GE
Power Conversion

Standard Motors
Product Catalog

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Quick Index

WELCOME to the new Standard Motor Catalog.
You now have access to our most recent and up-to-date product and pricing information.

Quick Index/Table of Contents ..... Section A

Introduction and Overview ..... Section B

Energy $aver® NEMA Premium® Motors ..... Section 1

X$D Ultra® NEMA Premium® Extra Severe Duty Motors ..... Section 2

Adjustable Speed Motors ..... Section 3

IEC Premium Efficiency Motors ..... Section 4

X$D Ultra® Premium Efficient Explosion Proof Motors ..... Section 5

High HP Low and Medium Voltage ..... Section 6

Vertical Pump Motors ..... Section 7

DC Motors ..... Section 8

Quick Custom Motors ..... Section 9

Technical Reference Guide ..... Section 10

Terms and Conditions ..... Section 11

Cross Reference Guide ..... Section 12

Table of Contents

1.0 Energy $aver® NEMA Premium® Motors

1.1 Open Dripproof

1.1 Standard Features
1.2 Pricing
1.5 Performance Data
1.7 Dimensions

1.8 TEFC - Extra Severe Duty

1.8 Standard Features
1.9 Pricing
1.13 Performance Data
1.17 NEMA Dimensions

1.18 TEFC - Extra Severe Duty C-Face

1.18 Pricing – C-Face Footed Frame
1.19 Performance Data – C-Face Footed Frame
1.20 Dimensions

1.21 Energy $aver® SGR

1.21 ODP Pricing
1.22 ODP Dimensions
1.23 TEFC Pricing
1.24 TEFC Dimensions

1.25 Kits and Accessories

2.0 X$D Ultra® NEMA Premium® Extra Severe Duty Motors

2.1 X$D Ultra® – Extra Severe Duty

2.1 Standard Features
2.2 Pricing
2.8 C-Face Pricing
2.9 High Torque Design C Pricing
2.10 Performance Data
2.16 Dimensions

2.18 X$D Ultra® 841

2.18 Standard Features
2.19 Pricing
2.24 C-Face Pricing
2.25 Performance Data
2.30 Dimensions

2.32 X$D Ultra® 661 for Heat Exchanger

2.32 Standard Features
2.33 Pricing
2.34 Performance Data
2.35 Dimensions

2.36 X$D Ultra®, X$D Ultra® 841 and 661 Kits 140 to 449T

2.40 X$D Ultra® Checklist for Value

Table of Contents

3.0 Adjustable Speed Motors

3.1 A$D Ultra®

3.1 Standard Features
3.2 Pricing
3.3 Performance Data
3.4 Dimensions
3.7 Kits and Accessories

4.0 IEC Premium Efficiency Motors

4.1 X$D Ultra® 841 IEC Premium Efficient Motors

4.1 Standard Features
4.2 Pricing
4.12 400V Performance Data
4.15 460V Performance Data
4.19 690V Performance Data
4.23 Checklist for Value
4.24 X$D Ultra® 841 IEC Dimensions
4.29 X$D Ultra® 841 IEC Kits

5.0 X$D Ultra® Premium Efficient Explosion Proof Motors

5.1 X$D Ultra® XP

5.1 Standard Features
5.2 Pricing
5.4 Performance Data
5.6 Dimensions

6.0 High HP Low and Medium Voltage

6.1 Quantum™ LMV - TEFC Low Voltage
6.6 Quantum™ LMV - TEFC Low Voltage with IEEE 841 Features
6.14 Quantum™ LMV - TEFC Medium Voltage
6.19 Quantum™ LMV - TEFC Medium Voltage with IEEE 841 Features
6.23 Quantum™ LMV - TEFC Dimensions
6.24 449 Frame TEFC
6.27 449 Frame TEFC Dimensions

Table of Contents

7.0 Vertical Pump Motors

7.1 Value Line™ Vertical Hollow Shaft - WPI

7.1 Standard Features
7.2 SE Value Line Pricing
7.3 HE Value Line Pricing
7.4 Dimensions
7.5 Coupling Kit Pricing
7.6 Stabilizer Bushing Pricing

7.7 Energy $aver® Vertical Hollow Shaft – WPI

7.7 Standard Features
7.8 Pricing
7.9 Performance Data
7.10 Dimensions
7.11 Coupling Kit Pricing

7.12 Energy $aver® Vertical Hollow Shaft – TEFC

7.12 Standard Features
7.13 Pricing
7.14 Performance Data
7.15 Dimensions
7.16 Kits and Accessories

7.17 Energy $aver® VSS TEFC NT

7.17 Standard Features
7.18 Pricing - Normal Thrust
7.19 Performance Data
7.20 Dimensions

7.21 X$D Ultra 841 VSS TEFC

7.21 Standard Features
7.22 Pricing - Inline Pump
7.23 Pricing - High Thrust
7.24 Performance Data
7.26 Dimensions 182-286 Frame
7.27 Dimensions 324-445 Frame

7.28 X$D Ultra 841 Vertical C-Face NT

7.28 Standard Features
7.29 Pricing
7.30 Performance Data
7.31 Dimensions

8.0 DC Motors

8.1 Standard Features - Kinamatic II™
8.2 Shunt Wound - Self Ventilated
8.3 Shunt Wound - Separately Ventilated
8.4 Shunt Wound - Blower Ventilated
8.5 Shunt Wound - Totally Enclosed
8.6 Type-K Power Supply
8.7 PY Design and BC42 and BC46 Design Tachometers
8.8 DC Dimensions
8.19 DC Motor Kits and Accessories
8.21 Mill Duty DC Motor - MD800
8.22 Dimensions

Table of Contents

9.0 Quick Custom Motors

9.1 Information Sheet

9.2 Industrial AC Stock Motor Modification List Prices

10.0 Technical Reference Guide

10.1 Index

I. Electrical Design

10.2 Voltage

10.3 Voltage and Frequency Variation

10.4 Voltage Unbalance

10.4 Frequency

10.5 Polyphase or Single-Phase Power

10.5 Motor Output Rating

10.6 Torque and Horsepower

10.12 Polyphase Motors Larger than 500 Hp

10.12 Single-Phase Motors

10.12 Service Factor

10.13 Motor Temperature

10.14 Duty Cycle Applications

10.16 Starting

10.17 Power Factor

10.18 Winding Connections and Starting

10.20 Electrical Modifications

II. Mechanical Design

10.23 Frame Designation System

10.23 Drains and Breathers

10.23 Mounting Configurations

10.25 Dynamic Balance

10.25 Bearing System

10.26 Winding Treatment

10.27 Adjustable Speed Inverter Duty Operation

10.28 Load Connection

10.31 Load Calculations

10.32 Mechanical Modifications

10.35 Vibration Detection

10.36 Motor Testing

III. Efficiency

10.38 Definition of Efficiency

10.39 Premium Efficiency

10.40 IEC Efficiency Levels

10.41 Simple Pay Back Calculations

IV. Classifications/Environment

10.42 Environmental Considerations

10.42 Hazardous "Classified" Locations

10.44 Environmental Modifications

V. Reference

10.46 NEMA vs IEC Motors

10.49 Annexure

10.51 Reference

11.0 Terms and Conditions

12.0 Cross Reference Guide

12.1 Catalog Number to Model Number

12.21 Model Number to Catalog Number

Contact Information Domestic and Global

For contact information regarding parts and maintenance see below.

GE Power Conversion Contact Information: Call (800) 541-7191

Maintenance & Repair

Before warranty service is commenced on any Power Conversion product, please contact Post Sale Service at:

USA & Canada:	(866) 563-1284
International:	(260) 439-4451
Fax:	1 (260) 439-4416
Dial Comm	*380-4451
Email:	gemotorspss@ge.com

Need parts, a service shop, or a distributor?
Go to: www.gemotors.com
lower right hand corner under contact us.

Order Information

To order GE motors directly please contact distributors near you.

The following websites contain distributor information on GE motor products, along with other GE products and company initiatives.

EliteNet Information: (only for approved GE customers)

EliteNet (available via **www.gemotors.com**) is our web-based tool providing our customers access to checking stock, order entry, design information, technical data, and much more. **EliteNet** is an exclusive web community that connects GE Power Conversion customers and channel partners with a private password protected website. A few of the many highlights of **EliteNet** are listed below:

- 24x7 availability of specific account information
- Private password protected
- Focused, personalized screens of information for everyone in your company
- E-training online to help your staff build their product knowledge
- Register on line via **www.gemotors.com**

Where to buy products

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Company Overview

GE Energy Management

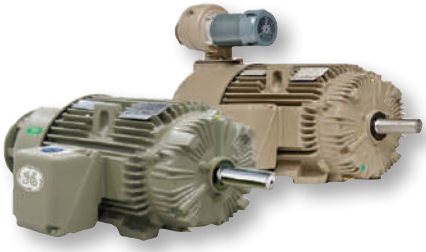
GE works connecting people and ideas everywhere to create advanced technologies for powering a cleaner, more productive world. With more than 100,000 employees in over 100 countries, our diverse portfolio of product and service solutions and deep industry expertise help our customers solve their challenges locally. We serve the energy sector with technologies in such areas as natural gas, oil, coal and nuclear energy; wind, solar, biogas and water processing; energy management; and grid modernization. We also offer integrated solutions to serve energy- and water-intensive industries such as mining, metals, marine, petrochemical, food & beverage and unconventional fuels.

The Power Conversion Business

GE is a world-class manufacturer of electric motors and generators with more than 125 years of experience. This GE Power Conversion business offers a full range of products, from fractional to 100,000 horsepower units, for highly demanding applications around the world. Driven by Lean Six Sigma methods and tools, the GE Power Conversion business serves industrial and commercial industries such as Power Generation, Oil and Gas, Chemical, Mining, Pulp and Paper, Water/Wastewater, Cement, and Metals. GE can design to any global standard and certification due to its extensive motor engineering and manufacturing experience. For more information, please visit **www.gemotors.com**.

Our Standard Products Catalog includes all cataloged numbered AC and DC motors and kits to meet your needs. Items marked "Y" under the "Normally Stock" column implies those items are available to ship from stock at your request. Items marked with an "N" mean that those will be manufactured at published leads-times, once an order is released. Please refer to "**EliteNet**" (via **www.gemotors.com**) for the latest published lead-times. Each section is meant to include; standard features, pricing, dimensions, and applicable kits.

We are continually updating **www.gemotors.com** with the most current information regarding GE Power Conversion products and services.



A$D Ultra Motor
Section 3.0

DC Motors
Section 8.0

X$D Ultra 841 IEC
Section 4.1

Notes

TABLE OF CONTENTS

1.0 Energy $aver® NEMA Premium® Motors

1.1 Open Dripproof

1.1 Standard Features
1.2 Pricing
1.5 Performance Data
1.7 Dimensions

1.8 TEFC - Extra Severe Duty

1.8 Standard Features
1.9 Pricing
1.13 Performance Data
1.17 NEMA Dimensions

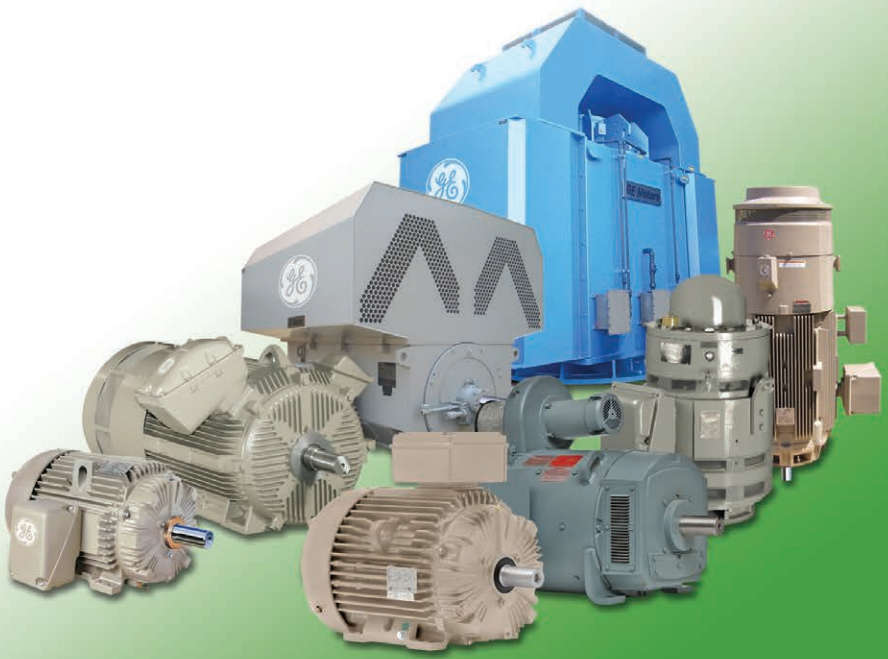
1.18 TEFC - Extra Severe Duty C-Face

1.18 Pricing – C-Face Footed Frame
1.19 Performance Data – C-Face Footed Frame
1.20 Dimensions

1.21 Energy $aver® SGR

1.21 ODP Pricing
1.22 ODP Dimensions
1.23 TEFC Pricing
1.24 TEFC Dimensions

1.25 Kits and Accessories



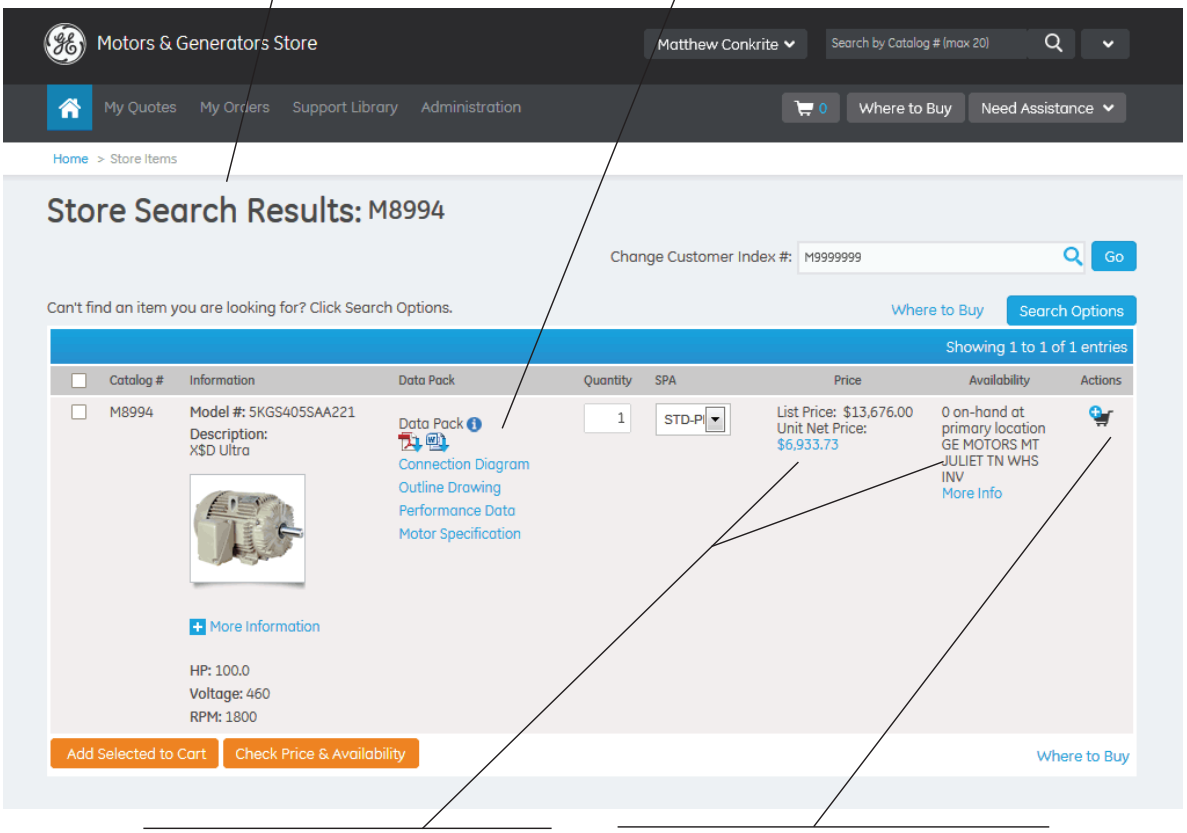
Standard Motor e-Commerce

It doesn't get much easier than this!

This application is the result of bringing together customer requests and the best user-interface practices on the web today.

You can search for any of our standard motors by its base ratings, catalog #, model #, and even competitors catalog #.

You will have instant access to the motor data pack in Microsoft Word or Adobe PDF formats. You can even download separate PDF's of the connection diagram, outline drawing, performance data, and specifications for quick reference.



As a registered direct customer of GE, you can see your net price according to your profile along with real time availability with one click.

If you like the results of your search, you can click to add items to your cart for later quoting or ordering.

Energy $aver®
Open Dripproof

Standard Features

HP Range	1-300
Poles	2, 4, 6
Voltage	200, 230/460, 460, 575
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors and C-390
Altitude	3300 ft
Ambient	40°C
Balance/Vibration	0.15 in/sec max
Bearing Caps	324-449
Bearing Type	Ball Bearing
Conduit Box	Stamped Steel
Efficiency	NEMA Premium
End Shield	Cast Iron
Fasteners	Metric
Frame Material	Cast Iron
Frame Size	143-449
Frequency	60 Hz (50 Hz for 230/460 Voltage ratings)
Grease	143-286: Lithium, 324-449: Polyurea
Ground	Brass Bolt in Conduit Box
Insulation Class	F
Insulation System	GEGARD1800™, Non-Hygroscopic, Anti-Fungus, meets, NEMA MG1-31
Inverter Capabilities	Variable Torque 20:1, Constant Torque 4:1
L10 Bearing Life	Direct Coupled: 65,000 hrs, Belted: 26,280 hrs, Exceptions: 180/4P: 50,843 hrs, 210/4P: 43,214 hrs
Lifting Means	Eye Bolt
Mounting	F1 as Standard and Modifiable to F2
Mounting Holes	1 per foot
Nameplate	Stainless Steel
NEMA Design	A or B
Paint	Buff, Alkyd
Relubrication	324-449
Rotor	Cast Aluminum
Service Factor	1.15
Temperature Rise	80°C @ 1.0 SF
Tests	NEMA Routine, IEEE 112
Time Rating	Continuous
Warranty	36 months from date of installation or 42 months from date of manufacture, whichever occurs first

Energy $aver®

Open Dripproof

Pricing

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in.)	C-Face Cat No.	Notes
1	1800	230/460	143T	2.8/1.4	85.5	**E707**	$333	G4-7D$Z1	Y	46	10.54	**A1058**	29, 84
1	1800	230/460	143T	2.8/1.4	85.5	**E792**	$333	G4-7D$Z1	Y	46	10.54	**A1058**	29, 70, 84
1	1200	230/460	145T	3.4/1.7	82.5	**E708**	$428	G4-7D$Z1	N	58	11.53	**A1058**	29, 84
1.5	3600	230/460	143T	3.8/1.9	84.0	**E709**	$363	G4-7D$Z1	Y	46	10.54	**A1058**	29, 84
1.5	1800	230/460	145T	4.2/2.1	86.5	**E710**	$363	G4-7D$Z1	Y	56	11.53	**A1058**	29, 84
1.5	1800	230/460	145T	4.2/2.1	86.5	**E793**	$363	G4-7D$Z1	Y	56	11.53	**A1058**	29, 70, 84
1.5	1200	230/460	182T	5.4/2.7	86.5	**E7707**	$470	G4-7D$Z1	Y	72	12.53	**A1059**	29, 84, 110
2	3600	230/460	145T	5.1/2.6	85.5	**E717**	$428	G4-7D$Z1	Y	58	11.53	**A1058**	29, 84
2	1800	230/460	145T	5.4/2.7	86.5	**E718**	$401	G4-7D$Z1	Y	58	11.53	**A1058**	29, 84
2	1800	230/460	145T	5.4/2.7	86.5	**E794**	$401	G4-7D$Z1	Y	58	11.53	**A1058**	29, 70, 84
2	1200	230/460	184T	7.0/3.5	87.5	**E7710**	$603	G4-7D$Z1	Y	91	13.53	**A1059**	29, 84
3	3600	230/460	145T	7.6/3.8	85.5	**E719**	$480	G4-7D$Z1	Y	60	11.53	**A1058**	29, 84
3	1800	200	182T	9.0	89.5	**E7714**	$416	G4-7D$Z1	Y	72	12.53	**A1059**	84, 110
3	1800	230/460	182T	7.8/3.9	89.5	**E720**	$416	G4-7D$Z1	Y	72	12.53	**A1059**	29, 84, 110
3	1800	230/460	182T	7.8/3.9	89.5	**E796**	$416	G4-7D$Z1	Y	72	12.53	**A1059**	29, 70, 84, 110
3	1800	575	182T	3.2	89.5	**E7635**	$416	G4-7D$Z1	N	72	12.53	**A1059**	110
3	1200	230/460	213T	9.8/4.9	88.5	**E7011**	$771	G4-7D$Z1	Y	128	15.85	**A1060**	29, 84, 110
5	3600	230/460	182T	12.0/6.0	86.5	**E721**	$584	G4-7D$Z1	Y	72	12.53	**A1059**	29, 84, 110
5	3600	230/460	182T	12.0/6.0	86.5	**E797**	$584	G4-7D$Z1	Y	72	12.53	**A1059**	29, 70, 84, 110
5	1800	200	184T	14.7	89.5	**E7716**	$584	G4-7D$Z1	N	91	13.53	**A1059**	84
5	1800	230/460	184T	12.8/6.4	89.5	**E722**	$584	G4-7D$Z1	Y	91	13.53	**A1059**	29, 84
5	1800	230/460	184T	12.8/6.4	89.5	**E798**	$584	G4-7D$Z1	Y	91	13.53	**A1059**	29, 70, 84
5	1800	575	184T	5.2	89.5	**E7808**	$584	G4-7D$Z1	Y	91	13.53	**A1059**	
5	1200	230/460	215T	13.8/6.9	89.5	**E7012**	$965	G4-7D$Z1	Y	157	17.38	**A1060**	29, 84, 110
7.5	3600	230/460	184T	17.4/8.7	88.5	**E723**	$840	G4-7D$Z1	Y	91	13.53	**A1059**	29, 84, 110
7.5	3600	230/460	184T	17.4/8.7	88.5	**E799**	$840	G4-7D$Z1	Y	91	13.53	**A1059**	29, 70, 84, 110
7.5	1800	200	213T	22.5	91.0	**E7729**	$807	G4-7D$Z1	N	128	15.85	**A1060**	84, 110
7.5	1800	230/460	213T	19.4/9.7	91.0	**E730**	$807	G4-7D$Z1	Y	128	15.85	**A1060**	29, 84, 110
7.5	1800	230/460	213T	19.4/9.7	91.0	**E7010**	$807	G4-7D$Z1	Y	128	15.85	**A1060**	29, 70, 84, 110
7.5	1800	575	213T	7.8	91.0	**E7640**	$807	G4-7D$Z1	Y	157	17.38	**A1060**	110
7.5	1200	230/460	254T	20.4/10.2	90.2	**E7013**	$1,257	G4-7D$Z1	Y	260	20.67	**A1060**	29, 84

Notes:

29 Usable on 200 Volts, 60Hz at 1.0 service factor
70 F2 Assembly
84 Designed for 50 or 60Hz operation
110 Offset Stator Core. **Not suitable for F2 conversion.**

Energy $aver®
Open Dripproof

Pricing (cont.)

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in.)	C-Face Cat No.	Notes
10	3600	230/460	213T	25.8/12.9	89.5	**E750**	$998	G4-7D$Z1	Y	163	15.85	**A1060**	29, 84, 110
10	3600	230/460	213T	25.8/12.9	89.5	**E7016**	$998	G4-7D$Z1	Y	163	15.85	**A1060**	29, 70, 84, 110
10	1800	200	215T	28.8	91.7	**E7734**	$975	G4-7D$Z1	N	157	17.38	**A1060**	84
10	1800	230/460	215T	24.8/12.4	91.7	**E731**	$975	G4-7D$Z1	Y	157	17.38	**A1060**	29, 84
10	1800	230/460	215T	24.8/12.4	91.7	**E7018**	$975	G4-7D$Z1	Y	157	17.38	**A1060**	29, 70, 84
10	1800	575	215T	10.1	91.7	**E7643**	$975	G4-7D$Z1	N	157	17.38	**A1060**	
10	1200	230/460	256T	27.8/13.9	91.7	**E7014**	$1,472	G4-7D$Z1	N	310	22.40	**A1060**	29, 84
15	3600	230/460	215T	37.8/18.9	90.2	**E751**	$1,263	G4-7D$Z1	Y	157	17.38	**A1060**	29, 84, 110
15	3600	230/460	215T	37.8/18.9	90.2	**E7020**	$1,263	G4-7D$Z1	Y	157	17.38	**A1060**	29, 70, 84, 110
15	1800	200	254T	42.6	93.0	**E7744**	$1,296	G4-7D$Z1	N	260	20.67	**A1061**	84
15	1800	230/460	254T	37.2/18.6	93.0	**E732**	$1,296	G4-7D$Z1	Y	260	20.67	**A1061**	29, 84
15	1800	230/460	254T	37.2/18.6	93.0	**E7021**	$1,296	G4-7D$Z1	Y	260	20.67	**A1061**	29, 70, 84
15	1800	575	254T	14.9	93.0	**E7646**	$1,296	G4-7D$Z1	Y	260	20.67	**A1061**	
15	1200	230/460	284T	37.8/18.9	91.7	**E7015**	$1,895	G4-7D$Z1	Y	394	23.82	**A1050**	29, 84
20	3600	230/460	254T	46.0/23.0	91.0	**E752**	$1,490	G4-7D$Z1	Y	260	20.67	**A1061**	29, 84
20	1800	200	256T	55.4	93.0	**E7754**	$1,583	G4-7D$Z1	N	310	22.40	**A1061**	84
20	1800	230/460	256T	48.2/24.1	93.0	**E733**	$1,583	G4-7D$Z1	Y	310	22.40	**A1061**	29, 84
20	1800	230/460	256T	48.2/24.1	93.0	**E7025**	$1,583	G4-7D$Z1	Y	310	22.40	**A1061**	29, 70, 84
20	1800	575	256T	19.3	93.0	**E7649**	$1,583	G4-7D$Z1	Y	310	22.40	**A1061**	
20	1200	230/460	286T	51.3/25.7	92.4	**E7017**	$2,324	G4-7D$Z1	Y	436	25.32	**A1050**	29, 84
25	3600	230/460	256T	57.4/28.7	91.7	**E753**	$1,818	G4-7D$Z1	Y	310	22.40	**A1061**	29, 84
25	1800	200	284T	76.7	93.6	**E7757**	$1,839	G4-7D$Z1	N	394	23.82	**A1050**	84
25	1800	230/460	284T	66.2/33.1	93.6	**E734**	$1,839	G4-7D$Z1	Y	394	23.82	**A1050**	29, 84
25	1800	230/460	284T	66.2/33.1	93.6	**E7027**	$1,839	G4-7D$Z1	Y	394	23.82	**A1050**	29, 70, 84
25	1800	575	284T	26.5	93.6	**E7652**	$1,839	G4-7D$Z1	Y	394	23.82	**A1050**	
25	1200	230/460	324T	64.2/32.1	93.0	**E7019**	$2,757	G4-7D$Z1	Y	580	26.26	**A1051**	29, 84
30	3600	230/460	284TS	70.0/35.0	91.7	**E754**	$2,169	G4-7D$Z1	Y	420	22.45	**A1050**	29, 84
30	1800	200	286T	83.7	94.1	**E7763**	$2,138	G4-7D$Z1	N	436	25.32	**A1050**	84
30	1800	230/460	286T	72.4/36.2	94.1	**E735**	$2,138	G4-7D$Z1	Y	436	25.32	**A1050**	29, 84
30	1800	230/460	286T	72.4/36.2	94.1	**E7028**	$2,138	G4-7D$Z1	Y	436	25.32	**A1050**	29, 70, 84
30	1800	575	286T	29.3	94.1	**E7654**	$2,138	G4-7D$Z1	N	436	25.32	**A1050**	
30	1200	230/460	326T	77.4/38.7	93.6	**E7022**	$3,155	G4-7D$Z1	Y	639	27.76	**A1051**	29, 84
40	3600	230/460	286TS	106.0/53.0	92.4	**E755**	$2,775	G4-7D$Z1	Y	445	23.95	**A1050**	29, 84
40	1800	230/460	324T	97.0/48.5	94.1	**E736**	$2,658	G4-7D$Z1	Y	480	26.26	**A1051**	29, 84
40	1800	230/460	324T	97.0/48.5	94.1	**E7030**	$2,658	G4-7D$Z1	Y	480	26.26	**A1051**	29, 70, 84
40	1800	575	324T	39.1	94.1	**E7310**	$2,658	G4-7D$Z1	Y	580	26.26	**A1051**	
40	1200	460	364T	48.2	94.1	**E7024**	$4,637	G4-7D$Z1	N	770	29.13	**A1053**	

Notes:
29 Usable on 200 Volts, 60Hz at 1.0 service factor
70 F2 Assembly
84 Designed for 50 or 60Hz operation
110 Offset Stator Core. **Not suitable for F2 conversion.**

Energy $aver®

Open Dripproof

Pricing (cont.)

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in.)	C-Face Cat No.	Notes
50	3600	230/460	324TS	116.4/58.2	93.0	**E756**	$3,299	G4-7D$Z1	Y	606	24.76	**A1051**	29, 84
50	1800	230/460	326T	121.0/60.5	94.5	**E737**	$3,099	G4-7D$Z1	Y	639	27.76	**A1051**	29, 84
50	1800	575	326T	48.6	94.5	**E7320**	$3,099	G4-7D$Z1	N	639	27.76	**A1051**	
50	1800	230/460	326TS	121.0/60.5	94.5	**E7254**	$3,099	G4-7D$Z1	N	639	26.26	**A1051**	29, 84
50	1200	460	365T	61.0	94.1	**E7026**	$5,415	G4-7D$Z1	N	838	30.13	**A1053**	
60	3600	230/460	326TS	136.4/68.2	93.6	**E757**	$3,975	G4-7D$Z1	Y	692	26.26	**A1051**	29, 84
60	1800	230/460	364T	150.6/75.3	95.0	**E7381**	$4,026	G4-7D$Z1	Y	770	29.13	**A1053**	29, 84
60	1800	230/460	364T	150.6/75.3	95.0	**E738**	$4,026	G4-7D$Z1	Y	770	29.13	**A1053**	29, 70, 84
60	1800	575	364T	60.2	95.0	**E7330**	$4,026	G4-7D$Z1	N	770	29.13	**A1053**	
60	1800	230/460	364TS	150.6/76.5	95.0	**E7383**	$4,026	G4-7D$Z1	N	770	27.00	**A1053**	29, 84
60	1200	460	404T	72.9	94.5	**E7029**	$6,701	G4-7D$Z1	N	1090	33.10	**A1062**	
75	3600	230/460	364TS	183.0/91.5	93.6	**E758**	$5,034	G4-7D$Z1	Y	686	27.00	**A1052**	29, 84
75	1800	230/460	365T	182.4/91.2	95.0	**E7391**	$4,659	G4-7D$Z1	Y	838	30.13	**A1053**	29, 84
75	1800	575	365T	73.9	95.0	**E7825**	$4,659	G4-7D$Z1	N	838	30.13	**A1053**	
75	1800	230/460	365TS	182.4/91.2	95.0	**E7393**	$4,659	G4-7D$Z1	N	838	28.00	**A1053**	29, 84
75	1200	460	405T	91.1	94.5	**E7032**	$7,575	G4-7D$Z1	N	1150	34.60	**A1063**	
100	3600	230/460	365TS	232.0/116.0	93.6	**E759**	$6,614	G4-7D$Z1	Y	812	28.00	**A1052**	29, 84
100	1800	230/460	404T	226.0/113.0	95.4	**E7401**	$5,939	G4-7D$Z1	Y	1090	33.10	**A1055**	29, 84
100	1800	575	404T	90.7	95.4	**E7340**	$5,939	G4-7D$Z1	N	1090	33.10	**A1055**	
100	1800	230/460	404TS	226.0/113.0	95.4	**E7257**	$5,939	G4-7D$Z1	N	1090	30.10	**A1055**	29, 84
100	1800	230/460	404T	226.0/113.0	95.4	**E740**	$5,939	G4-7D$Z1	Y	1090	30.10	**A1055**	29, 70, 84
100	1200	460	444T	120.0	95.0	**E7034**	$9,594	G4-7D$Z1	N	1494	37.70	**A1057**	
125	3600	460	404TS	142.0	94.1	**E7501**	$8,228	G4-7D$Z1	N	1092	30.10	**A1054**	
125	1800	460	405T	142.0	95.4	**E741**	$7,113	G4-7D$Z1	Y	1150	34.60	**A1055**	
125	1800	460	405TS	142.0	95.4	**E7342**	$7,113	G4-7D$Z1	N	1150	30.10	**A1055**	
125	1200	460	445T	150.0	95.0	**E7036**	$11,783	G4-7D$Z1	N	1715	39.70	**A1057**	
150	3600	460	405TS	170.0	94.1	**E7502**	$8,808	G4-7D$Z1	Y	1194	30.10	**A1054**	
150	1800	460	444T	168.0	95.8	**E742**	$9,791	G4-7D$Z1	Y	1494	37.70	**A1057**	
150	1800	460	444TS	168.0	95.8	**E7259**	$9,791	G4-7D$Z1	N	1494	33.95	**A1057**	
150	1200	460	447T	177.0	95.4	**E7962**	$12,995	G4-7D$Z1	N	2100	43.20	**A1057**	
200	3600	460	444TS	224.0	95.0	**E7503**	$15,510	G4-7D$Z1	Y	1590	33.95	**A1056**	
200	1800	460	445T	223.0	95.8	**E743**	$12,728	G4-7D$Z1	Y	1715	39.70	**A1057**	
200	1800	460	445TS	223.0	95.8	**E7360**	$12,728	G4-7D$Z1	N	1715	35.95	**A1057**	
200	1200	460	449T	235.0	95.4	**E7963**	$18,596	G4-7D$Z1	N	2150	49.77	**A1057**	110
250	3600	460	445TS	275.0	95.0	**E7504**	$18,042	G4-7D$Z1	Y	1800	35.95	**A1056**	
250	1800	460	447T	276.0	95.8	**E7272**	$15,801	G4-7D$Z1	Y	2100	43.20	**A1057**	
250	1800	460	447TS	276.0	95.8	**E7370**	$15,801	G4-7D$Z1	N	2100	39.46	**A1057**	
300	1800	460	449T	331.0	95.8	**E7273**	$19,488	G4-7D$Z1	N	2150	49.77	**A1057**	110

Notes:

29 Usable on 200 Volts, 60Hz at 1.0 service factor
70 F2 Assembly
84 Designed for 50 or 60Hz operation
110 Offset Stator Core. **Not suitable for F2 conversion.**

Energy $aver®

Open Dripproof

Typical Performance Data

HP: 1-300

HP	Volts	FL RPM	NP FLA	Code KVA/ HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP Eff. Full Load	Guar Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Load Eff.	75% Load Power Factor	50% Load Power Factor	Max KVAR	NEMA Design Letter
1	460	1740	1.4	N	3.0	7.7	9.6	85.5	84	87.9	86.7	79	72.7	60.9	0.5	-
1	460	1145	1.7	N	4.6	10.7	12.8	82.5	81.5	83.7	82.2	67	58.6	45.7	0.8	B
1.5	460	3505	1.9	M	2.2	7.1	9.1	84	82.5	87.5	86.3	89.5	86	77.9	0.4	B
1.5	460	1735	2	M	4.5	12.5	14.9	86.5	85.5	88.4	87.7	80	73.9	62.3	0.7	B
1.5	460	1180	2.6	M	6.7	20.6	26.4	86.5	85.5	87.5	84.8	62.5	53.7	41.3	1.3	A
2	460	3505	2.4	L	3.0	10	12.5	85.5	84	88.2	87.5	90	86.3	78.1	0.6	B
2	460	1725	2.7	L	6.1	17	19.9	86.5	85.5	88.6	88.2	80.5	75	63.6	0.9	B
2	460	1175	3.4	N	8.9	29	36	87.5	86.5	87.9	85.4	63	54.2	41.7	1.6	A
3	460	3490	3.6	L	4.5	15.8	18.5	85.5	84	89	89	91	87.7	80.3	0.8	A
3	200	1755	8.9	K	9.0	21.6	29.2	89.5	88.5	90.5	89.9	81.5	76.5	66.3	1.1	B
3	460	1755	3.8	K	9.0	22	29.7	89.5	88.5	90.6	89.9	81.5	76.3	66	1.1	B
3	575	1755	3.1	K	9.0	22.2	29.9	89.5	88.5	90.6	89.9	81	76.1	65.7	1.1	B
3	460	1185	4.8	N	13.3	45	63.6	88.5	87.5	89.7	87.5	66	57.5	44.7	2.2	A
5	460	3500	5.8	J	7.5	13.9	22.6	86.5	85.5	90.9	91.2	93	91.5	87.1	0.9	B
5	200	1740	14.4	J	15.1	34.8	45	89.5	88.5	90.5	90.7	83.5	79.7	70.8	1.6	B
5	460	1740	6.3	J	15.1	35.5	45.9	89.5	88.5	90.5	90.7	83	79.3	70.2	1.6	B
5	460	1170	6.8	K	22.4	52.3	72.9	89.5	88.5	90.9	90.3	76.5	70.2	58.4	2.3	A
7.5	460	3490	8.5	H	11.3	23.2	35.6	88.5	87.5	91.3	92	93.5	92.1	88	1.2	A
7.5	200	1770	21.9	K	22.2	69.9	79.2	91	90.2	92.1	91.4	81	75.4	64.5	3	A
7.5	460	1770	9.5	K	22.3	68.2	77.4	91	90.2	92.1	91.4	81.5	76.1	65.5	2.9	A
7.5	575	1770	7.6	K	22.3	67.8	77	91	90.2	92.1	91.3	81.5	76.2	65.6	2.9	A
7.5	460	1180	10.1	J	33.3	86	95.9	90.2	89.5	92.4	91.3	77	70.7	59	3.4	A
10	460	3510	12.2	J	14.9	34.8	46.1	89.5	88.5	91.3	91	85.5	82.9	75.3	2.8	A
10	200	1765	28.3	J	29.7	89.7	97.3	91.7	91	92.5	92.2	83	79	69.5	3.3	A
10	460	1765	12.2	J	29.7	88.7	96.4	91.7	91	92.5	92.2	83.5	79.2	69.8	3.3	A
10	575	1765	9.8	K	29.7	91.7	99.4	91.7	91	92.5	92.1	83	78.4	68.6	3.4	A
10	460	1180	13.4	K	44.4	129.4	138.5	91.7	91	92.7	91.6	76	69.3	57.3	4.8	A
15	460	3500	17.9	J	22.5	53.7	66.9	90.2	89.5	91.9	92.1	87	85.2	79.2	3.5	A
15	200	1770	41.8	H	44.5	119.3	120.9	93	92.4	93.3	92.7	83	78.8	69.5	4.9	A
15	460	1770	18.3	H	44.5	121.2	122.7	93	92.4	93.3	92.7	82.5	78.4	69	5	A
15	575	1770	14.6	H	44.5	121.2	122.7	93	92.4	93.3	92.7	82.5	78.4	69	5	A
15	460	1180	18.8	J	66.7	151.9	178.2	91.7	91	92.9	92.6	81.5	76.2	65.2	5.7	A
20	460	3540	22.4	H	29.7	71.1	86.7	91	90.2	91.7	91.1	92	89.9	84.7	4	A
20	200	1765	54.8	G	59.4	154.8	150.2	93	92.4	93.6	93.4	84.5	81.3	73.3	5.7	A
20	460	1765	23.8	G	59.4	155.7	151	93	92.4	93.6	93.4	84.5	81.2	73.2	5.7	A
20	575	1765	19.1	G	59.4	153.9	149.3	93	92.4	93.7	93.5	84.5	81.4	73.5	5.6	A
20	460	1180	25.2	J	88.9	230.2	257.1	92.4	91.7	93.2	92.8	80.5	74.4	62.8	8.2	A
25	460	3545	27.7	J	37.0	105	119	91.7	91	92.6	92.1	92	90	84.5	5	A
25	200	1780	74.2	H	73.8	194.6	196.7	93.6	93	93.9	92.9	77.5	71.8	60.5	10.8	A
25	460	1780	32.1	H	73.8	190.2	192.5	93.6	93	93.9	93	78	72.7	61.6	10.5	A
25	575	1780	25.6	H	73.8	190	192.3	93.6	93	93.9	93	78	72.7	61.6	10.5	A
25	460	1185	31.6	H	110.7	282.1	292.1	93	92.4	93.6	93	79.5	74.6	64	9.7	A

Energy $aver®

Open Dripproof

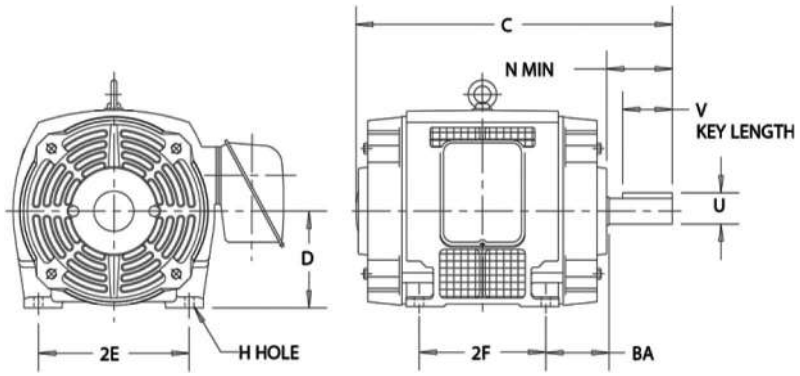
Typical Performance Data (cont.)

HP: 1-300

HP	Volts	FL RPM	NP FLA	Code KVA/ HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP Eff. Full Load	Guar Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Load Eff.	75% Load Power Factor	50% Load Power Factor	Max KVAR	NEMA Design Letter
30	460	3540	34	G	44.5	82.4	101.7	91.7	91	91.8	90.9	90	89.3	85.8	5.1	B
30	200	1775	81.7	G	88.7	216.2	198.3	94.1	93.6	94.5	94.2	84	81.2	73.8	8.1	B
30	460	1775	35.7	G	88.7	222.1	203.4	94.1	93.6	94.6	94.2	83.5	80.8	73.1	8.4	B
30	575	1780	28.8	G	88.6	239.7	218.5	94.1	93.6	94.5	94	83	79.3	70.7	9.2	A
40	460	3555	48.2	G	59.1	152.3	178.5	92.4	91.7	92.2	90.9	84	80.1	71	13	A
40	460	1780	47.4	H	118.0	237.1	355.6	94.1	93.6	94.3	93.7	84	80.7	72.5	11.7	A
40	575	1780	38.1	H	117.9	244.8	366.2	94.1	93.6	94.3	93.6	83.5	80	71.3	12.3	A
40	460	1185	47.1	G	177.3	338.8	402.4	94.1	93.6	94.4	94	84.5	81.2	72.9	11.7	A
50	460	3560	56.2	H	73.8	148.3	231.2	93	92.4	94.1	93.6	89.5	87.5	81.4	10.9	A
50	460	1780	59	H	147.5	317.1	455.8	94.5	94.1	94.6	94	84	80.5	72.2	14.8	A
50	460	1185	59.6	H	221.4	481	554.6	94.1	93.6	94.8	94.3	83.5	79.6	70.4	15.9	A
60	460	3560	66.3	J	88.5	196.8	287.1	93.6	93	94.5	94.1	90.5	88.7	83.2	12	A
60	460	1785	72.5	J	176.6	401.3	567.8	95	94.5	94.7	93.8	81.5	76.9	66.8	21.6	A
60	575	1785	58	J	176.6	401.6	568.3	95	94.5	94.7	93.8	81.5	76.9	66.8	21.6	A
60	460	1785	72.5	J	176.6	401.3	567.8	95	94.5	94.7	93.8	81.5	76.9	66.8	21.6	A
60	460	1185	71.2	G	265.7	578.7	622.5	94.5	94.1	94.9	94.6	83.5	80.5	72.3	17.6	A
75	460	3575	85.7	H	110.2	179.9	369.6	93.6	93	94.3	93.3	87.5	84.2	76	20.8	A
75	460	1785	88.5	H	220.9	482.8	663.6	95	94.5	95.2	94.5	83.5	79.8	70.9	23.4	A
75	575	1785	71.2	J	220.8	495	679.2	95	94.5	95.1	94.4	83	79.1	69.9	24.3	A
75	460	1785	88.5	H	220.9	482.8	663.6	95	94.5	95.2	94.5	83.5	79.8	70.9	23.4	A
75	460	1185	89	H	331.7	833.6	859.8	94.5	94.1	95.3	94.9	83.5	79.8	71	23	A
100	460	3570	111	H	147.0	263	490.1	93.6	93	95.1	94.4	90	87.7	81.3	22.3	A
100	460	1785	111	G	294.3	510.3	783.7	95.4	95	96	95.8	88	85.9	79.6	22.5	A
100	575	1785	89.2	G	294.4	494.9	761.3	95.4	95	96	95.8	88	86.3	80.3	21.7	B
100	460	1785	111	G	294.3	510.3	783.7	95.4	95	96	95.8	88	85.9	79.6	22.5	A
100	460	1190	117	G	441.7	750.8	932.7	95	94.5	95.6	95.4	84	81.3	73.8	27.3	A
125	460	3565	137	G	184.1	240.4	485.7	94.1	93.6	94.6	94	91	89.8	85.3	22.8	B
125	460	1785	139	G	367.7	717.2	1039.7	95.4	95	96.3	96.1	88	86	79.6	28.2	A
125	460	1190	147	G	552.5	948.6	1147.8	95	94.5	95.7	95.5	84	81.6	74.4	33.3	B
150	460	3565	163	G	220.9	310.7	599.5	94.1	93.6	94.9	94.4	91.5	90	85.5	27	A
150	460	1785	166	H	440.9	801.9	1175.6	95.8	95.4	95.8	95.4	88.5	87.1	81.7	30.9	A
150	460	1190	174	G	663.1	1160.6	1407.6	95.4	95	95.9	95.8	84.5	82.5	75.7	37.6	A
200	460	3575	215	G	293.6	380.3	876.6	95	94.5	95.8	95.2	91.5	89.8	84.7	37.9	A
200	460	1785	220	G	588.3	1073	1476.2	95.8	95.4	96.1	95.9	89	88.3	84	36.2	A
200	460	1185	231	G	884.9	1512.3	1774.6	95.4	95	96.1	96.1	85	83.8	78	45.1	B
250	460	3575	268	H	366.9	557	1166	95	94.5	96.2	95.7	92	90.7	85.9	44.4	A
250	460	1785	271	G	735.9	1119.1	1780.7	95.8	95.4	96.2	96.2	90	89.5	86.3	38.8	B
300	460	1785	326	G	883.5	1353.2	2077.2	95.8	95.4	96.3	96.4	90	89.8	87.1	43.9	B

Energy $aver®
Open Dripproof

Dimensions



NEMA Frame	D	2E	2F	BA	H	N Min.	U	V Min.	Key Width	Key Thickness	Key Length
143T	3.50	5.50	4.00	2.25	0.34 Slot	2.25	0.88	2.00	0.19	0.19	1.38
145T	3.50	5.50	5.00	2.25	0.34 Slot	2.25	0.88	2.00	0.19	0.19	1.38
182T	4.50	7.50	4.50	2.75	0.41 Dia.	2.75	1.12	2.50	0.25	0.25	1.75
184T	4.50	7.50	5.50	2.75	0.41 Dia.	2.75	1.12	2.50	0.25	0.25	1.75
213T	5.25	8.50	5.50	3.50	0.41 Dia.	3.38	1.38	3.12	0.31	0.31	2.38
215T	5.25	8.50	7.00	3.50	0.41 Dia.	3.38	1.38	3.12	0.31	0.31	2.38
254T	6.25	10.00	8.25	4.25	0.53 Dia.	4.00	1.62	3.75	0.38	0.38	2.88
256T	6.25	10.00	10.00	4.25	0.53 Dia.	4.00	1.62	3.75	0.38	0.38	2.88
284T	7.00	11.00	9.50	4.75	0.53 Dia.	4.62	1.88	4.38	0.50	0.50	3.25
284TS	7.00	11.00	9.50	4.75	0.53 Dia.	3.25	1.62	3.00	0.38	0.38	1.88
286T	7.00	11.00	11.00	4.75	0.53 Dia.	4.62	1.88	4.38	0.50	0.50	3.25
286TS	7.00	11.00	11.00	4.75	0.53 Dia.	3.25	1.62	3.00	0.38	0.38	1.88
324T	8.00	12.50	10.50	5.25	0.66 Dia.	5.25	2.12	5.00	0.50	0.50	3.88
324TS	8.00	12.50	10.50	5.25	0.66 Dia.	3.75	1.88	3.50	0.50	0.50	2.00
326T	8.00	12.50	12.00	5.25	0.66 Dia.	5.25	2.12	5.00	0.50	0.50	3.88
326TS	8.00	12.50	12.00	5.25	0.66 Dia.	3.75	1.88	3.50	0.50	0.50	2.00
364T	9.00	14.00	11.25	5.88	0.69 Dia.	5.88	2.38	5.62	0.62	0.62	4.25
364TS	9.00	14.00	11.25	5.88	0.69 Dia.	3.75	1.88	3.50	0.50	0.50	2.00
365T	9.00	14.00	12.25	5.88	0.69 Dia.	5.88	2.38	5.62	0.62	0.62	4.25
365TS	9.00	14.00	12.25	5.88	0.69 Dia.	3.75	1.88	3.50	0.50	0.50	2.00
404T	10.00	16.00	12.25	6.62	0.81 Dia.	7.25	2.88	7.00	0.75	0.75	5.62
404TS	10.00	16.00	12.25	6.62	0.81 Dia.	4.25	2.12	4.00	0.50	0.50	2.75
405T	10.00	16.00	13.75	6.62	0.81 Dia.	7.25	2.88	7.00	0.75	0.75	5.62
405TS	10.00	16.00	13.75	6.62	0.81 Dia.	4.25	2.12	4.00	0.50	0.50	2.75
444T	11.00	18.00	14.50	7.50	0.81 Dia.	8.50	3.38	8.25	0.88	0.88	6.88
444TS	11.00	18.00	14.50	7.50	0.81 Dia.	4.75	2.38	4.50	0.62	0.62	3.00
445T	11.00	18.00	16.50	7.50	0.81 Dia.	8.50	3.38	8.25	0.88	0.88	6.88
445TS	11.00	18.00	16.50	7.50	0.81 Dia.	4.75	2.38	4.50	0.62	0.62	3.00
447T	11.00	18.00	20.00	7.50	0.81 Dia.	8.50	3.38	8.25	0.88	0.88	6.88
447TS	11.00	18.00	20.00	7.50	0.81 Dia.	4.75	2.38	4.50	0.62	0.62	3.00
449T	11.00	18.00	25.00	7.50	0.81 Dia.	8.50	3.38	8.25	0.88	0.88	6.88

Notes:
"C" dimension is overall length and is shown for each catalog number on rating page
All dimensions are nominal. Request factory outlines for exact dimensions.

Energy $aver®

TEFC—Extra Severe Duty

Standard Features

NEMA Frame Size	143 - 449
Poles	2, 4 & 6
Horsepower Range	2-pole - 1 - 300 4-pole - 1 - 350 6-pole - 1 - 250
Voltage	230/460 V - 1 - 75 HP 460 and 575 - 1 - Max HP.
Shaft Extension	2-pole 143 - 326 fr - T 324 - 449 fr - TS 4 & 6-pole 143 - 449 fr - T
Agency Approvals	UL - Component and Insulation System Recognition CSA - Certification and Efficiency Verification
Warranty (months)	36 months from date of installation or 42 months from date of manufacture, whichever occurs first
Max Ambient & Altitude	40˚C & 3300 feet
Insulation Class	F
Winding Temperature Rise	105˚C at the Service Factor
Service Factor	1.15 Sine wave
NEMA Design	A or B
Insulation System	Non-Hygroscopic, Anti-Fungus, Polyester Resin, Trickle Treated, Tested to Exceed NEMA MG 1 Part 31
Inverter Capability	Variable Torque INF:1
Efficiency	Per USA & Canada Legislation (NEMA Premium 1-200 HP)
Frame Material	Cast iron
Frame/Conduit Box Gasket	Neoprene Rubber
End Shield Material	Cast iron
Conduit Box Material	Cast Iron or Fabricated Steel Plate
Conduit Box Cover Gasket	Neoprene Rubber
Conduit Box Rotation	90 degree increments
Conduit Box Hole Thread	NPT
Fan Cover Material	Cast iron
Fan	Bi-Directional, Non-sparking Plastic
Sound Power	NEMA MG 1 Part 9
Mounting	F1 (Field modifiable to F2)
Mounting Holes	2 per foot, 8 total
Lifting	4 point cast in lugs
Bearing Type	Single Shield Ball or Open Roller
Bearing L10 Life (Hours)	Belted - 26,280 per NEMA MG 1 14.42.2 Direct coupled - 130,000
Bearing Caps	143 - 286 fr - No 324 - 449 fr - Cast Iron, gasketed
Bearing Lubricant	Polyurea
Bearing Re-Lubrication	Grease fitting & plug . Extended through the fan cover. (Re-greasing is optional on 140-280 frame)
Bearing Protection	Steel reinforced neoprene shaft slinger
Fasteners	Hex Head, Zinc Plated
Condensation Drain	Stainless Steel T-drains at the lowest point of both end shields
Balance & Vibration	ISO 1940 Grade 1 NEMA Grade A
Vibration Pads	Cast in vibration pads for repeatable measurements
Nameplate	316 Stainless Steel
Paint	Epoxy ester, RAL 1001
Tests	NEMA Routine, IEEE 112 Method B

Energy $aver®

TEFC—Extra Severe Duty

Pricing

Volts: 230/460, 460, 575
HP: 1 - 350

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	NEMA Design	KVA/HP Code	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs.)	C Dim. (in.)	Notes
1	3600	575	143T	1.1	77.0	-	N	**M7500**	5KS143STE107	$492	G4-7S$P1	Y	47	12.4	
1	3600	230/460	143T	2.8/1.4	77.0	-	N	**M7700**	5KS143STE105	$492	G4-7S$P1	Y	47	12.25	29,105,131
1	1800	575	143T	1.1	85.5	B	N	**M7523**	5KS143STE204	$498	G4-7S$P1	Y	46	12.4	
1	1800	230/460	143T	2.8/1.4	85.5	B	N	**M7723**	5KS143STE205	$498	G4-7S$P1	Y	46	12.25	29,105,131
1	1200	230/460	145T	3.4/1.7	82.5	B	N	**M7540**	5KS145STE305	$660	G4-7S$P1	Y	51	13.4	29,105,131
1.5	3600	575	143T	1.5	84.0	B	M	**M7501**	5KS143STE104	$534	G4-7S$P1	Y	47	12.4	
1.5	3600	230/460	143T	3.8/1.9	85.5	B	M	**M7701**	5KS143STE109	$534	G4-7S$P1	N	43	11.62	
1.5	1800	575	145T	1.7	86.5	B	M	**M7524**	5KS145STE204	$554	G4-7S$P1	Y	60	13.4	
1.5	1800	230/460	145T	4.2/2.1	86.5	B	M	**M7724**	5KS145STE209	$554	G4-7S$P1	Y	60	13.24	29,105,131
1.5	1200	230/460	182T	4.8/2.4	87.5	B	M	**M7541**	5KS182STE305	$750	G4-7S$P1	Y	93	14.59	29,105,131
2	3600	575	145T	1.9	85.5	B	L	**M7502**	5KS145STE104	$639	G4-7S$P1	Y	63	13.4	
2	3600	230/460	145T	4.8/2.4	85.5	B	L	**M7702**	5KS145STE105	$639	G4-7S$P1	Y	63	13.24	29,105,131
2	1800	575	145T	2.2	86.5	B	L	**M7525**	5KS145STE207	$609	G4-7S$P1	Y	60	13.4	
2	1800	230/460	145T	5.4/2.7	86.5	B	L	**M7725**	5KS145STE205	$609	G4-7S$P1	Y	60	13.24	29,105,131
2	1200	230/460	184T	6.6/3.3	88.5	B	L	**M7542**	5KS184STE305	$840	G4-7S$P1	Y	106	15.57	29,105,131
3	3600	575	182T	2.9	86.5	B	K	**M7503**	5KS182STE104	$719	G4-7S$P1	Y	82	14.59	
3	3600	230/460	182T	7.2/3.6	86.5	B	K	**M7703**	5KS182STE105	$719	G4-7S$P1	Y	82	14.43	29,105,131
3	1800	575	182T	3	89.5	A	L	**M7526**	5KS182STE204	$690	G4-7S$P1	Y	86	14.59	
3	1800	230/460	182T	7.6/3.8	89.5	A	L	**M7726**	5KS182STE205	$675	G4-7S$P1	Y	86	14.43	29,105,131
3	1200	230/460	213T	8.2/4.1	89.5	B	K	**M7543**	5KS213STE305	$1,020	G4-7S$P1	Y	139	17.78	29,105,131
5	3600	575	184T	4.6	88.5	A	K	**M7504**	5KS184STE104	$890	G4-7S$P1	Y	106	15.57	
5	3600	230/460	184T	11.4/5.7	88.5	A	K	**M7704**	5KS184STE105	$890	G4-7S$P1	Y	106	15.42	29,105,131
5	1800	575	184T	5	89.5	A	K	**M7527**	5KS184STE204	$788	G4-7S$P1	Y	111	15.57	
5	1800	230/460	184T	12.6/6.3	89.5	A	K	**M7727**	5KS184STE205	$788	G4-7S$P1	Y	111	15.42	
5	1200	230/460	215T	13.6/6.8	89.5	A	K	**M7544**	5KS215STE305	$1,425	G4-7S$P1	Y	168	19.27	29,105,131
7.5	3600	575	213T	7.2	89.5	A	J	**M7505**	5KS213STE104	$1,076	G4-7S$P1	Y	149	17.94	
7.5	3600	230/460	213T	18/9	89.5	A	J	**M7705**	5KS213STE105	$1,076	G4-7S$P1	Y	200	20.15	
7.5	1800	575	213T	7.3	91.7	A	J	**M7528**	5KS213STE204	$1,070	G4-7S$P1	Y	158	17.78	
7.5	1800	230/460	213T	18.2/9.1	91.7	A	J	**M7728**	5KS213STE205	$1,070	G4-7S$P1	Y	158	17.94	29,105,131
7.5	1200	230/460	254T	19.6/9.8	91.0	B	G	**M7545**	5KS254STE305	$1,800	G4-7S$P1	Y	234	23.7	29,105,131
10	3600	575	215T	9.4	90.2	A	J	**M7506**	5KS215STE104	$1,257	G4-7S$P1	Y	184	19.27	
10	3600	230/460	215T	23.6/11.8	90.2	A	J	**M7706**	5KS215STE105	$1,257	G4-7S$P1	Y	184	19.43	29,105,131
10	1800	575	215T	9.8	91.7	A	J	**M7529**	5KS215STE204	$1,289	G4-7S$P1	Y	197	19.27	
10	1800	230/460	215T	24.4/12.2	91.7	A	J	**M7729**	5KS215STE205	$1,289	G4-7S$P1	Y	197	19.43	29,105,131
10	1200	230/460	256T	25.6/12.8	91.0	B	G	**M7546**	5KS256STE305	$2,430	G4-7S$P1	Y	265	25.4	29,105,131
15	3600	575	254T	13.4	91.0	A	H	**M7507**	5KS254STE104	$1,727	G4-7S$P1	Y	279	23.7	
15	3600	230/460	254T	33.6/16.8	91.0	A	H	**M7707**	5KS254STE105	$1,727	G4-7S$P1	Y	279	23.4	29,105,131
15	1800	575	254T	14.4	92.4	A	H	**M7530**	5KS254STE204	$1,697	G4-7S$P1	Y	277	23.7	
15	1800	230/460	254T	36/18	92.4	A	H	**M7730**	5KS254STE205	$1,697	G4-7S$P1	Y	277	23.4	29,105,131
15	1200	230/460	284T	37/18.5	91.7	B	G	**M7547**	5KS284STE305	$3,000	G4-7S$P1	Y	348	26.7	29,105,131

Notes:

29 Usable on 200 Volts, 60Hz at 1.0 service factor
105 Usable on 200/400V, 50Hz, same HP, at 1.0 service factor
131 Usable on 200/400V, 50Hz at 1.15SF and de-rated to next lower HP

Energy $aver®

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 1 - 350

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	NEMA Design	KVA/HP Code	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs.)	C Dim. (in.)	Notes
20	3600	575	256T	17.8	91.0	A	G	**M7508**	5KS256STE104	$2,139	G4-7S$P1	Y	336	25.4	
20	3600	230/460	256T	44.4/22.2	91.0	A	G	**M7708**	5KS256STE105	$2,139	G4-7S$P1	Y	336	25.1	29,105,131
20	1800	575	256T	19	93.0	A	G	**M7531**	5KS256STE204	$2,114	G4-7S$P1	Y	321	25.4	
20	1800	230/460	256T	47.4/23.7	93.0	A	G	**M7731**	5KS256STE205	$2,114	G4-7S$P1	Y	321	25.1	29,105,131
20	1200	230/460	286T	49/24.5	91.7	B	G	**M7548**	5KS286STE305	$3,600	G4-7S$P1	Y	373	28.2	29,105,131
25	3600	575	284TS	25.9	91.7	A	G	**M7509**	5KS284STE114	$2,456	G4-7S$P1	Y	468	25.33	
25	3600	230/460	284T	64.8/32.4	91.7	A	G	**M7749**	5KS284STE105	$2,456	G4-7S$P1	Y	473	26.9	29,105,131
25	3600	230/460	284TS	64.8/32.4	91.7	A	G	**M7709**	5KS284STE115	$2,456	G4-7S$P1	Y	473	25.53	29,105,131
25	1800	575	284T	23.8	93.6	B	G	**M7532**	5KS284STE204	$2,343	G4-7S$P1	Y	473	26.7	
25	1800	230/460	284T	59.6/29.8	93.6	B	G	**M7732**	5KS284STE205	$2,343	G4-7S$P1	Y	473	26.9	29,105,131
25	1200	230/460	324T	62.4/31.2	93.0	A	G	**M7549**	5KS324STE305	$4,200	G4-7S$P1	Y	511	29.9	29,105,131
30	3600	575	286TS	26.9	91.7	B	G	**M7510**	5KS286STE114	$2,867	G4-7S$P1	Y	513	26.83	
30	3600	230/460	286T	67.2/33.6	91.7	B	G	**M7750**	5KS286STE105	$2,867	G4-7S$P1	Y	518	28.4	29,105,131
30	3600	230/460	286TS	67.2/33.6	91.7	B	G	**M7710**	5KS286STE115	$2,867	G4-7S$P1	Y	518	27.03	29,105,131
30	1800	575	286T	28.7	93.6	B	G	**M7533**	5KS286STE204	$2,652	G4-7S$P1	Y	499	28.2	
30	1800	230/460	286T	71.8/35.9	93.6	B	G	**M7733**	5KS286STE205	$2,652	G4-7S$P1	Y	499	28.4	29,105,131
30	1200	230/460	326T	72.4/36.2	93.0	A	G	**M7550**	5KS326STE305	$4,800	G4-7S$P1	Y	586	31.4	29,105,131
40	3600	575	324TS	35.6	92.4	B	G	**M7511**	5KS324STE114	$3,678	G4-7S$P1	Y	614	28.4	
40	3600	230/460	324T	89/44.5	92.4	B	G	**M7712**	5KS324STE105	$3,678	G4-7S$P1	Y	632	29.7	105,131
40	3600	230/460	324TS	89/44.5	92.4	B	G	**M7711**	5KS324STE115	$3,678	G4-7S$P1	Y	632	26.32	105,131
40	1800	575	324T	40	94.1	A	H	**M7534**	5KS324STE204	$3,522	G4-7S$P1	Y	632	29.9	
40	1800	230/460	324T	93/46.5	94.1	A	H	**M7734**	5KS324STE205	$3,522	G4-7S$P1	Y	632	29.7	
40	1200	460	364T	50.4	94.1	A	G	**M7953**	5KS364LAA308	$7,650	G4-7S$P	N	980	34.89	
40	1200	575	364T	40	94.1	A	G	**M7951**	5KS364LAA304	$7,650	G4-7S$P	N	980	34.89	
40	1200	230/460	364T	100.8/50.4	94.1	A	G	**M7952**	5KS364LAA305	$7,650	G4-7S$P	Y	980	34.89	
50	3600	575	326TS	35.6	93.0	A	G	**M7513**	5KS326STE114	$4,760	G4-7S$P1	Y	697	31.4	
50	3600	230/460	326T	110/55	93.0	A	G	**M7714**	5KS326STE105	$4,760	G4-7S$P1	Y	724	31.32	105,131
50	3600	230/460	326TS	110/55	93.0	A	G	**M7713**	5KS326STE115	$4,760	G4-7S$P1	Y	724	27.82	105,131
50	1800	575	326T	46.3	94.5	A	J	**M7536**	5KS326STE204	$4,326	G4-7S$P1	Y	724	29.9	
50	1800	230/460	326T	115.8/57.9	94.5	A	J	**M7736**	5KS326STE205	$4,326	G4-7S$P1	Y	724	31.32	105,131
50	1200	460	365T	61	94.1	A	G	**M7956**	5KS365LAA308	$8,850	G4-7S$P	N	1000	34.89	
50	1200	575	365T	49.4	94.1	A	G	**M7954**	5KS365LAA304	$8,850	G4-7S$P	N	1000	34.89	
50	1200	230/460	365T	122.0/61.0	94.1	A	G	**M7955**	5KS365LAA305	$8,850	G4-7S$P	Y	1000	34.89	

Notes:

29 Usable on 200 Volts, 60Hz at 1.0 service factor
105 Usable on 200/400V, 50Hz, same HP, at 1.0 service factor
131 Usable on 200/400V, 50Hz at 1.15SF and de-rated to next lower HP

Energy $aver®

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 1 - 350

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	NEMA Design	KVA/HP Code	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs.)	C Dim. (in.)	Notes
60	3600	460	364TS	78.9	93.6	A	G	**M7909**	5KS364LAA118	$8,636	G4-7S$P	Y	930	32.76	
60	3600	575	364TS	63.2	93.6	A	G	**M7907**	5KS364LAA114	$8,636	G4-7S$P	Y	930	32.76	
60	3600	230/460	364TS	157.8/78.9	93.6	A	G	**M7908**	5KS364LAA115	$8,636	G4-7S$P	N	930	32.76	
60	1800	460	364T	73.9	95.0	A	G	**M7931**	5KS364LAA208	$8,456	G4-7S$P	Y	960	34.89	
60	1800	575	364T	58	95.0	A	G	**M7929**	5KS364LAA204	$8,456	G4-7S$P	Y	960	34.89	
60	1800	230/460	364T	147.8/73.9	95.0	A	G	**M7930**	5KS364LAA205	$8,636	G4-7S$P	N	960	34.89	
60	1200	460	404T	77.7	94.5	A	G	**M7958**	5KS404LAA308	$11,025	G4-7S$P	Y	1390	39.77	
60	1200	460	404T	77.7	94.5	A	G	**M7697**	5KS404LAA308F2	$11,025	G4-7S$P	Y	1390	39.77	70
60	1200	575	404T	61.3	94.5	A	G	**M7957**	5KS404LAA304	$11,025	G4-7S$P	N	1390	39.77	
60	1200	230/460	404T	155.4/77.7	94.5	A	G	**M7164**	5KS404LAA305	$11,025	G4-7S$P	N	1390	39.77	
75	3600	460	365TS	88.8	93.6	A	G	**M7912**	5KS365LAA118	$10,601	G4-7S$P	Y	970	32.76	
75	3600	575	365TS	71.4	93.6	A	G	**M7910**	5KS365LAA114	$10,601	G4-7S$P	Y	970	32.76	
75	3600	230/460	365TS	177.6/88.8	93.6	A	G	**M7911**	5KS365LAA115	$10,601	G4-7S$P	N	970	32.76	
75	1800	460	365T	90.8	95.4	A	G	**M7934**	5KS365LAA208	$10,251	G4-7S$P	Y	1010	34.89	
75	1800	575	365T	72.2	95.4	A	G	**M7932**	5KS365LAA204	$10,251	G4-7S$P	Y	1010	34.89	
75	1800	230/460	365T	181.6/90.8	95.4	A	G	**M7933**	5KS365LAA205	$10,251	G4-7S$P	N	1010	34.89	
75	1200	460	405T	97.7	94.5	A	G	**M7960**	5KS405LAA308	$12,300	G4-7S$P	Y	1420	39.77	117
75	1200	460	405T	97.7	94.5	B	G	**M7691**	5KS405LAA325	$12,300	G4-7S$P	N	1420	39.77	98
75	1200	575	405T	76.7	94.5	A	G	**M7959**	5KS405LAA304	$12,300	G4-7S$P	N	1420	39.77	
75	1200	230/460	405T	195.4/97.7	94.5	A	G	**M7165**	5KS405LAA305	$12,300	G4-7S$P	N	1420	39.77	
100	3600	460	405TS	112	95.0	A	H	**M7914**	5KS405LAA118	$13,727	G4-7S$P	Y	1430	36.76	
100	3600	575	405TS	89.6	95.0	A	H	**M7913**	5KS405LAA114	$13,727	G4-7S$P	Y	1430	36.76	
100	1800	460	405T	122	95.4	A	G	**M7936**	5KS405LAA208	$12,662	G4-7S$P	Y	1440	39.77	117
100	1800	460	405T	122.0	95.4	B	G	**M7694**	5KS405LAA248	$12,662	G4-7S$P	N	1440	39.77	98
100	1800	575	405T	98.1	95.4	A	G	**M7935**	5KS405LAA204	$12,662	G4-7S$P	Y	1440	39.77	
100	1200	460	444T	125	95.0	A	G	**M7962**	5KS444LAA308	$16,200	G4-7S$P	Y	1860	45.62	117
100	1200	460	444T	125.0	95.0	B	G	**M7692**	5KS444LAA333	$16,200	G4-7S$P	N	1860	45.62	98
100	1200	575	444T	99.1	95.0	A	G	**M7961**	5KS444LAA304	$16,200	G4-7S$P	N	1860	45.62	
125	3600	460	444TS	142	95.0	A	H	**M7916**	5KS444LAA118	$17,124	G4-7S$P	Y	1810	41.87	
125	3600	575	444TS	114	95.0	A	H	**M7915**	5KS444LAA114	$17,124	G4-7S$P	Y	1810	41.87	
125	1800	460	444T	148	95.4	A	G	**M7938**	5KS444LAA208	$15,909	G4-7S$P	Y	1780	45.62	117
125	1800	460	444T	148.0	95.4	A	G	**M7695**	5KS444LAA239	$15,909	G4-7S$P	N	1780	45.62	98
125	1800	575	444T	118	95.4	A	G	**M7937**	5KS444LAA204	$15,909	G4-7S$P	Y	1780	45.62	
125	1200	460	445T	153	95.0	A	G	**M7964**	5KS445LAA308	$19,500	G4-7S$P	Y	1950	45.62	117
125	1200	460	445T	153	95.0	B	G	**M7686**	5KS445LAA322	$19,500	G4-7S$P	Y	1950	45.62	98
125	1200	575	445T	122	95.0	A	G	**M7963**	5KS445LAA304	$19,500	G4-7S$P	N	1950	45.62	

Notes:
70 F2 Assembly
98 For belted load only. Roller bearing.
117 Ball Bearing

Energy $aver®

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 1 - 350

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	NEMA Design	KVA/HP Code	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs.)	C Dim. (in.)	Notes
150	3600	460	445TS	171	95.0	A	G	**M7918**	5KS445LAA118	$20,592	G4-7S$P	Y	1830	41.87	
150	3600	575	445TS	136	95.0	A	G	**M7917**	5KS445LAA114	$20,592	G4-7S$P	Y	1830	41.87	
150	1800	460	445T	173	95.8	A	G	**M7940**	5KS445LAA208	$18,509	G4-7S$P	Y	1880	45.62	117
150	1800	460	445T	173.0	95.8	A	G	**M7696**	5KS445LAA238	$18,509	G4-7S$P	N	1880	45.62	98
150	1800	575	445T	140	95.8	A	G	**M7939**	5KS445LAA204	$18,509	G4-7S$P	Y	1880	45.62	
150	1200	460	447T	182	95.8	A	H	**M7966**	5KS447LAA308	$22,350	G4-7S$P	Y	2560	54.12	117
150	1200	460	447T	182.0	95.8	A	H	**M7693**	5KS447LAA323	$22,350	G4-7S$P	N	2560	54.12	98
150	1200	575	447T	144	95.8	A	H	**M7965**	5KS447LAA304	$22,350	G4-7S$P	N	2560	54.12	
200	3600	460	447TS	216	95.4	A	G	**M7920**	5KS447LAA118	$26,069	G4-7S$P	Y	2420	50.37	
200	3600	575	447TS	172	95.4	A	G	**M7919**	5KS447LAA114	$26,069	G4-7S$P	Y	2420	50.37	
200	1800	460	447T	228	96.2	A	H	**M7942**	5KS447LAA208	$23,217	G4-7S$P	Y	2590	54.12	117
200	1800	460	447T	224	96.2	A	H	**M7671**	5KS447LAA234	$23,217	G4-7S$P	N	2590	54.12	98
200	1800	575	447T	181	96.2	A	H	**M7941**	5KS447LAA204	$23,217	G4-7S$P	Y	2590	54.12	
200	1800	575	447T	181.0	96.2	A	H	**M7698**	5KS447LAA242	$23,217	G4-7S$P	N	2590	54.12	98
200	1200	460	449T	240	95.8	A	H	**M7968**	5KS449LAA308	$27,800	G4-7S$P	Y	2730	54.12	117
200	1200	460	449T	240	95.8	A	H	**M7157**	5KS449LAA310	$27,800	G4-7S$P	N	2730	54.12	98
200	1200	575	449T	188	95.8	A	G	**M7967**	5KS449LAA304	$27,800	G4-7S$P	N	2730	54.12	117
200	1200	575	449T	188	95.8	A	G	**M7158**	5KS449LAA311	$27,800	G4-7S$P	N	2730	54.12	98
250	3600	460	449TS	276	95.8	A	H	**M7922**	5KS449LAA118	$33,588	G4-7S$P	Y	2510	50.37	
250	3600	575	449TS	220	95.8	A	H	**M7921**	5KS449LAA114	$33,588	G4-7S$P	Y	2510	50.37	
250	1800	460	449T	286	96.2	A	J	**M7160**	5KS449LAA210	$27,149	G4-7S$P	N	2840	54.12	117
250	1800	460	449T	286	96.2	A	J	**M7944**	5KS449LAA208	$27,149	G4-7S$P	Y	2840	54.12	98
250	1800	575	449T	226	96.2	A	H	**M7161**	5KS449LAA211	$27,149	G4-7S$P	Y	2840	54.12	117
250	1800	575	449T	226	96.2	A	H	**M7943**	5KS449LAA204	$27,149	G4-7S$P	N	2840	54.12	98
250	1200	460	449T	311	95.8	A	J	**M7672**	5KS449LAA307	$36,406	G4-7S$P	Y	2940	54.12	117
250	1200	460	449T	311	95.8	A	J	**M7673**	5KS449LAA309	$36,406	G4-7S$P	N	2940	54.12	98
250	1200	575	449T	246	95.8	A	J	**M7674**	5KS449LAA317	$36,406	G4-7S$P	N	2940	54.12	117
250	1200	575	449T	246	95.8	A	J	**M7675**	5KS449LAA319	$36,406	G4-7S$P	N	2940	54.12	98
300	1800	460	449T	347	96.2	A	J	**M7678**	5KS449LAA261	$31,492	G4-7S$P	N	2910	54.12	117
300	1800	460	449T	347	96.2	A	J	**M7679**	5KS449LAA262	$31,492	G4-7S$P	N	2910	54.12	98
300	1800	575	449T	280	96.2	A	J	**M7680**	5KS449LAA263	$31,492	G4-7S$P	N	2910	54.12	117
300	1800	575	449T	280	96.2	A	J	**M7681**	5KS449LAA264	$31,492	G4-7S$P	N	2910	54.12	98
350	1800	460	449T	398	96.2	A	H	**M7682**	5KS449LAA265	$39,530	G4-7S$P	N	3010	54.12	117
350	1800	460	449T	398	96.2	A	H	**M7683**	5KS449LAA266	$39,530	G4-7S$P	N	3010	54.12	98
350	1800	575	449T	322	96.2	A	J	**M7684**	5KS449LAA267	$39,530	G4-7S$P	N	3050	54.12	117
350	1800	575	449T	322	96.2	A	J	**M7685**	5KS449LAA268	$39,530	G4-7S$P	N	3050	54.12	98

Notes:
98 For belted load only. Roller bearing.
117 Ball Bearing

Energy $aver®

TEFC—Extra Severe Duty

Typical Performance Data

HP: 1-350

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff (%)	NP FL PF (%)	Max KVAR
1	3600	230/460	**M7600**	5KS143STE105F2	143T	2.8/1.4	11	A	N	1.5	3.9	5.5	77	88.5	0.3
1	3600	230/460	**M7700**	5KS143STE105	143T	2.8/1.4	11	-	N	1.5	3.9	5.5	77	88.5	0.3
1	3600	575	**M7500**	5KS143STE107	143T	1.1	8.8	-	N	1.5	3.9	5.5	77	88.5	0.3
1	1800	230/460	**M7623**	5KS143STE205F2	143T	2.8/1.4	11.2	B	N	3	8.2	9	85.5	76	0.5
1	1800	230/460	**M7723**	5KS143STE205	143T	2.8/1.4	11.2	B	N	3	8.2	9	85.5	76	0.5
1	1800	575	**M7523**	5KS143STE204	143T	1.1	8.8	B	N	3	8.3	9	85.5	76.0	0.5
1	1200	230/460	**M7540**	5KS145STE305	145T	3.4/1.7	8.6	B	N	4.6	7.8	12.1	82.5	65.5	0.8
1.5	3600	230/460	**M7601**	5KS143STE109F2	143T	3.8/1.9	19.8	B	M	2.2	3.9	5.6	84.0	87.5	0.5
1.5	3600	230/460	**M7701**	5KS143STE109	143T	3.8/1.9	19.8	B	M	2.2	3.9	5.6	84.0	87.5	0.5
1.5	3600	575	**M7501**	5KS143STE104	143T	1.5	13.7	B	M	2.2	3.9	5.6	84.0	87.5	0.5
1.5	1800	230/460	**M7553**	5KS145STE209F2RG3	145T	4.2/2.1	16.7	B	M	4.5	11.3	12.6	86.5	77	0.8
1.5	1800	230/460	**M7624**	5KS145STE209F2	145T	4.2/2.1	16.7	B	M	4.5	11.3	12.6	86.5	77	0.8
1.5	1800	230/460	**M7724**	5KS145STE209	145T	4.2/2.1	16.7	B	M	4.5	11.3	12.6	86.5	77	0.8
1.5	1800	575	**M7524**	5KS145STE204	145T	1.7	13.8	B	M	4.5	11.3	12.6	86.5	77.0	0.8
1.5	1200	230/460	**M7541**	5KS182STE305	182T	4.8/2.4	17.5	B	M	6.7	11.1	16.8	87.5	66.5	1.1
2	3600	230/460	**M7602**	5KS145STE105F2	145T	4.8/2.4	24.8	B	L	3	5.1	7.2	85.5	90.5	0.5
2	3600	230/460	**M7702**	5KS145STE105	145T	4.8/2.4	24.8	B	L	3	5.1	7.2	85.5	90.5	0.5
2	3600	575	**M7502**	5KS145STE104	145T	1.9	19.8	B	L	3	5.1	7.2	85.5	90.5	0.5
2	1800	230/460	**M7555**	5KS145STE205F2RG3	145T	5.4/2.7	20.1	B	L	6.1	14.2	16.4	86.5	79.5	0.9
2	1800	230/460	**M7625**	5KS145STE205F2	145T	5.4/2.7	20.1	B	L	6.1	14.2	16.4	86.5	79.5	0.9
2	1800	230/460	**M7725**	5KS145STE205	145T	5.4/2.7	20.1	B	L	6.1	14.2	16.4	86.5	79.5	0.9
2	1800	575	**M7525**	5KS145STE207	145T	2.2	16.3	B	L	6.1	14.2	16.4	86.5	79.5	0.9
2	1200	230/460	**M7542**	5KS184STE305	184T	6.6/3.3	22.9	B	L	9	14.3	21.5	88.5	65	1.3
3	3600	230/460	**M7603**	5KS182STE105F2	182T	7.2/3.6	29.7	B	K	4.5	7.1	10.3	86.5	91	0.7
3	3600	230/460	**M7703**	5KS182STE105	182T	7.2/3.6	29.7	B	K	4.5	7.1	10.3	86.5	91	0.7
3	3600	575	**M7503**	5KS182STE104	182T	2.9	23	B	K	4.5	7.2	10.3	86.5	91.0	0.7
3	1800	230/460	**M7557**	5KS182STE205F2RG3	182T	7.6/3.8	34.1	A	L	8.9	19.2	22.4	89.5	82	1.2
3	1800	230/460	**M7626**	5KS182STE205F2	182T	7.6/3.8	34.1	A	L	8.9	19.2	22.4	89.5	82	1.2
3	1800	230/460	**M7726**	5KS182STE205	182T	7.6/3.8	34.1	A	L	8.9	19.2	22.4	89.5	82	1.2
3	1800	575	**M7526**	5KS182STE204	182T	3.0	23	A	L	9	19.3	22.5	89.5	82	1.2
3	1200	230/460	**M7543**	5KS213STE305	213T	8.2/4.1	29	B	K	13.4	20.8	30.9	89.5	75	1.5
5	3600	230/460	**M7604**	5KS184STE105F2	184T	11.4/5.7	51.6	A	K	7.5	11.2	16	88.5	92	1.1
5	3600	230/460	**M7704**	5KS184STE105	184T	11.4/5.7	51.6	A	K	7.5	11.2	16	88.5	92	1.1
5	3600	575	**M7504**	5KS184STE104	184T	4.6	37.9	A	K	7.5	11.2	16.1	88.5	92.0	1.1
5	1800	230/460	**M7559**	5KS184STE205F2RG3	184T	12.6/6.3	55.4	A	K	15	27.7	33.7	89.5	83	1.8
5	1800	230/460	**M7627**	5KS184STE205F2	184T	12.6/6.3	55.4	A	K	15	27.7	33.7	89.5	83	1.8
5	1800	230/460	**M7727**	5KS184STE205	184T	12.6/6.3	55.4	A	K	15	27.7	33.7	89.5	83	1.8
5	1800	575	**M7527**	5KS184STE204	184T	5.0	45.3	A	K	15	27.7	33.7	89.5	83	2.3
5	1200	230/460	**M7544**	5KS215STE305	215T	13.6/6.8	49.5	A	K	22.4	33.7	48.2	89.5	75	2.4
7.5	3600	230/460	**M7605**	5KS213STE105F2	213T	18.0/9.0	70.8	A	J	11.2	15.7	22.4	89.5	87.0	2.0
7.5	3600	230/460	**M7705**	5KS213STE105	213T	18.0/9.0	70.8	A	J	11.2	15.7	22.4	89.5	87.0	2.0
7.5	3600	575	**M7505**	5KS213STE104	213T	7.2	54.7	A	J	11.2	15.7	22.4	89.5	87.0	2.0
7.5	1800	230/460	**M7561**	5KS213STE205F2RG3	213T	18.2/9.1	70.3	A	J	22.3	39.1	48	91.7	84	2.3
7.5	1800	230/460	**M7628**	5KS213STE205F2	213T	18.2/9.1	70.3	A	J	22.3	39.1	48	91.7	84	2.3
7.5	1800	230/460	**M7728**	5KS213STE205	213T	18.2/9.1	70.3	A	J	22.3	39.1	48	91.7	84	2.3
7.5	1800	575	**M7528**	5KS213STE204	213T	7.3	57.1	A	J	22.3	39	48	91.7	84	2.3
7.5	1200	230/460	**M7545**	5KS254STE305	254T	19.6/9.8	59.8	B	G	33.5	50.2	68.6	91	77	2.9
10	3600	230/460	**M7606**	5KS215STE105F2	215T	23.6/11.8	90.9	A	J	15	20.2	30	90.2	88.0	2.3
10	3600	230/460	**M7706**	5KS215STE105	215T	23.6/11.8	90.9	A	J	15	20.2	30	90.2	88.0	2.3
10	3600	575	**M7506**	5KS215STE104	215T	9.4	73.3	A	J	15	20.2	30	90.2	88	2.3
10	1800	230/460	**M7563**	5KS215STE205F2RG3	215T	24.4/12.2	94.6	A	J	29.8	49.2	59.6	91.7	84	3.2
10	1800	230/460	**M7629**	5KS215STE205F2	215T	24.4/12.2	94.6	A	J	29.8	49.2	59.6	91.7	84	3.2
10	1800	230/460	**M7729**	5KS215STE205	215T	24.4/12.2	94.6	A	J	29.8	49.2	59.6	91.7	84	3.2
10	1800	575	**M7529**	5KS215STE204	215T	9.8	76.4	A	J	29.8	49.2	59.6	91.7	84	3.2
10	1200	230/460	**M7546**	5KS256STE305	256T	25.6/12.8	76	B	G	44.8	67.2	89.6	91	80	3.3

Energy $aver®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

HP: 1-350

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff (%)	NP FL PF (%)	Max KVAR
15	3600	230/460	**M7607**	5KS254STE105F2	254T	33.6/16.8	119.8	A	H	22.3	29	44.6	91	92	3.2
15	3600	230/460	**M7707**	5KS254STE105	254T	33.6/16.8	119.8	A	H	22.3	29	44.6	91	92	3.2
15	3600	575	**M7507**	5KS254STE104	254T	13.4	98.9	A	H	22.3	29	44.6	91	92	3.2
15	1800	230/460	**M7565**	5KS254STE205F2RG3	254T	36/18	122.1	A	H	44.6	71.3	89.1	92.4	84.5	4.4
15	1800	230/460	**M7630**	5KS254STE205F2	254T	36/18	122.1	A	H	44.6	71.3	89.1	92.4	84.5	4.4
15	1800	230/460	**M7730**	5KS254STE205	254T	36/18	122.1	A	H	44.6	71.3	89.1	92.4	84.5	4.4
15	1800	575	**M7530**	5KS254STE204	254T	14.4	97.8	A	H	44.6	71.3	89.1	92.4	84.5	4.4
15	1200	230/460	**M7547**	5KS284LAA305	284T	40.8/20.4	124	A	H	66.5	93.1	133	91.7	75.0	7.6
20	3600	230/460	**M7708**	5KS256STE105	256T	44.4/22.2	152.8	A	G	29.8	38.8	59.7	91.0	92.5	3.6
20	3600	575	**M7508**	5KS256STE104	256T	17.8	127.2	A	G	29.8	38.7	59.6	91	92.5	3.6
20	1800	230/460	**M7567**	5KS256STE205F2RG3	256T	47.4/23.7	154	A	G	59.6	89.4	119.2	93	85	5.4
20	1800	230/460	**M7631**	5KS256STE205F2	256T	47.4/23.7	154	A	G	59.6	89.4	119.2	93	85	5.4
20	1800	230/460	**M7731**	5KS256STE205	256T	47.4/23.7	154	A	G	59.6	89.4	119.2	93	85	5.4
20	1800	575	**M7531**	5KS256STE204	256T	19.0	135.3	A	G	59.4	89.2	118.9	93.0	85.0	5.4
20	1200	230/460	**M7548**	5KS286LAA305	286T	53.8/26.9	158.8	A	H	88.8	119.9	177.6	91.7	76.0	9.7
25	3600	230/460	**M7709**	5KS284STE115	284TS	64.8/32.4	177.8	A	G	37	48.1	74	91.7	90.5	3.3
25	3600	230/460	**M7749**	5KS284STE105	284T	64.8/32.4	177.8	A	G	37	48.1	74	91.7	90.5	3.3
25	3600	575	**M7509**	5KS284STE114	284TS	25.9	142.3	A	G	37	48.1	74	91.7	90.5	3.3
25	1800	230/460	**M7632**	5KS284STE205F2	284T	59.6/29.8	181.2	B	G	74	111.1	148.1	93.6	84	6.5
25	1800	230/460	**M7732**	5KS284STE205	284T	59.6/29.8	181.2	B	G	74	111.1	148.1	93.6	84	6.5
25	1800	575	**M7532**	5KS284STE204	284T	23.8	141.8	B	G	74.1	111.1	148.1	93.6	84.0	6.5
25	1200	230/460	**M7549**	5KS324STE305	324T	62.4/31.2	193.7	A	G	110.9	149.7	221.8	93	80	8.4
30	3600	230/460	**M7710**	5KS286STE115	286TS	67.2/33.6	202.9	B	G	44.4	57.8	88.9	91.7	91.0	4.9
30	3600	230/460	**M7750**	5KS286STE105	286T	67.2/33.6	202.9	B	G	44.4	57.8	88.9	91.7	91.0	4.9
30	3600	575	**M7510**	5KS286STE114	286TS	26.9	154.6	B	G	44.5	57.8	89	91.7	91.0	4.9
30	1800	230/460	**M7570**	5KS286STE205F2RG3	286T	71.8/35.9	229.5	B	G	88.8	133.2	177.6	93.6	83.5	8.4
30	1800	230/460	**M7633**	5KS286STE205F2	286T	71.8/35.9	229.5	B	G	88.8	133.2	177.6	93.6	83.5	8.4
30	1800	230/460	**M7733**	5KS286STE205	286T	71.8/35.9	229.5	B	G	88.8	133.2	177.6	93.6	83.5	8.4
30	1800	575	**M7533**	5KS286STE204	286T	28.7	176.6	B	G	88.9	133.3	177.8	93.6	83.5	8.4
30	1200	230/460	**M7550**	5KS326STE305	326T	72.4/36.2	223.8	A	G	133.2	179.8	266.4	93	80	9.8
40	3600	230/460	**M7612**	5KS324STE105F2	324T	89/44.5	278.2	B	G	59.3	74.2	118.6	92.4	91.0	6.1
40	3600	230/460	**M7711**	5KS324STE115	324TS	89/44.5	278.2	B	G	59.3	74.2	118.6	92.4	91	6.1
40	3600	230/460	**M7712**	5KS324STE105	324T	89/44.5	278.2	B	G	59.3	74.2	118.6	92.4	91.0	6.1
40	3600	575	**M7511**	5KS324STE114	324TS	35.6	222.6	B	G	59.3	74.2	118.6	92.4	91.0	6.1
40	1800	230/460	**M7572**	5KS324STE205F2RG3	324T	93/46.5	343.8	A	H	118.1	165.3	236.2	94.1	85.5	10.4
40	1800	230/460	**M7634**	5KS324STE205F2	324T	93/46.5	343.8	A	H	118.1	165.3	236.2	94.1	85.5	10.4
40	1800	230/460	**M7734**	5KS324STE205	324T	93/46.5	343.8	A	H	118.1	165.3	236.2	94.1	85.5	10.4
40	1800	230/460	**M7735**	5KS324STE215	324TS	93/46.5	343.8	A	H	118.1	165.3	236.2	94.1	85.5	10.4
40	1800	575	**M7534**	5KS324STE204	324T	37.2	274.9	A	H	118.1	165.3	236.2	94.1	85.5	10.4
40	1200	230/460	**M7952**	5KS364LAA305	364T	100.8/50.4	282.4	A	G	177	238.9	353.9	94.1	79.0	16.6
40	1200	460	**M7953**	5KS364LAA308	364T	50.4	282.4	A	G	177	238.9	353.9	94.1	79.0	16.6
40	1200	575	**M7951**	5KS364LAA304	364T	40.0	222.6	A	G	177	238.9	354	94.1	79.5	16.2
50	3600	230/460	**M7614**	5KS326STE105F2	326T	110/55	374.2	A	G	74.1	88.9	148.1	93	91.5	7.4
50	3600	230/460	**M7713**	5KS326STE115	326TS	110/55	374.2	A	G	74.1	88.9	148.1	93	91.5	7.4
50	3600	230/460	**M7714**	5KS326STE105	326T	110/55	374.2	A	G	74.1	88.9	148.1	93	91.5	7.4
50	3600	575	**M7513**	5KS326STE114	326TS	35.6	309	A	G	74	88.8	148.1	93.0	91.5	7.4
50	1800	230/460	**M7636**	5KS326STE205F2	326T	115.8/57.9	446.1	A	J	147.6	206.6	295.2	94.5	85.5	13.0
50	1800	230/460	**M7736**	5KS326STE205	326T	115.8/57.9	446.1	A	J	147.6	206.6	295.2	94.5	85.5	13.0
50	1800	230/460	**M7737**	5KS326STE215	326TS	115.8/57.9	446.1	A	J	147.6	206.6	295.2	94.5	85.5	13.0
50	1800	575	**M7536**	5KS326STE204	326T	46.3	378.2	A	J	147.5	206.5	295	94.5	85.5	10.4
50	1200	230/460	**M7955**	5KS365LAA305	365T	122.0/61.0	318.6	A	G	222.1	299.9	444.2	94.1	81.5	17.0
50	1200	460	**M7956**	5KS365LAA308	365T	61.0	318.6	A	G	222.1	299.9	444.2	94.1	81.5	17.0
50	1200	575	**M7954**	5KS365LAA304	365T	49.4	267.7	A	G	221.9	299.6	443.9	94.1	80.5	18.2

Energy $aver®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

HP: 1-350

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff (%)	NP FL PF (%)	Max KVAR
60	3600	230/460	**M7908**	5KS364LAA115	364TS	157.8/78.9	442.5	A	G	88.2	105.9	176.4	93.6	76.0	29.2
60	3600	460	**M7909**	5KS364LAA118	364TS	78.9	442.5	A	G	88.2	105.9	176.4	93.6	76.0	29.2
60	3600	575	**M7907**	5KS364LAA114	364TS	63.2	353.8	A	G	88.2	105.9	176.4	93.6	76.0	29.0
60	1800	230/460	**M7930**	5KS364LAA205	364T	147.8/73.9	443	A	G	176.7	247.4	353.4	95.0	80.0	24.2
60	1800	460	**M7931**	5KS364LAA208	364T	73.9	443	A	G	176.7	247.4	353.4	95.0	80.0	24.2
60	1800	575	**M7929**	5KS364LAA204	364T	58.0	335.5	A	G	176.8	247.6	353.6	95.0	81.5	22.3
60	1200	230/460	**M7164**	5KS404LAA305	404T	155.4/77.7	417.5	A	G	264.5	357	528.9	94.5	76.5	26.6
60	1200	460	**M7697**	5KS404LAA308F2	404T	77.7	417.5	A	G	264.5	357	528.9	94.5	76.5	26.6
60	1200	460	**M7958**	5KS404LAA308	404T	77.7	417.5	A	G	264.5	357	528.9	94.5	76.5	26.6
60	1200	575	**M7957**	5KS404LAA304	404T	61.3	325.9	A	G	264.5	357.1	529	94.5	77.5	25.5
75	3600	230/460	**M7911**	5KS365LAA115	365TS	177.6/88.8	484.1	A	G	110.4	116	220.9	93.6	84.5	22.4
75	3600	460	**M7912**	5KS365LAA118	365TS	88.8	484.1	A	G	110.4	116	220.9	93.6	84.5	22.4
75	3600	575	**M7910**	5KS365LAA114	365TS	71.4	391.7	A	G	110.4	115.9	220.8	93.6	84.0	22.8
75	1800	230/460	**M7933**	5KS365LAA205	365T	181.6/90.8	577.8	A	G	220.8	309.2	441.7	95.4	81.0	28.5
75	1800	460	**M7934**	5KS365LAA208	365T	90.8	577.8	A	G	220.8	309.2	441.7	95.4	81.0	28.5
75	1800	575	**M7932**	5KS365LAA204	365T	72.2	458.3	A	G	220.8	309.2	441.7	95.4	81.5	28.2
75	1200	230/460	**M7165**	5KS405LAA305	405T	195.4/97.7	524.5	A	G	330.7	446.5	661.5	94.5	76.0	34.2
75	1200	460	**M7691**	5KS405LAA325	405T	97.7	524.5	B	G	330.7	446.5	661.5	94.5	76.0	34.2
75	1200	460	**M7960**	5KS405LAA308	405T	97.7	524.5	A	G	330.7	446.5	661.5	94.5	76.0	34.2
75	1200	575	**M7959**	5KS405LAA304	405T	76.7	402.3	A	G	330.9	446.7	661.7	94.5	77.5	31.6
100	3600	460	**M7914**	5KS405LAA118	405TS	112.0	831.9	A	H	147	154.4	294.1	95.0	88.0	26.5
100	3600	575	**M7913**	5KS405LAA114	405TS	89.6	665.7	A	H	147.1	154.4	294.1	95.0	88.0	25.6
100	1800	460	**M7694**	5KS405LAA248	405T	122.0	599.8	B	G	294.4	367.9	588.7	95.4	80.5	36.4
100	1800	460	**M7936**	5KS405LAA208	405T	122.0	599.8	A	G	294.4	367.9	588.7	95.4	80.5	36.4
100	1800	575	**M7935**	5KS405LAA204	405T	98.1	495.1	A	G	294.3	367.8	588.5	95.4	80.0	38.1
100	1200	460	**M7692**	5KS444LAA333	444T	125.0	691.5	B	G	440.9	551.2	881.8	95.0	79.0	39.0
100	1200	460	**M7962**	5KS444LAA308	444T	125.0	691.5	A	G	440.9	551.2	881.8	95.0	79.0	39.0
100	1200	575	**M7961**	5KS444LAA304	444T	99.1	542.3	A	G	441	551.2	882	95.0	79.5	37.7
125	3600	460	**M7916**	5KS444LAA118	444TS	142.0	995.3	A	H	183.2	183.2	366.4	95.0	86.5	36.4
125	3600	575	**M7915**	5KS444LAA114	444TS	114.0	796.2	A	H	183.2	183.2	366.4	95.0	86.5	36.4
125	1800	460	**M7695**	5KS444LAA239	444T	148.0	952.3	A	G	368	404.8	735.9	95.4	83.0	44.9
125	1800	460	**M7938**	5KS444LAA208	444T	148.0	952.3	A	G	368	404.8	735.9	95.4	83.0	44.9
125	1800	575	**M7937**	5KS444LAA204	444T	118.0	754.8	A	G	368	404.8	736	95.4	83.0	44.4
125	1200	460	**M7686**	5KS445LAA322	445T	153.0	815.6	B	G	551.7	689.6	1103.4	95.0	80.5	44.1
125	1200	460	**M7964**	5KS445LAA308	445T	153.0	815.6	A	G	551.7	689.6	1103.4	95.0	80.5	44.1
125	1200	575	**M7963**	5KS445LAA304	445T	122.0	652.2	A	G	551.7	689.6	1103.4	95.0	80.5	44.0
150	3600	460	**M7918**	5KS445LAA118	445TS	171.0	1121.1	A	G	220	220	440	95.0	86.5	41.6
150	3600	575	**M7917**	5KS445LAA114	445TS	136.0	903.7	A	G	220	220	440.1	95.0	87.0	40.8
150	1800	460	**M7696**	5KS445LAA238	445T	173.0	1137.2	A	G	441.7	485.9	883.4	95.8	84.5	48.6
150	1800	460	**M7940**	5KS445LAA208	445T	173.0	1137.2	A	G	441.7	485.9	883.4	95.8	84.5	48.6
150	1800	575	**M7939**	5KS445LAA204	445T	140.0	933.8	A	G	441.6	485.7	883.1	95.8	84.0	50.1
150	1200	460	**M7693**	5KS447LAA323	447T	182.0	1306	A	H	660.1	792.1	1320.1	95.8	80.5	58.9
150	1200	460	**M7966**	5KS447LAA308	447T	182.0	1306	A	H	660.1	792.1	1320.1	95.8	80.5	58.9
150	1200	575	**M7965**	5KS447LAA304	447T	144.0	988.4	A	H	660.3	792.3	1320.5	95.8	81.5	54.4
200	3600	460	**M7920**	5KS447LAA118	447TS	217.0	1466.3	A	G	293.4	293.4	586.9	95.4	90.5	39.5
200	3600	575	**M7919**	5KS447LAA114	447TS	173.0	1173.1	A	G	293.4	293.4	586.9	95.4	90.5	39.5
200	1800	460	**M7671**	5KS447LAA234	447T	228.0	1611.8	A	H	586.2	586.2	1172.4	96.2	85.5	60.1
200	1800	460	**M7942**	5KS447LAA208	447T	228.0	1611.8	A	H	586.2	586.2	1172.4	96.2	85.5	60.1
200	1800	575	**M7698**	5KS447LAA242	447T	181.0	1266.5	A	H	586.2	586.2	1172.5	96.2	86.0	58.7
200	1800	575	**M7941**	5KS447LAA204	447T	181.0	1266.5	A	H	586.2	586.2	1172.5	96.2	86.0	58.7
200	1200	460	**M7157**	5KS449LAA310	449T	240.0	1650.7	A	H	880.9	1057	1761.7	95.8	81.5	72.4
200	1200	460	**M7968**	5KS449LAA308	449T	240.0	1650.7	A	H	880.9	1057	1761.7	95.8	81.5	72.4
200	1200	575	**M7158**	5KS449LAA311	449T	188.0	1222.1	A	G	881.3	1057.6	1762.6	95.8	83.0	64.9
200	1200	575	**M7967**	5KS449LAA304	449T	188.0	1222.1	A	G	881.3	1057.6	1762.6	95.8	83.0	64.9

Energy $aver®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

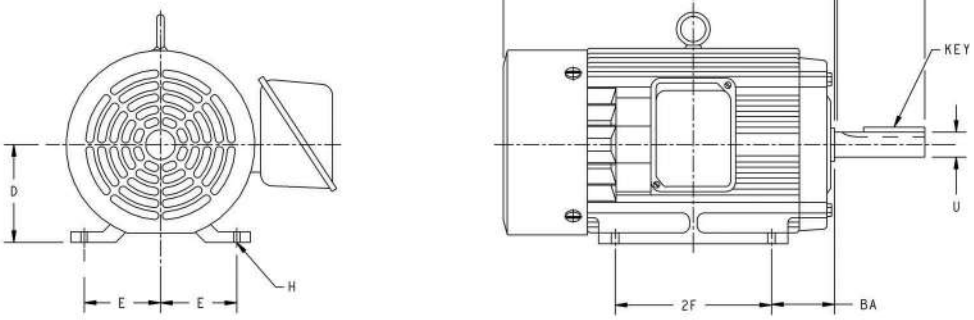
HP: 1-350

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff (%)	NP FL PF (%)	Max KVAR
250	3600	460	**M7922**	5KS449LAA118	449TS	276.0	2221	A	H	366.4	256.5	641.2	95.4	89.0	63.2
250	3600	575	**M7921**	5KS449LAA114	449TS	220.0	1771.3	A	H	366.4	256.5	641.3	95.4	89.0	60.7
250	1800	460	**M7160**	5KS449LAA210	449T	286.0	2269.7	A	J	732.1	585.7	1281.1	96.2	85.0	79.7
250	1800	460	**M7944**	5KS449LAA208	449T	286.0	2269.7	A	J	732.1	585.7	1281.1	96.2	85.0	79.7
250	1800	575	**M7161**	5KS449LAA211	449T	226.0	1712.7	A	H	732.3	585.8	1281.4	96.2	86.0	72.9
250	1800	575	**M7943**	5KS449LAA204	449T	226.0	1712.7	A	H	732.3	585.8	1281.4	96.2	86.0	72.9
250	1200	460	**M7672**	5KS449LAA307	449T	311.0	2321.8	A	J	1100.7	1100.7	1926.2	95.8	78.5	106.1
250	1200	460	**M7673**	5KS449LAA309	449T	311.0	2321.8	A	J	1100.7	1100.7	1926.2	95.8	78.5	106.1
250	1200	575	**M7674**	5KS449LAA317	449T	246.0	1801	A	J	1100.9	1100.9	1926.6	95.8	79.5	100.7
250	1200	575	**M7675**	5KS449LAA319	449T	246.0	1801	A	J	1100.9	1100.9	1926.6	95.8	79.5	100.7
300	1800	460	**M7678**	5KS449LAA261	449T	347.0	2773.1	A	J	878.7	702.9	1537.7	96.2	84.0	102.0
300	1800	460	**M7679**	5KS449LAA262	449T	347.0	2773.1	A	J	878.7	702.9	1537.7	96.2	84.0	102.0
300	1800	575	**M7680**	5KS449LAA263	449T	280.0	2231.1	A	J	878.6	702.9	1537.6	96.2	83.5	102.8
300	1800	575	**M7681**	5KS449LAA264	449T	280.0	2231.1	A	J	878.6	702.9	1537.6	96.2	83.5	102.8
350	1800	460	**M7682**	5KS449LAA265	449T	398.0	2983.1	A	H	1025.7	820.6	1795	96.2	85.5	105.1
350	1800	460	**M7683**	5KS449LAA266	449T	398.0	2983.1	A	H	1025.7	820.6	1795	96.2	85.5	105.1
350	1800	575	**M7684**	5KS449LAA267	449T	322.0	2565.9	A	J	1025.3	820.2	1794.3	96.2	84.5	115.4
350	1800	575	**M7685**	5KS449LAA268	449T	322.0	2565.9	A	J	1025.3	820.2	1794.3	96.2	84.5	115.4

Energy $aver®

TEFC—Extra Severe Duty

Dimensions



NEMA Frame	D	2E	2F	BA	H	N-W	U	V Min.	Key Width	Key Thickness	Key Length
143T	3.5	5.5	4	2.25	0.34 Slot	2.25	0.88	2	0.19	0.19	1.38
145T	3.5	5.5	5	2.25	0.34 Slot	2.25	0.88	2	0.19	0.19	1.38
182T	4.5	7.5	4.5	2.75	0.41 Dia.	2.75	1.12	2.5	0.25	0.25	1.75
184T	4.5	7.5	5.5	2.75	0.41 Dia.	2.75	1.12	2.5	0.25	0.25	1.75
213T	5.25	8.5	5.5	3.5	0.41 Dia.	3.38	1.38	3.12	0.31	0.31	2.38
215T	5.25	8.5	7	3.5	0.41 Dia.	3.38	1.38	3.12	0.31	0.31	2.38
254T	6.25	10	8.25	4.25	0.53 Dia.	4	1.62	3.75	0.38	0.38	2.88
256T	6.25	10	10	4.25	0.53 Dia.	4	1.62	3.75	0.38	0.38	2.88
284T	7	11	9.5	4.75	0.53 Dia.	4.62	1.88	4.38	0.5	0.5	3.25
284TS	7	11	9.5	4.75	0.53 Dia.	3.25	1.62	3	0.38	0.38	1.88
286T	7	11	11	4.75	0.53 Dia.	4.62	1.88	4.38	0.5	0.5	3.25
286TS	7	11	11	4.75	0.53 Dia.	3.25	1.62	3	0.38	0.38	1.88
324T	8	12.5	10.5	5.25	0.66 Dia.	5.25	2.12	5	0.5	0.5	3.88
324TS	8	12.5	10.5	5.25	0.66 Dia.	3.75	1.88	3.5	0.5	0.5	2
326T	8	12.5	12	5.25	0.66 Dia.	5.25	2.12	5	0.5	0.5	3.88
326TS	8	12.5	12	5.25	0.66 Dia.	3.75	1.88	3.5	0.5	0.5	2
364T	9	14	11.25	5.88	0.69 Dia.	5.88	2.38	5.62	0.62	0.62	4.25
364TS	9	14	11.25	5.88	0.69 Dia.	3.75	1.88	3.5	0.5	0.5	2
365T	9	14	12.25	5.88	0.69 Dia.	5.88	2.38	5.62	0.62	0.62	4.25
365TS	9	14	12.25	5.88	0.69 Dia.	3.75	1.88	3.5	0.5	0.5	2
404T	10	16	12.25	6.62	0.81 Dia.	7.25	2.88	7	0.75	0.75	5.62
404TS	10	16	12.25	6.62	0.81 Dia.	4.25	2.12	4	0.5	0.5	2.75
405T	10	16	13.75	6.62	0.81 Dia.	7.25	2.88	7	0.75	0.75	5.62
405TS	10	16	13.75	6.62	0.81 Dia.	4.25	2.12	4	0.5	0.5	2.75
444T	11	18	14.5	7.5	0.81 Dia.	8.5	3.38	8.25	0.88	0.88	6.88
444TS	11	18	14.5	7.5	0.81 Dia.	4.75	2.38	4.5	0.62	0.62	3
445T	11	18	16.5	7.5	0.81 Dia.	8.5	3.38	8.25	0.88	0.88	6.88
445TS	11	18	16.5	7.5	0.81 Dia.	4.75	2.38	4.5	0.62	0.62	3
447T	11	18	20	7.5	0.81 Dia.	8.5	3.38	8.25	0.88	0.88	6.88
447TS	11	18	20	7.5	0.81 Dia.	4.75	2.38	4.5	0.62	0.62	3
449T	11	18	25	7.5	0.81 Dia.	8.5	3.38	8.25	0.88	0.88	6.88
449TS	11	18	25	7.5	0.81 Dia.	4.75	2.38	4.5	0.63	0.63	3

Notes:
"C" dimension is overall length and is shown for each catalog number on rating pages.
All dimensions in inches. All dimensions are nominal. Request factory outlines for exact dimensions.
Motor base has two sets of holes at 3.00 and 5.00 inches

Energy $aver®

TEFC—Extra Severe Duty
C-Face Footed Frame

Pricing

Volts: 230/460 and 460
HP: 1 – 300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat No.	List Price	Price Symbol	Model No.	Norm. Stk.	Wt. (lbs)	C Dim. (in)
1	1800	230/460	143TC	2.8/1.4	85.5	**M7738**	$540	G4-7S$P1	5KS143STE222	Y	56	13.9
1.5	1800	230/460	145TC	4.2/2.1	86.5	**M7739**	$585	G4-7S$P1	5KS145STE222	Y	62	13.9
2	1800	230/460	145TC	5.4/2.7	86.5	**M7740**	$660	G4-7S$P1	5KS145STE229	Y	62	13.9
3	3600	230/460	182TC	7.2/3.6	86.5	**M7715**	$758	G4-7S$P1	5KS182STE122	Y	118	16.32
3	1800	230/460	182TC	7.6/3.8	89.5	**M7741**	$728	G4-7S$P1	5KS182STE222	Y	118	16.32
5	3600	230/460	184TC	11.4/5.7	88.5	**M7716**	$930	G4-7S$P1	5KS184STE122	Y	118	16.32
5	1800	230/460	184TC	12.6/6.3	89.5	**M7742**	$863	G4-7S$P1	5KS184STE222	Y	118	16.32
7.5	3600	230/460	213TC	18.0/9.0	89.5	**M7717**	$1,215	G4-7S$P1	5KS213STE122	Y	202	17.78
7.5	1800	230/460	213TC	18.2/9.1	91.7	**M7743**	$1,215	G4-7S$P1	5KS213STE222	Y	202	17.78
10	3600	230/460	215TC	23.6/11.8	90.2	**M7718**	$1,449	G4-7S$P1	5KS215STE122	Y	202	19.27
10	1800	230/460	215TC	24.4/12.2	91.7	**M7744**	$1,449	G4-7S$P1	5KS215STE222	Y	202	19.27
15	3600	230/460	254TC	33.6/16.8	91	**M7719**	$1,875	G4-7S$P1	5KS254STE122	Y	287	23.7
15	1800	230/460	254TC	36/18	92.4	**M7745**	$1,890	G4-7S$P1	5KS254STE222	Y	275	23.7
20	3600	230/460	256TC	44.4/22.2	91.0	**M7720**	$2,460	G4-7S$P1	5KS256STE122	Y	379	25.4
20	1800	230/460	256TC	47.4/23.7	93	**M7746**	$2,460	G4-7S$P1	5KS256STE222	Y	361	25.4
25	3600	230/460	284TSC	64.8/32.4	91.7	**M7721**	$2,925	G4-7S$P1	5KS284STE112	Y	450	25.33
25	1800	230/460	284TC	59.6/29.8	93.6	**M7747**	$2,925	G4-7S$P1	5KS284STE222	Y	450	26.7
30	3600	230/460	286TSC	67.2/33.6	91.7	**M7722**	$3,450	G4-7S$P1	5KS286STE112	Y	450	26.83
30	1800	230/460	286TC	71.8/35.9	93.6	**M7748**	$3,375	G4-7S$P1	5KS286STE222	Y	450	28.2
40	3600	230/460	324TSC	93.6/46.8	94.1	**M7650**	$4,744	G4-7S$P1	5KS324LAA129	Y	670	30.48
40	1800	230/460	324TC	96.0/48.0	94.5	**M7660**	$4,705	G4-7S$P1	5KS324LAA235	Y	710	30.55
50	3600	230/460	326TSC	113.8/56.9	94.5	**M7651**	$5,989	G4-7S$P1	5KS326LAA129	Y	660	30.48
50	1800	230/460	326TC	120.8/60.4	94.5	**M7661**	$5,548	G4-7S$P1	5KS326LAA230	Y	720	32.04
60	3600	230/460	364TSC	138.2/69.1	95	**M7652**	$9,499	G4-7S$P	5KS364LAA130	Y	960	32.76
60	1800	230/460	364TC	140.0/70.0	95	**M7662**	$9,499	G4-7S$P	5KS364LAA235	Y	1000	34.89
75	3600	230/460	365TSC	166.2/83.1	95.4	**M7653**	$11,661	G4-7S$P	5KS365LAA131	Y	1020	32.76
75	1800	230/460	365TC	172.2/86.1	95.4	**M7663**	$11,261	G4-7S$P	5KS365LAA229	Y	1090	34.89
100	3600	230/460	405TSC	216.0/108.0	95.4	**M7654**	$15,099	G4-7S$P	5KS405LAA126	Y	1530	36.76
100	1800	230/460	405TC	236.0/118.0	95.8	**M7664**	$14,044	G4-7S$P	5KS405LAA243	Y	1480	39.77
125	3600	460	444TSC	139	95.4	**M7655**	$18,836	G4-7S$P	5KS444LAA124	Y	1790	41.87
125	1800	460	444TC	140	95.8	**M7665**	$17,636	G4-7S$P	5KS444LAA236	Y	1970	45.62
150	3600	460	445TSC	162	95.8	**M7656**	$22,651	G4-7S$P	5KS445LAA125	Y	1930	41.87
150	1800	460	445TC	166.0	96.2	**M7666**	$20,360	G4-7S$P	5KS445LAA235	Y	2130	32.04
200	3600	460	447TSC	211.0	95.8	**M7657**	$28,676	G4-7S$P	5KS447LAA125	Y	2840	50.37
200	1800	460	447TC	218.0	96.5	**M7667**	$25,539	G4-7S$P	5KS447LAA245	Y	2800	54.12
250	3600	460	449TSC	265.0	95.8	**M7658**	$36,947	G4-7S$P	5KS449LAA123	Y	2750	50.37
250	1800	460	449TC	272.0	96.5	**M7668**	$29,864	G4-7S$P	5KS449LAA259	Y	3010	54.12
300	3600	460	449TSC	319.0	95.8	**M7659**	$48,032	G4-7S$P	5KS449LAA124	Y	2790	50.37
300	1800	460	449TC	332.0	96.2	**M7669**	$34,968	G4-7S$P	5KS449LAA260	Y	2980	54.12

Energy $aver®

TEFC—Extra Severe Duty
C-Face Footed Frame

Typical Performance Data

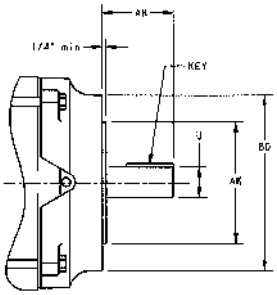
HP: 1-300

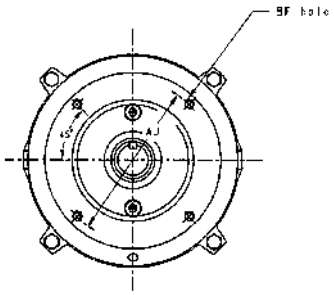
HP	RPM	Volts	Frame	Cat No.	Model No.	FLA	LRA	KVA Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	Nom. Eff. (%)	PF Nom. Eff. (%)	Max KVR
1	1800	230/460	143TC	**M7738**	5KS143STE222	2.8/1.4	11.2	N	3	8.2	9	85.5	76	0.5
1.5	1800	230/460	145TC	**M7739**	5KS145STE222	4.2/2.1	16.7	M	4.5	11.3	12.6	86.5	77	0.8
2	1800	230/460	145TC	**M7740**	5KS145STE229	5.4/2.7	20.1	M	6.1	14.2	16.4	86.5	79.5	0.9
3	3600	230/460	182TC	**M7715**	5KS182STE122	7.2/3.6	29.7	K	4.5	7.1	10.3	86.5	91	0.7
3	1800	230/460	182TC	**M7741**	5KS182STE222	7.6/3.8	34.1	L	8.9	19.2	22.4	89.5	82	1.2
5	3600	230/460	184TC	**M7716**	5KS184STE122	11.4/5.7	51.6	K	7.5	11.2	16	88.5	92	1.1
5	1800	230/460	184TC	**M7742**	5KS184STE222	12.6/6.3	55.4	K	15	27.7	33.7	89.5	83	1.8
7.5	3600	230/460	213TC	**M7717**	5KS213STE122	18.0/9.0	70.8	J	11.2	15.7	22.4	89.5	87.0	2.0
7.5	1800	230/460	213TC	**M7743**	5KS213STE222	18.2/9.1	70.3	J	22.3	39.1	48	91.7	84	2.3
10	3600	230/460	215TC	**M7718**	5KS215STE122	23.6/11.8	90.9	J	15	20.2	30	90.2	88.0	2.3
10	1800	230/460	215TC	**M7744**	5KS215STE222	24.4/12.2	94.6	J	29.8	49.2	59.6	91.7	84	3.2
15	3600	230/460	254TC	**M7719**	5KS254STE122	33.6/16.8	119.8	H	22.3	29	44.6	91	92	3.2
15	1800	230/460	254TC	**M7745**	5KS254STE222	36/18	122.1	H	44.6	71.3	89.1	92.4	84.5	4.4
20	3600	230/460	256TC	**M7720**	5KS256STE122	44.4/22.2	152.8	G	29.8	38.8	59.7	91.0	92.5	3.6
20	1800	230/460	256TC	**M7746**	5KS256STE222	47.4/23.7	154	G	59.6	89.4	119.2	93	85	5.4
25	3600	230/460	284TSC	**M7721**	5KS284STE112	64.8/32.4	177.8	G	37	48.1	74	91.7	90.5	3.3
25	1800	230/460	284TC	**M7747**	5KS284STE222	59.6/29.8	181.2	G	74	111.1	148.1	93.6	84	6.5
30	3600	230/460	286TSC	**M7722**	5KS286STE112	67.2/33.6	202.9	G	44.4	57.8	88.9	91.7	91.0	4.9
30	1800	230/460	286TC	**M7748**	5KS286STE222	71.8/35.9	229.5	G	88.8	133.2	177.6	93.6	83.5	8.4
40	3600	230/460	324TSC	**M7650**	5KS324LAA129	100.6/50.3	277.4	G	58.8	73.5	117.7	93.6	79.5	16.3
40	1800	230/460	324TC	**M7660**	5KS324LAA235	96.0/48.0	272.5	G	117.9	165.1	235.9	94.5	82.5	13.4
50	3600	230/460	326TSC	**M7651**	5KS326LAA129	121.2/60.6	314.2	G	73.6	88.4	147.3	93.6	82.5	16.6
50	1800	230/460	326TC	**M7661**	5KS326LAA230	120.8/60.4	341.2	G	147.5	206.6	295.1	94.5	82.0	17.1
60	3600	230/460	364TSC	**M7652**	5KS364LAA130	138.2/69.1	397	G	88.2	105.9	176.5	95.0	85.5	17.4
60	1800	230/460	364TC	**M7662**	5KS364LAA235	140.0/70.0	398.1	G	176.8	247.5	353.6	95.0	84.5	18.0
75	3600	230/460	365TSC	**M7653**	5KS365LAA131	166.2/83.1	494	G	110.4	115.9	220.7	95.4	88.5	16.8
75	1800	230/460	365TC	**M7663**	5KS365LAA229	172.2/86.1	513.3	G	220.9	309.3	441.9	95.4	85.5	20.8
100	3600	230/460	405TSC	**M7654**	5KS405LAA126	216.0/108.0	706.3	G	147.3	154.6	294.6	95.4	91.0	17.2
100	1800	230/460	405TC	**M7664**	5KS405LAA243	236.0/118.0	589	G	294.2	367.8	588.4	95.8	83.0	31.2
125	3600	460	444TSC	**M7655**	5KS444LAA124	139.0	824.3	G	183.5	183.5	366.9	95.4	88.5	28.5
125	1800	460	444TC	**M7665**	5KS444LAA236	140.0	831.1	G	368.3	405.2	736.6	95.8	87.0	32.1
150	3600	460	445TSC	**M7656**	5KS445LAA125	162.0	1016.5	G	220.1	220.1	440.3	95.8	90.5	28.2
150	1800	460	445TC	**M7666**	5KS445LAA235	166.0	1001.3	G	440.1	484.1	880.2	96.2	88.0	34.6
200	3600	460	447TSC	**M7657**	5KS447LAA125	211.0	1385	G	293.4	293.4	586.8	95.8	92.5	27.3
200	1800	460	447TC	**M7667**	5KS447LAA245	218.0	1334.2	G	586.6	586.6	1173.3	96.5	89.0	41.6
250	3600	460	449TSC	**M7658**	5KS449LAA123	265.0	1707.8	G	366.9	256.9	642.1	95.8	92.0	36.3
250	1800	460	449TC	**M7668**	5KS449LAA259	272.0	1529.2	G	733.8	587	1284.1	96.5	89.0	47.1
300	3600	460	449TSC	**M7659**	5KS449LAA124	319.0	2099.3	G	440.5	308.3	770.8	95.8	92.0	44.4
300	1800	460	449TC	**M7669**	5KS449LAA260	332.0	1995.4	G	879.9	703.9	1539.9	96.2	88.0	65.9

Energy $aver®

TEFC Severe Duty
C-Face Footed Frame

Dimensions





NEMA Frame	Dimensions in inches						
	AH	AJ	AK	U	Key Width	Key Thickness	Key Length
143TC-145TC	2.12	5.88	4.50	0.88	0.19	0.19	1.38
182TC-184TC	2.62	7.25	8.50	1.13	0.25	0.25	1.75
213TC-215TC	3.12	7.25	8.50	1.38	0.31	0.31	2.38
254TC-256TC	3.75	7.25	8.50	1.63	0.38	0.38	2.88
284TC-286TC	4.38	9.00	10.50	1.88	0.50	0.50	3.25
324TSC-326TSC	3.69	11.00	12.50	1.88	0.50	0.50	2.00
324TC-326TC	5.00	11.00	12.50	2.13	0.50	0.50	3.88
364TSC-365TSC	3.73	11.00	12.50	1.88	0.50	0.50	2.00
364TC-365TC	5.88	11.00	12.50	2.38	0.63	0.63	4.25
404TSC-405TSC	4.25	11.00	12.50	2.13	0.50	0.50	2.75
404.TC-405TC	7.28	11.00	12.50	2.88	0.75	0.75	5.63
444TSC-445TSC	4.75	14.00	16.00	2.38	0.63	0.73	3.00
444TC-445TC	8.50	14.00	16.00	3.38	0.88	0.88	6.88
447TSC-449TSC	4.75	14.00	16.00	2.38	0.63	0.63	3.00
447TC-449TC	8.50	14.00	16.00	3.38	0.88	0.88	6.88

Energy $aver® SGR

ODP - w/External AEGIS® Shaft Grounding Ring

Pricing

Volts: 230/460
HP: 1 – 50

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
1	1800	230/460	143T	2.8/1.4	85.5	**E7050**	$736	G4-7D$Z1	Y	46	10.54	29, 84
1	1800	230/460	143T	2.8/1.4	85.5	**E7051**	$736	G4-7D$Z1	N	46	10.54	29, 70, 84
1.5	1800	230/460	145T	4.2/2.1	86.5	**E7052**	$776	G4-7D$Z1	Y	56	11.53	29, 84
1.5	1800	230/460	145T	4.2/2.1	86.5	**E7053**	$776	G4-7D$Z1	N	56	11.53	29, 70, 84
2	1800	230/460	145T	5.4/2.7	86.5	**E7054**	$826	G4-7D$Z1	Y	58	11.53	29, 84
2	1800	230/460	145T	5.4/2.7	86.5	**E7055**	$826	G4-7D$Z1	N	58	11.53	29, 70, 84
3	1800	230/460	182T	7.8/3.9	89.5	**E7056**	$846	G4-7D$Z1	Y	72	12.53	29, 84, 110
3	1800	230/460	182T	7.8/3.9	89.5	**E7057**	$846	G4-7D$Z1	Y	72	12.53	29, 70, 84, 110
5	1800	230/460	184T	12.8/6.4	89.5	**E7058**	$1,070	G4-7D$Z1	Y	91	13.53	29, 84
5	1800	230/460	184T	12.8/6.4	89.5	**E7059**	$1,070	G4-7D$Z1	N	91	13.53	29, 70, 84
7.5	1800	230/460	213T	19.4/9.7	91.0	**E7060**	$1,368	G4-7D$Z1	Y	128	15.85	29, 84, 110
7.5	1800	230/460	213T	19.4/9.7	91.0	**E7061**	$1,368	G4-7D$Z1	Y	128	15.85	29, 70, 84, 110
10	1800	230/460	215T	24.8/12.4	91.7	**E7062**	$1,592	G4-7D$Z1	Y	157	17.38	29, 84
10	1800	230/460	215T	24.8/12.4	91.7	**E7063**	$1,592	G4-7D$Z1	N	157	17.38	29, 70, 84
15	1800	230/460	254T	37.2/18.6	93.0	**E7064**	$2,030	G4-7D$Z1	Y	260	20.67	29, 84
15	1800	230/460	254T	37.2/18.6	93.0	**E7065**	$2,030	G4-7D$Z1	N	260	20.67	29, 70, 84
20	1800	230/460	256T	48.2/24.1	93.0	**E7066**	$2,313	G4-7D$Z1	Y	310	22.4	29, 84
20	1800	230/460	256T	48.2/24.1	93.0	**E7067**	$2,313	G4-7D$Z1	N	310	22.4	29, 70, 84
25	1800	230/460	284T	66.2/33.1	93.6	**E7068**	$2,585	G4-7D$Z1	Y	294	23.82	29, 84
25	1800	230/460	284T	66.2/33.1	93.6	**E7069**	$2,585	G4-7D$Z1	N	294	23.82	29, 70, 84
30	1800	230/460	286T	72.4/36.2	94.1	**E7070**	$2,879	G4-7D$Z1	Y	436	25.32	29, 84
30	1800	230/460	286T	72.4/36.2	94.1	**E7071**	$2,879	G4-7D$Z1	N	436	25.32	29, 70, 84
40	1800	230/460	324T	97.0/48.5	94.1	**E7072**	$3,736	G4-7D$Z1	Y	480	26.26	29, 84
40	1800	230/460	324T	97.0/48.5	94.1	**E7073**	$3,736	G4-7D$Z1	N	480	26.26	29, 70, 84
50	1800	230/460	326T	121.0/60.5	94.5	**E7074**	$4,170	G4-7D$Z1	Y	639	27.76	29, 84

Notes:

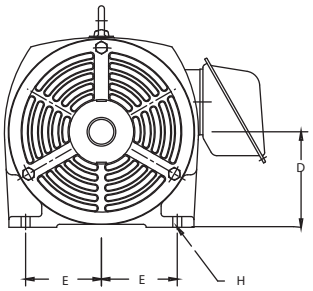
29 Usable on 200 Volts, 60Hz at 1.0 service factor
70 F2 Assembly
84 Designed for 50 or 60 Hz operation
110 Offset Stator Core. **Not suitable for F2 conversion.**

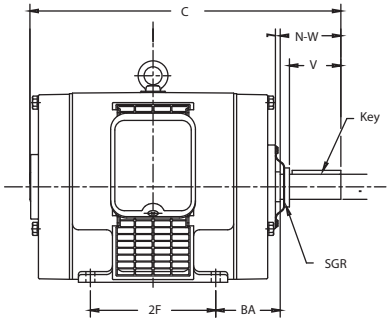
Extended warranty from Electro Static Technology guarantees against bearing failure due to fluting damage for the expected (L10) life of the original bearings.

Energy $aver® SGR

ODP - w/External AEGIS® Shaft Grounding Ring

Dimensions





NEMA Frame	D	2E	2F	BA	H	N-W	U	V Min.	Key Width	Key Thickness	Key Length
143T	3.50	5.50	4.00	2.25	0.34 Slot	2.25	0.88	1.80	0.19	0.19	1.38
145T	3.50	5.50	5.00	2.25	0.34 Slot	2.25	0.88	1.80	0.19	0.19	1.38
182T	4.50	7.50	4.50	2.75	0.41 Dia.	2.75	1.12	2.30	0.25	0.25	1.75
184T	4.50	7.50	5.50	2.75	0.41 Dia.	2.75	1.12	2.30	0.25	0.25	1.75
213T	5.25	8.50	5.50	3.50	0.41 Dia.	3.38	1.38	2.93	0.31	0.31	2.38
215T	5.25	8.50	7.00	3.50	0.41 Dia.	3.38	1.38	2.93	0.31	0.31	2.38
254T	6.25	10.00	8.25	4.25	0.53 Dia.	4.00	1.62	3.55	0.38	0.38	2.88
256T	6.25	10.00	10.00	4.25	0.53 Dia.	4.00	1.62	3.55	0.38	0.38	2.88
284T	7.00	11.00	9.50	4.75	0.53 Dia.	4.62	1.88	4.18	0.50	0.50	3.25
286T	7.00	11.00	11.00	4.75	0.53 Dia.	4.62	1.88	4.18	0.50	0.50	3.25
324T	8.00	12.50	10.50	5.25	0.66 Dia.	5.25	2.12	4.80	0.50	0.50	3.88
326T	8.00	12.50	12.00	5.25	0.66 Dia.	5.25	2.12	4.80	0.50	0.50	3.88

Notes:
"C" dimension is overall length and is shown for each catalog number on rating page.
All dimensions are nominal. Request factory outlines for exact dimensions.

Energy $aver® SGR

TEFC - w/External AEGIS® Shaft Grounding Ring

Pricing

Volts: 230/460
HP: 1 – 50

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
1	1800	230/460	143T	2.8/1.4	85.5	**M7551**	$931	G4-7S$P1	Y	46	12.25	29, 105, 131
1.5	1800	230/460	145T	4.2/2.1	86.5	**M7552**	$1,005	G4-7S$P1	Y	60	13.24	29, 105, 131
1.5	1800	230/460	145T	4.2/2.1	86.5	**M7553**	$1,005	G4-7S$P1	N	60	13.24	29, 70, 105, 131
2	1800	230/460	145T	5.4/2.7	86.5	**M7554**	$1,079	G4-7S$P1	Y	60	13.24	29, 105, 131
2	1800	230/460	145T	5.4/2.7	86.5	**M7555**	$1,079	G4-7S$P1	N	60	13.24	29, 70, 105, 131
3	1800	230/460	182T	7.6/3.8	89.5	**M7556**	$1,167	G4-7S$P1	Y	86	14.43	29, 105, 131
3	1800	230/460	182T	7.6/3.8	89.5	**M7557**	$1,167	G4-7S$P1	N	86	14.43	29, 70, 105, 131
5	1800	230/460	184T	12.6/6.3	89.5	**M7558**	$1,317	G4-7S$P1	Y	111	15.42	29, 105, 131
5	1800	230/460	184T	12.6/6.3	89.5	**M7559**	$1,317	G4-7S$P1	N	111	15.42	29, 70, 105, 131
7.5	1800	230/460	213T	18.2/9.1	91.7	**M7560**	$1,693	G4-7S$P1	Y	158	17.94	29, 105, 131
7.5	1800	230/460	213T	18.2/9.1	91.7	**M7561**	$1,693	G4-7S$P1	N	158	17.94	29, 70, 105, 131
10	1800	230/460	215T	24.4/12.2	91.7	**M7562**	$1,890	G4-7S$P1	Y	197	19.43	29, 105, 131
10	1800	230/460	215T	24.4/12.2	91.7	**M7563**	$1,890	G4-7S$P1	N	197	19.43	29, 70, 105, 131
15	1800	230/460	254T	36/18	92.4	**M7564**	$2,425	G4-7S$P1	Y	277	23.40	29, 105, 131
15	1800	230/460	254T	36/18	92.4	**M7565**	$2,425	G4-7S$P1	N	277	23.40	29, 70, 105, 131
20	1800	230/460	256T	47.4/23.7	93.0	**M7566**	$2,836	G4-7S$P1	Y	321	25.10	29, 105, 131
20	1800	230/460	256T	47.4/23.7	93.0	**M7567**	$2,836	G4-7S$P1	N	321	25.10	29, 70, 105, 131
25	1800	230/460	284T	59.6/29.8	93.6	**M7568**	$3,081	G4-7S$P1	Y	473	26.90	29, 105, 131
30	1800	230/460	286T	71.8/35.9	93.6	**M7569**	$3,385	G4-7S$P1	Y	499	28.40	29, 105, 131
30	1800	230/460	286T	71.8/35.9	93.6	**M7570**	$3,385	G4-7S$P1	N	499	28.40	29, 70, 105, 131
40	1800	230/460	324T	93/46.5	94.1	**M7571**	$4,587	G4-7S$P1	Y	632	29.70	105, 131
40	1800	230/460	324T	93/46.5	94.1	**M7572**	$4,587	G4-7S$P1	N	632	29.70	70, 105, 131
50	1800	230/460	326T	115.8/57.9	94.5	**M7574**	$5,379	G4-7S$P1	Y	724	31.32	105, 131

Notes:

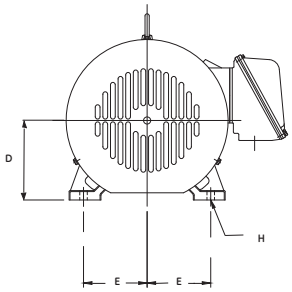
29 Usable on 200 Volt, 60Hz at 1.0 service factor
70 F2 Assembly
105 Usable on 200/400V, 50Hz, same HP, at 1.0 service factor
131 Usable on 200/400V, 50Hz at 1.15SF and de-rated to next lower HP

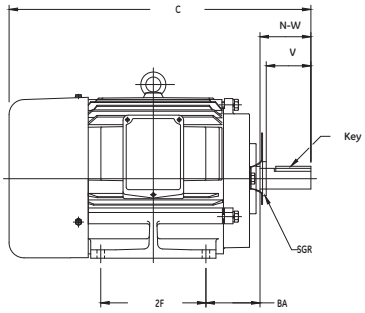
Extended warranty from Electro Static Technology guarantees against bearing failure due to fluting damage for the expected (L10) life of the original bearings.

Energy $aver® SGR

TEFC - w/External AEGIS® Shaft Grounding Ring

Dimensions





NEMA Frame	D	2E	2F	BA	H	N-W	U	V Min.	Key Width	Key Thickness	Key Length
143T	3.50	5.50	4.00	2.25	0.34 Slot	2.25	0.88	1.80	0.19	0.19	1.38
145T	3.50	5.50	5.00	2.25	0.34 Slot	2.25	0.88	1.80	0.19	0.19	1.38
182T	4.50	7.50	4.50	2.75	0.41 Dia.	2.75	1.12	2.30	0.25	0.25	1.75
184T	4.50	7.50	5.50	2.75	0.41 Dia.	2.75	1.12	2.30	0.25	0.25	1.75
213T	5.25	8.50	5.50	3.50	0.41 Dia.	3.38	1.38	2.93	0.31	0.31	2.38
215T	5.25	8.50	7.00	3.50	0.41 Dia.	3.38	1.38	2.93	0.31	0.31	2.38
254T	6.25	10.00	8.25	4.25	0.53 Dia.	4.00	1.62	3.55	0.38	0.38	2.88
256T	6.25	10.00	10.00	4.25	0.53 Dia.	4.00	1.62	3.55	0.38	0.38	2.88
284T	7.00	11.00	9.50	4.75	0.53 Dia.	4.62	1.88	4.18	0.50	0.50	3.25
286T	7.00	11.00	11.00	4.75	0.53 Dia.	4.62	1.88	4.18	0.50	0.50	3.25
324T	8.00	12.50	10.50	5.25	0.66 Dia.	5.25	2.12	4.80	0.50	0.50	3.88
326T	8.00	12.50	12.00	5.25	0.66 Dia.	5.25	2.12	4.80	0.50	0.50	3.88

Notes:
"C" dimension is overall length and is shown for each catalog number on rating page.
All dimensions are nominal. Request factory outlines for exact dimensions.

Energy $aver®
Kits and Accessories

NEMA 143 to 449T Frames

C-Face Kits—Energy $aver Dripproof

Cat. No.	Part No.	Frame	Poles	List Price	Price Symbol	Norm. Stk.
A1058	249A9573AAG09	143T-145T	2, 4, 6	$123	G4-7KITS	Y
A1059	249A9573AAG10	182T-184T	2, 4, 6	$168	G4-7KITS	Y
A1060	249A9573AAG11	213T-215T	2, 4, 6	$207	G4-7KITS	Y
A1061	249A9573AAG12	254T-256T	2, 4, 6	$240	G4-7KITS	Y
A1050	249A9573AAG01	284T(S)-286T(S)*	2, 4, 6	$387	G4-7KITS	Y
A1051	249A9573AAG02	324T(S)-326T(S)*	2, 4, 6	$627	G4-7KITS	Y
A1052	249A9573AAG03	364TS-365TS	2	$809	G4-7KITS	Y
A1053	249A9573AAG04	364T(S)-365T(S)*	2, 4, 6	$809	G4-7KITS	Y
A1054	249A9573AAG05	404TS-405TS	2	$1,088	G4-7KITS	Y
A1055	249A9573AAG06	404T(S)-405T(S)*	4	$1,286	G4-7KITS	Y
A1062	249A9573AAG13	404T(S)*	6	$1,253	G4-7KITS	Y
A1063	249A9573AAG14	405T(S)*	6	$1,253	G4-7KITS	Y
A1056	249A9573AAG07	444TS-449TS	2	$1,286	G4-7KITS	Y
A1057	249A9573AAG08	444T(S)-449T(S)*	2, 4, 6	$1,286	G4-7KITS	Y

*For use on models with "T" or "TS" type shaft dimensions.

C-Face Kits—Energy $aver TEFC-SD

Cat. No.	Part No.	Frame	List Price	Price Symbol	Norm. Stk.
A1064	249A9573ABG01	143T-145T	$147	G4-7KITS	Y
A1065	249A9573ABG02	182T-184T	$201	G4-7KITS	Y
A1066	249A9573ABG03	213T-215T	$251	G4-7KITS	Y
A1067	249A9573ABG04	254T-256T	$336	G4-7KITS	Y
A1068	249A9573ABG05	284T-286T	$446	G4-7KITS	Y
A1069	249A9573ABG06	324T(S)-326T(S)	$662	G4-7KITS	Y
A763	249A4321AMG03	364T-365T	$842	G4-7KITS	Y
A764	249A4321AMG04	364TS-365TS	$842	G4-7KITS	Y
A765	249A4321AMG05	404T-405T	$885	G4-7KITS	Y
A766	249A4321AMG06	404TS-405TS	$885	G4-7KITS	Y
A767	249A4321AMG07	444T-449T	$2,112	G4-7KITS	Y
A768	249A4321AMG08	444TS-449TS	$2,112	G4-7KITS	Y

Energy $aver®
Kits and Accessories

NEMA 143 to 449T Frames

Sliding Bases for 143-445 Frame Motors

Cat. No.	Part No.	Frame	No. of Adjusting Screws	List Price	Price Symbol	Norm. Stk.
A125	235A2321AB1	143	2	$135	G4-7KITS	N
A126	235A2321AB2	145	2	$135	G4-7KITS	N
A127	235A2321AB3	182	2	$150	G4-7KITS	Y
A128	235A2321AB4	184	2	$150	G4-7KITS	Y
A129	235A2321AB5	213	2	$188	G4-7KITS	Y
A130	235A2321AB6	215	2	$188	G4-7KITS	Y
A131	235A2321AB7	254	2	$263	G4-7KITS	Y
A132	235A2321AB8	256	2	$263	G4-7KITS	Y
A133	235A2321AB9	284	2	$300	G4-7KITS	Y
A134	235A2321AB10	286	2	$300	G4-7KITS	Y
A135	235A2321AB11	324	2	$390	G4-7KITS	Y
A136	235A2321AB12	326	2	$390	G4-7KITS	Y
A137	235A2321AB13	364	2	$495	G4-7KITS	Y
A138	235A2321AB14	365	2	$495	G4-7KITS	Y
A139	235A2321AB15	404	2	$720	G4-7KITS	N
A140	235A2321AB16	405	2	$720	G4-7KITS	N
A141	235A2321AB17	444	2	$900	G4-7KITS	N
A142	235A2321AB18	445	2	$900	G4-7KITS	N

2.0 X$D Ultra® NEMA Premium® Extra Severe Duty Motors

2.1 X$D Ultra® – Extra Severe Duty

2.1 Standard Features
2.2 Pricing
2.8 C-Face Pricing
2.9 High Torque Design C Pricing
2.10 Performance Data
2.16 Dimensions

2.18 X$D Ultra® 841

2.18 Standard Features
2.19 Pricing
2.25 C-Face Pricing
2.27 Performance Data
2.32 Dimensions

2.34 X$D Ultra® 661 for Heat Exchanger

2.34 Standard Features
2.35 Pricing
2.36 Performance Data
2.37 Dimensions

2.38 X$D Ultra®, X$D Ultra® 841 and 661 Kits 140 to 449T

2.42 X$D Ultra® Checklist for Value

LV/MV TEFC Manufacturing

Monterrey, Mexico

Established in 1995, this modern and efficient motor plant employs over 500 people. Here, GE's professional manufacturing team continues to improve upon previous techniques and technologies to deliver quality products and meet customer needs. The Monterrey, Mexico motors plant is an ISO 9000-2008 quality facility that has received several industry and internal awards for safety, quality, employee health programs and environmental responsibility.

Virtual Motor Plant Tour

For a look at our manufacturing site in action, click to **YouTube** and search the key words ***Monterrey AC Capabilities***.

X$D Ultra®

TEFC & TENV—Extra Severe Duty (IP55)

Standard Features

NEMA Frame Size	143 - 449
Poles	2, 4, 6 & 8
Horsepower Range	2-pole - 1 - 300 4-pole - 1 - 300 6-pole - .75 - 250 8-pole - .5 - 150
Voltage	230/460 V - 1 - 75 HP 460 and 575 - 1 - Max HP.
Shaft Extension	2-pole 143 - 326 fr - T 284 - 449 fr - TS 4, 6 & 8-pole 143 - 449 fr - T
Agency Approvals	UL - Component and Insulation System Recognition CSA - Certification and Efficiency Verification
Industry Specifications	IEEE 45 Marine Duty
Warranty (months)	60 months from date of installation or 66 months from date of manufacture, whichever occurs first
Max Ambient & Altitude	40˚C & 3300 feet
Insulation Class	H
Winding Temperature Rise	80C @1.0SF Sine wave (with some high end exceptions)
Service Factor	1.15 Sine wave (with some high end exceptions)
NEMA Design	B
Insulation System	Non-Hygroscopic, Anti-Fungus, Polyester Resin, Trickle Treated, Tested to Exceed NEMA MG 1 Part 31
Inverter Capability	Variable Torque - INF:1
Efficiency	Per USA & Canada Legislation (NEMA Premium 1-200 HP)
Frame Material	Cast iron
Frame/Conduit Box Gasket	Neoprene Rubber
End Shield Material	Cast iron
Conduit Box Material	Cast Iron or Fabricated Steel Plate
Conduit Box Cover Gasket	Neoprene Rubber
Conduit Box Rotation	90 degree increments
Conduit Box Hole Thread	NPT
Fan Cover Material	Cast iron
Fan	2-pole - Bi-Directional, Non-sparking Plastic (except Uni-directional Aluminum in 449 frame) 4, 6 & 8-pole - Bi-Directional, Non-sparking Plastic
Sound Power	NEMA MG 1 Part 9
Mounting	F1 (Field modifiable to F2)
Mounting Holes	2 per foot, 8 total
Lifting	4 point cast in lugs
Bearing Type	Single Shield Ball or Open Roller
Bearing L10 Life (Hours)	Belted - 26,280 per NEMA MG 1 14.42.2 Direct coupled - 130,000
Bearing Caps	Cast Iron, gasketed
Bearing Lubricant	Polyurea
Bearing Re-Lubrication	Grease fitting & plug . Extended through the fan cover.
Bearing Protection	Steel reinforced neoprene shaft slinger
Fasteners	Hex Head, Zinc Plated
Condensation Drain	Stainless Steel T-drains at the lowest point of both end shields
Balance & Vibration	ISO 1940 Grade 1 Ball bearings - .040 peak in/sec Roller bearings - 4-pole - .0006 in pk-pk 6 & 8-pole .0009 in pk-pk
Vibration Pads	Cast in vibration pads for repeatable measurements
Nameplate	316 Stainless Steel
Paint	Epoxy ester, RAL 1001
Tests	NEMA Routine including Vibration supplied with motor. IEEE 112 Method B

X$D Ultra®

TEFC—Extra Severe Duty (IP55)

Pricing

Volts: 230/460, 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	C-Face Kit	Notes
0.5	900	460	143T	1.3	66	**M9167**	5KS143SAA408	$864	G4-7U1	N	43	11.62	PB14A	55
0.5	900	575	143T	1.0	66	**M9168**	5KS143SAA404	$864	G4-7U1	N	43	11.62	PB14A	55
0.5	900	230/460	143T	2.6/1.3	66	**M9166**	5KS143SAA405	$864	G4-7U1	N	43	11.62	PB14A	55
0.75	1200	460	143T	1.6	77	**M9169**	5KS143SAA308	$980	G4-7U1	N	43	11.62	PB14A	55
0.75	1200	575	143T	1.3	77	**M481**	5KS143SAA304	$980	G4-7U1	Y	43	11.62	PB14A	55
0.75	1200	230/460	143T	3.2/1.6	77	**M480**	5KS143SAA305	$980	G4-7U1	N	43	11.62	PB14A	55
0.75	900	460	145T	1.8	70	**M9170**	5KS145SAA408	$1,352	G4-7U1	N	50	11.62	PB14A	55
0.75	900	575	145T	1.5	70	**M477**	5KS145SAA404	$1,352	G4-7U1	N	50	11.62	PB14A	55
0.75	900	230/460	145T	3.6/1.8	70	**M460**	5KS145SAA405	$1,352	G4-7U1	N	50	11.62	PB14A	55
1	3600	460	143T	1.4	85.5	**M9171**	5KS143SAA140	$927	G4-7U1	N	43	11.62	PB14A	55
1	3600	575	143T	1.1	85.5	**M463**	5KS143SAA120	$927	G4-7U1	N	43	11.62	PB14A	55
1	3600	230/460	143T	2.8/1.4	85.5	**M462**	5KS143SAA121	$927	G4-7U1	N	43	11.62	PB14A	55
1	1800	460	143T	1.6	85.5	**M475**	5KS143SAA208	$839	G4-7U1	N	43	11.62	PB14A	55
1	1800	575	143T	1.3	85.5	**M483**	5KS143SAA204	$839	G4-7U1	Y	43	11.62	PB14A	55
1	1800	230/460	143T	3.2/1.6	85.5	**M482**	5KS143SAA205	$839	G4-7U1	Y	43	11.62	PB14A	55
1	1200	460	145T	1.8	82.5	**M476**	5KS145SAA308	$1,040	G4-7U1	N	50	11.62	PB14A	55
1	1200	575	145T	1.5	82.5	**M485**	5KS145SAA304	$1,040	G4-7U1	Y	50	11.62	PB14A	55
1	1200	230/460	145T	3.6/1.8	82.5	**M484**	5KS145SAA305	$1,040	G4-7U1	N	50	11.62	PB14A	55
1	900	460	182T	2.2	75.5	**M9887**	5KS182SAA408	$1,229	G4-7U1	N	76	11.62	PB18A	55
1	900	575	182T	1.7	75.5	**M9872**	5KS182SAA404	$1,229	G4-7U1	N	76	11.62	PB18A	55
1	900	230/460	182T	4.4/2.2	75.5	**M9871**	5KS182SAA405	$1,229	G4-7U1	N	76	11.62	PB18A	55
1.5	3600	575	143T	1.8	84	**M487**	5KS143SAA104	$974	G4-7U1	N	43	11.62	PB14A	55
1.5	3600	230/460	143T	4.4/2.2	84	**M486**	5KS143SAA105	$974	G4-7U1	Y	43	11.62	PB14A	55
1.5	1800	460	145T	2.2	86.5	**M464**	5KS145SAA222	$932	G4-7U1	N	50	11.62	PB14A	55
1.5	1800	575	145T	1.8	86.5	**M493**	5KS145SAA223	$932	G4-7U1	Y	50	11.62	PB14A	55
1.5	1800	230/460	145T	4.4/2.2	86.5	**M492**	5KS145SAA221	$932	G4-7U1	Y	50	11.62	PB14A	55
1.5	1200	460	182T	2.3	87.5	**M9943**	5KS182SAA308	$1,034	G4-7U1	Y	76	13.63	PB18A	55
1.5	1200	575	182T	1.9	87.5	**M9703**	5KS182SAA304	$1,034	G4-7U1	Y	76	13.63	PB18A	55
1.5	1200	230/460	182T	4.6/2.3	87.5	**M9702**	5KS182SAA305	$1,034	G4-7U1	N	76	13.63	PB18A	55
1.5	900	460	184T	3.2	78.5	**M9888**	5KS184SAA408	$1,451	G4-7U1	N	101	15.91	PB18A	
1.5	900	575	184T	2.6	78.5	**M9874**	5KS184SAA404	$1,451	G4-7U1	N	101	15.91	PB18A	
1.5	900	230/460	184T	6.4/3.2	78.5	**M9873**	5KS184SAA405	$1,451	G4-7U1	N	101	15.91	PB18A	
1.5	3600	460	143T	2.2	84	**M465**	5KS143SAA108	$1,038	G4-7U1	N	43	11.62	PB14A	55
2	3600	460	145T	2.8	86.5	**M9172**	5KS145SAA108	$1,038	G4-7U1	N	50	11.62	PB14A	55
2	3600	575	145T	2.2	86.5	**M491**	5KS145SAA104	$1,038	G4-7U1	N	50	11.62	PB14A	55
2	3600	230/460	145T	5.6/2.8	86.5	**M490**	5KS145SAA105	$1,038	G4-7U1	Y	50	11.62	PB14A	55
2	1800	460	145T	2.8	86.5	**M494**	5KS145SAA208	$1,026	G4-7U1	Y	50	13.42	PB14A	
2	1800	575	145T	2.2	86.5	**M489**	5KS145SAA204	$1,026	G4-7U1	Y	50	13.42	PB14A	
2	1800	230/460	145T	5.6/2.8	86.5	**M488**	5KS145SAA205	$1,026	G4-7U1	Y	50	13.42	PB14A	
2	1200	460	184T	3.0	88.5	**M9944**	5KS184SAA308	$1,104	G4-7U1	Y	101	15.91	PB18A	
2	1200	575	184T	2.5	88.5	**M9706**	5KS184SAA304	$1,104	G4-7U1	Y	101	15.91	PB18A	
2	1200	230/460	184T	6.0/3.0	88.5	**M9704**	5KS184SAA305	$1,104	G4-7U1	N	101	15.91	PB18A	
2	900	460	213T	3.7	86.5	**M9705**	5KS213SAA408	$1,733	G4-7U1	N	200	17.25	PB21A	55
2	900	575	213T	3.0	86.5	**M9876**	5KS213SAA404	$1,733	G4-7U1	N	200	17.25	PB21A	55
2	900	230/460	213T	7.4/3.7	86.5	**M9875**	5KS213SAA405	$1,733	G4-7U1	Y	200	17.25	PB21A	55

Notes:
55 TENV Construction

X$D Ultra®

TEFC—Extra Severe Duty (IP55)

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	C-Face Kit	Notes
3	3600	460	182T	4.2	87.5	**M9939**	5KS182SAA108	$1,001	G4-7U1	Y	76	13.63	PB18A	55
3	3600	575	182T	3.4	87.5	**M9715**	5KS182SAA104	$1,001	G4-7U1	N	76	13.63	PB18A	55
3	3600	230/460	182T	8.4/4.2	87.5	**M9713**	5KS182SAA105	$1,001	G4-7U1	N	76	13.63	PB18A	55
3	1800	460	182T	4.0	89.5	**M9941**	5KS182SAA208	$975	G4-7U1	Y	76	13.63	PB18A	55
3	1800	575	182T	3.2	89.5	**M9711**	5KS182SAA204	$975	G4-7U1	Y	76	13.63	PB18A	55
3	1800	230/460	182T	8.0/4.0	89.5	**M241**	5KS182SAA205	$975	G4-7U1	Y	76	13.63	PB18A	55
3	1200	460	213T	4.3	89.5	**M9111**	5KS213SAA308	$1,230	G4-7U1	Y	200	17.25	PB21A	55
3	1200	575	213T	3.4	89.5	**M9712**	5KS213SAA304	$1,230	G4-7U1	Y	200	17.25	PB21A	55
3	1200	230/460	213T	8.6/4.3	89.5	**M9142**	5KS213SAA305	$1,230	G4-7U1	N	200	17.25	PB21A	55
3	900	460	215T	5.6	84	**M9708**	5KS215SAA408	$2,165	G4-7U1	N	220	17.25	PB21A	55
3	900	575	215T	4.5	84	**M9878**	5KS215SAA404	$2,165	G4-7U1	N	220	17.25	PB21A	55
3	900	230/460	215T	11.2/5.6	84	**M9877**	5KS215SAA405	$2,165	G4-7U1	Y	220	17.25	PB21A	55
5	3600	460	184T	6.4	88.5	**M9940**	5KS184SAA108	$1,068	G4-7U1	Y	101	15.91	PB18A	
5	3600	575	184T	5.1	88.5	**M9722**	5KS184SAA104	$1,068	G4-7U1	Y	101	15.91	PB18A	
5	3600	230/460	184T	12.8/6.4	88.5	**M240**	5KS184SAA105	$1,068	G4-7U1	N	101	15.91	PB18A	
5	1800	460	184T	6.6	89.5	**M9942**	5KS184SAA208	$1,026	G4-7U1	Y	101	15.91	PB18A	
5	1800	575	184T	5.3	89.5	**M9718**	5KS184SAA204	$1,026	G4-7U1	Y	101	15.91	PB18A	
5	1800	230/460	184T	13.2/6.6	89.5	**M242**	5KS184SAA205	$1,026	G4-7U1	Y	101	15.91	PB18A	
5	1200	460	215T	6.8	89.5	**M9112**	5KS215SAA308	$1,748	G4-7U1	Y	220	20.15	PB21A	
5	1200	575	215T	5.5	89.5	**M9717**	5KS215SAA304	$1,748	G4-7U1	Y	220	20.15	PB21A	
5	1200	230/460	215T	13.6/6.8	89.5	**M9143**	5KS215SAA305	$1,748	G4-7U1	N	220	20.15	PB21A	
5	900	460	254T	8.0	85.5	**M9719**	5KS254SAA408	$2,876	G4-7U1	N	315	25.59	PB25A	
5	900	575	254T	6.4	85.5	**M9880**	5KS254SAA404	$2,876	G4-7U1	N	315	25.59	PB25A	
5	900	230/460	254T	16.0/8.0	85.5	**M9879**	5KS254SAA405	$2,876	G4-7U1	Y	315	25.59	PB25A	
7.5	3600	460	213T	9.0	89.5	**M990**	5KS213SAA108	$1,524	G4-7U1	Y	200	20.15	PB21A	
7.5	3600	575	213T	7.2	89.5	**M9728**	5KS213SAA104	$1,524	G4-7U1	Y	200	20.15	PB21A	
7.5	3600	230/460	213T	18.0/9.0	89.5	**M9144**	5KS213SAA105	$1,524	G4-7U1	N	200	20.15	PB21A	
7.5	1800	460	213T	9.2	91.7	**M9911**	5KS213SAA208	$1,515	G4-7U1	Y	200	20.15	PB21A	
7.5	1800	575	213T	7.3	91.7	**M9730**	5KS213SAA204	$1,515	G4-7U1	Y	200	20.15	PB21A	
7.5	1800	230/460	213T	18.4/9.2	91.7	**M9145**	5KS213SAA205	$1,515	G4-7U1	Y	200	20.15	PB21A	
7.5	1200	460	254T	9.7	91	**M9113**	5KS254SAA308	$2,321	G4-7U1	Y	315	25.59	PB25A	
7.5	1200	575	254T	7.8	91	**M9726**	5KS254SAA304	$2,321	G4-7U1	Y	315	25.59	PB25A	
7.5	1200	230/460	254T	19.4/9.7	91	**M9146**	5KS254SAA305	$2,321	G4-7U1	N	315	25.59	PB25A	
7.5	900	460	256T	11.1	87.5	**M9724**	5KS256SAA408	$3,635	G4-7U1	N	350	25.59	PB25A	
7.5	900	575	256T	8.9	87.5	**M9882**	5KS256SAA404	$3,635	G4-7U1	N	350	25.59	PB25A	
7.5	900	230/460	256T	22.2/11.1	87.5	**M9881**	5KS256SAA405	$3,635	G4-7U1	Y	350	25.59	PB25A	
10	3600	460	215T	11.6	90.2	**M991**	5KS215SAA108	$1,635	G4-7U1	Y	220	20.15	PB21A	
10	3600	575	215T	9.3	90.2	**M9733**	5KS215SAA104	$1,635	G4-7U1	Y	220	20.15	PB21A	
10	3600	230/460	215T	23.2/11.6	90.2	**M9147**	5KS215SAA105	$1,635	G4-7U1	N	220	20.15	PB21A	
10	1800	460	215T	12.2	91.7	**M9912**	5KS215SAA208	$1,547	G4-7U1	Y	220	20.15	PB21A	
10	1800	575	215T	9.8	91.7	**M9738**	5KS215SAA204	$1,547	G4-7U1	Y	220	20.15	PB21A	
10	1800	230/460	215T	24.4/12.2	91.7	**M9148**	5KS215SAA205	$1,547	G4-7U1	Y	220	20.15	PB21A	
10	1200	460	256T	12.9	91	**M9114**	5KS256SAA308	$2,847	G4-7U1	Y	350	25.59	PB25A	
10	1200	575	256T	10.3	91	**M9737**	5KS256SAA304	$2,847	G4-7U1	Y	350	25.59	PB25A	
10	1200	230/460	256T	25.8/12.9	91	**M9149**	5KS256SAA305	$2,847	G4-7U1	N	350	25.59	PB25A	
10	900	460	284T	13.6	89.5	**M9736**	5KS284SAA408	$4,242	G4-7U1	N	460	28.58	PB28A	
10	900	575	284T	10.8	89.5	**M9884**	5KS284SAA404	$4,242	G4-7U1	N	460	28.58	PB28A	
10	900	230/460	284T	27.2/13.6	89.5	**M9883**	5KS284SAA405	$4,242	G4-7U1	Y	460	28.58	PB28A	

Notes:
55 TENV Construction

X$D Ultra®

TEFC—Extra Severe Duty (IP55)

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	C-Face Kit	Notes
15	3600	460	254T	17.3	91	**M992**	5KS254SAA108	$2,244	G4-7U1	Y	315	25.59	PB25A	
15	3600	575	254T	13.9	91	**M9741**	5KS254SAA104	$2,244	G4-7U1	Y	315	25.59	PB25A	
15	3600	230/460	254T	34.6/17.3	91	**M9150**	5KS254SAA105	$2,244	G4-7U1	N	315	25.59	PB25A	
15	1800	460	254T	18.9	92.4	**M9913**	5KS254SAA208	$2,127	G4-7U1	Y	315	25.59	PB25A	
15	1800	575	254T	15.1	92.4	**M9745**	5KS254SAA204	$2,127	G4-7U1	Y	315	25.59	PB25A	
15	1800	230/460	254T	37.8/18.9	92.4	**M9151**	5KS254SAA205	$2,127	G4-7U1	Y	315	25.59	PB25A	
15	1200	460	284T	19.6	91.7	**M9115**	5KS284SAA308	$3,788	G4-7U1	Y	460	28.58	PB28A	
15	1200	575	284T	15.8	91.7	**M9746**	5KS284SAA304	$3,788	G4-7U1	Y	460	28.58	PB28A	
15	1200	230/460	284T	39.2/19.6	91.7	**M9152**	5KS284SAA305	$3,788	G4-7U1	N	460	28.58	PB28A	
15	900	460	286T	20.1	89.5	**M9742**	5KS286SAA408	$5,526	G4-7U1	N	510	28.58	PB28A	
15	900	575	286T	16.1	89.5	**M9886**	5KS286SAA404	$5,526	G4-7U1	N	510	28.58	PB28A	
15	900	230/460	286T	40.2/20.1	89.5	**M9885**	5KS286SAA405	$5,526	G4-7U1	Y	510	28.58	PB28A	
20	3600	460	256T	22.6	91	**M993**	5KS256SAA108	$2,702	G4-7U1	Y	350	25.59	PB25A	
20	3600	575	256T	18.1	91	**M9749**	5KS256SAA104	$2,702	G4-7U1	Y	350	25.59	PB25A	
20	3600	230/460	256T	45.2/22.6	91	**M9153**	5KS256SAA105	$2,702	G4-7U1	N	350	25.59	PB25A	
20	1800	460	256T	23.8	93	**M9914**	5KS256SAA208	$2,541	G4-7U1	Y	350	25.59	PB25A	
20	1800	575	256T	18.9	93	**M9751**	5KS256SAA204	$2,541	G4-7U1	Y	350	25.59	PB25A	
20	1800	230/460	256T	47.6/23.8	93	**M9154**	5KS256SAA205	$2,541	G4-7U1	Y	350	25.59	PB25A	
20	1200	460	286T	25.5	91.7	**M9117**	5KS286SAA308	$4,625	G4-7U1	Y	510	28.58	PB28A	
20	1200	575	286T	20.4	91.7	**M9755**	5KS286SAA304	$4,625	G4-7U1	Y	510	28.58	PB28A	
20	1200	230/460	286T	51.0/25.5	91.7	**M9155**	5KS286SAA305	$4,625	G4-7U1	N	510	28.58	PB28A	
20	900	460	324T	29.8	91.0	**M9748**	5KS324SAA408	$6,756	G4-7U1	Y	650	32.04	A761	
20	900	575	324T	24.0	91.0	**M8950**	5KS324SAA404	$6,756	G4-7U1	N	650	32.04	A761	
20	900	230/460	324T	59.6/29.8	91.0	**M9173**	5KS324SAA405	$6,756	G4-7U1	N	650	32.04	A761	
25	3600	460	284TS	28.4	91.7	**M994**	5KS284SAA118	$3,384	G4-7U1	Y	460	28.58	PB28A	
25	3600	460	284T	28.4	91.7	**M9175**	5KS284SAA108	$3,384	G4-7U1	N	460	28.58	PB28A	
25	3600	575	284TS	22.7	91.7	**M9838**	5KS284SAA114	$3,384	G4-7U1	Y	460	28.58	PB28A	
25	3600	575	284T	22.7	91.7	**M9176**	5KS284SAA104	$3,384	G4-7U1	N	460	28.58	PB28A	
25	3600	230/460	284TS	56.8/28.4	91.7	**M9156**	5KS284SAA115	$3,384	G4-7U1	N	460	28.58	PB28A	
25	3600	230/460	284T	56.8/28.4	91.7	**M9174**	5KS284SAA105	$3,384	G4-7U1	N	460	28.58	PB28A	
25	1800	460	284T	29.1	93.6	**M9935**	5KS284SAA208	$3,243	G4-7U1	Y	460	28.58	PB28A	
25	1800	575	284T	23.3	93.6	**M9759**	5KS284SAA204	$3,243	G4-7U1	Y	460	28.58	PB28A	
25	1800	230/460	284T	58.2/29.1	93.6	**M9157**	5KS284SAA205	$3,243	G4-7U1	Y	460	28.58	PB28A	
25	1200	460	324T	31.6	93.0	**M9119**	5KS324SAA308	$5,502	G4-7U1	Y	690	32.04	A761	
25	1200	575	324T	25.5	93.0	**M9758**	5KS324SAA304	$5,502	G4-7U1	Y	690	32.04	A761	
25	1200	230/460	324T	63.2/31.6	93.0	**M9158**	5KS324SAA305	$5,502	G4-7U1	N	690	32.04	A761	
25	900	460	326T	36.5	91.0	**M9761**	5KS326SAA408	$8,420	G4-7U1	Y	710	32.04	A761	
25	900	575	326T	29.6	91.0	**M9762**	5KS326SAA404	$8,420	G4-7U1	N	710	32.04	A761	
25	900	230/460	326T	73.0/36.5	91.0	**M9177**	5KS326SAA405	$8,420	G4-7U1	N	710	32.04	A761	
30	3600	460	286TS	32.9	92.4	**M995**	5KS286SAA118	$3,980	G4-7U1	Y	510	28.58	PB28A	
30	3600	460	286T	32.9	92.4	**M9179**	5KS286SAA108	$3,980	G4-7U1	N	510	28.58	PB28A	
30	3600	575	286TS	26.3	92.4	**M9828**	5KS286SAA114	$3,980	G4-7U1	Y	510	28.58	PB28A	
30	3600	575	286T	26.3	92.4	**M9180**	5KS286SAA104	$3,980	G4-7U1	N	510	28.58	PB28A	
30	3600	230/460	286TS	65.8/32.9	92.4	**M9159**	5KS286SAA115	$3,980	G4-7U1	N	510	28.58	PB28A	
30	3600	230/460	286T	65.8/32.9	92.4	**M9178**	5KS286SAA105	$3,980	G4-7U1	N	510	28.58	PB28A	
30	1800	460	286T	34.7	93.6	**M9937**	5KS286SAA208	$3,788	G4-7U1	Y	510	28.58	PB28A	
30	1800	575	286T	27.7	93.6	**M9764**	5KS286SAA204	$3,788	G4-7U1	Y	510	28.58	PB28A	
30	1800	230/460	286T	69.4/34.7	93.6	**M9160**	5KS286SAA205	$3,788	G4-7U1	Y	510	28.58	PB28A	

X$D Ultra®

TEFC—Extra Severe Duty (IP55)

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	C-Face Kit	Notes
30	1200	460	326T	37.7	93.0	**M9122**	5KS326SAA308	$6,276	G4-7U1	Y	720	32.04	A761	
30	1200	575	326T	30.8	93.0	**M9834**	5KS326SAA304	$6,276	G4-7U1	Y	720	32.04	A761	
30	1200	230/460	326T	75.4/37.7	93.0	**M9161**	5KS326SAA305	$6,276	G4-7U1	N	720	32.04	A761	
30	900	460	364T	43.1	92.4	**M9767**	5KS364SAA408	$9,846	G4-7U	Y	980	34.89	A763	
30	900	575	364T	34.7	92.4	**M9766**	5KS364SAA404	$9,846	G4-7U	N	980	34.89	A763	
30	900	230/460	364T	86.2/43.1	92.4	**M9181**	5KS364SAA405	$9,846	G4-7U	N	980	34.89	A763	
40	3600	460	324TS	50.3	93.6	**M996**	5KS324SAA118	$4,952	G4-7U1	Y	640	30.54	A762	
40	3600	460	324T	50.3	93.6	**M9820**	5KS324SAA108	$4,952	G4-7U1	N	640	32.04	A761	
40	3600	575	324TS	39.7	93.6	**M9829**	5KS324SAA114	$4,952	G4-7U1	Y	640	30.54	A762	
40	3600	575	324T	39.7	93.6	**M9183**	5KS324SAA104	$4,952	G4-7U1	N	640	32.04	A761	
40	3600	230/460	324TS	100.6/50.3	93.6	**M9162**	5KS324SAA115	$4,952	G4-7U1	N	640	30.54	A762	
40	3600	230/460	324T	100.6/50.3	93.6	**M9182**	5KS324SAA105	$4,952	G4-7U1	N	640	32.04	A761	
40	1800	460	324TS	50.7	94.1	**M9916**	5KS324SAA218	$4,908	G4-7U1	N	670	30.54	A762	
40	1800	460	324T	50.7	94.1	**M9915**	5KS324SAA208	$4,908	G4-7U1	Y	670	32.04	A761	
40	1800	575	324T	40.0	94.1	**M9768**	5KS324SAA204	$4,908	G4-7U1	Y	670	32.04	A761	
40	1800	230/460	324T	101.4/50.7	94.1	**M9163**	5KS324SAA205	$4,908	G4-7U1	Y	670	32.04	A761	
40	1200	460	364T	49.7	94.1	**M9124**	5KS364SAA308	$8,657	G4-7U	Y	1000	34.89	A763	
40	1200	575	364T	40.0	94.1	**M9835**	5KS364SAA304	$8,657	G4-7U	Y	1000	34.89	A763	
40	1200	230/460	364T	99.4/49.7	94.1	**M9184**	5KS364SAA305	$8,657	G4-7U	N	1000	34.89	A763	
40	900	460	365T	55.5	93.0	**M9770**	5KS365SAA408	$12,144	G4-7U	N	1040	34.89	A763	
40	900	575	365T	44.1	93.0	**M9534**	5KS365SAA404	$12,144	G4-7U	N	1040	34.89	A763	
40	900	230/460	365T	111.0/55.5	93.0	**M9185**	5KS365SAA405	$12,144	G4-7U	N	1040	34.89	A763	
50	3600	460	326T	60.6	93.6	**M9823**	5KS326SAA108	$6,335	G4-7U1	N	660	32.04	A761	
50	3600	460	326TS	60.6	93.6	**M997**	5KS326SAA118	$6,335	G4-7U1	Y	660	30.54	A762	
50	3600	575	326TS	48.5	93.6	**M9839**	5KS326SAA114	$6,335	G4-7U1	Y	660	30.54	A762	
50	3600	575	326T	48.5	93.6	**M9187**	5KS326SAA104	$6,335	G4-7U1	N	660	32.04	A761	
50	3600	230/460	326TS	121.2/60.6	93.6	**M9164**	5KS326SAA115	$6,335	G4-7U1	N	660	30.54	A762	
50	3600	230/460	326T	121.2/60.6	93.6	**M9186**	5KS326SAA105	$6,335	G4-7U1	N	660	32.04	A761	
50	1800	460	326TS	61.5	94.5	**M9918**	5KS326SAA218	$5,754	G4-7U1	N	710	30.54	A762	
50	1800	460	326T	61.5	94.5	**M9917**	5KS326SAA208	$5,754	G4-7U1	Y	710	32.04	A761	
50	1800	575	326T	49.2	94.5	**M9765**	5KS326SAA204	$5,754	G4-7U1	Y	710	32.04	A761	
50	1800	230/460	326T	123.0/61.5	94.5	**M9165**	5KS326SAA205	$5,754	G4-7U1	N	710	32.04	A761	
50	1200	460	365T	61.4	94.1	**M9126**	5KS365SAA308	$10,050	G4-7U	Y	1020	34.89	A763	
50	1200	575	365T	49.4	94.1	**M9775**	5KS365SAA304	$10,050	G4-7U	Y	1020	34.89	A763	
50	1200	230/460	365T	122.8/61.4	94.1	**M9188**	5KS365SAA305	$10,050	G4-7U	N	1020	34.89	A763	
50	900	460	404T	67.1	93.0	**M9773**	5KS404SAA408	$14,654	G4-7U	N	1420	39.77	A765	
50	900	575	404T	54.0	93.0	**M9535**	5KS404SAA404	$14,654	G4-7U	N	1420	39.77	A765	
50	900	230/460	404T	134.2/67.1	93.0	**M9189**	5KS404SAA405	$14,654	G4-7U	N	1420	39.77	A765	
60	3600	460	364TS	69.5	95.0	**M998**	5KS364SAA118	$8,816	G4-7U	Y	960	32.76	A764	
60	3600	575	364TS	55.6	95.0	**M9847**	5KS364SAA114	$8,816	G4-7U	N	960	32.76	A764	
60	3600	230/460	364TS	139.0/69.5	95.0	**M9190**	5KS364SAA115	$8,816	G4-7U	N	960	32.76	A764	
60	1800	460	364TS	70.8	95.0	**M9921**	5KS364SAA218	$8,633	G4-7U	Y	1000	32.76	A764	
60	1800	460	364T	70.8	95.0	**M9919**	5KS364SAA208	$8,633	G4-7U	Y	1000	34.89	A763	
60	1800	575	364T	57.7	95.0	**M9776**	5KS364SAA204	$8,633	G4-7U	Y	960	34.89	A763	
60	1800	230/460	364T	141.6/70.8	95.0	**M9191**	5KS364SAA205	$8,633	G4-7U	N	960	34.89	A763	
60	1200	460	404T	74.3	94.5	**M9128**	5KS404SAA308	$11,691	G4-7U	Y	1430	39.77	A765	
60	1200	575	404T	59.4	94.5	**M9837**	5KS404SAA304	$11,691	G4-7U	Y	1430	39.77	A765	

X$D Ultra®

TEFC—Extra Severe Duty (IP55)

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	C-Face Kit	Notes
60	1200	230/460	404T	148.6/74.3	94.5	**M9192**	5KS404SAA305	$11,691	G4-7U	N	1430	39.77	A765	
60	900	460	405T	80.0	93.0	**M9778**	5KS405SAA408	$18,000	G4-7U	N	1490	39.77	A765	
60	900	575	405T	64.4	93.0	**M9536**	5KS405SAA404	$18,000	G4-7U	N	1490	39.77	A765	
60	900	230/460	405T	160.0/80.0	93.0	**M9193**	5KS405SAA405	$18,000	G4-7U	N	1490	39.77	A765	
75	3600	460	365TS	87.5	95.0	**M999**	5KS365SAA118	$10,823	G4-7U	Y	970	32.76	A764	
75	3600	575	365TS	70.4	95.0	**M9830**	5KS365SAA114	$10,823	G4-7U	N	970	32.76	A764	
75	3600	230/460	365TS	175.0/87.5	95.0	**M9194**	5KS365SAA115	$10,823	G4-7U	N	970	32.76	A764	
75	1800	460	365TS	87.1	95.4	**M9923**	5KS365SAA218	$10,466	G4-7U	N	1080	32.76	A764	
75	1800	460	365T	87.1	95.4	**M9922**	5KS365SAA208	$10,466	G4-7U	Y	1080	34.89	A763	
75	1800	575	365T	69.7	95.4	**M9781**	5KS365SAA204	$10,466	G4-7U	Y	1040	34.89	A763	
75	1800	230/460	365T	174.2/87.1	95.4	**M9195**	5KS365SAA205	$10,466	G4-7U	N	1080	34.89	A763	
75	1200	460	405T	92.9	94.5	**M9131**	5KS405SAA308	$12,996	G4-7U	Y	1460	39.77	A765	
75	1200	460	405T	92.9	94.5	**M7753**	5KS405SAA355	$12,996	G4-7U	N	1460	39.77		98
75	1200	575	405T	74.3	94.5	**M9868**	5KS405SAA304	$12,996	G4-7U	Y	1460	39.77	A765	
75	1200	575	405T	74.3	94.5	**M7762**	5KS405SAA358	$12,996	G4-7U	N	1460	39.77		98
75	1200	230/460	405T	185.8/92.9	94.5	**M9196**	5KS405SAA305	$12,996	G4-7U	N	1460	39.77	A765	
75	900	460	444T	101.0	93.6	**M9780**	5KS444SAA408	$22,523	G4-7U	N	1700	45.62	A767	
75	900	575	444T	80.0	93.6	**M9537**	5KS444SAA404	$22,523	G4-7U	N	1700	45.62	A767	
75	900	230/460	444T	202.0/101.0	93.6	**M9197**	5KS444SAA405	$22,523	G4-7U	N	1700	45.62	A767	
100	3600	460	405TS	108.0	95.0	**M9510**	5KS405SAA118	$14,013	G4-7U	Y	1530	36.76	A766	
100	3600	575	405TS	86.6	95.0	**M9831**	5KS405SAA114	$14,013	G4-7U	N	1530	36.76	A766	
100	1800	460	405TS	120.0	95.4	**M9925**	5KS405SAA218	$12,926	G4-7U	Y	1450	36.76	A766	
100	1800	460	405T	120.0	95.4	**M9924**	5KS405SAA208	$12,926	G4-7U	Y	1450	39.77	A765	
100	1800	460	405T	120.0	95.4	**M7754**	5KS405SAA2084	$12,926	G4-7U	N	1450	39.77		98
100	1800	575	405T	95.7	95.4	**M9779**	5KS405SAA204	$12,926	G4-7U	Y	1450	39.77	A765	
100	1200	460	444T	125.0	95.0	**M9133**	5KS444SAA308	$17,504	G4-7U	Y	1860	45.62	A767	
100	1200	460	444T	125.0	95.0	**M7755**	5KS444SAA373	$17,504	G4-7U	N	1860	45.62		98
100	1200	575	444T	99.1	95.0	**M9846**	5KS444SAA304	$17,504	G4-7U	Y	1860	45.62	A767	
100	1200	575	444T	99.1	95.0	**M7763**	5KS444SAA383	$17,504	G4-7U	N	1860	45.62		98
100	900	460	445T	132.0	94.1	**M9782**	5KS445SAA408	$28,538	G4-7U	N	1830	45.62	A767	
100	900	575	445T	106.0	94.1	**M8953**	5KS445SAA404	$28,538	G4-7U	N	1830	45.62	A767	
125	3600	460	444TS	137.0	95.0	**M9511**	5KS444SAA118	$18,305	G4-7U	Y	1900	41.87	A768	
125	3600	575	444TS	109.0	95.0	**M9538**	5KS444SAA114	$18,305	G4-7U	N	1900	41.87	A768	
125	1800	460	444TS	143.0	95.4	**M9927**	5KS444SAA218	$17,006	G4-7U	Y	1830	41.87	A768	
125	1800	460	444T	143.0	95.4	**M9926**	5KS444SAA208	$17,006	G4-7U	Y	1830	45.62	A767	
125	1800	460	444T	143.0	95.4	**M7756**	5KS444SAA2018	$17,006	G4-7U	N	1830	45.62		98
125	1800	575	444T	115.0	95.4	**M9832**	5KS444SAA204	$17,006	G4-7U	Y	1830	45.62	A767	
125	1200	460	445T	153.0	95.0	**M9135**	5KS445SAA308	$21,086	G4-7U	Y	1950	45.62	A767	
125	1200	460	445T	153.0	95.0	**M7757**	5KS445SAA349	$21,086	G4-7U	N	1950	45.62		98
125	1200	575	445T	122.0	95.0	**M9870**	5KS445SAA304	$21,086	G4-7U	Y	1950	45.62	A767	
125	1200	575	445T	122.0	95.0	**M7764**	5KS445SAA352	$21,086	G4-7U	N	1950	45.62		98
125	900	460	447T	158.0	94.5	**M9784**	5KS447SAA408	$31,778	G4-7U	Y	2420	54.12	A767	
125	900	575	447T	126.0	94.5	**M8954**	5KS447SAA404	$31,778	G4-7U	N	2420	54.12	A767	

Notes:
98 For belted load only. Roller bearing.

X$D Ultra®

TEFC—Extra Severe Duty (IP55)

Pricing (cont.)

Volts: 230/460, 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	C-Face Kit	Notes
150	3600	460	445TS	163.0	95.0	**M9512**	5KS445SAA118	$22,011	G4-7U	Y	1930	41.87	A768	
150	3600	575	445TS	131.0	95.0	**M8955**	5KS445SAA114	$22,011	G4-7U	N	1930	41.87	A768	
150	1800	460	445TS	168.0	95.8	**M9929**	5KS445SAA218	$19,785	G4-7U	Y	2000	41.87	A768	
150	1800	460	445T	168.0	95.8	**M9928**	5KS445SAA208	$19,785	G4-7U	Y	2000	45.62	A767	
150	1800	460	445T	168.0	95.8	**M7758**	5KS445SAA2029	$19,785	G4-7U	N	2000	45.62		98
150	1800	575	445T	135.0	95.8	**M9854**	5KS445SAA204	$19,785	G4-7U	Y	2000	45.62	A767	
150	1200	460	447T	170.0	95.8	**M9137**	5KS447SAA308	$25,545	G4-7U	Y	2940	54.12	A767	
150	1200	460	447T	170.0	95.8	**M7759**	5KS447SAA341	$25,545	G4-7U	N	2940	54.12		98
150	1200	575	447T	136.0	95.8	**M9869**	5KS447SAA304	$25,545	G4-7U	Y	2940	54.12	A767	
150	1200	575	447T	136.0	95.8	**M7765**	5KS447SAA344	$25,545	G4-7U	N	2940	54.12		98
150	900	460	449T	187.0	94.5	**M9785**	5KS449SAA408	$34,653	G4-7U	N	2660	54.12	A767	
150	900	575	449T	149.0	94.5	**M8956**	5KS449SAA404	$34,653	G4-7U	N	2660	54.12	A767	
200	3600	460	447TS	213.0	95.4	**M9961**	5KS447SAA118	$27,866	G4-7U	Y	2650	50.37	A768	
200	3600	575	447TS	171.0	95.4	**M8957**	5KS447SAA114	$27,866	G4-7U	N	2650	50.37	A768	66
200	1800	460	447T	220.0	96.2	**M9991**	5KS447SAA201	$24,818	G4-7U	Y	2770	54.12		98
200	1800	460	447T	220.0	96.2	**M9958**	5KS447SAA208	$24,818	G4-7U	Y	2770	54.12	A767	
200	1800	575	447T	175.0	96.2	**M9959**	5KS447SAA204	$24,818	G4-7U	N	2770	54.12	A767	
200	1800	575	447T	175.0	96.2	**M7761**	5KS447SAA2047	$24,818	G4-7U	N	2770	54.12		98
200	1200	460	449T	227.0	95.8	**M9139**	5KS449SAA308	$28,580	G4-7U	Y	3070	54.12	A767	
200	1200	460	449T	227.0	95.8	**M9198**	5KS449SAA382	$28,580	G4-7U	N	3070	54.12		98
200	1200	575	449T	182.0	95.8	**M9845**	5KS449SAA304	$28,580	G4-7U	Y	3070	54.12	A767	
200	1200	575	449T	182.0	95.8	**M9199**	5KS449SAA383	$28,580	G4-7U	N	3070	54.12		98
250	3600	460	449TS	264.0	95.8	**M9514**	5KS449SAA118	$35,903	G4-7U	Y	2860	0	A768	66
250	3600	460	449TS	264.0	95.8	**M9996**	5KS449SAA146	$35,903	G4-7U	N	2860	0	A768	62
250	3600	575	449TS	211.0	95.8	**M8959**	5KS449SAA122	$35,903	G4-7U	N	2860	50.37	A768	66
250	3600	575	449TS	211.0	95.8	**M9394**	5KS449SAA1007	$35,903	G4-7U	N	2860	50.37		62
250	1800	460	449T	282.0	95.4	**M9988**	5KS449SAA201	$29,021	G4-7U	Y	2660	54.12	A767	
250	1800	460	449T	282.0	95.4	**M9933**	5KS449SAA208	$29,021	G4-7U	Y	2660	54.12		98
250	1800	575	449T	226.0	95.4	**M9989**	5KS449SAA202	$29,021	G4-7U	N	2660	54.12	A767	
250	1800	575	449T	226.0	95.4	**M9851**	5KS449SAA204	$29,021	G4-7U	N	2660	54.12		98
250	1200	460	449T	293.0	95.8	**M8963**	5KS449SAA301	$36,180	G4-7U	Y	3150	54.12	A767	
250	1200	460	449T	293.0	95.8	**M9395**	5KS449SAA384	$36,180	G4-7U	N	3150	54.12		98
250	1200	575	449T	235.0	95.8	**M9396**	5KS449SAA385	$36,180	G4-7U	Y	3150	54.12		
250	1200	575	449T	235.0	95.8	**M9397**	5KS449SAA386	$36,180	G4-7U	N	3150	54.12		98
300	3600	460	449TS	319.0	95.8	**M8960**	5KS449SAA123	$44,522	G4-7U	Y	2790	50.37	A768	66
300	3600	460	449TS	319.0	95.8	**M9398**	5KS449SAA1008	$44,522	G4-7U	N	2790	50.37		62
300	3600	575	449TS	253.0	95.8	**M8961**	5KS449SAA124	$44,522	G4-7U	N	2790	50.37	A768	66
300	3600	575	449TS	253.0	95.8	**M9399**	5KS449SAA1009	$44,522	G4-7U	N	2790	50.37		62
300	1800	460	449T	329.0	95.8	**M9990**	5KS449SAA212	$33,981	G4-7U	Y	3050	54.12	A767	
300	1800	460	449T	329.0	95.8	**M9906**	5KS449SAA209	$33,981	G4-7U	Y	3050	54.12		98
300	1800	575	449T	263.0	95.8	**M9907**	5KS449SAA254	$33,981	G4-7U	N	3050	54.12	A767	
300	1800	575	449T	263.0	95.8	**M8962**	5KS449SAA223	$33,981	G4-7U	N	3050	54.12		98

Notes:
62 Only for CCW rotation facing opposite drive end.
66 Only for CW rotation facing opposite drive-end.
98 For belted load only. Roller Bearing on drive-end.

X$D Ultra®

TEFC—Extra Severe Duty (IP55)
C-Face

Pricing

Volts: 230/460, 460
HP: 0.75 – 50

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
0.75	1200	230/460	143TC	2.8/1.4	80.0	78.5	**M496**	$1,083	G4-7U1	N	43	13.92	55
1	1800	230/460	143TC	2.8/1.4	86.5	85.5	**M497**	$942	G4-7U1	Y	43	13.92	55
1	1800	460	143TC	1.4	86.5	85.5	**M478**	$1,020	G4-7U1	N	43	13.92	55
1	1200	230/460	145TC	3.6/1.8	82.5	81.5	**M498**	$1,143	G4-7U1	Y	50	13.92	55
1.5	1800	230/460	145TC	4.2/2.1	86.5	85.5	**M499**	$1,035	G4-7U1	Y	50	13.92	55
1.5	1800	460	145TC	2.1	86.5	85.5	**M479**	$1,035	G4-7U1	N	50	13.92	55
1.5	1200	460	182TC	2.4	87.5	86.5	**M9946**	$1,026	G4-7U1	Y	76	16.65	55
2	1800	230/460	145TC	5.4/2.7	86.5	85.5	**M500**	$1,130	G4-7U1	Y	50	13.92	
2	1200	460	184TC	3.0	88.5	87.5	**M9948**	$1,133	G4-7U1	Y	101	16.65	
3	3600	460	182TC	3.9	89.5	88.5	**M9945**	$1,134	G4-7U1	Y	76	16.65	55
3	1800	460	182TC	4.2	89.5	88.5	**M9889**	$1,109	G4-7U1	Y	76	16.65	55
3	1200	460	213TC	4.2	89.5	88.5	**M9950**	$1,350	G4-7U1	Y	200	20.90	55
5	3600	460	184TC	6.2	90.2	89.5	**M9947**	$1,188	G4-7U1	Y	101	16.65	
5	1800	460	184TC	6.6	89.5	88.5	**M9890**	$1,146	G4-7U1	Y	101	16.65	
5	1200	460	215TC	6.7	89.5	88.5	**M9952**	$1,868	G4-7U1	Y	220	20.90	
7.5	3600	460	213TC	8.5	91.0	90.2	**M9949**	$1,655	G4-7U1	Y	200	20.90	
7.5	1800	460	213TC	9.1	91.7	91.0	**M9891**	$1,646	G4-7U1	Y	200	20.90	
7.5	1200	460	254TC	9.8	91.7	91.0	**M9954**	$2,477	G4-7U1	Y	315	26.09	
10	3600	460	215TC	11.2	91.0	90.2	**M9951**	$1,755	G4-7U1	Y	220	20.90	
10	1800	460	215TC	12.0	91.7	91.0	**M9892**	$1,667	G4-7U1	Y	220	20.60	
10	1200	460	256TC	13.0	91.0	90.2	**M9956**	$3,003	G4-7U1	Y	350	26.09	
15	3600	460	254TC	17.5	91.7	91.0	**M9953**	$2,390	G4-7U1	Y	315	26.09	
15	1800	460	254TC	18.0	92.4	91.7	**M9893**	$2,283	G4-7U1	Y	315	26.09	
15	1200	460	284TC	19.5	91.7	91.0	**M9901**	$4,008	G4-7U1	Y	460	28.58	
20	3600	460	256TC	22.6	92.4	91.7	**M9955**	$2,858	G4-7U1	Y	350	26.09	
20	1800	460	256TC	23.3	93.0	92.4	**M9894**	$2,697	G4-7U1	Y	350	26.09	
20	1200	460	286TC	25.8	91.7	91.0	**M9902**	$4,845	G4-7U1	N	510	28.58	
25	3600	460	284TSC	27.8	93.0	92.4	**M9903**	$3,605	G4-7U1	N	460	27.20	
25	1800	460	284TC	29.6	93.6	93.0	**M9895**	$3,464	G4-7U1	Y	460	28.58	
30	3600	460	286TSC	33.2	93.0	92.4	**M9904**	$4,200	G4-7U1	N	510	27.20	
30	1800	460	286TC	35.3	93.6	93.0	**M9896**	$4,007	G4-7U1	Y	510	28.58	
40	3600	460	324TSC	46.3	94.1	93.6	**M8964**	$5,271	G4-7U1	N	649	29.04	
40	1800	460	324TC	49.8	94.5	94.1	**M8965**	$5,228	G4-7U1	Y	689	30.54	
50	3600	460	326TSC	56.9	94.5	94.1	**M8966**	$6,654	G4-7U1	N	700	30.48	
50	1800	460	326TC	62.3	94.5	94.1	**M8967**	$6,164	G4-7U1	Y	740	32.04	

Notes:
55 TENV Construction
C-Face ratings through 300HP, 449T Frame are available by custom order

X$D Ultra®

TEFC—Extra Severe Duty (IP55)
NEMA Design C (KGS Plus)—High Torque

Pricing

Volts: 460
HP: 40 - 300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Starting Torque (lb-ft)	Breakdown Torque (lb-ft)	Notes
40	1200	460	364T	50.6	93.0	92.4	**M8982**	$9,407	G4-7U	N	1000	34.89	443	454	98, 99
50	1200	460	365T	63.3	93.0	92.4	**M8983**	$10,800	G4-7U	N	1030	34.89	551	553	98, 99
60	1800	460	364T	72.5	94.5	94.1	**M8992**	$9,383	G4-7U	Y	1030	34.89	456	422	98, 99
60	1200	460	404T	73.2	94.1	93.6	**M8984**	$12,441	G4-7U	N	1480	39.77	590	625	98, 99
75	1800	460	365T	89.5	94.5	94.1	**M8993**	$11,216	G4-7U	Y	1090	34.89	594	521	98, 99
75	1200	460	405T	91.0	94.1	93.6	**M8985**	$13,746	G4-7U	N	1530	39.77	742	782	98, 99
100	1800	460	405T	118.0	95.4	95.0	**M8994**	$13,676	G4-7U	Y	1500	39.77	700	679	98, 99
100	1200	460	444T	123.0	93.0	92.4	**M8986**	$18,254	G4-7U	N	1920	45.62	1118	1032	98, 99
125	1800	460	444T	145.0	95.8	95.4	**M8995**	$17,756	G4-7U	Y	1970	45.62	762	924	98, 99
125	1200	460	445T	149	93.6	93	**M8987**	$23,380	G4-7U	N	2140	45.62	1324	1358	98, 99
150	1800	460	445T	173.0	95.8	95.4	**M8996**	$20,535	G4-7U	Y	2060	45.62	1105	1083	98, 99
150	1200	460	447T	185.0	94.5	94.1	**M8988**	$26,295	G4-7U	N	2700	54.12	1420	1486	98, 99
200	1800	460	447T	229.0	95.8	95.4	**M8997**	$25,568	G4-7U	Y	2700	54.12	1662	1503	98, 99
200	1200	460	449T	243.0	95.0	94.5	**M8989**	$29,330	G4-7U	N	3070	54.12	2433	2159	98, 99
250	1800	460	449T	282.0	95.8	95.4	**M8998**	$29,771	G4-7U	Y	2980	54.12	2137	1843	98, 99
300	1800	460	449T	338.0	95.4	95.0	**M8999**	$34,731	G4-7U	Y	3100	54.12	2116	2054	98, 99

Notes:
98 For belted load only. Roller Bearing on drive-end.
99 NEMA design C: High Torque and 4140 stress proof shaft material

X$D Ultra®

TEFC—Extra Severe Duty

Typical Performance Data

Volts: 230/460, 460, 575
HP: 0.50 - 300

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff. (%)	NP FL PF (%)	Max KVR
0.5	900	230/460	**M9166**	5KS143SAA405	143T	2.6/1.3	3.9	--	R	3.1	4.4	7	66	56	0.7
0.5	900	460	**M9167**	5KS143SAA408	143T	1.3	3.9	--	R	3.1	4.4	7	66	56	0.7
0.5	900	575	**M9168**	5KS143SAA404	143T	1	3.1	--	R	3.1	4.4	7	66	55.5	0.7
0.75	1200	230/460	**M480**	5KS143SAA305	143T	3.2/1.6	7.7	B	P	3.4	6	9.4	77	58	0.8
0.75	1200	460	**M9169**	5KS143SAA308	143T	1.6	7.7	B	P	3.4	6	9.4	77	58	0.8
0.75	1200	575	**M481**	5KS143SAA304	143T	1.3	6.3	B	P	3.4	6	9.4	77	57	0.8
0.75	900	230/460	**M460**	5KS145SAA405	145T	3.6/1.8	6	--	P	4.7	6.3	10.3	70	56	0.9
0.75	900	460	**M9170**	5KS145SAA408	145T	1.8	6	--	P	4.7	6.3	10.3	70	56	0.9
0.75	900	575	**M477**	5KS145SAA404	145T	1.5	4.9	--	P	4.7	6.3	10.3	70	55	0.9
1	3600	230/460	**M462**	5KS143SAA121	143T	2.8/1.4	9.8	--	N	1.5	3.7	5.4	85.5	80	0.4
1	3600	460	**M9171**	5KS143SAA140	143T	1.4	9.8	--	N	1.5	3.7	5.4	85.5	80	0.4
1	3600	575	**M463**	5KS143SAA120	143T	1.1	7.9	--	N	1.5	3.7	5.4	85.5	79.5	0.4
1	1800	230/460	**M482**	5KS143SAA205	143T	3.2/1.6	12.7	B	N	3	8.3	9	85.5	67.5	0.8
1	1800	460	**M475**	5KS143SAA208	143T	1.6	12.7	B	N	3	8.3	9	85.5	67.5	0.8
1	1800	575	**M483**	5KS143SAA204	143T	1.3	10.2	B	N	3	8.3	9	85.5	67.5	0.8
1	1200	230/460	**M484**	5KS145SAA305	145T	3.6/1.8	10	B	N	4.6	7.8	12.1	82.5	62.5	0.9
1	1200	460	**M476**	5KS145SAA308	145T	1.8	10	B	N	4.6	7.8	12.1	82.5	62.5	0.9
1	1200	575	**M485**	5KS145SAA304	145T	1.5	8.1	B	N	4.6	7.8	12.1	82.5	62.5	0.9
1	900	230/460	**M9871**	5KS182SAA405	182T	4.4/2.2	9.2	B	N	6.1	8.2	13	75.5	57	1.1
1	900	460	**M9887**	5KS182SAA408	182T	2.2	9.2	B	N	6.1	8.2	13	75.5	57	1.1
1	900	575	**M9872**	5KS182SAA404	182T	1.7	7.3	B	N	6.1	8.2	13	75.5	57	1.1
1.5	3600	230/460	**M486**	5KS143SAA105	143T	4.4/2.2	14.4	B	M	2.3	3.9	5.6	84	75.5	0.8
1.5	3600	460	**M465**	5KS143SAA108	143T	2.2	14.4	B	M	2.3	3.9	5.6	84	75.5	0.8
1.5	3600	575	**M487**	5KS143SAA104	143T	1.8	11.8	B	M	2.3	3.9	5.6	84	74	0.8
1.5	1800	230/460	**M492**	5KS145SAA221	145T	4.4/2.2	17.6	B	M	4.5	11.3	12.7	86.5	74	0.9
1.5	1800	460	**M464**	5KS145SAA222	145T	2.2	17.6	B	M	4.5	11.3	12.7	86.5	74	0.9
1.5	1800	575	**M493**	5KS145SAA223	145T	1.8	14.2	B	M	4.5	11.3	12.7	86.5	73.5	0.9
1.5	1200	230/460	**M9702**	5KS182SAA305	182T	4.6/2.3	17.4	B	M	6.7	11.1	16.8	87.5	68.5	1
1.5	1200	460	**M9943**	5KS182SAA308	182T	2.3	17.4	B	M	6.7	11.1	16.8	87.5	68.5	1
1.5	1200	575	**M9703**	5KS182SAA304	182T	1.9	14.1	B	M	6.7	11.1	16.8	87.5	68	1
1.5	900	230/460	**M9873**	5KS184SAA405	184T	6.4/3.2	14.5	B	M	9.1	11.8	19.1	78.5	56	1.6
1.5	900	460	**M9888**	5KS184SAA408	184T	3.2	14.5	B	M	9.1	11.8	19.1	78.5	56	1.6
1.5	900	575	**M9874**	5KS184SAA404	184T	2.6	11.4	B	M	9.1	11.8	19.1	78.5	56	1.6
2	3600	230/460	**M490**	5KS145SAA105	145T	5.6/2.8	22.1	B	L	3	5.1	7.2	86.5	78	0.9
2	3600	460	**M9172**	5KS145SAA108	145T	2.8	22.1	B	L	3	5.1	7.2	86.5	78	0.9
2	3600	575	**M491**	5KS145SAA104	145T	2.2	17.8	B	L	3	5.1	7.2	86.5	77.5	1
2	1800	230/460	**M488**	5KS145SAA205	145T	5.6/2.8	20.6	B	L	6.1	14.2	16.3	86.5	77.5	1
2	1800	460	**M494**	5KS145SAA208	145T	2.8	20.6	B	L	6.1	14.2	16.3	86.5	77.5	1
2	1800	575	**M489**	5KS145SAA204	145T	2.2	16.5	B	L	6.1	14.2	16.3	86.5	77.5	1
2	1200	230/460	**M9704**	5KS184SAA305	184T	6.0/3.0	22.6	B	L	9	14.4	21.5	88.5	69.5	1.2
2	1200	460	**M9944**	5KS184SAA308	184T	3	22.6	B	L	9	14.4	21.5	88.5	69.5	1.2
2	1200	575	**M9706**	5KS184SAA304	184T	2.5	19.3	B	L	9	14.3	21.5	88.5	68	1.3
2	900	230/460	**M9875**	5KS213SAA405	213T	7.4/3.7	19	B	L	12	15.6	25.2	86.5	59	1.8
2	900	460	**M9705**	5KS213SAA408	213T	3.7	19	B	L	12	15.6	25.2	86.5	59	1.8
2	900	575	**M9876**	5KS213SAA404	213T	3	15.4	B	L	12	15.6	25.1	86.5	58.5	1.8
3	3600	230/460	**M9713**	5KS182SAA105	182T	8.4/4.2	24.7	B	K	4.5	7.2	10.3	87.5	76	1.4
3	3600	460	**M9939**	5KS182SAA108	182T	4.2	24.7	B	K	4.5	7.2	10.3	87.5	76	1.4
3	3600	575	**M9715**	5KS182SAA104	182T	3.4	19.7	B	K	4.5	7.2	10.3	87.5	76	1.4
3	1800	230/460	**M241**	5KS182SAA205	182T	8.0/4.0	26.7	B	K	9	19.2	22.4	89.5	78.5	1.3
3	1800	460	**M9941**	5KS182SAA208	182T	4	26.7	B	K	9	19.2	22.4	89.5	78.5	1.3
3	1800	575	**M9711**	5KS182SAA204	182T	3.2	22.1	B	K	8.9	19.2	22.4	89.5	77.5	1.4
3	1200	230/460	**M9142**	5KS213SAA305	213T	8.6/4.3	29.9	B	K	13.4	20.8	30.8	89.5	73	1.7

X$D Ultra®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 230/460, 460, 575
HP: 0.50 - 300

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff. (%)	NP FL PF (%)	Max KVR
3	1200	460	**M9111**	5KS213SAA308	213T	4.3	29.9	B	K	13.4	20.8	30.8	89.5	73	1.7
3	1200	575	**M9712**	5KS213SAA304	213T	3.4	23.7	B	K	13.4	20.8	30.8	89.5	73	1.6
3	900	230/460	**M9877**	5KS215SAA405	215T	11.2/5.6	29.7	B	K	18.1	23.5	37.1	84	59.5	2.6
3	900	460	**M9708**	5KS215SAA408	215T	5.6	29.7	B	K	18.1	23.5	37.1	84	59.5	2.6
3	900	575	**M9878**	5KS215SAA404	215T	4.5	23.9	B	K	18.1	23.5	37.1	84	59.5	2.7
5	3600	230/460	**M240**	5KS184SAA105	184T	12.8/6.4	37	B	J	7.5	11.2	16.1	88.5	82.5	1.6
5	3600	460	**M9940**	5KS184SAA108	184T	6.4	37	B	J	7.5	11.2	16.1	88.5	82.5	1.6
5	3600	575	**M9722**	5KS184SAA104	184T	5.1	29.8	B	J	7.5	11.2	16.1	88.5	82.5	1.6
5	1800	230/460	**M242**	5KS184SAA205	184T	13.2/6.6	41	B	J	15	27.7	33.7	89.5	79.5	2
5	1800	460	**M9942**	5KS184SAA208	184T	6.6	41	B	J	15	27.7	33.7	89.5	79.5	2
5	1800	575	**M9718**	5KS184SAA204	184T	5.3	32.8	B	J	15	27.7	33.7	89.5	79.5	2
5	1200	230/460	**M9143**	5KS215SAA305	215T	13.6/6.8	42.8	B	J	22.4	33.6	48.2	89.5	77	2.2
5	1200	460	**M9112**	5KS215SAA308	215T	6.8	42.8	B	J	22.4	33.6	48.2	89.5	77	2.2
5	1200	575	**M9717**	5KS215SAA304	215T	5.5	35	B	J	22.4	33.6	48.2	89.5	76.5	2.2
5	900	230/460	**M9879**	5KS254SAA405	254T	16.0/8.0	39.2	B	J	30	39	61.5	85.5	68	3.5
5	900	460	**M9719**	5KS254SAA408	254T	8	39.2	B	J	30	39	61.5	85.5	68	3.5
5	900	575	**M9880**	5KS254SAA404	254T	6.4	30.6	B	J	30	39	61.5	85.5	68.5	3.4
7.5	3600	230/460	**M9144**	5KS213SAA105	213T	18.0/9.0	57.7	B	H	11.2	15.6	22.3	89.5	87.5	2.1
7.5	3600	460	**M990**	5KS213SAA108	213T	9	57.7	B	H	11.2	15.6	22.3	89.5	87.5	2.1
7.5	3600	575	**M9728**	5KS213SAA104	213T	7.2	46	B	H	11.2	15.6	22.3	89.5	87.5	2.1
7.5	1800	230/460	**M9145**	5KS213SAA205	213T	18.4/9.2	61.2	B	H	22.2	38.9	47.8	91.7	83.5	2.3
7.5	1800	460	**M9911**	5KS213SAA208	213T	9.2	61.2	B	H	22.2	38.9	47.8	91.7	83.5	2.3
7.5	1800	575	**M9730**	5KS213SAA204	213T	7.3	48.9	B	H	22.2	38.9	47.8	91.7	83.5	2.3
7.5	1200	230/460	**M9146**	5KS254SAA305	254T	19.4/9.7	59.5	B	H	33.5	50.3	68.7	91	79.5	3.1
7.5	1200	460	**M9113**	5KS254SAA308	254T	9.7	59.5	B	H	33.5	50.3	68.7	91	79.5	3.1
7.5	1200	575	**M9726**	5KS254SAA304	254T	7.8	46.9	B	H	33.5	50.3	68.7	91	79.5	3
7.5	900	230/460	**M9881**	5KS256SAA405	256T	22.2/11.1	54.4	B	H	45	56.2	90	87.5	72	4.3
7.5	900	460	**M9724**	5KS256SAA408	256T	11.1	54.4	B	H	45	56.2	90	87.5	72	4.3
7.5	900	575	**M9882**	5KS256SAA404	256T	8.9	42.6	B	H	45	56.3	90	87.5	72	4.2
10	3600	230/460	**M9147**	5KS215SAA105	215T	23.2/11.6	75.9	B	H	14.9	20.1	29.8	90.2	89.5	2.3
10	3600	460	**M991**	5KS215SAA108	215T	11.6	75.9	B	H	14.9	20.1	29.8	90.2	89.5	2.3
10	3600	575	**M9733**	5KS215SAA104	215T	9.3	60.6	B	H	14.9	20.1	29.8	90.2	89.5	2.3
10	1800	230/460	**M9148**	5KS215SAA205	215T	24.4/12.2	79	B	H	29.7	49	59.4	91.7	83.5	3
10	1800	460	**M9912**	5KS215SAA208	215T	12.2	79	B	H	29.7	49	59.4	91.7	83.5	3
10	1800	575	**M9738**	5KS215SAA204	215T	9.8	63.1	B	H	29.7	49	59.4	91.7	83.5	3
10	1200	230/460	**M9149**	5KS256SAA305	256T	25.8/12.9	77.7	B	H	44.8	67.2	89.6	91	79.5	4.1
10	1200	460	**M9114**	5KS256SAA308	256T	12.9	77.7	B	H	44.8	67.2	89.6	91	79.5	4.1
10	1200	575	**M9737**	5KS256SAA304	256T	10.4	61.5	B	H	44.8	67.2	89.6	91	79.5	4
10	900	230/460	**M9883**	5KS284SAA405	284T	27.2/13.6	75.2	B	H	59.5	74.3	118.9	89.5	77	4
10	900	460	**M9736**	5KS284SAA408	284T	13.6	75.2	B	H	59.5	74.3	118.9	89.5	77	4
10	900	575	**M9884**	5KS284SAA404	284T	10.8	59.9	B	H	59.5	74.3	119	89.5	77.5	4
15	3600	230/460	**M9150**	5KS254SAA105	254T	34.6/17.3	108.9	B	G	22.2	28.8	44.4	91	89	2.9
15	3600	460	**M992**	5KS254SAA108	254T	17.3	108.9	B	G	22.2	28.8	44.4	91	89	2.9
15	3600	575	**M9741**	5KS254SAA104	254T	13.9	88.3	B	G	22.2	28.8	44.4	91	89	2.9
15	1800	230/460	**M9151**	5KS254SAA205	254T	37.8/18.9	109.1	B	G	44.4	71	88.8	92.4	80.5	6.1
15	1800	460	**M9913**	5KS254SAA208	254T	18.9	109.1	B	G	44.4	71	88.8	92.4	80.5	6.1
15	1800	575	**M9745**	5KS254SAA204	254T	15.1	88	B	G	44.4	71	88.8	92.4	80.5	6.2
15	1200	230/460	**M9152**	5KS284SAA305	284T	39.2/19.6	110.1	B	G	66.6	93.3	133.3	91.7	78	6.5
15	1200	460	**M9115**	5KS284SAA308	284T	19.6	110.1	B	G	66.6	93.3	133.3	91.7	78	6.5
15	1200	575	**M9746**	5KS284SAA304	284T	15.8	89.8	B	G	66.6	93.3	133.2	91.7	77.5	6.7
15	900	230/460	**M9885**	5KS286SAA405	286T	40.2/20.1	111.6	B	G	89.5	111.9	179	89.5	78	5.7
15	900	460	**M9742**	5KS286SAA408	286T	20.1	111.6	B	G	89.5	111.9	179	89.5	78	5.7
15	900	575	**M9886**	5KS286SAA404	286T	16.1	89.2	B	G	89.5	111.9	179	89.5	78	5.7

X$D Ultra®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 230/460, 460, 575
HP: 0.50 - 300

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff. (%)	NP FL PF (%)	Max KVR
20	3600	230/460	**M9153**	5KS256SAA105	256T	45.2/22.6	139	B	G	29.7	38.5	59.3	91	91	2.3
20	3600	460	**M993**	5KS256SAA108	256T	22.6	139	B	G	29.7	38.5	59.3	91	91	2.3
20	3600	575	**M9749**	5KS256SAA104	256T	18.1	110.5	B	G	29.7	38.6	59.3	91	91	2.3
20	1800	230/460	**M9154**	5KS256SAA205	256T	47.6/23.8	135.1	B	G	59.2	88.8	118.4	93	84.5	6.2
20	1800	460	**M9914**	5KS256SAA208	256T	23.8	135.1	B	G	59.2	88.8	118.4	93	84.5	6.2
20	1800	575	**M9751**	5KS256SAA204	256T	18.9	106.5	B	G	59.2	88.8	118.5	93	85	6.1
20	1200	230/460	**M9155**	5KS286SAA305	286T	51.0/25.5	140.6	B	G	88.9	120	177.8	91.7	80	7.6
20	1200	460	**M9117**	5KS286SAA308	286T	25.5	140.6	B	G	88.9	120	177.8	91.7	80	7.6
20	1200	575	**M9755**	5KS286SAA304	286T	20.4	113	B	G	88.9	120	177.8	91.7	80	7.7
20	900	230/460	**M9173**	5KS324SAA405	324T	59.6/29.8	135	B	G	120	150	240	91	69	11.5
20	900	460	**M9748**	5KS324SAA408	324T	29.8	135	B	G	120	150	240	91	69	11.5
20	900	575	**M8950**	5KS324SAA404	324T	24	110.5	B	G	119.9	149.9	239.8	91	68.5	11.8
25	3600	230/460	**M9156**	5KS284SAA115	284TS	56.8/28.4	169.6	B	G	37	48.1	74	91.7	90	5.2
25	3600	230/460	**M9174**	5KS284SAA105	284T	56.8/28.4	169.6	B	G	37	48.1	74	91.7	90	5.2
25	3600	460	**M994**	5KS284SAA118	284TS	28.4	169.6	B	G	37	48.1	74	91.7	90	5.2
25	3600	460	**M9175**	5KS284SAA108	284T	28.4	169.6	B	G	37	48.1	74	91.7	90	5.2
25	3600	575	**M9176**	5KS284SAA104	284T	22.7	135.1	B	G	37	48.1	74	91.7	90	5.2
25	3600	575	**M9838**	5KS284SAA114	284TS	22.7	135.1	B	G	37	48.1	74	91.7	90	5.2
25	1800	230/460	**M9157**	5KS284SAA205	284T	58.2/29.1	174.8	B	G	73.9	110.8	147.7	93.6	86	6.9
25	1800	460	**M9935**	5KS284SAA208	284T	29.1	174.8	B	G	73.9	110.8	147.7	93.6	86	6.9
25	1800	575	**M9759**	5KS284SAA204	284T	23.3	140.9	B	G	73.9	110.8	147.7	93.6	86	7
25	1200	230/460	**M9158**	5KS324SAA305	324T	63.2/31.6	172.5	B	G	111.6	150.6	223.1	93	79.5	9
25	1200	460	**M9119**	5KS324SAA308	324T	31.6	172.5	B	G	111.6	150.6	223.1	93	79.5	9
25	1200	575	**M9758**	5KS324SAA304	324T	25.5	134.6	B	G	111.5	150.6	223.1	93	79	9.2
25	900	230/460	**M9177**	5KS326SAA405	326T	73.0/36.5	167.5	B	G	150.1	187.7	300.3	91	70.5	13.3
25	900	460	**M9761**	5KS326SAA408	326T	36.5	167.5	B	G	150.1	187.7	300.3	91	70.5	13.3
25	900	575	**M9762**	5KS326SAA404	326T	29.6	139.6	B	G	149.9	187.4	299.9	91	69.5	14
30	3600	230/460	**M9159**	5KS286SAA115	286TS	65.8/32.9	203.8	B	G	44.4	57.8	88.9	92.4	92.5	4.4
30	3600	230/460	**M9178**	5KS286SAA105	286T	65.8/32.9	203.8	B	G	44.4	57.8	88.9	92.4	92.5	4.4
30	3600	460	**M995**	5KS286SAA118	286TS	32.9	203.8	B	G	44.4	57.8	88.9	92.4	92.5	4.4
30	3600	460	**M9179**	5KS286SAA108	286T	32.9	203.8	B	G	44.4	57.8	88.9	92.4	92.5	4.4
30	3600	575	**M9180**	5KS286SAA104	286T	26.3	162.6	B	G	44.4	57.8	88.9	92.4	92.5	4.4
30	3600	575	**M9828**	5KS286SAA114	286TS	26.3	162.6	B	G	44.4	57.8	88.9	92.4	92.5	4.4
30	1800	230/460	**M9160**	5KS286SAA205	286T	69.4/34.7	206.4	B	G	88.7	133.1	177.4	93.6	86.5	7.8
30	1800	460	**M9937**	5KS286SAA208	286T	34.7	206.4	B	G	88.7	133.1	177.4	93.6	86.5	7.8
30	1800	575	**M9764**	5KS286SAA204	286T	27.7	165.4	B	G	88.7	133.1	177.4	93.6	86.5	7.8
30	1200	230/460	**M9161**	5KS326SAA305	326T	75.4/37.7	204.1	B	G	134	180.9	268	93	80	10.4
30	1200	460	**M9122**	5KS326SAA308	326T	37.7	204.1	B	G	134	180.9	268	93	80	10.4
30	1200	575	**M9834**	5KS326SAA304	326T	30.8	170.8	B	G	133.8	180.6	267.5	93	78.5	11.4
30	900	230/460	**M9181**	5KS364SAA405	364T	86.2/43.1	189.3	B	G	177.4	221.8	354.9	92.4	70.5	16.4
30	900	460	**M9767**	5KS364SAA408	364T	43.1	189.3	B	G	177.4	221.8	354.9	92.4	70.5	16.4
30	900	575	**M9766**	5KS364SAA404	364T	34.7	155.6	B	G	177.4	221.7	354.7	92.4	70	17.1
40	3600	230/460	**M9182**	5KS324SAA105	324T	100.6/50.3	277.4	B	G	58.8	73.5	117.7	93.6	79.5	16.3
40	3600	230/460	**M9162**	5KS324SAA115	324TS	100.6/50.3	277.4	B	G	58.8	73.5	117.7	93.6	79.5	16.3
40	3600	460	**M996**	5KS324SAA118	324TS	50.3	277.4	B	G	58.8	73.5	117.7	93.6	79.5	16.3
40	3600	460	**M9820**	5KS324SAA108	324T	50.3	277.4	B	G	58.8	73.5	117.7	93.6	79.5	16.3
40	3600	575	**M9183**	5KS324SAA104	324T	39.7	214.6	B	G	58.8	73.6	117.7	93.6	80.5	15.2
40	3600	575	**M9829**	5KS324SAA114	324TS	39.7	214.6	B	G	58.8	73.6	117.7	93.6	80.5	15.2
40	1800	460	**M9916**	5KS324SAA218	324TS	50.7	271.3	B	G	118	165.3	236.1	94.1	78.5	16.7
40	1800	230/460	**M9163**	5KS324SAA205	324T	101.4/50.7	271.3	B	G	118	165.3	236.1	94.1	78.5	16.7
40	1800	460	**M9915**	5KS324SAA208	324T	50.7	271.3	B	G	118	165.3	236.1	94.1	78.5	16.7
40	1800	575	**M9768**	5KS324SAA204	324T	40	212	B	G	118.1	165.3	236.2	94.1	79.5	16.1

X$D Ultra®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 230/460, 460, 575
HP: 0.50 - 300

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff. (%)	NP FL PF (%)	Max KVR
40	1200	230/460	**M9184**	5KS364SAA305	364T	99.4/49.7	263.7	B	G	177	239	354	94.1	80	15.5
40	1200	460	**M9124**	5KS364SAA308	364T	49.7	263.7	B	G	177	239	354	94.1	80	15.5
40	1200	575	**M9835**	5KS364SAA304	364T	40	213.3	B	G	177	238.9	354	94.1	79.5	15.7
40	900	230/460	**M9185**	5KS365SAA405	365T	111.0/55.5	243.6	B	G	236.7	295.9	473.4	93	72.5	20
40	900	460	**M9770**	5KS365SAA408	365T	55.5	243.6	B	G	236.7	295.9	473.4	93	72.5	20
40	900	575	**M9534**	5KS365SAA404	365T	44.1	191.7	B	G	236.8	296	473.6	93	73	19.5
50	3600	230/460	**M9186**	5KS326SAA105	326T	121.2/60.6	314.2	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	230/460	**M9164**	5KS326SAA115	326TS	121.2/60.6	314.2	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	460	**M997**	5KS326SAA118	326TS	60.6	314.2	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	460	**M9823**	5KS326SAA108	326T	60.6	314.2	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	575	**M9839**	5KS326SAA114	326TS	48.5	251.3	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	575	**M9187**	5KS326SAA104	326T	48.5	251.3	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	1800	230/460	**M9165**	5KS326SAA205	326T	123.0/61.5	335.8	B	G	147.6	206.6	295.2	94.5	80.5	18.8
50	1800	460	**M9918**	5KS326SAA218	326TS	61.5	335.8	B	G	147.6	206.6	295.2	94.5	80.5	18.8
50	1800	460	**M9917**	5KS326SAA208	326T	61.5	335.8	B	G	147.6	206.6	295.2	94.5	80.5	18.8
50	1800	575	**M9765**	5KS326SAA204	326T	49.2	270.5	B	G	147.6	206.6	295.2	94.5	80.5	19
50	1200	230/460	**M9188**	5KS365SAA305	365T	122.8/61.4	343	B	G	221.3	298.8	442.7	94.1	81	18.8
50	1200	460	**M9126**	5KS365SAA308	365T	61.4	343	B	G	221.3	298.8	442.7	94.1	81	18.8
50	1200	575	**M9775**	5KS365SAA304	365T	49.4	278.5	B	G	221.3	298.7	442.6	94.1	80.5	19.3
50	900	230/460	**M9189**	5KS404SAA405	404T	134.2/67.1	327.3	B	G	298.4	373	596.8	93	75	23.5
50	900	460	**M9773**	5KS404SAA408	404T	67.1	327.3	B	G	298.4	373	596.8	93	75	23.5
50	900	575	**M9535**	5KS404SAA404	404T	54	270.8	B	G	298.2	372.7	596.3	93	74.5	24.5
60	3600	230/460	**M9190**	5KS364SAA115	364TS	139.0/69.5	397	B	G	88.2	105.9	176.5	95	85	17.4
60	3600	460	**M998**	5KS364SAA118	364TS	69.5	397	B	G	88.2	105.9	176.5	95	85	17.4
60	3600	575	**M9847**	5KS364SAA114	364TS	55.6	321	B	G	88.2	105.9	176.5	95	85	17.7
60	1800	460	**M9921**	5KS364SAA218	364TS	70.8	399.5	B	G	176.8	247.5	353.6	95	83.5	19.3
60	1800	230/460	**M9191**	5KS364SAA205	364T	141.6/70.8	399.5	B	G	176.8	247.5	353.6	95	83.5	19.3
60	1800	460	**M9919**	5KS364SAA208	364T	70.8	399.5	B	G	176.8	247.5	353.6	95	83.5	19.3
60	1800	575	**M9776**	5KS364SAA204	364T	57.7	325.4	B	G	176.9	247.6	353.8	95	82	21.4
60	1200	230/460	**M9192**	5KS404SAA305	404T	148.6/74.3	411	B	G	264.4	356.9	528.8	94.5	80	22.2
60	1200	460	**M9128**	5KS404SAA308	404T	74.3	411	B	G	264.4	356.9	528.8	94.5	80	22.2
60	1200	575	**M9837**	5KS404SAA304	404T	59.4	328.9	B	G	264.4	356.9	528.8	94.5	80	22.2
60	900	230/460	**M9193**	5KS405SAA405	405T	160.0/80.0	405.9	B	G	357.9	447.4	715.9	93	75.5	27.8
60	900	460	**M9778**	5KS405SAA408	405T	80	405.9	B	G	357.9	447.4	715.9	93	75.5	27.8
60	900	575	**M9536**	5KS405SAA404	405T	64.4	331.5	B	G	357.7	447.2	715.5	93	75	28.5
75	3600	230/460	**M9194**	5KS365SAA115	365TS	175.0/87.5	484.1	B	G	110.4	116	220.9	95	84.5	22.4
75	3600	460	**M999**	5KS365SAA118	365TS	87.5	484.1	B	G	110.4	116	220.9	95	84.5	22.4
75	3600	575	**M9830**	5KS365SAA114	365TS	70.4	391.7	B	G	110.4	115.9	220.8	95	84	22.8
75	1800	460	**M9923**	5KS365SAA218	365TS	87.1	512.8	B	G	221	309.4	442	95.4	84.5	22.4
75	1800	230/460	**M9195**	5KS365SAA205	365T	174.2/87.1	512.8	B	G	221	309.4	442	95.4	84.5	22.4
75	1800	460	**M9922**	5KS365SAA208	365T	87.1	512.8	B	G	221	309.4	442	95.4	84.5	22.4
75	1800	575	**M9781**	5KS365SAA204	365T	69.7	408.1	B	G	221.1	309.5	442.2	95.4	84.5	22.5
75	1200	230/460	**M9196**	5KS405SAA305	405T	185.8/92.9	515	B	G	330.6	446.4	661.3	94.5	80	28.3
75	1200	460	**M9131**	5KS405SAA308	405T	92.9	515	B	G	330.6	446.4	661.3	94.5	80	28.3
75	1200	460	**M7753**	5KS405SAA355	405T	92.9	515	B	G	330.6	446.4	661.3	94.5	80	28.3
75	1200	575	**M7762**	5KS405SAA358	405T	74.3	409.8	B	G	330.6	446.4	661.3	94.5	80	28
75	1200	575	**M9868**	5KS405SAA304	405T	74.3	409.8	B	G	330.6	446.4	661.3	94.5	80	28
75	900	230/460	**M9197**	5KS444SAA405	444T	202.0/101.0	504.3	B	G	443	553.8	886.1	93.6	74.5	35.8
75	900	460	**M9780**	5KS444SAA408	444T	101	504.3	B	G	443	553.8	886.1	93.6	74.5	35.8
75	900	575	**M9537**	5KS444SAA404	444T	80	396.8	B	G	443.1	553.9	886.3	93.6	75	34.9

X$D Ultra®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 230/460, 460, 575
HP: 0.50 - 300

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff. (%)	NP FL PF (%)	Max KVR
100	3600	460	**M9510**	5KS405SAA118	405TS	108	706.3	B	G	147.3	154.6	294.6	95	91	17.2
100	3600	575	**M9831**	5KS405SAA114	405TS	86.6	564.3	B	G	147.3	154.7	294.6	95	91	16.8
100	1800	460	**M7754**	5KS405SAA2084	405T	120	581.7	B	G	294.4	367.9	588.7	95.4	82	33.4
100	1800	460	**M9925**	5KS405SAA218	405TS	120	581.7	B	G	294.4	367.9	588.7	95.4	82	33.4
100	1800	460	**M9924**	5KS405SAA208	405T	120	581.7	B	G	294.4	367.9	588.7	95.4	82	33.4
100	1800	575	**M9779**	5KS405SAA204	405T	95.7	461	B	G	294.4	368	588.8	95.4	82	33.1
100	1200	460	**M7755**	5KS444SAA373	444T	125	691.5	B	G	440.9	551.2	881.8	95	79	39
100	1200	460	**M9133**	5KS444SAA308	444T	125	691.5	B	G	440.9	551.2	881.8	95	79	39
100	1200	575	**M9846**	5KS444SAA304	444T	99.1	542.3	B	G	441	551.2	882	95	79.5	37.7
100	1200	575	**M7763**	5KS444SAA383	444T	99.1	542.3	B	G	441	551.2	882	95	79.5	37.7
100	900	460	**M9782**	5KS445SAA408	445T	132	676.8	B	G	591.1	738.8	1182.1	94.1	75.5	44.7
100	900	575	**M8953**	5KS445SAA404	445T	106	555.6	B	G	590.9	738.6	1181.7	94.1	75	46.5
125	3600	460	**M9511**	5KS444SAA118	444TS	137	849	B	G	183.4	183.4	366.8	95	90	24.5
125	3600	575	**M9538**	5KS444SAA114	444TS	109	679.2	B	G	183.4	183.4	366.8	95	90	24.5
125	1800	460	**M7756**	5KS444SAA2018	444T	143	856.1	B	G	368.3	405.2	736.7	95.4	85.5	36.7
125	1800	460	**M9927**	5KS444SAA218	444TS	143	856.1	B	G	368.3	405.2	736.7	95.4	85.5	36.7
125	1800	460	**M9926**	5KS444SAA208	444T	143	856.1	B	G	368.3	405.2	736.7	95.4	85.5	36.7
125	1800	575	**M9832**	5KS444SAA204	444T	115	698.3	B	G	368.2	405.1	736.5	95.4	85.5	37.6
125	1200	460	**M9135**	5KS445SAA308	445T	153	815.6	B	G	551.7	689.6	1103.4	95	80.5	44.1
125	1200	460	**M7757**	5KS445SAA349	445T	153	815.6	B	G	551.7	689.6	1103.4	95	80.5	44.1
125	1200	575	**M9870**	5KS445SAA304	445T	122	652.2	B	G	551.7	689.6	1103.4	95	80.5	44
125	1200	575	**M7764**	5KS445SAA352	445T	122	652.2	B	G	551.7	689.6	1103.4	95	80.5	44
125	900	460	**M9784**	5KS447SAA408	447T	158	852.5	B	G	739	886.8	1478	94.5	78.5	48.2
125	900	575	**M8954**	5KS447SAA404	447T	126	675.1	B	G	739	886.9	1478.1	94.5	78.5	48.2
150	3600	460	**M9512**	5KS445SAA118	445TS	163	1016.5	B	G	220.2	220.2	440.3	95	90.5	28.2
150	3600	575	**M8955**	5KS445SAA114	445TS	131	822.5	B	G	220.1	220.1	440.2	95	90	29.1
150	1800	460	**M9929**	5KS445SAA218	445TS	168	1011.1	B	G	442.2	486.4	884.4	95.8	87	38.6
150	1800	460	**M7758**	5KS445SAA2029	445T	168	1011.1	B	G	442.2	486.4	884.4	95.8	87	38.6
150	1800	460	**M9928**	5KS445SAA208	445T	168	1011.1	B	G	442.2	486.4	884.4	95.8	87	38.6
150	1800	575	**M9854**	5KS445SAA204	445T	135	802	B	G	442.2	486.5	884.5	95.8	87	38.3
150	1200	460	**M9137**	5KS447SAA308	447T	170	1037.5	B	G	660.7	792.8	1321.4	95.8	86	38.8
150	1200	460	**M7759**	5KS447SAA341	447T	170	1037.5	B	G	660.7	792.8	1321.4	95.8	86	38.8
150	1200	575	**M9869**	5KS447SAA304	447T	136	815.3	B	G	660.8	792.9	1321.5	95.8	86	38
150	1200	575	**M7765**	5KS447SAA344	447T	136	815.3	B	G	660.8	792.9	1321.5	95.8	86	38
150	900	460	**M9785**	5KS449SAA408	449T	187	1002.7	B	G	887.2	1064.7	1774.5	94.5	79.5	53.2
150	900	575	**M8956**	5KS449SAA404	449T	149	789.1	B	G	887.5	1065	1774.9	94.5	80	52.2
200	3600	460	**M9961**	5KS447SAA118	447TS	213	1360.3	B	G	293.5	293.5	587	95.4	92	30.9
200	3600	575	**M8957**	5KS447SAA114	447TS	171	1088.2	B	G	293.5	293.5	587	95.4	92	30.9
200	1800	460	**M9991**	5KS447SAA201	447T	220	1371.7	B	G	586.5	586.5	1173.1	96.2	88.5	43.6
200	1800	460	**M9958**	5KS447SAA208	447T	220	1371.7	B	G	586.5	586.5	1173.1	96.2	88.5	43.6
200	1800	575	**M7761**	5KS447SAA2047	447T	175	1079.3	B	G	586.6	586.6	1173.2	96.2	89	42.8
200	1800	575	**M9959**	5KS447SAA204	447T	175	1079.3	B	G	586.6	586.6	1173.2	96.2	89	42.8
200	1200	460	**M9139**	5KS449SAA308	449T	227	1345.1	B	G	881.7	1058	1763.4	95.8	86	50.4
200	1200	460	**M9198**	5KS449SAA382	449T	227	1345.1	B	G	881.7	1058	1763.4	95.8	86	50.4
200	1200	575	**M9199**	5KS449SAA383	449T	182	1056	B	G	881.8	1058.2	1763.7	95.8	86	49.3
200	1200	575	**M9845**	5KS449SAA304	449T	182	1056	B	G	881.8	1058.2	1763.7	95.8	86	49.3
250	3600	460	**M9514**	5KS449SAA118	449TS	264	1754.4	B	G	366.8	256.8	641.9	95.8	92.5	36.5
250	3600	460	**M9996**	5KS449SAA146	449TS	264	1754.4	B	G	366.8	256.8	641.9	95.8	92.5	36.5
250	3600	575	**M8959**	5KS449SAA122	449TS	211	1395.7	B	G	366.8	256.8	642	95.8	92.5	35.5
250	3600	575	**M9394**	5KS449SAA1007	449TS	211	1395.7	B	G	366.8	256.8	642	95.8	92.5	35.5
250	1800	460	**M9988**	5KS449SAA201	449T	282	1734.4	B	G	733.4	586.7	1283.4	95.4	87	62.7

X$D Ultra®

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 230/460, 460, 575
HP: 0.50 - 300

HP	RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff. (%)	NP FL PF (%)	Max KVR
250	1800	460	**M9933**	5KS449SAA208	449T	282	1734.4	B	G	733.4	586.7	1283.4	95.4	87	62.7
250	1800	575	**M9989**	5KS449SAA202	449T	226	1397.2	B	G	733.3	586.7	1283.3	95.4	87	63.3
250	1800	575	**M9851**	5KS449SAA204	449T	226	1397.2	B	G	733.3	586.7	1283.3	95.4	87	63.3
250	1200	460	**M8963**	5KS449SAA301	449T	293	1711.1	B	G	1101.4	1101.4	1927.4	95.8	83.5	74.4
250	1200	460	**M9395**	5KS449SAA384	449T	293	1711.1	B	G	1101.4	1101.4	1927.4	95.8	83.5	74.4
250	1200	575	**M9397**	5KS449SAA386	449T	235	1401.2	B	G	1101.2	1101.2	1927	95.8	83	77.2
250	1200	575	**M9396**	5KS449SAA385	449T	235	1401.2	B	G	1101.2	1101.2	1927	95.8	83	77.2
300	3600	460	**M8960**	5KS449SAA123	449TS	319	2099.3	B	G	440.5	308.3	770.8	95.8	92	44.4
300	3600	460	**M9398**	5KS449SAA1008	449TS	319	2099.3	B	G	440.5	308.3	770.8	95.8	92	44.4
300	3600	575	**M9399**	5KS449SAA1009	449TS	253	1623.2	B	G	440.6	308.5	771.1	95.8	92.5	42
300	3600	575	**M8961**	5KS449SAA124	449TS	253	1623.2	B	G	440.6	308.5	771.1	95.8	92.5	42
300	1800	460	**M9990**	5KS449SAA212	449T	329	2080.7	B	G	879.8	703.8	1539.7	95.8	89	63.5
300	1800	460	**M9906**	5KS449SAA209	449T	329	2080.7	B	G	879.8	703.8	1539.7	95.8	89	63.5
300	1800	575	**M9907**	5KS449SAA254	449T	263	1600.2	B	G	880.1	704.1	1540.1	95.8	89	60.8
300	1800	575	**M8962**	5KS449SAA223	449T	263	1600.2	B	G	880.1	704.1	1540.1	95.8	89	60.8

X$D Ultra®

TEFC—Extra Severe Duty

Dimensions

Dimensions refer to drawing on following page

Cast Iron Construction/Frames 140-449, Type KS, 3-Phase/Dimensions—For estimating only

Frame [19]	Approx. Net Weight (lbs)	Dimensions in Inches																				
		Shaft						Mounting [18]														
		Key																				
		Width	Depth	Length	N-W	U [1]	V	E	H	BA	BS	2F	2XF	A	B	C	D [3]	G	J	K	L	O
143T	43	0.187	0.187	1.380	2.25	0.875	2.12	2.75	0.39	2.25	2.25	5.00	4.00	6.88	5.88	13.42	3.50	0.40	1.39	2.32	6.42	7.25
145T	50	0.187	0.187	1.380	2.25	0.875	2.12	2.75	0.39	2.25	2.25	5.00	4.00	6.88	5.88	13.42	3.50	0.40	1.39	2.32	6.42	7.25
182T	76	0.250	0.250	1.750	2.75	1.125	2.50	3.75	0.46	2.75	2.75	5.50	4.50	8.68	6.64	15.91	4.50	0.46	1.54	2.58	7.66	9.25
184T	101	0.250	0.250	1.750	2.75	1.125	2.50	3.75	0.46	2.75	2.75	5.50	4.50	8.68	6.64	15.91	4.50	0.46	1.54	2.58	7.66	9.25
213T	200	0.312	0.312	2.380	3.38	1.375	3.12	4.25	0.46	3.50	3.50	7.00	5.50	9.60	8.00	20.15	5.25	0.57	1.47	3.12	9.77	10.43
215T	220	0.312	0.312	2.380	3.38	1.375	3.12	4.25	0.46	3.50	3.50	7.00	5.50	9.60	8.00	20.15	5.25	0.57	1.47	3.12	9.77	10.43
254T	315	0.375	0.375	2.380	4.00	1.625	3.76	5.00	0.58	4.25	5.00	10.00	8.25	11.20	11.30	25.29	6.25	0.65	1.52	3.93	12.34	12.50
256T	350	0.375	0.375	2.880	4.00	1.625	3.76	5.00	0.58	4.25	5.00	10.00	8.25	11.20	11.30	25.29	6.25	0.65	1.52	3.93	12.34	12.50
284TS	460	0.375	0.375	1.880	3.25	1.625	3.00	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	27.20	7.00	0.76	1.75	4.12	13.70	13.88
284T	460	0.500	0.500	3.250	4.62	1.875	4.38	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	28.58	7.00	0.76	1.75	4.12	13.70	13.88
286TS	510	3.750	3.750	1.880	3.25	1.625	3.00	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	27.20	7.00	0.76	1.75	4.12	13.70	13.88
286T	510	0.500	0.500	3.250	4.62	1.875	4.38	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	28.58	7.00	0.76	1.75	4.12	13.70	13.88
324TS	664	0.500	0.500	2.000	3.75	1.875	3.50	6.25	0.67	5.25	6.00	10.50	10.50	14.40	13.80	29.04	8.00	0.99	2.01	3.62	15.54	17.07
324T	664	0.500	0.500	3.880	5.25	2.125	5.00	6.25	0.67	5.25	6.00	10.50	10.50	14.40	13.80	30.54	8.00	0.99	2.01	3.62	15.54	17.07
326TS	800	0.500	0.500	2.000	3.75	1.875	3.50	6.25	0.67	5.25	6.00	12.00	10.50	14.40	13.80	30.54	8.00	0.99	2.01	3.62	15.54	17.07
326T	800	0.500	0.500	3.880	5.25	2.125	5.00	6.25	0.67	5.25	6.00	12.00	10.50	14.40	13.80	32.04	8.00	0.99	2.01	3.62	15.54	17.07
364TS	1122	0.500	0.500	2.000	3.75	1.875	3.50	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	32.76	9.00	1.09	2.26	3.40	17.00	19.02
364T	1122	0.625	0.625	4.250	5.88	2.375	5.64	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	43.89	9.00	1.09	2.26	3.40	17.00	19.02
365TS	1155	0.500	0.500	2.000	3.75	1.875	3.50	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	32.76	9.00	1.09	2.26	3.40	17.00	19.02
365T	1155	0.625	0.625	4.250	5.88	2.375	5.64	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	43.89	9.00	1.09	2.26	3.40	17.00	19.02
404TS	1580	0.500	0.500	2.750	4.25	2.125	4.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	36.76	10.00	1.29	2.64	4.00	19.02	21.18
404T	1580	0.750	0.750	5.625	7.25	2.875	7.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	39.77	10.00	1.29	2.64	4.00	19.02	21.18
405TS	1600	0.500	0.500	2.750	4.25	2.125	4.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	36.76	10.00	1.29	2.64	4.00	19.02	21.18
405T	1600	0.750	0.750	5.625	7.25	2.875	7.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	39.77	10.00	1.29	2.64	4.00	19.02	21.18
444TS	2100	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	41.87	11.00	1.49	2.64	4.97	21.37	23.94
444T	2100	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	45.62	11.00	1.49	2.64	4.97	21.37	23.94
445TS	2260	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	41.87	11.00	1.49	2.64	4.97	21.37	23.94
445T	2260	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	45.62	11.00	1.49	2.64	4.97	21.37	23.94
447TS	2610	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	50.37	11.00	1.49	2.64	8.81	25.62	23.94
447T	2610	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	54.12	11.00	1.49	2.64	8.81	25.62	23.94
449TS	3010	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	50.37	11.00	1.49	2.64	8.81	25.62	23.94
449T	3010	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	54.12	11.00	1.49	2.64	8.81	25.62	23.94
449LL	3010	0.875	0.875	4.500	6.75	3.375	6.50	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	53.37	11.00	1.49	2.64	8.70	25.62	23.94

Notes:

1 Shaft diameters 1 1/2 inches and smaller will come within the limits of +0.000 inch, -0.0005 inch diameters 1 5/8 inches and larger +0.000 inch, -0.001 inch

3 Tolerance on "D" dimension for rigid base motors will be +0.000 inch, -0.060 inch.

18 Motor feet have 2 holes per foot allowing NEMA F-1 or F-2 assembly while maintaining critical NEMA mounting dimensions

19 Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward, or from either side
Weights shown are approximate shipping weights and should be used for estimating only

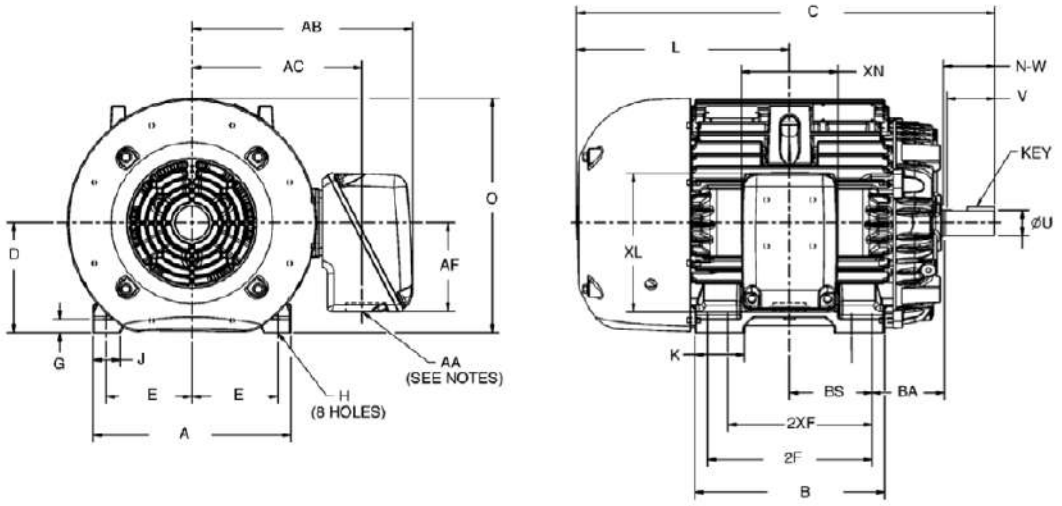
X$D Ultra®

TEFC—Extra Severe Duty

Dimensions (cont.)

Dimensions on previous page

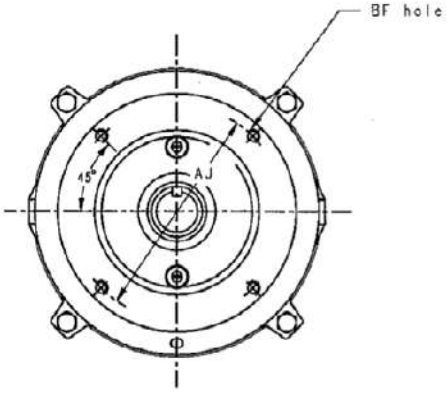
Cast Iron Construction/Frames 140-449, Type KS, 3-Phase/Dimensions—For estimating only



Conduit Box Dimensions

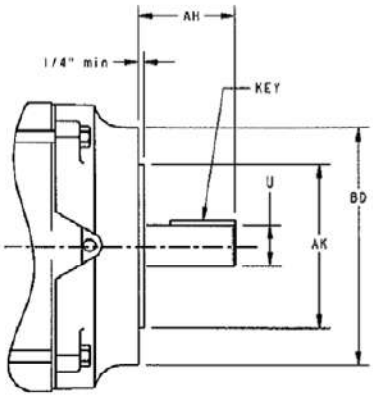
Frame	Nominal HP	Approx. Vol. (cubic in)	Dimensions in Inches					
			AA*	AB	AC	AF	XL	XN
143-145	2	32	0.75	6.62	5.12	2.50	4.30	5.40
182-184	5	32	0.75	7.82	6.32	2.50	4.30	5.40
213-215	10	55	1.00	9.50	7.42	3.50	5.78	4.16
254-256	20	140	1.25	11.68	9.12	4.59	7.37	5.37
284-286	30	140	1.50	12.44	9.88	4.59	7.37	5.37
324-326	50	346	3.00	16.13	12.43	6.44	10.14	7.00
364-365	75	346	3.00	17.07	13.37	6.44	10.14	7.00
404-405	125	700	3.00	20.48	16.22	7.00	12.13	10.50
444-449	200	700	3.00	22.00	17.74	7.00	12.13	10.50
444-449	250-300	1260	2x 4.00	22.56	17.80	7.00	12.40	16.25

* A tapped NPT hole is provided for the conduit size listed in Column AA



C-Face Dimensions

NEMA Frame	All Dimensions in inches						
	AH	AJ	AK	U	Key Width	Key Thickness	Key Length
143TC-145TC	2.12	5.88	4.50	0.88	0.19	0.19	1.38
182TC-184TC	2.62	7.25	8.50	1.13	0.25	0.25	1.75
213TC-215TC	3.12	7.25	8.50	1.38	0.31	0.31	2.38
254TC-256TC	3.75	7.25	8.50	1.63	0.38	0.38	2.88
284TC-286TC	4.38	9.00	10.50	1.88	0.50	0.50	3.25



X$D Ultra® 841

TEFC—Extra Severe Duty (IP56)

Standard Features

NEMA Frame Size	143 - 449
Poles	2, 4, 6 & 8
Horsepower Range	2-pole - 1 - 300 4-pole - 1 - 300 6-pole - .75 - 250 8-pole - .5 - 200
Voltage	460 & 575
Shaft Extension	2-pole 143 - 326 fr - T 284 - 449 fr - TS 4, 6 & 8-pole 143 - 449 fr - T
Agency Approvals	UL - Component and Insulation System Recognition CSA - Certification and Efficiency Verification
Industry Specifications	IEEE 841, IEEE 45 Marine Duty
Warranty (months)	60 months from date of installation or 66 months from date of manufacture, whichever occurs first
Max Ambient & Altitude	40˚C & 3300 feet
Insulation Class	H
Winding Temperature Rise	80C @1.0SF Sine wave (with some high end exceptions)
Service Factor	1.15 Sine wave (with some high end exceptions)
Bearing Housing Rise	Per IEEE 841 - 2-pole - 50C 4,6,8 pole - 45C
Division 2 Temperature Code	CSA Certified Div 2, T3 (200 C) (with some high end exceptions)
NEMA Design	B
Insulation System	Non-Hygroscopic, Anti-Fungus, Polyester Resin, Trickle Treated, Tested to Exceed NEMA MG 1 Part 31
Inverter Capability	Variable Torque INF:1
Efficiency	Per IEEE 841 (NEMA Premium 1-300 HP)
Frame Material	Cast iron
Frame/Conduit Box Gasket	Neoprene Rubber
Frame/End Shield Seal	Yes
End Shield Material	Cast iron
Conduit Box Material	Cast Iron or Fabricated Steel Plate
Conduit Box Cover Gasket	Neoprene Rubber
Conduit Box Rotation	90 degree increments
Conduit Box Hole Thread	NPT
Shaft Runout	Per IEEE 841
Fan Cover Material	Cast iron
Fan	2-pole - Bi-Directional, Non-sparking Plastic (except Uni-directional Aluminum in 449 frame) 4, 6 & 8-pole - Bi-Directional, Non-sparking Plastic
Sound Power	90 dBA sound power (with some high end exceptions)
Mounting	F1 (Field modifiable to F2)
Mounting Holes	2 per foot, 8 total
Lifting	4 point cast in lugs
Bearing Type	Single Shield Ball or Open Roller
Bearing L10 Life (Hours)	Belted - 26,280 per NEMA MG 1 14.42.2 Direct coupled - 50,000 per IEEE 841
Bearing Caps	Cast Iron, gasketed
Bearing Lubricant	Polyurea
Bearing Re-Lubrication	Grease fitting & plug. Extended through the fan cover. Includes provisions for conversion to Oil Mist Lubrication
Bearing Protection	Inpro Seal both ends
Fasteners	Hex Head, Zinc Plated
Condensation Drain	Stainless Steel T-drains at the lowest point of both end shields
Balance & Vibration	ISO 1940 Grade 1 Ball bearings - .040 peak in/sec Roller bearings - 4-pole - .0006 in pk-pk 6 & 8-pole .0009 in pk-pk
Vibration Pads	Cast in vibration pads for repeatable measurements
Nameplate	316 Stainless Steel
Paint	Epoxy ester, RAL 1001
Tests	NEMA Routine including Vibration supplied with motor. IEEE 112 Method B

X$D Ultra® 841

TEFC—Extra Severe Duty

Pricing

Volts: 460, 575
HP: 0.50 –300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
0.5	900	460	143T	1.3	66	**M9344**	5KS143XAA408	$892	G4-7UX1	N	43	13.42	
0.5	900	575	143T	1.0	66	**M9345**	5KS143XAA404	$892	G4-7UX1	N	43	13.42	
0.75	1200	460	143T	1.4	80	**M354**	5KS143XAA308	$1,008	G4-7UX1	N	43	13.4	
0.75	1200	575	143T	1.1	80	**M355**	5KS143XAA304	$1,008	G4-7UX1	N	43	13.4	
0.75	900	460	145T	1.9	72	**M8901**	5KS145XAA408	$1,662	G4-7UX1	N	50	13.4	
0.75	900	575	145T	1.5	70	**M9346**	5KS145XAA404	$1,662	G4-7UX1	N	50	13.42	
1	3600	460	143T	1.3	87.5	**M8903**	5KS143XAA122	$1,035	G4-7UX1	N	43	11.6	
1	3600	575	143T	1.1	87.5	**M8904**	5KS143XAA120	$1,035	G4-7UX1	N	43	11.6	
1	1800	460	143T	1.4	86.5	**M352**	5KS143XAA208	$1,020	G4-7UX1	Y	43	11.6	
1	1800	575	143T	1.2	86.5	**M353**	5KS143XAA204	$1,020	G4-7UX1	Y	43	11.6	
1	1200	460	145T	1.8	82.5	**M363**	5KS145XAA308	$1,092	G4-7UX1	Y	50	13.4	
1	1200	575	145T	1.5	82.5	**M364**	5KS145XAA304	$1,092	G4-7UX1	N	50	13.4	
1	900	460	182T	2.2	80	**M9413**	5KS182XAA408	$1,334	G4-7UX1	N	76	15.9	
1	900	575	182T	1.8	80	**M9482**	5KS182XAA404	$1,334	G4-7UX1	N	76	15.9	
1.5	3600	460	143T	2	87.5	**M8905**	5KS143XAA108	$1,080	G4-7UX1	Y	43	11.6	
1.5	3600	575	143T	1.6	87.5	**M8906**	5KS143XAA104	$1,080	G4-7UX1	N	43	11.6	
1.5	1800	460	145T	2.1	86.5	**M359**	5KS145XAA208	$1,157	G4-7UX1	Y	50	11.6	
1.5	1800	575	145T	1.7	86.5	**M360**	5KS145XAA204	$1,157	G4-7UX1	Y	50	11.6	
1.5	1200	460	182T	2.4	87.5	**M9414**	5KS182XAA308	$1,194	G4-7UX1	Y	76	15.9	
1.5	1200	575	182T	1.9	87.5	**M9483**	5KS182XAA304	$1,194	G4-7UX1	N	76	15.9	
1.5	900	460	184T	3.2	80	**M9415**	5KS184XAA408	$1,577	G4-7UX1	N	101	15.9	
1.5	900	575	184T	2.6	80	**M9485**	5KS184XAA404	$1,577	G4-7UX1	N	101	15.9	
2	3600	460	145T	2.7	86.5	**M8907**	5KS145XAA108	$1,293	G4-7UX1	Y	43	11.6	
2	3600	575	145T	2.2	86.5	**M8908**	5KS145XAA104	$1,293	G4-7UX1	N	43	11.6	
2	1800	460	145T	2.7	86.5	**M361**	5KS145XAA220	$1,250	G4-7UX1	Y	50	13.4	
2	1800	575	145T	2.2	86.5	**M362**	5KS145XAA223	$1,250	G4-7UX1	Y	50	13.4	
2	1200	460	184T	3	88.5	**M9416**	5KS184XAA308	$1,278	G4-7UX1	Y	101	15.9	
2	1200	575	184T	2.5	88.5	**M9486**	5KS184XAA304	$1,278	G4-7UX1	Y	101	15.9	
2	900	460	213T	3.8	86.5	**M9417**	5KS213XAA408	$2,031	G4-7UX1	N	200	20.1	
2	900	575	213T	3	86.5	**M9487**	5KS213XAA404	$2,031	G4-7UX1	N	200	20.1	
3	3600	460	182T	3.9	89.5	**M9418**	5KS182XAA108	$1,178	G4-7UX1	Y	76	15.9	
3	3600	575	182T	3.1	89.5	**M9488**	5KS182XAA104	$1,178	G4-7UX1	N	76	15.9	
3	1800	460	182T	4.2	89.5	**M9419**	5KS182XAA208	$1,112	G4-7UX1	Y	76	15.9	
3	1800	575	182T	3.3	89.5	**M9489**	5KS182XAA204	$1,112	G4-7UX1	Y	76	15.9	
3	1200	460	213T	4.2	89.5	**M9420**	5KS213XAA308	$1,425	G4-7UX1	Y	200	20.1	
3	1200	575	213T	3.4	89.5	**M9490**	5KS213XAA304	$1,425	G4-7UX1	Y	200	20.1	
3	900	460	215T	5.4	86.5	**M9421**	5KS215XAA408	$2,621	G4-7UX1	N	220	20.1	
3	900	575	215T	4.3	86.5	**M9491**	5KS215XAA404	$2,621	G4-7UX1	N	220	20.1	
5	3600	460	184T	6.3	90.2	**M9422**	5KS184XAA108	$1,334	G4-7UX1	Y	101	15.9	
5	3600	575	184T	5	90.2	**M9492**	5KS184XAA104	$1,334	G4-7UX1	N	101	15.9	
5	1800	460	184T	6.6	89.5	**M9423**	5KS184XAA208	$1,182	G4-7UX1	Y	101	15.9	

X$D Ultra® 841

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 460, 575
HP: 0.50 –300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
5	1800	575	184T	5.3	89.5	**M9493**	5KS184XAA204	$1,182	G4-7UX1	Y	101	15.9	
5	1200	460	215T	7.2	89.5	**M9424**	5KS215XAA308	$2,007	G4-7UX1	Y	220	20.1	
5	1200	575	215T	5.4	89.5	**M9494**	5KS215XAA304	$2,007	G4-7UX1	Y	220	20.1	
5	900	460	254T	8.1	89.5	**M9425**	5KS254XAA408	$3,615	G4-7UX1	N	315	25.6	
5	900	575	254T	6.5	89.5	**M9495**	5KS254XAA404	$3,615	G4-7UX1	N	315	25.6	
7.5	3600	460	213T	8.5	91	**M9426**	5KS213XAA108	$1,740	G4-7UX1	Y	200	20.1	
7.5	3600	575	213T	6.8	91	**M9496**	5KS213XAA104	$1,740	G4-7UX1	N	200	20.1	
7.5	1800	460	213T	9.1	91.7	**M9427**	5KS213XAA208	$1,730	G4-7UX1	Y	200	20.1	
7.5	1800	575	213T	7.2	91.7	**M9497**	5KS213XAA204	$1,730	G4-7UX1	Y	200	20.1	
7.5	1200	460	254T	9.8	91.7	**M9428**	5KS254XAA308	$2,667	G4-7UX1	Y	315	25.6	
7.5	1200	575	254T	7.9	91.7	**M9498**	5KS254XAA304	$2,667	G4-7UX1	Y	315	25.6	
7.5	900	460	256T	11.6	89.5	**M9429**	5KS256XAA408	$4,577	G4-7UX1	N	350	25.6	
7.5	900	575	256T	9.3	89.5	**M9499**	5KS256XAA404	$4,577	G4-7UX1	N	350	25.6	
10	3600	460	215T	11.2	91	**M9430**	5KS215XAA108	$1,883	G4-7UX1	Y	220	20.1	
10	3600	575	215T	9	91	**M9563**	5KS215XAA104	$1,883	G4-7UX1	N	220	20.1	
10	1800	460	215T	12	91.7	**M9431**	5KS215XAA208	$1,929	G4-7UX1	Y	220	20.1	
10	1800	575	215T	9.6	91.7	**M9564**	5KS215XAA204	$1,929	G4-7UX1	Y	220	20.1	
10	1200	460	256T	13.1	91	**M9432**	5KS256XAA308	$3,260	G4-7UX1	Y	350	25.6	
10	1200	575	256T	10.5	91	**M9565**	5KS256XAA304	$3,260	G4-7UX1	Y	350	25.6	
10	900	460	284T	13.8	90.2	**M9433**	5KS284XAA408	$5,426	G4-7UX1	N	460	28.58	
10	900	575	284T	11	90.2	**M9566**	5KS284XAA404	$5,426	G4-7UX1	N	460	28.58	
15	3600	460	254T	17.6	91.7	**M9434**	5KS254XAA108	$2,588	G4-7UX1	Y	315	25.6	
15	3600	575	254T	14	91.7	**M9567**	5KS254XAA104	$2,588	G4-7UX1	N	315	25.6	
15	1800	460	254T	18	92.4	**M9435**	5KS254XAA208	$2,541	G4-7UX1	Y	315	25.6	
15	1800	575	254T	14.4	92.4	**M9568**	5KS254XAA204	$2,541	G4-7UX1	Y	315	25.6	
15	1200	460	284T	19.6	91.7	**M9436**	5KS284XAA308	$4,323	G4-7UX1	Y	460	28.58	
15	1200	575	284T	15.7	91.7	**M9569**	5KS284XAA304	$4,323	G4-7UX1	Y	460	28.58	
15	900	460	286T	20.5	90.2	**M9437**	5KS286XAA408	$7,089	G4-7UX1	N	510	28.58	
15	900	575	286T	16.4	90.2	**M9570**	5KS286XAA404	$7,089	G4-7UX1	N	510	28.58	
20	3600	460	256T	22.6	92.4	**M9438**	5KS256XAA108	$3,203	G4-7UX1	Y	350	25.6	
20	3600	575	256T	18.1	92.4	**M9571**	5KS256XAA104	$3,203	G4-7UX1	N	350	25.6	
20	1800	460	256T	23.3	93	**M9439**	5KS256XAA208	$3,167	G4-7UX1	Y	350	25.6	
20	1800	575	256T	18.6	93	**M9572**	5KS256XAA204	$3,167	G4-7UX1	Y	350	25.6	
20	1200	460	286T	26	91.7	**M9440**	5KS286XAA308	$5,268	G4-7UX1	Y	510	28.58	
20	1200	575	286T	20.8	91.7	**M9573**	5KS286XAA304	$5,268	G4-7UX1	Y	510	28.58	
20	900	460	324T	29.8	91	**M9441**	5KS324XAA408	$8,189	G4-7UX1	N	649	30.54	
20	900	575	324T	23.9	91	**M9574**	5KS324XAA404	$8,189	G4-7UX1	N	649	30.54	
25	3600	460	284TS	27.8	93	**M9442**	5KS284XAA118	$3,948	G4-7UX1	Y	460	27.2	
25	3600	460	284T	28.0	91.7	**M9347**	5KS284XAA108	$3,948	G4-7UX1	N	460	28.58	
25	3600	575	284TS	22.2	93	**M9575**	5KS284XAA114	$3,948	G4-7UX1	N	460	27.2	
25	3600	575	284T	22.4	91.7	**M9348**	5KS284XAA104	$3,948	G4-7UX1	N	460	28.58	

X$D Ultra® 841

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 460, 575
HP: 0.50 –300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
25	1800	460	284TS	29.1	93.6	**M9383**	5KS284XAA218	$3,771	G4-7UX1	N	460	27.2	
25	1800	460	284T	29.8	93.6	**M9443**	5KS284XAA208	$3,771	G4-7UX1	Y	460	28.58	
25	1800	575	284T	23.8	93.6	**M9576**	5KS284XAA204	$3,771	G4-7UX1	Y	460	28.58	
25	1200	460	324T	32.3	93	**M9444**	5KS324XAA308	$6,669	G4-7UX1	Y	679	30.54	
25	1200	575	324T	25.8	93	**M9577**	5KS324XAA304	$6,669	G4-7UX1	Y	679	30.54	
25	900	460	326T	37	91	**M9445**	5KS326XAA408	$9,807	G4-7UX1	N	710	32.04	
25	900	575	326T	29.2	91	**M9578**	5KS326XAA404	$9,807	G4-7UX1	N	710	32.04	
30	3600	460	286TS	33.4	93	**M9446**	5KS286XAA118	$4,610	G4-7UX1	Y	510	27.2	
30	3600	460	286T	32.5	93	**M9349**	5KS286XAA108	$4,610	G4-7UX1	N	510	28.58	
30	3600	575	286TS	26.7	93	**M9579**	5KS286XAA114	$4,610	G4-7UX1	N	510	27.2	
30	3600	575	286T	26.0	93	**M9350**	5KS286XAA104	$4,610	G4-7UX1	N	510	28.58	
30	1800	460	286TS	34.9	93.6	**M9388**	5KS286XAA218	$4,383	G4-7UX1	N	510	27.2	
30	1800	460	286T	35.5	93.6	**M9447**	5KS286XAA208	$4,383	G4-7UX1	Y	510	28.58	
30	1800	575	286T	28.4	93.6	**M9580**	5KS286XAA204	$4,383	G4-7UX1	Y	510	28.58	
30	1200	460	326T	38.2	93	**M9448**	5KS326XAA308	$7,443	G4-7UX1	Y	730	32.04	
30	1200	575	326T	30.8	93	**M9581**	5KS326XAA304	$7,443	G4-7UX1	Y	730	32.04	
30	900	460	364T	42.2	92.4	**M9449**	5KS364XAA408	$12,110	G4-7UX	N	1010	34.89	
30	900	575	364T	33.8	92.4	**M9582**	5KS364XAA404	$12,110	G4-7UX	N	1010	34.89	
40	3600	460	324TS	46.8	94.1	**M9450**	5KS324XAA118	$6,264	G4-7UX1	Y	649	29.04	
40	3600	460	324T	50.3	93.6	**M9351**	5KS324XAA108	$6,264	G4-7UX1	N	640	32.04	
40	3600	575	324TS	37.4	94.1	**M9583**	5KS324XAA114	$6,264	G4-7UX1	N	649	29.04	
40	3600	575	324T	39.7	93.6	**M9352**	5KS324XAA104	$6,264	G4-7UX1	N	640	32.04	
40	1800	460	324TS	49.7	94.1	**M9389**	5KS324XAA218	$6,077	G4-7UX1	N	670	30.54	
40	1800	460	324T	50.8	94.5	**M9451**	5KS324XAA208	$6,077	G4-7UX1	Y	689	30.54	
40	1800	575	324T	40.6	94.5	**M9584**	5KS324XAA204	$6,077	G4-7UX1	Y	689	30.54	
40	1200	460	364T	49.4	94.1	**M9452**	5KS364XAA308	$9,950	G4-7UX	Y	1030	34.89	
40	1200	575	364T	39.8	94.1	**M9585**	5KS364XAA304	$9,950	G4-7UX	Y	1030	34.89	
40	900	460	365T	55.9	93	**M9453**	5KS365XAA408	$14,937	G4-7UX	N	1090	34.89	
40	900	575	365T	45	93	**M9586**	5KS365XAA404	$14,937	G4-7UX	N	1090	34.89	
50	3600	460	326TS	57.3	94.5	**M9454**	5KS326XAA118	$7,647	G4-7UX1	Y	700	30.48	
50	3600	460	326T	60.6	93.6	**M9353**	5KS326XAA108	$7,647	G4-7UX1	N	660	32.04	
50	3600	575	326TS	45.5	94.5	**M9587**	5KS326XAA114	$7,647	G4-7UX1	N	700	30.48	
50	3600	575	326T	48.5	93.6	**M9354**	5KS326XAA104	$7,647	G4-7UX1	N	660	32.04	
50	1800	460	326TS	60.8	94.5	**M9390**	5KS326XAA218	$6,923	G4-7UX1	N	710	30.54	
50	1800	460	326T	63.9	94.5	**M9455**	5KS326XAA208	$6,923	G4-7UX1	Y	740	32.04	
50	1800	575	326T	51.1	94.5	**M9588**	5KS326XAA204	$6,923	G4-7UX1	Y	740	32.04	
50	1200	460	365T	62.2	94.1	**M9456**	5KS365XAA308	$11,343	G4-7UX	Y	1070	34.89	
50	1200	575	365T	49.7	94.1	**M9589**	5KS365XAA304	$11,343	G4-7UX	Y	1070	34.89	
50	900	460	404T	66.6	93	**M9457**	5KS404XAA408	$18,023	G4-7UX	N	1490	39.77	
50	900	575	404T	53	93	**M9590**	5KS404XAA404	$18,023	G4-7UX	N	1490	39.77	
60	3600	460	364TS	70.4	95	**M9458**	5KS364XAA118	$10,256	G4-7UX	Y	940	32.76	
60	3600	575	364TS	56.3	95	**M9591**	5KS364XAA114	$10,256	G4-7UX	N	940	32.76	
60	1800	460	364TS	71.7	95.0	**M9391**	5KS364XAA218	$9,924	G4-7UX	N	970	32.75	
60	1800	460	364T	71.2	95	**M9459**	5KS364XAA208	$9,924	G4-7UX	Y	1020	34.89	

X$D Ultra® 841

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 460, 575
HP: 0.50 –300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
60	1800	575	364T	56.6	95	**M9592**	5KS364XAA204	$9,924	G4-7UX	Y	1020	34.89	
60	1200	460	404T	72.5	95	**M9460**	5KS404XAA308	$13,245	G4-7UX	Y	1480	39.77	
60	1200	575	404T	58	95	**M9593**	5KS404XAA304	$13,245	G4-7UX	N	1480	39.77	
60	1200	575	404T	58.7	94.5	**M9480**	5KS404XAA370	$14,347	G4-7UX	N	1410	39.77	98
60	900	460	405T	78.9	93	**M9461**	5KS405XAA408	$20,340	G4-7UX	N	1570	39.77	
60	900	575	405T	63.1	93	**M9594**	5KS405XAA404	$20,340	G4-7UX	N	1570	39.77	
75	3600	460	365TS	85.2	95.8	**M9462**	5KS365XAA118	$12,261	G4-7UX	Y	1020	32.76	
75	3600	575	365TS	68.6	95.8	**M8917**	5KS365XAA114	$12,261	G4-7UX	N	1020	32.76	
75	1800	460	365TS	87.1	95.4	**M9392**	5KS365XAA218	$11,759	G4-7UX	N	1040	32.75	
75	1800	460	365T	86.6	95.4	**M9463**	5KS365XAA208	$11,759	G4-7UX	Y	1090	34.89	
75	1800	575	365T	68.9	95.4	**M9596**	5KS365XAA204	$11,759	G4-7UX	Y	1090	34.89	
75	1200	460	405T	89.6	95	**M9464**	5KS405XAA308	$14,547	G4-7UX	Y	1540	39.77	
75	1200	460	405T	92.9	94.5	**M9355**	5KS405XAA370	$14,547	G4-7UX	N	1460	39.77	98
75	1200	575	405T	71.2	95	**M9597**	5KS405XAA304	$14,547	G4-7UX	N	1540	39.77	
75	1200	575	405T	73.8	94.5	**M9481**	5KS405XAA379	$14,947	G4-7UX	N	1430	39.77	98
75	900	460	444T	94	94.5	**M9465**	5KS444XAA408	$25,449	G4-7UX	N	1950	45.62	
75	900	575	444T	75.2	94.5	**M9598**	5KS444XAA404	$25,449	G4-7UX	N	1950	45.62	
100	3600	460	405TS	108	95.4	**M9466**	5KS405XAA118	$15,783	G4-7UX	Y	1530	36.76	112
100	3600	575	405TS	86.3	95.4	**M8918**	5KS405XAA114	$15,783	G4-7UX	N	1530	36.76	112
100	1800	460	405TS	120.0	95.4	**M9393**	5KS405XAA218	$14,477	G4-7UX	N	1450	36.77	
100	1800	460	405T	119	95.8	**M9467**	5KS405XAA208	$14,477	G4-7UX	Y	1480	39.77	
100	1800	460	405T	120.0	95.4	**M9356**	5KS405XAA2088	$14,477	G4-7UX	N	1450	39.77	98
100	1800	575	405T	95.3	95.8	**M9693**	5KS405XAA204	$14,477	G4-7UX	Y	1480	39.77	
100	1800	575	405T	97.5	95.4	**M9484**	5KS405XAA2122	$14,877	G4-7UX	N	1440	39.77	98
100	1200	460	444T	116	95.4	**M9468**	5KS444XAA308	$18,723	G4-7UX	Y	2060	45.62	
100	1200	460	444T	125.0	95	**M9357**	5KS444XAA366	$18,723	G4-7UX	N	1860	45.62	98
100	1200	575	444T	93	95.4	**M9694**	5KS444XAA304	$18,723	G4-7UX	N	2060	45.62	
100	1200	575	444T	97.3	95.0	**M9533**	5KS444XAA373	$19,323	G4-7UX	N	1880	45.62	98
100	900	460	445T	125	94.5	**M9469**	5KS445XAA408	$32,247	G4-7UX	N	2020	45.62	
100	900	575	445T	100	94.5	**M9695**	5KS445XAA404	$32,247	G4-7UX	N	2020	45.62	
125	3600	460	444TS	139	95.4	**M9470**	5KS444XAA118	$20,169	G4-7UX	Y	1790	41.87	
125	3600	575	444TS	112	95.4	**M8919**	5KS444XAA114	$20,169	G4-7UX	N	1790	41.87	
125	1800	460	444T	144	95.8	**M9471**	5KS444XAA208	$18,651	G4-7UX	Y	1970	45.62	
125	1800	460	444T	143.0	95.4	**M9358**	5KS444XAA2028	$18,651	G4-7UX	N	1830	45.62	98
125	1800	575	444T	115	95.8	**M9697**	5KS444XAA204	$18,651	G4-7UX	Y	1970	45.62	
125	1800	575	444T	116.0	95.4	**M9539**	5KS444XAA2058	$19,251	G4-7UX	N	1810	45.62	98
125	1200	460	445T	150	95.4	**M9472**	5KS445XAA308	$22,307	G4-7UX	Y	2130	45.62	
125	1200	460	445T	153.0	95	**M9359**	5KS445XAA371	$22,307	G4-7UX	N	1950	45.62	98

Notes:
98 For belted load only. Roller bearing.
112 Sound level exceeds IEEE 841

X$D Ultra® 841

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 460, 575
HP: 0.50 –300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
125	1200	575	445T	120	95.4	**M9698**	5KS445XAA304	$22,307	G4-7UX	N	2130	45.62	
125	1200	575	445T	119.0	95.0	**M9595**	5KS445XAA380	$22,907	G4-7UX	N	1970	45.62	98
125	900	460	447T	155	95	**M9473**	5KS447XAA408	$35,909	G4-7UX	N	2580	52.12	
125	900	575	447T	124	95	**M9699**	5KS447XAA404	$35,909	G4-7UX	N	2580	52.12	
150	3600	460	445TS	163	95.8	**M9474**	5KS445XAA118	$23,874	G4-7UX	Y	1930	41.87	
150	3600	575	445TS	130	95.8	**M8920**	5KS445XAA114	$23,874	G4-7UX	N	1930	41.87	
150	1800	460	445T	170	96.2	**M9475**	5KS445XAA208	$21,431	G4-7UX	Y	2090	45.62	
150	1800	460	445T	168.0	95.8	**M9360**	5KS445XAA2054	$21,431	G4-7UX	N	2000	45.62	98
150	1800	575	445T	137	96.2	**M9384**	5KS445XAA204	$21,431	G4-7UX	Y	2060	45.62	
150	1800	575	445T	136.0	95.8	**M9599**	5KS445XAA2083	$22,031	G4-7UX	N	1970	45.62	98
150	1200	460	447T	171	95.8	**M9476**	5KS447XAA308	$27,162	G4-7UX	Y	2860	52.12	
150	1200	460	447T	170.0	95.8	**M9361**	5KS447XAA363	$27,162	G4-7UX	N	2940	54.01	98
150	1200	575	447T	137	95.8	**M9385**	5KS447XAA304	$27,162	G4-7UX	N	2860	52.12	
150	1200	575	447T	136.0	95.8	**M9386**	5KS447XAA374	$27,762	G4-7UX	N	2940	54.12	98
150	900	460	449T	184	95	**M8937**	5KS449XAA408	$39,158	G4-7UX	N	3150	52.12	
150	900	575	449T	147	95	**M8938**	5KS449XAA404	$39,158	G4-7UX	N	3120	52.12	
200	3600	460	447TS	214	95.8	**M9477**	5KS447XAA118	$29,729	G4-7UX	Y	2560	50.37	112
200	3600	575	447TS	170	95.8	**M8939**	5KS447XAA114	$29,729	G4-7UX	N	2560	50.37	112
200	1800	460	447T	220	96.5	**M9478**	5KS447XAA208	$26,421	G4-7UX	Y	2800	54.12	
200	1800	460	447T	220.0	96.2	**M9362**	5KS447XAA2044	$26,421	G4-7UX	N	2770	54.01	98
200	1800	575	447T	175	96.5	**M9387**	5KS447XAA204	$26,421	G4-7UX	Y	2800	54.12	
200	1800	575	447T	175.0	96.2	**M9363**	5KS447XAA2045	$26,421	G4-7UX	N	2770	54.01	98
200	1200	460	449T	229	95.8	**M8940**	5KS449XAA308	$30,213	G4-7UX	Y	3070	54.12	
200	1200	460	449T	227.0	95.8	**M9364**	5KS449XAA350	$30,213	G4-7UX	N	3070	54.01	98
200	1200	575	449T	183	95.8	**M8941**	5KS449XAA304	$30,213	G4-7UX	N	3070	54.12	
200	1200	575	449T	182.0	95.8	**M9365**	5KS449XAA351	$30,213	G4-7UX	N	3070	54.01	98
200	900	460	449T	247	95.4	**M8942**	5KS449XAA409	$41,250	G4-7UX	N	3120	54.12	
200	900	575	449T	196.0	95.4	**M9366**	5KS449XAA439	$41,250	G4-7UX	N	3210	54.12	
250	3600	460	449TS	265	95.8	**M8943**	5KS449XAA123	$37,578	G4-7UX	Y	2770	50.37	66,112
250	3600	460	449TS	265	95.8	**M8979**	5KS449XAA125	$37,578	G4-7UX	Y	2770	50.37	62,112
250	3600	575	449TS	211	95.8	**M8944**	5KS449XAA124	$37,578	G4-7UX	N	2770	50.37	66,112
250	3600	575	449TS	211.0	95.8	**M9367**	5KS449XAA143	$37,578	G4-7UX	N	2860	50.37	62,112
250	1800	460	449T	280	96.2	**M8945**	5KS449XAA224	$30,654	G4-7UX	Y	2790	54.12	
250	1800	460	449T	272.0	96.5	**M9368**	5KS449XAA287	$37,578	G4-7UX	N	3100	54.12	98
250	1800	575	449T	224	96.2	**M8946**	5KS449XAA225	$30,654	G4-7UX	N	2790	54.12	
250	1800	575	449T	217.0	96.5	**M9369**	5KS449XAA288	$37,578	G4-7UX	N	3100	54.01	98
250	1200	460	449T	294	95.8	**M8947**	5KS449XAA337	$35,990	G4-7UX	Y	3150	54.12	
250	1200	460	449T	294.0	95.8	**M9370**	5KS449XAA352	$35,990	G4-7UX	N	3210	54.12	98
250	1200	575	449T	233	95.8	**M9630**	5KS449XAA345	$35,990	G4-7UX	N	3150	54.12	97
250	1200	575	449T	234.0	95.8	**M9371**	5KS449XAA353	$35,990	G4-7UX	N	3210	54.01	98

Notes:

62 Only for CCW rotation facing opposite drive end.
66 Only for CW rotation facing opposite drive end.
97 Does not meet 200C AIT at 1.0SF-215C AIT and above only
98 For belted load only. Roller bearing.
112 Noise level exceeds IEEE-841

X$D Ultra® 841

TEFC—Extra Severe Duty

Pricing (cont.)

Volts: 460, 575
HP: 0.50 –300

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
300	3600	460	449TS	319	95.8	**M8948**	5KS449XAA134	$40,170	G4-7UX	Y	2790	54.12	62,97,112
300	3600	460	449TS	319.0	95.8	**M9372**	5KS449XAA144	$40,170	G4-7UX	N	2790	50.37	62,97,112
300	3600	575	449TS	253.0	95.8	**M9373**	5KS449XAA145	$40,170	G4-7UX	N	2790	50.37	62,97,112
300	3600	575	449TS	253.0	95.8	**M9374**	5KS449XAA146	$40,170	G4-7UX	N	2790	50.37	62,97,112
300	1800	460	449T	332	96.2	**M8949**	5KS449XAA208	$35,624	G4-7UX	Y	2980	54.12	112
300	1800	460	449T	332.0	96.2	**M9375**	5KS449XAA289	$35,624	G4-7UX	N	2940	54.12	98,112
300	1800	575	449T	264	96.2	**M9640**	5KS449XAA275	$35,624	G4-7UX	N	2980	54.12	112
300	1800	575	449T	265.0	96.2	**M9376**	5KS449XAA290	$35,624	G4-7UX	N	3000	54.12	98,112

Notes:

62 Only for CCW rotation facing opposite drive end.
66 Only for CW rotation facing opposite drive end.
97 Does not meet 200C AIT at 1.0SF-215C AIT and above only
98 For belted load only. Roller bearing.
112 Noise level exceeds IEEE-841

X$D Ultra® 841

TEFC—Extra Severe Duty
C-Face

Pricing

Volts: 460
HP: 1 – 50

HP	RPM	Volts	Frame	FLA	NP FL Eff. (%)	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
1	3600	460	143TC	1.4	81.5	**M9377**	5KS143XAA139	$1,240	G4-7UX1	N	43	13.92	
1	1800	460	143TC	1.4	86.5	**M520**	5KS143XAA200	$1,145	G4-7UX1	Y	43	13.92	
1	1800	460	143TCZ	1.3/1.1	86.5	**M9140**	5KS143XAA295	$1,145	G4-7UX1	Y	43	15.88	158
1	1800	575	143TC	1.2	85.5	**M9540**	5KS143XAA2024	$1,145	G4-7UX1	Y	43	13.92	
1.5	3600	460	143TC	2.2	84	**M9378**	5KS143XAA140	$1,384	G4-7UX1	N	43	13.92	
1.5	1800	460	145TC	2.1	86.5	**M521**	5KS145XAA200	$1,286	G4-7UX1	Y	50	13.92	
1.5	1800	575	145TC	1.8	86.5	**M9541**	5KS145XAA2028	$1,286	G4-7UX1	Y	50	13.92	
1.5	1200	460	182TC	2.4	87.5	**M8926**	5KS182XAA300	$1,184	G4-7UX1	N	76	16.65	
2	3600	460	145TC	2.7	85.5	**M9379**	5KS145XAA143	$1,473	G4-7UX1	N	50	13.92	158
2	1800	460	145TC	2.7	86.5	**M526**	5KS145XAA222	$1,377	G4-7UX1	Y	50	13.92	
2	1800	460	145TCZ	2.6/1.7	86.5	**M495**	5KS145XAA295	$1,377	G4-7UX1	Y	50	15.88	
2	1800	575	145TC	2.2	86.5	**M9542**	5KS145XAA2029	$1,377	G4-7UX1	Y	50	13.92	
2	1200	460	184TC	3	88.5	**M8928**	5KS184XAA300	$1,307	G4-7UX1	N	101	16.65	
3	3600	460	182TC	3.9	89.5	**M8925**	5KS182XAA100	$1,335	G4-7UX1	Y	76	16.65	
3	3600	575	182TC	3.2	86.5	**M9543**	5KS182XAA144	$1,335	G4-7UX1	N	76	16.66	
3	1800	460	182TC	4.2	89.5	**M8909**	5KS182XAA200	$1,263	G4-7UX1	Y	76	16.65	
3	1800	575	182TC	3.2	89.5	**M9544**	5KS182XAA2026	$1,263	G4-7UX1	Y	76	16.66	
3	1200	460	213TC	4.3	89.5	**M9380**	5KS213XAA329	$1,203	G4-7UX1	N	200	20.89	
5	3600	460	184TC	6.3	90.2	**M8927**	5KS184XAA100	$1,484	G4-7UX1	Y	101	16.65	
5	3600	575	184TC	5.2	88.5	**M9545**	5KS184XAA1044	$1,484	G4-7UX1	Y	101	16.66	
5	1800	460	184TC	6.6	89.5	**M8910**	5KS184XAA200	$1,320	G4-7UX1	Y	101	16.65	
5	1800	575	184TC	5.3	89.5	**M9546**	5KS184XAA2067	$1,320	G4-7UX1	Y	101	16.66	
5	1200	460	215TC	7.2	89.5	**M8932**	5KS215XAA300	$2,145	G4-7UX1	N	220	20.9	
7.5	3600	460	213TC	8.5	91	**M8929**	5KS213XAA100	$1,898	G4-7UX1	Y	200	20.9	
7.5	3600	575	213TC	7.2	89.5	**M9547**	5KS213XAA1044	$1,898	G4-7UX1	Y	200	20.9	
7.5	1800	460	213TC	9.1	91.7	**M8911**	5KS213XAA200	$1,878	G4-7UX1	Y	200	20.9	
7.5	1800	575	213TC	7.3	91.7	**M9548**	5KS213XAA2074	$1,878	G4-7UX1	Y	200	20.9	
7.5	1200	460	254TC	9.8	91.7	**M8934**	5KS254XAA300	$2,847	G4-7UX1	N	315	26.09	
10	3600	460	215TC	11.2	91	**M8931**	5KS215XAA100	$2,021	G4-7UX1	Y	220	20.9	
10	3600	575	215TC	9.2	90.2	**M9549**	5KS215XAA1040	$2,021	G4-7UX1	Y	220	20.9	
10	1800	460	215TC	12	91.7	**M8912**	5KS215XAA200	$2,079	G4-7UX1	Y	220	20.9	
10	1800	575	215TC	9.8	91.7	**M9550**	5KS215XAA2070	$2,079	G4-7UX1	Y	220	20.9	
10	1200	460	256TC	13.1	91	**M8936**	5KS256XAA300	$3,438	G4-7UX1	N	350	26.09	
15	3600	460	254TC	17.6	91.7	**M8933**	5KS254XAA100	$2,768	G4-7UX1	Y	315	26.09	
15	3600	575	254TC	13.9	91	**M9551**	5KS254XAA1076	$2,768	G4-7UX1	Y	315	26.09	
15	1800	460	254TC	18	92.4	**M8913**	5KS254XAA200	$2,727	G4-7UX1	Y	315	26.09	
15	1800	575	254TC	15.1	92.4	**M9552**	5KS254XAA2102	$2,727	G4-7UX1	Y	315	26.09	
15	1200	460	284TC	19.6	91.7	**M8921**	5KS284XAA300	$4,575	G4-7UX1	N	460	28.58	

Notes:
158 56C C-Face and Shaft Extension
C-Face ratings through 250HP, 449T Frame are available by custom order

X$D Ultra® 841

TEFC—Extra Severe Duty
C-Face

Pricing

Volts: 460
HP: 1 – 50

HP	RPM	Volts	Frame	FLA	NP FL Eff. (%)	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
20	3600	460	256TC	22.6	92.4	**M8935**	5KS256XAA100	$3,387	G4-7UX1	Y	350	26.09	
20	3600	575	256TC	18.1	91	**M9553**	5KS256XAA1014	$3,387	G4-7UX1	Y	350	26.09	
20	1800	460	256TC	23.3	93	**M8914**	5KS256XAA200	$3,362	G4-7UX1	Y	350	26.09	
20	1800	575	256TC	18.9	93	**M9554**	5KS256XAA2068	$3,362	G4-7UX1	Y	350	26.09	
20	1200	460	286TC	26	91.7	**M8922**	5KS286XAA300	$5,519	G4-7UX1	N	510	28.58	
25	3600	460	284TC	28	91.7	**M8923**	5KS284XAA100	$4,206	G4-7UX1	N	460	28.58	
25	3600	460	284TSC	27.8	93	**M8951**	5KS284XAA139	$4,206	G4-7UX1	Y	460	27.2	
25	3600	575	284TSC	22.4	91.7	**M9555**	5KS284XAA1007	$4,206	G4-7UX1	N	460	27.2	
25	1800	460	284TC	29.8	93.6	**M8915**	5KS284XAA200	$4,028	G4-7UX1	Y	460	28.58	
25	1800	575	284TC	23.3	93.6	**M9556**	5KS284XAA2036	$4,028	G4-7UX1	Y	460	28.58	
25	1200	460	324TC	31.6	93	**M9381**	5KS324XAA353	$6,505	G4-7UX1	N	690	32.04	
30	3600	460	286TC	32.5	93	**M8924**	5KS286XAA100	$4,865	G4-7UX1	N	510	28.58	
30	3600	460	286TSC	33.4	93	**M8952**	5KS286XAA128	$4,865	G4-7UX1	Y	510	27.2	
30	3600	575	286TSC	26.1	92.4	**M9557**	5KS286XAA181	$4,865	G4-7UX1	N	510	27.2	
30	1800	460	286TC	35.5	93.6	**M8916**	5KS286XAA200	$4,637	G4-7UX1	Y	510	28.58	
30	1800	575	286TC	27.9	93.6	**M9558**	5KS286XAA2027	$4,637	G4-7UX1	Y	510	28.58	
30	1200	460	326TC	37.7	93	**M9382**	5KS326XAA340	$7,542	G4-7UX1	N	720	32.04	
40	3600	460	324TSC	46.3	94.1	**M8971**	5KS324XAA175	$6,584	G4-7UX1	Y	649	29.04	
40	3600	575	324TSC	37.7	93.0	**M9559**	5KS324XAA1106	$6,584	G4-7UX1	N	640	30.54	
40	1800	460	324TC	49.8	94.5	**M8972**	5KS324XAA279	$6,396	G4-7UX1	Y	689	30.54	
40	1800	575	324TC	39.5	94.1	**M9560**	5KS324XAA2146	$6,396	G4-7UX1	N	670	32.04	
50	3600	460	326TSC	56.9	94.5	**M8973**	5KS326XAA155	$7,967	G4-7UX1	Y	700	30.48	
50	3600	575	326TSC	46.0	93.0	**M9561**	5KS326XAA1035	$7,967	G4-7UX1	N	680	30.54	
50	1800	460	326TC	62.3	94.5	**M8974**	5KS326XAA263	$7,244	G4-7UX1	Y	740	32.04	
50	1800	575	326TC	48.9	94.5	**M9562**	5KS326XAA2083	$7,244	G4-7UX1	N	710	32.04	

X$D Ultra® 841

TEFC—Extra Severe Duty

Typical Performance Data

Volts: 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Cat No.	Model No.	Frame	FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP PF Eff. (%)	NP PF PF (%)	Max. KVAR
0.5	900	460	**M9344**	5KS143XAA408	143T	1.3	3.9	-	R	3.1	4.3	7	66	55.5	0.7
0.5	900	575	**M9345**	5KS143XAA404	143T	1.0	3.1	-	R	3.1	4.3	7	66	55.0	0.7
0.75	1200	460	**M354**	5KS143XAA308	143T	1.6	7.7	B	P	3.4	6	9.4	77	57.5	0.8
0.75	1200	575	**M355**	5KS143XAA304	143T	1.3	6.3	B	P	3.4	6	9.4	77	57.0	0.8
0.75	900	460	**M8901**	5KS145XAA408	145T	1.8	6	-	P	4.7	6.3	10.2	70	55.0	0.9
0.75	900	575	**M9346**	5KS145XAA404	145T	1.5	4.9	-	P	4.6	6.3	10.2	70	54.0	0.9
1	3600	460	**M8903**	5KS143XAA122	143T	1.4	9.8	-	N	1.5	3.7	5.3	81.5	80.5	0.4
1	3600	575	**M8904**	5KS143XAA120	143T	1.1	7.9	-	N	1.5	3.7	5.3	81.5	80.5	0.4
1	1800	460	**M352**	5KS143XAA208	143T	1.6	12.7	B	N	3	8.2	9	85.5	67.5	0.8
1	1800	575	**M353**	5KS143XAA204	143T	1.3	10.2	B	N	3	8.2	9	85.5	67.5	0.8
1	1200	460	**M363**	5KS145XAA308	145T	1.8	10	B	N	4.6	7.7	12.1	82.5	62.0	0.9
1	1200	575	**M364**	5KS145XAA304	145T	1.5	8.1	B	N	4.6	7.7	12.1	82.5	62.0	0.9
1	900	460	**M9413**	5KS182XAA408	182T	2.2	9.2	B	N	6	8.1	13	75.5	56.0	1.1
1	900	575	**M9482**	5KS182XAA404	182T	1.8	7.3	B	N	6	8.2	13	75.5	56.5	1.1
1.5	3600	460	**M8905**	5KS143XAA108	143T	2.2	16.4	B	M	2.2	3.9	5.6	84	77.5	0.7
1.5	3600	575	**M8906**	5KS143XAA104	143T	1.8	13.8	B	M	2.2	3.9	5.6	84	76.0	0.8
1.5	1800	460	**M359**	5KS145XAA208	145T	2.2	17.6	B	M	4.5	11.3	12.6	86.5	74.0	0.9
1.5	1800	575	**M360**	5KS145XAA204	145T	1.8	14.2	B	M	4.5	11.3	12.6	86.5	73.5	0.9
1.5	1200	460	**M9414**	5KS182XAA308	182T	2.4	17.4	B	M	6.7	11.1	16.8	87.5	68.0	1.0
1.5	1200	575	**M9483**	5KS182XAA304	182T	1.9	14.1	B	M	6.7	11.1	16.8	87.5	67.5	1.0
1.5	900	460	**M9415**	5KS184XAA408	184T	3.2	14.5	B	M	9.1	11.8	19.1	78.5	56.0	1.6
1.5	900	575	**M9485**	5KS184XAA404	184T	2.6	11.4	B	M	9.1	11.8	19.1	78.5	56.0	1.6
2	3600	460	**M8907**	5KS145XAA108	145T	2.7	22.4	B	L	3	5.1	7.2	85.5	80.5	0.8
2	3600	575	**M8908**	5KS145XAA104	145T	2.2	17.8	B	L	3	5.1	7.2	85.5	81.0	0.8
2	1800	460	**M361**	5KS145XAA220	145T	2.8	20.6	B	L	6.1	14.2	16.3	86.5	77.5	1.0
2	1800	575	**M362**	5KS145XAA223	145T	2.2	16.5	B	L	6.1	14.2	16.3	86.5	77.5	1.0
2	1200	460	**M9416**	5KS184XAA308	184T	3.0	22.6	B	L	9	14.4	21.5	88.5	69.5	1.2
2	1200	575	**M9486**	5KS184XAA304	184T	2.5	19.3	B	L	9	14.3	21.5	88.5	68.0	1.3
2	900	460	**M9417**	5KS213XAA408	213T	3.7	19	B	L	12	15.5	25.1	86.5	58.5	1.8
2	900	575	**M9487**	5KS213XAA404	213T	3.0	15.4	B	L	12	15.5	25.1	86.5	58.5	1.8
3	3600	460	**M9418**	5KS182XAA108	182T	4.3	24.7	B	K	4.5	7.1	10.3	86.5	76.0	1.4
3	3600	575	**M9488**	5KS182XAA104	182T	3.4	19.7	B	K	4.5	7.1	10.3	86.5	76.0	1.4
3	1800	460	**M9419**	5KS182XAA208	182T	4.0	26.7	B	K	8.9	19.2	22.3	89.5	78.0	1.3
3	1800	575	**M9489**	5KS182XAA204	182T	3.2	22.1	B	K	8.9	19.2	22.3	89.5	77.5	1.4
3	1200	460	**M9420**	5KS213XAA308	213T	4.3	29.9	B	K	13.4	20.7	30.8	89.5	73.0	1.7
3	1200	575	**M9490**	5KS213XAA304	213T	3.4	23.7	B	K	13.4	20.7	30.8	89.5	73.0	1.6
3	900	460	**M9421**	5KS215XAA408	215T	5.4	28.4	B	K	18	23.4	37	85.5	60.5	2.5
3	900	575	**M9491**	5KS215XAA404	215T	4.3	22.7	B	K	18	23.4	37	85.5	60.5	2.5

X$D Ultra® 841

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Cat No.	Model No.	Frame	FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP PF Eff. (%)	NP PF PF (%)	Max. KVAR
5	3600	460	**M9422**	5KS184XAA108	184T	6.4	37	B	J	7.5	11.2	16.1	88.5	82.5	1.6
5	3600	575	**M9492**	5KS184XAA104	184T	5.1	29.8	B	J	7.5	11.2	16.1	88.5	82.5	1.6
5	1800	460	**M9423**	5KS184XAA208	184T	6.6	41	B	J	15	27.7	33.7	89.5	79.5	2.0
5	1800	575	**M9493**	5KS184XAA204	184T	5.3	32.8	B	J	15	27.7	33.7	89.5	79.5	2.0
5	1200	460	**M9424**	5KS215XAA308	215T	6.8	42.8	B	J	22.4	33.6	48.2	89.5	77.0	2.2
5	1200	575	**M9494**	5KS215XAA304	215T	5.5	35	B	J	22.4	33.6	48.2	89.5	76.5	2.2
5	900	460	**M9425**	5KS254XAA408	254T	7.8	38.4	B	J	30	38.9	61.4	86.5	69.0	3.3
5	900	575	**M9495**	5KS254XAA404	254T	6.3	31.1	B	J	29.9	38.9	61.4	86.5	69.0	3.4
7.5	3600	460	**M9426**	5KS213XAA108	213T	9.0	57.7	B	H	11.2	15.6	22.3	89.5	87.5	2.1
7.5	3600	575	**M9496**	5KS213XAA104	213T	7.2	46	B	H	11.2	15.6	22.3	89.5	87.5	2.1
7.5	1800	460	**M9427**	5KS213XAA208	213T	9.2	61.2	B	H	22.2	38.9	47.8	91.7	83.5	2.3
7.5	1800	575	**M9497**	5KS213XAA204	213T	7.3	48.9	B	H	22.2	38.9	47.8	91.7	83.5	2.3
7.5	1200	460	**M9428**	5KS254XAA308	254T	9.7	59.5	B	H	33.5	50.3	68.7	91	79.5	3.1
7.5	1200	575	**M9498**	5KS254XAA304	254T	7.8	46.9	B	H	33.5	50.3	68.7	91	79.5	3.0
7.5	900	460	**M9429**	5KS256XAA408	256T	11.1	54.4	B	H	45	56.2	90	87.5	72.0	4.3
7.5	900	575	**M9499**	5KS256XAA404	256T	8.9	42.6	B	H	45	56.3	90	87.5	72.0	4.2
10	3600	460	**M9430**	5KS215XAA108	215T	11.6	75.9	B	H	14.9	20.1	29.8	90.2	89.5	2.3
10	3600	575	**M9563**	5KS215XAA104	215T	9.3	60.6	B	H	14.9	20.1	29.8	90.2	89.5	2.3
10	1800	460	**M9431**	5KS215XAA208	215T	12.2	79	B	H	29.7	49	59.4	91.7	83.5	3.0
10	1800	575	**M9564**	5KS215XAA204	215T	9.8	63.1	B	H	29.7	49	59.4	91.7	83.5	3.0
10	1200	460	**M9432**	5KS256XAA308	256T	12.9	77.7	B	H	44.8	67.2	89.6	91	79.5	4.1
10	1200	575	**M9565**	5KS256XAA304	256T	10.4	61.5	B	H	44.8	67.2	89.6	91	79.5	4.0
10	900	460	**M9433**	5KS284XAA408	284T	13.6	75.2	B	H	59.5	74.3	118.9	89.5	77.0	4.0
10	900	575	**M9566**	5KS284XAA404	284T	10.8	59.9	B	H	59.5	74.3	119	89.5	77.5	4.0
15	3600	460	**M9434**	5KS254XAA108	254T	17.3	108.9	B	G	22.2	28.8	44.4	91	89.0	2.9
15	3600	575	**M9567**	5KS254XAA104	254T	13.9	88.3	B	G	22.2	28.8	44.4	91	89.0	2.9
15	1800	460	**M9435**	5KS254XAA208	254T	18.9	109.1	B	G	44.4	71	88.8	92.4	80.5	6.1
15	1800	575	**M9568**	5KS254XAA204	254T	15.1	88	B	G	44.4	71	88.8	92.4	80.5	6.2
15	1200	460	**M9436**	5KS284XAA308	284T	19.6	110.1	B	G	66.6	93.3	133.3	91.7	78.0	6.5
15	1200	575	**M9569**	5KS284XAA304	284T	15.8	89.8	B	G	66.6	93.3	133.2	91.7	77.5	6.7
15	900	460	**M9437**	5KS286XAA408	286T	20.1	111.6	B	G	89.5	111.9	179	89.5	78.0	5.7
15	900	575	**M9570**	5KS286XAA404	286T	16.1	89.2	B	G	89.5	111.9	179	89.5	78.0	5.7
20	3600	460	**M9438**	5KS256XAA108	256T	22.6	139	B	G	29.7	38.5	59.3	91	91.0	2.3
20	3600	575	**M9571**	5KS256XAA104	256T	18.1	110.5	B	G	29.7	38.6	59.3	91	91.0	2.3
20	1800	460	**M9439**	5KS256XAA208	256T	23.8	135.1	B	G	59.2	88.8	118.4	93	84.5	6.2
20	1800	575	**M9572**	5KS256XAA204	256T	18.9	106.5	B	G	59.2	88.8	118.5	93	85.0	6.1
20	1200	460	**M9440**	5KS286XAA308	286T	25.5	140.6	B	G	88.9	120	177.8	91.7	80.0	7.6
20	1200	575	**M9573**	5KS286XAA304	286T	20.4	113	B	G	88.9	120	177.8	91.7	80.0	7.7
20	900	460	**M9441**	5KS324XAA408	324T	29.8	135	B	G	120	150	240	91.0	69.0	11.5
20	900	575	**M9574**	5KS324XAA404	324T	24.0	110.5	B	G	119.9	149.9	239.8	91.0	68.5	11.8

X$D Ultra® 841

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Cat No.	Model No.	Frame	FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP PF Eff. (%)	NP PF PF (%)	Max. KVAR
25	3600	460	**M9347**	5KS284XAA108	284T	28.0	173	B	G	37	48.1	74	91.7	91.0	4.8
25	3600	460	**M9442**	5KS284XAA118	284TS	28.0	173	B	G	37	48.1	74	91.7	91.0	4.8
25	3600	575	**M9575**	5KS284XAA114	284TS	22.4	136.2	B	G	37	48.1	74	91.7	91.0	4.6
25	3600	575	**M9348**	5KS284XAA104	284T	22.4	136.2	B	G	37	48.1	74	91.7	91.0	4.6
25	1800	460	**M9443**	5KS284XAA208	284T	29.1	174.8	B	G	73.9	110.8	147.7	93.6	86.0	6.9
25	1800	575	**M9576**	5KS284XAA204	284T	23.3	140.9	B	G	73.9	110.8	147.7	93.6	86.0	7.0
25	1200	460	**M9444**	5KS324XAA308	324T	31.6	172.5	B	G	111.6	150.6	223.1	93.0	79.5	9.0
25	1200	575	**M9577**	5KS324XAA304	324T	25.5	134.6	B	G	111.5	150.6	223.1	93.0	79.0	9.2
25	900	460	**M9445**	5KS326XAA408	326T	36.5	167.5	B	G	150.1	187.7	300.3	91.0	70.5	13.3
25	900	575	**M9578**	5KS326XAA404	326T	29.6	139.6	B	G	149.9	187.4	299.9	91.0	69.5	14.0
30	3600	460	**M9349**	5KS286XAA108	286T	32.5	207.7	B	G	44.4	57.7	88.8	93	93.0	4.0
30	3600	460	**M9446**	5KS286XAA118	286TS	32.5	207.7	B	G	44.4	57.7	88.8	93	93.0	4.0
30	3600	575	**M9350**	5KS286XAA104	286T	26.0	167.5	B	G	44.4	57.7	88.8	93	93.0	4.1
30	3600	575	**M9579**	5KS286XAA114	286TS	26.0	167.5	B	G	44.4	57.7	88.8	93	93.0	4.1
30	1800	460	**M9447**	5KS286XAA208	286T	34.9	209	B	G	88.7	133	177.4	93.6	86.0	8.1
30	1800	575	**M9580**	5KS286XAA204	286T	27.9	164.5	B	G	88.7	133.1	177.4	93.6	86.0	7.9
30	1200	460	**M9448**	5KS326XAA308	326T	37.7	204.1	B	G	134	180.9	268	93.0	80.0	10.4
30	1200	575	**M9581**	5KS326XAA304	326T	30.8	170.8	B	G	133.8	180.6	267.5	93.0	78.5	11.4
30	900	460	**M9449**	5KS364XAA408	364T	43.1	189.3	B	G	177.4	221.8	354.9	92.4	70.5	16.4
30	900	575	**M9582**	5KS364XAA404	364T	34.7	155.6	B	G	177.4	221.7	354.7	92.4	70.0	17.1
40	3600	460	**M9351**	5KS324XAA108	324T	50.3	277.4	B	G	58.8	73.5	117.7	93.6	79.5	16.3
40	3600	460	**M9450**	5KS324XAA118	324TS	50.3	277.4	B	G	58.8	73.5	117.7	93.6	79.5	16.3
40	3600	575	**M9583**	5KS324XAA114	324TS	39.7	214.6	B	G	58.8	73.6	117.7	93.6	80.5	15.2
40	3600	575	**M9352**	5KS324XAA104	324T	39.7	214.6	B	G	58.8	73.6	117.7	93.6	80.5	15.2
40	1800	460	**M9451**	5KS324XAA208	324T	50.7	271.3	B	G	118	165.3	236.1	94.1	78.5	16.7
40	1800	575	**M9584**	5KS324XAA204	324T	40.0	212	B	G	118.1	165.3	236.2	94.1	79.5	16.1
40	1200	460	**M9452**	5KS364XAA308	364T	49.7	263.7	B	G	177	239	354	94.1	80.0	15.5
40	1200	575	**M9585**	5KS364XAA304	364T	40.0	213.3	B	G	177	238.9	354	94.1	79.5	15.7
40	900	460	**M9453**	5KS365XAA408	365T	55.5	243.6	B	G	236.7	295.9	473.4	93.0	72.5	20.0
40	900	575	**M9586**	5KS365XAA404	365T	44.1	191.7	B	G	236.8	296	473.6	93.0	73.0	19.5
50	3600	460	**M9353**	5KS326XAA108	326T	60.6	314.2	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	460	**M9454**	5KS326XAA118	326TS	60.6	314.2	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	575	**M9354**	5KS326XAA104	326T	48.5	251.3	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	3600	575	**M9587**	5KS326XAA114	326TS	48.5	251.3	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	1800	460	**M9455**	5KS326XAA208	326T	61.5	335.8	B	G	147.6	206.6	295.2	94.5	80.5	18.8
50	1800	575	**M9588**	5KS326XAA204	326T	49.2	270.5	B	G	147.6	206.6	295.2	94.5	80.5	19.0
50	1200	460	**M9456**	5KS365XAA308	365T	61.4	343	B	G	221.3	298.8	442.7	94.1	81.0	18.8
50	1200	575	**M9589**	5KS365XAA304	365T	49.4	278.5	B	G	221.3	298.7	442.6	94.1	80.5	19.3
50	900	460	**M9457**	5KS404XAA408	404T	67.1	327.3	B	G	298.4	373	596.8	93.0	75.0	23.5
50	900	575	**M9590**	5KS404XAA404	404T	54.0	270.8	B	G	298.2	372.7	596.3	93.0	74.5	24.5

X$D Ultra® 841

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Cat No.	Model No.	Frame	FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP PF Eff. (%)	NP PF PF (%)	Max. KVAR
60	3600	460	**M9458**	5KS364XAA118	364TS	69.5	397	B	G	88.2	105.9	176.5	95.0	85.0	17.4
60	3600	575	**M9591**	5KS364XAA114	364TS	55.6	321	B	G	88.2	105.9	176.5	95.0	85.0	17.7
60	1800	460	**M9459**	5KS364XAA208	364T	72.1	409.1	B	G	176.9	247.6	353.8	95.0	82.0	21.5
60	1800	575	**M9592**	5KS364XAA204	364T	57.7	325.4	B	G	176.9	247.6	353.8	95.0	82.0	21.4
60	1200	460	**M9460**	5KS404XAA308	404T	74.3	411	B	G	264.4	356.9	528.8	94.5	80.0	22.2
60	1200	575	**M9593**	5KS404XAA304	404T	59.4	328.9	B	G	264.4	356.9	528.8	94.5	80.0	22.2
60	900	460	**M9461**	5KS405XAA408	405T	80.0	405.9	B	G	357.9	447.4	715.9	93.0	75.5	27.8
60	900	575	**M9594**	5KS405XAA404	405T	64.4	331.5	B	G	357.7	447.2	715.5	93.0	75.0	28.5
75	3600	460	**M9462**	5KS365XAA118	365TS	87.5	484.1	B	G	110.4	116	220.9	95.0	84.5	22.4
75	3600	575	**M8917**	5KS365XAA114	365TS	70.4	391.7	B	G	110.4	115.9	220.8	95.0	84.0	22.8
75	1800	460	**M9463**	5KS365XAA208	365T	87.1	509.2	B	G	221.1	309.5	442.2	95.4	84.5	22.4
75	1800	575	**M9596**	5KS365XAA204	365T	69.7	408.1	B	G	221.1	309.5	442.2	95.4	84.5	22.5
75	1200	460	**M9464**	5KS405XAA308	405T	92.9	515	B	G	330.6	446.4	661.3	94.5	80.0	28.3
75	1200	460	**M9355**	5KS405XAA370	405T	92.9	515	B	G	330.6	446.4	661.3	94.5	80.0	28.3
75	1200	575	**M9597**	5KS405XAA304	405T	74.3	409.8	B	G	330.6	446.4	661.3	94.5	80.0	28.0
75	900	460	**M9465**	5KS444XAA408	444T	101.0	504.3	B	G	443	553.8	886.1	93.6	74.5	35.8
75	900	575	**M9598**	5KS444XAA404	444T	80.0	396.8	B	G	443.1	553.9	886.3	93.6	75.0	34.9
100	3600	460	**M9466**	5KS405XAA118	405TS	108.0	706.3	B	G	147.3	154.6	294.6	95.0	91.0	17.2
100	3600	575	**M8918**	5KS405XAA114	405TS	86.6	564.3	B	G	147.3	154.7	294.6	95.0	91.0	16.8
100	1800	460	**M9356**	5KS405XAA2088	405T	120.0	581.7	B	G	294.4	367.9	588.7	95.4	82.0	33.4
100	1800	460	**M9467**	5KS405XAA208	405T	120.0	581.7	B	G	294.4	367.9	588.7	95.4	82.0	33.4
100	1800	575	**M9693**	5KS405XAA204	405T	95.7	461	B	G	294.4	368	588.8	95.4	82.0	33.1
100	1200	460	**M9357**	5KS444XAA366	444T	125.0	691.5	B	G	440.9	551.2	881.8	95.0	79.0	39.0
100	1200	460	**M9468**	5KS444XAA308	444T	125.0	691.5	B	G	440.9	551.2	881.8	95.0	79.0	39.0
100	1200	575	**M9694**	5KS444XAA304	444T	99.1	542.3	B	G	441	551.2	882	95.0	79.5	37.7
100	900	460	**M9469**	5KS445XAA408	445T	132.0	676.8	B	G	591.1	738.8	1182.1	94.1	75.5	44.7
100	900	575	**M9695**	5KS445XAA404	445T	106.0	555.6	B	G	590.9	738.6	1181.7	94.1	75.0	46.5
125	3600	460	**M9470**	5KS444XAA118	444TS	137.0	849	B	G	183.4	183.4	366.8	95.0	90.0	24.5
125	3600	575	**M8919**	5KS444XAA114	444TS	109.0	679.2	B	G	183.4	183.4	366.8	95.0	90.0	24.5
125	1800	460	**M9358**	5KS444XAA2028	444T	143.0	856.1	B	G	368.3	405.2	736.7	95.4	85.5	36.7
125	1800	460	**M9471**	5KS444XAA208	444T	143.0	856.1	B	G	368.3	405.2	736.7	95.4	85.5	36.7
125	1800	575	**M9697**	5KS444XAA204	444T	115.0	698.3	B	G	368.2	405.1	736.5	95.4	85.5	37.6
125	1200	460	**M9472**	5KS445XAA308	445T	153.0	815.6	B	G	551.7	689.6	1103.4	95.0	80.5	44.1
125	1200	460	**M9359**	5KS445XAA371	445T	153.0	815.6	B	G	551.7	689.6	1103.4	95.0	80.5	44.1
125	1200	575	**M9698**	5KS445XAA304	445T	122.0	652.2	B	G	551.7	689.6	1103.4	95.0	80.5	44.0
125	900	460	**M9473**	5KS447XAA408	447T	158.0	852.5	B	G	739	886.8	1478	94.5	78.5	48.2
125	900	575	**M9699**	5KS447XAA404	447T	126.0	675.1	B	G	739	886.9	1478.1	94.5	78.5	48.2

X$D Ultra® 841

TEFC—Extra Severe Duty

Typical Performance Data (cont.)

Volts: 460, 575
HP: 0.50 – 300

HP	RPM	Volts	Cat No.	Model No.	Frame	FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP PF Eff. (%)	NP PF PF (%)	Max. KVAR
150	3600	460	**M9474**	5KS445XAA118	445TS	163.0	1016.5	B	G	220.2	220.2	440.3	95.0	90.5	28.2
150	3600	575	**M8920**	5KS445XAA114	445TS	131.0	822.5	B	G	220.1	220.1	440.2	95.0	90.0	29.1
150	1800	460	**M9475**	5KS445XAA208	445T	168.0	1011.1	B	G	442.2	486.4	884.4	95.8	87.0	38.6
150	1800	460	**M9360**	5KS445XAA2054	445T	168.0	1011.1	B	G	442.2	486.4	884.4	95.8	87.0	38.6
150	1800	575	**M9384**	5KS445XAA204	445T	135.0	802	B	G	442.2	486.5	884.5	95.8	87.0	38.3
150	1200	460	**M9361**	5KS447XAA363	447T	170.0	1037.5	B	G	660.7	792.8	1321.4	95.8	86.0	38.8
150	1200	460	**M9476**	5KS447XAA308	447T	170.0	1037.5	B	G	660.7	792.8	1321.4	95.8	86.0	38.8
150	1200	575	**M9385**	5KS447XAA304	447T	136.0	815.3	B	G	660.8	792.9	1321.5	95.8	86.0	38.0
150	900	460	**M8937**	5KS449XAA408	449T	187.0	1002.7	B	G	887.2	1064.7	1774.5	94.5	79.5	53.2
150	900	575	**M8938**	5KS449XAA404	449T	149.0	789.1	B	G	887.5	1065	1774.9	94.5	80.0	52.2
200	3600	460	**M9477**	5KS447XAA118	447TS	213.0	1360.3	B	G	293.5	293.5	587	95.4	92.0	30.9
200	3600	575	**M8939**	5KS447XAA114	447TS	171.0	1088.2	B	G	293.5	293.5	587	95.4	92.0	30.9
200	1800	460	**M9362**	5KS447XAA2044	447T	220.0	1371.7	B	G	586.5	586.5	1173.1	96.2	88.5	43.6
200	1800	460	**M9478**	5KS447XAA208	447T	220.0	1371.7	B	G	586.5	586.5	1173.1	96.2	88.5	43.6
200	1800	575	**M9363**	5KS447XAA2045	447T	175.0	1079.3	B	G	586.6	586.6	1173.2	96.2	89.0	42.8
200	1800	575	**M9387**	5KS447XAA204	447T	175.0	1079.3	B	G	586.6	586.6	1173.2	96.2	89.0	42.8
200	1200	460	**M8940**	5KS449XAA308	449T	227.0	1345.1	B	G	881.7	1058	1763.4	95.8	86.0	50.4
200	1200	460	**M9364**	5KS449XAA350	449T	227.0	1345.1	B	G	881.7	1058	1763.4	95.8	86.0	50.4
200	1200	575	**M8941**	5KS449XAA304	449T	182.0	1056	B	G	881.8	1058.2	1763.7	95.8	86.0	49.3
200	1200	575	**M9365**	5KS449XAA351	449T	182.0	1056	B	G	881.8	1058.2	1763.7	95.8	86.0	49.3
200	900	460	**M8942**	5KS449XAA409	449T	247.0	1426	B	G	1182	1418.3	2363.9	95.4	79.5	72.0
200	900	575	**M9366**	5KS449XAA439	449T	196.0	1128	B	G	1182.1	1418.5	2364.1	95.4	80.0	71.0
250	3600	460	**M8943**	5KS449XAA123	449TS	264.0	1754.4	B	G	366.8	256.8	641.9	95.8	92.5	36.5
250	3600	460	**M8979**	5KS449XAA125	449TS	264.0	1754.4	B	G	366.8	256.8	641.9	95.8	92.5	36.5
250	3600	575	**M8944**	5KS449XAA124	449TS	211.0	1395.7	B	G	366.8	256.8	642	95.8	92.5	35.5
250	3600	575	**M9367**	5KS449XAA143	449TS	211.0	1395.7	B	G	366.8	256.8	642	95.8	92.5	35.5
250	1800	460	**M9368**	5KS449XAA287	449T	272.0	1613.5	B	G	733.4	586.7	1283.4	96.5	89.0	48.8
250	1800	460	**M8945**	5KS449XAA224	449T	272.0	1613.5	B	G	733.4	586.7	1283.4	96.5	89.0	48.8
250	1800	575	**M9369**	5KS449XAA288	449T	217.0	1268.2	B	G	733.5	586.8	1283.5	96.5	89.5	47.9
250	1800	575	**M8946**	5KS449XAA225	449T	217.0	1268.2	B	G	733.5	586.8	1283.5	96.5	89.5	47.9
250	1200	460	**M9370**	5KS449XAA352	449T	294.0	1822.3	B	G	1100.8	1100.8	1926.3	95.8	83.0	79.2
250	1200	460	**M8947**	5KS449XAA337	449T	294.0	1822.3	B	G	1100.8	1100.8	1926.3	95.8	83.0	79.2
250	1200	575	**M9630**	5KS449XAA345	449T	234.0	1435.3	B	G	1100.9	1100.9	1926.5	95.8	83.5	77.7
250	1200	575	**M9371**	5KS449XAA353	449T	234.0	1435.3	B	G	1100.9	1100.9	1926.5	95.8	83.5	77.7
300	3600	460	**M9372**	5KS449XAA144	449TS	319.0	2099.3	B	G	440.5	308.3	770.8	95.8	92.0	44.4
300	3600	460	**M8948**	5KS449XAA134	449TS	319.0	2099.3	B	G	440.5	308.3	770.8	95.8	92.0	44.4
300	3600	575	**M9373**	5KS449XAA145	449TS	253.0	1623.2	B	G	440.6	308.5	771.1	95.8	92.5	42.0
300	3600	575	**M9374**	5KS449XAA146	449TS	253.0	1623.2	B	G	440.6	308.5	771.1	95.8	92.5	42.0
300	1800	460	**M8949**	5KS449XAA208	449T	332.0	2052.7	B	G	879.8	703.9	1539.7	96.2	88.0	69.5
300	1800	460	**M9375**	5KS449XAA289	449T	332.0	2052.7	B	G	879.8	703.9	1539.7	96.2	88.0	69.5
300	1800	575	**M9640**	5KS449XAA275	449T	265.0	1646.1	B	G	879.7	703.8	1539.5	96.2	88.0	67.6
300	1800	575	**M9376**	5KS449XAA290	449T	265.0	1646.1	B	G	879.7	703.8	1539.5	96.2	88.0	67.6

X$D Ultra® 841

TEFC—Extra Severe Duty

Dimensions

Dimensions refer to drawing on following page
Cast Iron Construction/Frames 140-449, Type KS, 3-Phase/Dimensions—For estimating only

Frame	Approx. Net Weight in lbs	Dimensions in Inches																				
		Shaft						Mounting [18]														
		Key																				
		Width	Depth	Length	N-W	U [1]	V	E	H	BA	BS	2F	2XF	A	B	C	D [3]	G	J	K	L	O
143T	43	0.187	0.187	1.380	2.25	0.874	2.12	2.75	0.39	2.25	2.25	5.00	4.00	6.88	5.88	13.42	3.50	0.40	1.39	2.32	6.42	7.25
145T	50	0.187	0.187	1.380	2.25	0.874	2.12	2.75	0.39	2.25	2.25	5.00	4.00	6.88	5.88	13.42	3.50	0.40	1.39	2.32	6.42	7.25
182T	76	0.250	0.250	1.750	2.75	1.125	2.50	3.75	0.46	2.75	2.75	5.50	4.50	8.68	6.64	15.91	4.50	0.46	1.54	2.58	7.66	9.25
184T	101	0.250	0.250	1.750	2.75	1.125	2.50	3.75	0.46	2.75	2.75	5.50	4.50	8.68	6.64	15.91	4.50	0.46	1.54	2.58	7.66	9.25
213T	200	0.312	0.312	2.380	3.38	1.375	3.12	4.25	0.46	3.50	3.50	7.00	5.50	9.60	8.00	20.15	5.25	0.57	1.47	3.12	9.77	10.43
215T	220	0.312	0.312	2.380	3.38	1.375	3.12	4.25	0.46	3.50	3.50	7.00	5.50	9.60	8.00	20.15	5.25	0.57	1.47	3.12	9.77	10.43
254T	315	0.375	0.375	2.380	4.00	1.625	3.76	5.00	0.58	4.25	5.00	10.00	8.25	11.20	11.30	25.29	6.25	0.65	1.52	3.93	12.34	12.50
256T	350	0.375	0.375	2.880	4.00	1.625	3.76	5.00	0.58	4.25	5.00	10.00	8.25	11.20	11.30	25.29	6.25	0.65	1.52	3.93	12.34	12.50
284TS	460	0.375	0.375	1.880	3.25	1.625	3.00	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	27.20	7.00	0.76	1.75	4.12	13.70	13.88
284T	460	0.500	0.500	3.250	4.62	1.875	4.38	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	28.58	7.00	0.76	1.75	4.12	13.70	13.88
286TS	510	3.750	3.750	1.880	3.25	1.625	3.00	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	27.20	7.00	0.76	1.75	4.12	13.70	13.88
286T	510	0.500	0.500	3.250	4.62	1.875	4.38	5.50	0.58	4.76	5.50	11.00	9.50	12.40	12.80	28.58	7.00	0.76	1.75	4.12	13.70	13.88
324TS	664	0.500	0.500	2.000	3.75	1.875	3.50	6.25	0.67	5.25	6.00	10.50	10.50	14.40	13.80	29.04	8.00	0.99	2.01	3.62	15.54	17.07
324T	664	0.500	0.500	3.880	5.25	2.125	5.00	6.25	0.67	5.25	6.00	10.50	10.50	14.40	13.80	30.54	8.00	0.99	2.01	3.62	15.54	17.07
326TS	800	0.500	0.500	2.000	3.75	1.875	3.50	6.25	0.67	5.25	6.00	12.00	10.50	14.40	13.80	30.54	8.00	0.99	2.01	3.62	15.54	17.07
326T	800	0.500	0.500	3.880	5.25	2.125	5.00	6.25	0.67	5.25	6.00	12.00	10.50	14.40	13.80	32.04	8.00	0.99	2.01	3.62	15.54	17.07
364TS	1122	0.500	0.500	2.000	3.75	1.875	3.50	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	32.76	9.00	1.09	2.26	3.40	17.00	19.02
364T	1122	0.625	0.625	4.250	5.88	2.375	5.64	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	43.89	9.00	1.09	2.26	3.40	17.00	19.02
365TS	1155	0.500	0.500	2.000	3.75	1.875	3.50	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	32.76	9.00	1.09	2.26	3.40	17.00	19.02
365T	1155	0.625	0.625	4.250	5.88	2.375	5.64	7.00	0.69	5.88	6.13	12.25	11.25	16.00	14.40	43.89	9.00	1.09	2.26	3.40	17.00	19.02
404TS	1580	0.500	0.500	2.750	4.25	2.125	4.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	36.76	10.00	1.29	2.64	4.00	19.02	21.18
404T	1580	0.750	0.750	5.625	7.25	2.875	7.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	39.77	10.00	1.29	2.64	4.00	19.02	21.18
405TS	1600	0.500	0.500	2.750	4.25	2.125	4.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	36.76	10.00	1.29	2.64	4.00	19.02	21.18
405T	1600	0.750	0.750	5.625	7.25	2.875	7.00	8.00	0.81	6.62	6.88	13.75	12.25	18.00	16.00	39.77	10.00	1.29	2.64	4.00	19.02	21.18
444TS	2100	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	41.87	11.00	1.49	2.64	4.97	21.37	23.94
444T	2100	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	45.62	11.00	1.49	2.64	4.97	21.37	23.94
445TS	2260	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	41.87	11.00	1.49	2.64	4.97	21.37	23.94
445T	2260	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	8.25	16.50	14.50	20.00	18.80	45.62	11.00	1.49	2.64	4.97	21.37	23.94
447TS	2610	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	50.37	11.00	1.49	2.64	8.81	25.62	23.94
447T	2610	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	54.12	11.00	1.49	2.64	8.81	25.62	23.94
449TS	3010	0.625	0.625	3.000	4.75	2.375	4.50	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	50.37	11.00	1.49	2.64	8.81	25.62	23.94
449T	3010	0.875	0.875	6.875	8.50	3.375	8.25	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	54.12	11.00	1.49	2.64	8.81	25.62	23.94

Notes:

1 Shaft diameters 1 1/2 inches and smaller will come within the limits of +0.000 inch, -0.0005 inch diameters 1 5/8 inches and larger +0.000 inch, -0.001 inch

3 Tolerance on "D" dimension for rigid base motors will be +0.000 inch, -0.060 inch.

18 Motor feet have 2 holes per foot allowing NEMA F-1 or F-2 assembly while maintaining critical NEMA mounting dimensions

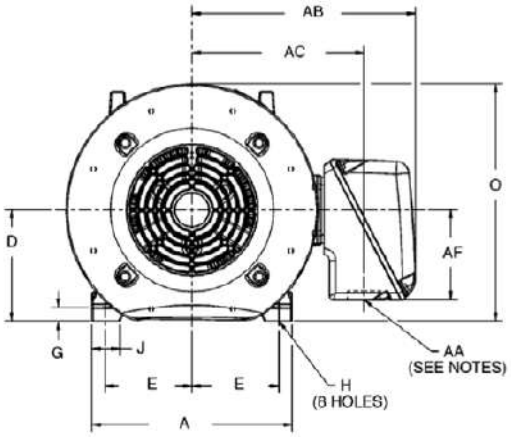
X$D Ultra® 841

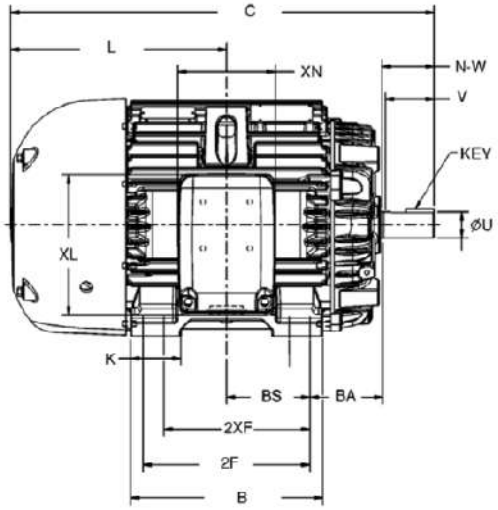
TEFC—Extra Severe Duty

Dimensions

Frame dimensions on previous page

Cast Iron Construction/Frames 140-449, Type KS, 3-Phase/Dimensions—For estimating only

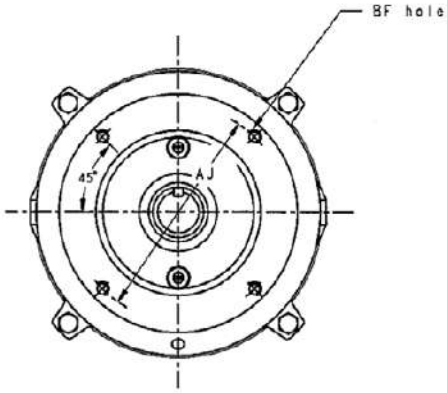




Conduit Box Dimensions

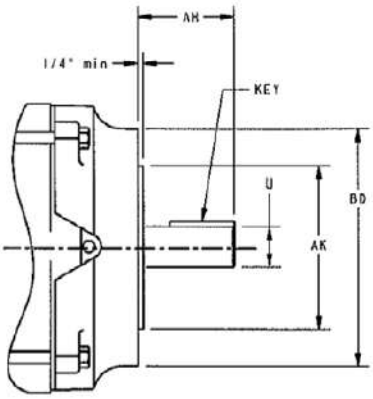
Frame	Nominal HP	Approx. Vol.	Dimensions in Inches					
			AA*	AB	AC	AF	XL	XN
143-145	2	32	0.75	6.62	5.12	2.50	4.30	5.40
182-184	5	32	0.75	7.82	6.32	2.50	4.30	5.40
213-215	10	55	1.00	9.50	7.42	3.50	5.78	4.16
254-256	20	140	1.25	11.68	9.12	4.59	7.37	5.37
284-286	30	140	1.50	12.44	9.88	4.59	7.37	5.37
324-326	50	346	3.00	16.13	12.43	6.44	10.14	7.00
364-365	75	346	3.00	17.07	13.37	6.44	10.14	7.00
404-405	125	700	3.00	20.48	16.22	7.00	12.13	10.50
444-449	200	700	3.00	22.00	17.74	7.00	12.13	10.50
444-449	250	1260	2X 4.00	22.56	17.80	7.00	12.40	16.25

* A tapped NPT hole is provided for the conduit size listed in Column AA



C-Face Dimensions

NEMA Frame	Dimensions in inches						
	AH	AJ	AK	U	Key Width	Key Thickness	Key Length
143TC-145TC	2.12	5.88	4.50	0.88	0.19	0.19	1.38
182TC-184TC	2.62	7.25	8.50	1.13	0.25	0.25	1.75
213TC-215TC	3.12	7.25	8.50	1.38	0.31	0.31	2.38
254TC-256TC	3.75	7.25	8.50	1.63	0.38	0.38	2.88
284TC-286TC	4.38	9.00	10.50	1.88	0.50	0.50	3.25



X$D Ultra® 661

TEFC—Extra Severe Duty (IP-56)
Heat Exchanger

Standard Features

HP Range	5-75
Poles	4 pole
Voltage	460
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors and C-390 (CE and ATEX Zone 2 by custom order)
Altitude	3300 ft
Ambient	40°C
Balance/Vibration	1940 ISO Grade 1.0, Roller Bearings: 4P: 0.0004 in (P-P)
Bearing Caps	Cast iron and gasketed on both ends
Bearing Housing Rise	4 pole: 45°C
Bearing Protection	Complete motor IP56 (exceeds API 661 requirement of IP55), Inpro Seal both ends
Bearing Type	Roller bearing on DE only (exception: 184 frames). Ball bearing on ODE.
Conduit Box	Gasketed and rotatable in 90 degree increments, Cast iron
Div 2 Temp Codes	Motors have an Auto Ignition Temperature of 200 degree C stamped on the nameplate. A Division 2 Nameplate can be provided (see kit section).
Drains	Stainless Steel T-drains in lowest section of both endshields
Efficiency	Meets or exceeds NEMA Premium nominal. Exceeds all NEMA Premium minimum efficiencies.
End Shield	Cast Iron
Fan	Non-Sparking Plastic
Fan Cover	Cast Iron
Fasteners	SAE, Grade 5
Foot Draft Angle	+/- 1.5 degrees
Foot Flatness	0.005 inches
Frame Material	Cast Iron
Frame Size	184-365
Frequency	60 Hz
Grease	Polyurea
Ground	Ground Lug in Conduit Box and Frame Ground
Industry Specifications	Meets IEEE 45 Marine Duty, Meets GM 7E-TA Automotive Duty, Exceeds API 661 specification
Insulation Class	Class H
Insulation System	GEGARD2400™ 143-449 frames. Non-Hygroscopic, Anti-Fungus, 2400Volt @ .1microsecond rise time. Exceeds NEMA MG1-31
Inverter Capabilities	Variable Torque inf:1
L10 Bearing Life	Belted: 40,000 hrs
Lifting Means	4 Lugs cast into frame
Mounting	180-320 frames all orientations. 360 frame stocked as shaft up. Shaft down available upon request.
Mounting Holes	2 per foot - All frames
Nameplate	Stainless Steel
NEMA Design	B
Oil Mist Lube	Includes provisions for conversion to Oil Mist Lubrication
Paint	Buff, Epoxy ester
Relubrication	Both ends, extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.15
Shaft TIR	Meets IEEE 841, .001 in for shaft diameter 1.625 in and smaller, .0015 in for shaft diameter greater than 1.625 in.
Special Painting	Meets IEEE 841
Temperature	Rise 80°C @ 1.0 SF
Tests	NEMA Routine Report including Vibration supplied with motor, IEEE 112 Method B
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first

X$D Ultra® 661

TEFC—Extra Severe Duty (IP-56)
Heat Exchanger

Pricing

Volts: 460
HP: 5 - 75

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
5	1800	460	184T	6.6	89.5	**M6621**	5KS184XAA221W8	$1,973	G4-7UXHE	Y	101	15.91	117
7.5	1800	460	213T	9.2	91.7	**M6622**	5KS213XAA220W8	$2,565	G4-7UXHE	Y	200	20.15	
10	1800	460	215T	12.2	91.7	**M6623**	5KS215XAA220W8	$2,684	G4-7UXHE	Y	220	20.15	
15	1800	460	254T	18.9	92.4	**M6624**	5KS254XAA221W8	$3,183	G4-7UXHE	Y	315	25.59	
20	1800	460	256T	23.8	93	**M6625**	5KS256XAA223W8	$3,659	G4-7UXHE	Y	350	25.59	
25	1800	460	284T	28.9	93.6	**M6626**	5KS284XAA220W8	$4,263	G4-7UXHE	Y	460	28.58	
30	1800	460	286T	35.1	93.6	**M6627**	5KS286XAA222W8	$4,875	G4-7UXHE	Y	510	28.58	
40	1800	460	324T	49.7	94.1	**M6628**	5KS324XAA271W8	$6,698	G4-7UXHE	Y	670	32.04	
50	1800	460	326T	61.1	94.5	**M6629**	5KS326XAA253W8	$7,544	G4-7UXHE	Y	710	32.04	
60	1800	460	364T	69.1	95	**M6630**	5KS364XAA249W8	$11,334	G4-7UXHE	N	850	38.06	119
60	1800	460	364T	69.1	95	**M6631**	5KS364XAA250W6	$11,334	G4-7UXHE	N	1070	34.89	118
75	1800	460	365T	85.1	95.4	**M6632**	5KS365XAA253W6	$13,169	G4-7UXHE	N	1050	38.06	118
75	1800	460	365T	85.1	95.4	**M6633**	5KS365XAA254W8	$13,169	G4-7UXHE	N	1085	34.89	119

Notes:
117 Ball bearing
118 Shaft down mounting only
119 Shaft up mounting only

X$D Ultra® 661

TEFC—Extra Severe Duty (IP-56)
Heat Exchanger

Typical Performance Data

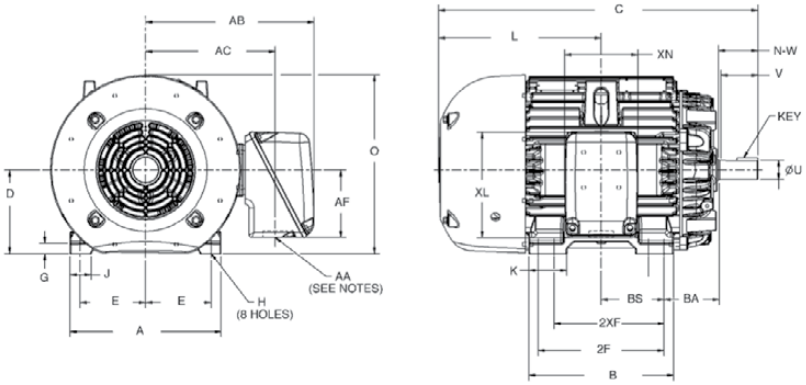
Volts: 460
HP: 5 - 75

HP	FL RPM	Volts	Cat No.	Model No.	Frame	NP FLA	LRA	NEMA Design	Code KVA/HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP Eff. Full Load	NP P.F. Full Load	Max KVAR
5	1755	460	**M6621**	5KS184XAA221W8	184T	6.6	41	B	J	15	228	299	89.5	79.5	2
7.5	1770	460	**M6622**	5KS213XAA220W8	213T	9.2	61.2	B	H	22.2	193	283	91.7	83.5	2.3
10	1765	460	**M6623**	5KS215XAA220W8	215T	12.2	79	B	H	29.7	191	274	91.7	83.5	3
15	1775	460	**M6624**	5KS254XAA221W8	254T	18.9	109.1	B	G	44.4	206	274	92.4	80.5	6.1
20	1775	460	**M6625**	5KS256XAA223W8	256T	23.8	135.1	B	G	59.2	204	255	93	84.5	6.2
25	1775	460	**M6626**	5KS284XAA220W8	284T	28.9	169	B	G	73.9	173	277	93.6	86.5	6.7
30	1780	460	**M6627**	5KS286XAA222W8	286T	35.1	224.7	A	G	88.6	192	290	93.6	85.5	8.6
40	1780	460	**M6628**	5KS324XAA271W8	324T	49.7	267.6	B	G	118.1	163	242	94.1	80	15.2
50	1780	460	**M6629**	5KS326XAA253W8	326T	61.1	337.4	B	G	147.6	173	243	94.5	81	17.8
60	1785	460	**M6630**	5KS364XAA249W8	364T	69.1	408.6	B	G	176.5	153	247	95	95.7	16.9
60	1785	460	**M6631**	5KS364XAA250W6	364T	69.1	408.6	B	G	176.5	153	247	95	95.7	16.4
75	1785	460	**M6632**	5KS365XAA253W6	365T	85.1	507.2	B	G	220.8	158	247	95.4	86	19.7
75	1785	460	**M6633**	5KS365XAA254W8	365T	85.1	506.8	B	G	220.8	157	247	95.4	86.5	19.1

X$D Ultra® 661

TEFC—Extra Severe Duty (IP-56)
Heat Exchanger

Dimensions



Common Motor Dimensions

Frame	Approx. Net Weight (in lbs)	Dimensions in inches																				
		Shaft						Mounting [18]														
		Key																				
		Width	Depth	Length	N-W	U [1]	V	E	H	BA	BS	2F	2XF	A	B	C	D [3]	G	J	K	L	O
184T	101	0.25	0.25	1.75	2.75	1.13	2.50	3.75	0.46	2.75	2.75	5.50	4.50	8.7	6.6	15.91	4.50	0.46	1.54	2.58	7.66	9.25
213T	200	0.31	0.31	2.38	3.38	1.38	3.12	4.25	0.46	3.50	3.50	7.00	5.50	9.6	8.0	20.15	5.25	0.57	1.47	3.12	9.77	10.43
215T	220	0.31	0.31	2.38	3.38	1.38	3.12	4.25	0.46	3.50	3.50	7.00	5.50	9.6	8.0	20.15	5.25	0.57	1.47	3.12	9.77	10.43
254T	315	0.38	0.38	2.38	4.00	1.63	3.76	5.00	0.58	4.25	5.00	10.00	8.30	11.2	11.3	25.59	6.25	0.65	1.52	3.93	12.34	12.50
256T	350	0.38	0.38	2.38	4.00	1.63	3.76	5.00	0.58	4.25	5.00	10.00	8.30	11.2	11.3	25.59	6.25	0.65	1.52	3.93	12.34	12.50
284T	460	0.50	0.50	3.25	4.62	1.88	4.38	5.50	0.58	4.75	5.50	11.00	9.50	12.4	12.8	28.58	7.00	0.76	1.75	4.12	13.70	13.88
286T	510	0.50	0.50	3.25	4.62	1.88	4.38	5.50	0.58	4.75	5.50	11.00	9.50	12.4	12.8	28.58	7.00	0.76	1.75	4.12	13.70	13.88
324T	670	0.50	0.50	3.88	5.25	2.13	5.00	6.25	0.67	5.25	6.00	12.00	10.50	14.4	13.8	32.04	8.00	0.99	2.01	3.62	15.54	17.07
326T	710	0.50	0.50	3.88	5.25	2.13	5.00	6.25	0.67	5.25	6.00	12.00	10.50	14.4	13.8	32.04	8.00	0.99	2.01	3.62	15.54	17.07
364T	1070	0.63	0.63	4.25	5.88	2.38	5.64	7.00	0.69	5.88	6.13	12.25	11.25	16.0	14.4	38.00	9.00	1.09	2.26	3.40	17.00	19.02
365T	1085	0.63	0.63	4.25	5.88	2.38	5.64	7.00	0.69	5.88	6.13	12.25	11.25	16.0	14.4	38.00	9.00	1.09	2.26	3.40	17.00	19.02

Notes:

1 Shaft diameters 1 1/2 inches and smaller will come within the limits of +0.000 inch, -0.0005 inch diameters 1 5/8 inches and larger +0.000 inch, -0.001 inch

3 Tolerance on "D" dimension for rigid base motors will be +0.000 inch, -0.060 inch.

18 Motor feet have 2 holes per foot allowing NEMA F-1 or F-2 assembly while maintaining critical NEMA mounting dimensions. Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward, or from either side. Weights shown are approximate shipping weights and should be used for estimating only.

Conduit Box Dimensions

Frame	Nominal HP		Dimensions in Inches					
		Approx. Vol.	AA*	AB	AC	AF	XL	XN
182-184	5	32	0.75	7.82	6.32	2.50	4.30	5.40
213-215	10	55	1.00	9.50	7.42	3.50	5.78	4.16
254-256	20	140	1.25	11.68	9.12	4.59	7.37	5.37
284-286	30	140	1.50	12.44	9.88	4.59	7.37	5.37
324-326	50	346	3.00	16.13	12.43	6.44	10.14	7.00
364-365	75	346	3.00	17.07	13.37	6.44	10.14	7.00

* A tapped NPT hole is provided for the conduit size listed in Column AA

X$D Ultra® Family

Kits and Accessories

C-Face Kits - X$D Ultra

Cat. No.	Part No.	Frame	List Price	Price Symbol	Norm. Stk.
PB14A	4001A5202AA-G01	143T – 145T	$108	G4-7KITS	Y
PB18A	4001A5202AA-G02	182T – 184T	$147	G4-7KITS	Y
PB21A	4001A5202AA-G03	213T – 215T	$188	G4-7KITS	Y
PB25A	4001A5202AA-G04	254T – 256T	$254	G4-7KITS	Y
PB28A	4001A5202AA-G05	284T – 286T, 284TS-286TS	$336	G4-7KITS	Y
A761	249A4321AMG01	324T – 326T	$392	G4-7KITS	Y
A762	249A4321AMG02	324TS – 326TS	$392	G4-7KITS	Y
A763	249A4321AMG03	364T – 365T	$842	G4-7KITS	Y
A764	249A4321AMG04	364TS – 365TS	$842	G4-7KITS	Y
A765	249A4321AMG05	404T – 405T	$885	G4-7KITS	Y
A766	249A4321AMG06	404TS – 405TS	$885	G4-7KITS	Y
A767	249A4321AMG07	444T – 449T	$2,112	G4-7KITS	Y
A768	249A4321AMG08	444TS – 449TS	$2,112	G4-7KITS	Y

Notes:
143-256 frame will not meet NEMA BA dimension using C-Face kit
X$D Ultra C-Face kits will not have endshield machined for Inpro/Seal®

D Flange Kits - X$D Ultra

Cat. No.	Part No.	Frame	List Price	Price Symbol	Norm. Stk.
A991	249A4321ARG01	324T-326T	$912	G4-7KITS	Y
A992	249A4321ARG02	324TS-326TS	$912	G4-7KITS	Y
A995	249A4321ARG05	404T-405T	$2,100	G4-7KITS	N
A996	249A4321ARG06	404TS-405TS	$2,100	G4-7KITS	Y
A997	249A4321ARG07	444T-449T	$2,186	G4-7KITS	Y
A998	249A4321ARG08	444TS-449TS	$2,519	G4-7KITS	N

Notes:
X$D Ultra D-Flange kits will not have end shield machined for Inpro/Seal®
364-365 frame D flange motors are available by custom order

Division 2 Nameplate—X$D Ultra

A standard auxiliary tag is provided on the motor which states: "Maximum exposed internal and external surface temperatures shall not exceed 200 Degree C under usual service conditions (sine wave power) at 1.0 SF." If required, a UL Div 2 nameplate may be ordered as a custom feature. The new nameplate will exclude the motor capability on a variable frequency drive unless supplied for technical review. Net price for custom motors is $200 per motor. Price for installing nameplate on stock motor through the FastTrack Motor Modification Shop is on page 9.2 of this catalog.

Drip Cover Kits - X$D Ultra, Ultra 841, Ultra 661

Cat. No.	Part No.	Frame	List Price	Price Symbol	Norm. Stk.
A1201	249A4267AD-G01	140	$158	G4-7KITS	Y
A1202	249A4267AD-G02	180	$165	G4-7KITS	Y
A1203	249A4267AD-G03	210	$188	G4-7KITS	Y
A1204	249A4267AD-G04	250	$204	G4-7KITS	Y
A1205	249A4267AD-G05	280	$233	G4-7KITS	Y
A1206	249A4267AD-G06	320	$260	G4-7KITS	Y

Notes:
364-449 frame motors available for vertical mounting by custom order

X$D Ultra® Family

Kits and Accessories (cont.)

Ground Terminal Post - X$D Ultra and 500 Frames

The Ground Terminal Post replaces a bolt on the drive-end endshield allowing for an external frame ground

Cat. No.	Part No.	Frame	List Price	Price Symbol	Norm. Stk.
A340	4001A5921CYG006	140	$102	G4-7KITS	N
A341	4001A5921CYG001	180-250	$102	G4-7KITS	N
A342	4001A5921CYG002	280	$102	G4-7KITS	N
A343	249A4234AA-G20	320	$102	G4-7KITS	N
A344	249A4234AA-G03	364-405	$102	G4-7KITS	N
A345	249A4234AA-G21	444-449	$102	G4-7KITS	N
A346	249A4234AA-G07	500	$102	G4-7KITS	N

Notes:
X$D Ultra 841 and Ultra 661 motors have the ground terminal post standard

Low Profile Inpro/Seal® Kits - X$D Ultra

Cat. No.	Part No.	Frame	List Price	Price Symbol	Norm. Stk.
A1001	4002B5914AN1	140T - 145T	$218	G4-7KITS	N
A1002	4002B5914AN2	182T - 184T	$218	G4-7KITS	Y
A1003	4002B5914AN3	213T-215T	$237	G4-7KITS	Y
A1004	4002B5914AN4	254T-256T	$285	G4-7KITS	Y
A1005	4002B5914AN5	284T-286T, 284TS-286TS	$369	G4-7KITS	Y
A826	235A4575GE1	324T-326T	$504	G4-7KITS	N
A1007	235A4575GS1	324TS-326TS	$504	G4-7KITS	Y
A828	235A4575GE3	364T-365T	$588	G4-7KITS	N
A829	235A4575GE4	364TS-365TS	$588	G4-7KITS	N
A830	235A4575GE5	404T-405T	$689	G4-7KITS	N
A831	235A4575GE6	404TS-405TS	$689	G4-7KITS	N
A832	235A4575GE7	444T-449T	$824	G4-7KITS	N
A833	235A4575GE8	444TS-449TS	$824	G4-7KITS	N

Notes:
X$D Ultra 841 and X$D Ultra 661 have DE and ODE Inpro seals standard

Space Heater Kits - X$D Ultra

Cat. No.	Part No.	Frame	Voltage	List Price	Price Symbol	Norm. Stk.
A233	153B1073BE-G01	182-184	110-120	$161	G4-7KITS	Y
A239	153B1073BD-G02	182-184	220-240	$161	G4-7KITS	Y
A234	153B1069AA-G01	213-286	110-120	$167	G4-7KITS	Y
A235	153B1069AA-G02	213-286	220-240	$167	G4-7KITS	Y
A236	153B1069AA-G03	213-286	440-480	$167	G4-7KITS	Y
A237	153B1069AN-G01	324-405	110-120	$282	G4-7KITS	Y
A238	153B1069AN-G05	324-405	200-208, 220-240	$282	G4-7KITS	Y
A240	153B1069AN-G03	324-405	440-480	$282	G4-7KITS	Y
A241	153B1069AN-G02	444-449	110-120	$305	G4-7KITS	Y
A242	153B1069AN-G06	444-449	200-208, 220-240	$305	G4-7KITS	Y
A244	153B1069AN-G04	444-449	440-480	$305	G4-7KITS	Y

Notes:
Includes insulation piece and strip heater with two leads and terminals
No separate heater nameplate furnished. The existing motor nameplate is to be stamped with heater volts and watts.

X$D Ultra® Family

Kits and Accessories (cont.)

Thermostatically Controlled Space Heater Kits (Division 2 Hazardous Locations)—X$D Ultra, Ultra 841, Ultra 661, 500 Frames

GE has developed and patented a thermostatically controlled space heater. These heaters operate with a maximum surface temperature of 155 degrees C and are provided with a hermetically sealed thermostat so they do not spark. In most cases when a motor is shut down, the space heaters are immediately turned on. As the motor may take many hours to cool down, the heaters being automatically turned on can result in a cumulative temperature that exceeds the 80% Auto-Ignition Temperature (A.I.T.) limit for temperature code T3. These thermostatically controlled heaters will not allow the heater to energize until the motor has sufficiently cooled down (below 140C thermostat reset temperature) thereby not allowing the temperatures to exceed the limit and conserving energy.

Cat. No.	Part No.	Frame	Voltage	List Price	Price Symbol	Norm. Stk.
A284	235A4753BF1	182-184	110-120	$509	G4-7KITS	N
A285	235A4753BF2	182-184	220-240	$509	G4-7KITS	N
A286	235A4753BF4	182-184	440-480	$509	G4-7KITS	N
A287	235A4753BG1	213-286	110-120	$608	G4-7KITS	N
A288	235A4753BG2	213-286	220-240	$608	G4-7KITS	N
A289	235A4753BG3	213-286	440-480	$608	G4-7KITS	N
A290	235A4753BH1	324-405	110-120	$608	G4-7KITS	N
A291	235A4753BH2	324-405	220-240	$608	G4-7KITS	N
A292	235A4753BH3	324-405	440-480	$608	G4-7KITS	N
A293	235A4753BJ1	444-449	110-120	$720	G4-7KITS	N
A294	235A4753BJ2	444-449	220-240	$720	G4-7KITS	N
A295	235A4753BJ3	444-449	440-480	$720	G4-7KITS	N
A296	235A4753BK1	509-5013	110-120	$825	G4-7KITS	N
A297	235A4753BK2	509-5013	220-240	$825	G4-7KITS	N
A298	235A4753BK3	509-5013	440-480	$825	G4-7KITS	N

Thermostat Kit - X$D Ultra, Ultra 841, Ultra 661

Cat. No.	Part No.	Opening Temperature	Temp Class	List Price	Price Symbol	Norm. Stk.
A337	153B1004AC-G120	155-165°C	F	$134	G4-7KITS	N

Single thermostat with leads are 29" long with terminals

X$D Ultra® Family

Kits and Accessories (cont.)

Sliding Bases for 143-445 Frame Motors

Bases are suitable for the indicated frame size and are suitable for the majority of floor-mounted, belt connected motors. The bases are not suitable for ceiling or side-wall mounting installations. Number of adjusting screws is identified in the table.

Cat. No.	Part No.	Frame	No. of Adjusting Screws	List Price	Price Symbol	Norm. Stk.
A125	235A2321AB1	143	2	$135	G4-7KITS	N
A126	235A2321AB2	145	2	$135	G4-7KITS	N
A127	235A2321AB3	182	2	$150	G4-7KITS	Y
A128	235A2321AB4	184	2	$150	G4-7KITS	Y
A129	235A2321AB5	213	2	$188	G4-7KITS	Y
A130	235A2321AB6	215	2	$188	G4-7KITS	Y
A131	235A2321AB7	254	2	$263	G4-7KITS	Y
A132	235A2321AB8	256	2	$263	G4-7KITS	Y
A133	235A2321AB9	284	2	$300	G4-7KITS	Y
A134	235A2321AB10	286	2	$300	G4-7KITS	Y
A135	235A2321AB11	324	2	$390	G4-7KITS	Y
A136	235A2321AB12	326	2	$390	G4-7KITS	Y
A137	235A2321AB13	364	2	$495	G4-7KITS	Y
A138	235A2321AB14	365	2	$495	G4-7KITS	Y
A139	235A2321AB15	404	2	$720	G4-7KITS	N
A140	235A2321AB16	405	2	$720	G4-7KITS	N
A141	235A2321AB17	444	2	$900	G4-7KITS	N
A142	235A2321AB18	445	2	$900	G4-7KITS	N

X$D Ultra® Family

Checklist for value

Complete Test per MG1 Part 12 IEEE Standard 112, Test Method B on 2% of all production. Verification of compliance and routine test report supplied with every X$D Ultra motor

Charged lube system with Polyurea grease decreases the potential for contaminants in the lubricant

Dual mounting holes provide for application versatility and reduce inventory

Four point cast-in lifting lugs eliminate lost eye bolts and make mounting easier and safer

Stock X$D Ultra motors can be UL listed for Division 2 locations or modified to meet ATEX Zone 2 or CE requirements

Stainless steel combination breather/drains allow condensation to drain from motor

Five year warranty (60/66 months) is standard. This comprehensive warranty program covers both mechanical and efficiency performance

Rugged cast iron frame, conduit box and fan cover are resistant to process industry environments for extended motor life

Epoxyester paint system stands up to corrosive environments and meets the IEEE 841 paint requirements

Rigid and recessed severe-duty shaft slinger provides bearing system protection. (XSD Ultra 841 and Ultra 661 motors have non rotating seal/bearing isolator on the drive end). Field modifiable to a non-contact rotating seal on the drive-end

Corrosion resistant SAE Grade 5 hardware is rugged and designed for ease of the motor service

Grease fittings and plugs provide relubrication access to extend bearing life

Embossed 316 stainless steel nameplate stamped with superior operational and maintenance information.

Permanently labeled, non-wicking Class H leads make connections and installation easy

Lead gasket and conduit box cover gasket prevent moisture and contaminants from entering motor

Cast-in vibration pads provide five point vibration probe mounting locations (four radial and one axial)

Single shielded bearings on both ends open towards the grease cavity allowing maximum opportunity for grease circulation within the confines of the GE Six Star Bearing System

130,000 hour L10 direct connected and 26,280 hour L10 belted bearing life increases up-time and decreases repair costs

Oversized gasketed conduit box reduces the possibility of moisture in the conduit box

Precision Plus balance to 0.04 in/sec results in smooth, reliable operation and extends bearing life

Cast iron bearing cap with gasket retains lubricant and protects the interior of the motor and the bearing system from contaminants

New finned endshields (324-449 Frames) for improved heat dissipation and long bearing life

Non-sparking corrosion resistant fan is quiet and energy efficient

Premium efficiency lowers annual energy cost and extends motor life without any sacrifice in NEMA B performance

GEGARD2400 insulation system is manufactured with Class H materials and is designed to exceed the IGBT requirements of NEMA MG1-31

Extended grease fittings and grease filler tubes charged with Polyurea grease make maintenance safer and easier

ISO 1940 Grade 1.0 Precision Plus balance for low vibration

Temperature resistant Polyurea bearing grease suitable for temperatures of -40 to +120° C

Fan covers on frames 324 through 449 are designed with axial mounting bolts to ensure a more rugged installation

Grounding terminal in conduit box adds to safety during installation and service

Stator core centered in the frame enabling conversion to F2 mounting

Low temperature rise design increases bearing life

3.0 Adjustable Speed Motors

3.1 A$D Ultra®

3.1 Standard Features

3.2 Pricing

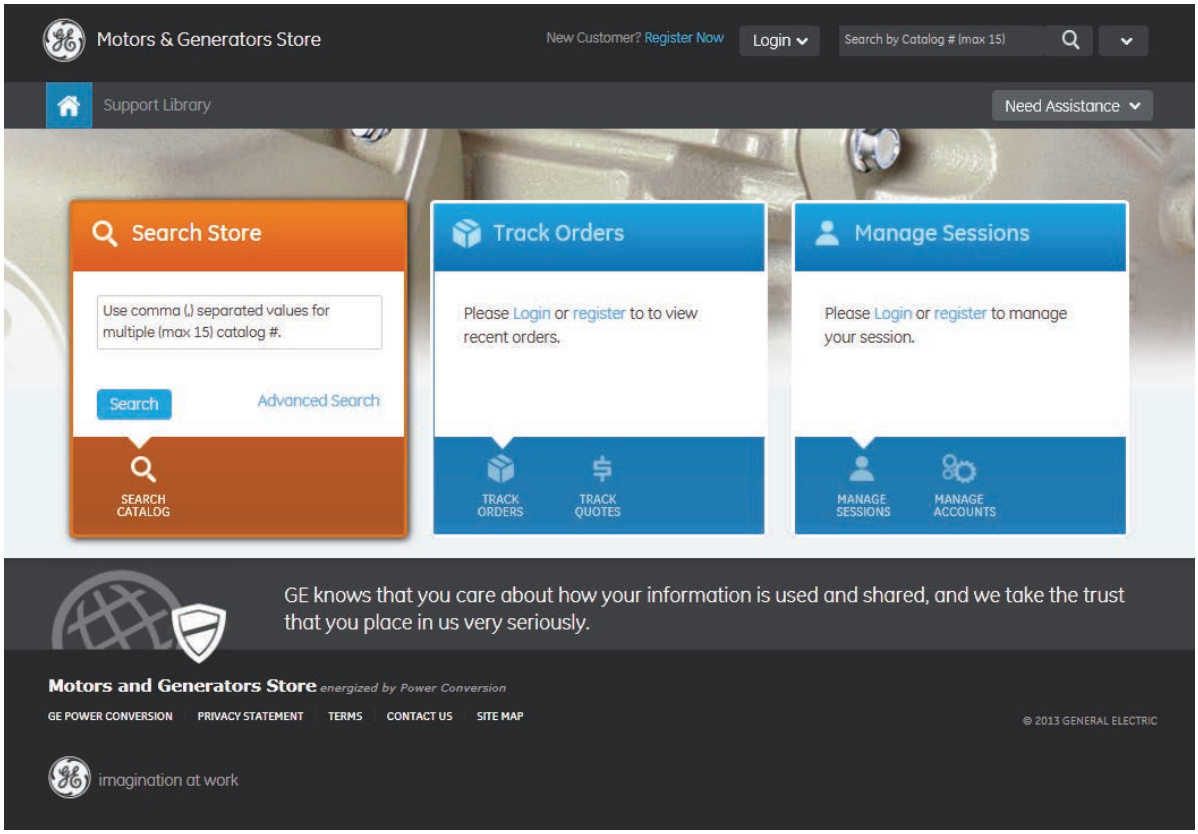
3.3 Performance Data

3.4 Dimensions

3.7 Kits and Accessories

Standard Motor e-Commerce

As of February 24, 2014 a new generation standard motor ordering application came online. As a valued client of GE, you will have access to all of its great features.



If you already have access to EliteNet, your credentials should already be loaded into this site. There may be a simple registration process to acquire your login and password.

If you do not have an account with EliteNet, don't worry! There is a simple registration link at the top of this page to get the process started. Your sales representative will help you gain access to your new profile.

www.mgstore.gepowerconversion.com
Give us a try today!

Adjustable Speed Drive—A$D Ultra®

Standard Features

HP Range	1.5-300
Poles	4 and 6
Voltage	230/460, 460
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 feet
Ambient	40°C
Balance/Vibration	0.040 in/sec (P) @ 60 Hz 0.055 in/sec (P) at others frequency
Bearing Housing Rise	65°C
Bearing Caps	Both ends. 143-286: ODE is gasketed, 324-449: both ends are gasketed
Bearing Protection	Aegis shaft ground ring installed inside the motor in DE bearing cap 140-449 frame. Recessed Slinger. Inpro seal kit available
Bearing Type	Ball, roller bearing available as an option 360 frame and higher. Insulated Opposite Drive End Bearing 444- 449 Frame.
Centered Core	Allows F1-F2 field conversion
Conduit Box	Gasketed and rotatable, Fabricated Steel above 250 Amps, All other: Cast iron
Cooling	143-182: Non-Vent, 184-449: Totally Enclosed Fan Cooled, 364-449: Blower Cooled also available.
DE Mounting	143-286: NEMA C-face mount
Drains	Stainless Steel T-drains
End Shield	Cast Iron—C-face std through 286 frame
Fan	Non-Sparking Plastic or Bronze
Fan Cover	Cast Iron
Fasteners	SAE, Grade 5
Foot Draft Angle	+/- 1.5 degrees
Foot Flatness	0.005 inches
Frame Material	Cast Iron
Frame Size	143-449
Frequency	60 Hz
Grease	Polyurea
Ground	Ground lug in Conduit Box
Insulation Class	H
Insulation System	GEGUARD 2400 Non-Hygroscopic, AntiFungus, 2400Volt @ .1microsecond rise time. Exceeds NEMA MG1-31
Inverter Capabilities	Variable Torque inf:1, Constant Torque inf:1, Constant Horsepower to 1.5 times base speed.
L10 Bearing Life	Direct Coupled: 130,000 hrs, Belted: 26,280 hrs, Belted L10a 50,000
Lifting Means	4 Lugs cast into frame
Mounting	F1 as Standard and Modifiable to F2
Mounting Holes	1 per foot (324 frame), 2 per foot (all other frames)
Nameplate	Stainless Steel includes Weight, Vibration Limit, Service Factor, Speed Range, Constant Torque, and Constant HP
NEMA Design	NEMA A
Paint	Buff, Epoxy ester
Relubrication	Both ends, extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.0 SF for PWM operation
Shaft TIR	Meets IEEE 841, .001 in. for shaft diameter 1.625 in and smaller, .0015 in for shaft diameter greater than 1.625 in.
Tach Mounting	ODE C-face provision for tach mounting. 143-184: 4.5" rabbet, 213-449: 8.5" rabbet
Temperature Rise	80°C by resistance TEBC & TENV: 105°C by resistance TEFC
Tests	NEMA Routine Report including Vibration supplied with motor, IEEE 112. 100% CIV tested.
Thermal Protection	140-280, 2 NC Thermostats; 320-449, 3 NC Thermostats
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first Extended warranty from Electro Static Technology guarantees against bearing failure due to fluting damage for the expected (L10) life of the original bearings.

Adjustable Speed Drive—A$D Ultra®

Pricing

Volts: 230/460, 460
HP: 1.5 – 300

A$D Totally Enclosed – Infinite: 1 Constant Torque Speed Range

HP	RPM	Volts	Frame	Enclosure	Base	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in.)	Notes
1.5	1800	230/460	143TC	TENV	Ftd	4.2/2.2	85.5	**M9300**	$1,455	G4-7AS	Y	43	13.32	
2	1800	230/460	145TC	TENV	Ftd	5.6/2.8	85.5	**M9301**	$1,494	G4-7AS	Y	50	13.32	
3	1800	230/460	182TC	TENV	Ftd	7.8/3.9	89.5	**M9302**	$1,875	G4-7AS	Y	76	16.95	
5	1800	230/460	184TC	TEFC	Ftd	13.2/6.6	89.5	**M9303**	$2,097	G4-7AS	Y	101	19.36	
7.5	1800	230/460	213TC	TEFC	Ftd	18.6/9.3	91.7	**M9304**	$2,454	G4-7AS	Y	200	24.00	
10	1800	230/460	215TC	TEFC	Ftd	24.8/12.4	91.7	**M9305**	$2,931	G4-7AS	Y	300	24.00	
15	1800	230/460	254TC	TEFC	Ftd	36.4/18.2	92.4	**M9306**	$3,531	G4-7AS	Y	315	29.32	
20	1800	230/460	256TC	TEFC	Ftd	49.4/24.7	93.0	**M9307**	$3,908	G4-7AS	Y	350	29.32	
25	1800	230/460	284TC	TEFC	Ftd	59.8/29.9	93.6	**M9308**	$4,880	G4-7AS	Y	460	32.14	
25	1200	230/460	324T	TEFC	Ftd	63.0/31.5	93.0	**M9328**	$7,028	G4-7AS	N	660	32.81	
30	1800	230/460	286TC	TEFC	Ftd	72.8/36.4	94.1	**M9309**	$5,577	G4-7AS	Y	510	32.14	
30	1200	230/460	326T	TEFC	Ftd	73.6/36.8	93.0	**M9329**	$8,690	G4-7AS	N	690	34.31	
40	1800	230/460	324T	TEFC	Ftd	96.6/48.3	94.5	**M9310**	$7,223	G4-7AS	Y	670	32.81	
40	1200	230/460	364T	TEFC	Ftd	95.8/47.9	93.6	**M9330**	$11,748	G4-7AS	N	960	37.93	
50	1800	230/460	326T	TEFC	Ftd	131.2/65.6	94.5	**M9311**	$8,934	G4-7AS	Y	740	34.31	
50	1200	230/460	365T	TEFC	Ftd	119.8/59.9	94.1	**M9331**	$13,308	G4-7AS	N	1010	37.93	
60	1800	230/460	364T	TEFC	Ftd	142.4/71.2	95.0	**M9312**	$11,516	G4-7AS	Y	970	37.93	
60	1800	230/460	364T	TEBC	Ftd	140.0/70.0	95.0	**M9313**	$12,639	G4-7AS	N	960	41.04	
60	1200	230/460	404T	TEFC	Ftd	142.4/71.2	94.5	**M9332**	$22,665	G4-7AS	N	1390	42.51	
60	1200	230/460	404T	TEBC	Ftd	145.8/72.9	94.5	**M9333**	$25,358	G4-7AS	N	1370	45.59	
75	1800	230/460	365T	TEFC	Ftd	174.2/87.1	95.4	**M9314**	$13,047	G4-7AS	Y	1020	37.93	
75	1800	230/460	365T	TEBC	Ftd	187.4/93.7	95.4	**M9315**	$15,858	G4-7AS	Y	1030	41.01	
75	1200	230/460	405T	TEFC	Ftd	181.2/90.6	94.5	**M9334**	$25,469	G4-7AS	N	1430	42.51	
75	1200	230/460	405T	TEBC	Ftd	180.0/90.0	94.5	**M9335**	$28,161	G4-7AS	N	1410	43.51	
100	1800	230/460	405T	TEFC	Ftd	238.0/119	95.8	**M9316**	$17,654	G4-7AS	Y	1420	43.51	
100	1800	230/460	405T	TEBC	Ftd	232.0/116	95.8	**M9317**	$21,090	G4-7AS	Y	1420	43.51	
100	1200	460	444T	TEFC	Ftd	230.0/115/0	95.0	**M9336**	$24,462	G4-7AS	N	1850	49.33	103
100	1200	460	444T	TEBC	Ftd	238.0/119.0	95.0	**M9337**	$27,162	G4-7AS	N	1760	50.69	103
125	1800	460	444T	TEFC	Ftd	145.0	95.8	**M9318**	$23,984	G4-7AS	Y	1760	49.33	103
125	1800	460	444T	TEBC	Ftd	169.0	95.8	**M9319**	$26,876	G4-7AS	N	1740	50.69	103
125	1200	460	445T	TEFC	Ftd	145.0	95.4	**M9338**	$27,362	G4-7AS	N	2020	49.33	103
125	1200	460	445T	TEBC	Ftd	149.0	149.0	**M9339**	$30,339	G4-7AS	N	1880	50.69	103
150	1800	460	445T	TEFC	Ftd	172.0	95.8	**M9320**	$26,825	G4-7AS	Y	1880	49.33	103
150	1800	460	445T	TEBC	Ftd	169.0	95.8	**M9321**	$30,467	G4-7AS	Y	1830	50.69	103
150	1200	460	447T	TEFC	Ftd	174.0	95.8	**M9340**	$33,030	G4-7AS	N	2510	57.83	103
150	1200	460	447T	TEBC	Ftd	174.0	95.8	**M9341**	$36,780	G4-7AS	N	1440	60.91	103
200	1800	460	447T	TEFC	Ftd	224.0	96.2	**M9322**	$32,379	G4-7AS	Y	2420	57.83	103
200	1800	460	447T	TEBC	Ftd	224.0	96.2	**M9323**	$36,021	G4-7AS	N	2420	60.91	103
200	1200	460	449T	TEFC	Ftd	236.0	96.2	**M9342**	$46,842	G4-7AS	N	2820	57.93	103
200	1200	460	449T	TEBC	Ftd	230.0	96.2	**M9343**	$50,592	G4-7AS	N	2680	60.91	103
250	1800	460	449T	TEFC	Ftd	281.0	96.2	**M9324**	$40,332	G4-7AS	Y	2630	57.93	103
250	1800	460	449T	TEBC	Ftd	275.0	96.2	**M9325**	$45,119	G4-7AS	N	2520	60.91	103
300	1800	460	449T	TEFC	Ftd	365.0	96.5	**M9326**	$45,923	G4-7AS	N	2890	57.93	103
300	1800	460	449T	TEBC	Ftd	334.0	96.2	**M9327**	$50,709	G4-7AS	N	2800	60.91	103

Notes:
103 Insulated O.D.E. bearing and shaft ground brush on DE

Adjustable Speed Drive—A$D Ultra®

Typical Performance Data

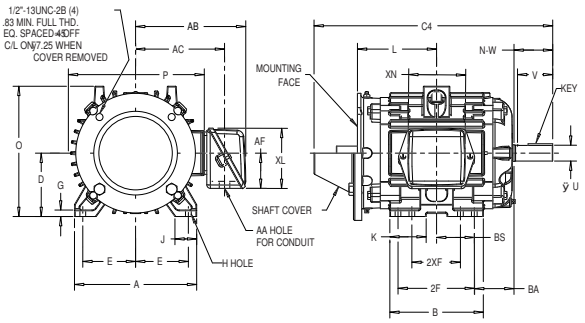
Volts: 460
HP: 1.5 – 300

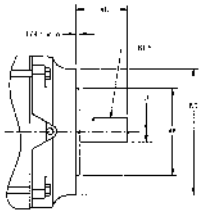
HP	RPM	Frame	Enclosure	FLA	LR Amps	KVA Code	Power Factor	FL Torque Lb-ft	LR Torque Lt-ft	BD Torque Lb-ft	Nom. Eff.	Min. Guar. Eff.
1.5	1800	143TC	TENV	2.2	19.2	M	74.0	4.5	19.0	22.4	85.5	84.0
2	1800	145TC	TENV	2.8	23.7	L	77.0	6.1	24.3	28.1	85.5	84.0
3	1800	182TC	TENV	3.9	28.1	J	80.5	8.9	22.1	28.9	89.5	88.5
5	1800	184TC	TEFC	6.6	42.9	J	79.0	15.0	35.1	44.1	89.5	88.5
7.5	1800	213TC	TEFC	9.3	84.3	K	82.5	22.2	45.3	80.4	91.7	91.0
10	1800	215TC	TEFC	12.4	115.7	L	82.0	29.6	64.0	110.4	91.7	91.0
15	1800	254TC	TEFC	18.2	157.6	K	83.5	44.3	89.7	184.2	92.4	91.7
20	1800	256TC	TEFC	24.7	244.7	L	81.5	59.0	147.9	286.7	93.0	92.4
25	1800	284TC	TEFC	29.8	219.3	H	83.5	73.6	154.3	218.0	93.6	93.0
25	1200	324T	TEFC	31.5	184.1	G	80.0	111.0	108.9	291.1	93.0	92.4
30	1800	286TC	TEFC	36.4	288.3	J	82.0	88.4	203.7	272.2	94.1	93.6
30	1200	326T	TEFC	36.8	199.4	G	82.0	133.5	119.5	314.5	93.0	92.4
40	1800	324T	TEFC	48.3	282.1	H	82.0	118.0	101.1	322.4	94.5	94.1
40	1200	364T	TEFC	47.9	319.8	H	83.5	177.5	221.0	546.7	93.6	93.0
50	1800	326T	TEFC	65.6	490.4	J	75.5	147.0	189.3	555.5	94.5	94.1
50	1200	365T	TEFC	59.9	440.7	H	83.0	221.6	318.0	758.3	94.1	93.6
60	1800	364T	TEFC	70.4	499.6	H	83.0	176.5	204.2	557.4	95.0	94.5
60	1800	364T	TEBC	69.1	444.1	G	84.5	176.7	178.5	495.5	95.0	94.5
60	1200	404T	TEFC	71.2	447.7	G	83.5	265.1	305.6	741.5	94.5	94.1
60	1200	404T	TEBC	72.9	454.0	G	81.5	265.1	303.3	751.8	94.5	94.1
75	1800	365T	TEFC	87.1	711.1	J	84.5	220.4	313.6	791.2	95.4	95.0
75	1800	365T	TEBC	93.7	894.9	L	78.5	220.0	401.2	993.1	95.4	95.0
75	1200	405T	TEFC	90.6	621.9	H	82.0	331.2	446.4	1030.7	94.5	94.1
75	1200	405T	TEBC	90.0	576.1	G	82.5	331.5	404.5	953.7	94.5	94.1
100	1800	405T	TEFC	119.0	962.5	J	82.0	293.4	388.2	1091.3	95.8	95.4
100	1800	405T	TEBC	116.0	746.8	G	84.5	294.0	286.1	849.1	95.8	95.4
100	1200	444T	TEFC	115.0	815.1	H	85.5	441.1	466.2	1345.0	95.0	94.5
100	1200	444T	TEBC	119.0	795.9	H	83.0	441.4	436.6	1313.5	95.0	94.5
125	1800	444T	TEFC	145.0	940.9	G	84.0	367.0	290.7	1106.9	95.8	95.4
125	1800	444T	TEBC	143.0	829.7	G	85.5	367.3	182.8	979.2	95.8	95.4
125	1200	445T	TEFC	145.0	1222.9	J	84.5	550.7	756.0	2022.1	95.4	94.5
125	1200	445T	TEBC	149.0	1124.7	J	82.5	551.3	663.7	1858.7	95.4	94.5
150	1800	445T	TEFC	172.0	1292.6	H	85.0	440.0	438.7	1516.2	95.8	95.4
150	1800	445T	TEBC	169.0	1076.0	G	86.5	440.5	351.5	1265.6	95.8	95.4
150	1200	447T	TEFC	174.0	1516.5	K	84.0	660.8	1027.0	2749.3	95.8	95.4
150	1200	447T	TEBC	174.0	1442.2	J	84.0	661.1	959.2	2615.3	95.8	95.4
200	1800	445T	TEFC	224.0	1737.5	H	87.0	586.7	665.3	2162.0	96.2	95.8
200	1800	445T	TEBC	224.0	1737.5	H	87.0	586.5	665.1	2163.6	96.2	95.8
200	1200	449T	TEFC	236.0	2373.6	L	82.5	880.4	1709.0	4300.8	96.2	95.8
200	1200	449T	TEBC	230.0	2028.7	K	84.5	881.4	1430.2	3681.6	96.2	95.8
250	1800	449T	TEFC	281.0	2530.3	K	86.5	732.7	1050.7	3124.2	96.2	95.8
250	1800	449T	TEBC	275.0	2046.3	H	88.5	733.6	819.4	2538.3	96.2	95.8
300	1800	449T	TEFC	350.0	3859.2	M	83.5	878.4	173.1	4736.3	96.2	95.8
300	1800	449T	TEBC	328.0	3122.6	K	87.5	879.2	1362.8	3845.6	96.2	95.8

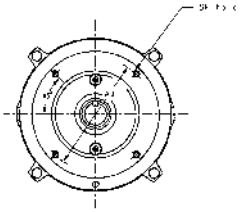
Adjustable Speed Drive—A$D Ultra®

Motor Dimensions

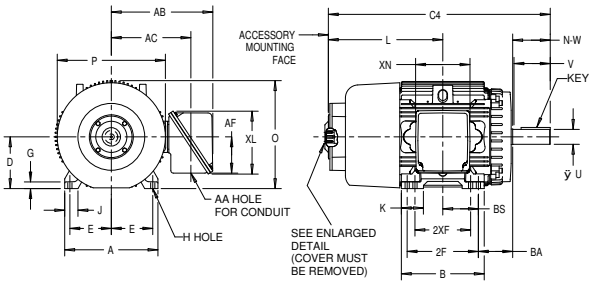
140-180 Frame (Tenv)

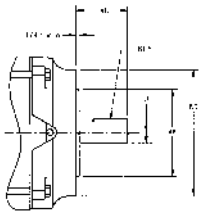


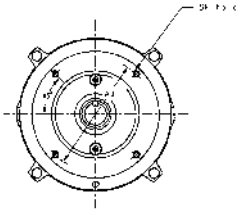


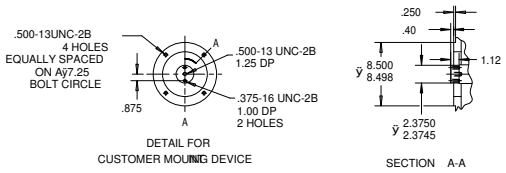


360-5013 Frame (TEFC)

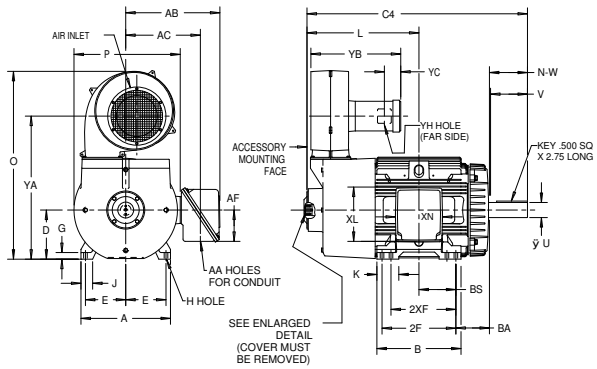


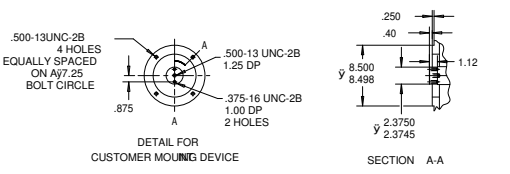






364-5013 Frame (TEBC)





Adjustable Speed Drive—A$D Ultra®

Motor Dimensions (cont.)

Dimensions correspond to figures on page 3.4

TENV Dimensions

Frame	Net Wt. Lbs	Shaft						Mounting[25]															
		Keyway		Key Length	N-W	U[19]	V[20]	E	H	BA	BS	2F	2XF	A	B	C	D[21]	G	J	K	L	O	P
		W	D																				
143TC	43	0.187	0.0935	1.38	2.13	0.88	2.12	2.75	0.37	2.75	2.50	–	4.00	6.88	5.88	13.32	3.50	0.40	1.39	2.32	5.25	7.25	7.34
145TC	43	0.187	0.0935	1.38	2.13	0.88	2.12	2.75	0.37	2.75	2.50	5.00	–	6.88	5.88	13.32	3.50	0.40	1.39	2.32	5.25	7.25	7.34
182TC	76	0.250	0.1250	1.75	2.63	1.12	2.62	3.75	0.46	3.5	2.75	–	4.50	8.68	6.64	16.95	4.50	0.46	1.54	2.58	6.38	9.25	9.50

TEFC Dimensions

Frame	Net Wt. Lbs	Shaft						Mounting[25]															
		Keyway		Key Length	N-W	U[19]	V[20]	E	H	BA	BS	2F	2XF	A	B	C	D[21]	G	J	K	L	O	P
		W	D																				
184TC	101	0.250	0.1250	1.75	2.62	1.12	2.62	3.75	0.46	3.50	2.75	5.50	–	8.68	6.64	19.36	4.50	0.46	1.54	2.58	8.78	9.54	9.92
213TC	200	0.310	0.1560	2.38	3.13	1.38	3.38	4.25	0.46	4.25	3.50	–	5.50	9.60	8.00	24.00	5.25	0.57	1.47	3.12	11.23	11.00	11.37
215TC	220	0.310	0.1560	2.38	3.13	1.38	3.38	4.25	0.46	4.25	3.50	7.00	–	9.60	8.00	24.00	5.25	0.57	1.47	3.12	11.23	11.00	11.37
254TC	315	0.380	0.1900	2.88	4.00	1.62	3.75	5.00	0.53	4.75	5.00	–	8.25	11.20	11.30	29.32	6.25	0.65	1.52	3.93	13.93	12.88	13.25
256TC	350	0.380	0.1900	2.88	4.00	1.62	3.75	5.00	0.53	4.75	5.00	10.00	–	11.20	11.30	29.32	6.25	0.65	1.52	3.93	13.93	12.88	13.25
284TC	460	0.500	0.2500	3.25	4.38	1.88	4.38	5.50	0.53	5.25	5.50	–	9.50	12.40	12.80	32.14	7.00	0.80	1.75	4.12	18.76	14.29	14.50
286TC	510	0.500	0.2500	3.25	4.38	1.88	4.38	5.50	0.53	5.25	5.50	11.00	–	12.40	12.80	32.14	7.00	0.80	1.75	4.12	18.76	14.29	14.50
324T	685	0.500	0.1900	3.88	5.25	2.12	5.00	6.25	0.66	5.25	5.50	–	10.50	14.40	12.30	32.81	8.00	1.00	2.02	2.88	20.15	17.05	18.38
326T	740	0.500	0.1900	3.88	5.25	2.13	5.00	6.25	0.66	5.25	6.00	12.00	–	14.40	13.80	34.31	8.00	1.00	2.01	3.63	20.90	17.07	18.38
364T	965	0.625	0.2500	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	–	11.25	16.00	14.40	37.93	9.00	1.10	2.26	3.40	23.12	19.02	20.34
365T	1070	0.625	0.2500	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	12.25	–	16.00	14.40	37.93	9.00	1.10	2.26	3.40	23.12	19.02	20.34
405T	1560	0.750	0.3750	5.62	7.25	2.88	7.00	8.00	0.81	6.62	6.88	13.75	–	18.00	16.00	42.51	10.00	1.30	2.64	4.00	24.85	22.97	21.29
444T	2050	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	–	14.50	20.00	18.80	49.33	11.00	1.50	2.64	4.90	25.69	22.98	24.22
445T	2050	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	16.50	–	20.00	18.80	49.33	11.00	1.50	2.64	4.90	25.69	22.98	24.22
447T	2830	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	12.50	–	20.00	20.00	27.30	57.83	11.00	1.50	2.64	8.81	32.41	24.80	27.11
449T	3110	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	12.50	25.00	–	20.00	27.30	57.83	11.00	1.50	2.64	8.81	32.41	24.80	27.11

TEBC Dimensions

Frame	Net Wt. Lbs	Shaft						Mounting[25]															
		Keyway		Key Length	N-W	U[19]	V[20]	E	H	BA	BS	2F	2XF	A	B	C	D[21]	G	J	K	L	O	P
		W	D																				
364T	965	0.625	0.250	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	–	11.25	16.00	14.40	41.01	9.00	1.10	2.26	3.40	23.12	29.66	20.34
365T	1025	0.625	0.250	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	12.30	–	16.00	14.40	41.01	9.00	1.10	2.26	3.40	23.12	29.66	20.34
405T	1600	0.750	0.250	5.63	7.25	2.88	7.00	8.00	0.81	6.62	6.88	13.75	–	18.00	16.00	45.59	10.00	1.30	2.64	4.0	24.85	30.66	22.94
444T	1750	0.875	0.310	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	–	14.50	20.00	18.80	50.69	11.00	1.50	2.64	4.90	28.16	40.66	27.31
445T	2000	0.875	0.310	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	16.50	–	20.00	18.80	50.69	11.00	1.50	2.64	4.90	28.16	40.66	27.31
449T[26]	2650	0.875	0.440	6.88	8.50	3.38	8.25	9.00	0.81	7.50	12.50	25.00	–	20.00	37.30	60.91	11.00	1.50	2.64	8.81	32.41	40.66	27.31

Notes:

19 Shaft diameters 1.5 inches and smaller will come within the limits of +0.000 inch -0.0005 inch; diameters 1.625 inches and larger +0.000 inch -0.001 inch
20 Dimension "V" represents length of straight part of shaft extension
21 Tolerance on "D" dimension will be: On frames 182T-362T +0.000 inch -0.032 inch; On frames 364T-449T +0.000 inch -0.060 inch
25 Motor feet have 2 holes = per foot allowing NEMA F-1 or F-2 assembly while maintaining critical NEMA dimensions
26 Cast iron motors in 449 frame also have mounting holes meeting 447 frame dimensions

Adjustable Speed Drive—A$D Ultra®

Motor Dimensions (cont.)

Conduit Box Dimensions

Frame	Normal HP[40]	Approx. Volume	AA	AB	AC [23]	AF	XL	XN
182T-184T	5	32	0.75	7.83	6.32	2.50	4.30	5.40
213T-215T	10	32	1.00	9.50	7.42	3.50	5.78	4.16
254T-256T	20	76	1.25	12.15	9.12	4.59	7.38	5.38
284T-286T	30	137	1.50	12.91	9.88	4.59	7.38	5.38
324T-326T	50	346	3.00	16.13	12.43	6.44	10.12	7.00
364T-365T	75	346	3.00	17.13	13.43	6.44	10.12	7.00
404T-405T	100	700	3.00	20.54	16.28	7.00	12.13	10.50
444T-449T	300	1260	4.00	22.06	17.80	7.00	12.35	16.25

Notes:

23 Insulated ODE bearing and shaft ground brush on DE

40 Conduit box size is determined by full load amps. Nominal horsepower is stated as a reference only. Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward or from either side.

Blower Dimensions

Frame	YA	YB	YE	YH
364T-365T	25.22	13.54	3.57	0.875
404T-405T	27.58	13.54	2.84	0.875
444T-449T	33.95	20.08	2.44	1.094

C-Face Mounting

	All Dimensions in Inches						
NEMA Frame	AH	AJ	AK	U	Key Width	Key Thickness	Key Length
143TC-145TC	2.12	5.88	4.50	0.875	0.19	0.19	1.38
182TC-184TC	2.62	7.25	8.50	1.125	0.25	0.25	1.75
213TC-215TC	3.12	7.25	8.50	1.375	0.31	0.31	2.38
254TC-256TC	3.75	7.25	8.50	1.625	0.38	0.38	2.88
284TC-286TC	4.38	9.00	10.50	1.875	0.50	0.50	3.25

Adjustable Speed Drive—A$D Ultra®

Kits and Accessories

C-Face Kits

Part No.	Frame	Poles	Cat. No.	List Price	Price Symbol	Norm. Stk.
249A4321AMG01	324T-326T	4-6	**A761**	$392	G4-7KITS	Y
249A4321AMG03	364T-365T	4-6	**A763**	$842	G4-7KITS	Y
249A4321AMG05	404T-405T	4-6	**A765**	$885	G4-7KITS	Y
249A4321AMG07	444T-445T	4-6	**A767**	$2,112	G4-7KITS	Y

Inpro-Seals® Kits

Part No.	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.
4002B5914AN1	140T-145T	**A1001**	$218	G4-7KITS	N
4002B5914AN2	182T-184T	**A1002**	$218	G4-7KITS	Y
4002B5914AN3	213T-215T	**A1003**	$237	G4-7KITS	Y
4002B5914AN4	254T-256T	**A1004**	$285	G4-7KITS	Y
4002B5914AN5	284T-286T	**A1005**	$369	G4-7KITS	Y
235A4575GE1	320T	**A826**	$504	G4-7KITS	N
235A4575GE3	360T	**A828**	$588	G4-7KITS	N
235A4575GE5	400T	**A830**	$689	G4-7KITS	N
235A4575GE7	440T	**A832**	$824	G4-7KITS	N

Space Heater Kits

Part No.	Frame	Volts	Cat. No.	List Price	Price Symbol	Norm. Stk.
153B1073BE-G01	182T-184T	110-120	**A233**	$161	G4-7KITS	N
153B1073BD-G02	182T-184T	220-240	**A239**	$161	G4-7KITS	N
153B1069AA-G01	213T-326T	110-120	**A234**	$167	G4-7KITS	N
153B1069AA-G02	213T-326T	220-240	**A235**	$167	G4-7KITS	N
153B1069AA-G03	213T-326T	440-480	**A236**	$167	G4-7KITS	N
153B1069AN-G01	364T-405T	110-120	**A237**	$282	G4-7KITS	N
153B1069AN-G05	364T-405T	200-208, 220-240	**A238**	$282	G4-7KITS	N
153B1069AN-G03	364T-405T	440-480	**A240**	$282	G4-7KITS	N
153B1069AN-G02	444T-449T	110-120	**A241**	$305	G4-7KITS	N
153B1069AN-G06	444T-449T	200-208, 220-240	**A242**	$305	G4-7KITS	N
153B1069AN-G04	444T-449T	440-480	**A244**	$305	G4-7KITS	N

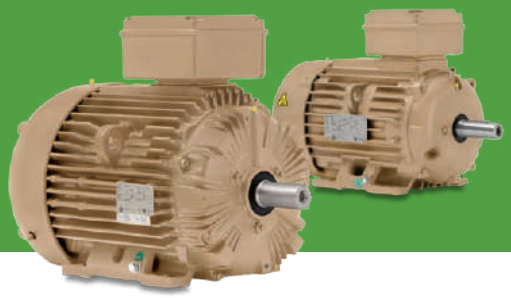
Adjustable Speed Drive—A$D Ultra®

Kits and Accessories (cont.)

Encoder Kits

Part No.	Frame	Brand	Model	PPR	VDC	Connector	Output	Cat. No.	List Price	Price Symbol	Norm. Stk.
153B4404CS2	140	Avtron	HS35A Optical Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	**A150**	$863	G4-7KITS	Y
153B4404CS3	140	Avtron	HS35A Optical Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	**A151**	$863	G4-7KITS	N
153B4404CW1	140	Avtron	HS35M Magnetic Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	**A154**	$1,088	G4-7KITS	Y
153B4404CW2	140	Avtron	HS35M Magnetic Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	**A155**	$1,088	G4-7KITS	N
153B4404DB1	140	Dynapar	HS35R Optical Encoder with basket guard	1024	5-26V in/out	10 Pin + Mating	Single	**A170**	$825	G4-7KITS	Y
153B4404DB2	140	Dynapar	HS35R Optical Encoder with basket guard	2048	5-26V in/out	10 Pin + Mating	Single	**A171**	$825	G4-7KITS	N
153B4404DA1	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	**A172**	$1,125	G4-7KITS	N
153B4404DA2	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	**A173**	$1,125	G4-7KITS	Y
153B4404DA3	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	**A174**	$1,950	G4-7KITS	N
153B4404DA4	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	**A175**	$1,950	G4-7KITS	N
153B4404CS4	180-360	Avtron	HS35A Optical Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	**A152**	$863	G4-7KITS	Y
153B4404CS5	180-360	Avtron	HS35A Optical Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	**A153**	$863	G4-7KITS	N
153B4404CW3	180-360	Avtron	HS35M Magnetic Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	**A156**	$1,088	G4-7KITS	Y
153B4404CW4	180-360	Avtron	HS35M Magnetic Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	**A157**	$1,088	G4-7KITS	N
153B4404CT13	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	**A158**	$3,450	G4-7KITS	Y
153B4404CT15	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	**A160**	$3,450	G4-7KITS	N
153B4404CT17	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	**A162**	$5,250	G4-7KITS	Y
153B4404CT19	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	**A164**	$5,250	G4-7KITS	N
153B4404DD1	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	**A176**	$1,500	G4-7KITS	N
153B4404DD2	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	**A177**	$1,500	G4-7KITS	Y
153B4404DD3	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	**A178**	$2,475	G4-7KITS	N
153B4404DD4	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	**A179**	$2,475	G4-7KITS	N
153B4404DC1	180-360	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	**A180**	$2,513	G4-7KITS	Y
153B4404DC3	180-360	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	**A182**	$3,150	G4-7KITS	N
153B4404CT14	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	**A159**	$3,450	G4-7KITS	Y
153B4404CT16	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	**A161**	$3,450	G4-7KITS	N
153B4404CT18	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	**A163**	$5,250	G4-7KITS	Y
153B4404CT20	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	**A165**	$5,250	G4-7KITS	N
153B4404DC2	440	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	**A181**	$2,625	G4-7KITS	Y
153B4404DC4	440	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	**A183**	$3,300	G4-7KITS	N

4.0 IEC Premium Efficiency Motors



4.1 X$D Ultra® 841 IEC Premium Efficient Motors

4.1 Standard Features

4.2 Pricing

4.12 400V Performance Data

4.15 460V Performance Data

4.19 690V Performance Data

4.23 Checklist for Value

4.24 X$D Ultra® 841 IEC Dimensions

4.29 X$D Ultra® 841 IEC Kits

A Whole New Way to Look at Motors!

GE Virtual Motor Display
Available for free in the Apple App Store for iPads!

This hi-tech presentation tool helps communicate to users how all electrical motors are NOT built the same. You can explode, contract and rotate the motor assembly by swiping the screen. You can also tap buttons to view features and benefits, and double-tap to magnify details.

It'll make a useful addition to your iPad App Tools!

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty (IP55)
IE3 Efficiency

Standard Features

kW Range	0.55–220
Poles	2, 4, 6, 8
Voltage	400 / 50Hz, 460 / 60Hz, 690 / 50Hz (Other voltages up to 690V available by request)
Efficiency	Meets or exceeds IEEE 841 efficiency levels and IEC 60034-30 standard IE3 Premium Efficiency (Identical to NEMA Premium Efficiency levels at 60Hz)
Frequency	60Hz or 50Hz
IEC Design	N
Agency Approvals	IEC 60034, UL - Component and Insulation System Recognition, CSA - Motors and C-390, CE Mark 3rd party ATEX and IEC Ex Na Zone 2 (ABS certification up to 90kW by custom order)
Altitude	1000 meters
Ambient	-40ºC to 40ºC
Balance/Vibration	ISO Grade 1, Ball Bearings: 1.4mm/sec (P) (0.055 in/sec (P)) Roller Bearing at 50 Hz: 4P: 0.0179 mm (P-P), 6P: 0.0269 mm (P-P) Roller Bearing at 60 Hz: 4P: 0.0102 mm (P-P), 6P: 0.0127 mm (P-P)
Bearing Caps	90-280 IEC Frames: Both ends are gasketed
Bearing Housing Rise	2-pole: 55ºC, 4, 6, 8-pole: 50ºC
Bearing Protection	IP55 (meets IEEE 841 requirement of IP55), recessed slingers both ends
Bearing Type	Ball (Roller bearing available by custom request)
Centered Core	Allows F1-F2 field conversion when side mounted conduit box is ordered
Conduit Box	Gasketed and rotatable in 90 degree increments, Cast iron, gland plate on 112 frame and larger. Standard location for top mounted conduit box - motor leads will exit the right side of the motor when viewed from drive end.
Zone 2 / Div 2 Temp Codes	Motors have ATEX and IEC Ex NA with an Auto Ignition Temperature of T3, 200 degree C stamped on the nameplate. CSA or Division 2 Nameplate can be provided by custom request.
Drains	Stainless Steel T-drains in lowest section of both endshields
Duty Rating	S1 (Continuous)
Earthing / Ground	Earthing provision in Conduit Box and one on each side of stator frame
End Shield	Cast Iron
Fan	Non-Sparking Plastic or Bronze
Fan Cover	Cast Iron
Fasteners	Metric, ISO, Grade 8.8
Foot Draft Angle	+/- 1.5 degrees
Foot Flatness	0.005 inches
Frame Material	Cast Iron
Frame Size	IEC 90S-280H
Grease	Polyurea
Industry Specifications	Meets or exceeds IEEE 841 features; Meets IEEE 45 Marine Duty
Insulation Class	Class H
Insulation System	GEGARD2400™ 90-280 IEC frames. Non-Hygroscopic, Anti-Fungus, 2400Volt @ .1microsecond rise time. (Exceeds NEMA MG1-31)
Inverter Capabilities	Variable Torque inf:1, Constant Torque 20:1 (see Inverter Duty Capabilities, page iv)
L10 Bearing Life	Direct Coupled: 130,000 hrs, Belted: 26,280 hrs
Lifting Means	4 Lugs cast into frame
Mounting	IM B3 (Top mounted conduit box standard; left or right of DE by custom order)
Mounting Holes	1 per foot (200M frame), 2 per foot (all other frames)
Nameplate	316 Stainless Steel includes mass, guaranteed minimum efficiency, vibration limit
Oil Mist Lube	Includes provisions for conversion to Oil Mist Lubrication
Paint	Buff, Epoxy ester
Relubrication	Both ends, extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.0 (1.15 available by custom request)
Shaft TIR	Meets IEEE 841, 0.025 mm for shaft diameter 41 mm and smaller, 0.038 in for shaft diameter greater than 41 mm
Special Painting	Meets IEEE 841
Temperature Rise	80°C @ 1.0 SF
Tests	Routine Report including Vibration supplied with motor, IEEE 112 Method B
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing

Volts: 400
Frequency: 50Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
0.55	3000	400	90S	1.3	80.7	77.8	**N402**	$1,035	G4-7UXIEC1	N	23	331.6	
0.55	1500	400	90S	1.2	82.9	80.3	**N401**	$1,022	G4-7UXIEC1	N	23	331.6	
0.55	1000	400	90S	1.5	79.1	76.0	**N400**	$1,044	G4-7UXIEC1	N	23	331.6	
0.55	750	400	90L	2.3	67.0	62.1	**N472**	$1,242	G4-7UXIEC1	N	23	331.6	
0.75	3000	400	90S	1.7	84.0	81.6	**N405**	$1,069	G4-7UXIEC1	N	23	331.6	
0.75	1500	400	90S	1.6	84.0	81.6	**N404**	$1,053	G4-7UXIEC1	N	23	331.6	
0.75	1000	400	90S	2.0	80.6	77.7	**N403**	$1,128	G4-7UXIEC1	N	23	331.6	
0.75	750	400	112S	2.7	75.0	71.3	**N473**	$1,160	G4-7UXIEC1	N	46	394.4	
1.1	3000	400	90S	2.4	83.8	81.4	**N495**	$1,115	G4-7UXIEC1	N	23	331.6	
1.1	1500	400	90L	2.2	85.3	83.1	**N407**	$1,194	G4-7UXIEC1	N	23	331.6	
1.1	1000	400	112S	2.7	85.5	83.3	**N406**	$1,080	G4-7UXIEC1	N	46	394.4	
1.1	750	400	112M	3.5	77.6	74.2	**N474**	$1,456	G4-7UXIEC1	N	46	394.4	
1.5	3000	400	90L	3.2	85.0	82.8	**N412**	$1,335	G4-7UXIEC1	N	23	331.6	
1.5	1500	400	90L	3.4	85.8	83.7	**N410**	$1,290	G4-7UXIEC1	N	23	331.6	79
1.5	1500	400	112S	3.3	87.5	85.6	**N496**	$1,290	G4-7UXIEC1	N	46	394.4	80
1.5	1000	400	112M	3.8	85.5	83.3	**N409**	$1,207	G4-7UXIEC1	N	46	394.4	
1.5	750	400	132S	4.8	79.6	76.5	**N475**	$1,848	G4-7UXIEC1	N	100	506.0	
2.2	3000	400	112S	4.5	86.4	84.4	**N415**	$1,216	G4-7UXIEC1	N	46	394.4	
2.2	1500	400	112S	4.7	87.5	85.6	**N414**	$1,148	G4-7UXIEC1	N	46	394.4	
2.2	1000	400	112M	5.3	85.4	83.2	**N497**	$1,371	G4-7UXIEC1	N	46	394.4	
2.2	750	400	132M	6.7	83.5	81.0	**N476**	$2,072	G4-7UXIEC1	N	100	506.0	
3	3000	400	112S	5.9	88.5	86.8	**N418**	$1,299	G4-7UXIEC1	N	46	394.4	
3	1500	400	112S	6.6	88.4	86.7	**N417**	$1,221	G4-7UXIEC1	N	46	394.4	
3	1000	400	132S	6.9	87.5	85.6	**N416**	$2,415	G4-7UXIEC1	N	100	506.0	
3	750	400	160M	8.1	85.5	83.3	**N477**	$2,729	G4-7UXIEC1	N	130	658.4	
3.7	3000	400	112M	7.2	88.2	86.4	**N421**	$1,338	G4-7UXIEC1	N	46	394.4	
3.7	1500	400	112M	7.6	89.2	87.6	**N420**	$1,400	G4-7UXIEC1	N	46	394.4	
3.7	1000	400	132M	8.6	87.7	85.9	**N419**	$2,433	G4-7UXIEC1	N	100	506.0	
3.7	750	400	160M	8.9	86.5	84.5	**N478**	$2,865	G4-7UXIEC1	N	130	658.4	
4	3000	400	112M	7.8	88.5	86.8	**N424**	$1,377	G4-7UXIEC1	N	46	394.4	
4	1500	400	112M	8.2	89.2	87.6	**N423**	$1,468	G4-7UXIEC1	N	46	394.4	90
4	1000	400	132M	10.0	87.7	85.9	**N422**	$2,343	G4-7UXIEC1	N	100	506.0	
4	750	400	160M	9.4	86.5	84.5	**N479**	$3,009	G4-7UXIEC1	N	130	658.4	
5.5	3000	400	132S	9.9	89.4	87.8	**N428**	$1,797	G4-7UXIEC1	N	100	506.0	
5.5	1500	400	132S	11.0	90.0	88.5	**N427**	$1,786	G4-7UXIEC1	N	100	506.0	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 400
Frequency: 50Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
5.5	1000	400	132M	12.3	86.1	84.0	**N425**	$2,690	G4-7UXIEC1	N	100	506.0	79,95
5.5	1000	400	160M	11.8	88.7	87.0	**N426**	$3,150	G4-7UXIEC1	N	130	658.4	80
5.5	750	400	160L	15.2	86.5	84.5	**N480**	$3,401	G4-7UXIEC1	N	130	658.4	79,90
5.5	750	400	180M	12.8	86.5	84.5	**N481**	$3,650	G4-7UXIEC1	N	200	726.1	80
7.5	3000	400	132S	13.2	90.3	88.8	**N431**	$1,944	G4-7UXIEC1	N	100	506.0	
7.5	1500	400	132M	15.0	90.8	89.4	**N430**	$1,992	G4-7UXIEC1	N	100	506.0	
7.5	1000	400	160M	15.7	89.7	88.2	**N429**	$3,366	G4-7UXIEC1	N	130	658.4	90
7.5	750	400	180L	16.8	87.8	86.0	**N482**	$4,707	G4-7UXIEC1	N	200	726.1	80
11	3000	400	160M	20.1	91.2	89.9	**N434**	$2,672	G4-7UXIEC1	N	130	658.4	
11	1500	400	160M	20.3	91.7	90.5	**N433**	$2,624	G4-7UXIEC1	N	130	658.4	
11	1000	400	160L	23.2	90.8	89.4	**N432**	$4,464	G4-7UXIEC1	N	130	658.4	90
11	750	400	180L	24.4	88.5	86.8	**N483**	$5,773	G4-7UXIEC1	N	200	726.1	90,95
11	750	400	200M	26.0	88.5	86.8	**N484**	$5,773	G4-7UXIEC1	N	365	787.6	80
15	3000	400	160M	26.6	91.9	90.7	**N437**	$3,307	G4-7UXIEC1	N	130	658.4	
15	1500	400	160L	29.1	92.3	91.1	**N498**	$3,270	G4-7UXIEC1	N	130	658.4	
15	1000	400	180L	29.4	91.6	90.3	**N435**	$5,440	G4-7UXIEC1	N	200	726.1	
15	750	400	200L	38	90.4	89.0	**N485**	$6,577	G4-7UXIEC1	N	365	787.6	
18.5	3000	400	160L	32.3	92.4	91.3	**N440**	$3,387	G4-7UXIEC1	N	130	658.4	90
18.5	1500	400	180M	34.9	92.7	91.6	**N439**	$3,894	G4-7UXIEC1	N	200	726.1	
18.5	1000	400	200L	41.7	92.1	90.9	**N438**	$6,092	G4-7UXIEC1	N	365	787.6	
18.5	750	400	225S	39.7	92.1	90.9	**N486**	$8,396	G4-7UXIEC1	N	524	873.6	
22	3000	400	180M	39.2	92.7	91.6	**N443**	$4,760	G4-7UXIEC1	N	200	726.1	
22	1500	400	180L	40.4	93.1	92.1	**N442**	$4,526	G4-7UXIEC1	N	200	726.1	
22	1000	400	200L	47.0	92.5	91.4	**N441**	$6,799	G4-7UXIEC1	N	365	787.6	
22	750	400	225M	46.7	92.5	91.4	**N487**	$8,815	G4-7UXIEC1	N	524	873.6	
30	3000	400	200M	54.9	93.3	92.3	**N446**	$5,722	G4-7UXIEC1	N	365	787.6	
30	1500	400	200M	56.8	93.6	92.6	**N445**	$5,551	G4-7UXIEC1	N	365	787.6	
30	1000	400	225M	58.1	93.1	92.1	**N444**	$8,476	G4-7UXIEC	N	524	873.6	
30	750	400	250M	62.0	92.5	91.4	**N488**	$12,268	G4-7UXIEC	N	721	958.0	
37	3000	400	200M	67.1	93.7	92.8	**N449**	$6,985	G4-7UXIEC1	N	365	787.6	
37	1500	400	200L	72.4	94.0	93.1	**N448**	$6,324	G4-7UXIEC1	N	365	787.6	
37	1000	400	250M	72.3	93.5	92.5	**N447**	$10,792	G4-7UXIEC	N	721	958.0	
37	750	400	250M	79.1	93.1	92.1	**N489**	$13,881	G4-7UXIEC	N	721	958.0	
45	3000	400	225S	79.9	94.0	93.1	**N452**	$8,736	G4-7UXIEC	N	524	839.8	
45	1500	400	225S	85.0	94.3	93.4	**N451**	$8,454	G4-7UXIEC	N	524	839.8	

Notes:

79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 400
Frequency: 50Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
45	1000	400	280S	98.1	93.9	93.0	**N450**	$14,303	G4-7UXIEC	N	998	1079.6	
45	750	400	280S	92	93.5	92.5	**N490**	$15,957	G4-7UXIEC	N	998	1079.6	
55	3000	400	225M	96.8	94.3	93.4	**N455**	$10,445	G4-7UXIEC	N	524	873.6	
55	1500	400	225M	101.0	94.5	93.7	**N454**	$10,017	G4-7UXIEC	N	524	873.6	
55	1000	400	280M	111.0	94.2	93.3	**N453**	$14,908	G4-7UXIEC	N	998	1079.6	
55	750	400	280M	111.0	93.9	93.0	**N491**	$18,160	G4-7UXIEC	N	998	1079.6	
75	3000	400	250M	127.0	94.8	94.0	**N458**	$12,860	G4-7UXIEC	N	721	958.0	
75	1500	400	250M	136.0	95.0	94.3	**N457**	$11,796	G4-7UXIEC	N	721	958.0	
75	1000	400	280M	144.0	94.7	93.9	**N456**	$15,256	G4-7UXIEC	N	998	1079.6	
75	750	400	280M	150	94.6	93.8	**N492**	$19,894	G4-7UXIEC	N	998	1079.6	
90	3000	400	280M	154.0	95.0	94.3	**N460**	$16,434	G4-7UXIEC	N	998	1079.6	66
90	1500	400	280S	160.0	95.2	94.5	**N459**	$15,197	G4-7UXIEC	N	998	1079.6	
90	1000	400	280K	232.0	95.6	94.6	**N469**	$20,777	G4-7UXIEC	N	1430	1330.4	
90	750	400	280K	183.0	94.9	94.1	**N493**	$23,999	G4-7UXIEC	N	1430	1330.4	
110	3000	400	280M	186.0	95.3	94.6	**N462**	$19,453	G4-7UXIEC	N	998	1079.6	66
110	1500	400	280M	190.0	95.5	94.8	**N461**	$17,462	G4-7UXIEC	N	998	1079.6	
110	1000	400	280H	278.0	95.9	94.6	**N470**	$22,841	G4-7UXIEC	N	1430	1330.4	
110	750	400	280H	222	95.3	94.6	**N494**	$25,990	G4-7UXIEC	N	1430	1330.4	100
132	3000	400	280K	218	95.6	94.9	**N463**	$21,575	G4-7UXIEC	N	1430	1302.3	
132	1500	400	280K	232	95.6	94.9	**N465**	$19,879	G4-7UXIEC	N	1430	1330.4	
132	1000	400	280H	348	96.0	94.8	**N471**	$25,211	G4-7UXIEC	N	1430	1330.4	100
160	3000	400	280H	262	95.7	95.3	**N464**	$23,888	G4-7UXIEC	N	1430	1302.3	
160	1500	400	280H	278	95.9	95.5	**N466**	$22,216	G4-7UXIEC	N	1430	1330.4	
200	1500	400	280H	348	96.0	95.6	**N467**	$24,198	G4-7UXIEC	N	1430	1330.4	96,100
220	1500	400	280H	380	96.0	95.6	**N468**	$26,000	G4-7UXIEC	N	1430	1330.4	90,95,96, 97,100

Notes:

66 CW rotation only facing opposite drive-end. CCW rotation available, but must be specified on the order.
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
96 Does not meet IEEE 841 noise level
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.
100 With 85 mm shaft extension diameter

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 460
Frequency: 60Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
0.55	3600	460	90S	1.3	80.7	77.8	**N502**	$1,035	G4-7UXIEC1	N	23	331.6	
0.55	1800	460	90S	1.2	82.9	80.3	**N501**	$1,022	G4-7UXIEC1	N	23	331.6	
0.55	1200	460	90S	1.5	79.1	76.0	**N500**	$1,044	G4-7UXIEC1	N	23	331.6	
0.55	900	460	90L	1.6	72	67.8	**N575**	$1,242	G4-7UXIEC1	N	23	331.6	
0.75	3600	460	90S	1.7	84.0	81.6	**N505**	$1,069	G4-7UXIEC1	N	23	331.6	
0.75	1800	460	90S	1.6	84.0	81.6	**N504**	$1,053	G4-7UXIEC1	N	23	331.6	
0.75	1200	460	90S	2.0	80.6	77.7	**N503**	$1,128	G4-7UXIEC1	N	23	331.6	
0.75	900	460	112S	2.4	75.5	71.8	**N576**	$1,160	G4-7UXIEC1	N	23	394.4	
1.1	3600	460	90S	2.4	83.8	81.4	**N508**	$1,115	G4-7UXIEC1	N	23	331.6	
1.1	1800	460	90L	2.2	85.3	83.1	**N507**	$1,194	G4-7UXIEC1	N	23	331.6	
1.1	1200	460	112S	2.7	85.5	83.3	**N506**	$1,080	G4-7UXIEC1	N	46	394.4	
1.1	900	460	112M	3.3	78.5	75.3	**N577**	$1,456	G4-7UXIEC1	N	46	394.4	
1.5	3600	460	90L	3.2	85.0	82.8	**N512**	$1,335	G4-7UXIEC1	N	23	331.6	
1.5	1800	460	90L	3.3	87.5	85.6	**N511**	$1,290	G4-7UXIEC1	N	46	394.4	79,80
1.5	1200	460	112M	3.8	85.5	83.3	**N509**	$1,207	G4-7UXIEC1	N	46	394.4	
1.5	900	460	132S	3.9	84.0	84.6	**N578**	$1,848	G4-7UXIEC1	N	100	506.0	
2.2	3600	460	90L	3.8	85.0	82.8	**N563**	$1,216	G4-7UXIEC1	N	23	331.6	79,95
2.2	3600	460	112S	4.0	86.5	84.5	**N515**	$1,216	G4-7UXIEC1	N	46	394.4	80
2.2	1800	460	112S	4.0	89.5	87.9	**N514**	$1,148	G4-7UXIEC1	N	46	394.4	
2.2	1200	460	112M	4.4	88.0	86.2	**N513**	$1,317	G4-7UXIEC1	N	46	394.4	79
2.2	1200	460	132S	4.3	89.5	87.9	**N564**	$2,395	G4-7UXIEC1	N	100	506.0	80
2.2	900	460	132M	5.6	85.5	83.3	**N579**	$2,072	G4-7UXIEC1	N	100	506.0	
3	3600	460	112S	5.1	88.5	86.8	**N518**	$1,299	G4-7UXIEC1	N	46	394.4	
3	1800	460	112S	5.8	89.5	87.9	**N517**	$1,221	G4-7UXIEC1	N	46	394.4	
3	1200	460	132M	5.6	89.6	88.0	**N516**	$2,415	G4-7UXIEC1	N	100	506.0	
3	900	460	160M	6.4	85.5	83.3	**N580**	$2,729	G4-7UXIEC1	N	130	658.4	
3.7	3600	460	112M	6.2	88.5	86.8	**N521**	$1,338	G4-7UXIEC1	N	46	394.4	
3.7	1800	460	112M	6.7	89.5	87.9	**N520**	$1,400	G4-7UXIEC1	N	46	394.4	
3.7	1200	460	132M	7.1	89.5	87.9	**N519**	$2,433	G4-7UXIEC1	N	100	506.0	
3.7	900	460	160M	7.8	86.5	84.5	**N581**	$2,865	G4-7UXIEC1	N	130	658.4	
4	3600	460	112M	6.8	88.5	86.8	**N524**	$1,377	G4-7UXIEC1	N	46	394.4	
4	1800	460	112M	6.9	90.5	89.1	**N523**	$1,468	G4-7UXIEC1	N	46	394.4	
4	1200	460	132M	7.7	90.5	89.1	**N522**	$2,343	G4-7UXIEC1	N	100	506.0	
4	900	460	160M	8.2	86.5	84.5	**N582**	$3,009	G4-7UXIEC1	N	130	658.4	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
95 Class F temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 460
Frequency: 60Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
5.5	3600	460	132S	8.6	89.5	87.9	**N528**	$1,797	G4-7UXIEC1	N	100	506.0	
5.5	1800	460	132S	9.5	91.7	90.5	**N527**	$1,786	G4-7UXIEC1	N	100	506.0	
5.5	1200	460	132M	11.0	89.4	87.8	**N525**	$2,690	G4-7UXIEC1	N	100	506.0	79
5.5	1200	460	160M	9.5	91.0	89.7	**N526**	$3,150	G4-7UXIEC1	N	130	658.4	80
5.5	900	460	160L	11.6	86.5	84.5	**N583**	$3,401	G4-7UXIEC1	N	130	658.4	
7.5	3600	460	132M	11.5	90.2	88.7	**N531**	$1,944	G4-7UXIEC1	N	100	506.0	
7.5	1800	460	132M	13.0	91.7	90.5	**N530**	$1,992	G4-7UXIEC1	N	100	506.0	
7.5	1200	460	160M	13.4	91.0	89.7	**N529**	$3,366	G4-7UXIEC1	N	130	658.4	
7.5	900	460	180M	14.5	88.5	86.8	**N584**	$4,707	G4-7UXIEC1	N	200	726.1	
11	3600	460	160M	17.0	91.0	89.7	**N534**	$2,672	G4-7UXIEC1	N	130	658.4	
11	1800	460	160M	17.3	92.4	91.3	**N533**	$2,624	G4-7UXIEC1	N	130	658.4	
11	1200	460	160L	19.4	91.7	90.5	**N532**	$4,464	G4-7UXIEC1	N	130	658.4	
11	900	460	180L	20.7	88.5	86.8	**N585**	$5,773	G4-7UXIEC1	N	200	726.1	
15	3600	460	160M	23.0	91.0	89.7	**N537**	$3,307	G4-7UXIEC1	N	130	658.4	
15	1800	460	160L	23.4	93.0	92.0	**N536**	$3,270	G4-7UXIEC1	N	130	658.4	
15	1200	460	180L	27.0	91.7	90.5	**N535**	$5,440	G4-7UXIEC1	N	200	726.1	
15	900	460	200M	30	90.2	88.7	**N587**	$6,577	G4-7UXIEC1	N	365	787.6	
18.5	3600	460	160L	27.7	91.7	90.5	**N540**	$3,387	G4-7UXIEC1	N	130	658.4	90
18.5	1800	460	180M	29.0	93.6	92.6	**N539**	$3,894	G4-7UXIEC1	N	200	726.1	
18.5	1200	460	200L	32.0	93.0	92.0	**N538**	$6,092	G4-7UXIEC1	N	365	787.6	
18.5	900	460	200L	38.7	90.2	88.7	**N588**	$8,396	G4-7UXIEC1	N	365	787.6	
22	3600	460	180M	32.7	91.7	90.5	**N543**	$4,760	G4-7UXIEC1	N	200	726.1	
22	1800	460	180L	34.9	93.6	92.6	**N542**	$4,526	G4-7UXIEC1	N	200	726.1	
22	1200	460	200L	37.3	93.0	92.0	**N541**	$6,799	G4-7UXIEC1	N	365	787.6	
22	900	460	225S	41.2	91.7	90.5	**N589**	$8,815	G4-7UXIEC1	N	524	873.6	
30	3600	460	200M	47.6	94.1	93.2	**N546**	$5,722	G4-7UXIEC1	N	365	787.6	
30	1800	460	200M	49.7	94.1	93.2	**N545**	$5,551	G4-7UXIEC1	N	365	787.6	
30	1200	460	225M	48.8	94.1	93.2	**N544**	$8,476	G4-7UXIEC	N	524	873.6	
30	900	460	225M	55.9	91.7	90.5	**N590**	$12,268	G4-7UXIEC1	N	524	873.6	
37	3600	460	200M	58.1	93.0	92.0	**N549**	$6,985	G4-7UXIEC1	N	365	787.6	
37	1800	460	200L	60.3	94.5	93.7	**N548**	$6,324	G4-7UXIEC1	N	365	787.6	
37	1200	460	250M	64.5	94.1	93.2	**N547**	$10,792	G4-7UXIEC	N	721	958.0	
37	900	460	250M	67.9	92.4	91.3	**N591**	$13,881	G4-7UXIEC	N	721	958.0	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 460
Frequency: 60Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Guar. Min. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
45	3600	460	225S	70.6	93.6	92.6	**N552**	$8,736	G4-7UXIEC	N	524	839.8	
45	1800	460	225S	70.8	95.0	94.3	**N551**	$8,454	G4-7UXIEC	N	524	839.8	
45	1200	460	280S	72.9	94.5	93.7	**N550**	$14,303	G4-7UXIEC	N	998	1079.6	
45	900	460	250M	82.0	92.4	91.3	**N592**	$15,957	G4-7UXIEC	N	721	958.0	
55	3600	460	225M	85.3	93.6	92.6	**N555**	$10,445	G4-7UXIEC	N	524	873.6	
55	1800	460	225M	84.6	95.4	94.7	**N554**	$10,017	G4-7UXIEC	N	524	873.6	
55	1200	460	280M	91.3	94.5	93.7	**N553**	$14,908	G4-7UXIEC	N	998	1079.6	
55	900	460	280S	93.4	93.6	92.6	**N593**	$18,160	G4-7UXIEC	N	998	1079.6	
75	3600	460	250M	110.0	94.1	93.2	**N558**	$12,860	G4-7UXIEC	N	721	958.0	
75	1800	460	250M	117.0	95.4	94.7	**N557**	$11,796	G4-7UXIEC	N	721	958.0	
75	1200	460	280M	118.0	95.0	94.3	**N556**	$15,256	G4-7UXIEC	N	998	1079.6	
75	900	460	280M	127.0	93.6	92.6	**N594**	$19,894	G4-7UXIEC	N	998	1079.6	
90	3600	460	280M	134.0	95.0	94.3	**N560**	$16,434	G4-7UXIEC	N	998	1079.6	66
90	1800	460	280S	139.0	95.4	94.7	**N559**	$15,197	G4-7UXIEC	N	998	1079.6	
90	1200	460	280K	143.0	95.0	94.3	**N571**	$20,777	G4-7UXIEC	N	1430	1330.4	
90	900	460	280K	153.0	94.5	93.7	**N595**	$23,999	G4-7UXIEC	N	1430	1330.4	
110	3600	460	280M	162.0	95.0	94.3	**N562**	$19,453	G4-7UXIEC	N	998	1079.6	66
110	1800	460	280M	164.0	95.8	95.2	**N561**	$17,462	G4-7UXIEC	N	998	1079.6	
110	1200	460	280K	173.0	95.8	95.2	**N572**	$22,841	G4-7UXIEC	N	1430	1330.4	
110	900	460	280H	184.0	95.0	94.3	**N596**	$25,990	G4-7UXIEC	N	1430	1330.4	
132	3600	460	280K	192.0	95.4	94.7	**N565**	$21,575	G4-7UXIEC	N	1430	1302.3	
132	1800	460	280K	200.0	96.2	95.6	**N567**	$19,879	G4-7UXIEC	N	1430	1330.4	
132	1200	460	280H	207.0	95.8	95.2	**N573**	$25,211	G4-7UXIEC	N	1430	1330.4	
132	900	460	280H	221.0	95.4	94.7	**N597**	$28,011	G4-7UXIEC	N	1430	1302.3	100
160	3600	460	280H	229.0	95.4	94.9	**N566**	$23,888	G4-7UXIEC	N	1430	1302.3	96
160	1800	460	280H	239.0	96.2	95.8	**N568**	$22,216	G4-7UXIEC	N	1430	1330.4	
160	1200	460	280H	250.0	95.8	95.4	**N574**	$24,915	G4-7UXIEC	N	1430	1330.4	100
200	1800	460	280H	298.0	96.2	95.8	**N569**	$24,198	G4-7UXIEC	N	1430	1330.4	96
220	1800	460	280H	330.0	96.2	95.8	**N570**	$26,000	G4-7UXIEC	N	1430	1330.4	96

Notes:
66 CW rotation only facing opposite drive-end. CCW rotation available, but must be specified on the order.
96 Does not meet IEEE 841 noise level
100 With 85 mm shaft extension diameter

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
0.55	3000	690	90S	0.7	79.1	**N1003**	$1,880	G4-7UXIEC	N	23	331.6	
0.55	1500	690	90S	0.8	81.2	**N1002**	$1,825	G4-7UXIEC	N	23	331.6	
0.55	1000	690	90S	0.9	77.2	**N1001**	$1,862	G4-7UXIEC	N	23	331.6	
0.55	750	690	112S	1.3	67	**N1000**	$2,070	G4-7UXIEC	N	46	394.4	
0.75	3000	690	90S	0.9	81.4	**N1007**	$1,761	G4-7UXIEC	N	23	331.6	
0.75	1500	690	90S	1	82.9	**N1006**	$1,533	G4-7UXIEC	N	23	331.6	
0.75	1000	690	112S	1.3	78.9	**N1005**	$1,974	G4-7UXIEC	N	46	394.4	
0.75	750	690	112S	1.5	75	**N1004**	$2,294	G4-7UXIEC	N	100	506	
1.1	3000	690	90S	1.3	83	**N1011**	$1,847	G4-7UXIEC	N	23	331.6	
1.1	1500	690	90L	1.4	84.5	**N1010**	$1,770	G4-7UXIEC	N	23	331.6	
1.1	1000	690	112S	1.6	81	**N1009**	$2,090	G4-7UXIEC	N	46	394.4	
1.1	750	690	132S	2	77.6	**N1008**	$2,539	G4-7UXIEC	N	100	506	
1.5	3000	690	112S	1.9	84.8	**N1015**	$1,972	G4-7UXIEC	N	46	394.4	
1.5	1500	690	112S	2	85.6	**N1014**	$1,949	G4-7UXIEC	N	46	394.4	
1.5	1000	690	112M	2.1	82.5	**N1013**	$2,438	G4-7UXIEC	N	46	394.4	
1.5	750	690	132S	2.8	79.6	**N1012**	$2,848	G4-7UXIEC	N	100	506	
2.2	3000	690	112S	2.6	86.2	**N1020**	$2,022	G4-7UXIEC	N	46	394.4	
2.2	1500	690	112S	2.8	86.9	**N1019**	$1,853	G4-7UXIEC	N	46	394.4	
2.2	1000	690	112M	3.1	84.3	**N1018**	$2,048	G4-7UXIEC	N	46	394.4	
2.2	750	690	132M	3.8	83.5	**N1016**	$2,975	G4-7UXIEC	N	100	506	
3	3000	690	112S	3.4	87.2	**N1024**	$2,123	G4-7UXIEC	N	46	394.4	
3	1500	690	112S	3.7	88.4	**N1023**	$2,042	G4-7UXIEC	N	46	394.4	
3	1000	690	132S	4	85.6	**N1022**	$2,898	G4-7UXIEC	N	100	506	
3	750	690	160M	4.6	85.5	**N1021**	$3,266	G4-7UXIEC	N	130	658.4	
3.7	3000	690	112M	4.1	87.9	**N1028**	$2,289	G4-7UXIEC	N	46	394.4	
3.7	1500	690	132S	4.7	88.4	**N1027**	$2,162	G4-7UXIEC	N	46	394.4	
3.7	1000	690	132M	5	86.5	**N1026**	$2,573	G4-7UXIEC	N	100	506	
3.7	750	690	160M	5.3	86.5	**N1025**	$3,283	G4-7UXIEC	N	130	658.4	

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
4	3000	690	112M	4.3	88.1	**N1032**	$2,438	G4-7UXIEC	N	46	394.4	
4	1500	690	132S	5.1	88.7	**N1031**	$2,368	G4-7UXIEC	N	46	394.4	
4	1000	690	132M	5.5	86.9	**N1030**	$2,595	G4-7UXIEC	N	100	506	
4	750	690	160M	5.5	86.5	**N1029**	$3,447	G4-7UXIEC	N	130	658.4	
5.5	3000	690	132S	5.8	89.2	**N1038**	$2,896	G4-7UXIEC	N	100	506	
5.5	1500	690	132S	6.6	89.6	**N1037**	$2,878	G4-7UXIEC	N	100	506	
5.5	1000	690	132M	6.7	88	**N1036**	$3,444	G4-7UXIEC	N	100	506	79,90, 95,97
5.5	1000	690	160M	7	88	**N1035**	$3,683	G4-7UXIEC	N	130	658.4	80
5.5	750	690	160L	7.4	86.5	**N1034**	$3,620	G4-7UXIEC	N	130	658.4	90
5.5	750	690	180M	7.4	86.5	**N1040**	$4,226	G4-7UXIEC	N	130	658.4	80
7.5	3000	690	132S	7.7	90.1	**N1043**	$3,106	G4-7UXIEC	N	100	506	
7.5	1500	690	132M	8.9	90.4	**N1042**	$2,938	G4-7UXIEC	N	100	506	
7.5	1000	690	160M	8.9	89.1	**N1041**	$3,923	G4-7UXIEC	N	130	658.4	
7.5	750	690	180L	9.5	87.8	**N1039**	$4,924	G4-7UXIEC	N	200	726.1	90
11	3000	690	160M	11.5	91.2	**N1049**	$3,331	G4-7UXIEC	N	130	658.4	
11	1500	690	160M	12.1	91.4	**N1048**	$3,157	G4-7UXIEC	N	130	658.4	
11	1000	690	160L	12.4	90.3	**N1047**	$5,007	G4-7UXIEC	N	130	658.4	90
11	1000	690	180M	13.5	90.3	**N1046**	$5,855	G4-7UXIEC	N	200	726.1	80
11	750	690	180L	14.2	88.5	**N1045**	$5,622	G4-7UXIEC	N	200	726.1	79,90,95
11	750	690	200M	15.1	88.5	**N1044**	$6,243	G4-7UXIEC	N	365	787.6	80
15	3000	690	160M	14.8	91.9	**N1054**	$4,011	G4-7UXIEC	N	130	658.4	
15	1500	690	160L	16.4	92.1	**N1053**	$3,772	G4-7UXIEC	N	130	658.4	
15	1000	690	180L	18.4	91.2	**N1052**	$6,702	G4-7UXIEC	N	200	726.1	79,90,95
15	1000	690	200M	17.2	91.2	**N1051**	$6,966	G4-7UXIEC	N	365	787.6	80
15	750	690	200L	21	90.4	**N1050**	$6,864	G4-7UXIEC	N	365	787.6	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
18.5	3000	690	160L	18.1	92.4	**N1059**	$4,627	G4-7UXIEC	N	130	658.4	90,95,97
18.5	3000	690	180M	18.4	92.4	**N1058**	$5,267	G4-7UXIEC	N	200	726.1	80
18.5	1500	690	180M	20.1	92.6	**N1057**	$4,814	G4-7UXIEC	N	200	726.1	
18.5	1000	690	200L	23.5	92.1	**N1056**	$7,229	G4-7UXIEC	N	365	787.6	
18.5	750	690	225S	23.2	92.1	**N1055**	$10,994	G4-7UXIEC	N	524	873.6	
22	3000	690	180M	24.2	92.7	**N1065**	$5,907	G4-7UXIEC	N	200	726.1	90
22	3000	690	200M	21.7	92.7	**N1064**	$6,204	G4-7UXIEC	N	365	787.6	80
22	1500	690	180L	26	93	**N1063**	$5,622	G4-7UXIEC	N	200	726.1	79,90
22	1500	690	200M	24.4	93	**N1062**	$6,034	G4-7UXIEC	N	365	787.6	80
22	1000	690	200L	26.7	92.5	**N1061**	$8,241	G4-7UXIEC	N	365	787.6	
22	750	690	225M	27.1	92.5	**N1060**	$11,545	G4-7UXIEC	N	524	873.6	
30	3000	690	200M	31.8	93.3	**N1069**	$6,502	G4-7UXIEC	N	365	787.6	
30	1500	690	200M	32.9	93.6	**N1068**	$6,444	G4-7UXIEC	N	365	787.6	
30	1000	690	225M	34.2	92.9	**N1067**	$10,600	G4-7UXIEC	N	524	873.6	
30	750	690	250M	38	92.5	**N1066**	$15,133	G4-7UXIEC	N	721	958	
37	3000	690	200M	28.9	93.7	**N1073**	$8,317	G4-7UXIEC	N	365	787.6	
37	1500	690	200L	42	94	**N1072**	$7,556	G4-7UXIEC	N	365	787.6	
37	1000	690	250M	41.4	93.5	**N1071**	$15,361	G4-7UXIEC	N	721	958	
37	750	690	250M	45.9	93.1	**N1070**	$15,889	G4-7UXIEC	N	721	958	
45	3000	690	225S	46.3	94	**N1077**	$10,796	G4-7UXIEC	N	524	839.8	
45	1500	690	225S	50	94.2	**N1076**	$10,571	G4-7UXIEC	N	524	839.8	
45	1000	690	280S	52.2	93.7	**N1075**	$20,290	G4-7UXIEC	N	998	1079.6	
45	750	690	280S	52.6	93.5	**N1074**	$20,903	G4-7UXIEC	N	998	1079.6	
55	3000	690	225M	56.7	94.3	**N1081**	$13,252	G4-7UXIEC	N	524	873.6	
55	1500	690	225M	58.6	94.6	**N1080**	$12,815	G4-7UXIEC	N	524	873.6	
55	1000	690	280M	62.3	94.1	**N1079**	$20,492	G4-7UXIEC	N	998	1079.6	
55	750	690	280M	64.1	93.9	**N1078**	$24,321	G4-7UXIEC	N	998	1079.6	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Pricing (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

kW	RPM	Volts	Frame	I_N (A)	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Mass (kgs)	L Dim. (mm)	Notes
75	3000	690	250M	74.8	94.8	**N1086**	$16,563	G4-7UXIEC	N	721	958	90,95,97
75	3000	690	280S	73.2	94.8	**N1085**	$19,099	G4-7UXIEC	N	998	1079.6	80
75	1500	690	250M	78.6	95	**N1084**	$15,278	G4-7UXIEC	N	721	958	
75	1000	690	280M	82.8	94.7	**N1083**	$20,689	G4-7UXIEC	N	998	1079.6	
75	750	690	280M	86.2	94.6	**N1082**	$26,687	G4-7UXIEC	N	998	1079.6	
90	3000	690	280M	89.1	95	**N1090**	$21,634	G4-7UXIEC	N	998	1079.6	
90	1500	690	280S	92.5	95.2	**N1089**	$20,099	G4-7UXIEC	N	998	1079.6	
90	1000	690	280K	96.1	95	**N1088**	$27,478	G4-7UXIEC	N	1430	1330.4	
90	750	690	280K	105	94.9	**N1087**	$32,564	G4-7UXIEC	N	1430	1330.4	
110	3000	690	280M	109	95.3	**N1094**	$26,016	G4-7UXIEC	N	998	1079.6	
110	1500	690	280M	111	95.5	**N1093**	$23,385	G4-7UXIEC	N	998	1079.6	
110	1000	690	280K	118	95.3	**N1092**	$30,290	G4-7UXIEC	N	1430	1330.4	
110	750	690	280H	125	95.3	**N1091**	$35,414	G4-7UXIEC	N	1430	1330.4	
132	3000	690	280K	126	95.5	**N1097**	$30,531	G4-7UXIEC	N	1430	1302.3	
132	1500	690	280K	135	95.6	**N1096**	$29,641	G4-7UXIEC	N	1430	1330.4	
132	1000	690	280H	139	95.5	**N1095**	$33,169	G4-7UXIEC	N	1430	1330.4	
150	3000	690	280H	152	95.7	**N1100**	$32,291	G4-7UXIEC	N	1430	1330.4	
150	1500	690	280H	150	95.9	**N1099**	$31,349	G4-7UXIEC	N	1430	1330.4	
150	1000	690	280H	157	95.8	**N1098**	$34,674	G4-7UXIEC	N	1430	1330.4	
160	3000	690	280H	152	95.7	**N1102**	$34,049	G4-7UXIEC	N	1430	1330.4	
160	1500	690	280H	163	95.9	**N1101**	$33,057	G4-7UXIEC	N	1430	1330.4	
185	3000	690	280H	175	95.8	**N1104**	$39,156	G4-7UXIEC	N	1430	1330.4	90,95, 96,97
185	1500	690	280H	185	96	**N1103**	$34,387	G4-7UXIEC	N	1430	1330.4	
200	1500	690	280H	202	96	**N1106**	$35,716	G4-7UXIEC	N	1430	1330.4	96
220	1500	690	280H	222	96	**N1105**	$37,882	G4-7UXIEC	N	1430	1330.4	90,95, 96,97

Notes:

80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
96 Does not meet IEEE 841 noise level
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data

Volts: 400
Frequency: 50Hz
kW: 0.55 - 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	Guar. Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
0.55	90S	2930	1.3	7.8	2.8	1.8	5.0	6.5	80.7	77.8	82.3	79	78.5	71	59	0.4	
0.55	90S	1435	1.2	6.7	3.0	3.7	11.0	13.2	82.9	80.3	85.2	84	79	71.5	58.6	0.4	
0.55	90S	945	1.5	5.0	2.5	5.6	14.0	17.2	79.1	76.0	81.1	79.5	68	59	46	0.6	
0.55	90L	700	2.3	3.7	2.8	7.5	20.6	24.9	67	62.1	66.6	60.8	50.5	42	32.3	1.1	
0.75	90S	2910	1.7	7.0	2.4	2.5	6.0	7.7	84.0	81.6	85.5	84.5	77.5	69.7	56.2	0.5	
0.75	90S	1425	1.6	6.4	2.8	5.0	13.8	16.4	84.0	81.6	86.6	86.4	83	77.2	65.7	0.4	
0.75	90S	940	2.0	5.2	2.7	7.6	20.3	24.5	80.6	77.7	81.7	80.3	68	58.8	45.7	0.7	
0.75	112S	725	2.7	4.6	2.0	9.9	19.5	29.8	75	71.3	76.3	71.9	53.5	44.9	34.2	1.2	
1.1	90S	2920	2.4	8.9	3.3	3.6	11.8	14.1	83.8	81.4	89	88.4	80.5	73.6	60.9	0.6	
1.1	90L	1425	2.2	6.7	3.0	7.4	22.1	25.5	85.3	83.1	87.1	87.1	83	76.5	64.5	0.6	
1.1	112S	970	2.7	7.2	2.3	10.8	24.5	42.4	85.5	83.3	87.5	86.1	68.5	60.1	47	1	
1.1	112M	715	3.5	4.4	1.9	14.7	27.3	38.8	77.6	74.2	77.6	74.6	58	49.2	37.6	1.5	
1.5	90L	2915	3.2	8.0	3.1	4.9	15.5	18.0	85.0	82.8	86.6	85.3	78.5	71.1	58.2	0.9	
1.5	90L	1435	3.4	7.5	3.9	10.0	38.8	43.0	85.8	83.7	86.4	85.4	75	66.1	52.3	1.2	79
1.5	112S	1465	3.3	6.8	2.5	9.8	24.0	32.8	87.5	85.6	89.1	87.8	74.5	66.8	54.1	1.1	80
1.5	112M	965	3.8	6.9	2.4	14.8	35.1	57.6	85.5	83.3	86.1	84.5	67.5	58.5	45.4	1.4	
1.5	132S	725	4.8	5.1	2.1	19.8	42.4	66.3	79.6	76.5	80.4	77.1	56.5	47.8	36.6	2.2	
2.2	112S	2945	4.5	7.5	2.0	7.1	14.2	23.7	86.4	84.4	90.3	89.2	82	76.6	65.5	1	
2.2	112S	1465	4.7	6.8	2.4	14.3	35.0	46.2	87.5	85.6	90.1	89.4	77	70.6	58.4	1.4	
2.2	112M	965	5.3	7.1	2.4	21.8	51.9	83.9	85.4	83.2	86.6	85.5	70	61	47.6	2	
2.2	132M	725	6.7	5.5	2.3	29.0	67.8	103.3	83.5	81.0	83.2	80.5	56.5	48.1	36.7	3	
3	112S	2935	5.9	6.9	1.9	9.8	18.2	29.8	88.5	86.8	90.6	90	83	77.6	66.8	1.3	
3	112S	1460	6.6	6.7	2.5	19.6	48.5	62.4	88.4	86.7	89.4	88.5	74.5	67.8	55.3	2.1	
3	132S	975	6.9	6.0	1.8	29.4	54.1	76.9	87.5	85.6	89.2	88.7	71.5	65.2	53.2	2.2	
3	160M	735	8.1	5.7	2.2	39.0	85.4	129.7	85.5	83.3	87	84.8	62.5	53.4	40.9	3.4	
3.7	112M	2930	7.2	6.7	1.8	12.1	22.2	35.7	88.2	86.4	91	90.8	84.5	79.8	69.8	1.5	
3.7	112M	1455	7.6	6.7	2.4	24.2	57.6	72.9	89.2	87.6	90.5	90.3	79	73.1	61.6	2.1	
3.7	132M	970	8.6	6.0	1.9	36.3	69.4	96.4	87.7	85.9	89.1	88.7	71	64.6	52.6	2.8	
3.7	160M	730	8.9	5.2	1.8	48.3	85.1	132.2	86.5	84.5	89	88	69	61.2	48.5	3.2	
4	112M	2925	7.8	6.6	1.8	13.1	23.9	38.2	88.5	86.8	90.9	90.8	83.5	78.9	68.6	1.7	
4	112M	1455	8.2	6.5	2.4	26.2	61.8	77.8	89.2	87.6	90.3	90.2	78.5	72.6	61.1	2.3	90
4	132M	975	10.0	6.2	2.2	39.2	88.1	119.3	87.7	85.9	88.1	87	66	58.3	45.8	3.8	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 400
Frequency: 50Hz
kW: 0.55 - 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	Guar. Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
4	160M	730	9.4	4.9	1.6	52.4	85.1	132.2	86.5	84.5	88.8	88.2	71	63.6	51	3.2	
5.5	132S	2930	9.9	7.0	2.3	17.9	41.5	49.6	89.4	87.8	91.4	91.4	89.5	87	80.2	1.8	
5.5	132S	1470	11.0	6.6	2.0	35.8	70.2	99.5	90.0	88.5	91.5	91.2	80.5	76	65.7	2.8	
5.5	132M	960	12.3	5.6	1.9	54.6	101.4	139.9	86.1	84.0	88.3	88.6	75	69	57.2	3.7	79,95
5.5	160M	975	11.8	5.8	2.0	54.0	108.0	149.0	88.7	87.0	89.5	88.8	76	69	56.5	3.8	80
5.5	160L	735	15.2	5.8	2.5	71.7	180.9	259.9	86.5	84.5	87.1	84.8	60.5	51.3	39	6.7	79,90
5.5	180M	740	12.8	7.0	2.2	71.2	156.0	238.9	86.5	84.5	90.2	89.3	71.5	63.6	50.9	4.4	80
7.5	132S	2945	13.2	8.5	3.1	24.3	75.7	79.3	90.3	88.8	92.9	92.8	90.5	87.9	81.2	2.3	
7.5	132M	1470	15.0	7.0	2.1	48.8	103.6	142.8	90.8	89.4	91.8	91.6	79.5	74.5	63.6	4.1	
7.5	160M	975	15.7	6.1	2.2	73.6	162.7	213.5	89.7	88.2	90.8	90.4	77	70.3	58.1	4.9	90
7.5	180L	735	16.8	6.9	2.1	97.1	202.3	306.3	87.8	86.0	91.2	90.7	73.5	66.7	54.5	5.2	80
11	160M	2960	20.1	7.3	2.5	35.5	89.5	101.1	91.2	89.9	92.7	92.5	86.5	83.3	75.3	4.1	
11	160M	1475	20.3	6.7	2.5	71.2	178.0	205.7	91.7	90.5	93.5	93.5	85.5	81.5	72.1	4.6	
11	160L	975	23.2	7.0	2.7	107.6	290.4	360.1	90.8	89.4	91.7	91.1	75.5	68.6	56	7.6	90
11	180L	735	24.4	6.8	2.2	142.9	317.4	459.1	88.5	86.8	90.5	90.2	73.5	66.7	54.3	7.8	90,95
11	200M	730	26	4.6	1.7	144.0	240.1	327.5	88.5	86.8	91.8	91.3	69	62.2	50.2	8.6	80
15	160M	2965	26.6	8.7	3.4	48.3	165.4	155.8	91.9	90.7	93.9	93.7	88.5	85.9	78.8	4.9	
15	160L	1480	29.1	7.9	3.2	96.7	309.7	345.5	92.3	91.1	93.7	93.1	80.5	74.5	62.5	8.5	
15	180L	980	29.4	8.1	2.8	145.7	411.6	489.2	91.6	90.3	92.5	92.2	80.5	74.2	62	8.7	
15	200L	730	38	5.3	2.2	195.6	439.8	574.3	90.4	89.0	91.2	89.9	63	54.9	42.5	15.1	
18.5	160L	2965	32.3	9.1	3.8	59.6	226.2	194.0	92.4	91.3	94.3	94.3	89.5	87.6	81.5	5.4	90
18.5	180M	1480	34.9	7.0	1.9	119.3	232.3	342.1	92.7	91.6	93.9	93.6	82.5	77.4	66.6	9.2	
18.5	200L	985	41.7	6.7	2.1	179.1	370.0	597.8	92.1	90.9	92.6	91.4	69.5	61.3	48.4	15.6	
18.5	225S	740	39.7	4.6	1.4	238.9	323.9	528.5	92.1	90.9	93.8	93.3	73	66.8	55.1	12.3	
22	180M	2970	39.2	9.7	4.2	70.7	299.8	287.6	92.7	91.6	94.2	93.5	87.5	82.9	73.2	9.2	
22	180L	1480	40.4	7.9	2.9	141.9	408.8	423.0	93.1	92.1	93.9	93.8	84.5	79.8	69.8	9.9	
22	200L	985	47.0	6.7	2.0	213.1	422.7	670.3	92.5	91.4	93.4	92.6	73	66	53.4	15.8	
22	225M	740	46.7	4.6	1.4	284.1	385.4	624.9	92.5	91.4	94.2	93.8	73.5	67.6	56.1	14	
30	200M	2970	54.9	5.8	1.7	96.4	160.7	240.3	93.3	92.3	94.6	93.9	84.5	80.9	72.1	12.3	
30	200M	1480	56.8	5.5	1.8	193.3	340.9	485.1	93.6	92.6	95	94.8	81.5	76.8	66.4	14.5	
30	225M	990	58.1	5.5	1.5	289.9	449.3	740.7	93.1	92.1	94.7	94.5	80	74.6	63.6	15.7	

Notes:

79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 400
Frequency: 50Hz
kW: 0.55 - 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	Guar. Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
30	250M	735	62	5.0	1.5	390.2	591.5	1007.5	92.5	91.4	94.1	93.9	75.5	69.4	57.5	18.7	
37	200M	2970	67.1	6.1	1.9	118.9	226.0	307.9	93.7	92.8	95.1	94.5	85	81.4	72.7	14.8	
37	200L	1485	72.4	6.4	2.1	238.0	503.7	712.6	94.0	93.1	95.2	94.7	78.5	72	60	21.8	
37	250M	995	72.3	6.1	1.6	355.5	586.4	965.8	93.5	92.5	95.3	94.7	79	73.2	61.8	20.5	
37	250M	735	79.1	5.8	1.9	479.6	912.0	1510.3	93.1	92.1	94.3	93.7	72.5	64.9	52.1	27.2	
45	225S	2975	79.9	6.4	1.8	144.5	256.2	389.0	94.0	93.1	95.7	95.2	86.5	83.3	75.1	16.6	
45	225S	1485	85.0	6.9	2.0	289.0	586.7	894.4	94.3	93.4	95.5	95.1	81	75.3	63.7	23.8	
45	280S	995	98.1	6.5	1.6	432.0	695.8	1411.0	93.9	93.0	93.7	92.3	70.5	62.7	49.8	36.4	
45	280S	740	92	5.5	1.5	579.1	894.1	1546.8	93.5	92.5	94.6	94	75.5	69.5	57.8	28	
55	225M	2975	96.8	6.7	1.9	176.6	330.7	487.8	94.3	93.4	95.9	95.5	87	83.8	75.6	19.9	
55	225M	1485	101.0	6.7	2.0	353.4	698.0	1036.0	94.5	93.7	95.3	94.9	83	77.9	67.3	26.2	
55	280M	995	111.0	6.4	1.5	528.3	808.5	1587.4	94.2	93.3	94.6	93.6	76	69.1	56.8	35.8	
55	280M	740	111	5.7	1.7	707.7	1170.0	1956.9	93.9	93.0	95.1	94.4	76	70.1	58.4	33.4	
75	250M	2975	127.0	8.4	2.4	240.5	572.8	813.2	94.8	94.0	96.2	96	90	87.2	80.2	23.2	
75	250M	1490	136.0	5.8	1.7	480.8	836.3	1261.2	95.0	94.3	96.5	96.3	83.5	79.1	69.3	32.7	
75	280M	995	144.0	6.1	1.4	721.2	1027.0	1949.8	94.7	93.9	95.1	94.6	79.5	74	62.8	40.4	
75	280M	740	150	5.9	1.7	965.3	1685.2	2725.3	94.6	93.8	95.4	94.8	76.5	70.6	58.9	44.6	
90	280M	2980	154.0	6.6	1.5	288.1	426.8	816.6	95.0	94.3	95.6	95.1	89	86.4	79.6	28.2	66
90	280S	1490	160.0	6.8	1.3	575.9	745.8	1665.8	95.2	94.5	96.4	96.2	85.5	81.7	72.5	36	
90	280K	1490	232	6.3	1.3	844.5	1090.4	2377.4	95.6	94.3	96.7	96.6	86	82.5	74	49.5	
90	280K	740	183	6.5	2.0	1157.5	2364.8	3751.6	94.9	94.1	95.2	94.6	75	68.4	56.2	58.4	
110	280M	2985	186.0	7.7	1.8	351.8	634.8	1123.2	95.3	94.6	96.1	95.6	89.5	87.1	80.2	34	66
110	280M	1490	190.0	6.3	1.2	704.3	857.3	1845.8	95.5	94.8	96.2	96	87.5	84.6	77.1	37.2	
110	280H	1495	278	7.0	1.5	1023.2	1503.8	3091.2	95.9	94.6	97	96.8	86.5	83.1	74.7	58.7	
110	280H	745	222	6.8	2.2	1413.8	3102.2	4829.4	95.3	94.6	95.5	95	75	68.4	56	71.4	100
132	280K	2980	218	6.9	1.6	422.5	680.6	1309.5	95.6	94.9	96.2	95.9	91.5	90.1	85.6	31.2	
132	280K	1490	232	6.3	1.3	844.5	1090.4	2377.4	95.6	94.9	96.7	96.6	86	82.5	74	49.5	
132	280H	1495	348	7.2	1.5	1278.7	1958.2	3916.4	96	94.8	96.7	96.3	86.5	82.7	74.1	75.1	100
160	280H	2985	262	7.7	1.9	511.9	947.1	1708.6	95.7	95.3	96.5	96.3	92	90.5	85.9	37.4	
160	280H	1495	278	7.0	1.5	1023.2	1503.8	3091.2	95.9	95.5	97	96.8	86.5	83.1	74.7	58.7	
200	280H	1495	348	7.2	1.5	1278.7	1958.2	3916.4	96	95.6	96.7	96.3	86.5	82.7	74.1	75.1	96,100
220	280H	1490	380	6.6	1.4	1407.5	1958.2	3916.4	96	95.6	96.7	96.4	87	84.1	76.5	75.1	90,95, 96,97,100

Notes:

66 CW rotation only facing opposite drive-end. CCW rotation available, but must be specified on the order.
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
96 Does not meet IEEE 841 noise level
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.
100 With 85 mm shaft extension diameter

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 460
Frequency: 60Hz
kW: 0.55 - 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	Guar. Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
0.55	90S	3520	1.1	7.6	2.2	1.5	3.3	4.7	77.0	73.6	86.4	84.8	82.0	75.6	64.0	0.3	
0.55	90S	1745	1.1	7.8	3.3	3.0	10.0	12.5	82.5	79.9	85.5	83.4	77	69.5	56.9	0.4	
0.55	90S	1145	1.3	5.2	2.4	4.6	10.8	14.2	80	77.0	80.6	78.4	67.5	58.4	45.7	0.6	
0.55	90L	840	1.6	3.6	1.9	6.3	11.7	15.3	72	67.8	73.6	70.4	59	50	38.5	0.8	
0.75	90S	3515	1.3	7.9	2.3	2.0	4.6	6.5	82.5	79.9	88.3	87.4	85.0	80.3	70.2	0.3	
0.75	90S	1740	1.4	8.1	3.5	4.1	14.2	17.5	85.5	83.3	86.9	85.3	78.5	71	58.5	0.5	
0.75	90S	1155	1.8	6.1	3.1	6.2	19.1	24.3	82.5	79.9	83	80.5	63	53.9	41.5	0.8	
0.75	112S	875	2.4	4.9	1.9	8.2	15.3	26.2	75.5	71.8	78.6	74.4	52	43.5	33	1.2	
1.1	90S	3520	1.9	8.4	2.7	3.0	8.1	10.6	84.0	81.6	85.6	83.3	85.0	80.3	70.8	0.5	
1.1	90L	1735	2	7.8	3.3	6.0	19.9	24.0	86.5	84.5	87.2	86.2	80	72.8	60.3	0.7	
1.1	112S	1170	2.3	7.3	1.9	9.0	17.4	34.2	87.5	85.6	88.6	87.1	69.5	61.6	49	0.9	
1.1	112M	870	3.3	5.0	2.0	12.0	24.0	37.0	78.5	75.3	79.8	76.1	53.5	45	34.1	1.7	
1.5	90L	3515	2.7	8.5	2.8	4.1	11.5	14.8	85.5	83.3	86.5	84.7	83.0	77.2	66.2	0.7	
1.5	90L	1730	2.7	7.8	3.4	8.3	27.9	32.7	86.5	84.5	87.9	87.2	81	73.9	61.5	0.9	79,80
1.5	112M	1170	3	7.3	2.0	12.3	24.7	46.1	88.5	86.8	88.6	87.4	71	63	50.2	1.2	
1.5	132S	880	3.9	5.4	1.7	16.3	27.5	52.5	84	81.6	85.9	83.3	57	48.6	37.2	1.9	
2.2	90L	3475	3.8	7.0	2.4	6.0	14.3	18.1	85.0	82.8	86.2	85.7	84	78.6	67.9	1	79, 95
2.2	112S	3540	4.0	7.7	2.1	5.9	11.9	20.5	86.5	84.5	91.2	90.4	79.5	72.8	60.5	1.2	80
2.2	112S	1765	4.0	7.5	2.7	11.9	31.9	41.2	89.5	87.9	90.7	89.7	77	70.2	58	1.4	
2.2	112M	1165	4.5	7.4	2.2	18.0	39.9	69.3	88	86.2	88.4	87.3	70.5	62.6	49.6	1.8	79
2.2	132S	1180	4.3	7.1	2.1	17.8	36.6	57.3	89.5	87.9	89.5	88.2	72	64.7	52.3	1.7	80
2.2	132M	875	5.6	5.6	1.9	23.9	44.7	75.7	85.5	83.3	86.4	84.2	58	49.9	38.3	2.7	
3	112S	3540	5.1	7.5	2.0	8.1	16.1	26.4	88.5	86.8	90.4	89.1	83.5	78.7	68.5	1.3	
3	112S	1765	5.8	7.4	2.8	16.2	44.9	57.2	89.5	87.9	89.7	88.3	72.5	65	52.3	2.3	
3	132M	1175	5.6	6.7	1.9	24.4	46.1	69.8	89.6	88.0	90.1	89.4	75	68.7	57	2	
3	160M	880	6.4	5.0	1.5	32.6	50.2	84.6	85.5	83.3	87.7	86.3	69	61.3	48.7	2.6	
3.7	112M	3540	6.2	7.6	2.1	10.0	20.5	32.8	88.5	86.8	91.1	90	84	79.4	69.4	1.5	
3.7	112M	1760	6.7	7.0	2.5	20.1	50.4	63.3	89.5	87.9	90.5	89.8	77	70.8	58.9	2.2	
3.7	132M	1175	7.1	7.3	2.2	30.0	65.8	95.3	89.5	87.9	90.6	89.7	73	66.1	53.9	2.7	
3.7	160M	880	7.8	5.4	1.7	40.0	66.2	111.7	86.5	84.5	89.7	88.4	68.5	60.9	48.4	3.2	
4	112M	3535	6.8	7.5	2.0	10.8	22.0	35.2	88.5	86.8	91.2	90.2	83.5	78.8	68.6	1.7	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
95 Class F temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 460
Frequency: 60Hz
kW: 0.55 - 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	Guar. Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
4	112M	1760	6.9	7.1	2.5	21.7	54.1	66.9	90.5	89.1	91.7	91	80	74.8	64	2	
4	132M	1180	7.7	7.6	2.4	32.4	76.9	109.4	90.5	89.1	90.8	89.8	72	64.6	52.2	3.1	
4	160M	880	8.2	5.1	1.5	43.4	66.2	111.7	86.5	84.5	89.7	88.7	70.5	63.2	50.9	3.2	
5.5	132S	3535	8.6	7.2	2.1	14.9	31.2	41.9	89.5	87.9	91.1	90.4	89.5	86.9	80.3	1.8	
5.5	132S	1775	9.5	7.8	2.4	29.6	70.5	96.5	91.7	90.5	92	91	79.5	73.8	62.8	3.1	
5.5	132M	1175	11.0	7.1	2.4	44.7	108.1	149.1	89.4	87.8	89.6	88.5	69	61.4	48.7	4.7	79
5.5	160M	1175	9.5	6.8	2.3	44.6	99.0	131.3	91.0	89.7	91.7	91	79.5	73.6	62.3	3.1	80
5.5	160M	880	11.6	5.5	1.8	59.6	105.5	166.1	86.5	84.5	90.2	89.2	69	61.6	49	4.6	
7.5	132M	3530	11.5	7.4	2.3	20.3	46.5	56.1	90.2	88.7	92	91.8	91	89.2	84.1	2	
7.5	132M	1770	13.0	7.4	2.3	40.5	91.1	123.0	91.7	90.5	92.1	91.4	79	73.8	62.9	4.2	
7.5	160M	1175	13.4	7.3	2.6	60.9	158.1	197.5	91.0	89.7	91.2	90.3	77	70.5	58.2	4.9	
7.5	180M	885	14.5	7.1	2.0	80.7	163.0	254.1	88.5	86.8	91.3	90.6	73.5	66.4	54.2	5.3	
11	160M	3555	17.0	6.8	2.0	29.5	60.2	73.9	91.0	89.7	92.5	92.1	89.5	88.2	83.5	2.9	
11	160M	1770	17.3	6.4	2.2	59.3	132.2	152.8	92.4	91.3	93.3	93.1	86.5	83.3	75.2	4.1	
11	160L	1175	19.4	7.9	3.0	89.2	267.6	244.0	91.7	90.5	92.3	91.6	77.5	70.8	58.5	7	
11	180L	885	20.7	6.6	1.9	118.7	222.9	338.4	88.5	86.8	91.2	91	75.5	69.8	58.3	6.8	
15	160M	3560	23.0	7.8	2.6	40.2	106.4	111.9	91.0	89.7	93.4	93.2	90	88.7	83.9	3.9	
15	160L	1775	23.4	7.1	2.6	80.7	212.9	271.1	93.0	92.0	94.1	94	86.5	83.5	75.4	5.5	
15	180L	1185	27.0	6.0	1.7	121.0	203.4	329.9	91.7	90.5	92.3	91.7	76	69.7	57.7	9.7	
15	200M	875	30	4.7	1.6	163.4	258.9	358.7	90.2	88.7	92.1	91.6	69.5	63.3	51.5	11.1	
18.5	160L	3555	27.7	7.9	2.9	49.7	145.9	132.6	91.7	90.5	93.9	93.9	91.5	90.8	87.5	3.8	90
18.5	180M	1780	29.0	6.6	1.9	99.2	184.4	267.4	93.6	92.6	94.3	94	85.5	81.6	72.6	7.5	
18.5	200L	1180	32.0	5.5	1.9	149.8	280.4	352.8	93.0	92.0	93.5	93	78	73.3	62.9	9.8	
18.5	200L	880	38.7	5.2	2.0	200.9	392.2	524.8	90.2	88.7	91.9	90.9	66.5	59	46.7	16.1	
22	180M	3560	32.7	8.0	3.3	59.0	194.3	257.6	91.7	90.5	93.9	93.3	92	90.3	85.3	5.6	
22	180L	1780	34.9	7.2	2.0	118.0	238.9	329.3	93.6	92.6	94.4	94.1	84.5	80.2	70.6	9.5	
22	200L	1180	37.3	5.6	2.0	178.3	354.0	414.7	93	92.0	93.8	93.5	79.5	74.9	65	10.9	
22	225S	890	41.2	4.7	1.4	236.2	329.3	525.2	91.7	90.5	94.2	93.6	73	66.8	55.2	14.4	
30	200M	3570	47.6	5.9	1.6	80.2	125.8	203.5	94.1	93.2	93.9	92.8	84	80.3	71.5	12.7	
30	200M	1780	49.7	5.4	1.7	160.9	274.1	395.2	94.1	93.2	94.7	94.2	80.5	75.5	64.8	15.2	
30	225M	1185	48.8	5.3	1.4	241.3	346.7	558.3	94.1	93.2	94.8	94.5	82	78.2	68.8	13.2	
30	225M	890	55.9	4.7	1.4	322.2	455.9	708.6	91.7	90.5	94.4	93.9	73.5	67.6	56.2	19	

Notes:
79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 460
Frequency: 60Hz
kW: 0.55 - 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	Guar. Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
37	200M	3565	58.1	5.4	1.5	99.1	144.5	221.4	93.0	92.0	94.3	93.6	86	83.6	76.6	12.8	
37	200L	1780	60.3	5.9	1.9	198.2	379.5	509.0	94.5	93.7	95.2	94.8	81.5	77	66.8	17.6	
37	250M	1195	64.5	6.1	1.6	296.0	477.1	811.2	94.1	93.2	94.6	93.6	76.5	70.3	58.4	22.9	
37	250M	885	67.9	5.5	1.7	399.0	668.1	1128.9	92.4	91.3	94.3	93.7	74	67.3	55	24.9	
45	225S	3570	70.6	6.0	1.5	120.3	174.9	302.1	93.6	92.6	95	94.1	85.5	82.1	73.7	17.5	
45	225S	1785	70.8	6.0	1.7	240.9	404.7	244.0	95.0	94.3	95.3	95.1	84	80.2	70.8	18.9	
45	280S	1195	72.9	6.5	1.4	359.8	514.3	995.0	94.5	93.7	94.5	93.4	82	77.5	67.5	21.2	
45	250M	885	82.0	5.6	1.7	485.4	839.2	1388.8	92.4	91.3	94.6	94.1	74.5	67.9	55.7	29.5	
55	225M	3575	85.3	6.7	1.8	146.9	261.9	400.5	93.6	92.6	95.5	94.7	86.5	83	74.6	20.8	
55	225M	1785	84.6	6.1	1.8	294.5	531.2	748.8	95.4	94.7	95.7	95.6	85.5	82.1	73.7	20.8	
55	280M	1195	91.3	6.4	1.5	439.8	640.6	1245.0	94.5	93.7	94.6	93.6	80	74.3	63.3	29.6	
55	280S	890	93.4	5.3	1.4	589.4	833.2	1380.4	93.6	92.6	95.3	94.8	79	74.8	64.8	27	
75	250M	3570	110.0	6.9	1.8	200.5	368.4	548.8	94.1	93.2	95.9	95.6	91	90	85.6	17.5	
75	250M	1785	117.0	5.0	1.5	400.8	597.2	912.1	95.4	94.7	96.2	95.9	84	80.4	71.8	29.9	
75	280M	1190	118.0	5.9	1.3	600.4	805.2	1472.3	95.0	94.3	95.3	94.7	84	80.3	71.6	30.3	
75	280M	890	127.0	5.2	1.4	804.5	1147.8	1858.1	93.6	92.6	95.4	95.1	79.5	75.2	65.4	36.1	
90	280M	3580	134.0	6.4	1.3	239.9	322.4	656.5	95.0	94.3	95.7	95.2	88.5	86.1	79.3	28.4	66
90	280S	1785	139.0	6.4	1.9	481.1	915.7	1363.5	95.4	94.7	95.8	95.3	85	81.1	71.7	37.2	
90	280K	1195	143	6.6	1.7	719.9	1211.0	2198.1	95	94.3	95.6	95	83	78.3	68.4	40.7	
90	280K	890	153.0	5.8	1.7	964.5	1649.3	2608.1	94.5	93.7	95.4	94.9	78	73.1	62.4	48	
110	280M	3580	162.0	6.5	1.5	293.2	429.3	795.5	95.0	94.3	96.1	95.7	89.5	87.7	81.9	31	66
110	280M	1790	164.0	6.0	1.2	586.5	684.3	1478.0	95.8	95.2	96.4	96.1	88	85.3	78.3	35.2	
110	280K	1195	173	7.2	1.9	879.4	1662.7	2870.4	95.8	95.2	95.9	95.4	83.5	79.1	69.2	48.4	
110	280H	890	184.0	6.0	1.8	1178.5	2100.5	3231.8	95.0	94.3	95.7	95.3	79	74.1	63.5	56.3	
132	280K	3585	192	7.5	1.7	351.5	600.3	1177.1	95.4	94.7	95.6	94.9	90.5	88.5	82.7	36.7	
132	280K	1790	200	6.9	1.4	702.9	988.6	2109.1	96.2	95.6	96.4	96.2	86	82.4	73.6	50.8	
132	280H	1195	207	7.0	1.8	1055.7	1944.5	3337.3	95.8	95.2	96	95.6	83.5	79.3	69.6	57.2	
132	280H	890	221.0	6.3	1.9	1413.9	2673.4	4051.8	95.4	94.7	95.8	95.4	78.5	73.3	62.5	69.9	100
160	280H	3580	229	7.2	1.8	426.3	777.0	1324.0	95.4	94.9	96	95.5	92	91	87	34.8	96
160	280H	1795	239	7.1	1.5	852.0	1259.5	2557.6	96.2	95.8	96.8	96.6	87.5	84.1	76	56.1	
160	280H	1195	250	7.0	1.9	1279.8	2387.5	4006.9	95.8	95.4	96.1	95.8	84	80.2	70.9	66.2	100

Notes:
66 CW rotation only facing opposite drive-end. CCW rotation available, but must be specified on the order.
96 Does not meet IEEE 841 noise level
100 With 85 mm shaft extension diameter

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 460
Frequency: 60Hz
kW: 0.55 - 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	Guar. Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
200	200	280H	1795	298	7.2	1.5	1064.6	1633.3	3229.3	96.2	95.8	96.4	95.7	87.5	84.3	76.6	96
220	220	280H	1795	330	7.3	1.6	1171.1	1815.5	3589.8	96.2	95.8	96.4	95.8	87	83.7	75.6	96

Notes:
96 Does not meet IEEE 841 noise level

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
0.55	90S	2930	0.7	7.1	2.3	1.8	4.2	5.7	79.1	79.5	76.1	78.5	70.7	58.1	0.4	
0.55	90S	1450	0.8	6.9	3.1	3.6	11.3	14.1	81.2	82.4	79.9	73	63.8	50.1	0.5	
0.55	90S	955	0.9	5.3	2.8	5.5	15.5	19.4	77.2	77.1	73.5	63	53.3	70.8	0.7	
0.55	112S	725	1.3	4.4	19	7.2	13.8	22.1	67	70.2	64.4	52.5	44	33.9	1	
0.75	90S	2915	0.9	7.1	2.4	2.5	5.8	7.5	81.4	82.2	80.1	82	75.3	63.2	0.4	
0.75	90S	1440	1	6.6	2.7	5	13.4	16.9	82.9	83.8	82.5	79	71	57.5	0.5	
0.75	112S	975	1.3	6.3	2.1	7.4	15.2	27.4	78.9	80.4	77.1	63.5	54	41.4	0.9	
0.75	112S	720	1.5	4.4	1.7	9.9	17.1	27.1	75	74.7	70.5	57	47.9	36.7	1.1	
1.1	90S	2915	1.3	7.6	2.6	3.6	9.2	11.3	83	84.5	83.4	84	78.1	66.3	0.6	
1.1	90L	1440	1.4	7.3	3.2	7.3	23.7	28.3	84.5	86.2	85.4	79.5	71.6	58.3	0.7	
1.1	112S	970	1.6	7.1	2.5	10.8	24.1	40.8	81	86.6	85.1	70	61.1	48.2	1	
1.1	132S	725	2	5	1.9	14.5	27.1	41.9	77.6	80	76.5	60	51.4	39.6	1.5	
1.5	112S	2945	1.9	7.7	2	4.9	10	16.9	84.8	88	86.2	80	73.1	61	0.8	
1.5	112S	1465	2	6.6	2.3	9.8	23	31.9	85.6	88.2	87	75.5	68	55.3	1.1	
1.5	112M	960	2.1	6.3	2	14.9	30.2	49.8	82.5	84.3	83.1	71	62.3	49.1	13	
1.5	132S	725	2.8	5.2	2.2	19.8	44.5	67.9	79.6	80.6	77.4	57.5	48.8	37.4	2.1	
2.2	112S	2940	2.6	7.9	2.2	7.1	14	22.6	86.2	89.3	88.4	82.5	76.5	65.1	1.1	
2.2	112S	1465	2.8	6.8	2.4	14.4	33.5	44.2	86.9	89.1	88.5	78	71.6	59.4	1.5	
2.2	112M	960	3.2	6.7	2.5	21.7	48	75.8	84.3	85.5	84.7	72.5	64.3	50.9	1.8	
2.2	132M	720	3.8	5	1.8	29	51.4	97.3	83.5	84.2	83.1	62.5	54.7	42.6	2.8	
3	112S	2930	3.4	7	1.9	9.8	18.6	29.4	87.2	89.6	89.2	84	78.9	68.2	1.4	
3	112S	1460	3.7	6.7	2.5	19.6	29.4	83.7	88.4	89.4	89.1	78	71.5	59.4	1.8	
3	132S	975	4	6.4	2.1	29.6	52.7	72.7	85.6	88.3	87.4	70.5	63.2	50.7	2.1	
3	160M	735	4.6	5.4	2	39.1	81.6	124.3	85.5	86.1	84	64.5	55.8	41.8	3.3	
3.7	112M	2930	4.1	7.1	2	12.1	24	37.1	87.9	90.1	90.1	85	78.6	67.8	1.5	
3.7	132S	1470	4.7	6.4	2	24	48.5	70.6	88.4	89.3	88.1	74	67.2	54.8	2.7	
3.7	132M	970	5	6.2	2.1	36.3	69.4	93.3	86.5	88.3	87.7	71	66.7	54.8	2.9	
3.7	160M	730	5.3	5.4	1.9	48.3	89.5	137.5	86.5	88.3	87	68	59.8	46.9	3.4	
4	112M	2920	4.3	7.6	2.6	13	33.6	40	88.1	90.5	89.9	87.5	83.7	74.7	1.6	
4	132S	1470	5.1	6.6	2.1	26	53.3	76.9	88.7	89.3	88.1	74.5	67.8	55.4	3	
4	132M	975	5.5	6.5	2.3	39	88.1	115.8	86.9	88.6	87.8	70	62.5	50	3.3	
4	160M	725	5.5	5.1	1.7	52.4	89.5	137.5	86.5	88.1	87.2	70	62.2	49.4	3.4	

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
5.5	132S	2930	5.8	7.5	2.7	17.9	47.6	51.8	89.2	91.3	91.1	90	87.7	81	2.1	
5.5	132S	1470	6.6	7.2	2.2	35.7	78.7	109.1	89.6	90.6	90	78	72.1	60.3	3.4	
5.5	132M	960	6.7	6	2.1	54	113.9	151.6	88	89.7	89.2	77.5	70.7	58.4	3.6	79,90, 95,97
5.5	160M	975	7	5.8	2.1	54.9	108.6	144.8	88	87.3	88.1	75	68.6	56.4	3.3	80
5.5	160L	730	7.4	7	2.1	71.2	149.4	230.1	86.5	89.8	88.9	72	64.4	51.8	4.3	90
5.5	180M	735	7.4	6.6	2.0	71.2	149.5	230.2	86.5	89.8	88.9	72	64.4	51.8	4.3	80
7.5	132S	2940	7.7	8.5	3.2	24.4	79	78.6	90.1	92.3	92.4	90.5	88.3	83	2.3	
7.5	132M	1470	8.9	7.5	2.3	48.7	105.6	149.3	90.4	91.3	91.1	78	72.2	60.7	4.5	
7.5	160M	975	8.9	6.3	2.3	73.6	166.2	211.4	89.1	91	90.8	79	73.1	61.4	4.4	
7.5	180L	735	9.5	6.4	2	97.3	197.9	300.6	87.8	90.8	90.6	75.5	69.1	57.3	4.8	90
11	160M	2960	11.5	7.7	2.9	35.5	102.4	103.9	91.2	92.4	92.3	91	89	83	2.1	
11	160M	1480	12.1	6.8	2.5	71	188	226.7	91.4	93.1	92.9	83.5	78.3	67.6	5.4	
11	160L	985	12.4	8	2.6	106.7	284.4	350.6	90.3	92.4	92.2	82	76.2	64.6	5.9	90
11	180M	975	13.5	7	2.7	107.7	284.4	253.5	90.3	91.3	90.9	76	68.6	55.9	7.6	80
11	180L	735	14.2	6.8	2.2	143	306.1	456.1	88.5	90	89.3	74	67.3	55	7.8	79,90,95
11	200M	730	15.1	4.7	1.7	144	251	341.8	88.5	91.6	91.1	69	62	49.8	8.7	80
15	160M	2960	14.8	8.6	3.7	48.4	177.6	140.9	91.9	93.8	94	92	90.9	87.2	3.2	
15	160L	1480	16.4	7.2	2.8	96.9	267	306.8	92.1	93.3	93	83	77.7	66.7	7.5	
15	180L	980	18.4	6.1	1.6	145.5	239	403.5	91.2	92.9	92.3	75	68.6	56.4	9.9	79,90,95
15	200M	985	17.2	8.1	2.8	145.7	409.5	489.6	91.2	92	91.7	80	73.6	61.2	9	80
15	200L	730	21	5.1	2	196.2	393.6	517.6	90.4	91.5	90.7	66	58.5	46	13.4	
18.5	160L	2955	18.1	9	3.8	59.7	238.2	210.7	92.4	94	93.6	92.5	90.3	84.7	5.2	90,95,97
18.5	180M	2965	18.4	8.7	3.8	59.8	221.1	173.5	92.4	93.7	94	91	89.8	85.2	4.5	80
18.5	180M	1480	20.1	7.2	1.8	119.3	239.8	360	92.6	93.6	93.3	80.5	74.4	62.7	10.4	
18.5	200L	985	23.5	5.8	1.6	179	334.6	543.9	92.1	92.9	91.9	73.5	66.1	53.5	15.6	
18.5	225S	740	23.2	4.6	1.3	238.6	318.5	519.1	92.1	93.4	93.9	73.5	67.2	55.5	12.1	
22	180M	2965	24.2	5.8	1.6	70.6	108.5	181.9	92.7	93.9	92.9	82	77.5	67.4	10.6	90
22	200M	2975	21.7	8.7	3.9	70.9	286.3	251.8	92.7	93.9	93.7	91.5	88.9	82.4	6.5	80
22	180L	1480	26	5.7	1.9	141.5	264.2	401	93	94.1	93.5	76	69	56.5	14.5	79,90
22	200M	1485	24.4	8	2.9	142	273.2	444	93	93.4	93	81	75.5	64.3	11.8	80
22	200L	985	26.7	6.6	1.9	213.3	415.7	659.3	92.5	93.4	92.8	74.5	66.5	55.2	15.6	
22	225M	740	27.1	4.6	1.4	284	379.4	614.6	92.5	94	93.7	73.5	67.3	56.5	13.9	

Notes:

79 Efficiency does not meet IE3 efficiency level
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
30	200M	2970	31.8	5.8	1.7	70.6	158.9	237.5	93.3	94.5	93.9	85	81.3	72.7	12	
30	200M	1480	32.9	5.5	1.8	193.3	335.4	477.4	93.6	95	94.8	81.5	76.7	66.2	14.6	
30	225M	990	34.2	5.5	1.8	289.5	445.9	733.4	92.9	95.1	94.7	80.5	73.1	62.2	15.2	
30	250M	735	38	5.8	1.8	388.7	718	1211.7	92.5	93.9	93.3	71.5	64	51.1	22.9	
37	200M	2970	28.9	6.1	2.1	118.9	244.9	305.9	93.7	95	94.5	85	81.6	73	14.7	
37	200L	1485	42	6.4	2.1	238	501.8	710.2	94	95.2	94.7	78.5	72	60	21.8	
37	250M	995	41.4	5.9	1.6	355.6	554.1	914.9	93.5	95.2	94.8	80	74.8	63.9	19.2	
37	250M	735	45.9	5.8	1.9	479.5	909.8	1505.3	93.1	94.2	93.7	72.5	64.9	52	26.9	
45	225S	2975	46.3	6.4	1.8	144.4	253.5	384.6	94	95.7	95.2	86.5	83.4	75.1	16.6	
45	225S	1485	50	6.7	2.1	289	592.3	911.8	94.2	95.5	95.1	80	73.8	61.8	25.3	
45	280S	995	52.2	6.1	1.4	432.2	597.8	1211.9	93.7	94.3	93.3	77	70.4	58.4	28.1	
45	280S	740	52.6	5.3	1.5	579.3	883.2	1528.1	93.5	94.7	94.1	76.5	70.6	59	26.9	
55	225M	2975	56.7	7.1	2	176.6	326.5	490.4	94.3	95.9	95.4	86	82.1	73	21.9	
55	225M	1485	58.6	6.7	2	353.5	694.7	1030.1	94.6	95.4	95.1	83	78	67.5	25.9	
55	280M	995	62.3	6.2	1.4	528.5	770.8	1508.1	94.1	94.7	94	78.5	72.4	59.5	31.8	
55	280M	740	64.1	5.6	1.6	708	1158.1	1937.7	93.9	95.1	94.6	77	71.1	58.7	33	
75	250M	2975	74.8	5.9	1.2	240.2	287.3	605.1	94.8	95.1	94.6	88.5	86.7	80.6	22.5	90,95,97
75	280S	2980	73.2	8.3	2.4	240.7	565.2	802	94.8	96.3	96.1	91.5	88.1	81.8	21.7	80
75	250M	1490	78.6	5.2	1.6	481.3	762.4	1166.1	95	96.4	96.3	84.5	80.9	72.2	29.6	
75	280M	995	82.8	6	1.4	721.3	1014.5	1921.6	94.7	95.1	94.6	80	74.7	63.7	39.4	
75	280M	740	86.2	5.7	1.7	965.7	1667	2696.7	94.6	95.4	95	77	71.5	60.1	44.1	
90	280M	2980	89.1	6.6	1.5	288.1	421.9	804.9	95	95.6	95.1	89	86.6	80.1	27.7	
90	280S	1490	92.5	6.9	1.3	575.8	736.9	1641.8	95.2	96.4	96.2	85.5	81.3	71.8	36.9	
90	280K	995	96.1	6.6	1.7	864.7	1464.7	2704.3	95	95.8	95.5	82.5	78.1	68	41.2	
90	280K	740	105	6.6	2.1	1157.2	2336.9	3708.4	94.9	95.1	94.5	74	67.3	56.5	57.8	
110	280M	2985	109	7.1	1.6	352	597.7	1095.9	95.3	96	95.5	89.5	86.7	79.9	34.2	
110	280M	1490	111	6	1.1	704.3	830.8	1834.3	95.5	96.4	96	87	84	76.5	37.7	
110	280K	995	118	6.9	1.8	1056.8	1881.2	3430.2	95.3	96	95.7	82	77.2	66.7	52.4	
110	280H	745	125	6.4	2	1415.3	3064.9	4773	95.3	95.6	95.1	77	68.7	56.4	70.7	

Notes:
80 Up framed to meet IE3 efficiency or IEEE 841 temperature requirements
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Typical Performance Data (cont.)

Volts: 690
Frequency: 50Hz
kW: 0.55 – 220

Output kW	Frame	FL RPM	NP Amps I_N (A)	Start/ Full Load Amps I_S/I_N	Start/ Full Load Torque T_S/T_N	Full Load Torque T_N (Nm)	Starting Torque T_S (Nm)	Breakdown Torque Tmax (Nm)	NP Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max. KVAR	Notes
132	280K	2980	126	6.9	1.8	422.2	674.9	1295.1	95.5	96.3	95.9	91	90.2	85.7	90.9	
132	280K	1490	135	6.4	1.3	844.5	1079.4	2349.1	95.6	96.8	96.6	86	82.1	73.4	48.8	
132	280H	995	139	7.2	1.9	1267.9	2248.2	4001.6	95.5	96.1	95.8	83	78.8	68.8	58.6	
150	280H	2985	152	7.6	2	479.7	939	1690.5	95.7	96.5	96.2	92	90.1	85	37.1	
150	280H	1490	150	6.3	1.3	1023.3	1488.1	3054.5	95.9	97	96.8	86.5	83.3	75	58	
150	280H	995	157	6.9	1.8	1063.2	1939.7	3395.2	95.8	96.2	96.1	83.5	79.3	69.5	65	
160	280H	2985	152	7.8	1.8	511.8	939	1690.4	95.7	96.5	96.3	92	90.2	85.2	37.1	
160	280H	1495	163	7.3	1.5	1023	1582.1	3258	95.9	97	96.8	85.5	81.7	72.5	63.4	
185	280H	2980	175	7.6	1.8	592.1	1091.7	1914.8	95.8	96.6	96.5	92.5	91	86.8	40.9	90,95, 96,97
185	280H	1490	185	6.6	1.4	1183.3	1642.4	3362	96	96.6	96.3	87	83.6	75.7	65.3	
200	280H	1495	202	7.5	1.6	1278.4	1937	3868.8	96	96.8	96.4	85.5	83	74.5	74.1	96
220	280H	1490	222	6.8	1.5	1407.2	2043.7	4088.4	96	96.7	96.5	86.5	83.2	75	79.8	90,95, 96,97

Notes:
90 Does not meet IEEE 841 bearing temperature rise
95 Class F temperature rise
96 Does not meet IEEE 841 noise level
97 Does not meet 200C AIT at 1.0SF-230C AIT above only.

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty
IE3 Efficiency

Checklist for Value

Complete Test per IEC 60034 and IEEE Standard 112, Test Method B on 2% of all production. Verification of compliance and routine test report supplied with every X$D Ultra 841 IEC motor

Charged lube system with Polyurea grease decreases the potential for contaminants in the lubricant

Dual mounting holes provide for application versatility and reduce inventory

Four point cast-in lifting lugs eliminate lost eye bolts and make mounting easier and safer

CE Mark, ATEX Zone 2, IEC Ex Zone 2 standard on nameplates

All ratings designed to meet T3 (200ºC) Temperature code for division 2 and Zone 2 environments

CSA Division 2 certification and nameplates available upon request

Stainless steel combination breather/drains allow condensation to drain from motor

Five year (60/66months) warranty is standard. This comprehensive warranty program covers both mechanical and efficiency performance

Rugged cast iron frame, conduit box and fan cover are resistant to process industry environments for extended motor life

Epoxy ester paint system stands up to corrosive environments and meets the IEEE 841 paint requirements

Rigid and recessed severe-duty shaft slinger provides bearing system protection. Field modifiable to a non-contact rotating seal on the drive-end

Corrosion resistant ISO Grade 8.8 hardware is rugged and designed for ease of the motor service

Grease fittings and plugs provide relubrication access to extend bearing life

Embossed 316 stainless steel nameplate stamped with superior operational and maintenance information. Permanently labeled, non-wicking Class H leads make connections and installation easy

Lead gasket and conduit box cover gasket prevent moisture and contaminants from entering motor

Cast-in vibration pads provide five point vibration probe mounting locations (four radial and one axial)

Single shielded bearings on both ends open towards the grease cavity allowing maximum opportunity for grease circulation within the confines of the GE Six Star Bearing System

130,000 hour L10 direct connected and 50,000 hour L10a belted bearing life increases up-time and decreases repair costs

Oversized gasketed conduit box reduces the possibility of moisture in the conduit box

Precision balance to 1.4mm/sec (P) (0.055 in/sec (P)) results in smooth, reliable operation and extends bearing life

Cast iron bearing cap with gasket retains lubricant and protects the interior of the motor and the bearing system from contaminants

New finned end shields (200-280 Frames) for improved heat dissipation and long bearing life

Non-sparking corrosion resistant fan is quiet and energy efficient

Premium IE3 efficiency lowers annual energy cost and extends motor life without any sacrifice in class B temperature rise at 1.0 S.F.

GEGARD2400 insulation system is manufactured with Class H materials and is designed to exceed the IGBT requirements of NEMA MG1-31

Extended grease fittings and grease filler tubes charged with Polyurea grease make maintenance safer and easier

ISO 1940 Grade 1.0 Precision balance for low vibration

Temperature resistant Polyurea bearing grease suitable for temperatures of -40 to +130° C

Fan covers on frames 200 through 280 are designed with axial mounting bolts to ensure a more rugged installation

Grounding terminal in conduit box and on both sides of the frame adds to safety during installation and service

Stator core centered in the frame with the standard endshield construction enables conversion from conduit box on the left side of the DE shaft to the right side of the DE shaft

Low temperature rise design increases bearing life

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty

Dimensions

Dimensions refer to drawings on following page. Dimensions in millimeters (mm).
Cast Iron Construction/Frames 90-280, Type KFS, 3 Phase/Dimensions - For estimating only

Frame	Pole	A	AA	AB	AC	AD	B	B1	BA	BB	C	D	DB	E	EG	F	G	GA	GD	H	HA	Apprx Mass kgs
90	All	140	36.6	174.8	181.8	167.1	100	125	58.9	149.4	56	24	M8	50	19	8	20.0	27	7	90	11	23
112	All	190	45.2	220.5	234.6	221.2	114	140	65.5	168.7	70	28	M10	60	22	8	24.0	31	7	112	9.1	46
132	All	216	42.1	243.8	282.4	240.0	140	178	79.2	203.2	89	38	M12	80	28	10	33.0	41	8	132	12.9	100
160	All	254	39.9	284.5	329.8	293.0	210	254	99.8	287.0	108	42	M16	110	36	12	37.0	45	8	160	17.5	130
180	All	279	45.9	315.0	374.8	312.3	241	279	104.6	325.1	121	48	M16	110	36	14	42.5	51.5	9	180	21.2	200
200	All	318	59.7	365.8	461.2	388.5	267	305	92.3	350.5	133	55	M20	110	42	16	49.0	59	10	200	22	365
225	2	356	62.9	406.4	511.6	413.9	286	311	86.7	365.8	149	55	M20	110	42	16	49.0	59	10	225	24	524
	4-8	356	62.9	406.4	511.6	413.9	286	311	86.7	365.8	149	60	M20	140	42	18	53.0	64	11	225	24	
250	2	406	75.5	457.2	576.8	485.3	311	349	102.0	406.4	168	60	M20	140	42	18	53.0	64	11	250	28.8	721
	4-8	406	75.5	457.2	576.8	485.3	311	349	102.0	406.4	168	65	M20	140	42	18	58.0	69	11	250	28.8	
280 S/M	2	457	66.7	508.0	659.4	527.3	368	419	126.2	477.5	190	65	M20	140	42	18	58.0	69	11	280	38.4	998
	4-8	457	66.7	508.0	659.4	527.3	368	419	126.2	477.5	190	75	M20	140	42	20	67.5	79.5	12	280	38.4	
280 K/H	2	457	79.3	508.0	659.4	527.3	500	630	221.2	693.5	196.5	65	M20	140	42	18	58	69	11	280	38.4	1430
	4-8	457	79.3	508.0	659.4	527.3	500	630	221.2	693.5	196.5	85	M20	170	42	22	76	90	14	280	38.4	
280 K/H	2	457	79.3	508.0	659.4	545.1	500	630	221.2	693.5	196.5	65	M20	140	42	18	58	69	11	280	38.4	1430
	4-8	457	79.3	508.0	659.4	545.1	500	630	221.2	693.5	196.5	85	M20	170	42	22	76	90	14	280	38.4	

Frame	Pole	HB	HC	HD	HE	HF	HL	K	L	LH	LW	UB[2]	Ground Bolt	Conduit Box Volume Cu-Decimeters	Cu-Inch
90	All	208.6	183.1	264.8	118.6	174.8	127	10	331.6	44.5	127	2 X M25 X 1.5	M6 X 1.0	0.49	30
112	All	270	238.7	340.8	158	228.8	158.2	12	394.4	48	147.3	2 X M32 X 1.5	M6 X 1.0	0.9	55
132	All	308.8	277.5	379.7	176.8	247.7	158.2	12	506	48	147.3	2 X M32 X 1.5	M6 X 1.0	0.90	55
160	All	371.8	332.6	455.8	211.8	295.8	193.8	14.5	658.4	64	180.3	2 X M40 X 1.5	M8 X 1.25	2.25	137
180	All	411.1	367.1	495	231.1	315	193.8	14.5	726.1	64	180.3	2 X M40 X 1.5	M8 X 1.25	2.25	137
200	All	500	435.9	591	300	391	243.3	18.5	787.6	85	236.2	2 X M50 X 1.5	M12 X 1.75	5.67	346
225	2	551.1	486.4	641.8	326.1	416.8	243.3	18.5	839.8	85	236.2	2 X M50 X 1.5	M12 X 1.75	5.67	346
	4-8	551.1	486.4	641.8	326.1	416.8	243.3	18.5	873.6	85	236.2	2 X M50 X 1.5	M12 X 1.75		
250	2	613.7	548.9	738.1	363.7	488.1	317.5	24	958	112	304.8	2 X M63 X 1.5	M12 X 1.75	11.47	700
	4-8	613.7	548.9	738.1	363.7	488.1	317.5	24	958	112	304.8	2 X M63 X 1.5	M12 X 1.75		
280 S/M	2	682.3	617.4	806.6	402.3	526.6	317.5	24	1079.6	112	304.8	2 X M63 X 1.5	M12 X 1.75	11.47	700
	4-8	682.3	617.4	806.6	402.3	526.6	317.5	24	1079.6	112	304.8	2 X M63 X 1.5	M12 X 1.75		
280 K/H	2	682.3	617.4	806.6	402.3	526.6	317.5	24	1302.3	112	304.8	2 X M63 X 1.5	M12 X 1.75	11.47	700
	4-8	682.3	617.4	806.6	402.3	526.6	317.5	24	1330.4	112	304.8	2 X M63 X 1.5	M12 X 1.75		
280 K/H	2	697.8	617.4	819.8	417.8	539.8	398.8	24	1302.3	120	388.6	2 X M63 X 1.5	M12 X 1.75	20.65	1260
	4-8	697.8	617.4	819.8	417.8	539.8	398.8	24	1330.4	120	388.6	2 X M63 X 1.5	M12 X 1.75		

Notes:

-All Dimensions are with standard conduit box sizes only
-Motor feet have 2 holes per foot allowing assembly with conduit box on the right or left side of the DE shaft while maintaining critical IEC mounting dimensions
-Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward, or from either side
-Weights shown are approximate shipping weights and should be used for estimating only

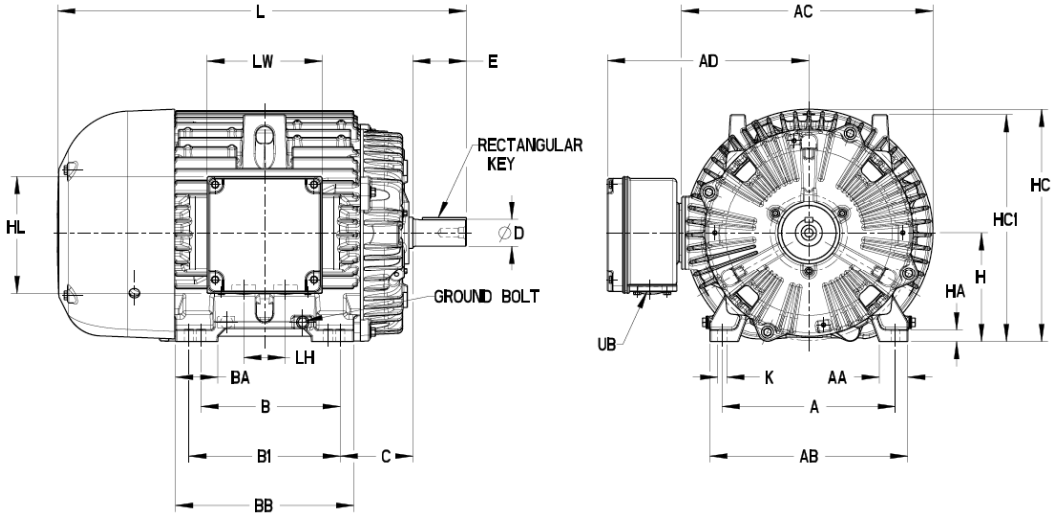
2 Two tapped holes (UB) are provided in the conduit box gland plate. The holes are plugged for shipping.
90 frames do not have gland plates—two tapped holes (UB) provided in bottom of the conduit box.

X$D Ultra® 841 IEC

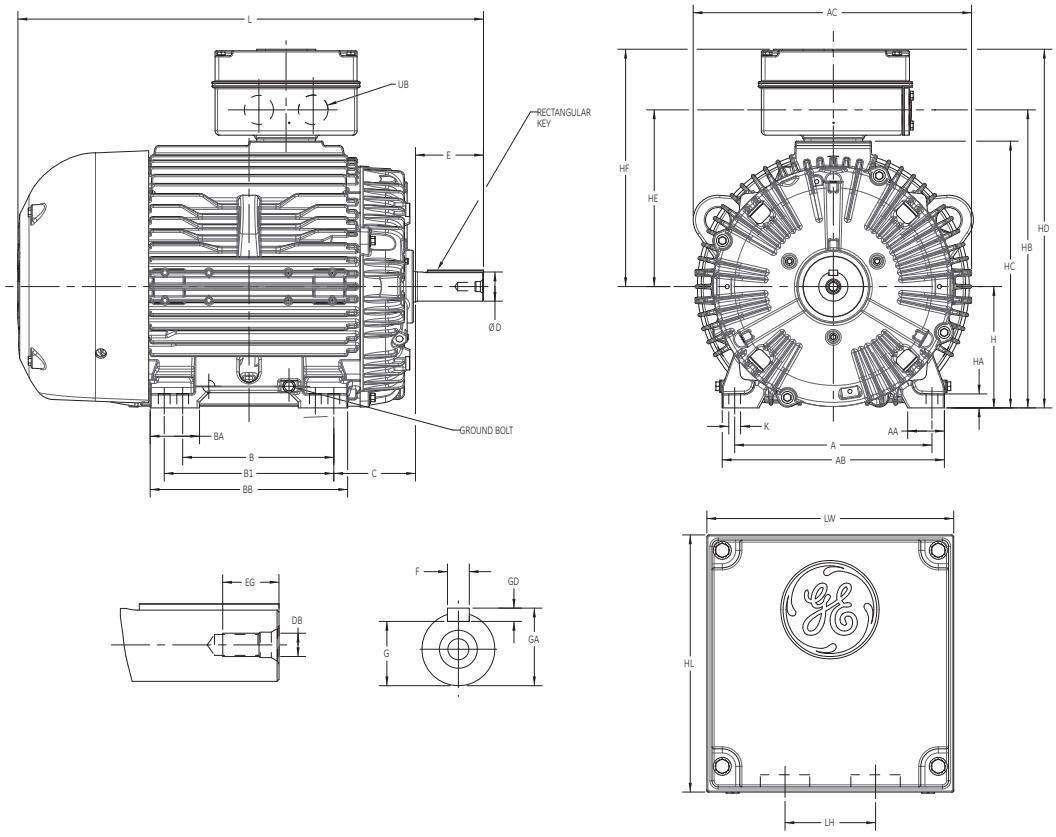
TEFC—Extra Severe Duty

Dimensions (cont.)

Side Mounted Conduit Box



Top Mounted Conduit Box



X$D Ultra® 841 IEC

TEFC—Extra Severe Duty

Dimensions (cont.)

All dimensions are in mm

Flange With Through Holes (FF) or Tapped Holes (FT)	Frame	Conduit Box Volume (Cu-Deci-meters)	Conduit Box Volume (Cu-In)	Pole	A	AA	AB	AC	B	B1	BA	BB	C[1]	D	DB	E	EG	F	G	GA	GD
FF100	90	0.49	30	All	140	36.6	174.8	181.8	100	125	58.9	149.4	100	24	M8	50	19	8	20	27	7
FT100	90	0.49	30	All	140	36.6	174.8	181.8	100	125	58.9	149.4	100	24	M8	50	19	8	20	27	7
FF115	90	0.49	30	All	140	36.6	174.8	181.8	100	125	58.9	149.4	100	24	M8	50	19	8	20	27	7
FT115	90	0.49	30	All	140	36.6	174.8	181.8	100	125	58.9	149.4	100	24	M8	50	19	8	20	27	7
FF130	90	0.49	30	All	140	36.6	174.8	181.8	100	125	58.9	149.4	100	24	M8	50	19	8	20	27	7
FT130	90	0.49	30	All	140	36.6	174.8	181.8	100	125	58.9	149.4	100	24	M8	50	19	8	20	27	7
FF165	90	0.49	30	All	140	36.6	174.8	181.8	100	125	58.9	149.4	100	24	M8	50	19	8	20	27	7
FF130	112	0.9	55	All	190	45.2	220.5	234.6	114	140	65.8	168.7	115	28	M10	60	22	8	24	31	7
FT130	112	0.9	55	All	190	45.2	220.5	234.6	114	140	65.8	168.7	115	28	M10	60	22	8	24	31	7
FF165	112	0.9	55	All	190	45.2	220.5	234.6	114	140	65.8	168.7	115	28	M10	60	22	8	24	31	7
FT165	112	0.9	55	All	190	45.2	220.5	234.6	114	140	65.8	168.7	115	28	M10	60	22	8	24	31	7
FF215	112	0.9	55	All	190	45.2	220.5	234.6	114	140	65.8	168.7	115	28	M10	60	22	8	24	31	7
FT215	112	0.9	55	All	190	45.2	220.5	234.6	114	140	65.8	168.7	115	28	M10	60	22	8	24	31	7
FF165	132	0.9	55	All	216	42.1	243.8	282.4	140	178	79.2	203.2	118	38	M12	80	28	10	33	41	8
FT165	132	0.9	55	All	216	42.1	243.8	282.4	140	178	79.2	203.2	118	38	M12	80	28	10	33	41	8
FF215	132	0.9	55	All	216	42.1	243.8	282.4	140	178	79.2	203.2	118	38	M12	80	28	10	33	41	8
FT215	132	0.9	55	All	216	42.1	243.8	282.4	140	178	79.2	203.2	118	38	M12	80	28	10	33	41	8
FF265	132	0.9	55	All	216	42.1	243.8	282.4	140	178	79.2	203.2	118	38	M12	80	28	10	33	41	8
FT265	132	0.9	55	All	216	42.1	243.8	282.4	140	178	79.2	203.2	118	38	M12	80	28	10	33	41	8
FF300	160	2.25	137	All	254	39.9	284.5	329.8	210	254	99.8	287	146	42	M16	110	36	12	37	45	8
FF215	160	2.25	137	All	254	39.9	284.5	329.8	210	254	99.8	287	146	42	M16	110	36	12	37	45	8
FT215	160	2.25	137	All	254	39.9	284.5	329.8	210	254	99.8	287	146	42	M16	110	36	12	37	45	8
FF265	160	2.25	137	All	254	39.9	284.5	329.8	210	254	99.8	287	146	42	M16	110	36	12	37	45	8
FT265	160	2.25	137	All	254	39.9	284.5	329.8	210	254	99.8	287	146	42	M16	110	36	12	37	45	8
FF300	180	2.25	137	All	279	45.9	315	374.8	241	279	104.6	325.1	146	48	M16	110	36	14	42.5	51.5	9
FF350	200	5.67	346	All	318	59.7	365.8	461.2	267	305	92.4	350.5	158	55	M20	110	42	16	49	59	10
FF400	225	5.67	346	4-8	356	62.9	406.4	511.6	286	311	86.4	365.8	149	60	M20	140	42	18	53	64	11
		5.67		2	356	62.9	406.4	511.6	286	311	86.4	365.8	149	55	M20	110	42	16	49	59	10
FF500	250	11.47	700	4-8	406	75.5	457.2	576.8	311	349	101.6	406.4	168	65	M20	140	42	18	58	69	11
		11.47		2	406	75.5	457.2	576.8	311	349	101.6	406.4	168	60	M20	140	42	18	53	64	11
FF500	280 S/M	11.47	700	2	457	66.7	508	659.4	368	419	126.2	477.5	190	65	M20	140	42	18	58	69	11
				4-8	457	66.7	508	659.4	368	419	126.2	477.5	190	75	M20	140	42	20	67.5	79.5	12
FF500	280 K/H	11.47	700	2	457	79.3	508	659.4	500	630	221.2	693.5	192.5	65	M20	140	42	18	58	69	11
				4-8	457	79.3	508	659.4	500	630	221.2	693.5	192.5	85	M20	170	42	22	76	90	14
FF500	280 K/H	20.65	1260	2	457	79.3	508	659.4	500	630	221.2	693.5	192.5	65	M20	140	42	18	58	69	11
				4-8	457	79.3	508	659.4	500	630	221.2	693.5	192.5	85	M20	170	42	22	76	90	14

Notes:

1 C Dimension is not per IEC standard in 90, 112, 132, 160, 180, 200, and 280K/H frames

X$D Ultra® 841 IEC

TEFC—Extra Severe Duty

Dimensions (cont.)

All dimensions are in mm

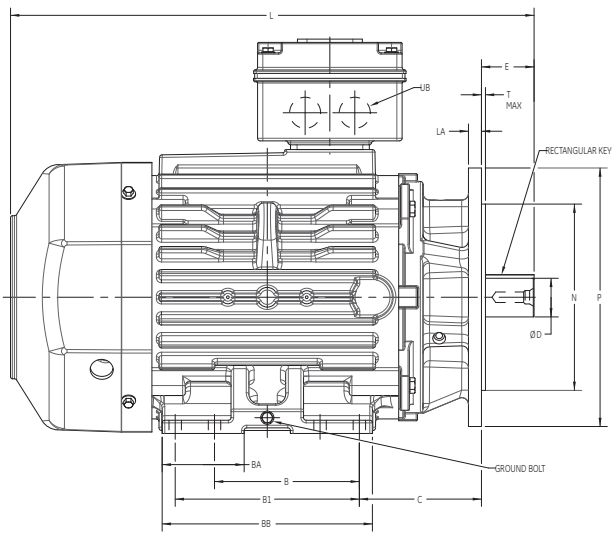
Flange With Through Holes (FF) or Tapped Holes (FT)	Frame	Pole	H	HA	HC	HL	K	L	LA	LW	LH	M	N	P	S	T max.	Z	UB	Ground Bolt
FF100	90	All	90	11	183.1	127	10	375.4	11.6	127	44.5	100	80	120	7	3	4	2 X M25 X 1.5	M6 X 1.0
FT100	90	All	90	11	183.1	127	10	375.4	11.6	127	44.5	100	80	120	M6	3	4	2 X M25 X 1.5	M6 X 1.0
FF115	90	All	90	11	183.1	127	10	375.4	11.6	127	44.5	115	95	140	10	3	4	2 X M25 X 1.5	M6 X 1.0
FT115	90	All	90	11	183.1	127	10	375.4	11.6	127	44.5	115	95	140	M8	3	4	2 X M25 X 1.5	M6 X 1.0
FF130	90	All	90	11	183.1	127	10	375.4	11.6	127	44.5	130	110	160	10	3.5	4	2 X M25 X 1.5	M6 X 1.0
FT130	90	All	90	11	183.1	127	10	375.4	11.6	127	44.5	130	110	160	M8	3.5	4	2 X M25 X 1.5	M6 X 1.0
FF165	90	All	90	11	183.1	127	10	375.4	11.6	127	44.5	165	130	200	12	3.5	4	2 X M25 X 1.5	M6 X 1.0
FF130	112	All	112	9.1	238.7	158.2	12	439.6	12	147.3	48	130	110	160	10	3.5	4	2 X M32 X 1.5	M6 X 1.0
FT130	112	All	112	9.1	238.7	158.2	12	439.6	12	147.3	48	130	110	160	M8	3.5	4	2 X M32 X 1.5	M6 X 1.0
FF165	112	All	112	9.1	238.7	158.2	12	439.6	12	147.3	48	165	130	200	12	3.5	4	2 X M32 X 1.5	M6 X 1.0
FT165	112	All	112	9.1	238.7	158.2	12	439.6	12	147.3	48	165	130	200	M10	3.5	4	2 X M32 X 1.5	M6 X 1.0
FF215	112	All	112	9.1	238.7	158.2	12	439.6	12	147.3	48	215	180	250	14.5	4	4	2 X M32 X 1.5	M6 X 1.0
FT215	112	All	112	9.1	238.7	158.2	12	439.6	12	147.3	48	215	180	250	M12	4	4	2 X M32 X 1.5	M6 X 1.0
FF165	132	All	132	12.9	277.5	158.2	12	535	12.6	147.3	48	165	130	200	12	3.5	4	2 X M32 X 1.5	M6 X 1.00
FT165	132	All	132	12.9	277.5	158.2	12	535	12.6	147.3	48	165	130	200	M10	3.5	4	2 X M32 X 1.5	M6 X 1.00
FF215	132	All	132	12.9	277.5	158.2	12	535	12.6	147.3	48	215	180	250	14.5	4	4	2 X M32 X 1.5	M6 X 1.00
FT215	132	All	132	12.9	277.5	158.2	12	535	12.6	147.3	48	215	180	250	M12	4	4	2 X M32 X 1.5	M6 X 1.00
FF265	132	All	132	12.9	277.5	158.2	12	535	12.6	147.3	48	265	230	300	14.5	4	4	2 X M32 X 1.5	M6 X 1.00
FT265	132	All	132	12.9	277.5	158.2	12	535	12.6	147.3	48	265	230	300	M12	4	4	2 X M32 X 1.5	M6 X 1.00
FF300	160	All	160	17.4	332.6	193.8	14.5	696.5	14.9	180.3	64	300	250	350	18.5	5	4	2 X M40 X 1.5	M8 X 1.25
FF215	160	All	160	17.4	332.6	193.8	14.5	696.5	14.9	180.3	64	215	180	250	14.5	4	4	2 X M40 X 1.5	M8 X 1.25
FT215	160	All	160	17.4	332.6	193.8	14.5	696.5	14.9	180.3	64	215	180	250	M12	4	4	2 X M40 X 1.5	M8 X 1.25
FF265	160	All	160	17.4	332.6	193.8	14.5	696.5	14.9	180.3	64	265	230	300	14.5	4	4	2 X M40 X 1.5	M8 X 1.25
FT265	160	All	160	17.4	332.6	193.8	14.5	696.5	14.9	180.3	64	265	230	300	M12	4	4	2 X M40 X 1.5	M8 X 1.25
FF300	180	All	180	21.2	367.1	193.8	14.5	751.2	14.2	180.3	64	300	250	350	18.5	5	4	2 X M40 X 1.5	M8 X 1.25
FF350	200	All	200	21.8	435.9	243.3	18.5	812.5	18.9	236.2	85	350	300	400	18.5	5	4	2 X M50 X 1.5	M12 X 1.75
FF400	225	4-8	225	24	491	243.3	18.5	874	20	236.2	85	400	350	450	18.5	5	8	2 X M50 X 1.5	M12 X 1.75
		2	225	24	491	243.3	18.5	844	20	236.2	85	400	350	450	18.5	5	8	2 X M50 X 1.5	M12 X 1.75
FF500	250	4-8	250	28.8	548.9	317.5	24	963	25	304.8	112	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75
		2	250	28.8	548.9	317.5	24	963	25	304.8	112	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75
FF500	280 S/M	2	280	38.4	617.4	317.5	24	1079.6	24.9	304.8	112	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75
		4-8	280	38.4	617.4	317.5	24	1077.9	24.9	304.8	112	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75
FF500	280 K/H	2	280	38.4	617.6	317.5	24	1298.3	24.9	304.8	112	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75
		4-8	280	38.4	617.6	317.5	24	1326.5	24.9	304.8	112	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75
FF500	280 K/H	2	280	38.4	617.6	398.8	24	1298.3	24.9	388.6	120	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75
		4-8	280	38.4	617.6	398.8	24	1326.5	24.9	388.6	120	500	450	550	18.5	5	8	2 X M63 X 1.5	M12 X 1.75

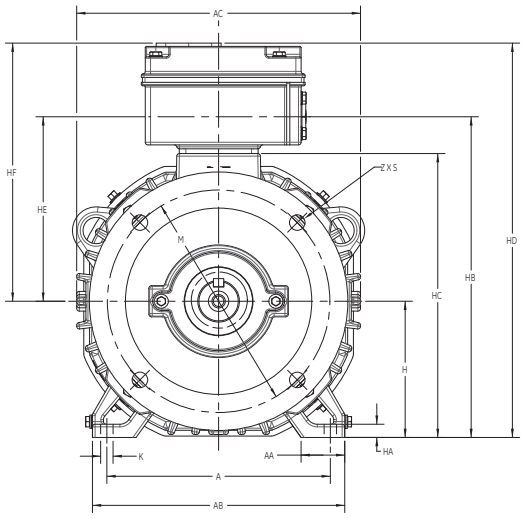
X$D Ultra® 841 IEC

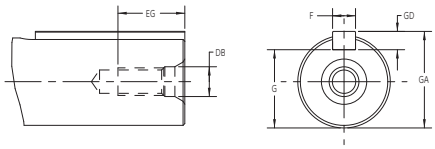
TEFC—Extra Severe Duty

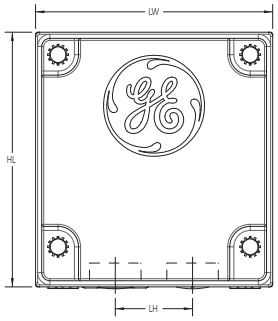
Dimensions (cont.)

FF and FT Flange









X$D Ultra® 841 IEC

TEFC—Extra Severe Duty

Drip Cover Kits

Cat. No.	Part No.	Frame	List Price	Price Symbol	Norm. Stk.
A1201	249A4267AD-G01	140	$158	G4-7KITS	Y
A1202	249A4267AD-G02	180	$165	G4-7KITS	Y
A1203	249A4267AD-G03	210	$188	G4-7KITS	Y
A1204	249A4267AD-G04	250	$204	G4-7KITS	Y
A1205	249A4267AD-G05	280	$233	G4-7KITS	Y
A1206	249A4267AD-G06	320	$260	G4-7KITS	Y

Notes

5.0 X$D Ultra® Premium Efficient Explosion Proof Motors

5.1 X$D Ultra® XP

5.1 Standard Features

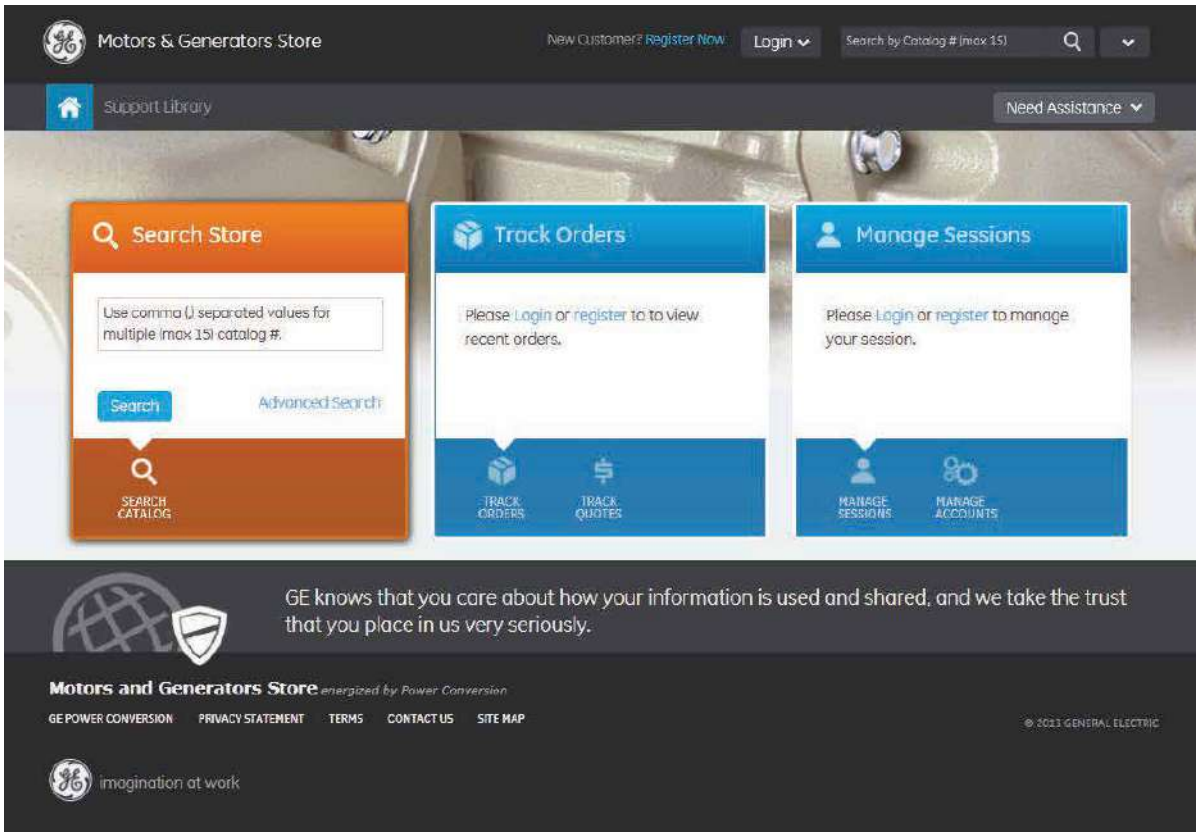
5.2 Pricing

5.4 Performance Data

5.6 Dimensions

Standard Motor e-Commerce

As of February 24, 2014 a new generation standard motor ordering application came online. As a valued client of GE, you will have access to all of its great features.



If you already have access to EliteNet, your credentials should already be loaded into this site. There may be a simple registration process to acquire your login and password.

If you do not have an account with EliteNet, don't worry! There is a simple registration link at the top of this page to get the process started. Your sales representative will help you gain access to your new profile.

www.mgstore.gepowerconversion.com
Give us a try today!

X$D Ultra® XP

Premium Efficient Explosion Proof

Standard Features

Div 1, Class I, Groups C and D; Class II, Groups F and G

HP Rating	1.5-150
Poles	2, 4, 6
Voltage	230/460, 460, 575
Agency Approvals	UL-Component and Insulation System Recognition, UL-674 CSA-Motors and C-390
Altitude	Up to 3300 ft at 40°C
Ambient	40°C
Balance/Vibration	140-280 Frames - Precision Plus (0.040 in/sec); 320 Frames and larger - NEMA Grade B (0.080 in/sec)
Bearing Caps	Yes
Bearing Type	Ball
Conduit Box	Cast Iron
Drains	None
Efficiency	Meets or exceeds NEMA Premium
End Shield	Cast Iron
Fan	Polypropylene Non-Sparking (Some High HP 2 Poles are Bronze)
Fan Cover	Cast Iron - ASTM A48
Frame Material	Finned Cast Iron
Frame Size	182-445
Frequency	60 Hz
Grease	Polyurea
Ground	Inside Conduit Box
Insulation Class	F
Insulation System	182 to 445 frames. Non-Hygroscopic, Anti-Fungus
L10 Bearing Life	Direct Coupled: 65,000 hrs, Belted: 25,000 hrs
Lifting Means	Lifting Lugs Cast Into Frame
Mounting	F1
Mounting Holes	Dual Mounting holes
Nameplate	316 Stainless Steel
NEMA Design	A or B (See Performance Data)
Paint	Buff, Epoxy ester
Relubrication	Both ends, extended through fan cover
Rotor	Cast Aluminum
Service Factor	1.00
Temperature Rise	105°C Max (UL Limit), at rated load
Tests	NEMA Routine, IEEE 112 Method B
Thermal Protection	1 NC thermostat
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first

X$D Ultra® XP

Premium Efficient Explosion Proof

Pricing

Base Mounted-Class I, Groups C and D; Class II, Groups F and G
Volts: 230/460, 460, 575
HP: 1.5 – 150

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	NEMA Design	KVA/HP Code	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Weight (lbs.)	C Dim. (in.)	Code
1.5	1200	230/460	182T	4.8/2.4	87.5	B	M	**E9601**	5KS182CAA305	$1,043	G6-7XP$	N	76	15.92	T3B
1.5	1200	575	182T	1.9	87.5	B	M	**E9602**	5KS182CAA304	$1,043	G6-7XP$	N	76	15.92	T3B
2	1200	230/460	184T	6.0/3.0	88.5	B	L	**E9603**	5KS184CAA305	$1,164	G6-7XP$	N	101	15.92	T3C
2	1200	575	184T	2.5	88.5	B	L	**E9604**	5KS184CAA304	$1,164	G6-7XP$	N	101	15.92	T3C
3	3600	230/460	182T	7.8/3.9	86.5	B	K	**E9605**	5KS182CAA105	$1,035	G6-7XP$	N	76	15.92	T3B
3	3600	575	182T	3.2	86.5	B	K	**E9606**	5KS182CAA104	$1,035	G6-7XP$	N	76	15.92	T3B
3	1800	230/460	182T	8.0/4.0	89.5	B	K	**E9607**	5KS182CAA205	$1,007	G6-7XP$	Y	76	15.92	T3B
3	1800	575	182T	3.2	89.5	B	K	**E9608**	5KS182CAA204	$1,007	G6-7XP$	N	76	15.92	T3B
3	1200	230/460	213T	8.6/4.3	89.5	B	K	**E9678**	5KS213CAA305	$1,415	G6-7XP$	N	200	20.15	T3C
3	1200	575	213T	3.4	89.5	B	K	**E9610**	5KS213CAA304	$1,415	G6-7XP$	N	200	20.15	T3C
5	3600	230/460	184T	13.0/6.5	88.5	B	J	**E9611**	5KS184CAA105	$1,229	G6-7XP$	Y	101	15.92	T3B
5	3600	575	184T	5.2	88.5	B	J	**E9612**	5KS184CAA104	$1,229	G6-7XP$	N	101	15.92	T3B
5	1800	230/460	184T	13.2/6.6	89.5	B	J	**E9613**	5KS184CAA205	$1,181	G6-7XP$	Y	101	15.92	T3B
5	1800	575	184T	5.3	89.5	B	J	**E9614**	5KS184CAA204	$1,181	G6-7XP$	N	101	15.92	T3B
5	1200	230/460	215T	13.6/6.8	89.5	B	J	**E9679**	5KS215CAA305	$2,010	G6-7XP$	N	220	20.15	T3C
5	1200	575	215T	5.5	89.5	B	J	**E9616**	5KS215CAA304	$2,010	G6-7XP$	N	220	20.15	T3C
7.5	3600	230/460	213T	18.0/9.0	89.5	B	H	**E9661**	5KS213CAA105	$1,605	G6-7XP$	Y	200	20.15	T3C
7.5	3600	575	213T	7.2	89.5	B	H	**E9617**	5KS213CAA104	$1,605	G6-7XP$	N	200	20.2	T3C
7.5	1800	230/460	213T	18.4/9.2	91.7	B	H	**E9669**	5KS213CAA205	$1,595	G6-7XP$	Y	200	20.15	T3C
7.5	1800	575	213T	7.3	91.7	B	H	**E9618**	5KS213CAA204	$1,595	G6-7XP$	N	200	20.15	T3C
7.5	1200	230/460	254T	19.4/9.7	91.0	B	H	**E9680**	5KS254CAA305	$2,553	G6-7XP$	N	315	25.59	T3C
7.5	1200	575	254T	7.8	91.0	B	H	**E9619**	5KS254CAA304	$2,553	G6-7XP$	N	315	25.59	T3C
10	3600	230/460	215T	23.0/11.5	90.2	B	H	**E9662**	5KS215CAA105	$1,881	G6-7XP$	Y	220	20.15	T3C
10	3600	575	215T	9.2	90.2	B	H	**E9620**	5KS215CAA104	$1,881	G6-7XP$	N	220	20.15	T3C
10	1800	230/460	215T	24.4/12.2	91.7	B	H	**E9671**	5KS215CAA205	$1,779	G6-7XP$	Y	220	20.15	T3C
10	1800	575	215T	9.8	91.7	B	H	**E9621**	5KS215CAA204	$1,779	G6-7XP$	N	220	20.15	T3C
10	1200	230/460	256T	25.8/12.9	91.0	B	H	**E9686**	5KS256CAA305	$3,132	G6-7XP$	N	350	25.59	T3C
10	1200	575	256T	10.3	91.0	B	H	**E9622**	5KS256CAA304	$3,132	G6-7XP$	N	350	25.59	T3C
15	3600	230/460	254T	34.6/17.3	91.0	B	G	**E9663**	5KS254CAA105	$2,468	G6-7XP$	Y	315	25.59	T3C
15	3600	575	254T	13.9	91.0	B	G	**E9623**	5KS254CAA104	$2,468	G6-7XP$	N	315	25.59	T3C
15	1800	230/460	254T	37.8/18.9	92.4	B	G	**E9672**	5KS254CAA205	$2,340	G6-7XP$	Y	315	25.59	T3C
15	1800	575	254T	15.1	92.4	B	G	**E9624**	5KS254CAA204	$2,340	G6-7XP$	N	315	25.59	T3C
15	1200	230/460	284T	39.6/19.8	91.7	B	G	**E9682**	5KS284CAA305	$4,167	G6-7XP$	N	460	28.58	T3C
15	1200	575	284T	15.8	91.7	B	G	**E9625**	5KS284CAA304	$4,167	G6-7XP$	N	460	28.58	T3C
20	3600	230/460	256T	45.2/22.6	91.0	B	G	**E9664**	5KS256CAA105	$2,972	G6-7XP$	Y	350	25.59	T3C
20	3600	575	256T	18.1	91.0	B	G	**E9626**	5KS256CAA104	$2,972	G6-7XP$	N	350	25.59	T3C
20	1800	230/460	256T	47.6/23.8	93.0	B	G	**E9673**	5KS256CAA205	$2,796	G6-7XP$	Y	350	25.59	T3C
20	1800	575	256T	18.9	93.0	B	G	**E9627**	5KS256CAA204	$2,796	G6-7XP$	N	350	25.59	T3C
20	1200	230/460	286T	52.4/26.2	91.7	B	G	**E9683**	5KS286CAA305	$5,087	G6-7XP$	N	510	28.58	T3C
20	1200	575	286T	21.1	91.7	B	G	**E9628**	5KS286CAA304	$5,087	G6-7XP$	N	510	28.58	T3C
25	3600	230/460	284TS	56.0/28.0	91.7	B	G	**E9665**	5KS284CAA115	$3,723	G6-7XP$	N	460	27.2	T3C
25	3600	575	284TS	22.4	91.7	B	G	**E9629**	5KS284CAA114	$3,723	G6-7XP$	N	460	27.2	T3C
25	1800	230/460	284T	58.2/29.1	93.6	B	G	**E9674**	5KS284CAA205	$3,567	G6-7XP$	Y	460	28.58	T3C
25	1800	575	284T	23.3	93.6	B	G	**E9630**	5KS284CAA204	$3,567	G6-7XP$	N	460	28.58	T3C
25	1200	460	324T	30.9	93.0	A	H	**E9294**	5KS324CAG308	$6,577	G6-7X$P	Y	730	32	T3C
25	1200	230/460	324T	61.8/30.9	93.0	A	H	**E9292**	5KS324CAG305	$6,577	G6-7X$P	Y	730	32	T3C

X$D Ultra® XP

Premium Efficient Explosion Proof

Pricing (cont.)

Base Mounted-Class I, Groups C and D; Class II, Groups F and G
Volts: 230/460, 460, 575
HP: 1.5 – 150

HP	RPM	Volts	Frame	FLA	Nom. Eff. (%)	NEMA Design	KVA/HP Code	Cat No.	Model No.	List Price	Price Symbol	Norm. Stk.	Weight (lbs.)	C Dim. (in.)	Code
30	3600	230/460	286TS	66.0/33.0	92.4	A	G	**E9666**	5KS286CAA115	$4,377	G6-7XP$	N	510	27.2	T3C
30	3600	575	286TS	26.4	92.4	A	G	**E9631**	5KS286CAA114	$4,377	G6-7XP$	N	510	27.2	T3C
30	1800	230/460	286T	69.8/34.9	93.6	B	G	**E9675**	5KS286CAA205	$4,167	G6-7XP$	Y	510	28.58	T3C
30	1800	575	286T	27.9	93.6	B	G	**E9632**	5KS286CAA204	$4,167	G6-7XP$	N	510	28.58	T3C
30	1200	460	326T	37.0	93.0	A	H	**E9295**	5KS326CAG308	$7,522	G6-7X$P	Y	730	32	T3C
30	1200	230/460	326T	74.0/37.0	93.0	A	H	**E9293**	5KS326CAG305	$7,522	G6-7X$P	Y	730	32	T3C
40	3600	460	324TS	49.4	92.4	B	G	**E9276**	5KS324CAG118	$6,254	G6-7X$P	Y	600	30.52	T3C
40	3600	230/460	324TS	98.8/49.4	92.4	B	G	**E9274**	5KS324CAG115	$6,254	G6-7X$P	Y	600	30.52	T3C
40	1800	230/460	324T	98.8/49.4	94.1	A	G	**E9283**	5KS324CAG205	$6,123	G6-7X$P	Y	700	32	T3C
40	1800	460	324T	49.4	94.1	A	G	**E9284**	5KS324CAG208	$6,123	G6-7X$P	Y	700	32	T3C
40	1200	230/460	364T	95.2/47.6	94.1	A	H	**E9285**	5KS364CAG305	$9,615	G6-7X$P	Y	990	34.48	T3C
40	1200	460	364T	47.6	94.1	A	H	**E9296**	5KS364CAG308	$9,615	G6-7X$P	Y	990	34.48	T3C
50	3600	230/460	326TS	117.8/58.9	93.0	B	G	**E9275**	5KS326CAG115	$7,695	G6-7X$P	Y	650	30.52	T3C
50	3600	460	326TS	58.9	93.0	B	G	**E9277**	5KS326CAG118	$7,695	G6-7X$P	Y	650	30.52	T3C
50	1800	230/460	326T	123.8/61.9	94.5	A	G	**E9286**	5KS326CAG205	$7,168	G6-7X$P	Y	740	32	T3C
50	1800	460	326T	61.9	94.5	A	G	**E9287**	5KS326CAG208	$7,168	G6-7X$P	Y	740	32	T3C
50	1200	230/460	365T	117.0/58.5	94.1	A	H	**E9288**	5KS365CAG305	$11,043	G6-7X$P	Y	1090	34.48	T3C
50	1200	460	365T	58.5	94.1	A	H	**E9297**	5KS365CAG308	$11,043	G6-7X$P	Y	1090	34.48	T3C
60	3600	460	364TS	69.0	93.6	B	G	**E9278**	5KS364CAG118	$9,355	G6-7X$P	Y	950	32.36	T3C
60	1800	460	364T	74.4	95.0	A	G	**E9289**	5KS364CAG208	$9,355	G6-7X$P	Y	1050	34.48	T3C
60	1200	460	404T	67.9	94.5	A	H	**E9298**	5KS404CAG308	$12,556	G6-7X$P	Y	1560	39.48	T3C
75	3600	460	365TS	84.3	94.1	B	G	**E9279**	5KS365CAG118	$11,398	G6-7X$P	Y	1020	32.36	T3C
75	1800	460	365T	92.0	95.4	B	G	**E9290**	5KS365CAG208	$18,480	G6-7X$P	Y	1050	34.48	T3C
75	1200	460	405T	85.4	94.5	A	G	**E9299**	5KS405CAG308	$14,260	G6-7X$P	Y	1570	39.48	T3C
100	3600	460	405TS	108.0	94.1	B	G	**E9280**	5KS405CAG118	$16,048	G6-7X$P	Y	1470	36.48	T3C
100	1800	460	405T	111.0	95.4	B	G	**E9291**	5KS405CAG208	$22,464	G6-7X$P	Y	1560	39.48	T3C
100	1200	460	444T	115.0	95.0	B	G	**E9300**	5KS444CAG308	$21,185	G6-7X$P	Y	1990	45.28	T3C
125	3600	460	444TS	132.0	95.0	B	G	**E9281**	5KS444CAG118	$19,575	G6-7X$P	Y	1990	41.54	T3C
125	1800	460	444T	143.0	95	B	G	**E9302**	5KS444CAG208	$18,480	G6-7X$P	Y	1960	45.28	T3C
125	1200	460	445T	143.0	95.0	B	G	**E9301**	5KS445CAG308	$22,645	G6-7X$P	Y	1950	41.54	T3C
150	3600	460	445TS	156	95.0	B	G	**E9282**	5KS445CAG118	$23,959	G6-7X$P	Y	1990	41.54	T3C
150	1800	460	445T	164	95.8	B	G	**E9303**	5KS445CAG208	$22,464	G6-7X$P	Y	2050	45.28	T3C

X$D Ultra® XP

Premium Efficient Explosion Proof

Typical Performance Data

Base Mounted-Class I, Groups C and D; Class II, Groups F and G
Volts: 230/460, 460, 575
HP: 1.5 – 150

HP	RPM	Volts	Cat No.	Model No.	Frame	FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft.)	LRT (lb-ft.)	BDT (lb-ft.)	Nom. FL Eff. (%)	NP FL PF (%)	Max KVR	C Dim. (in.)	Weight (lbs.)
1.5	1200	575	**E9602**	5KS182CAA304	182T	1.9	14.1	B	M	6.7	11.1	16.8	87.5	67.5	1.0	15.92	76
1.5	1200	230/460	**E9601**	5KS182CAA305	182T	4.8/2.4	17.4	B	M	6.7	11.1	16.8	87.5	68.0	1.0	15.92	76
2	1200	575	**E9604**	5KS184CAA304	184T	2.5	19.1	B	L	9	14.3	21.5	88.5	68.0	1.3	15.92	101
2	1200	230/460	**E9603**	5KS184CAA305	184T	6.0/3.0	22.6	B	L	9	14.4	21.5	88.5	69.5	1.3	15.92	101
3	3600	575	**E9606**	5KS182CAA104	182T	3.2	19.6	B	K	4.5	7.1	10.3	86.5	82.0	1.1	15.92	76
3	3600	230/460	**E9605**	5KS182CAA105	182T	7.8/3.9	24.2	B	K	4.5	7.1	10.3	86.5	82.5	1.1	15.92	76
3	1800	575	**E9608**	5KS182CAA204	182T	3.2	22.1	B	K	8.9	19.2	22.3	89.5	77.5	1.4	15.92	76
3	1800	230/460	**E9607**	5KS182CAA205	182T	8.0/4.0	26.8	B	K	8.9	19.2	22.3	89.5	78.0	1.3	15.92	76
3	1200	575	**E9610**	5KS213CAA304	213T	3.4	23.7	B	K	13.4	20.7	30.8	89.5	73.0	1.6	20.15	200
3	1200	230/460	**E9678**	5KS213CAA305	213T	8.6/4.3	29.9	B	K	13.4	20.7	30.8	89.5	73.0	1.7	20.15	200
5	3600	575	**E9612**	5KS184CAA104	184T	5.2	31.7	B	J	7.5	11.2	16	88.5	81.0	1.8	15.92	101
5	3600	230/460	**E9611**	5KS184CAA105	184T	13.0/6.5	39.1	B	J	7.5	11.2	16	88.5	81.5	1.8	15.92	101
5	1800	575	**E9614**	5KS184CAA204	184T	5.3	32.8	B	J	15	27.7	33.7	89.5	79.5	2.0	15.92	101
5	1800	230/460	**E9613**	5KS184CAA205	184T	13.2/6.6	41.1	B	J	15	27.7	33.7	89.5	79.5	2.0	15.92	101
5	1200	575	**E9616**	5KS215CAA304	215T	5.5	35	B	J	22.4	33.6	48.2	89.5	76.5	2.2	20.15	220
5	1200	230/460	**E9679**	5KS215CAA305	215T	13.6/6.8	42.8	B	J	22.4	33.6	48.2	89.5	77.0	2.2	20.15	220
7.5	3600	575	**E9617**	5KS213CAA104	213T	7.2	45.6	B	H	11.2	15.6	22.3	89.5	87.5	2.1	20.2	200
7.5	3600	230/460	**E9661**	5KS213CAA105	213T	18.0/9.0	57.1	B	H	11.2	15.6	22.3	89.5	87.5	2.1	20.15	200
7.5	1800	575	**E9618**	5KS213CAA204	213T	7.3	48.9	B	H	22.2	38.9	47.8	91.7	83.5	2.3	20.15	200
7.5	1800	230/460	**E9669**	5KS213CAA205	213T	18.4/9.2	61.3	B	H	22.2	38.9	47.8	91.7	83.5	2.3	20.15	200
7.5	1200	575	**E9619**	5KS254CAA304	254T	7.8	46.9	B	H	33.5	50.3	68.7	91	79.5	3.0	25.59	315
7.5	1200	230/460	**E9680**	5KS254CAA305	254T	19.4/9.7	59.5	B	H	33.5	50.3	68.7	91	79.5	3.1	25.59	315
10	3600	575	**E9620**	5KS215CAA104	215T	9.2	58.5	B	H	14.9	20.1	29.8	90.2	90.0	2.2	20.15	220
10	3600	230/460	**E9662**	5KS215CAA105	215T	23.0/11.5	73.1	B	H	14.9	20.1	29.8	90.2	90.0	2.2	20.15	220
10	1800	575	**E9621**	5KS215CAA204	215T	9.8	63.8	B	H	29.7	49	59.4	91.7	83.5	3.1	20.15	220
10	1800	230/460	**E9671**	5KS215CAA205	215T	24.4/12.2	79.1	B	H	29.7	49	59.4	91.7	83.5	3.0	20.15	220
10	1200	575	**E9622**	5KS256CAA304	256T	10.3	61.5	B	H	44.8	67.2	89.6	91	79.5	4.0	25.59	350
10	1200	230/460	**E9686**	5KS256CAA305	256T	25.8/12.9	77.7	B	H	44.8	67.2	89.6	91	79.5	4.1	25.59	350
15	3600	575	**E9623**	5KS254CAA104	254T	13.9	88.3	B	G	22.2	28.8	44.4	91	89.0	2.9	25.59	315
15	3600	230/460	**E9663**	5KS254CAA105	254T	34.6/17.3	108.9	B	G	22.2	28.8	44.4	91	89.0	2.9	25.59	315
15	1800	575	**E9624**	5KS254CAA204	254T	15.1	88	B	G	44.4	71	88.8	92.4	80.5	6.2	25.59	315
15	1800	230/460	**E9672**	5KS254CAA205	254T	37.8/18.9	109.1	B	G	44.4	71	88.8	92.4	80.5	6.1	25.59	315
15	1200	575	**E9625**	5KS284CAA304	284T	15.8	86.9	B	G	66.6	93.3	133.2	91.7	77.5	6.6	28.58	460
15	1200	230/460	**E9682**	5KS284CAA305	284T	39.6/19.8	109.1	B	G	66.6	93.2	133.2	91.7	77.5	6.6	28.58	460
20	3600	575	**E9626**	5KS256CAA104	256T	18.1	114.2	B	G	29.6	38.5	59.3	91	91.0	2.6	25.59	350
20	3600	230/460	**E9664**	5KS256CAA105	256T	45.2/22.6	140.3	B	G	29.7	38.5	59.3	91	91.0	2.6	25.59	350
20	1800	575	**E9627**	5KS256CAA204	256T	18.9	106.5	B	G	59.2	88.8	118.5	93	85.0	6.1	25.59	350
20	1800	230/460	**E9673**	5KS256CAA205	256T	47.6/23.8	135.1	B	G	59.2	88.8	118.4	93	84.5	6.2	25.59	350
20	1200	575	**E9628**	5KS286CAA304	286T	21.1	117.2	B	G	88.9	120	177.7	91.7	77.5	9.0	28.58	510
20	1200	230/460	**E9683**	5KS286CAA305	286T	52.4/26.2	142.8	B	G	88.9	120	177.8	91.7	78.0	8.6	28.58	510
25	3600	575	**E9629**	5KS284CAA114	284TS	22.4	139.8	B	G	37	48.1	74	91.7	91.0	4.8	27.2	460
25	3600	230/460	**E9665**	5KS284CAA115	284TS	56.0/28.0	173.6	B	G	37	48.1	74	91.7	91.0	4.7	27.2	460
25	1800	575	**E9630**	5KS284CAA204	284T	23.3	144	B	G	73.8	110.7	147.7	93.6	86.0	7.1	28.58	460
25	1800	230/460	**E9674**	5KS284CAA205	284T	58.2/29.1	178.1	B	G	73.8	110.8	147.7	93.6	86.0	7.0	28.58	460
25	1200	460	**E9294**	5KS324CAG308	324T	30.9	219.8	A	H	111	149.9	222	93.0	81.5	7.2	32	730
25	1200	230/460	**E9292**	5KS324CAG305	324T	61.8/30.9	219.8	A	H	111	149.9	222	93.0	81.5	7.2	32	730

X$D Ultra® XP

Premium Efficient Explosion Proof

Typical Performance Data (cont.)

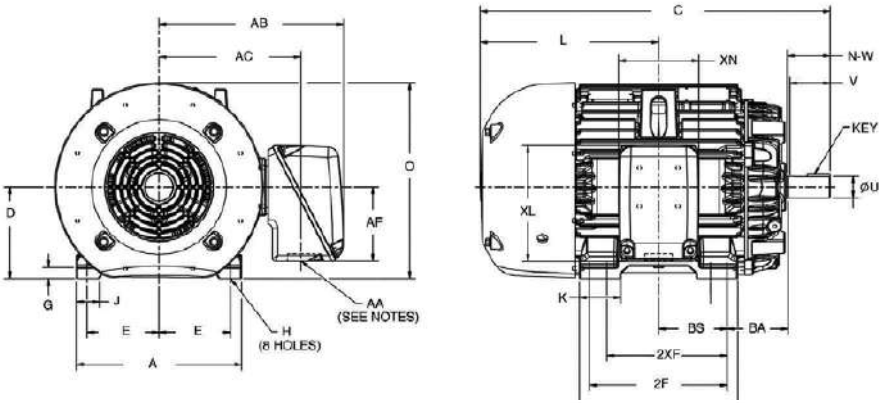
Base Mounted-Class I, Groups C and D; Class II, Groups F and G
Volts: 230/460, 460, 575
HP: 1.5 – 150

HP	RPM	Volts	Cat No.	Model No.	Frame	FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft.)	LRT (lb-ft.)	BDT (lb-ft.)	Nom. FL Eff. (%)	NP FL PF (%)	Max KVR	C Dim. (in.)	Weight (lbs.)
30	3600	575	**E9631**	5KS286CAA114	286TS	26.4	184.7	A	G	44.3	57.7	88.7	92.4	92.0	5.1	27.2	510
30	3600	230/460	**E9666**	5KS286CAA115	286TS	66.0/33.0	228.7	A	G	44.4	57.7	88.7	92.4	92.0	5.1	27.2	510
30	1800	575	**E9632**	5KS286CAA204	286T	27.9	171.2	B	G	88.6	132.9	177.3	93.6	86.0	8.2	28.58	510
30	1800	230/460	**E9675**	5KS286CAA205	286T	69.8/34.9	216.1	B	G	88.6	132.9	177.2	93.6	86.0	8.2	28.58	510
30	1200	460	**E9295**	5KS326CAG308	326T	37.0	271.7	A	H	133.3	180	266.7	93.0	81.5	9.0	32	730
30	1200	230/460	**E9293**	5KS326CAG305	326T	74.0/37.0	271.7	A	H	133.3	180	266.7	93.0	81.5	9.0	32	730
40	3600	460	**E9276**	5KS324CAG118	324TS	49.4	263	B	G	59.2	74	118.4	92.4	82.0	17.1	30.52	600
40	3600	230/460	**E9274**	5KS324CAG115	324TS	98.8/49.4	263	B	G	59.2	74	118.4	92.4	82.0	17.1	30.52	600
40	1800	460	**E9284**	5KS324CAG208	324T	49.4	266.6	A	G	118	165.2	235.9	94.1	80.5	14.3	32	700
40	1800	230/460	**E9283**	5KS324CAG205	324T	98.8/49.4	266.6	A	G	118	165.2	235.9	94.1	80.5	14.3	32	700
40	1200	460	**E9296**	5KS364CAG308	364T	47.6	342.6	A	H	176.9	238.8	353.8	94.1	83.5	11.8	34.48	990
40	1200	230/460	**E9285**	5KS364CAG305	364T	95.2/47.6	342.6	A	H	176.9	238.8	353.8	94.1	83.5	11.8	34.48	990
50	3600	460	**E9277**	5KS326CAG118	326TS	58.9	333.9	B	G	74.2	89.1	148.5	93.0	85.5	17.0	30.52	650
50	3600	230/460	**E9275**	5KS326CAG115	326TS	117.8/58.9	333.9	B	G	74.2	89.1	148.5	93.0	85.5	17.0	30.52	650
50	1800	460	**E9287**	5KS326CAG208	326T	61.9	342.9	A	G	147.5	206.5	295	94.5	80.0	18.6	32	740
50	1800	230/460	**E9286**	5KS326CAG205	326T	123.8/61.9	342.9	A	G	147.5	206.5	295	94.5	80.0	18.6	32	740
50	1200	460	**E9297**	5KS365CAG308	365T	58.5	428	A	H	221	298.3	441.9	94.1	85.0	13.1	34.48	1090
50	1200	230/460	**E9288**	5KS365CAG305	365T	117.0/58.5	428	A	H	221	298.3	441.9	94.1	85.0	13.1	34.48	1090
60	3600	460	**E9278**	5KS364CAG118	364TS	69.0	405.7	B	G	88.8	106.6	177.6	93.6	87.0	17.4	32.36	950
60	1800	460	**E9289**	5KS364CAG208	364T	74.4	432.4	A	G	176.4	247	352.8	95.0	79.5	23.8	34.48	1050
60	1200	460	**E9298**	5KS404CAG308	404T	67.9	470.1	A	H	264.7	357.3	529.4	94.5	87.5	13.3	39.48	1560
75	3600	460	**E9279**	5KS365CAG118	365TS	84.3	523.8	B	G	111	116.6	222	94.1	88.5	19.1	32.36	1020
75	1800	460	**E9290**	5KS365CAG208	365T	92.0	488.6	B	G	220.9	309.3	441.8	95.4	80.0	28.2	34.48	1050
75	1200	460	**E9299**	5KS405CAG308	405T	85.4	591.3	A	G	331.1	446.9	662.1	94.5	87.0	16.9	39.48	1570
100	3600	460	**E9280**	5KS405CAG118	405TS	108.0	685	B	G	147.4	154.8	294.8	94.1	92.5	12.7	36.48	1470
100	1800	460	**E9291**	5KS405CAG208	405T	111.0	681.8	B	G	293.8	367.2	587.6	95.4	88.5	21.9	39.48	1560
100	1200	460	**E9300**	5KS444CAG308	444T	115.0	680.4	B	G	441.3	551.7	882.7	95.0	86.0	26.6	45.28	1990
125	3600	460	**E9281**	5KS444CAG118	444TS	132.0	856.9	B	G	184	184	368	95.0	93.5	13.7	41.54	1990
125	1800	460	**E9302**	5KS444CAG208	444T	143.0	867.5	B	G	551.8	689.8	1103.6	95.0	86.0	33.4	45.28	1960
125	1200	460	**E9301**	5KS445CAG308	445T	156.0	1025.9	B	G	220.9	220.9	441.8	95.0	94.5	13.7	41.54	1950
150	3600	460	**E9282**	5KS445CAG118	445TS	156	1063.6	B	G	220.7	220.7	441.5	95	95	13.9	41.54	1990
150	1800	460	**E9303**	5KS445CAG208	445T	164	1068	B	G	440.9	485	881.8	95.8	89.5	29.1	45.28	2050

X$D Ultra® XP

Premium Efficient Explosion Proof

Dimensions



Cast Iron Construction/Frames 143-286, Type KS, 3-Phase/Dimensions—For estimating only

Frame	Approx. Net Weight in lbs	Dimensions in Inches																			
		Shaft						Mounting[18]													
		Key																			
		Width	Depth	Length	N-W	U[1]	V	E	H	BA	BS	2F	2XF	A	B	C	D[3]	G	J	K	L	O
182T-184T	101	0.25	0.25	1.75	2.75	1.25	2.27	3.75	0.046	3.75	2.75	5.5	4.5	8.68	6.64	15.92	4.5	0.46	1.54	2.58	7.67	9.25
213T-215T	220	0.312	0.312	2.38	3.38	1.375	3.12	4.25	0.46	3.5	3.5	7	5.5	9.6	8	20.15	4.5	0.46	1.54	3.4	7.67	9.25
254T-256T	350	0.375	0.375	2.88	4	1.625	3.52	5	0.58	4.25	5	10	8.25	11.2	11.3	25.59	6.25	0.65	1.52	3.93	12.34	12.5
284T-286T	460	0.5	0.5	3.25	4.62	1.875	4.14	5.5	0.58	4.76	5.5	11	9.5	12.4	12.8	28.58	7	0.76	1.75	4.12	13.7	13.88
284TS-286TS	510	0.375	0.375	1.88	3.25	1.625	2.76	5.5	0.58	4.75	5.5	11	9.5	12.4	12.8	27.2	7	0.76	1.75	4.12	13.7	13.8
324T-326T	740	0.5	0.5	5.25	5.25	2.125	5	6.25	0.65	5.25	6	12	10.5	14.4	13.8	32.02	8	1	1.97	3.63	15.52	16.44
324TS-326TS	680	0.5	0.5	2	3.75	1.875	3.5	6.25	0.65	5.25	6	12	10.5	14.4	13.8	30.52	8	1	1.97	3.63	15.52	16.44
364T-365T	1050	0.625	0.625	4.25	5.88	2.375	5.63	7	0.625	5.88	6.12	12.25	11.25	16	14.4	34.48	9	1.1	2.25	3.4	16.6	18.1
364TS-365TS	1020	0.5	0.5	2	3.75	1.875	3.5	7	0.625	5.88	6.12	12.25	11.25	16	14.4	32.36	9	1.1	2.25	3.4	16.6	18.1
404T-405T	1560	0.75	0.75	5.62	7.25	2.875	7	8	0.81	6.62	6.88	13.75	12.25	18	16	39.48	10	1.3	2.3	4.1	18.74	20.06
404TS-405TS	1570	0.5	0.5	2.75	4.25	2.125	4	8	0.81	6.62	6.88	13.75	12.25	18	16	36.48	10	1.3	2.3	4.1	18.74	20.06
444T-445T	1990	0.875	0.875	6.88	8.5	3.375	8.25	9	0.81	7.5	8.25	16.5	14.5	20	18.8	45.28	11	1.49	2.61	4.9	21.03	21.93
444TS-445TS	2050	0.625	0.625	3	4.75	2.375	4.5	9	0.81	7.5	8.25	16.5	14.5	20	18.8	41.54	11	1.49	2.61	4.9	21.03	21.93

Notes:

1 Shaft diameters 1 1/2 inches and smaller will come within the limits of +0.000 inch, -0.0005 inch diameters 1 5/8 inches and larger +0.000 inch, -0.001 inch

3 Tolerance on "D" dimension for rigid base motors will be +0.000 inch, -0.060 inch. No tolerance has been est. for the "D" dimension of resilient mounted motors.

18 Motor feet have 2 holes per foot allowing NEMA F-1 or F-2 assembly while maintaining critical NEMA mounting dimensions. Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward, or from either side. Weights shown are approximate shipping weights and should be used for estimating only.

Conduit Box Dimensions

Frame	Nominal HP	Approx. Vol.	Dimensions in Inches					
			AA*	AB	AC	AF	XL	XN
182-184	5	26	3/4	8.38	6.44	2.5	4.81	4.42
213-215	10	26	1	8.99	7.14	2.5	4.81	4.42
254-256	20	127	1-1/4	11.43	8.75	4.62	8.83	7.75
284-286	30	250	2	13.98	10.76	6.5	10.75	8.62
324-326	50	250	2	15.25	12	6.5	10.75	7.88
364-365	75	920	4	21.91	16.8	5.19	10.38	17.31
404-405	100	920	4	22.91	17.8	5.19	10.38	17.31
444-445	150	920	4	24.23	19.12	5.19	10.38	17.31

*A tapped NPT hole is provided for the conduit size listed in Column AA

6.0 High HP Low and Medium Voltage

6.1 Quantum™ LMV - TEFC
Low Voltage

6.5 Quantum™ LMV - TEFC
Low Voltage with IEEE 841 Features

6.9 Quantum™ LMV - TEFC
Medium Voltage

6.13 Quantum™ LMV - TEFC
Medium Voltage with IEEE 841 Features

6.16 Quantum™ LMV - TEFC
Dimensions

6.18 449 Frame TEFC

6.21 449 Frame TEFC
Dimensions

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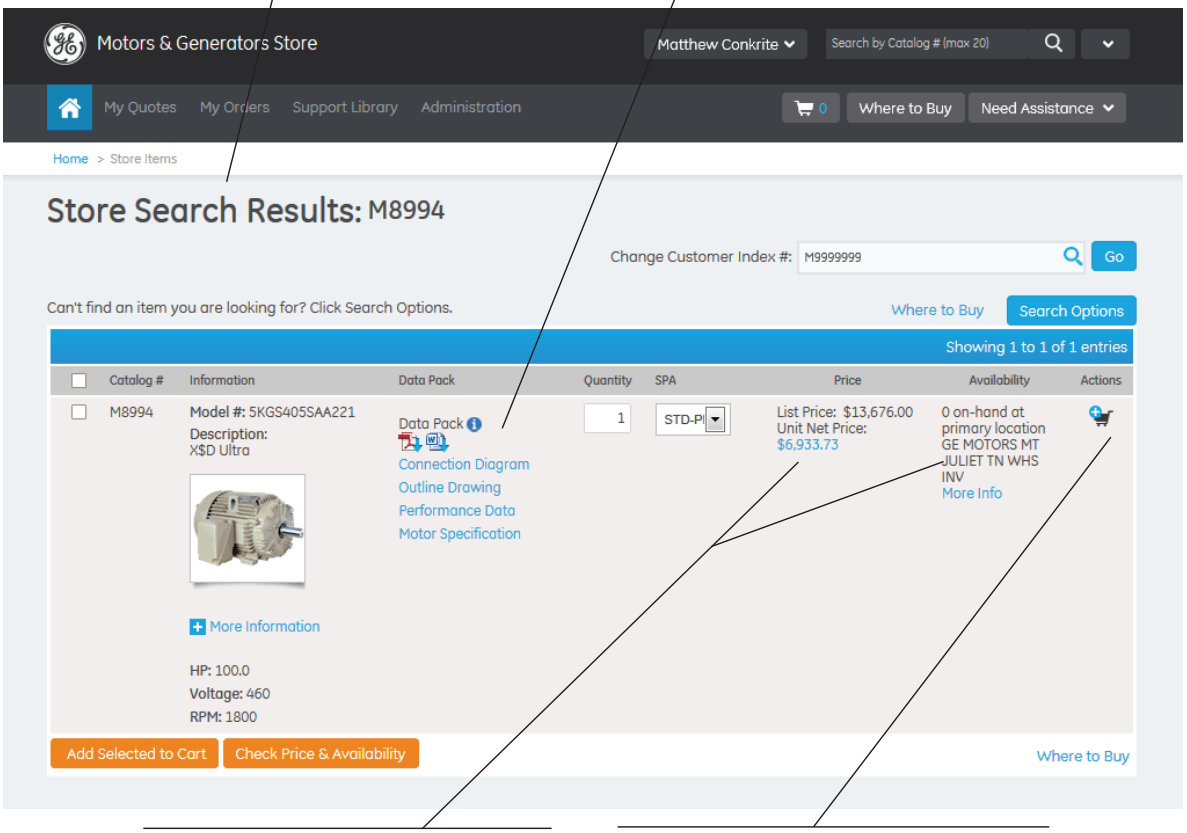

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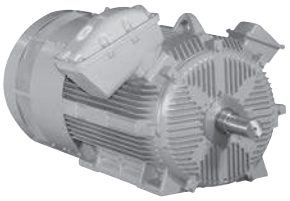
Quantum™ LMV—TEFC

Severe Duty Low Voltage

Standard Features

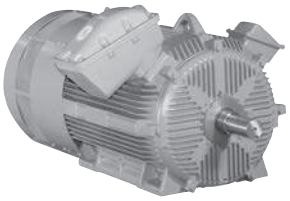


HP Range	300-700
Poles	2, 4, 6
Voltage	460, 575
Altitude	3300 ft
Ambient	40°C
Balance/Vibration	NEMA Grade B
Bearing Caps	Both Ends
Bearing Protection	IP55; Shaft slinger both ends
Bearing Temp Device	Provisions on DE and ODE Endshield; plugged
Bearing Type	Single Shielded Ball; 509L & 5011L have DE roller bearing
Conduit Box	Cast Iron or Fabricated Steel; Gasketed and rotatable in 90 degree increments
Drains	Stainless Steel T-drains in lowest section of both endshields
Efficiency	NEMA Premium (Meets or exceeds EISA efficiency requirements 350-500HP)
Enclosure	TEFC
End Shield	Cast Iron
Fan	Aluminum (Unidirectional on 2 poles)
Fan Cover	Fabricated Steel
Fasteners	SAE Grade 5
Frame Material	Cast Iron
Frame Size	509-5013
Frequency	60 Hz
Ground	Ground in conduit box and 2 NEMA Type ground pads on frame
Insulation Class	Class F
Insulation System	Epoxy VPI
Inverter Capabilities	Variable Torque INF:1 @ 1.0 SF on PWM power (unless otherwise noted on pricing pages)
L10 Bearing Life	Direct Coupled: 100,000 hrs, Belted 26,280 Hours
Leads	Permanently numbered, Non-wicking
Lifting Means	Two (2) cast in lifting lugs
Lubrication	Polyurea Grease
Mounting	Foot mounted F1 only, contact factory for F2 mounting options
Mounting Holes	Dual drilled for 508/509, 5010/5011, 5012/5013 mounting
Nameplate	316 Stainless Steel
NEMA Design	Standard Torque
Paint	Epoxyester Buff
Relubrication	Yes, both ends; extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.15 (unless otherwise noted on pricing pages)
Shaft Material	AISI 1045; 509L and 5011L AISI 4142
Space Heater	115V standard space heater, leads to accessory box
Temperature Rise	80°C @ 1.0 SF (unless otherwise noted on pricing pages)
Tests	NEMA Routine, IEEE 112 Method B
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	36 months from date of installation or 42 months from date of manufacture, whichever occurs first

Quantum™ LMV—TEFC

Severe Duty Low Voltage

Pricing



Severe Duty Low Voltage

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes	Model No.
300	3600	460	509LS	313	95.8	**Q532**	$22,649	G4-7U5LV	N	4650	66.13	66	5KS509SAA124
300	3600	460	509LS	313	95.8	**Q533**	$22,649	G4-7U5LV	N	4650	66.13	145	5KS509SAA125
300	3600	575	509LS	251	95.8	**Q539**	$22,649	G4-7U5LV	N	4650	66.13	66	5KS509SAA126
300	3600	575	509LS	251	95.8	**Q545**	$22,649	G4-7U5LV	N	4650	66.13	145	5KS509SAA127
300	1800	460	509LL	328	96.2	**Q575**	$20,114	G4-7U5LV	N	4550	67.13		5KS509SAA257
300	1800	460	509L	328	96.2	**Q576**	$20,614	G4-7U5LV	N	4550	72,38	148	5KS509SAA258
300	1800	575	509LL	264	96.2	**Q577**	$20,114	G4-7U5LV	N	4550	67.13		5KS509SAA259
300	1800	575	509L	264	96.2	**Q578**	$20,614	G4-7U5LV	N	4550	72.38	148	5KS509SAA260
300	1200	460	509LL	346	95.4	**Q579**	$22,917	G4-7U5LV	N	4650	67.13		5KS509SAA346
300	1200	460	509L	346	95.4	**Q580**	$23,417	G4-7U5LV	N	4650	72.38	148	5KS509SAA347
300	1200	575	509LL	277	95.4	**Q581**	$22,917	G4-7U5LV	N	4650	67.13		5KS509SAA348
300	1200	575	509L	277	95.4	**Q582**	$23,417	G4-7U5LV	N	4650	72.38	148	5KS509SAA349
350	3600	460	5011LS	364	95.8	**Q540**	$23,916	G4-7U5LV	N	5400	74.14	66	5KS511SAA176
350	3600	460	5011LS	364	95.8	**Q527**	$23,916	G4-7U5LV	N	5400	74.14	145	5KS511SAA143
350	3600	575	5011LS	291	95.8	**Q546**	$23,916	G4-7U5LV	N	5400	74.14	66	5KS511SAA185
350	3600	575	5011LS	291	95.8	**Q547**	$23,916	G4-7U5LV	N	5400	74.14	145	5KS511SAA186
350	1800	460	509LL	385	96.2	**Q583**	$22,885	G4-7U5LV	N	4650	67.13		5KS509SAA261
350	1800	460	509L	385	96.2	**Q584**	$23,385	G4-7U5LV	N	4650	72.38	148	5KS509SAA262
350	1800	575	509LL	310	96.2	**Q585**	$22,885	G4-7U5LV	N	4650	67.13		5KS509SAA263
350	1800	575	509L	310	96.2	**Q586**	$23,385	G4-7U5LV	N	4650	72.38	148	5KS509SAA264
350	1200	460	5011LL	400	95.8	**Q587**	$26,528	G4-7U5LV	N	5150	75.14		5KS511SAA367
350	1200	460	5011L	400	95.8	**Q588**	$27,028	G4-7U5LV	N	5150	80.39	148	5KS511SAA368
350	1200	575	5011LL	318	95.8	**Q589**	$26,528	G4-7U5LV	N	5150	75.14		5KS511SAA369
350	1200	575	5011L	318	95.8	**Q590**	$27,028	G4-7U5LV	N	5150	80.39	148	5KS511SAA370
400	3600	460	5011LS	418	95.8	**Q541**	$26,137	G4-7U5LV	N	5400	74.14	66	5KS511SAA177
400	3600	460	5011LS	418	95.8	**Q528**	$26,137	G4-7U5LV	N	5400	74.14	145	5KS511SAA144
400	3600	575	5011LS	334	95.8	**Q548**	$26,137	G4-7U5LV	N	5400	74.14	66	5KS511SAA187
400	3600	575	5011LS	334	95.8	**Q549**	$26,137	G4-7U5LV	N	5400	74.14	145	5KS511SAA188
400	1800	460	509LL	440	96.2	**Q591**	$25,685	G4-7U5LV	N	4750	67.13		5KS509SAA265
400	1800	460	509L	440	96.2	**Q592**	$26,185	G4-7U5LV	N	4750	72.38	148	5KS509SAA266
400	1800	575	509LL	352	96.2	**Q593**	$25,685	G4-7U5LV	N	4750	67.13		5KS509SAA267
400	1800	575	509L	352	96.2	**Q594**	$26,185	G4-7U5LV	N	4750	72.38	148	5KS509SAA268
400	1200	460	5011LL	450	96.2	**Q595**	$29,278	G4-7U5LV	N	5400	75.14		5KS511SAA371
400	1200	460	5011L	450	96.2	**Q596**	$29,778	G4-7U5LV	N	5400	80.39	148	5KS511SAA372
400	1200	575	5011LL	360	96.2	**Q597**	$29,278	G4-7U5LV	N	5400	75.14		5KS511SAA373
400	1200	575	5011L	360	96.2	**Q598**	$29,778	G4-7U5LV	N	5400	80.39	148	5KS511SAA374

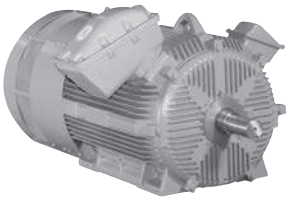
Notes:

66 CW rotation only facing opposite drive-end.
145 CCW rotation facing opposite drive end.
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table in Application Guide.
149 Class F rise @ 1.0 SF only

Quantum™ LMV—TEFC

Severe Duty Low Voltage

Pricing (continued)



Severe Duty Low Voltage

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes	Model No.
450	3600	460	5011LS	468	95.8	**Q542**	$29,901	G4-7U5LV	N	5475	74.14	66	5KS511SAA178
450	3600	460	5011LS	468	95.8	**Q529**	$29,901	G4-7U5LV	N	5475	74.14	145	5KS511SAA145
450	3600	575	5011LS	374	95.8	**Q557**	$29,901	G4-7U5LV	N	5475	74.14	66	5KS511SAA189
450	3600	575	5011LS	374	95.8	**Q558**	$29,901	G4-7U5LV	N	5475	74.14	145	5KS511SAA190
450	1800	460	5011LL	489	96.2	**Q599**	$28,168	G4-7U5LV	N	5400	75.14		5KS511SAA299
450	1800	460	5011L	489	96.2	**Q5000**	$28,668	G4-7U5LV	N	5400	80.39	148	5KS511SAA2001
450	1800	575	5011LL	394	96.2	**Q5001**	$28,168	G4-7U5LV	N	5400	75.14		5KS511SAA2002
450	1800	575	5011L	394	96.2	**Q5002**	$28,668	G4-7U5LV	N	5400	80.39	148	5KS511SAA2003
450	1200	460	5011LL	506	96.2	**Q5003**	$32,565	G4-7U5LV	N	5700	75.14		5KS511SAA375
450	1200	460	5011L	506	96.2	**Q5004**	$33,065	G4-7U5LV	N	5700	80.39	148	5KS511SAA376
450	1200	575	5011LL	410	96.2	**Q5005**	$32,565	G4-7U5LV	N	5700	75.14		5KS511SAA377
450	1200	575	5011L	410	96.2	**Q5006**	$33,065	G4-7U5LV	N	5700	80.39	148	5KS511SAA378
500	3600	460	5011LS	517	95.8	**Q543**	$31,368	G4-7U5LV	N	5750	74.14	66	5KS511SAA179
500	3600	460	5011LS	517	95.8	**Q530**	$31,368	G4-7U5LV	N	5750	74.14	145	5KS511SAA146
500	3600	575	5011LS	414	95.8	**Q559**	$31,368	G4-7U5LV	N	5750	74.14	66	5KS511SAA191
500	3600	575	5011LS	414	95.8	**Q560**	$31,368	G4-7U5LV	N	5750	74.14	145	5KS511SAA192
500	1800	460	5011LL	541	96.2	**Q5007**	$30,256	G4-7U5LV	N	5700	75.14		5KS511SAA2004
500	1800	460	5011L	541	96.2	**Q5008**	$30,756	G4-7U5LV	N	5700	80.39	148	5KS511SAA2005
500	1800	575	5011LL	430	96.2	**Q5009**	$30,256	G4-7U5LV	N	5700	75.14		5KS511SAA2006
500	1800	575	5011L	430	96.2	**Q5010**	$30,756	G4-7U5LV	N	5700	80.39	148	5KS511SAA2007
500	1200	460	5013S	559	96.2	**Q5011**	$37,901	G4-7U5LV	N	6700	85.13		5KS513SAA357
500	1200	575	5013S	450	96.2	**Q5013**	$37,901	G4-7U5LV	N	6700	85.13		5KS513SAA359
600	3600	460	5013ST	618	96.2	**Q544**	$35,963	G4-7U5LV	N	6700	83.13	66	5KS513SAA145
600	3600	460	5013ST	618	96.2	**Q531**	$35,963	G4-7U5LV	N	6700	83.13	145	5KS513SAA128
600	3600	575	5013ST	494	96.2	**Q561**	$35,963	G4-7U5LV	N	6700	83.13	66	5KS513SAA171
600	3600	575	5013ST	494	96.2	**Q562**	$35,963	G4-7U5LV	N	6700	83.13	145	5KS513SAA172
600	1800	460	5013S	643	96.5	**Q5015**	$35,755	G4-7U5LV	N	6900	85.13		5KS513SAA256
600	1800	575	5013S	514	96.5	**Q5017**	$35,755	G4-7U5LV	N	6900	85.13		5KS513SAA258
600	1200	460	5013S	674	95.8	**Q5019**	$40,152	G4-7U5LV	N	7150	85.13	149	5KS513SAA361
600	1200	575	5013S	539	95.8	**Q5021**	$40,152	G4-7U5LV	N	7150	85.13	149	5KS513SAA363
700	3600	460	5013ST	717	96.2	**Q563**	$39,033	G4-7U5LV	N	6900	83.13	66, 149	5KS513SAA173
700	3600	460	5013ST	717	96.2	**Q564**	$39,033	G4-7U5LV	N	6900	83.13	145, 149	5KS513SAA174
700	3600	575	5013ST	577	96.2	**Q565**	$39,033	G4-7U5LV	N	6900	83.13	66, 149	5KS513SAA175
700	3600	575	5013ST	577	96.2	**Q566**	$39,033	G4-7U5LV	N	6900	83.13	145, 149	5KS513SAA176
700	1800	460	5013S	787	96.2	**Q5023**	$38,826	G4-7U5LV	N	7150	85.13	149	5KS513SAA260
700	1800	575	5013S	630	96.2	**Q5025**	$38,826	G4-7U5LV	N	7150	85.13	149	5KS513SAA262
700	1200	460	5013S	791	95.8	**Q5027**	$43,610	G4-7U5LV	N	7150	85.13	149	5KS513SAA365
700	1200	575	5013S	636	95.8	**Q5029**	$43,610	G4-7U5LV	N	7150	85.13	149	5KS513SAA367

Notes:

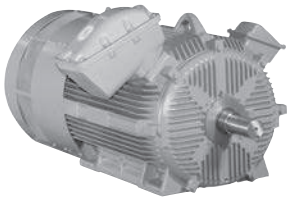
66 CW rotation only facing opposite drive-end.
145 CCW rotation facing opposite drive end.
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table in Application Guide.
149 Class F rise @ 1.0 SF only

Quantum™ LMV—TEFC

Severe Duty Low Voltage

Typical Performance Data

NEMA Premium



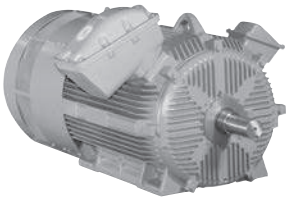
Volts: 460, 575
Frequency: 60 Hz
HP: 300-700

HP	FL RPM	Volts	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	FL Nom Eff	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
300	3563	460	313	2042.3	G	442.1	95.8	95.8	95.4	93.5	93.0	90.3	39.5
300	3562	575	251	1603.1	G	442.2	95.8	95.8	95.4	93.5	93.1	90.6	38.4
300	1785	460	328	1994.4	G	882.2	96.2	96.3	96.0	89.0	86.7	80.5	65.6
300	1785	575	264	1511.7	G	882.3	96.2	96.2	96.0	88.5	86.6	80.5	65.2
300	1185	460	346	2044.7	G	1328.5	95.4	95.9	95.7	85.0	82.0	74.0	82.1
300	1185	575	277	1582.8	G	1328.6	95.4	95.8	73.9	85.0	81.8	73.9	82.1
350	3560	460	364	2354.2	G	516.1	95.8	96.0	95.7	94.0	93.6	91.3	41.9
350	3558	575	291	1797.9	G	516.4	95.8	96.0	95.7	94.0	93.7	91.7	39.8
350	1785	460	385	2331.2	G	1029.6	96.2	96.3	96.1	88.5	86.2	79.7	79.2
350	1785	575	310	1926.8	G	1029.3	96.2	96.4	96.1	88.0	85.7	78.8	82.6
350	1186	460	400	2373.7	G	1549.2	95.8	96.2	96.1	85.5	82.9	75.3	90.9
350	1185	575	318	1834.2	G	1550.1	95.8	96.1	96.1	86.0	83.4	76.2	87.6
400	3559	460	418	2611.3	G	590.1	95.8	95.9	95.5	93.5	93.3	91.0	49.0
400	3559	575	334	2089.0	G	590.1	95.8	95.8	95.5	93.5	93.3	91.0	49.0
400	1785	460	440	2639.2	G	1176.4	96.2	96.3	96.0	88.5	86.3	79.9	89.6
400	1785	575	352	2077.4	G	1176.5	96.2	96.3	96.0	88.5	86.5	80.4	87.8
400	1190	460	450	2681.7	G	1765.2	96.2	96.5	96.4	86.5	84.0	77.0	97.3
400	1190	575	360	2145.3	G	1765.2	96.2	96.5	96.4	86.5	84.0	77.0	97.3
450	3559	460	468	3020.6	G	663.9	95.8	96.1	95.9	94.0	94.0	92.1	50.1
450	3556	575	374	2275.3	G	664.5	95.8	96.0	95.8	94.0	94.1	92.5	47.1
450	1785	460	489	2954.8	G	1323.9	96.2	96.4	96.2	89.5	87.7	82.2	91.0
450	1785	575	394	2369.3	G	1323.5	96.2	96.5	96.2	89.0	87.3	81.6	93.3
450	1189	460	506	2984.0	G	1986.7	96.2	96.5	96.5	86.5	84.0	77.2	108.4
450	1190	575	410	2470.3	G	1985.4	96.2	96.6	96.4	85.5	82.8	75.2	117.5
500	3568	460	517	3309.7	G	735.6	95.8	96.4	96.2	94.5	94.3	92.5	52.6
500	3569	575	414	2638.4	G	735.6	95.8	96.4	96.2	94.5	94.2	92.5	52.8
500	1784	460	541	3266.1	G	1471.4	96.2	96.6	96.4	90.0	88.8	84.1	91.5
500	1784	575	430	2706.3	G	1471.4	96.2	96.5	96.4	90.5	89.0	84.2	91.5
500	1189	460	559	3408.6	G	2206.9	96.2	96.7	96.7	87.0	84.8	78.3	115.1
500	1190	575	450	2676.3	G	2206.8	96.2	96.6	96.6	86.5	84.5	77.9	116.8
600	3565	460	618	3787.00	G	883.5	96.2	96.5	96.5	94.5	95.0	93.9	52.4
600	3564	575	494	2962.2	G	883.9	96.2	96.4	96.4	94.5	95.0	94.0	51.2
600	1784	460	643	3932.7	G	1765.6	96.5	96.8	96.7	90.5	89.6	85.3	101.7
600	1783	575	514	2962.4	G	1766.8	96.5	96.7	96.7	90.5	89.9	86.2	95.8
600	1188	460	674	3905.5	G	2651.1	95.8	96.6	96.7	87.0	85.3	79.3	131.9
600	1188	575	539	3124.5	G	2651.1	95.8	96.6	96.7	87.0	85.3	79.3	131.9
700	3570	460	717	5657.5	H	1028.9	96.2	96.8	96.6	95.0	94.5	92.3	78.6
700	3563	575	577	3558.1	G	1031.4	96.2	96.6	96.6	94.5	94.9	93.8	62.1
700	1781	460	787	4789.0	G	2063.3	96.2	96.5	96.3	86.5	83.4	75.6	184.3
700	1781	575	630	3655.9	G	2063.9	96.2	96.5	96.4	86.5	83.8	76.4	178.0
700	1188	460	791	4712.0	G	3093.9	95.8	96.6	96.7	86.5	84.4	77.8	164.4
700	1189	575	636	3898.4	G	3091.5	95.8	96.7	96.7	86.0	83.2	75.9	177.9

Quantum™ LMV—TEFC

Severe Duty Low Voltage with IEEE 841 Features

Standard Features

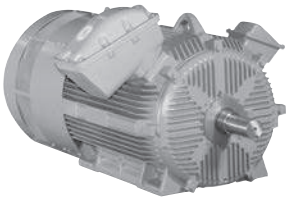


HP Range	300-500
Poles	2, 4, 6
Voltage	460, 575
Altitude	3300 ft
Ambient	40°C to -25°C
Balance/Vibration	NEMA Grade B
Bearing Caps	Both Ends
Bearing Protection	IP55; Inpro Seal on both ends
Bearing Temp Device	100 Ohm Platinum RTD both bearings
Bearing Type	Single Shielded Ball; 509L & 5011L have DE roller bearing
Conduit Box	Cast Iron or Fabricated Steel; Gasketed and rotatable in 90 degree increments
Div 2 Temp Codes	CSA Certified Class I Div 2 Groups A,B,C,D T3 200C AIT
Drains	Stainless Steel T-drains in lowest section of both endshields
Efficiency	Meets or exceeds IEEE 841-2009 efficiency requirements
Enclosure	TEFC
End Shield	Cast Iron
Fan	Bronze (Unidirectional on 2 poles)
Fan Cover	Fabricated Steel
Fasteners	SAE Grade 5
Foot Draft Angle	+/- 1.5 degrees
Frame Material	Cast Iron
Frame Size	509-5013
Frequency	60 Hz
Ground	Ground in conduit box and 2 NEMA Type ground pads on frame
Insulation Class	Class F
Insulation System	Epoxy VPI
Inverter Capabilities	Variable Torque INF:1 @ 1.0 SF on PWM power (unless otherwise noted on pricing pages)
L10 Bearing Life	Direct Coupled: 100,000 hrs, Belted 26,280 Hours
Leads	Permanently numbered, Non-wicking
Lifting Means	Two (2) cast in lifting lugs
Lubrication	Polyurea Grease
Mounting	Foot mounted F1 only, contact factory for F2 mounting options
Mounting Holes	Dual drilled for 508/509, 5010/5011, 5012/5013 mounting
Nameplate	316 Stainless Steel
NEMA Design	Standard Torque
Oil Mist Lube	Includes provisions for conversion to Oil Mist Lubrication
Paint	Epoxyester Buff, meets IEEE 841
Relubrication	Yes, both ends; extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.15 (unless otherwise noted on pricing pages)
Shaft Material	AISI 1045; 509L and 5011L AISI 4142
Space Heater	115V thermostatically controlled, leads to accessory box
Stator Temp Device	100 Ohm Platinum stator winding RTD's, leads to accessory box
Temperature Rise	80°C @ 1.0 SF
Tests	NEMA Routine Report including vibration supplied with motor, IEEE 112 Method B
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first

Quantum™ LMV—TEFC

Severe Duty Low Voltage with IEEE 841 Features

Pricing



Volts: 460, 575
HP: 300-500

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes	Model No.
300	3600	460	509LS	313	95.8	**Q8120**	$26,182	G4-7U5XLV	N	4650	66.13	66, 112	5KS509XAA130
300	3600	460	509LS	313	95.8	**Q814**	$26,182	G4-7U5XLV	N	4650	66.13	112, 145	5KS509XAA123
300	3600	575	509LS	251	95.8	**Q815**	$26,182	G4-7U5XLV	N	4650	66.13	66, 112	5KS509XAA124
300	3600	575	509LS	251	95.8	**Q816**	$26,182	G4-7U5XLV	N	4650	66.13	112, 145	5KS509XAA125
300	1800	460	509LL	328	96.2	**Q846**	$23,308	G4-7U5XLV	N	4550	67.13	112	5KS509XAA246
300	1800	460	509L	328	96.2	**Q847**	$23,808	G4-7U5XLV	N	4550	72,38	112, 148	5KS509XAA247
300	1800	575	509LL	262	96.2	**Q848**	$23,308	G4-7U5XLV	N	4550	67.13	112	5KS509XAA248
300	1800	575	509L	262	96.2	**Q849**	$23,808	G4-7U5XLV	N	4550	72.38	112, 148	5KS509XAA249
300	1200	460	5011LL	343	95.8	**Q8108**	$27,982	G4-7U5XLV	Y	5150	75.14	112	5KS511XAA367
300	1200	460	5011L	343	95.8	**Q850**	$28,482	G4-7U5XLV	N	5150	80.39	112, 148	5KS511XAA368
300	1200	575	5011LL	274	95.8	**Q851**	$27,982	G4-7U5XLV	N	5150	75.14	112	5KS511XAA369
300	1200	575	5011L	274	95.8	**Q855**	$28,482	G4-7U5XLV	N	5150	80.39	112, 148	5KS511XAA370
350	3600	460	5011LS	364	95.8	**Q8121**	$27,535	G4-7U5XLV	N	5400	74.14	66, 112	5KS511XAA155
350	3600	460	5011LS	364	95.8	**Q8100**	$27,535	G4-7U5XLV	N	5400	74.14	112, 145	5KS511XAA156
350	3600	575	5011LS	291	95.8	**Q817**	$27,535	G4-7U5XLV	N	5400	74.14	66, 112	5KS511XAA140
350	3600	575	5011LS	291	95.8	**Q818**	$27,535	G4-7U5XLV	N	5400	74.14	112, 145	5KS511XAA141
350	1800	460	509LL	385	96.2	**Q8104**	$26,413	G4-7U5XLV	Y	4650	67.13	112	5KS509XAA261
350	1800	460	509L	385	96.2	**Q856**	$26,913	G4-7U5XLV	N	4650	72.38	112, 148	5KS509XAA250
350	1800	575	509LL	308	96.2	**Q861**	$26,413	G4-7U5XLV	N	4650	67.13	112	5KS509XAA232
350	1800	575	509L	308	96.2	**Q857**	$26,913	G4-7U5XLV	N	4650	72.38	112, 148	5KS509XAA251
350	1200	460	5011LL	398	95.8	**Q8109**	$30,022	G4-7U5XLV	N	5150	75.14	112	5KS511XAA364
350	1200	460	5011L	398	95.8	**Q858**	$30,522	G4-7U5XLV	N	5150	80.39	112, 148	5KS511XAA350
350	1200	575	5011LL	318	95.8	**Q852**	$30,022	G4-7U5XLV	N	5150	75.14	112	5KS511XAA340
350	1200	575	5011L	318	95.8	**Q859**	$30,522	G4-7U5XLV	N	5150	80.39	112, 148	5KS511XAA351
400	3600	460	5011LS	418	95.8	**Q8122**	$29,765	G4-7U5XLV	N	5400	74.14	66, 112	5KS511XAA157
400	3600	460	5011LS	418	95.8	**Q8101**	$29,765	G4-7U5XLV	N	5400	74.14	112, 145	5KS511XAA158
400	3600	575	5011LS	334	95.8	**Q819**	$29,765	G4-7U5XLV	N	5400	74.14	66, 112	5KS511XAA142
400	3600	575	5011LS	334	95.8	**Q825**	$29,765	G4-7U5XLV	N	5400	74.14	112, 145	5KS511XAA143
400	1800	460	509LL	440	96.2	**Q8105**	$28,737	G4-7U5XLV	Y	4750	67.13	112	5KS509XAA262
400	1800	460	509L	440	96.2	**Q860**	$29,237	G4-7U5XLV	N	4750	72.38	112, 148	5KS509XAA252
400	1800	575	509LL	352	96.2	**Q862**	$28,237	G4-7U5XLV	N	4750	67.13	112	5KS509XAA236
400	1800	575	509L	352	96.2	**Q865**	$29,237	G4-7U5XLV	N	4750	72.38	112, 148	5KS509XAA253
400	1200	460	5011LL	450	96.2	**Q8110**	$32,968	G4-7U5XLV	Y	5400	75.14	112	5KS511XAA365
400	1200	460	5011L	450	96.2	**Q866**	$33,468	G4-7U5XLV	N	5400	80.39	112, 148	5KS511XAA352
400	1200	575	5011LL	360	96.2	**Q853**	$32,968	G4-7U5XLV	N	5400	75.14	112	5KS511XAA341
400	1200	575	5011L	360	96.2	**Q867**	$33,468	G4-7U5XLV	N	5400	80.39	112, 148	5KS511XAA353

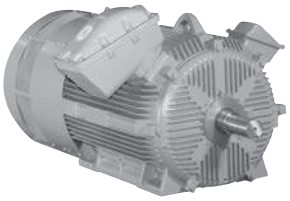
Notes:

66 CW rotation only facing opposite drive-end.
112 Noise level exceeds IEEE 841
145 CCW rotation facing opposite drive end.
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table in Application Guide.

Quantum™ LMV—TEFC

Severe Duty Low Voltage with IEEE 841 Features

Pricing (continued)



Volts: 460, 575
HP: 300-500

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes	Model No.
450	3600	460	5011LS	468	95.8	**Q8123**	$33,841	G4-7U5XLV	N	5475	74.14	66, 112	5KS511XAA159
450	3600	460	5011LS	468	95.8	**Q8102**	$33,841	G4-7U5XLV	N	5475	74.14	112, 145	5KS511XAA160
450	3600	575	5011LS	374	95.8	**Q826**	$33,841	G4-7U5XLV	N	5475	74.14	66, 112	5KS511XAA144
450	3600	575	5011LS	374	95.8	**Q827**	$33,841	G4-7U5XLV	N	5475	74.14	112, 145	5KS511XAA145
450	1800	460	5011LL	489	96.2	**Q8106**	$31,907	G4-7U5XLV	Y	5400	75.14	112	5KS511XAA253
450	1800	460	5011L	489	96.2	**Q868**	$32,407	G4-7U5XLV	N	5400	80.39	112, 148	5KS511XAA243
450	1800	575	5011LL	394	96.2	**Q863**	$31,907	G4-7U5XLV	N	5400	75.14	112	5KS511XAA238
450	1800	575	5011L	394	96.2	**Q869**	$32,407	G4-7U5XLV	N	5400	80.39	112, 148	5KS511XAA244
450	1200	460	5011LL	506	96.2	**Q8111**	$36,388	G4-7U5XLV	N	5700	75.14	112	5KS511XAA366
450	1200	460	5011L	506	96.2	**Q870**	$36,888	G4-7U5XLV	N	5700	80.39	112, 148	5KS511XAA354
450	1200	575	5011LL	410	96.2	**Q854**	$36,388	G4-7U5XLV	N	5700	75.14	112	5KS511XAA342
450	1200	575	5011L	410	96.2	**Q871**	$36,888	G4-7U5XLV	N	5700	80.39	112, 148	5KS511XAA355
500	3600	460	5011LS	517	95.8	**Q8124**	$35,308	G4-7U5XLV	N	5750	74.14	66, 112	5KS511XAA161
500	3600	460	5011LS	517	95.8	**Q8103**	$35,308	G4-7U5XLV	N	5750	74.14	112, 145	5KS511XAA162
500	3600	575	5011LS	414	95.8	**Q828**	$35,308	G4-7U5XLV	N	5750	74.14	66, 112	5KS511XAA146
500	3600	575	5011LS	414	95.8	**Q829**	$35,308	G4-7U5XLV	N	5750	74.14	112, 145	5KS511XAA147
500	1800	460	5011LL	541	96.2	**Q8107**	$34,097	G4-7U5XLV	Y	5700	75.14	112	5KS511XAA254
500	1800	460	5011L	541	96.2	**Q872**	$34,597	G4-7U5XLV	N	5700	80.39	112, 148	5KS511XAA245
500	1800	575	5011LL	430	96.2	**Q864**	$34,097	G4-7U5XLV	N	5700	75.14	112	5KS511XAA234
500	1800	575	5011L	430	96.2	**Q873**	$34,597	G4-7U5XLV	N	5700	80.39	112, 148	5KS511XAA246
500	1200	460	5013S	559	96.2	**Q874**	$41,702	G4-7U5XLV	N	6700	85.13	112	5KS513XAA322
500	1200	575	5013S	450	96.2	**Q876**	$41,702	G4-7U5XLV	N	6700	85.13	112	5KS513XAA324

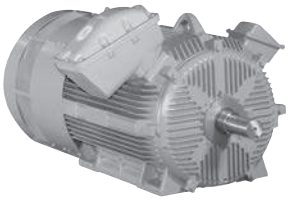
Notes:

66 CW rotation only facing opposite drive-end.
112 Noise level exceeds IEEE 841
145 CCW rotation facing opposite drive end.
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table in Application Guide.

Quantum™ LMV—TEFC

Severe Duty Low Voltage with IEEE 841 Features

Typical Performance Data



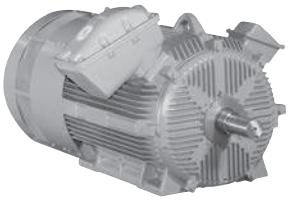
Volts: 460, 575
HP: 300-500

HP	FL RPM	Volts	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	FL Nom Eff	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
300	3560	460	313	2061.6	G	442.3	95.8	95.8	95.5	93.5	93.0	90.3	39.5
300	3560	575	251	1618.3	G	442.4	95.8	95.8	95.5	93.5	93.1	90.5	38.4
300	1785	460	328	1964.4	G	882.0	96.2	96.5	96.2	89.0	86.7	80.5	65.6
300	1785	575	262	1599.6	G	882.0	96.2	96.5	96.2	89.0	86.8	80.6	65.6
300	1185	460	343	2021.0	G	1328.2	95.8	96.0	95.8	85.5	82.7	75.2	78.3
300	1185	575	274	1616.9	G	1328.2	95.8	96.0	95.8	85.5	82.7	75.2	78.3
350	3570	460	364	2340.5	G	514.6	95.8	95.8	95.3	94.0	94.0	92.0	39.2
350	3570	575	291	1781.6	G	514.8	95.8	95.8	95.3	94.0	94.0	92.3	37.2
350	1785	460	385	2296.1	G	1029.4	96.2	96.6	96.3	88.5	86.2	79.7	79.2
350	1785	575	308	1780.5	G	1029.5	96.2	96.6	96.3	88.5	86.2	79.9	78.3
350	1185	460	398	2339.2	G	1550.0	95.8	96.1	96.1	86.0	83.3	76.1	88.1
350	1185	575	318	1902.8	G	1550.1	95.8	96.1	96.1	86.0	83.7	76.5	86.8
400	3570	460	418	2692.1	G	588.3	95.8	95.9	95.5	93.5	93.3	90.8	50.1
400	3570	575	334	2153.6	G	588.3	95.8	95.9	95.5	93.5	93.3	90.8	50.1
400	1785	460	440	2599.4	G	1176.1	96.2	96.5	96.2	88.5	86.3	79.9	89.6
400	1785	575	352	2046.1	G	1176.3	96.2	96.5	96.2	88.5	86.5	80.4	87.8
400	1190	460	450	2709.6	G	1765.4	96.2	96.4	96.4	86.5	84.0	77.0	97.3
400	1190	575	360	2167.6	G	1765.4	96.2	96.4	96.4	86.5	84.0	77.0	97.3
450	3570	460	468	2970.9	G	662.1	95.8	96.0	95.8	94.0	94.0	92.2	49.4
450	3570	575	374	2376.7	G	662.1	95.8	96.0	95.8	94.0	94.0	92.2	49.4
450	1785	460	489	2910.3	G	1323.6	96.2	96.7	96.4	89.5	87.7	82.2	91.0
450	1785	575	394	2333.7	G	1323.3	96.2	96.7	96.4	89.0	87.3	81.6	93.3
450	1190	460	506	3015.1	G	1987.0	96.2	96.4	96.4	86.5	84.0	77.2	108.4
450	1190	575	410	2496.1	G	1985.7	96.2	96.6	96.4	85.5	82.8	75.2	117.5
500	3570	460	517	3340.9	G	735.8	95.8	96.2	96.0	94.5	94.3	92.5	52.6
500	3570	575	414	2663.2	G	735.7	95.8	96.3	96.1	94.5	94.2	92.5	52.8
500	1785	460	541	3216.9	G	1471.0	96.2	96.8	96.6	90.0	88.8	84.1	91.5
500	1785	575	430	2427.2	G	1472.4	96.2	96.7	96.6	90.5	89.4	84.5	84.3
500	1190	460	559	3382.6	G	2207.6	96.2	96.5	96.6	87.0	85.1	78.8	112.6
500	1190	575	450	2704.2	G	2207.1	96.2	96.5	96.6	86.5	84.6	78.0	116.8

Quantum™ LMV—TEFC

Severe Duty Medium Voltage

Standard Features

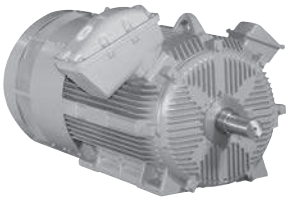


HP Range	200-800
Poles	2, 4, 6
Voltage	2300/4000
Altitude	3300 ft
Ambient	40°C
Balance/Vibration	NEMA Grade B
Bearing Caps	Both Ends
Bearing Protection	IP55; Shaft slinger both ends
Bearing Temp Device	100 Ohm Platinum RTD both bearings
Bearing Type	Single Shielded Ball; 509L & 5011L have DE roller bearing
Conduit Box	Fabricated Steel; Gasketed and rotatable in 90 degree increments
Drain	Stainless Steel T-drains in lowest section of both endshields
Efficiency	NEMA Premium
Enclosure	TEFC
End Shield	Cast Iron
Fan	Aluminum (Unidirectional on 2 poles)
Fan Cover	Fabricated Steel
Fasteners	SAE Grade 5
Frame Material	Cast Iron
Frame Size	509-5013
Frequency	60 Hz
Ground	Ground in conduit box and 2 NEMA Type ground pads on frame
Insulation Class	Class F
Insulation System	Epoxy VPI
Inverter Capabilities	Consult Factory
L10 Bearing Life	Direct Coupled: 100,000 hrs, Belted 26,280 Hours
Leads	Permanently numbered, Non-wicking
Lifting Means	Two (2) cast in lifting lugs
Lubrication	Polyurea Grease
Mounting	Foot mounted F1 only, contact factory for F2 mounting options
Mounting Holes	Dual drilled for 508/509, 5010/5011, 5012/5013 mounting
Nameplate	316 Stainless Steel
NEMA Design	Standard Torque
Paint	Epoxyester Buff
Relubrication	Yes, both ends; extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.15 (unless otherwise noted on pricing pages)
Shaft Material	AISI 1045; 509L and 5011L AISI 4142
Space Heater	115V standard space heater, leads to accessory box
Stator Temp Device	100 Ohm Platinum stator winding RTD's, leads to accessory box
Temperature Rise	80°C @ 1.0 SF (unless otherwise noted on pricing pages)
Tests	NEMA Routine; IEEE 112 Method B
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	36 months from date of installation or 42 months from date of manufacture, whichever occurs first

Quantum™ LMV—TEFC

Severe Duty Medium Voltage

Pricing



Volts: 2300/4000
HP: 200-800

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes	Model No.
200	1200	2300/4000	509LL	46.6/26.8	95.0	**Q534**	$28,193	G4-7U5MV	Y	4450	67.13		5KS509SAA335
200	1200	2300/4000	509L	46.6/26.8	95.0	**Q514**	$28,693	G4-7U5MV	Y	4450	72.38	148	5KS509SAA326
250	3600	2300/4000	509LS	53.0/30.5	95.0	**Q550**	$28,336	G4-7U5MV	N	4500	66.13	66	5KS509SAA122
250	3600	2300/4000	509LS	53.0/30.5	95.0	**Q500**	$28,336	G4-7U5MV	N	4500	66.13	145	5KS509SAA121
250	1800	2300/4000	509LL	55.3/31.8	95.0	**Q507**	$28,125	G4-7U5MV	Y	4350	67.13		5KS509SAA234
250	1800	2300/4000	509L	55.3/31.8	95.0	**Q5031**	$28,625	G4-7U5MV	N	4350	72.38	148	5KS509SAA269
250	1200	2300/4000	509LL	58.6/33.7	95.0	**Q535**	$31,413	G4-7U5MV	Y	4475	67.13		5KS509SAA336
250	1200	2300/4000	509L	58.6/33.7	95.0	**Q515**	$31,913	G4-7U5MV	Y	4475	72.38	148	5KS509SAA327
300	3600	2300/4000	5011LS	63.2/36.2	95.0	**Q551**	$33,749	G4-7U5MV	N	4950	74.14	66	5KS511SAA1015
300	3600	2300/4000	5011LS	63.2/36.2	95.0	**Q501**	$33,749	G4-7U5MV	N	4950	74.14	145	5KS511SAA1016
300	1800	2300/4000	509LL	66.1/38	95.0	**Q508**	$30,192	G4-7U5MV	Y	4550	67.13		5KS509SAA235
300	1800	2300/4000	509L	66.1/38	95.0	**Q5032**	$30,692	G4-7U5MV	N	4550	72.38	148	5KS509SAA270
300	1200	2300/4000	5011LL	70.1/40.3	95.4	**Q536**	$35,521	G4-7U5MV	Y	5400	75.14		5KS511SAA358
300	1200	2300/4000	5011L	68.5/39.4	95.4	**Q516**	$36,021	G4-7U5MV	Y	5400	80.39	148	5KS511SAA338
350	3600	2300/4000	5011LS	73.4/42.4	95.0	**Q552**	$36,588	G4-7U5MV	Y	4950	74.14	66	5KS511SAA167
350	3600	2300/4000	5011LS	73.4/42.4	95.0	**Q502**	$36,588	G4-7U5MV	N	4950	74.14	145	5KS511SAA140
350	1800	2300/4000	5011LL	77.6/44.6	95.4	**Q509**	$36,302	G4-7U5MV	Y	5200	75.14		5KS511SAA244
350	1800	2300/4000	5011L	77.6/44.6	95.4	**Q5033**	$36,802	G4-7U5MV	N	5200	80.39	148	5KS511SAA2008
350	1200	2300/4000	5011LL	80.2/46.1	95.0	**Q537**	$40,054	G4-7U5MV	Y	5500	75.14		5KS511SAA359
350	1200	2300/4000	5011L	80.2/46.1	95.0	**Q517**	$40,554	G4-7U5MV	Y	5500	80.39	148	5KS511SAA339
400	3600	2300/4000	5011LS	83.8/48.2	95.0	**Q553**	$40,637	G4-7U5MV	Y	5300	74.14	66	5KS511SAA168
400	3600	2300/4000	5011LS	83.8/48.2	95.0	**Q503**	$40,637	G4-7U5MV	N	5300	74.14	145	5KS511SAA141
400	1800	2300/4000	5011LL	87.7/50.4	95.4	**Q510**	$38,116	G4-7U5MV	Y	5800	75.14		5KS511SAA245
400	1800	2300/4000	5011L	87.7/50.4	95.4	**Q5034**	$38,616	G4-7U5MV	N	5800	80.39	148	5KS511SAA2009
400	1200	2300/4000	5011LL	93.9/54	95.4	**Q538**	$42,772	G4-7U5MV	Y	5700	75.14		5KS511SAA357
400	1200	2300/4000	5011L	93.9/54	95.4	**Q518**	$43,272	G4-7U5MV	Y	5700	80.39	148	5KS511SAA340
450	3600	2300/4000	5011LS	93.4/53.7	95.4	**Q554**	$44,106	G4-7U5MV	Y	5550	74.14	66	5KS511SAA169
450	3600	2300/4000	5011LS	93.4/53.7	95.4	**Q504**	$44,106	G4-7U5MV	N	5550	74.14	145	5KS511SAA142
450	1800	2300/4000	5011LL	98.3/56.5	95.8	**Q511**	$40,022	G4-7U5MV	Y	5800	75.14		5KS511SAA276
450	1800	2300/4000	5011L	98.3/56.5	95.8	**Q5035**	$40,522	G4-7U5MV	N	5800	80.39	148	5KS511SAA2010
450	1200	2300/4000	5013S	103.7/59.6	95.0	**Q519**	$47,547	G4-7U5MV	N	6600	85.13		5KS513SAA326
500	3600	2300/4000	5013ST	103.8/59.7	95.4	**Q555**	$47,559	G4-7U5MV	N	6350	83.13	66	5KS513SAA143
500	3600	2300/4000	5013ST	103.8/59.7	95.4	**Q505**	$47,559	G4-7U5MV	N	6350	83.13	145	5KS513SAA126
500	1800	2300/4000	5013S	109.4/62.9	95.8	**Q512**	$46,369	G4-7U5MV	Y	7000	85.13		5KS513SAA226
500	1200	2300/4000	5013S	114.6/65.9	96.2	**Q520**	$53,559	G4-7U5MV	Y	7150	85.13		5KS513SAA327
600	3600	2300/4000	5013ST	124.0/71.3	95.8	**Q556**	$55,057	G4-7U5MV	Y	6700	83.13	66, 149	5KS513SAA144
600	3600	2300/4000	5013ST	124.0/71.3	95.8	**Q506**	$55,057	G4-7U5MV	N	6700	83.13	145, 149	5KS513SAA127
600	1800	2300/4000	5013S	130.4/75	96.2	**Q513**	$53,730	G4-7U5MV	Y	7150	85.13		5KS513SAA227

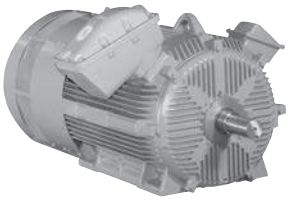
Notes:

66 CW rotation only facing opposite drive-end.
114 Fabricated Copper Bar Rotor
145 CCW rotation facing opposite drive end.
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table in Application Guide.
149 Class F rise @ 1.0 SF only

Quantum™ LMV—TEFC

Severe Duty Medium Voltage

Pricing (continued)



Volts: 2300/4000
HP: 200-800

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes	Model No.
600	1200	2300/4000	5013S	138.3/79.5	96.2	**Q521**	$59,200	G4-7U5MV	N	7150	85.13	149	5KS513SAA328
700	3600	2300/4000	5013ST	144.7/83.2	95.8	**Q567**	$58,440	G4-7U5MV	N	6900	83.13	66,149	5KS513SAA177
700	3600	2300/4000	5013ST	144.7/83.2	95.8	**Q568**	$58,440	G4-7U5MV	N	6900	83.13	145,149	5KS513SAA178
700	1800	2300/4000	5013S	149.3/85.8	96.5	**Q5041**	$62,120	G4-7U5MV	N	7150	85.13	114, 149	5KS513SAA266
800	3600	2300/4000	5013ST	165.5/95.1	95.8	**Q569**	$61,824	G4-7U5MV	N	6900	83.13	66,149	5KS513SAA179
800	3600	2300/4000	5013ST	165.5/95.1	95.8	**Q570**	$61,824	G4-7U5MV	N	6900	83.13	145,149	5KS513SAA180
800	1800	2300/4000	5013S	172.4/99.1	96.5	**Q5043**	$64,226	G4-7U5MV	N	7150	85.13	114, 149	5KS513SAA268

Notes:

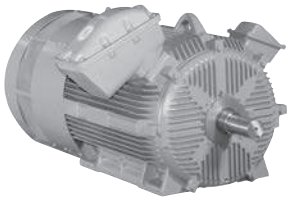
66 CW rotation only facing opposite drive-end.
114 Fabricated Copper Bar Rotor
145 CCW rotation facing opposite drive end.
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table in Application Guide.
149 Class F rise @ 1.0 SF only

Quantum™ LMV—TEFC

Severe Duty Medium Voltage

Typical Performance Data

NEMA Premium



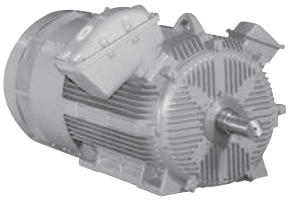
Volts: 4000
HP: 200-800

HP	FL RPM	Volts	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	FL Nom Eff	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
200	1185	4000	26.8	153.8	G	886.0	95.0	95.4	95.1	84.5	81.2	72.9	57.0
250	3562	4000	30.5	195.4	G	368.4	95.0	95.1	94.6	93.0	92.2	88.9	36.8
250	1783	4000	32.2	192.2	G	736.1	95.0	95.1	94.6	88.0	85.5	78.6	60.4
250	1185	4000	33.7	195.1	G	1107.4	95.0	95.5	95.2	84.0	80.7	72.1	73.7
300	3560	4000	36.2	233.3	G	442.2	95.0	95.0	94.6	94.0	93.9	91.8	34.1
300	1784	4000	38.4	236.1	G	883.0	95.0	95.6	95.2	88.5	86.1	79.5	69.2
300	1186	4000	40.3	235.5	G	1328.4	95.4	95.8	95.5	84.0	80.5	71.9	88.7
350	3558	4000	42.2	269.6	G	516.5	95.0	95.3	95.1	94.0	93.8	91.7	40.7
350	1783	4000	44.1	279.3	G	1030.3	95.4	95.8	95.6	89.5	87.4	81.5	73.7
350	1189	4000	46.1	272.3	G	1546.0	95.0	96.1	96.0	86.0	83.8	76.7	86.5
400	3568	4000	48.2	309.7	G	588.5	95.0	95.8	95.6	94.0	94.0	92.0	45.0
400	1783	4000	50.4	313.9	G	1177.6	95.4	96.1	95.9	89.5	88.0	82.7	78.9
400	1188	4000	52.8	299.8	G	1767.4	95.4	96.3	96.1	85.5	83.3	76.2	100.4
450	3568	4000	53.7	357.2	G	662.0	95.4	96.0	95.7	94.5	94.0	92.0	50.9
450	1784	4000	56.8	351.9	G	1324.6	95.8	96.3	96.0	89.0	87.4	81.9	92.0
450	1189	4000	59.6	355.7	G	1987.1	95.0	96.4	96.2	85.5	82.8	75.3	117.1
500	3568	4000	59.7	386.0	G	735.7	95.4	96.2	96.0	94.5	94.3	92.6	52.1
500	1783	4000	62.8	382.9	G	1472.1	95.8	96.4	96.2	89.5	88.3	83.3	94.4
500	1189	4000	65.1	397.2	G	2208.2	96.2	96.5	96.3	86.0	83.5	76.3	125.2
600	3564	4000	71.3	439.6	G	883.9	95.8	96.3	96.3	94.5	94.5	93.0	59.2
600	1787	4000	75.0	614.7	H	1763.1	96.2	96.8	96.5	89.5	86.7	79.7	138.0
600	1188	4000	78.5	485.8	G	2651.0	96.2	96.5	96.4	85.5	83.0	75.4	155.8
700	3568	4000	83.2	584.8	G	1030.1	95.8	96.6	96.5	94.5	94.4	92.4	76.4
700	1786	4000	85.8	565.6	G	2057.2	96.5	96.7	96.6	91.0	89.9	85.8	115.2
800	3571	4000	95.1	784.2	H	1176.1	95.8	96.8	96.6	94.5	93.8	90.9	102.7
800	1789	4000	99.1	757.2	H	2347.8	96.5	96.9	96.7	90.0	87.7	81.6	167.5

Quantum™ LMV—TEFC

Severe Duty Medium Voltage with IEEE 841 Features

Standard Features

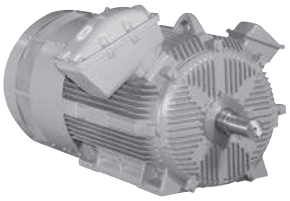


HP Range	200-500
Poles	2, 4, 6
Voltage	2300/4000
Altitude	3300 ft
Ambient	40°C to -25°C
Balance/Vibration	NEMA Grade B
Bearing Caps	Both Ends
Bearing Protection	IP55; Inpro Seal on both ends
Bearing Temp Device	100 Ohm Platinum RTD both bearings
Bearing Type	Single Shielded Ball; 509L & 5011L have DE roller bearing
Conduit Box	Fabricated Steel; Gasketed and rotatable in 90 degree increments
Div 2 Temp Codes	CSA Certified Class I Div 2 Groups A,B,C,D T3 200C AIT (unless otherwise noted on pricing pages)
Drains	Stainless Steel T-drains in lowest section of both endshields
Efficiency	Meets or exceeds IEEE 841-2009 efficiency requirements
Enclosure	TEFC
End Shield	Cast Iron
Fan	Bronze (Unidirectional on 2 poles)
Fan Cover	Fabricated Steel
Fasteners	SAE Grade 5
Foot Draft Angle	+/- 1.5 degrees
Frame Material	Cast Iron
Frame Size	509-5013
Frequency	60 Hz
Ground	Ground in conduit box and 2 NEMA Type ground pads on frame
Insulation Class	Class F
Insulation System	Epoxy VPI
Inverter Capabilities	Consult Factory
L10 Bearing Life	Direct Coupled: 100,000 hrs, Belted 26,280 Hours
Leads	Permanently numbered, Non-wicking
Lifting Means	Two (2) cast in lifting lugs
Lubrication	Polyurea Grease
Mounting	Foot mounted F1 only, contact factory for F2 mounting options
Mounting Holes	Dual drilled for 508/509, 5010/5011, 5012/5013 mounting
Nameplate	316 Stainless Steel
NEMA Design	Standard Torque
Oil Mist Lube	Includes provisions for conversion to Oil Mist Lubrication
Paint	Epoxyester Buff, meets IEEE 841
Relubrication	Yes, both ends; extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.15 (unless otherwise noted on pricing pages)
Shaft Material	AISI 1045; 509L and 5011L AISI 4142
Space Heater	115V thermostatically controlled, leads to accessory box
Stator Temp Device	100 Ohm Platinum stator winding RTD's, leads to accessory box
Temperature Rise	80°C @ 1.0 SF (unless otherwise noted on pricing pages)
Tests	NEMA Routine Report including vibration supplied with motor, IEEE 112 Method B
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first

Quantum™ LMV—TEFC

Severe Duty Medium Voltage with IEEE 841 Features

Pricing



Volts: 2300/4000
HP: 200-500

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes	Model No.
200	1200	2300/4000	509LL	46.6/26.8	95.0	**Q878**	$34,452	G4-7U5XMV	Y	4450	67.13		5KS509XAA350
200	1200	2300/4000	509L	46.6/26.8	95.0	**Q879**	$34,952	G4-7U5XMV	Y	4450	72.38	148	5KS509XAA351
250	3600	2300/4000	509LS	53.1/30.5	95.0	**Q830**	$34,764	G4-7U5XMV	N	4650	66.13	66, 112	5KS509XAA126
250	3600	2300/4000	509LS	53.1/30.5	95.0	**Q831**	$34,764	G4-7U5XMV	N	4650	66.13	112, 145	5KS509XAA127
250	1800	2300/4000	509LL	56.0/32.2	95.0	**Q880**	$34,718	G4-7U5XMV	Y	4350	67.13	112	5KS509XAA254
250	1800	2300/4000	509L	56.0/32.2	95.0	**Q881**	$35,218	G4-7U5XMV	N	4350	72.38	112, 148	5KS509XAA255
250	1200	2300/4000	509LL	58.6/33.7	95.0	**Q882**	$37,997	G4-7U5XMV	Y	4475	67.13	112	5KS509XAA352
250	1200	2300/4000	509L	58.6/33.7	95.0	**Q883**	$38,497	G4-7U5XMV	Y	4475	72.38	112, 148	5KS509XAA353
300	3600	2300/4000	5011LS	63.2/36.2	95.0	**Q832**	$41,718	G4-7U5XMV	N	4950	74.14	66, 112	5KS511XAA175
300	3600	2300/4000	5011LS	63.2/36.2	95.0	**Q833**	$41,718	G4-7U5XMV	N	4950	74.14	112, 145	5KS511XAA176
300	1800	2300/4000	509LL	66.8/38.4	95.0	**Q884**	$37,142	G4-7U5XMV	Y	4550	67.13	112	5KS509XAA256
300	1800	2300/4000	509L	66.8/38.4	95.0	**Q885**	$37,642	G4-7U5XMV	N	4550	72.38	112, 148	5KS509XAA257
300	1200	2300/4000	5011LL	69.7/40.1	95.4	**Q886**	$42,715	G4-7U5XMV	Y	5400	75.14	112	5KS511XAA356
300	1200	2300/4000	5011L	69.7/40.1	95.4	**Q887**	$43,215	G4-7U5XMV	Y	5400	80.39	112, 148	5KS511XAA357
350	3600	2300/4000	5011LS	73.0/42.0	95.0	**Q834**	$43,711	G4-7U5XMV	N	4950	74.14	66, 112	5KS511XAA148
350	3600	2300/4000	5011LS	73.0/42.0	95.0	**Q835**	$43,711	G4-7U5XMV	N	4950	74.14	112, 145	5KS511XAA149
350	1800	2300/4000	5011LL	76.7/44.1	95.4	**Q888**	$44,183	G4-7U5XMV	Y	5200	75.14	112	5KS511XAA247
350	1800	2300/4000	5011L	76.7/44.1	95.4	**Q889**	$44,683	G4-7U5XMV	N	5200	80.39	112, 148	5KS511XAA248
350	1200	2300/4000	5011LL	80.2/46.1	95.0	**Q890**	$47,935	G4-7U5XMV	Y	5500	75.14	112	5KS511XAA358
350	1200	2300/4000	5011L	80.2/46.1	95.0	**Q891**	$48,435	G4-7U5XMV	N	5500	80.39	112, 148	5KS511XAA359
400	3600	2300/4000	5011LS	83.5/48.0	95.0	**Q836**	$48,218	G4-7U5XMV	N	5300	74.14	66, 112	5KS511XAA150
400	3600	2300/4000	5011LS	83.5/48.0	95.0	**Q837**	$48,218	G4-7U5XMV	N	5300	74.14	112, 145	5KS511XAA151
400	1800	2300/4000	5011LL	87.7/50.4	95.4	**Q892**	$45,997	G4-7U5XMV	Y	5800	75.14	112	5KS511XAA249
400	1800	2300/4000	5011L	87.7/50.4	95.4	**Q893**	$46,497	G4-7U5XMV	N	5800	80.39	112, 148	5KS511XAA250
400	1200	2300/4000	5011LL	93.2/53.6	95.0	**Q894**	$50,653	G4-7U5XMV	Y	5700	75.14	112	5KS511XAA360
400	1200	2300/4000	5011L	93.2/53.6	95.0	**Q895**	$51,153	G4-7U5XMV	N	5700	80.39	112, 148	5KS511XAA361
450	3600	2300/4000	5011LS	93.4/53.7	95.4	**Q838**	$51,987	G4-7U5XMV	N	5550	74.14	66, 90, 95, 112, 147	5KS511XAA152
450	3600	2300/4000	5011LS	93.4/53.7	95.4	**Q839**	$51,987	G4-7U5XMV	N	5550	74.14	90, 95, 112, 145, 147	5KS511XAA153
450	1800	2300/4000	5011LL	98.3/56.5	95.8	**Q896**	$47,903	G4-7U5XMV	N	5800	75.14	112	5KS511XAA251
450	1800	2300/4000	5011L	98.3/56.5	95.8	**Q897**	$48,403	G4-7U5XMV	N	5800	80.39	112, 148	5KS511XAA252
450	1200	2300/4000	5013S	103.1/59.3	95.0	**Q898**	$55,428	G4-7U5XMV	N	6600	85.13	112	5KS513XAA326
500	3600	2300/4000	5013ST	103.8/59.7	95.4	**Q840**	$55,440	G4-7U5XMV	N	6350	83.13	66, 112, 147	5KS513XAA126
500	3600	2300/4000	5013ST	103.8/59.7	95.4	**Q841**	$55,440	G4-7U5XMV	N	6350	83.13	112, 145, 147	5KS513XAA127
500	1800	2300/4000	5013S	109.3/62.8	95.8	**Q8000**	$54,250	G4-7U5XMV	Y	7000	85.13	112	5KS513XAA232
500	1200	2300/4000	5013S	115.1/66.2	96.2	**Q8002**	$59,907	G4-7U5XMV	Y	7150	85.13	112	5KS513XAA328

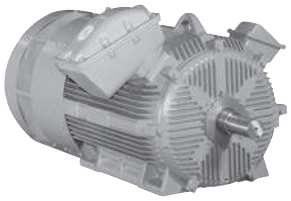
Notes:

66 CW rotation only facing opposite drive-end.
90 Does not meet IEEE 841 Bearing Temperature Rise
95 Class F Rise
112 Noise level exceeds IEEE 841
145 CCW rotation facing opposite drive end.
147 Does not meet 200C AIT - 215C AIT and above only
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table in Application Guide.

Quantum™ LMV—TEFC

Severe Duty Medium Voltage with IEEE 841 Features

Typical Performance Data

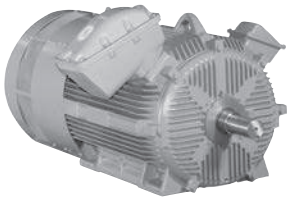


Volts: 4000
HP: 200-500

HP	FL RPM	Volts	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	FL Nom Eff	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
200	1185	4000	26.8	153.8	G	886.0	95.0	95.4	95.1	84.5	81.2	72.9	57.0
250	3565	4000	30.5	195.4	G	368.4	95.0	95.1	94.6	93.0	92.2	88.9	36.8
250	1785	4000	32.2	192.2	G	736.1	95.0	95.1	94.6	88.0	85.5	78.6	60.4
250	1185	4000	33.7	195.1	G	1107.4	95.0	95.5	95.2	84.0	80.7	72.1	73.7
300	3560	4000	36.2	233.3	G	442.2	95.0	95.0	94.6	94.0	93.9	91.8	34.1
300	1785	4000	38.4	236.1	G	883.0	95.0	95.6	95.2	88.5	86.1	79.5	69.2
300	1185	4000	40.1	232.4	G	1328.8	95.4	95.8	95.5	84.5	81.2	72.9	85.3
350	3570	4000	42.0	273.5	G	514.9	95.0	95.4	95.1	94.5	94.0	92.0	39.2
350	1785	4000	44.1	262.4	G	1030.3	95.4	96.0	95.7	89.5	87.5	82.0	71.7
350	1190	4000	46.1	272.3	G	1546.0	95.0	96.1	96.0	86.0	83.8	76.7	86.5
400	3565	4000	48.0	303.4	G	588.8	95.0	95.6	95.4	94.5	94.2	92.4	42.7
400	1785	4000	50.4	313.9	G	1177.6	95.4	96.1	95.9	89.5	88.0	82.7	78.9
400	1190	4000	53.6	323.5	G	1765.2	95.0	96.3	96.1	84.5	81.4	73.1	113.3
450	3570	4000	53.7	357.2	G	662.0	95.4	96.0	95.7	94.5	94.0	92.0	50.9
450	1785	4000	56.5	340.8	G	1324.6	95.8	96.5	96.2	89.5	87.6	82.2	90.3
450	1190	4000	59.3	357.6	G	1987.5	95.0	96.4	96.2	86.0	83.7	76.6	111.3
500	3565	4000	59.7	386.0	G	735.7	95.4	96.2	96.0	94.5	94.3	92.6	52.1
500	1785	4000	62.8	382.9	G	1472.1	95.8	96.4	96.2	89.5	88.3	83.3	94.4
500	1190	4000	66.2	428.6	G	2205.5	96.2	96.6	96.3	85.0	81.4	72.9	142.7

Quantum™ LMV—TEFC

Dimensions



Dimensions refer to drawings on following page

Frame 500, Totally Enclosed Fan Cooled

	Shaft						Mounting														
	Keyway		Key																		
Frame	Width	Depth	Length	N-W	U[1]	V[2]	E	H	BA	2F	2XF	A	B	C	D[3]	G	J	K	L	O	P
508L	1.000	0.500	10.00	12.00	3.875	11.50	10.00	1.07	8.50	-	25.00	23.00	31.90	72.39	12.50	1.35	7.09	8.36	37.88	30.80	30.45
508LL	0.875	0.437	5.00	6.75	3.375	6.50	10.00	1.07	8.50	-	25.00	23.00	31.90	67.14	12.50	1.35	7.09	8.36	37.88	30.80	30.45
508LS	0.625	0.312	4.00	5.75	2.625	5.50	10.00	1.07	8.50	-	25.00	23.00	31.90	66.14	12.50	1.35	7.09	8.36	37.88	30.80	30.45
509L	1.000	0.500	10.00	12.00	3.875	11.50	10.00	1.07	8.50	28.00	-	23.00	31.90	72.39	12.50	1.35	7.09	8.36	37.88	30.80	30.45
509LL	0.875	0.437	5.00	6.75	3.375	6.50	10.00	1.07	8.50	28.00	-	23.00	31.90	67.14	12.50	1.35	7.09	8.36	37.88	30.80	30.45
509LS	0.625	0.312	4.00	5.75	2.625	5.50	10.00	1.07	8.50	28.00	-	23.00	31.90	66.14	12.50	1.35	7.09	8.36	37.88	30.80	30.45
5010L	1.000	0.500	10.00	12.00	3.875	11.50	10.00	1.07	8.50	-	32.00	23.00	39.90	80.39	12.50	1.35	7.09	10.00	41.88	30.80	30.45
5010LL	0.875	0.437	5.00	6.75	3.375	6.50	10.00	1.07	8.50	-	32.00	23.00	39.90	75.14	12.50	1.35	7.09	10.00	41.88	30.80	30.45
5010LS	0.625	0.312	4.00	5.75	2.625	5.50	10.00	1.07	8.50	-	32.00	23.00	39.90	74.14	12.50	1.35	7.09	10.00	41.88	30.80	30.45
5011L	1.000	0.500	10.00	12.00	3.875	11.50	10.00	1.07	8.50	36.00	-	23.00	39.90	80.39	12.50	1.35	7.09	10.00	41.88	30.80	30.45
5011LL	0.875	0.437	5.00	6.75	3.375	6.50	10.00	1.07	8.50	36.00	-	23.00	39.90	75.14	12.50	1.35	7.09	10.00	41.88	30.80	30.45
5011LS	0.625	0.312	4.00	5.75	2.625	5.50	10.00	1.07	8.50	36.00	-	23.00	39.90	74.14	12.50	1.35	7.09	10.00	41.88	30.80	30.45
5012S	1.000	0.500	5.50	7.75	3.875	7.50	10.00	1.07	8.50	-	40.00	23.00	48.90	85.14	12.50	1.35	7.09	10.00	46.38	30.80	30.45
5012ST	0.750	0.375	4.00	5.75	2.875	5.50	10.00	1.07	8.50	-	40.00	23.00	48.90	83.13	12.50	1.35	7.09	10.00	46.38	30.80	30.45
5013S	1.000	0.500	5.50	7.75	3.875	7.50	10.00	1.07	8.50	45.00	-	23.00	48.90	85.14	12.50	1.35	7.09	10.00	46.38	30.80	30.45
5013ST	0.750	0.375	4.00	5.75	2.875	5.50	10.00	1.07	8.50	45.00	-	23.00	48.90	83.13	12.50	1.35	7.09	10.00	46.38	30.80	30.45

Conduit Box Dimensions

Frame	Max. FL Amps[4]	Approx. Volume	AA	AB	XL	XN	R
508-5013	400	1260	2-4.00	22.67	12.39	16.25	35.14
508-5013	600	2500	2-4.00	22.98	14.50	23.95	35.63
508-5013	1200	5700	3-3.00	28.83	22.25	22.25	41.30

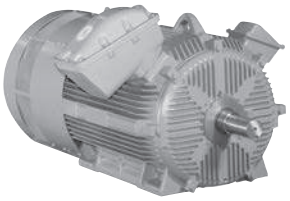
Notes:

1 Tolerance on "U" dimension will be +0.000 inch - 0.001
2 Dimension "V" represents length of straight part of shaft extension
3 Tolerance on "D" dimension will be + 0.000 inch - 0.060 inch
4 Conduit box size is determined by full load amps

Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward or from either side

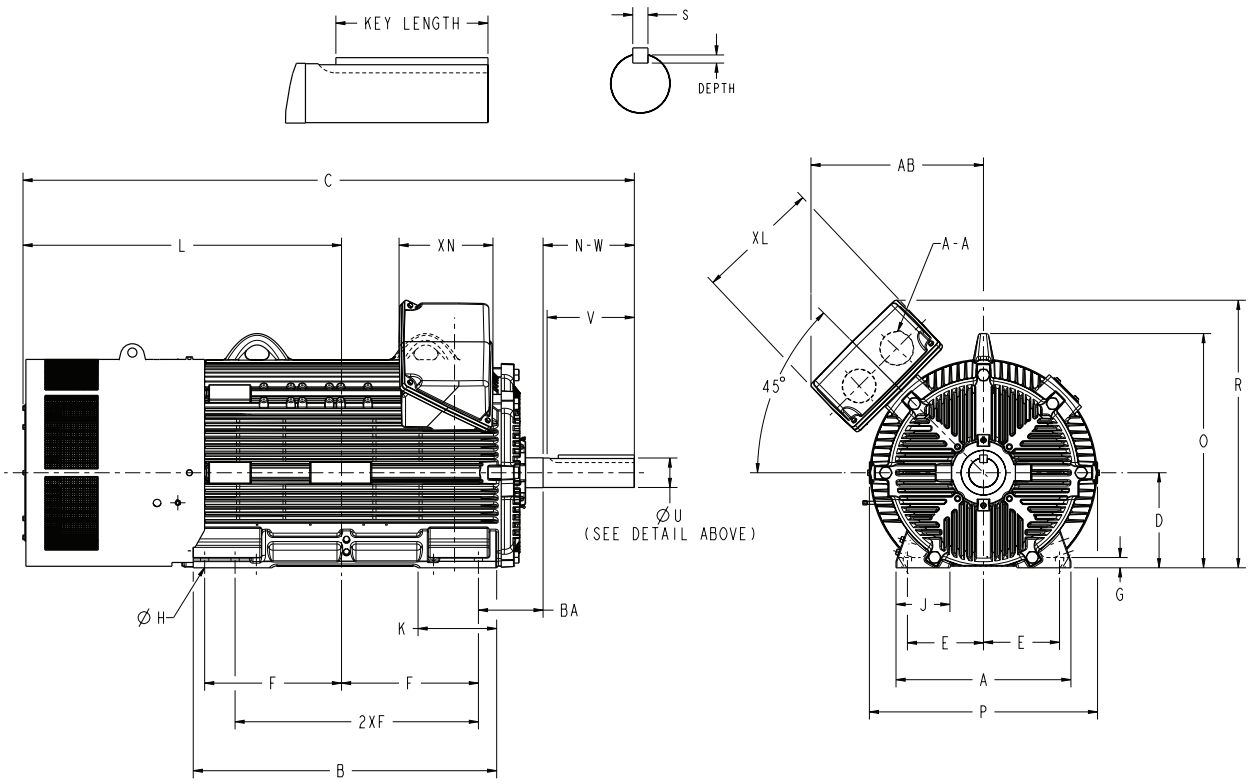
Quantum™ LMV—TEFC

Dimensions



Frame dimensions on previous page

Frame 500, Totally Enclosed Fan Cooled



449 Frame TEFC

Severe Duty Medium Voltage

Standard Features

HP Range	125-200
Poles	2, 4, 6
Voltage	2300 (200HP 4 pole 2300/4000V)
Altitude	3300 ft
Ambient	40°C
Balance/Vibration	0.055 in/sec Ball Bearing; Roller Bearing 6 Pole 0.0005 in (P-P)
Bearing Caps	Both Ends
Bearing Protection	Shaft Slinger Both Ends
Bearing Type	Single Shielded Ball; 125HP and 150HP 6 pole have DE Roller Bearing
Conduit Box	Cast Iron; 200HP 4 pole Fabricated Steel
Div 2 Temp Codes	Auto Ignition Temperature stamped on nameplate, refer to pricing for temperature codes
Drain	Stainless Steel T Drains in lowest section of both endshields
Efficiency	Premium
Enclosure	TEFC
End Shield	Cast Iron
Fan	Bidirectional Non Sparking Plastic
Fan Cover	Cast Iron
Fasteners	SAE Grade 5
Frame Material	Cast Iron
Frame Size	447/449
Frequency	60 Hz
Ground	Ground in conduit box
Insulation Class	Class F
Insulation System	Epoxy VPI
Inverter Capabilities	Consult Factory
L10 Bearing Life	Direct Coupled: 130,000 hrs 4 and 6 pole; 65,000 hrs 2 pole; Belted 26,280 hrs
Leads	Permanently Numbered, Non-wicking
Lifting Means	Two (2) cast in lifting lugs
Lubrication	Ball Bearing Polyurea
Mounting	Foot mounted F1 only
Mounting Holes	2 per foot
Nameplate	316 Stainless Steel
NEMA Design	B
Paint	Epoxy Ester Buff
Relubrication	Yes, both ends; extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.15
Shaft Material	2 and 4 Pole AISI 1045; 6 Pole AISI 4140
Space Heater	115V thermostatically controlled space heater, leads to accessory box
Stator Temp Device	100 Ohm Platinum Stator RTD's, leads to accessory box
Temperature Rise	80°C @ 1.0 SF
Tests	NEMA Routine; IEEE 112 Method B
Time Rating	Continuous
Warranty	36 months from date of installation or 42 months from date of manufacture, whichever occurs first

449 Frame TEFC

Severe Duty Medium Voltage

Pricing

449 Frame

HP	RPM	Volts	Frame	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
125	3600	2300	447TS	26.9	93.0	**E9520**	$21,816	G4-7TAN	N	2490	50.06	115
125	1800	2300	449T	28.8	95.0	**E9523**	$21,623	G4-7TAN	N	2490	53.81	115
125	1200	2300	449T	32.1	94.1	**E9526**	$21,956	G4-7TAN	N	2750	53.81	97, 148
150	3600	2300	449TS	32.1	93.0	**E9521**	$23,117	G4-7TAN	Y	2610	50.06	97
150	1800	2300	449T	34.8	95.0	**E9524**	$22,250	G4-7TAN	Y	2610	53.81	97
150	1200	2300	449T	38.3	94.1	**E9527**	$22,568	G4-7TAN	N	2750	53.81	97, 148
200	3600	2300	449TS	42.8	93.6	**E9522**	$24,541	G4-7TAN	Y	2610	50.06	116, 149
200	1800	2300/4000	449T	45.2/26.0	95.0	**E9525**	$23,887	G4-7TAN	Y	2720	53.81	97

Notes:

97 Does not meet 200°C AIT at 1.0 SF - 215°C AIT and above only
115 Meets 200°C AIT at 1.0 SF
116 Does not meet 200°C AIT at 1.0 SF - 260°C AIT and above only
148 Roller bearing on drive end. High strength shaft material. For belted loads only. Refer to Belt Drive Table on page 10.31
149 Class F rise @ 1.0 SF only

449 Frame TEFC

Severe Duty Medium Voltage

Typical Performance Data

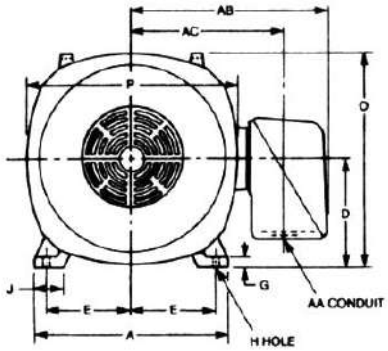
Volts: 2300, 2300/4000
HP: 125-200

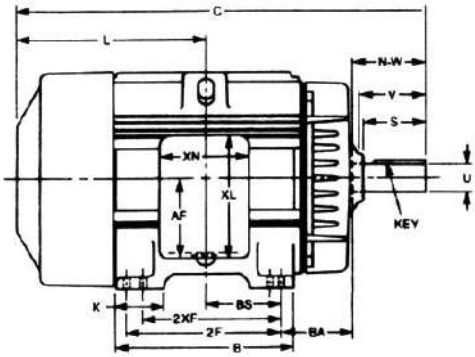
HP	FL RPM	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP Eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
125	3570	26.9	171.2	G	183.8	309.3	400.5	93.0	93.0	91.9	93.5	93.5	91.9	14.1
125	1785	28.8	165.4	G	367.7	696.8	813.7	95.0	95.1	94.4	85.5	82.4	74.6	34.7
125	1190	32.1	176.8	G	552.0	999.7	1137.1	94.1	94.4	93.7	77.5	72.9	62.4	49.7
150	3570	32.3	212.9	G	220.5	409.2	499.4	93.0	93.7	92.8	93.5	93.8	92.2	16.5
150	1785	34.8	209.8	G	441.0	903.2	1034.6	95.0	95.3	94.7	85.0	81.9	73.6	43.2
150	1190	38.3	215.5	G	662.6	1291.4	1401.4	94.1	94.6	94.0	78.0	73.5	63.3	58.0
200	3570	42.8	274.4	G	294.3	537.1	648.9	93.6	94.2	93.6	93.5	93.9	92.4	21.3
200	1785	26.0	154.8	G	587.6	998.3	1275.1	95.0	95.2	94.8	87.0	85.0	78.4	48.2

449 Frame TEFC

Severe Duty Medium Voltage

Dimensions





449 Frame, Totally Enclosed Fan Cooled

Frame	Shaft						Mounting															
	Keyway		Key																			
	Width	Depth	Length	N-W	U[1]	V[2]	E	H	BA	BS	2F	2XF	A	B	C	D[3]	G	J	K	L	O	P
447TS	0.625	0.625	3.00	4.75	2.375	4.50	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	50.06	11.00	1.47	2.61	8.91	25.31	22.98	23.08
449TS	0.625	0.625	3.00	4.75	2.375	4.50	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	50.06	11.00	1.47	2.61	8.91	25.31	22.98	23.08
449T	0.875	0.875	6.88	8.50	3.375	8.25	9.00	0.81	7.50	12.50	25.00	20.00	20.00	27.30	58.31	11.00	1.47	2.61	8.91	25.31	22.98	23.08

Conduit Box Dimensions

Frame	Max. FL Amps[5]	Approx. Volume	AA	AB	AC[4]	AF	XL	XN
447-449	250	700	8-3.00	20.81	16.68	7.00	12.14	10.50
447-449	250	2500	2-4.00	22.05	16.93	7.78	13.68	27.25

Notes:

1 Tolerance on "U" dimension will be +0.000 inch - 0.001
2 Dimension "V" represents length of straight part of shaft extension
3 Tolerance on "D" dimension will be + 0.000 inch - 0.060 inch
4 Dimension to AA hole
5 Conduit box size is determined by full load amps

Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward or from either side

Notes

7.0 Vertical Pump Motors

7.1 Value Line™ Vertical Hollow Shaft - WPI

7.1 Standard Features
7.2 SE Value Line Pricing
7.3 HE Value Line Pricing
7.4 Dimensions
7.5 Coupling Kit Pricing
7.6 Stabilizer Bushing Pricing

7.7 Energy $aver® Vertical Hollow Shaft – WPI

7.7 Standard Features
7.8 Pricing
7.9 Performance Data
7.10 Dimensions
7.11 Coupling Kit Pricing

7.12 Energy $aver® Vertical Hollow Shaft – TEFC

7.12 Standard Features
7.13 Pricing
7.14 Performance Data
7.15 Dimensions
7.16 Kits and Accessories

7.17 Energy $aver® VSS TEFC NT

7.17 Standard Features
7.18 Pricing - Normal Thrust
7.19 Performance Data
7.20 Dimensions

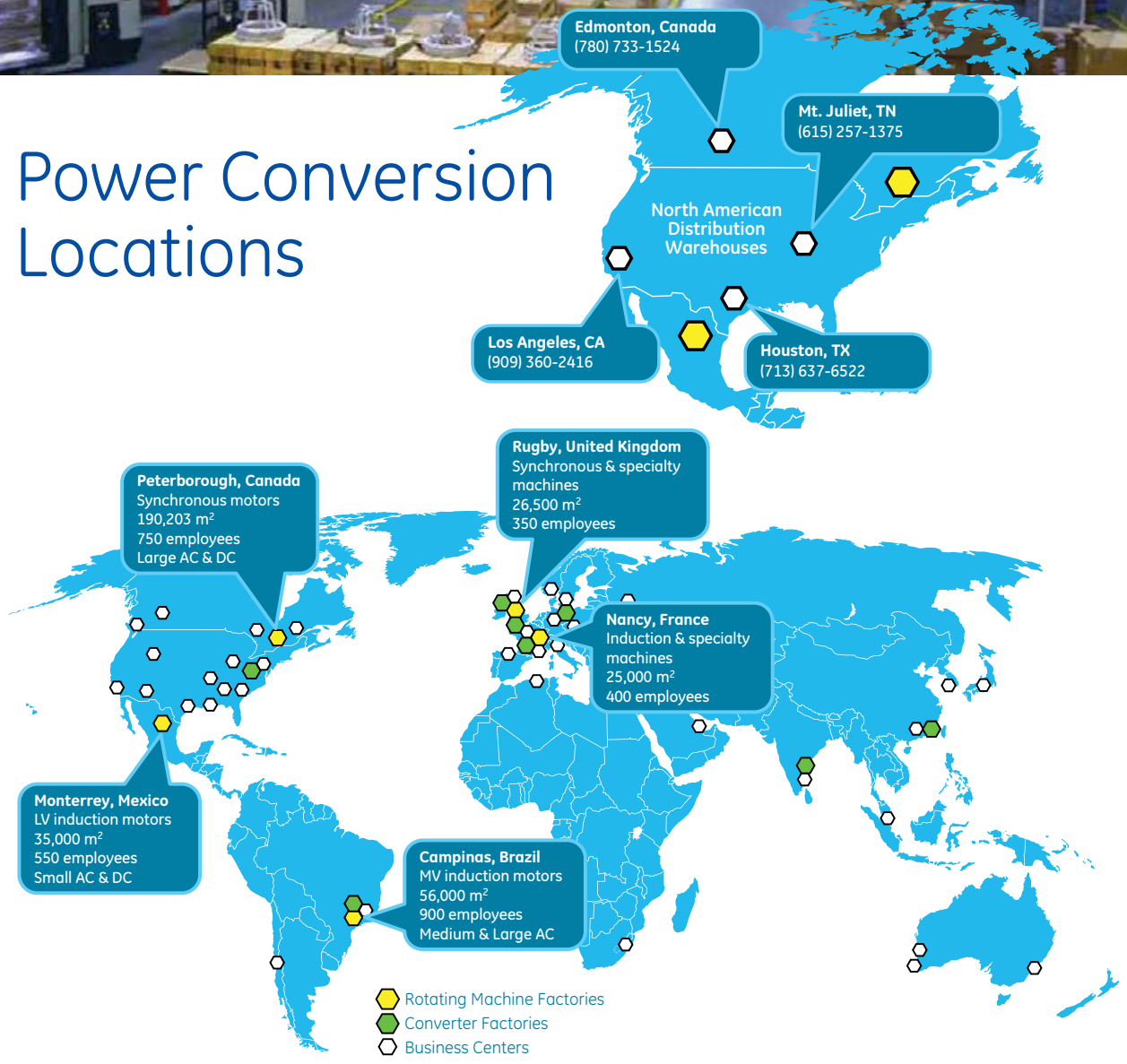
7.21 X$D Ultra 841 VSS TEFC

7.21 Standard Features
7.22 Pricing - Inline Pump
7.23 Pricing - High Thrust
7.24 Performance Data
7.26 Dimensions 182-286 Frame
7.27 Dimensions 324-445 Frame

7.28 X$D Ultra 841 Vertical C-Face NT

7.28 Standard Features
7.29 Pricing
7.30 Performance Data
7.31 Dimensions

Power Conversion Locations



Value Line™ Vertical Hollow Shaft

Weather Protection I

Standard Features

Type	SE Value Line	HE Value Line
HP Range	30-200	5-300
Poles	4	2, 4, 6
Voltage	230/460, 460 PWS	230/460, 460
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 ft	3300 ft
Ambient	40ºC	40ºC
Balance/Vibration	0.15 in/sec max	0.15 in/sec max
Bearing Caps	Yes	Yes
Bearing Protection	Shaft Slinger	Shaft Slinger
Bearing Type	High Thrust	High Thrust
Conduit Box	Cast Iron	Cast Iron
Coupling	Non-Reverse or Bolted	Non-Reverse or Bolted
Efficiency	Standard Efficiency	High Efficiency
End Shield	Cast Iron	Cast Iron
Fasteners	SAE	SAE
Finishing Varnish	Applied to stator windings for additional moisture protection.	Applied to stator windings for additional moisture protection.
Frame Material	Cast Iron	Cast Iron
Frame Size	284-445	213-449
Frequency	60 Hz (De-rated at 50 Hz and noted on the nameplate.)	60 Hz (De-rated at 50 Hz and noted on the nameplate.)
Grease/Oil	All Guide and 213-286 Thrust Bearings: Shell Alvania R3, 324-449; Polyrex EM	All Guide and 213-286 Thrust Bearings: Shell Alvania R3, 324-449; Polyrex EM
Ground	Brass Bolt in Conduit Box	Brass Bolt in Conduit Box
Insulation Class	F	F
Insulation System	Non-Hygroscopic, Anti-Fungus, Meets NEMA MG1-31 for variable frequency drives.	Non-Hygroscopic, Anti-Fungus, Meets NEMA MG1-31 for variable frequency drives.
Inverter Capabilities	Variable Torque *20-60 Hz (see Inverter Duty Capabilities on page iv)	Variable Torque 0-60 Hz without non-reverse ratchet and *20-60 Hz with NRR (see Inverter Duty Capabilities on page iv)
Lifting Means	Yes	Yes
Mounting	Vertical P-Base	Vertical P-Base
Nameplate	Stainless Steel	Stainless Steel
NEMA Design	A or B	A or B
Non-Reverse Ratchet Type	Ball Style	Ball Style
Paint	Gray, Polyurethane	Gray, Polyurethane
Relubrication	Yes	Yes
Rotor	Cast Aluminum	Cast Aluminum
Service Factor	1.15	1.15
Space Heater	Standard on all ratings, 115 Volt, 60 Hz	Standard on all ratings, 115 Volt, 60 Hz
Temperature Rise	80ºC @ 1.0 SF	80ºC @ 1.0 SF
Tests	NEMA Routine, IEEE 112 Method B	NEMA Routine, IEEE 112 Method B
Time Rating	Continuous	Continuous
Top Hat	Steel	Steel
Warranty	24 months from date of purchase or 30 months from date of shipment, whichever occurs first	36 months from date of purchase or 42 months from date of shipment, whichever occurs first

SE Value Line™ Vertical Hollow Shaft

Standard Efficiency
Weather Protection I
Ball Style Non-Reverse Ratchet

Pricing

Volts: 230/460, 460 PWS
HP: 30-200

HP	RPM	Volts	Frame	FLA	NEMA Code	Thrust Down	LRA	Nom. Eff.	Cat. No.	Motor List Price	Coupling List Price*	Price Symbol	Norm. Stk.	Wt. (lbs)	CD Dim. (in)	AG Dim. (in)	Notes
30	1800	230/460	L286TP16	76.2/38.1	G	3150	378.2	91.0	**V3908**	$2,785	$234	G5-7VHSB	Y	507	24.75	29.25	51, 111
40	1800	230/460	L324TP16	104.6/52.3	G	5700	286.9	90.2	**V3909**	$2,810	$732	G5-7VHSB	Y	760	28.22	32.72	51, 111
50	1800	230/460	L326TP16	127.4/63.7	G	5650	359.1	91.7	**V3920**	$3,454	$732	G5-7VHSB	Y	760	28.22	32.72	51, 111
60	1800	230/460	L364TP16	167.2/83.6	G	8200	442.9	91.7	**V3929**	$4,155	$732	G5-7VHSB	N	1102	31.16	35.95	51, 111
60	1800	460 PWS	L364TP16	83.6	G	8200	442.9	91.7	**V3930**	$4,155	$732	G5-7VHSB	Y	1102	31.16	35.95	51, 111
75	1800	230/460	L365TP16	195.0/97.5	G	8100	574.6	92.4	**V3940**	$5,151	$732	G5-7VHSB	N	1102	31.16	35.95	51, 111
75	1800	460 PWS	L365TP16	97.5	G	8100	574.6	92.4	**V3941**	$5,151	$732	G5-7VHSB	Y	1102	31.16	35.95	51, 111
100	1800	230/460	L404TP16	228.0/114.0	G	11900	558.0	93.0	**V3951**	$6,661	$845	G5-7VHSB	N	1590	36.94	42.05	51, 111
100	1800	460 PWS	L404TP16	114.0	G	11900	558.0	93.0	**V3952**	$6,661	$845	G5-7VHSB	Y	1590	36.94	42.05	51, 111
125	1800	460PWS	L405TP16	180.0	H	11900	1300.0	94.1	**V3954**	$8,700	$845	G5-7VHSB	Y	1735	36.94	42.05	51, 111
150	1800	460PWS	L444TP16	181.0	G	11700	1069.0	93.0	**V3955**	$10,060	$900	G5-7VHSB	Y	2075	44.80	50.11	51, 111
200	1800	460PWS	L445TP20	230.0	G	11500	1462.0	94.1	**V3956**	$13,854	$900	G5-7VHSB	Y	2260	44.80	50.11	51, 111

Notes:
*Motor coupling is required and priced separately on page 7.5.
PWS following the voltage denotes motor is Part Winding Start
51 Space Heater, 115V/60 Hz
111 Usable on 190/380 volts, 50 Hz at 1.0 Service Factor and derated to next lower HP

HE Value Line™ Vertical Hollow Shaft

High Efficiency
Weather Protection I
Ball Style Non-Reverse Ratchet

Pricing

Volts: 230/460, 460 PWS
HP: 5-300

HP	RPM	Volts	Frame	FLA @ 460	NEMA Code	Thrust Down	LRA	Nom. Eff.	Cat. No.	Motor List Price	Coupling List Price*	Price Symbol	Norm. Stk	Wt. (lbs)	CD Dim. (in)	AG Dim. (in)	Notes
5	3600	230/460	L213TP10	6.2	J	1900	39	85.5	**V3109**	$1,663	$218	G5-7VHSB	Y	220	20.25	24.62	111
5	1800	230/460	L213TP10	6.4	J	2400	41	87.5	**V3616**	$1,647	$218	G5-7VHSB	Y	220	20.25	24.62	111
7.5	3600	230/460	L213TP10	9.2	J	1900	70	87.5	**V3108**	$1,792	$218	G5-7VHSB	Y	220	20.25	24.62	6, 111
7.5	1800	230/460	L213TP10	9.5	H	2400	61	88.5	**V3615**	$1,700	$218	G5-7VHSB	Y	220	20.25	24.62	111
10	3600	230/460	L213TP10	12.5	J	1900	92	88.5	**V3107**	$1,937	$218	G5-7VHSB	Y	220	20.25	24.62	6, 111
10	1800	230/460	L215TP10	12.3	H	2350	76	89.5	**V3643**	$1,937	$218	G5-7VHSB	Y	220	20.25	24.62	111
10	1200	230/460	L256TP12	13.1	H	3750	83	90.2	**V3178**	$2,655	$234	G5-7VHSB	Y	370	23.38	27.85	6, 111
15	3600	230/460	L215TP10	18.3	H	1850	127	89.5	**V3139**	$2,070	$218	G5-7VHSB	Y	220	20.25	24.62	6, 111
15	1800	230/460	L254TP10	18.6	G	3250	111	91.0	**V3658**	$2,129	$229	G5-7VHSB	Y	340	23.38	27.85	111
15	1800	230/460	L254TP16	18.6	G	3250	111	91.0	**V3660**	$2,129	$229	G5-7VHSB	Y	340	23.38	27.85	111
15	1200	230/460	L284TP12	18.8	H	3700	124	90.2	**V3191**	$2,901	$234	G5-7VHSB	Y	507	24.75	29.25	6, 111
20	3600	230/460	L254TP10	22.7	G	2600	131	90.2	**V3157**	$2,273	$229	G5-7VHSB	Y	340	23.38	27.85	111
20	1800	230/460	L256TP12	24.6	G	3250	136	91.0	**V3674**	$2,513	$229	G5-7VHSB	Y	370	23.38	27.85	111
20	1800	230/460	L256TP16	24.6	G	3250	136	91.0	**V3676**	$2,513	$229	G5-7VHSB	Y	370	23.68	27.85	111
25	3600	230/460	L256TP12	27.8	G	2600	179	91.0	**V3171**	$2,601	$229	G5-7VHSB	Y	370	23.38	27.85	111
25	1800	230/460	L284TP12	30.6	G	3200	148	91.7	**V3689**	$2,793	$234	G5-7VHSB	Y	507	24.75	29.25	111
25	1800	230/460	L284TP16	30.6	G	3200	148	91.7	**V3690**	$2,793	$234	G5-7VHSB	Y	507	24.75	29.25	111
30	3600	230/460	L284TP12	34.5	G	2600	187	91.0	**V3188**	$2,655	$234	G5-7VHSB	Y	507	24.75	29.25	111
30	1800	230/460	L286TP12	36.2	G	3150	179	92.4	**V3698**	$3,149	$234	G5-7VHSB	Y	507	24.75	29.25	111
30	1800	230/460	L286TP16	36.2	G	3150	179	92.4	**V3699**	$3,149	$234	G5-7VHSB	Y	507	24.75	29.25	111
30	1200	230/460	L326TP16	37.3	G	6550	218	92.4	**V3423**	$4,178	$732	G5-7VHSB	Y	855	28.22	32.72	111
40	3600	230/460	L286TP12	45.9	G	2500	238	91.7	**V3197**	$3,525	$234	G5-7VHSB	Y	507	24.75	29.25	111
40	1800	230/460	L324TP12	47.4	G	5700	297	93.0	**V3611**	$3,348	$732	G5-7VHSB	Y	760	28.22	32.72	6, 111
40	1800	230/460	L324TP16	47.4	G	5700	297	93.0	**V3609**	$3,348	$732	G5-7VHSB	Y	760	28.22	32.72	6, 111
40	1800	460 PWS	L324TP16	47.4	G	5700	297	93.0	**V3610**	$3,348	$732	G5-7VHSB	Y	760	28.22	32.72	6, 110
40	1200	230/460	L364TP16	42.1	G	9450	304	93.0	**V3435**	$5,232	$732	G5-7VHSB	Y	1102	31.16	35.95	6, 111
50	3600	230/460	L324TP12	56.9	H	4550	414	92.4	**V3407**	$4,088	$732	G5-7VHSB	Y	790	28.22	32.72	6, 111
50	3600	230/460	L324TP16	56.9	H	4550	414	92.4	**V3450**	$4,088	$732	G5-7VHSB	N	760	28.22	32.72	6, 111
50	1800	230/460	L326TP12	59.6	G	5650	376	93.0	**V3622**	$4,115	$732	G5-7VHSB	N	760	28.22	32.72	6, 111
50	1800	230/460	L326TP16	59.6	G	5650	376	93.0	**V3620**	$4,115	$732	G5-7VHSB	Y	760	28.22	32.72	6, 111
50	1800	460 PWS	L326TP16	59.6	G	5650	376	93.0	**V3621**	$4,115	$732	G5-7VHSB	Y	760	28.22	32.72	6, 111
60	3600	460 PWS	L326TP16	75.0	H	4500	520	92.4	**V3551**	$4,769	$732	G5-7VHSB	Y	760	28.22	32.72	6, 110
60	1800	230/460	L364TP16	72.7	G	8200	459	93.6	**V3629**	$4,950	$732	G5-7VHSB	Y	1102	31.16	35.95	110
60	1800	460 PWS	L364TP16	72.7	G	8200	459	93.6	**V3630**	$4,950	$732	G5-7VHSB	Y	1102	31.16	35.95	110
60	1200	460 PWS	L404TP16	70.8	G	13850	454	93.6	**V3553**	$7,187	$845	G5-7VHSB	Y	1590	36.94	42.05	6, 110
75	3600	460 PWS	L364TP16	83.4	G	6500	540	93.0	**V3428**	$5,993	$732	G5-7VHSB	Y	1102	31.16	35.95	110
75	1800	230/460	L365TP16	89.3	G	8100	561	94.1	**V3640**	$6,135	$732	G5-7VHSB	Y	1102	31.16	35.95	6, 111
75	1800	460 PWS	L365TP16	89.3	G	8100	561	94.1	**V3641**	$6,135	$732	G5-7VHSB	Y	1102	31.16	35.95	6, 110
75	1200	460 PWS	L405TP16	88.3	G	13750	572	93.6	**V3555**	$8,600	$845	G5-7VHSB	Y	1590	36.94	42.05	6, 110
100	1800	230/460	L404TP16	128.0	G	11900	583	94.1	**V3651**	$8,223	$845	G5-7VHSB	Y	1590	36.94	42.05	111
100	1800	460 PWS	L404TP16	128.0	G	7200	583	94.1	**V3685**	$7,773	$845	G5-7VHSB	Y	1590	36.94	42.05	110
100	1800	460 PWS	L404TP16	128.0	G	11900	583	94.1	**V3653**	$8,223	$845	G5-7VHSB	Y	1590	36.94	42.05	110
100	1200	460 PWS	L444TP16	123.0	G	13600	743	94.1	**V3468**	$11,709	$900	G5-7VHSB	N	2075	44.80	50.11	6, 110
125	1800	460 PWS	L405TP16	162.0	G	7200	878	94.5	**V3686**	$10,176	$845	G5-7VHSB	Y	1590	36.94	42.05	110
125	1800	460 PWS	L405TP16	162.0	G	11700	878	94.5	**V3656**	$10,676	$845	G5-7VHSB	Y	1590	36.94	42.05	110
150	1800	460 PWS	L444TP16	167.0	G	11700	1035	95.0	**V3664**	$11,766	$900	G5-7VHSB	Y	2075	44.80	50.11	110
150	1800	460 PWS	L444TP20	167.0	G	11700	1035	95.0	**V3666**	$11,766	$900	G5-7VHSB	N	2075	44.80	50.11	110
200	1800	460 PWS	L445TP16	232.0	G	11500	1576	95.0	**V3670**	$16,203	$900	G5-7VHSB	Y	2260	44.80	50.11	6, 110
200	1800	460 PWS	L445TP20	232.0	G	11500	1576	95.0	**V3683**	$16,203	$900	G5-7VHSB	Y	2260	44.80	50.11	6, 110
250	1800	460 PWS	L447TP20	298.0	J	14100	2266	95.4	**V3678**	$19,515	$1,125	G5-7VHSB	Y	3000	44.80	50.00	6, 110
300	1800	460 PWS	L449TP20	362.0	J	13800	2695	95.4	**V3679**	$23,230	$1,125	G5-7VHSB	Y	3500	49.78	55.02	6, 110

Notes:

* Motor coupling is required and priced separately on page 7.5.

PWS following the voltage denotes motor is Part Winding Start

6 NEMA Design A

110 Usable on 380 volts, 50 Hz at 1.0 Service Factor and derated to next lower HP

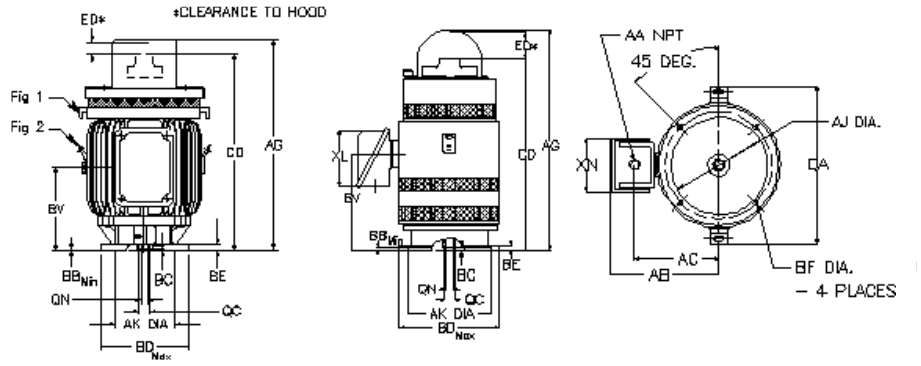
111 Usable on 190/380 volts, 50 Hz at 1.0 Service Factor and derated to next lower HP

Value Line™ Vertical Hollow Shaft

Weather Protection I

Ball Style Non-Reverse Ratchet

Dimensions



Motor Dimensions (dimensions in inches)

Frame Size	AG	AJ	AK	BB	BC	BD	BE	BF	BV	CD	ED	QA	QC	QN	Notes
L213TP10/L215TP10	24.62	9.13	8.25	0.22	0.25	10.0	0.75	0.44	8.14	20.25	4.35	14.17	1.125	1.000	
L213TP12/L215TP12	24.62	9.13	8.25	0.22	0.12	12.0	0.75	0.44	8.14	20.25	4.35	14.17	1.375	1.250	
L254TP10/L256TP10	27.85	9.13	8.25	0.22	0.12	10.0	0.98	0.44	9.41	23.38	4.50	17.72	1.375	1.250	
L254TP12/L256TP12	27.85	9.13	8.25	0.22	0.12	12.0	0.98	0.44	9.41	23.38	4.50	17.72	1.375	1.250	
L254TP16/L256TP16	27.85	14.75	13.50	0.22	0.12	16.5	0.98	0.69	9.41	23.38	4.50	17.72	1.375	1.250	
L284TP10/L286TP10	29.25	9.13	8.25	0.22	0.31	10.0	0.98	0.44	10.19	24.75	4.50	20.71	1.375	1.250	
L284TP12/L286TP12	29.25	9.13	8.25	0.22	0.31	12.0	0.98	0.44	10.19	24.75	4.50	20.71	1.375	1.250	
L284TP16/L286TP16	29.25	9.13	13.50	0.22	0.31	16.5	0.98	0.69	10.19	24.75	4.50	20.71	1.375	1.250	
L324TP12/L326TP12	32.73	9.13	8.25	0.28	0.25	12.0	0.98	0.44	13.44	28.22	4.40	22.36	1.875	1.750	
L324TP16/L326TP16	32.73	14.75	13.50	0.28	0.25	16.5	0.98	0.69	13.44	28.22	4.40	22.36	1.875	1.750	
L364TP12/L365TP12	35.95	9.13	8.25	0.28	0.25	12.0	0.98	0.44	16.12	31.16	4.52	24.80	1.875	1.750	
L364TP16/L365TP16	35.95	14.75	13.50	0.28	0.25	16.5	0.98	0.69	16.12	31.16	4.52	24.80	1.875	1.750	
L404TP16/L405TP16	42.05	14.75	13.50	0.28	0.25	16.5	0.98	0.69	15.68	36.94	4.40	27.87	2.000	1.938	
L404TP20/L405TP20	42.05	14.75	13.50	0.28	0.25	20.0	0.98	0.69	15.68	36.94	4.40	27.87	2.000	1.938	
L444TP16/L445TP16	50.11	14.75	13.50	0.28	0.28	16.5	1.16	0.69	21.83	44.78	4.40	31.40	2.000	1.938	
L444TP20/L445TP20	50.11	14.75	13.50	0.28	0.28	20.5	1.16	0.69	21.83	44.78	4.40	31.40	2.000	1.938	
L444TP24/L445TP24	50.11	14.75	13.50	0.28	0.28	24.0	1.16	0.69	21.83	44.78	4.40	31.40	2.000	1.938	
L447TP20	50.00	14.75	13.50	0.28	0.28	20.0	1.16	0.69	27.80	44.78	5.18	31.40	2.625	2.560	
L449TP20*	55.00	14.75	13.50	0.28	0.28	20.0	1.16	0.69	27.80	49.75	5.18	31.40	2.625	2.560	

Conduit Box Dimensions (dimensions in inches)

Frame Size	AA	AB	AC	XL	XN	Notes
L213TP10/L215TP10	1.0	9.30	7.20	6.80	2.60	
L254TP10/L256TP10	1.5	10.97	8.46	7.76	5.67	
L254TP12/L256TP12	1.5	10.97	8.46	7.76	5.67	
L284TP12/L286TP12	1.5	14.60	10.83	9.20	8.11	
L284TP16/L286TP16	1.5	14.60	10.83	9.20	8.11	
L324TP12/L326TP12	1.5	14.68	11.85	8.38	8.11	
L324TP16/L326TP16	1.5	14.68	11.85	8.38	8.11	
L364TP12/L365TP12	2.5	15.78	12.91	8.38	8.11	
L364TP16/L365TP16	2.5	15.78	12.91	8.38	8.11	
L404TP16/L405TP16	2.5	20.90	16.06	15.75	10.55	
L444TP16/L445TP16	2.5	21.65	16.81	16.62	11.26	
L444TP20/L445TP20	2.5	21.65	16.81	16.62	11.26	
L447TP20	3.5	21.65	16.81	16.62	11.26	
L449TP20*	3.5	21.65	16.81	16.62	11.26	

Value Line™ Vertical Hollow Shaft

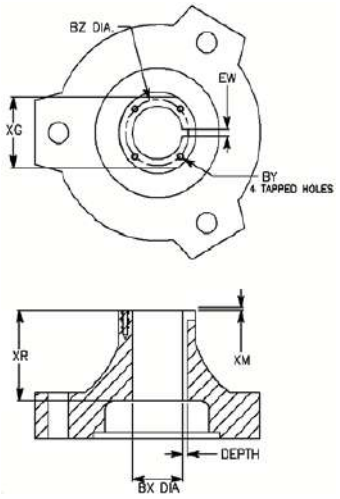
Weather Protection I

Ball Style Non-Reverse Ratchet

Coupling Kit Pricing

5 to 300HP Coupling (Specify size of coupling with order)

Frame Size	Cat. No.	List Price	Price Symbol	Norm. Stk.	Dimensions in Inches							
					BX	Depth	EW	XG	BY	BZ	XM	XR
210TP	**Y8454**	$218	G5-7KITS	Y	1.001	0.140	0.250	1.75	10-32 UNF	1.375	0.39	1.65
	Y8513	$218	G5-7KITS	Y	Blank coupling must be machined to proper dimensions							
250TP	**Y8457**	$229	G5-7KITS	Y	1.001	0.140	0.250	1.75	10-32 UNF	1.375	0.39	1.65
	Y8458	$229	G5-7KITS	Y	1.188	0.140	0.250		1/4 -20 UNC	1.750		
	Y8459	$229	G5-7KITS	Y	1.251	0.140	0.250					
	Y8514	$229	G5-7KITS	Y	Blank coupling must be machined to proper dimensions							
280TP	**Y8462**	$234	G5-7KITS	Y	1.001	0.140	0.250	1.75	10-32 UNF	1.375	0.39	1.85
	Y8463	$234	G5-7KITS	Y	1.188	0.140	0.250		1/4 -20 UNC	1.750		
	Y8464	$234	G5-7KITS	Y	1.251	0.140	0.250					
	Y8515	$234	G5-7KITS	Y	Blank coupling must be machined to proper dimensions							
320TP 360TP	**Y8520**	$732	G5-7KITS	Y	1.001	0.140	0.250	N/A	10-32 UNF	1.375	0.47	1.61
	Y8521	$732	G5-7KITS	Y	1.188	0.140	0.250		1/4 -20 UNC	1.750		
	Y8522	$732	G5-7KITS	Y	1.251	0.140	0.250					
	Y8523	$732	G5-7KITS	Y	1.251	0.140	0.375					
	Y8524	$732	G5-7KITS	Y	1.438	0.140	0.375			2.120		
	Y8525	$732	G5-7KITS	Y	1.501	0.140	0.375					
	Y8526	$732	G5-7KITS	Y	Blank coupling must be machined to proper dimensions							
400TP	**Y8527**	$845	G5-7KITS	Y	1.188	0.140	0.250	N/A	1/4 -20 UNC	1.750	0.63	2.43
	Y8528	$845	G5-7KITS	Y	1.251	0.140	0.375					
	Y8529	$845	G5-7KITS	Y	1.438	0.140	0.375			2.120		
	Y8530	$845	G5-7KITS	Y	1.501	0.140	0.375					
	Y8531	$845	G5-7KITS	Y	1.688	0.203	0.375			2.500		
	Y8532	$845	G5-7KITS	N	1.751	0.203	0.375					
	Y8533	$845	G5-7KITS	Y	Blank coupling must be machined to proper dimensions							
440TP	**Y8534**	$900	G5-7KITS	N	1.188	0.140	0.250	N/A	1/4 -20 UNC	1.750	0.63	2.22
	Y8537	$900	G5-7KITS	Y	1.501	0.140	0.375			2.120		
	Y8538	$900	G5-7KITS	Y	1.688	0.203	0.375			2.500		
	Y8539	$900	G5-7KITS	Y	1.751	0.203	0.375					
	Y8540	$900	G5-7KITS	N	1.938	0.203	0.375					
	Y8541	$900	G5-7KITS	Y	Blank coupling must be machined to proper dimensions							
447TP 449TP	**Y8563**	$1,125	G5-7KITS	Y	1.501	0.168	0.375	N/A	1/4 -20 UNC	2.125	0.55	2.22
	Y8564	$1,125	G5-7KITS	Y	1.688	0.171	0.375			2.500		
	Y8566	$1,125	G5-7KITS	Y	1.938	0.222	0.500				0.67	
	Y8570	$1,125	G5-7KITS	N	2.188	0.226	0.500		3/8 -16 UNC	3.250		
	Y8571	$1,125	G5-7KITS	N	2.251		0.500					
	Y8575	$1,125	G5-7KITS	Y	Blank coupling must be machined to proper dimensions							



Value Line™ Vertical Hollow Shaft

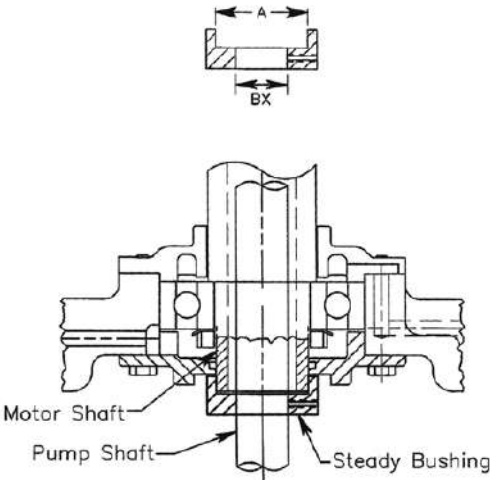
Weather Protection I

Ball Style Non-Reverse Ratchet

Stabilizer Bushing Pricing

Optional Stabilizer/Steady Bushing

Frame Size	Cat. No.	List Price	Price Symbol	Dim. in Inches		Norm. Stk.
				A	BX	
210TP/250TP	**Y8284**	$110	G5-7KITS	1.76	1.001	Y
280TP	**Y8292**	$107	G5-7KITS	2.17	1.001	Y
	Y8291	$107	G5-7KITS	2.17	1.188	Y
	Y8290	$107	G5-7KITS	2.17	1.251	Y
320TP	**Y8301**	$135	G5-7KITS	2.36	1.001	Y
	Y8298	$135	G5-7KITS	2.36	1.188	Y
	Y8297	$135	G5-7KITS	2.36	1.251	Y
	Y8296	$135	G5-7KITS	2.36	1.438	Y
	Y8295	$135	G5-7KITS	2.36	1.501	Y
360TP	**Y8307**	$135	G5-7KITS	2.56	1.001	Y
	Y8305	$135	G5-7KITS	2.56	1.188	Y
	Y8304	$135	G5-7KITS	2.56	1.251	Y
	Y8303	$135	G5-7KITS	2.56	1.438	Y
	Y8302	$135	G5-7KITS	2.56	1.501	Y
400TP/440TP	**Y8360**	$141	G5-7KITS	2.64	1.188	Y
	Y8312	$141	G5-7KITS	2.64	1.251	Y
	Y8311	$141	G5-7KITS	2.64	1.438	Y
	Y8310	$141	G5-7KITS	2.64	1.501	Y
	Y8309	$141	G5-7KITS	2.64	1.688	Y
	Y8308	$141	G5-7KITS	2.64	1.751	Y
447TP/449TP (250HP and 300HP only)	**Y8384**	$236	G5-7KITS	3.43	1.501	Y
	Y8385	$236	G5-7KITS	3.43	1.688	Y
	Y8387	$236	G5-7KITS	3.43	1.938	Y
	Y8391	$236	G5-7KITS	3.43	2.188	Y
	Y8392	$236	G5-7KITS	3.43	2.251	Y



Energy $aver® Vertical Hollow Shaft

Premium Efficiency
Weather Protection I

Standard Features

HP Range	5-600
Poles	4
Voltage	230/460, 460 PWS
Efficiency	NEMA Premium Efficient
Frequency	60 Hz
NEMA Design	A or B
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 ft
Ambient	40ºC
Balance/Vibration	Special Balance, 0.075 in/sec max
Bearing Caps	Yes
Bearing Protection	Shaft Slinger
Bearing Type	High Thrust or (optional Spherical Roller on 400-600HP)
Conduit Box	Cast Iron
Coupling	Non-Reverse(standard) , Self Release, or Bolted
End Shield	Cast Iron
Fasteners	SAE
Frame Material	Cast Iron
Frame Size	213-509
Grease/Oil	Polyrex EM, 350-500Hp Thrust Bearings: ISO 32, 150 SUS
Ground	Brass Bolt in Conduit Box
Inverter Capabilities	Variable Torque 0-60Hz w/out non-reverse ratchet & *20-60Hz w/ NRR
Insulation Class	H
Insulation System	GEGard 2400, Non-Hygroscopic, Anti-Fungus, Meets NEMA MG1-31 for variable frequency drives.
Lifting Means	Yes
Mounting	Vertical P-Base
Nameplate	Stainless Steel
Non-Reverse Ratchet Type	Pin Style Non Reverse
Paint	Buff Epoxyester
Relubrication	Yes
Rotor	Cast Aluminum
Service Factor	1.15
Shaft Grounding	Aegis Shaft Grounding Ring on ODE (150HP and greater)
Space Heater	115 Volt, 144 W, 60 Hz
Temperature Rise	80ºC @ 1.0 SF
Tests	NEMA Routine, IEEE 112 Method B
Thermostats	Includes NC Winding Thermostats (150HP and greater)
Time Rating	Continuous
Top Hat	Cast Iron
Warranty	36 months from date of purchase or 42 months from date of shipment, whichever occurs first

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
Weather Protection I

Pricing

Volts: 230/460, 460 PWS
HP: 5-600

HP	RPM	Volts	Frame	FLA	Thrust Down	LRA	NEMA Nom Eff.	Cat No.	Motor List Price	Coupling List Price*	Price Symbol	Norm Stk	Wt (lbs)	CD Dim (in)	AG Dim (in)	Notes
5	1800	230/460	L213TP10	13.0/6.5	2092	42.6	91	**V891**	$2,322	$218	G5-7VHSB	N	172	18.88	22.44	51, 111
7.5	1800	230/460	L213TP10	19.0/9.5	2079	59.5	91	**V892**	$2,408	$218	G5-7VHSB	N	172	18.88	22.44	51, 111
10	1800	230/460	L215TP10	24.4/12.2	2071	74.0	91.7	**V893**	$2,452	$218	G5-7VHSB	N	206	18.88	22.44	51, 111
15	1800	230/460	L254TP10	36.0/18.0	2575	99.6	93	**V894**	$2,676	$229	G5-7VHSB	Y	280	23.54	26.72	51, 111
20	1800	230/460	L256TP10	47.6/23.8	2575	129.9	93	**V895**	$2,777	$228	G5-7VHSB	Y	315	23.54	26.72	51, 111
25	1800	230/460	L284TP16	58.8/29.4	2960	182.8	93.6	**V896**	$3,289	$234	G5-7VHSB	Y	420	25.75	29.57	51, 111
30	1800	230/460	L286TP16	70.6/35.3	2960	247.9	94.1	**V897**	$3,607	$234	G5-7VHSB	Y	470	25.75	29.57	51, 111
40	1800	230/460	L324TP16	99.4/49.7	4100	285.3	94.1	**V881**	$4,203	$732	G5-7VHSB	Y	700	31.36	36.93	51, 111
50	1800	230/460	L326TP16	121.6/60.8	4100	335.3	94.5	**V882**	$5,047	$732	G5-7VHSB	Y	740	31.36	36.93	51, 111
60	1800	460 PWS	L364TP16	73.3	5294	410.3	95	**V883**	$6,347	$732	G5-7VHSB	Y	980	35.04	40.21	51, 110
75	1800	460 PWS	L365TP16	93.9	5200	514.7	95	**V884**	$7,233	$732	G5-7VHSB	Y	1060	35.04	40.21	51, 110
100	1800	460 PWS	L404TP16	115.0	7849	680.1	95.4	**V885**	$9,475	$845	G5-7VHSB	Y	1560	39.75	45.26	51, 110
125	1800	460 PWS	L405TP16	147.0	7849	860.4	95.4	**V886**	$11,570	$845	G5-7VHSB	Y	1590	39.75	45.26	51, 110
150	1800	460 PWS	L444TP16	167.0	8225	1104.2	95.8	**V887**	$14,095	$1,125	G5-7VHSB	Y	2050	47.3	53.44	51, 110, 112, 113
200	1800	460 PWS	L445TP20	223.0	13355	1470.9	95.8	**V888**	$18,197	$1,125	G5-7VHSB	Y	1890	47.3	61.94	51, 110, 112, 113
250	1800	460 PWS	L447TP20	279.0	13355	1791.2	95.8	**V889**	$22,998	$1,125	G5-7VHSB	Y	2580	55.8	61.94	51, 110, 112, 113
300	1800	460 PWS	L449TP20	333.0	13355	1878.4	95.8	**V890**	$26,694	$1,125	G5-7VHSB	Y	2580	55.8	61.94	51, 110, 112, 113
350	1800	460 PWS	L449TP20	382.0	13345	2409.0	95.8	**V850**	$27,759	$1,125	G5-7VHSB	Y	2580	55.8	61.94	51, 110, 112, 113
400	1800	460 PWS	L449TP20	438.0	13345	2601.3	95.8	**V851**	$31,533	$1,125	G5-7VHSB	Y	2590	55.8	61.94	51, 110, 112, 113
400	1800	460 PWS	L449TP20	443.0	38,720	2601.3	95.8	**V951**	$35,733	$1,125	G5-7VHSB	Y	2630	55.8	61.94	51, 110, 112, 113
500	1800	460 PWS	L509TP24	547.0	13680	3284.5	96.2	**V852**	$41,106	SRC incl	G5-7VHSB	Y	3570	58.2	66.32	51, 110, 112, 113, 157
500	1800	460 PWS	L509TP24	547.0	45,304	3284.5	96.2	**V952**	$44,453	SRC incl	G5-7VHSB	Y	3620	59.9	66.32	51, 110, 112, 113, 156, 157
600	1800	460 PWS	L511TP24	640.0	44,796	4008.9	95.4	**V953**	$49,953	SRC incl	G5-7VHSB	Y	4380	67.9	74.32	51, 110, 112, 113, 156, 157

Notes:
*Motor coupling is required and priced separately on page 7.11.
51 Space Heater, 115V/60 Hz
110 Usable on 380 volts, 50 Hz at 1.0 Service Factor and derated to next lower HP
111 Usable on 190/380 volts, 50 Hz at 1.0 Service Factor and derated to next lower HP
112 Includes NC Winding Thermostats (150HP and greater)
113 Aegis Shaft Grouding ring on ODE (150HP and greater)
156 With Spherical Roller Bearing requires water cooling
157 Includes Self Release Coupling (SRC) with 2 3/16" BX

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
Weather Protection I

Typical Performance Data

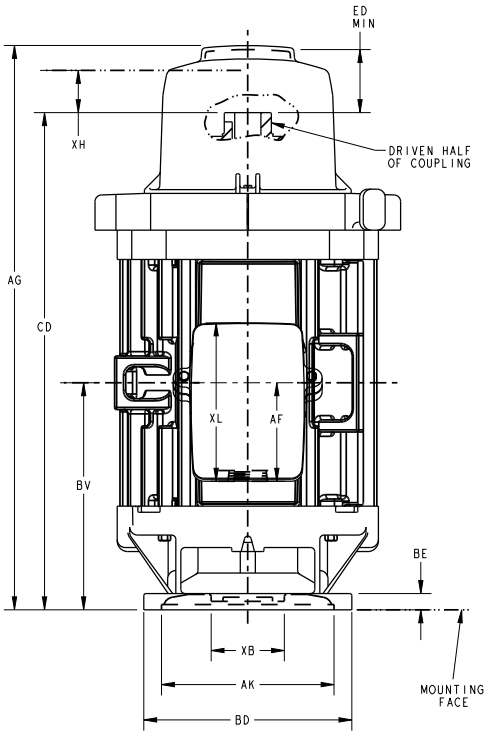
HP: 5-600

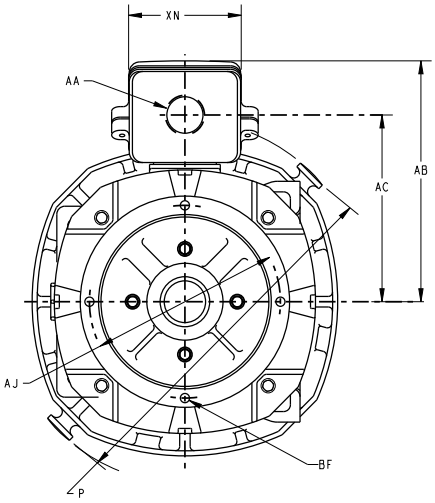
HP	Cat No.	Volts	FL RPM	NP FLA	Design LRA	NEMA Code	Code KVA/ HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
5	**V891**	230/460	1770	13.0/6.5	42.6	B	J	15	28	44	91	91.3	90.6	79.5	74.1	63.2	2.1
7.5	**V892**	230/460	1765	19.0/9.5	59.5	B	H	22	41	61	91	92	91.7	81.0	77	67.3	2.7
10	**V893**	230/460	1765	24.4/12.2	74	B	H	30	53	76	91.7	92.5	92.6	83.5	80.6	72.7	2.9
15	**V894**	230/460	1775	36.0/18.0	99.6	B	G	44	85	111	93	93.5	93.2	84.0	80.1	70.7	4.9
20	**V895**	230/460	1775	47.6/23.8	129.9	B	G	59	114	145	93	93.7	93.6	84.5	80.6	71.5	6.3
25	**V896**	230/460	1780	58.8/29.4	182.8	B	G	74	135	213	93.6	94	93.8	85.0	81.7	73	7.4
30	**V897**	230/460	1780	70.6/35.3	247.9	A	H	88	187	277	94.1	94.3	94	84.5	80.4	70.9	9.6
40	**V881**	230/460	1775	99.4/49.7	285.3	B	G	118	218	263	94.1	93.9	93.3	80.5	76.6	67.2	15.7
50	**V882**	230/460	1780	121.6/60.8	335.3	B	G	147	228	321	94.5	95	94.5	81.0	76.7	66.9	17.4
60	**V883**	460	1785	73.3	410.3	B	G	176	311	439	95.0	95.8	95	80.0	74.8	64	23.0
75	**V884**	460	1785	93.9	514.7	B	G	220	395	550	95.0	95.8	95.2	78.0	72.6	61.2	31.2
100	**V885**	460	1790	115.0	680.1	B	G	294	607	669	95.4	95.3	94.8	85.0	81.9	73.9	28.2
125	**V886**	460	1785	147.0	860.4	B	G	367	728	804	95.4	95.3	94.9	84.0	80.8	72.5	36.8
150	**V887**	460	1785	167.0	1104.2	B	G	441	666	1068	95.8	95.5	95.2	88.0	85.6	78.6	36.3
200	**V888**	460	1785	223.0	1470.9	B	G	588	917	1422	95.8	95.8	95.6	88.0	85.2	78.1	49.1
250	**V889**	460	1785	279.0	1791.2	B	G	735	1162	1716	95.8	95.6	95.4	88.0	86	79.5	58.0
300	**V890**	460	1785	333.0	1878.4	B	G	882	1286	1780	95.8	95.9	95.8	88.5	87.5	82.6	58.8
350	**V850**	460	1785	382.0	2409	B	G	1030	1682	2294	95.8	96.1	96.1	89.5	88.4	83.5	66.9
400	**V851**	460	1780	438.0	2601.3	B	G	1178	1812	2471	95.8	96	96.1	89.5	88.6	84.1	73.4
400	**V951**	460	1780	443.0	2601.3	B	G	1179	1812	2463	95.8	94.9	94.5	89.5	88.6	84.4	73.4
500	**V852**	460	1785	547.0	3284.5	B	G	1470	1981	3088	96.2	95.8	95.5	89.0	88.2	83.8	87.8
500	**V952**	460	1785	547.0	3284.5	B	G	1470	1981	3077	96.2	94.6	93.7	89.0	88.3	84.1	87.8
600	**V953**	460	1775	640.0	4008.9	-	F	1775	3525	3796	95.4	94.6	94.3	92.0	92.1	90.1	71.8

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
Weather Protection I

Dimensions





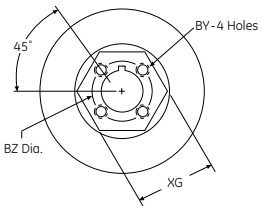
VIEW A

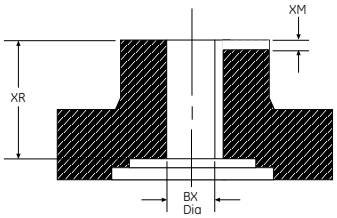
	Dimensions are in Inches																	
													Conduit Box Dimensions					
Frame	P	AG	CD	AJ	AK	BD	BE	BF	XB	BV	Ed Min	XH	AA	AB	AC	AF	XL	XN
L213/L215	14.780	22.44	18.88	9.25	8.25	10.00	0.77	0.438	3.50	8.59	2.75	2.00	1 - NPT	9.41	7.30	3.50	5.79	4.16
L254/L256	17.200	26.72	23.54	9.25	8.25	10.00	0.77	0.438	3.50	10.75	2.75	2.00	1-1/4" - NPT	11.40	8.84	4.59	7.38	5.38
L284/L286	19.280	29.57	25.75	14.75	13.50	16.50	0.77	0.69	5.50	12.00	4.00	2.50	1-1/2" - NPT	12.79	9.76	4.59	7.38	5.38
L324/L326	22.10	36.93	31.36	14.75	13.50	16.50	0.77	0.69	5.50	13.75	4.00	3.75	3" -8 - NPT	15.36	11.63	6.44	10.12	7.0
L364/L365	25.38	40.21	35.04	14.75	13.50	16.50	0.88	0.69	5.50	14.34	4.00	3.75	3" -8 - NPT	15.36	11.63	6.44	10.12	7.0
L404/L405	28.02	45.26	39.74	14.75	13.50	16.50	1.00	0.69	5.50	16.69	4.50	4.00	3" -8 - NPT	19.68	15.24	7.00	12.14	10.5
L444/L445	31.44	53.44	47.30	14.75	13.50	16.50	1.00	0.69	5.50	17.50	5.70	5.23	3" -8 - NPT	20.94	16.68	7.00	12.14	10.5
L447/L449	31.44	61.94	55.80	14.75	13.50	20.00	1.00	0.69	4.50	21.75	5.70	5.23	3" -8 - NPT	20.94	16.68	7.00	12.14	10.5
L447/L449 (250-300HP)	31.44	61.94	55.80	14.75	13.50	20.00	1.00	0.69	4.50	21.75	5.70	5.23	3" -8 - NPT	21.57	16.68	7.23	12.39	16.25
L447/L449 (350-400HP)	31.44	61.94	55.80	14.75	13.50	20.00	1.00	0.69	4.50	21.75	5.70	5.23	4" -8 - NPT	22.13	16.93	8.12	12.39	16.25
L509TP24	33.80	66.32	59.90	14.75	13.50	24.50	1.40	0.69	–	23.50	6.00	4.88	4" -8 - NPT	31.50	26.25	14.19	22.68	12.0
L511TP24	33.80	74.32	67.90	14.75	13.50	24.50	1.40	0.69	–	27.50	6.00	4.88	3" -8 - NPT	28.82	21.43	10.44	21.74	20.0

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
Weather Protection I

Coupling Kit Pricing





WPI VHS Coupling Kits, Pin Style Non-Reverse Ratchet
HP: 5-600

		Non-Reverse Ratchet Assembly				Dimensions in Inches							
Frame Size	Cat No	Part Number	List Price	Price Symbol	Norm. Stk.	BX	Depth	EW	XG	BY	BZ	XM	XR
L213TP/ L215TP	**Y8352**	4002B5521AA-G01	$218	G5-7KITS	Y	1.001	.125	.25	2.435	#10-32	1.375	.438	1.25
L254TP/ L256TP/ L284TP/ L286TP	**Y8353**	4002B5525AA-G03	$229	G5-7KITS	Y	1.001	.125	.25	2.435	#10-32	1.375	.438	1.50
	Y8354	4002B5525AA-G02	$229	G5-7KITS	Y	1.188				1/4-20 UNC	1.75		
	Y8355	4002B5525AA-G01	$229	G5-7KITS	Y	1.251							
L324TP/ L326TP	**Y8342**	192B9950AY-G06	$732	G5-7KITS	N	1.001	.125	.25	2.63	#10-32	1.375	.44	1.813
	Y8343	192B9950AY-G05	$732	G5-7KITS	Y	1.188				1/4-20 UNC	1.75		
	Y8344	192B9950AY-G04	$732	G5-7KITS	Y	1.251							
	Y8357	192B9950AY-G03	$732	G5-7KITS	Y	1.251	.188	.375				.562	
	Y8358	192B9950AY-G01	$732	G5-7KITS	Y	1.501					2.125		
L364TP/ L365TP	**Y8356**	192B9950BC-G06	$732	G5-7KITS	Y	1.188	.125	.25	3.25	1/4-20 UNC	1.75	.562	2.24
	Y8345	192B9950BC-G05	$732	G5-7KITS	Y	1.251	.188	.375					
	Y8346	192B9950BC-G04	$732	G5-7KITS	Y	1.438					2.12		
	Y8347	192B9950BC-G03	$732	G5-7KITS	Y	1.501							
L404TP/ L405TP	**Y8348**	192B9950BJ-G06	$845	G5-7KITS	N	1.188	.125	.25	3.75	1/4-20 UNC	1.75	.44	2.74
	Y8349	192B9950BJ-G05	$845	G5-7KITS	Y	1.251	.188	.375				.562	
	Y8350	192B9950BJ-G03	$845	G5-7KITS	Y	1.501					2.50		
	Y8351	192B9950BJ-G02	$845	G5-7KITS	N	1.688							
L440TP/ L447TP/ L449TP	**Y8440**	192B9950BL-G13	$1,125	G5-7KITS	Y	1.501	.180	.375	4.75	1/4-20 UNC	2.13	.562	5.25
	Y8435	192B9950BL-G12	$1,125	G5-7KITS	Y	1.688					2.50		
	Y8439	192B9950BL-G11	$1,125	G5-7KITS	N	1.751							
	Y8442	192B9950BL-G09	$1,125	G5-7KITS	Y	1.938	.230	.500				.688	
	Y8448	192B9950BL-G05	$1,125	G5-7KITS	Y	2.188	.235			3/8-UNC	3.25		
L509TP/ L511TP	**Y8432**	192B9950BN-G12	$1,650	G5-7KITS	N	1.501	.180	.375	5.62	1/4-20 UNC	2.125	.562	5.25
	Y8436	192B9950BN-G11	$1,650	G5-7KITS	N	1.688					2.50		
	Y8467	192B9950BN-G10	$1,650	G5-7KITS	N	1.751							
	Y8443	192B9950BN-G09	$1,650	G5-7KITS	Y	1.813	.230	.500				.688	
	Y8445	192B9950BN-G08	$1,650	G5-7KITS	N	1.938							
	Y8449	192B9950BN-G07	$1,650	G5-7KITS	N	2.001				3/8-16 UNC	3.25		
	Y8450	192B9950BN-G06	$1,650	G5-7KITS	Y	2.188	.235						
	Y8452	192B9950BN-G05	$1,650	G5-7KITS	N	2.251							
	Y8456	192B9950BN-G04	$1,650	G5-7KITS	N	2.438	.290	.625			3.75	.812	
	Y8461	192B9950BN-G03	$1,650	G5-7KITS	N	2.501							
	Y8465	192B9950BN-G02	$1,650	G5-7KITS	N	2.688							
	Y8466	192B9950BN-G01	$1,650	G5-7KITS	N	2.751							

For PE Energy Saver WPI VHS Stabalizer Bushings (5-400 HP) see bottom page 7.16.

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
TEFC - Severe Duty

Standard Features

HP Range	5-200
Poles	2, 4
Voltage	230/460, 460 PWS
Efficiency	NEMA Premium Efficiency
Frequency	60 Hz (De-rated at 50 Hz and noted on the nameplate.)
NEMA Design	B
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 ft
Ambient	40ºC
Balance/Vibration	Special Balance = 0.075 IPS max
Bearing Caps	Yes
Bearing Protection	Shaft Slinger
Bearing Type	High Thrust
Conduit Box	Cast Iron
Coupling	Non-Reverse Standard , Self Release, or Bolted available
End Shield	Cast Iron
Fasteners	SAE
Frame Material	Cast Iron
Frame Size	213-447
Grease/Oil	Polyrex EM, 350-500Hp Thrust Bearings: ISO 32, 150 SUS
Ground	Frame Ground Bolt and Brass Bolt in Conduit Box
Inverter Capabilities	Variable Torque 0-60Hz w/out non-reverse ratchet & 12-60Hz w/ NRR
Insulation Class	H
Insulation System	GEGard 2400, Non-Hygroscopic, Anti-Fungus, Meets NEMA MG1-31 for variable frequency drives.
Lifting Means	Yes
Mounting	Vertical P-Base
Nameplate	Stainless Steel
Non-Reverse Ratchet Type	Pin Style
Paint	Buff Epoxyester
Relubrication	Yes
Rotor	Cast Aluminum
Service Factor	1.15
Shaft Grounding	Aegis Shaft Grounding Ring on ODE (125HP and greater)
Space Heater	115 Volt, 144 W, 60 Hz
Temperature Rise	80ºC @ 1.0 SF
Tests	NEMA Routine, IEEE 112 Method B
Thermostats	Includes NC Winding Thermostats (125HP and greater)
Time Rating	Continuous
Top Hat	Cast Iron
Warranty	36 months from date of purchase or 42 months from date of shipment, whichever occurs first

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
TEFC - Severe Duty

Pricing

Volts: 230/460, 460
HP: 5-200

HP	RPM	Volts	Frame	FLA @ 460	Thrust Down	LRA	Nom Eff.	Cat No.	Motor List Price	Coupling List Price*	Price Symbol	Norm Stk	Wt (lbs)	CD Dim (in)	AG Dim (in)	Notes
5	3600	230/460	L213TP10	12.0/6.0	1,663	42	88.5	**V898**	$2,395	$265	G6-7VHSB	N	200	18.88	23.7	51, 111
5	1800	230/460	L213TP10	13.2/6.6	2,071	43	89.5	**V899**	$2,326	$265	G5-7VHSB	Y	200	18.88	23.7	51, 111
7.5	3600	230/460	L213TP10	18.0/9.0	1,658	58	89.5	**V900**	$2,434	$265	G5-7VHSB	N	200	18.88	23.7	51, 111
7.5	1800	230/460	L213TP10	18.4/9.2	2,071	61	91.7	**V901**	$2,345	$265	G5-7VHSB	Y	200	18.88	23.7	51, 111
10	3600	230/460	L215TP10	23.2/11.6	1,658	76	90.2	**V902**	$2,637	$265	G5-7VHSB	N	220	18.88	23.7	51, 111
10	1800	230/460	L215TP10	24.4/12.2	2,065	79	91.7	**V903**	$2,545	$265	G5-7VHSB	Y	220	18.88	23.7	51, 111
15	3600	230/460	L254TP10	34.6/17.3	2,070	109	91	**V904**	$2,957	$324	G5-7VHSB	N	315	23.54	28.26	51, 111
15	1800	230/460	L254TP10	37.8/18.9	2,570	109	92.4	**V905**	$3,589	$324	G5-7VHSB	Y	315	23.54	28.26	51, 111
20	1800	230/460	L256TP10	47.6/23.8	2,597	135	93	**V906**	$3,955	$324	G5-7VHSB	Y	350	23.54	28.26	51, 111
25	1800	230/460	L284TP16	58.2/29.1	2,976	175	93.6	**V907**	$4,573	$324	G5-7VHSB	Y	460	25.75	30.6	51, 111
30	1800	230/460	L286TP16	69.4/34.7	2,959	206	93.6	**V908**	$4,994	$324	G5-7VHSB	Y	510	25.75	30.6	51, 111
40	1800	230/460	L324TP16	98.8/49.4	4,148	298	94.1	**V909**	$6,667	$732	G5-7VHSB	Y	700	31.36	36.57	51, 111
50	1800	230/460	L326TP16	123.8/61.9	4,126	384	94.5	**V910**	$7,617	$732	G5-7VHSB	Y	740	31.36	36.57	51, 111
60	1800	460	L364TP16	73.0	5,288	435	95.0	**V911**	$9,692	$845	G5-7VHSB	Y	1050	35.04	40.88	51, 110
75	1800	460	L365TP16	92.0	5,288	530	95.4	**V912**	$11,587	$845	G5-7VHSB	Y	1050	35.04	40.88	51, 110
100	1800	460	L405TP16	111.0	5,086	682	95.4	**V913**	$15,175	$845	G5-7VHSB	Y	1560	39.74	46.56	51, 110
125	1800	460	L444TP16	138.0	6,816	891	95.0	**V914**	$21,334	$1,125	G5-7VHSB	Y	2050	47.37	53.54	51, 110, 112, 113
150	1800	460	L445TP16	167.0	6,816	1,035	94.5	**V915**	$24,941	$1,125	G5-7VHSB	Y	2010	47.37	53.54	51, 110, 112, 113
200	1800	460	L447TP16	218.0	11,138	1,384	95.4	**V916**	$33,201	$1,125	G5-7VHSB	Y	2800	55.67	62.04	51, 110, 112, 113

Notes:
* Motor coupling is required and priced separately on page 7.16.
51 Space Heater, 115V/60 Hz
110 Usable on 380 volts, 50 Hz at 1.0 Service Factor and derated to next lower HP
111 Usable on 190/380 volts, 50 Hz at 1.0 Service Factor and derated to next lower HP
112 Includes NC Winding Thermostats (125HP and greater)
113 Aegis Shaft Grouding ring on ODE (125HP and greater)

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
TEFC - Severe Duty

Typical Performance Data

HP: 5-200

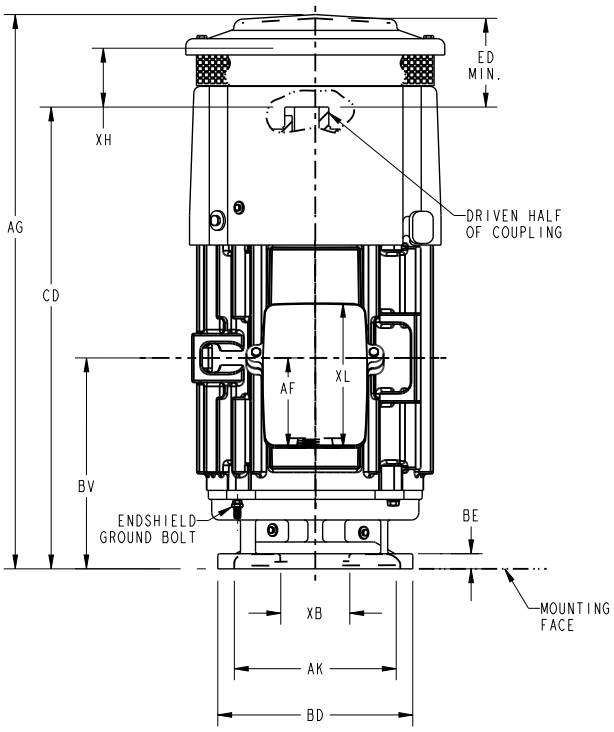
HP	Cat No.	Volts	FL RPM	NP FLA	Design LRA	NEMA Code	Code KVA/HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
5	**V898**	230/460	3540	12.0/6.0	41.6	B	J	7.4	11.1	15.9	88.5	90.0	88.5	88.5	85.7	78.4	1.3
5	**V899**	230/460	1770	13.2/6.6	42.5	B	J	14.8	27.5	33.4	89.5	90.4	89.5	79.5	74.3	63.5	2.1
7.5	**V900**	230/460	3525	18.0/9.0	57.7	B	H	11.2	15.6	22.3	89.5	90.4	89.8	87.5	84.4	76.6	2.1
7.5	**V901**	230/460	1770	18.4/9.2	61.2	B	H	22.2	38.9	47.8	91.7	92.2	91.7	83.5	80.3	71.8	2.3
10	**V902**	230/460	3520	23.2/11.6	75.9	B	H	14.9	20.1	29.8	90.2	91.2	91.1	89.5	87.5	81.4	2.3
10	**V903**	230/460	1765	24.4/12.2	79	B	H	29.7	49	59.4	91.7	92.3	92.1	83.5	80.5	72.3	3.0
15	**V904**	230/460	3550	34.6/17.3	108.9	B	G	22.2	28.8	44.4	91	91.8	91.7	89.0	88.2	83.8	2.9
15	**V905**	230/460	1775	37.8/18.9	109.1	B	G	44.4	71	88.8	92.4	92.7	92.2	80.5	75.1	63.7	6.1
20	**V906**	230/460	1775	47.6/23.8	135.1	B	G	59.2	88.8	118.4	93	93.7	93.6	84.5	80.9	71.8	6.2
25	**V907**	230/460	1775	58.2/29.1	174.8	B	G	73.9	110.8	147.7	93.6	94.2	94.1	86.0	82.8	74.8	6.9
30	**V908**	230/460	1775	69.4/34.7	206.4	B	G	88.7	133.1	177.4	93.6	94.2	94.3	86.5	83.7	76.3	7.8
40	**V909**	230/460	1780	98.8/49.4	298.2	B	G	118	165.1	235.9	94.1	94.5	93.8	80.5	76.1	66.2	14.3
50	**V910**	230/460	1780	123.8/61.9	383.5	B	G	147.5	206.5	295	94.5	94.7	94.1	80.0	75.2	65.0	18.6
60	**V911**	460	1785	73.0	434.6	B	G	176.7	247.3	353.4	95.0	95.1	94.5	81.0	76.0	65.6	22.0
75	**V912**	460	1780	92.0	530.3	B	G	221.1	309.5	442.2	95.4	95.4	94.9	80.0	75.2	64.6	28.2
100	**V913**	460	1785	111.0	681.9	B	G	293.8	367.2	587.6	95.4	95.5	95.0	88.5	86.4	80.5	21.9
125	**V914**	460	1785	138.0	891.3	B	G	367.2	404	734.5	95.0	94.9	94.2	89.5	88.4	83.8	23.5
150	**V915**	460	1785	167.0	1035.2	B	G	441.2	485.3	882.4	94.5	94.4	93.6	89.0	88.1	83.6	28.6
200	**V916**	460	1785	218.0	1383.6	B	G	587.8	587.8	1175.5	95.4	95.5	95.0	90.0	88.4	83.4	38.7

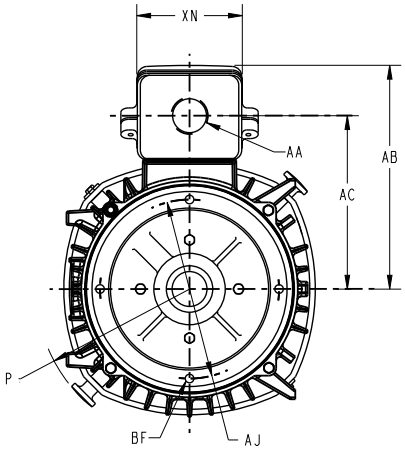
Energy $aver® Vertical Hollow Shaft

Premium Efficiency

TEFC - Severe Duty

Dimensions



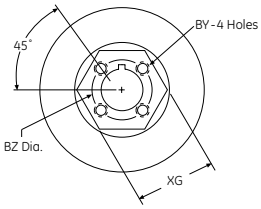


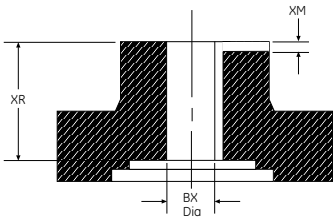
	Dimensions are in Inches																	
													Conduit Box Dimensions					
Frame	P	AG	CD	AJ	AK	BD	BE	BF	XB	BV	Ed Min	XH	AA	AB	AC	AF	XL	XN
L213/L215	13.160	23.70	18.88	9.25	8.25	10.00	0.77	0.438	3.50	8.39	4.00	3.00	1 - NPT	9.53	7.42	3.50	5.79	4.16
L254/L256	15.640	28.26	23.54	9.25	8.25	10.00	0.77	0.438	3.50	10.75	4.00	3.00	1-1/4" - NPT	12.15	9.12	4.59	7.38	5.38
L284/L286	17.260	30.60	25.75	14.75	13.50	16.50	0.77	0.69	5.50	12.00	4.00	2.50	1-1/2" - NPT	12.91	9.88	4.59	7.38	5.38
L324/L326	20.00	36.57	31.36	14.75	13.50	16.50	0.77	0.69	5.50	13.75	4.00	3.75	3" -8 - NPT	15.36	11.63	6.44	10.12	7.0
L364/L365	22.84	40.88	34.05	14.75	13.50	16.50	0.88	0.69	5.50	14.34	4.00	3.75	3" -8 - NPT	16.72	12.99	6.44	10.12	7.0
L404/L405	25.14	46.56	39.74	14.75	13.50	16.50	1.00	0.69	5.50	16.69	4.50	4.00	3" -8 - NPT	19.68	15.36	7.00	12.14	10.5
L444/L445	25.84	53.54	47.37	14.75	13.50	16.50	1.00	0.69	5.50	17.50	5.59	4.38	3" -8 - NPT	20.94	16.68	7.00	12.14	10.5
L447/L449	25.84	62.04	55.87	14.75	13.50	16.50	1.00	0.69	5.50	21.75	5.59	4.38	3" -8 - NPT	20.94	16.68	7.00	12.14	10.5

Energy $aver® Vertical Hollow Shaft

Premium Efficiency
TEFC - Severe Duty
Pin Style Non-Reverse Ratchet

Kits and Accessories



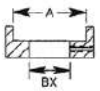


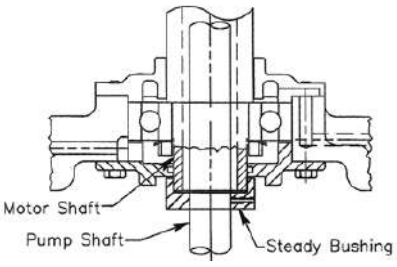
PE Energy Saver TEFC VHS Coupling Kits
HP: 5-200

		Non-Reverse Ratchet Assembly				Dimensions in Inches							
Frame Size	Cat No.	Part Number	List Price	Price Symbol	Norm. Stk.	BX	Depth	EW	XG	BY	BZ	XM	XR
L213TP/ L215TP	**Y8400**	4002B5521AC-G01	$265	G5-7KITS	Y	1.001	.125	.25	2.435	#10-32	1.375	.438	1.25
L254TP/ L256TP/ L284TP/ L286TP	**Y8401**	4002B5528AC-G03	$324	G5-7KITS	Y	1.001	.125	.25	2.435	#10-32	1.375	.438	1.50
	Y8402	4002B5528AC-G02	$324	G5-7KITS	Y	1.188				1/4-20 UNC	1.75		
	Y8403	4002B5528AC-G01	$324	G5-7KITS	Y	1.251							
L324TP/ L326TP	**Y8404**	192B9950BA-G06	$732	G5-7KITS	N	1.001	.125	.25	2.63	#10-32	1.375	.440	1.813
	Y8405	192B9950BA-G05	$732	G5-7KITS	Y	1.188				1/4-20 UNC	1.75		
	Y8406	192B9950BA-G04	$732	G5-7KITS	Y	1.251							
L364TP/ L365TP/ L404TP/ L405TP	**Y8431**	192B9950BE-G06	$845	G5-7KITS	Y	1.188	.188	.375	3.25	1/4-20 UNC	1.75	.562	2.24
	Y8407	192B9950BE-G05	$845	G5-7KITS	N	1.251							
	Y8408	192B9950BE-G04	$845	G5-7KITS	Y	1.438					2.12		
	Y8409	192B9950BE-G03	$845	G5-7KITS	Y	1.501							
L440TP/ L447TP/ L449TP	**Y8410**	192B9950BG-G12	$1,125	G5-7KITS	Y	1.501	.180	.375	3.74	1/4-20 UNC	2.13	.562	5.30
	Y8411	192B9950BG-G09	$1,125	G5-7KITS	Y	1.688					2.50		
	Y8412	192B9950BG-G06	$1,125	G5-7KITS	N	1.938	.23	.500				.688	
	Y8413	192B9950BG-G02	$1,125	G5-7KITS	N	2.188	.235			3/8-UNC	3.25		

PE Energy Saver WPI/TEFC VHS Stabilizer Bushings
HP: 5-400

		Non-Reverse Ratchet Assembly				Dimensions in Inches	
Frame Size	Cat No.	Part Number	List Price	Price Symbol	Norm. Stk.	BX	A
210	**Y8414**	401A5521AA-G01	$120	G5-7KITS	Y	1.001	1.573
250	**Y8415**	401A5525AA-G03	$120	G5-7KITS	Y	1.001	1.767
	Y8416	401A5525AA-G02	$120	G5-7KITS	Y	1.188	1.767
	Y8417	401A5525AA-G01	$120	G5-7KITS	Y	1.251	1.767
280	**Y8418**	401A5528AA-G03	$120	G5-7KITS	Y	1.001	1.964
	Y8419	401A5528AA-G02	$120	G5-7KITS	Y	1.188	1.964
	Y8420	401A5528AA-G01	$120	G5-7KITS	Y	1.251	1.964
320/360	**Y8421**	249A4245AD-G04	$140	G5-7KITS	Y	1.188	2.266
	Y8422	249A4245AD-G03	$140	G5-7KITS	Y	1.251	2.266
	Y8423	249A4245AD-G02	$140	G5-7KITS	Y	1.438	2.266
	Y8424	249A4245AD-G01	$140	G5-7KITS	Y	1.501	2.266
400	**Y8425**	249A4245AE-G04	$180	G5-7KITS	Y	1.438	2.7827
	Y8426	249A4245AE-G03	$180	G5-7KITS	Y	1.501	2.7827
440	**Y8427**	249A4245BG-G01	$260	G5-7KITS	Y	1.501	3.187
	Y8428	249A4245BG-G02	$260	G5-7KITS	Y	1.688	3.187
	Y8429	249A4245BG-G05	$260	G5-7KITS	Y	1.938	3.187
	Y8430	249A4245BG-G09	$260	G5-7KITS	N	2.188	3.187





Energy $aver® TEFC VSS NT

Vertical Solid Shaft Normal Thrust
Premium Efficiency
TEFC - Severe Duty

Standard Features

HP Range	3-75 HP
Poles	2, 4
Voltage	230/460, 460
Efficiency	NEMA Premium Efficiency
Frequency	60 Hz (Suitable for 50 Hz and 190/380V at 1.0 SF)
NEMA Design	B
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 ft
Ambient	40ºC
Balance/Vibration	Special Balance = 0.075 IPS
Bearing Caps	Yes
Bearing Protection	Shaft Slinger both ends, IP55
Bearing Type	Normal Thrust
Conduit Box	Cast Iron
Coupling	none
End Shield	Cast Iron
Fasteners	SAE
Frame Material	Cast Iron
Frame Size	182-365
Grease/Oil	Grease
Ground	Frame Ground Bolt and Brass Bolt in Conduit Box
Inverter Capabilities	Variable Torque 0-60Hz at 1.0 SF
Insulation Class	H
Insulation System	GEGard 2400, Non-Hygroscopic, Anti-Fungus, Meets NEMA MG1-31 for variable frequency drives.
Lifting Means	Yes
Mounting	Vertical P-Base
Nameplate	Stainless Steel
Paint	Buff Epoxyester
Relubrication	Yes
Rotor	Cast Aluminum
Service Factor	1.15
Space Heater	115 Volt, 60 Hz
Temperature Rise	80ºC @ 1.0 SF
Tests	NEMA Routine, IEEE 112 Method B
Time Rating	Continuous
Top Hat	Cast Iron Steel
Warranty	36 months from date of purchase or 42 months from date of shipment, whichever occurs first

Energy $aver® TEFC VSS NT

Vertical Solid Shaft Normal Thrust
Premium Efficiency
TEFC - Severe Duty

Pricing

Normal Thrust
Volts: 230/460, 460
HP: 3-75

HP	RPM	Volts	NEMA Frame	SF	FLA @ NP	Nom. Eff.	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk.	Wt (lbs)	L10 Down Thrust (lbs) @ 8760 Hrs	C Dim (in)	Notes
3	3600	230/460	182HP10	1.15	8.6/4.3	86.5	**V960**	5KS182SAE123	$1,198	G6-7VIL	Y	76	522	17.83	
3	1800	230/460	182HP10	1.15	8.0/4.0	89.5	**V980**	5KS182SAE226	$1,100	G6-7VIL	Y	76	652	17.83	
5	3600	230/460	184HP10	1.15	12.8/6.4	88.5	**V961**	5KS184SAE120	$1,378	G6-7VIL	Y	101	522	17.83	
5	1800	230/460	184HP10	1.15	13.2/6.6	89.5	**V981**	5KS184SAE228	$1,273	G6-7VIL	Y	101	652	17.83	
7.5	3600	230/460	213HP10	1.15	18.0/9.0	89.5	**V962**	5KS213SAE133	$1,692	G6-7VIL	Y	200	620	22.34	
7.5	1800	230/460	213HP10	1.15	18.4/9.2	91.7	**V982**	5KS213SAE230	$1,625	G6-7VIL	Y	200	772	22.34	
10	3600	230/460	215HP10	1.15	23.2/11.6	90.2	**V963**	5KS215SAE184	$1,842	G6-7VIL	Y	220	620	22.34	
10	1800	230/460	215HP10	1.15	24.4/12.2	91.7	**V983**	5KS215SAE226	$1,829	G6-7VIL	Y	220	772	22.34	
15	3600	230/460	254HP10	1.15	34.6/17.3	91	**V964**	5KS254SAE126	$2,405	G6-7VIL	Y	315	685	27.33	
15	1800	230/460	254HP10	1.15	37.8/18.9	92.4	**V984**	5KS254SAE225	$2,337	G6-7VIL	Y	315	856	27.33	
20	3600	230/460	256HP10	1.15	45.2/22.6	91	**V965**	5KS256SAE129	$2,632	G6-7VIL	Y	350	685	27.33	
20	1800	230/460	256HP10	1.15	47.6/23.8	93	**V985**	5KS256SAE225	$2,665	G6-7VIL	Y	350	856	27.33	
25	3600	230/460	284HP10	1.15	55.2/27.6	91.7	**V966**	5KS284SAE129	$3,007	G6-7VIL	Y	460	783	29.92	
25	1800	230/460	284HP10	1.15	57.8/28.9	93.6	**V986**	5KS284SAE222	$2,856	G6-7VIL	Y	460	968	29.92	
30	3600	230/460	286HP10	1.15	66.0/33.0	92.4	**V967**	5KS286SAE131	$3,320	G6-7VIL	Y	510	783	29.92	
30	1800	230/460	286HP10	1.15	69.8/34.9	93	**V987**	5KS286SAE222	$3,256	G6-7VIL	Y	510	968	29.92	
40	3600	460	324HP16	1.15	47.1	92.4	**V968**	5KS324SAE134	$4,836	G6-7VIL	Y	640	1067	34.15	
40	1800	460	324HP16	1.15	49.4	94.1	**V988**	5KS324SAE226	$4,702	G6-7VIL	Y	700	1294	34.15	
50	3600	460	326HP16	1.15	57.8	93	**V969**	5KS326SAE123	$5,575	G6-7VIL	Y	680	1067	34.15	
50	1800	460	326HP16	1.15	61.9	94.5	**V989**	5KS326SAE222	$5,575	G6-7VIL	Y	740	1294	34.15	
60	3600	460	364HP16	1.15	67.4	94.1	**V970**	5KS364SAE152	$6,898	G6-7VIL	Y	1020	1000	37.45	
60	1800	460	364HP16	1.15	74.4	95	**V990**	5KS364SAE222	$6,819	G6-7VIL	Y	1050	1205	37.45	
75	3600	460	365HP16	1.15	84.7	93.6	**V971**	5KS365SAE137	$8,223	G6-7VIL	Y	1020	1000	37.45	
75	1800	460	365HP16	1.15	92.0	95.4	**V991**	5KS365SAE223	$7,929	G6-7VIL	Y	1050	1205	37.45	

Energy $aver® TEFC VSS NT

Vertical Solid Shaft Normal Thrust
Premium Efficiency
TEFC - Severe Duty

Typical Performance Data

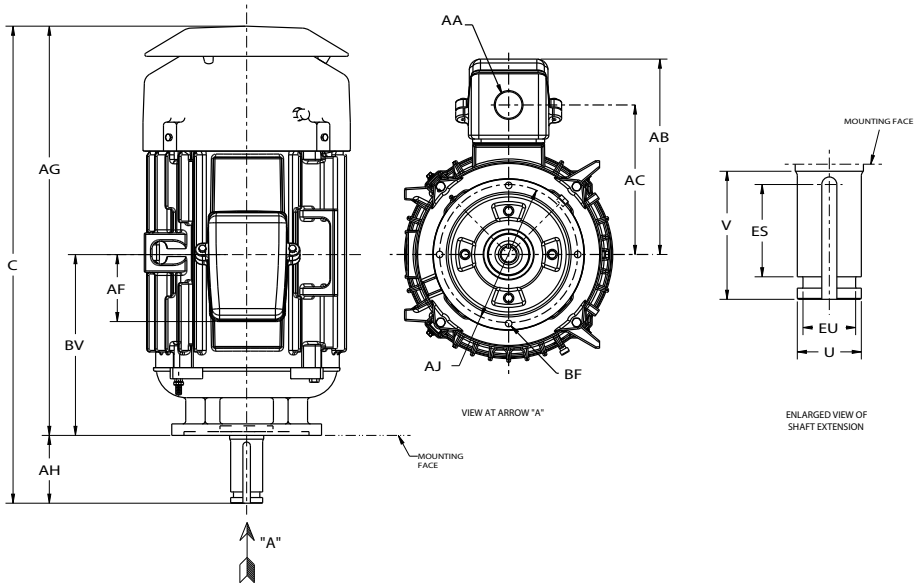
HP: 3-75

HP	Cat No.	Volts	FL RPM	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
3	**V960**	230/460	3525	8.6/4.3	24.7	K	4.5	7.1	10.3	86.5	86.5	84.4	76.0	69.1	57	1.4
3	**V980**	230/460	1765	8.0/4.0	26.7	K	8.9	19.2	22.3	89.5	89.7	88.4	78.0	72.2	60.8	1.3
5	**V961**	230/460	3515	12.8/6.4	37	J	7.5	11.2	16.1	88.5	89.1	88.4	82.5	78.1	68	1.6
5	**V981**	230/460	1755	13.2/6.6	41	J	15	27.7	33.7	89.5	90.4	90.1	79.5	74.2	63.3	2.0
7.5	**V962**	230/460	3525	18.0/9.0	57.7	H	11.2	15.6	22.3	89.5	90.4	89.8	87.5	84.4	76.6	2.1
7.5	**V982**	230/460	1770	18.4/9.2	61.2	H	22.2	38.9	47.8	91.7	92.2	91.7	83.5	80.3	71.8	2.3
10	**V963**	230/460	3520	23.2/11.6	75.9	H	14.9	20.1	29.8	90.2	91.2	91.1	89.5	87.5	81.4	2.3
10	**V983**	230/460	1765	24.4/12.2	79	H	29.7	49	59.4	91.7	92.3	92.1	83.5	80.5	72.3	3.0
15	**V964**	230/460	3550	34.6/17.3	108.9	G	22.2	28.8	44.4	91	91.8	91.7	89.0	88.2	83.8	2.9
15	**V984**	230/460	1775	37.8/18.9	109.1	G	44.4	71	88.8	92.4	92.7	92.2	80.5	75.1	63.7	6.1
20	**V965**	230/460	3540	45.2/22.6	139	G	29.7	38.5	59.3	91	92.6	93	91.0	91.7	90.3	2.3
20	**V985**	230/460	1775	47.6/23.8	135.1	G	59.2	88.8	118.4	93	93.7	93.6	84.5	80.9	71.8	6.2
25	**V966**	230/460	3540	55.2/27.6	155	G	37.1	48.2	74.2	91.7	92.6	92.8	92.5	92.5	90.4	3.2
25	**V986**	230/460	1775	57.8/28.9	169	G	73.9	110.8	147.7	93.6	94.1	94.1	86.5	83.5	75.8	6.7
30	**V967**	230/460	3550	66.0/33.0	231.1	G	44.4	57.7	88.7	92.4	93.4	93.3	92.0	91	86.9	5.1
30	**V987**	230/460	1775	69.8/34.9	203.1	G	88.7	133	177.4	93	93.8	93.9	86.5	83.8	76.4	7.8
40	**V968**	460	3545	47.1	265.1	G	59.3	74.1	118.6	92.4	93.2	92.4	86.0	82.6	74.5	13.0
40	**V988**	460	1780	49.4	298.2	G	118	165.1	235.9	94.1	94.5	93.8	80.5	76.1	66.2	14.3
50	**V969**	460	3540	57.8	340	G	74.1	89	148.3	93.0	93.7	93.2	87.0	84.4	76.9	14.7
50	**V989**	460	1780	61.9	383.5	G	147.5	206.5	295.0	94.5	94.7	94.1	80.0	75.2	65	18.6
60	**V970**	460	3555	67.4	428.4	G	88.6	106.4	177.3	94.1	94.3	93.6	88.5	86.4	80.2	15.4
60	**V990**	460	1785	74.4	469.8	G	176.5	247	352.9	95.0	95.6	95.1	79.5	74.1	62.9	23.8
75	**V971**	460	3550	84.7	523.8	G	111	116.6	222.0	93.6	94.5	94	88.5	86.5	80.2	19.1
75	**V991**	460	1780	92.0	530.9	G	221	309.3	441.9	95.4	95.4	94.9	80.0	75.2	64.6	28.2

Energy $aver® TEFC VSS NT

Vertical Solid Shaft Normal Thrust
Premium Efficiency
TEFC - Severe Duty
182 - 365 Frame

Dimensions



Normal Thrust

	Shaft				Dimensions in Inches									
Frame	ES Min	EU	U	V Min	C	AG	AH	BV	AF	AA	AB	AC	AJ	BF
L182/L184	1.28	0.875	1.125	2.75	17.83	15.08	2.75	6.50	2.50	3/4" -14 NPT	8.76	6.68	9.125	0.438
L213/L215	1.28	0.875	1.125	2.75	22.34	19.59	2.75	8.59	3.50	1 - NPT	9.53	7.42	9.125	0.438
L254/L256	1.28	0.875	1.125	2.75	27.33	24.58	2.75	10.75	4.59	1.25 - NPT	11.4	9.12	9.125	0.438
L284/L286	1.28	0.875	1.125	2.75	29.91	27.41	2.75	12.00	4.59	1.5 - NPT	12.91	9.88	9.125	0.438
L324/L326	3.03	1.25	1.625	4.5	34.15	29.65	4.50	13.75	6.47	3 - NPT	15.36	11.63	14.75	0.69
L364/L365	3.03	1.25	1.625	4.5	37.45	32.95	4.50	14.34	6.47	3 - NPT	16.72	12.99	14.75	0.69

Note

Tolerances:

AH: +/- 0.010"
U: + 0.000" ; - 0.005"
EU: + 0.000" ; - 0.005"

X$D Ultra 841 VSS

Vertical Solid Shaft Inline Pump and High Thrust
TEFC - 841 - Extra Severe Duty

Standard Features

HP Range	3-150
Poles	2, 4
Voltage	460
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 ft
Ambient	40ºC
Balance/Vibration	0.075 in/sec max
Bearing Caps	Cast Iron and Sealed
Bearing Protection	IP55, 182-286: Inpro Seal on both ends; 324-445: Inpro Seal DE
Bearing Type	Guide Bearing: Deep Groove Ball Bearing; Thrust Bearing: Double Row Angular Contact Ball Bearing
Conduit Box	Cast Iron, Gasketed and Rotatable in 90 degree increments
Coupling	Not available on this product construction
Div 2 Temp Codes	Motors have a AIT of 200 degrees C stamped on nameplates
Drains	Stainless Steel T-drain
Efficiency	NEMA Premium
End Shield	Cast Iron
Fan	Non-Sparking Plastic or Bronze
Fan Cover	Cast Iron
Fasteners	SAE Grade 5
Frame Material	Cast Iron
Frame Size	182-445
Frequency	60Hz (De-rated at 50Hz and noted on the nameplate)
Grease/Oil	All Guide and 182-286 Thrust Bearings: Polyurea 324-445 Upper Thrust Bearings: Oil
Ground	Ground lug in Conduit box and Frame Ground
Insulation Class	H
Insulation System	GEGARD2400, Non-Hygroscopic, Anti-Fungus, 2400Volt at .1microsecond rise time, Exceeds NEMA MG1-31 for variable frequency drives
Inverter Capabilities	Inverter duty, INF:1 Variable torque, Suitable for PWM Operation
L10 Bearing Life	50,000 hrs
Lifting Means	4 lugs cast in frames
Mounting	Vertical P-Base
Mounting Holes	Per NEMA
Nameplate	316 Stainless Steel
NEMA Design	B
Paint	Buff, Epoxyester
Shaft TIR	Meets IEEE841, .001" for shaft diameter 1.625" and smaller, .0015"for shaft diameter greater than 1.625"
Special Painting	Meets IEEE841
Relubrication	Yes
Rotor	Cast Aluminum
Service Factor	1.15
Temperature Rise	80ºC @ 1.0 SF
Tests	NEMA Routine including vibration supplied with motor, IEEE 112 Method B
Time Rating	Continuous
Top Hat	Cast Iron
Warranty	36 months from date of installation or 42 months from date of manufacture, whichever occurs first

X$D Ultra 841 VSS

Vertical Solid Shaft Inline Motor
TEFC - 841 - Extra Severe Duty
NEMA Premium

Pricing

Inline Pump
Volts: 460
3 - 150 HP

HP	RPM	NEMA Frame	FLA @ NP	Full Load Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	WT	L10 Down Thrust (lbs) @ 8,760 Hrs	L10 Down Thrust (lbs) @ 26,280 Hrs	C Dim.	Notes
3	3600	L182LP10	3.8	88.5	**V768**	$1,913	G6-7VIL	Y	76	752	516	18.18	
3	1800	L182LP10	4.2	89.5	**V780**	$1,885	G6-7VIL	Y	76	752	516	18.18	
5	3600	L184LP10	6.1	90.2	**V769**	$2,471	G6-7VIL	Y	101	752	516	18.18	
5	1800	L184LP10	6.6	89.5	**V781**	$2,282	G6-7VIL	Y	101	752	516	18.18	
7.5	3600	L213LP10	8.4	91	**V770**	$2,926	G6-7VIL	Y	200	758	516	22.34	
7.5	1800	L213LP10	9.2	91.7	**V782**	$2,831	G6-7VIL	Y	200	758	516	22.34	
10	3600	L215LP10	11.2	91	**V771**	$3,051	G6-7VIL	Y	220	758	516	22.34	
10	1800	L215LP10	12.2	91.7	**V783**	$3,177	G6-7VIL	Y	220	758	516	22.34	
15	3600	L254LP10	16.8	91.7	**V772**	$3,517	G6-7VIL	Y	315	910	612	27.33	
15	1800	L254LP10	18.6	92.4	**V784**	$3,646	G6-7VIL	Y	315	1,140	764	27.33	
20	3600	L256LP10	22.6	91	**V773**	$3,825	G6-7VIL	Y	350	910	612	27.33	
20	1800	L256LP10	23.7	93	**V785**	$4,141	G6-7VIL	Y	350	1,140	764	27.33	
25	3600	L284LP10	27.2	93	**V774**	$4,067	G6-7VIL	Y	460	1,057	705	31.66	
25	1800	L284LP10	29.1	93.6	**V786**	$4,619	G6-7VIL	Y	460	1,313	870	31.66	
30	3600	L286LP10	32.5	93	**V775**	$4,703	G6-7VIL	Y	510	1,057	705	31.66	
30	1800	L286LP10	34.7	93.6	**V787**	$5,443	G6-7VIL	Y	510	1,313	870	31.66	79
40	3600	L324LP16	46.6	92.4	**V776**	$6,867	G6-7VIL	Y	670	1,963	1,323	41.07	
40	1800	L324LP16	49.4	94.1	**V788**	$6,741	G6-7VIL	Y	700	2,422	1,616	41.07	153
50	3600	L326LP16	57.5	93	**V777**	$8,834	G6-7VIL	Y	680	1,963	1,323	41.07	
50	1800	L326LP16	61.9	94.5	**V789**	$9,109	G6-7VIL	Y	740	2,422	1,616	41.07	153
60	3600	L364LP16	67.8	93.6	**V778**	$10,795	G6-7VIL	Y	1000	3,768	2,555	45.38	
60	1800	L364LP16	73	95	**V790**	$11,269	G6-7VIL	Y	1050	4,690	3,160	45.38	
75	3600	L365LP16	84.7	93.6	**V779**	$13,487	G6-7VIL	Y	1010	3,768	2,555	45.38	
75	1800	L365LP16	92	95.4	**V791**	$13,724	G6-7VIL	Y	1070	4,690	3,160	45.38	153
100	3600	L405LP16	109	93	**V872**	$14,578	G6-7VIL	Y	1480	3,715	2,501	51.06	
100	1800	L405LP16	112	95	**V871**	$15,016	G6-7VIL	Y	1540	4,565	3,036	51.06	79
125	3600	L444LP16	135	93	**V876**	$18,939	G6-7VIL	Y	1990	3,901	2,578	58.04	79
125	1800	L444LP16	138	95	**V869**	$19,508	G6-7VIL	Y	1990	4,858	3,192	58.04	79
150	3600	L445LP16	160	93.6	**V877**	$22,727	G6-7VIL	Y	1990	3,901	2,578	58.04	79
150	1800	L445LP16	173	95.8	**V870**	$23,409	G6-7VIL	Y	2020	4,858	3,192	58.04	

Notes:
79 Efficiency does not meet NEMA Premium level.
153 NEMA A locked rotor amps

X$D Ultra 841 VSS

Vertical Solid Shaft High Thrust
TEFC - 841 - Extra Severe Duty
NEMA Premium

Pricing

High Thrust
Volts: 460
3 - 150 HP

HP	RPM	NEMA Frame	FLA @ NP	Full Load Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	WT	L10 Down Thrust (lbs) @ 8,760 Hrs	L10 Down Thrust (lbs) @ 26,280 Hrs	C Dim.	Notes
3	3600	L182VP10	3.8	88.5	**V854**	$1,818	G6-7VIL	N	76	1,912	1,320	18.17	
3	1800	L182VP10	4	89.5	**V868**	$1,791	G6-7VIL	N	76	1,912	1,320	18.17	
5	3600	L184VP10	6.1	90.2	**V853**	$2,347	G6-7VIL	N	101	1,912	1,320	18.17	
5	1800	L184VP10	6.6	89.5	**V867**	$2,168	G6-7VIL	N	101	1,912	1,320	18.17	
7.5	3600	L213VP10	8.4	91	**V855**	$2,779	G6-7VIL	N	200	2,692	1,857	22.34	
7.5	1800	L213VP10	9.2	91.7	**V866**	$2,690	G6-7VIL	N	200	2,692	1,857	22.34	
10	3600	L215VP10	11.2	91	**V856**	$2,899	G6-7VIL	N	220	2,692	1,857	22.34	
10	1800	L215VP10	12.2	91.7	**V865**	$3,018	G6-7VIL	N	220	2,692	1,857	22.34	
15	3600	L254VP10	16.8	91.7	**V857**	$3,341	G6-7VIL	N	315	2,988	2,053	27.33	
15	1800	L254VP10	18.6	92.4	**V864**	$3,464	G6-7VIL	N	315	3,758	2,580	27.33	
20	3600	L256VP10	22.6	91	**V858**	$3,634	G6-7VIL	N	350	2,988	2,053	27.33	
20	1800	L256VP10	23.7	93	**V863**	$3,933	G6-7VIL	N	350	3,758	2,580	27.33	
25	3600	L284VP10	27.1	93	**V859**	$3,864	G6-7VIL	N	460	3,356	2,300	29.92	
25	1800	L284VP10	29.1	93.6	**V862**	$4,388	G6-7VIL	N	460	4,210	2,879	29.92	
30	3600	L286VP10	32.5	93	**V860**	$4,467	G6-7VIL	N	510	3,356	2,300	29.92	
30	1800	L286VP10	34.7	93.6	**V861**	$5,170	G6-7VIL	N	510	4,210	2,879	29.92	79
40	3600	L324VP16	46.6	92.4	**V873**	$6,523	G6-7VIL	Y	680	2,926	1,991	41.07	
40	1800	L324VP16	51	94.1	**V879**	$6,404	G6-7VIL	Y	700	3,636	2,450	41.07	
50	3600	L326VP16	68.2	93	**V875**	$8,392	G6-7VIL	Y	680	2,926	1,991	41.07	79
50	1800	L326VP16	64.3	94.5	**V880**	$8,654	G6-7VIL	Y	740	3,636	2,450	41.07	
60	3600	L364VP16	68.2	93	**V874**	$9,716	G6-7VIL	Y	1010	3,768	2,555	45.38	
60	1800	L364VP16	74.4	95	**V878**	$10,142	G6-7VIL	Y	1050	4,690	3,162	45.38	
75	3600	L365VP16	84.7	93.6	**V792**	$12,138	G6-7VIL	Y	1010	3,768	2,555	45.38	
75	1800	L365VP16	92	95.4	**V796**	$12,351	G6-7VIL	Y	1070	4,690	3,162	45.38	153
100	3600	L405VP16	108	93.6	**V793**	$13,120	G6-7VIL	Y	1480	3,715	2,501	51.06	
100	1800	L405VP16	111	95.4	**V797**	$13,514	G6-7VIL	Y	1540	4,565	3,036	51.06	
125	3600	L444VP16	135	93	**V794**	$17,045	G6-7VIL	Y	1990	3,901	2,578	58.04	79
125	1800	L444VP16	138	95	**V798**	$17,557	G6-7VIL	Y	2050	6,056	4,023	58.04	79
150	3600	L445VP16	160	93.6	**V795**	$20,455	G6-7VIL	Y	1990	3,901	2,578	58.04	79
150	1800	L445VP16	178	95.8	**V799**	$21,068	G6-7VIL	Y	2020	6,056	4,023	58.04	153

Notes:
79 Efficiency does not meet NEMA Premium level.
153 NEMA A locked rotor amps

X$D Ultra 841 VSS

Vertical Solid Shaft Inline Pump and High Thrust Motors
TEFC - 841 - Extra Severe Duty

Typical Performance Data

Inline Pump

HP	Cat No.	Volts	FL RPM	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
3	**V768**	460	3535	3.8	32	K	4.5	8.9	14.8	88.5	88.2	86.2	82.5	77.5	67.2	1.0
3	**V780**	460	1765	4.2	32	K	8.9	22.5	30.7	89.5	89.4	88.1	75.5	68.6	56.3	1.5
5	**V769**	460	3535	6.1	46	J	7.4	16.5	25.5	90.2	90.7	89.6	85	80.4	70.9	1.5
5	**V781**	460	1755	6.6	46	J	15.0	34.1	44.7	89.5	90.4	90.1	79.5	74.2	63.3	2.0
7.5	**V770**	460	3535	8.4	63.5	H	11.1	24.7	32.3	91	91.6	91	91.5	90	85.6	1.4
7.5	**V782**	460	1770	9.2	63.5	H	22.2	42.9	62.9	91.7	92.2	91.7	83.5	80.3	71.8	2.3
10	**V771**	460	3525	11.2	81	H	14.9	32.6	40.6	91	91.9	91.9	91.5	90.8	87.2	1.6
10	**V783**	460	1765	12.2	81	H	29.7	56.8	81.3	91.7	92.3	92.1	83.5	80.5	72.3	3.0
15	**V772**	460	3550	16.8	116	G	22.2	47.7	55.8	91.7	92.5	92.4	91	91.1	88.8	2.0
15	**V784**	460	1775	18.6	116	G	44.4	91.8	121.2	92.4	93	92.5	81.5	76.3	65.3	5.8
20	**V773**	460	3540	22.6	145	G	29.7	64.4	67.7	91	92.6	93	91	91.7	90.3	2.3
20	**V785**	460	1775	23.7	145	G	59.2	121.3	150.9	93	93.8	93.7	85	81.3	72.5	6.1
25	**V774**	460	3555	27.2	182.5	G	36.9	96.5	94.3	93	93.5	93.2	92.5	91.7	88.4	3.8
25	**V786**	460	1775	29.1	182.5	G	73.9	122.9	181.5	93.6	94.2	94.1	86	82.8	74.8	6.9
30	**V775**	460	3550	32.5	217.5	G	44.4	123.4	111.9	93	93.9	93.7	93	92.3	89.4	4.2
30	**V787**	460	1775	34.7	217.5	G	88.7	147.3	210.8	93.6	94.2	94.3	86.5	83.7	76.2	7.8
40	**V776**	460	3545	46.6	290	G	59.2	102.2	153.6	92.4	91.7	90	87	84.4	77.5	12.0
40	**V788**	460	1780	49.4	290	G	118.0	221.6	309.4	94.1	94.5	93.8	80.5	76.1	66.2	14.3
50	**V777**	460	3540	57.5	362.5	G	74.1	129.4	190.2	93	92.3	91	87.5	84.6	77.5	14.9
50	**V789**	460	1780	61.9	362.5	G	147.5	295	398	94.5	94.8	94.2	80	75.2	65	18.6
60	**V778**	460	3555	67.8	435	G	88.7	161.7	233.3	93.6	93.2	92	88.5	86.2	80.1	15.8
60	**V790**	460	1785	73	435	G	176.7	315.8	465.1	95	95.1	94.5	81	76	65.6	22.0
75	**V779**	460	3550	84.7	542.5	G	111.0	206.9	292.3	93.6	93.7	92.7	88.5	86	79.5	20.2
75	**V791**	460	1780	92	542.5	G	220.9	424.5	600.4	95.4	95.2	94.7	80	74.7	63.8	29.1
100	**V871**	460	1785	112	725	G	293.9	625.2	670.5	95	95.2	94.6	88	85.8	79.6	22.8
100	**V872**	460	3560	109	725	G	147.5	347.2	331.6	93	93.1	92	92.5	92.7	90.7	12.2
125	**V869**	460	1785	138	907.5	G	367.3	1008.8	839.5	95	94.8	94.1	89.5	88.1	83.3	24.2
125	**V876**	460	3565	135	907.5	G	184.1	485.8	423.1	93	93	91.6	93.5	93.6	92.2	13.7
150	**V870**	460	1785	173	1085	G	441.3	1148.7	963.7	95.8	95	94.4	84.5	81.5	73.3	43.5
150	**V877**	460	3565	160	1085	G	220.9	579.6	514.6	93.6	93.4	92.4	93.5	93.3	91.6	17.6

X$D Ultra 841 VSS

Vertical Solid Shaft Inline Pump and High Thrust Motors
TEFC - 841 - Extra Severe Duty

Typical Performance Data (cont.)

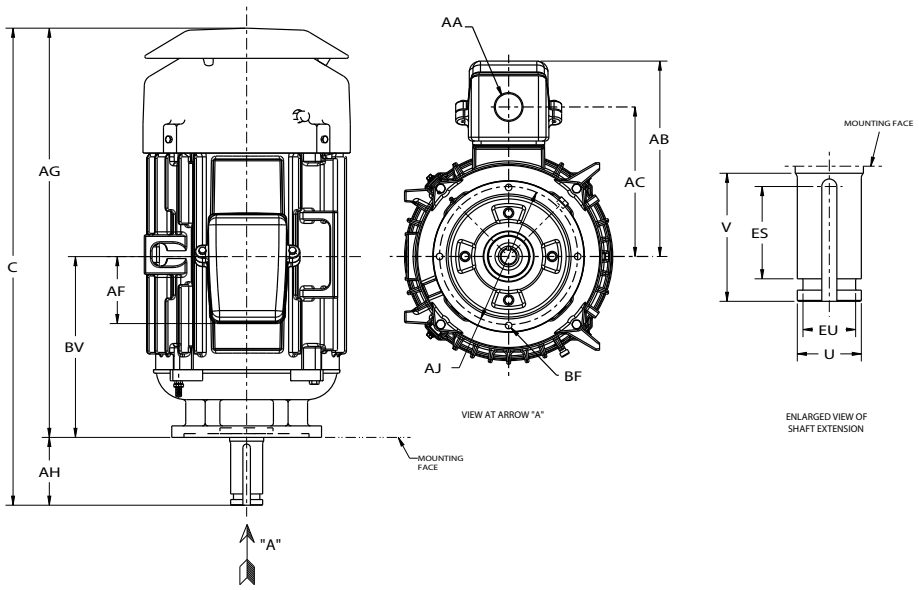
High Thrust

HP	Cat No.	Volts	FL RPM	NP FLA	Design LRA	Code KVA/HP	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP eff. Full Load	75% Load Eff.	50% Load Eff.	NP PF Full Load	75% Load Power Factor	50% Load Power Factor	Max KVAR
3	**V854**	460	3535	3.8	32	K	4.5	8.9	14.8	88.5	88.2	86.2	82.5	77.5	67.2	1.0
3	**V868**	460	1765	4	32	K	8.9	22.1	29.8	89.5	89.7	88.4	78	72.2	60.8	1.3
5	**V853**	460	3535	6.1	46	J	7.4	16.5	25.5	90.2	90.7	89.6	85	80.4	70.9	1.5
5	**V867**	460	1755	6.6	46	J	15.0	34.1	44.7	89.5	90.4	90.1	79.5	74.2	63.3	2.0
7.5	**V855**	460	3535	8.4	63.5	H	11.1	24.7	32.3	91	91.6	91	91.5	90	85.6	1.4
7.5	**V866**	460	1770	9.2	63.5	H	22.2	42.9	62.9	91.7	92.2	91.7	83.5	80.3	71.8	2.3
10	**V856**	460	3525	11.2	81	H	14.9	32.6	40.6	91	91.9	91.9	91.5	90.8	87.2	1.6
10	**V865**	460	1765	12.2	81	H	29.7	56.8	81.3	91.7	92.3	92.1	83.5	80.5	72.3	3.0
15	**V857**	460	3550	16.8	116	G	22.2	47.7	55.8	91.7	92.5	92.4	91	91.1	88.8	2.0
15	**V864**	460	1775	18.6	116	G	44.4	91.8	121.2	92.4	93	92.5	81.5	76.3	65.3	5.8
20	**V858**	460	3540	22.6	145	G	29.7	64.4	67.7	91	92.6	93	91	91.7	90.3	2.3
20	**V863**	460	1775	23.7	145	G	59.2	121.3	150.9	93	93.8	93.7	85	81.3	72.5	6.1
25	**V859**	460	3550	27.1	182.5	G	37.0	94.2	89.3	93	93.4	93.2	93	92.4	89.6	3.4
25	**V862**	460	1775	29.1	182.5	G	73.9	122.9	181.5	93.6	94.2	94.1	86	82.8	74.8	6.9
30	**V860**	460	3545	32.5	217.5	G	44.4	117.3	106.7	93	93.6	93.6	93	92.5	89.9	4.0
30	**V861**	460	1775	34.7	217.5	G	88.7	147.3	210.8	93.6	94.2	94.3	86.5	83.7	76.2	7.8
40	**V873**	460	3550	46.6	290	G	59.2	104.1	155.3	92.4	91.8	90	87	84.5	77.6	11.9
40	**V879**	460	1780	51	290	H	117.8	254.8	345.7	94.1	94.4	93.5	78	72.6	61.5	16.7
50	**V875**	460	3545	57.8	362.5	G	74.1	129.6	190.6	93	92.4	91	87	84.6	77.5	14.9
50	**V880**	460	1780	64.3	362.5	H	147.4	307.5	424.7	94.5	94.6	93.8	77	71.5	60.1	21.7
60	**V874**	460	3555	68.2	435	G	88.7	159.9	228.7	93	93.2	92.1	88.5	86.7	81	15.2
60	**V878**	460	1785	74.4	435	G	176.6	347.9	501.3	95	95.1	94.4	79.5	74.2	63.1	23.8
75	**V792**	460	3550	84.7	542.5	G	111.0	206.9	292.3	93.6	93.7	92.7	88.5	86	79.5	20.2
75	**V796**	460	1780	92	542.5	G	220.9	424.5	600.4	95.4	95.2	94.7	80	74.7	63.8	29.1
100	**V793**	460	3560	108	725	G	147.4	347.2	332.4	93.6	93.8	93	92.5	92.7	90.7	12.2
100	**V797**	460	1785	111	725	G	293.8	625.2	671	95.4	95.4	94.9	88	85.7	79.5	22.8
125	**V794**	460	3565	135	907.5	G	184.1	485.8	423.1	93	93	91.6	93.5	93.6	92.2	13.7
125	**V798**	460	1785	138	907.5	G	367.2	1021.6	840.1	95	94.9	94.2	89.5	88.4	83.8	23.5
150	**V795**	460	3565	160	1085	G	220.9	579.6	514.6	93.6	93.4	92.4	93.5	93.3	91.6	17.6
150	**V799**	460	1790	178	1085	H	440.5	1286.3	1140.4	95.8	95.4	94.6	82.5	78.1	68	52.3

X$D Ultra 841 VSS

Vertical Solid Shaft Inline Pump and High Thrust
TEFC - 841 - Extra Severe Duty
182 - 286 Frame

Dimensions



Inline Pump

	Shaft Extension				Dimensions in Inches									
Frame	ES Min	EU	U	V Min	C	AG	AH	BV	AF	AA	AB	AC	AJ	BF
L182/L184LP	1.28	0.8725	1.125	2.75	18.17	15.42	2.75	6.50	2.89	1 - NPT	8.76	6.68	9.125	0.438
L213/L215LP	1.28	1.25	1.625	2.75	22.34	19.59	2.75	8.59	2.89	1 - NPT	9.53	7.42	9.125	0.438
L254/L256LP	1.28	1.25	1.625	2.75	27.33	24.58	2.75	10.75	3.69	1.25 - NPT	12.15	9.12	9.125	0.438
L284/L286LP	3.03	1.75	2.125	4.25	31.66	27.16	4.50	12.00	4.59	1.5 - NPT	12.91	9.88	9.125	0.438

High Thrust

	Shaft				Dimensions in Inches									
Frame	ES Min	EU	U	V Min	C	AG	AH	BV	AF	AA	AB	AC	AJ	BF
L182/L184VP	1.28	0.875	1.125	2.75	18.17	15.42	2.75	6.50	2.89	1 - NPT	8.76	6.88	9.125	0.438
L213/L215VP	1.28	0.875	1.125	2.75	22.34	19.59	2.75	8.59	3.5	1 - NPT	9.53	7.42	9.125	0.438
L254/L256VP	1.28	0.875	1.125	2.75	27.33	24.58	2.75	10.75	4.59	1.25 - NPT	12.15	9.12	9.125	0.438
L284/L286VP	1.28	0.875	1.125	2.75	29.92	27.16	2.75	12.00	4.59	1.5 - NPT	12.91	9.88	9.125	0.438

Note

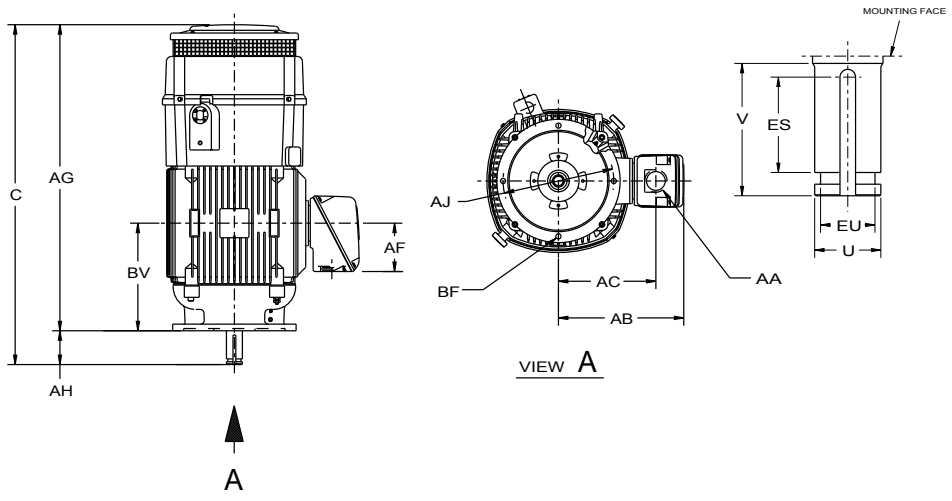
Tolerances:

AH: +/- 0.010"
U: + 0.000" ; - 0.005"
EU: + 0.000" ; - 0.005"

X$D Ultra 841 VSS

Vertical Solid Shaft Inline Pump and High Thrust
TEFC - 841 - Extra Severe Duty
324 - 445 Frame

Dimensions



Inline Pump

Frame	Shaft Extension				Dimensions in Inches									
	ES Min	EU	U	V Min	C	AG	AH	BV	AF	AA	AB	AC	AJ	BF
L324/L326LP	3.03	1.75	2.125	4.25	41.07	36.57	4.50	13.75	6.47	3 - NPT	15.36	11.63	14.75	0.69
L364/L365LP	3.03	1.75	2.125	4.5	45.38	40.88	4.50	14.34	6.47	3 - NPT	16.72	12.99	14.75	0.69
L405LP	3.03	1.75	2.125	4.5	51.06	46.56	4.50	16.69	7.00	3 - NPT	19.47	15.36	14.75	0.69
L444/L445LP	3.03	1.75	2.125	4.5	58.04	53.54	4.50	17.50	7.00	3 - NPT	20.94	16.68	14.75	0.69

High Thrust

Frame	Shaft				Dimensions in Inches									
	ES Min	EU	U	V Min	C	AG	AH	BV	AF	AA	AB	AC	AJ	BF
L324/L326VP	3.03	1.25	1.625	4.25	41.07	36.57	4.50	13.75	6.47	3 - NPT	15.36	11.63	14.75	0.69
L364/L365VP	3.03	1.25	1.625	4.5	45.38	40.88	4.50	14.34	6.47	3 - NPT	16.72	12.99	14.75	0.69
L405VP	3.03	1.25	1.625	4.5	51.06	46.56	4.50	16.69	7.00	3 - NPT	19.47	15.36	14.75	0.69
L444/L445VP	3.03	1.75	2.125	4.5	58.04	53.54	4.50	17.50	7.00	3 - NPT	20.94	16.68	14.75	0.69

Note

Tolerances:

AH: +/- 0.010"
U: + 0.000" ; - 0.005"
EU: + 0.000" ; - 0.005"

X$D Ultra® 841 Vertical C-Face NT

TEFC—Extra Severe Duty (IP56)

Standard Features

NEMA Frame Size	143 - 365
Poles	2, 4 & 6
Horsepower Range	2-pole - 1 - 75 4-pole - 1 - 75 6-pole - 1.5 - 50
Voltage	460
Shaft Extension	2-pole 143 - 286 fr - T 284 - 365 fr - TS 4 & 6-pole 4P: 143 - 365, 6P: 182 - 326 - T
Agency Approvals	UL - Component and Insulation System Recognition CSA - Certification and Efficiency Verification
Industry Specifications	IEEE 841, IEEE 45 Marine Duty
Warranty (months)	60 months from date of installation or 66 months from date of manufacture, whichever occurs first
Max Ambient & Altitude	40˚C & 3300 feet
Insulation Class	H
Winding Temperature Rise	80C @1.0SF Sine wave (with some high end exceptions)
Service Factor	1.15 Sine wave (with some high end exceptions)
Bearing Housing Rise	Per IEEE 841 - 2-pole - 50C 4 & 6-pole - 45C
Division 2 Temperature Code	CSA Certified Div 2, T3 (200 C) (with some high end exceptions)
NEMA Design	B
Insulation System	Non-Hygroscopic, Anti-Fungus, Polyester Resin, Trickle Treated, Tested to Exceed NEMA MG 1 Part 31
Inverter Capability	Variable Torque INF:1
Efficiency	Per IEEE 841 (NEMA Premium 1-300 HP)
Frame Material	Cast iron
Frame/Conduit Box Gasket	Neoprene Rubber
Frame/End Shield Seal	Yes
End Shield Material	Cast iron
Conduit Box Material	Cast Iron or Fabricated Steel Plate
Conduit Box Cover Gasket	Neoprene Rubber
Conduit Box Rotation	90 degree increments
Conduit Box Hole Thread	NPT
Shaft Runout	Per IEEE 841
Fan Cover Material	Cast iron
Fan	2-pole - Bi-Directional, Non-sparking Plastic (except Uni-directional Aluminum in 449 frame) 4 & 6-pole - Bi-Directional, Non-sparking Plastic
Sound Power	90 dBA sound power (with some high end exceptions)
Mounting	W6, Shaft Down with C-Face Flange
Mounting Holes	Per NEMA
Lifting	4 point cast in lugs
Bearing Type	Single Shield Ball
Bearing L10 Life (Hours)	Direct coupled - 50,000 per IEEE 841
Bearing Caps	Cast Iron, gasketed
Bearing Lubricant	Polyurea
Bearing Re-Lubrication	Grease fitting & plug. Extended through the fan cover. Includes provisions for conversion to Oil Mist Lubrication
Bearing Protection	Inpro Seal both ends
Fasteners	Hex Head, Zinc Plated
Condensation Drain	Stainless Steel T-drains at the lowest point of both end shields
Balance & Vibration	ISO 1940 Grade 1 Ball bearings - .040 peak in/sec
Vibration Pads	Cast in vibration pads for repeatable measurements
Nameplate	316 Stainless Steel
Paint	Epoxy ester, RAL 1001
Tests	NEMA Routine including Vibration supplied with motor. IEEE 112 Method B

X$D Ultra® 841 Vertical C-Face NT

TEFC—Extra Severe Duty (IP56)

Pricing

Volts: 460
1 - 75 HP

HP	RPM	Volts	Frame	FLA	Nom Eff %	Cat. No.	Model No.	List Price	Price Symbol	Norm. Stk	Wt. (Lbs)	L10 Down Thrust (lbs) @ 8,760 Hrs	L10 Down Thrust (lbs) @ 50,000 Hrs	C Dim (In)	Notes
1	3600	460	143TC	1.4	81.5	**M9400**	5KS143XAA145	$1,408	G4-7UX1	Y	43	260	120	15.77	
1	1800	460	143TC	1.6	85.5	**M9401**	5KS143XAA2008	$1,392	G4-7UX1	Y	43	332	146	15.77	
1.5	3600	460	143TC	2.2	84	**M9402**	5KS143XAA146	$1,457	G4-7UX1	Y	43	253	115	15.77	
1.5	1800	460	145TC	2.2	86.5	**M9403**	5KS145XAA2009	$1,542	G4-7UX1	Y	50	321	137	15.77	
1.5	1200	460	182TC	2.4	87.5	**M9404**	5KS182XAA326	$1,583	G4-7UX1	N	76	690	308	17.93	
2	3600	460	145TC	2.7	85.5	**M9405**	5KS145XAA145	$1,692	G4-7UX1	Y	50	249	110	15.77	
2	1800	460	145TC	2.8	86.5	**M9406**	5KS145XAA2010	$1,645	G4-7UX1	Y	50	316	132	15.77	
2	1200	460	184TC	3	88.5	**M9407**	5KS184XAA325	$1,775	G4-7UX1	N	101	677	295	17.93	
3	3600	460	182TC	4.3	86.5	**M9408**	5KS182XAA138	$1,664	G4-7UX1	Y	76	448	205	17.93	
3	1800	460	182TC	4	89.5	**M9409**	5KS182XAA2004	$1,592	G4-7UX1	Y	76	575	254	17.93	
3	1200	460	213TC	4.3	89.5	**M9410**	5KS213XAA335	$1,980	G4-7UX1	N	200	1089	495	22.13	
5	3600	460	184TC	6.4	88.5	**M9411**	5KS184XAA1022	$1,835	G4-7UX1	Y	101	438	196	17.93	
5	1800	460	184TC	6.6	89.5	**M9412**	5KS184XAA2031	$1,669	G4-7UX1	Y	101	555	235	17.93	
5	1200	460	215TC	6.8	89.5	**M9500**	5KS215XAA341	$2,620	G4-7UX1	N	220	1056	467	22.13	
7.5	3600	460	213TC	9	89.5	**M9501**	5KS213XAA1023	$2,326	G4-7UX1	Y	200	698	320	22.13	
7.5	1800	460	213TC	9.2	91.7	**M9502**	5KS213XAA2049	$2,315	G4-7UX1	Y	200	903	400	22.13	
7.5	1200	460	254TC	9.7	91	**M9503**	5KS254XAA335	$3,544	G4-7UX1	N	315	1293	591	27.57	
10	3600	460	215TC	11.6	90.2	**M9504**	5KS215XAA1018	$2,484	G4-7UX1	Y	220	691	313	22.13	
10	1800	460	215TC	12.2	91.7	**M9505**	5KS215XAA2043	$2,534	G4-7UX1	Y	220	887	385	22.13	
10	1200	460	256TC	12.9	91	**M9506**	5KS256XAA327	$4,097	G4-7UX1	N	350	1284	583	27.57	
15	3600	460	254TC	17.3	91	**M9507**	5KS254XAA1044	$3,358	G4-7UX1	Y	315	793	353	27.57	
15	1800	460	254TC	18.9	92.4	**M9508**	5KS254XAA2059	$3,307	G4-7UX1	Y	315	999	419	27.57	
15	1200	460	284TC	20.4	91.7	**M9509**	5KS284XAA338	$5,404	G4-7UX1	N	460	1231	533	30.04	
20	3600	460	256TC	22.6	91	**M9513**	5KS256XAA198	$4,035	G4-7UX1	Y	350	761	321	27.57	
20	1800	460	256TC	23.8	93	**M9515**	5KS256XAA2041	$3,995	G4-7UX1	Y	350	999	412	27.57	
20	1200	460	286TC	26.9	91.7	**M9516**	5KS286XAA332	$6,444	G4-7UX1	N	510	1189	490	30.04	
25	3600	460	284TC	27.6	91.7	**M9517**	5KS284XAA186	$4,992	G4-7UX1	N	460	749	312	30.04	
25	3600	460	284TSC	27.6	91.7	**M9518**	5KS284XAA187	$4,992	G4-7UX1	Y	460	749	312	28.66	
25	1800	460	284TC	28.9	93.6	**M9519**	5KS284XAA2002	$4,797	G4-7UX1	Y	460	970	387	30.04	
25	1200	460	324TC	31.6	93	**M9520**	5KS324XAA354	$8,293	G4-7UX1	N	690	1540	634	33	
30	3600	460	286TC	33	92.4	**M9521**	5KS286XAA167	$5,720	G4-7UX1	N	510	712	275	30.04	
30	3600	460	286TSC	33	92.4	**M9522**	5KS286XAA168	$5,720	G4-7UX1	Y	510	712	275	28.66	
30	1800	460	286TC	35.1	93.6	**M9523**	5KS286XAA2010	$5,470	G4-7UX1	Y	510	944	362	30.04	
30	1200	460	326TC	37.7	93	**M9524**	5KS326XAA342	$9,144	G4-7UX1	N	720	1540	634	33	
40	3600	460	324TSC	50.3	93.6	**M9525**	5KS324XAA1079	$7,847	G4-7UX1	Y	640	334	96	31.5	
40	1800	460	324TC	50.7	94.1	**M9526**	5KS324XAA2109	$7,642	G4-7UX1	Y	670	1295	539	33	
50	3600	460	326TSC	60.6	93.6	**M9527**	5KS326XAA1009	$8,200	G4-7UX1	Y	660	321	83	31.5	
50	1800	460	326TC	61.5	94.5	**M9528**	5KS326XAA2055	$7,967	G4-7UX1	Y	710	1247	492	33	
60	3600	460	364TSC	69.5	95	**M9529**	5KS364XAA187	$12,055	G4-7UX	Y	960	543	172	35.93	
60	1800	460	364TC	71.7	95	**M9530**	5KS364XAA2034	$11,799	G4-7UX	Y	1027	1675	690	38.06	
75	3600	460	365TSC	87.4	95	**M9531**	5KS365XAA1002	$13,507	G4-7UX	Y	970	523	154	35.93	
75	1800	460	365TC	87.1	95.4	**M9532**	5KS365XAA2034	$13,284	G4-7UX	Y	1040	1604	620	38.06	

X$D Ultra® 841 Vertical C-Face NT

TEFC—Extra Severe Duty (IP56)

Typical Performance Data

1 - 75 HP

HP	RPM	Volts	Cat. No.	Model No.	Frame	NP FLA	LRA	NEMA Design	KVA/HP Code	FLT (lb-ft)	LRT (lb-ft)	BDT (lb-ft)	NP FL Eff%	NP FL PF %	Max KVR
1	3600	460	**M9400**	5KS143XAA145	143TC	1.4	15	–	N	1.5	3.7	5.3	81.5	80.5	0.4
1	1800	460	**M9401**	5KS143XAA2008	143TC	1.6	15	B	N	3	8.2	9	85.5	67.5	0.8
1.5	3600	460	**M9402**	5KS143XAA146	143TC	2.2	20	B	M	2.2	3.9	5.6	84	77.5	0.7
1.5	1800	460	**M9403**	5KS145XAA2009	145TC	2.2	20	B	M	4.5	11.3	12.6	86.5	74	0.9
1.5	1200	460	**M9404**	5KS182XAA326	182TC	2.4	20	B	M	6.7	11.1	16.8	87.5	68	1
2	3600	460	**M9405**	5KS145XAA145	145TC	2.7	25	B	L	3	5.1	7.2	85.5	80.5	0.8
2	1800	460	**M9406**	5KS145XAA2010	145TC	2.8	25	B	L	6.1	14.2	16.3	86.5	77.5	1
2	1200	460	**M9407**	5KS184XAA325	184TC	3	25	B	L	9	14.4	21.5	88.5	69.5	1.2
3	3600	460	**M9408**	5KS182XAA138	182TC	4.3	32	B	K	4.5	7.1	10.3	86.5	76	1.4
3	1800	460	**M9409**	5KS182XAA2004	182TC	4	32	B	K	8.9	19.2	22.3	89.5	78	1.3
3	1200	460	**M9410**	5KS213XAA335	213TC	4.3	32	–	K	13.4	20.7	30.8	89.5	73	1.7
5	3600	460	**M9411**	5KS184XAA1022	184TC	6.4	46	B	J	7.5	11.2	16.1	88.5	82.5	1.6
5	1800	460	**M9412**	5KS184XAA2031	184TC	6.6	46	B	J	15	27.7	33.7	89.5	79.5	2
5	1200	460	**M9500**	5KS215XAA341	215TC	6.8	46	B	J	22.4	33.6	48.2	89.5	77	2.2
7.5	3600	460	**M9501**	5KS213XAA1023	213TC	9	63.5	B	H	11.2	15.6	22.3	89.5	87.5	2.1
7.5	1800	460	**M9502**	5KS213XAA2049	213TC	9.2	63.5	B	H	22.2	38.9	47.8	91.7	83.5	2.3
7.5	1200	460	**M9503**	5KS254XAA335	254TC	9.7	63.5	B	H	33.5	50.3	68.7	91	79.5	3.1
10	3600	460	**M9504**	5KS215XAA1018	215TC	11.6	81	B	H	14.9	20.1	29.8	90.2	89.5	2.3
10	1800	460	**M9505**	5KS215XAA2043	215TC	12.2	81	B	H	29.7	49	59.4	91.7	83.5	3
10	1200	460	**M9506**	5KS256XAA327	256TC	12.9	81	B	H	44.8	67.2	89.6	91	79.5	4.1
15	3600	460	**M9507**	5KS254XAA1044	254TC	17.3	116	B	G	22.2	28.8	44.4	91	89	2.9
15	1800	460	**M9508**	5KS254XAA2059	254TC	18.9	116	B	G	44.4	71	88.8	92.4	80.5	6.1
15	1200	460	**M9509**	5KS284XAA338	284TC	20.4	116	A	G	66.5	93.1	133.1	91.7	75	7.6
20	3600	460	**M9513**	5KS256XAA198	256TC	22.6	145	B	G	29.7	38.5	59.3	91	91	2.3
20	1800	460	**M9515**	5KS256XAA2041	256TC	23.8	145	B	G	59.2	88.8	118.4	93	84.5	6.2
20	1200	460	**M9516**	5KS286XAA332	286TC	26.9	145	A	G	88.8	119.9	177.6	91.7	76	9.7
25	3600	460	**M9517**	5KS284XAA186	284TC	27.6	182.5	B	G	37.1	48.2	74.2	91.7	92.5	3.2
25	3600	460	**M9518**	5KS284XAA187	284TSC	27.6	182.5	B	G	37.1	48.2	74.2	91.7	92.5	3.2
25	1800	460	**M9519**	5KS284XAA2002	284TC	28.9	182.5	B	G	73.9	110.8	147.7	93.6	86.5	6.7
25	1200	460	**M9520**	5KS324XAA354	324TC	31.6	182.5	B	G	111.5	150.6	223.1	93	79.5	9
30	3600	460	**M9521**	5KS286XAA167	286TC	33	217.5	A	G	44.4	57.7	88.7	92.4	92	5.1
30	3600	460	**M9522**	5KS286XAA168	286TSC	33	217.5	A	G	44.4	57.7	88.7	92.4	92	5.1
30	1800	460	**M9523**	5KS286XAA2010	286TC	35.1	217.5	A	G	88.6	132.9	177.2	93.6	85.5	8.6
30	1200	460	**M9524**	5KS326XAA342	326TC	37.7	217.5	B	G	134	180.9	268	93	80	10.4
40	3600	460	**M9525**	5KS324XAA1079	324TSC	50.3	290	B	G	58.8	73.5	117.7	93.6	79.5	16.3
40	1800	460	**M9526**	5KS324XAA2109	324TC	50.7	290	B	G	118	165.2	236	94.1	78.5	16.7
50	3600	460	**M9527**	5KS326XAA1009	326TSC	60.6	362.5	B	G	73.6	88.4	147.3	93.6	82.5	16.6
50	1800	460	**M9528**	5KS326XAA2055	326TC	61.5	362.5	B	G	147.6	206.6	295.1	94.5	80.5	18.8
60	3600	460	**M9529**	5KS364XAA187	364TSC	69.5	435	B	G	88.2	105.9	176.5	95	85	17.4
60	1800	460	**M9530**	5KS364XAA2034	364TC	71.7	412.9	B	G	176.8	283.2	460.2	95	82.5	21
75	3600	460	**M9531**	5KS365XAA1002	365TSC	87.4	542.5	B	G	110.4	116	220.9	95	84.5	22.4
75	1800	460	**M9532**	5KS365XAA2034	365TC	87.1	509.2	B	G	221.1	378.9	561.6	95.4	84.5	22.4

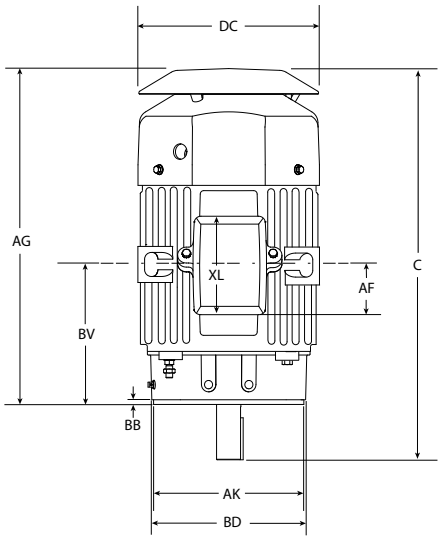
X$D Ultra® 841 Vertical C-Face NT

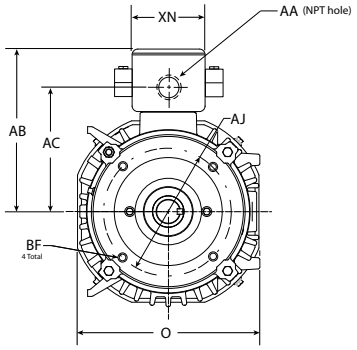
TEFC—Extra Severe Duty (IP56)

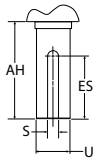
NEMA Premium a product of ecomagination

GEGARD2400™ INVERTER DUTY EXCEEDS NEMA MG1-31

Dimensions







Frame	Approx. Net Weight in lbs	Dimensions in inches																	
		Shaft							Mounting										
		Key																	
		Width	Depth	Length	AH	ES	S	U	AF	AG	AK	AJ	BB (Min)	BF	BD	BV	C	DC	O
143TC	43	0.187	0.187	1.38	1.90	1.41	0.187	0.875	2.50	13.34	8.5	7.25	0.16	3/8-16 UNC	6.5	11.93	15.77	8	7.25
145TC	50	0.187	0.187	1.38	1.90	1.41	0.187	0.875	2.50	13.34	8.5	7.25	0.16	3/8-16 UNC	6.5	11.93	15.77	8	7.25
182TC	76	0.25	0.25	1.75	2.40	1.78	0.25	1.125	3.50	15.31	8.5	7.25	0.25	1/2-13 UNC	8.5	15.58	17.93	8.76	9.21
184TC	101	0.25	0.25	1.75	2.40	1.78	0.25	1.125	3.50	15.31	8.5	7.25	0.25	1/2-13 UNC	8.5	15.58	17.93	8.76	9.21
213TC	200	0.312	0.312	2.38	3.31	2.41	0.312	1.375	3.50	19	8.5	7.25	0.25	1/2-13 UNC	8.7	19.27	22.13	10.24	10.31
215TC	220	0.312	0.312	2.38	3.31	2.41	0.312	1.375	3.50	19	8.5	7.25	0.25	1/2-13 UNC	8.7	19.27	22.13	10.24	10.31
254TC	315	0.375	0.375	2.88	3.61	2.91	0.375	1.625	4.59	23.82	8.5	7.25	0.25	1/2-13 UNC	8.7	24.09	27.57	12.24	12.38
256TC	350	0.375	0.375	2.88	3.61	2.91	0.375	1.625	4.59	23.82	8.5	7.25	0.25	1/2-13 UNC	8.7	24.09	27.57	12.24	12.38
284TC	460	0.5	0.5	3.25	4.10	3.28	0.5	1.875	4.59	25.66	10.5	9	0.25	1/2-13 UNC	10.77	25.66	30.04	13.5	13.76
286TC	510	0.5	0.5	3.25	4.10	3.28	0.5	1.875	4.59	25.66	10.5	9	0.25	1/2-13 UNC	10.77	25.66	30.04	13.5	13.76
284TSC	460	0.375	0.375	1.88	3.00	1.91	0.375	1.625	4.59	25.66	10.5	9	0.25	1/2-13 UNC	10.77	25.93	28.66	13.5	13.76
286TSC	510	0.375	0.375	1.88	3.00	1.91	0.375	1.625	4.59	25.66	10.5	9	0.25	1/2-13 UNC	10.77	25.93	28.66	13.5	13.76
324TC	664	0.5	0.5	3.88	5.00	3.91	0.5	2.125	6.44	28	10.5	11	0.25	5/8-11 UNC	12.86	28.25	33	14.7	17
326TC	800	0.5	0.5	3.88	5.00	3.91	0.5	2.125	6.44	28	10.5	11	0.25	5/8-11 UNC	12.86	28.25	33	14.7	17
324TSC	664	0.5	0.5	2	3.50	2.03	0.5	1.875	6.44	28	12.5	11	0.25	5/8-11 UNC	12.86	28.25	31.5	14.7	16.68
326TSC	800	0.5	0.5	2	3.50	2.03	0.5	1.875	6.44	28	12.5	11	0.25	5/8-11 UNC	12.86	28.25	31.5	14.7	16.68
364TC	1122	0.625	0.5	4.25	5.62	4.28	0.625	2.375	6.44	32.45	12.5	11	0.25	5/8-11 UNC	13.02	32.7	38.06	19.02	18.86
365TC	1155	0.625	0.5	4.25	5.62	4.28	0.625	2.375	6.44	32.45	12.5	11	0.25	5/8-11 UNC	13.02	32.7	38.06	19.02	18.86
364TSC	1122	0.5	0.5	2	3.47	2.03	0.5	1.875	6.44	32.45	12.5	11	0.25	5/8-11 UNC	13.02	32.7	35.93	19.02	18.86
365TSC	1155	0.5	0.5	2	3.47	2.03	0.5	1.875	6.44	32.45	12.5	11	0.25	5/8-11 UNC	13.02	32.7	35.93	19.02	18.86

Frame	Nominal HP	Approx. Volume	AA (NPT Thread)	AB	AC	AF	XL	XN
143-145	2	32	3/4 "	6.63	5.12	2.5	4.3	5.4
182-184	5	55	1"	8.7	6.62	3.5	5.78	4.16
213-215	10	55	1"	9.5	7.42	3.5	5.78	4.16
254-256	20	140	1-1/4 "	12.15	9.12	4.59	7.37	5.37
284-286	30	140	1-1/2 "	12.91	9.88	4.59	7.37	5.37
324-326	50	346	3 "	16.13	12.43	6.44	10.15	7
364-365	75	346	3 "	17.14	13.43	6.44	10.09	7

Notes

8.0 DC Motors

8.1 Standard Features
- Kinamatic II™

8.2 Shunt Wound - Self Ventilated

8.3 Shunt Wound - Separately Ventilated

8.4 Shunt Wound - Blower Ventilated

8.5 Shunt Wound - Totally Enclosed

8.6 Type-K Power Supply

8.7 PY Design and BC42 and BC46 Design Tachometers

8.8 DC Dimensions

8.19 DC Motor Kits and Accessories

8.21 Mill Duty DC Motor - MD800

8.22 Dimensions

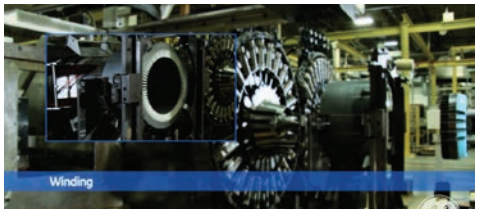
LV/MV TEFC Manufacturing

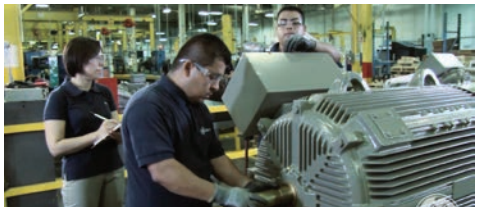
Monterrey, Mexico

Established in 1995, this modern and efficient motor plant employs over 500 people. Here, GE's professional manufacturing team continues to improve upon previous techniques and technologies to deliver quality products and meet customer needs. The Monterrey, Mexico motors plant is an ISO 9000-2008 quality facility that has received several industry and internal awards for safety, quality, employee health programs and environmental responsibility.

Virtual Motor Plant Tour

For a look at our manufacturing site in action, click to **YouTube** and search the key words ***Monterrey AC Capabilities***.





Direct Current Motors

Kinamatic II™

Standard Features

HP Range	1-500
Base Speed	1150RPM, 1750RPM
Armature Voltage	240V, 500V
Field Voltage	300/150, 240/120
Accessory Mounting	8.5" accessory mounting rabbet with accessory shaft extension
Agency Approvals	CSA
Altitude	3300 ft
Ambient	40°C
Balance/Vibration	Measured at top speed: Peak-to-Peak amplitude 0.0015"
Bearing Caps	Cast iron CD258AT-CD5010AY both DE and CE
Bearing Type	Antifriction ball, CDL182AT-CD2010AT: double shielded, CD258AT-CD5010AY: open
Coils	CD180AT - CD329AT random wound - dip and baked
	CD360AT - CD5010AY TREC® coils
Conduit Box	Fabricated steel, 360° rotatable, gasketed, oversized
Current Overload	Occasionally repeated loads of 150% of base speed full load current
Endbells	CD182AT-CD500AT: Cast Iron, CD5010AY: CE- cast iron, DE-fabricated steel
Frame Material	Rolled Steel
Frame Size	CD182AT-CD5010AY
Grease	Lithium soap based
Grease Fittings	Alemite
Ground	Bronze bolt in conduit box
Insulation Class	Class F
Insulation System	Armature Treatment: Radiant Heat Process (RHP)
Lifting Means	Two (2) welded lifting lugs
Mounting	F1, modifiable to F2
Nameplate	Stainless Steel
Paint	ANSI #49 grey, heavy duty enamel
Relubrication	CDL182AT-CD2110AT: pre-lubricated, CD258AT-CD5010AY zerk grease fittings
Service Factor	1.0
Temperature Rise	Class F @ rated load and rated base speed
Tests	Routine Test: Report available upon request and purchase order
Warranty	24 months from date of installation or 28 months from date of manufacture; whichever occurs first

DC Motors – Kinamatic™

Type-C Power Supply

Pricing

Base Mounted - GE CD180AT-CD500AT
Shunt Wound - Dripproof Fully Guarded - Self Ventilated

HP	RPM	Armature Volts	Field Volts	Armature Amps	Field Amps	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
2	1750/2300	240	300/150	7.6	.35/.20	L182AT	**D587**	$3,608	GO-2AS180	Y	83	15.30	
3	1750/2300	240	300/150	11.0	.34/.23	186AT	**D403**	$4,248	GO-2AS180	Y	105	16.80	
3	1750/2300	500	300/150	5.1	.55/.30	186AT	**D588**	$4,248	GO-2AS180	Y	105	16.80	
3	1750/2300	240	240/120	11.0	.44/.28	186ATC	**D404**	$4,420	GO-2AS180	Y	102	16.80	75
5	1750/2300	240	300/150	18.0	.45/.27	L186AT	**D409**	$5,224	GO-2AS180	Y	128	18.80	
5	1750/2300	500	300/150	8.5	.72/.42	L186AT	**D407**	$5,224	GO-2AS180	N	128	18.80	
5	1750/2300	240	240/120	17.9	.57/.39	L186ATC	**D410**	$5,396	GO-2AS180	N	128	18.80	75
7.5	1750/2300	240	300/150	26.5	.95/.52	189AT	**D417**	$6,304	GO-2AS180	N	162	20.80	
7.5	1750/2300	500	300/150	13.2	.78/.54	218AT	**D421**	$6,304	GO-2AS2P	Y	234	24.20	
7.5	1750/2300	240	240/120	28.1	.98/.63	218ATC	**D422**	$6,806	GO-2AS2P	Y	243	24.20	75
10	1750/2300	240	300/150	36.6	1.12/.64	219AT	**D425**	$7,184	G0-2AS2P	Y	252	25.20	
10	1750/2300	500	300/150	17.2	1.35/.88	219AT	**D423**	$7,184	G0-2AS2P	Y	252	25.20	
10	1750/2300	240	240/120	36.6	1.40/.86	219ATC	**D427**	$7,686	G0-2AS2P	Y	252	25.20	75
15	1750/2300	240	300/150	56.0	1.30/.80	258AT	**D434**	$8,642	GO-2AS2P	Y	361	27.10	
15	1750/2300	500	300/150	25.2	1.60/.88	258AT	**D432**	$8,642	GO-2AS2P	Y	361	27.10	
15	1750/2300	240	240/120	55.1	1.67/.89	258ATC	**D435**	$9,144	GO-2AS2P	N	378	27.10	75
20	1750/2300	240	300/150	70.5	1.42/.95	259AT	**D441**	$9,910	G0-2AS2P	Y	403	28.80	
20	1750/2300	500	300/150	35.0	1.53/.83	259AT	**D437**	$9,910	G0-2AS2P	Y	403	28.80	
25	1750/2300	240	300/150	91.0	1.47/.90	287AT	**D444**	$12,236	GO-2AS2P	Y	493	31.00	
25	1750/2300	500	300/150	42.7	1.76/1.20	287AT	**D442**	$12,236	GO-2AS2P	Y	493	31.00	
25	1150/2000	240	300/150	89.0	1.89/1.08	328AT	**D589**	$15,900	GO-2AS2P	N	769	35.40	
30	1750/2300	240	300/150	107.0	1.56/1.11	288AT	**D448**	$13,468	G0-2AS2P	Y	548	32.70	
30	1750/2300	500	300/150	50.4	2.08/1.16	288AT	**D445**	$13,468	G0-2AS2P	Y	548	32.70	
40	1750/2100	500	300/150	65.4	2.32/1.69	328AT	**D541**	$15,844	GO-2AS2P	N	769	35.40	
40	1750/2100	500	300/150	65.4	2.32/1.69	328AT	**D542**	$15,844	GO-2AS2P	N	769	35.40	70
40	1150/2000	500	300/150	64.9	2.90/1.35	366AT	**D453**	$21,084	G0-2AS4P	N	860	35.90	
50	1750/2100	500	300/150	83.7	2.32/1.70	328AT	**D449**	$18,098	G0-2AS2P	Y	769	35.40	
50	1750/2100	500	300/150	83.7	2.32/1.70	328AT	**D450**	$18,098	G0-2AS2P	N	769	35.40	70
50	1150/2000	500	300/150	80.0	2.50/1.32	368AT	**D543**	$24,280	GO-2AS4P	N	1020	38.90	
60	1750/2100	500	300/150	97.4	3.00/2.30	366AT	**D544**	$20,716	G0-2AS4P	N	860	35.90	
60	1150/2000	500	300/150	98.0	2.50/1.30	368AT	**D462**	$27,744	G0-2AS4P	N	1020	38.90	
60	850/1700	500	300/150	99.0	3.00/1.30	407AT	**D590**	$33,800	G0-2AS4P	N	1300	40.10	
75	1750/2100	500	300/150	122.0	3.06/2.30	366AT	**D455**	$24,338	GO-2AS4P	Y	860	35.90	
75	1750/2100	500	300/150	122.0	3.06/2.30	366AT	**D456**	$24,338	GO-2AS4P	N	860	35.90	70
100	1750/2000	500	300/150	161.0	3.80/2.80	368AT	**D465**	$30,532	G0-2AS4P	N	1020	38.90	
100	1750/2000	500	300/150	160.0	3.80/2.80	368AT	**D466**	$30,532	G0-2AS4P	N	1020	38.90	70
125	1750/2000	500	300/150	200.0	3.06/2.55	407AT	**D471**	$36,158	GO-2AS4P	Y	1300	40.10	
150	1750/2000	500	300/150	238.0	3.80/3.30	409AT	**D476**	$43,502	G0-2AS4P	N	1600	44.60	
150	1750/2000	500	300/150	238.0	3.80/3.30	409AT	**D477**	$43,502	G0-2AS4P	N	1600	44.60	70
200	1750/2000	500	300/150	319.0	4.00/3.25	504AT	**D480**	$55,176	GO-2AS4P	N	1900	45.70	
250	1750/1900	500	300/150	394.0	8.00/6.68	506AT	**D547**	$67,844	G0-2AS4P	N	2290	49.70	
300	1750/1900	500	300/150	473.0	8.00/6.83	506AT	**D486**	$81,350	GO-2AS4P	N	2290	49.70	

Notes:
70 F-2 assembly
75 C-Face Mounting

DC Motors – Kinamatic™

Type-C Power Supply

Pricing (cont.)

Base Mounted - GE CD180AT-CD500AT
Shunt Wound - Dripproof Fully Guarded - Separately Ventilated

HP	RPM	Armature Volts	Field Volts	Armature Amps	Field Amps	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
10	1750/2300	240	300/150	36.6	1.12/0.64	219AT	**D426**	$7,184	GO-2AS2P	N	252	25.20	
10	1750/2300	500	300/150	17.2	1.35/0.88	219AT	**D424**	$7,184	GO-2AS2P	Y	252	25.20	
15	1750/2300	500	300/150	25.2	1.60/0.88	258AT	**D433**	$8,642	GO-2AS2P	N	361	27.10	
20	1750/2300	500	300/150	35.0	1.53/0.83	259AT	**D438**	$9,910	GO-2AS2P	N	403	28.80	
20	1750/2300	500	300/150	35.0	1.53/0.83	259AT	**D439**	$9,910	GO-2AS2P	N	403	28.80	70
30	1750/2300	500	300/150	50.4	2.08/1.16	288AT	**D446**	$12,272	GO-2AS2P	N	548	32.70	
40	1750/2100	500	300/150	67.0	2.03/1.32	327AT	**D548**	$14,432	GO-2AS2P	N	691	33.40	
40	1150/2000	500	300/150	70.2	2.30/1.01	328AT	**D609**	$18,374	GO-2AS2P	N	769	35.30	
50	1750/2100	500	300/150	83.7	2.30/1.70	328AT	**D451**	$16,480	GO-2AS2P	Y	769	35.30	
50	1150/2000	500	300/150	82.0	2.90/1.35	366AT	**D610**	$21,154	GO-2AS4P	N	860	35.90	
60	1750/2100	500	300/150	97.0	2.40/1.60	L328AT	**D576**	$18,860	GO-2AS2P	Y	888	37.90	
75	1750/2100	500	300/150	125.0	2.40/1.60	329AT	**D577**	$22,154	GO-2AS2P	Y	888	37.90	
100	1750/2000	500	300/150	160.0	3.90/3.00	368AT	**D558**	$27,784	GO-2AS4P	N	1020	38.90	
125	1750/2000	500	300/150	202.0	3.80/3.00	368AT	**D559**	$32,900	GO-2AS4P	Y	1020	38.90	
125	850/1700	500	300/150	203.0	3.70/1.72	506AT	**D613**	$47,614	GO-2AS4P	N	2290	49.70	
150	1750/2000	500	300/150	242.0	4.00/3.37	407AT	**D560**	$37,868	GO-2AS4P	N	1300	40.10	
150	850/1700	500	300/150	240.0	9.40/2.90	506AT	**D615**	$53,866	GO-2AS4P	N	2290	49.70	
200	1750/2000	500	300/150	318.0	6.10/4.60	L409AT	**D574**	$48,020	GO-2AS4P	Y	1650	48.10	
250	1750/1900	500	300/150	400.0	4.30/3.87	504AT	**D575**	$59,036	GO-2AS4P	N	1900	45.70	
250	1150/1700	500	300/150	401.0	6.50/3.48	506AT	**D618**	$69,500	GO-2AS4P	N	2290	49.70	
300	1150/1600	500	300/150	480.0	6.40/4.00	508AT	**D619**	$81,514	GO-2AS4P	N	2810	54.70	
400	1750/1900	500	300/150	629.0	6.42/5.50	508AT	**D489**	$98,320	GO-2AS4P	Y	2810	54.70	
500	1750/1900	500	300/150	781.0	8.10/6.80	5010AY	**D620**	$131,440	GO-2AS4P	N	4260	65.50	104

Notes:
70 F-2 assembly
104 4 1/8" shaft diameter

DC Motors – Kinamatic™

Type-C Power Supply

Pricing (cont.)

Base Mounted - GE CD180AT-CD500AT
Shunt Wound - Dripproof Fully Guarded - Blower Ventilated

HP	RPM	Armature Volts	Field Volts	Armature Amps	Field Amps	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
7.5	1750/2300	240	300/150	26.5	0.95/0.52	189AT	**D418**	$8,578	GO-2AS180	Y	172	23.00	
10	1750/2300	500	300/150	17.2	1.35/0.88	219AT	**D561**	$9,458	GO-2AS2P	N	272	25.20	
15	1750/2300	500	300/150	25.2	1.60/0.88	258AT	**D562**	$10,916	GO-2AS2P	N	381	27.10	
20	1750/2300	500	300/150	35.0	1.53/0.83	259AT	**D563**	$12,184	GO-2AS2P	N	423	28.80	
20	1150/2000	500	300/150	33.9	1.98/0.94	327AT	**D650**	$14,794	GO-2AS2P	N	752	33.40	
25	1750/2300	500	300/150	42.7	1.76/1.20	287AT	**D564**	$13,728	GO-2AS2P	N	513	31.00	
25	1150/2000	500	300/150	42.0	2.30/1.02	328AT	**D651**	$16,880	GO-2AS2P	N	830	35.30	
30	1750/2300	500	300/150	50.4	2.08/1.16	288AT	**D565**	$14,848	GO-2AS2P	Y	576	32.70	
40	1750/2100	500	300/150	67.0	2.03/1.32	327AT	**D566**	$17,298	GO-2AS2P	Y	752	33.40	
50	1750/2100	500	300/150	82.0	2.30/1.70	328AT	**D567**	$19,346	GO-2AS2P	N	830	35.30	
60	1750/2100	500	300/150	97.0	2.40/1.55	L328AT	**D578**	$21,726	GO-2AS2P	N	949	37.90	
60	1750/2100	500	300/150	97.2	3.40/2.38	365AT	**D652**	$25,020	GO-2AS4P	N	815	33.70	
60	1150/2000	500	300/150	97.0	4.00/1.78	368AT	**D654**	$27,032	GO-2AS4P	N	1085	38.90	
75	1750/2100	500	300/150	125.0	2.40/1.60	329AT	**D579**	$25,020	GO-2AS2P	Y	949	37.90	
75	1750/2100	500	300/150	125.0	2.40/1.60	329AT	**D655**	$25,020	GO-2AS2P	N	949	37.90	70
75	1750/2100	500	300/150	122.0	2.40/1.85	366AT	**D656**	$27,496	GO-2AS4P	Y	925	35.90	
75	1750/2100	500	300/150	122.0	2.40/1.85	366AT	**D657**	$27,496	GO-2AS4P	N	925	35.90	70
75	1150/2000	500	300/150	123.0	3.80/1.80	368AT	**D658**	$31,564	GO-2AS4P	N	1085	38.90	
100	1750/2000	500	300/150	160.0	3.90/3.00	368AT	**D467**	$30,942	GO-2AS4P	Y	1085	38.90	
100	1150/2000	500	300/150	162.0	7.10/2.96	407AT	**D659**	$37,866	GO-2AS4P	N	1365	40.10	
100	850/1700	500	300/150	614.0	6.00/2.40	409AT	**D660**	$43,834	GO-2AS4P	N	1665	44.60	
125	1750/2000	500	300/150	202.0	3.80/3.00	368AT	**D468**	$36,058	GO-2AS4P	Y	1085	38.90	
125	1150/2000	500	300/150	201.0	7.10/3.30	409AT	**D661**	$43,834	GO-2AS4P	N	1665	44.60	
150	1750/2000	500	300/150	242.0	4.00/3.37	407AT	**D473**	$41,026	GO-2AS4P	Y	1365	40.10	
150	1150/2000	500	300/150	244.0	7.29/3.54	409AT	**D662**	$50,472	GO-2AS4P	N	1665	44.60	
200	1750/2000	500	300/150	318.0	6.10/4.60	L409AT	**D478**	$51,726	GO-2AS4P	N	1720	48.00	
200	1750/2000	500	300/150	318.0	6.10/4.60	L409AT	**D663**	$51,726	GO-2AS4P	N	1720	48.00	70
250	1750/1900	500	300/150	400.0	4.30/3.87	504AT	**D482**	$62,742	GO-2AS4P	Y	1982	45.70	
250	1750/1900	500	300/150	400.0	4.30/3.87	504AT	**D664**	$62,742	GO-2AS4P	N	1982	45.70	70
300	850/1500	500	300/150	477.0	12.00/5.10	5010AY	**D490**	$96,214	GO-2AS4P	N	4343	65.50	104
400	1150/1500	500	300/150	631.0	8.20/5.50	5010AY	**D492**	$121,618	GO-2AS4P	N	4343	65.50	104

Notes:
70 F-2 assembly
104 4 1/8" shaft diameter

DC Motors – Kinamatic™

Type-C Power Supply

Pricing (cont.)

Base Mounted - GE CD180AT-CD500AT
Shunt Wound - Totally Enclosed

HP	RPM	Armature Volts	Field Volts	Armature Amps	Field Amps	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
1	1750/2300	240	300/150	3.6	0.35/0.22	L182AT	**D681**	$4,146	GO-2AS180	N	83	15.30	55
1	1150/2000	240	240/120	3.7	0.53/0.21	L182AT	**D680**	$4,442	GO-2AS180	N	83	15.30	55
2	1750/2300	240	300/150	7.1	0.29/0.17	L186AT	**D553**	$4,386	GO-2AS180	N	128	18.80	55
3	1750/2300	240	300/150	10.8	0.29/0.17	L186AT	**D530**	$5,618	GO-2AS180	Y	128	18.80	55
3	1750/2300	500	300/150	5.1	0.45/0.26	L186ATC	**D682**	$6,564	GO-2AS180	N	128	18.80	55, 77
5	1750/2300	240	300/150	17.6	0.38/0.24	189AT	**D408**	$8,484	GO-2AS180	N	165	23.00	76
5	1750/2300	240	240/120	17.2	0.95/0.65	2110AT	**D684**	$8,974	GO-2AS2P	Y	280	26.70	55
5	1750/2300	240	300/150	17.2	0.74/0.45	2110AT	**D683**	$8,974	GO-2AS2P	N	280	26.70	55
5	1750/2300	500	300/150	8.3	0.60/0.40	189AT	**D415**	$8,484	GO-2AS180	N	165	23.00	76
5	1750/2300	500	300/150	8.2	0.76/0.52	2110AT	**D685**	$8,974	GO-2AS2P	Y	280	26.70	55
7.5	1750/2300	240	300/150	26.2	1.15/0.70	2110AT	**D430**	$10,274	GO-2AS2P	N	287	29.30	76
7.5	1750/2300	500	300/150	12.8	0.74/0.44	2110AT	**D429**	$10,274	GO-2AS2P	N	287	29.30	76
7.5	1750/2300	500	300/150	12.4	0.91/0.58	259AT	**D686**	$10,892	GO-2AS2P	Y	403	28.90	55
10	1750/2300	240	300/150	34.3	0.88/0.55	259AT	**D440**	$11,736	GO-2AS2P	N	442	31.90	
10	1750/2300	500	300/150	16.3	1.15/0.72	259AT	**D436**	$11,736	GO-2AS2P	N	442	31.90	
15	1750/2300	240	300/150	51.7	0.98/0.68	288AT	**D568**	$15,158	GO-2AS2P	N	587	36.40	
15	1750/2300	500	300/150	24.5	0.98/0.68	288AT	**D569**	$15,158	GO-2AS2P	N	587	36.40	
20	1750/2300	240	300/150	68.5	1.24/0.86	327AT	**D570**	$17,420	GO-2AS2P	N	732	37.60	
25	1750/2300	240	300/150	85.0	1.50/1.10	328AT	**D572**	$20,098	GO-2AS2P	N	812	39.50	
30	1750/2300	240	300/150	103.0	1.80/1.30	366AT	**D460**	$22,594	GO-2AS4P	N	940	40.40	
30	1750/2300	500	300/150	48.7	1.80/1.24	366AT	**D457**	$22,594	GO-2AS4P	N	940	40.40	
40	1750/2100	240	300/150	136.0	0.95/0.76	368AT	**D469**	$28,522	GO-2AS4P	N	1100	43.40	
40	1750/2100	500	300/150	64.6	1.49/1.20	368AT	**D463**	$28,522	GO-2AS4P	N	1100	43.40	
50	1750/2100	500	150/300	80.7	1.49/1.20	409AT	**D554**	$34,340	GO-2AS4P	N	1680	49.40	
75	1750/2100	500	300/150	120.0	1.50/1.25	409AT	**D474**	$41,592	GO-2AS4P	N	1680	49.40	

Notes:
55 TENV Construction
76 Accessory mounting faces not available for TEFC CD180AT and CD210AT frames
77 8 1/2" C-face rabbet

DC Motors – Kinamatic™

Type-K Power Supply

Pricing (cont.)

Base and End Mounted - NEMA 180-210 Frame
Shunt Wound - Dripproof

HP	RPM	Armature Volts	Field Volts	Armature Amps	Field Amps	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
1	1750/2050	180	200/100	4.9	0.44/0.37	L182AT	**D585**	$5,196	GO-2AS180	N	83	15.30	
1	1750/2050	180	200/100	4.9	0.44/0.37	L182ACY	**D402**	$5,368	GO-2AS180	N	80	15.30	78
1.5	1750/2050	180	200/100	7.3	0.44/0.37	L182ACY	**D536**	$5,590	GO-2AS180	N	80	17.50	64, 78
2	1750/2050	180	200/100	9.4	0.59/0.39	186ACY	**D406**	$5,812	GO-2AS180	N	102	16.80	78
2	1750/2050	180	200/100	9.4	0.59/0.39	186ATC	**D537**	$5,812	GO-2AS180	N	102	16.80	77
3	1750/2050	180	200/100	14.4	0.59/0.39	186ATC	**D539**	$5,648	GO-2AS180	Y	102	18.80	77
5	2500/2750	180	200/100	23.6	0.93/0.72	186AT	**D586**	$5,262	GO-2AS180	N	105	16.80	64
5	1750/2050	180	200/100	24.1	0.75/0.54	L186ATC	**D413**	$5,842	GO-2AS180	Y	128	18.80	64, 77
5	1750/2050	180	200/100	24.1	0.75/0.54	L186ATC	**D414**	$8,116	GO-2AS180	N	128	18.80	77, 88
5	1750/2050	180	200/100	23.7	1.38/0.94	219ATC	**D428**	$9,392	GO-2AS2P	Y	261	25.20	77

Shunt Wound - Totally Enclosed

HP	RPM	Armature Volts	Field Volts	Armature Amps	Field Amps	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
1	1750/2050	180	200/100	5.0	0.28/0.22	L182ATC	**D400**	$5,298	GO-2AS180	N	80	15.30	55, 77
1	1750/2050	180	200/100	5.0	0.28/0.22	L182ACY	**D401**	$5,298	GO-2AS180	N	80	15.30	55, 78
1.5	1750/2050	180	200/100	7.3	0.37/0.27	186ACY	**D405**	$5,568	GO-2AS180	Y	102	16.80	55, 78
1.5	1750/2050	180	200/100	7.3	0.37/0.27	186ATC	**D540**	$5,568	GO-2AS180	N	102	16.80	55, 77
2	1750/2050	180	200/100	9.5	0.48/0.37	L186ATC	**D411**	$5,714	GO-2AS180	Y	128	18.80	55, 77
2	1750/2050	180	200/100	9.5	0.48/0.37	L186ACY	**D412**	$5,714	GO-2AS180	Y	128	18.80	55, 78
3	1750/2050	180	200/100	13.9	0.63/0.46	189ACY	**D555**	$5,988	GO-2AS180	N	160	20.80	55, 78
3	1750/2050	180	200/100	13.9	0.63/0.46	189ATC	**D419**	$5,988	GO-2AS180	Y	160	80.80	55, 77
5	1750/2050	180	200/100	23.3	1.00/0.74	189ATC	**D420**	$7,590	GO-2AS180	Y	160	20.80	58, 64, 76, 77
5	1750/2050	180	200/100	23.0	0.81/0.63	2110ATC	**D431**	$10,994	GO-2AS2P	Y	289	26.70	55, 77
5	1750/2050	180	200/100	23.3	1.00/0.74	189AT	**D583**	$7,418	GO-2AS180	Y	162	20.80	58, 76, 64
5	1750/2050	180	200	23.0	0.80/0.60	2110ACY	**D584**	$11,662	GO-2AS2P	Y	389	8.50	55, 74, 77

Notes:

55 TENV Construction
58 TEFC Construction
64 Suitable for constant torque to 60% of base speed
74 1.125" diameter shaft
76 Accessory mounting faces not available for TEFC CD180AT and CD210AT frames
77 8 1/2" C-face rabbet
78 4 1/2" C-face rabbet
88 Blower provided with filter

DC Motors – Tachometer

PY Design

Pricing

AC Tachometer Generators - Totally Enclosed

HP	Volts/ 100RPM	% Ripple	GE Frame	Frame	Bearings	Base	Rotation	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
400-5000	28	NA	18	GE59	Ball	FLG	Either or Reversing Service	**5PY59EY2B**	$1,204	GO-7PTC	N	5	6.00	55

DC Tachometer Generators - Totally Enclosed

HP	Volts/ 100RPM	% Ripple	GE Frame	Frame	Bearings	Base	Rotation	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
100-5000	50	0.50%	18	GE59	Ball	FLG	Either; Reversing Service to 2500RPM	**5PY59JY2**	$2,480	GO-7PTC	N	7	7.47	55
100-2500	100	0.50%	18	GE59	Ball	FLG	Either or Reversing Service	**5PY59JY1**	$2,480	GO-7PTC	N	8	7.47	55

DC Motors – Tachometer

BC42 and BC46 Design

Pricing

DC Tachometer - Totally Enclosed Non-Ventilated

RPM	Volts/ 100RPM	GE Frame	NEMA Frame	Base	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
100-5000	50	46	56C	Bolt-On	**5BC46AB2291A**	$7,722	GO-7PTC	N	41	14.63	55, 22
100-3600	100	46	56	Bolt-On	**5BC46AB1571C**	$8,289	GO-7PTC	N	36	11.72	55
100-3600	100	46	56C	Bolt-On	**5BC46AB2014B**	$8,711	GO-7PTC	N	41	14.63	55, 22
100-3600	100	46	56	Bolt-On	**5BC46AB1581C**	$8,185	GO-7PTC	N	36	14.49	55, 22
100-2750	100	42	56	Bolt-On	**5BC42AB1834F**	$6,078	GO-7PTC	N	25	10.50	55
100-2750	100	42	56C	Bolt-On	**5BC42AB2177C**	$5,526	GO-7PTC	N	30	12.54	55, 22
100-5000	50	42	56C	Bolt-On	**5BC42AB2195C**	$5,641	GO-7PTC	N	30	12.54	55, 22

DC Tachometer Generators - Explosion Proof
Class I, Group D; Class II, Group E, F, G

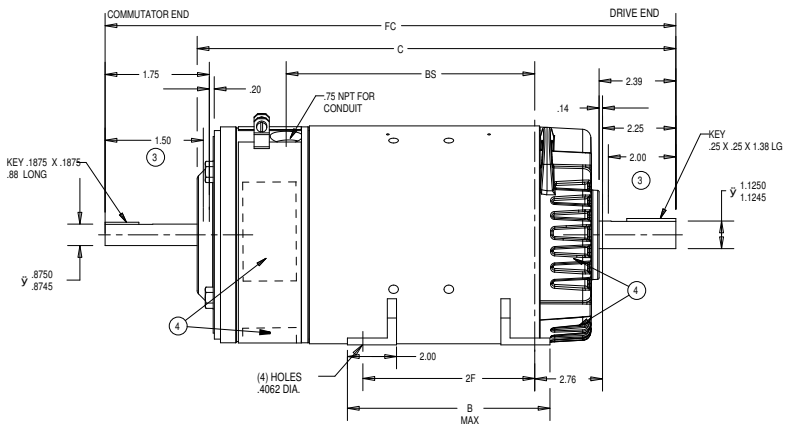
RPM	Volts/ 100RPM	GE Frame	NEMA Frame	Base	Model No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in)	Notes
100-5000	50	18	56C	NB	**D267**	$8,022	GO-7PTC	N	38	11.88	58
100-2500	100	18	56C	NB	**D268**	$8,022	GO-7PTC	N	28	11.88	58

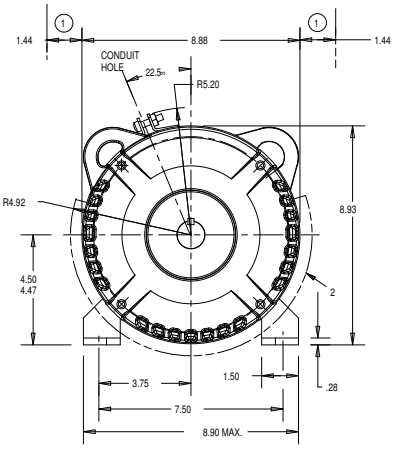
Notes:
22 Double shaft extension 1 7/8" long by 5/8" diameter each end
55 TENV Construction
58 TEFC Construction

DC Motors – Kinamatic™

Type CD, Dripproof Fully Guarded and Totally Enclosed
Non-Ventilated, Frames L182AT to 189AT

Motor Dimensions





Frame Size	Approx. Wk2 of Arm. Lb. Ft.^{2}	B	C	FC	2F	BS	Approx. Net. Wt. (lbs) ◊
L182AT	0.28	5.80	15.26	16.51	4.5	6.63	83
186AT	0.45	8.30	16.76	18.01	7.0	8.13	105
L186AT	0.67	8.30	18.76	20.01	7.0	10.13	128
189AT	0.77	11.56	20.76	22.01	10.0	12.13	162

Notes:

1 Splashproof fully guarded machines will have additional covers, increasing the overall width at the commutator-end and drive-end side air openings

2 Dripproof, fully guarded vertical drive-end shaft down machines will have additional covers, increasing the overall width and exceeding bottom feet at the commutator-end openings

3 Represents minimum length of shaft available for hubs

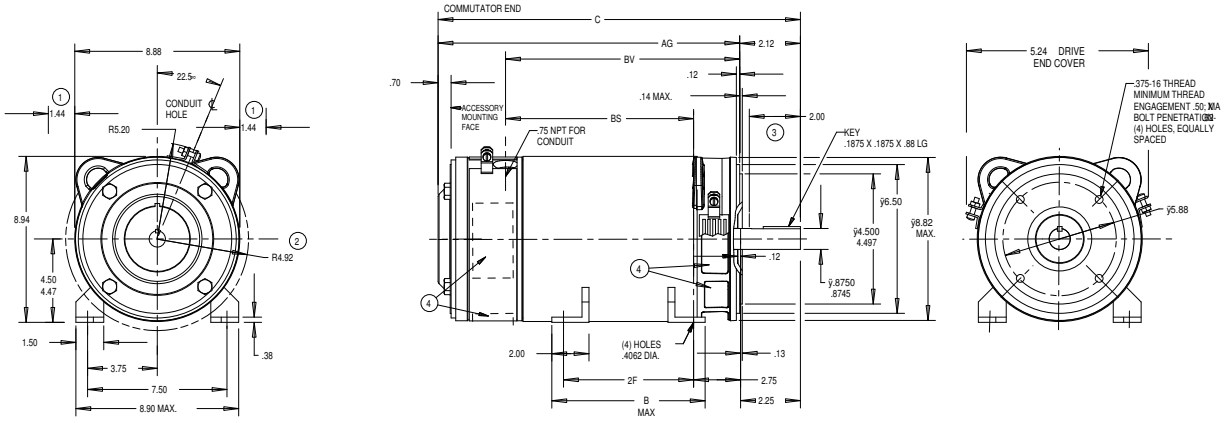
4 Air opening. For enclosure type and mounting position, see enclosure and mounting assembly. Totally enclosed machines will not have openings or covers on drive-end.
The standard single shaft machine has the commutator end bearing bracket and shaft extension prepared to accept accessories. For additional information, see 36C697103AA.
For blower ventilated, blower can only be mounted on side of motor because there is no air opening at the top of the motor. The motor leads exit at the top of the motor.
Commutator-end shaft extension is furnished only when specifically ordered.
Shaft runout shall not exceed 0.002 inch total indicator reading.

◊ For shipping weight add 15% to net weight.

DC Motors – Kinamatic™

Type CD, Dripproof Fully Guarded and Totally Enclosed Non-Ventilated, L182ACY to 189ACY 4 1/2" Type C-Face Mounting with Feet

Motor Dimensions (cont.)



Frame Size	Approx. Wk2 of Arm. Lb. Ft.^{2}	B	C	2F	AG	BS	BV	Approx. Net. Wt. (lbs) ◊
L182ACY	0.28	5.80	15.26	4.5	13.14	6.63	9.51	83
186ACY	0.45	8.30	16.76	7.0	14.64	8.13	11.01	105
L186ACY	0.67	8.30	18.76	7.0	16.64	10.13	13.01	128
189ACY	0.77	11.56	20.76	10.0	18.64	12.13	15.01	162

Notes:

1 Splashproof fully guarded machines will have additional covers, increasing the overall width at the commutator-end and drive-end side air openings

2 Dripproof, fully guarded vertical drive-end shaft down machines will have additional covers, increasing the overall width and exceeding bottom of mounting feet at the commutator-end openings

3 Represents minimum length of shaft available for hubs

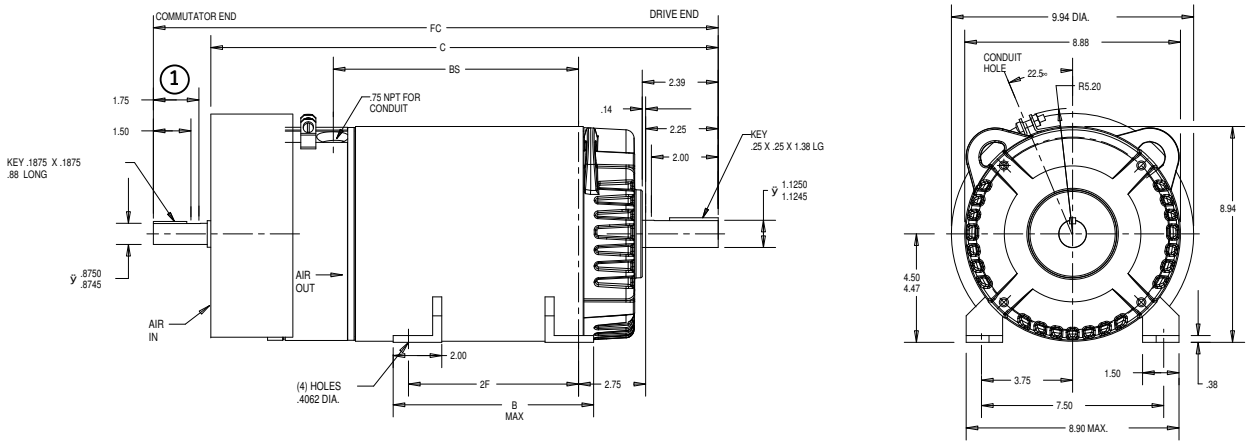
4 Air opening. For enclosure type and mounting position, see enclosure and mounting assembly. Totally enclosed machines will not have openings or covers on drive-end.
Mounting face will be square and rabbet diameter concentric with shaft within .004 inch total indicator reading. Shaft runout not to exceed .002 inch total indicator reading
Feet will be supplied unless otherwise specified.
The standard single shaft machine has the commutator end bearing bracket and shaft extension prepared to accept accessories. For additional information, see 36C697103AA.

◊ For shipping weight add 15% to net weight.

DC Motors – Kinamatic™

Type CD, Dripproof Fully Guarded and Totally Enclosed Non-ventilated, Frames L182ACY to 189ACY 4 1/2" Type C-Face Mounting with Feet

Motor Dimensions (cont.)



Frame Size	Approx. Wk2 of Arm. Lb. Ft.²	B	C	FC	2F	BS	Approx. Net. Wt. (lbs) ◊
L182ATC	0.28	5.80	17.45	19.47	4.5	6.63	83
186ATC	0.45	8.30	18.95	20.97	7.0	8.13	105
L186ATC	0.67	8.30	20.95	22.97	7.0	10.13	128
189ATC	0.77	11.56	22.95	24.97	10.0	12.13	165

Notes:

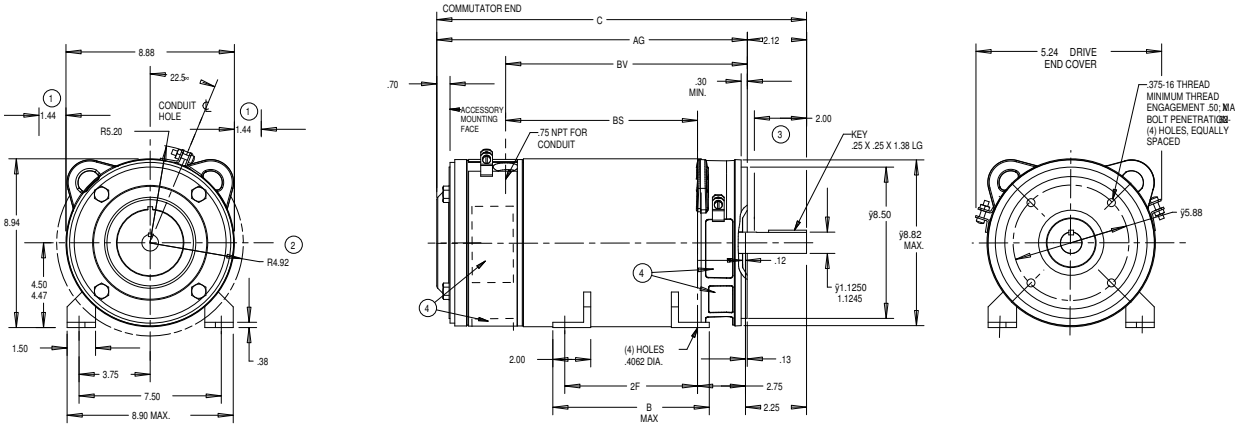
1 Represents minimum length of shaft available for hubs
For mounting position see enclosure and mounting assembly
Shaft runout shall not exceed .002 inch total indicator reading
Commutator end-shaft extension is furnished only when specifically ordered

◊ For shipping weight add 15% to net weight.

DC Motors – Kinamatic™

Type CD, Dripproof Fully Guarded and Totally Enclosed Non-ventilated, Frames L182ATC to 189 ATC 8 1/2" Type C-Face Mounting with Feet

Motor Dimensions (cont.)



Frame Size	Approx. Wk2 of Arm. Lb. Ft.²	B	C	FC	2F	BS	BV
L182ATC	0.28	5.80	15.26	16.51	4.5	6.63	9.51
186ATC	0.45	8.30	16.76	18.01	7.0	8.13	11.01
L186ATC	0.67	8.30	18.76	20.01	7.0	10.13	13.01
189ATC	0.77	11.56	20.76	22.01	10.0	12.13	15.01

Notes:

1 Splashproof fully guarded machines will have additional covers, increasing the overall width at the commutator-end and drive-end side air openings

2 Dripproof, fully guarded vertical drive-end shaft down machines will have additional covers, increasing the overall width and exceeding bottom of mounting feet at the commutator-end openings

3 Represents minimum length of shaft available for hubs

4 Air opening. For enclosure type and mounting position, see enclosure and mounting assembly. Totally enclosed machines will not have openings or covers on drive-end.

Mounting face will be square and rabbet diameter concentric with shaft within .004 inch total indicator reading. Shaft runout not to exceed .002 inch total indicator reading

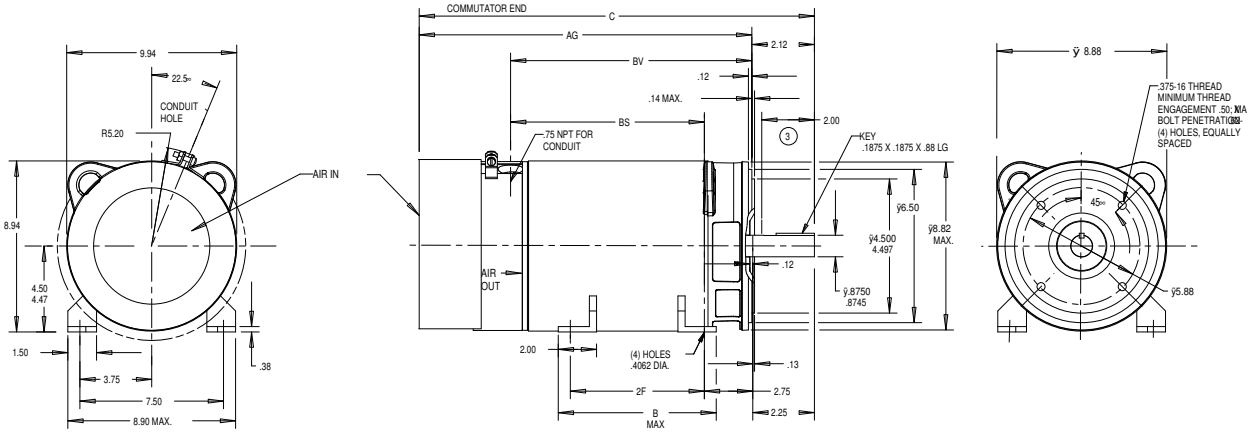
Feet will be supplied unless otherwise specified.

The standard single shaft machine has the commutator end bearing bracket and shaft extension prepared to accept accessories. For additional information, see 36C697103AA.

DC Motors – Kinamatic™

Type CD, Totally Enclosed Fan Cooled, Frames L182ACY to 189 ACY 4 1/2" Type C-Face Mounting with Feet

Motor Dimensions (cont.)



Frame Size	Approx. Wk2 of Arm. Lb. Ft.²	B	C	2F	AG	BS	BV	Approx. Net. Wt. (lbs) ◊
L182ACY	0.28	5.80	17.45	4.5	15.33	6.63	9.51	83
186ACY	0.45	8.30	18.95	7.0	16.83	8.13	11.01	105
L186ACY	0.67	8.30	20.95	7.0	18.83	10.13	13.01	128
189ACY	0.77	11.56	22.95	10.0	20.83	12.13	15.01	165

Notes:

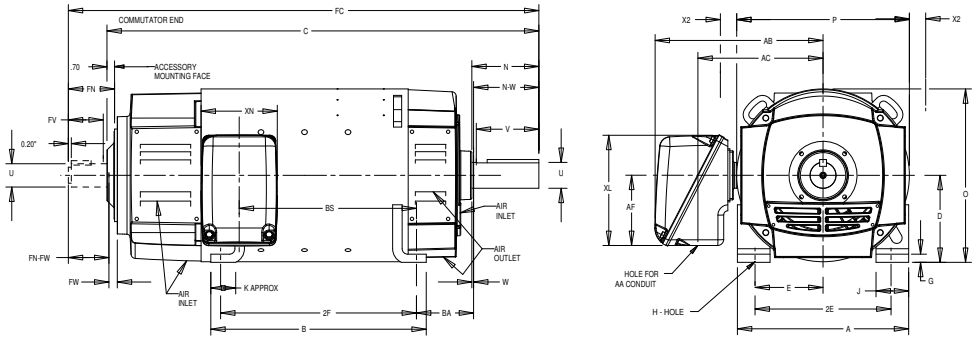
3 Represents minimum length of shaft available for hubs
For mounting position see enclosure and mounting assembly
Mounting face will be square and rabbet diameter concentric with shaft within .004 inch total indicator
Feet will be supplied unless otherwise specified

◊ For shipping weight add 15% to net weight.

DC Motors – Kinamatic™

Type CD, Dripproof Fully Guarded Splashproof, Totally Enclosed Non-ventilated, Frames 218AT to 329AT with Feet*

Motor Dimensions (cont.)



Frame Size	Approx. Net Wt. (lbs)◊	Approx. Wk2 of Arm. Lb. Ft²	Drive End Key			Commutator End Key			Dimensions in Inches								
			Width	Thick	Length ±.03	Width	Thick	Length ±.03	A Max	B Max	C	D[1]	E	2F	G	H	J	K
218AT	234	1.35	0.3125	0.3125	1.75	0.2500	0.2500	1.00	10.40	11.56	24.22	5.25	4.25	10.0	0.50	0.4062	2.00	2.2
219AT	252	1.49	0.3125	0.3125	1.75	0.2500	0.2500	1.00	10.40	12.56	25.22	5.25	4.25	11.0	0.50	0.4062	2.00	2.2
2110AT	580	1.17	0.3125	0.3125	1.75	0.2500	0.2500	1.00	10.40	14.06	26.72	5.25	4.25	12.5	0.50	0.4062	2.00	2.2
258AT	361	2.91	0.3750	0.3750	2.25	0.3125	0.3125	1.50	12.40	14.06	27.14	6.25	5.00	12.5	0.62	0.5312	2.25	2.0
259AT	403	3.31	0.3750	0.3750	2.25	0.3125	0.3125	1.50	12.40	15.56	28.76	6.25	5.00	14.0	0.62	0.5312	2.25	2.0
287AT	493	4.67	0.5000	0.5000	2.25	0.3750	0.3750	2.00	13.88	14.16	30.98	7.00	5.50	12.5	0.64	0.5312	2.50	2.0
288AT	548	5.36	0.5000	0.5000	2.50	0.3750	0.3750	2.00	13.88	15.66	32.72	7.00	5.50	14.0	0.64	0.5312	2.50	2.0
327AT	691	8.45	0.5000	0.5000	2.50	0.5000	0.5000	2.25	15.88	15.96	33.44	8.00	6.25	14.0	0.75	0.6562	3.00	2.3
328AT	769	9.67	0.5000	0.5000	3.00	0.5000	0.5000	2.25	15.88	17.96	35.32	8.00	6.25	16.0	0.75	0.6562	3.00	2.3
L328AT	888		0.5000	0.5000	3.00	0.5000	0.5000	2.25	15.88	19.96	37.94	8.00	6.26	16.0	0.75	0.6562	3.00	2.3
329AT	888	11.40	0.5000	0.5000	3.00	0.5000	0.5000	2.25	15.88	19.96	37.94	8.00	6.25	18.0	0.75	0.6562	3.00	2.3

Frame Size	Dimensions in Inches														
	AA = 1.25					AA = 2.00					AA = 3.00				
	AB	AC	AF	XL	XN	AB	AC	AF	XL	XN	AB	AC	AF	XL	XN
210AT	9.62	7.56	3.62	5.94	4.38	11.48	8.92	4.62	7.38	5.38	Not Available				
250AT	10.62	8.58	3.62	5.94	4.38	11.74	9.18	4.62	7.38	5.38					
280AT	11.34	9.28	3.62	5.94	4.38	12.46	9.90	4.62	7.38	5.38	14.90	11.28	6.62	10.50	8.56
320AT	Not Available					13.44	10.88	4.62	7.38	5.38	15.12	11.50	6.62	10.50	8.56

Frame Size	Dimensions in Inches														
	N	O	P	U[4]	V[3]	W	N-W	BA	FC	FN	FU[4]	FV[3]	FW	FN-FW	BS	XZ[2]
218AT	2.91	10.46	10.42	1.38	2.5	0.16	2.75	3.50	25.97	2.45	1.125	2.0	0.2	2.25	8.36	1.5
219AT	2.91	10.46	10.42	1.38	2.5	0.16	2.75	3.50	26.97	2.45	1.125	2.0	0.2	2.25	9.36	1.5
2110AT	2.91	10.46	10.42	1.38	2.5	0.16	2.75	3.50	28.47	2.45	1.125	2.0	0.2	2.25	10.87	1.5
258AT	3.41	12.46	12.42	1.63	3.0	0.16	3.25	4.25	29.39	2.95	1.375	2.5	0.2	2.75	9.65	1.5
259AT	3.41	12.46	12.42	1.63	3.0	0.16	3.25	4.25	31.01	2.95	1.375	2.5	0.2	2.75	11.26	1.5
287AT	3.91	13.94	13.88	1.88	3.5	0.16	3.75	4.75	33.75	3.45	1.625	3.0	0.2	3.25	10.89	1.5
288AT	3.91	13.94	13.88	1.88	3.5	0.16	3.75	4.75	35.47	3.45	1.625	3.0	0.2	3.25	12.62	1.5
327AT	4.41	15.94	15.88	2.13	4.0	0.16	4.25	5.25	36.69	3.95	1.875	3.5	0.2	3.75	11.80	1.5
328AT	4.41	15.94	15.88	2.13	4.0	0.16	4.25	5.25	38.57	3.95	1.875	3.5	0.2	3.75	13.68	1.5
L328AT	4.41	15.94	15.87	2.13	4.0	0.02	4.25	5.25	41.19	3.95	1.875	3.5	0.2	3.75	16.30	1.5
329AT	4.41	15.94	15.88	2.13	4.0	0.16	4.25	5.25	41.19	3.95	1.875	3.5	0.2	3.75	16.30	1.5

Notes:

* Dripproof, fully guarded machines can be used for wall or ceiling mounting. Assembly modifications must be made to maintain proper enclosure.

1 Dimensions "D" will not be exceeded. When exact dimension is required, shims up to .03 inches may be necessary where dimension "D" is 8 inches or less. When dimension "D" is over 8 inches, shims up to .06 inch may be necessary.

2 Splashproof machines will have additional covers, increasing the overall width at the commutator end and drive end side cover openings.

3 "V" represents minimum length of shaft available for hubs.

4 Shaft diameters 1.5 inches and smaller will come within the limits of +0.0000 inch -0.0005 inch. Diameters larger than 1.5 inches will come within the limits of +0.0000 inch -0.0010 inch. Shaft runout on diameters 1.625 inches and smaller shall not exceed .002 inch indicator reading. Diameters larger than 1.625 inches shall not exceed .003 inch indicator reading.

◊ For shipping weight add 15% to net weight.

Conduit box will be assembled on the right hand side facing the commutator end for motors, and on the left hand side facing the commutator end for generators. Conduit box will be assembled on opposite side of frame, if so specified. Conduit box may be oriented to accommodate customer's application. Dimensions pertaining to conduit boxes vary according to rating. Refer to GE for dimensions.

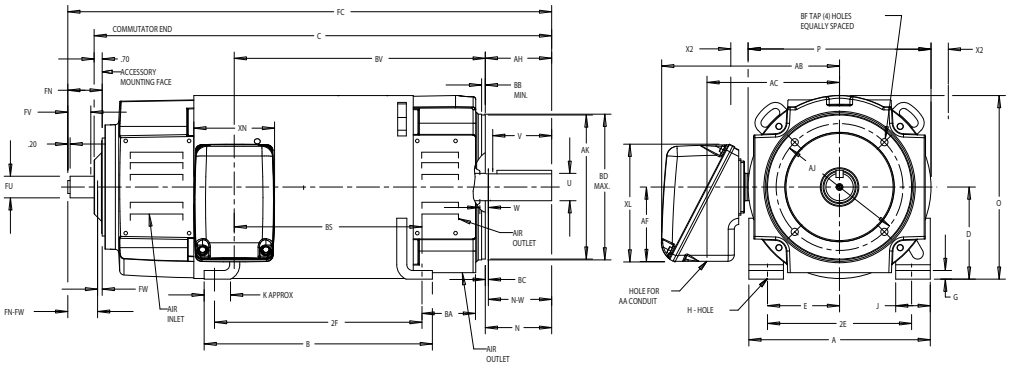
The standard single shaft machine has the commutator end bearing bracket and shaft prepared to accept accessories.

Commutator end shaft extension is furnished only when specifically ordered, and is prepared for accessory drive.

DC Motors – Kinamatic™

Type CD, Dripproof Fully Guarded Splashproof, Totally Enclosed Non-ventilated*
Frames 218ATC to 329ATC with feet

Motor Dimensions (cont.)



Frame Size	Approx Net Wt. (lbs) ◊	Approx Wk2 of Arm Lb. Ft²	Drive End Key			Comm. End Key			Dimensions in Inches																
			Width	Thick	Length ±.03	Width	Thick	Length ±.03	A Max	B Max	C	D[1]	E	2F	G	H	J	K	N	O	P	U[4]	V[3]	W	N-W
218ATC	234	1.35	0.3125	0.3125	1.75	0.2500	0.2500	1.00	10.40	11.56	24.22	5.25	4.25	10.0	0.50	0.4062	2.00	2.2	2.97	10.46	10.42	1.375	2.5	0.22	2.75
219ATC	261	1.49	0.3125	0.3125	1.75	0.2500	0.2500	1.00	10.40	12.56	25.22	5.25	4.25	11.0	0.50	0.4062	2.00	2.2	2.97	10.46	10.42	1.375	2.5	0.22	2.75
2110ATC	389	1.71	0.3125	0.3125	1.75	0.2500	0.2500	1.00	10.40	14.06	26.72	5.25	4.25	12.5	0.50	0.4062	2.00	2.2	2.97	10.46	10.42	1.375	2.5	0.22	2.75
258ATC	378	2.91	0.3750	0.3750	2.25	0.3125	0.3125	1.50	12.40	14.06	27.14	6.25	5.00	12.5	0.62	0.5312	2.25	2.0	3.47	12.46	12.42	1.625	3.0	0.22	3.25
259ATC	420	3.31	0.3750	0.3750	2.25	0.3125	0.3125	1.50	12.40	15.56	28.76	6.25	5.00	14.0	0.62	0.5312	2.25	2.0	3.47	12.46	12.42	1.625	3.0	0.22	3.25
287ATC	522	4.67	0.5000	0.5000	2.50	0.3750	0.3750	2.00	13.88	14.16	30.98	7.00	5.50	12.5	0.64	0.5312	2.50	2.0	3.97	13.94	13.88	1.875	3.5	0.22	3.75
288ATC	577	5.36	0.5000	0.5000	2.50	0.3750	0.3750	2.00	13.88	15.66	32.72	7.00	5.50	14.0	0.64	0.5312	2.50	2.0	3.97	13.94	13.88	1.875	3.5	0.22	3.75
327ATC	720	8.45	0.5000	0.5000	3.00	0.5000	0.5000	2.25	15.88	15.96	33.44	8.00	6.25	14.0	0.75	0.6562	3.00	2.3	4.47	15.94	15.88	2.125	4.0	0.22	4.25
328ATC	798	9.67	0.5000	0.5000	3.00	0.5000	0.5000	2.25	15.88	17.96	35.32	8.00	6.25	16.0	0.75	0.6562	3.00	2.3	4.47	15.94	15.88	2.125	4.0	0.22	4.25
329ATC	917	11.40	0.5000	0.5000	3.00	0.5000	0.5000	2.25	15.88	19.96	37.94	8.00	6.25	18.0	0.75	0.6562	3.00	2.3	4.47	15.94	15.88	2.125	4.0	0.22	4.25

Frame Size	Dimensions in Inches														
	AA = 1.25					AA = 2.00					AA = 3.00				
	AB	AC	AF	XL	XN	AB	AC	AF	XL	XN	AB	AC	AF	XL	XN
210ATC	9.62	7.56	3.62	5.94	4.38	11.48	8.92	4.62	7.38	5.38	Not Available				
250ATC	10.62	8.56	3.62	5.94	4.38	11.74	9.18	4.62	7.38	5.38					
280ATC	11.34	9.28	3.62	5.94	4.38	12.46	9.90	4.62	7.38	5.38	14.90	11.28	6.62	10.50	8.56
320ATC	Not Available					13.44	10.88	4.62	7.38	5.38	15.12	11.50	6.62	10.50	8.56

Frame Size	Dimensions in Inches																	
	BA	BB Min	FN	FU[4]	BC	BF Tap	BF Depth	FV[3]	FW	FN-FW	AH	AJ	AK	ZA[2]	BD Max	BV	BS	FC
218ATC	3.50	0.3	2.45	1.125	0.25	.500-13	1.00	2.0	0.2	2.25	1.125	7.25	8.5	1.5	9.00	12.11	8.36	25.97
219ATC	3.50	0.3	2.45	1.125	0.25	.500-13	1.00	2.0	0.2	2.25	1.125	7.25	8.5	1.5	9.00	13.11	9.36	26.97
2110ATC	3.50	0.3	2.45	1.125	0.25	.500-13	1.00	2.0	0.2	2.25	2.500	7.25	8.5	1.5	9.00	14.62	10.87	28.47
258ATC	4.25	0.3	2.95	1.375	0.24	.500-13	1.00	2.5	0.2	2.75	2.500	7.25	8.5	1.5	10.00	14.14	9.65	29.39
259ATC	4.25	0.3	2.95	1.375	0.24	.500-16	1.00	2.5	0.2	2.75	2.500	7.25	8.5	1.5	10.00	15.75	11.26	31.01
287ATC	4.75	0.3	3.45	1.625	0.24	.500-13	1.00	3.0	0.2	3.25	3.000	9.00	10.5	1.5	11.25	15.88	10.87	33.73
288ATC	4.75	0.3	3.45	1.625	0.24	.500-13	1.00	3.0	0.2	3.25	3.000	9.00	10.5	1.5	11.25	17.61	12.62	35.47
327ATC	5.25	0.3	3.95	1.875	0.24	.500-11	1.25	3.5	0.2	3.75	3.750	11.00	12.5	1.5	14.00	17.29	11.80	36.69
328ATC	5.25	0.3	3.95	1.875	0.24	.500-11	1.25	3.5	0.2	3.75	3.750	11.00	12.5	1.5	14.00	19.17	13.68	38.57
329ATC	5.25	0.3	3.95	1.875	0.24	.500-11	1.25	3.5	0.2	3.75	3.750	11.00	12.5	1.5	14.00	21.79	13.68	41.19

Notes:

* Dripproof, fully guarded machines can be used for wall or ceiling mounting. Assembly modifications must be made to maintain proper enclosure.

1 Dimensions "D" will not be exceeded. When exact dimension is required, shims up to .03 inches may be necessary where dimension "D" is 8 inches or less. When dimension "D" is over 8 inches, shims up to .06 inch may be necessary.

2 Splashproof machines will have additional covers, increasing the overall width at the commutator end and drive end side cover openings.

3 "V" represents minimum length of shaft available for hubs.

4 Shaft diameters 1.5 inches and smaller will come within the limits of +0.0000 inch -0.0005 inch. Diameters larger than 1.5 inches will come within the limits of +0.0000 inch -0.0010 inch. Shaft runout on diameters 1.625 inches and smaller shall not exceed .002 inch indicator reading. Diameters larger than 1.625 inches shall not exceed .003 inch indicator reading.

◊ For shipping weight add 15% to net weight.

Conduit box will be assembled on the right hand side facing the commutator end for motors, and on the left hand side facing the commutator end for generators. Conduit box will be assembled on opposite side of frame, if so specified. Conduit box may be oriented to accommodate customer's application. Dimensions pertaining to conduit boxes vary according to rating. Refer to GE for dimensions.

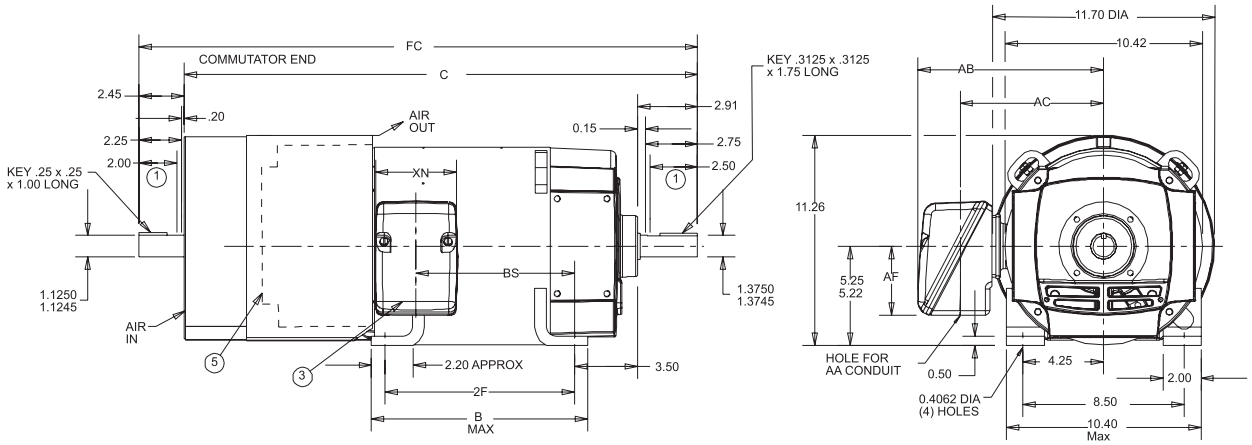
The standard single shaft machine has the commutator end bearing bracket and shaft prepared to accept accessories.

Commutator end shaft extension is furnished only when specifically ordered, and is prepared for accessory drive.

DC Motors – Kinamatic™

Type CD, Totally Enclosed Fan Cooled, Frames 218AT to 2110AT with Feet

Motor Dimensions (cont.)



Frame Size	B	C	FC	2F	BS	Approx. Net. Wt. (lbs) ◊
218AT	11.56	26.82	29.34	10.00	8.36	241
219AT	12.56	27.82	30.34	11.00	9.36	259
2110AT	14.06	29.32	31.84	12.50	10.87	287

Conduit Box Dimensions

AA	AB	AC	AF	XL	XN
1.25	9.62	7.56	3.62	5.94	4.38
2.00	11.48	8.92	4.62	7.38	5.38

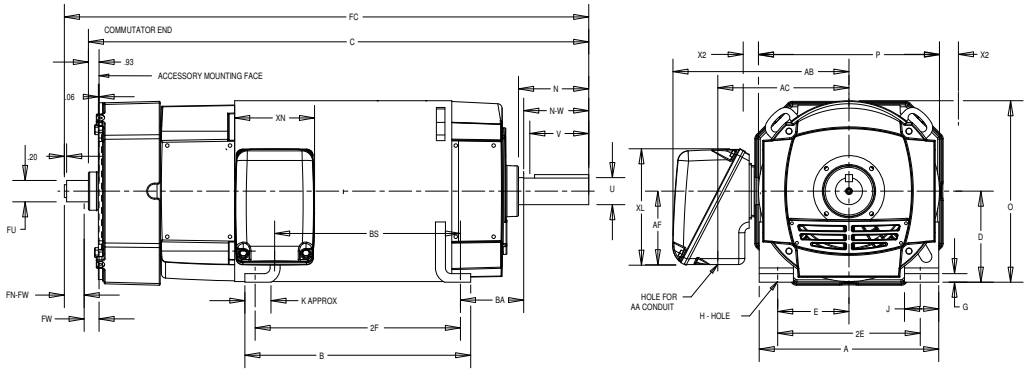
Notes:

1 Represents minimum length of shaft available for hubs
2 Machine can be used for wall or ceiling mounting
3 Conduit box may be turned so that entrance can be made upward, downward, from commutator-end or drive-end, providing mounting conditions permit. Conduit box will be assembled on opposite side of frame, if so specified. Dimensions pertaining to conduit boxes vary according to rating.
4 Shaft run-out shall no exceed 0.002 inch total indicator reading on drive-end
5 Shroud is removable to permit access to hand-hole covers
6 Commutator-end shaft extension is furnished only when specifically ordered.
◊ For shipping weight add 15% to net weight.

DC Motors – Kinamatic™

Type CD, Totally Enclosed Fan Cooled, Frames 285AT to 328AT with Feet

Motor Dimensions (cont.)



Frame Size	Approx. Net Wt. (lbs) ◊	Approx. Wk2 of Arm. Lb. Ft²	Drive End Key			Commutator End Key			Dimensions in Inches									
			Width	Thick	Length ±.03	Width	Thick	Length ±.03	A Max	B Max	C	D[1]	E	2F	G	H	J	K
258AT	397	3.17	0.375	0.375	2.25	0.3125	0.3125	1.50	12.40	14.06	30.32	6.25	5.00	12.5	0.62	0.5312	2.25	2.0
259AT	442	3.57	0.375	0.375	2.25	0.3125	0.3125	1.50	12.40	15.56	31.94	6.25	5.00	14.0	0.62	0.5312	2.25	2.0
287AT	532	5.09	0.500	0.500	2.50	0.3750	0.3750	2.00	13.88	14.16	34.66	7.00	5.50	12.5	0.64	0.5312	2.50	2.0
288AT	587	5.78	0.500	0.500	2.50	0.3750	0.3750	2.00	13.88	15.66	36.40	7.00	5.50	14.0	0.64	0.5312	2.50	2.0
327AT	732	9.20	0.500	0.500	3.00	0.5000	0.5000	2.25	15.88	15.96	37.62	8.00	6.25	14.0	0.75	0.6562	3.00	2.3
328AT	812	10.42	0.500	0.500	3.00	0.5000	0.5000	2.25	15.88	17.96	39.50	8.00	6.25	16.0	0.75	0.6562	3.00	2.3

Frame Size	Dimensions in Inches															
	N	O	P	U[3]	V[2]	W	N-W	BA	FC	FN	FU[3]	FV[2]	FW	FN-FW	BS	XP
258AT	3.41	12.75	13.00	1.625	3.0	0.16	3.25	4.25	32.64	3.25	1.375	2.5	0.5	2.75	9.65	12.42
259AT	3.41	12.75	13.00	1.625	3.0	0.16	3.25	4.25	34.26	3.25	1.375	2.5	0.5	2.75	11.26	12.42
287AT	3.91	14.25	14.52	1.875	3.5	0.16	3.75	4.75	37.48	3.75	1.625	3.0	0.5	3.25	10.89	13.88
288AT	3.91	14.25	14.52	1.875	3.5	0.16	3.75	4.75	39.22	3.75	1.625	3.0	0.5	3.25	12.62	13.88
327AT	4.41	16.25	16.52	2.125	4.0	0.16	4.25	5.25	40.94	4.25	1.875	3.5	0.5	3.75	11.80	15.88
328AT	4.41	16.25	16.52	2.125	4.0	0.16	4.25	5.25	42.82	4.25	1.875	3.5	0.5	3.75	13.68	15.88

Frame Size	Dimensions in Inches														
	AA = 1.25					AA = 2.00					AA = 3.00				
	AB	AC	AF	XL	XN	AB	AC	AF	XL	XN	AB	AC	AF	XL	XN
210AT	9.62	7.56	3.62	5.94	4.38	11.48	8.92	4.62	7.38	5.38	Not Available				
250AT	10.62	8.56	3.62	5.94	4.38	11.74	9.18	4.62	7.38	5.38					
280AT	11.34	9.28	3.62	5.94	4.38	12.46	9.90	4.62	7.38	5.38	14.90	11.28	6.62	10.50	8.56
320AT	Not Available					13.44	10.88	4.62	7.38	5.38	15.12	11.50	6.62	10.50	8.56

Notes:

1 Dimensions "D" will not be exceeded. When exact dimension is required, shims up to .03 inches may be necessary where dimension "D" is 8 inches or less. When dimension "D" is over 8 inches, shims up to .06 inch may be necessary.

2 "V" represents minimum length of shaft available for hubs.

3 Shaft diameters 1.5 inches and smaller will come within the limits of +0.0000 inch -0.0005 inch. Diameters larger than 1.5 inches will come within the limits of +0.0000 inch -0.0010 inch. Shaft runout on diameters 1.625 inches and smaller shall not exceed .002 inch indicator reading. Diameters larger than 1.625 inches shall not exceed .003 inch indicator reading.

◊ For shipping weight add 15% to net weight.

Conduit box will be assembled on the right hand side facing the commutator end for motors, and on the left hand side facing the commutator end for generators. Conduit box will be assembled on opposite side of frame, if so specified. Conduit box may be oriented to accommodate customer's application. Dimensions pertaining to conduit boxes vary according to rating. Refer to GE for dimensions.

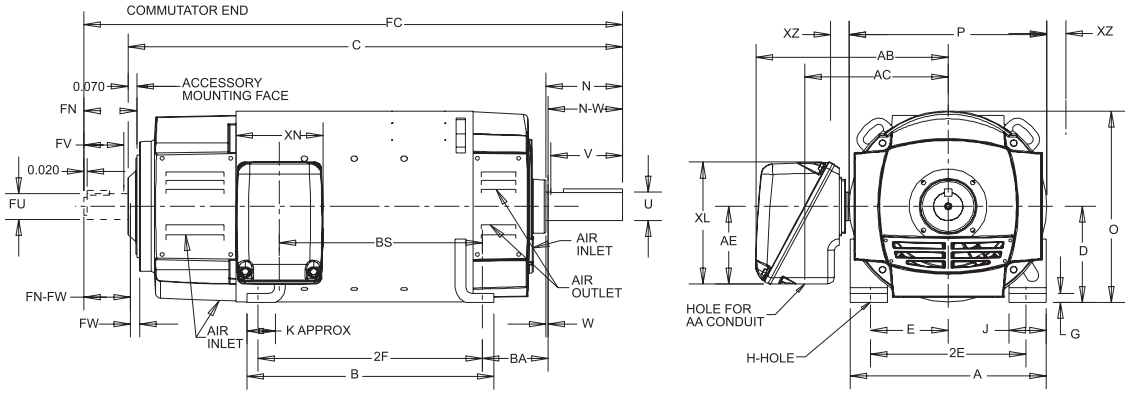
The standard single shaft machine has the commutator end bearing bracket and shaft prepared to accept accessories.

Commutator end shaft extension is furnished only when specifically ordered, and is prepared for accessory drive.

DC Motors – Kinamatic™

Type CD, Dripproof Fully Guarded, Splashproof, Totally Enclosed Non-ventilated*
Frames 365AT to 5010AY with Feet

Motor Dimensions (cont.)



Frame Size	Approx. Net Wt. (lbs)◊	Approx. Wk2 of Arm. Lb. Ft²	Drive End Key			Commutator End Key			Dimensions in Inches										
			Width	Thick	Length ±.03	Width	Thick	Length ±.03	A Max	B Max	C	D[1]	E	2F	G	H	J	K	N
365AT	750	15.61	0.625	0.625	3.50	0.500	0.500	3.00	17.92	14.16	33.70	9.0	7	12.25	0.74	0.8125	3.26	2.31	4.92
366AT	860	18.27	0.625	0.625	3.50	0.500	0.500	3.00	17.92	15.90	35.90	9.0	7	14.00	0.74	0.8125	3.26	2.31	4.92
368AT	1020	22.21	0.625	0.625	3.50	0.500	0.500	3.00	17.92	19.90	38.90	9.0	7	18.00	0.74	0.8125	3.26	2.31	4.92
407AT	1300	35.47	0.625	0.625	4.00	0.625	0.625	3.50	20.00	20.16	40.12	10.0	8	18.00	0.86	0.9375	4.00	2.38	5.42
L407AT	1350	35.54	0.625	0.625	4.00	0.625	0.625	3.50	20.00	20.16	43.52	10.0	8	18.00	0.86	0.9375	4.00	2.38	5.42
409AT	1600	43.81	0.625	0.625	4.00	0.625	0.625	3.50	20.00	24.16	44.62	10.0	8	22.00	0.86	0.9375	4.00	2.38	5.42
L409AT	1650	43.88	0.625	0.625	4.00	0.625	0.625	3.50	20.00	24.16	48.02	10.0	8	22.00	0.86	0.9375	4.00	2.38	5.42
504AT	1900	79.10	0.750	0.750	5.25	0.750	0.750	4.50	24.92	18.96	45.74	12.5	10	16.00	1.11	1.1875	4.50	3.00	6.67
L504AT	2070	79.15	0.750	0.750	5.25	0.750	0.750	4.50	24.92	18.96	47.50	12.5	10	16.00	1.11	1.1875	4.50	3.00	6.67
506AT	2290	98.76	0.750	0.750	5.25	0.750	0.750	4.50	24.92	22.96	49.74	12.5	10	20.00	1.11	1.1875	4.50	3.00	6.67
L506AT	2440	98.81	0.750	0.750	5.25	0.750	0.750	4.50	24.92	22.96	51.50	12.5	10	20.00	1.11	1.1875	4.50	3.00	6.67
508AT	2810	121.87	0.750	0.750	5.25	0.750	0.750	4.50	24.92	27.96	54.74	12.5	10	25.00	1.11	1.1875	4.50	3.00	6.67
L508AT	2970	122.92	0.750	0.750	5.25	0.750	0.750	4.50	24.92	27.96	56.50	12.5	10	25.00	1.11	1.1875	4.50	3.00	6.67
5010AY	4260	157.28	1.000	1.000	6.50	0.750	0.750	5.25	24.92	34.88	65.49	12.5	10	32.00	1.11	1.1875	4.50	3.00	8.42

Frame Size	Dimensions Continued (For Conduit Box Dimensions, refer to publication GEP-387K, Page 124)														BS			
	O	P	U[4]	V[3]	W	N-W	BA	FC	FN	FU[4]	FV[3]	FW	FN-FW	AA = 3"	AA = 4"	AA = (2) 4"	AA = Blank	XZ[2]
365AT	17.91	17.90	2.375	4.50	0.17	4.75	5.875	37.45	4.45	2.125	4.00	0.2	4.25	9.02	9.02	6.64	-	0.25
366AT	17.91	17.90	2.375	4.50	0.17	4.75	5.875	39.65	4.45	2.125	4.00	0.2	4.25	11.22	11.22	8.84	-	0.25
368AT	17.91	17.90	2.375	4.50	0.17	4.75	5.875	32.65	4.45	2.125	4.00	0.2	4.25	14.22	14.22	11.84	-	0.25
407AT	20.15	20.38	2.625	5.00	0.17	5.25	6.625	44.37	4.95	2.375	4.50	0.2	4.75	15.18	15.18	12.80	12.80	-
L407AT	20.15	20.38	2.625	5.00	0.17	5.25	6.625	47.77	4.95	2.375	4.50	0.2	4.75	15.18	15.18	12.80	12.80	-
409AT	20.15	20.38	2.625	5.00	0.17	5.25	6.625	48.87	4.95	2.375	4.50	0.2	4.75	19.68	19.68	17.30	17.30	-
L409AT	20.15	20.38	2.625	5.00	0.17	5.25	6.625	52.27	4.95	2.375	4.50	0.2	4.75	19.68	19.68	17.30	17.30	-
504AT	25.15	25.38	3.250	6.25	0.17	6.50	8.500	50.99	5.95	2.875	5.50	0.2	5.75	-	13.26	10.88	10.88	-
L504AT	25.15	25.38	3.250	6.25	0.17	6.50	8.500	52.75	5.95	2.875	5.50	0.2	5.75	-	-	-	11.16	-
506AT	25.15	25.38	3.250	6.25	0.17	6.50	8.500	54.99	5.95	2.875	5.50	0.2	5.75	-	17.26	14.88	14.88	-
L506AT	25.15	25.38	3.250	6.25	0.17	6.50	8.500	56.75	5.95	2.875	5.50	0.2	5.75	-	-	-	15.16	-
508AT	25.15	25.38	3.250	6.25	0.17	6.50	8.500	59.99	5.95	2.875	5.50	0.2	5.75	-	22.26	19.88	19.88	-
L508AT	25.15	25.38	3.250	6.25	0.17	6.50	8.500	61.75	5.95	2.875	5.50	0.2	5.75	-	-	-	20.16	-
5010AY	25.17	25.38	4.125	8.00	0.17	8.25	8.500	71.49	6.70	3.250	6.25	0.2	6.50	-	31.26	28.88	28.88	-

Notes:

* Dripproof, fully guarded machines can be used for wall or ceiling mounting. Assembly modifications must be made to maintain proper enclosure.

1 Dimensions "D" will not be exceeded. When exact dimension is required, shims up to .03 inches may be necessary where dimension "D" is 8 inches or less. When dimension "D" is over 8 inches, shims up to .06 inch may be necessary.

2 Splashproof machines will have additional covers, increasing the overall width at the commutator end and drive end side cover openings.

3 "V" represents minimum length of shaft available for hubs.

4 Shaft diameters 1.5 inches and smaller will come within the limits of +0.0000 inch -0.0005 inch. Diameters larger than 1.5 inches will come within the limits of +0.0000 inch -0.0010 inch. Shaft runout on diameters 1.625 inches and smaller shall not exceed .002 inch indicator reading. Diameters larger than 1.625 inches shall not exceed .003 inch indicator reading.

◊ For shipping weight add 15% to net weight.

Conduit box will be assembled on the right hand side facing the commutator end for motors, and on the left hand side facing the commutator end for generators. Conduit box will be assembled on opposite side of frame, if so specified. Conduit box may be oriented to accommodate customer's application. Dimensions pertaining to conduit boxes vary according to rating. Refer to GE for dimensions.

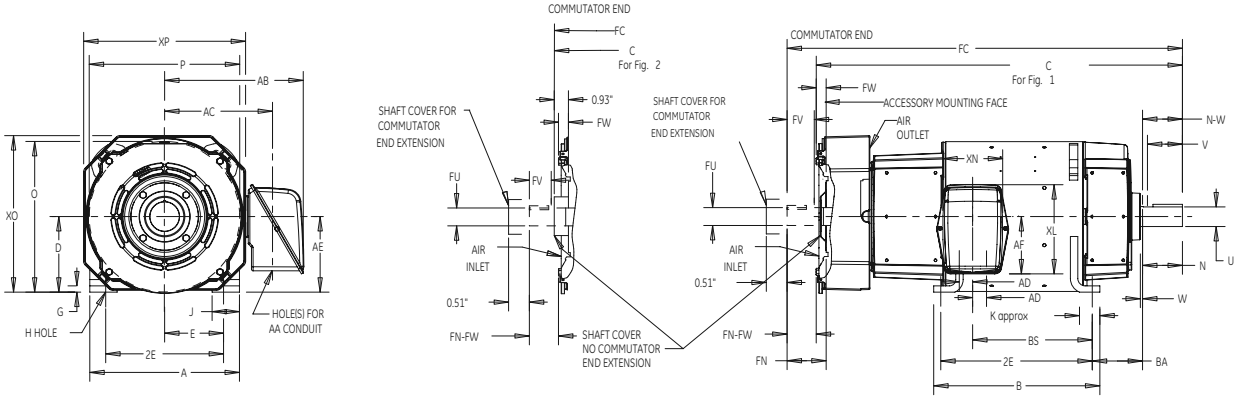
The standard single shaft machine has the commutator end bearing bracket and shaft prepared to accept accessories.

Commutator end shaft extension is furnished only when specifically ordered, and is prepared for accessory drive.

DC Motors – Kinamatic™

Type CD, Totally Enclosed Fan Cooled Frames 365AT to L409AT with Feet

Motor Dimensions (cont.)



Frame Size	See Fig. No.	Approx. Net Wt. (lbs) ◊	Approx. Wk2 of Arm. Lb. Ft²	Drive End Key			Commutator End Key			Dimensions in Inches										
				Width	Thick	Length ±.03	Width	Thick	Length ±.03	A Max	B Max	C	D[1]	E	2F	G	H	J	K	N
365AT	1	830	15.61	0.625	0.625	3.50	0.500	0.500	3.00	17.92	14.16	38.22	9.0	7.0	12.25	0.74	0.8125	3.26	2.31	4.92
366AT	1	940	18.27	0.625	0.625	3.50	0.500	0.500	3.00	17.92	15.90	40.42	9.0	7.0	14.00	0.74	0.8125	3.26	2.31	4.92
368AT	1	1100	22.21	0.625	0.625	3.50	0.500	0.500	3.00	17.92	19.90	43.42	9.0	7.0	18.00	0.74	0.8125	3.26	2.31	4.92
407AT	2	1380	35.47	0.625	0.625	4.00	0.625	0.625	3.50	20.00	20.16	44.90	10.0	8.0	18.00	0.86	0.9375	4.00	2.38	5.42
L407AT	2	1430	35.54	0.625	0.625	4.00	0.625	0.625	3.50	20.00	20.16	48.30	10.0	8.0	18.00	0.86	0.9375	4.00	2.38	5.42
409AT	2	1680	43.81	0.625	0.625	4.00	0.625	0.625	3.50	20.00	24.16	49.40	10.0	8.0	22.00	0.86	0.9375	4.00	2.38	5.42
L409AT	2	1730	43.88	0.625	0.625	4.00	0.625	0.625	3.50	20.00	24.16	52.80	10.0	8.0	22.00	0.86	0.9375	4.00	2.38	5.42

Frame Size	See Fig. No.	Dimensions Continued (For Conduit Box Dimensions, refer to publication GEP-387K, Page 124)																BS		
		O	P	U[2]	V[3]	W	N-W	BA	FC	FN	FU[2]	FV[3]	FW	FN-FW	XO	XP	AA = 3"	AA = 4"	AA = (2) 4"	AA = Blank
365AT	1	17.91	17.90	2.375	4.50	0.17	4.75	5.875	42.47	5.42	2.125	4.00	1.17	4.25	18.62	19.24	9.02	9.02	6.64	-
366AT	1	17.91	17.90	2.375	4.50	0.17	4.75	5.875	44.67	5.42	2.125	4.00	1.17	4.25	18.62	19.24	11.22	11.22	8.84	-
368AT	1	17.91	17.90	2.375	4.50	0.17	4.75	5.875	44.67	5.42	2.125	4.00	1.17	4.25	18.62	19.24	14.22	14.22	11.84	-
407AT	2	20.15	20.38	2.625	5.00	0.17	5.25	6.625	49.39	5.42	2.375	4.50	0.67	4.75	19.62	19.24	15.18	15.18	12.80	12.80
L407AT	2	20.15	20.38	2.625	5.00	0.17	5.25	6.625	52.79	5.42	2.375	4.50	0.67	4.75	19.62	19.24	15.18	15.18	12.80	12.80
409AT	2	20.15	20.38	2.625	5.00	0.17	5.25	6.625	53.89	5.42	2.375	4.50	0.67	4.75	19.62	19.24	19.68	19.68	17.30	17.30
L409AT	2	20.15	20.38	2.625	5.00	0.17	5.25	6.625	57.29	5.42	2.375	4.50	0.67	4.75	19.62	19.24	19.68	19.68	17.30	17.30

Frame Size	13.38 x 13.31 AA = Blank, Available Drill Space				
	AB	AE	AF	XL	XN
360AT	Not Available				
400AT	24.76	12.95	6.75	13.50	13.50

Frame Size	Dimensions in Inches																		
	AA = 3						AA = 4						AA = (2) 4						
	AB	AC	AE	AF	XL	XN	AB	AC	AE	AF	XL	XN	AB	AC	AD	AE	AF	XL	XN
360AT	16.08	12.33	9.00	6.44	10.12	7.00	17.82	13.20	9.00	8.50	13.50	8.62	18.72	14.97	3.00	9.00	6.75	13.50	13.50
400AT	17.47	13.72	12.92	6.44	10.12	7.00	19.22	14.60	12.95	8.50	13.50	8.62	20.12	16.37	3.00	12.95	6.75	13.50	13.50

Notes:

Machine can be used for wall or ceiling mounting.

1 Dimensions "D" will not be exceeded. When exact dimension is required, shims up to .03 inches may be necessary where dimension "D" is 8 inches or less. When dimension "D" is over 8 inches, shims up to .06 inch may be necessary.

2 Shaft diameters 1.5 inches and smaller will come within the limits of +0.0000 inch -0.0005 inch. Diameters larger than 1.5 inches will come within the limits of +0.0000 inch -0.0010 inch. Shaft runout on diameters 1.625 inches and smaller shall not exceed .002 inch indicator reading. Diameters larger than 1.625 inches shall not exceed .003 inch indicator reading.

3 "V" represents minimum length of shaft available for hubs.

◊ For shipping weight add 15% to net weight.

Conduit box will be assembled on the right hand side facing the commutator end for motors, and on the left hand side facing the commutator end for generators. Conduit box will be assembled on opposite side of frame, if so specified. Conduit box may be oriented to accommodate customer's application. Dimensions pertaining to conduit boxes vary according to rating. Refer to GE for dimensions.

The standard single shaft machine has the commutator end bearing bracket and shaft prepared to accept accessories.

Commutator end shaft extension is furnished only when specifically ordered, and is prepared for accessory drive.

DC Motors – Kinamatic™

Kits and Accessories

Type CD

Blower Kits

Blower kits are designed for standard mounting on the motor commutator end and for addition only to Dripproof Fully Guarded (DPFG) or Dripproof Fully Guarded - Separately Ventilated (DPFG-BV) motors. Blower motors are 230/460 Volts AC, 3 phase, 60 Hertz. To properly mount blower kits on CD180AT frames, drilling and tapping three holes is required. For other applications, refer to factory.

Blower with Filter

Cat. No.	Frame Size	List Price	Price Symbol
A687	CDL182AT-CD188AT	$5,000	GO-2KITS
A688	CD218AT-CD2110AT	$5,000	GO-2KITS
A689	CD258AT-CD259AT	$4,500	GO-2KITS
A690	CD287AT-CD288AT	$4,500	GO-2KITS
A691	CD327AT-CD328AT	$4,620	GO-2KITS
A692	CD365AT-CD368AT	$4,186	GO-2KITS
A693	CD407AT-CD409AT	$5,000	GO-2KITS
A694	CDL407AT-CDL409AT	$4,600	GO-2KITS
A695	CD504AT-CD5010AY	$7,500	GO-2KITS

C-Face Endshield Kits

C-Face endshield kits are designed for mounting on the Fully Guarded or Totally Enclosed Non-Ventilated motors, but requires machine disassembly by a qualified service facility.

Cat. No.	Frame Size	List Price	Price Symbol
A670	CDL182AT-CD189AT (DP)	$1,000	GO-2KITS
A673	CDL182AT-CD189AT (TEFC)	$1,000	GO-2KITS
A671	CD218AT-CD2110AT	$2,400	GO-2KITS
A672	CD258AT-CD259AT	$1,600	GO-2KITS
A674	CD287AT-CD288AT	$1,600	GO-2KITS
A676	CD327AT-CD328AT	$1,800	GO-2KITS

Lexan® Covers

Two transparent covers are required to replace metal covers on the brush openings at the commutator. Each kit includes one cover.

Cat. No.	Frame Size	List Price	Price Symbol
A677	CD218AT-CD2110AT	$400	GO-2KITS
A678	CD258AT-CD259AT	$450	GO-2KITS
A680	CD287AT-CD288AT	$700	GO-2KITS
A682	CD327AT-CD329AT	$700	GO-2KITS
A683	CD365AT-CD409AT	$700	GO-2KITS
A684	CDL407AT-CDL409AT	$700	GO-2KITS
A685	CD504AT-CD5010AY	$700	GO-2KITS

DC Motors – Kinamatic™

Kits and Accessories

Tachometers

The Type AN enclosure provides a compact construction for medium accuracy speed-indicating or speed-regulating application. The AN series tachometers can be furnished with either AC or digital output signal for speed regulation. For information on Type PY or Type BC tachometers, refer to the Tachometer Generator Section.

AN Series

Cat. No.	Frame Size	List Price	Price Symbol
A647	CD182AT-CD328AT	$4,800	GO-2KITS
A648	CD365AT-CD368AT	$4,800	GO-2KITS
A649	CD407AT-CD409AT	$5,200	GO-2KITS
A650	CD504AT-CD5010AY	$5,200	GO-2KITS

Tachometer Mounting Kits

Tachometer mounting kits are design for mounting on the accessory commutator end shaft extension of Fully Guarded or Totally Enclosed Kinamatic motors, with the exception of TEFC machines. Refer to factory for TEFC motors. This feature is optional on all CD180AT frames. An accessory commutator end shaft extension is supplied on all CD210AT-CD500AT frame motors and will accept a tachometer kit only if the shaft extension is currently not is use. Note: Type BC and Type PY tachometer must be ordered independently of the tachometer mounting kit.

Type BC Tachometer Mounting Kit

Cat. No.	Frame Size	List Price	Price Symbol
A641	CD182AT-CD328AT	$3,200	GO-2KITS
A642	CD365AT-CD368AT	$3,200	GO-2KITS
A643	CD407AT-CD5010AY	$3,800	GO-2KITS

Type PY Tachometer Mounting Kit

Cat. No.	Frame Size	List Price	Price Symbol
A644	CD182AT-CD328AT	$4,600	GO-2KITS
A645	CD365AT-CD368AT	$4,800	GO-2KITS
A646	CD407AT-CD409AT	$5,000	GO-2KITS
A686	CD504AT-CD5010AY	$5,200	GO-2KITS

Mill Duty DC Motors – MD800

Standard Features

Introduction

Auxiliary mill motors are specifically designed for mill, crane and hoist service. They may be used advantageously for any application which requires a high ratio of peak to average load torques or where a motor is required to accelerate, decelerate or reverse rapidly under conditions of severe duty-cycle operation. Armored motors are designed to meet the standards established by the Association of Iron and Steel Technology (AIST).

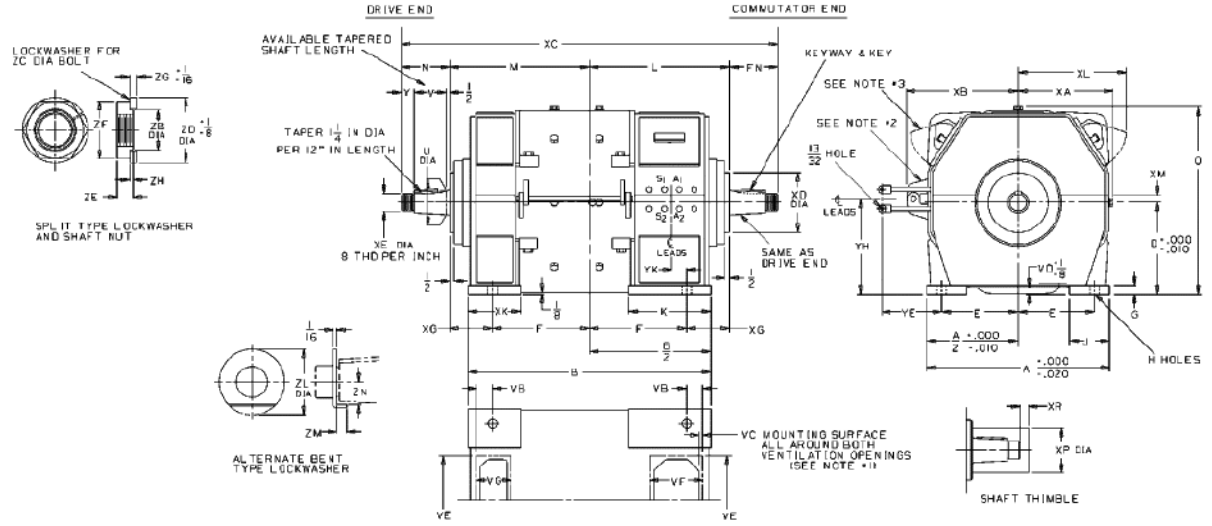
HP Range	5-250
Voltage	230 Volt DC
Altitude	3300 ft
Ambient	40°C
Bearing Type	Single-width solid cylindrical roller bearing
Enclosures	Totally Enclosed and Forced Ventilated
Frames	Horizontally split steel frame with lifting lugs
Frame Size	MD802 through MD818
Insulation Class	H
Leads	Exit frame F2 configuration (conduit box not standard)
Shaft	Tapered and equal on DE and CE and replaceable without disturbing the windings
Speed	Various
Temperature Rise	75°C rise by thermometer or 110°C rise by resistance
Time Ratings	Continuous, 30 minutes or 60 minutes
Warranty	24 months from date of purchase or 30 months from date of shipment; whichever occurs first
Winding	Series, Shunt, and Compound

Standard Type Product Offering

	60 min. 75°C Rise Totally Enclosed, or Continuous, 75°C Rise Force-Ventilated				30 min. 75°C Rise Totally Enclosed			Continuous Duty Cycle, 30% Time On, 75°C Rise, Totally Enclosed					
		Full-Load Speed RPM (Approx.)				Full-Load Speed RPM (Approx.)		Full-Load Speed RPM (Approx.)					
								Series		Compound		Shunt	
Frame Size	HP	Series	Compound or Shunt	Adjustable Speed	HP	Series	Compound	HP	RPM	HP	RPM	HP	RPM
802A	5	900	1025	1025/2050	6.5	750	925	5.5	840	5	1080	5	1130
802B	7.5	800	900	900/1800	10	675	775	8	780	7.5	950	7.5	1000
802C	10	800	900	900/1800	13.5	675	775	10	800	9.5	940	9	1000
803	15	725	800	800/2000	19	620	725	15	725	14.5	840	14	880
804	20	650	725	725/1800	26	580	650	20	650	18.5	775	17	800
806	30	575	650	650/1950	39	500	600	30	575	28.5	690	25	715
808	50	525	575	575/1725	65	450	525	40	570	37.5	625	35	630
810	70	500	550	550/1650	90	440	500	60	550	52.5	615	45	600
812	100	475	515	515/1300	135	420	475	85	510	75	580	60	565
814	150	460	500	500/1250	200	400	460	115	515	110	565	85	560
816	200	450	480	480/1200	265	400	450	150	500	140	540	110	535
818	250	410	435	435/1100	325	360	400	185	485	165	490	130	470

Mill Duty DC Motors – MD800

Dimensions



FRAME	APPROX NET WT IN LBS	DIMENSIONS IN INCHES																				
		A	B	D	E	F	G	H	J	K	L M	O	XA	XB	XC	XD	XG	XK	XL	XM	XP	XR
802	600	15	20 1/2	7 5/8	6 1/4	8 1/4	3/4	25/32	3 1/8	8 5/8	12	15 9/16	8 3/16	9 7/8	32 7/8	4 1/2	3 3/4	5 1/8	9 3/4	5/8	2 3/4	10/16
803	770	17	23 1/2	8 1/2	7	9	7/8	29/32	3 5/8	9 1/8	13 1/2	17 5/16	9	10 11/16	37	5 1/2	4 1/2	5 7/8	10 5/8	5/8	3 5/8	5/8
804	960	18	25 1/2	9	7 1/2	9 1/2	7/8	29/32	4	9 3/4	14 1/2	18 5/16	9 5/16	11	39	5 1/2	5	5 3/4	10 7/8	3/4	3 5/8	5/8
806	1300	20	27 1/2	10	8 1/4	10 1/2	1"	1 1/32	4 1/4	10	15 1/2	20 5/16	10 5/16	12 1/4	42 1/4	6 1/4	5	6 3/4	12	3/4	4 1/4	1 1/4
808	1790	22 3/4	31 1/4	11 1/4	9 3/8	12 3/8	1 1/8	1 3/16	4 3/4	11 3/4	17 1/2	22 15/16	11 11/16	13 1/2	47 1/2	7 1/4	5 1/8	7	13 1/2	7/8	4 1/4	5/8
810	2450	24 1/2	32 1/2	12 1/4	10 1/4	13	1 1/8	1 3/16	5 1/4	11	18 3/4	24 15/16	12 11/16	14 1/2	50 1/4	8	5 3/4	7	14 1/2	1"	6 1/16	1 1/4
812	3280	27	36	13 3/8	11 1/4	14 1/4	1 1/4	1 5/16	5 3/4	11	20 1/2	27 3/16	13 13/16	15 5/8	55	8 3/4	6 1/4	8 1/4	15 3/4	1"	6 1/16	5/8
814	4500	30	41 1/2	14 3/4	12 1/2	16	1 1/2	1 9/16	6 1/4	13 1/2	23 1/4	29 15/16	15 3/16	—	60 3/4	10	7 1/4	8 3/4	17 1/4	1 1/8	7 11/16	1 3/8
816	5780	32 1/2	46 3/4	16	13 1/2	17 1/2	1 1/2	1 9/16	7 1/4	17 1/2	26	32 7/16	16 7/16	—	67 1/2	10	8 1/2	9 3/4	19 1/2	1 1/4	7 11/16	3/4
818	7500	36	49 3/4	17 3/4	15	19 1/2	1 3/4	1 13/16	7 3/4	17 3/4	27 1/2	35 15/16	18 3/16	—	70 5/8	10	8	11	21 1/2	1 3/8	7 11/16	11/16

FRAME	APPROX NET WT IN LBS	DIMENSIONS IN INCHES																								
		SHAFT					KEYWAY		KEY	NUT AND LOCKWASHER										VENT. DUCT FLANGE SURFACE						MOTOR LEADS		
		N FN	U	V	Y	XE	WIDTH	DEPTH	LGTH	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZL	ZM	ZN	VB	VC	VD	VE	VF	VG	YE	YH	YK
802	600	4 7/16	1 3/4	2 3/4	1 3/16	1"	1/2	1/4	2 5/8	1 3/8	1 1/2	2 3/8	7/8	2	1/4	3/16	2 1/2	1/4	1"	7/8	3/8	1/2	7 1/4	4 3/4	2 3/16	7	8 5/8	3
803	770	5	2	3 1/4	1 1/4	1 1/4	1/2	1/4	3 1/8	1 1/2	1 1/2	2 3/8	15/16	2 1/4	1/4	3/16	2 7/8	5/16	1 1/8	1 3/4	1/2	1/2	8 1/2	5	3 1/4	7	9 1/2	3
804	960	5	2	3 1/4	1 1/4	1 1/4	1/2	1/4	3 1/8	1 1/2	1 1/2	2 3/8	15/16	2 1/4	1/4	3/16	2 7/8	5/16	1 1/8	2 1/4	1/2	5/8	9	5 1/2	2 3/4	7	10	3
806	1300	5 5/8	2 1/2	3 3/4	1 3/8	1 1/2	1/2	1/4	3 3/4	2	2	2 7/8	1 1/16	2 3/4	3/8	5/16	3 1/4	3/8	1 1/4	2 1/8	1/2	3/4	10 1/4	6	3 3/8	7	11	3
808	1790	6 1/4	3	4 1/4	1 1/2	2	3/4	1/4	4 1/8	2 1/2	2 1/2	3 1/2	1 3/16	3 1/2	7/16	3/8	4 5/16	21/32	1 1/2	2	1/2	7/8	11 1/2	6 1/2	3 1/2	10	12 1/2	3
810	2450	6 3/8	3 1/4	4 1/4	1 5/8	2 1/4	3/4	1/4	4 1/8	2 3/4	2 3/4	3 3/4	1 5/16	4	1/2	7/16	4 3/4	3/4	1 5/8	2 1/8	1/2	7/8	12	7	3 5/8	10	13 1/2	3
812	3280	7	3 5/8	4 3/4	1 3/4	2 1/2	3/4	1/4	4 5/8	3	3	4	1 7/16	4 1/4	1/2	7/16	5	5/8	1 7/8	2 1/2	5/8	1"	13 3/4	8 1/4	4 7/8	10	14 5/8	3
814	4500	7 1/8	4 1/4	4 3/4	1 7/8	3	1"	3/8	4 5/8	3 1/2	3 1/2	5	1 9/16	4 3/4	3/8	5/16	5 7/8	23/32	2 7/32	3 3/8	5/8	1 1/4	15 1/4	9 1/4	5 1/2	12	16 1/4	3
816	5780	7 3/4	4 5/8	5 1/4	2	3 1/4	1 1/4	3/8	5 1/8	4	4	6	1 11/16	5 3/8	3/8	5/16	6 1/2	5/8	2 5/8	4 1/2	1"	1 1/8	16	11	6 5/8	12	17 1/2	4 1/2
818	7500	7 13/16	5	5 3/4	1 9/16	3 1/2	1 1/4	1/2	5 5/8	4	4	6	1 1/4	5 3/4	3/8	5/16	6 3/4	3/4	2 5/8	3 7/8	1"	1 3/8	18	12	7 1/8	12	19 1/4	4 1/2

9.0 Quick Custom Motors

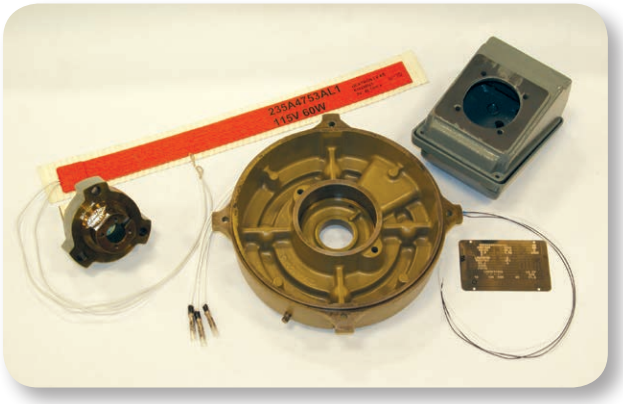
9.1 Information Sheet

9.2 Industrial AC Stock Motor Modification List Prices

Quick Custom Motors
3 Week Lead Time

GE can now manufacture X$D Ultra® and X$D Ultra® 841 motors that meet your specific requirements. “Smart-Modified” motors can typically be built in three weeks!

Available modifications include:



- Insulated Bearing
- Oversized Conduit Box
- Condulet mounted to side of conduit box
- Armored Cable Gland
- Unarmored Cable Gland
- CSA Cable Gland
- Stainless Steel Fasteners
- Self-Certified Division 2
- Drip Cover
- Flanges
- C-Face End Shield
- D-Flange End Shield
- Automatic Grease Relief
- Oil Mist Lubrication
- Button Head Grease Fittings
- 380V 50HZ Rerate
- Vertical Jack Screws
- F2 Mounting
- Seals (DE or ODE)
- Space Heaters
- Thermostats
- Winding RTD
- Bearing RTD

For more information on these and other motor modifications, please contact your GE sales representative or call us at 1 (800) 541-7191.

Quick Custom Motors

When you need a non-standard motor right away, GE can execute pre-engineered modifications to meet your specific requirements. Common modification requests were ingrained into our standard manufacturing process, so we are able to turnkey your specifications at a much faster rate.

Motor Model
X$D Ultra® and X$D Ultra® 841

Typical Lead Time
Three Weeks

How to Order
Orders are placed by contacting a GE sales representative or calling us at 1 (800) 541-7191.

Pricing
The motor modification list prices include all necessary parts for the modification unless noted in the list price table.

How to Estimate a Quote
Example:
Adding a standard space heater and a stainless steel INPRO™ seal to an X$D Ultra® M9883 motor.
The modified motor net price is determined by summing the motor list price:

1. Determine standard motor list price.
2. Add the motor modification(s) list price.
3. Multiply total list price by your motor price symbol multiplier.

M9883 5KS284SAA405 Motor List:	$4,242.00
Standard Space Heater List:	$327.00
Stainless Steel INPRO Seal List:	$360.00
Total List:	$4,929.00
Motor G4-7U1 Multiplier:	x 0.5
Mod Motor Net Price:	$2,464.50

Freight Terms
Standard terms and conditions apply

Cancellation Policy
Smart Motor Modification orders can be cancelled without penalty within the first 24 hours of order placement. Orders cancelled after 24 hours of order placement and before motor shipment will be subject to an 80% cancellation charge based on the mod motor net price.

Modified motors cannot be returned for credit or restocking.

Stock Motor Modification

Industrial AC Motor Modification Pricing

Modification	Frame Size												
	140	180	210	250	280	320	360	400	444/445	447/449	509	5011	5013
Bearings													
One Insulated Bearing	$1,160	$1,200	$1,214	$1,175	$1,514	$1,535	$1,799	$2,765	$3,074	$3,074	$3,417	$3,417	$3,417
Two Insulated Bearings	$2,319	$2,400	$2,427	$2,700	$3,027	$3,069	$4,374	$5,529	$6,144	$6,144	$6,834	$6,834	$6,834
Conduit													
Oversized Conduit Box		$45			$135	$214	$196	$196	$495	$495			
Condulet mounted to side of conduit box	$436	$436	$436	$436	$436	$436	$436	$436	$436	$436	$436	$436	$436
Armored Cable Gland	$249	$249	$249	$276	$276	$1,107	$1,107	$1,746	$1,746	$4,897	$9,000	$9,000	$9,000
Unarmored Cable Gland	$122	$122	$175	$175	$258	$406	$457	$457	$963	$963	$3,750	$3,750	$3,750
CSA Cable Gland	$299	$299	$299	$332	$332	$1,328	$1,328	$2,095	$2,095	$5,876	$10,800	$10,800	$10,800
Corrosion Resistance													
Stainless Steel Fasteners	$180	$180	$180	$180	$240	$248	$303	$413	$507	$627	$699	$699	$699
Division 2													
Self Certified Division 2 Nameplate	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125
Drip Cover	$185	$185	$185	$185	$185	$369							
Flanges													
C-Face End Shield Kit	$134	$134	$134	$234	$234	$779	$813	$813	$1,167	$1,167			
D-Flange End Shield Kit						$1,001	$1,167	$1,167	$1,178	$1,785			
Lubrication													
Automatic Grease Relief	$38	$38	$38	$38	$38	$38	$38	$38	$38	$38	$90	$90	$90
Oil Mist Lubrication	$810	$810	$810	$810	$810	$810	$810	$810	$810	$810	$810	$810	$810
Button Head Grease Fittings	$250	$250	$250	$250	$250								
Nameplate													
380V 50HZ Rerate	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125
Mounting													
Vertical Jack Screws	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250
F2 Mounting	$250	$250	$250	$500	$500	$750	$750	$1,000	$1,000	$1,000			
Seals (DE or ODE)													
Bronze INPRO Seal	$150	$150	$165	$188	$210	$255	$500	$563	$675	$900	$1,050	$1,088	$1,350
Stainless Steel INPRO Seal		$300	$315	$338	$360	$405	$650	$713	$825	$1,050	$1,200	$1,238	$1,500
ProTECH Seal	$113	$113	$128	$150	$188	$210	$413	$450	$563	$750	$863	$900	$1,050
Space Heaters													
Standard Space Heater (LV Motors)	$219	$219	$219	$219	$327	$327	$393	$480	$569	$642	$642	$642	$642
Standard Space Heater (MV Motors)									$1,005	$1,079	$1,155	$1,155	$1,155
Thermostatically Controlled Space Heater (LV Motors)		$509	$608	$608	$608	$870	$870	$870	$1,013	$1,013	$1,380	$1,380	$1,380
Thermostatically Controlled Space Heater (MV Motors)									$1,088	$1,088	$1,440	$1,440	$1,440
Thermal Protection													
Class B Normally Open Alarm Thermostat	$135	$135	$135	$135	$135	$180	$180	$248	$248	$305	$315	$315	$315
Class B Normally Closed Trip Thermostat	$225	$225	$225	$225	$225	$270	$270	$371	$371	$437	$468	$468	$468
Class B Normally Closed Alarm Thermostat	$225	$225	$225	$225	$225	$270	$270	$371	$371	$437	$468	$468	$468
Class F Normally Open Alarm Thermostat	$149	$149	$149	$149	$149	$198	$198	$272	$272	$335	$347	$347	$347
Class F Normally Closed Trip Thermostat	$227	$227	$227	$227	$227	$297	$297	$403	$403	$500	$501	$501	$501
Class F Normally Closed Alarm Thermostat	$227	$227	$227	$227	$227	$297	$297	$403	$403	$500	$501	$501	$501
Class H Normally Open Alarm Thermostat	$164	$164	$164	$164	$164	$218	$218	$300	$300	$367	$381	$381	$381
Class H Normally Closed Trip Thermostat	$241	$241	$241	$241	$241	$329	$329	$450	$450	$516	$588	$588	$588
Class H Normally Closed Alarm Thermostat	$241	$241	$241	$241	$241	$329	$329	$450	$450	$516	$588	$588	$588
Winding RTD						$2,175	$2,850	$2,850	$2,993	$2,993	$3,015	$3,015	$3,015
Bearing RTD								$1,540	$2,000	$2,000	$2,000	$2,000	$2,000

*If you have any questions, or require a modification that is not listed, please contact your GE Power Conversion Sales Representative or call 800-541-7191.
*Pricing subject to change without notice. Verify pricing and lead time with your GE Sales Representative at time of order.

10.0 Technical Reference Guide

10.1 Index

I. Electrical Design

10.2 Voltage
10.3 Voltage and Frequency Variation
10.4 Voltage Unbalance
10.4 Frequency
10.5 Polyphase or Single-Phase Power
10.5 Motor Output Rating
10.6 Torque and Horsepower
10.12 Polyphase Motors Larger than 500 Hp
10.12 Single-Phase Motors
10.12 Service Factor
10.13 Motor Temperature
10.14 Duty Cycle Applications
10.16 Starting
10.17 Power Factor
10.18 Winding Connections and Starting
10.20 Electrical Modifications

II. Mechanical Design

10.23 Frame Designation System
10.23 Drains and Breathers
10.23 Mounting Configurations
10.25 Dynamic Balance
10.25 Bearing System
10.26 Winding Treatment
10.27 Adjustable Speed Inverter Duty Operation
10.28 Load Connection
10.31 Load Calculations
10.32 Mechanical Modifications
10.35 Vibration Detection
10.36 Motor Testing

III. Efficiency

10.38 Definition of Efficiency
10.39 Premium Efficiency
10.40 IEC Efficiency Levels
10.41 Simple Pay Back Calculations

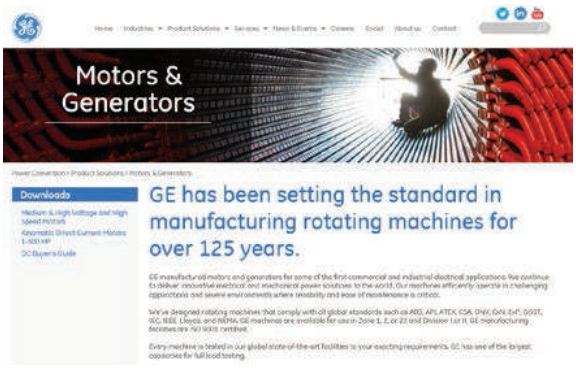
IV. Classifications/Environment

10.42 Environmental Considerations
10.42 Hazardous “Classified” Locations
10.44 Environmental Modifications

V. Reference

10.46 NEMA vs IEC Motors
10.49 Annexure
10.51 Reference

On the Web



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Index

50 HZ Operation 10.5
Altitude 10.44
Ambient 10.45
Applications, Quick Reference 10.48
Balance, Dynamic 10.25
Bearing Life 10.32
Bearing Lubrication 10.25
Bearing Systems, Horizontal 10.25
Bearing Thermal Protection 10.32
Brakes 10.32
Cable Glands 10.20
C-Face Mounting 10.34
Conduit Box, Special 10.33
Connection, Winding 10.18
Cooling 10.13
Corona Inception Voltage 10.37
Couplings, Half 10.33
Current Transformers 10.20
Current, General 10.7
Current, Low Starting 10.21
D-Flange Mounting 10.34
Design A and B (Types K and KS) 10.8
Design C (Types KG and KGS) 10.8
Design Comparison, Polyphase 10.9
Design D (Type KR) 10.8
Design L (Type C) 10.12
Dowel Holes 10.33
Drip Covers 10.45
Dual Voltage 10.2
Duty Cycle Application 10.14
Dynamic Balance 10.25
Efficiency Levels – IEC 10.40
Efficiency, Definition 10.38
Enclosure / Cooling Comparison of IEC / NEMA 10.23
Enclosure, Materials 10.23
Enclosures 10.42
Endshields, Special 10.33
Explosion-Proof Motors 10.42
Export Boxing 10.45
Frame Designation, IEC / NEMA Comparison 10.23
Frame, Non-standard 10.34
Frequency, Definition 10.4
Frequency, Dual 10.5
Frequency, Standards 10.4
Frequency, Variation 10.5
Grease Fittings 10.34
Grease, Special 10.45
Grounding 10.20
Hardware 10.45
Hazardous Locations 10.42
Hazardous Locations, per ATEX 10.44
Horsepower 10.6
Inertia, Load 10.16
Insulation Class 10.13
Leads, Special 10.21
Load Calculation (Belt Drive) 10.31
Load Connection 10.28
Load, High Inertia 10.16
Losses, General 10.38
Losses, Types of 10.38
Lubrication 10.25
Model Number Nomenclature 10.47
Mounting Configurations – NEMA 10.23
Mounting Configurations – IEC 10.24
Mounting Configurations Comparison – IEC / NEMA 10.25
Paint, Special 10.45
Paint, Standard 10.45
Polyphase Motors, 1-500 Hp 10.8
Polyphase Motors, 500 Hp and Up 10.12
Polyphase, Design Comparison 10.9
Power Factor 10.17
Power, Polyphase 10.5
Power, Single-phase 10.5
Premium Efficiency, per NEMA 10.39
Premium Efficiency, per IEC 10.40
Screens 10.45
Service Factor 10.12
Shaft Seals 10.46
Shaft Slinger 10.35
Shafts, Special 10.34
Sheave, Limiting Dimensions 10.30
Single-phase Power 10.5
Space Heaters 10.21
Speed 10.5
Starting Connections 10.18
Starting Frequency 10.16
Surge Protection 10.21
Temperature Rise, Standard 10.13
Temperature Rise, Special 10.21
Terminals, Special 10.21
Testing 10.36
Thermal Protection 10.21
Thermostats, Thermistors, RTD 10.22
Torque comparison IEC / NEMA for LRT, PUT and BDT 10.9
Torque, Breakdown 10.6
Torque, Definition 10.6
Torque, Locked-rotor 10.6
Torque, Pull-up 10.6
Torque 10.6
Type KC Motors (Design L) 10.12
Type KR Motors (Design D) 10.8
Types K and KS Motors (Design A and B) 10.8
Variable Frequency Operation 10.5
Vertical Jack Screws 10.35
Vibration Switch / Probe 10.35
Voltage 10.2
Voltage, Definition 10.2
Voltage, Low Starting 10.4
Voltage, Special 10.2
Voltage, Unbalance 10.4
Voltage, Variation 10.3
Winding Connections and Starting 10.18
Winding Treatment – Custom Polyseal® 10.26
Winding Treatment – Trickle Treat 10.26
Winding Treatment – Vacuum Pressure Impregnated 10.26
Winding Treatment, Special 10.26

I. ELECTRICAL DESIGN

VOLTAGE

DEFINITION

The motor nameplate voltage is determined by the available power supply, which must be known in order to properly select a motor for a given application. The nameplate voltage will normally be less than the nominal distribution system voltage.

The distribution voltage is the same as the supply transformer voltage rating; the utilization (motor nameplate) voltage is set at a slightly lower level to allow for a voltage drop in the system between the transformer and the motor leads.

Some specification still call for 220, 440 or 550 volt motors which were the long accepted standards. However, modern distribution systems have transformers located adjacent to secondary unit substations or load centers, plant wide power factor correction and shorter power line runs. The result is a stiffer distribution system which delivers higher voltage at the motor. The following motor nameplate voltages provide the best match to distribution system voltages and meet current motor design practices.

Table 1: Standard 60 HZ Nameplate Voltages

Nominal Distribution System Voltage	Motor Nameplate Voltage	
Polyphase 60 HZ	Below 125 Hp	125 Hp & Up
208	200	-
240	230	-
480	460	460
600	575	575
2400	2300	2300
4160	4000	4000
	-	6600
Single-phase 60 HZ		
120	115	-
208	200	-
240	230	-

NOTE: Distribution system voltages vary from country to country; therefore, motor nameplate voltage should be selected for the country in which it will be operated. Though, generally it is observed of nominal voltages of 230V/400V or 400V/690V. Additionally references for 'System voltages' can be found in IEEE 141 and IEC 60038.

SPECIAL VOLTAGES

Special motor designs are required for nameplate voltages other than those listed in Tables 1 and 2. Motors greater than 100 horsepower rated less than 34 volts will not be furnished without approval of the Company. Motors with nameplate voltages different than those listed in Tables 1 or 2.

Table 2: Standard 50 HZ Nameplate Voltages

Nominal Distribution System Voltage	Motor Nameplate Voltage	
Polyphase 50 HZ	Below 125 Hp	125 Hp & Up
See Note	200	-
	220	-
	380	380
	400	400
	415	415
	550	550
	690	690
	-	3000
	-	6600
Single-phase 60 HZ	-	3300
120	110	-
208	200	-
240	220	-

DUAL VOLTAGE MOTORS

Polyphase and single-phase motors may be furnished as dual voltage ratings under the following conditions:

1. Both voltages are standard for the particular rating as listed in Tables 1 and 2.

2. The two voltages are in a ratio of either 1:2 or 1:√3 (e.g. 230/460, 60 HZ; 2300/4000, 60 HZ; or 220/380, 50 HZ).

3. Single-phase voltage ratios are 1:2 only.

VOLTAGE AND FREQUENCY VARIATION

All motors are designed to operate successfully with limited voltage and frequency variations. However, voltage variation with rated frequency must be limited to ±10% and frequency variation with rated voltage must be limited to ±5%. The combined variation of voltage and frequency must be limited to 10% (subject to the sum of absolute value with frequency variation not exceeding ±5% of rated value). Variations are expressed as deviation form motor nameplate values, not necessarily system nominal values. The allowable ±10% voltage variation is based upon the assumption that horsepower will not exceed nameplate rating and that motor temperature may increase. For instance, a 230 volt motor operating at 207 volts (90% of rated) loses any service factor indicated on the nameplate, and could run hotter than at rated voltage.

The following conditions are likely to occur with variations in voltage:

A. An increase or decrease in voltage may result in increased heating at rated horsepower load. Under extended operation this may accelerate insulation deterioration and shorten motor insulation life.

B. An increase in voltage will usually result in a noticeable decrease in power factor. Conversely, a decrease in voltage will result in an increase in power factor.

C. Locked-rotor and breakdown torque will be proportional to the square of the voltage. Therefore, a decrease in voltage will result in a decrease in available torque.

D. An increase of 10% in voltage will result in a reduction of slip for approximately 17%. A voltage reduction of 10% would increase slip by about 21%.

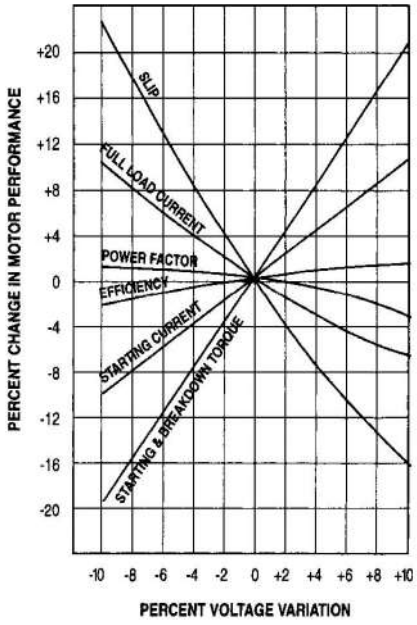


Figure 1: Performance variations with respect to Voltage Variation.

The following conditions are likely to occur with variations in frequency:

A. Frequency greater than rated frequency normally improves power factor but decreases locked-rotor and maximum torque. This condition also increases speed, and therefore, friction and windage losses.

B. Conversely, a decrease in frequency will usually lower power factor and speed while increasing locked-rotor maximum torque and locked-rotor current.

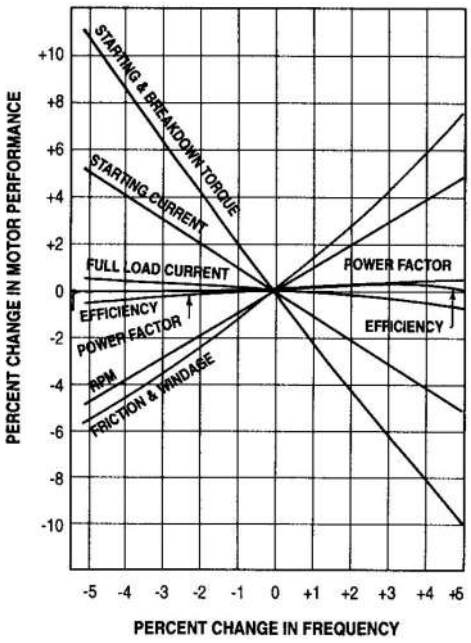


Figure 2: Performance variations with respect to Frequency Variation

VOLTAGE UNBALANCE

Unbalanced line voltages applied to a polyphase motor result in unbalanced currents in the stator windings. Even a small percentage of current unbalance, thus increasing temperature rise and possibly resulting in nuisance tripping.

Voltages should be as evenly balanced as can be read on a voltmeter. If voltages are unbalanced, the rated horsepower of the motor should be derated, based upon the percent unbalance, as shown in the following graph

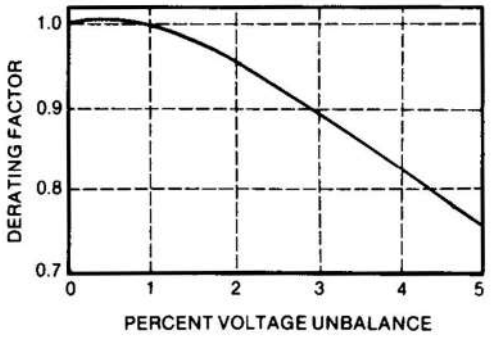


Figure 3: Voltage Unbalance is calculated as follows:

$$\text{Percent Unbalance} = 100 \times \frac{\text{Maximum Voltage Deviation From Average Voltage}}{\text{Average Voltage}}$$

For instance, a 100 horsepower, three-phase motor operating with voltages of 598, 575 and 552 applied at the motor terminals,
Average Voltage = (598+575+552)/3 = 575V
Voltage deviation from average Voltage = Absolute (575-598) = 23V; Absolute (575-552) = 23V; Absolute (575-575) = 0V
Maximum deviation from average voltage = 23V
%Unbalance = 100*23/575 = 4%

From Figure 3, the rated output of 100 horsepower should be derated to approximately 82 Hp to reduce the possibility of damage to the motor. Motor operation above 5% voltage unbalance is not recommended.

Unbalance voltages will produce the following effects on performance characteristics:

Torques:	Unbalanced voltage results in reduced locked-rotor and breakdown torques for the application.
Full-Load Speed:	Unbalanced voltage results in a slight reduction of full-load speed.
Current:	Locked-rotor current will be unbalanced to the same degree that voltages are unbalanced but locked-rotor KVA will increase only slightly. Full-load current at unbalanced voltage will be unbalanced in the order of six to ten times the voltage unbalance.
Temperature Rise:	A 3.5% voltage unbalance will cause an approximate 25% increase in temperature rise.

LOW STARTING VOLTAGE

Large motors may experience a considerable voltage drop at the motor terminals when started due to large inrush current values. Motors can be designed to compensate for the drop in voltage. For example, motors in frames 143-5013 can be supplied for operation under low starting voltage conditions down to 65% of nameplate rated voltage. The inertia referred to the motor shaft, the type of load (constant or variable torque), and the expected voltage drop must be provided to allow evaluation of the application for each rating involved. In any case, motors designed for low starting voltage may have higher than standard inrush current when started on full rated voltage.

FREQUENCY

DEFINITION

Frequency can be defined as the number of complete alternations-per-second of an alternating current

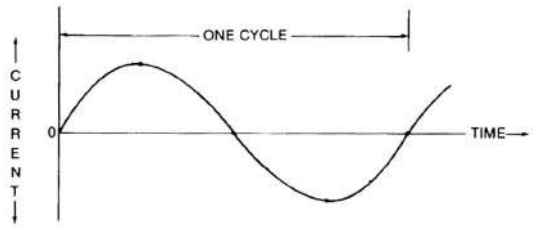


Figure 4

As shown in Figure 4 above, current is said to have been through one complete cycle when it has gone from zero to maximum, to minimum, and back to zero again. Frequency is the number of these complete cycles over the passage of time and is usually expressed as HZ: one HZ equals one cycle per second (cps). Predominant power system frequency in North America is 60 HZ.

FREQUENCY STANDARDS

The predominant power system frequency in the United States is 60 HZ. However, 50 HZ systems are common in other countries. Other systems such as 40 HZ and 25 HZ are isolated and relatively few in number.

50 HZ OPERATION OF 60 HZ MOTORS

General Electric standard motors rated at 60 HZ may be successfully operated at 50 HZ at reduced voltage and horsepower as shown in the following table:

Table 3

Motor Rated 60 HZ Voltage	50 HZ Operational Voltage Rating (±5%)		
230	190	200	208
460	380	400	415
575	475	500	-
De-rate factor	.85	.90	1.00

- Rated Hp at 50 HZ = Nameplate Hp x De-rate Factor
- Allowable voltage variation at de-rated Hp = ±5%
- Select motor overload protection for 60 HZ amps and 1.0 Service Factor
- Motor speed = 5/6 nameplate rated speed
- Service Factor = 1.0

60 HZ motors intended for use as shown above should be ordered as 60 HZ motors with no reference to 50 HZ operation.

DUAL FREQUENCY

Motors that require 50 HZ and 60 HZ operation of the same motor are non-NEMA defined motors and will be nameplate as such. When this is a motor requirement, it must be specified with the order.

Some of our stock motors are nameplated 50/60 HZ and others can be re-rated; refer to technical support or EliteNet.

VARIABLE FREQUENCY OPERATION

Motors are available for use on variable frequency inverters of various types:

1. VVI is a square wave inverter in which voltage and frequency vary in proportion (constant volts per HZ).

2. PWM is a pulse width modulated inverter and the same as the VVI type except pulses are varied in time to simulate a sine wave.
   2a. IGBT is a pulse width modulated inverter using a bipolar transistor for higher switching speeds. This technology provinces a cleaner resolved sine wave on a carrier frequency above the audible range.
   2b. Vector control

3. CCI is a constant current inverter, which utilizes a square wave current supply as opposed to voltage.

When applying a motor for use with a variable frequency drive, see section on special applications (For more details, refer to page 10.48).

POLYPHASE OR SINGLE-PHASE POWER

DEFINITION

A power system can be either single-phase or polyphase. Figure 4 illustrates single-phase power, which is most commonly found in homes, rural areas and in small commercial establishments.

A polyphase power system consists of two or more alternating currents of equal frequency and amplitude but offset from each other by a phase angle. Figure 5 illustrates a three phase power system having phases A, B, and C. Each phase is offset by 120 degrees, 360 degrees being the span of one complete cycle.

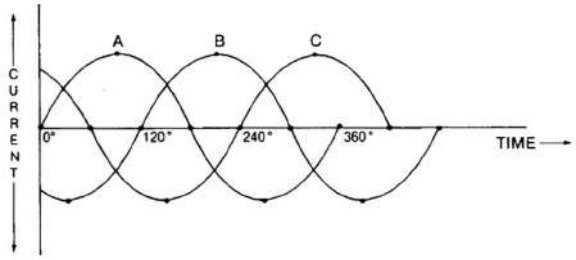


Figure 5: Three-phase Power

For motors, an advantage of three-phase power is simpler construction which requires less maintenance. Also, a more powerful machine can be built into a smaller frame and will generally operate at a higher efficiency than single-phase motors of the same rating.

MOTOR OUTPUT RATING

SPEED

The speed at which an induction motor operates is dependent upon the input power frequency and the number of electromagnetic poles for which the motor is wound. The higher the frequency, the faster the motor runs. The more poles the motor has, the slower it runs. The speed of the rotating magnetic field in the stator is called synchronous speed. To determine the synchronous speed of an induction motor, the following equation is used:

$$\text{Synchronous Speed (RPM)} = \frac{60 \times 2 \times \text{Frequency}}{\text{Number of Poles}}$$

Actual full-load speed (the speed at which an induction motor will operate at nameplate rated load) will be less than synchronous speed. The difference between synchronous speed and full-load speed is called slip. Percent slip is defined as follows:

$$\text{Percent slip} = \frac{\text{Synchronous Speed - Full Load Speed}}{\text{Synchronous Speed}} \text{ (x 100)}$$

Induction motors are built having rated slip ranging from less than 5% to as much as 20%. A motor with a slip of less than 5% is called a normal slip motor. Motors with a slip of 5% or more are used for applications requiring high starting torque (conveyor) and /or higher than normal slip (punch press) where, as the motor slows down, increased torque allows for flywheel energy release.

TORQUE AND HORSEPOWER

Torque and horsepower are two key motor characteristics that determine the size of the motor for an application. The difference between the two can be explained using a simple illustration of a shaft and wrench.

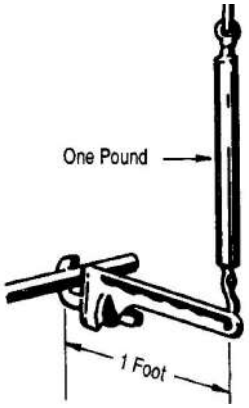


Figure 6

Torque is merely a turning effort or force acting through a radius. In Figure 6 , it takes one pound at the end of the one foot wrench to turn the shaft at a steady rate. Therefore, the torque required is one pound times one foot, or one pound-foot. If the wrench were turned twice as fast, the torque required would remain the same, provided it is turned at a steady rate.

Horsepower, on the other hand, takes into account how fast the shaft is turned. Turning the shaft rapidly require more horsepower than turning it slowly. Thus, horsepower is a measure of the rate at which work is done. By definition, the relationship between torque and power is as follows:

1 Horsepower = 33,000 lb.-ft./minute

or

1 Horsepower = 0.746 kilowatt

1 kilowatt = 1,000 N-m/Sec

In the above example, the one pound force moves a distance of 1 foot x 2π x 1 pound, or 6.28 feet per revolution. To produce one horsepower, the shaft would have to be turned at a rate of:

$$\frac{1 \text{ Hp} \times 33{,}000 \text{ lb-ft/min/Hp}}{1 \text{ lb} \times 2} = 5{,}252 \text{ RPM}$$

From the above, an equation is derived for determining horsepower output from speed and torque in lb-ft.

$$\text{Hp} = \frac{\text{RPM} \times 2\pi \times \text{Torque}}{33{,}000} \quad \text{or Hp} = \frac{\text{RPM} \times \text{Torque}}{5{,}252}$$

Or when output is in kW and Torque is in N-m;

$$\text{kW} = \frac{\text{RPM} \times 2\pi \times \text{Torque}}{60{,}000} \quad \text{or kW} = \frac{\text{RPM} \times \text{Torque}}{9{,}549}$$

From this relationship:

$$\text{Full-Load torque in lb-ft} = \frac{\text{Hp} \times 5{,}252}{\text{Full load RPM}}$$

OR

$$\text{Full-Load torque in N-m} = \frac{\text{kW} \times 9{,}549}{\text{Full load RPM}}$$

The following graph illustrates a typical speed torque curve for a NEMA design B induction motor. An understanding of several points on this curve will aid in properly applying motors.

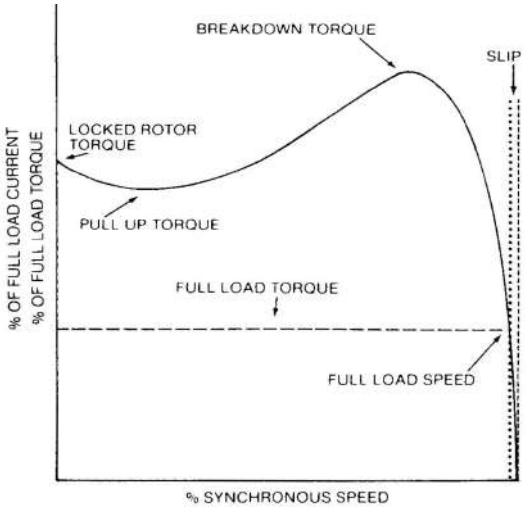


Figure 7: Speed Torque Curve

LOCKED-ROTOR TORQUE

Locked-rotor torque ('Breakaway Torque' or 'Starting Torque') is the torque which the motor will develop at rest (for all angular positions of the rotor) with rated voltage at rated frequency applied. It is also sometimes known as starting torque and is usually expressed as a percentage of full-load torque.

PULL-UP TORQUE

Pull-up (pull-in) torque is the minimum torque developed during the period of acceleration from locked-rotor to the speed at which breakdown torque occurs. For motors which do not have a definite breakdown torque (such as NEMA design D) pull-up torque is the minimum torque developed up to rated full-load speed. It is usually expressed as a percentage of full-load torque.

NOTE: Pull-in Torque and pull-out Torque are terms used for synchronous motors.

BREAKDOWN TORQUE

Breakdown (Maximum or Pull-out) torque is the maximum torque the motor will develop with rated voltage applied at rated frequency without an abrupt drop in speed. Breakdown torque is usually expressed as a percentage of full-load torque.

FULL-LOAD TORQUE

Full-load torque is the torque necessary to produce rated horsepower at full-load speed. In pound-feet, it is equal to the rated horsepower times 5252 divided by the full-load speed in RPM.

MOTOR CURRENT

In addition to the relationship between speed and torque, the relationship of motor current to these two values is an important application consideration. The speed/torque curve is repeated below with the current curve added to demonstrate a typical relationship.

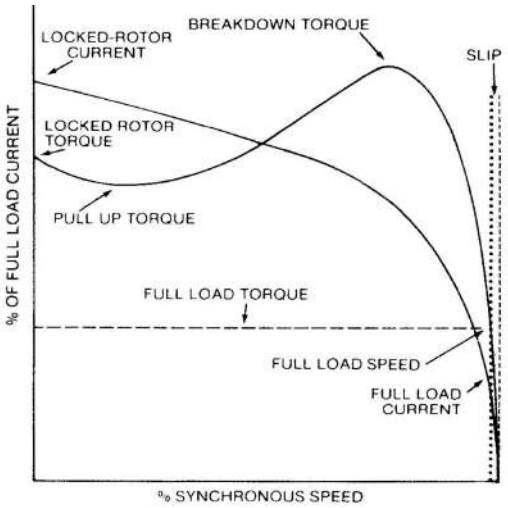


Figure 8: Speed, Torque, Current Curve

Two important points on this current curve need to be examined:

FULL-LOAD CURRENT

The full-load current of an induction motor is the steady-state current taken from the power line when the motor is operating at the full-load torque with rated voltage and rated frequency applied.

LOCKED-ROTOR CURRENT

Locked-rotor current is the steady-state current of a motor with the rotor locked and with rated voltage applied at rated frequency. NEMA has designated a set of code letters to define locked-rotor kilovolt-amperes-per-horsepower. This code letter appears on the nameplate of all AC squirrel-cage induction motors. KVA per horsepower is calculated as follows:

For three-phase motors:

$$\text{KVA/Hp} = \frac{\sqrt{3} \times \text{LR current (in amperes)} \times \text{volts}}{1{,}000 \times \text{Hp}}$$

For single-phase motors:

$$\text{KVA/Hp} = \frac{\text{LR current (in amperes)} \times \text{volts}}{1{,}000 \times \text{Hp}}$$

Table 4: Locked-Rotor Current Code Letters

Letter Designation	KVA per Hp*
A	0-3.15
B	3.15-3.55
C	3.55-4.0
D	4.0-4.5
E	4.5-5.0
F	5.0-5.6
G	5.6-6.3
H	6.3-7.1
J	7.1-8.0
K	8.0-9.0
L	9.0-10.0
M	10.0-11.2
N	11.2-12.5
P	12.5-14.0
R	14.0-16.0
S	16.0-18.0
T	18.0-20.0
U	20.0-22.4
V	22.4 and up

*The locked-rotor kilovolt-amperes-per-horsepower range includes the lower figure up to, but not including, the higher figure. For example, 3.14 is letter "A" and 3.15 is letter "B".

By manipulating the preceding equation for KVA/Hp for three-phase motors the following equation can be derived for calculating locked-rotor current:

$$\text{LRA} = \frac{1{,}000 \times \text{Hp} \times \text{Locked-Rotor KVA/Hp}}{\sqrt{3} \times \text{Volts}}$$

This equation can then be used to determine approximate starting current of any particular motor. For instance, the approximate starting current for a 7.5 Hp, 230 volt motor with a locked-rotor KVA code letter G would be:

$$\text{LRA} = \frac{1{,}000 \times 7.5 \times 6.0}{\sqrt{3} \times 230}$$

Operating a motor in a locked-rotor condition in excess of 20 seconds can result in insulation failure due to the excessive heat generated in the stator. Figure 9 illustrates the maximum time a motor may be operated at locked-rotor without injurious heating. This graph assumes a NEMA design B motor with a class B or F temperature rise.

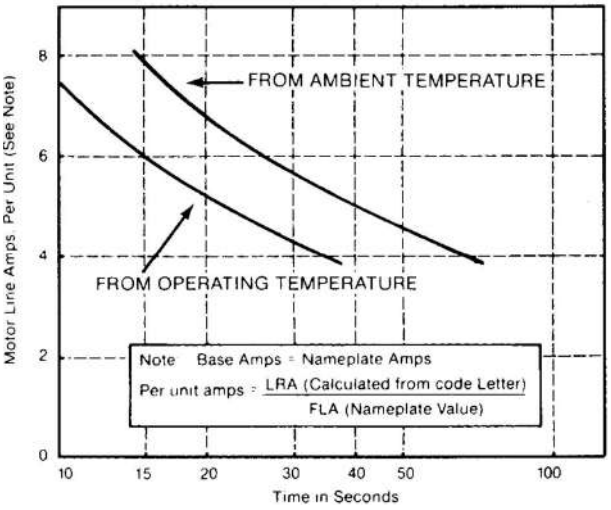


Figure 9: Line Current vs. Safe Stall Time for Standard Induction Motors.

Motor protection, either inherent or at the motor control should be selected to limit stall time of the motor.

POLYPHASE MOTORS, 1-500 Hp

NEMA has designated several specific types of motors, each type having unique speed/torque relationships. These designs are described below along with some typical applications for each. Following these descriptions is a summary of performance characteristics.

NEMA DESIGN A & B [1-200 Hp (250 Hp-500 Hp, for 2 & 4 Pole only)]

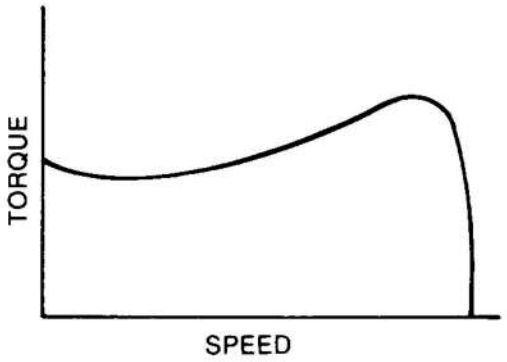


Figure 10: Typical NEMA Design A & B Speed/Torque Curve

GE Types:	K, KS
Starting Current:	Design A - High to Medium (not defined by NEMA) Design B - Low
Starting Torque:	Normal
Breakdown Torque:	Normal
Full-Load Slip:	Low (less than 5%)
Applications:	Fans, blowers, pumps, machine tools, or other uses with low starting torque requirements and essentially constant load.

NEMA DESIGN C (1-200 Hp)

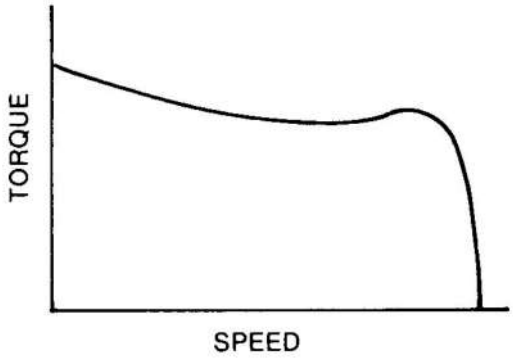


Figure 11: Typical NEMA Design C Speed/Torque Curve

GE Types:	KG, KGS
Starting Current:	Low
Starting Torque:	High
Breakdown Torque:	Normal
Full-Load Slip:	Low (less than 5%)
Applications:	Hard-to-start loads such as plunger pumps, conveyors and compressors.

NEMA DESIGN D (1-150 Hp)

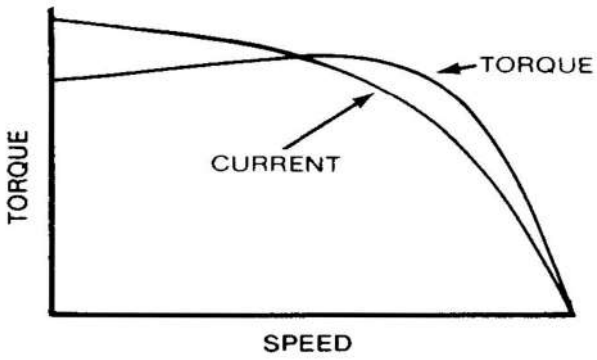


Figure 12: Typical NEMA Design D Speed/Torque Curve

GE Types:	KR
Starting Current:	Low
Starting Torque:	Very High
Breakdown Torque:	Not Applicable
Full-Load Slip:	High (5-8%; 8-13%)
Applications:	The combination of high starting torque and high slip make Type KR motors ideal for very high inertia loads and/or for considerable variations in load; e.g., punch presses, shears, cranes, hoists and elevators.

The following tables compare NEMA Polyphase design for several performance criteria

Table 5: Comparison of Polyphase Designs

NEMA Design	Starting Current	Locked-Rotor Torque	Breakdown Torque	% Slip	Applications
A	High to medium	Normal	Normal	Max 5%	Broad applications including fans, blowers, pumps, machined tools
B	Low	Normal	Normal	Max 5%	Normal Starting torque for fans, blowers, rotary pumps, unloaded compressors, some conveyors, metal cutting machine tools, misc machinery. Constant load speed.
C	Low	High	Normal	Max 5%	High inertia starts such as large centrifugal blowers, flywheels and crusher drums. Loaded starts such as piston pumps, compressors and conveyors. Constant load speed.
D	Low	Very High	N/A	N/A	Very high inertia and loaded starts. Choice of slip to match load.
				5-8%	1) Punch presses, shears and forming machine tools.
				8-13%	2) Cranes, hoists, elevators and oil well pumping jacks.

LOCKED ROTOR TORQUE

Table 6: Minimum Locked Rotor Torque - NEMA, MG-1, Part 12 (% Full-Load Torque)

Hp	Design A and B (ref. NEMA Table 12-2)							Design C (ref. NEMA Table 12-3)			Design D		
RPM @ 60 HZ	3600	1800	1200	900	720	600	514	1800	1200	900	1800	1200	900
RPM @ 50 HZ	3000	1500	1000	750	-	-	-	1500	1000	750	1500	1000	750
1	-	275	170	135	135	115	110	285	255	225	275	275	275
1.5	175	250	165	130	130	115	110	285	250	225	275	275	275
2	170	235	160	130	125	115	110	285	250	225	275	275	275
3	160	215	155	130	125	115	110	270	250	225	275	275	275
5	150	185	150	130	125	115	110	271	250	225	275	275	275
7.5	140	175	150	130	125	115	110	272	250	225	275	275	275
10	135	165	150	125	120	115	110	273	250	225	275	275	275
15	130	160	140	125	120	115	110	274	250	225	275	275	275
20	130	150	135	125	120	115	110	200	200	200	275	275	275
25	130	150	135	125	120	115	110	200	200	200	275	275	275
30	130	150	135	125	120	115	110	200	200	200	275	275	275
40	125	140	135	125	120	115	110	200	200	200	275	275	275
50	120	140	135	125	120	115	110	200	200	200	275	275	275
60	120	140	135	125	120	115	110	200	200	200	275	275	275
75	105	140	135	125	120	115	110	200	200	200	275	275	275
100	105	125	125	125	120	115	110	200	200	200	275	275	275
125	100	110	125	120	115	115	110	200	200	200	275	275	275
150	100	110	120	120	115	115	-	200	200	200	275	275	275
200	100	100	120	120	115	-	-	200	200	200	-	-	-
250	70	80	100	100	-	-	-	-	-	-	-	-	-
300-350	70	80	100	-	-	-	-	-	-	-	-	-	-
400-500	70	80	-	-	-	-	-	-	-	-	-	-	-

PULL-UP TORQUE

The pull-up torque for NEMA design A, B and C motors are listed in Table 7 with rated voltage and frequency applied, and torques will not be less than the following:

Table 7: Minimum Pull-up Torque - NEMA MG-1, Part 12 (% of Full Load Torque)

Hp	Design A and B							Design C		
RPM @ 60 HZ	3600	1800	1200	900	720	600	514	1800	1200	900
RPM @ 50 HZ	3000	1500	1000	750	-	-	-	1500	1000	750
0.75	-	-	120	100	100	100	100	-	-	-
1	-	190	120	120	100	100	100	195	180	165
1.5	120	175	115	115	100	100	100	195	175	160
2	120	165	110	110	100	100	100	195	175	160
3	110	150	110	110	100	100	100	180	175	160
5	105	130	105	105	100	100	100	180	175	160
7.5	100	120	105	105	100	100	100	175	165	150
10	100	115	105	105	100	100	100	175	165	150
15	100	110	100	100	100	100	100	165	150	140
20	100	105	100	100	100	100	100	165	150	140
25	100	105	100	100	100	100	100	150	150	140
30	100	105	100	100	100	100	100	150	150	140
40	100	100	100	100	100	100	100	150	150	140
50	100	100	100	100	100	100	100	150	150	140
60	100	100	100	100	100	100	100	140	140	140
75	95	100	100	100	100	100	100	140	140	140
100	95	100	100	100	100	100	100	140	140	140
125	90	100	100	100	100	100	100	140	140	140
150	90	100	100	100	100	100	100	140	140	140
200	90	90	100	100	100	-	-	140	140	140
250	65	75	90	90	-	-	-	-	-	-
300-350	65	75	90	-	-	-	-	-	-	-
400-500	65	75	-	-	-	-	-	-	-	-

BREAKDOWN TORQUE

Table 8: Minimum Breakdown Torque - NEMA MG-1, Part 12 (% of Full Load Torque)

Hp	Design A and B							Design C		
RPM @ 60 HZ	3600	1800	1200	900	720	600	514	1800	1200	900
RPM @ 50 HZ	3000	1500	1000	750	-	-	-	1500	1000	750
1	-	300	265	215	200	200	200	285	255	225
1.5	250	280	250	210	200	200	200	285	250	225
2	240	270	240	210	200	200	200	285	250	225
3	230	250	230	205	200	200	200	270	250	225
5	215	225	215	205	200	200	200	271	250	225
7.5	200	215	205	200	200	200	200	272	250	225
10	200	200	200	200	200	200	200	273	250	225
15	200	200	200	200	200	200	200	274	250	225
20	200	200	200	200	200	200	200	200	200	200
25	200	200	200	200	200	200	200	200	200	200
30	200	200	200	200	200	200	200	200	200	200
40	200	200	200	200	200	200	200	200	200	200
50	200	200	200	200	200	200	200	200	200	200
60	200	200	200	200	200	200	200	200	200	200
75	200	200	200	200	200	200	200	200	200	200
100	200	200	200	200	200	200	200	200	200	200
125	200	200	200	200	200	200	200	200	200	200
150	200	200	200	200	200	200	-	200	200	200
200	200	200	200	200	200	-	-	200	200	200
250	175	175	175	175	-	-	-	-	-	-
300	175	175	175	-	-	-	-	-	-	-
300	175	175	175	-	-	-	-	-	-	-
400-500	175	175	-	-	-	-	-	-	-	-

TABLE 9: Comparison of NEMA Design A and B / IEC Starting Characteristics for Normal Starting Torque Cage Motors

Number of Poles		2			4			6			8		
Hp	kW	TI	Tu	Tb	TI	Tu	Tb	TI	Tu	Tb	TI	Tu	Tb
3	2.2	160/170	110/100	230/200	215/180	150/120	250/200	155/160	110/110	230/190	130/140	100/100	205/180
5	3.7	150/160	105/110	215/200	175/170	130/120	225/200	150/150	105/110	215/190	130/130	100/100	205/180
7.5	5.5	140/150	100/100	200/200	175/160	120/110	215/200	150/150	105/110	205/190	125/130	100/100	200/180
10	7.5	135/150	100/100	200/200	165/160	115/110	200/200	150/150	105/110	200/180	125/135	100/100	200/170
15-20	11-15	130/140	100/100	200/200	150/150	105/110	200/200	135/140	100/100	200/180	125/120	100/90	200/170
25-30	18.5-22.5	130/130	100/90	200/190	150/140	105/100	200/190	135/140	100/100	200/180	125/120	100/90	200/170
40-50	30-37	120/120	100/90	200/190	140/130	100/100	200/190	135/130	100/100	200/180	125/120	100/90	200/170
60-75	45-56	105/110	95/80	200/180	140/120	100/90	200/180	135/120	100/90	200/170	125/110	100/80	200/170
100-125	75-93	100/100	90/70	200/180	110/110	100/80	200/180	125/110	100/80	200/170	120/100	100/70	200/160
150-200	110-150	100/90	90/70	200/170	100/100	90/80	200/170	120/100	100/80	200/170	120/90	100/70	200/160
250-300	186-220	70/80	65/60	200/170	80/90	70/70	175/170	100/90	90/70	175/160	60/90	60/70	175/160
350-500	260-370	70/75	65/60	175/160	80/75	70/60	175/160	60/75	60/60	175/160	60/75	60/60	175/160
600-800	450-600	60/65	60/50	175/160	60/65	60/50	175/160	60/65	60/50	175/160	60/65	60/50	175/160

Notes:

(1) First value indicates NEMA and Second value indicates IEC.
(2) TI = Locked-rotor torque, percentage of full-load torque
(3) TU = Pull-up torque, percentage of full-load torque
(4) Tb = Breakdown torque, percentage of full-load torque
(5) Minimum values with no negative tolerance
(6) Where the horsepower's are in scope, this table is for NEMA Designs A or B
(7) NEMA value corresponds to maximum horsepower and the torques for the lower horsepower(s) are equal to or greater than the value shown.

Table 10: Comparison of NEMA Design C / IEC Design H Starting Characteristics for High Starting Torque Cage Motors

Number of Poles		4			6			8		
Hp	kW	TI	Tu	Tb	TI	Tu	Tb	TI	Tu	Tb
3	2.2	*/270	*/180	*/200	255/240	175/165	225/190	225/210	160/150	200/190
5	3.7	250/255	175/180	200/200	250/225	175/165	200/190	225/200	160/150	200/190
7.5-10	5.5-7.5	250/240	175/165	190/200	225/225	160/165	190/190	200/200	140/150	190/190
15	11	225/225	160/165	190/200	200/210	140/150	190/190	200/200	140/140	190/190
20	15	200/225	140/165	190/200	200/210	140/150	190/190	200/200	140/140	190/190
30	22.5	200/210	140/150	190/190	200/210	140/150	190/190	200/200	140/140	190/190
40-50	30-37	200/200	140/150	190/190	200/200	140/150	190/190	200/200	140/140	190/190
75-200	55-150	200/200	140/140	190/190	200/200	140/140	190/190	200/200	140/140	190/190

Notes:

(1) Please refer above Notes from (1) to (6)
(2) *Not defined in NEMA. Design B torques normally adequate for 3 Hp or less.
(3) This table is for NEMA Design C and IEC Design H

POLYPHASE MOTORS LARGER THAN 500 Hp

Rating large than those listed in Tables 6, 7, and 8 are not covered by NEMA design letters, but have minimum torques established by NEMA MG-1 as follows:

Table 11: Motor Torque - NEMA MG-1, Part 20

Torque	*Minimum % of Rated Full-Load Torque
Locked-Rotor	60
Pull-up	60
Breakdown	175

* Higher values can be quoted for specific applications.

Locked-rotor current of these designs will normally not exceed 650% of full-load current, and will normally be within NEMA locked-rotor KVA limits for a code G or H motor.

SINGLE-PHASE MOTORS

NEMA DESIGN L

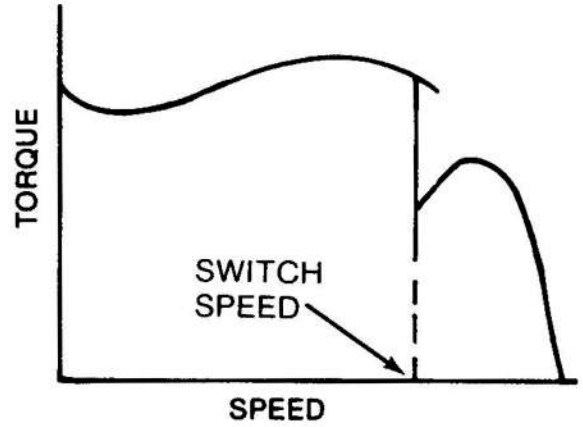


Figure 13: Typical NEMA Design L Speed/Torque Curve

A NEMA Design L motor is a single-phase integral horsepower motor designed to withstand full-voltage starting. The GE offering to meet design limits of design L is a type KC. Starting performance of type KC motors is dependent upon an additional winding controlled by a centrifugal mechanism and switch. Upon energization of the motor, both windings and the run winding of the motor are connected to the line. As the motor comes up to speed, the centrifugal mechanism will actuate and open the switch, removing the start provisions from the line. The RPM at which this occurs is known as "switch speed". The motor will then operate at full-load with only the run windings connected.

Breakdown torques developed by Design L motors are shown in the following table:

Table 12: Single-phase (Design L) Breakdown Torque in lb-ft (NEMA MG-1, Part 10)

Hp	Frequency (HZ)					
	60	50	60	50	60	50
	Synchronous Speed					
	3600	3000	1800	1500	1200	1000
1	-	-	5.16-6.8	6.19-8.2	6.9-9.2	*
1.5	3.6-4.6	4.3-5.5	6.8-10.1	8.2-12.1	9.2-13.8	
2	4.6-6.0	5.5-7.2	10.1-13.0	12.1-15.6	13.8-18.0	*
3	6.0-8.6	7.2-10.2	13.0-19.0	15.6-22.8	18.0-25.8	*
5	8.6-13.5	10.2-16.2	19.0-30.0	22.8-36.0	25.8-40.5	*
7.5	13.5-20.0	16.2-24.0	30.0-45.0	36.0-54.0	40.5-60.0	*
10	20.0-27.0	24.0-32.4	45.0-60.0	54.0-72.0	*	*

* NO torque values have been established for these ratings

Maximum locked-rotor currents for Design L, 60 HZ motors are shown in the following table:

Table 13: Single-phase Maximum Locked-Rotor Current in Amperes at 230 Volts - NEMA MG-1, Part 12.34

Hp	Amps
1	45
1.5	50
2	65
3	90
5	135
7.5	200
10	260

SERVICE FACTOR

Service factor is defined as the permissible amount of overload a motor will handle within defined temperature limits. When voltage and frequency are maintained at nameplate rated values the motor may be overloaded up to the horsepower obtained by multiplying the rated horsepower by the service factor shown on the nameplate. However, locked-rotor torque, locked-rotor current and breakdown torque are unchanged. NEMA has defined service factor values for standard polyphase dripproof, 60 HZ motors as shown in the following table:

Table 14: Service Factor - NEMA MG-1, Part 12

Hp	Synchronous Speed						
	3600	1800	1200	900	720	600	514
1	1.25	1.15*	1.15*	1.15*	1.0	1.0	1.0
1.5-125	1.15*	1.15*	1.15*	1.15*	1.15*	1.15*	1.15*
150	1.15*	1.15*	1.15*	1.15*	1.15*	1.15*	1.0
200	1.15*	1.15*	1.15*	1.15*	1.15*	1.0	1.0
over 200	1.0	1.15*	1.15*	1.15*	1.15*	-	-

Note: Over 250 HP - Synchronous speed may vary after 1800 RPM

* These service factor apply only to NEMA design A, B, and C motors.

MOTOR TEMPERATURE

A major consideration in both motor design and application is heat. Excessive heat will accelerate motor insulation deteriation and cause premature insulation failure. Excessive heat may also cause a breakdown of bearing grease, thus damaging the bearing system of a motor.

The total temperature a motor must withstand is the result of two factors: external, or ambient temperature; and internal, or motor temperature rise. An understanding of how these components are measured and expressed is important for proper motor application.

For a given application, the maximum sustained ambient temperature, measured in degrees Centigrade (Celsius), should be determined. The ambient temperature is the temperature that the motor sees. If the motor is in a housing or chamber, then the ambient temperature is the temperature inside the housing. Most motors are designed to operate in a maximum ambient temperature of 40°C.

The temperature rise is the result of heat generated by motor losses during operation. At no-load, friction in the bearings, core losses (eddy current and hysteresis losses), and stator I^2R losses contribute to temperature rise; at full-load, additional losses which cause heating are rotor I^2R losses and stray load losses. (NOTE: I=current in amps and R=resistance of the stator or rotor in ohms).

Motor current increases with an increase in load and under locked-rotor, temperature rise will be significantly higher under these conditions. Therefore, applications requiring frequent starting and/or frequent overloads may require special motors to compensate for the increase in total temperature.

MOTOR COOLING

The total temperature of a motor is greater than the surrounding environment; heat generated during motor operation will be transferred to the ambient air. The rate of heat transfer affects the maximum load and/or the duty cycle of a specific motor design. Factors affecting this rate of transfer are:

1. Motor Enclosure
Different enclosures result in different airflow patterns which alter the amount of ambient air in contract with the motor.

2. Frame Surface Area
Increasing the area of a motor enclosure in contact with the ambient air will increase the rate of heat transfer. General Electric motor enclosures often are cast with many ribs to increase their surface area for cooler operation.

3. Airflow over motor
The velocity of air moving over the enclosure affects the rate of heat transfer. Fans are provided on most totally enclosed and some open motors to increase the velocity of air over the external parts.

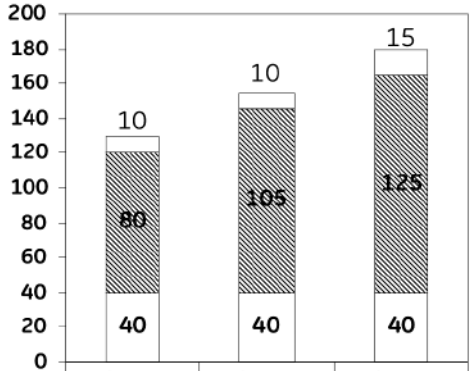
4. Ambient air density
A reduction in the ambient air density will result in a reduction of the rate of heat transfer from the motor. Therefore, total operating temperature increases with altitude. Standard motors are suitable for operations up to 3300 feet; motors with service factor may be used at altitudes up to 9900 feet at 1.0 service factor.

INSULATION CLASS vs. TEMPERATURE

NEMA has classified insulation systems by their ability to provide suitable thermal endurance. The total temperature is the sum of ambient temperature plus the motor's temperature rise. The following charts illustrate the maximum total motor temperature allowed for each of the standard classes of insulation. An additional 10°C measured temperature rise is permitted when temperatures are measured by detectors embedded in the winding. Figures 14-17 illustrate the temperature rise limits established for various insulation classes per NEMA MG-1, Part 12.

NOTE: It has been observed that for every 10°C above rated insulation temperature [i.e. for a class F insulation system if a motor runs at 165°C (exceeding the 155°C)], then the thermal insulation life is cut to half. So, for every 10°C below the rated temperature, the insulation life is doubled.

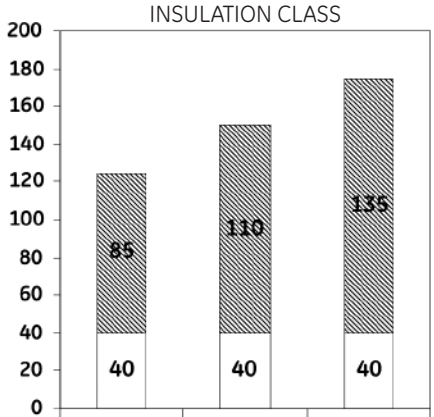
ENCLOSURE: DRIPPROOF OR TEFC
SERVICE FACTOR: 1.0



	Class B	Class F	Class H
Hotspot	10	10	15
Rise by resistance	80	105	125
Ambient	40	40	40
Total Maximum	**130**	**155**	**180**

Figure 14

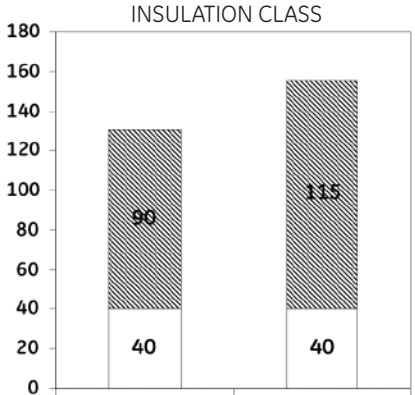
ENCLOSURE: TENV SERVICE FACTOR: 1.0



	Class B	Class F	Class H
Rise by resistance	85	110	135
Ambient	40	40	40

Figure 15

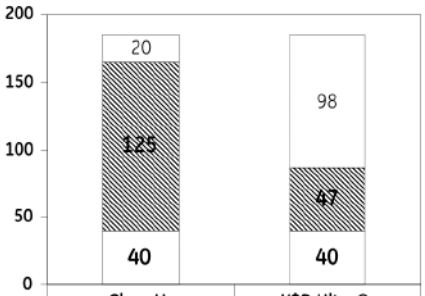
ENCLOSURE: DRIPPROOF OR TEFC
SERVICE FACTOR: 1.15



	Class B	Class F
Rise by resistance	90	115
Ambient	40	40

Figure 16

ENCLOSURE X$D ULTRA® SERVICE FACTOR: 1.0



	Class H	X$D Ultra®
Temperature Margin	20	98
Rise by resistance	125	47*
Ambient	40	40

Figure 17

***Note:** 47 C is the weighted average temperature rise for X$D Ultra® Motors, per Ecomagination Product Review (EPR -rev 11-29-2010)

DUTY CYCLE APPLICATIONS

TYPES OF DUTY

The duty cycle of a motor describes the energization/deenergization, and load variations, with respect to time for any given application. Duty cycle applications may be divided into three basic classifications:

1. **Continuous duty** is a requirement of service that demands operation at an essentially constant load for an indefinitely long time. This is the most common duty classification and accounts for approximately 90% of motor applications. To size a motor for a specific application with this duty cycle classification, select proper horsepower based upon continuous load.

2. **Intermittent duty** is a requirement of service that demands operation for alternate intervals of load and no-load; or load and rest; or load, no-load and rest; each interval of which is definitely specified. Select a motor for these applications to match the horsepower requirements under loaded condition. In some instances, such as a hoist or elevator application, savings in the purchase price of a motor may be possible by designing for the intermittent duty cycle. 30 or 60 minute motors are normally specified. Frequent starts, however, can increase motor heating.

3. **Varying duty** is a requirement of service that demands operation at loads and for intervals of time, which may be subject to wide variation. For this classification of duty cycle, a horsepower versus time curve will permit determination of the peak horsepower required and a calculation of the root-mean-square (RMS) horsepower will indicate the proper motor rating from a heating standpoint. The following example demonstrates the method for selecting a motor for a varying duty cycle based upon peak horsepower and RMS horsepower requirements assuming constant frequency.

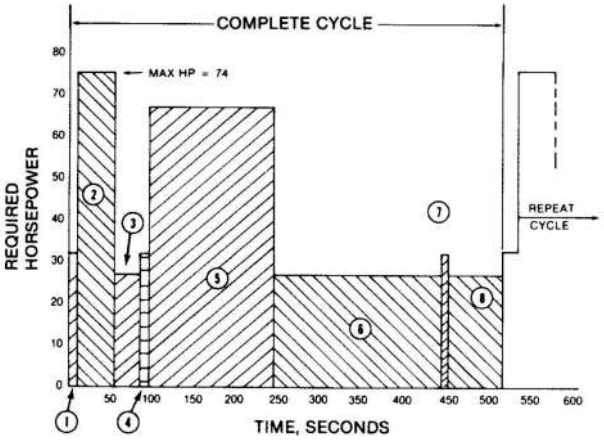


Figure 18: Duty Cycle Calculations

To properly size a motor for the varying duty cycle described in the preceding horsepower versus time graph, a table should be made as shown quantifying each part of the cycle. The first three columns of the table list data from the graph, and fourth column is derived by squaring the horsepower and multiplying by the time for each part of the cycle. Using this data, sum the periods of time and $(Hp)^2t$, and evolve the RMS horsepower as follows:

Table 15

Part of Cycle	Time Sec. (t)	Required Hp	$(Hp)^2t$
1	15	32	15,360
2	40	74	219,040
3	30	27	21,870
4	5	32	5,120
5	148	66	644,688
6	200	27	145,800
7	12	32	12,288
8	70	27	51,030
	520		1,115,196

$$\text{RMS Hp} = \sqrt{\frac{\Sigma (Hp)^2t}{\Sigma t}}$$

RMS Hp = Root - Mean - Square Horsepower

$$\text{RMS Hp} = \sqrt{\frac{1{,}115{,}196}{520}} = \sqrt{2{,}145} = 46.3 \text{ Hp}$$

The load RMS horsepower is used to determine the required motor thermal capability at constant speed. To allow for ±10% voltage variation and the resulting additional motor heating, particularly at peak loads and 90% voltage, a 10% allowance is added to the RMS horsepower calculation:

Required Hp = RMS Hp x 1.10
46.3 x 1.10 = 50.9 Hp

The motor's usable horsepower is determined by the nameplate Hp x service factor and must be equal to or greater than the required horsepower. In our example, there is a choice of either a 50 Hp motor with a 1.15 service factor or a 60 Hp motor at a 1.0 service factor. From a thermal viewpoint, either of these ratings is suitable for the required load Hp of 50.9, but the peak load still needs to be considered.

The motor must also be capable of carrying the peak horsepower (torque) value from the duty cycle at 90% voltage. Since motor breakdown torque is reduced by the voltage squared, the required breakdown torque (BDT) is determined by the equation:

$$\%BDT = \left[\frac{\text{Peak-Load Hp X 100}}{\text{NP Hp X } .9^2}\right] + 20 \text{ (see note)}$$

$$= \left[\frac{\text{Peak-Load Hp X 123}}{\text{NP Hp}}\right] + 20$$

NP Hp = Nameplate Rated Horsepower
%BDT = Percent Breakdown Torque

Note: Margin of 20% added to prevent inefficiencies of operation too close to actual breakdown torque.

For Example, with a 50 Hp motor at 1.15 SF:

$$\%BDT + [74/50 \times 123+20] = 202\%$$

For 60 Hp at 1.0 SF:

$$\%BDT = [74/60 \times 123+20] = 172\%$$

Conclusion: Since the NEMA breakdown torque for a 50 Hp or 60 Hp motor is 200%, the best choice for the application is the 60 Hp rating which only requires 172% at the peak-load horsepower.

DUTY CYCLES PER IEC:
Standardized coded duty cycles for use of purchaser to define the expected or any equivalent loading condition, and which may be used by the manufacturer in defining the rating. The basic duty types are:

- S1- Continuous running duty
- S2- Short time Duty
- S3- Intermittent periodic duty
- S4- Intermittent periodic duty with starting
- S5- Intermittent periodic duty with electric braking
- S6- Continuous operation periodic duty
- S7- Continuous operation periodic duty with electric braking.
- S8- Continuous operation periodic duty with related load / speed changes
- S9- Duty with one-periodic load and speed variations
- S10- Duty with not more than 4 discreet values

STARTING LOAD INERTIA (WK²)
In any type of duty cycle operation, it is necessary to determine not only the horsepower requirements but the number of times the motor will be started, the inertia of the driven machine, the type of load (constant or variable torque) and the method of stopping the motor.

The inertia (WK²) of the rotating parts of the driven equipment affects the acceleration time and motor heating during acceleration. The heating of motor rotor and stator during frequent starting, stopping, and /or reversals can become a design limitation.

If the motor is direct connected, the inertia supplied by the equipment manufacturer may be used as is. If the motor is to drive the equipment through a pulley or gear such that the driven equipment is operating at a higher or lower speed than the motor, it is necessary to calculate the inertia referred to the motor shaft: that is, an equivalent inertia based on the speed of the motor.

$$WK^2 \text{ (Referred to Motor Shaft)} = WK^2 \text{ (Driven Equipment)} \times \frac{RPM^2 \text{ (Driven Equipment)}}{RPM^2 \text{ (Motor)}}$$

The method of stopping the motor is also taken into consideration in a duty cycle calculation. For example, if the motor is allowed to coast to a stop or mechanical braking is used; the RMS horsepower calculation may be affected. Plug stopping DC braking increases motor heating considerably. Therefore, the method of stopping must be part of the duty cycle data provided.

STARTING FREQUENCY
A special kind of duty cycle is one in which a motor is required to perform repetitive starts with a given load and connected inertia. Motor selection must take into account the motor heating caused by starting frequency, load inertia and running load.

A motor during acceleration draws about 6 times full-load current, so resistance losses during starting are up to 36 times (current squared) the losses at full-load. A motor operating on a low inertia load (pump) may come up to speed vary quickly, in less than one second. Starting losses may be so low that the start cycle could repeated several times per minute without overheating the winding. However, motor life can be limited by mechanical starting stresses. When frequent starting is planned refer to NEMA MG-10.

HIGH INERTIA LOADS
At the other extreme, the same motor connected to a high inertia load (such as a large centrifugal blower) could burn out before getting up to full speed on the first start. Motor applications involving frequent starts or high load inertia must be carefully studied to obtain satisfactory operation and long motor life.

The following table lists recommended maximum load inertias for type K, KB, KG, KS and KGS, KBS 60 HZ or 50 HZ, motor starting a fan or centrifugal pump load for two successive cold starts or one start from rated load temperature. The cold stars should be possible within 10 seconds of each other at rated frequency and voltage, and permitted by conventional control. It is recommended, however, that high inertia drives have thermal protection in the motor to prevent burnout from misapplication or excessive starting frequency.

Table 16: Maximum load Inertia NEMA MG-1, parts 12 and 20

Speed, RPM							
Hp	**3600**	**1800**	**1200**	**900**	**720**	**600**	**514**
Load WK² (Exclusive of Motor WK²) lb - ft²							
1	-	5.8	15	31	53	82	118
1.5	1.8	8.6	23	45	77	120	174
2	2.4	11	30	60	102	158	228
3	3.5	17	44	87	149	231	335
5	5.7	27	71	148	242	375	544
7.5	8.3	39	104	208	256	551	798
10	11	51	137	273	467	723	1048
15	16	75	200	400	684	1060	1540
20	21	99	262	525	898	1393	2018
25	26	122	324	647	1108	1719	2491
30	31	144	384	769	1316	2042	2959
40	40	189	503	1007	1725	2677	3881
50	49	232	620	1241	2127	3302	4788
60	58	275	735	1473	2524	3819	5680
75	71	338	904	1814	3111	4831	7010
100	92	441	1181	2372	4070	6320	9180
125	113	542	1452	2919	5010	7790	11310
150	133	640	1719	3456	5940	9230	-
200	172	831	2238	4508	77050	12060	-
250	210	1017	2744	5540	9530	14830	-
300	246	1197	3239	6540	11270	-	-
350	281	1373	3723	7530	-	-	-
400	315	1546	4199	8500	-	-	-
450	349	1714	4666	9460	-	-	-
500	381	1880	5130	-	-	-	-
600	443	2202	6030	-	-	-	-
700	503	2514	-	-	-	-	-
800	560	2815	-	-	-	-	-

POWER FACTOR

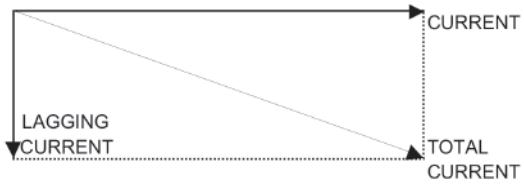
In a sense, motors are electromagnets and power factor is a measure of the amount of magnetizing current required.

Power factor is an important consideration when selecting a motor for particular application since low power factor may result in power factor penalty charges from the utility company. Power companies must supply KVA but normally meters only kilowatts used, low motor power factor requires additional KVA with low return on kW utilized; hence, power factor penalties.

Following is the equation for power factor in a three-phase system:

$$\text{Amps} = \frac{\text{Watts input}}{\sqrt{3} \times \text{Volts} \times \text{PF}}$$

The equation below is a numerical method of expressing the phase difference between voltage and current in a motor circuit. The current in an induction motor lags the applied voltage, and only the component that is in phase with the voltage varies with motor power. The relationship expressed in the above equation can be show as a vector relationship in which the numerical expression is actually the cosine of the angle L.

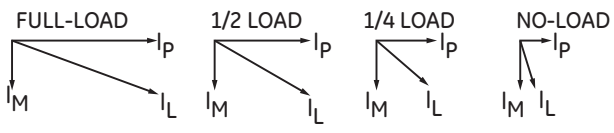


$$\text{PF} = \frac{\text{Watts input}}{\sqrt{3} \times \text{Volts} \times \text{Amps}}$$

Figure 19

As seen from their relationship, line current required for a given motor output varies inversely with power factor. Increasing power factor will reduce the required line current, thus reducing voltage drop in power lines and transformers.

The lagging current shown above is actually motor magnetizing current, which is dependent upon motor design. This magnetizing current is independent of motor load; i.e., just as much required at no-load as at full-load. Thus power factor at partial loads is never as high as at full-load, and at no-load power factor is essentially zero.



I_P = In-phase Current
I_M = Magnetizing Current
I_L = Total Current

Figure 20

There are two basic methods for improving the power factor of a motor for a particular application:

1. Purchase a motor with an inherently high power factor.

2. Install power factor correction capacitors. Capacitors draw leading current as opposed to the lagging current drawn by induction motors. Placing capacitors in parallel with the motor windings will result in leading current offsetting some of the lagging current, increasing power factor as shown in Figure 21:

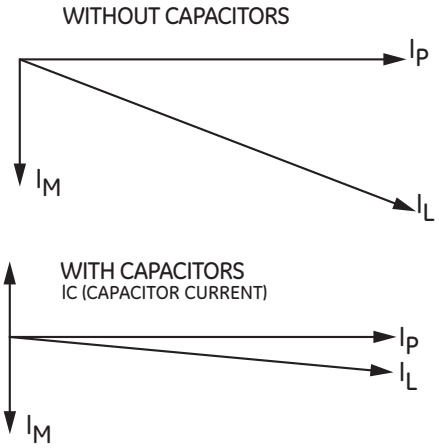


Figure 21: Power Factor Correction

For many applications the use of capacitors for power factor correction is the most economical method and one that also works at partial loads. Capacitors should be used to improve full load power factor to approximately 95% maximum.

WARNING: IN NO CASE SHOULD POWER FACTOR IMPROVEMENT CAPACITORS BE APPLIED IN RATINGS EXCEEDING THE MAXIMUM SAFE VALUE SPECIFIED BY THE MOTOR MANUFACTURER, EXCESSIVE IMPROVEMENT MAY CAUSE OVER EXCITETATION RESULTING IN HIGH TRANSIENT VOLTAGES, CURRENTS AND TORQUES THAT CAN INCREASE SAFETY HAZARDS TO PERSONNEL AND CAUSE POSSIBLE DAMAGE TO THE MOTOR OR TO THE DRIVEN EQUIPMENT.

WINDING CONNECTIONS AND STARTING

The design of a motor's windings and the pattern of connecting the leads from these windings will determine voltage ratios for dual-voltage motors and may also determine what starting options are available.

Following is a brief description of some of the more popular starting methods:

1. Full Voltage Starting

This method is the least expensive from a initial cost standpoint and is the most commonly used starting method on smaller motors. While it results in the highest inrush current values, connections and starter operation are greatly simplified. All standard motors are designed for full voltage (across-the-line) starting.

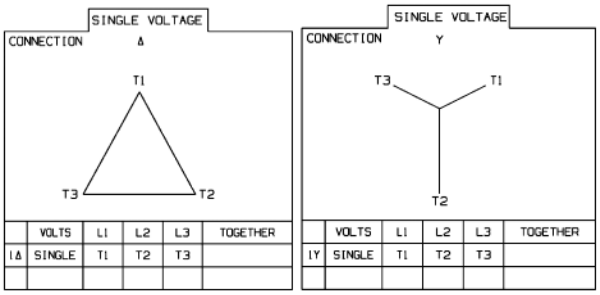


Figure 22: Full Voltage Starting/Direct-On-Line (DOL) Starting

2. Part Winding Starting (PWS)

This method energizes only part of the total winding when the motor is started and is suitable for pump, fan and compressor loads. PWS will reduce inrush current, but the motor heating rate will increase considerably. There are no standard performance requirements for part winding starting and, therefore, a motor started in this manner may fail to accelerate a high-inertia or constant torque load. PWS usually requires special winding connections, which must be specified at the time the motor is ordered.

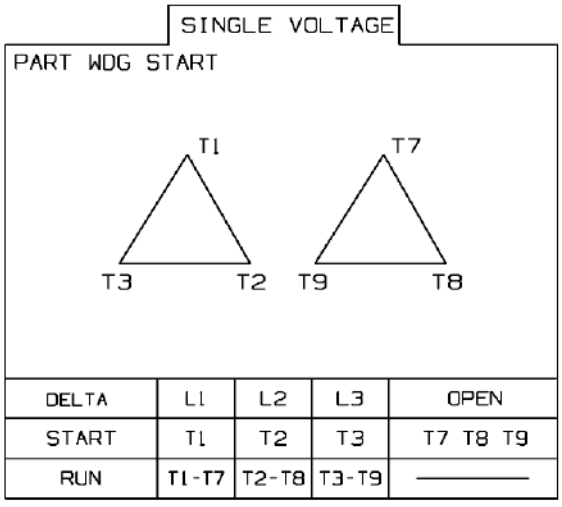


Figure 23: Part Winding Start

3. Autotransformer Starting

In contrast to part winding start, autotransformer starting uses the complete motor winding but limits input voltage to reduce inrush current. The most commonly furnished taps on autotransformer starters are 50, 65, and 80% of full voltage and most also provide an adjustable timer for switching to full voltage after the motor has accelerated. No special motor winding is required.

Table 17: Autotransformer Starter

	% Full Load Torque		
Transformer Tap	Voltage & Current at Motor	Supply Line Current	Motor Output Torque
80% Tap	80	64*	64
65% Tap	65	42*	42
50% Tap	50	25*	25

*Autotransformer magnetizing current not included. Magnetizing current is usually less than 25 percent of motor full-load current.

4. Wye Start/Delta Run

This connection method allows a motor to be started at reduced load with reduced phase voltage and, therefore, with reduced inrush current. Wye Delta starters may be furnished with either open or closed transitions. Open transition, generally lower in cost, will produce higher transient current than a closed transition starter at the transition from wye to delta.

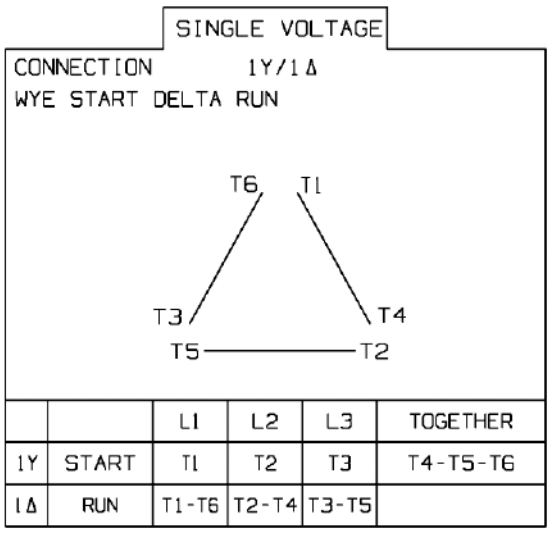


Figure 24: Wye Start/Delta Run

TWO-SPEED MOTORS

Description:
Two-speed motors are applied where the operation of two definite speeds are desired. The motors are classified as to the relation of full-load torques at rated speeds: i.e., constant torque, variable torque and constant horsepower.

Product Line:

NEMA Design	NEMA design does not apply for multi-speed motors (GE Types K, KS)
Enclosure	Dripproof or Totally-Enclosed, Explosion-Proof Fan-Cooled
Frame	182-5011
Voltage	200, 230, 460, 575
Frequency and Phase	60 HZ, 3-phase
Ambient	40°C, Dripproof, 1.15 Service Factor; 40°C, TEFC, 1.0 Service Factor
Rating	1 through 800 horsepower • One winding, Variable torque and constant torque

Application:
Different speeds are obtained by switching electrical connections. The speed on each connection has the constant speed characteristic typical of single-speed induction motors. Two-speed motors may have a single re-connectible winding or two independent windings.

It is possible to arrange a single winding so that it can be re-connected for a different number of poles (and speed) by suitable re-connection of the leads. However, such an arrangement will permit only two speeds and the speeds must be in the ratio of two-to-one.

An alternate way of securing two speeds is to have two separate windings, each wound for a different number of poles and speed.

Such an arrangement means that one winding is not in use when the other is connected to the line; motor frame sizes usually are larger in order to accommodate the idle winding. But the use of two windings permits two speeds which are not in the ratio of two-to-one. Speeds with a two-to-one ratio can be delivered by two-winding motors as well as by single-winding motors.

The choice between one winding and two winding motors is affected by the speeds desired, the motor price, the control price, wiring complexity and physical size. One winding motors have lower prices than two winding motors, but usually require more expensive controls.

Two-speed motors are classified by the relation of the full-load torques at the two full-load speeds.

If the motor has the same full-load torque at both speeds, the motor is a constant torque motor. Since constant torque motors have the same full-load torque at both speeds, the horsepower ratings for the two speeds are in the same ratio as the speeds. For example, the low speed rating of a 10 Hp 1800/900 RPM constant torque motor is 5 Hp.

If the full-load torques are in the same ratio as the speeds, the motor is a variable *torque motor*. The horsepower at the low speed, involving both reduced torques and speed, compares to the high speed in ratio of the square of the speeds. Therefore, in the case of a 10 Hp 1800/900 RPM variable torque motor, the low speed horsepower is 2 1/2 using the following equation:

$$Hp_{LOW} = Hp_{HI} \left[\frac{RPM_{LOW}}{RPM_{HI}} \right]^2$$

If the full-load torque value at the two speeds varies inversely to the speed, the motor is designated constant-horsepower.

The horsepower listing of two-speed motors always applies to the highest speed. The horsepower ratings at the lower speeds are determined by the particular speed and the motor's torque classification. Motor horsepower is a direct function of both torque and speed.

For each speed of a two-speed motor, the horsepower rating must be equal to, or greater than, the horsepower required by the driven load at each speed.

Constant-torque motors are used on friction type loads, or where the work being done is in direct proportion to the speed. Typical examples of constant torque loads are conveyors, escalators and positive displacement pumps or compressors.

Variable torque motors are normally applied to fans, centrifugal blowers and centrifugal pumps which put a horsepower load on the motor which varies as the cube of the speed. If the motor output is adequate for the high speed load, it is sure to have enough Hp at the lower speeds since the motor Hp reduces only as the square of the speed.

Constant horsepower motors are applied on machines that must handle a heavier weight or a greater cut (machine tools) on lower speed than on high speed. For example, a metal-cutting lathe would use the high-speed connection for a light finish cut, but the low-speed connection for taking off large chips in a rough cut.

Two-speed ratings may have lower starting torques than the corresponding single speed ratings.

Two-speed motors are connected in various ways requiring special control, whether manual or magnetic, for starting, changing speeds and stopping. Since the full-load current for high speed is different from that for the lower speeds, separate independent thermal overload relays with correctly selected heaters are required in the control to completely protect the motor on all speed connections.

An alternate is to specify two-speed motors equipped with heat-sensing protectors, built into the windings to positively prevent burnouts caused by overloads, stalling, lack of ventilation, single-phasing or unbalanced voltages regardless of speed, winding connection or ambient temperature.

Two-speed motors are supplied for a single voltage. Motors larger than 365T frame are not furnished for voltages below 460 volts at 60 HZ (380 volts at 50 HZ).

Two-speed motors may be started on any speed either on full voltage, or on reduced voltage by resistor, reactor or autotransformer starters. They are not available for wye-delta or part winding starting.

ELECTRICAL MODIFICATIONS

CABLE GLANDS

Cable gland is used to provide weather proof of a single round multi-conductor cable in to the motor conduit box. Customer must supply cable outer diameter. Cable size is limited from .25 to 3.5 inch diameter for both unarmored and armored cable glands.

CURRENT TRANSFORMER

It is sometimes desirable on larger motors to have current transformers installed in the motor conduit box for operation of auxiliary devices or sensing circuits. Motors in frames 509-5013 can be furnished with single-secondary current transformers in the main or neutral leads. These can include window-type transformers or bar-type transformers to meet the specifications of the user or the control manufacturer and must be fully specified by the customer. Current transformers require an oversize conduit box which must be included in the order.

GROUNDING PROVISIONS

Special grounding provisions can be supplied in the conduit box, on the frame, or for mounting in the drive end shield. The special conduit box grounding provision consists of a brass stud in place of one of the conduit box mounting screws. Also included are two jam nuts for mounting to an external ground lead.

Hardware for the endshield grounding option is shipped as a kit including a brass stud, nut and washer. The stud is assembled in place of one of the endshield bolts.

GROUNDING

1) **Conduit box ground**
   X$D Ultra® and severe duty are provided with a bronze grounding stud inside the conduit box. On Open motors the bronze grounding stud is provided on request however customer can use the labeled conduit box fixing bolts for grounding.

2) **Endshield Ground Bolt Kit**
   Endshield ground bolt kits are available for 140 thru 500 frame product except Quantum. These kits are not allowed for the use on Division I motors.

3) **Servit Post**
   Servit post is mounted on frame close to the base of the motor. This option is not allowed on Division I motors. The frame ground wire is passed through a hole in the servit post by the end user.

4) **Ground Pad**
   NEMA type ground pads on frame can be provided on request. These ground pads consist of a bronze bolt and copper washer mounted on a spot face area located on conduit box side near foot.

Table 18

Frames	Max Full Load Amps	Bolt Size	Qty
143-286	160	5/16"-18 UNC	1
143-286	250	3/8"-16 UNC	1
500	1200	0.500-13 UNC	2
324-5013	600	0.500-13 UNC	1
324-5013	1200	0.500-13 UNC	2

LEADS, SPECIAL

All motors are provided with standard leads of ample length for easy connection in the conduit box to the power leads. Lead size and material are dependent upon the class of insulation system in the motor and the current capacity required. Longer than standard leads are available on request.

SPACE HEATERS

Space heaters are used to prevent moisture condensation in the motor when it is not running. They are generally mounted on the opposite connect end of the stator on the OD of the end turns.

GE space heater kits are designed to raise the temperature of winding 6.5 to 9 degree C above the ambient with an initial rate of rise 3.5 degree C per hour. They are suitable for use on both single phase AC and DC voltage supplies. Surface temperature during operation is approximately 200 degrees C.

Special Div II Space Heaters: GE Power Conversion has developed and patented a thermostatically controlled space heater. These heaters are provided with hermetically sealed thermostat so they only operate with a maximum surface temperature of 140 degree C and do not spark in an end of life event. In order to limit surface temperature rise during operation, these heaters operate at watt densities significantly lower than standard heaters. The thermostat limits the maximum temperature resulting from motor residual temperature (occurring as a result of motor operation), ambient temperature, and space heater temperature. During continued normal operation with a 40 degree C ambient, the surface temperature will remain below the thermostat setting; which will increase the life of the heater. The thermostat opening temperature might be exceeded due to high ambient and/or motor residual temperatures.

In most cases when a motor is shut down, the space heaters are immediately turned on. As the motor may take many hours to cool down, the heaters being automatically turned on can result in a cumulative hear that may result in temperatures that approach the 80% Auto-Ignition Temperature or AIT limit. A thermostatically controlled heater will not allow the heater to energize until the motor has sufficiently cooled down (below 140°C thermostat reset temperature) thereby not allowing the temperatures to exceed the stated AIT.

STARTING CURRENT, LOWER THAN STANDARD

The starting current code (KVA-per-horsepower) for polyphase 60 HZ motors in the integral-Hp sizes is typically code G. Reducing the amount of starting current to code F limits or lower may require more material, increased frame size or a combination of these factors. Starting torque and breakdown torque may also be reduced to less than NEMA design B limits.

SURGE PROTECTION

Surge Capacitors and Surge Arrestors (Lighting Arrestors)

Surge protection capacitors and lighting arrestors can be supplied on 500 frame motors as a package in an oversize conduit box for mounting adjacent to the motor.

Surge capacitors and Lighting Arrestors are used to protect the motor from voltage spikes on the power line. Surge capacitors are available without surge arrestors. Surge arrestors are available only with surge capacitors.

TEMPERATURE RISE, SPECIAL

NEMA has defined allowable winding temperature rise according to class of insulation and maximum ambient temperature. Where there are requirements for special low winding temperature rise, please contact the Company for review of the available options.

TERMINALS, SPECIAL

All motors, except as mentioned below are supplied with ring terminal (illustrated in Figure 25):

- Non-X$D Ultra Motors in Frames 140-280, will be supplied with lead wire stripped for connection to power leads.

Figure 25: Ring Terminal

Leads range in size from 18 gauge to 8 gauge depending on the amount of current that the motor produces.

THERMAL PROTECTION - WINDING

The following devices are applicable only to motors with class F or H insulation with class B or F temperature rise.

Built-in protective devices to prevent motor overheating may be either: (A) Line interrupting devices which open the power supply when the motor overheats or (B) pilot devices. The latter open the holding coil circuits of a magnetic switch to take the motor off the line, or energize alarm bells or warning lights. Motors taken off line by pilot devices typically cannot be restarted until an operator recloses the magnetic starting switch.

A. Line-interrupting Devices - Current-Sensing Thermal Protectors

These protectors sense both motor temperature and current and offer inherent protection against all abnormal stalled and running conditions. They are built into the motor conduit box for automatic* reset operation on both automatic* and manual reset operation on single-phase motors 182-215 frame.

These protectors are not available on explosion-proof motors or on two-winding two-speed motors.

*** WARNING:** A MOTOR WITH AUTOMATIC-RESET THERMAL PROTECTION SHOULD NEVER BE USED WHERE AN UNEXPECTED RESTART MAY INJURE PERSONNEL OR DAMAGE PROPERTY.

B. Pilot Devices

(1) Thermostats

These protectors are not available on two-winding two-speed motors.

Thermostats are mounted on the stator winding and are temperature-sensing only. They are available with normally closed contacts and only for automatic reset.

Thermostats will protect the motor from high ambient temperature, exceedingly long accelerating cycles (where the design is not rotor limited), repeated or excessive overloads and loss of ventilation. However, they do not give protection under stalled or locked-rotor conditions and must be used with an external current-sensitive motor control for complete motor protection.

Thermostats can be installed in all motor enclosures They are not recommended for machines with name-plate voltages exceeding 600 volts.

Thermostats are suitable for the following pilot circuits:

Table 19

Power Supply	Voltage	Current
AC	110-115 volts	6.0 amp
AC	220-230 volts	3.0 amp
AC	440-480 volts	1.5 amp
AC	550 volts	1.2 amp
DC	115-125 volts	2.2 amp
DC	230-250 volts	1.1 amp
DC	550 volts	0.4 amp

(2) Thermistors (Not Allowed on DIV 1 Motors)

Thermistors are small non-linear resistance devices placed in the stator windings. As the critical temperature is reached, the resistance of the thermistors changes radically, causing operation of a control relay. Normally, 3 thermistors are furnished, one per phase. Thermistors may be furnished with or without a separate control relay (greater than 600 nameplate volts).

(3) Resistance Temperature Detectors

RTD's are precision wire-wound resistors with calibrated temperature-resistance characteristics. These devices are used in conjunction with customer supplied instruments and are available in 10, 100 and 120 ohm designs. Normally six RTD's (2 per phase) are furnished per motor, suitably distributed around the circumference of the stator winding, located between coil sides and positioned to detect the highest slot temperature. RTD's are constructed using a fine, pure, metallic, spring-like wire surrounded by an insulator and enclosed in a metal sheath.

- 120 Ohm Nickel
- 100 Ohm Platinum
- 10 Ohm Copper

II. MECHANICAL DESIGN

FRAME DESIGNATION SYSTEM

For footed machines, in NEMA the first 2 digits are taken and divided by 4, the resultant value indicates the height of the shaft center from the ground in inches.

A historical reference on how NEMA frame size was reduced over the years can be found at page 10.50 (on ANNEXURE B).

For example NEMA Frame 182; has a shaft center height of 18/4=4.5".

For foot-mounted machines, the IEC frame designation system consists of the frame number that indicates the height of the shaft center from the ground in millimeters (mm).

For example IEC Frame 112S; has a shaft center height of 112mm. In the Table 20: S, M and L are variations in B (i.e. equivalent to NEMA 2F) dimension; refer to IEC 60072-1 for more details.

Table 20: Comparison of NEMA and IEC Frame Designations

IEC	90S	90L	112S	112M	132S	132M	160M	160L	180M	180L
NEMA	143	145	182	184	213	215	254	256	284	286

IEC	200M	200L	225S	225M	250S	250M	280S	280M	315S	315M
NEMA	324	326	364	365	404	405	444	445	504	505

Additional quick references for major mounting dimension between NEMA and IEC can be found on page 10.49 (ANNEXURE A).

ENCLOSURE MATERIAL

Frame and endshield materials are listed below in Table 20B.

Table 20B

Frame Size	Enclosure	Frame & Endshield Material
143-449	TE*	Cast iron or rolled steel
143-449	DP, WPI	Cast iron or rolled steel
509-5013	DP, TEFC, WPI, WPII	Cast iron
182-5013	Explosion-proof	Cast iron
143-5013	Severe-duty	Cast iron

*TE: Totally enclosed machines like TENV, TEFC, TEAO, TEBC as applicable.

Table 21: Quick Comparison of NEMA and IEC

Enclosure/Cooling Designation			
NEMA Enclosures		IEC Enclosure Codes	
		Protection	Cooling
DPFG	Drip-proof fully guarded, self-ventilated	IP-22	IC-01
ESV	Piped Ventilation (Enclosed separately Ventilated, air ducted in and out)	IP44	IC-37
TENV	Totally enclosed non-ventilated	IP44/IP55	IC-410
TEFC	Totally enclosed fan cooled	IP44/IP55	IC-411
TEAO	Totally enclosed air over frame	IP44/IP55	IC-416
TEBC	Totally enclosed blower cooled	IP44/IP55	IC-416
TENV-XP	TENV, explosion-proof	Not defined	
TEFC-XP	TEFC, explosion-proof		

DRAINS AND BREATHERS

Enclosed Motors (except explosion-proof)

Standard enclosed motor construction includes drain holes in the bottom of the motor. X$D Ultra® severe-duty motors, special plugs designed to serve as both drains and breathers are inserted into the drain holes. Available as an option is a sintered-metal breather and drain which acts as a one-way vent preventing entrance of contaminants while allowing the moisture to drain out.

Explosion-Proof

Standard explosion-proof motors are furnished without drains or breathers. Available as an option is the UL listed Crouse-Hinds breather/drain which acts as a one-way vent, preventing the entrance of contaminants while allowing the moisture to drain out.

MOUNTING CONFIGURATIONS

The following diagrams illustrate the various mounting possibilities for "horizontal" motors in NEMA and IEC.

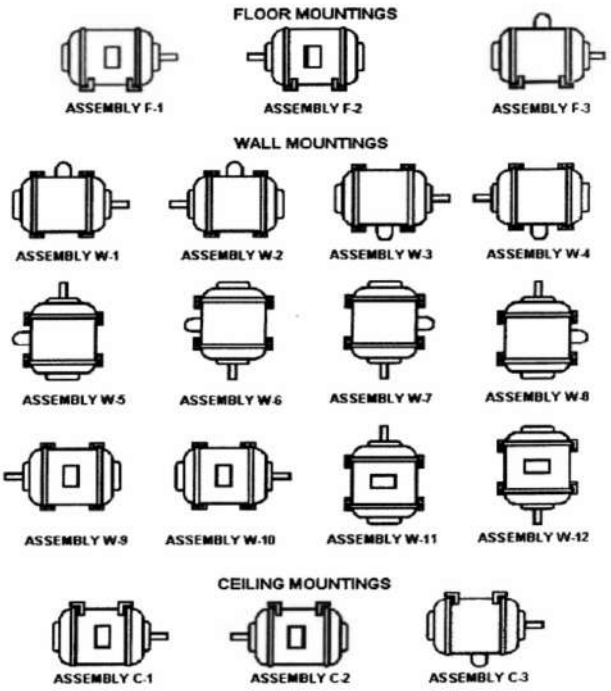
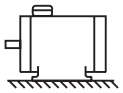
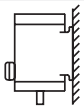
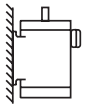
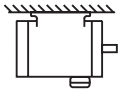


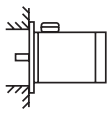
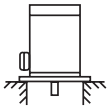
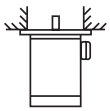
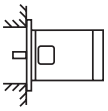
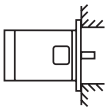
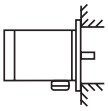
Figure 26: NEMA Mounting

IEC Motor Mounting Configurations

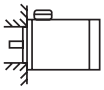
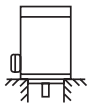
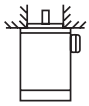
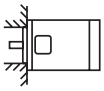
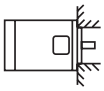
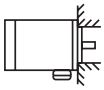
Foot Mounted Motors

Code I	IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
Code II	IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071
	 Figure 1	 Figure 2	 Figure 3	Figure 4	Figure 5	 Figure 6

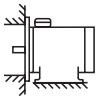
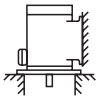
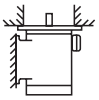
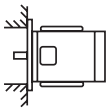
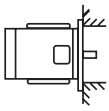
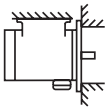
Flange Mounted Motors - Large Flange

Code I	IM B5	IM V1	IM V3	Undefined*	Undefined*	Undefined*
Code II	IM 3001	IM 3011	IM 3031	IM 3051	IM 3061	IM 3071
	 Figure 7	 Figure 8	 Figure 9	 Figure 10	 Figure 11	 Figure 12

Flange Mounted Motors - Small Flange

Code I	IM B14	IM V18	IM V19	Undefined*	Undefined*	Undefined*
Code II	IM 3601	IM 3611	IM 3631	IM 3651	IM 3661	IM 3671
	 Figure 13	 Figure 14	 Figure 15	 Figure 16	 Figure 17	 Figure 18

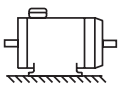
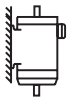
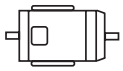
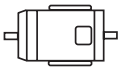
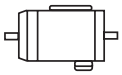
Foot and Flange Mounted Motors With Feet and Large Flange

Code I	IM B35	IM V15	IM V36	Undefined*	Undefined*	Undefined*
Code II	IM 2001	IM 2011	IM 2031	IM 2051	IM 2061	IM 2071
	 Figure 19	 Figure 20	 Figure 21	 Figure 22	 Figure 23	 Figure 24

Foot and Flange Mounted Motors With Feet and Small Flange

Code I	IM B34	IM V17	Undefined*	Undefined*	Undefined*	Undefined*
Code II	IM 2101	IM 2111	IM 2131	IM 2151	IM 2161	IM 2171
	Figure 25	Figure 26	Figure 27	Figure 28	Figure 29	Figure 30

Foot Mounted Motors With Free Shaft Extension

Code I	Undefined*	Undefined*	Undefined*	Undefined*	Undefined*	Undefined*
Code II	IM 1002	IM 1012	IM 1032	IM 1052	IM 1062	IM 1072
	 Figure 31	Figure 32	 Figure 33	 Figure 34	 Figure 35	 Figure 36

* Not defined in IEC 60034-7

Figure 27: IEC Mounting

Motors may be furnished for any of the 18 mounting configurations shown in Figure 27. Other than F1 and F2 mountings, endshields need to be rotated appropriately; to ensure guarding, drain and grease inlet/outlet locations.

Unless otherwise specified, all horizontal motors will be furnished for F1 mounting.

Vertical Mounting

Typically, ball bearing motors in frames 326 and smaller mounted vertically with shaft up or down can handle external thrust loads, in either direction. See Table 26 on page 10.28.

Motors which are to be mounted vertically in either a shaft up or shaft down attitude must be reviewed by application engineering to ensure:

1. A suitable bearing and lubrication system is specified, and
2. Adequate provisions or features are considered as necessary to protect the motor from outside contaminants such as water and/or dust

Table 22: Comparison of Mounting Configurations between IEC and NEMA

Arrangement	NEMA Mounting	IEC Mounting*
Floor Mounting	F1, F2	IM B3/IM 1001
Ceiling Mounting	C1, C2	IM BB/IM 1071
Wall Mounting, Shaft Horizontal	W2, W4	IM B6/IM 1051
	W1, W3	IM B7/IM 1061
Wall Mounting, Shaft Vertical	W6, W7, W9, W10, W11, W12	IM V5/IM 1011
	W5, W8	IM V6/IM 1031

*Terminal box location as per IEC 60034-7

DYNAMIC BALANCE

General Electric motors are dynamically balanced so that vibration, as tested per NEMA standard MG-1, Part 7, will be within the limits stated below for standard balance. Motors balanced to either the special or precision balance limits shown will be furnished at additional price when specified. Precision balance is a feature of the X$D Ultra® severe-duty product line.

Table 23: Vibration Limits (140-5013 Frame)

Motors with two ball bearings Vibration measured in Inches/Sec				
RPM	Standard	Special	Precision	X$D Ultra
All Speeds	0.15	0.075	0.055	0.04

Motors with one ball bearing and one roller bearing Vibration measure in Inches (peak to peak)			
RPM	Standard	Special	Precision
3000-4000	0.001	0.0005	0.0003
1500-2999	0.0015	0.0008	0.0004
1000-1499	0.002	0.001	0.0005
999 and slower	0.0025	0.0013	0.0007

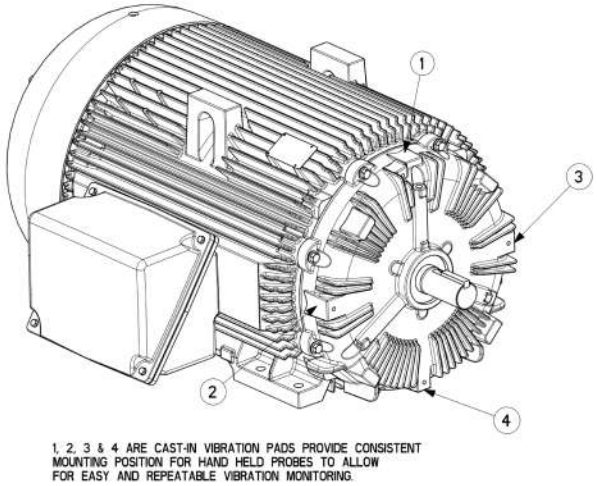


Figure 28: Shows the position of Cast-in Vibration Pads, on Standard X$D Ultra® Motors

Benefits of Lower Vibration

Machinery vibration is a significant contributor to equipment failure. To build reliable equipment it is advisable to use motors with lower vibration. GE's X$D Ultra® Vibration at rated voltage and frequency shall not exceed the limits of 0.04 inch per second. Overall vibration as evaluated by NEMA MG-1, Part 7.

Following can be the advantages of using motors with lower vibration including:

- Longer bearing life
- Reduced damage to the shafts and rotor
- Fewer equipment break-down
- Lower operational noise
- Minimum power loss hence efficient operation of equipment
- Low energy costs
- Minimum stress levels in the equipment structures

For additional information, refer IEEE Paper PCIC-2003-12

BEARING SYSTEMS

Antifriction

All standard motors are equipped with "clean steel" Conrad deep groove type ball bearings, sized for the loads to be expected in industrial applications.

Sleeve-Type

Split-sleeve bearings are available for frames 509 through 5013 in Dripproof, Weather Protected I and II, and some Totally enclosed fan cooled (Quantum design) enclosures. They should be used for direct drive applications only. For DP, WPI, and WPII enclosures, the bearings are mounted in the bottom and top halves of the split endshields. The top half endshield is removable for bearing or winding inspection. TEFC Quantum can be supplied with split sleeve bearings mounted outboard of the motor endshields. Solid sleeve bearings are available for frames 509 through 5013 totally-enclosed-fan-cooled machines (Non-Quantum). Sleeve bearings are not available on explosion-proof motors. All sleeve bearings are equipped with oil reservoirs, ring oilers, sight gauges, level gauges and drain provisions.

BEARING LUBRICATION

Ball bearing motors are shipped with sufficient grease for a long operating period. Re-lubrication at intervals consistent with the type of service shown in Table 24 will provide longer bearing life.

Excessive, too frequent lubrication or the use of non-compatible lubrication may damage the motor. If the bearing grease cavity and the bearing races have excessive grease to the point where the grease stays packed around the bearing rotating elements, the bearing will actually run hotter. Follow re-lubrication type and procedures provided in the instructions shipped with motors.

Table 24: Re-lubrication Intervals

Type of Service	Typical Examples	HP Range	Re-lubrication Interval (yrs)	
			Horizontal	Vertical
Easy	Valves, door openers, portable floor sanders, motor operating infrequently (one hour per day)	1.0-7.5 10-40 50-150 200-350 400-800	10 7 4 3 1	9 3 1.5 9 Mo. -
Standard	Machine tools, air conditioning apparatus, conveyors, one or two shifts, garage compressors, refrigeration machinery, laundry machinery, oil well pumps, wood working machinery	1.0-7.5 10-40 50-150 200-350 400-800	7 4 1.5 1 6 Mo.	3 1 6 Mo. 3 Mo. -
Severe	Motors for fans, M-G sets, etc. that run for 24 hours/365 days, coal and mining machinery, motors subject to severe vibration, steel mill machinery	1.0-7.5 10-40 50-150 200-350 400-800	4 1.5 9 Mo. 6 Mo. 3 Mo.	1.5 6 Mo. 3 Mo. 1.5 Mo. -
Very Severe	Dirty, vibrating applications, where end of shaft is hot (pumps and fans), high ambient temperatures	1.0-7.5 10-40 50-150 200-350 400-800	9 Mo. 4 Mo. 4 Mo. 3 Mo. 2 Mo.	6 Mo. 3 Mo. 2 Mo. 1 Mo. -

WINDING TREATMENT

Various winding treatment options and protective coatings are available to provide additional protection in special or extreme application and environmental conditions.

Custom Polyseal® Motors (Frames 444-5013)

These motors are available with vacuum pressure impregnated windings which have been taped to hold additional varnish and to increase their mechanical strength. Custom Polyseal® motors meet NEMA MG-1, Part 1 and are capable of an underwater submergence test which includes a hi-pot and megger test.

Trickle Treat (Random Wound - 143-449 frames)

In this process a 60 HZ current is passed through the winding. This "pumps" the varnish into the windings resulting in better penetration into the stator slots and an increase in varnish build.

Applying a controlled current to the windings produces optimal varnish curing. This cures the windings from the inside-out, rather than oven baking.

Vacuum Pressure Impregnation (500 frames)

This process completely seals the windings against moisture and harsh environments. It provides greater mechanical strength; that lowers the vibration level. Machine lasts longer and requires less maintenance.

Table 25: Quick Winding Treatment Comparison for Random Wound Motors

Winding Treatment	Vacuum Pressure Impregnation	Trickle Treatment
Penetration	Better	Best
Advantages	• Best Penetration • Leads to Sealed System	• Maximum Fill Rate • Excellent CIV Protection
Limitations	• High Investment • Longer Process Time	• Cannot Be A Sealed System

Abrasion Resistance (320-5013) ODP or WPI/WPII

GE motors can be supplied with an abrasion resistant winding treatment which gives added protection from airborne particles.

ADJUSTABLE SPEED INVERTER DUTY OPERATION

PRODUCT

NEMA Design does not apply (GE Type KAF)
Enclosure: Open Dripproof or Totally-Enclosed
Frames: 143-5013

ADJUSTABLE SPEED DRIVE (A$D™) OPERATION

Most of today's state-of-the-art inverter drives uses IGBT technology. These drives solve the electrical noise problem of the older transistor units but can create significant issues for pre-IGBT motor insulation life. The IGBT drive use frequencies that are above the audible range and can cause significant rapid voltage spikes that may shorten motor insulation life.

Motor manufacturers, through the National Electric Manufacturers Association (NEMA) technical section have defined IGBT drive output spike voltage as 3.1 times the motor nameplate voltage.

Example: NEMA MG-1-31 states 3.1 times the nameplate voltage or 460 volts x 3.1= 1425 minimal acceptable voltage spike @ .01 microsecond rise time. Similarly for 575V; the voltage spike = 575 volts x 3.1 = 1783V

Specific to this application, GE uses insulation system to withstand spike voltages up to 2400V.

X$D Ultra® GEGARD2400 incorporates Class H rated GE701 varnish, which consists of 100% solids and has no solvents that evaporate during the curing cycle.

With the use of more sophisticated designs, GE Energy has solved the spiking issue and offers drive products that keep the spike under 1000 volts and are compatible with older existing motors.

Besides the motor insulation system, the application should consider the shortest leads possible between the drive and motor (50 ft) and make sure the motor has enough thermal capability to support the application at reduced speeds.

The point here is that being IGBT "Compatible" is not necessarily "Invertor Duty". Standard efficiency motors with appropriate IGBT compatible insulation have as a primary design parameter cost, not variable speed loading capability. Many simple applications can be served with these standard motors but all the parameters must be considered. Some of the most significant are:

- Thermal stress for low frequency constant torque loads
- Low frequency performance - speed oscillation
- Lead length
- System information feedback

If any of these items are necessary or unknown the user should consider the true Inverter Duty Motor.

A$D™/LOAD REQUIREMENT DATA SHEET

VARIABLE FREQUENCY OPERATION

Design Point	Hp @		RPM
Range (Min-Max)	-		RPM
Type Load Variable Torque	Constant Torque		
Above Design RPM	Constant Hp	CTq	VTq

A$D Type: _____ PWM (Pulse Width Modulated)

_____ VSI (6 Step Voltage Inverter)

_____ CSI (6 Step Current Inverter)

Make	Model #

Fill out only the applicable requirements below:

Service Factor (sine wave)	(A$D)
Temp Rise (sine wave)	(A$D)
Overload (150% for 1 minute standard):	
Overload (%) of motor required at top speed:	
Starting Torque (140% rated torque with 150% Rated Current Standard):	

LOAD CONNECTION

TYPES OF CONNECTION

Two methods of mechanical connection of the motor to the driven load are commonly used:

1. Direct Connection

Direct connection should always be considered where the required load speed coincides with an available motor speed. The preferred practice is to use a flexible coupling, which will allow a slight amount of misalignment and minimize transmission of thrust to the motor bearings. Axial thrust loads are commonly encountered when a pump impeller or fan is mounted on the motor shaft. They also occur in direct connected helial gear drives and when the motor is mounted vertically or in an inclined position where any weight other than the rotor is supported by the motor shaft. Refer to Table 26 for recommended maximum axial thrust loads for horizontal ball-bearing motor with typical bearing sizes.

2. Belt, Chain and Gear Drives

When connecting a motor to its load with this type of drive, proper selection is necessary to limit bearing loads within radial load capacities. Tables 27 and 28 provide recommended minimum V-belt sheave diameters for 60 and 50 HZ motors. Tables 27 and 28 indicates the approximate radial forces corresponding to a belt tightened sufficiently to prevent slippage. Additional tension will increase the radial force and decrease bearing life. For A-B-C-D-E belts, the center line of the pulley should not extend beyond the end of the shaft. For 3V-5V-8V belts, the center-line of the pulley should not be any closer to the end of the shaft than 1/2 the V dimension of the shaft.

Requests are made accordingly for parameters not labeled in these tables. Belt and sheave manufactureres and their distributers typcally provide a Load Analysis Data sheet as a technical service. Regardless of who is asked, the following information is necessary.

Table 26: Axial Thrust (pounds) for Horizontal Motors

	3600 RPM		1800 RPM		1200 RPM		900 RPM	
Frame	Bearing	Thrust	Bearing	Thrust	Bearing	Thrust	Bearing	Thrust
182-184	6206	140	6206	165	6206	220	6206	245
213-215	6307	250	6307	335	6307	375	6307	425
254-256	6309	405	6309	500	6309	670	6309	710
284-286	6310	460	6310	625	6310	770	6310	790
324-326	6210	230	6210	290	6210	395	6210	325
364-365	6213	390	6213	485	6213	630	6213	635
404-405	6313	375	6313	435	6313	590	6313	710
444-445	6314	760	6314	1040	6314	1205	6314	1400
449	6314	705	6314	965	6314	1115	6314	1325
509	6315	705	6318	1175	6318	1275	6318	1445
511	6315	680	6318	1030	6318	1290	6318	1260
513	6315	620	6320	1265	6320	1360	6320	1450

Note: Table 26 assumes no external radial loading on the shaft. Thrust values in Table 26 represent the maximum permissible to provide a 25,000 hour L_{10} life in accordance with ABMA calculations.

Table 27: Limiting Sheave Dimensions for V-Belt Drive (Frames 182T-449T)

Frame	Horsepower at Sync Speed, RPM				V-belt Sheave (inches)**				
					Conventional		Narrow		
					A, B, C, and D sections††		3V, 5V, 8V Sections ***		
60 HZ	3600	1800	1200	900	Min. Pitch Dia	Max Width Inches	Min Outside Dia.	Max Width Inches#	Belt Pull (lbs)**
182T	3.0	3.0	1.5	1.0	2.4	5.25	2.4	2.75	155
182T	5.0	-	-	-	2.6	5.25	2.4	2.75	130
184T	-	-	2.0	1.5	2.4	5.25	2.4	2.75	155
184T	5.0	-	-	-	2.6	5.25	2.4	2.75	130
184T	7.5	5.0	-	-	3.0	5.25	3.0	2.75	210
213T	7.5-10.0	7.5	3.0	2.0	3.0	6.5	3.0	3.38	310
215T	10.0	-	5.0	3.0	3.0	6.5	3.0	3.38	310
215T	15.0	10.0	-	-	3.0	6.5	3.8	3.38	355
254T	15.0	-	7.5	5.0	3.8	7.75	3.8	4.0	370
254T	20.0	15.0	-	-	4.4	7.75	4.4	4.0	425
256T	20.0-25.0	-	10.0	7.5	4.4	7.75	4.4	4.0	425
256T	-	20.0	-	-	4.6	7.75	4.4	4.0	565
284T	30.0	-	-	-	4.4	9.0	4.4	4.58	425
284T	-	-	15.0	10.0	4.6	9.0	4.4	4.58	625
284T	-	25.0	-	-	5.0	9.0	4.4	4.58	705
286T	30.0	-	-	-	4.4	9.0	4.4	4.58	425
286T	40.0	-	-	-	4.6	9.0	4.6	4.58	540
286T	-	30.0	20.0	15.0	5.4	9.0	5.2	4.58	715
324T	40.0	-	-	-	4.6	10.25	4.6	5.25	540
324T	-	40.0	25.0	20.0	6.0	10.25	6.0	5.25	825
324T	50.0	-	-	-	5.0	10.25	5.0	5.25	620
326T	50.0	-	-	-	5.0	10.25	5.0	5.25	620
326T	-	50.0	30.0	25.0	6.8	10.25	6.8	5.25	910
326T	60.0	-	-	-	5.4	10.25	5.4	5.25	690
364T	-	-	40.0	30.0	6.8	11.5	6.8	5.88	1195
364T	60.0	-	-	-	5.4	11.5	5.4	5.88	690
364T	-	60.0	-	-	7.4	11.5	7.4	5.88	1005
365T	-	-	50.0	40.0	8.2	11.5	8.2	5.88	1210
365T	-	75.0	-	-	9.0	11.5	8.6	5.88	1080
404T	-	-	60.0	-	9.0	14.25	8.0	7.25	1395
404T	-	-	-	50.0	9.0	14.5	8.4	7.25	1475
404T	-	100.0	-	-	10.0	14.25	8.6	7.25	1440
405T	-	-	75.0	60.0	10.0	14.25	10.0	7.25	1485
405T	-	100.0	-	-	11.5	14.25	8.6	7.25	1440
405T	-	125.0	-	-	11.0	14.25	10.5	7.25	1475
444T	-	-	100.0	75.0	10.5	16.75	10.0	8.5	1770
444T	-	-	-	-	11.0	16.75	9.5	8.5	1995
444T	-	125.0	-	-	-	16.75	9.5	8.5	1630
444T	-	150.0	-	100.0	12.5	-	10.5	8.5	1770
445T	-	-	125.0	-	12.5	16.75	12.0	8.5	1935
445T	-	-	-	-	-	16.75	12.0	8.5	2065
445T	-	150.0	-	-	-	-	10.5	8.5	1770
445T	-	200.0	-	-	-	-	13.2	8.5	1875
445T	-	-	150.0	-	-	-	13.5	8.5	2065
449T	-	-	200.0	-	-	-	18.475	8.5	1980
449T	-	-	-	150.0	-	-	169.0	8.5	1955
449T	-	-	-	200.0	-	-	27.75	8.5	1785
449T	-	250.0	-	-	-	-	15.5	12.75	1995

* For the maximum speed of the drive components, see NEMA MG-1-Part 14 Section 14.7.3.

† For the assignment of horsepower and speed ratings to frames, see NEMA Part 13.

**Sheave dimensions are based on the following:

a. Motor nameplate horsepower and speed
b. Belt service factor of 1.6 with belts tightened to belt manufacturers' recommendations
c. Speed reduction of 5:1
d. Mounting of sheave on motor shaft in accordance with NEMA MG-1-Part 14 Section 14.7
e. Center-to-center distance between sheaves approximately equal to the diameter of the larger sheave
f. Calculations based upon standards covered by the †† and *** footnotes, as applicable

The width of the sheave shall be no greater than that required to transmit the indicated horsepower but in no case shall it be wider than 2(N-W) -0.25.

*** As covered by Standard Specifications for Drives Using Narrow V-Belts (3V, 5V, and 8V).

The width of the sheave shall be not greater than that required to transmit the indicated horsepower but in no case shall it be wider than (N-W).

†† As covered by Engineering Standards Specifications for Drives Using Multiple V-Belts (A,B,C, and D Cross Sections) See 1.1, The Rubber Manufacturers Association.

Table 28: Limiting Sheave Dimensions for V-Belt Drive Typical 500 Frame Data

Dripproof					
Horsepower @ RPM			Bearing Construction	Min. Sheave Dia. (in)	Belt Pulls (lbs)
1800	1200	900			
-	-	150	(1)	16.5	2200
-	-	200	(2)	9	5500
-	-	250	(2)	17	3600
-	250	-	(2)	9	5200
-	300	-	(2)	15	3700
300	-	-	(2)	7.5	4900
350	-	-	(2)	13.5	3200
TEFC Motors					
-	-	125	(1)	14.5	2100
-	-	150	(1)	18	2100
-	-	-	(2)	13	3800
-	200	-	(1)	18	2100
-	250	-	(2)	15	3100
-	250*	-	(2)	10.5	4400
-	-	-	(1)	17.5	1800
-	-	-	(2)	9	4100
-	-	-	(2)	11.5	3800

* for 5011L frame size

(1) Deep groove ball-bearing construction

(2) Special shaft materials and roller-bearing construction

Notes:

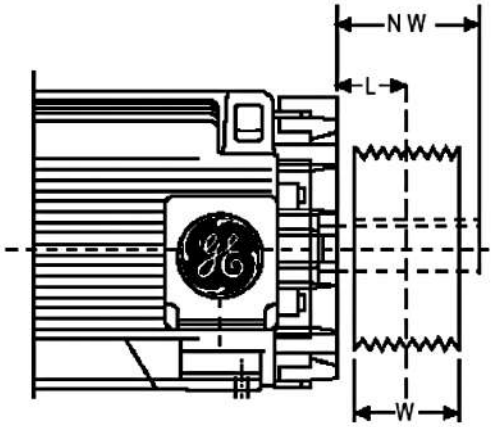
1. Minimum bearing life, L_{10}, for a given sheave diameter is 25,000 hours
2. The recommended sheave diameters are based on a 5:1 speed reduction and a sheave center-to-center distance approximately equal to the diameter of the larger sheave.

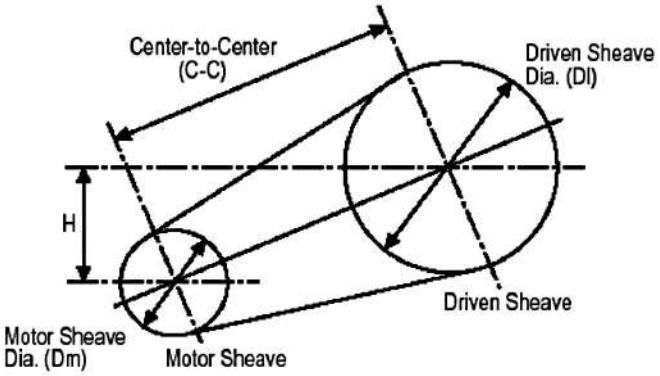
CAUTION: BELT SPEEDS IN EXCESS OF 6500 FEET PER MINUTE MAY REQUIRE SPECIAL SELECTION OF DRIVE COMPONENTS. MOTOR USER SHOULD GET SPECIFIC APPROVAL FROM BELT AND SHEAVE SUPPLIER FOR SUCH APPLICATIONS.

LOAD CALCULATIONS

Belt Driven Application Analysis

Belt and Sheave Manufacturers and their distributors typically provide a Load Analysis Data Output Sheet to the end user/OEM as a technical service. When requesting a quotation for GE Energy we suggest the Load Analysis Data Output Sheet be provided in addition to this form for a complete motor shaft and bearing analysis.





End User:
Application information (e.g. fan, pump, crusher):
Type of Driven Load (e.g. variable torque, constant torque, constant horsepower):
Motor Rating - **Required**
Horsepower: Frame Size: Speed:
Motor Enclosure: Voltage:
Shaft Orientation (e.g. horizontal, vertical shaft up, vertical shaft down):
Belt information - **Required**
Distance between face of motor endshield and center line of motor sheave width (L):
Inertia of driven load referred to the motor shaft (lb-ft^2) (required for centrifuge):
The following is not required when a Load Analysis Data Output sheet is provided:
Option A
Motor sheave pitch diameter (Dm):
Driven sheave pitch diameter (DI):
Center-to-center distance between sheaves (C-C)
Motor shaft height vs. driven shaft (H):
Width of motor sheave (W):
Weight of motor sheave (lbs):
Belt service factor:
Belt Type (e.g. 5V, 3VX): Number of belts:
Option B
Radial Load/Belt Pull (lbs):

This page must be completed for:
a) 720 RPM and slower motors (10 or more poles)
b) 447T and larger frame sizes
c) Non-standard L_{10} values
d) Customer requests

MECHANICAL MODIFICATIONS

BEARING - TEMPERATURE DETECTORS

BTD's are used to measure the temperature of bearings; these are precision, wire-wound resistors with a known temperature resistance characteristic. In operation, the BTD is usually wired into a specific type of circuit (Wheatstone bridge). The output of this circuit can be used to drive a meter, which has been calibrated, in temperature, or to operate a relay to sound an alarm or shut down the motor. These devices are available on 320-5013 frame motors.

BTD's are constructed using a fine, pure, metallic, spring-like wire surrounded by an insulator and enclosed in a metal sheath.

- 120 Ohm Nickel
- 100 Ohm Platinum
- 10 Ohm Copper

BEARING THERMOCOUPLE

A thermocouple is constructed of two dissimilar wires joined at one end and encased in a metal sheath that an electro-motive force (EMF) is developed by the thermo-electric effects. Any given set of thermocouple wires have a known "EMF vs. Temperature" characteristic. The other end of each wire is connected to a meter or measuring circuit. Heating the measuring junction of the thermocouple produces a voltage that is greater than the voltage across the reference junction. The difference between the two voltages is proportional to the difference in temperature and can be measured on a voltmeter.

Thermocouples are classified based on the materials used for joints, examples are

Iron Constantan	-	Type J
Chromel Constantan	-	Type E
Copper Constantan	-	Type T
Chromel Alumel	-	Type K

BEARING LIFE

L_{10} life is the basic rating life expressed in millions of revolutions or number of operating hours at 90% reliability. The bearing life, in hours for 90% reliability, for anti-friction bearings expressed as:

$$L_{10} = \frac{1000000}{60*RPM} * (C/P)^n$$

Where:
RPM = rotation speed
C = bearing dynamic capacity
P = equivalent radial load
n = 3 for ball bearing and 10/3 for roller bearing

L_{10a} life is the rating life expressed in millions of revolutions or number of operating hours considering life adjustment factors for reliability, material and operating conditions.

L_{10a} life = $a1*a2*a3*L_{10}$
Where a1= adjustment factor for reliability
a2= adjustment factor for bearing materials
a3= adjustment factor for bearing operating conditions including adequacy of lubrication, cleanliness, temperature etc.

Generally a2 and a3 factors are combined and called as a23 - Combined Life Adjustment Factor.

BRAKES

Brakes supplied mounted on motors will be disc-type, spring set electrically released brakes manufactured by Stearns Electric Corp. at General Electric Company option. Brakes are available for motors in frames 143-445 only.

Several factors must be considered when determining the correct brake for a particular application.

Refer to General Electric, for 'frames above 445' and 'Special brakes like Drum-Shoe/ Floor-mounted'.

1. **Brake Torque**
   As a general rule of thumb, the torque rating of a brake should, as a minimum, match the full-load torque of the motor on which it is mounted. This will provide ample torque if the brake is used for holding and will also provide a stop in approximately the same time as required for acceleration. Full-load torque can be calculated as follows:

$$\text{Full-Load Torque} = \frac{5252 \times Hp}{\text{Full-load Speed}}$$

   For applications involving high inertia load, fast stops or a stop within a given time limit, the brake should be selected on the basis of total inertia to be retarded. Brake rating may be calculated as follows:

$$\text{Torque} = \frac{WK^2 \times RPM}{308 \times t}$$

   Where:
   WK^2 = Load inertia in lb-ft²
   RPM = Full-Load Speed in RPM
   t = Time, in seconds, to stop

   Standard brake torque ratings or continuous duty include: 6, 10, 15, 25, 35, 50, 75, 105, 125, 175, 230, 330, 440, 550 lb-ft. If the calculated brake torque falls between the standard torque values, specify the next higher torque.

2. **Brake Voltage**
   Brakes are supplied for operation on the same voltage as the motor unless otherwise specified. In the case of dual voltage motors, brake voltage will be the lower of the motor voltages, unless otherwise specified. Standard brake voltages are:

   60 HZ: 200, 230, 460, 575 volts
   50 HZ: 200, 220, 380, 415, 440, 550 volts

   Stearns brakes are all single-phase.

   Brake leads are terminated at a conduit connection on the brake.

3. **Brake Enclosure**
   Brakes are available in enclosures to match the needs of the environment in which they will be operating. Standard enclosure is for application on dripproof or totally-enclosed fan-cooled motors for indoor or semi-protected outdoor installations. Dust-tight, waterproof enclosure is suitable for severe-duty and totally-enclosed motors used in conditions of extreme moisture, abrasive or conductive dusts, acid or alkali fumes or for outdoor installation.

4. **Vertical Mounting Position**
   Brakes must be specially modified for vertical mounting. Specify if the motor will be above or below the brake.

CONDUIT BOX, SPECIAL

Standard conduit boxes meet or exceed NEMA and NEC volumes and are adequate for connecting all necessary leads for power and any incidental control circuits.

Available options for motors in frames 182 through 449 include extra 3/4 inch conduit hole for dripproof, TENV and TEFC motors, additional conduit box, waterproof conduit box and oversized box.

Motors in frames 509-5013 are available with a 2500 cubic inch motor mounted box suitable for stress cone connections or for mounting accessory equipment. This special box is furnished as standard for all motors of 3000 volts and above. Three stand-off insulator-supported copper bar terminations for motor leads can be furnished. An 11,000 and a 17,000 cubic inch motor mounted conduit box are available. In addition, a 44,000 cubic inch floor mounted, conduit box is available to mount beside the motor with conduit connection to the motor frame. This construction allows the customer to mount accessories such as current transformers, surge capacitors, lightning arrestors, etc.

315 frame IEC conduit boxes are cast iron or fabricated steel depending on the size of the box. The box is severe duty, with lead gasket and ground terminal. Motors up to 690 volt will have a terminal block, above 690 volt will have standoff terminals.

COUPLINGS

Motors are normally furnished without couplings; however, a one-piece half coupling can be installed on the motor shaft at the factory providing it is balanced, finished machined and key-seated to motor shaft dimensions. It must be shipped prepaid to the factory of motor manufacturer before the start of production. Motors are dynamically balanced prior to installing the half coupling and are not rebalanced after coupling assembly.

A vibration test with half-coupling installed will be performed and a test report issued when this special service is requested by the customer and included in the quotation.

DOWEL HOLES IN FEET

Dowel holes are furnished as standard on 500 frame motors as an alignment aid. One 1/2 inch hole is provided in each of the diagonally opposite feet.

ENDSHIELDS, SPECIAL

Horizontal motors are available with C-face, and D-flange endshields, which have rabbets and bolt holes for mounting equipment to the motor, or for overhanging the motor on a driven machine. The C-face endshield provides a male rabbet and tapped holes for mounting bolts. This endshield is used for mounting small apparatus, such as pumps, to the motor. The D-flange has a male rabbet, with holes in the flange for through bolts. This flange is primarily used on machine-tool gear boxes and compressors.

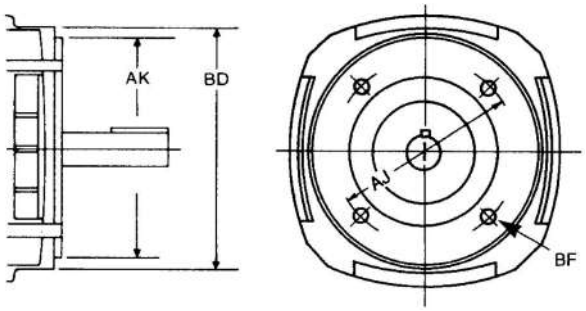


Figure 29: Type C-Face

Table 29: C-Face Mounting Dimensions (inches)

Dimension in inches					
NEMA Frame Size	Frame Diameter	Rabbet Diameter	Bolt Circle	Bolt Holes	
				BF	
	BD	AK	AJ	Tap Size	Min. Depth
182-184	9.00	8.50	7.25	.50-13	0.88
213-215	8.68	8.50	7.25	.50-13	0.88
254-256	8.68	8.50	7.25	.50-13	0.88
284-286	10.75	10.50	9.00	.50-13	0.88
324-326	12.75	12.50	11.00	.625-11	1.06
364-365	13.00	12.50	11.00	.625-11	1.06
404-405	13.00	12.50	11.00	.625-11	1.06
444-449	13.00	12.50	14.00	.625-11	1.06
500	18.00	16.50	14.50	.625-11	1.06

Note: Frames 180 through 326 have 4 holes; 364 and larger have 8 holes

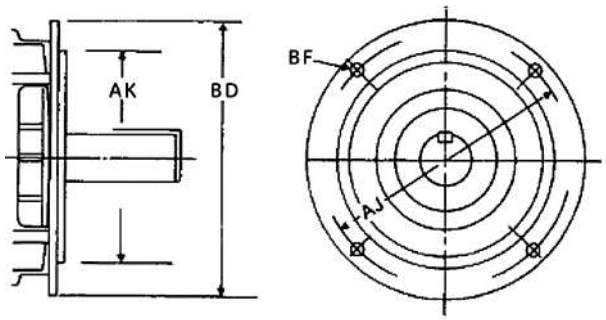


Figure 30: Type D-Flange

Table 30: D-Flange Mounting Dimensions (inches)

Dimension in inches				
NEMA Frame Size	Face Diameter	Rabbet Diameter	Bolt Circle	Bolt Holes
	BD	AK	AJ	BF
182-184	11.00	9.00	10.00	0.53
213-215	11.00	9.00	10.00	0.53
254-256	14.00	11.00	12.50	0.81
284-286	14.00	11.00	12.50	0.81
324-326	18.00	14.00	16.00	0.81
364-365	18.00	14.00	16.00	0.81
404-405	21.90	18.00	20.00	0.81
444-449	21.94	18.00	20.00	0.81
500	25.00	18.00	22.00	0.81

Note: Frames 182 through 365 have 4 holes. 404 and larger have 8 holes.

C-face and D-flange kits are available for field modification of standard motors by an Authorized GE Service center. These kits are provided as a convenience item. These modified motors will not meet NEMA BA dimensions and there is some loss in usable shaft length.

FRAME, NON-STANDARD

Requests are occasionally received to furnish motors in frame sizes either larger or smaller than NEMA standard. If frame size is larger than standard it is to be supplied, the standard motor rating for the frame size that will be furnished. If smaller than standard frame is required, please contact GE Energy for feasibility and terms.

GREASE AND RELIEF FITTINGS

Motors with regreasable bearing systems can be supplied with regrease fittings and automatic grease relief devices. Severe-duty motors are supplied with extended hydraulic grease fittings and plugs.

SHAFTS, SPECIAL

Motors are furnished with a single straight shaft with sled runner keyway and a rectangular key. For motors in frames 182 through 449, a long shaft for V-belt drive is supplied for a majority of ratings and is denoted by the suffix "T" or "L" on the motor frame size. Two-pole (3600 RPM) motors in frames 284 through 449 and certain other 449 frame ratings are furnished with short shafts for direct connection. These motors are denoted with the suffix "TS", "LL" or "LS" on the motor frame size. Standard double-end shaft extensions are available for motors in frames 143 through 5011. Special shaft designs are available including differences in dimensions and/or materials as follows:

Length: Up to 10 inches longer than standard for motors in frames 182-449

Up to 13 inches longer than standard for motors in frames 509-5013
Longer than standard shafts are usually suitable for direct connection. Other drives such as belts or gearing may require special bearings and should be referred to GE Energy.

Keyway: Sled-runner, round end, or Woodruff #3 or #9

Hole: Drilled radially or in the end of the shaft. Drilled and tapped in the end of the shaft. Hole depth limited to three times the hole diameter 26.

Steps: One or more reductions in shaft diameter.

Threads: Class 2A right-hand thread size appropriate to the shaft diameter.

Squared: Milled flats on four sides of one step.

Tapered: 1- 1/4 or 1- 1/2 inch per foot taper with threads, nut and lock washer.

SHAFT SLINGER
A steel reinforced neoprene shaft slinger is an elastomer ring disc mounted on the shaft. It reduces the probability of the contamination of the bearing system when the shaft is rotating. (Not available on explosion proof). Shaft slinger is standard on drive end for all Severe Duty motors and on both ends on X$D Ultra® motors (except C-face and D-flange, for 140-180 frames).

Shaft Grounding Ring (SGR)
The shaft grounding ring prevents electrical bearing damage by safely channeling harmful shaft voltages away from the bearings to ground.

The specially engineered conductive micro fiber of the AEGIS grounding ring used in GE motors provides a path of least resistance for damaging bearing currents and extends motor bearing life. The shaft grounding ring is offered as an externally mounted option on the Energy $aver® ODP and TEFC motor products, and DC products, using a specially designed mounting bracket. The shaft grounding ring is offered as an internal mount option on X$D Ultra® motors and A$D motors.

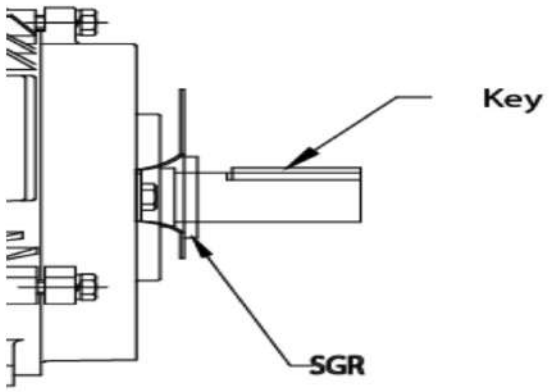


Figure 31

TACHOMETER
Tachometer and encoder are terms used for equipment that has an output signal indicating the motors speed. The degree of sophistication is diverse - ranging from a DC voltage proportional to speed, to dual output frequency pulses, up to a few thousand pulses per revolution (PPR). It can be used to indicate not only velocity, but also acceleration and position when used in association with equipment to interpret the signals.

TACHOMETER OR ENCODER MOUNTING PROVISION
For mounting a C-face tachometer, the motor is supplied with an 8.5" C-face mounting rabbet on the opposite drive end with a stub shaft. Customer is to provide; the 'stub shaft dimensions', 'manufacturer' and 'style' of device to be mounted, with order.

For mounting a tether tachometer, the motor is supplied with opposite drive end shaft extension and a hole drilled and tapped in the fan cover/endshield to secure the anti-rotation device. Customer is to provide; 'detailed shaft dimensions', 'manufacturer' and 'type' of the tachometer device.

Note: Tachs available through mod-shop, see section 9.

VERTICAL JACK SCREWS
Vertical jack screws are used during alignment of the motor and drive equipment. The jack screw is used as an aid to insert the proper shims. Vertical jack screws are NOT intended as permanent support of the motor. Proper shimming and bolting of the motor to the base must be completed and tension removed from the jack screws.

VIBRATION DETECTION
Motors can be provided with vibration switch or vibration detection probes/transmitters or with only provisions for vibration probes.

VIBRATION SWITCH
Provided with SPDT switch which disconnects the motor power circuit when the motor vibration level exceeds the set vibration limit.

VIBRATION PROBES/TRANSMITTERS
This transmits electrical signal (mA) proportional to velocity or displacement, directly to PLC or DCS or any other vibration monitor.

These are generally mounted on the endshields, above the bearings. When it is not feasible to mount on the endshields, they can be mounted on the frame, close to the endshields.

MOTOR TESTING

Good motor application practice requires that uniform and meaningful terminology be used to define efficiency values which are determined by accurate test procedures uniformly applied by the motor manufacturers.

Testing to accurately determine the value of motor losses can be time consuming and expensive. Also, wide variations in results can be experienced when different test methods are used. In order to maintain consistency, NEMA has established the following guidelines:

Efficiency and losses shall be determined in accordance with latest revision of IEEE standard 112 or CSA C390. Polyphase squirrel-cage motors rated 1-500 Hp shall be tested by dynamometer. The efficiency will be determined using segregated losses in which stray load loss is obtained from linear regress ion analysis to reduce the effect of random errors in the test measurements.

This procedure focuses on stray load losses where the greatest variance can occur from one motor to the next. It also clearly defines the procedure and requires testing either at full operating temperature or by making corrections for temperature differences. Finally, the test method requires use of a dynamometer to provide the most accurate data as a basis for accuracy improvement and stray load loss measurement.

Motor efficiency is not an absolute or constant for all motors of the same design. Rather, the efficiencies of a large number of motors will fit a distribution as shown in Figure 32. Though Figure 32 illustrates a normal distribution, in reality the distribution **need not be** normal.

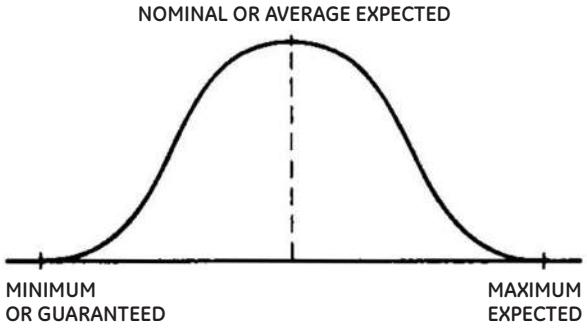


Figure 32: Efficiency distribution

The nominal efficiency which appears on the motor nameplate corresponds to the nominal, or average expected efficiency on the curve. The guaranteed minimum efficiency appearing on GE energy efficient motor nameplates corresponds to the minimum, or guaranteed on the curve.

It is to be noted that there is difference in calculation between NEMA and IEC, the same is illustrated by the table below:

Table 31: Comparison of Methodology for Efficiency Calculation between IEC and NEMA

Parameters	IEC	NEMA
Standards	IEC 60034-2	IEEE-112 Method B
Rotor I^2R loss or slip loss	No temperature correction	Temperature correction to Winding temperature
Stray load loss	0.5% of input*	Measured **
Input	Measured	Measured
Output	Calculated by subtracting the losses from input	Calculated from measured Torque

* 0.5% of input; for a motor
** Calculated stray loss is smoothed by regression analysis; output is corrected.

PLUG REVERSAL TESTING

This is an accelerated life test to evaluate the integrity of the construction and materials for the insulation system of the motor. "Plugging" is rapid braking of the motor brought about by suddenly reversing two of the three phases of the supply voltage while it is rotating in any direction. This 'plugging' action subjects the motor winding to severe electromagnetic forces and consequent mechanical stresses.

The test consists of subjecting the motor to several thousands of plugging and reversals. At the end of the test, the motor must be operable and successfully pass the standard insulation inspecting requirements and has exceeded the compiled historical data. Figure 33, show the Plug-reversal historical data for a 4-pole motor.

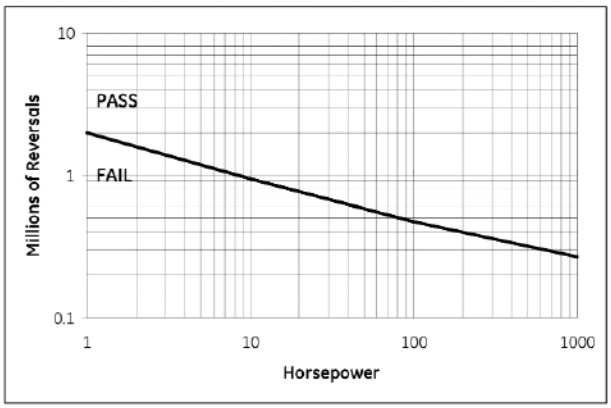


Figure 33: 4-pole GE motor test results data for minimum number of plug-reversals.

It is to be noted that for the subject test motor is equipped with special grease and or bearings. If need arises, the bearing system of the test motor, is overhauled.

Corona Inception Voltage (CIV)
The CIV is the voltage at which partial discharges begin occurring within small voids inherent in any insulation system, for random winding which id fed by IGBT drive. When the voltage stress across these voids reaches the CIV, a discharge of energy takes place. These partial discharges can cause degradation of the insulation system through both chemical and mechanical erosion. Clearly, if a motor is operating continuously at a level of voltage stress above its CIV, insulation degradation occurs and eventually leads to motor failure.

CIV can be controlled
1. Externally by:
   - Introducing power conditioning accessories like filters, reactors and isolation transformers.
   - Restricting the distance (lead length), between the motor and drive.
2. Internally by:
   - Eliminating small air spaces where corona could develop.
   - Making the space between conductors sufficiently long, so that a 2000 volt spike; cannot cause a partial discharge.
   - Advanced PWM control techniques are being developed to reduce the maximum spike voltage from 3 times to 2 times of DC voltage.

Effects of CIV, depend on construction and process adopted during manufacturing; few are listed below:

1. **Winding:** CIV improves if the beginning turn and ending turn are not in close proximity

2. **Varnish and Resin:** CIV improves with the increase in number of 'dip and bake' or 'VPI' system or excellent varnish impregnation through trickle-treat.

3. **Phase Paper:** Introduction of phase paper between the different phases, improves CIV, which are a standard feature for GE's Polyphase motors.

AMBIENT
As a standard offering, GE motors are rated for maximum ambient of +40°C. For high and low ambient, refer to page 10.45.

GE stock X$D Ultra® motors, generally are rated for dual ambient, as follows:

At ambient 40°C, Class H with temperature rise limited to 80°C at 1.0 Service Factor and suitable for 1.25 Service Factor with 115°C rise. Alternatively these motors are suitable for operation in a 65°C ambient with 105°C rise, at 1.0 Service Factor.

III. EFFICIENCY

DEFINITION

Efficiency is an important application consideration. This is especially true for applications having high hours of operation where cost of motor operation is many times the initial purchase price of the motor.

As shown below, efficiency is defined as watts output over watts input using 746 watts as the equivalent of one horsepower:

$$\text{Efficiency} = \frac{746 \times \text{Hp Output}}{\text{Watts Input}} = \frac{\text{Watts Output}}{\text{Watts Input}}$$

This can also be expressed as the watts input minus the losses divided by the watts input.

$$\text{Efficiency} = \frac{\text{Input - Losses}}{\text{Input}}$$

The only way to improve efficiency is to reduce losses. Although input power is readily measured, power out is difficult to measure accurately. Therefore, precision equipment is required to determine the efficiency and the losses in a motor. Standard test procedures are defined to measure the individual components of loss separately in order to improve the accuracy of efficiency determination.

DESCRIPTION OF MOTOR LOSSES

Typically, motor losses are categorized, first, as those which occur while the motor is energized but operating at no-load; and, second, those additional losses due to the output load. Specific losses are:

1. No-load losses
   a. Windage and friction
   b. Stator iron losses
   c. Stator I^2R losses

2. Load Losses
   a. Stator I^2R losses (due to increase in current under load)
   b. Rotor I^2R
   c. Stray load losses

The no-load losses and the conductor losses under load can be measured separately; however, the stray load loss requires accurate input-output test equipment for determination. The stray-load loss consists of losses due to harmonic currents and flux in the motor. Factors affecting stray load losses include:

- Stator and rotor slot geometry
- Number of slots
- Air gap length
- Rotor slot insulation
- Manufacturing process

PREMIUM EFFICIENCY

GE Premium Efficiency motors exceed or meet the NEMA Premium Efficiency (except for special motors like Vertical High Thrust motors. Etc.) as stated in the table:

Table 32: NEMA Premium Efficiency Nominal Level; Reference Table 12-12 NEMA (MG-1)

Motor Hp	Enclosed Motors			Open Motors		
	2 Pole	4 Pole	6 Pole	2 Pole	4 Pole	6 Pole
1	77	85.5	82.5	77	85.5	82.5
1.5	84	86.5	87.5	84	86.5	86.5
2	85.2	86.5	88.5	85.5	86.5	87.5
3	86.5	89.5	89.5	85.5	89.5	88.5
5	88.5	89.5	89.5	86.5	89.5	89.5
7.5	89.5	91.7	91	88.5	91	91.2
10	90.2	91.7	91	89.5	91.7	91.7
15	91	92.4	91.7	90.2	93	91.7
20	91	93	91.7	91	93	92.4
25	91.7	93.6	93	91.7	93.6	93
30	91.7	93.6	93	91.7	94.1	93.6
40	92.4	94.1	94.1	92.4	94.1	94.1
50	93	94.5	94.1	93	94.5	94.1
60	93.6	95	94.5	93.6	95	94.5
75	93.6	95.4	94.5	93.6	95	94.5
100	94.1	95.4	95	93.6	95.4	95
125	95	95.4	95	94.1	95.4	95
150	95	95.8	95.8	94.1	95.8	95.4
200	95.4	96.2	95.8	95	95.8	95.4
250	95.8	96.2	95.8	95	95.8	95.4
300	95.8	96.2	95.8	95.4	95.8	95.4
350	95.8	96.2	95.8	95.4	95.8	95.4
400	95.8	96.2	95.8	95.8	95.8	95.8
450	95.8	96.2	95.8	95.8	96.2	95.2
500	95.8	96.2	95.8	95.8	96.2	95.2

The "minimum guaranteed efficiency," below nominal value:

1. Per NEMA is 2 bands -OR (as applicable)
2. Per EISAct 2007 law requires the motor losses to be no more than 15% lower than namplate. Referred to the federal registry 10 CFR Part 431, and section 431.24.

GE's X$D Ultra® family of products, offers 'minimum guaranteed efficiency' at 1 band below the nominal value.

Comparison, of '1-band low'; for minimum guaranteed efficiency levels (Per NEMA).

Table 33: Comparison of Minimum Guaranteed Efficiency Levels

Nominal Value	Minimum Guaranteed Efficiency	
	1-band	2-band
98.6	98.5	98.4
98.5	98.4	98.2
98.4	98.2	98.0
98.2	98.0	97.8
98.0	97.8	97.6
97.8	97.6	97.4
97.6	97.4	97.1
97.4	97.1	96.8
97.1	96.8	96.5
96.8	96.5	96.2
96.5	96.2	95.8
96.2	95.8	95.4
95.8	95.4	95.0
95.4	95.0	94.5
95.0	94.5	94.1
94.5	94.1	93.6
94.1	93.6	93.0
93.6	93.0	92.4
93.0	92.4	91.7
92.4	91.7	91.0

Nominal Value	Minimum Guaranteed Efficiency	
	1-band	2-band
91.7	91.0	90.2
91.0	90.2	89.5
90.2	89.5	88.5
89.5	88.5	87.5
88.5	87.5	86.5
87.5	86.5	85.5
86.5	85.5	84.0
85.5	84.0	82.5
84.0	82.5	81.5
82.5	80.0	81.5
81.5	80.0	78.5
80.0	78.5	77.0
78.5	77.0	75.5
77.0	75.5	74.0
75.5	74.0	72.0
74.0	72.0	70.0
72.0	70.0	68.0
70.0	68.0	66.0
68.0	66.0	64.0
66.0	64.0	62.0

IEC EFFICIENCY LEVELS

More information can be found out, when IEC publishes and releases the IEC Standard IEC 60034-30.

Note: Table 34 indicates the Nominal values being proposed for Premium Efficiency (IE3) levels. The values could be changed when the standard is released by IEC.

Table 34: IEC Efficiency Levels for IE1, IE2, IE3 and IE4 for 50 HZ

Motor Rating	% Efficiency											
	2 Pole				4 Pole				6 Pole			
kW	IE1	IE2	IE3	IE4	IE1	IE2	IE3	IE4	IE1	IE2	IE3	IE4
0.75	72.1	77.4	80.7	84.9	72.1	79.6	82.5	85.6	70.0	75.9	78.9	83.1
1.1	75.0	79.6	82.7	86.7	75.0	81.4	84.1	87.4	72.9	78.1	81.0	84.1
1.5	77.2	81.3	84.2	87.5	77.2	82.8	85.3	88.1	75.2	79.8	82.5	86.2
2.2	79.7	83.2	85.9	89.1	79.7	84.3	86.7	89.7	77.7	81.8	84.3	87.1
3	81.5	84.6	87.1	89.7	81.5	85.5	87.7	90.3	79.7	83.3	85.6	88.7
4	83.1	85.8	88.1	90.3	83.1	86.6	88.6	90.9	81.4	84.6	86.8	89.5
5.5	84.7	87.0	89.2	91.5	84.7	87.7	89.6	92.1	83.1	86.0	88.0	90.2
7.5	86.0	88.1	90.1	92.1	86.0	88.7	90.4	92.6	84.7	87.2	89.1	91.5
11	87.6	89.4	91.2	93.0	87.6	89.8	91.4	93.6	86.4	88.7	90.3	92.5
15	88.7	90.3	91.9	93.4	88.7	90.6	92.1	94.0	87.7	89.7	91.2	93.1
18.5	89.3	90.9	92.4	93.8	89.3	91.2	92.6	94.3	88.6	90.4	91.7	93.5
22	89.9	91.3	92.7	94.2	89.9	91.6	93.0	94.7	89.2	90.9	92.2	93.9
30	90.7	92.0	93.3	94.0	90.7	92.3	93.6	95.0	90.2	91.7	92.9	94.3
37	91.2	92.5	93.7	94.8	91.2	92.7	93.9	95.3	90.8	92.2	93.3	94.6
45	91.7	92.9	94.0	95.1	91.7	93.1	94.2	95.6	91.4	92.7	93.7	94.9
55	92.1	93.2	94.3	95.4	92.1	93.5	94.6	95.8	91.9	93.1	94.1	95.2
75	92.7	93.8	94.7	95.6	92.7	94.0	95.0	96.0	92.6	93.7	94.6	95.4
90	93.0	94.1	95.0	95.8	93.0	94.2	95.2	96.2	92.7	94.0	94.9	95.6
110	93.3	94.3	95.2	96.0	93.3	94.5	95.4	96.4	93.3	94.3	95.1	95.6
132	93.5	94.6	95.4	96.0	93.5	94.7	95.6	96.5	93.5	94.6	95.4	95.8
180	93.8	94.8	95.6	-	93.8	94.9	95.8	*	93.8	94.8	95.6	*
200 up to 375	94.0	95.0	95.8	*	94.0	95.1	96.0	*	94.0	95.0	95.8	*

*Other efficiency levels are indicated for specific motor ratings in IEC 60034-30

Table 35: Indicative Values (%) of IEC Premium Efficiency (IEC) for 50 HZ

kW	Hp	2 Pole	4 Pole	6 Pole
0.75	1	82.1	84	80.6
1.1	1.5	83.8	85.3	82.4
1.5	2	85.1	86.3	83.8
2.2	3	86.4	87.5	85.4
3	4	87.5	88.4	86.6
4	5.4	88.4	89.2	87.7
5.5	7.4	89.4	91	88.7
7.5	10	90.3	91.8	89.7
11	15	91.2	91.7	90.8
15	20	91.9	92.3	91.6
18.5	25	92.4	92.7	92.1
22	30	92.7	93.1	92.5
30	40	93.3	93.6	93.1
37	50	93.7	94	93.5
45	60	94	94.3	93.9
55	74	94.3	94.5	94.2
75	100	94.7	95	94.7
90	120	95	95.2	94.9
110	150	95.2	95.4	95.2
132	175	95.4	95.6	95.4
160	210	95.6	95.8	95.6
200 & above	265 & above	95.8	96	95.8

1. Pre-EPAct: DOE's MotorMaster+ software version 4.00.01 (9/26/2003) "Average Standard Efficiency" motor defaults
2. EPAct: Energy Policy Act of 1992
3. NEMA Premium: NEMA MG-1 Table 12-12

Table 36: Comparison of Efficiency Levels (Pre-EPAct/ EPAct/ Premium) for 4-pole Totally Enclosed Motors for 60 HZ

Size (Hp)	Pre-EPAct[1]	EPAct[2]	NEMA Premium[3]
1	76.7	82.5	85.5
1.5	79.1	84	86.5
2	80.8	84	86.5
3	81.4	87.5	89.5
5	83.3	87.5	89.5
7.5	85.5	89.5	91.7
10	85.7	89.5	91.7
15	86.6	91	92.4
20	88.5	91	93
25	89.3	92.4	93.6
30	89.6	92.4	93.6
40	90.2	93	94.1
50	91.3	93	94.5
60	91.8	93.6	95
75	91.7	94.1	95.4
100	92.3	94.5	95.4
125	92.2	94.5	95.4
150	93	95	95.8
200	93.5	95	96.2
250	94.2	95	96.2
300	94.4	95.4	96.2
350	94.6	95.4	96.2
400	94.8	95.4	96.2
450	94.9	95.4	96.2
500	94.9	95.8	96.2

SIMPLE PAY BACK CALCULATIONS

The most important factor to consider when deciding for replacement of a motor is the pay back period.
A = per unit Load = (% load / 100%)
B = Annual usage in terms of number of hours
C = Electricity cost per kWh in $

If efficiency of the existing motor + (Eff_{old}) in % terms and Efficiency of the new motor = (Eff_{new}) in % terms.

Savings = $Hp \times 0.746 \times A \times B \times C \times \left[\frac{100}{(Eff_{old})}\right] - \left[\frac{100}{(Eff_{new})}\right]$

Cost difference of Motor = (Cost for Premium Eff. Motor) - (Cost for Low Eff. Motor)
Where "cost for Low Eff. Motor" could be; an old running motor = 0
Or replacement for a failed motor = Cost of competitor motor

Pay back (in years) = (Cost difference of motor) / (Savings)

To illustrate the benefit annual savings for X$D Ultra, over competitor motor (considering minimum guaranteed efficiencies); under the following condition:

A = per unit load = 75% / 100% = 0.75
B = annual usage = 7200 hours
C = Electricity cost per kWh = 0.09¢
Hp = 20 Hp
Pole = 4

Savings = $20 \times 0.746 \times 0.75 \times 7200 \times 0.09 \times \left[\frac{100}{91.7}\right] - \left[\frac{100}{92.4}\right]$

Annual Savings = $59.90

To illustrate the pay back period, to replace a 15 year old running 20 Hp 4 -pole motor with a Premium Efficiency motor, under the following operating conditions:

A = per unit load = 75% / 100% = 0.75
B = Annual usage = 7300 hours
C= Electricity cost per kWh = 0.09¢

If Cost for Premium Eff. Motor = X$D Ultra® Price = $ 1125.00

Refer to Table 31; to compare and note the efficiency level; from which we can arrive at:

Eff_{old} = 88.5%
Eff_{new} = 93%

Savings = $401.96

Cost difference of Motor = $1125.00 - 0 = $1125.00

Pay back in years = $1125.00 / $401.96
= 2.8 years

A pay-back period less than 3 years, is recommended for replacement.

IV. CLASSIFICATIONS/ ENVIRONMENT

ENVIRONMENTAL CONSIDERATIONS

Motor Enclosures

The type of enclosure required is dependent upon the surrounding atmosphere in which the motor is installed and the amount of mechanical protection and corrosion resistance required. The two general classes of motor enclosure are open and totally-enclosed. An open machine is one having ventilating openings which permit passage of external air over and around the winding of the motor. A totally-enclosed machine is constructed to prevent the free exchange of air between the inside and outside of the motor, but not sufficiently enclosed to be termed air-tight.

Derivatives of these two basic enclosures are described below.

Dripproof

Dripproof motors are designed to be internally ventilated by ambient air, having ventilation openings constructed so that successful operation is not affected when drops of liquid or solid particles strike the enclosure at any angle from 0 to 15 degrees downward from vertical. Dripproof motors are typically used in relatively clean, indoor applications.

Weather Protected Type I (WPI)

A weather protected type I machine is an open machine with its ventilating passages so constructed as to minimize the entrance of rain, snow and airborne particles to the electric parts and having its ventilating openings so constructed as to prevent the passage of a cylindrical rod 3/4-inch in diameter.

Weather Protected Type II (WPII)

A weather protected type II machine shall have, in addition to the enclosure defined for a weather protected type I machine, ventilating passages at both intake and discharge so arranged that high-velocity air and airborne particles blown into the machine by storms or high winds can be discharged without entering the interval ventilating passages leading directly to the electric parts of the machine itself. For motors in frames 143T through 449T, standard TEFC motors should be specified. Ratings built in frames 509 and larger utilize dripproof frames with "top hat" mechanical construction to meet the above specifications. WPII motors have provisions for air filters.

Totally-Enclosed

Totally-Enclosed motors are designed so that there is no free exchange of air between the inside and the outside of the enclosure, but not sufficiently enclosed to be airtight. Totally-enclosed motors may be of the following types of construction.

1. TEFC (Totally-Enclosed Fan-Cooled) This type includes an external fan mounted on the motor shaft. This fan is enclosed in a fan casing which both protects the fan and directs the output air over the motor frame for cooling. The airflow is dependent on the shaft speed.

2. TEAO (Totally-Enclosed Air-Over) This type is similar to TEFC designs except that the cooling air being forced over the motor frame is provided by a fan which is not an integral part of the motor. User should ensure the sufficient airflow as mentioned on the nameplate.

3. TENV (Totally-Enclosed Non-Ventilated) This type of construction does not require forced airflow over the motor frame for cooling.

4. TEBV (Totally-Enclosed Blower Ventilated) is used in applications where a separate mounted blower provides supplementary air to cool the motor. Typical uses are in inverter drive application with low frequency. The airflow is independent of the shaft speed.

Piped Ventilation

When motors are cooled by piping in outside air, the required airflow in cubic feet per minute (CFM) can be calculated from the equation:

$$CFM = \frac{Hp \left[\frac{100}{Eff\ \%} - 1\right] \left[746 \times 1.8\right]}{10}$$

This results in a 10°C air temperature rise.

HAZARDOUS 'CLASSIFIED' LOCATIONS (INCLUDES DIV II)

Specially designed totally-enclosed motors are available for operation in the classes of hazardous atmospheres, as defined by Underwriters Laboratories, the National Electrical Code. Two basic classes are:

Class I Division I Explosion-Proof

An explosion-proof motor is a totally-enclosed machine designed to withstand an explosion of a specified gas or vapor which may occur within it and to prevent the ignition of the specified gas or vapor surrounding the motor.

Class II Division I Dust Ignition Proof

A dust-ignition proof motor is a totally-enclosed machine constructed in a manner which will exclude ignitable amounts of dust or amounts which might affect performance or rating, and which will not permit arcs, sparks, or heat generated inside the enclosure to cause ignition of exterior accumulations or atmospheric suspension of a specific dust and/or in the vicinity of the enclosure.

The various atmospheres defined within the two classes have been divided into groups dependent upon the explosive characteristics of the materials. The class and group of service shall appear on the motor nameplate along with an identification number which identifies a maximum operating temperature as shown in the following tabulations:

Table 37: Hazardous Atmospheres

Class	Group	ID No.	Atmosphere
I	A	T2A	Acetylene
I	B	T2A	Hydrogen, manufactured gas
I	C	T3A	Ethyl ether vapor
I	D	T2A T2D*	Gasoline, petroleum, naptha, alcohols, acetone, lacquer solvents, natural gas
II	E	T3B	Metal dust
II	F	T3B	Carbon black, coal or coke dust
II	G	T3B	Grain dust

*T2A without thermostat/T2D with thermostat

Divisions, Hazardous Location

The National Electrical Code has defined two distinct divisions within each of the hazardous location classes:

a) Class I, Division 1 - A Class I, Division 1 location is a location: (1) in which ignitable concentrations of flammable gases or vapors exist under normal operating conditions; or (2) in which ignitable concentrations of such gases or vapors exist frequently because of repair or maintenance operations or because of leakage; or (3) in which breakdown or faulty operation of equipment or processes might release ignitable concentrations of flammable gases or vapors, and might also cause simultaneous failure of electric equipment. Division 1 locations always require the use of explosion- proof construction motors.

b) Class I, Division 2 - A Class I, Division 2 location is a location: (1) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the liquids, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in case of abnormal operation of equipment; or (2) in which ignitable concentrations of gases or vapors are normally prevented by positive mechanical ventilation, and which might become hazardous through failure or abnormal operation of the ventilating equipment; or (3) that is adjacent to a Class I, Division 1 location, and to which ignitable concentrations of gases or vapors might occasionally be communicated. The National Electrical Code allows the installation of non- explosion-proof motors in Division 2 locations.

c) Class II, Division 1 - A Class II, Division 1 location is a location: (1) in which combustible dust is in the air under normal operating conditions in quantities sufficient to produce explosive or ignitable mixtures; or (2) where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure or electric equipment, operation of protection devices, or from other causes; or (3) in which combustible dusts of an electrically conductive nature may be present. Division 1 locations always require the application of the appropriate dust-ignition proof motor.

d) Class II, Division 2 - A Class II, Division 2 location is a location: (1) in which combustible dust will not normally be in suspension in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus, or (2) dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment, and dust accumulations resulting from there may be ignitable by abnormal operation or failure of electrical equipment or other apparatus. The National Electrical Code specifies Class limits when operating at full-load in free air. The surface temperature limits vary with dust characteristics such as ignition temperature, susceptibility to dehydration and potential for carbonization. The controlling document is ANSI/NFPA 70; material characteristics are detailed in NFPA 497M.

e) ATEX Zone 2, Group II, Category 3 In all European Union Member States, the product which is intended for use in potentially explosive atmospheres will need to comply with the ATEX Directive 94/9/EC and the CE Marking Directive. This product is governed by European standard EN60079-15.

Equipment in this category is intended for use in areas in which explosive atmospheres caused by gases, vapors, mists, or air/dust mixtures are unlikely to occur or, it they do occur, are likely to do so only infrequently and for a short period only.

Equipment in this category ensures the requisite level of protection during normal operation.

Table 38: Temperature Identification Numbers

Maximum Temperature		Identification No.
Degrees C	Degrees F	Acetylene
450	842	T1
300	572	T2
280	536	T2A
260	500	T2B
230	446	T2C
215	419	T2D
200	392	T3
180	356	T3A
165	329	T3B
160	320	T3C
135	275	T4
120	248	T48
100	212	T5
85	185	T6

Note: For motors having multiple UL labels, the lowest identification number will apply.

CAUTION: THE RESPONSIBILITY OF SPECIFYING THE PROPER CLASS, GROUP AND DIVISION OF HAZARDOUS LOCATION RESIDES WITH THE ULTIMATE USER AND THE INVOLVED REGULATORY AGENCY.

Motors of Hazardous (Explosive Gas) Atmosphere, per ATEX:

IEC standards dealing with apparatus for use in explosive gas atmospheres are contained in a series of publication EN60079-0 through EN60079-19. The rules for classification and application of motors in these areas differ considerably from United States standards and practices. Some of the differences are noted in the following summary.

Classification of Gases:

IEC classifies apparatus in two broad groups as follows:
Group 1: for application on coal mining, and
Group 2: for application on other industries.

Group 2 is divided into categories 1, 2 and 3.

'Category 1 equipment' is intended for use in Zone 0 situations.

'Category 2 equipment' is intended for use in Zone 1 situations.

'Category 3 equipment' is intended for use in Zone 2 situations.

Classifications of Hazardous Areas

IEC divides the classification of hazardous areas into three zones according to the degree of hazard, defined as follows.

Zone 0 - A zone in which an explosive gas-air mixture is continuously present or present for long periods.

Zone 1 - A zone in which an explosive gas-air mixture is likely to occur in normal operation.

Zone 2 - A zone in which an explosive gas-air mixture is not likely to occur, and if it occurs it will only exist for a short time.

Thus the following comparison Table 39 applies:

Table 39

ATEX	UL/NEC
Group II, Zone 0	Not Defined
Group II, Zone 1	Class I, Division 1
Group II, Zone 2	Class I, Division 2

Note: EC has established six temperature classes for the grouping of gases relative to the ignition temperature - T1, T2, T3, T4, T5, and T6, for the surface temperature values of this code please refer Table 38.

ENVIRONMENTAL MODIFICATIONS

Care is needed in using motors that have a combination of unusual environmental conditions. For example, a motor with a requirement of high altitude plus high temperature and service factor may be available only in an oversized frame.

ALTITUDE

The rating of standard motors assumes operation at sea level in a 40°C ambient. For purposes of standardization it is considered that there is no difference in motor operating temperature between sea level and 3300 feet altitude.

The cooling effect of ventilating air is a function of its density. The atmospheric pressure and density at higher altitudes is reduced and the air cannot remove as much motor heat, causing the motor to run hotter. As a general guide, motor temperature rise increases 1% for every 330 feet above 3300 feet. To keep motor heating within safe limits at altitudes above 3300, there are the following alternatives:

A. Supply a motor designed for standard sea level operation which can either be:
   (1) Operated at less load (a motor with service factor rating of 1.15 or higher can be operated at altitudes up to 9000 feet with a 1.0 service factor),
   or
   (2) Operated in a lower ambient temperature per the following Table 40:

Table 40

If Ambient Temperature is:	Maximum Altitude with Same Service Factor is:
30°C	6600 ft.
20°C	9900 ft.

It should be remembered that, although the outdoor ambient temperature at higher altitudes is low, motors probably will be installed indoors in higher ambient temperatures.

Motors applied per A(1) or A(2) above, will have no special altitude or temperature data on the nameplate.

B. Supply a special motor designed for the required high altitude operation, with appropriate data stamped on the nameplate.

HIGH AMBIENT
Standard motors are designed so that the temperature rise produced within the motor, added to the standard 40°C ambient temperature, will not exceed the winding-insulation temperature limit. If the ambient temperature exceeds 40°C:

A. The temperature rise produced in the motor must be offset by:
   1) Reducing the load and consequent motor losses. A motor rated for a 40°C ambient temperature and operating in a 50°C ambient, will, if rated 1.15 service factor, carry rated Hp with no overload (1.0 SF) and, if rated 1.0 service factor, carry 90% of rated Hp, or by...
   (2) Applying a special motor design

B. The temperature limit may be raised by the substitution of a higher-temperature insulation system, special grease and bearings.

Motors applied per A(1) above will not have special ambient temperature or service factor data on the nameplate.

The choice between A(2) and B rests with the motor designer who also may have to use a frame size larger than is standard for the rating.

Explosion-proof motors may require frame sizes different from the corresponding totally-enclosed motors.

WARNING: THE MAXIMUM ALLOWABLE AMBIENT TEMPERATURE FOR EXPLOSION-PROOF MACHINES IS 60°C.

HIGH AMBIENT, SINGLE-PHASE
For operation in ambient temperatures higher than 40°C, refer to GE Energy giving full details of the application.

LOW AMBIENT
For operation in ambient temperatures of less than -40°C, give full details of the application. Special low temperature grease and special steel shafts may be required.

DRIP COVERS (WALL OR VERTICAL MOUNTING)
Drip covers can be furnished on standard horizontal motors for added protection from dripping liquids and falling objects when the motor is mounted in other than the horizontal position.

If dripping liquids are present in the application, protective covers are recommended for dripproof construction motors mounted shaft up or shaft down.

EXPORT BOXING AND PACKING
Export boxing and packing should be specified when a motor, and/or spare parts, are to be furnished for export shipment.

GREASE, SPECIAL
Motors designed for unusual environmental conditions or special duty should have bearing grease selected for such service. The most commonly encountered conditions requiring special lubricants are extremely high or low operating ambient. The majority of motor greases used by GE are suitable for operation at ambient temperatures from minus 40°C to plus 40°C.

GE uses special grease for very low ambient and very high ambient.

HARDWARE
Standard motor hardware has a plated protective coating suitable for the corrosive atmospheres generally encountered. For extremely corrosive atmospheres, stainless steel hardware may be required, and should be specified.

PAINT

Standard Finishes
Motors are protected by a two coat paint system. The first coat is a rust-inhibitive primer applied to protect the castings during storage and manufacture. The second coat is a medium light gray or buff semi-gloss paint. Most commercially available paints are compatible with the paint system described above. This is especially useful if the customer chooses to apply any finish coat over the motor paint in his plant when the driven equipment is painted.

Special Finishes
Special paint like polyurethane or carboline epoxy paint system (corrosion resistant epoxy) is used for salty atmospheres.

It's a 3 part paint process
1. Primer coat - Penetrating sealer
2. Intermediate coat - 2 part epoxy
3. Finish coat Polyurethane topcoat with color.

For IEEE 841 motors, the outside surface of ODE IEEE 841 endshields and inside of the fan cover are also coated with at least one finish coat.

Dry film thickness (DFT) adds up to 10 mils.

SCREENS

Intake and Discharge Screens - Dripproof Guarded
Corrosion resistant screens can be furnished over the air-intake and discharge openings of dripproof motors. Dripproof motors that are equipped with these screens conform to the "Dripproof Guarded" definition appearing in NEMA MG-1, Part 1.

Rodent Screens - Rodent screens will be provided where required as part of the dripproof guarded system and with specific request of the purchaser.

SHAFT SEALS (LIP SEAL/NON-CONTACT LABYRINTH SEAL)

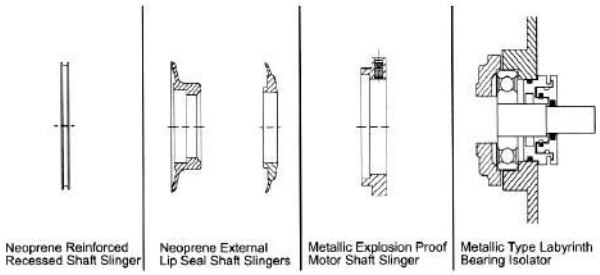


Figure 34

Non-contact Labyrinth seals are metallic seals with rubber sealing rings, which provide protection against both dust and liquids.

Lip seal (contact type) consists of a spring loaded rubber circular lip. The spring loaded lip prevents entry of dust and liquid particles inside the motor.

Either of the above seals are provided on request.

The following tabulation (Table 41) lists the sealing arrangement where shafts emerge from the motor bearing housings.

Table 41: Shaft Seals

GE Motor Enclosure	Motor Frame	
	143	509
	449	5013
	Shaft Seal	
Standard Dripproof	F	F
Totally Enclosed	F	F
Severe-duty Enclosed	S	S
X$D Ultra®	S	S
Explosion-proof	F*	F*
IEEE-841	L	L
API-661	L	Not Applicable

F = Close running fit at both ends.
S = Neoprene slinger steel reinforced DE and ODE.
L = Non-contact Labyrinth seals.
* Except Class II Group E motors which have non-sparking labyrinth seals.

V. REFERENCE

NEMA VERSUS IEC MOTORS: A BRIEF OVERVIEW

1.0 Standards Organizations

Standard	NEMA (National Electrical Manufacturers Association)
Function	A North American based trade association comprised of 450+ member companies that manufacture electrical transmission and distribution, control, and other electrical type equipment.
Web Address	www.nema.org
Standard	IEC (International Electrotechnical Commission)
Function	A global organization that prepares and publishes international standards for all electrical, electronic and other related technologies.
Web Address	www.iec.ch

2.0 Motor Output

Table 42:
NEMA Output Ratings - Expressed in HP (Horsepower)
IEC Output Ratings - Expressed in kW (Kilowatts)

IEC (kW) Rating	NEMA (HP) Rating	IEC (kW) Rating	NEMA (HP) Rating
0.37	0.5	55	75
0.55	0.75	75	100
0.75	1	90	125
1.1	1.5	110	150
1.5	2	132	-
2.2	3	**150**	**200**
3.7	**5**	160	-
4	5.4	**185**	**250**
5.5	7.5	200	-
7.5	10	**220**	**300**
11	15	250	350
15	20	280	-
18.5	25	**300**	**400**
22	30	315	-
30	40	**335**	**450**
37	50	355	-
45	60	**375**	**500**

Note: kW ratings shown in **bold** text are not typical for standard IEC motors. (Shown only for reference to NEMA comparable HP ratings)

Table 43: Hp and kW Power Conversions

Multiply	By	To Obtain
Horsepower (Hp)	0.746	Kilowatts (kW)
Kilowatts (kW)	1.341	Horsepower (HP)

3.0 Motor Voltages/Frequencies

A line frequency of 60 HZ is standard for North America, however, outside the United States, many countries are standardized on 50 HZ. Common voltages and frequencies are summarized below.

Table 44

50 HZ	220	240	380*	400*	415	500	660	690
60 HZ	230	-	440	460	480	575	-	-

* Sometimes seen at 60 HZ

4.0 Motor Speeds

Table 45

Synchronous Speeds at No Load for 50 HZ and 60 HZ AC Motors		
Number of Poles	**60 HZ**	**50 HZ**
2	3600	3000
4	1800	1500
6	1200	1000
8	900	750

5.0 Motor Dimensions

NEMA dimensions: Expressed in inches
IEC dimensions: Typically given in millimeters (mm)

IEC uses a different letter nomenclature than NEMA to represent various motor dimensions. The following tables and figures summarize the differences for key dimensions.

NEMA typically assigns the shaft diameter (U) and shaft lengths (N-W) based on assigned frame sizes. IEC has standard shaft dimensions but they are independent of frame size.

Table 46: NEMA/IEC Comparison of Basic Motor Dimension Letters

Motor Dimension	IEC	NEMA
Overall motor length	L	C
Shaft diameter	D	U
Shaft height	H	D
Closest mounting hole centerline to DE shaft shoulder	C	BA
Length of shaft extension from shaft shoulder	E	N-W
Distance from mounting holes in mounting feet (Side view)	B	2F
Distance from mounting holes in mounting feet (Front view)	A	2E

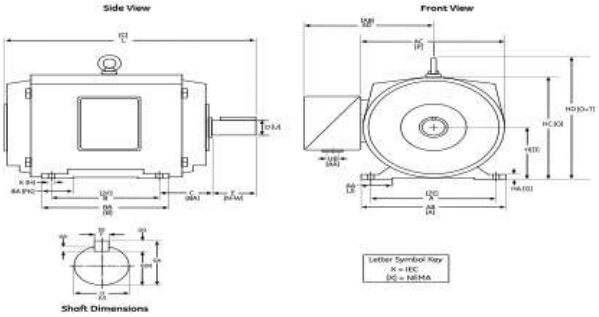


Figure 35

Table 47: Quick Reference of Industrial Applications for 3 Phase Induction Motors

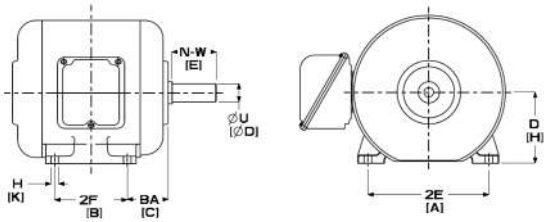
Applications	Requirements					Environment (Subject to Engineering Review)		Standards	GE Types
	NEMA Design	Starting Current	Locked Rotor Torque	Break-Down Torque	% Slip				
Normal starting torque, constant load (single) speed, such as: • Fans • Blowers • Pumps • Machined Tools • Unloaded compressors • Some conveyors • Metal cutting machine tools • Misc. machinery	A	High to Medium	Normal	Normal	Max 5%			NEMA MG1	K, KS X$D Ultra®
								IEEE-841	KS-X$D Ultra® 841
	B	Low	Normal	Normal	Max 5%	Hazardous	DIV 1	UL/CSA	K, KS - XP
							DIV 2	UL/CSA	K, KS
							Zone 1	UL/CSA	K, KS - XP
							Zone 2	UL/CSA ATEX, CE MARK	K, KS
						Marine		IEEE45	KS-X$D Ultra®
Constant load (single) speed High inertia start such as: • Large centrifugal blowers • Flywheels • Crusher Drums • Piston Pumps • Compressors • Conveyors	C	Low	High	Normal	Max 5%	Non Hazardous		NEMA MG1	KG, KGS, X$D Ultra® KGS
						Hazardous	DIV 1	UL/CSA	KG, KGS - XP
							DIV 2	UL/CSA	KG, KGS
							Zone 1	UL/CSA	KG, KGS - XP
							Zone 2	UL/CSA ATEX, CE MARK	KG, KGS
						Marine		IEEE45	KGS-X$D Ultra®
Very high inertia and loaded starts. Choice of slip to match load. • Punch presses • Shears • Forming machine tools • Cranes • Hoists • Elevators • Oil well pumping jacks	D	Low	Very High	-	5-8%	Non Hazardous		NEMA MG1	KR
						Hazardous	DIV 1	UL/CSA	KR XP
							DIV 2	UL/CSA	KR
					8-13%		Zone 1	UL/CSA	KR XP
							Zone 2	UL/CSA ATEX, CE MARK	KR
Constant torque applications, such as: • Agitators • Centrifuges • Conveyors • Extruders • Feeders • Grinders • Kilns • Mills • Mixers • Presses • Saws • Test Stands • Tools	Application Driven	Not Applicable	Not Applicable	Application Driven	-	Non Hazardous		NEMA MG1	KAF/X$D Ultra®
								IEEE-841	KS-X$D Ultra® 841
						Hazardous*	DIV 1	UL/CSA	KAF
							DIV 2	UL/CSA	KAF
							Zone 1	UL/CSA	KAF
							Zone 2	UL/CSA ATEX, CE MARK	KAF
Cooling Tower Fans	A or B	High to Medium	Normal	Normal	Max 5%	##Non Hazardous Suitable for DIV 2		NEMA MG1 API 661	KS-X$D Ultra® 661
Reciprocating Compressors (High Speed)	A or B	High to Medium	Normal	Normal	Max 5%	-		NEMA MG1 API 541 & API 547	500 Frame

* Refer to GE, for specific suitability requirements such as Auto Ignition Temperature, Gas Groups and Rating Details.
Product offering limitation. Refer to GE for more information.

K - NEMA designs A and B
KS - NEMA design A and B Energy Saver
KAF - Adjustable frequency
KG - NEMA design C
KGS - NEMA design C Energy Saver
KR - NEMA design D, 5 to 8% slip or 8 to 13% slip

ANNEXURE A

Table 48: QUICK COMPARISON BETWEEN NEMA AND IEC MOUNTING DIMENSIONS



Dimensions in reference above sketch stand for NEMA (IEC)

Frame Size		D (H)		2E (A)		2F (B)		BA (C)		H (K)		N-W (E)		ØU (ØD)	
IEC	NEMA	IEC	NEMA	IEC	NEMA	IEC	NEMA	IEC	NEMA	IEC	NEMA	IEC	NEMA	IEC	NEMA
		mm	mm (inch)	mm	mm (inch)	mm	mm (inch)	mm	mm (inch)	mm	mm (inch)	mm	mm (inch)	mm	mm (inch)
90S	143	90	88.9 (3.5)	140	139.7 (5.5)	100	101.6 (4)	56	57.2 (2.25)	10	8.6 (0.34)	50	57.15 (2.25)	24	22.225 (0.875)
90L	145	90	88.9 (3.5)	140	139.7 (5.5)	125	127 (5)	56	57.2 (2.25)	10	8.6 (0.34)	50	57.15 (2.25)	24	22.225 (0.875)
112S	182	112	114.3 (4.5)	190	190.5 (7.5)	114	114.3 (4.5)	70	69.9 (2.75)	12	10.4 (0.41)	60	69.85 (2.75)	28	28.575 (1.125)
112M	184	112	114.3 (4.5)	190	190.5 (7.5)	140	139.7 (5.5)	70	69.9 (2.75)	12	10.4 (0.41)	60	69.85 (2.75)	28	28.575 (1.125)
132S	213	132	133.4 (5.25)	216	215.9 (8.5)	140	139.7 (5.5)	89	88.9 (3.5)	12	10.4 (0.41)	80	82.852 (3.38)	38	34.925 (1.375)
132M	215	132	133.4 (5.25)	216	215.9 (8.5)	178	177.8 (7)	89	88.9 (3.5)	12	10.4 (0.41)	80	82.852 (3.38)	38	34.925 (1.375)
160M	254	160	158.8 (6.25)	254	254 (10)	210	209.6 (8.25)	108	108 (4.25)	14.5	13.5 (0.53)	110	101.6 (4)	42	41.275 (1.625)
160L	256	160	158.8 (6.25)	254	254 (10)	254	254 (10)	108	108 (4.25)	14.5	13.5 (0.53)	110	101.6 (4)	42	41.275 (1.625)
180M	284	180	177.8 (7)	279	279.4 (11)	241	241.3 (9.5)	121	120.6 (4.75)	14.5	13.5 (0.53)	110	117.348 (4.62)	48	47.625 (1.875)
180L	286	180	177.8 (7)	279	279.4 (11)	279	279.4 (11)	121	120.6 (4.75)	14.5	13.5 (0.53)	110	117.348 (4.62)	48	47.625 (1.875)
200M	324	200	203.2 (8)	318	317.5 (12.5)	267	266.7 (10.5)	133	133.4 (5.25)	18.5	16.8 (0.66)	110	133.35 (5.25)	55	53.975 (2.125)
200L	326	200	203.2 (8)	318	317.5 (12.5)	305	304.8 (12)	133	133.4 (5.25)	18.5	16.8 (0.66)	110	133.35 (5.25)	55	53.975 (2.125)
225S	364	225	228.6 (9)	356	355.6 (14)	286	285.6 (11.25)	149	149.4 (5.88)	18.5	16.8 (0.66)	140	149.352 (5.88)	60	60.325 (2.375)
225M	365	225	228.6 (9)	356	355.6 (14)	311	311.2 (12.25)	149	149.4 (5.88)	18.5	16.8 (0.66)	140	149.352 (5.88)	60	60.325 (2.375)
250S	404	250	254 (10)	406	406.4 (16)	311	311.2 (12.25)	168	168.1 (6.62)	24	20.6 (0.81)	140	184.15 (7.25)	65	73.025 (2.875)
250M	405	250	254 (10)	406	406.4 (16)	349	349.2 (13.75)	168	168.1 (6.62)	24	20.6 (0.81)	140	184.15 (7.25)	65	73.025 (2.875)
280S	444	280	279.4 (11)	457	457.2 (18)	368	368.3 (14.5)	190	190.5 (7.5)	24	20.6 (0.81)	140	215.9 (8.5)	75	85.725 (3.375)
280M	445	280	279.4 (11)	457	457.2 (18)	419	419.1 (16.5)	190	190.5 (7.5)	24	20.6 (0.81)	140	215.9 (8.5)	75	85.725 (3.375)
315S	504	315	317.5 (12.5)	508	508 (20)	406	406.4 (16)	216	215.9 (8.5)	28	-	-	-	-	-
315M	505	315	317.5 (12.5)	508	508 (20)	457	457.2 (8.5)	216	215.9 (8.5)	28	-	-	-	-	-

Important Note: The shaft extension indicated above for NEMA pertains to 'T-shaft extension'.

Note: Above table should not be used as an exact comparison for NEMA and IEC frame sizes.

ANNEXURE B
HISTORY INDICATING THE FRAME SIZE REDUCTION FOR NEMA AC MOTORS

Table 49 - OPEN DRIP-PROOF

THREE PHASE FRAME SIZES - GENERAL PURPOSE												
RPM	**3600**			**1800**			**1200**			**900**		
NEMA Program Hp	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)
1	-	-	-	203	182	143T	204	184	145T	225	213	182T
1.5	203	182	143T	204	184	145T	224	184	182T	254	213	184T
2	204	184	145T	224	184	145T	225	213	184T	254	215	213T
3	224	184	145T	225	213	182T	254	215	213T	284	254U	215T
5	225	213	182T	254	215	184T	284	254U	215T	324	256U	254T
7.5	254	215	184T	284	254U	213T	324	256U	254T	326	284	256T
10	284	254U	213T	324	256U	215T	326	284U	256T	364	286U	284T
15	324	256U	215T	326	284U	254T	364	324U	284T	365	326U	286T
20	326	284U	254T	364	286U	256T	365	326U	286T	404	364U	324T
25	364S	286U	256T	364	324U	284T	404	364U	324T	405	365U	326T
30	364S	324S	284TS	365	326U	286T	405	365U	326T	444	404U	364T
40	365S	326S	286TS	404	364U	324T	444	404U	364T	445	405U	365T
50	404S	364S	324TS	405S	365US	326T	445	405U	365T	504U	444U	404T
60	405S	365US	326TS	444S	404US	364T	504U	444U	404T	505	445U	405T
75	444S	404US	364TS	445S	405US	365T	505	445U	405T	-	-	444T
100	445S	405US	365TS	504S	444US	404T	-	-	444T	-	-	445T
125	504S	444US	404TS	505S	445US	405T	-	-	445T	-	-	-
150	505S	444US	405TS	-	-	444T	-	-	-	-	-	-
200	-	-	444TS	-	-	445T	-	-	-	-	-	-
250	-	-	445TS	-	-	-	-	-	-	-	-	-

ANNEXURE B
HISTORY INDICATING THE FRAME SIZE REDUCTION FOR NEMA AC MOTORS

Table 50 - TOTALLY ENCLOSED FAN COOLED

THREE PHASE FRAME SIZES - GENERAL PURPOSE												
RPM	**3600**			**1800**			**1200**			**900**		
NEMA Program Hp	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)	Orig. (Pre-U)	1952 Rerate (U)	1964 Rerate (T)
1	-	-	-	203	182	143T	204	184	145T	225	213	182T
1.5	203	182	143T	204	184	145T	224	184	182T	254	213	184T
2	204	184	145T	224	184	145T	225	213	184T	254	215	213T
3	224	184	182T	225	213	182T	254	215	213T	284	254U	215T
5	225	213	184T	254	215	184T	284	254U	215T	324	256U	254T
7.5	254	215	213T	284	254U	213T	324	256U	254T	326	284U	256T
10	284	254U	215T	324	256U	215T	326	284U	256T	364	286U	284T
15	324	256U	254T	326	284U	254T	364	324U	284T	365	326U	286T
20	326	286U	256T	364	286U	256T	365	326U	286T	404	364U	324T
25	365S	324U	284TS	365	324U	284T	404	364U	324T	405	365U	326T
30	404S	326S	286TS	404	326U	286T	405	365U	326T	444	404U	364T
40	405S	364US	324TS	405	364U	324T	444	404U	364T	445	405U	365T
50	444S	365US	326TS	444S	365US	326T	445	405U	365T	504U	444U	404T
60	445S	405US	364TS	445S	405US	364T	504U	444U	404T	505	445U	405T
75	504S	444US	365TS	504S	444US	365T	505	445U	405T	-	-	444T
100	505S	445US	405TS	505S	445US	405T	-	-	444T	-	-	445T
125	-	-	444TS	-	-	444T	-	-	445T	-	-	-
150	-	-	445TS	-	-	445T	-	-	-	-	-	-

REFERENCES

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Notes

Notes

Terms and Conditions for Sale of Products and Services

Form ES 104 (Rev. 4)

NOTICE: Sale of any Products or Services is expressly conditioned on Buyer's assent to these Terms and Conditions. Any acceptance of Seller's offer is expressly limited to acceptance of these Terms and Conditions and Seller expressly objects to any additional or different terms proposed by Buyer. No facility entry form shall modify these Terms and Conditions even if signed by Seller's representative. Any order to perform work and Seller's performance of work shall constitute Buyer's assent to these Terms and Conditions. Unless otherwise specified in the quotation, Seller's quotation shall expire 30 days from its date and may be modified or withdrawn by Seller before receipt of Buyer's conforming acceptance.

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"Buyer" means the entity to which Seller is providing Products or Services under the Contract.

"Contract" means either the contract agreement signed by both parties, or the purchase order signed by Buyer and accepted by Seller in writing, for the sale of Products or Services, together with these Terms and Conditions, Seller's final quotation, the agreed scope(s) of work, and Seller's order acknowledgement. In the event of any conflict, the Terms and Conditions shall take precedence over other documents included in the Contract.

"Contract Price" means the agreed price stated in the Contract for the sale of Products and Services, including adjustments (if any) in accordance with the Contract.

"Hazardous Materials" means any toxic or hazardous substance, hazardous material, dangerous or hazardous waste, dangerous good, radioactive material, petroleum or petroleum-derived products or by-products, or any other chemical, substance, material or emission, that is regulated, listed or controlled pursuant to any national, state, provincial, or local law, statute, ordinance, directive, regulation or other legal requirement of the United States ("U.S.") or the country of the Site.

"Insolvent/Bankrupt" means that a party is insolvent, makes an assignment for the benefit of its creditors, has a receiver or trustee appointed for it or any of its assets, or files or has filed against it a proceeding under any bankruptcy, insolvency dissolution or liquidation laws.

"Products" means the equipment, parts, materials, supplies, software, and other goods Seller has agreed to supply to Buyer under the Contract.

"Seller" means the entity providing Products or performing Services under the Contract.

"Services" means the services Seller has agreed to perform for Buyer under the Contract.

"Site" means the premises where Products are used or Services are performed, not including Seller's premises from which it performs Services.

"Terms and Conditions" means these "Terms and Conditions for Sale of Products and Services", including any relevant addenda pursuant to Article 18, together with any modifications or additional provisions specifically stated in Seller's final quotation or specifically agreed upon by Seller in writing.

2. Payment

2.1 Buyer shall pay Seller for the Products and Services by paying all invoiced amounts in U.S. dollars, without set-off for any payment from Seller not due under this Contract, within thirty (30) days from the invoice date. If the Contract Price is less than U.S. Two Hundred Fifty Thousand Dollars ($250,000), Seller shall issue invoices upon shipment of Products and as Services are performed. If the Contract Price is U.S. Two Hundred Fifty Thousand Dollars ($250,000) or more, progress payments shall be invoiced starting with twenty-five percent (25%) of the Contract Price for Products and Services upon the earlier of Contract signature or issuance of Seller's order acknowledgement and continuing such that ninety percent (90%) of the Contract Price for Products is received before the earliest scheduled Product shipment and Services are invoiced as performed ("Progress Payments"). For each calendar month, or fraction thereof, that payment is late, Buyer shall pay a late payment charge computed at the rate of 1.5% per month on the overdue balance, or the maximum rate permitted by law, whichever is less.

2.2 As and if requested by Seller, Buyer shall at its expense establish and keep in force payment security in the form of an irrevocable, unconditional, sight letter of credit or bank guarantee allowing for pro-rata payments as Products are shipped and Services are performed, plus payment of cancellation and termination charges, and all other amounts due from Buyer under the Contract ("Payment Security"). The Payment Security shall be (a) in a form, and issued or confirmed by a bank acceptable to Seller, (b) payable at the counters of such acceptable bank or negotiating bank, (c) opened at least sixty (60) days prior to both the earliest scheduled shipment of Products and commencement of Services, and (d) remain in effect until the latest of ninety (90) days after the last scheduled Product shipment, completion of all Services and Seller's receipt of the final payment required under the Contract. Buyer shall, at its expense, increase the amount(s), extend the validity period(s) and make other appropriate modifications to any Payment Security within ten (10) days of Seller's notification that such adjustment is necessary in connection with Buyer's obligations under the Contract.

2.3 Seller is not required to commence or continue its performance unless and until any required Payment Security is received, operative and in effect and all applicable Progress Payments have been received. For each day of delay in receiving Progress Payments or acceptable Payment Security, Seller shall be entitled to a matching extension of the schedule. If at any time Seller reasonably determines that Buyer's financial condition or payment history does not justify continuation of Seller's performance, Seller shall be entitled to require full or partial payment in advance or otherwise restructure payments, request additional forms of Payment Security, suspend its performance or terminate the Contract.

3. Taxes and Duties

Seller shall be responsible for all corporate taxes measured by net income due to performance of or payment for work under this Contract ("Seller Taxes"). Buyer shall be responsible for all taxes, duties, fees, or other charges of any nature (including, but not limited to, consumption, gross receipts, import, property, sales, stamp, turnover, use, or value-added taxes, and all items of withholding, deficiency, penalty, addition to tax, interest, or assessment related thereto, imposed by any governmental authority on Buyer or Seller or its subcontractors) in relation to the Contract or the performance of or payment for work under the Contract other than Seller Taxes ("Buyer Taxes"). The Contract Price does not include the amount of any Buyer Taxes. If Buyer deducts or withholds Buyer Taxes, Buyer shall pay additional amounts so that Seller receives the full Contract Price without reduction for Buyer Taxes. Buyer shall provide to Seller, within one month of payment, official receipts from the applicable governmental authority for deducted or withheld taxes.

4. Deliveries; Title Transfer; Risk of Loss; Storage

4.1 For shipments that do not involve export, including shipments from one European Union ("EU") country to another EU country, Seller shall deliver Products to Buyer FCA Seller's facility or warehouse (Incoterms 2010). For export shipments, Seller shall deliver Products to Buyer FCA Port of Export (Incoterms 2010). Buyer shall pay all delivery costs and charges or pay Seller's standard shipping charges plus up to twenty-five (25%) percent. Partial deliveries are permitted. Seller may deliver Products in advance of the delivery schedule. Delivery times are approximate and are dependent upon prompt receipt by Seller of all information necessary to proceed with the work without interruption. If Products delivered do not correspond in quantity, type or price to those itemized in the shipping invoice or documentation, Buyer shall so notify Seller within ten (10) days after receipt.

4.2 For shipments that do not involve export, title to Products shall pass to Buyer upon delivery in accordance with Section 4.1. For export shipments from a Seller facility or warehouse outside the U.S., title shall pass to Buyer upon delivery in accordance with Section 4.1. For shipments from the U.S. to another country, title shall pass to Buyer immediately after each item departs from the territorial land, seas and overlying airspace of the U.S. The 1982 United Nations Convention of the law of the Sea shall apply to determine the U.S. territorial seas. For all other shipments, title to Products shall pass to Buyer the earlier of (i) the port of export immediately after Products have been cleared for export or (ii) immediately after each item departs from the territorial land, seas and overlying airspace of the sending country. When Buyer arranges the export or intercommunity shipment, Buyer will provide Seller evidence of exportation or intercommunity shipment acceptable to the relevant tax and custom authorities. Notwithstanding the foregoing, Seller grants only a license, and does not pass title, for any software provided by Seller under this Contract, and title to any leased equipment remains with Seller.

4.3 Risk of loss shall pass to Buyer upon delivery pursuant to Section 4.1, except that for export shipments from the U.S., risk of loss shall transfer to Buyer upon title passage.

4.4 If any Products to be delivered under this Contract or if any Buyer equipment repaired at Seller's facilities cannot be shipped to or received by Buyer when ready due to any cause attributable to Buyer or its other contractors, Seller may ship the Products and equipment to a storage facility, including storage at the place of manufacture or repair, or to an agreed freight forwarder. If Seller places Products or equipment into storage, the following apply: (i) title and risk of loss immediately pass to Buyer, if they have not already passed, and delivery shall be deemed to have occurred; (ii) any amounts otherwise payable to Seller upon delivery or shipment shall be due; (iii) all expenses and charges incurred by Seller related to the storage shall be payable by Buyer upon submission of Seller's invoices; and (iv) when conditions permit and upon payment of all amounts due, Seller shall make Products and repaired equipment available to Buyer for delivery.

4.5 If repair Services are to be performed on Buyer's equipment at Seller's facility, Buyer shall be responsible for, and shall retain risk of loss of, such equipment at all times, except that Seller shall be responsible for damage to the equipment while at Seller's facility to the extent such damage is caused by Seller's negligence.

5. Warranty

5.1 Seller warrants that Products shall be delivered free from defects in material, workmanship and title and that Services shall be performed in a competent, diligent manner in accordance with any mutually agreed specifications.

5.2 The warranty for Products shall expire one (1) year from first use or eighteen (18) months from delivery, whichever occurs first, except that software is warranted for ninety (90) days from delivery. The warranty for Services shall expire one (1) year after performance of the Service, except that software-related Services are warranted for ninety (90) days.

5.3 If Products or Services do not meet the above warranties, Buyer shall promptly notify Seller in writing prior to expiration of the warranty period. Seller shall (i) at its option, repair or replace defective Products and (ii) re-perform defective Services. If despite Seller's reasonable efforts, a non-conforming Product cannot be repaired or replaced, or non-conforming Services cannot be re-performed, Seller shall refund or credit monies paid by Buyer for such non-conforming Products and Services. Warranty repair, replacement or re-performance by Seller shall not extend or renew the applicable warranty period. Buyer shall obtain Seller's agreement on the specifications of any tests it plans to conduct to determine whether a non-conformance exists.

5.4 Buyer shall bear the costs of access for Seller's remedial warranty efforts (including removal and replacement of systems, structures or other parts of Buyer's facility), de installation, decontamination, re installation and transportation of defective Products to Seller and back to Buyer.

5.5 The warranties and remedies are conditioned upon (a) proper storage, installation, use, operation, and maintenance of Products, (b) Buyer keeping accurate and complete records of operation and maintenance during the warranty period and providing Seller access to those records, and (c) modification or repair of Products or Services only as authorized by Seller in writing. Failure to meet any such conditions renders the warranty null and void. Seller is not responsible for normal wear and tear.

5.6 This Article 5 provides the exclusive remedies for all claims based on failure of or defect in Products or Services, regardless of when the failure or defect arises, and whether a claim, however described, is based on contract, warranty, indemnity, tort/extra-contractual liability (including negligence), strict liability or otherwise. The warranties provided in this Article 5 are exclusive and are in lieu of all other warranties, conditions and guarantees whether written, oral, implied or statutory. **NO IMPLIED OR STATUTORY WARRANTY, OR WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLIES.**

6. Confidentiality

6.1 Seller and Buyer (as to information disclosed, the "Disclosing Party") may each provide the other party (as to information received, the "Receiving Party") with Confidential Information in connection with this Contract. "Confidential Information" means (a) information that is designated in writing as "confidential" or "proprietary" by Disclosing Party at the time of written disclosure, and (b) information that is orally designated as "confidential" or "proprietary" by Disclosing Party at the time of oral or visual disclosure and is confirmed to be "confidential" or "proprietary" in writing within twenty (20) days after the oral or visual disclosure. In addition, prices for Products and Services shall be considered Seller's Confidential Information.

6.2 Receiving Party agrees: (i) to use the Confidential Information only in connection with the Contract and use of Products and Services, (ii) to take reasonable measures to prevent disclosure of the Confidential Information to third parties, and (iii) not to disclose the Confidential Information to a competitor of Disclosing Party. Notwithstanding these restrictions, (a) Seller may disclose Confidential Information to its affiliates and subcontractors in connection with performance of the Contract, (b) a Receiving Party may disclose Confidential Information to its auditors, (c) Buyer may disclose Confidential Information to lenders as necessary for Buyer to secure or retain financing needed to perform its obligations under the Contract, and (d) a Receiving Party may disclose Confidential Information to any other third party with the prior written permission of Disclosing Party, and in each case, only so long as the Receiving Party obtains a non-disclosure commitment from any such subcontractors, auditors, lenders or other permitted third party that prohibits disclosure of the Confidential Information and provided further that the Receiving Party remains responsible for any unauthorized use or disclosure of the Confidential Information. Receiving Party shall upon request return to Disclosing Party or destroy all copies of Confidential Information except to the extent that a specific provision of the Contract entitles Receiving Party to retain an item of Confidential Information. Seller may also retain one archive copy of Buyer's Confidential Information.

6.3 The obligations under this Article 6 shall not apply to any portion of the Confidential Information that: (i) is or becomes generally available to the public other than as a result of disclosure by Receiving Party, its representatives or its affiliates; (ii) is or becomes available to Receiving Party on a non-confidential basis from a source other than Disclosing Party when the source is not, to the best of Receiving Party's knowledge, subject to a confidentiality obligation to Disclosing Party; (iii) is independently developed by Receiving Party, its representatives or affiliates, without reference to the Confidential Information; (iv) is required to be disclosed by law or valid legal process provided that the Receiving Party intending to make disclosure in response to such requirements or process shall promptly notify the Disclosing Party in advance of such disclosure and reasonably cooperate in attempts to maintain the confidentiality of the Confidential Information.

6.4 Each Disclosing Party warrants that it has the right to disclose the information that it discloses. Neither Buyer nor Seller shall make any public announcement about the Contract without prior written approval of the other party. As to any individual item of Confidential Information, the restrictions under this Article 6 shall expire five (5) years after the date of disclosure. Article 6 does not supersede any separate confidentiality or nondisclosure agreement signed by the parties.

7. Intellectual Property

7.1 Seller shall defend and indemnify Buyer against any claim by a non-affiliated third party (a "Claim") alleging that Products or Services furnished under this Contract infringe a patent in effect in the U.S., an EU member state or the country of the Site (provided there is a corresponding patent issued by the U.S. or an EU member state), or any copyright or trademark registered in the country of the Site, provided that Buyer (a) promptly notifies Seller in writing of the Claim, (b) makes no admission of liability and does not take any position adverse to Seller, (c) gives Seller sole authority to control defense and settlement of the Claim, and (d) provides Seller with full disclosure and reasonable assistance as required to defend the Claim.

7.2 Section 7.1 shall not apply and Seller shall have no obligation or liability with respect to any Claim based upon (a) Products or Services that have been modified, or revised, (b) the combination of any Products or Services with other products or services when such combination is a basis of the alleged infringement, (c) failure of Buyer to implement any update provided by Seller that would have prevented the Claim, (d) unauthorized use of Products or Services, or (e) Products or Services made or performed to Buyer's specifications.

7.3 Should any Product or Service, or any portion thereof, become the subject of a Claim, Seller may at its option (a) procure for Buyer the right to continue using the Product or Service, or applicable portion thereof, (b) modify or replace it in whole or in part to make it non-infringing, or (c) failing (a) or (b), take back infringing Products or Services and refund the price received by Seller attributable to the infringing Products or Services.

7.4 Article 7 states Seller's exclusive liability for intellectual property infringement by Products and Services.

7.5 Each party shall retain ownership of all Confidential Information and intellectual property it had prior to the Contract. All new intellectual property conceived or created by Seller in the performance of this Contract, whether alone or with any contribution from Buyer, shall be owned exclusively by Seller. Buyer agrees to deliver assignment documentation as necessary to achieve that result.

8. Indemnity

Each of Buyer and Seller (as an "Indemnifying Party") shall indemnify the other party (as an "Indemnified Party") from and against claims brought by a third party, on account of personal injury or damage to the third party's tangible property, to the extent caused by the negligence of the Indemnifying Party in connection with this Contract. In the event the injury or damage is caused by joint or concurrent negligence of Buyer and Seller, the loss or expense shall be borne by each party in proportion to its degree of negligence. For purposes of Seller's indemnity obligation, no part of the Products or Site is considered third party property.

9. Insurance

During the term of the Contract, Seller shall maintain for its protection the following insurance coverage: (i) Worker's Compensation, Employer's Liability and other statutory insurance required by law with respect to work related injuries or disease of employees of Seller in such form(s) and amount(s) as required by applicable laws; (ii) Automobile Liability insurance with a combined single limit of $2,500,000.00; and (iii) Commercial General Liability or Public Liability insurance for bodily injury and property damage with a combined single limit of $2,500,000.00. If required in the Contract, Seller shall provide a certificate of insurance reflecting such coverage.

10. Excusable Events

Seller shall not be liable or considered in breach of its obligations under this Contract to the extent that Seller's performance is delayed or prevented, directly or indirectly, by any cause beyond its reasonable control, or by armed conflict, acts or threats of terrorism, epidemics, strikes or other labor disturbances, or acts or omissions of any governmental authority or of the Buyer or Buyer's contractors or suppliers. If an excusable event occurs, the schedule for Seller's performance shall be extended by the amount of time lost by reason of the event plus such additional time as may be needed to overcome the effect of the event. If acts or omissions of the Buyer or its contractors or suppliers cause the delay, Seller shall also be entitled to an equitable price adjustment.

11. Termination and Suspension

11.1 Buyer may terminate the Contract (or the portion affected) for cause if Seller (i) becomes Insolvent/Bankrupt, or (ii) commits a material breach of the Contract which does not otherwise have a specified contractual remedy, provided that: (a) Buyer shall first provide

Seller with detailed written notice of the breach and of Buyer's intention to terminate the Contract, and (b) Seller shall have failed, within 30 days after receipt of the notice, to commence and diligently pursue cure of the breach.

11.2 If Buyer terminates the Contract pursuant to Section 11.1, (i) Seller shall reimburse Buyer the difference between that portion of the Contract Price allocable to the terminated scope and the actual amounts reasonably incurred by Buyer to complete that scope, and (ii) Buyer shall pay to Seller (a) the portion of the Contract Price allocable to Products completed, (b) lease fees incurred, and (c) amounts for Services performed before the effective date of termination. The amount due for Services shall be determined in accordance with the milestone schedule (for completed milestones) and rates set forth in the Contract (for work toward milestones not yet achieved and where there is no milestone schedule), as applicable or, where there are no milestones and/or rates in the Contract, at Seller's then-current standard time and material rates.

11.3 Seller may suspend or terminate the Contract (or any affected portion thereof) immediately for cause if Buyer (i) becomes Insolvent/Bankrupt, or (ii) materially breaches the Contract, including, but not limited to, failure or delay in Buyer providing Payment Security, making any payment when due, or fulfilling any payment conditions.

11.4 If the Contract (or any portion thereof) is terminated for any reason other than Seller's default under Section 11.1, Buyer shall pay Seller for all Products completed, lease fees incurred and Services performed before the effective date of termination, plus expenses reasonably incurred by Seller in connection with the termination. The amount due for Services shall be determined in accordance with the milestone schedule (for completed milestones) and rates set forth in the Contract (for work toward milestones not yet achieved and where there is no milestone schedule), as applicable or, where there are no milestones and/or rates in the Contract, at Seller's then-current standard time and material rates. In addition, Buyer shall pay Seller a cancellation charge equal to 80% of the Contract Price applicable to uncompleted made-to-order Products and 15% of the Contract Price applicable to all other uncompleted Products.

11.5 Either Buyer or Seller may terminate the Contract (or the portion affected) upon twenty (20) days advance notice if there is an excusable event (as described in Article 10) lasting longer than one hundred and twenty (120) days. In such case, Buyer shall pay to Seller amounts payable under Section 11.4, excluding the cancellation charge for uncompleted Products.

11.6 Buyer shall pay all reasonable expenses incurred by Seller in connection with a suspension, including, but not limited to, expenses for repossession, fee collection, demobilization/remobilization, and costs of storage during suspension. The schedule for Seller's obligations shall be extended for a period of time reasonably necessary to overcome the effects of any suspension.

12. Compliance with Laws, Codes and Standards

12.1 Seller shall comply with laws applicable to the manufacture of Products and its performance of Services. Buyer shall comply with laws applicable to the application, operation, use and disposal of the Products and Services.

12.2 Seller's obligations are conditioned upon Buyer's compliance with all U.S. and other applicable trade control laws and regulations. Buyer shall not trans-ship, re-export, divert or direct Products other than in and to the ultimate country of destination declared by Buyer and specified as the country of ultimate destination on Seller's invoice.

12.3 Notwithstanding any other provision, Buyer shall timely obtain, effectuate and maintain in force any required permit, license, exemption, filing, registration and other authorization, including, but not limited to, building and environmental permits, import licenses, environmental impact assessments, and foreign exchange authorizations, required for the lawful performance of Services at the Site or fulfillment of Buyer's obligations, except that Seller shall obtain any license or registration necessary for Seller to generally conduct business and visas or work permits, if any, necessary for Seller's personnel. Buyer shall provide reasonable assistance to Seller in obtaining such visas and work permits.

13. Environmental, Health and Safety Matters

13.1 Buyer shall maintain safe working conditions at the Site, including, without limitation, implementing appropriate procedures regarding Hazardous Materials, confined space entry, and energization and de-energization of power systems (electrical, mechanical and hydraulic) using safe and effective lock-out/tag-out ("LOTO") procedures including physical LOTO or a mutually agreed upon alternative method.

13.2 Buyer shall timely advise Seller in writing of all applicable Site-specific health, safety, security and environmental requirements and procedures. Without limiting Buyer's responsibilities under Article 13, Seller has the right but not the obligation to, from time to time, review and inspect applicable health, safety, security and environmental documentation, procedures and conditions at the Site.

13.3 If, in Seller's reasonable opinion, the health, safety, or security of personnel or the Site is, or is apt to be, imperiled by security risks, terrorist acts or threats, the presence of or threat of exposure to Hazardous Materials, or unsafe working conditions, Seller may, in addition to other rights or remedies available to it, evacuate some or all of its personnel from Site, suspend performance of all or any part of the Contract, and/or remotely perform or supervise work. Any such occurrence shall be considered an excusable event. Buyer shall reasonably assist in any such evacuation.

13.4 Operation of Buyer's equipment is the responsibility of Buyer. Buyer shall not require or permit Seller's personnel to operate Buyer's equipment at Site.

13.5 Buyer will make its Site medical facilities and resources available to Seller personnel who need medical attention.

13.6. Seller has no responsibility or liability for the pre-existing condition of Buyer's equipment or the Site. Prior to Seller starting any work at Site, Buyer will provide documentation that identifies the presence and condition of any Hazardous Materials existing in or about Buyer's equipment or the Site that Seller may encounter while performing under this Contract. Buyer shall disclose to Seller industrial hygiene and environmental monitoring data regarding conditions that may affect Seller's work or personnel at the Site. Buyer shall keep Seller informed of changes in any such conditions.

13.7 Seller shall notify Buyer if Seller becomes aware of: (i) conditions at the Site differing materially from those disclosed by Buyer, or (ii) previously unknown physical conditions at Site differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract. If any such conditions cause an increase in Seller's cost of, or the time required for, performance of any part of the work under the Contract, an equitable adjustment in price and schedule shall be made.

13.8 If Seller encounters Hazardous Materials in Buyer's equipment or at the Site that require special handling or disposal, Seller is not obligated to continue work affected by the hazardous conditions. In such an event, Buyer shall eliminate the hazardous conditions in accordance with applicable laws and regulations so that Seller's work under the Contract may safely proceed, and Seller shall be entitled to an equitable adjustment of the price and schedule to compensate for any increase in Seller's cost of, or time required for, performance of any part of the work. Buyer shall properly store, transport and dispose of all Hazardous Materials introduced, produced or generated in the course of Seller's work at the Site.

13.9 Buyer shall indemnify Seller for any and all claims, damages, losses, and expenses arising out of or relating to any Hazardous Materials which are or were (i) present in or about Buyer's equipment or the Site prior to the commencement of Seller's work, (ii) improperly handled or disposed of by Buyer or Buyer's employees, agents, contractors or subcontractors, or (iii) brought, generated, produced or released on Site by parties other than Seller.

14. Changes

14.1 Each party may at any time propose changes in the schedule or scope of Products or Services. Seller is not obligated to proceed with any change until both parties agree upon such change in writing. The written change documentation will describe the changes in scope and schedule, and the resulting changes in price and other provisions, as agreed.

14.2 The scope, Contract Price, schedule, and other provisions will be equitably adjusted to reflect additional costs or obligations incurred by Seller resulting from a change, after Seller's proposal date, in Buyer's Site-specific requirements or procedures, or in industry specifications, codes, standards, applicable laws or regulations. However, no adjustment will be made on account of a general change in Seller's manufacturing or repair facilities resulting from a change in laws or regulations applicable to such facilities. Unless otherwise agreed by the parties, pricing for additional work arising from such changes shall be at Seller's time and material rates.

14.3 It shall be acceptable and not considered a change if Seller delivers a Product that bears a different, superseding or new part or version number compared to the part or version number listed in the Contract.

15. Limitations of Liability

15.1 The total liability of Seller for all claims of any kind arising from or related to the formation, performance or breach of this Contract, or any Products or Services, shall not exceed the (i) Contract Price, or (ii) if Buyer places multiple order(s) under the Contract, the price of each particular order for all claims arising from or related to that order and ten thousand US dollars (US $10,000) for all claims not part of any particular order.

15.2 Seller shall not be liable for loss of profit or revenues, loss of use of equipment or systems, interruption of business, cost of replacement power, cost of capital, downtime costs, increased operating costs, any special, consequential, incidental, indirect, or punitive damages, or claims of Buyer's customers for any of the foregoing types of damages.

15.3 All Seller liability shall end upon expiration of the applicable warranty period, provided that Buyer may continue to enforce a claim for which it has given notice prior to that date by commencing an action or arbitration, as applicable under this Contract, before expiration of any statute of limitations or other legal time limitation but in no event later than one year after expiration of such warranty period.

15.4 Seller shall not be liable for advice or assistance that is not required for the work scope under this Contract.

15.5 If Buyer is supplying Products or Services to a third party, or using Products or Services at a facility owned by a third party, Buyer shall either (i) indemnify and defend Seller from and against any and all claims by, and liability to, any such third party in excess of the limitations set forth in this Article 15, or (ii) require that the third party agree, for the benefit of and enforceable by Seller, to be bound by all the limitations included in this Article 15.

15.6 For purposes of this Article 15, the term "Seller" means Seller, its affiliates, subcontractors and suppliers of any tier, and their respective employees. The limitations in this Article 15 shall apply regardless of whether a claim is based in contract, warranty, indemnity, tort/extra-contractual liability (including negligence), strict liability or otherwise, and shall prevail over any conflicting terms, except to the extent that such terms further restrict Seller's liability.

16. Governing Law and Dispute Resolution

16.1 This Contract shall be governed by and construed in accordance with the laws of (i) the State of New York if Buyer's place of business is in the U.S. or (ii) England if the Buyer's place of business is outside the U.S., in either case without giving effect to any choice of law rules that would cause the application of laws of any other jurisdiction (the "Governing Law"). If the Contract includes the sale of Products and the Buyer is outside the Seller's country, the United Nations Convention on Contracts for the International Sale of Goods shall apply.

16.2 All disputes arising in connection with this Contract, including any question regarding its existence or validity, shall be resolved in accordance with this Article 16. If a dispute is not resolved by negotiations, either party may, by giving written notice, refer the dispute to a meeting of appropriate higher management, to be held within twenty (20) business days after the giving of notice. If the dispute is not resolved within thirty (30) business days after the giving of notice, or such later date as may be mutually agreed, either party may commence arbitration or court proceedings, depending upon the location of the Buyer, in accordance with the following:

(a) if the Buyer's pertinent place of business is in the U.S, legal action shall be commenced in federal court with jurisdiction applicable to, or state court located in, either Cobb County, Georgia or the location of Buyer's principal place of business; or (b) if the Buyer's pertinent place of business is outside the U.S., the dispute shall be submitted to and finally resolved by arbitration under the Rules of Arbitration of the International Chamber of Commerce ("ICC"). The number of arbitrators shall be one, selected in accordance with the ICC rules, unless the amount in dispute exceeds the equivalent of U.S. $5,000,000, in which event it shall be three. When three arbitrators are involved, each party shall appoint one arbitrator, and those two shall appoint the third within thirty (30) days, who shall be the Chairman. The seat, or legal place, of arbitration, shall be London, England. The arbitration shall be conducted in English. In reaching their decision, the arbitrators shall give full force and effect to the intent of the parties as expressed in the Contract, and if a solution is not found in the Contract, shall apply the governing law of the Contract. The decision of the arbitrator(s) shall be final and binding upon both parties, and neither party shall seek recourse to a law court or other authority to appeal for revisions of the decision.

16.3 Notwithstanding the foregoing, each party shall have the right at any time, at its option and where legally available, to immediately commence an action or proceeding in a court of competent jurisdiction, subject to the terms of this Contract, to seek a restraining order, injunction, or similar order to enforce the confidentiality provisions set forth in Article 6 and/or the nuclear use restrictions set forth in Section 19.1, or to seek interim or conservatory measures. Monetary damages shall only be available in accordance with Section 16.2.

17. Inspection and Factory Tests

Seller will apply its normal quality control procedures in manufacturing Products. Seller shall attempt to accommodate requests by Buyer to witness Seller's factory tests of Products, subject to appropriate access restrictions, if such witnessing can be arranged without delaying the work.

18. Software, Leased Equipment, Remote Diagnostic Services, PCB Services

If Seller provides any software to Buyer, the Software License Addendum shall apply. If Seller leases any of Seller's equipment or provides related Services to Buyer, including placing Seller's equipment at Buyer's site to provide remote Services, the Lease Addendum shall apply. If Seller provides remote diagnostic services to Buyer, the Remote Diagnostic Services Addendum shall apply. If Seller provides PCB Services to Buyer, the PCB Services Addendum shall apply. If there is any conflict between these "Terms and Conditions for the Sale of Products and Services, Form ES 104" and the terms of any addendum incorporated pursuant to this Article 18, the terms of the addendum shall take precedence with respect to the applicable scope.

19. General Clauses

19.1 Products and Services sold by Seller are not intended for use in connection with any nuclear facility or activity, and Buyer warrants that it shall not use or permit others to use Products or Services for such purposes, without the advance written consent of Seller. If, in breach of this, any such use occurs, Seller (and its parent, affiliates, suppliers and subcontractors) disclaims all liability for any nuclear or other damage, injury or contamination, and, in addition to any other rights of Seller, Buyer shall indemnify and hold Seller (and its parent, affiliates, suppliers and subcontractors) harmless against all such liability. Consent of Seller to any such use, if any, will be conditioned upon additional terms and conditions that Seller determines to be acceptable for protection against nuclear liability.

19.2 Seller may assign or novate its rights and obligations under the Contract, in whole or in part, to any of its affiliates or may assign any of its accounts receivable under this Contract to any party without Buyer's consent. Buyer agrees to execute any documents that may be necessary to complete Seller's assignment or novation. Seller may subcontract portions of the work, so long as Seller remains responsible for it. The delegation or assignment by Buyer of any or all of its rights or obligations under the Contract without Seller's prior written consent (which consent shall not be unreasonably withheld) shall be void.

19.3 Buyer shall notify Seller immediately upon any change in ownership of more than fifty percent (50%) of Buyer's voting rights or of any controlling interest in Buyer. If Buyer fails to do so or Seller objects to the change, Seller may (a) terminate the Contract, (b) require Buyer to provide adequate assurance of performance (including but not limited to payment), and/or (c) put in place special controls regarding Seller's Confidential Information.

19.4 If any Contract provision is found to be void or unenforceable, the remainder of the Contract shall not be affected. The parties will endeavor to replace any such void or unenforceable provision with a new provision that achieves substantially the same practical and economic effect and is valid and enforceable.

19.5 The following Articles shall survive termination or cancellation of the Contract: 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 18, 19 and 20.

19.6 The Contract represents the entire agreement between the parties. No oral or written representation or warranty not contained in this Contract shall be binding on either party. Buyer's and Seller's rights, remedies and obligations arising from or related to Products and Services sold under this Contract are limited to the rights, remedies and obligations stated in this Contract. No modification, amendment, rescission or waiver shall be binding on either party unless agreed in writing.

19.7 Except as provided in Article 15 (Limitations of Liability) and in Section 19.1 (no nuclear use), this Contract is only for the benefit of the parties, and no third party shall have a right to enforce any provision of this Contract, whether under the English Contracts (Rights of Third Parties) Act of 1999 or otherwise.

19.8 This Contract may be signed in multiple counterparts that together shall constitute one agreement.

20. US Government Contracts

20.1 This Article 20 applies only if the Contract is for the direct or indirect sale to any agency of the U.S. government and/or is funded in whole or in part by any agency of the U.S. government.

20.2 Buyer agrees that all Products and Services provided by Seller meet the definition of "commercial-off-the-shelf" ("COTS") or "commercial item" as those terms are defined in Federal Acquisition Regulation ("FAR") 2.101. To the extent the Buy American Act, Trade Agreements Act, or other domestic preference requirements are applicable to this Contract, the country of origin of Products is unknown unless otherwise specifically stated by Seller in this Contract. Buyer agrees any Services offered by Seller are exempt from the Service Contract Act of 1965 (FAR 52.222-41). Buyer represents and agrees that this Contract is not funded in whole or in part by American Recovery Reinvestment Act funds unless otherwise specifically stated in the Contract. The version of any applicable FAR clause listed in this Article 20 shall be the one in effect on the effective date of this Contract.

20.3 If Buyer is an agency of the U.S. Government, then as permitted by FAR 12.302, Buyer agrees that all paragraphs of FAR 52.212-4 (except those listed in 12.302(b)) are replaced with these Terms and Conditions. Buyer further agrees the subparagraphs of FAR 52.212-5 apply only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the Contract Price.

20.4 If Buyer is procuring the Products or Services as a contractor, or subcontractor at any tier, on behalf of any agency of the U.S. Government, then Buyer agrees that FAR 52.212-5(e) or 52.244-6 (whichever is applicable) applies only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the Contract Price.

12.0 Cross Reference Guide

12.1 Catalog Number to Model Number

12.22 Model Number to Catalog Number

A Whole New Way to Look at Motors!

GE Virtual Motor Display
Available for free in the Apple App Store for iPads!

This hi-tech presentation tool helps communicate to users how all electrical motors are NOT built the same. You can explode, contract and rotate the motor assembly by swiping the screen. You can also tap buttons to view features and benefits, and double-tap to magnify details.

It'll make a useful addition to your iPad App Tools!

Cross Reference Guide

Catalog to Model Number

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
A100	249A9598AA1	---	$60	GO-1R	2.40
A1001	4002B5914AN1	---	$218	G4-7KITS	2.39
A1001	4002B5914AN1	---	$218	G4-7KITS	3.7
A1002	4002B5914AN2	---	$218	G4-7KITS	2.39
A1002	4002B5914AN2	---	$218	G4-7KITS	3.7
A1003	4002B5914AN3	---	$237	G4-7KITS	2.39
A1003	4002B5914AN3	---	$237	G4-7KITS	3.7
A1004	4002B5914AN4	---	$285	G4-7KITS	2.39
A1004	4002B5914AN4	---	$285	G4-7KITS	3.7
A1005	4002B5914AN5	---	$369	G4-7KITS	2.39
A1005	4002B5914AN5	---	$369	G4-7KITS	3.7
A1007	235A4575GS1	---	$504	G4-7KITS	2.39
A101	249A9598AA2	---	$60	GO-1R	2.40
A102	249A9598AA3	---	$71	GO-1R	2.40
A103	249A9598AA4	---	$71	GO-1R	2.40
A104	249A9598AA5	---	$91	GO-1R	2.40
A105	249A9598AA6	---	$91	GO-1R	2.40
A1050	249A9573AAG01	---	$387	G4-7KITS	1.25
A1051	249A9573AAG02	---	$627	G4-7KITS	1.25
A1052	249A9573AAG03	---	$809	G4-7KITS	1.25
A1053	249A9573AAG04	---	$809	G4-7KITS	1.25
A1054	249A9573AAG05	---	$1,088	G4-7KITS	1.25
A1055	249A9573AAG06	---	$1,286	G4-7KITS	1.25
A1056	249A9573AAG07	---	$1,286	G4-7KITS	1.25
A1057	249A9573AAG08	---	$1,286	G4-7KITS	1.25
A1058	249A9573AAG09	---	$123	G4-7KITS	1.25
A1059	249A9573AAG10	---	$168	G4-7KITS	1.25
A106	249A9598AA7	---	$105	GO-1R	2.40
A1060	249A9573AAG11	---	$207	G4-7KITS	1.25
A1061	249A9573AAG12	---	$240	G4-7KITS	1.25
A1062	249A9573AAG13	---	$1,253	G4-7KITS	1.25
A1063	249A9573AAG14	---	$1,253	G4-7KITS	1.25
A1064	249A9573ABG01	---	$147	G4-7KITS	1.25
A1065	249A9573ABG02	---	$201	G4-7KITS	1.25
A1066	249A9573ABG03	---	$251	G4-7KITS	1.25
A1067	249A9573ABG04	---	$336	G4-7KITS	1.25
A1068	249A9573ABG05	---	$446	G4-7KITS	1.25
A1069	249A9573ABG06	---	$662	G4-7KITS	1.25
A107	249A9598AA8	---	$105	GO-1R	2.40
A108	249A9598AA9	---	$186	GO-1R	2.40
A1201	249A4267AD-G01	---	$158	G4-7KITS	2.38
A1201	249A4267AD-G01	---	$158	G4-7KITS	4.29
A1202	249A4267AD-G02	---	$165	G4-7KITS	2.38
A1202	249A4267AD-G02	---	$165	G4-7KITS	4.29
A1203	249A4267AD-G03	---	$188	G4-7KITS	2.38
A1203	249A4267AD-G03	---	$188	G4-7KITS	4.29
A1204	249A4267AD-G04	---	$204	G4-7KITS	2.38
A1204	249A4267AD-G04	---	$204	G4-7KITS	4.29
A1205	249A4267AD-G05	---	$233	G4-7KITS	2.38
A1205	249A4267AD-G05	---	$233	G4-7KITS	4.29
A1206	249A4267AD-G06	---	$260	G4-7KITS	2.38
A1206	249A4267AD-G06	---	$260	G4-7KITS	4.29
A125	235A2321AB1	---	$135	G4-7KITS	1.26
A125	235A2321AB1	---	$135	G4-7KITS	2.41
A126	235A2321AB2	---	$135	G4-7KITS	1.26
A126	235A2321AB2	---	$135	G4-7KITS	2.41
A127	235A2321AB3	---	$150	G4-7KITS	1.26
A127	235A2321AB3	---	$150	G4-7KITS	2.41
A128	235A2321AB4	---	$150	G4-7KITS	1.26
A128	235A2321AB4	---	$150	G4-7KITS	2.41
A129	235A2321AB5	---	$188	G4-7KITS	1.26
A129	235A2321AB5	---	$188	G4-7KITS	2.41
A130	235A2321AB6	---	$188	G4-7KITS	1.26
A130	235A2321AB6	---	$188	G4-7KITS	2.41
A131	235A2321AB7	---	$263	G4-7KITS	1.26
A131	235A2321AB7	---	$263	G4-7KITS	2.41
A132	235A2321AB8	---	$263	G4-7KITS	1.26
A132	235A2321AB8	---	$263	G4-7KITS	2.41
A133	235A2321AB9	---	$300	G4-7KITS	1.26
A133	235A2321AB9	---	$300	G4-7KITS	2.41
A134	235A2321AB10	---	$300	G4-7KITS	1.26
A134	235A2321AB10	---	$300	G4-7KITS	2.41
A135	235A2321AB11	---	$390	G4-7KITS	1.26
A135	235A2321AB11	---	$390	G4-7KITS	2.41
A136	235A2321AB12	---	$390	G4-7KITS	1.26
A136	235A2321AB12	---	$390	G4-7KITS	2.41
A137	235A2321AB13	---	$495	G4-7KITS	1.26
A137	235A2321AB13	---	$495	G4-7KITS	2.41
A138	235A2321AB14	---	$495	G4-7KITS	1.26
A138	235A2321AB14	---	$495	G4-7KITS	2.41
A139	235A2321AB15	---	$720	G4-7KITS	1.26
A139	235A2321AB15	---	$720	G4-7KITS	2.41
A140	235A2321AB16	---	$720	G4-7KITS	1.26
A140	235A2321AB16	---	$720	G4-7KITS	2.41
A141	235A2321AB17	---	$900	G4-7KITS	1.26
A141	235A2321AB17	---	$900	G4-7KITS	2.41
A142	235A2321AB18	---	$900	G4-7KITS	1.26
A142	235A2321AB18	---	$900	G4-7KITS	2.41
A150	153B4404CS2	---	$863	G4-7KITS	3.8
A151	153B4404CS3	---	$863	G4-7KITS	3.8
A152	153B4404CS4	---	$863	G4-7KITS	3.8
A153	153B4404CS5	---	$863	G4-7KITS	3.8
A154	153B4404CW1	---	$1,088	G4-7KITS	3.8
A155	153B4404CW2	---	$1,088	G4-7KITS	3.8
A156	153B4404CW3	---	$1,088	G4-7KITS	3.8
A157	153B4404CW4	---	$1,088	G4-7KITS	3.8
A158	153B4404CT13	---	$3,450	G4-7KITS	3.8
A159	153B4404CT14	---	$3,450	G4-7KITS	3.8
A160	153B4404CT15	---	$3,450	G4-7KITS	3.8
A161	153B4404CT16	---	$3,450	G4-7KITS	3.8
A162	153B4404CT17	---	$5,250	G4-7KITS	3.8
A163	153B4404CT18	---	$5,250	G4-7KITS	3.8
A164	153B4404CT19	---	$5,250	G4-7KITS	3.8
A165	153B4404CT20	---	$5,250	G4-7KITS	3.8
A170	153B4404DB1	---	$825	G4-7KITS	3.8
A171	153B4404DB2	---	$825	G4-7KITS	3.8
A172	153B4404DA1	---	$1,125	G4-7KITS	3.8
A173	153B4404DA2	---	$1,125	G4-7KITS	3.8
A174	153B4404DA3	---	$1,950	G4-7KITS	3.8
A175	153B4404DA4	---	$1,950	G4-7KITS	3.8
A176	153B4404DD1	---	$1,500	G4-7KITS	3.8
A177	153B4404DD2	---	$1,500	G4-7KITS	3.8
A178	153B4404DD3	---	$2,475	G4-7KITS	3.8
A179	153B4404DD4	---	$2,475	G4-7KITS	3.8
A180	153B4404DC1	---	$2,513	G4-7KITS	3.8
A181	153B4404DC2	---	$2,625	G4-7KITS	3.8

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
A182	153B4404DC3	---	$3,150	G4-7KITS	3.8
A183	153B4404DC4	---	$3,300	G4-7KITS	3.8
A233	153B1073BE-G01	---	$161	G4-7KITS	2.39
A233	153B1073BE-G01	---	$161	G4-7KITS	3.7
A234	153B1069AA-G01	---	$167	G4-7KITS	2.39
A234	153B1069AA-G01	---	$167	G4-7KITS	3.7
A235	153B1069AA-G02	---	$167	G4-7KITS	2.39
A235	153B1069AA-G02	---	$167	G4-7KITS	3.7
A236	153B1069AA-G03	---	$167	G4-7KITS	2.39
A236	153B1069AA-G03	---	$167	G4-7KITS	3.7
A237	153B1069AN-G01	---	$282	G4-7KITS	2.39
A237	153B1069AN-G01	---	$282	G4-7KITS	3.7
A238	153B1069AN-G05	---	$282	G4-7KITS	2.39
A238	153B1069AN-G05	---	$282	G4-7KITS	3.7
A239	153B1073BD-G02	---	$161	G4-7KITS	2.39
A239	153B1073BD-G02	---	$161	G4-7KITS	3.7
A240	153B1069AN-G03	---	$282	G4-7KITS	2.39
A240	153B1069AN-G03	---	$282	G4-7KITS	3.7
A241	153B1069AN-G02	---	$305	G4-7KITS	2.39
A241	153B1069AN-G02	---	$305	G4-7KITS	3.7
A242	153B1069AN-G06	---	$305	G4-7KITS	2.39
A242	153B1069AN-G06	---	$305	G4-7KITS	3.7
A244	153B1069AN-G04	---	$305	G4-7KITS	2.39
A244	153B1069AN-G04	---	$305	G4-7KITS	3.7
A284	235A4753BF1	---	$509	G4-7KITS	2.40
A285	235A4753BF2	---	$509	G4-7KITS	2.40
A286	235A4753BF4	---	$509	G4-7KITS	2.40
A287	235A4753BG1	---	$608	G4-7KITS	2.40
A288	235A4753BG2	---	$608	G4-7KITS	2.40
A289	235A4753BG3	---	$608	G4-7KITS	2.40
A290	235A4753BH1	---	$608	G4-7KITS	2.40
A291	235A4753BH2	---	$608	G4-7KITS	2.40
A292	235A4753BH3	---	$608	G4-7KITS	2.40
A293	235A4753BJ1	---	$720	G4-7KITS	2.40
A294	235A4753BJ2	---	$720	G4-7KITS	2.40
A295	235A4753BJ3	---	$720	G4-7KITS	2.40
A296	235A4753BK1	---	$825	G4-7KITS	2.40
A297	235A4753BK2	---	$825	G4-7KITS	2.40
A298	235A4753BK3	---	$825	G4-7KITS	2.40
A337	153B1004AC-G120	---	$134	G4-7KITS	2.40
A340	4001A5921CYG006	---	$102	G4-7KITS	2.39
A341	4001A5921CYG001	---	$102	G4-7KITS	2.39
A342	4001A5921CYG002	---	$102	G4-7KITS	2.39
A343	249A4234AA-G20	---	$102	G4-7KITS	2.39
A344	249A4234AA-G03	---	$102	G4-7KITS	2.39
A345	249A4234AA-G21	---	$102	G4-7KITS	2.39
A346	249A4234AA-G07	---	$102	G4-7KITS	2.39
A641	36A167700AAG01	---	$3,200	GO-2KITS	8.20
A642	36A167700BAG01	---	$3,200	GO-2KITS	8.20
A643	36A167700CAG01	---	$3,800	GO-2KITS	8.20
A644	36A167701AAG01	---	$4,600	GO-2KITS	8.20
A645	36A167701BAG01	---	$4,800	GO-2KITS	8.20
A646	36A167701CAG01	---	$5,000	GO-2KITS	8.20
A647	36A167702AAG01	---	$4,800	GO-2KITS	8.20
A648	36A167702BAG01	---	$4,800	GO-2KITS	8.20
A649	36A167702CAG01	---	$5,200	GO-2KITS	8.20
A650	36A167702DAG01	---	$5,200	GO-2KITS	8.20
A670	36A172471AAG02	---	$1,000	GO-2KITS	8.19
A671	36A172472AAG01	---	$2,400	GO-2KITS	8.19
A672	36A172473AAG01	---	$1,600	GO-2KITS	8.19
A673	36A172471AAG01	---	$1,000	GO-2KITS	8.19
A674	36A172474AAG01	---	$1,600	GO-2KITS	8.19
A676	36A172475AAG01	---	$1,800	GO-2KITS	8.19
A677	36A167802BAG02	---	$400	GO-2KITS	8.19
A678	36A167803BAG02	---	$450	GO-2KITS	8.19
A680	36A167804BAG02	---	$700	GO-2KITS	8.19
A682	36A167805BAG02	---	$700	GO-2KITS	8.19
A683	36A167806BAG02	---	$700	GO-2KITS	8.19
A684	36A167807BAG02	---	$700	GO-2KITS	8.19
A685	36A167809BAG02	---	$700	GO-2KITS	8.19
A686	36A167701CAG14	---	$5,200	GO-2KITS	8.20
A687	36A167741CBG01	---	$5,000	GO-2KITS	8.19
A688	36A167742ABG02	---	$5,000	GO-2KITS	8.19
A689	36A167743ABG02	---	$4,500	GO-2KITS	8.19
A690	36A167744ABG03	---	$4,500	GO-2KITS	8.19
A691	36A167745GBG10	---	$4,620	GO-2KITS	8.19
A692	36A167746GBG10	---	$4,186	GO-2KITS	8.19
A693	36A167747GBG10	---	$5,000	GO-2KITS	8.19
A694	36A167747GDG10	---	$4,600	GO-2KITS	8.19
A695	36A167749EBG34	---	$7,500	GO-2KITS	8.19
A761	249A4321AMG01	---	$392	G4-7KITS	2.38
A761	249A4321AMG01	---	$392	G4-7KITS	3.7
A762	249A4321AMG02	---	$392	G4-7KITS	2.38
A763	249A4321AMG03	---	$842	G4-7KITS	1.25
A763	249A4321AMG03	---	$842	G4-7KITS	2.38
A763	249A4321AMG03	---	$842	G4-7KITS	3.7
A764	249A4321AMG04	---	$842	G4-7KITS	1.25
A764	249A4321AMG04	---	$842	G4-7KITS	2.38
A765	249A4321AMG05	---	$885	G4-7KITS	1.25
A765	249A4321AMG05	---	$885	G4-7KITS	2.38
A765	249A4321AMG05	---	$885	G4-7KITS	3.7
A766	249A4321AMG06	---	$885	G4-7KITS	1.25
A766	249A4321AMG06	---	$885	G4-7KITS	2.38
A767	249A4321AMG07	---	$2,112	G4-7KITS	1.25
A767	249A4321AMG07	---	$2,112	G4-7KITS	2.38
A767	249A4321AMG07	---	$2,112	G4-7KITS	3.7
A768	249A4321AMG08	---	$2,112	G4-7KITS	1.25
A768	249A4321AMG08	---	$2,112	G4-7KITS	2.38
A826	235A4575GE1	---	$504	G4-7KITS	2.39
A826	235A4575GE1	---	$504	G4-7KITS	3.7
A828	235A4575GE3	---	$588	G4-7KITS	2.39
A828	235A4575GE3	---	$588	G4-7KITS	3.7
A829	235A4575GE5	---	$588	G4-7KITS	2.39
A830	235A4575GE5	---	$689	G4-7KITS	2.39
A830	235A4575GE5	---	$689	G4-7KITS	3.7
A831	235A4575GE6	---	$689	G4-7KITS	2.39
A832	235A4575GE7	---	$824	G4-7KITS	2.39
A832	235A4575GE7	---	$824	G4-7KITS	3.7
A833	235A4575GE8	---	$824	G4-7KITS	2.39
A991	249A4321ARG01	---	$912	G4-7KITS	2.38
A992	249A4321ARG02	---	$912	G4-7KITS	2.38
A995	249A4321ARG05	---	$2,100	G4-7KITS	2.38
A996	249A4321ARG06	---	$2,100	G4-7KITS	2.38
A997	249A4321ARG07	---	$2,186	G4-7KITS	2.38
A998	249A4321ARG08	---	$2,519	G4-7KITS	2.38
D267	5BC42AE1008A	38	$8,022	GO-7PTC	8.7

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
D268	5BC42AE1001A	28	$8,022	GO-7PTC	8.7
D400	5CD142FC008B054	80	$5,298	GO-2AS180	8.6
D401	5CD142FE012B025	80	$5,298	GO-2AS180	8.6
D402	5CD142GE011B020	80	$5,368	GO-2AS180	8.6
D403	5CD143JA014B026	105	$4,248	GO-2AS180	8.2
D404	5CD143JC014B012	102	$4,420	GO-2AS180	8.2
D405	5CD143LE007B021	102	$5,568	GO-2AS180	8.6
D406	5CD143ME003B021	102	$5,812	GO-2AS180	8.6
D407	5CD144FA002B020	128	$5,224	GO-2AS180	8.2
D408	5CD145SA011B018	165	$8,484	GO-2AS180	8.5
D409	5CD144PA002B055	128	$5,224	GO-2AS180	8.2
D410	5CD144PC016B013	128	$5,396	GO-2AS180	8.2
D411	5CD144SC003B063	128	$5,714	GO-2AS180	8.6
D412	5CD144SE005B028	128	$5,714	GO-2AS180	8.6
D413	5CD144UC005B037	128	$5,842	GO-2AS180	8.6
D414	5CD144UC023B030	128	$8,116	GO-2AS180	8.6
D415	5CD145GA002B016	165	$8,484	GO-2AS180	8.5
D417	5CD145UA005B026	162	$6,304	GO-2AS180	8.2
D418	5CD145UA030B005	172	$8,578	GO-2AS180	8.4
D419	5CD145VC005B055	160	$5,988	GO-2AS180	8.6
D420	5CD145WC006B021	160	$7,590	GO-2AS180	8.6
D421	5CD152GA017B014	234	$6,304	GO-2AS2P	8.2
D422	5CD152NC025B015	243	$6,806	GO-2AS2P	8.2
D423	5CD153JA001B023	252	$7,184	GO-2AS2P	8.2
D424	5CD153JA001B106	252	$7,184	GO-2AS2P	8.3
D425	5CD153RA039B003	252	$7,184	GO-2AS2P	8.2
D426	5CD153RA039B039	252	$7,184	GO-2AS2P	8.3
D427	5CD153RC027B015	252	$7,686	GO-2AS2P	8.2
D428	5CD153TC024B001	261	$9,392	GO-2AS2P	8.6
D429	5CD154KA026B004	287	$10,274	GO-2AS2P	8.5
D430	5CD154TA007B005	287	$10,274	GO-2AS2P	8.5
D431	5CD154ZC852B800	289	$10,994	GO-2AS2P	8.6
D432	5CD163KA009A133	361	$8,642	GO-2AS2P	8.2
D433	5CD163KA009A134	361	$8,642	GO-2AS2P	8.3
D434	5CD163SA026A070	361	$8,642	GO-2AS2P	8.2
D435	5CD163SC035A010	378	$9,144	GO-2AS2P	8.2
D436	5CD164LA014A031	442	$11,736	GO-2AS2P	8.5
D437	5CD164MA012A136	403	$9,910	GO-2AS2P	8.2
D438	5CD164MA012A137	403	$9,910	GO-2AS2P	8.3
D439	5CD164MA038A028	403	$9,910	GO-2AS2P	8.3
D440	5CD164TA009A034	442	$11,736	GO-2AS2P	8.5
D441	5CD164UA023A109	403	$9,910	GO-2AS2P	8.2
D442	5CD173NA010A114	493	$12,236	GO-2AS2P	8.2
D444	5CD173VA018A079	493	$12,236	GO-2AS2P	8.2
D445	5CD174RA009A197	548	$13,468	GO-2AS2P	8.2
D446	5CD174RA009A257	548	$12,272	GO-2AS2P	8.3
D448	5CD174WA020A089	548	$13,468	GO-2AS2P	8.2
D449	5CD184TA094B068	769	$18,098	GO-2AS2P	8.2
D450	5CD184TA094B070	769	$18,098	GO-2AS2P	8.2
D451	5CD184TA094B069	769	$16,480	GO-2AS2P	8.3
D453	5CD193MA038A053	860	$21,084	GO-2AS4P	8.2
D455	5CD193PA065A129	860	$24,338	GO-2AS4P	8.2
D456	5CD193PA065A140	860	$24,338	GO-2AS4P	8.2
D457	5CD193PA084A037	940	$22,594	GO-2AS4P	8.5
D460	5CD193TA027A007	940	$22,594	GO-2AS4P	8.5
D462	5CD194NA067A051	1020	$27,744	GO-2AS4P	8.2
D463	5CD194RA060A028	1100	$28,522	GO-2AS4P	8.5
D465	5CD194SA081A067	1020	$30,532	GO-2AS4P	8.2
D466	5CD194SA081A129	1020	$30,532	GO-2AS4P	8.2
D467	5CD194SA082A418	1085	$30,942	GO-2AS4P	8.4
D468	5CD194SA082A315	1085	$36,058	GO-2AS4P	8.4
D469	5CD194UA035A008	1100	$28,522	GO-2AS4P	8.5
D471	5CD203PA088A032	1300	$36,158	GO-2AS4P	8.2
D473	5CD203PA097A176	1365	$41,026	GO-2AS4P	8.4
D474	5CD204PA086A041	1680	$41,592	GO-2AS4P	8.5
D476	5CD204RA068A048	1600	$43,502	GO-2AS4P	8.2
D477	5CD204RA068A049	1600	$43,502	GO-2AS4P	8.2
D478	5CD204SA038A261	1720	$51,726	GO-2AS4P	8.4
D480	5CD222PA076B030	1900	$55,176	GO-2AS4P	8.2
D482	5CD222YA001B098	1982	$62,742	GO-2AS4P	8.4
D486	5CD223SA074B132	2290	$81,350	GO-2AS4P	8.2
D489	5CD224TA033B079	2810	$98,320	GO-2AS4P	8.3
D490	5CD226SA002B052	4343	$96,214	GO-2AS4P	8.4
D492	5CD226TA001B048	4343	$121,618	GO-2AS4P	8.4
D530	5CD144MA020B073	128	$5,618	GO-2AS180	8.5
D536	5CD142GE011B039	80	$5,590	GO-2AS180	8.6
D537	5CD143MC003B040	102	$5,812	GO-2AS180	8.6
D539	5CD143MC003B018	102	$5,648	GO-2AS180	8.6
D540	5CD143LC007B034	102	$5,568	GO-2AS180	8.6
D541	5CD184TA094B071	769	$15,844	GO-2AS2P	8.2
D542	5CD184TA094B075	769	$15,844	GO-2AS2P	8.2
D543	5CD194NA067A052	1020	$24,280	GO-2AS2P	8.2
D544	5CD193PA065A160	860	$20,716	GO-2AS4P	8.2
D547	5CD223SA074B133	2290	$67,844	GO-2AS4P	8.2
D548	5CD183SA043B052	691	$14,432	GO-2AS2P	8.3
D553	5CD144MA020B038	128	$4,386	GO-2AS180	8.5
D554	5CD204PA086A042	1680	$34,340	GO-2AS4P	8.5
D555	5CD145VE005B008	160	$5,988	GO-2AS180	8.6
D558	5CD194SA082A247	1020	$27,784	GO-2AS4P	8.3
D559	5CD194SA082A419	1020	$32,900	GO-2AS4P	8.3
D560	5CD203PA097A225	1300	$37,868	GO-2AS4P	8.3
D561	5CD153JA001B090	272	$9,458	GO-2AS2P	8.4
D562	5CD163KA009A136	381	$10,916	GO-2AS2P	8.4
D563	5CD164MA012A076	423	$12,184	GO-2AS2P	8.4
D564	5CD173NA010A130	513	$13,728	GO-2AS2P	8.4
D565	5CD174RA009A141	576	$14,848	GO-2AS2P	8.4
D566	5CD183SA043B017	752	$17,298	GO-2AS2P	8.4
D567	5CD184TA094B025	830	$19,346	GO-2AS2P	8.4
D568	5CD174VA019A060	587	$15,158	GO-2AS2P	8.5
D569	5CD174NA005A080	587	$15,158	GO-2AS2P	8.5
D570	5CD183WA043B006	732	$17,420	GO-2AS2P	8.5
D572	5CD184YA064B004	812	$20,098	GO-2AS2P	8.5
D574	5CD204SA038A265	1650	$48,020	GO-2AS4P	8.3
D575	5CD222YA001B125	1900	$59,036	GO-2AS4P	8.3
D576	5CD185VA811B802	888	$18,860	GO-2AS2P	8.3
D577	5CD185VA012B003	888	$22,154	GO-2AS4P	8.3
D578	5CD185VA811B803	949	$21,726	GO-2AS2P	8.4
D579	5CD185VA012B001	949	$25,020	GO-2AS2P	8.4
D583	5CD145WA009B020	162	$7,418	GO-2AS180	8.6
D584	5CD154ZC801B803	389	$11,662	GO-2AS2P	8.6
D585	5CD142GA010B034	83	$5,196	GO-2AS180	8.6
D586	5CD143UA022B010	105	$5,262	GO-2AS180	8.6
D587	5CD142EA019B017	83	$3,608	GO-2AS180	8.2
D588	5CD143BA012B038	105	$4,248	GO-2AS180	8.2
D589	5CD184VA085B006	769	$15,900	GO-2AS2P	8.2
D590	5CD203LA057A013	1300	$33,800	GO-2AS4P	8.2

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
D609	5CD184PA021B018	769	$18,374	GO-2AS2P	8.3
D610	5CD193MA038A055	860	$21,154	GO-2AS4P	8.3
D613	5CD223MA051B038	2290	$47,614	GO-2AS4P	8.3
D615	5CD223NA048B024	2290	$53,866	GO-2AS4P	8.3
D618	5CD223PA097B025	2290	$69,500	GO-2AS4P	8.3
D619	5CD224RA090B076	2810	$81,514	GO-2AS4P	8.3
D620	5CD226AA002B024	4260	$131,440	GO-2AS4P	8.3
D650	5CD183MA033B020	752	$14,794	GO-2AS2P	8.4
D651	5CD184NA054B019	830	$16,880	GO-2AS2P	8.4
D652	5CD192NA027A136	815	$25,020	GO-2AS2P	8.4
D654	5CD194XA002A073	1085	$27,032	GO-2AS2P	8.4
D655	5CD185VA012B002	949	$25,020	GO-2AS2P	8.4
D656	5CD193PA094A243	925	$27,496	GO-2AS4P	8.4
D657	5CD193PA094A244	925	$27,496	GO-2AS4P	8.4
D658	5CD194XA002A092	1085	$31,564	GO-2AS4P	8.4
D659	5CD203NA039A054	1365	$37,866	GO-2AS4P	8.4
D660	5CD204NA044A093	1665	$43,834	GO-2AS4P	8.4
D661	5CD204PA107A104	1665	$43,834	GO-2AS4P	8.4
D662	5CD204PA107A141	1665	$50,472	GO-2AS4P	8.4
D663	5CD204SA038A260	1720	$51,726	GO-2AS4P	8.4
D664	5CD222YA001B096	1982	$62,742	GO-2AS4P	8.4
D680	5CD142AA036B008	83	$4,442	GO-2AS180	8.5
D681	5CD142DA036B024	83	$4,146	GO-2AS180	8.5
D682	5CD144EC002B052	128	$6,564	GO-2AS180	8.5
D683	5CD154SA016B023	280	$8,974	GO-2AS2P	8.5
D684	5CD154SA045B001	280	$8,974	GO-2AS2P	8.5
D685	5CD154JA015B024	280	$8,974	GO-2AS2P	8.5
D686	5CD164LA041A026	403	$10,892	GO-2AS2P	8.5
E7010	5KS213ATE205F2	128	$807	G4-7D$Z1	1.2
E7011	5KS213ATE305	128	$771	G4-7D$Z1	1.2
E7012	5KS215ATE305	157	$965	G4-7D$Z1	1.2
E7013	5KS254ATE305	260	$1,257	G4-7D$Z1	1.2
E7014	5KS256ATE305	310	$1,472	G4-7D$Z1	1.3
E7015	5KS284ATE305	394	$1,895	G4-7D$Z1	1.3
E7016	5KS213ATE105F2	163	$998	G4-7D$Z1	1.3
E7017	5KS286ATE305	436	$2,324	G4-7D$Z1	1.3
E7018	5KS215ATE205F2	157	$975	G4-7D$Z1	1.3
E7019	5KS324ATE305	580	$2,757	G4-7D$Z1	1.3
E7020	5KS215ATE105F2	157	$1,263	G4-7D$Z1	1.3
E7021	5KS254ATE205F2	260	$1,296	G4-7D$Z1	1.3
E7022	5KS326ATE305	639	$3,155	G4-7D$Z1	1.3
E7024	5KS364ATE308	770	$4,637	G4-7D$Z1	1.3
E7025	5KS256ATE205F2	310	$1,583	G4-7D$Z1	1.3
E7026	5KS365ATE308	838	$5,415	G4-7D$Z1	1.4
E7027	5KS284ATE205F2	394	$1,839	G4-7D$Z1	1.3
E7028	5KS286ATE205F2	436	$2,138	G4-7D$Z1	1.3
E7029	5KS404ATE308	1090	$6,701	G4-7D$Z1	1.4
E7030	5KS324ATE205F2	480	$2,658	G4-7D$Z1	1.3
E7032	5KS405ATE308	1150	$7,575	G4-7D$Z1	1.4
E7034	5KS444ATE308	1494	$9,594	G4-7D$Z1	1.4
E7036	5KS445ATE308	1715	$11,783	G4-7D$Z1	1.4
E7050	5KS143ATE205RG3	46	$736	G4-7D$Z1	1.21
E7051	5KS143ATE205F2RG3	46	$736	G4-7D$Z1	1.21
E7052	5KS145ATE202RG3	56	$776	G4-7D$Z1	1.21
E7053	5KS145ATE202F2RG3	56	$776	G4-7D$Z1	1.21
E7054	5KS145ATE205RG3	58	$826	G4-7D$Z1	1.21
E7055	5KS145ATE205F2RG3	58	$826	G4-7D$Z1	1.21
E7056	5KS182ATE205RG3	72	$846	G4-7D$Z1	1.21
E7057	5KS182ATE205F2RG3	72	$846	G4-7D$Z1	1.21
E7058	5KS184ATE205RG3	91	$1,070	G4-7D$Z1	1.21
E7059	5KS184ATE205F2RG3	91	$1,070	G4-7D$Z1	1.21
E7060	5KS213ATE205RG3	128	$1,368	G4-7D$Z1	1.21
E7061	5KS213ATE205F2RG3	128	$1,368	G4-7D$Z1	1.21
E7062	5KS215ATE205RG3	157	$1,592	G4-7D$Z1	1.21
E7063	5KS215ATE205F2RG3	157	$1,592	G4-7D$Z1	1.21
E7064	5KS254ATE205RG3	260	$2,030	G4-7D$Z1	1.21
E7065	5KS254ATE205F2RG3	260	$2,030	G4-7D$Z1	1.21
E7066	5KS256ATE205RG3	310	$2,313	G4-7D$Z1	1.21
E7067	5KS256ATE205F2RG3	310	$2,313	G4-7D$Z1	1.21
E7068	5KS284ATE205RG3	294	$2,585	G4-7D$Z1	1.21
E7069	5KS284ATE205F2RG3	294	$2,585	G4-7D$Z1	1.21
E707	5KS143ATE205	46	$333	G4-7D$Z1	1.2
E7070	5KS286ATE205RG3	436	$2,879	G4-7D$Z1	1.21
E7071	5KS286ATE205F2RG3	436	$2,879	G4-7D$Z1	1.21
E7072	5KS324ATE205RG3	480	$3,736	G4-7D$Z1	1.21
E7073	5KS324ATE205F2RG3	480	$3,736	G4-7D$Z1	1.21
E7074	5KS326ATE205RG3	639	$4,170	G4-7D$Z1	1.21
E708	5KS145ATE305	58	$428	G4-7D$Z1	1.2
E709	5KS143ATE105	46	$363	G4-7D$Z1	1.2
E710	5KS145ATE202	56	$363	G4-7D$Z1	1.2
E717	5KS145ATE102	58	$428	G4-7D$Z1	1.2
E718	5KS145ATE205	58	$401	G4-7D$Z1	1.2
E719	5KS145ATE105	60	$480	G4-7D$Z1	1.2
E720	5KS182ATE205	72	$416	G4-7D$Z1	1.2
E721	5KS182ATE105	72	$584	G4-7D$Z1	1.2
E722	5KS184ATE205	91	$584	G4-7D$Z1	1.2
E723	5KS184ATE105	91	$840	G4-7D$Z1	1.2
E7254	5KS326ATE215	639	$3,099	G4-7D$Z1	1.4
E7257	5KS404ATE215	1090	$5,939	G4-7D$Z1	1.4
E7259	5KS444ATE218	1494	$9,791	G4-7D$Z1	1.4
E7272	5KS447ATE208	2100	$15,801	G4-7D$Z1	1.4
E7273	5KS449ATE208	2150	$19,488	G4-7D$Z1	1.4
E730	5KS213ATE205	128	$807	G4-7D$Z1	1.2
E731	5KS215ATE205	157	$975	G4-7D$Z1	1.3
E7310	5KS324ATE204	580	$2,658	G4-7D$Z1	1.3
E732	5KS254ATE205	260	$1,296	G4-7D$Z1	1.3
E7320	5KS326ATE204	639	$3,099	G4-7D$Z1	1.4
E733	5KS256ATE205	310	$1,583	G4-7D$Z1	1.3
E7330	5KS364ATE204	770	$4,026	G4-7D$Z1	1.4
E734	5KS284ATE205	394	$1,839	G4-7D$Z1	1.3
E7340	5KS404ATE204	1090	$5,939	G4-7D$Z1	1.4
E7342	5KS405ATE218	1150	$7,113	G4-7D$Z1	1.4
E735	5KS286ATE205	436	$2,138	G4-7D$Z1	1.3
E736	5KS324ATE205	480	$2,658	G4-7D$Z1	1.3
E7360	5KS445ATE218	1715	$12,728	G4-7D$Z1	1.4
E737	5KS326ATE205	639	$3,099	G4-7D$Z1	1.4
E7370	5KS447ATE218	2100	$15,801	G4-7D$Z1	1.4
E738	5KS364ATE205F2	770	$4,026	G4-7D$Z1	1.4
E7381	5KS364ATE205	770	$4,026	G4-7D$Z1	1.4
E7383	5KS364ATE215	770	$4,026	G4-7D$Z1	1.4
E7391	5KS365ATE205	838	$4,659	G4-7D$Z1	1.4
E7393	5KS365ATE215	838	$4,659	G4-7D$Z1	1.4
E740	5KS404ATE205F2	1090	$5,939	G4-7D$Z1	1.4
E7401	5KS404ATE205	1090	$5,939	G4-7D$Z1	1.4
E741	5KS405ATE208	1150	$7,113	G4-7D$Z1	1.4
E742	5KS444ATE208	1494	$9,791	G4-7D$Z1	1.4

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
E743	5KS445ATE208	1715	$12,728	G4-7D$Z1	1.4
E750	5KS213ATE105	163	$998	G4-7D$Z1	1.3
E7501	5KS404ATE118	1092	$8,228	G4-7D$Z1	1.4
E7502	5KS405ATE118	1194	$8,808	G4-7D$Z1	1.4
E7503	5KS444ATE118	1590	$15,510	G4-7D$Z1	1.4
E7504	5KS445ATE118	1800	$18,042	G4-7D$Z1	1.4
E751	5KS215ATE105	157	$1,263	G4-7D$Z1	1.3
E752	5KS254ATE105	260	$1,490	G4-7D$Z1	1.3
E753	5KS256ATE105	310	$1,818	G4-7D$Z1	1.3
E754	5KS284ATE115	420	$2,169	G4-7D$Z1	1.3
E755	5KS286ATE115	445	$2,775	G4-7D$Z1	1.3
E756	5KS324ATE115	606	$3,299	G4-7D$Z1	1.4
E757	5KS326ATE115	692	$3,975	G4-7D$Z1	1.4
E758	5KS364ATE115	686	$5,034	G4-7D$Z1	1.4
E759	5KS365ATE115	812	$6,614	G4-7D$Z1	1.4
E7635	5KS182ATE204	72	$416	G4-7D$Z1	1.2
E7640	5KS213ATE204	157	$807	G4-7D$Z1	1.2
E7643	5KS215ATE204	157	$975	G4-7D$Z1	1.3
E7646	5KS254ATE204	260	$1,296	G4-7D$Z1	1.3
E7649	5KS256ATE204	310	$1,583	G4-7D$Z1	1.3
E7652	5KS284ATE204	394	$1,839	G4-7D$Z1	1.3
E7654	5KS286ATE204	436	$2,138	G4-7D$Z1	1.3
E7707	5KS182ATE305	72	$470	G4-7D$Z1	1.2
E7710	5KS184ATE305	91	$603	G4-7D$Z1	1.2
E7714	5KS182ATE206	72	$416	G4-7D$Z1	1.2
E7716	5KS184ATE206	91	$584	G4-7D$Z1	1.2
E7729	5KS213ATE206	128	$807	G4-7D$Z1	1.2
E7734	5KS215ATE206	157	$975	G4-7D$Z1	1.3
E7744	5KS254ATE206	260	$1,296	G4-7D$Z1	1.3
E7754	5KS256ATE206	310	$1,583	G4-7D$Z1	1.3
E7757	5KS284ATE206	394	$1,839	G4-7D$Z1	1.3
E7763	5KS286ATE206	436	$2,138	G4-7D$Z1	1.3
E7808	5KS184ATE204	91	$584	G4-7D$Z1	1.2
E7825	5KS365ATE204	838	$4,659	G4-7D$Z1	1.4
E792	5KS143ATE205F2	46	$333	G4-7D$Z1	1.2
E793	5KS145ATE202F2	56	$363	G4-7D$Z1	1.2
E794	5KS145ATE205F2	58	$401	G4-7D$Z1	1.2
E796	5KS182ATE205F2	72	$416	G4-7D$Z1	1.2
E7962	5KS447ATE308	2100	$12,995	G4-7D$Z1	1.4
E7963	5KS449ATE308	2150	$18,596	G4-7D$Z1	1.4
E797	5KS182ATE105F2	72	$584	G4-7D$Z1	1.2
E798	5KS184ATE205F2	91	$584	G4-7D$Z1	1.2
E799	5KS184ATE105F2	91	$840	G4-7D$Z1	1.2
E9274	5KS324CAG115	600	$6,254	G6-7X$P	5.3
E9275	5KS326CAG115	650	$7,695	G6-7X$P	5.3
E9276	5KS324CAG118	600	$6,254	G6-7X$P	5.3
E9277	5KS326CAG118	650	$7,695	G6-7X$P	5.3
E9278	5KS364CAG118	950	$9,355	G6-7X$P	5.3
E9279	5KS365CAG118	1020	$11,398	G6-7X$P	5.3
E9280	5KS405CAG118	1470	$16,048	G6-7X$P	5.3
E9281	5KS444CAG118	1990	$19,575	G6-7X$P	5.3
E9282	5KS445CAG118	1990	$23,959	G6-7X$P	5.3
E9283	5KS324CAG205	700	$6,123	G6-7X$P	5.3
E9284	5KS324CAG208	700	$6,123	G6-7X$P	5.3
E9285	5KS364CAG305	990	$9,615	G6-7X$P	5.3
E9286	5KS326CAG205	740	$7,168	G6-7X$P	5.3
E9287	5KS326CAG208	740	$7,168	G6-7X$P	5.3
E9288	5KS365CAG305	1090	$11,043	G6-7X$P	5.3

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
E9289	5KS364CAG208	1050	$9,355	G6-7X$P	5.3
E9290	5KS365CAG208	1050	$18,480	G6-7X$P	5.3
E9291	5KS405CAG208	1560	$22,464	G6-7X$P	5.3
E9292	5KS324CAG305	730	$6,577	G6-7X$P	5.2
E9293	5KS326CAG305	730	$7,522	G6-7X$P	5.3
E9294	5KS324CAG308	730	$6,577	G6-7X$P	5.2
E9295	5KS326CAG308	730	$7,522	G6-7X$P	5.3
E9296	5KS364CAG308	990	$9,615	G6-7X$P	5.3
E9297	5KS365CAG308	1090	$11,043	G6-7X$P	5.3
E9298	5KS404CAG308	1560	$12,556	G6-7X$P	5.3
E9299	5KS405CAG308	1570	$14,260	G6-7X$P	5.3
E9300	5KS444CAG308	1990	$21,185	G6-7X$P	5.3
E9301	5KS445CAG308	1950	$22,645	G6-7X$P	5.3
E9302	5KS444CAG208	1960	$18,480	G6-7X$P	5.3
E9303	5KS445CAG208	2050	$22,464	G6-7X$P	5.3
E9520	5KS447SAG120	2490	$21,816	G4-7TAN	6.19
E9521	5KS449SAG122	2610	$23,117	G4-7TAN	6.19
E9522	5KS449SAG124	2610	$24,541	G4-7TAN	6.19
E9523	5KS449SAG124	2490	$21,623	G4-7TAN	6.19
E9524	5KS449SAG223	2610	$22,250	G4-7TAN	6.19
E9525	5KS449SAG222	2720	$23,887	G4-7TAN	6.19
E9526	5KS449SAG321	2750	$21,956	G4-7TAN	6.19
E9527	5KS449SAG320	2750	$22,568	G4-7TAN	6.19
E9601	5KS182CAA305	76	$1,043	G6-7XP$	5.2
E9602	5KS182CAA304	76	$1,043	G6-7XP$	5.2
E9603	5KS184CAA305	101	$1,164	G6-7XP$	5.2
E9604	5KS184CAA304	101	$1,164	G6-7XP$	5.2
E9605	5KS182CAA105	76	$1,035	G6-7XP$	5.2
E9606	5KS182CAA104	76	$1,035	G6-7XP$	5.2
E9607	5KS182CAA205	76	$1,007	G6-7XP$	5.2
E9608	5KS182CAA204	76	$1,007	G6-7XP$	5.2
E9610	5KS213CAA304	200	$1,415	G6-7XP$	5.2
E9611	5KS184CAA105	101	$1,229	G6-7XP$	5.2
E9612	5KS184CAA104	101	$1,229	G6-7XP$	5.2
E9613	5KS184CAA205	101	$1,181	G6-7XP$	5.2
E9614	5KS184CAA204	101	$1,181	G6-7XP$	5.2
E9616	5KS215CAA304	220	$2,010	G6-7XP$	5.2
E9617	5KS213CAA104	200	$1,605	G6-7XP$	5.2
E9618	5KS213CAA204	200	$1,595	G6-7XP$	5.2
E9619	5KS254CAA304	315	$2,553	G6-7XP$	5.2
E9620	5KS215CAA104	220	$1,881	G6-7XP$	5.2
E9621	5KS215CAA204	220	$1,779	G6-7XP$	5.2
E9622	5KS256CAA304	350	$3,132	G6-7XP$	5.2
E9623	5KS254CAA104	315	$2,468	G6-7XP$	5.2
E9624	5KS254CAA204	315	$2,340	G6-7XP$	5.2
E9625	5KS284CAA304	460	$4,167	G6-7XP$	5.2
E9626	5KS256CAA104	350	$2,972	G6-7XP$	5.2
E9627	5KS256CAA204	350	$2,796	G6-7XP$	5.2
E9628	5KS286CAA304	510	$5,087	G6-7XP$	5.2
E9629	5KS284CAA114	460	$3,723	G6-7XP$	5.2
E9630	5KS284CAA204	460	$3,567	G6-7XP$	5.2
E9631	5KS286CAA114	510	$4,377	G6-7XP$	5.3
E9632	5KS286CAA204	510	$4,167	G6-7XP$	5.3
E9661	5KS213CAA105	200	$1,605	G6-7XP$	5.2
E9662	5KS215CAA105	220	$1,881	G6-7XP$	5.2
E9663	5KS254CAA105	315	$2,468	G6-7XP$	5.2
E9664	5KS256CAA105	350	$2,972	G6-7XP$	5.2
E9665	5KS284CAA115	460	$3,723	G6-7XP$	5.2

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
E9666	5KS286CAA115	510	$4,377	G6-7XP$	5.3
E9669	5KS213CAA205	200	$1,595	G6-7XP$	5.2
E9671	5KS215CAA205	220	$1,779	G6-7XP$	5.2
E9672	5KS254CAA205	315	$2,340	G6-7XP$	5.2
E9673	5KS256CAA205	350	$2,796	G6-7XP$	5.2
E9674	5KS284CAA205	460	$3,567	G6-7XP$	5.2
E9675	5KS286CAA205	510	$4,167	G6-7XP$	5.3
E9678	5KS213CAA305	200	$1,415	G6-7XP$	5.2
E9679	5KS215CAA305	220	$2,010	G6-7XP$	5.2
E9680	5KS254CAA305	315	$2,553	G6-7XP$	5.2
E9682	5KS284CAA305	460	$4,167	G6-7XP$	5.2
E9683	5KS286CAA305	510	$5,087	G6-7XP$	5.2
E9686	5KS256CAA305	350	$3,132	G6-7XP$	5.2
M240	5KS184SAA105	101	$1,068	G4-7U1	2.3
M241	5KS182SAA205	76	$975	G4-7U1	2.3
M242	5KS184SAA205	101	$1,026	G4-7U1	2.3
M352	5KS143XAA208	43	$1,020	G4-7UX1	2.19
M353	5KS143XAA204	43	$1,020	G4-7UX1	2.19
M354	5KS143XAA308	43	$1,008	G4-7UX1	2.19
M355	5KS143XAA304	43	$1,008	G4-7UX1	2.19
M359	5KS145XAA208	50	$1,157	G4-7UX1	2.19
M360	5KS145XAA204	50	$1,157	G4-7UX1	2.19
M361	5KS145XAA220	50	$1,250	G4-7UX1	2.19
M362	5KS145XAA223	50	$1,250	G4-7UX1	2.19
M363	5KS145XAA308	50	$1,092	G4-7UX1	2.19
M364	5KS145XAA304	50	$1,092	G4-7UX1	2.19
M460	5KS145SAA405	50	$1,352	G4-7U1	2.2
M462	5KS143SAA121	43	$927	G4-7U1	2.2
M463	5KS143SAA120	43	$927	G4-7U1	2.2
M464	5KS145SAA222	50	$932	G4-7U1	2.2
M465	5KS143SAA108	43	$1,038	G4-7U1	2.2
M475	5KS143SAA208	43	$839	G4-7U1	2.2
M476	5KS145SAA308	50	$1,040	G4-7U1	2.2
M477	5KS145SAA404	50	$1,352	G4-7U1	2.2
M478	5KS143SAA200	43	$1,020	G4-7U1	2.8
M479	5KS145SAA200	50	$1,035	G4-7U1	2.8
M480	5KS143SAA305	43	$980	G4-7U1	2.2
M481	5KS143SAA304	43	$980	G4-7U1	2.2
M482	5KS143SAA205	43	$839	G4-7U1	2.2
M483	5KS143SAA204	43	$839	G4-7U1	2.2
M484	5KS145SAA305	50	$1,040	G4-7U1	2.2
M485	5KS145SAA304	50	$1,040	G4-7U1	2.2
M486	5KS143SAA105	43	$974	G4-7U1	2.2
M487	5KS143SAA104	43	$974	G4-7U1	2.2
M488	5KS145SAA205	50	$1,026	G4-7U1	2.2
M489	5KS145SAA204	50	$1,026	G4-7U1	2.2
M490	5KS145SAA105	50	$1,038	G4-7U1	2.2
M491	5KS145SAA104	50	$1,038	G4-7U1	2.2
M492	5KS145SAA221	50	$932	G4-7U1	2.2
M493	5KS145SAA223	50	$932	G4-7U1	2.2
M494	5KS145SAA208	50	$1,026	G4-7U1	2.2
M495	5KS145XAA295	50	$1,377	G4-7UX1	2.25
M496	5KS143SAA302	43	$1,083	G4-7U1	2.8
M497	5KS143SAA202	43	$942	G4-7U1	2.8
M498	5KS145SAA302	50	$1,143	G4-7U1	2.8
M499	5KS145SAA224	50	$1,035	G4-7U1	2.8
M500	5KS145SAA202	50	$1,130	G4-7U1	2.8
M520	5KS143XAA200	43	$1,145	G4-7UX1	2.25

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M521	5KS145XAA200	50	$1,286	G4-7UX1	2.25
M526	5KS145XAA222	50	$1,377	G4-7UX1	2.25
M6621	5KS184XAA221W8	101	$1,973	G4-7UXHE	2.35
M6622	5KS213XAA220W8	200	$2,565	G4-7UXHE	2.35
M6623	5KS215XAA220W8	220	$2,684	G4-7UXHE	2.35
M6624	5KS254XAA221W8	315	$3,183	G4-7UXHE	2.35
M6625	5KS256XAA223W8	350	$3,659	G4-7UXHE	2.35
M6626	5KS284XAA220W8	460	$4,263	G4-7UXHE	2.35
M6627	5KS286XAA222W8	510	$4,875	G4-7UXHE	2.35
M6628	5KS324XAA271W8	670	$6,698	G4-7UXHE	2.35
M6629	5KS326XAA253W8	710	$7,544	G4-7UXHE	2.35
M6630	5KS364XAA249W8	850	$11,334	G4-7UXHE	2.35
M6631	5KS364XAA250W6	1070	$11,334	G4-7UXHE	2.35
M6632	5KS365XAA253W6	1050	$13,169	G4-7UXHE	2.35
M6633	5KS365XAA254W8	1085	$13,169	G4-7UXHE	2.35
M7157	5KS449LAA310	2730	$27,800	G4-7S$P	1.15
M7158	5KS449LAA311	2730	$27,800	G4-7S$P	1.15
M7160	5KS449LAA210	2840	$27,149	G4-7S$P	1.16
M7161	5KS449LAA211	2840	$27,149	G4-7S$P	1.16
M7164	5KS404LAA305	1390	$11,025	G4-7S$P	1.11
M7165	5KS405LAA305	1420	$12,300	G4-7S$P	1.11
M7500	5KS143STE107	47	$492	G4-7S$P1	1.9
M7501	5KS143STE104	47	$534	G4-7S$P1	1.9
M7502	5KS145STE104	63	$639	G4-7S$P1	1.9
M7503	5KS182STE104	82	$719	G4-7S$P1	1.9
M7504	5KS184STE104	106	$890	G4-7S$P1	1.9
M7505	5KS213STE104	149	$1,076	G4-7S$P1	1.9
M7506	5KS215STE104	184	$1,257	G4-7S$P1	1.9
M7507	5KS254STE104	279	$1,727	G4-7S$P1	1.9
M7508	5KS256STE104	336	$2,139	G4-7S$P1	1.10
M7509	5KS284STE114	468	$2,456	G4-7S$P1	1.10
M7510	5KS286STE114	513	$2,867	G4-7S$P1	1.10
M7511	5KS324STE114	614	$3,678	G4-7S$P1	1.10
M7513	5KS326STE114	697	$4,760	G4-7S$P1	1.10
M7523	5KS143STE204	46	$498	G4-7S$P1	1.9
M7524	5KS145STE204	60	$554	G4-7S$P1	1.9
M7525	5KS145STE207	60	$609	G4-7S$P1	1.9
M7526	5KS182STE204	86	$690	G4-7S$P1	1.9
M7527	5KS184STE204	111	$788	G4-7S$P1	1.9
M7528	5KS213STE204	158	$1,070	G4-7S$P1	1.9
M7529	5KS215STE204	197	$1,289	G4-7S$P1	1.9
M7530	5KS254STE204	277	$1,697	G4-7S$P1	1.9
M7531	5KS256STE204	321	$2,114	G4-7S$P1	1.10
M7532	5KS284STE204	473	$2,343	G4-7S$P1	1.10
M7533	5KS286STE204	499	$2,652	G4-7S$P1	1.10
M7534	5KS324STE204	632	$3,522	G4-7S$P1	1.10
M7536	5KS326STE204	724	$4,326	G4-7S$P1	1.10
M7540	5KS145STE305	51	$660	G4-7S$P1	1.9
M7541	5KS182STE305	93	$750	G4-7S$P1	1.9
M7542	5KS184STE305	106	$840	G4-7S$P1	1.9
M7543	5KS213STE305	139	$1,020	G4-7S$P1	1.9
M7544	5KS215STE305	168	$1,425	G4-7S$P1	1.9
M7545	5KS254STE305	234	$1,800	G4-7S$P1	1.9
M7546	5KS256STE305	265	$2,430	G4-7S$P1	1.9
M7547	5KS284STE305	348	$3,000	G4-7S$P1	1.9
M7548	5KS286STE305	373	$3,600	G4-7S$P1	1.10
M7549	5KS324STE305	511	$4,200	G4-7S$P1	1.10
M7550	5KS326STE305	586	$4,800	G4-7S$P1	1.10

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M7551	5KS143STE205RG3	46	$931	G4-7S$P1	1.23
M7552	5KS145STE209RG3	60	$1,005	G4-7S$P1	1.23
M7553	5KS145STE209F2RG3	60	$1,005	G4-7S$P1	1.23
M7554	5KS145STE205RG3	60	$1,079	G4-7S$P1	1.23
M7555	5KS145STE205F2RG3	60	$1,079	G4-7S$P1	1.23
M7556	5KS182STE205RG3	86	$1,167	G4-7S$P1	1.23
M7557	5KS182STE205F2RG3	86	$1,167	G4-7S$P1	1.23
M7558	5KS184STE205RG3	111	$1,317	G4-7S$P1	1.23
M7559	5KS184STE205F2RG3	111	$1,317	G4-7S$P1	1.23
M7560	5KS213STE205RG3	158	$1,693	G4-7S$P1	1.23
M7561	5KS213STE205F2RG3	158	$1,693	G4-7S$P1	1.23
M7562	5KS215STE205RG3	197	$1,890	G4-7S$P1	1.23
M7563	5KS215STE205F2RG3	197	$1,890	G4-7S$P1	1.23
M7564	5KS254STE205RG3	277	$2,425	G4-7S$P1	1.23
M7565	5KS254STE205F2RG3	277	$2,425	G4-7S$P1	1.23
M7566	5KS256STE205RG3	321	$2,836	G4-7S$P1	1.23
M7567	5KS256STE205F2RG3	321	$2,836	G4-7S$P1	1.23
M7568	5KS284STE205RG3	473	$3,081	G4-7S$P1	1.23
M7569	5KS286STE205RG3	499	$3,385	G4-7S$P1	1.23
M7570	5KS286STE205F2RG3	499	$3,385	G4-7S$P1	1.23
M7571	5KS324STE205RG3	632	$4,587	G4-7S$P1	1.23
M7572	5KS324STE205F2RG3	632	$4,587	G4-7S$P1	1.23
M7574	5KS326STE205RG3	724	$5,379	G4-7S$P1	1.23
M7650	5KS324LAA129	670	$4,744	G4-7S$P1	1.18
M7651	5KS326LAA129	660	$5,989	G4-7S$P1	1.18
M7652	5KS364LAA130	960	$9,499	G4-7S$P	1.18
M7653	5KS365LAA131	1020	$11,661	G4-7S$P	1.18
M7654	5KS405LAA126	1530	$15,099	G4-7S$P	1.18
M7655	5KS444LAA124	1790	$18,836	G4-7S$P	1.18
M7656	5KS445LAA125	1930	$22,651	G4-7S$P	1.18
M7657	5KS447LAA125	2840	$28,676	G4-7S$P	1.18
M7658	5KS449LAA123	2750	$36,947	G4-7S$P	1.18
M7659	5KS449LAA124	2790	$48,032	G4-7S$P	1.18
M7660	5KS324LAA235	710	$4,705	G4-7S$P1	1.18
M7661	5KS326LAA230	720	$5,548	G4-7S$P1	1.18
M7662	5KS364LAA235	1000	$9,499	G4-7S$P	1.18
M7663	5KS365LAA229	1090	$11,261	G4-7S$P	1.18
M7664	5KS405LAA243	1480	$14,044	G4-7S$P	1.18
M7665	5KS444LAA236	1970	$17,636	G4-7S$P	1.18
M7666	5KS445LAA235	2130	$20,360	G4-7S$P	1.18
M7667	5KS447LAA245	2800	$25,539	G4-7S$P	1.18
M7668	5KS449LAA259	3010	$29,864	G4-7S$P	1.18
M7669	5KS449LAA260	2980	$34,968	G4-7S$P	1.18
M7671	5KS447LAA234	2590	$23,217	G4-7S$P	1.15
M7672	5KS449LAA307	2940	$36,406	G4-7S$P	1.16
M7673	5KS449LAA309	2940	$36,406	G4-7S$P	1.16
M7674	5KS449LAA317	2940	$36,406	G4-7S$P	1.16
M7675	5KS449LAA319	2940	$36,406	G4-7S$P	1.16
M7678	5KS449LAA261	2910	$31,492	G4-7S$P	1.16
M7679	5KS449LAA262	2910	$31,492	G4-7S$P	1.16
M7680	5KS449LAA263	2910	$31,492	G4-7S$P	1.16
M7681	5KS449LAA264	2910	$31,492	G4-7S$P	1.16
M7682	5KS449LAA265	3010	$39,530	G4-7S$P	1.16
M7683	5KS449LAA266	3010	$39,530	G4-7S$P	1.16
M7684	5KS449LAA267	3050	$39,530	G4-7S$P	1.16
M7685	5KS449LAA268	3050	$39,530	G4-7S$P	1.16
M7686	5KS445LAA322	1950	$19,500	G4-7S$P	1.11
M7691	5KS405LAA325	1420	$12,300	G4-7S$P	1.11

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M7692	5KS444LAA333	1860	$16,200	G4-7S$P	1.11
M7693	5KS447LAA323	2560	$22,350	G4-7S$P	1.15
M7694	5KS405LAA248	1440	$12,662	G4-7S$P	1.11
M7695	5KS444LAA239	1780	$15,909	G4-7S$P	1.11
M7696	5KS445LAA238	1880	$18,509	G4-7S$P	1.12
M7697	5KS404LAA308F2	1390	$11,025	G4-7S$P	1.11
M7698	5KS447LAA242	2590	$23,217	G4-7S$P	1.15
M7700	5KS143STE105	47	$492	G4-7S$P1	1.9
M7701	5KS143STE109	43	$534	G4-7S$P1	1.9
M7702	5KS145STE105	63	$639	G4-7S$P1	1.9
M7703	5KS182STE105	82	$719	G4-7S$P1	1.9
M7704	5KS184STE105	106	$890	G4-7S$P1	1.9
M7705	5KS213STE105	200	$1,076	G4-7S$P1	1.9
M7706	5KS215STE105	184	$1,257	G4-7S$P1	1.9
M7707	5KS254STE105	279	$1,727	G4-7S$P1	1.9
M7708	5KS256STE105	336	$2,139	G4-7S$P1	1.10
M7709	5KS284STE115	473	$2,456	G4-7S$P1	1.10
M7710	5KS286STE115	518	$2,867	G4-7S$P1	1.10
M7711	5KS324STE115	632	$3,678	G4-7S$P1	1.10
M7712	5KS324STE105	632	$3,678	G4-7S$P1	1.10
M7713	5KS326STE115	724	$4,760	G4-7S$P1	1.10
M7714	5KS326STE105	724	$4,760	G4-7S$P1	1.10
M7715	5KS182STE122	118	$758	G4-7S$P1	1.18
M7716	5KS184STE122	118	$930	G4-7S$P1	1.18
M7717	5KS213STE122	202	$1,215	G4-7S$P1	1.18
M7718	5KS215STE122	202	$1,449	G4-7S$P1	1.18
M7719	5KS254STE122	287	$1,875	G4-7S$P1	1.18
M7720	5KS256STE122	379	$2,460	G4-7S$P1	1.18
M7721	5KS284STE112	450	$2,925	G4-7S$P1	1.18
M7722	5KS286STE112	450	$3,450	G4-7S$P1	1.18
M7723	5KS143STE205	46	$498	G4-7S$P1	1.9
M7724	5KS145STE209	60	$554	G4-7S$P1	1.9
M7725	5KS145STE205	60	$609	G4-7S$P1	1.9
M7726	5KS182STE205	86	$675	G4-7S$P1	1.9
M7727	5KS184STE205	111	$788	G4-7S$P1	1.9
M7728	5KS213STE205	158	$1,070	G4-7S$P1	1.9
M7729	5KS215STE205	197	$1,289	G4-7S$P1	1.9
M7730	5KS254STE205	277	$1,697	G4-7S$P1	1.9
M7731	5KS256STE205	321	$2,114	G4-7S$P1	1.10
M7732	5KS284STE205	473	$2,343	G4-7S$P1	1.10
M7733	5KS286STE205	499	$2,652	G4-7S$P1	1.10
M7734	5KS324STE205	632	$3,522	G4-7S$P1	1.10
M7736	5KS326STE205	724	$4,326	G4-7S$P1	1.10
M7738	5KS143STE222	56	$540	G4-7S$P1	1.18
M7739	5KS145STE222	62	$585	G4-7S$P1	1.18
M7740	5KS145STE229	62	$660	G4-7S$P1	1.18
M7741	5KS182STE222	118	$728	G4-7S$P1	1.18
M7742	5KS184STE222	118	$863	G4-7S$P1	1.18
M7743	5KS213STE222	202	$1,215	G4-7S$P1	1.18
M7744	5KS215STE222	202	$1,449	G4-7S$P1	1.18
M7745	5KS254STE222	275	$1,890	G4-7S$P1	1.18
M7746	5KS256STE222	361	$2,460	G4-7S$P1	1.18
M7747	5KS284STE222	450	$2,925	G4-7S$P1	1.18
M7748	5KS286STE222	450	$3,375	G4-7S$P1	1.18
M7749	5KS284STE105	473	$2,456	G4-7S$P1	1.10
M7753	5KS405SAA355	1460	$12,996	G4-7U	2.6
M7754	5KS405SAA2084	1450	$12,926	G4-7U	2.6
M7755	5KS444SAA373	1860	$17,504	G4-7U	2.6

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M7756	5KS444SAA2018	1830	$17,006	G4-7U	2.6
M7757	5KS445SAA349	1950	$21,086	G4-7U	2.6
M7758	5KS445SAA2029	2000	$19,785	G4-7U	2.7
M7759	5KS447SAA341	2940	$25,545	G4-7U	2.7
M7761	5KS447SAA2047	2770	$24,818	G4-7U	2.7
M7762	5KS405SAA358	1460	$12,996	G4-7U	2.6
M7763	5KS444SAA383	1860	$17,504	G4-7U	2.6
M7764	5KS445SAA352	1950	$21,086	G4-7U	2.6
M7765	5KS447SAA344	2940	$25,545	G4-7U	2.7
M7907	5KS364LAA114	930	$8,636	G4-7S$P	1.11
M7908	5KS364LAA115	930	$8,636	G4-7S$P	1.11
M7909	5KS364LAA118	930	$8,636	G4-7S$P	1.11
M7910	5KS365LAA114	970	$10,601	G4-7S$P	1.11
M7911	5KS365LAA115	970	$10,601	G4-7S$P	1.11
M7912	5KS365LAA118	970	$10,601	G4-7S$P	1.11
M7913	5KS405LAA114	1430	$13,727	G4-7S$P	1.11
M7914	5KS405LAA118	1430	$13,727	G4-7S$P	1.11
M7915	5KS444LAA114	1810	$17,124	G4-7S$P	1.11
M7916	5KS444LAA118	1810	$17,124	G4-7S$P	1.11
M7917	5KS445LAA114	1830	$20,592	G4-7S$P	1.12
M7918	5KS445LAA118	1830	$20,592	G4-7S$P	1.12
M7919	5KS447LAA114	2420	$26,069	G4-7S$P	1.15
M7920	5KS447LAA118	2420	$26,069	G4-7S$P	1.15
M7921	5KS449LAA114	2510	$33,588	G4-7S$P	1.16
M7922	5KS449LAA118	2510	$33,588	G4-7S$P	1.16
M7929	5KS364LAA204	960	$8,456	G4-7S$P	1.11
M7930	5KS364LAA205	960	$8,636	G4-7S$P	1.11
M7931	5KS364LAA208	960	$8,456	G4-7S$P	1.11
M7932	5KS365LAA204	1010	$10,251	G4-7S$P	1.11
M7933	5KS365LAA205	1010	$10,251	G4-7S$P	1.11
M7934	5KS365LAA208	1010	$10,251	G4-7S$P	1.11
M7935	5KS405LAA204	1440	$12,662	G4-7S$P	1.11
M7936	5KS405LAA208	1440	$12,662	G4-7S$P	1.11
M7937	5KS444LAA204	1780	$15,909	G4-7S$P	1.11
M7938	5KS444LAA208	1780	$15,909	G4-7S$P	1.11
M7939	5KS445LAA204	1880	$18,509	G4-7S$P	1.12
M7940	5KS445LAA208	1880	$18,509	G4-7S$P	1.12
M7941	5KS447LAA204	2590	$23,217	G4-7S$P	1.15
M7942	5KS447LAA208	2590	$23,217	G4-7S$P	1.15
M7943	5KS449LAA204	2840	$27,149	G4-7S$P	1.16
M7944	5KS449LAA208	2840	$27,149	G4-7S$P	1.16
M7950	5KS326LAA308	670	$4,800	G4-7S$P1	1.10
M7951	5KS364LAA304	980	$7,650	G4-7S$P	1.10
M7952	5KS364LAA305	980	$7,650	G4-7S$P	1.10
M7953	5KS364LAA308	980	$7,650	G4-7S$P	1.10
M7954	5KS365LAA304	1000	$8,850	G4-7S$P	1.10
M7955	5KS365LAA305	1000	$8,850	G4-7S$P	1.10
M7956	5KS365LAA308	1000	$8,850	G4-7S$P	1.10
M7957	5KS404LAA304	1390	$11,025	G4-7S$P	1.11
M7958	5KS404LAA308	1390	$11,025	G4-7S$P	1.11
M7959	5KS405LAA304	1420	$12,300	G4-7S$P	1.11
M7960	5KS405LAA308	1420	$12,300	G4-7S$P	1.11
M7961	5KS444LAA304	1860	$16,200	G4-7S$P	1.11
M7962	5KS444LAA308	1860	$16,200	G4-7S$P	1.11
M7963	5KS445LAA304	1950	$19,500	G4-7S$P	1.11
M7964	5KS445LAA308	1950	$19,500	G4-7S$P	1.11
M7965	5KS447LAA304	2560	$22,350	G4-7S$P	1.15
M7966	5KS447LAA308	2560	$22,350	G4-7S$P	1.15

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M7967	5KS449LAA304	2730	$27,800	G4-7S$P	1.15
M7968	5KS449LAA308	2730	$27,800	G4-7S$P	1.15
M8901	5KS145XAA408	50	$1,662	G4-7UX1	2.19
M8903	5KS143XAA122	43	$1,035	G4-7UX1	2.19
M8904	5KS143XAA120	43	$1,035	G4-7UX1	2.19
M8905	5KS143XAA108	43	$1,080	G4-7UX1	2.19
M8906	5KS143XAA104	43	$1,080	G4-7UX1	2.19
M8907	5KS145XAA108	43	$1,293	G4-7UX1	2.19
M8908	5KS145XAA104	43	$1,293	G4-7UX1	2.19
M8909	5KS182XAA200	76	$1,263	G4-7UX1	2.25
M8910	5KS184XAA200	101	$1,320	G4-7UX1	2.25
M8911	5KS213XAA200	200	$1,878	G4-7UX1	2.25
M8912	5KS215XAA200	220	$2,079	G4-7UX1	2.25
M8913	5KS254XAA200	315	$2,727	G4-7UX1	2.25
M8914	5KS256XAA200	350	$3,362	G4-7UX1	2.26
M8915	5KS284XAA200	460	$4,028	G4-7UX1	2.26
M8916	5KS286XAA200	510	$4,637	G4-7UX1	2.26
M8917	5KS365XAA114	1020	$12,261	G4-7UX	2.22
M8918	5KS405XAA114	1530	$15,783	G4-7UX	2.22
M8919	5KS444XAA114	1790	$20,169	G4-7UX	2.22
M8920	5KS445XAA114	1930	$23,874	G4-7UX	2.23
M8921	5KS284XAA300	460	$4,575	G4-7UX1	2.25
M8922	5KS286XAA300	510	$5,519	G4-7UX1	2.26
M8923	5KS284XAA100	460	$4,206	G4-7UX1	2.26
M8924	5KS286XAA100	510	$4,865	G4-7UX1	2.26
M8925	5KS182XAA100	76	$1,335	G4-7UX1	2.25
M8926	5KS182XAA300	76	$1,184	G4-7UX1	2.25
M8927	5KS184XAA100	101	$1,484	G4-7UX1	2.25
M8928	5KS184XAA300	101	$1,307	G4-7UX1	2.25
M8929	5KS213XAA100	200	$1,898	G4-7UX1	2.25
M8931	5KS215XAA100	220	$2,021	G4-7UX1	2.25
M8932	5KS215XAA300	220	$2,145	G4-7UX1	2.25
M8933	5KS254XAA100	315	$2,768	G4-7UX1	2.25
M8934	5KS254XAA300	315	$2,847	G4-7UX1	2.25
M8935	5KS256XAA100	350	$3,387	G4-7UX1	2.26
M8936	5KS256XAA300	350	$3,438	G4-7UX1	2.25
M8937	5KS449XAA408	3150	$39,158	G4-7UX	2.23
M8938	5KS449XAA404	3120	$39,158	G4-7UX	2.23
M8939	5KS447XAA114	2560	$29,729	G4-7UX	2.23
M8940	5KS449XAA308	3070	$30,213	G4-7UX	2.23
M8941	5KS449XAA304	3070	$30,213	G4-7UX	2.23
M8942	5KS449XAA409	3120	$41,250	G4-7UX	2.23
M8943	5KS449XAA123	2770	$37,578	G4-7UX	2.23
M8944	5KS449XAA124	2770	$37,578	G4-7UX	2.23
M8945	5KS449XAA224	2790	$30,654	G4-7UX	2.23
M8946	5KS449XAA225	2790	$30,654	G4-7UX	2.23
M8947	5KS449XAA337	3150	$35,990	G4-7UX	2.23
M8948	5KS449XAA134	2790	$40,170	G4-7UX	2.24
M8949	5KS449XAA208	2980	$35,624	G4-7UX	2.24
M8950	5KS324SAA404	650	$6,756	G4-7U1	2.4
M8951	5KS284XAA139	460	$4,206	G4-7UX1	2.26
M8952	5KS286XAA128	510	$4,865	G4-7UX1	2.26
M8953	5KS445SAA404	1830	$28,538	G4-7U	2.6
M8954	5KS447SAA404	2420	$31,778	G4-7U	2.6
M8955	5KS445SAA114	1930	$22,011	G4-7U	2.7
M8956	5KS449SAA404	2660	$34,653	G4-7U	2.7
M8957	5KS447SAA114	2650	$27,866	G4-7U	2.7
M8959	5KS449SAA122	2860	$35,903	G4-7U	2.7

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M8960	5KS449SAA123	2790	$44,522	G4-7U	2.7
M8961	5KS449SAA124	2790	$44,522	G4-7U	2.7
M8962	5KS449SAA223	3050	$33,981	G4-7U	2.7
M8963	5KS449SAA301	3150	$36,180	G4-7U	2.7
M8964	5KS324SAA152	649	$5,271	G4-7U1	2.8
M8965	5KS324SAA2007	689	$5,228	G4-7U1	2.8
M8966	5KS326SAA146	700	$6,654	G4-7U1	2.8
M8967	5KS326SAA271	740	$6,164	G4-7U1	2.8
M8971	5KS324XAA175	649	$6,584	G4-7UX1	2.26
M8972	5KS324XAA279	689	$6,396	G4-7UX1	2.26
M8973	5KS326XAA155	700	$7,967	G4-7UX1	2.26
M8974	5KS326XAA263	740	$7,244	G4-7UX1	2.26
M8979	5KS449XAA125	2770	$37,578	G4-7UX	2.23
M8982	5KGS364SAA320	1000	$9,407	G4-7U	2.9
M8983	5KGS365SAA320	1030	$10,800	G4-7U	2.9
M8984	5KGS404SAA320	1480	$12,441	G4-7U	2.9
M8985	5KGS405SAA321	1530	$13,746	G4-7U	2.9
M8986	5KGS444SAA320	1920	$18,254	G4-7U	2.9
M8987	5KGS445SAA320	2140	$23,380	G4-7U	2.9
M8988	5KGS447SAA320	2700	$26,295	G4-7U	2.9
M8989	5KGS449SAA321	3070	$29,330	G4-7U	2.9
M8992	5KGS364SAA220	1030	$9,383	G4-7U	2.9
M8993	5KGS365SAA220	1090	$11,216	G4-7U	2.9
M8994	5KGS405SAA221	1500	$13,676	G4-7U	2.9
M8995	5KGS444SAA220	1970	$17,756	G4-7U	2.9
M8996	5KGS445SAA220	2060	$20,535	G4-7U	2.9
M8997	5KGS447SAA220	2700	$25,568	G4-7U	2.9
M8998	5KGS449SAA222	2980	$29,771	G4-7U	2.9
M8999	5KGS449SAA224	3100	$34,731	G4-7U	2.9
M9111	5KS213SAA308	200	$1,230	G4-7U1	2.3
M9112	5KS215SAA308	220	$1,748	G4-7U1	2.3
M9113	5KS254SAA308	315	$2,321	G4-7U1	2.3
M9114	5KS256SAA308	350	$2,847	G4-7U1	2.3
M9115	5KS284SAA308	460	$3,788	G4-7U1	2.4
M9117	5KS286SAA308	510	$4,625	G4-7U1	2.4
M9119	5KS324SAA308	690	$5,502	G4-7U1	2.4
M9122	5KS326SAA308	720	$6,276	G4-7U1	2.5
M9124	5KS364SAA308	1000	$8,657	G4-7U	2.5
M9126	5KS365SAA308	1020	$10,050	G4-7U	2.5
M9128	5KS404SAA308	1430	$11,691	G4-7U	2.5
M9131	5KS405SAA308	1460	$12,996	G4-7U	2.6
M9133	5KS444SAA308	1860	$17,504	G4-7U	2.6
M9135	5KS445SAA308	1950	$21,086	G4-7U	2.6
M9137	5KS447SAA308	2940	$25,545	G4-7U	2.7
M9139	5KS449SAA308	3070	$28,580	G4-7U	2.7
M9140	5KS143XAA295	43	$1,145	G4-7UX1	2.25
M9142	5KS213SAA305	200	$1,230	G4-7U1	2.3
M9143	5KS215SAA305	220	$1,748	G4-7U1	2.3
M9144	5KS213SAA105	200	$1,524	G4-7U1	2.3
M9145	5KS213SAA205	200	$1,515	G4-7U1	2.3
M9146	5KS254SAA305	315	$2,321	G4-7U1	2.3
M9147	5KS215SAA105	220	$1,635	G4-7U1	2.3
M9148	5KS215SAA205	220	$1,547	G4-7U1	2.3
M9149	5KS256SAA305	350	$2,847	G4-7U1	2.3
M9150	5KS254SAA105	315	$2,244	G4-7U1	2.4
M9151	5KS254SAA205	315	$2,127	G4-7U1	2.4
M9152	5KS284SAA305	460	$3,788	G4-7U1	2.4
M9153	5KS256SAA105	350	$2,702	G4-7U1	2.4

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9154	5KS256SAA205	350	$2,541	G4-7U1	2.4
M9155	5KS286SAA305	510	$4,625	G4-7U1	2.4
M9156	5KS284SAA115	460	$3,384	G4-7U1	2.4
M9157	5KS284SAA205	460	$3,243	G4-7U1	2.4
M9158	5KS324SAA305	690	$5,502	G4-7U1	2.4
M9159	5KS286SAA115	510	$3,980	G4-7U1	2.4
M9160	5KS286SAA205	510	$3,788	G4-7U1	2.4
M9161	5KS326SAA305	720	$6,276	G4-7U1	2.5
M9162	5KS324SAA115	640	$4,952	G4-7U1	2.5
M9163	5KS324SAA205	670	$4,908	G4-7U1	2.5
M9164	5KS326SAA115	660	$6,335	G4-7U1	2.5
M9165	5KS326SAA205	710	$5,754	G4-7U1	2.5
M9166	5KS143SAA405	43	$864	G4-7U1	2.2
M9167	5KS143SAA408	43	$864	G4-7U1	2.2
M9168	5KS143SAA404	43	$864	G4-7U1	2.2
M9169	5KS143SAA308	43	$980	G4-7U1	2.2
M9170	5KS145SAA408	50	$1,352	G4-7U1	2.2
M9171	5KS143SAA140	43	$927	G4-7U1	2.2
M9172	5KS145SAA108	50	$1,038	G4-7U1	2.2
M9173	5KS324SAA405	650	$6,756	G4-7U1	2.4
M9174	5KS284SAA105	460	$3,384	G4-7U1	2.4
M9175	5KS284SAA108	460	$3,384	G4-7U1	2.4
M9176	5KS284SAA104	460	$3,384	G4-7U1	2.4
M9177	5KS326SAA405	710	$8,420	G4-7U1	2.4
M9178	5KS286SAA105	510	$3,980	G4-7U1	2.4
M9179	5KS286SAA108	510	$3,980	G4-7U1	2.4
M9180	5KS286SAA104	510	$3,980	G4-7U1	2.4
M9181	5KS364SAA405	980	$9,846	G4-7U	2.5
M9182	5KS324SAA105	640	$4,952	G4-7U1	2.5
M9183	5KS324SAA104	640	$4,952	G4-7U1	2.5
M9184	5KS364SAA305	1000	$8,657	G4-7U	2.5
M9185	5KS365SAA405	1040	$12,144	G4-7U	2.5
M9186	5KS326SAA105	660	$6,335	G4-7U1	2.5
M9187	5KS326SAA104	660	$6,335	G4-7U1	2.5
M9188	5KS365SAA305	1020	$10,050	G4-7U	2.5
M9189	5KS404SAA405	1420	$14,654	G4-7U	2.5
M9190	5KS364SAA115	960	$8,816	G4-7U	2.5
M9191	5KS364SAA205	960	$8,633	G4-7U	2.5
M9192	5KS404SAA305	1430	$11,691	G4-7U	2.6
M9193	5KS405SAA405	1490	$18,000	G4-7U	2.6
M9194	5KS365SAA115	970	$10,823	G4-7U	2.6
M9195	5KS365SAA205	1080	$10,466	G4-7U	2.6
M9196	5KS405SAA305	1460	$12,996	G4-7U	2.6
M9197	5KS444SAA405	1700	$22,523	G4-7U	2.6
M9198	5KS449SAA382	3070	$28,580	G4-7U	2.7
M9199	5KS449SAA383	3070	$28,580	G4-7U	2.7
M9300	5KAF143SAA202	43	$1,455	G4-7AS	3.2
M9301	5KAF145SAA202	50	$1,494	G4-7AS	3.2
M9302	5KAF182SAA202	76	$1,875	G4-7AS	3.2
M9303	5KAF184SAA202	101	$2,097	G4-7AS	3.2
M9304	5KAF213SAA202	200	$2,454	G4-7AS	3.2
M9305	5KAF215SAA202	300	$2,931	G4-7AS	3.2
M9306	5KAF254SAA202	315	$3,531	G4-7AS	3.2
M9307	5KAF256SAA202	350	$3,908	G4-7AS	3.2
M9308	5KAF284SAA202	460	$4,880	G4-7AS	3.2
M9309	5KAF286SAA202	510	$5,577	G4-7AS	3.2
M9310	5KAF324SAA222	670	$7,223	G4-7AS	3.2
M9311	5KAF326SAA222	740	$8,934	G4-7AS	3.2

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9312	5KAF364SAA222	970	$11,516	G4-7AS	3.2
M9313	5KAF364SAA223	960	$12,639	G4-7AS	3.2
M9314	5KAF365SAA223	1020	$13,047	G4-7AS	3.2
M9315	5KAF365SAA224	1030	$15,858	G4-7AS	3.2
M9316	5KAF405SAA221	1420	$17,654	G4-7AS	3.2
M9317	5KAF405SAA220	1420	$21,090	G4-7AS	3.2
M9318	5KAF444SAA220	1760	$23,984	G4-7AS	3.2
M9319	5KAF444SAA221	1740	$26,876	G4-7AS	3.2
M9320	5KAF445SAA220	1880	$26,825	G4-7AS	3.2
M9321	5KAF445SAA221	1830	$30,467	G4-7AS	3.2
M9322	5KAF447SAA220	2420	$32,379	G4-7AS	3.2
M9323	5KAF447SAA221	2420	$36,021	G4-7AS	3.2
M9324	5KAF449SAA221	2630	$40,332	G4-7AS	3.2
M9325	5KAF449SAA222	2520	$45,119	G4-7AS	3.2
M9326	5KAF449SAA223	2890	$45,923	G4-7AS	3.2
M9327	5KAF449SAA224	2800	$50,709	G4-7AS	3.2
M9328	5KAF324SAA322	660	$7,028	G4-7AS	3.2
M9329	5KAF326SAA322	690	$8,690	G4-7AS	3.2
M9330	5KAF364SAA322	960	$11,748	G4-7AS	3.2
M9331	5KAF365SAA323	1010	$13,308	G4-7AS	3.2
M9332	5KAF404SAA323	1390	$22,665	G4-7AS	3.2
M9333	5KAF404SAA324	1370	$25,358	G4-7AS	3.2
M9334	5KAF405SAA323	1430	$25,469	G4-7AS	3.2
M9335	5KAF405SAA331	1410	$28,161	G4-7AS	3.2
M9336	5KAF444SAA321	1850	$24,462	G4-7AS	3.2
M9337	5KAF444SAA322	1760	$27,162	G4-7AS	3.2
M9338	5KAF445SAA321	2020	$27,362	G4-7AS	3.2
M9339	5KAF445SAA322	1880	$30,339	G4-7AS	3.2
M9340	5KAF447SAA322	2510	$33,030	G4-7AS	3.2
M9341	5KAF447SAA323	1440	$36,780	G4-7AS	3.2
M9342	5KAF449SAA324	2820	$46,842	G4-7AS	3.2
M9343	5KAF449SAA325	2680	$50,592	G4-7AS	3.2
M9344	5KS143XAA408	43	$892	G4-7UX1	2.19
M9345	5KS143XAA404	43	$892	G4-7UX1	2.19
M9346	5KS145XAA404	50	$1,662	G4-7UX1	2.19
M9347	5KS284XAA108	460	$3,948	G4-7UX1	2.20
M9348	5KS284XAA104	460	$3,948	G4-7UX1	2.20
M9349	5KS286XAA108	510	$4,610	G4-7UX1	2.21
M9350	5KS286XAA104	510	$4,610	G4-7UX1	2.21
M9351	5KS324XAA108	640	$6,264	G4-7UX1	2.21
M9352	5KS324XAA104	640	$6,264	G4-7UX1	2.21
M9353	5KS326XAA108	660	$7,647	G4-7UX1	2.21
M9354	5KS326XAA104	660	$7,647	G4-7UX1	2.21
M9355	5KS405XAA370	1460	$14,547	G4-7UX	2.22
M9356	5KS405XAA2088	1450	$14,477	G4-7UX	2.22
M9357	5KS444XAA366	1860	$18,723	G4-7UX	2.22
M9358	5KS444XAA2028	1830	$18,651	G4-7UX	2.22
M9359	5KS445XAA371	1950	$22,307	G4-7UX	2.22
M9360	5KS445XAA2054	2000	$21,431	G4-7UX	2.23
M9361	5KS447XAA363	2940	$27,162	G4-7UX	2.23
M9362	5KS447XAA2044	2770	$26,421	G4-7UX	2.23
M9363	5KS447XAA2045	2770	$26,421	G4-7UX	2.23
M9364	5KS449XAA350	3070	$30,213	G4-7UX	2.23
M9365	5KS449XAA351	3070	$30,213	G4-7UX	2.23
M9366	5KS449XAA439	3210	$41,250	G4-7UX	2.23
M9367	5KS449XAA143	2860	$37,578	G4-7UX	2.23
M9368	5KS449XAA287	3100	$37,578	G4-7UX	2.23
M9369	5KS449XAA288	3100	$37,578	G4-7UX	2.23
M9370	5KS449XAA352	3210	$35,990	G4-7UX	2.23
M9371	5KS449XAA353	3210	$35,990	G4-7UX	2.23
M9372	5KS449XAA144	2790	$40,170	G4-7UX	2.24
M9373	5KS449XAA145	2790	$40,170	G4-7UX	2.24
M9374	5KS449XAA146	2790	$40,170	G4-7UX	2.24
M9375	5KS449XAA289	2940	$35,624	G4-7UX	2.24
M9376	5KS449XAA290	3000	$35,624	G4-7UX	2.24
M9377	5KS143XAA139	43	$1,240	G4-7UX1	2.25
M9378	5KS143XAA140	43	$1,384	G4-7UX1	2.25
M9379	5KS145XAA143	50	$1,473	G4-7UX1	2.25
M9380	5KS213XAA329	200	$1,203	G4-7UX1	2.25
M9381	5KS324XAA353	690	$6,505	G4-7UX1	2.26
M9382	5KS326XAA340	720	$7,542	G4-7UX1	2.26
M9383	5KS284XAA218	460	$3,771	G4-7UX1	2.21
M9384	5KS445XAA204	2060	$21,431	G4-7UX	2.23
M9385	5KS447XAA304	2860	$27,162	G4-7UX	2.23
M9386	5KS447XAA374	2940	$27,762	G4-7UX	2.23
M9387	5KS447XAA204	2800	$26,421	G4-7UX	2.23
M9388	5KS286XAA218	510	$4,383	G4-7UX1	2.21
M9389	5KS324XAA218	670	$6,077	G4-7UX1	2.21
M9390	5KS326XAA218	710	$6,923	G4-7UX1	2.21
M9391	5KS364XAA218	970	$9,924	G4-7UX	2.21
M9392	5KS365XAA218	1040	$11,759	G4-7UX	2.22
M9393	5KS405XAA218	1450	$14,477	G4-7UX	2.22
M9394	5KS449SAA1007	2860	$35,903	G4-7U	2.7
M9395	5KS449SAA384	3150	$36,180	G4-7U	2.7
M9396	5KS449SAA385	3150	$36,180	G4-7U	2.7
M9397	5KS449SAA386	3150	$36,180	G4-7U	2.7
M9398	5KS449SAA1008	2790	$44,522	G4-7U	2.7
M9399	5KS449SAA1009	2790	$44,522	G4-7U	2.7
M9400	5KS143XAA145	43	$1,408	G4-7UX1	7.29
M9401	5KS143XAA2008	43	$1,392	G4-7UX1	7.29
M9402	5KS143XAA146	43	$1,457	G4-7UX1	7.29
M9403	5KS145XAA2009	50	$1,542	G4-7UX1	7.29
M9404	5KS182XAA326	76	$1,583	G4-7UX1	7.29
M9405	5KS145XAA145	50	$1,692	G4-7UX1	7.29
M9406	5KS145XAA2010	50	$1,645	G4-7UX1	7.29
M9407	5KS184XAA325	101	$1,775	G4-7UX1	7.29
M9408	5KS182XAA138	76	$1,664	G4-7UX1	7.29
M9409	5KS182XAA2004	76	$1,592	G4-7UX1	7.29
M9410	5KS213XAA335	200	$1,980	G4-7UX1	7.29
M9411	5KS184XAA1022	101	$1,835	G4-7UX1	7.29
M9412	5KS184XAA2031	101	$1,669	G4-7UX1	7.29
M9413	5KS182XAA408	76	$1,334	G4-7UX1	2.19
M9414	5KS182XAA308	76	$1,194	G4-7UX1	2.19
M9415	5KS184XAA408	101	$1,577	G4-7UX1	2.19
M9416	5KS184XAA308	101	$1,278	G4-7UX1	2.19
M9417	5KS213XAA408	200	$2,031	G4-7UX1	2.19
M9418	5KS182XAA108	76	$1,178	G4-7UX1	2.19
M9419	5KS182XAA208	76	$1,112	G4-7UX1	2.19
M9420	5KS213XAA308	200	$1,425	G4-7UX1	2.19
M9421	5KS215XAA408	220	$2,621	G4-7UX1	2.19
M9422	5KS184XAA108	101	$1,334	G4-7UX1	2.19
M9423	5KS184XAA208	101	$1,182	G4-7UX1	2.19
M9424	5KS215XAA308	220	$2,007	G4-7UX1	2.20
M9425	5KS254XAA408	315	$3,615	G4-7UX1	2.20
M9426	5KS213XAA108	200	$1,740	G4-7UX1	2.20
M9427	5KS213XAA208	200	$1,730	G4-7UX1	2.20

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9428	5KS254XAA308	315	$2,667	G4-7UX1	2.20
M9429	5KS256XAA408	350	$4,577	G4-7UX1	2.20
M9430	5KS215XAA108	220	$1,883	G4-7UX1	2.20
M9431	5KS215XAA208	220	$1,929	G4-7UX1	2.20
M9432	5KS256XAA308	350	$3,260	G4-7UX1	2.20
M9433	5KS284XAA408	460	$5,426	G4-7UX1	2.20
M9434	5KS254XAA108	315	$2,588	G4-7UX1	2.20
M9435	5KS254XAA208	315	$2,541	G4-7UX1	2.20
M9436	5KS284XAA308	460	$4,323	G4-7UX1	2.20
M9437	5KS286XAA408	510	$7,089	G4-7UX1	2.20
M9438	5KS256XAA108	350	$3,203	G4-7UX1	2.20
M9439	5KS256XAA208	350	$3,167	G4-7UX1	2.20
M9440	5KS286XAA308	510	$5,268	G4-7UX1	2.20
M9441	5KS324XAA408	649	$8,189	G4-7UX1	2.20
M9442	5KS284XAA118	460	$3,948	G4-7UX1	2.20
M9443	5KS284XAA208	460	$3,771	G4-7UX1	2.21
M9444	5KS324XAA308	679	$6,669	G4-7UX1	2.21
M9445	5KS326XAA408	710	$9,807	G4-7UX1	2.21
M9446	5KS286XAA118	510	$4,610	G4-7UX1	2.21
M9447	5KS286XAA208	510	$4,383	G4-7UX1	2.21
M9448	5KS326XAA308	730	$7,443	G4-7UX1	2.21
M9449	5KS364XAA408	1010	$12,110	G4-7UX	2.21
M9450	5KS324XAA118	649	$6,264	G4-7UX1	2.21
M9451	5KS324XAA208	689	$6,077	G4-7UX1	2.21
M9452	5KS364XAA308	1030	$9,950	G4-7UX	2.21
M9453	5KS365XAA408	1090	$14,937	G4-7UX	2.21
M9454	5KS326XAA118	700	$7,647	G4-7UX1	2.21
M9455	5KS326XAA208	740	$6,923	G4-7UX1	2.21
M9456	5KS365XAA308	1070	$11,343	G4-7UX	2.21
M9457	5KS404XAA408	1490	$18,023	G4-7UX	2.21
M9458	5KS364XAA118	940	$10,256	G4-7UX	2.21
M9459	5KS364XAA208	1020	$9,924	G4-7UX	2.21
M9460	5KS404XAA308	1480	$13,245	G4-7UX	2.22
M9461	5KS405XAA408	1570	$20,340	G4-7UX	2.22
M9462	5KS365XAA118	1020	$12,261	G4-7UX	2.22
M9463	5KS365XAA208	1090	$11,759	G4-7UX	2.22
M9464	5KS405XAA308	1540	$14,547	G4-7UX	2.22
M9465	5KS444XAA408	1950	$25,449	G4-7UX	2.22
M9466	5KS405XAA118	1530	$15,783	G4-7UX	2.22
M9467	5KS405XAA208	1480	$14,477	G4-7UX	2.22
M9468	5KS444XAA308	2060	$18,723	G4-7UX	2.22
M9469	5KS445XAA408	2020	$32,247	G4-7UX	2.22
M9470	5KS444XAA118	1790	$20,169	G4-7UX	2.22
M9471	5KS444XAA208	1970	$18,651	G4-7UX	2.22
M9472	5KS445XAA308	2130	$22,307	G4-7UX	2.22
M9473	5KS447XAA408	2580	$35,909	G4-7UX	2.23
M9474	5KS445XAA118	1930	$23,874	G4-7UX	2.23
M9475	5KS445XAA208	2090	$21,431	G4-7UX	2.23
M9476	5KS447XAA308	2860	$27,162	G4-7UX	2.23
M9477	5KS447XAA118	2560	$29,729	G4-7UX	2.23
M9478	5KS447XAA208	2800	$26,421	G4-7UX	2.23
M9480	5KS404XAA370	1410	$14,347	G4-7UX	2.22
M9481	5KS405XAA379	1430	$14,947	G4-7UX	2.22
M9482	5KS182XAA404	76	$1,334	G4-7UX1	2.19
M9483	5KS182XAA304	76	$1,194	G4-7UX1	2.19
M9484	5KS405XAA2122	1440	$14,877	G4-7UX	2.22
M9485	5KS184XAA404	101	$1,577	G4-7UX1	2.19
M9486	5KS184XAA304	101	$1,278	G4-7UX1	2.19

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9487	5KS213XAA404	200	$2,031	G4-7UX1	2.19
M9488	5KS182XAA104	76	$1,178	G4-7UX1	2.19
M9489	5KS182XAA204	76	$1,112	G4-7UX1	2.19
M9490	5KS213XAA304	200	$1,425	G4-7UX1	2.19
M9491	5KS215XAA404	220	$2,621	G4-7UX1	2.19
M9492	5KS184XAA104	101	$1,334	G4-7UX1	2.19
M9493	5KS184XAA204	101	$1,182	G4-7UX1	2.20
M9494	5KS215XAA304	220	$2,007	G4-7UX1	2.20
M9495	5KS254XAA404	315	$3,615	G4-7UX1	2.20
M9496	5KS213XAA104	200	$1,740	G4-7UX1	2.20
M9497	5KS213XAA204	200	$1,730	G4-7UX1	2.20
M9498	5KS254XAA304	315	$2,667	G4-7UX1	2.20
M9499	5KS256XAA404	350	$4,577	G4-7UX1	2.20
M9500	5KS215XAA341	220	$2,620	G4-7UX1	7.29
M9501	5KS213XAA1023	200	$2,326	G4-7UX1	7.29
M9502	5KS213XAA2049	200	$2,315	G4-7UX1	7.29
M9503	5KS254XAA335	315	$3,544	G4-7UX1	7.29
M9504	5KS215XAA1018	220	$2,484	G4-7UX1	7.29
M9505	5KS215XAA2043	220	$2,534	G4-7UX1	7.29
M9506	5KS256XAA327	350	$4,097	G4-7UX1	7.29
M9507	5KS254XAA1044	315	$3,358	G4-7UX1	7.29
M9508	5KS254XAA2059	315	$3,307	G4-7UX1	7.29
M9509	5KS284XAA338	460	$5,404	G4-7UX1	7.29
M9510	5KS405SAA118	1530	$14,013	G4-7U	2.6
M9511	5KS444SAA118	1900	$18,305	G4-7U	2.6
M9512	5KS445SAA118	1930	$22,011	G4-7U	2.7
M9513	5KS256XAA198	350	$4,035	G4-7UX1	7.29
M9514	5KS449SAA118	2860	$35,903	G4-7U	2.7
M9515	5KS256XAA2041	350	$3,995	G4-7UX1	7.29
M9516	5KS286XAA332	510	$6,444	G4-7UX1	7.29
M9517	5KS284XAA186	460	$4,992	G4-7UX1	7.29
M9518	5KS284XAA187	460	$4,992	G4-7UX1	7.29
M9519	5KS284XAA2002	460	$4,797	G4-7UX1	7.29
M9520	5KS324XAA354	690	$8,293	G4-7UX1	7.29
M9521	5KS286XAA167	510	$5,720	G4-7UX1	7.29
M9522	5KS286XAA168	510	$5,720	G4-7UX1	7.29
M9523	5KS286XAA2010	510	$5,470	G4-7UX1	7.29
M9524	5KS326XAA342	720	$9,144	G4-7UX1	7.29
M9525	5KS324XAA1079	640	$7,847	G4-7UX1	7.29
M9526	5KS324XAA2109	670	$7,642	G4-7UX1	7.29
M9527	5KS326XAA1009	660	$8,200	G4-7UX1	7.29
M9528	5KS326XAA2055	710	$7,967	G4-7UX1	7.29
M9529	5KS364XAA187	960	$12,055	G4-7UX	7.29
M9530	5KS364XAA2034	1027	$11,799	G4-7UX	7.29
M9531	5KS365XAA1002	970	$13,507	G4-7UX	7.29
M9532	5KS365XAA2034	1040	$13,284	G4-7UX	7.29
M9533	5KS444XAA373	1880	$19,323	G4-7UX	2.22
M9534	5KS365SAA404	1040	$12,144	G4-7U	2.5
M9535	5KS404SAA404	1420	$14,654	G4-7U	2.5
M9536	5KS405SAA404	1490	$18,000	G4-7U	2.6
M9537	5KS444SAA404	1700	$22,523	G4-7U	2.6
M9538	5KS444SAA114	1900	$18,305	G4-7U	2.6
M9539	5KS444XAA2058	1810	$19,251	G4-7UX	2.22
M9540	5KS143XAA2024	43	$1,145	G4-7UX1	2.25
M9541	5KS145XAA2028	50	$1,286	G4-7UX1	2.25
M9542	5KS145XAA2029	50	$1,377	G4-7UX1	2.25
M9543	5KS182XAA144	76	$1,335	G4-7UX1	2.25
M9544	5KS182XAA2026	76	$1,263	G4-7UX1	2.25

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9545	5KS184XAA1044	101	$1,484	G4-7UX1	2.25
M9546	5KS184XAA2067	101	$1,320	G4-7UX1	2.25
M9547	5KS213XAA1044	200	$1,898	G4-7UX1	2.25
M9548	5KS213XAA2074	200	$1,878	G4-7UX1	2.25
M9549	5KS215XAA1040	220	$2,021	G4-7UX1	2.25
M9550	5KS215XAA2070	220	$2,079	G4-7UX1	2.25
M9551	5KS254XAA1076	315	$2,768	G4-7UX1	2.25
M9552	5KS254XAA2102	315	$2,727	G4-7UX1	2.25
M9553	5KS256XAA1014	350	$3,387	G4-7UX1	2.26
M9554	5KS256XAA2068	350	$3,362	G4-7UX1	2.26
M9555	5KS284XAA1007	460	$4,206	G4-7UX1	2.26
M9556	5KS284XAA2036	460	$4,028	G4-7UX1	2.26
M9557	5KS286XAA181	510	$4,865	G4-7UX1	2.26
M9558	5KS286XAA2027	510	$4,637	G4-7UX1	2.26
M9559	5KS324XAA1106	640	$6,584	G4-7UX1	2.26
M9560	5KS324XAA2146	670	$6,396	G4-7UX1	2.26
M9561	5KS326XAA1035	680	$7,967	G4-7UX1	2.26
M9562	5KS326XAA2083	710	$7,244	G4-7UX1	2.26
M9563	5KS215XAA104	220	$1,883	G4-7UX1	2.20
M9564	5KS215XAA204	220	$1,929	G4-7UX1	2.20
M9565	5KS256XAA304	350	$3,260	G4-7UX1	2.20
M9566	5KS284XAA404	460	$5,426	G4-7UX1	2.20
M9567	5KS254XAA104	315	$2,588	G4-7UX1	2.20
M9568	5KS254XAA204	315	$2,541	G4-7UX1	2.20
M9569	5KS284XAA304	460	$4,323	G4-7UX1	2.20
M9570	5KS286XAA404	510	$7,089	G4-7UX1	2.20
M9571	5KS256XAA104	350	$3,203	G4-7UX1	2.20
M9572	5KS256XAA204	350	$3,167	G4-7UX1	2.20
M9573	5KS286XAA304	510	$5,268	G4-7UX1	2.20
M9574	5KS324XAA404	649	$8,189	G4-7UX1	2.20
M9575	5KS284XAA114	460	$3,948	G4-7UX1	2.20
M9576	5KS284XAA204	460	$3,771	G4-7UX1	2.21
M9577	5KS324XAA304	679	$6,669	G4-7UX1	2.21
M9578	5KS326XAA404	710	$9,807	G4-7UX1	2.21
M9579	5KS286XAA114	510	$4,610	G4-7UX1	2.21
M9580	5KS286XAA204	510	$4,383	G4-7UX1	2.21
M9581	5KS326XAA304	730	$7,443	G4-7UX1	2.21
M9582	5KS364XAA404	1010	$12,110	G4-7UX	2.21
M9583	5KS324XAA114	649	$6,264	G4-7UX1	2.21
M9584	5KS324XAA204	689	$6,077	G4-7UX1	2.21
M9585	5KS364XAA304	1030	$9,950	G4-7UX	2.21
M9586	5KS365XAA404	1090	$14,937	G4-7UX	2.21
M9587	5KS326XAA114	700	$7,647	G4-7UX1	2.21
M9588	5KS326XAA204	740	$6,923	G4-7UX1	2.21
M9589	5KS365XAA304	1070	$11,343	G4-7UX	2.21
M9590	5KS404XAA404	1490	$18,023	G4-7UX	2.21
M9591	5KS364XAA114	940	$10,256	G4-7UX	2.21
M9592	5KS364XAA204	1020	$9,924	G4-7UX	2.22
M9593	5KS404XAA304	1480	$13,245	G4-7UX	2.22
M9594	5KS405XAA404	1570	$20,340	G4-7UX	2.22
M9595	5KS445XAA380	1970	$22,907	G4-7UX	2.23
M9596	5KS365XAA204	1090	$11,759	G4-7UX	2.22
M9597	5KS405XAA304	1540	$14,547	G4-7UX	2.22
M9598	5KS444XAA404	1950	$25,449	G4-7UX	2.22
M9599	5KS445XAA2083	1970	$22,031	G4-7UX	2.23
M9630	5KS449XAA345	3150	$35,990	G4-7UX	2.23
M9640	5KS449XAA275	2980	$35,624	G4-7UX	2.24
M9693	5KS405XAA204	1480	$14,477	G4-7UX	2.22

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9694	5KS444XAA304	2060	$18,723	G4-7UX	2.22
M9695	5KS445XAA404	2020	$32,247	G4-7UX	2.22
M9697	5KS444XAA204	1970	$18,651	G4-7UX	2.22
M9698	5KS445XAA304	2130	$22,307	G4-7UX	2.23
M9699	5KS447XAA404	2580	$35,909	G4-7UX	2.23
M9702	5KS182SAA305	76	$1,034	G4-7U1	2.2
M9703	5KS182SAA304	76	$1,034	G4-7U1	2.2
M9704	5KS184SAA305	101	$1,104	G4-7U1	2.2
M9705	5KS213SAA408	200	$1,733	G4-7U1	2.2
M9706	5KS184SAA304	101	$1,104	G4-7U1	2.2
M9708	5KS215SAA408	220	$2,165	G4-7U1	2.3
M9711	5KS182SAA204	76	$975	G4-7U1	2.3
M9712	5KS213SAA304	200	$1,230	G4-7U1	2.3
M9713	5KS182SAA105	76	$1,001	G4-7U1	2.3
M9715	5KS182SAA104	76	$1,001	G4-7U1	2.3
M9717	5KS215SAA304	220	$1,748	G4-7U1	2.3
M9718	5KS184SAA204	101	$1,026	G4-7U1	2.3
M9719	5KS254SAA408	315	$2,876	G4-7U1	2.3
M9722	5KS184SAA104	101	$1,068	G4-7U1	2.3
M9724	5KS256SAA408	350	$3,635	G4-7U1	2.3
M9726	5KS254SAA304	315	$2,321	G4-7U1	2.3
M9728	5KS213SAA104	200	$1,524	G4-7U1	2.3
M9730	5KS213SAA204	200	$1,515	G4-7U1	2.3
M9733	5KS215SAA104	220	$1,635	G4-7U1	2.3
M9736	5KS284SAA408	460	$4,242	G4-7U1	2.3
M9737	5KS256SAA304	350	$2,847	G4-7U1	2.3
M9738	5KS215SAA204	220	$1,547	G4-7U1	2.3
M9741	5KS254SAA104	315	$2,244	G4-7U1	2.4
M9742	5KS286SAA408	510	$5,526	G4-7U1	2.4
M9745	5KS254SAA204	315	$2,127	G4-7U1	2.4
M9746	5KS284SAA304	460	$3,788	G4-7U1	2.4
M9748	5KS324SAA408	650	$6,756	G4-7U1	2.4
M9749	5KS256SAA104	350	$2,702	G4-7U1	2.4
M9751	5KS256SAA204	350	$2,541	G4-7U1	2.4
M9755	5KS286SAA304	510	$4,625	G4-7U1	2.4
M9758	5KS324SAA304	690	$5,502	G4-7U1	2.4
M9759	5KS284SAA204	460	$3,243	G4-7U1	2.4
M9761	5KS326SAA408	710	$8,420	G4-7U1	2.4
M9762	5KS326SAA404	710	$8,420	G4-7U1	2.4
M9764	5KS286SAA204	510	$3,788	G4-7U1	2.4
M9765	5KS326SAA204	710	$5,754	G4-7U1	2.5
M9766	5KS364SAA404	980	$9,846	G4-7U	2.5
M9767	5KS364SAA408	980	$9,846	G4-7U	2.5
M9768	5KS324SAA204	670	$4,908	G4-7U1	2.5
M9770	5KS365SAA408	1040	$12,144	G4-7U	2.5
M9773	5KS404SAA408	1420	$14,654	G4-7U	2.5
M9775	5KS365SAA304	1020	$10,050	G4-7U	2.5
M9776	5KS364SAA204	960	$8,633	G4-7U	2.5
M9778	5KS405SAA408	1490	$18,000	G4-7U	2.6
M9779	5KS405SAA204	1450	$12,926	G4-7U	2.6
M9780	5KS444SAA408	1700	$22,523	G4-7U	2.6
M9781	5KS365SAA204	1040	$10,466	G4-7U	2.6
M9782	5KS445SAA408	1830	$28,538	G4-7U	2.6
M9784	5KS447SAA408	2420	$31,778	G4-7U	2.6
M9785	5KS449SAA408	2660	$34,653	G4-7U	2.7
M9820	5KS324SAA108	640	$4,952	G4-7U1	2.5
M9823	5KS326SAA108	660	$6,335	G4-7U1	2.5
M9828	5KS286SAA114	510	$3,980	G4-7U1	2.4

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9829	5KS324SAA114	640	$4,952	G4-7U1	2.5
M9830	5KS365SAA114	970	$10,823	G4-7U	2.6
M9831	5KS405SAA114	1530	$14,013	G4-7U	2.6
M9832	5KS444SAA204	1830	$17,006	G4-7U	2.6
M9834	5KS326SAA304	720	$6,276	G4-7U1	2.5
M9835	5KS364SAA304	1000	$8,657	G4-7U	2.5
M9837	5KS404SAA304	1430	$11,691	G4-7U	2.5
M9838	5KS284SAA114	460	$3,384	G4-7U1	2.4
M9839	5KS326SAA114	660	$6,335	G4-7U1	2.5
M9845	5KS449SAA304	3070	$28,580	G4-7U	2.7
M9846	5KS444SAA304	1860	$17,504	G4-7U	2.6
M9847	5KS364SAA114	960	$8,816	G4-7U	2.5
M9851	5KS449SAA204	2660	$29,021	G4-7U	2.7
M9854	5KS445SAA204	2000	$19,785	G4-7U	2.7
M9868	5KS405SAA304	1460	$12,996	G4-7U	2.6
M9869	5KS447SAA304	2940	$25,545	G4-7U	2.7
M9870	5KS445SAA304	1950	$21,086	G4-7U	2.6
M9871	5KS182SAA405	76	$1,229	G4-7U1	2.2
M9872	5KS182SAA404	76	$1,229	G4-7U1	2.2
M9873	5KS184SAA405	101	$1,451	G4-7U1	2.2
M9874	5KS184SAA404	101	$1,451	G4-7U1	2.2
M9875	5KS213SAA405	200	$1,733	G4-7U1	2.2
M9876	5KS213SAA404	200	$1,733	G4-7U1	2.2
M9877	5KS215SAA405	220	$2,165	G4-7U1	2.3
M9878	5KS215SAA404	220	$2,165	G4-7U1	2.3
M9879	5KS254SAA405	315	$2,876	G4-7U1	2.3
M9880	5KS254SAA404	315	$2,876	G4-7U1	2.3
M9881	5KS256SAA405	350	$3,635	G4-7U1	2.3
M9882	5KS256SAA404	350	$3,635	G4-7U1	2.3
M9883	5KS284SAA405	460	$4,242	G4-7U1	2.3
M9884	5KS284SAA404	460	$4,242	G4-7U1	2.3
M9885	5KS286SAA405	510	$5,526	G4-7U1	2.4
M9886	5KS286SAA404	510	$5,526	G4-7U1	2.4
M9887	5KS182SAA408	76	$1,229	G4-7U1	2.2
M9888	5KS184SAA408	101	$1,451	G4-7U1	2.2
M9889	5KS182SAA200	76	$1,109	G4-7U1	2.8
M9890	5KS184SAA200	101	$1,146	G4-7U1	2.8
M9891	5KS213SAA200	200	$1,646	G4-7U1	2.8
M9892	5KS215SAA200	220	$1,667	G4-7U1	2.8
M9893	5KS254SAA200	315	$2,283	G4-7U1	2.8
M9894	5KS256SAA200	350	$2,697	G4-7U1	2.8
M9895	5KS284SAA200	460	$3,464	G4-7U1	2.8
M9896	5KS286SAA200	510	$4,007	G4-7U1	2.8
M990	5KS213SAA108	200	$1,524	G4-7U1	2.3
M9901	5KS284SAA300	460	$4,008	G4-7U1	2.8
M9902	5KS286SAA300	510	$4,845	G4-7U1	2.8
M9903	5KS284SAA100	460	$3,605	G4-7U1	2.8
M9904	5KS286SAA100	510	$4,200	G4-7U1	2.8
M9906	5KS449SAA209	3050	$33,981	G4-7U	2.7
M9907	5KS449SAA254	3050	$33,981	G4-7U	2.7
M991	5KS215SAA108	220	$1,635	G4-7U1	2.3
M9911	5KS213SAA208	200	$1,515	G4-7U1	2.3
M9912	5KS215SAA208	220	$1,547	G4-7U1	2.3
M9913	5KS254SAA208	315	$2,127	G4-7U1	2.4
M9914	5KS256SAA208	350	$2,541	G4-7U1	2.4
M9915	5KS324SAA208	670	$4,908	G4-7U1	2.5
M9916	5KS324SAA218	670	$4,908	G4-7U1	2.5
M9917	5KS326SAA208	710	$5,754	G4-7U1	2.5

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
M9918	5KS326SAA218	710	$5,754	G4-7U1	2.5
M9919	5KS364SAA208	1000	$8,633	G4-7U	2.5
M992	5KS254SAA108	315	$2,244	G4-7U1	2.4
M9921	5KS364SAA218	1000	$8,633	G4-7U	2.5
M9922	5KS365SAA208	1080	$10,466	G4-7U	2.6
M9923	5KS365SAA218	1080	$10,466	G4-7U	2.6
M9924	5KS405SAA208	1450	$12,926	G4-7U	2.6
M9925	5KS405SAA218	1450	$12,926	G4-7U	2.6
M9926	5KS444SAA208	1830	$17,006	G4-7U	2.6
M9927	5KS444SAA218	1830	$17,006	G4-7U	2.6
M9928	5KS445SAA208	2000	$19,785	G4-7U	2.7
M9929	5KS445SAA218	2000	$19,785	G4-7U	2.7
M993	5KS256SAA108	350	$2,702	G4-7U1	2.4
M9933	5KS449SAA208	2660	$29,021	G4-7U	2.7
M9935	5KS284SAA208	460	$3,243	G4-7U1	2.4
M9937	5KS286SAA208	510	$3,788	G4-7U1	2.4
M9939	5KS182SAA108	76	$1,001	G4-7U1	2.3
M994	5KS284SAA118	460	$3,384	G4-7U1	2.4
M9940	5KS184SAA108	101	$1,068	G4-7U1	2.3
M9941	5KS182SAA208	76	$975	G4-7U1	2.3
M9942	5KS184SAA208	101	$1,026	G4-7U1	2.3
M9943	5KS182SAA308	76	$1,034	G4-7U1	2.2
M9944	5KS184SAA308	101	$1,104	G4-7U1	2.2
M9945	5KS182SAA100	76	$1,134	G4-7U1	2.8
M9946	5KS182SAA300	76	$1,026	G4-7U1	2.8
M9947	5KS184SAA100	101	$1,188	G4-7U1	2.8
M9948	5KS184SAA300	101	$1,133	G4-7U1	2.8
M9949	5KS213SAA100	200	$1,655	G4-7U1	2.8
M995	5KS286SAA118	510	$3,980	G4-7U1	2.4
M9950	5KS213SAA300	200	$1,350	G4-7U1	2.8
M9951	5KS215SAA100	220	$1,755	G4-7U1	2.8
M9952	5KS215SAA300	220	$1,868	G4-7U1	2.8
M9953	5KS254SAA100	315	$2,390	G4-7U1	2.8
M9954	5KS254SAA300	315	$2,477	G4-7U1	2.8
M9955	5KS256SAA100	350	$2,858	G4-7U1	2.8
M9956	5KS256SAA300	350	$3,003	G4-7U1	2.8
M9958	5KS447SAA208	2770	$24,818	G4-7U	2.7
M9959	5KS447SAA204	2770	$24,818	G4-7U	2.7
M996	5KS324SAA118	640	$4,952	G4-7U1	2.5
M9961	5KS447SAA118	2650	$27,866	G4-7U	2.7
M997	5KS326SAA118	660	$6,335	G4-7U1	2.5
M998	5KS364SAA118	960	$8,816	G4-7U	2.5
M9988	5KS449SAA201	2660	$29,021	G4-7U	2.7
M9989	5KS449SAA202	2660	$29,021	G4-7U	2.7
M999	5KS365SAA118	970	$10,823	G4-7U	2.6
M9990	5KS449SAA212	3050	$33,981	G4-7U	2.7
M9991	5KS447SAA201	2770	$24,818	G4-7U	2.7
M9996	5KS449SAA146	2860	$35,903	G4-7U	2.7
N1000	5KFS111XAA409	101	$2,070	G4-7UXIEC	4.8
N1001	5KFS901XAA309	51	$1,862	G4-7UXIEC	4.8
N1002	5KFS901XAA209	51	$1,825	G4-7UXIEC	4.8
N1003	5KFS901XAA109	51	$1,880	G4-7UXIEC	4.8
N1004	5KFS111XAA419	221	$2,294	G4-7UXIEC	4.8
N1005	5KFS111XAA309	101	$1,974	G4-7UXIEC	4.8
N1006	5KFS901XAA219	51	$1,533	G4-7UXIEC	4.8
N1007	5KFS901XAA119	51	$1,761	G4-7UXIEC	4.8
N1008	5KFS131XAA409	221	$2,539	G4-7UXIEC	4.8
N1009	5KFS111XAA319	101	$2,090	G4-7UXIEC	4.8

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
N1010	5KFS903XAA209	51	$1,770	G4-7UXIEC	4.8
N1011	5KFS901XAA129	51	$1,847	G4-7UXIEC	4.8
N1012	5KFS131XAA419	221	$2,848	G4-7UXIEC	4.8
N1013	5KFS112XAA309	101	$2,438	G4-7UXIEC	4.8
N1014	5KFS111XAA209	101	$1,949	G4-7UXIEC	4.8
N1015	5KFS111XAA109	101	$1,972	G4-7UXIEC	4.8
N1016	5KFS132XAA409	221	$2,975	G4-7UXIEC	4.8
N1018	5KFS112XAA319	101	$2,048	G4-7UXIEC	4.8
N1019	5KFS111XAA219	101	$1,853	G4-7UXIEC	4.8
N1020	5KFS111XAA119	101	$2,022	G4-7UXIEC	4.8
N1021	5KFS162XAA409	287	$3,266	G4-7UXIEC	4.8
N1022	5KFS131XAA309	221	$2,898	G4-7UXIEC	4.8
N1023	5KFS111XAA229	101	$2,042	G4-7UXIEC	4.8
N1024	5KFS111XAA129	101	$2,123	G4-7UXIEC	4.8
N1025	5KFS162XAA419	287	$3,283	G4-7UXIEC	4.8
N1026	5KFS132XAA309	221	$2,573	G4-7UXIEC	4.8
N1027	5KFS131XAA209	101	$2,162	G4-7UXIEC	4.8
N1028	5KFS112XAA109	101	$2,289	G4-7UXIEC	4.8
N1029	5KFS162XAA429	287	$3,447	G4-7UXIEC	4.9
N1030	5KFS132XAA319	221	$2,595	G4-7UXIEC	4.9
N1031	5KFS131XAA219	101	$2,368	G4-7UXIEC	4.9
N1032	5KFS112XAA119	101	$2,438	G4-7UXIEC	4.9
N1034	5KFS163XAA419	287	$3,620	G4-7UXIEC	4.9
N1035	5KFS162XAA319	287	$3,683	G4-7UXIEC	4.9
N1036	5KFS132XAA329	221	$3,444	G4-7UXIEC	4.9
N1037	5KFS131XAA229	221	$2,878	G4-7UXIEC	4.9
N1038	5KFS131XAA119	221	$2,896	G4-7UXIEC	4.9
N1039	5KFS193XAA409	441	$4,924	G4-7UXIEC	4.9
N1040	5KFS192XAA409	287	$4,226	G4-7UXIEC	4.9
N1041	5KFS162XAA309	287	$3,923	G4-7UXIEC	4.9
N1042	5KFS132XAA209	221	$2,938	G4-7UXIEC	4.9
N1043	5KFS131XAA109	221	$3,106	G4-7UXIEC	4.9
N1044	5KFS202XAA409	805	$6,243	G4-7UXIEC	4.9
N1045	5KFS193XAA419	441	$5,622	G4-7UXIEC	4.9
N1046	5KFS192XAA309	441	$5,855	G4-7UXIEC	4.9
N1047	5KFS163XAA309	287	$5,007	G4-7UXIEC	4.9
N1048	5KFS162XAA209	287	$3,157	G4-7UXIEC	4.9
N1049	5KFS162XAA109	287	$3,331	G4-7UXIEC	4.9
N1050	5KFS203XAA409	805	$6,864	G4-7UXIEC	4.9
N1051	5KFS202XAA309	805	$6,966	G4-7UXIEC	4.9
N1052	5KFS193XAA309	441	$6,702	G4-7UXIEC	4.9
N1053	5KFS163XAA209	287	$3,772	G4-7UXIEC	4.9
N1054	5KFS162XAA119	287	$4,011	G4-7UXIEC	4.9
N1055	5KFS221XAA409	1155	$10,994	G4-7UXIEC	4.10
N1056	5KFS203XAA309	805	$7,229	G4-7UXIEC	4.10
N1057	5KFS192XAA209	441	$4,814	G4-7UXIEC	4.10
N1058	5KFS192XAA109	441	$5,267	G4-7UXIEC	4.10
N1059	5KFS163XAA109	287	$4,627	G4-7UXIEC	4.10
N1060	5KFS222XAA409	1155	$11,545	G4-7UXIEC	4.10
N1061	5KFS203XAA319	805	$8,241	G4-7UXIEC	4.10
N1062	5KFS202XAA209	805	$6,034	G4-7UXIEC	4.10
N1063	5KFS193XAA209	441	$5,622	G4-7UXIEC	4.10
N1064	5KFS202XAA109	805	$6,204	G4-7UXIEC	4.10
N1065	5KFS192XAA119	441	$5,907	G4-7UXIEC	4.10
N1066	5KFS262XAA409	1590	$15,133	G4-7UXIEC	4.10
N1067	5KFS222XAA309	1155	$10,600	G4-7UXIEC	4.10
N1068	5KFS202XAA219	805	$6,444	G4-7UXIEC	4.10
N1069	5KFS202XAA119	805	$6,502	G4-7UXIEC	4.10

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
N1070	5KFS262XAA419	1590	$15,889	G4-7UXIEC	4.10
N1071	5KFS262XAA309	1590	$15,361	G4-7UXIEC	4.10
N1072	5KFS203XAA209	805	$7,556	G4-7UXIEC	4.10
N1073	5KFS202XAA129	805	$8,317	G4-7UXIEC	4.10
N1074	5KFS291XAA409	2201	$20,903	G4-7UXIEC	4.10
N1075	5KFS291XAA309	2201	$20,290	G4-7UXIEC	4.10
N1076	5KFS221XAA209	1155	$10,571	G4-7UXIEC	4.10
N1077	5KFS221XAA109	1155	$10,796	G4-7UXIEC	4.10
N1078	5KFS292XAA409	2201	$24,321	G4-7UXIEC	4.10
N1079	5KFS292XAA309	2201	$20,492	G4-7UXIEC	4.10
N1080	5KFS222XAA209	1155	$12,815	G4-7UXIEC	4.10
N1081	5KFS222XAA109	1155	$13,252	G4-7UXIEC	4.10
N1082	5KFS292XAA419	2201	$26,687	G4-7UXIEC	4.11
N1083	5KFS292XAA319	2201	$20,689	G4-7UXIEC	4.11
N1084	5KFS262XAA209	1590	$15,278	G4-7UXIEC	4.11
N1085	5KFS291XAA109	2201	$19,099	G4-7UXIEC	4.11
N1086	5KFS262XAA109	1590	$16,563	G4-7UXIEC	4.11
N1087	5KFS294XAA409	3153	$32,564	G4-7UXIEC	4.11
N1088	5KFS294XAA309	3153	$27,478	G4-7UXIEC	4.11
N1089	5KFS291XAA209	2201	$20,099	G4-7UXIEC	4.11
N1090	5KFS292XAA109	2201	$21,634	G4-7UXIEC	4.11
N1091	5KFS295XAA409	3153	$35,414	G4-7UXIEC	4.11
N1092	5KFS294XAA319	3153	$30,290	G4-7UXIEC	4.11
N1093	5KFS292XAA209	2201	$23,385	G4-7UXIEC	4.11
N1094	5KFS292XAA119	2201	$26,016	G4-7UXIEC	4.11
N1095	5KFS295XAA309	3153	$33,169	G4-7UXIEC	4.11
N1096	5KFS294XAA209	3153	$29,641	G4-7UXIEC	4.11
N1097	5KFS294XAA419	3153	$30,531	G4-7UXIEC	4.11
N1098	5KFS295XAA319	3153	$34,674	G4-7UXIEC	4.11
N1099	5KFS295XAA209	3153	$31,349	G4-7UXIEC	4.11
N1100	5KFS295XAA109	3153	$32,291	G4-7UXIEC	4.11
N1101	5KFS295XAA219	3153	$33,057	G4-7UXIEC	4.11
N1102	5KFS295XAA119	3153	$34,049	G4-7UXIEC	4.11
N1103	5KFS295XAA229	3153	$34,387	G4-7UXIEC	4.11
N1104	5KFS295XAA129	3153	$39,156	G4-7UXIEC	4.11
N1105	5KFS295XAA249	3153	$37,882	G4-7UXIEC	4.11
N1106	5KFS295XAA239	3153	$35,716	G4-7UXIEC	4.11
N400	5KFS901XAA307	51	$1,044	G4-7UXIEC1	4.2
N401	5KFS901XAA207	51	$1,022	G4-7UXIEC1	4.2
N402	5KFS901XAA107	51	$1,035	G4-7UXIEC1	4.2
N403	5KFS901XAA317	51	$1,128	G4-7UXIEC1	4.2
N404	5KFS901XAA217	51	$1,053	G4-7UXIEC1	4.2
N405	5KFS901XAA117	51	$1,069	G4-7UXIEC1	4.2
N406	5KFS111XAA307	101	$1,080	G4-7UXIEC1	4.2
N407	5KFS903XAA207	51	$1,194	G4-7UXIEC1	4.2
N409	5KFS112XAA307	101	$1,207	G4-7UXIEC1	4.2
N410	5KFS903XAA217	51	$1,290	G4-7UXIEC1	4.2
N412	5KFS903XAA107	51	$1,335	G4-7UXIEC1	4.2
N414	5KFS111XAA217	101	$1,148	G4-7UXIEC1	4.2
N415	5KFS111XAA107	101	$1,216	G4-7UXIEC1	4.2
N416	5KFS131XAA307	221	$2,415	G4-7UXIEC1	4.2
N417	5KFS111XAA227	101	$1,221	G4-7UXIEC1	4.2
N418	5KFS111XAA117	101	$1,299	G4-7UXIEC1	4.2
N419	5KFS132XAA307	221	$2,433	G4-7UXIEC1	4.2
N420	5KFS112XAA207	101	$1,400	G4-7UXIEC1	4.2
N421	5KFS112XAA107	101	$1,338	G4-7UXIEC1	4.2
N422	5KFS132XAA317	221	$2,343	G4-7UXIEC1	4.2
N423	5KFS112XAA217	101	$1,468	G4-7UXIEC1	4.2

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
N424	5KFS112XAA117	101	$1,377	G4-7UXIEC1	4.2
N425	5KFS132XAA327	221	$2,690	G4-7UXIEC1	4.3
N426	5KFS162XAA307	287	$3,150	G4-7UXIEC1	4.3
N427	5KFS131XAA207	221	$1,786	G4-7UXIEC1	4.2
N428	5KFS131XAA107	221	$1,797	G4-7UXIEC1	4.2
N429	5KFS162XAA317	287	$3,366	G4-7UXIEC1	4.3
N430	5KFS132XAA207	221	$1,992	G4-7UXIEC1	4.3
N431	5KFS131XAA117	221	$1,944	G4-7UXIEC1	4.3
N432	5KFS163XAA307	287	$4,464	G4-7UXIEC1	4.3
N433	5KFS162XAA207	287	$2,624	G4-7UXIEC1	4.3
N434	5KFS162XAA107	287	$2,672	G4-7UXIEC1	4.3
N435	5KFS193XAA307	441	$5,440	G4-7UXIEC1	4.3
N437	5KFS162XAA117	287	$3,307	G4-7UXIEC1	4.3
N438	5KFS203XAA307	805	$6,092	G4-7UXIEC1	4.3
N439	5KFS192XAA207	441	$3,894	G4-7UXIEC1	4.3
N440	5KFS163XAA107	287	$3,387	G4-7UXIEC1	4.3
N441	5KFS203XAA317	805	$6,799	G4-7UXIEC1	4.3
N442	5KFS193XAA207	441	$4,526	G4-7UXIEC1	4.3
N443	5KFS192XAA107	441	$4,760	G4-7UXIEC1	4.3
N444	5KFS222XAA307	1155	$8,476	G4-7UXIEC1	4.3
N445	5KFS202XAA207	805	$5,551	G4-7UXIEC1	4.3
N446	5KFS202XAA107	805	$5,722	G4-7UXIEC	4.3
N447	5KFS262XAA307	1590	$10,792	G4-7UXIEC1	4.3
N448	5KFS203XAA207	805	$6,324	G4-7UXIEC1	4.3
N449	5KFS202XAA117	805	$6,985	G4-7UXIEC	4.3
N450	5KFS291XAA307	2201	$14,303	G4-7UXIEC1	4.4
N451	5KFS221XAA207	1155	$8,454	G4-7UXIEC1	4.3
N452	5KFS221XAA107	1155	$8,736	G4-7UXIEC	4.3
N453	5KFS292XAA307	2201	$14,908	G4-7UXIEC	4.4
N454	5KFS222XAA207	1155	$10,017	G4-7UXIEC	4.4
N455	5KFS222XAA107	1155	$10,445	G4-7UXIEC	4.4
N456	5KFS292XAA317	2201	$15,256	G4-7UXIEC	4.4
N457	5KFS262XAA207	1590	$11,796	G4-7UXIEC	4.4
N458	5KFS262XAA107	1590	$12,860	G4-7UXIEC	4.4
N459	5KFS291XAA207	2201	$15,197	G4-7UXIEC	4.4
N460	5KFS292XAA107	2201	$16,434	G4-7UXIEC	4.4
N461	5KFS292XAA207	2201	$17,462	G4-7UXIEC	4.4
N462	5KFS292XAA117	2201	$19,453	G4-7UXIEC	4.4
N463	5KFS294XAA107	3153	$21,575	G4-7UXIEC	4.4
N464	5KFS295XAA107	3153	$23,888	G4-7UXIEC	4.4
N465	5KFS294XAA207	3153	$19,879	G4-7UXIEC	4.4
N466	5KFS295XAA207	3153	$22,216	G4-7UXIEC	4.4
N467	5KFS295XAA217	3153	$24,198	G4-7UXIEC	4.4
N468	5KFS295XAA227	3153	$26,000	G4-7UXIEC	4.4
N469	5KFS294XAA307	3153	$20,777	G4-7UXIEC	4.4
N470	5KFS294XAA317	3153	$22,841	G4-7UXIEC	4.4
N471	5KFS295XAA307	3153	$25,211	G4-7UXIEC	4.4
N472	5KFS903XAA407	51	$1,242	G4-7UXIEC1	4.2
N473	5KFS111XAA407	101	$1,160	G4-7UXIEC1	4.2
N474	5KFS112XAA407	101	$1,456	G4-7UXIEC1	4.2
N475	5KFS131XAA407	221	$1,848	G4-7UXIEC1	4.2
N476	5KFS132XAA407	221	$2,072	G4-7UXIEC1	4.2
N477	5KFS162XAA407	287	$2,729	G4-7UXIEC1	4.2
N478	5KFS162XAA417	287	$2,865	G4-7UXIEC1	4.2
N479	5KFS162XAA427	287	$3,009	G4-7UXIEC1	4.2
N480	5KFS163XAA407	287	$3,401	G4-7UXIEC1	4.3
N481	5KFS192XAA407	441	$3,650	G4-7UXIEC1	4.3
N482	5KFS193XAA407	441	$4,707	G4-7UXIEC1	4.3
N483	5KFS193XAA417	441	$5,773	G4-7UXIEC1	4.3
N484	5KFS292XAA407	805	$5,773	G4-7UXIEC1	4.3
N485	5KFS203XAA407	805	$6,577	G4-7UXIEC1	4.3
N486	5KFS221XAA407	1155	$8,396	G4-7UXIEC1	4.3
N487	5KFS222XAA407	1155	$8,815	G4-7UXIEC1	4.3
N488	5KFS262XAA407	1590	$12,268	G4-7UXIEC	4.3
N489	5KFS262XAA417	1590	$13,881	G4-7UXIEC	4.3
N490	5KFS291XAA407	2201	$15,957	G4-7UXIEC	4.4
N491	5KFS292XAA427	2201	$18,160	G4-7UXIEC	4.4
N492	5KFS292XAA417	2201	$19,894	G4-7UXIEC	4.4
N493	5KFS294XAA407	3153	$23,999	G4-7UXIEC	4.4
N494	5KFS295XAA407	3153	$25,990	G4-7UXIEC	4.4
N495	5KFS901XAA127	51	$1,115	G4-7UXIEC1	4.2
N496	5KFS111XAA207	101	$1,290	G4-7UXIEC1	4.2
N497	5KFS112XAA317	101	$1,371	G4-7UXIEC1	4.2
N498	5KFS163XAA207	287	$3,270	G4-7UXIEC1	4.3
N500	5KFS901XAA308	51	$1,044	G4-7UXIEC1	4.5
N501	5KFS901XAA208	51	$1,022	G4-7UXIEC1	4.5
N502	5KFS901XAA108	51	$1,035	G4-7UXIEC1	4.5
N503	5KFS901XAA318	51	$1,128	G4-7UXIEC1	4.5
N504	5KFS901XAA218	51	$1,053	G4-7UXIEC1	4.5
N505	5KFS901XAA118	51	$1,069	G4-7UXIEC1	4.5
N506	5KFS111XAA308	101	$1,080	G4-7UXIEC1	4.5
N507	5KFS903XAA208	51	$1,194	G4-7UXIEC1	4.5
N508	5KFS901XAA128	51	$1,115	G4-7UXIEC1	4.5
N509	5KFS112XAA308	101	$1,207	G4-7UXIEC1	4.5
N511	5KFS903XAA218	101	$1,290	G4-7UXIEC1	4.5
N512	5KFS903XAA108	51	$1,335	G4-7UXIEC1	4.5
N513	5KFS112XAA318	101	$1,317	G4-7UXIEC1	4.5
N514	5KFS111XAA208	101	$1,148	G4-7UXIEC1	4.5
N515	5KFS111XAA108	101	$1,216	G4-7UXIEC1	4.5
N516	5KFS132XAA308	221	$2,415	G4-7UXIEC1	4.5
N517	5KFS111XAA218	101	$1,221	G4-7UXIEC1	4.5
N518	5KFS111XAA118	101	$1,299	G4-7UXIEC1	4.5
N519	5KFS132XAA318	221	$2,433	G4-7UXIEC1	4.5
N520	5KFS112XAA208	101	$1,400	G4-7UXIEC1	4.5
N521	5KFS112XAA108	101	$1,338	G4-7UXIEC1	4.5
N522	5KFS132XAA328	221	$2,343	G4-7UXIEC1	4.5
N523	5KFS112XAA218	101	$1,468	G4-7UXIEC1	4.5
N524	5KFS112XAA118	101	$1,377	G4-7UXIEC1	4.5
N525	5KFS132XAA338	221	$2,690	G4-7UXIEC1	4.6
N526	5KFS162XAA308	287	$3,150	G4-7UXIEC1	4.6
N527	5KFS131XAA208	221	$1,786	G4-7UXIEC1	4.6
N528	5KFS131XAA108	221	$1,797	G4-7UXIEC1	4.6
N529	5KFS162XAA318	287	$3,366	G4-7UXIEC1	4.6
N530	5KFS132XAA208	221	$1,992	G4-7UXIEC1	4.6
N531	5KFS132XAA108	221	$1,944	G4-7UXIEC1	4.6
N532	5KFS163XAA308	287	$4,464	G4-7UXIEC1	4.6
N533	5KFS162XAA208	287	$2,624	G4-7UXIEC1	4.6
N534	5KFS162XAA108	287	$2,672	G4-7UXIEC1	4.6
N535	5KFS193XAA308	441	$5,440	G4-7UXIEC1	4.6
N536	5KFS163XAA208	287	$3,270	G4-7UXIEC1	4.6
N537	5KFS162XAA118	287	$3,307	G4-7UXIEC1	4.6
N538	5KFS203XAA308	805	$6,092	G4-7UXIEC1	4.6
N539	5KFS192XAA208	441	$3,894	G4-7UXIEC1	4.6
N540	5KFS163XAA108	287	$3,387	G4-7UXIEC1	4.6
N541	5KFS203XAA318	805	$6,799	G4-7UXIEC1	4.6
N542	5KFS193XAA208	441	$4,526	G4-7UXIEC1	4.6

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
N543	5KFS192XAA108	441	$4,760	G4-7UXIEC1	4.6
N544	5KFS222XAA308	1155	$8,476	G4-7UXIEC	4.6
N545	5KFS202XAA208	805	$5,551	G4-7UXIEC1	4.6
N546	5KFS202XAA108	805	$5,722	G4-7UXIEC1	4.6
N547	5KFS262XAA308	1590	$10,792	G4-7UXIEC	4.6
N548	5KFS203XAA208	805	$6,324	G4-7UXIEC1	4.6
N549	5KFS202XAA118	805	$6,985	G4-7UXIEC1	4.6
N550	5KFS291XAA308	2201	$14,303	G4-7UXIEC	4.7
N551	5KFS221XAA208	1155	$8,454	G4-7UXIEC	4.7
N552	5KFS221XAA108	1155	$8,736	G4-7UXIEC	4.7
N553	5KFS292XAA308	2201	$14,908	G4-7UXIEC	4.7
N554	5KFS222XAA208	1155	$10,017	G4-7UXIEC	4.7
N555	5KFS222XAA108	115	$10,445	G4-7UXIEC	4.7
N556	5KFS292XAA318	2201	$15,256	G4-7UXIEC	4.7
N557	5KFS262XAA208	1590	$11,796	G4-7UXIEC	4.7
N558	5KFS262XAA108	1590	$12,860	G4-7UXIEC	4.7
N559	5KFS291XAA208	2201	$15,197	G4-7UXIEC	4.7
N560	5KFS292XAA108	2201	$16,434	G4-7UXIEC	4.7
N561	5KFS292XAA208	2201	$17,462	G4-7UXIEC	4.7
N562	5KFS292XAA118	2201	$19,453	G4-7UXIEC	4.7
N563	5KFS903XAA118	51	$1,216	G4-7UXIEC1	4.5
N564	5KFS131XAA308	221	$2,395	G4-7UXIEC1	4.5
N565	5KFS294XAA108	3153	$21,575	G4-7UXIEC	4.7
N566	5KFS295XAA108	3153	$23,888	G4-7UXIEC	4.7
N567	5KFS294XAA208	3153	$19,879	G4-7UXIEC	4.7
N568	5KFS295XAA208	3153	$22,216	G4-7UXIEC	4.7
N569	5KFS295XAA218	3153	$24,198	G4-7UXIEC	4.7
N570	5KFS295XAA228	3153	$26,000	G4-7UXIEC	4.7
N571	5KFS294XAA308	3153	$20,777	G4-7UXIEC	4.7
N572	5KFS294XAA318	3153	$22,841	G4-7UXIEC	4.7
N573	5KFS295XAA308	3153	$25,211	G4-7UXIEC	4.7
N574	5KFS295XAA318	3153	$24,915	G4-7UXIEC	4.7
N575	5KFS903XAA408	51	$1,242	G4-7UXIEC1	4.5
N576	5KFS111XAA408	51	$1,160	G4-7UXIEC1	4.5
N577	5KFS112XAA408	101	$1,456	G4-7UXIEC1	4.5
N578	5KFS131XAA408	221	$1,848	G4-7UXIEC1	4.5
N579	5KFS132XAA408	221	$2,072	G4-7UXIEC1	4.5
N580	5KFS162XAA408	287	$2,729	G4-7UXIEC1	4.5
N581	5KFS162XAA418	287	$2,865	G4-7UXIEC1	4.5
N582	5KFS162XAA428	287	$3,009	G4-7UXIEC1	4.5
N583	5KFS163XAA408	287	$3,401	G4-7UXIEC1	4.6
N584	5KFS192XAA408	441	$4,707	G4-7UXIEC1	4.6
N585	5KFS193XAA408	441	$5,773	G4-7UXIEC1	4.6
N587	5KFS202XAA418	805	$6,577	G4-7UXIEC1	4.6
N588	5KFS203XAA408	805	$8,396	G4-7UXIEC1	4.6
N589	5KFS221XAA408	1155	$8,815	G4-7UXIEC1	4.6
N590	5KFS222XAA408	1155	$12,268	G4-7UXIEC1	4.6
N591	5KFS262XAA408	1590	$13,881	G4-7UXIEC	4.6
N592	5KFS262XAA418	1590	$15,957	G4-7UXIEC	4.7
N593	5KFS291XAA408	2201	$18,160	G4-7UXIEC	4.7
N594	5KFS292XAA408	2201	$19,894	G4-7UXIEC	4.7
N595	5KFS294XAA408	3153	$23,999	G4-7UXIEC	4.7
N596	5KFS295XAA408	3153	$25,990	G4-7UXIEC	4.7
N597	5KFS295XAA418	3153	$28,011	G4-7UXIEC	4.7
PB14A	4001A5202AA-G01	---	$108	G4-7KITS	2.38
PB18A	4001A5202AA-G02	---	$147	G4-7KITS	2.38
PB21A	4001A5202AA-G03	---	$188	G4-7KITS	2.38
PB25A	4001A5202AA-G04	---	$254	G4-7KITS	2.38

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
PB28A	4001A5202AA-G05	---	$336	G4-7KITS	2.38
Q500	5KS509SAA121	4500	$28,336	G4-7U5MV	6.10
Q5000	5KS511SAA2001	5400	$28,668	G4-7U5LV	6.3
Q5001	5KS511SAA2002	5400	$28,168	G4-7U5LV	6.3
Q5002	5KS511SAA2003	5400	$28,668	G4-7U5LV	6.3
Q5003	5KS511SAA375	5700	$32,565	G4-7U5LV	6.3
Q5004	5KS511SAA376	5700	$33,065	G4-7U5LV	6.3
Q5005	5KS511SAA377	5700	$32,565	G4-7U5LV	6.3
Q5006	5KS511SAA378	5700	$33,065	G4-7U5LV	6.3
Q5007	5KS511SAA2004	5700	$30,256	G4-7U5LV	6.3
Q5008	5KS511SAA2005	5700	$30,756	G4-7U5LV	6.3
Q5009	5KS511SAA2006	5700	$30,256	G4-7U5LV	6.3
Q501	5KS511SAA1016	4950	$33,749	G4-7U5MV	6.10
Q5010	5KS511SAA2007	5700	$30,756	G4-7U5LV	6.3
Q5011	5KS513SAA357	6700	$37,901	G4-7U5LV	6.3
Q5013	5KS513SAA359	6700	$37,901	G4-7U5LV	6.3
Q5015	5KS513SAA256	6900	$35,755	G4-7U5LV	6.3
Q5017	5KS513SAA258	6900	$35,755	G4-7U5LV	6.3
Q5019	5KS513SAA361	7150	$40,152	G4-7U5LV	6.3
Q502	5KS511SAA140	4950	$36,588	G4-7U5MV	6.10
Q5021	5KS513SAA363	7150	$40,152	G4-7U5LV	6.3
Q5023	5KS513SAA260	7150	$38,826	G4-7U5LV	6.3
Q5025	5KS513SAA262	7150	$38,826	G4-7U5LV	6.3
Q5027	5KS513SAA365	7150	$43,610	G4-7U5LV	6.3
Q5029	5KS513SAA367	7150	$43,610	G4-7U5LV	6.3
Q503	5KS511SAA141	5300	$40,637	G4-7U5MV	6.10
Q5031	5KS509SAA269	4350	$28,625	G4-7U5MV	6.10
Q5032	5KS509SAA270	4550	$30,692	G4-7U5MV	6.10
Q5033	5KS511SAA2008	5200	$36,802	G4-7U5MV	6.10
Q5034	5KS511SAA2009	5800	$38,616	G4-7U5MV	6.10
Q5035	5KS511SAA2010	5800	$40,522	G4-7U5MV	6.10
Q504	5KS511SAA142	5550	$44,106	G4-7U5MV	6.10
Q5041	5KS513SAA266	7150	$62,120	G4-7U5MV	6.11
Q5043	5KS513SAA268	7150	$64,226	G4-7U5MV	6.11
Q505	5KS513SAA126	6350	$47,559	G4-7U5MV	6.10
Q506	5KS513SAA127	6700	$55,057	G4-7U5MV	6.10
Q507	5KS509SAA234	4350	$28,125	G4-7U5MV	6.10
Q508	5KS509SAA235	4550	$30,192	G4-7U5MV	6.10
Q509	5KS511SAA244	5200	$36,302	G4-7U5MV	6.10
Q510	5KS511SAA245	5800	$38,116	G4-7U5MV	6.10
Q511	5KS511SAA276	5800	$40,022	G4-7U5MV	6.10
Q512	5KS513SAA226	7000	$46,369	G4-7U5MV	6.10
Q513	5KS513SAA227	7150	$53,730	G4-7U5MV	6.10
Q514	5KS509SAA326	4450	$28,693	G4-7U5MV	6.10
Q515	5KS509SAA327	4475	$31,913	G4-7U5MV	6.10
Q516	5KS511SAA338	5400	$36,021	G4-7U5MV	6.10
Q517	5KS511SAA339	5500	$40,554	G4-7U5MV	6.10
Q518	5KS511SAA340	5700	$43,272	G4-7U5MV	6.10
Q519	5KS513SAA326	6600	$47,547	G4-7U5MV	6.10
Q520	5KS513SAA327	7150	$53,559	G4-7U5MV	6.10
Q521	5KS513SAA328	7150	$59,200	G4-7U5MV	6.11
Q527	5KS511SAA143	5400	$23,916	G4-7U5LV	6.2
Q528	5KS511SAA144	5400	$26,137	G4-7U5LV	6.2
Q529	5KS511SAA145	5475	$29,901	G4-7U5LV	6.3
Q530	5KS511SAA146	5750	$31,368	G4-7U5LV	6.3
Q531	5KS513SAA128	6700	$35,963	G4-7U5LV	6.3
Q532	5KS509SAA124	4650	$22,649	G4-7U5LV	6.2
Q533	5KS509SAA125	4650	$22,649	G4-7U5LV	6.2

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
Q534	5KS509SAA335	4450	$28,193	G4-7U5MV	6.10
Q535	5KS509SAA336	4475	$31,413	G4-7U5MV	6.10
Q536	5KS511SAA358	5400	$35,521	G4-7U5MV	6.10
Q537	5KS511SAA359	5500	$40,054	G4-7U5MV	6.10
Q538	5KS511SAA357	5700	$42,772	G4-7U5MV	6.10
Q539	5KS509SAA126	4650	$22,649	G4-7U5LV	6.2
Q540	5KS511SAA176	5400	$23,916	G4-7U5LV	6.2
Q541	5KS511SAA177	5400	$26,137	G4-7U5LV	6.2
Q542	5KS511SAA178	5475	$29,901	G4-7U5LV	6.3
Q543	5KS511SAA179	5750	$31,368	G4-7U5LV	6.3
Q544	5KS513SAA145	6700	$35,963	G4-7U5LV	6.3
Q545	5KS509SAA127	4650	$22,649	G4-7U5LV	6.2
Q546	5KS511SAA185	5400	$23,916	G4-7U5LV	6.2
Q547	5KS511SAA186	5400	$23,916	G4-7U5LV	6.2
Q548	5KS511SAA187	5400	$26,137	G4-7U5LV	6.2
Q549	5KS511SAA188	5400	$26,137	G4-7U5LV	6.2
Q550	5KS509SAA122	4500	$28,336	G4-7U5MV	6.10
Q551	5KS511SAA1015	4950	$33,749	G4-7U5MV	6.10
Q552	5KS511SAA167	4950	$36,588	G4-7U5MV	6.10
Q553	5KS511SAA168	5300	$40,637	G4-7U5MV	6.10
Q554	5KS511SAA169	5550	$44,106	G4-7U5MV	6.10
Q555	5KS513SAA143	6350	$47,559	G4-7U5MV	6.10
Q556	5KS513SAA144	6700	$55,057	G4-7U5MV	6.10
Q557	5KS511SAA189	5475	$29,901	G4-7U5LV	6.3
Q558	5KS511SAA190	5475	$29,901	G4-7U5LV	6.3
Q559	5KS511SAA191	5750	$31,368	G4-7U5LV	6.3
Q560	5KS511SAA192	5750	$31,368	G4-7U5LV	6.3
Q561	5KS513SAA171	6700	$35,963	G4-7U5LV	6.3
Q562	5KS513SAA172	6700	$35,963	G4-7U5LV	6.3
Q563	5KS513SAA173	6900	$39,033	G4-7U5LV	6.3
Q564	5KS513SAA174	6900	$39,033	G4-7U5LV	6.3
Q565	5KS513SAA175	6900	$39,033	G4-7U5LV	6.3
Q566	5KS513SAA176	6900	$39,033	G4-7U5LV	6.3
Q567	5KS513SAA177	6900	$58,440	G4-7U5MV	6.11
Q568	5KS513SAA178	6900	$58,440	G4-7U5MV	6.11
Q569	5KS513SAA179	6900	$61,824	G4-7U5MV	6.11
Q570	5KS513SAA180	6900	$61,824	G4-7U5MV	6.11
Q575	5KS509SAA257	4550	$20,114	G4-7U5LV	6.2
Q576	5KS509SAA258	4550	$20,614	G4-7U5LV	6.2
Q577	5KS509SAA259	4550	$20,114	G4-7U5LV	6.2
Q578	5KS509SAA260	4550	$20,614	G4-7U5LV	6.2
Q579	5KS509SAA346	4650	$22,917	G4-7U5LV	6.2
Q580	5KS509SAA347	4650	$23,417	G4-7U5LV	6.2
Q581	5KS509SAA348	4650	$22,917	G4-7U5LV	6.2
Q582	5KS509SAA349	4650	$23,417	G4-7U5LV	6.2
Q583	5KS509SAA261	4650	$22,885	G4-7U5LV	6.2
Q584	5KS509SAA262	4650	$23,385	G4-7U5LV	6.2
Q585	5KS509SAA263	4650	$22,885	G4-7U5LV	6.2
Q586	5KS509SAA264	4650	$23,385	G4-7U5LV	6.2
Q587	5KS511SAA367	5150	$26,528	G4-7U5LV	6.2
Q588	5KS511SAA368	5150	$27,028	G4-7U5LV	6.2
Q589	5KS511SAA369	5150	$26,528	G4-7U5LV	6.2
Q590	5KS511SAA370	5150	$27,028	G4-7U5LV	6.2
Q591	5KS509SAA265	4750	$25,685	G4-7U5LV	6.2
Q592	5KS509SAA266	4750	$26,185	G4-7U5LV	6.2
Q593	5KS509SAA267	4750	$25,685	G4-7U5LV	6.2
Q594	5KS509SAA268	4750	$26,185	G4-7U5LV	6.2
Q595	5KS511SAA371	5400	$29,278	G4-7U5LV	6.2

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
Q596	5KS511SAA372	5400	$29,778	G4-7U5LV	6.2
Q597	5KS511SAA373	5400	$29,278	G4-7U5LV	6.2
Q598	5KS511SAA374	5400	$29,778	G4-7U5LV	6.2
Q599	5KS511SAA299	5400	$28,168	G4-7U5LV	6.3
Q8000	5KS513XAA232	7000	$54,250	G4-7U5XMV	6.14
Q8002	5KS513XAA328	7150	$59,907	G4-7U5XMV	6.14
Q8100	5KS511XAA156	5400	$27,535	G4-7U5XLV	6.6
Q8101	5KS511XAA158	5400	$29,765	G4-7U5XLV	6.6
Q8102	5KS511XAA160	5475	$33,841	G4-7U5XLV	6.7
Q8103	5KS511XAA162	5750	$35,308	G4-7U5XLV	6.7
Q8104	5KS509XAA261	4650	$26,413	G4-7U5XLV	6.6
Q8105	5KS509XAA262	4750	$28,737	G4-7U5XLV	6.6
Q8106	5KS511XAA253	5400	$31,907	G4-7U5XLV	6.7
Q8107	5KS511XAA254	5700	$34,097	G4-7U5XLV	6.7
Q8108	5KS511XAA367	5150	$27,982	G4-7U5XLV	6.6
Q8109	5KS511XAA364	5150	$30,022	G4-7U5XLV	6.6
Q8110	5KS511XAA365	5400	$32,968	G4-7U5XLV	6.6
Q8111	5KS511XAA366	5700	$36,388	G4-7U5XLV	6.7
Q8120	5KS509XAA130	4650	$26,182	G4-7U5XLV	6.6
Q8121	5KS511XAA155	5400	$27,535	G4-7U5XLV	6.6
Q8122	5KS511XAA157	5400	$29,765	G4-7U5XLV	6.6
Q8123	5KS511XAA159	5475	$33,841	G4-7U5XLV	6.7
Q8124	5KS511XAA161	5750	$35,308	G4-7U5XLV	6.7
Q814	5KS509XAA123	4650	$26,182	G4-7U5XLV	6.6
Q814	5KS509XAA123	4650	$29,847	G4-7U5XLV	6.7
Q815	5KS509XAA124	4650	$26,182	G4-7U5XLV	6.6
Q816	5KS509XAA125	4650	$26,182	G4-7U5XLV	6.6
Q817	5KS511XAA140	5400	$27,535	G4-7U5XLV	6.6
Q818	5KS511XAA141	5400	$27,535	G4-7U5XLV	6.6
Q819	5KS511XAA142	5400	$29,765	G4-7U5XLV	6.6
Q825	5KS511XAA143	5400	$29,765	G4-7U5XLV	6.6
Q826	5KS511XAA144	5475	$33,841	G4-7U5XLV	6.7
Q827	5KS511XAA145	5475	$33,841	G4-7U5XLV	6.7
Q828	5KS511XAA146	5750	$35,308	G4-7U5XLV	6.7
Q829	5KS511XAA147	5750	$35,308	G4-7U5XLV	6.7
Q830	5KS509XAA126	4650	$34,764	G4-7U5XMV	6.14
Q831	5KS509XAA127	4650	$34,764	G4-7U5XMV	6.14
Q832	5KS511XAA175	4950	$41,718	G4-7U5XMV	6.14
Q833	5KS511XAA176	4950	$41,718	G4-7U5XMV	6.14
Q834	5KS511XAA148	4950	$43,711	G4-7U5XMV	6.14
Q835	5KS511XAA149	4950	$43,711	G4-7U5XMV	6.14
Q836	5KS511XAA150	5300	$48,218	G4-7U5XMV	6.14
Q837	5KS511XAA151	5300	$48,218	G4-7U5XMV	6.14
Q838	5KS511XAA152	5550	$51,987	G4-7U5XMV	6.14
Q839	5KS511XAA153	5550	$51,987	G4-7U5XMV	6.14
Q840	5KS513XAA126	6350	$55,440	G4-7U5XMV	6.14
Q841	5KS513XAA127	6350	$55,440	G4-7U5XMV	6.14
Q846	5KS509XAA246	4550	$23,308	G4-7U5XLV	6.6
Q847	5KS509XAA247	4550	$23,808	G4-7U5XLV	6.6
Q848	5KS509XAA248	4550	$23,308	G4-7U5XLV	6.6
Q849	5KS509XAA249	4550	$23,808	G4-7U5XLV	6.6
Q850	5KS511XAA368	5150	$28,482	G4-7U5XLV	6.6
Q851	5KS511XAA369	5150	$27,982	G4-7U5XLV	6.6
Q852	5KS511XAA340	5150	$30,022	G4-7U5XLV	6.6
Q853	5KS511XAA341	5400	$32,968	G4-7U5XLV	6.6
Q854	5KS511XAA342	5700	$36,388	G4-7U5XLV	6.7
Q855	5KS511XAA370	5150	$28,482	G4-7U5XLV	6.6
Q856	5KS509XAA250	4650	$26,913	G4-7U5XLV	6.6

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
Q857	5KS509XAA251	4650	$26,913	G4-7U5XLV	6.6
Q858	5KS511XAA350	5150	$30,522	G4-7U5XLV	6.6
Q859	5KS511XAA351	5150	$30,522	G4-7U5XLV	6.6
Q860	5KS509XAA252	4750	$29,237	G4-7U5XLV	6.6
Q861	5KS509XAA232	4650	$26,413	G4-7U5XLV	6.6
Q862	5KS509XAA236	4750	$28,237	G4-7U5XLV	6.6
Q863	5KS511XAA238	5400	$31,907	G4-7U5XLV	6.7
Q864	5KS511XAA234	5700	$34,097	G4-7U5XLV	6.7
Q865	5KS509XAA253	4750	$29,237	G4-7U5XLV	6.6
Q866	5KS511XAA352	5400	$33,468	G4-7U5XLV	6.6
Q867	5KS511XAA353	5400	$33,468	G4-7U5XLV	6.6
Q868	5KS511XAA243	5400	$32,407	G4-7U5XLV	6.7
Q869	5KS511XAA244	5400	$32,407	G4-7U5XLV	6.7
Q870	5KS511XAA354	5700	$36,888	G4-7U5XLV	6.7
Q871	5KS511XAA355	5700	$36,888	G4-7U5XLV	6.7
Q872	5KS511XAA245	5700	$34,597	G4-7U5XLV	6.7
Q873	5KS511XAA246	5700	$34,597	G4-7U5XLV	6.7
Q874	5KS513XAA322	6700	$41,702	G4-7U5XLV	6.7
Q876	5KS513XAA324	6700	$41,702	G4-7U5XLV	6.7
Q878	5KS509XAA350	4450	$34,452	G4-7U5XMV	6.14
Q879	5KS509XAA351	4450	$34,952	G4-7U5XMV	6.14
Q880	5KS509XAA254	4350	$34,718	G4-7U5XMV	6.14
Q881	5KS509XAA255	4350	$35,218	G4-7U5XMV	6.14
Q882	5KS509XAA352	4475	$37,997	G4-7U5XMV	6.14
Q883	5KS509XAA353	4475	$38,497	G4-7U5XMV	6.14
Q884	5KS509XAA256	4550	$37,142	G4-7U5XMV	6.14
Q885	5KS509XAA257	4550	$37,642	G4-7U5XMV	6.14
Q886	5KS511XAA356	5400	$42,715	G4-7U5XMV	6.14
Q887	5KS511XAA357	5400	$43,215	G4-7U5XMV	6.14
Q888	5KS511XAA247	5200	$44,183	G4-7U5XMV	6.14
Q889	5KS511XAA248	5200	$44,683	G4-7U5XMV	6.14
Q890	5KS511XAA358	5500	$47,935	G4-7U5XMV	6.14
Q891	5KS511XAA359	5500	$48,435	G4-7U5XMV	6.14
Q892	5KS511XAA249	5800	$45,997	G4-7U5XMV	6.14
Q893	5KS511XAA250	5800	$46,497	G4-7U5XMV	6.14
Q894	5KS511XAA360	5700	$50,653	G4-7U5XMV	6.14
Q895	5KS511XAA361	5700	$51,153	G4-7U5XMV	6.14
Q896	5KS511XAA251	5800	$47,903	G4-7U5XMV	6.14
Q897	5KS511XAA252	5800	$48,403	G4-7U5XMV	6.14
Q898	5KS513XAA326	6600	$55,428	G4-7U5XMV	6.14
V3107	5KE213DTT5005A	220	$1,937	G5-7VHSB	7.3
V3108	5KE213DTT5003A	220	$1,792	G5-7VHSB	7.3
V3109	5KE213DTT5002	220	$1,663	G5-7VHSB	7.3
V3139	5KE215DTT5005A	220	$2,070	G5-7VHSB	7.3
V3157	5KE254DTT5005A	340	$2,273	G5-7VHSB	7.3
V3171	5KE256DTT5005A	370	$2,601	G5-7VHSB	7.3
V3178	5KE256DTT7005A	370	$2,655	G5-7VHSB	7.3
V3188	5KE284DTT5005A	507	$2,655	G5-7VHSB	7.3
V3191	5KE284DTT7005A	507	$2,901	G5-7VHSB	7.3
V3197	5KE286DTT5005A	507	$3,525	G5-7VHSB	7.3
V3407	5KE324DTT5002A	790	$4,088	G5-7VHSB	7.3
V3423	5KE326DTT7002A	855	$4,178	G5-7VHSB	7.3
V3428	5KE364DTT5002A	1102	$5,993	G5-7VHSB	7.3
V3435	5KE364DTT7002A	1102	$5,232	G5-7VHSB	7.3
V3450	5KE324DTT5003	760	$4,088	G5-7VHSB	7.3
V3468	5KE444DTT7009A	2075	$11,709	G5-7VHSB	7.3
V3551	5KE326DTT5002A	760	$4,769	G5-7VHSB	7.3
V3553	5KE404DTT7002A	1590	$7,187	G5-7VHSB	7.3

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
V3555	5KE405DTT7002A	1590	$8,600	G5-7VHSB	7.3
V3609	5KE324DTT6013A	760	$3,348	G5-7VHSB	7.3
V3610	5KE324DTT6017A	760	$3,348	G5-7VHSB	7.3
V3611	5KE324DTT6012A	760	$3,348	G5-7VHSB	7.3
V3615	5KE213DTT6015A	220	$1,700	G5-7VHSB	7.3
V3616	5KE213DTT6012A	220	$1,647	G5-7VHSB	7.3
V3620	5KE326DTT6013A	760	$4,115	G5-7VHSB	7.3
V3621	5KE326DTT6017A	760	$4,115	G5-7VHSB	7.3
V3622	5KE326DTT6012A	760	$4,115	G5-7VHSB	7.3
V3629	5KE364DTT6017A	1102	$4,950	G5-7VHSB	7.3
V3630	5KE364DTT6019A	1102	$4,950	G5-7VHSB	7.3
V3640	5KE365DTT6017A	1102	$6,135	G5-7VHSB	7.3
V3641	5KE365DTT6019A	1102	$6,135	G5-7VHSB	7.3
V3643	5KE215DTT6015A	220	$1,937	G5-7VHSB	7.3
V3651	5KE404DTT6012A	1590	$8,223	G5-7VHSB	7.3
V3653	5KE404DTT6013A	1590	$8,223	G5-7VHSB	7.3
V3656	5KE405DTT6012A	1590	$10,676	G5-7VHSB	7.3
V3658	5KE254DTT6015A	340	$2,129	G5-7VHSB	7.3
V3660	5KE254DTT6012A	340	$2,129	G5-7VHSB	7.3
V3664	5KE444DTT6013A	2075	$11,766	G5-7VHSB	7.3
V3666	5KE444DTT6012A	2075	$11,766	G5-7VHSB	7.3
V3670	5KE445DTT6013A	2260	$16,203	G5-7VHSB	7.3
V3674	5KE256DTT6015A	370	$2,513	G5-7VHSB	7.3
V3676	5KE256DTT6012A	370	$2,513	G5-7VHSB	7.3
V3678	5KE447DTT6018A	3000	$19,515	G5-7VHSB	7.3
V3679	5KE449DTT6018A	3500	$23,230	G5-7VHSB	7.3
V3683	5KE445DTT6012A	2260	$16,203	G5-7VHSB	7.3
V3685	---	1590	$7,773	G5-7VHSB	7.3
V3686	---	1590	$10,176	G5-7VHSB	7.3
V3689	5KE284DTT6015A	507	$2,793	G5-7VHSB	7.3
V3690	5KE284DTT6011A	507	$2,793	G5-7VHSB	7.3
V3698	5KE286DTT6015A	507	$3,149	G5-7VHSB	7.3
V3699	5KE286DTT6011A	507	$3,149	G5-7VHSB	7.3
V3908	5KS286DTT6011A	507	$2,785	G5-7VHSB	7.2
V3909	5K324DTT6013A	760	$2,810	G5-7VHSB	7.2
V3920	5K326DTT6013A	760	$3,454	G5-7VHSB	7.2
V3929	5K364DTT6013A	1102	$4,155	G5-7VHSB	7.2
V3930	5KS364DTT6019A	1102	$4,155	G5-7VHSB	7.2
V3940	5K365DTT6013A	1102	$5,151	G5-7VHSB	7.2
V3941	5KS365DTT6019A	1102	$5,151	G5-7VHSB	7.2
V3951	5K404DTT6013A	1590	$6,661	G5-7VHSB	7.2
V3952	5KS404DTT6013A	1590	$6,661	G5-7VHSB	7.2
V3954	5KS405DTT6012A	1735	$8,700	G5-7VHSB	7.2
V3955	5KS444DTT6013A	2075	$10,060	G5-7VHSB	7.2
V3956	5KS445DTT6012A	2260	$13,854	G5-7VHSB	7.2
V768	5KS182XAE5723	76	$1,913	G6-7VIL	7.22
V769	5KS184XAE5724	101	$2,471	G6-7VIL	7.22
V770	5KS213XAE5724	200	$2,926	G6-7VIL	7.22
V771	5KS215XAE5721	220	$3,051	G6-7VIL	7.22
V772	5KS254XAE5722	315	$3,517	G6-7VIL	7.22
V773	5KS256XAE5725	350	$3,825	G6-7VIL	7.22
V774	5KS284XAE5721	460	$4,067	G6-7VIL	7.22
V775	5KS286XAE5722	510	$4,703	G6-7VIL	7.22
V776	5KS324XAE5722	670	$6,867	G6-7VIL	7.22
V777	5KS326XAE5726	680	$8,834	G6-7VIL	7.22
V778	5KS364XAE5721	1000	$10,795	G6-7VIL	7.22
V779	5KS365XAE5723	1010	$13,487	G6-7VIL	7.22
V780	5KS182XAE6722	76	$1,885	G6-7VIL	7.22

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
V781	5KS184XAE5724	101	$2,282	G6-7VIL	7.22
V782	5KS213XAE6722	200	$2,831	G6-7VIL	7.22
V783	5KS215XAE6721	220	$3,177	G6-7VIL	7.22
V784	5KS254XAE6727	315	$3,646	G6-7VIL	7.22
V785	5KS256XAE6721	350	$4,141	G6-7VIL	7.22
V786	5KS284XAE6720	460	$4,619	G6-7VIL	7.22
V787	5KS286XAE6722	510	$5,443	G6-7VIL	7.22
V788	5KS324XAE6720	700	$6,741	G6-7VIL	7.22
V789	5KS326XAE6720	740	$9,109	G6-7VIL	7.22
V790	5KS364XAE6721	1050	$11,269	G6-7VIL	7.22
V791	5KS365XAE6721	1070	$13,724	G6-7VIL	7.22
V792	5KS365XAE5421	1010	$12,138	G6-7VIL	7.23
V793	5KS405XAE5429	1480	$13,120	G6-7VIL	7.23
V794	5KS444XAE5421	1990	$17,045	G6-7VIL	7.23
V795	5KS445XAE5421	1990	$20,455	G6-7VIL	7.23
V796	5KS365XAE6424	1070	$12,351	G6-7VIL	7.23
V797	5KS405XAE6431	1540	$13,514	G6-7VIL	7.23
V798	5KS444XAE6427	2050	$17,557	G6-7VIL	7.23
V799	5KS445XAE6427	2020	$21,068	G6-7VIL	7.23
V850	5KS449DAE6020	2980	$27,759	G5-7VHSB	7.8
V851	5KS449DAE6021	2980	$31,533	G5-7VHSB	7.8
V852	5KS509DAE6020	3570	$41,106	G5-7VHSB	7.8
V853	5KS184XAE5422	101	$2,347	G6-7VIL	7.23
V854	5KS182XAE5420	76	$1,818	G6-7VIL	7.23
V855	5KS213XAE5422	200	$2,779	G6-7VIL	7.23
V856	5KS215XAE5421	220	$2,899	G6-7VIL	7.23
V857	5KS254XAE5424	315	$3,341	G6-7VIL	7.23
V858	5KS256XAE5420	350	$3,634	G6-7VIL	7.23
V859	5KS284XAE5425	460	$3,864	G6-7VIL	7.23
V860	5KS286XAE5423	510	$4,467	G6-7VIL	7.23
V861	5KS286XAE6429	510	$5,170	G6-7VIL	7.23
V862	5KS284XAE6421	460	$4,388	G6-7VIL	7.23
V863	5KS256XAE6422	350	$3,933	G6-7VIL	7.23
V864	5KS254XAE6422	315	$3,464	G6-7VIL	7.23
V865	5KS215XAE6422	220	$3,018	G6-7VIL	7.23
V866	5KS213XAE6423	200	$2,690	G6-7VIL	7.23
V867	5KS184XAE6421	101	$2,168	G6-7VIL	7.23
V868	5KS182XAE6421	76	$1,791	G6-7VIL	7.23
V869	5KS444XAE6721	1990	$19,508	G6-7VIL	7.22
V870	5KS445XAE6720	2020	$23,409	G6-7VIL	7.22
V871	5KS405XAE6720	1540	$15,016	G6-7VIL	7.22
V872	5KS405XAE5721	1480	$14,578	G6-7VIL	7.22
V873	5KS324XAE5422	680	$6,523	G6-7VIL	7.23
V874	5KS364XAE5424	1010	$9,716	G6-7VIL	7.23
V875	5KS326XAE5424	680	$8,392	G6-7VIL	7.23
V876	5KS444XAE5720	1990	$18,939	G6-7VIL	7.22
V877	5KS445XAE5720	1990	$22,727	G6-7VIL	7.22
V878	5KS364XAE6427	1050	$10,142	G6-7VIL	7.23
V879	5KS324XAE6421	700	$6,404	G6-7VIL	7.23
V880	5KS326XAE6422	740	$8,654	G6-7VIL	7.23
V881	5KS324DAE6022	700	$4,203	G5-7VHSB	7.8
V882	5KS326DAE6024	740	$5,047	G5-7VHSB	7.8
V883	5KS364DAE6029	980	$6,162	G5-7VHSB	7.8
V884	5KS365DAE6025A	1060	$7,233	G5-7VHSB	7.8
V885	5KS404DAE6021	1560	$9,475	G5-7VHSB	7.8
V886	5KS405DAE6024	1590	$11,570	G5-7VHSB	7.8
V887	5KS444DAE6023	2050	$14,095	G5-7VHSB	7.8
V888	5KS447DAE6029	1890	$18,197	G5-7VHSB	7.8
V889	5KS447DAE6028	2580	$22,998	G5-7VHSB	7.8
V890	5KS449DAE6030	2610	$26,694	G5-7VHSB	7.8
V891	5KS213DAE6038	172	$2,322	G5-7VHSB	7.8
V892	5KS213DAE6039	172	$2,408	G5-7VHSB	7.8
V893	5KS215DAE6026	206	$2,452	G5-7VHSB	7.8
V894	5KS254DAE6030	280	$2,478	G5-7VHSB	7.8
V895	5KS256DAE6030	315	$2,777	G5-7VHSB	7.8
V896	5KS284DAE6032A	420	$3,193	G5-7VHSB	7.8
V897	5KS286DAE6032A	470	$3,607	G5-7VHSB	7.8
V898	5KS184SAE5020	200	$2,395	G6-7VHSB	7.13
V899	5KS184SAE6021	200	$2,326	G5-7VHSB	7.13
V900	5KS213SAE5028	200	$2,434	G5-7VHSB	7.13
V901	5KS213SAE6031	200	$2,345	G5-7VHSB	7.13
V902	5KS215SAE5023	220	$2,637	G5-7VHSB	7.13
V903	5KS215SAE6025	220	$2,545	G5-7VHSB	7.13
V904	5KS254SAE5026	315	$2,957	G5-7VHSB	7.13
V905	5KS254SAE6033	315	$3,589	G5-7VHSB	7.13
V906	5KS256SAE6037	350	$3,955	G5-7VHSB	7.13
V907	5KS284SAE6033	460	$4573	G5-7VHSB	7.13
V908	5KS286SAE6032	510	$4,994	G5-7VHSB	7.13
V909	5KS324SAE6031	700	$6,667	G5-7VHSB	7.13
V910	5KS326SAE6042	740	$7,617	G5-7VHSB	7.13
V911	5KS364SAE6034	1050	$9,692	G5-7VHSB	7.13
V912	5KS365SAE6035	1050	$11,587	G5-7VHSB	7.13
V913	5KS405SAE6027	1560	$15,175	G5-7VHSB	7.13
V914	5KS444SAE6031	2050	$21334	G5-7VHSB	7.13
V915	5KS445SAE6033	2010	$24,941	G5-7VHSB	7.13
V916	5KS447SAE6033	2800	$33,201	G5-7VHSB	7.13
V951	---	2630	$35,733	G5-7VHSB	7.8
V952	---	3620	$44,453	G5-7VHSB	7.8
V953	---	4380	$49,953	G5-7VHSB	7.8
V960	5KS182SAE123	76	$1,198	G6-7VIL	7.18
V961	5KS184SAE120	101	$1,378	G6-7VIL	7.18
V962	5KS213SAE133	200	$1,692	G6-7VIL	7.18
V963	5KS215SAE184	220	$1,842	G6-7VIL	7.18
V964	5KS254SAE126	315	$2,405	G6-7VIL	7.18
V965	5KS256SAE129	350	$2,632	G6-7VIL	7.18
V966	5KS284SAE129	460	$3,007	G6-7VIL	7.18
V967	5KS286SAE131	510	$3,320	G6-7VIL	7.18
V968	5KS324SAE134	640	$4,836	G6-7VIL	7.18
V969	5KS326SAE123	680	$5,575	G6-7VIL	7.18
V970	5KS364SAE152	1020	$6,898	G6-7VIL	7.18
V971	5KS365SAE137	1020	$8,223	G6-7VIL	7.18
V980	5KS182SAE226	76	$1,100	G6-7VIL	7.18
V981	5KS184SAE228	101	$1,273	G6-7VIL	7.18
V982	5KS213SAE230	200	$1,625	G6-7VIL	7.18
V983	5KS215SAE226	220	$1,829	G6-7VIL	7.18
V984	5KS254SAE225	315	$2,337	G6-7VIL	7.18
V985	5KS256SAE225	350	$2,665	G6-7VIL	7.18
V986	5KS284SAE222	460	$2,856	G6-7VIL	7.18
V987	5KS286SAE222	510	$3,256	G6-7VIL	7.18
V988	5KS324SAE226	700	$4,702	G6-7VIL	7.18
V989	5KS326SAE222	740	$5,575	G6-7VIL	7.18
V990	5KS364SAE222	1050	$6,819	G6-7VIL	7.18
V991	5KS365SAE223	1050	$7,929	G6-7VIL	7.18
Y8284	249A9510AAG1	---	$110	G5-7KITS	7.6
Y8290	249A9510AAG7	---	$107	G5-7KITS	7.6
Y8291	249A9510AAG8	---	$107	G5-7KITS	7.6

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
Y8292	249A9510AAG9	---	$107	G5-7KITS	7.6
Y8295	249A9510AAG12	---	$135	G5-7KITS	7.6
Y8296	249A9510AAG13	---	$135	G5-7KITS	7.6
Y8297	249A9510AAG14	---	$135	G5-7KITS	7.6
Y8298	249A9510AAG15	---	$135	G5-7KITS	7.6
Y8301	249A9510AAG17	---	$135	G5-7KITS	7.6
Y8302	249A9510AAG18	---	$135	G5-7KITS	7.6
Y8303	249A9510AAG19	---	$135	G5-7KITS	7.6
Y8304	249A9510AAG20	---	$135	G5-7KITS	7.6
Y8305	249A9510AAG21	---	$135	G5-7KITS	7.6
Y8307	249A9510AAG23	---	$135	G5-7KITS	7.6
Y8308	249A9510AAG24	---	$141	G5-7KITS	7.6
Y8309	249A9510AAG25	---	$141	G5-7KITS	7.6
Y8310	249A9510AAG26	---	$141	G5-7KITS	7.6
Y8311	249A9510AAG27	---	$141	G5-7KITS	7.6
Y8312	249A9510AAG28	---	$141	G5-7KITS	7.6
Y8342	192B9950AY-G06	---	$732	G5-7KITS	7.11
Y8343	192B9950AY-G05	---	$732	G5-7KITS	7.11
Y8344	192B9950AY-G04	---	$732	G5-7KITS	7.11
Y8345	192B9950BC-G05	---	$732	G5-7KITS	7.11
Y8346	192B9950BC-G04	---	$732	G5-7KITS	7.11
Y8347	192B9950BC-G03	---	$732	G5-7KITS	7.11
Y8348	192B9950BJ-G06	---	$845	G5-7KITS	7.11
Y8349	192B9950BJ-G05	---	$845	G5-7KITS	7.11
Y8350	192B9950BJ-G03	---	$845	G5-7KITS	7.11
Y8351	192B9950BJ-G02	---	$845	G5-7KITS	7.11
Y8352	4002B5521AA-G01	---	$218	G5-7KITS	7.11
Y8353	4002B5525AA-G03	---	$229	G5-7KITS	7.11
Y8354	4002B5525AA-G02	---	$229	G5-7KITS	7.11
Y8355	4002B5525AA-G01	---	$229	G5-7KITS	7.11
Y8356	192B9950BC-G06	---	$732	G5-7KITS	7.11
Y8357	192B9950AY-G03	---	$732	G5-7KITS	7.11
Y8358	192B9950AY-G01	---	$732	G5-7KITS	7.11
Y8360	249A9510AAG29	---	$141	G5-7KITS	7.6
Y8384	249A9510AAG42	---	$236	G5-7KITS	7.6
Y8385	249A9510AAG41	---	$236	G5-7KITS	7.6
Y8387	249A9510AAG39	---	$236	G5-7KITS	7.6
Y8391	249A9510AAG35	---	$236	G5-7KITS	7.6
Y8392	249A9510AAG34	---	$236	G5-7KITS	7.6
Y8400	4002B5521AC-G01	---	$265	G5-7KITS	7.16
Y8401	4002B5528AC-G03	---	$324	G5-7KITS	7.16
Y8402	4002B5528AC-G02	---	$324	G5-7KITS	7.16
Y8403	4002B5528AC-G01	---	$324	G5-7KITS	7.16
Y8404	192B9950BA-G06	---	$732	G5-7KITS	7.16
Y8405	192B9950BA-G05	---	$732	G5-7KITS	7.16
Y8406	192B9950BA-G04	---	$732	G5-7KITS	7.16
Y8407	192B9950BE-G05	---	$845	G5-7KITS	7.16
Y8408	192B9950BE-G04	---	$845	G5-7KITS	7.16
Y8409	192B9950BE-G03	---	$845	G5-7KITS	7.16
Y8410	192B9950BG-G12	---	$1,125	G5-7KITS	7.16
Y8411	192B9950BG-G09	---	$1,125	G5-7KITS	7.16
Y8412	192B9950BG-G06	---	$1,125	G5-7KITS	7.16
Y8413	192B9950BG-G02	---	$1,125	G5-7KITS	7.16
Y8414	401A5521AA-G01	---	$120	G5-7KITS	7.16
Y8415	401A5525AA-G03	---	$120	G5-7KITS	7.16
Y8416	401A5525AA-G02	---	$120	G5-7KITS	7.16
Y8417	401A5525AA-G01	---	$120	G5-7KITS	7.16
Y8418	401A5528AA-G03	---	$120	G5-7KITS	7.16
Y8419	401A5528AA-G02	---	$120	G5-7KITS	7.16
Y8420	401A5528AA-G01	---	$120	G5-7KITS	7.16
Y8421	249A4245AD-G04	---	$140	G5-7KITS	7.16
Y8422	249A4245AD-G03	---	$140	G5-7KITS	7.16
Y8423	249A4245AD-G02	---	$140	G5-7KITS	7.16
Y8424	249A4245AD-G01	---	$140	G5-7KITS	7.16
Y8425	249A4245AE-G04	---	$180	G5-7KITS	7.16
Y8426	249A4245AE-G03	---	$180	G5-7KITS	7.16
Y8427	249A4245BG-G01	---	$260	G5-7KITS	7.16
Y8428	249A4245BG-G02	---	$260	G5-7KITS	7.16
Y8429	249A4245BG-G05	---	$260	G5-7KITS	7.16
Y8430	249A4245BG-G09	---	$260	G5-7KITS	7.16
Y8431	192B9950BE-G06	---	$845	G5-7KITS	7.16
Y8432	192B9950BN-G12	---	$1,650	G5-7KITS	7.11
Y8435	192B9950BL-G12	---	$1,125	G5-7KITS	7.11
Y8436	192B9950BN-G11	---	$1,650	G5-7KITS	7.11
Y8439	192B9950BL-G11	---	$1,125	G5-7KITS	7.11
Y8440	192B9950BL-G13	---	$1,125	G5-7KITS	7.11
Y8442	192B9950BL-G09	---	$1,125	G5-7KITS	7.11
Y8443	192B9950BN-G09	---	$1,650	G5-7KITS	7.11
Y8445	192B9950BN-G08	---	$1,650	G5-7KITS	7.11
Y8448	192B9950BL-G05	---	$1,125	G5-7KITS	7.11
Y8449	192B9950BN-G07	---	$1,650	G5-7KITS	7.11
Y8450	192B9950BN-G06	---	$1,650	G5-7KITS	7.11
Y8452	192B9950BN-G05	---	$1,650	G5-7KITS	7.11
Y8454	249A9516AA2	---	$218	G5-7KITS	7.5
Y8456	192B9950BN-G04	---	$1,650	G5-7KITS	7.11
Y8457	249A9516AA4	---	$229	G5-7KITS	7.5
Y8458	249A9516AA5	---	$229	G5-7KITS	7.5
Y8459	249A9516AA6	---	$229	G5-7KITS	7.5
Y8461	192B9950BN-G03	---	$1,650	G5-7KITS	7.11
Y8462	249A9516AA8	---	$234	G5-7KITS	7.5
Y8463	249A9516AA9	---	$234	G5-7KITS	7.5
Y8464	249A9516AA10	---	$234	G5-7KITS	7.5
Y8465	192B9950BN-G02	---	$1,650	G5-7KITS	7.11
Y8466	192B9950BN-G01	---	$1,650	G5-7KITS	7.11
Y8467	192B9950BN-G10	---	$1,650	G5-7KITS	7.11
Y8513	249A9516AA1	---	$218	G5-7KITS	7.5
Y8514	249A9516AA3	---	$229	G5-7KITS	7.5
Y8515	249A9516AA7	---	$234	G5-7KITS	7.5
Y8520	249A9516AB2	---	$732	G5-7KITS	7.5
Y8521	249A9516AB3	---	$732	G5-7KITS	7.5
Y8522	249A9516AB4	---	$732	G5-7KITS	7.5
Y8523	249A9516AB5	---	$732	G5-7KITS	7.5
Y8524	249A9516AB6	---	$732	G5-7KITS	7.5
Y8525	249A9516AB7	---	$732	G5-7KITS	7.5
Y8526	249A9516AB011	---	$732	G5-7KITS	7.5
Y8527	249A9516AB9	---	$845	G5-7KITS	7.5
Y8528	249A9516AB10	---	$845	G5-7KITS	7.5
Y8529	249A9516AB11	---	$845	G5-7KITS	7.5
Y8530	249A9516AB12	---	$845	G5-7KITS	7.5
Y8531	249A9516AB13	---	$845	G5-7KITS	7.5
Y8532	249A9516AB14	---	$845	G5-7KITS	7.5
Y8533	249A9516AB8	---	$845	G5-7KITS	7.5
Y8534	249A9516AB16	---	$900	G5-7KITS	7.5
Y8537	249A9516AB17	---	$900	G5-7KITS	7.5
Y8538	249A9516AB18	---	$900	G5-7KITS	7.5
Y8539	249A9516AB19	---	$900	G5-7KITS	7.5

Cross Reference Guide

Catalog to Model Number (cont.)

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number
Y8540	249A9516AB20	---	$900	G5-7KITS	7.5
Y8541	249A9516AB15	---	$900	G5-7KITS	7.5
Y8563	249A9516AB22	---	$1,125	G5-7KITS	7.5
Y8564	249A9516AB23	---	$1,125	G5-7KITS	7.5
Y8566	249A9516AB24	---	$1,125	G5-7KITS	7.5
Y8570	249A9516AB25	---	$1,125	G5-7KITS	7.5
Y8571	249A9516AB26	---	$1,125	G5-7KITS	7.5
Y8575	249A9516AB21	---	$1,125	G5-7KITS	7.5
---	5BC42AB2177C	30	$5,526	GO-7PTC	8.7
---	5BC42AB2195C	30	$5,641	GO-7PTC	8.7
---	5BC42AB1834F	25	$6,078	GO-7PTC	8.7
---	5BC46AB1581C	36	$8,185	GO-7PTC	8.7
---	5BC46AB1571C	36	$8,289	GO-7PTC	8.7
---	5BC46AB2014B	41	$8,711	GO-7PTC	8.7

Cat. No.	Model	Wt. (lbs)	List Price	Price Symbol	Page Number

Cross Reference Guide

Model to Catalog Number

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
153B1004AC-G120	A337	---	$134	G4-7KITS	2.40
153B1069AA-G01	A234	---	$167	G4-7KITS	2.39
153B1069AA-G01	A234	---	$167	G4-7KITS	3.7
153B1069AA-G02	A235	---	$167	G4-7KITS	2.39
153B1069AA-G02	A235	---	$167	G4-7KITS	3.7
153B1069AA-G03	A236	---	$167	G4-7KITS	2.39
153B1069AA-G03	A236	---	$167	G4-7KITS	3.7
153B1069AN-G01	A237	---	$282	G4-7KITS	2.39
153B1069AN-G01	A237	---	$282	G4-7KITS	3.7
153B1069AN-G02	A241	---	$305	G4-7KITS	2.39
153B1069AN-G02	A241	---	$305	G4-7KITS	3.7
153B1069AN-G03	A240	---	$282	G4-7KITS	2.39
153B1069AN-G03	A240	---	$282	G4-7KITS	3.7
153B1069AN-G04	A244	---	$305	G4-7KITS	2.39
153B1069AN-G04	A244	---	$305	G4-7KITS	3.7
153B1069AN-G05	A238	---	$282	G4-7KITS	2.39
153B1069AN-G05	A238	---	$282	G4-7KITS	3.7
153B1069AN-G06	A242	---	$305	G4-7KITS	2.39
153B1069AN-G06	A242	---	$305	G4-7KITS	3.7
153B1073BD-G02	A239	---	$161	G4-7KITS	2.39
153B1073BD-G02	A239	---	$161	G4-7KITS	3.7
153B1073BE-G01	A233	---	$161	G4-7KITS	2.39
153B1073BE-G01	A233	---	$161	G4-7KITS	3.7
153B4404CS2	A150	---	$863	G4-7KITS	3.8
153B4404CS3	A151	---	$863	G4-7KITS	3.8
153B4404CS4	A152	---	$863	G4-7KITS	3.8
153B4404CS5	A153	---	$863	G4-7KITS	3.8
153B4404CT13	A158	---	$3,450	G4-7KITS	3.8
153B4404CT14	A159	---	$3,450	G4-7KITS	3.8
153B4404CT15	A160	---	$3,450	G4-7KITS	3.8
153B4404CT16	A161	---	$3,450	G4-7KITS	3.8
153B4404CT17	A162	---	$5,250	G4-7KITS	3.8
153B4404CT18	A163	---	$5,250	G4-7KITS	3.8
153B4404CT19	A164	---	$5,250	G4-7KITS	3.8
153B4404CT20	A165	---	$5,250	G4-7KITS	3.8
153B4404CW1	A154	---	$1,088	G4-7KITS	3.8
153B4404CW2	A155	---	$1,088	G4-7KITS	3.8
153B4404CW3	A156	---	$1,088	G4-7KITS	3.8
153B4404CW4	A157	---	$1,088	G4-7KITS	3.8
153B4404DA1	A172	---	$1,125	G4-7KITS	3.8
153B4404DA2	A173	---	$1,125	G4-7KITS	3.8
153B4404DA3	A174	---	$1,950	G4-7KITS	3.8
153B4404DA4	A175	---	$1,950	G4-7KITS	3.8
153B4404DB1	A170	---	$825	G4-7KITS	3.8
153B4404DB2	A171	---	$825	G4-7KITS	3.8
153B4404DC1	A180	---	$2,513	G4-7KITS	3.8
153B4404DC2	A181	---	$2,625	G4-7KITS	3.8
153B4404DC3	A182	---	$3,150	G4-7KITS	3.8
153B4404DC4	A183	---	$3,300	G4-7KITS	3.8
153B4404DD1	A176	---	$1,500	G4-7KITS	3.8
153B4404DD2	A177	---	$1,500	G4-7KITS	3.8
153B4404DD3	A178	---	$2,475	G4-7KITS	3.8
153B4404DD4	A179	---	$2,475	G4-7KITS	3.8
192B9950AY-G01	Y8358	---	$732	G5-7KITS	7.11
192B9950AY-G03	Y8357	---	$732	G5-7KITS	7.11
192B9950AY-G04	Y8344	---	$732	G5-7KITS	7.11
192B9950AY-G05	Y8343	---	$732	G5-7KITS	7.11
192B9950AY-G06	Y8342	---	$732	G5-7KITS	7.11

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
192B9950BA-G04	Y8406	---	$732	G5-7KITS	7.16
192B9950BA-G05	Y8405	---	$732	G5-7KITS	7.16
192B9950BA-G06	Y8404	---	$732	G5-7KITS	7.16
192B9950BC-G03	Y8347	---	$732	G5-7KITS	7.11
192B9950BC-G04	Y8346	---	$732	G5-7KITS	7.11
192B9950BC-G05	Y8345	---	$732	G5-7KITS	7.11
192B9950BC-G06	Y8356	---	$732	G5-7KITS	7.11
192B9950BE-G03	Y8409	---	$845	G5-7KITS	7.16
192B9950BE-G04	Y8408	---	$845	G5-7KITS	7.16
192B9950BE-G05	Y8407	---	$845	G5-7KITS	7.16
192B9950BE-G06	Y8431	---	$845	G5-7KITS	7.16
192B9950BG-G02	Y8413	---	$1,125	G5-7KITS	7.16
192B9950BG-G06	Y8412	---	$1,125	G5-7KITS	7.16
192B9950BG-G09	Y8411	---	$1,125	G5-7KITS	7.16
192B9950BG-G12	Y8410	---	$1,125	G5-7KITS	7.16
192B9950BJ-G02	Y8351	---	$845	G5-7KITS	7.11
192B9950BJ-G03	Y8350	---	$845	G5-7KITS	7.11
192B9950BJ-G05	Y8349	---	$845	G5-7KITS	7.11
192B9950BJ-G06	Y8348	---	$845	G5-7KITS	7.11
192B9950BL-G05	Y8448	---	$1,125	G5-7KITS	7.11
192B9950BL-G09	Y8442	---	$1,125	G5-7KITS	7.11
192B9950BL-G11	Y8439	---	$1,125	G5-7KITS	7.11
192B9950BL-G12	Y8435	---	$1,125	G5-7KITS	7.11
192B9950BL-G13	Y8440	---	$1,125	G5-7KITS	7.11
192B9950BN-G01	Y8466	---	$1,650	G5-7KITS	7.11
192B9950BN-G02	Y8465	---	$1,650	G5-7KITS	7.11
192B9950BN-G03	Y8461	---	$1,650	G5-7KITS	7.11
192B9950BN-G04	Y8456	---	$1,650	G5-7KITS	7.11
192B9950BN-G05	Y8452	---	$1,650	G5-7KITS	7.11
192B9950BN-G06	Y8450	---	$1,650	G5-7KITS	7.11
192B9950BN-G07	Y8449	---	$1,650	G5-7KITS	7.11
192B9950BN-G08	Y8445	---	$1,650	G5-7KITS	7.11
192B9950BN-G09	Y8443	---	$1,650	G5-7KITS	7.11
192B9950BN-G10	Y8467	---	$1,650	G5-7KITS	7.11
192B9950BN-G11	Y8436	---	$1,650	G5-7KITS	7.11
192B9950BN-G12	Y8432	---	$1,650	G5-7KITS	7.11
235A2321AB1	A125	---	$135	G4-7KITS	1.26
235A2321AB1	A125	---	$135	G4-7KITS	2.41
235A2321AB10	A134	---	$300	G4-7KITS	1.26
235A2321AB10	A134	---	$300	G4-7KITS	2.41
235A2321AB11	A135	---	$390	G4-7KITS	1.26
235A2321AB11	A135	---	$390	G4-7KITS	2.41
235A2321AB12	A136	---	$390	G4-7KITS	1.26
235A2321AB12	A136	---	$390	G4-7KITS	2.41
235A2321AB13	A137	---	$495	G4-7KITS	1.26
235A2321AB13	A137	---	$495	G4-7KITS	2.41
235A2321AB14	A138	---	$495	G4-7KITS	1.26
235A2321AB14	A138	---	$495	G4-7KITS	2.41
235A2321AB15	A139	---	$720	G4-7KITS	1.26
235A2321AB15	A139	---	$720	G4-7KITS	2.41
235A2321AB16	A140	---	$720	G4-7KITS	1.26
235A2321AB16	A140	---	$720	G4-7KITS	2.41
235A2321AB17	A141	---	$900	G4-7KITS	1.26
235A2321AB17	A141	---	$900	G4-7KITS	2.41
235A2321AB18	A142	---	$900	G4-7KITS	1.26
235A2321AB18	A142	---	$900	G4-7KITS	2.41
235A2321AB2	A126	---	$135	G4-7KITS	1.26
235A2321AB2	A126	---	$135	G4-7KITS	2.41

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
235A2321AB3	A127	---	$150	G4-7KITS	1.26
235A2321AB3	A127	---	$150	G4-7KITS	2.41
235A2321AB4	A128	---	$150	G4-7KITS	1.26
235A2321AB4	A128	---	$150	G4-7KITS	2.41
235A2321AB5	A129	---	$188	G4-7KITS	1.26
235A2321AB5	A129	---	$188	G4-7KITS	2.41
235A2321AB6	A130	---	$188	G4-7KITS	1.26
235A2321AB6	A130	---	$188	G4-7KITS	2.41
235A2321AB7	A131	---	$263	G4-7KITS	1.26
235A2321AB7	A131	---	$263	G4-7KITS	2.41
235A2321AB8	A132	---	$263	G4-7KITS	1.26
235A2321AB8	A132	---	$263	G4-7KITS	2.41
235A2321AB9	A133	---	$300	G4-7KITS	1.26
235A2321AB9	A133	---	$300	G4-7KITS	2.41
235A4575GE1	A826	---	$504	G4-7KITS	2.39
235A4575GE1	A826	---	$504	G4-7KITS	3.7
235A4575GE3	A828	---	$588	G4-7KITS	2.39
235A4575GE3	A828	---	$588	G4-7KITS	3.7
235A4575GE5	A829	---	$588	G4-7KITS	2.39
235A4575GE5	A830	---	$689	G4-7KITS	2.39
235A4575GE5	A830	---	$689	G4-7KITS	3.7
235A4575GE6	A831	---	$689	G4-7KITS	2.39
235A4575GE7	A832	---	$824	G4-7KITS	2.39
235A4575GE7	A832	---	$824	G4-7KITS	3.7
235A4575GE8	A833	---	$824	G4-7KITS	2.39
235A4575GS1	A1007	---	$504	G4-7KITS	2.39
235A4753BF1	A284	---	$509	G4-7KITS	2.40
235A4753BF2	A285	---	$509	G4-7KITS	2.40
235A4753BF4	A286	---	$509	G4-7KITS	2.40
235A4753BG1	A287	---	$608	G4-7KITS	2.40
235A4753BG2	A288	---	$608	G4-7KITS	2.40
235A4753BG3	A289	---	$608	G4-7KITS	2.40
235A4753BH1	A290	---	$608	G4-7KITS	2.40
235A4753BH2	A291	---	$608	G4-7KITS	2.40
235A4753BH3	A292	---	$608	G4-7KITS	2.40
235A4753BJ1	A293	---	$720	G4-7KITS	2.40
235A4753BJ2	A294	---	$720	G4-7KITS	2.40
235A4753BJ3	A295	---	$720	G4-7KITS	2.40
235A4753BK1	A296	---	$825	G4-7KITS	2.40
235A4753BK2	A297	---	$825	G4-7KITS	2.40
235A4753BK3	A298	---	$825	G4-7KITS	2.40
249A4234AA-G03	A344	---	$102	G4-7KITS	2.39
249A4234AA-G07	A346	---	$102	G4-7KITS	2.39
249A4234AA-G20	A343	---	$102	G4-7KITS	2.39
249A4234AA-G21	A345	---	$102	G4-7KITS	2.39
249A4245AD-G01	Y8424	---	$140	G5-7KITS	7.16
249A4245AD-G02	Y8423	---	$140	G5-7KITS	7.16
249A4245AD-G03	Y8422	---	$140	G5-7KITS	7.16
249A4245AD-G04	Y8421	---	$140	G5-7KITS	7.16
249A4245AE-G03	Y8426	---	$180	G5-7KITS	7.16
249A4245AE-G04	Y8425	---	$180	G5-7KITS	7.16
249A4245BG-G01	Y8427	---	$260	G5-7KITS	7.16
249A4245BG-G02	Y8428	---	$260	G5-7KITS	7.16
249A4245BG-G05	Y8429	---	$260	G5-7KITS	7.16
249A4245BG-G09	Y8430	---	$260	G5-7KITS	7.16
249A4267AD-G01	A1201	---	$158	G4-7KITS	2.38
249A4267AD-G01	A1201	---	$158	G4-7KITS	4.29
249A4267AD-G02	A1202	---	$165	G4-7KITS	2.38
249A4267AD-G02	A1202	---	$165	G4-7KITS	4.29
249A4267AD-G03	A1203	---	$188	G4-7KITS	2.38
249A4267AD-G03	A1203	---	$188	G4-7KITS	4.29
249A4267AD-G04	A1204	---	$204	G4-7KITS	2.38
249A4267AD-G04	A1204	---	$204	G4-7KITS	4.29
249A4267AD-G05	A1205	---	$233	G4-7KITS	2.38
249A4267AD-G05	A1205	---	$233	G4-7KITS	4.29
249A4267AD-G06	A1206	---	$260	G4-7KITS	2.38
249A4267AD-G06	A1206	---	$260	G4-7KITS	4.29
249A4321AMG01	A761	---	$392	G4-7KITS	2.38
249A4321AMG01	A761	---	$392	G4-7KITS	3.7
249A4321AMG02	A762	---	$392	G4-7KITS	2.38
249A4321AMG03	A763	---	$842	G4-7KITS	1.25
249A4321AMG03	A763	---	$842	G4-7KITS	2.38
249A4321AMG03	A763	---	$842	G4-7KITS	3.7
249A4321AMG04	A764	---	$842	G4-7KITS	1.25
249A4321AMG04	A764	---	$842	G4-7KITS	2.38
249A4321AMG05	A765	---	$885	G4-7KITS	1.25
249A4321AMG05	A765	---	$885	G4-7KITS	2.38
249A4321AMG05	A765	---	$885	G4-7KITS	3.7
249A4321AMG06	A766	---	$885	G4-7KITS	1.25
249A4321AMG06	A766	---	$885	G4-7KITS	2.38
249A4321AMG07	A767	---	$2,112	G4-7KITS	1.25
249A4321AMG07	A767	---	$2,112	G4-7KITS	2.38
249A4321AMG07	A767	---	$2,112	G4-7KITS	3.7
249A4321AMG08	A768	---	$2,112	G4-7KITS	1.25
249A4321AMG08	A768	---	$2,112	G4-7KITS	2.38
249A4321ARG01	A991	---	$912	G4-7KITS	2.38
249A4321ARG02	A992	---	$912	G4-7KITS	2.38
249A4321ARG05	A995	---	$2,100	G4-7KITS	2.38
249A4321ARG06	A996	---	$2,100	G4-7KITS	2.38
249A4321ARG07	A997	---	$2,186	G4-7KITS	2.38
249A4321ARG08	A998	---	$2,519	G4-7KITS	2.38
249A9510AAG1	Y8284	---	$110	G5-7KITS	7.6
249A9510AAG12	Y8295	---	$135	G5-7KITS	7.6
249A9510AAG13	Y8296	---	$135	G5-7KITS	7.6
249A9510AAG14	Y8297	---	$135	G5-7KITS	7.6
249A9510AAG15	Y8298	---	$135	G5-7KITS	7.6
249A9510AAG17	Y8301	---	$135	G5-7KITS	7.6
249A9510AAG18	Y8302	---	$135	G5-7KITS	7.6
249A9510AAG19	Y8303	---	$135	G5-7KITS	7.6
249A9510AAG20	Y8304	---	$135	G5-7KITS	7.6
249A9510AAG21	Y8305	---	$135	G5-7KITS	7.6
249A9510AAG23	Y8307	---	$135	G5-7KITS	7.6
249A9510AAG24	Y8308	---	$141	G5-7KITS	7.6
249A9510AAG25	Y8309	---	$141	G5-7KITS	7.6
249A9510AAG26	Y8310	---	$141	G5-7KITS	7.6
249A9510AAG27	Y8311	---	$141	G5-7KITS	7.6
249A9510AAG28	Y8312	---	$141	G5-7KITS	7.6
249A9510AAG29	Y8360	---	$141	G5-7KITS	7.6
249A9510AAG34	Y8392	---	$236	G5-7KITS	7.6
249A9510AAG35	Y8391	---	$236	G5-7KITS	7.6
249A9510AAG39	Y8387	---	$236	G5-7KITS	7.6
249A9510AAG41	Y8385	---	$236	G5-7KITS	7.6
249A9510AAG42	Y8384	---	$236	G5-7KITS	7.6
249A9510AAG7	Y8290	---	$107	G5-7KITS	7.6
249A9510AAG8	Y8291	---	$107	G5-7KITS	7.6
249A9510AAG9	Y8292	---	$107	G5-7KITS	7.6

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
249A9516AA1	Y8513	---	$218	G5-7KITS	7.5
249A9516AA10	Y8464	---	$234	G5-7KITS	7.5
249A9516AA2	Y8454	---	$218	G5-7KITS	7.5
249A9516AA3	Y8514	---	$229	G5-7KITS	7.5
249A9516AA4	Y8457	---	$229	G5-7KITS	7.5
249A9516AA5	Y8458	---	$229	G5-7KITS	7.5
249A9516AA6	Y8459	---	$229	G5-7KITS	7.5
249A9516AA7	Y8515	---	$234	G5-7KITS	7.5
249A9516AA8	Y8462	---	$234	G5-7KITS	7.5
249A9516AA9	Y8463	---	$234	G5-7KITS	7.5
249A9516AB011	Y8526	---	$732	G5-7KITS	7.5
249A9516AB10	Y8528	---	$845	G5-7KITS	7.5
249A9516AB11	Y8529	---	$845	G5-7KITS	7.5
249A9516AB12	Y8530	---	$845	G5-7KITS	7.5
249A9516AB13	Y8531	---	$845	G5-7KITS	7.5
249A9516AB14	Y8532	---	$845	G5-7KITS	7.5
249A9516AB15	Y8541	---	$900	G5-7KITS	7.5
249A9516AB16	Y8534	---	$900	G5-7KITS	7.5
249A9516AB17	Y8537	---	$900	G5-7KITS	7.5
249A9516AB18	Y8538	---	$900	G5-7KITS	7.5
249A9516AB19	Y8539	---	$900	G5-7KITS	7.5
249A9516AB2	Y8520	---	$732	G5-7KITS	7.5
249A9516AB20	Y8540	---	$900	G5-7KITS	7.5
249A9516AB21	Y8575	---	$1,125	G5-7KITS	7.5
249A9516AB22	Y8563	---	$1,125	G5-7KITS	7.5
249A9516AB23	Y8564	---	$1,125	G5-7KITS	7.5
249A9516AB24	Y8566	---	$1,125	G5-7KITS	7.5
249A9516AB25	Y8570	---	$1,125	G5-7KITS	7.5
249A9516AB26	Y8571	---	$1,125	G5-7KITS	7.5
249A9516AB3	Y8521	---	$732	G5-7KITS	7.5
249A9516AB4	Y8522	---	$732	G5-7KITS	7.5
249A9516AB5	Y8523	---	$732	G5-7KITS	7.5
249A9516AB6	Y8524	---	$732	G5-7KITS	7.5
249A9516AB7	Y8525	---	$732	G5-7KITS	7.5
249A9516AB8	Y8533	---	$845	G5-7KITS	7.5
249A9516AB9	Y8527	---	$845	G5-7KITS	7.5
249A9573AAG01	A1050	---	$387	G4-7KITS	1.25
249A9573AAG02	A1051	---	$627	G4-7KITS	1.25
249A9573AAG03	A1052	---	$809	G4-7KITS	1.25
249A9573AAG04	A1053	---	$809	G4-7KITS	1.25
249A9573AAG05	A1054	---	$1,088	G4-7KITS	1.25
249A9573AAG06	A1055	---	$1,286	G4-7KITS	1.25
249A9573AAG07	A1056	---	$1,286	G4-7KITS	1.25
249A9573AAG08	A1057	---	$1,286	G4-7KITS	1.25
249A9573AAG09	A1058	---	$123	G4-7KITS	1.25
249A9573AAG10	A1059	---	$168	G4-7KITS	1.25
249A9573AAG11	A1060	---	$207	G4-7KITS	1.25
249A9573AAG12	A1061	---	$240	G4-7KITS	1.25
249A9573AAG13	A1062	---	$1,253	G4-7KITS	1.25
249A9573AAG14	A1063	---	$1,253	G4-7KITS	1.25
249A9573ABG01	A1064	---	$147	G4-7KITS	1.25
249A9573ABG02	A1065	---	$201	G4-7KITS	1.25
249A9573ABG03	A1066	---	$251	G4-7KITS	1.25
249A9573ABG04	A1067	---	$336	G4-7KITS	1.25
249A9573ABG05	A1068	---	$446	G4-7KITS	1.25
249A9573ABG06	A1069	---	$662	G4-7KITS	1.25
249A9598AA1	A100	---	$60	GO-1R	2.40
249A9598AA2	A101	---	$60	GO-1R	2.40

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
249A9598AA3	A102	---	$71	GO-1R	2.40
249A9598AA4	A103	---	$71	GO-1R	2.40
249A9598AA5	A104	---	$91	GO-1R	2.40
249A9598AA6	A105	---	$91	GO-1R	2.40
249A9598AA7	A106	---	$105	GO-1R	2.40
249A9598AA8	A107	---	$105	GO-1R	2.40
249A9598AA9	A108	---	$186	GO-1R	2.40
36A167700AAG01	A641	---	$3,200	GO-2KITS	8.20
36A167700BAG01	A642	---	$3,200	GO-2KITS	8.20
36A167700CAG01	A643	---	$3,800	GO-2KITS	8.20
36A167701AAG01	A644	---	$4,600	GO-2KITS	8.20
36A167701BAG01	A645	---	$4,800	GO-2KITS	8.20
36A167701CAG01	A646	---	$5,000	GO-2KITS	8.20
36A167701CAG14	A686	---	$5,200	GO-2KITS	8.20
36A167702AAG01	A647	---	$4,800	GO-2KITS	8.20
36A167702BAG01	A648	---	$4,800	GO-2KITS	8.20
36A167702CAG01	A649	---	$5,200	GO-2KITS	8.20
36A167702DAG01	A650	---	$5,200	GO-2KITS	8.20
36A167741CBG01	A687	---	$5,000	GO-2KITS	8.19
36A167742ABG02	A688	---	$5,000	GO-2KITS	8.19
36A167743ABG02	A689	---	$4,500	GO-2KITS	8.19
36A167744ABG03	A690	---	$4,500	GO-2KITS	8.19
36A167745GBG10	A691	---	$4,620	GO-2KITS	8.19
36A167746GBG10	A692	---	$4,186	GO-2KITS	8.19
36A167747GBG10	A693	---	$5,000	GO-2KITS	8.19
36A167747GDG10	A694	---	$4,600	GO-2KITS	8.19
36A167749EBG34	A695	---	$7,500	GO-2KITS	8.19
36A167802BAG02	A677	---	$400	GO-2KITS	8.19
36A167803BAG02	A678	---	$450	GO-2KITS	8.19
36A167804BAG02	A680	---	$700	GO-2KITS	8.19
36A167805BAG02	A682	---	$700	GO-2KITS	8.19
36A167806BAG02	A683	---	$700	GO-2KITS	8.19
36A167807BAG02	A684	---	$700	GO-2KITS	8.19
36A167809BAG02	A685	---	$700	GO-2KITS	8.19
36A172471AAG01	A673	---	$1,000	GO-2KITS	8.19
36A172471AAG02	A670	---	$1,000	GO-2KITS	8.19
36A172472AAG01	A671	---	$2,400	GO-2KITS	8.19
36A172473AAG01	A672	---	$1,600	GO-2KITS	8.19
36A172474AAG01	A674	---	$1,600	GO-2KITS	8.19
36A172475AAG01	A676	---	$1,800	GO-2KITS	8.19
4001A5202AA-G01	PB14A	---	$108	G4-7KITS	2.38
4001A5202AA-G02	PB18A	---	$147	G4-7KITS	2.38
4001A5202AA-G03	PB21A	---	$188	G4-7KITS	2.38
4001A5202AA-G04	PB25A	---	$254	G4-7KITS	2.38
4001A5202AA-G05	PB28A	---	$336	G4-7KITS	2.38
4001A5921CYG001	A341	---	$102	G4-7KITS	2.39
4001A5921CYG002	A342	---	$102	G4-7KITS	2.39
4001A5921CYG006	A340	---	$102	G4-7KITS	2.39
4002B5521AA-G01	Y8352	---	$218	G5-7KITS	7.11
4002B5521AC-G01	Y8400	---	$265	G5-7KITS	7.16
4002B5525AA-G01	Y8355	---	$229	G5-7KITS	7.11
4002B5525AA-G02	Y8354	---	$229	G5-7KITS	7.11
4002B5525AA-G03	Y8353	---	$229	G5-7KITS	7.11
4002B5528AC-G01	Y8403	---	$324	G5-7KITS	7.16
4002B5528AC-G02	Y8402	---	$324	G5-7KITS	7.16
4002B5528AC-G03	Y8401	---	$324	G5-7KITS	7.16
4002B5914AN1	A1001	---	$218	G4-7KITS	2.39
4002B5914AN1	A1001	---	$218	G4-7KITS	3.7

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
4002B5914AN2	A1002	---	$218	G4-7KITS	2.39
4002B5914AN2	A1002	---	$218	G4-7KITS	3.7
4002B5914AN3	A1003	---	$237	G4-7KITS	2.39
4002B5914AN3	A1003	---	$237	G4-7KITS	3.7
4002B5914AN4	A1004	---	$285	G4-7KITS	2.39
4002B5914AN4	A1004	---	$285	G4-7KITS	3.7
4002B5914AN5	A1005	---	$369	G4-7KITS	2.39
4002B5914AN5	A1005	---	$369	G4-7KITS	3.7
401A5521AA-G01	Y8414	---	$120	G5-7KITS	7.16
401A5525AA-G01	Y8417	---	$120	G5-7KITS	7.16
401A5525AA-G02	Y8416	---	$120	G5-7KITS	7.16
401A5525AA-G03	Y8415	---	$120	G5-7KITS	7.16
401A5528AA-G01	Y8420	---	$120	G5-7KITS	7.16
401A5528AA-G02	Y8419	---	$120	G5-7KITS	7.16
401A5528AA-G03	Y8418	---	$120	G5-7KITS	7.16
5BC42AB1834F	---	25	$6,078	GO-7PTC	8.7
5BC42AB2177C	---	30	$5,526	GO-7PTC	8.7
5BC42AB2195C	---	30	$5,641	GO-7PTC	8.7
5BC42AE1001A	D268	28	$8,022	GO-7PTC	8.7
5BC42AE1008A	D267	38	$8,022	GO-7PTC	8.7
5BC46AB1571C	---	36	$8,289	GO-7PTC	8.7
5BC46AB1581C	---	36	$8,185	GO-7PTC	8.7
5BC46AB2014B	---	41	$8,711	GO-7PTC	8.7
5CD142AA036B008	D680	83	$4,442	GO-2AS180	8.5
5CD142DA036B024	D681	83	$4,146	GO-2AS180	8.5
5CD142EA019B017	D587	83	$3,608	GO-2AS180	8.2
5CD142FC008B054	D400	80	$5,298	GO-2AS180	8.6
5CD142FE012B025	D401	80	$5,298	GO-2AS180	8.6
5CD142GA010B034	D585	83	$5,196	GO-2AS180	8.6
5CD142GE011B020	D402	80	$5,368	GO-2AS180	8.6
5CD142GE011B039	D536	80	$5,590	GO-2AS180	8.6
5CD143BA012B038	D588	105	$4,248	GO-2AS180	8.2
5CD143JA014B026	D403	105	$4,248	GO-2AS180	8.2
5CD143JC014B012	D404	102	$4,420	GO-2AS180	8.2
5CD143LC007B034	D540	102	$5,568	GO-2AS180	8.6
5CD143LE007B021	D405	102	$5,568	GO-2AS180	8.6
5CD143MC003B018	D539	102	$5,648	GO-2AS180	8.6
5CD143MC003B040	D537	102	$5,812	GO-2AS180	8.6
5CD143ME003B021	D406	102	$5,812	GO-2AS180	8.6
5CD143UA022B010	D586	105	$5,262	GO-2AS180	8.6
5CD144EC002B052	D682	128	$6,564	GO-2AS180	8.5
5CD144FA002B020	D407	128	$5,224	GO-2AS180	8.2
5CD144MA020B038	D553	128	$4,386	GO-2AS180	8.5
5CD144MA020B073	D530	128	$5,618	GO-2AS180	8.5
5CD144PA002B055	D409	128	$5,224	GO-2AS180	8.2
5CD144PC016B013	D410	128	$5,396	GO-2AS180	8.2
5CD144SC003B063	D411	128	$5,714	GO-2AS180	8.6
5CD144SE005B028	D412	128	$5,714	GO-2AS180	8.6
5CD144UC005B037	D413	128	$5,842	GO-2AS180	8.6
5CD144UC023B030	D414	128	$8,116	GO-2AS180	8.6
5CD145GA002B016	D415	165	$8,484	GO-2AS180	8.5
5CD145SA011B018	D408	165	$8,484	GO-2AS180	8.5
5CD145UA005B026	D417	162	$6,304	GO-2AS180	8.2
5CD145UA030B005	D418	172	$8,578	GO-2AS180	8.4
5CD145VC005B055	D419	160	$5,988	GO-2AS180	8.6
5CD145VE005B008	D555	160	$5,988	GO-2AS180	8.6
5CD145WA009B020	D583	162	$7,418	GO-2AS180	8.6
5CD145WC006B021	D420	160	$7,590	GO-2AS180	8.6

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5CD152GA017B014	D421	234	$6,304	GO-2AS2P	8.2
5CD152NC025B015	D422	243	$6,806	GO-2AS2P	8.2
5CD153JA001B023	D423	252	$7,184	GO-2AS2P	8.2
5CD153JA001B090	D561	272	$9,458	GO-2AS2P	8.4
5CD153JA001B106	D424	252	$7,184	GO-2AS2P	8.3
5CD153RA039B003	D425	252	$7,184	GO-2AS2P	8.2
5CD153RA039B039	D426	252	$7,184	GO-2AS2P	8.3
5CD153RC027B015	D427	252	$7,686	GO-2AS2P	8.2
5CD153TC024B001	D428	261	$9,392	GO-2AS2P	8.6
5CD154JA015B024	D685	280	$8,974	GO-2AS2P	8.5
5CD154KA026B004	D429	287	$10,274	GO-2AS2P	8.5
5CD154SA016B023	D683	280	$8,974	GO-2AS2P	8.5
5CD154SA045B001	D684	280	$8,974	GO-2AS2P	8.5
5CD154TA007B005	D430	287	$10,274	GO-2AS2P	8.5
5CD154ZC801B803	D584	389	$11,662	GO-2AS2P	8.6
5CD154ZC852B800	D431	289	$10,994	GO-2AS2P	8.6
5CD163KA009A133	D432	361	$8,642	GO-2AS2P	8.2
5CD163KA009A134	D433	361	$8,642	GO-2AS2P	8.3
5CD163KA009A136	D562	381	$10,916	GO-2AS2P	8.4
5CD163SA026A070	D434	361	$8,642	GO-2AS2P	8.2
5CD163SC035A010	D435	378	$9,144	GO-2AS2P	8.2
5CD164LA014A031	D436	442	$11,736	GO-2AS2P	8.5
5CD164LA041A026	D686	403	$10,892	GO-2AS2P	8.5
5CD164MA012A076	D563	423	$12,184	GO-2AS2P	8.4
5CD164MA012A136	D437	403	$9,910	GO-2AS2P	8.2
5CD164MA012A137	D438	403	$9,910	GO-2AS2P	8.3
5CD164MA038A028	D439	403	$9,910	GO-2AS2P	8.3
5CD164TA009A034	D440	442	$11,736	GO-2AS2P	8.5
5CD164UA023A109	D441	403	$9,910	GO-2AS2P	8.2
5CD173NA010A114	D442	493	$12,236	GO-2AS2P	8.2
5CD173NA010A130	D564	513	$13,728	GO-2AS2P	8.4
5CD173VA018A079	D444	493	$12,236	GO-2AS2P	8.2
5CD174NA005A080	D569	587	$15,158	GO-2AS2P	8.5
5CD174RA009A141	D565	576	$14,848	GO-2AS2P	8.4
5CD174RA009A197	D445	548	$13,468	GO-2AS2P	8.2
5CD174RA009A257	D446	548	$12,272	GO-2AS2P	8.3
5CD174VA019A060	D568	587	$15,158	GO-2AS2P	8.5
5CD174WA020A089	D448	548	$13,468	GO-2AS2P	8.2
5CD183MA033B020	D650	752	$14,794	GO-2AS2P	8.4
5CD183SA043B017	D566	752	$17,298	GO-2AS2P	8.4
5CD183SA043B052	D548	691	$14,432	GO-2AS2P	8.3
5CD183WA043B006	D570	732	$17,420	GO-2AS2P	8.5
5CD184NA054B019	D651	830	$16,880	GO-2AS2P	8.4
5CD184PA021B018	D609	769	$18,374	GO-2AS2P	8.3
5CD184TA094B025	D567	830	$19,346	GO-2AS2P	8.4
5CD184TA094B068	D449	769	$18,098	GO-2AS2P	8.2
5CD184TA094B069	D451	769	$16,480	GO-2AS2P	8.3
5CD184TA094B070	D450	769	$18,098	GO-2AS2P	8.2
5CD184TA094B071	D541	769	$15,844	GO-2AS2P	8.2
5CD184TA094B075	D542	769	$15,844	GO-2AS2P	8.2
5CD184VA085B006	D589	769	$15,900	GO-2AS2P	8.2
5CD184YA064B004	D572	812	$20,098	GO-2AS2P	8.5
5CD185VA012B001	D579	949	$25,020	GO-2AS2P	8.4
5CD185VA012B002	D655	949	$25,020	GO-2AS2P	8.4
5CD185VA012B003	D577	888	$22,154	GO-2AS4P	8.3
5CD185VA811B802	D576	888	$18,860	GO-2AS2P	8.3
5CD185VA811B803	D578	949	$21,726	GO-2AS2P	8.4
5CD192NA027A136	D652	815	$25,020	GO-2AS2P	8.4

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5CD193MA038A053	D453	860	$21,084	GO-2AS4P	8.2
5CD193MA038A055	D610	860	$21,154	GO-2AS4P	8.3
5CD193PA065A129	D455	860	$24,338	GO-2AS4P	8.2
5CD193PA065A140	D456	860	$24,338	GO-2AS4P	8.2
5CD193PA065A160	D544	860	$20,716	GO-2AS4P	8.2
5CD193PA084A037	D457	940	$22,594	GO-2AS4P	8.5
5CD193PA094A243	D656	925	$27,496	GO-2AS4P	8.4
5CD193PA094A244	D657	925	$27,496	GO-2AS4P	8.4
5CD193TA027A007	D460	940	$22,594	GO-2AS4P	8.5
5CD194NA067A051	D462	1020	$27,744	GO-2AS4P	8.2
5CD194NA067A052	D543	1020	$24,280	GO-2AS2P	8.2
5CD194RA060A028	D463	1100	$28,522	GO-2AS4P	8.5
5CD194SA081A067	D465	1020	$30,532	GO-2AS4P	8.2
5CD194SA081A129	D466	1020	$30,532	GO-2AS4P	8.2
5CD194SA082A247	D558	1020	$27,784	GO-2AS4P	8.3
5CD194SA082A315	D468	1085	$36,058	GO-2AS4P	8.4
5CD194SA082A418	D467	1085	$30,942	GO-2AS4P	8.4
5CD194SA082A419	D559	1020	$32,900	GO-2AS4P	8.3
5CD194UA035A008	D469	1100	$28,522	GO-2AS4P	8.5
5CD194XA002A073	D654	1085	$27,032	GO-2AS2P	8.4
5CD194XA002A092	D658	1085	$31,564	GO-2AS4P	8.4
5CD203LA057A013	D590	1300	$33,800	GO-2AS4P	8.2
5CD203NA039A054	D659	1365	$37,866	GO-2AS4P	8.4
5CD203PA088A032	D471	1300	$36,158	GO-2AS4P	8.2
5CD203PA097A176	D473	1365	$41,026	GO-2AS4P	8.4
5CD203PA097A225	D560	1300	$37,868	GO-2AS4P	8.3
5CD204NA044A093	D660	1665	$43,834	GO-2AS4P	8.4
5CD204PA086A041	D474	1680	$41,592	GO-2AS4P	8.5
5CD204PA086A042	D554	1680	$34,340	GO-2AS4P	8.5
5CD204PA107A104	D661	1665	$43,834	GO-2AS4P	8.4
5CD204PA107A141	D662	1665	$50,472	GO-2AS4P	8.4
5CD204RA068A048	D476	1600	$43,502	GO-2AS4P	8.2
5CD204RA068A049	D477	1600	$43,502	GO-2AS4P	8.2
5CD204SA038A260	D663	1720	$51,726	GO-2AS4P	8.4
5CD204SA038A261	D478	1720	$51,726	GO-2AS4P	8.4
5CD204SA038A265	D574	1650	$48,020	GO-2AS4P	8.3
5CD222PA076B030	D480	1900	$55,176	GO-2AS4P	8.2
5CD222YA001B096	D664	1982	$62,742	GO-2AS4P	8.4
5CD222YA001B098	D482	1982	$62,742	GO-2AS4P	8.4
5CD222YA001B125	D575	1900	$59,036	GO-2AS4P	8.3
5CD223MA051B038	D613	2290	$47,614	GO-2AS4P	8.3
5CD223NA048B024	D615	2290	$53,866	GO-2AS4P	8.3
5CD223PA097B025	D618	2290	$69,500	GO-2AS4P	8.3
5CD223SA074B132	D486	2290	$81,350	GO-2AS4P	8.2
5CD223SA074B133	D547	2290	$67,844	GO-2AS4P	8.2
5CD224RA090B076	D619	2810	$81,514	GO-2AS4P	8.3
5CD224TA033B079	D489	2810	$98,320	GO-2AS4P	8.3
5CD226AA002B024	D620	4260	$131,440	GO-2AS4P	8.3
5CD226SA002B052	D490	4343	$96,214	GO-2AS4P	8.4
5CD226TA001B048	D492	4343	$121,618	GO-2AS4P	8.4
5K324DTT6013A	V3909	760	$2,810	G5-7VHSB	7.2
5K326DTT6013A	V3920	760	$3,454	G5-7VHSB	7.2
5K364DTT6013A	V3929	1102	$4,155	G5-7VHSB	7.2
5K365DTT6013A	V3940	1102	$5,151	G5-7VHSB	7.2
5K404DTT6013A	V3951	1590	$6,661	G5-7VHSB	7.2
5KAF143SAA202	M9300	43	$1,455	G4-7AS	3.2
5KAF145SAA202	M9301	50	$1,494	G4-7AS	3.2
5KAF182SAA202	M9302	76	$1,875	G4-7AS	3.2
5KAF184SAA202	M9303	101	$2,097	G4-7AS	3.2
5KAF213SAA202	M9304	200	$2,454	G4-7AS	3.2
5KAF215SAA202	M9305	300	$2,931	G4-7AS	3.2
5KAF254SAA202	M9306	315	$3,531	G4-7AS	3.2
5KAF256SAA202	M9307	350	$3,908	G4-7AS	3.2
5KAF284SAA202	M9308	460	$4,880	G4-7AS	3.2
5KAF286SAA202	M9309	510	$5,577	G4-7AS	3.2
5KAF324SAA222	M9310	670	$7,223	G4-7AS	3.2
5KAF324SAA322	M9328	660	$7,028	G4-7AS	3.2
5KAF326SAA222	M9311	740	$8,934	G4-7AS	3.2
5KAF326SAA322	M9329	690	$8,690	G4-7AS	3.2
5KAF364SAA222	M9312	970	$11,516	G4-7AS	3.2
5KAF364SAA223	M9313	960	$12,639	G4-7AS	3.2
5KAF364SAA322	M9330	960	$11,748	G4-7AS	3.2
5KAF365SAA223	M9314	1020	$13,047	G4-7AS	3.2
5KAF365SAA224	M9315	1030	$15,858	G4-7AS	3.2
5KAF365SAA323	M9331	1010	$13,308	G4-7AS	3.2
5KAF404SAA323	M9332	1390	$22,665	G4-7AS	3.2
5KAF404SAA324	M9333	1370	$25,358	G4-7AS	3.2
5KAF405SAA220	M9317	1420	$21,090	G4-7AS	3.2
5KAF405SAA221	M9316	1420	$17,654	G4-7AS	3.2
5KAF405SAA323	M9334	1430	$25,469	G4-7AS	3.2
5KAF405SAA331	M9335	1410	$28,161	G4-7AS	3.2
5KAF444SAA220	M9318	1760	$23,984	G4-7AS	3.2
5KAF444SAA221	M9319	1740	$26,876	G4-7AS	3.2
5KAF444SAA321	M9336	1850	$24,462	G4-7AS	3.2
5KAF444SAA322	M9337	1760	$27,162	G4-7AS	3.2
5KAF445SAA220	M9320	1880	$26,825	G4-7AS	3.2
5KAF445SAA221	M9321	1830	$30,467	G4-7AS	3.2
5KAF445SAA321	M9338	2020	$27,362	G4-7AS	3.2
5KAF445SAA322	M9339	1880	$30,339	G4-7AS	3.2
5KAF447SAA220	M9322	2420	$32,379	G4-7AS	3.2
5KAF447SAA221	M9323	2420	$36,021	G4-7AS	3.2
5KAF447SAA322	M9340	2510	$33,030	G4-7AS	3.2
5KAF447SAA323	M9341	1440	$36,780	G4-7AS	3.2
5KAF449SAA221	M9324	2630	$40,332	G4-7AS	3.2
5KAF449SAA222	M9325	2520	$45,119	G4-7AS	3.2
5KAF449SAA223	M9326	2890	$45,923	G4-7AS	3.2
5KAF449SAA224	M9327	2800	$50,709	G4-7AS	3.2
5KAF449SAA324	M9342	2820	$46,842	G4-7AS	3.2
5KAF449SAA325	M9343	2680	$50,592	G4-7AS	3.2
5KE213DTT5002	V3109	220	$1,663	G5-7VHSB	7.3
5KE213DTT5003A	V3108	220	$1,792	G5-7VHSB	7.3
5KE213DTT5005A	V3107	220	$1,937	G5-7VHSB	7.3
5KE213DTT6012A	V3616	220	$1,647	G5-7VHSB	7.3
5KE213DTT6015A	V3615	220	$1,700	G5-7VHSB	7.3
5KE215DTT5005A	V3139	220	$2,070	G5-7VHSB	7.3
5KE215DTT6015A	V3643	220	$1,937	G5-7VHSB	7.3
5KE254DTT5005A	V3157	340	$2,273	G5-7VHSB	7.3
5KE254DTT6012A	V3660	340	$2,129	G5-7VHSB	7.3
5KE254DTT6015A	V3658	340	$2,129	G5-7VHSB	7.3
5KE256DTT5005A	V3171	370	$2,601	G5-7VHSB	7.3
5KE256DTT6012A	V3676	370	$2,513	G5-7VHSB	7.3
5KE256DTT6015A	V3674	370	$2,513	G5-7VHSB	7.3
5KE256DTT7005A	V3178	370	$2,655	G5-7VHSB	7.3
5KE284DTT5005A	V3188	507	$2,655	G5-7VHSB	7.3
5KE284DTT6011A	V3690	507	$2,793	G5-7VHSB	7.3
5KE284DTT6015A	V3689	507	$2,793	G5-7VHSB	7.3

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KE284DTT7005A	V3191	507	$2,901	G5-7VHSB	7.3
5KE286DTT5005A	V3197	507	$3,525	G5-7VHSB	7.3
5KE286DTT6011A	V3699	507	$3,149	G5-7VHSB	7.3
5KE286DTT6015A	V3698	507	$3,149	G5-7VHSB	7.3
5KE324DTT5002A	V3407	790	$4,088	G5-7VHSB	7.3
5KE324DTT5003	V3450	760	$4,088	G5-7VHSB	7.3
5KE324DTT6012A	V3611	760	$3,348	G5-7VHSB	7.3
5KE324DTT6013A	V3609	760	$3,348	G5-7VHSB	7.3
5KE324DTT6017A	V3610	760	$3,348	G5-7VHSB	7.3
5KE326DTT5002A	V3551	760	$4,769	G5-7VHSB	7.3
5KE326DTT6012A	V3622	760	$4,115	G5-7VHSB	7.3
5KE326DTT6013A	V3620	760	$4,115	G5-7VHSB	7.3
5KE326DTT6017A	V3621	760	$4,115	G5-7VHSB	7.3
5KE326DTT7002A	V3423	855	$4,178	G5-7VHSB	7.3
5KE364DTT5002A	V3428	1102	$5,993	G5-7VHSB	7.3
5KE364DTT6017A	V3629	1102	$4,950	G5-7VHSB	7.3
5KE364DTT6019A	V3630	1102	$4,950	G5-7VHSB	7.3
5KE364DTT7002A	V3435	1102	$5,232	G5-7VHSB	7.3
5KE365DTT6017A	V3640	1102	$6,135	G5-7VHSB	7.3
5KE365DTT6019A	V3641	1102	$6,135	G5-7VHSB	7.3
5KE404DTT6012A	V3651	1590	$8,223	G5-7VHSB	7.3
5KE404DTT6013A	V3653	1590	$8,223	G5-7VHSB	7.3
5KE404DTT7002A	V3553	1590	$7,187	G5-7VHSB	7.3
5KE405DTT6012A	V3656	1590	$10,676	G5-7VHSB	7.3
5KE405DTT7002A	V3555	1590	$8,600	G5-7VHSB	7.3
5KE444DTT6012A	V3666	2075	$11,766	G5-7VHSB	7.3
5KE444DTT6013A	V3664	2075	$11,766	G5-7VHSB	7.3
5KE444DTT7009A	V3468	2075	$11,709	G5-7VHSB	7.3
5KE445DTT6012A	V3683	2260	$16,203	G5-7VHSB	7.3
5KE445DTT6013A	V3670	2260	$16,203	G5-7VHSB	7.3
5KE447DTT6018A	V3678	3000	$19,515	G5-7VHSB	7.3
5KE449DTT6018A	V3679	3500	$23,230	G5-7VHSB	7.3
5KFS111XAA107	N415	101	$1,216	G4-7UXIEC1	4.2
5KFS111XAA108	N515	101	$1,216	G4-7UXIEC1	4.5
5KFS111XAA109	N1015	101	$1,972	G4-7UXIEC	4.8
5KFS111XAA117	N418	101	$1,299	G4-7UXIEC1	4.2
5KFS111XAA118	N518	101	$1,299	G4-7UXIEC1	4.5
5KFS111XAA119	N1020	101	$2,022	G4-7UXIEC	4.8
5KFS111XAA129	N1024	101	$2,123	G4-7UXIEC	4.8
5KFS111XAA207	N496	101	$1,290	G4-7UXIEC1	4.2
5KFS111XAA208	N514	101	$1,148	G4-7UXIEC1	4.5
5KFS111XAA209	N1014	101	$1,949	G4-7UXIEC	4.8
5KFS111XAA217	N414	101	$1,148	G4-7UXIEC1	4.2
5KFS111XAA218	N517	101	$1,221	G4-7UXIEC1	4.5
5KFS111XAA219	N1019	101	$1,853	G4-7UXIEC	4.8
5KFS111XAA227	N417	101	$1,221	G4-7UXIEC1	4.2
5KFS111XAA229	N1023	101	$2,042	G4-7UXIEC	4.8
5KFS111XAA307	N406	101	$1,080	G4-7UXIEC1	4.2
5KFS111XAA308	N506	101	$1,080	G4-7UXIEC1	4.5
5KFS111XAA309	N1005	101	$1,974	G4-7UXIEC	4.8
5KFS111XAA319	N1009	101	$2,090	G4-7UXIEC	4.8
5KFS111XAA407	N473	101	$1,160	G4-7UXIEC1	4.2
5KFS111XAA408	N576	51	$1,160	G4-7UXIEC1	4.5
5KFS111XAA409	N1000	101	$2,070	G4-7UXIEC	4.8
5KFS111XAA419	N1004	221	$2,294	G4-7UXIEC	4.8
5KFS112XAA107	N421	101	$1,338	G4-7UXIEC1	4.2
5KFS112XAA108	N521	101	$1,338	G4-7UXIEC1	4.5
5KFS112XAA109	N1028	101	$2,289	G4-7UXIEC	4.8
5KFS112XAA117	N424	101	$1,377	G4-7UXIEC1	4.2
5KFS112XAA118	N524	101	$1,377	G4-7UXIEC1	4.5
5KFS112XAA119	N1032	101	$2,438	G4-7UXIEC	4.9
5KFS112XAA207	N420	101	$1,400	G4-7UXIEC1	4.2
5KFS112XAA208	N520	101	$1,400	G4-7UXIEC1	4.5
5KFS112XAA217	N423	101	$1,468	G4-7UXIEC1	4.2
5KFS112XAA218	N523	101	$1,468	G4-7UXIEC1	4.5
5KFS112XAA307	N409	101	$1,207	G4-7UXIEC1	4.2
5KFS112XAA308	N509	101	$1,207	G4-7UXIEC1	4.5
5KFS112XAA309	N1013	101	$2,438	G4-7UXIEC	4.8
5KFS112XAA317	N497	101	$1,371	G4-7UXIEC1	4.2
5KFS112XAA318	N513	101	$1,317	G4-7UXIEC1	4.5
5KFS112XAA319	N1018	101	$2,048	G4-7UXIEC	4.8
5KFS112XAA407	N474	101	$1,456	G4-7UXIEC1	4.2
5KFS112XAA408	N577	101	$1,456	G4-7UXIEC1	4.5
5KFS131XAA107	N428	221	$1,797	G4-7UXIEC1	4.2
5KFS131XAA108	N528	221	$1,797	G4-7UXIEC1	4.6
5KFS131XAA109	N1043	221	$3,106	G4-7UXIEC	4.9
5KFS131XAA117	N431	221	$1,944	G4-7UXIEC1	4.3
5KFS131XAA119	N1038	221	$2,896	G4-7UXIEC	4.9
5KFS131XAA207	N427	221	$1,786	G4-7UXIEC1	4.2
5KFS131XAA208	N527	221	$1,786	G4-7UXIEC1	4.6
5KFS131XAA209	N1027	101	$2,162	G4-7UXIEC	4.8
5KFS131XAA219	N1031	101	$2,368	G4-7UXIEC	4.9
5KFS131XAA229	N1037	221	$2,878	G4-7UXIEC	4.9
5KFS131XAA307	N416	221	$2,415	G4-7UXIEC1	4.2
5KFS131XAA308	N564	221	$2,395	G4-7UXIEC1	4.5
5KFS131XAA309	N1022	221	$2,898	G4-7UXIEC	4.8
5KFS131XAA407	N475	221	$1,848	G4-7UXIEC1	4.2
5KFS131XAA408	N578	221	$1,848	G4-7UXIEC1	4.5
5KFS131XAA409	N1008	221	$2,539	G4-7UXIEC	4.8
5KFS131XAA419	N1012	221	$2,848	G4-7UXIEC	4.8
5KFS132XAA108	N531	221	$1,944	G4-7UXIEC1	4.6
5KFS132XAA207	N430	221	$1,992	G4-7UXIEC1	4.3
5KFS132XAA208	N530	221	$1,992	G4-7UXIEC1	4.6
5KFS132XAA209	N1042	221	$2,938	G4-7UXIEC	4.9
5KFS132XAA307	N419	221	$2,433	G4-7UXIEC1	4.2
5KFS132XAA308	N516	221	$2,415	G4-7UXIEC1	4.5
5KFS132XAA309	N1026	221	$2,573	G4-7UXIEC	4.8
5KFS132XAA317	N422	221	$2,343	G4-7UXIEC1	4.2
5KFS132XAA318	N519	221	$2,433	G4-7UXIEC1	4.5
5KFS132XAA319	N1030	221	$2,595	G4-7UXIEC	4.9
5KFS132XAA327	N425	221	$2,690	G4-7UXIEC1	4.3
5KFS132XAA328	N522	221	$2,343	G4-7UXIEC1	4.5
5KFS132XAA329	N1036	221	$3,444	G4-7UXIEC	4.9
5KFS132XAA338	N525	221	$2,690	G4-7UXIEC1	4.6
5KFS132XAA407	N476	221	$2,072	G4-7UXIEC1	4.2
5KFS132XAA408	N579	221	$2,072	G4-7UXIEC1	4.5
5KFS132XAA409	N1016	221	$2,975	G4-7UXIEC	4.8
5KFS162XAA107	N434	287	$2,672	G4-7UXIEC1	4.3
5KFS162XAA108	N534	287	$2,672	G4-7UXIEC1	4.6
5KFS162XAA109	N1049	287	$3,331	G4-7UXIEC	4.9
5KFS162XAA117	N437	287	$3,307	G4-7UXIEC1	4.3
5KFS162XAA118	N537	287	$3,307	G4-7UXIEC1	4.6
5KFS162XAA119	N1054	287	$4,011	G4-7UXIEC	4.9
5KFS162XAA207	N433	287	$2,624	G4-7UXIEC1	4.3
5KFS162XAA208	N533	287	$2,624	G4-7UXIEC1	4.6
5KFS162XAA209	N1048	287	$3,157	G4-7UXIEC	4.9

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KFS162XAA307	N426	287	$3,150	G4-7UXIEC1	4.3
5KFS162XAA308	N526	287	$3,150	G4-7UXIEC1	4.6
5KFS162XAA309	N1041	287	$3,923	G4-7UXIEC	4.9
5KFS162XAA317	N429	287	$3,366	G4-7UXIEC1	4.3
5KFS162XAA318	N529	287	$3,366	G4-7UXIEC1	4.6
5KFS162XAA319	N1035	287	$3,683	G4-7UXIEC	4.9
5KFS162XAA407	N477	287	$2,729	G4-7UXIEC1	4.2
5KFS162XAA408	N580	287	$2,729	G4-7UXIEC1	4.5
5KFS162XAA409	N1021	287	$3,266	G4-7UXIEC	4.8
5KFS162XAA417	N478	287	$2,865	G4-7UXIEC1	4.2
5KFS162XAA418	N581	287	$2,865	G4-7UXIEC1	4.5
5KFS162XAA419	N1025	287	$3,283	G4-7UXIEC	4.8
5KFS162XAA427	N479	287	$3,009	G4-7UXIEC1	4.2
5KFS162XAA428	N582	287	$3,009	G4-7UXIEC1	4.5
5KFS162XAA429	N1029	287	$3,447	G4-7UXIEC	4.9
5KFS163XAA107	N440	287	$3,387	G4-7UXIEC1	4.3
5KFS163XAA108	N540	287	$3,387	G4-7UXIEC1	4.6
5KFS163XAA109	N1059	287	$4,627	G4-7UXIEC	4.10
5KFS163XAA207	N498	287	$3,270	G4-7UXIEC1	4.3
5KFS163XAA208	N536	287	$3,270	G4-7UXIEC1	4.6
5KFS163XAA209	N1053	287	$3,772	G4-7UXIEC	4.9
5KFS163XAA307	N432	287	$4,464	G4-7UXIEC1	4.3
5KFS163XAA308	N532	287	$4,464	G4-7UXIEC1	4.6
5KFS163XAA309	N1047	287	$5,007	G4-7UXIEC	4.9
5KFS163XAA407	N480	287	$3,401	G4-7UXIEC1	4.3
5KFS163XAA408	N583	287	$3,401	G4-7UXIEC1	4.6
5KFS163XAA419	N1034	287	$3,620	G4-7UXIEC	4.9
5KFS192XAA107	N443	441	$4,760	G4-7UXIEC1	4.3
5KFS192XAA108	N543	441	$4,760	G4-7UXIEC1	4.6
5KFS192XAA109	N1058	441	$5,267	G4-7UXIEC	4.10
5KFS192XAA119	N1065	441	$5,907	G4-7UXIEC	4.10
5KFS192XAA207	N439	441	$3,894	G4-7UXIEC1	4.3
5KFS192XAA208	N539	441	$3,894	G4-7UXIEC1	4.6
5KFS192XAA209	N1057	441	$4,814	G4-7UXIEC	4.10
5KFS192XAA309	N1046	441	$5,855	G4-7UXIEC	4.9
5KFS192XAA407	N481	441	$3,650	G4-7UXIEC1	4.3
5KFS192XAA408	N584	441	$4,707	G4-7UXIEC1	4.6
5KFS192XAA409	N1040	287	$4,226	G4-7UXIEC	4.9
5KFS193XAA207	N442	441	$4,526	G4-7UXIEC1	4.3
5KFS193XAA208	N542	441	$4,526	G4-7UXIEC1	4.6
5KFS193XAA209	N1063	441	$5,622	G4-7UXIEC	4.10
5KFS193XAA307	N435	441	$5,440	G4-7UXIEC1	4.3
5KFS193XAA308	N535	441	$5,440	G4-7UXIEC1	4.6
5KFS193XAA309	N1052	441	$6,702	G4-7UXIEC	4.9
5KFS193XAA407	N482	441	$4,707	G4-7UXIEC1	4.3
5KFS193XAA408	N585	441	$5,773	G4-7UXIEC1	4.6
5KFS193XAA409	N1039	441	$4,924	G4-7UXIEC	4.9
5KFS193XAA417	N483	441	$5,773	G4-7UXIEC1	4.3
5KFS193XAA419	N1045	441	$5,622	G4-7UXIEC	4.9
5KFS202XAA107	N446	805	$5,722	G4-7UXIEC	4.3
5KFS202XAA108	N546	805	$5,722	G4-7UXIEC1	4.6
5KFS202XAA109	N1064	805	$6,204	G4-7UXIEC	4.10
5KFS202XAA117	N449	805	$6,985	G4-7UXIEC	4.3
5KFS202XAA118	N549	805	$6,985	G4-7UXIEC1	4.6
5KFS202XAA119	N1069	805	$6,502	G4-7UXIEC	4.10
5KFS202XAA129	N1073	805	$8,317	G4-7UXIEC	4.10
5KFS202XAA207	N445	805	$5,551	G4-7UXIEC1	4.3
5KFS202XAA208	N545	805	$5,551	G4-7UXIEC1	4.6

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KFS202XAA209	N1062	805	$6,034	G4-7UXIEC	4.10
5KFS202XAA219	N1068	805	$6,444	G4-7UXIEC	4.10
5KFS202XAA309	N1051	805	$6,966	G4-7UXIEC	4.9
5KFS202XAA409	N1044	805	$6,243	G4-7UXIEC	4.9
5KFS202XAA418	N587	805	$6,577	G4-7UXIEC1	4.6
5KFS203XAA207	N448	805	$6,324	G4-7UXIEC1	4.3
5KFS203XAA208	N548	805	$6,324	G4-7UXIEC1	4.6
5KFS203XAA209	N1072	805	$7,556	G4-7UXIEC	4.10
5KFS203XAA307	N438	805	$6,092	G4-7UXIEC1	4.3
5KFS203XAA308	N538	805	$6,092	G4-7UXIEC1	4.6
5KFS203XAA309	N1056	805	$7,229	G4-7UXIEC	4.10
5KFS203XAA317	N441	805	$6,799	G4-7UXIEC1	4.3
5KFS203XAA318	N541	805	$6,799	G4-7UXIEC1	4.6
5KFS203XAA319	N1061	805	$8,241	G4-7UXIEC	4.10
5KFS203XAA407	N485	805	$6,577	G4-7UXIEC1	4.3
5KFS203XAA408	N588	805	$8,396	G4-7UXIEC1	4.6
5KFS203XAA409	N1050	805	$6,864	G4-7UXIEC	4.9
5KFS221XAA107	N452	1155	$8,736	G4-7UXIEC	4.3
5KFS221XAA108	N552	1155	$8,736	G4-7UXIEC	4.7
5KFS221XAA109	N1077	1155	$10,796	G4-7UXIEC	4.10
5KFS221XAA207	N451	1155	$8,454	G4-7UXIEC1	4.3
5KFS221XAA208	N551	1155	$8,454	G4-7UXIEC	4.7
5KFS221XAA209	N1076	1155	$10,571	G4-7UXIEC	4.10
5KFS221XAA407	N486	1155	$8,396	G4-7UXIEC1	4.3
5KFS221XAA408	N589	1155	$8,815	G4-7UXIEC1	4.6
5KFS221XAA409	N1055	1155	$10,994	G4-7UXIEC	4.10
5KFS222XAA107	N455	1155	$10,445	G4-7UXIEC	4.4
5KFS222XAA108	N555	115	$10,445	G4-7UXIEC	4.7
5KFS222XAA109	N1081	1155	$13,252	G4-7UXIEC	4.10
5KFS222XAA207	N454	1155	$10,017	G4-7UXIEC	4.4
5KFS222XAA208	N554	1155	$10,017	G4-7UXIEC	4.7
5KFS222XAA209	N1080	1155	$12,815	G4-7UXIEC	4.10
5KFS222XAA307	N444	1155	$8,476	G4-7UXIEC1	4.3
5KFS222XAA308	N544	1155	$8,476	G4-7UXIEC	4.6
5KFS222XAA309	N1067	1155	$10,600	G4-7UXIEC	4.10
5KFS222XAA407	N487	1155	$8,815	G4-7UXIEC1	4.3
5KFS222XAA408	N590	1155	$12,268	G4-7UXIEC1	4.6
5KFS222XAA409	N1060	1155	$11,545	G4-7UXIEC	4.10
5KFS262XAA107	N458	1590	$12,860	G4-7UXIEC	4.4
5KFS262XAA108	N558	1590	$12,860	G4-7UXIEC	4.7
5KFS262XAA109	N1086	1590	$16,563	G4-7UXIEC	4.11
5KFS262XAA207	N457	1590	$11,796	G4-7UXIEC	4.4
5KFS262XAA208	N557	1590	$11,796	G4-7UXIEC	4.7
5KFS262XAA209	N1084	1590	$15,278	G4-7UXIEC	4.11
5KFS262XAA307	N447	1590	$10,792	G4-7UXIEC1	4.3
5KFS262XAA308	N547	1590	$10,792	G4-7UXIEC	4.6
5KFS262XAA309	N1071	1590	$15,361	G4-7UXIEC	4.10
5KFS262XAA407	N488	1590	$12,268	G4-7UXIEC	4.3
5KFS262XAA408	N591	1590	$13,881	G4-7UXIEC	4.6
5KFS262XAA409	N1066	1590	$15,133	G4-7UXIEC	4.10
5KFS262XAA417	N489	1590	$13,881	G4-7UXIEC	4.3
5KFS262XAA418	N592	1590	$15,957	G4-7UXIEC	4.7
5KFS262XAA419	N1070	1590	$15,889	G4-7UXIEC	4.10
5KFS291XAA109	N1085	2201	$19,099	G4-7UXIEC	4.11
5KFS291XAA207	N459	2201	$15,197	G4-7UXIEC	4.4
5KFS291XAA208	N559	2201	$15,197	G4-7UXIEC	4.7
5KFS291XAA209	N1089	2201	$20,099	G4-7UXIEC	4.11
5KFS291XAA307	N450	2201	$14,303	G4-7UXIEC1	4.4

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KFS291XAA308	N550	2201	$14,303	G4-7UXIEC	4.7
5KFS291XAA309	N1075	2201	$20,290	G4-7UXIEC	4.10
5KFS291XAA407	N490	2201	$15,957	G4-7UXIEC	4.4
5KFS291XAA408	N593	2201	$18,160	G4-7UXIEC	4.7
5KFS291XAA409	N1074	2201	$20,903	G4-7UXIEC	4.10
5KFS292XAA107	N460	2201	$16,434	G4-7UXIEC	4.4
5KFS292XAA108	N560	2201	$16,434	G4-7UXIEC	4.7
5KFS292XAA109	N1090	2201	$21,634	G4-7UXIEC	4.11
5KFS292XAA117	N462	2201	$19,453	G4-7UXIEC	4.4
5KFS292XAA118	N562	2201	$19,453	G4-7UXIEC	4.7
5KFS292XAA119	N1094	2201	$26,016	G4-7UXIEC	4.11
5KFS292XAA207	N461	2201	$17,462	G4-7UXIEC	4.4
5KFS292XAA208	N561	2201	$17,462	G4-7UXIEC	4.7
5KFS292XAA209	N1093	2201	$23,385	G4-7UXIEC	4.11
5KFS292XAA307	N453	2201	$14,908	G4-7UXIEC	4.4
5KFS292XAA308	N553	2201	$14,908	G4-7UXIEC	4.7
5KFS292XAA309	N1079	2201	$20,492	G4-7UXIEC	4.10
5KFS292XAA317	N456	2201	$15,256	G4-7UXIEC	4.4
5KFS292XAA318	N556	2201	$15,256	G4-7UXIEC	4.7
5KFS292XAA319	N1083	2201	$20,689	G4-7UXIEC	4.11
5KFS292XAA407	N484	805	$5,773	G4-7UXIEC1	4.3
5KFS292XAA408	N594	2201	$19,894	G4-7UXIEC	4.7
5KFS292XAA409	N1078	2201	$24,321	G4-7UXIEC	4.10
5KFS292XAA417	N492	2201	$19,894	G4-7UXIEC	4.4
5KFS292XAA419	N1082	2201	$26,687	G4-7UXIEC	4.11
5KFS292XAA427	N491	2201	$18,160	G4-7UXIEC	4.4
5KFS294XAA107	N463	3153	$21,575	G4-7UXIEC	4.4
5KFS294XAA108	N565	3153	$21,575	G4-7UXIEC	4.7
5KFS294XAA207	N465	3153	$19,879	G4-7UXIEC	4.4
5KFS294XAA208	N567	3153	$19,879	G4-7UXIEC	4.7
5KFS294XAA209	N1096	3153	$29,641	G4-7UXIEC	4.11
5KFS294XAA307	N469	3153	$20,777	G4-7UXIEC	4.4
5KFS294XAA308	N571	3153	$20,777	G4-7UXIEC	4.7
5KFS294XAA309	N1088	3153	$27,478	G4-7UXIEC	4.11
5KFS294XAA317	N470	3153	$22,841	G4-7UXIEC	4.4
5KFS294XAA318	N572	3153	$22,841	G4-7UXIEC	4.7
5KFS294XAA319	N1092	3153	$30,290	G4-7UXIEC	4.11
5KFS294XAA407	N493	3153	$23,999	G4-7UXIEC	4.4
5KFS294XAA408	N595	3153	$23,999	G4-7UXIEC	4.7
5KFS294XAA409	N1087	3153	$32,564	G4-7UXIEC	4.11
5KFS294XAA419	N1097	3153	$30,531	G4-7UXIEC	4.11
5KFS295XAA107	N464	3153	$23,888	G4-7UXIEC	4.4
5KFS295XAA108	N566	3153	$23,888	G4-7UXIEC	4.7
5KFS295XAA109	N1100	3153	$32,291	G4-7UXIEC	4.11
5KFS295XAA119	N1102	3153	$34,049	G4-7UXIEC	4.11
5KFS295XAA129	N1104	3153	$39,156	G4-7UXIEC	4.11
5KFS295XAA207	N466	3153	$22,216	G4-7UXIEC	4.4
5KFS295XAA208	N568	3153	$22,216	G4-7UXIEC	4.7
5KFS295XAA209	N1099	3153	$31,349	G4-7UXIEC	4.11
5KFS295XAA217	N467	3153	$24,198	G4-7UXIEC	4.4
5KFS295XAA218	N569	3153	$24,198	G4-7UXIEC	4.7
5KFS295XAA219	N1101	3153	$33,057	G4-7UXIEC	4.11
5KFS295XAA227	N468	3153	$26,000	G4-7UXIEC	4.4
5KFS295XAA228	N570	3153	$26,000	G4-7UXIEC	4.7
5KFS295XAA229	N1103	3153	$34,387	G4-7UXIEC	4.11
5KFS295XAA239	N1106	3153	$35,716	G4-7UXIEC	4.11
5KFS295XAA249	N1105	3153	$37,882	G4-7UXIEC	4.11
5KFS295XAA307	N471	3153	$25,211	G4-7UXIEC	4.4

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KFS295XAA308	N573	3153	$25,211	G4-7UXIEC	4.7
5KFS295XAA309	N1095	3153	$33,169	G4-7UXIEC	4.11
5KFS295XAA318	N574	3153	$24,915	G4-7UXIEC	4.7
5KFS295XAA319	N1098	3153	$34,674	G4-7UXIEC	4.11
5KFS295XAA407	N494	3153	$25,990	G4-7UXIEC	4.4
5KFS295XAA408	N596	3153	$25,990	G4-7UXIEC	4.7
5KFS295XAA409	N1091	3153	$35,414	G4-7UXIEC	4.11
5KFS295XAA418	N597	3153	$28,011	G4-7UXIEC	4.7
5KFS901XAA107	N402	51	$1,035	G4-7UXIEC1	4.2
5KFS901XAA108	N502	51	$1,035	G4-7UXIEC1	4.5
5KFS901XAA109	N1003	51	$1,880	G4-7UXIEC	4.8
5KFS901XAA117	N405	51	$1,069	G4-7UXIEC1	4.2
5KFS901XAA118	N505	51	$1,069	G4-7UXIEC1	4.5
5KFS901XAA119	N1007	51	$1,761	G4-7UXIEC	4.8
5KFS901XAA127	N495	51	$1,115	G4-7UXIEC1	4.2
5KFS901XAA128	N508	51	$1,115	G4-7UXIEC1	4.5
5KFS901XAA129	N1011	51	$1,847	G4-7UXIEC	4.8
5KFS901XAA207	N401	51	$1,022	G4-7UXIEC1	4.2
5KFS901XAA208	N501	51	$1,022	G4-7UXIEC1	4.5
5KFS901XAA209	N1002	51	$1,825	G4-7UXIEC	4.8
5KFS901XAA217	N404	51	$1,053	G4-7UXIEC1	4.2
5KFS901XAA218	N504	51	$1,053	G4-7UXIEC1	4.5
5KFS901XAA219	N1006	51	$1,533	G4-7UXIEC	4.8
5KFS901XAA307	N400	51	$1,044	G4-7UXIEC1	4.2
5KFS901XAA308	N500	51	$1,044	G4-7UXIEC1	4.5
5KFS901XAA309	N1001	51	$1,862	G4-7UXIEC	4.8
5KFS901XAA317	N403	51	$1,128	G4-7UXIEC1	4.2
5KFS901XAA318	N503	51	$1,128	G4-7UXIEC1	4.5
5KFS903XAA107	N412	51	$1,335	G4-7UXIEC1	4.2
5KFS903XAA108	N512	51	$1,335	G4-7UXIEC1	4.5
5KFS903XAA118	N563	51	$1,216	G4-7UXIEC1	4.5
5KFS903XAA207	N407	51	$1,194	G4-7UXIEC1	4.2
5KFS903XAA208	N507	51	$1,194	G4-7UXIEC1	4.5
5KFS903XAA209	N1010	51	$1,770	G4-7UXIEC	4.8
5KFS903XAA217	N410	51	$1,290	G4-7UXIEC1	4.2
5KFS903XAA218	N511	101	$1,290	G4-7UXIEC1	4.5
5KFS903XAA407	N472	51	$1,242	G4-7UXIEC1	4.2
5KFS903XAA408	N575	51	$1,242	G4-7UXIEC1	4.5
5KGS364SAA220	M8992	1030	$9,383	G4-7U	2.9
5KGS364SAA320	M8982	1000	$9,407	G4-7U	2.9
5KGS365SAA220	M8993	1090	$11,216	G4-7U	2.9
5KGS365SAA320	M8983	1030	$10,800	G4-7U	2.9
5KGS404SAA320	M8984	1480	$12,441	G4-7U	2.9
5KGS405SAA221	M8994	1500	$13,676	G4-7U	2.9
5KGS405SAA321	M8985	1530	$13,746	G4-7U	2.9
5KGS444SAA220	M8995	1970	$17,756	G4-7U	2.9
5KGS444SAA320	M8986	1920	$18,254	G4-7U	2.9
5KGS445SAA220	M8996	2060	$20,535	G4-7U	2.9
5KGS445SAA320	M8987	2140	$23,380	G4-7U	2.9
5KGS447SAA220	M8997	2700	$25,568	G4-7U	2.9
5KGS447SAA320	M8988	2700	$26,295	G4-7U	2.9
5KGS449SAA222	M8998	2980	$29,771	G4-7U	2.9
5KGS449SAA224	M8999	3100	$34,731	G4-7U	2.9
5KGS449SAA321	M8989	3070	$29,330	G4-7U	2.9
5KS143ATE105	E709	46	$363	G4-7D$Z1	1.2
5KS143ATE205	E707	46	$333	G4-7D$Z1	1.2
5KS143ATE205F2	E792	46	$333	G4-7D$Z1	1.2
5KS143ATE205F2RG3	E7051	46	$736	G4-7D$Z1	1.21

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS143ATE205RG3	E7050	46	$736	G4-7D$Z1	1.21
5KS143SAA104	M487	43	$974	G4-7U1	2.2
5KS143SAA105	M486	43	$974	G4-7U1	2.2
5KS143SAA108	M465	43	$1,038	G4-7U1	2.2
5KS143SAA120	M463	43	$927	G4-7U1	2.2
5KS143SAA121	M462	43	$927	G4-7U1	2.2
5KS143SAA140	M9171	43	$927	G4-7U1	2.2
5KS143SAA200	M478	43	$1,020	G4-7U1	2.8
5KS143SAA202	M497	43	$942	G4-7U1	2.8
5KS143SAA204	M483	43	$839	G4-7U1	2.2
5KS143SAA205	M482	43	$839	G4-7U1	2.2
5KS143SAA208	M475	43	$839	G4-7U1	2.2
5KS143SAA302	M496	43	$1,083	G4-7U1	2.8
5KS143SAA304	M481	43	$980	G4-7U1	2.2
5KS143SAA305	M480	43	$980	G4-7U1	2.2
5KS143SAA308	M9169	43	$980	G4-7U1	2.2
5KS143SAA404	M9168	43	$864	G4-7U1	2.2
5KS143SAA405	M9166	43	$864	G4-7U1	2.2
5KS143SAA408	M9167	43	$864	G4-7U1	2.2
5KS143STE104	M7501	47	$534	G4-7S$P1	1.9
5KS143STE105	M7700	47	$492	G4-7S$P1	1.9
5KS143STE107	M7500	47	$492	G4-7S$P1	1.9
5KS143STE109	M7701	43	$534	G4-7S$P1	1.9
5KS143STE204	M7523	46	$498	G4-7S$P1	1.9
5KS143STE205	M7723	46	$498	G4-7S$P1	1.9
5KS143STE205RG3	M7551	46	$931	G4-7S$P1	1.23
5KS143STE222	M7738	56	$540	G4-7S$P1	1.18
5KS143XAA104	M8906	43	$1,080	G4-7UX1	2.19
5KS143XAA108	M8905	43	$1,080	G4-7UX1	2.19
5KS143XAA120	M8904	43	$1,035	G4-7UX1	2.19
5KS143XAA122	M8903	43	$1,035	G4-7UX1	2.19
5KS143XAA139	M9377	43	$1,240	G4-7UX1	2.25
5KS143XAA140	M9378	43	$1,384	G4-7UX1	2.25
5KS143XAA145	M9400	43	$1,408	G4-7UX1	7.29
5KS143XAA146	M9402	43	$1,457	G4-7UX1	7.29
5KS143XAA200	M520	43	$1,145	G4-7UX1	2.25
5KS143XAA2008	M9401	43	$1,392	G4-7UX1	7.29
5KS143XAA2024	M9540	43	$1,145	G4-7UX1	2.25
5KS143XAA204	M353	43	$1,020	G4-7UX1	2.19
5KS143XAA208	M352	43	$1,020	G4-7UX1	2.19
5KS143XAA295	M9140	43	$1,145	G4-7UX1	2.25
5KS143XAA304	M355	43	$1,008	G4-7UX1	2.19
5KS143XAA308	M354	43	$1,008	G4-7UX1	2.19
5KS143XAA404	M9345	43	$892	G4-7UX1	2.19
5KS143XAA408	M9344	43	$892	G4-7UX1	2.19
5KS145ATE102	E717	58	$428	G4-7D$Z1	1.2
5KS145ATE105	E719	60	$480	G4-7D$Z1	1.2
5KS145ATE202	E710	56	$363	G4-7D$Z1	1.2
5KS145ATE202F2	E793	56	$363	G4-7D$Z1	1.2
5KS145ATE202F2RG3	E7053	56	$776	G4-7D$Z1	1.21
5KS145ATE202RG3	E7052	56	$776	G4-7D$Z1	1.21
5KS145ATE205	E718	58	$401	G4-7D$Z1	1.2
5KS145ATE205F2	E794	58	$401	G4-7D$Z1	1.2
5KS145ATE205F2RG3	E7055	58	$826	G4-7D$Z1	1.21
5KS145ATE205RG3	E7054	58	$826	G4-7D$Z1	1.21
5KS145ATE305	E708	58	$428	G4-7D$Z1	1.2
5KS145SAA104	M491	50	$1,038	G4-7U1	2.2
5KS145SAA105	M490	50	$1,038	G4-7U1	2.2

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS145SAA108	M9172	50	$1,038	G4-7U1	2.2
5KS145SAA200	M479	50	$1,035	G4-7U1	2.8
5KS145SAA202	M500	50	$1,130	G4-7U1	2.8
5KS145SAA204	M489	50	$1,026	G4-7U1	2.2
5KS145SAA205	M488	50	$1,026	G4-7U1	2.2
5KS145SAA208	M494	50	$1,026	G4-7U1	2.2
5KS145SAA221	M492	50	$932	G4-7U1	2.2
5KS145SAA222	M464	50	$932	G4-7U1	2.2
5KS145SAA223	M493	50	$932	G4-7U1	2.2
5KS145SAA224	M499	50	$1,035	G4-7U1	2.8
5KS145SAA302	M498	50	$1,143	G4-7U1	2.8
5KS145SAA304	M485	50	$1,040	G4-7U1	2.2
5KS145SAA305	M484	50	$1,040	G4-7U1	2.2
5KS145SAA308	M476	50	$1,040	G4-7U1	2.2
5KS145SAA404	M477	50	$1,352	G4-7U1	2.2
5KS145SAA405	M460	50	$1,352	G4-7U1	2.2
5KS145SAA408	M9170	50	$1,352	G4-7U1	2.2
5KS145STE104	M7502	63	$639	G4-7S$P1	1.9
5KS145STE105	M7702	63	$639	G4-7S$P1	1.9
5KS145STE204	M7524	60	$554	G4-7S$P1	1.9
5KS145STE205	M7725	60	$609	G4-7S$P1	1.9
5KS145STE205F2RG3	M7555	60	$1,079	G4-7S$P1	1.23
5KS145STE205RG3	M7554	60	$1,079	G4-7S$P1	1.23
5KS145STE207	M7525	60	$609	G4-7S$P1	1.9
5KS145STE209	M7724	60	$554	G4-7S$P1	1.9
5KS145STE209F2RG3	M7553	60	$1,005	G4-7S$P1	1.23
5KS145STE209RG3	M7552	60	$1,005	G4-7S$P1	1.23
5KS145STE222	M7739	62	$585	G4-7S$P1	1.18
5KS145STE229	M7740	62	$660	G4-7S$P1	1.18
5KS145STE305	M7540	51	$660	G4-7S$P1	1.9
5KS145XAA104	M8908	43	$1,293	G4-7UX1	2.19
5KS145XAA108	M8907	43	$1,293	G4-7UX1	2.19
5KS145XAA143	M9379	50	$1,473	G4-7UX1	2.25
5KS145XAA145	M9405	50	$1,692	G4-7UX1	7.29
5KS145XAA200	M521	50	$1,286	G4-7UX1	2.25
5KS145XAA2009	M9403	50	$1,542	G4-7UX1	7.29
5KS145XAA2010	M9406	50	$1,645	G4-7UX1	7.29
5KS145XAA2028	M9541	50	$1,286	G4-7UX1	2.25
5KS145XAA2029	M9542	50	$1,377	G4-7UX1	2.25
5KS145XAA204	M360	50	$1,157	G4-7UX1	2.19
5KS145XAA208	M359	50	$1,157	G4-7UX1	2.19
5KS145XAA220	M361	50	$1,250	G4-7UX1	2.19
5KS145XAA222	M526	50	$1,377	G4-7UX1	2.25
5KS145XAA223	M362	50	$1,250	G4-7UX1	2.19
5KS145XAA295	M495	50	$1,377	G4-7UX1	2.25
5KS145XAA304	M364	50	$1,092	G4-7UX1	2.19
5KS145XAA308	M363	50	$1,092	G4-7UX1	2.19
5KS145XAA404	M9346	50	$1,662	G4-7UX1	2.19
5KS145XAA408	M8901	50	$1,662	G4-7UX1	2.19
5KS182ATE105	E721	72	$584	G4-7D$Z1	1.2
5KS182ATE105F2	E797	72	$584	G4-7D$Z1	1.2
5KS182ATE204	E7635	72	$416	G4-7D$Z1	1.2
5KS182ATE205	E720	72	$416	G4-7D$Z1	1.2
5KS182ATE205F2	E796	72	$416	G4-7D$Z1	1.2
5KS182ATE205F2RG3	E7057	72	$846	G4-7D$Z1	1.21
5KS182ATE205RG3	E7056	72	$846	G4-7D$Z1	1.21
5KS182ATE206	E7714	72	$416	G4-7D$Z1	1.2
5KS182ATE305	E7707	72	$470	G4-7D$Z1	1.2

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS182CAA104	E9606	76	$1,035	G6-7XP$	5.2
5KS182CAA105	E9605	76	$1,035	G6-7XP$	5.2
5KS182CAA204	E9608	76	$1,007	G6-7XP$	5.2
5KS182CAA205	E9607	76	$1,007	G6-7XP$	5.2
5KS182CAA304	E9602	76	$1,043	G6-7XP$	5.2
5KS182CAA305	E9601	76	$1,043	G6-7XP$	5.2
5KS182SAA100	M9945	76	$1,134	G4-7U1	2.8
5KS182SAA104	M9715	76	$1,001	G4-7U1	2.3
5KS182SAA105	M9713	76	$1,001	G4-7U1	2.3
5KS182SAA108	M9939	76	$1,001	G4-7U1	2.3
5KS182SAA200	M9889	76	$1,109	G4-7U1	2.8
5KS182SAA204	M9711	76	$975	G4-7U1	2.3
5KS182SAA205	M241	76	$975	G4-7U1	2.3
5KS182SAA208	M9941	76	$975	G4-7U1	2.3
5KS182SAA300	M9946	76	$1,026	G4-7U1	2.8
5KS182SAA304	M9703	76	$1,034	G4-7U1	2.2
5KS182SAA305	M9702	76	$1,034	G4-7U1	2.2
5KS182SAA308	M9943	76	$1,034	G4-7U1	2.2
5KS182SAA404	M9872	76	$1,229	G4-7U1	2.2
5KS182SAA405	M9871	76	$1,229	G4-7U1	2.2
5KS182SAA408	M9887	76	$1,229	G4-7U1	2.2
5KS182SAE123	V960	76	$1,198	G6-7VIL	7.18
5KS182SAE226	V980	76	$1,100	G6-7VIL	7.18
5KS182STE104	M7503	82	$719	G4-7S$P1	1.9
5KS182STE105	M7703	82	$719	G4-7S$P1	1.9
5KS182STE122	M7715	118	$758	G4-7S$P1	1.18
5KS182STE204	M7526	86	$690	G4-7S$P1	1.9
5KS182STE205	M7726	86	$675	G4-7S$P1	1.9
5KS182STE205F2RG3	M7557	86	$1,167	G4-7S$P1	1.23
5KS182STE205RG3	M7556	86	$1,167	G4-7S$P1	1.23
5KS182STE222	M7741	118	$728	G4-7S$P1	1.18
5KS182STE305	M7541	93	$750	G4-7S$P1	1.9
5KS182XAA100	M8925	76	$1,335	G4-7UX1	2.25
5KS182XAA104	M9488	76	$1,178	G4-7UX1	2.19
5KS182XAA108	M9418	76	$1,178	G4-7UX1	2.19
5KS182XAA138	M9408	76	$1,664	G4-7UX1	7.29
5KS182XAA144	M9543	76	$1,335	G4-7UX1	2.25
5KS182XAA200	M8909	76	$1,263	G4-7UX1	2.25
5KS182XAA2004	M9409	76	$1,592	G4-7UX1	7.29
5KS182XAA2026	M9544	76	$1,263	G4-7UX1	2.25
5KS182XAA204	M9489	76	$1,112	G4-7UX1	2.19
5KS182XAA208	M9419	76	$1,112	G4-7UX1	2.19
5KS182XAA300	M8926	76	$1,184	G4-7UX1	2.25
5KS182XAA304	M9483	76	$1,194	G4-7UX1	2.19
5KS182XAA308	M9414	76	$1,194	G4-7UX1	2.19
5KS182XAA326	M9404	76	$1,583	G4-7UX1	7.29
5KS182XAA404	M9482	76	$1,334	G4-7UX1	2.19
5KS182XAA408	M9413	76	$1,334	G4-7UX1	2.19
5KS182XAE5420	V854	76	$1,818	G6-7VIL	7.23
5KS182XAE5723	V768	76	$1,913	G6-7VIL	7.22
5KS182XAE6421	V868	76	$1,791	G6-7VIL	7.23
5KS182XAE6722	V780	76	$1,885	G6-7VIL	7.22
5KS184ATE105	E723	91	$840	G4-7D$Z1	1.2
5KS184ATE105F2	E799	91	$840	G4-7D$Z1	1.2
5KS184ATE204	E7808	91	$584	G4-7D$Z1	1.2
5KS184ATE205	E722	91	$584	G4-7D$Z1	1.2
5KS184ATE205F2	E798	91	$584	G4-7D$Z1	1.2
5KS184ATE205F2RG3	E7059	91	$1,070	G4-7D$Z1	1.21

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS184ATE205RG3	E7058	91	$1,070	G4-7D$Z1	1.21
5KS184ATE206	E7716	91	$584	G4-7D$Z1	1.2
5KS184ATE305	E7710	91	$603	G4-7D$Z1	1.2
5KS184CAA104	E9612	101	$1,229	G6-7XP$	5.2
5KS184CAA105	E9611	101	$1,229	G6-7XP$	5.2
5KS184CAA204	E9614	101	$1,181	G6-7XP$	5.2
5KS184CAA205	E9613	101	$1,181	G6-7XP$	5.2
5KS184CAA304	E9604	101	$1,164	G6-7XP$	5.2
5KS184CAA305	E9603	101	$1,164	G6-7XP$	5.2
5KS184SAA100	M9947	101	$1,188	G4-7U1	2.8
5KS184SAA104	M9722	101	$1,068	G4-7U1	2.3
5KS184SAA105	M240	101	$1,068	G4-7U1	2.3
5KS184SAA108	M9940	101	$1,068	G4-7U1	2.3
5KS184SAA200	M9890	101	$1,146	G4-7U1	2.8
5KS184SAA204	M9718	101	$1,026	G4-7U1	2.3
5KS184SAA205	M242	101	$1,026	G4-7U1	2.3
5KS184SAA208	M9942	101	$1,026	G4-7U1	2.3
5KS184SAA300	M9948	101	$1,133	G4-7U1	2.8
5KS184SAA304	M9706	101	$1,104	G4-7U1	2.2
5KS184SAA305	M9704	101	$1,104	G4-7U1	2.2
5KS184SAA308	M9944	101	$1,104	G4-7U1	2.2
5KS184SAA404	M9874	101	$1,451	G4-7U1	2.2
5KS184SAA405	M9873	101	$1,451	G4-7U1	2.2
5KS184SAA408	M9888	101	$1,451	G4-7U1	2.2
5KS184SAE120	V961	101	$1,378	G6-7VIL	7.18
5KS184SAE228	V981	101	$1,273	G6-7VIL	7.18
5KS184SAE5020	V898	200	$2,395	G6-7VHSB	7.13
5KS184SAE6021	V899	200	$2,326	G5-7VHSB	7.13
5KS184STE104	M7504	106	$890	G4-7S$P1	1.9
5KS184STE105	M7704	106	$890	G4-7S$P1	1.9
5KS184STE122	M7716	118	$930	G4-7S$P1	1.18
5KS184STE204	M7527	111	$788	G4-7S$P1	1.9
5KS184STE205	M7727	111	$788	G4-7S$P1	1.9
5KS184STE205F2RG3	M7559	111	$1,317	G4-7S$P1	1.23
5KS184STE205RG3	M7558	111	$1,317	G4-7S$P1	1.23
5KS184STE222	M7742	118	$863	G4-7S$P1	1.18
5KS184STE305	M7542	106	$840	G4-7S$P1	1.9
5KS184XAA100	M8927	101	$1,484	G4-7UX1	2.25
5KS184XAA1022	M9411	101	$1,835	G4-7UX1	7.29
5KS184XAA104	M9492	101	$1,334	G4-7UX1	2.19
5KS184XAA1044	M9545	101	$1,484	G4-7UX1	2.25
5KS184XAA108	M9422	101	$1,334	G4-7UX1	2.19
5KS184XAA200	M8910	101	$1,320	G4-7UX1	2.25
5KS184XAA2031	M9412	101	$1,669	G4-7UX1	7.29
5KS184XAA204	M9493	101	$1,182	G4-7UX1	2.20
5KS184XAA2067	M9546	101	$1,320	G4-7UX1	2.25
5KS184XAA208	M9423	101	$1,182	G4-7UX1	2.19
5KS184XAA221W8	M6621	101	$1,973	G4-7UXHE	2.35
5KS184XAA300	M8928	101	$1,307	G4-7UX1	2.25
5KS184XAA304	M9486	101	$1,278	G4-7UX1	2.19
5KS184XAA308	M9416	101	$1,278	G4-7UX1	2.19
5KS184XAA325	M9407	101	$1,775	G4-7UX1	7.29
5KS184XAA404	M9485	101	$1,577	G4-7UX1	2.19
5KS184XAA408	M9415	101	$1,577	G4-7UX1	2.19
5KS184XAE5422	V853	101	$2,347	G6-7VIL	7.23
5KS184XAE5724	V769	101	$2,471	G6-7VIL	7.22
5KS184XAE5724	V781	101	$2,282	G6-7VIL	7.22
5KS184XAE6421	V867	101	$2,168	G6-7VIL	7.23

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS213ATE105	E750	163	$998	G4-7D$Z1	1.3
5KS213ATE105F2	E7016	163	$998	G4-7D$Z1	1.3
5KS213ATE204	E7640	157	$807	G4-7D$Z1	1.2
5KS213ATE205	E730	128	$807	G4-7D$Z1	1.2
5KS213ATE205F2	E7010	128	$807	G4-7D$Z1	1.2
5KS213ATE205F2RG3	E7061	128	$1,368	G4-7D$Z1	1.21
5KS213ATE205RG3	E7060	128	$1,368	G4-7D$Z1	1.21
5KS213ATE206	E7729	128	$807	G4-7D$Z1	1.2
5KS213ATE305	E7011	128	$771	G4-7D$Z1	1.2
5KS213CAA104	E9617	200	$1,605	G6-7XP$	5.2
5KS213CAA105	E9661	200	$1,605	G6-7XP$	5.2
5KS213CAA204	E9618	200	$1,595	G6-7XP$	5.2
5KS213CAA205	E9669	200	$1,595	G6-7XP$	5.2
5KS213CAA304	E9610	200	$1,415	G6-7XP$	5.2
5KS213CAA305	E9678	200	$1,415	G6-7XP$	5.2
5KS213DAE6038	V891	172	$2,322	G5-7VHSB	7.8
5KS213DAE6039	V892	172	$2,408	G5-7VHSB	7.8
5KS213SAA100	M9949	200	$1,655	G4-7U1	2.8
5KS213SAA104	M9728	200	$1,524	G4-7U1	2.3
5KS213SAA105	M9144	200	$1,524	G4-7U1	2.3
5KS213SAA108	M990	200	$1,524	G4-7U1	2.3
5KS213SAA200	M9891	200	$1,646	G4-7U1	2.8
5KS213SAA204	M9730	200	$1,515	G4-7U1	2.3
5KS213SAA205	M9145	200	$1,515	G4-7U1	2.3
5KS213SAA208	M9911	200	$1,515	G4-7U1	2.3
5KS213SAA300	M9950	200	$1,350	G4-7U1	2.8
5KS213SAA304	M9712	200	$1,230	G4-7U1	2.3
5KS213SAA305	M9142	200	$1,230	G4-7U1	2.3
5KS213SAA308	M9111	200	$1,230	G4-7U1	2.3
5KS213SAA404	M9876	200	$1,733	G4-7U1	2.2
5KS213SAA405	M9875	200	$1,733	G4-7U1	2.2
5KS213SAA408	M9705	200	$1,733	G4-7U1	2.2
5KS213SAE133	V962	200	$1,692	G6-7VIL	7.18
5KS213SAE230	V982	200	$1,625	G6-7VIL	7.18
5KS213SAE5028	V900	200	$2,434	G5-7VHSB	7.13
5KS213SAE6031	V901	200	$2,345	G5-7VHSB	7.13
5KS213STE104	M7505	149	$1,076	G4-7S$P1	1.9
5KS213STE105	M7705	200	$1,076	G4-7S$P1	1.9
5KS213STE122	M7717	202	$1,215	G4-7S$P1	1.18
5KS213STE204	M7528	158	$1,070	G4-7S$P1	1.9
5KS213STE205	M7728	158	$1,070	G4-7S$P1	1.9
5KS213STE205F2RG3	M7561	158	$1,693	G4-7S$P1	1.23
5KS213STE205RG3	M7560	158	$1,693	G4-7S$P1	1.23
5KS213STE222	M7743	202	$1,215	G4-7S$P1	1.18
5KS213STE305	M7543	139	$1,020	G4-7S$P1	1.9
5KS213XAA100	M8929	200	$1,898	G4-7UX1	2.25
5KS213XAA1023	M9501	200	$2,326	G4-7UX1	7.29
5KS213XAA104	M9496	200	$1,740	G4-7UX1	2.20
5KS213XAA1044	M9547	200	$1,898	G4-7UX1	2.25
5KS213XAA108	M9426	200	$1,740	G4-7UX1	2.20
5KS213XAA200	M8911	200	$1,878	G4-7UX1	2.25
5KS213XAA204	M9497	200	$1,730	G4-7UX1	2.20
5KS213XAA2049	M9502	200	$2,315	G4-7UX1	7.29
5KS213XAA2074	M9548	200	$1,878	G4-7UX1	2.25
5KS213XAA208	M9427	200	$1,730	G4-7UX1	2.20
5KS213XAA220W8	M6622	200	$2,565	G4-7UXHE	2.35
5KS213XAA304	M9490	200	$1,425	G4-7UX1	2.19
5KS213XAA308	M9420	200	$1,425	G4-7UX1	2.19

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS213XAA329	M9380	200	$1,203	G4-7UX1	2.25
5KS213XAA335	M9410	200	$1,980	G4-7UX1	7.29
5KS213XAA404	M9487	200	$2,031	G4-7UX1	2.19
5KS213XAA408	M9417	200	$2,031	G4-7UX1	2.19
5KS213XAE5422	V855	200	$2,779	G6-7VIL	7.23
5KS213XAE5724	V770	200	$2,926	G6-7VIL	7.22
5KS213XAE6423	V866	200	$2,690	G6-7VIL	7.23
5KS213XAE6722	V782	200	$2,831	G6-7VIL	7.22
5KS215ATE105	E751	157	$1,263	G4-7D$Z1	1.3
5KS215ATE105F2	E7020	157	$1,263	G4-7D$Z1	1.3
5KS215ATE204	E7643	157	$975	G4-7D$Z1	1.3
5KS215ATE205	E731	157	$975	G4-7D$Z1	1.3
5KS215ATE205F2	E7018	157	$975	G4-7D$Z1	1.3
5KS215ATE205F2RG3	E7063	157	$1,592	G4-7D$Z1	1.21
5KS215ATE205RG3	E7062	157	$1,592	G4-7D$Z1	1.21
5KS215ATE206	E7734	157	$975	G4-7D$Z1	1.3
5KS215ATE305	E7012	157	$965	G4-7D$Z1	1.2
5KS215CAA104	E9620	220	$1,881	G6-7XP$	5.2
5KS215CAA105	E9662	220	$1,881	G6-7XP$	5.2
5KS215CAA204	E9621	220	$1,779	G6-7XP$	5.2
5KS215CAA205	E9671	220	$1,779	G6-7XP$	5.2
5KS215CAA304	E9616	220	$2,010	G6-7XP$	5.2
5KS215CAA305	E9679	220	$2,010	G6-7XP$	5.2
5KS215DAE6026	V893	206	$2,452	G5-7VHSB	7.8
5KS215SAA100	M9951	220	$1,755	G4-7U1	2.8
5KS215SAA104	M9733	220	$1,635	G4-7U1	2.3
5KS215SAA105	M9147	220	$1,635	G4-7U1	2.3
5KS215SAA108	M991	220	$1,635	G4-7U1	2.3
5KS215SAA200	M9892	220	$1,667	G4-7U1	2.8
5KS215SAA204	M9738	220	$1,547	G4-7U1	2.3
5KS215SAA205	M9148	220	$1,547	G4-7U1	2.3
5KS215SAA208	M9912	220	$1,547	G4-7U1	2.3
5KS215SAA300	M9952	220	$1,868	G4-7U1	2.8
5KS215SAA304	M9717	220	$1,748	G4-7U1	2.3
5KS215SAA305	M9143	220	$1,748	G4-7U1	2.3
5KS215SAA308	M9112	220	$1,748	G4-7U1	2.3
5KS215SAA404	M9878	220	$2,165	G4-7U1	2.3
5KS215SAA405	M9877	220	$2,165	G4-7U1	2.3
5KS215SAA408	M9708	220	$2,165	G4-7U1	2.3
5KS215SAE184	V963	220	$1,842	G6-7VIL	7.18
5KS215SAE226	V983	220	$1,829	G6-7VIL	7.18
5KS215SAE5023	V902	220	$2,637	G5-7VHSB	7.13
5KS215SAE6025	V903	220	$2,545	G5-7VHSB	7.13
5KS215STE104	M7506	184	$1,257	G4-7S$P1	1.9
5KS215STE105	M7706	184	$1,257	G4-7S$P1	1.9
5KS215STE122	M7718	202	$1,449	G4-7S$P1	1.18
5KS215STE204	M7529	197	$1,289	G4-7S$P1	1.9
5KS215STE205	M7729	197	$1,289	G4-7S$P1	1.9
5KS215STE205F2RG3	M7563	197	$1,890	G4-7S$P1	1.23
5KS215STE205RG3	M7562	197	$1,890	G4-7S$P1	1.23
5KS215STE222	M7744	202	$1,449	G4-7S$P1	1.18
5KS215STE305	M7544	168	$1,425	G4-7S$P1	1.9
5KS215XAA100	M8931	220	$2,021	G4-7UX1	2.25
5KS215XAA1018	M9504	220	$2,484	G4-7UX1	7.29
5KS215XAA104	M9563	220	$1,883	G4-7UX1	2.20
5KS215XAA1040	M9549	220	$2,021	G4-7UX1	2.25
5KS215XAA108	M9430	220	$1,883	G4-7UX1	2.20
5KS215XAA200	M8912	220	$2,079	G4-7UX1	2.25

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS215XAA204	M9564	220	$1,929	G4-7UX1	2.20
5KS215XAA2043	M9505	220	$2,534	G4-7UX1	7.29
5KS215XAA2070	M9550	220	$2,079	G4-7UX1	2.25
5KS215XAA208	M9431	220	$1,929	G4-7UX1	2.20
5KS215XAA220W8	M6623	220	$2,684	G4-7UXHE	2.35
5KS215XAA300	M8932	220	$2,145	G4-7UX1	2.25
5KS215XAA304	M9494	220	$2,007	G4-7UX1	2.20
5KS215XAA308	M9424	220	$2,007	G4-7UX1	2.20
5KS215XAA341	M9500	220	$2,620	G4-7UX1	7.29
5KS215XAA404	M9491	220	$2,621	G4-7UX1	2.19
5KS215XAA408	M9421	220	$2,621	G4-7UX1	2.19
5KS215XAE5421	V856	220	$2,899	G6-7VIL	7.23
5KS215XAE5721	V771	220	$3,051	G6-7VIL	7.22
5KS215XAE6422	V865	220	$3,018	G6-7VIL	7.23
5KS215XAE6721	V783	220	$3,177	G6-7VIL	7.22
5KS254ATE105	E752	260	$1,490	G4-7D$Z1	1.3
5KS254ATE204	E7646	260	$1,296	G4-7D$Z1	1.3
5KS254ATE205	E732	260	$1,296	G4-7D$Z1	1.3
5KS254ATE205F2	E7021	260	$1,296	G4-7D$Z1	1.3
5KS254ATE205F2RG3	E7065	260	$2,030	G4-7D$Z1	1.21
5KS254ATE205RG3	E7064	260	$2,030	G4-7D$Z1	1.21
5KS254ATE206	E7744	260	$1,296	G4-7D$Z1	1.3
5KS254ATE305	E7013	260	$1,257	G4-7D$Z1	1.2
5KS254CAA104	E9623	315	$2,468	G6-7XP$	5.2
5KS254CAA105	E9663	315	$2,468	G6-7XP$	5.2
5KS254CAA204	E9624	315	$2,340	G6-7XP$	5.2
5KS254CAA205	E9672	315	$2,340	G6-7XP$	5.2
5KS254CAA304	E9619	315	$2,553	G6-7XP$	5.2
5KS254CAA305	E9680	315	$2,553	G6-7XP$	5.2
5KS254DAE6030	V894	280	$2,478	G5-7VHSB	7.8
5KS254SAA100	M9953	315	$2,390	G4-7U1	2.8
5KS254SAA104	M9741	315	$2,244	G4-7U1	2.4
5KS254SAA105	M9150	315	$2,244	G4-7U1	2.4
5KS254SAA108	M992	315	$2,244	G4-7U1	2.4
5KS254SAA200	M9893	315	$2,283	G4-7U1	2.8
5KS254SAA204	M9745	315	$2,127	G4-7U1	2.4
5KS254SAA205	M9151	315	$2,127	G4-7U1	2.4
5KS254SAA208	M9913	315	$2,127	G4-7U1	2.4
5KS254SAA300	M9954	315	$2,477	G4-7U1	2.8
5KS254SAA304	M9726	315	$2,321	G4-7U1	2.3
5KS254SAA305	M9146	315	$2,321	G4-7U1	2.3
5KS254SAA308	M9113	315	$2,321	G4-7U1	2.3
5KS254SAA404	M9880	315	$2,876	G4-7U1	2.3
5KS254SAA405	M9879	315	$2,876	G4-7U1	2.3
5KS254SAA408	M9719	315	$2,876	G4-7U1	2.3
5KS254SAE126	V964	315	$2,405	G6-7VIL	7.18
5KS254SAE225	V984	315	$2,337	G6-7VIL	7.18
5KS254SAE5026	V904	315	$2,957	G5-7VHSB	7.13
5KS254SAE6033	V905	315	$3,589	G5-7VHSB	7.13
5KS254STE104	M7507	279	$1,727	G4-7S$P1	1.9
5KS254STE105	M7707	279	$1,727	G4-7S$P1	1.9
5KS254STE122	M7719	287	$1,875	G4-7S$P1	1.18
5KS254STE204	M7530	277	$1,697	G4-7S$P1	1.9
5KS254STE205	M7730	277	$1,697	G4-7S$P1	1.9
5KS254STE205F2RG3	M7565	277	$2,425	G4-7S$P1	1.23
5KS254STE205RG3	M7564	277	$2,425	G4-7S$P1	1.23
5KS254STE222	M7745	275	$1,890	G4-7S$P1	1.18
5KS254STE305	M7545	234	$1,800	G4-7S$P1	1.9

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS254XAA100	M8933	315	$2,768	G4-7UX1	2.25
5KS254XAA104	M9567	315	$2,588	G4-7UX1	2.20
5KS254XAA1044	M9507	315	$3,358	G4-7UX1	7.29
5KS254XAA1076	M9551	315	$2,768	G4-7UX1	2.25
5KS254XAA108	M9434	315	$2,588	G4-7UX1	2.20
5KS254XAA200	M8913	315	$2,727	G4-7UX1	2.25
5KS254XAA204	M9568	315	$2,541	G4-7UX1	2.20
5KS254XAA2059	M9508	315	$3,307	G4-7UX1	7.29
5KS254XAA208	M9435	315	$2,541	G4-7UX1	2.20
5KS254XAA2102	M9552	315	$2,727	G4-7UX1	2.25
5KS254XAA221W8	M6624	315	$3,183	G4-7UXHE	2.35
5KS254XAA300	M8934	315	$2,847	G4-7UX1	2.25
5KS254XAA304	M9498	315	$2,667	G4-7UX1	2.20
5KS254XAA308	M9428	315	$2,667	G4-7UX1	2.20
5KS254XAA335	M9503	315	$3,544	G4-7UX1	7.29
5KS254XAA404	M9495	315	$3,615	G4-7UX1	2.20
5KS254XAA408	M9425	315	$3,615	G4-7UX1	2.20
5KS254XAE5424	V857	315	$3,341	G6-7VIL	7.23
5KS254XAE5722	V772	315	$3,517	G6-7VIL	7.22
5KS254XAE6422	V864	315	$3,464	G6-7VIL	7.23
5KS254XAE6727	V784	315	$3,646	G6-7VIL	7.22
5KS256ATE105	E753	310	$1,818	G4-7D$Z1	1.3
5KS256ATE204	E7649	310	$1,583	G4-7D$Z1	1.3
5KS256ATE205	E733	310	$1,583	G4-7D$Z1	1.3
5KS256ATE205F2	E7025	310	$1,583	G4-7D$Z1	1.3
5KS256ATE205F2RG3	E7067	310	$2,313	G4-7D$Z1	1.21
5KS256ATE205RG3	E7066	310	$2,313	G4-7D$Z1	1.21
5KS256ATE206	E7754	310	$1,583	G4-7D$Z1	1.3
5KS256ATE305	E7014	310	$1,472	G4-7D$Z1	1.3
5KS256CAA104	E9626	350	$2,972	G6-7XP$	5.2
5KS256CAA105	E9664	350	$2,972	G6-7XP$	5.2
5KS256CAA204	E9627	350	$2,796	G6-7XP$	5.2
5KS256CAA205	E9673	350	$2,796	G6-7XP$	5.2
5KS256CAA304	E9622	350	$3,132	G6-7XP$	5.2
5KS256CAA305	E9686	350	$3,132	G6-7XP$	5.2
5KS256DAE6030	V895	315	$2,777	G5-7VHSB	7.8
5KS256SAA100	M9955	350	$2,858	G4-7U1	2.8
5KS256SAA104	M9749	350	$2,702	G4-7U1	2.4
5KS256SAA105	M9153	350	$2,702	G4-7U1	2.4
5KS256SAA108	M993	350	$2,702	G4-7U1	2.4
5KS256SAA200	M9894	350	$2,697	G4-7U1	2.8
5KS256SAA204	M9751	350	$2,541	G4-7U1	2.4
5KS256SAA205	M9154	350	$2,541	G4-7U1	2.4
5KS256SAA208	M9914	350	$2,541	G4-7U1	2.4
5KS256SAA300	M9956	350	$3,003	G4-7U1	2.8
5KS256SAA304	M9737	350	$2,847	G4-7U1	2.3
5KS256SAA305	M9149	350	$2,847	G4-7U1	2.3
5KS256SAA308	M9114	350	$2,847	G4-7U1	2.3
5KS256SAA404	M9882	350	$3,635	G4-7U1	2.3
5KS256SAA405	M9881	350	$3,635	G4-7U1	2.3
5KS256SAA408	M9724	350	$3,635	G4-7U1	2.3
5KS256SAE129	V965	350	$2,632	G6-7VIL	7.18
5KS256SAE225	V985	350	$2,665	G6-7VIL	7.18
5KS256SAE6037	V906	350	$3,955	G5-7VHSB	7.13
5KS256STE104	M7508	336	$2,139	G4-7S$P1	1.10
5KS256STE105	M7708	336	$2,139	G4-7S$P1	1.10
5KS256STE122	M7720	379	$2,460	G4-7S$P1	1.18
5KS256STE204	M7531	321	$2,114	G4-7S$P1	1.10

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS256STE205	M7731	321	$2,114	G4-7S$P1	1.10
5KS256STE205F2RG3	M7567	321	$2,836	G4-7S$P1	1.23
5KS256STE205RG3	M7566	321	$2,836	G4-7S$P1	1.23
5KS256STE222	M7746	361	$2,460	G4-7S$P1	1.18
5KS256STE305	M7546	265	$2,430	G4-7S$P1	1.9
5KS256XAA100	M8935	350	$3,387	G4-7UX1	2.26
5KS256XAA1014	M9553	350	$3,387	G4-7UX1	2.26
5KS256XAA104	M9571	350	$3,203	G4-7UX1	2.20
5KS256XAA108	M9438	350	$3,203	G4-7UX1	2.20
5KS256XAA198	M9513	350	$4,035	G4-7UX1	7.29
5KS256XAA200	M8914	350	$3,362	G4-7UX1	2.26
5KS256XAA204	M9572	350	$3,167	G4-7UX1	2.20
5KS256XAA2041	M9515	350	$3,995	G4-7UX1	7.29
5KS256XAA2068	M9554	350	$3,362	G4-7UX1	2.26
5KS256XAA208	M9439	350	$3,167	G4-7UX1	2.20
5KS256XAA223W8	M6625	350	$3,659	G4-7UXHE	2.35
5KS256XAA300	M8936	350	$3,438	G4-7UX1	2.25
5KS256XAA304	M9565	350	$3,260	G4-7UX1	2.20
5KS256XAA308	M9432	350	$3,260	G4-7UX1	2.20
5KS256XAA327	M9506	350	$4,097	G4-7UX1	7.29
5KS256XAA404	M9499	350	$4,577	G4-7UX1	2.20
5KS256XAA408	M9429	350	$4,577	G4-7UX1	2.20
5KS256XAE5420	V858	350	$3,634	G6-7VIL	7.23
5KS256XAE5725	V773	350	$3,825	G6-7VIL	7.22
5KS256XAE6422	V863	350	$3,933	G6-7VIL	7.23
5KS256XAE6721	V785	350	$4,141	G6-7VIL	7.22
5KS284ATE115	E754	420	$2,169	G4-7D$Z1	1.3
5KS284ATE204	E7652	394	$1,839	G4-7D$Z1	1.3
5KS284ATE205	E734	394	$1,839	G4-7D$Z1	1.3
5KS284ATE205F2	E7027	394	$1,839	G4-7D$Z1	1.3
5KS284ATE205F2RG3	E7069	294	$2,585	G4-7D$Z1	1.21
5KS284ATE205RG3	E7068	294	$2,585	G4-7D$Z1	1.21
5KS284ATE206	E7757	394	$1,839	G4-7D$Z1	1.3
5KS284ATE305	E7015	394	$1,895	G4-7D$Z1	1.3
5KS284CAA114	E9629	460	$3,723	G6-7XP$	5.2
5KS284CAA115	E9665	460	$3,723	G6-7XP$	5.2
5KS284CAA204	E9630	460	$3,567	G6-7XP$	5.2
5KS284CAA205	E9674	460	$3,567	G6-7XP$	5.2
5KS284CAA304	E9625	460	$4,167	G6-7XP$	5.2
5KS284CAA305	E9682	460	$4,167	G6-7XP$	5.2
5KS284DAE6032A	V896	420	$3,193	G5-7VHSB	7.8
5KS284SAA100	M9903	460	$3,605	G4-7U1	2.8
5KS284SAA104	M9176	460	$3,384	G4-7U1	2.4
5KS284SAA105	M9174	460	$3,384	G4-7U1	2.4
5KS284SAA108	M9175	460	$3,384	G4-7U1	2.4
5KS284SAA114	M9838	460	$3,384	G4-7U1	2.4
5KS284SAA115	M9156	460	$3,384	G4-7U1	2.4
5KS284SAA118	M994	460	$3,384	G4-7U1	2.4
5KS284SAA200	M9895	460	$3,464	G4-7U1	2.8
5KS284SAA204	M9759	460	$3,243	G4-7U1	2.4
5KS284SAA205	M9157	460	$3,243	G4-7U1	2.4
5KS284SAA208	M9935	460	$3,243	G4-7U1	2.4
5KS284SAA300	M9901	460	$4,008	G4-7U1	2.8
5KS284SAA304	M9746	460	$3,788	G4-7U1	2.4
5KS284SAA305	M9152	460	$3,788	G4-7U1	2.4
5KS284SAA308	M9115	460	$3,788	G4-7U1	2.4
5KS284SAA404	M9884	460	$4,242	G4-7U1	2.3
5KS284SAA405	M9883	460	$4,242	G4-7U1	2.3

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS284SAA408	M9736	460	$4,242	G4-7U1	2.3
5KS284SAE129	V966	460	$3,007	G6-7VIL	7.18
5KS284SAE222	V986	460	$2,856	G6-7VIL	7.18
5KS284SAE6033	V907	460	$4573	G5-7VHSB	7.13
5KS284STE105	M7749	473	$2,456	G4-7S$P1	1.10
5KS284STE112	M7721	450	$2,925	G4-7S$P1	1.18
5KS284STE114	M7509	468	$2,456	G4-7S$P1	1.10
5KS284STE115	M7709	473	$2,456	G4-7S$P1	1.10
5KS284STE204	M7532	473	$2,343	G4-7S$P1	1.10
5KS284STE205	M7732	473	$2,343	G4-7S$P1	1.10
5KS284STE205RG3	M7568	473	$3,081	G4-7S$P1	1.23
5KS284STE222	M7747	450	$2,925	G4-7S$P1	1.18
5KS284STE305	M7547	348	$3,000	G4-7S$P1	1.9
5KS284XAA100	M8923	460	$4,206	G4-7UX1	2.26
5KS284XAA1007	M9555	460	$4,206	G4-7UX1	2.26
5KS284XAA104	M9348	460	$3,948	G4-7UX1	2.20
5KS284XAA108	M9347	460	$3,948	G4-7UX1	2.20
5KS284XAA114	M9575	460	$3,948	G4-7UX1	2.20
5KS284XAA118	M9442	460	$3,948	G4-7UX1	2.20
5KS284XAA139	M8951	460	$4,206	G4-7UX1	2.26
5KS284XAA186	M9517	460	$4,992	G4-7UX1	7.29
5KS284XAA187	M9518	460	$4,992	G4-7UX1	7.29
5KS284XAA200	M8915	460	$4,028	G4-7UX1	2.26
5KS284XAA2002	M9519	460	$4,797	G4-7UX1	7.29
5KS284XAA2036	M9556	460	$4,028	G4-7UX1	2.26
5KS284XAA204	M9576	460	$3,771	G4-7UX1	2.21
5KS284XAA208	M9443	460	$3,771	G4-7UX1	2.21
5KS284XAA218	M9383	460	$3,771	G4-7UX1	2.21
5KS284XAA220W8	M6626	460	$4,263	G4-7UXHE	2.35
5KS284XAA300	M8921	460	$4,575	G4-7UX1	2.25
5KS284XAA304	M9569	460	$4,323	G4-7UX1	2.20
5KS284XAA308	M9436	460	$4,323	G4-7UX1	2.20
5KS284XAA338	M9509	460	$5,404	G4-7UX1	7.29
5KS284XAA404	M9566	460	$5,426	G4-7UX1	2.20
5KS284XAA408	M9433	460	$5,426	G4-7UX1	2.20
5KS284XAE5425	V859	460	$3,864	G6-7VIL	7.23
5KS284XAE5721	V774	460	$4,067	G6-7VIL	7.22
5KS284XAE6421	V862	460	$4,388	G6-7VIL	7.23
5KS284XAE6720	V786	460	$4,619	G6-7VIL	7.22
5KS286ATE115	E755	445	$2,775	G4-7D$Z1	1.3
5KS286ATE204	E7654	436	$2,138	G4-7D$Z1	1.3
5KS286ATE205	E735	436	$2,138	G4-7D$Z1	1.3
5KS286ATE205F2	E7028	436	$2,138	G4-7D$Z1	1.3
5KS286ATE205F2RG3	E7071	436	$2,879	G4-7D$Z1	1.21
5KS286ATE205RG3	E7070	436	$2,879	G4-7D$Z1	1.21
5KS286ATE206	E7763	436	$2,138	G4-7D$Z1	1.3
5KS286ATE305	E7017	436	$2,324	G4-7D$Z1	1.3
5KS286CAA114	E9631	510	$4,377	G6-7XP$	5.3
5KS286CAA115	E9666	510	$4,377	G6-7XP$	5.3
5KS286CAA204	E9632	510	$4,167	G6-7XP$	5.3
5KS286CAA205	E9675	510	$4,167	G6-7XP$	5.3
5KS286CAA304	E9628	510	$5,087	G6-7XP$	5.2
5KS286CAA305	E9683	510	$5,087	G6-7XP$	5.2
5KS286DAE6032A	V897	470	$3,607	G5-7VHSB	7.8
5KS286DTT6011A	V3908	507	$2,785	G5-7VHSB	7.2
5KS286SAA100	M9904	510	$4,200	G4-7U1	2.8
5KS286SAA104	M9180	510	$3,980	G4-7U1	2.4
5KS286SAA105	M9178	510	$3,980	G4-7U1	2.4

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS286SAA108	M9179	510	$3,980	G4-7U1	2.4
5KS286SAA114	M9828	510	$3,980	G4-7U1	2.4
5KS286SAA115	M9159	510	$3,980	G4-7U1	2.4
5KS286SAA118	M995	510	$3,980	G4-7U1	2.4
5KS286SAA200	M9896	510	$4,007	G4-7U1	2.8
5KS286SAA204	M9764	510	$3,788	G4-7U1	2.4
5KS286SAA205	M9160	510	$3,788	G4-7U1	2.4
5KS286SAA208	M9937	510	$3,788	G4-7U1	2.4
5KS286SAA300	M9902	510	$4,845	G4-7U1	2.8
5KS286SAA304	M9755	510	$4,625	G4-7U1	2.4
5KS286SAA305	M9155	510	$4,625	G4-7U1	2.4
5KS286SAA308	M9117	510	$4,625	G4-7U1	2.4
5KS286SAA404	M9886	510	$5,526	G4-7U1	2.4
5KS286SAA405	M9885	510	$5,526	G4-7U1	2.4
5KS286SAA408	M9742	510	$5,526	G4-7U1	2.4
5KS286SAE131	V967	510	$3,320	G6-7VIL	7.18
5KS286SAE222	V987	510	$3,256	G6-7VIL	7.18
5KS286SAE6032	V908	510	$4,994	G5-7VHSB	7.13
5KS286STE112	M7722	450	$3,450	G4-7S$P1	1.18
5KS286STE114	M7510	513	$2,867	G4-7S$P1	1.10
5KS286STE115	M7710	518	$2,867	G4-7S$P1	1.10
5KS286STE204	M7533	499	$2,652	G4-7S$P1	1.10
5KS286STE205	M7733	499	$2,652	G4-7S$P1	1.10
5KS286STE205F2RG3	M7570	499	$3,385	G4-7S$P1	1.23
5KS286STE205RG3	M7569	499	$3,385	G4-7S$P1	1.23
5KS286STE222	M7748	450	$3,375	G4-7S$P1	1.18
5KS286STE305	M7548	373	$3,600	G4-7S$P1	1.10
5KS286XAA100	M8924	510	$4,865	G4-7UX1	2.26
5KS286XAA104	M9350	510	$4,610	G4-7UX1	2.21
5KS286XAA108	M9349	510	$4,610	G4-7UX1	2.21
5KS286XAA114	M9579	510	$4,610	G4-7UX1	2.21
5KS286XAA118	M9446	510	$4,610	G4-7UX1	2.21
5KS286XAA128	M8952	510	$4,865	G4-7UX1	2.26
5KS286XAA167	M9521	510	$5,720	G4-7UX1	7.29
5KS286XAA168	M9522	510	$5,720	G4-7UX1	7.29
5KS286XAA181	M9557	510	$4,865	G4-7UX1	2.26
5KS286XAA200	M8916	510	$4,637	G4-7UX1	2.26
5KS286XAA2010	M9523	510	$5,470	G4-7UX1	7.29
5KS286XAA2027	M9558	510	$4,637	G4-7UX1	2.26
5KS286XAA204	M9580	510	$4,383	G4-7UX1	2.21
5KS286XAA208	M9447	510	$4,383	G4-7UX1	2.21
5KS286XAA218	M9388	510	$4,383	G4-7UX1	2.21
5KS286XAA222W8	M6627	510	$4,875	G4-7UXHE	2.35
5KS286XAA300	M8922	510	$5,519	G4-7UX1	2.26
5KS286XAA304	M9573	510	$5,268	G4-7UX1	2.20
5KS286XAA308	M9440	510	$5,268	G4-7UX1	2.20
5KS286XAA332	M9516	510	$6,444	G4-7UX1	7.29
5KS286XAA404	M9570	510	$7,089	G4-7UX1	2.20
5KS286XAA408	M9437	510	$7,089	G4-7UX1	2.20
5KS286XAE5423	V860	510	$4,467	G6-7VIL	7.23
5KS286XAE5722	V775	510	$4,703	G6-7VIL	7.22
5KS286XAE6429	V861	510	$5,170	G6-7VIL	7.23
5KS286XAE6722	V787	510	$5,443	G6-7VIL	7.22
5KS324ATE115	E756	606	$3,299	G4-7D$Z1	1.4
5KS324ATE204	E7310	580	$2,658	G4-7D$Z1	1.3
5KS324ATE205	E736	480	$2,658	G4-7D$Z1	1.3
5KS324ATE205F2	E7030	480	$2,658	G4-7D$Z1	1.3
5KS324ATE205F2RG3	E7073	480	$3,736	G4-7D$Z1	1.21

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS324ATE205RG3	E7072	480	$3,736	G4-7D$Z1	1.21
5KS324ATE305	E7019	580	$2,757	G4-7D$Z1	1.3
5KS324CAG115	E9274	600	$6,254	G6-7X$P	5.3
5KS324CAG118	E9276	600	$6,254	G6-7X$P	5.3
5KS324CAG205	E9283	700	$6,123	G6-7X$P	5.3
5KS324CAG208	E9284	700	$6,123	G6-7X$P	5.3
5KS324CAG305	E9292	730	$6,577	G6-7X$P	5.2
5KS324CAG308	E9294	730	$6,577	G6-7X$P	5.2
5KS324DAE6022	V881	700	$4,203	G5-7VHSB	7.8
5KS324LAA129	M7650	670	$4,744	G4-7S$P1	1.18
5KS324LAA235	M7660	710	$4,705	G4-7S$P1	1.18
5KS324SAA104	M9183	640	$4,952	G4-7U1	2.5
5KS324SAA105	M9182	640	$4,952	G4-7U1	2.5
5KS324SAA108	M9820	640	$4,952	G4-7U1	2.5
5KS324SAA114	M9829	640	$4,952	G4-7U1	2.5
5KS324SAA115	M9162	640	$4,952	G4-7U1	2.5
5KS324SAA118	M996	640	$4,952	G4-7U1	2.5
5KS324SAA152	M8964	649	$5,271	G4-7U1	2.8
5KS324SAA2007	M8965	689	$5,228	G4-7U1	2.8
5KS324SAA204	M9768	670	$4,908	G4-7U1	2.5
5KS324SAA205	M9163	670	$4,908	G4-7U1	2.5
5KS324SAA208	M9915	670	$4,908	G4-7U1	2.5
5KS324SAA218	M9916	670	$4,908	G4-7U1	2.5
5KS324SAA304	M9758	690	$5,502	G4-7U1	2.4
5KS324SAA305	M9158	690	$5,502	G4-7U1	2.4
5KS324SAA308	M9119	690	$5,502	G4-7U1	2.4
5KS324SAA404	M8950	650	$6,756	G4-7U1	2.4
5KS324SAA405	M9173	650	$6,756	G4-7U1	2.4
5KS324SAA408	M9748	650	$6,756	G4-7U1	2.4
5KS324SAE134	V968	640	$4,836	G6-7VIL	7.18
5KS324SAE226	V988	700	$4,702	G6-7VIL	7.18
5KS324SAE6031	V909	700	$6,667	G5-7VHSB	7.13
5KS324STE105	M7712	632	$3,678	G4-7S$P1	1.10
5KS324STE114	M7511	614	$3,678	G4-7S$P1	1.10
5KS324STE115	M7711	632	$3,678	G4-7S$P1	1.10
5KS324STE204	M7534	632	$3,522	G4-7S$P1	1.10
5KS324STE205	M7734	632	$3,522	G4-7S$P1	1.10
5KS324STE205F2RG3	M7572	632	$4,587	G4-7S$P1	1.23
5KS324STE205RG3	M7571	632	$4,587	G4-7S$P1	1.23
5KS324STE305	M7549	511	$4,200	G4-7S$P1	1.10
5KS324XAA104	M9352	640	$6,264	G4-7UX1	2.21
5KS324XAA1079	M9525	640	$7,847	G4-7UX1	7.29
5KS324XAA108	M9351	640	$6,264	G4-7UX1	2.21
5KS324XAA1106	M9559	640	$6,584	G4-7UX1	2.26
5KS324XAA114	M9583	649	$6,264	G4-7UX1	2.21
5KS324XAA118	M9450	649	$6,264	G4-7UX1	2.21
5KS324XAA175	M8971	649	$6,584	G4-7UX1	2.26
5KS324XAA204	M9584	689	$6,077	G4-7UX1	2.21
5KS324XAA208	M9451	689	$6,077	G4-7UX1	2.21
5KS324XAA2109	M9526	670	$7,642	G4-7UX1	7.29
5KS324XAA2146	M9560	670	$6,396	G4-7UX1	2.26
5KS324XAA218	M9389	670	$6,077	G4-7UX1	2.21
5KS324XAA271W8	M6628	670	$6,698	G4-7UXHE	2.35
5KS324XAA279	M8972	689	$6,396	G4-7UX1	2.26
5KS324XAA304	M9577	679	$6,669	G4-7UX1	2.21
5KS324XAA308	M9444	679	$6,669	G4-7UX1	2.21
5KS324XAA353	M9381	690	$6,505	G4-7UX1	2.26
5KS324XAA354	M9520	690	$8,293	G4-7UX1	7.29

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS324XAA404	M9574	649	$8,189	G4-7UX1	2.20
5KS324XAA408	M9441	649	$8,189	G4-7UX1	2.20
5KS324XAE5422	V873	680	$6,523	G6-7VIL	7.23
5KS324XAE5722	V776	670	$6,867	G6-7VIL	7.22
5KS324XAE6421	V879	700	$6,404	G6-7VIL	7.23
5KS324XAE6720	V788	700	$6,741	G6-7VIL	7.22
5KS326ATE115	E757	692	$3,975	G4-7D$Z1	1.4
5KS326ATE204	E7320	639	$3,099	G4-7D$Z1	1.4
5KS326ATE205	E737	639	$3,099	G4-7D$Z1	1.4
5KS326ATE205RG3	E7074	639	$4,170	G4-7D$Z1	1.21
5KS326ATE215	E7254	639	$3,099	G4-7D$Z1	1.4
5KS326ATE305	E7022	639	$3,155	G4-7D$Z1	1.3
5KS326CAG115	E9275	650	$7,695	G6-7X$P	5.3
5KS326CAG118	E9277	650	$7,695	G6-7X$P	5.3
5KS326CAG205	E9286	740	$7,168	G6-7X$P	5.3
5KS326CAG208	E9287	740	$7,168	G6-7X$P	5.3
5KS326CAG305	E9293	730	$7,522	G6-7X$P	5.3
5KS326CAG308	E9295	730	$7,522	G6-7X$P	5.3
5KS326DAE6024	V882	740	$5,047	G5-7VHSB	7.8
5KS326LAA129	M7651	660	$5,989	G4-7S$P1	1.18
5KS326LAA230	M7661	720	$5,548	G4-7S$P1	1.18
5KS326LAA308	M7950	670	$4,800	G4-7S$P1	1.10
5KS326SAA104	M9187	660	$6,335	G4-7U1	2.5
5KS326SAA105	M9186	660	$6,335	G4-7U1	2.5
5KS326SAA108	M9823	660	$6,335	G4-7U1	2.5
5KS326SAA114	M9839	660	$6,335	G4-7U1	2.5
5KS326SAA115	M9164	660	$6,335	G4-7U1	2.5
5KS326SAA118	M997	660	$6,335	G4-7U1	2.5
5KS326SAA146	M8966	700	$6,654	G4-7U1	2.8
5KS326SAA204	M9765	710	$5,754	G4-7U1	2.5
5KS326SAA205	M9165	710	$5,754	G4-7U1	2.5
5KS326SAA208	M9917	710	$5,754	G4-7U1	2.5
5KS326SAA218	M9918	710	$5,754	G4-7U1	2.5
5KS326SAA271	M8967	740	$6,164	G4-7U1	2.8
5KS326SAA304	M9834	720	$6,276	G4-7U1	2.5
5KS326SAA305	M9161	720	$6,276	G4-7U1	2.5
5KS326SAA308	M9122	720	$6,276	G4-7U1	2.5
5KS326SAA404	M9762	710	$8,420	G4-7U1	2.4
5KS326SAA405	M9177	710	$8,420	G4-7U1	2.4
5KS326SAA408	M9761	710	$8,420	G4-7U1	2.4
5KS326SAE123	V969	680	$5,575	G6-7VIL	7.18
5KS326SAE222	V989	740	$5,575	G6-7VIL	7.18
5KS326SAE6042	V910	740	$7,617	G5-7VHSB	7.13
5KS326STE105	M7714	724	$4,760	G4-7S$P1	1.10
5KS326STE114	M7513	697	$4,760	G4-7S$P1	1.10
5KS326STE115	M7713	724	$4,760	G4-7S$P1	1.10
5KS326STE204	M7536	724	$4,326	G4-7S$P1	1.10
5KS326STE205	M7736	724	$4,326	G4-7S$P1	1.10
5KS326STE205RG3	M7574	724	$5,379	G4-7S$P1	1.23
5KS326STE305	M7550	586	$4,800	G4-7S$P1	1.10
5KS326XAA1009	M9527	660	$8,200	G4-7UX1	7.29
5KS326XAA1035	M9561	680	$7,967	G4-7UX1	2.26
5KS326XAA104	M9354	660	$7,647	G4-7UX1	2.21
5KS326XAA108	M9353	660	$7,647	G4-7UX1	2.21
5KS326XAA114	M9587	700	$7,647	G4-7UX1	2.21
5KS326XAA118	M9454	700	$7,647	G4-7UX1	2.21
5KS326XAA155	M8973	700	$7,967	G4-7UX1	2.26
5KS326XAA204	M9588	740	$6,923	G4-7UX1	2.21

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS326XAA2055	M9528	710	$7,967	G4-7UX1	7.29
5KS326XAA208	M9455	740	$6,923	G4-7UX1	2.21
5KS326XAA2083	M9562	710	$7,244	G4-7UX1	2.26
5KS326XAA218	M9390	710	$6,923	G4-7UX1	2.21
5KS326XAA253W8	M6629	710	$7,544	G4-7UXHE	2.35
5KS326XAA263	M8974	740	$7,244	G4-7UX1	2.26
5KS326XAA304	M9581	730	$7,443	G4-7UX1	2.21
5KS326XAA308	M9448	730	$7,443	G4-7UX1	2.21
5KS326XAA340	M9382	720	$7,542	G4-7UX1	2.26
5KS326XAA342	M9524	720	$9,144	G4-7UX1	7.29
5KS326XAA404	M9578	710	$9,807	G4-7UX1	2.21
5KS326XAA408	M9445	710	$9,807	G4-7UX1	2.21
5KS326XAE5424	V875	680	$8,392	G6-7VIL	7.23
5KS326XAE5726	V777	680	$8,834	G6-7VIL	7.22
5KS326XAE6422	V880	740	$8,654	G6-7VIL	7.23
5KS326XAE6720	V789	740	$9,109	G6-7VIL	7.22
5KS364ATE115	E758	686	$5,034	G4-7D$Z1	1.4
5KS364ATE204	E7330	770	$4,026	G4-7D$Z1	1.4
5KS364ATE205	E7381	770	$4,026	G4-7D$Z1	1.4
5KS364ATE205F2	E738	770	$4,026	G4-7D$Z1	1.4
5KS364ATE215	E7383	770	$4,026	G4-7D$Z1	1.4
5KS364ATE308	E7024	770	$4,637	G4-7D$Z1	1.3
5KS364CAG118	E9278	950	$9,355	G6-7X$P	5.3
5KS364CAG208	E9289	1050	$9,355	G6-7X$P	5.3
5KS364CAG305	E9285	990	$9,615	G6-7X$P	5.3
5KS364CAG308	E9296	990	$9,615	G6-7X$P	5.3
5KS364DAE6029	V883	980	$6,162	G5-7VHSB	7.8
5KS364DTT6019A	V3930	1102	$4,155	G5-7VHSB	7.2
5KS364LAA114	M7907	930	$8,636	G4-7S$P	1.11
5KS364LAA115	M7908	930	$8,636	G4-7S$P	1.11
5KS364LAA118	M7909	930	$8,636	G4-7S$P	1.11
5KS364LAA130	M7652	960	$9,499	G4-7S$P	1.18
5KS364LAA204	M7929	960	$8,456	G4-7S$P	1.11
5KS364LAA205	M7930	960	$8,636	G4-7S$P	1.11
5KS364LAA208	M7931	960	$8,456	G4-7S$P	1.11
5KS364LAA235	M7662	1000	$9,499	G4-7S$P	1.18
5KS364LAA304	M7951	980	$7,650	G4-7S$P	1.10
5KS364LAA305	M7952	980	$7,650	G4-7S$P	1.10
5KS364LAA308	M7953	980	$7,650	G4-7S$P	1.10
5KS364SAA114	M9847	960	$8,816	G4-7U	2.5
5KS364SAA115	M9190	960	$8,816	G4-7U	2.5
5KS364SAA118	M998	960	$8,816	G4-7U	2.5
5KS364SAA204	M9776	960	$8,633	G4-7U	2.5
5KS364SAA205	M9191	960	$8,633	G4-7U	2.5
5KS364SAA208	M9919	1000	$8,633	G4-7U	2.5
5KS364SAA218	M9921	1000	$8,633	G4-7U	2.5
5KS364SAA304	M9835	1000	$8,657	G4-7U	2.5
5KS364SAA305	M9184	1000	$8,657	G4-7U	2.5
5KS364SAA308	M9124	1000	$8,657	G4-7U	2.5
5KS364SAA404	M9766	980	$9,846	G4-7U	2.5
5KS364SAA405	M9181	980	$9,846	G4-7U	2.5
5KS364SAA408	M9767	980	$9,846	G4-7U	2.5
5KS364SAE152	V970	1020	$6,898	G6-7VIL	7.18
5KS364SAE222	V990	1050	$6,819	G6-7VIL	7.18
5KS364SAE6034	V911	1050	$9,692	G5-7VHSB	7.13
5KS364XAA114	M9591	940	$10,256	G4-7UX	2.21
5KS364XAA118	M9458	940	$10,256	G4-7UX	2.21
5KS364XAA187	M9529	960	$12,055	G4-7UX	7.29

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS364XAA2034	M9530	1027	$11,799	G4-7UX	7.29
5KS364XAA204	M9592	1020	$9,924	G4-7UX	2.22
5KS364XAA208	M9459	1020	$9,924	G4-7UX	2.21
5KS364XAA218	M9391	970	$9,924	G4-7UX	2.21
5KS364XAA249W8	M6630	850	$11,334	G4-7UXHE	2.35
5KS364XAA250W6	M6631	1070	$11,334	G4-7UXHE	2.35
5KS364XAA304	M9585	1030	$9,950	G4-7UX	2.21
5KS364XAA308	M9452	1030	$9,950	G4-7UX	2.21
5KS364XAA404	M9582	1010	$12,110	G4-7UX	2.21
5KS364XAA408	M9449	1010	$12,110	G4-7UX	2.21
5KS364XAE5424	V874	1010	$9,716	G6-7VIL	7.23
5KS364XAE5721	V778	1000	$10,795	G6-7VIL	7.22
5KS364XAE6427	V878	1050	$10,142	G6-7VIL	7.23
5KS364XAE6721	V790	1050	$11,269	G6-7VIL	7.22
5KS365ATE115	E759	812	$6,614	G4-7D$Z1	1.4
5KS365ATE204	E7825	838	$4,659	G4-7D$Z1	1.4
5KS365ATE205	E7391	838	$4,659	G4-7D$Z1	1.4
5KS365ATE215	E7393	838	$4,659	G4-7D$Z1	1.4
5KS365ATE308	E7026	838	$5,415	G4-7D$Z1	1.4
5KS365CAG118	E9279	1020	$11,398	G6-7X$P	5.3
5KS365CAG208	E9290	1050	$18,480	G6-7X$P	5.3
5KS365CAG305	E9288	1090	$11,043	G6-7X$P	5.3
5KS365CAG308	E9297	1090	$11,043	G6-7X$P	5.3
5KS365DAE6025A	V884	1060	$7,233	G5-7VHSB	7.8
5KS365DTT6019A	V3941	1102	$5,151	G5-7VHSB	7.2
5KS365LAA114	M7910	970	$10,601	G4-7S$P	1.11
5KS365LAA115	M7911	970	$10,601	G4-7S$P	1.11
5KS365LAA118	M7912	970	$10,601	G4-7S$P	1.11
5KS365LAA131	M7653	1020	$11,661	G4-7S$P	1.18
5KS365LAA204	M7932	1010	$10,251	G4-7S$P	1.11
5KS365LAA205	M7933	1010	$10,251	G4-7S$P	1.11
5KS365LAA208	M7934	1010	$10,251	G4-7S$P	1.11
5KS365LAA229	M7663	1090	$11,261	G4-7S$P	1.18
5KS365LAA304	M7954	1000	$8,850	G4-7S$P	1.10
5KS365LAA305	M7955	1000	$8,850	G4-7S$P	1.10
5KS365LAA308	M7956	1000	$8,850	G4-7S$P	1.10
5KS365SAA114	M9830	970	$10,823	G4-7U	2.6
5KS365SAA115	M9194	970	$10,823	G4-7U	2.6
5KS365SAA118	M999	970	$10,823	G4-7U	2.6
5KS365SAA204	M9781	1040	$10,466	G4-7U	2.6
5KS365SAA205	M9195	1080	$10,466	G4-7U	2.6
5KS365SAA208	M9922	1080	$10,466	G4-7U	2.6
5KS365SAA218	M9923	1080	$10,466	G4-7U	2.6
5KS365SAA304	M9775	1020	$10,050	G4-7U	2.5
5KS365SAA305	M9188	1020	$10,050	G4-7U	2.5
5KS365SAA308	M9126	1020	$10,050	G4-7U	2.5
5KS365SAA404	M9534	1040	$12,144	G4-7U	2.5
5KS365SAA405	M9185	1040	$12,144	G4-7U	2.5
5KS365SAA408	M9770	1040	$12,144	G4-7U	2.5
5KS365SAE137	V971	1020	$8,223	G6-7VIL	7.18
5KS365SAE223	V991	1050	$7,929	G6-7VIL	7.18
5KS365SAE6035	V912	1050	$11,587	G5-7VHSB	7.13
5KS365XAA1002	M9531	970	$13,507	G4-7UX	7.29
5KS365XAA114	M8917	1020	$12,261	G4-7UX	2.22
5KS365XAA118	M9462	1020	$12,261	G4-7UX	2.22
5KS365XAA2034	M9532	1040	$13,284	G4-7UX	7.29
5KS365XAA204	M9596	1090	$11,759	G4-7UX	2.22
5KS365XAA208	M9463	1090	$11,759	G4-7UX	2.22

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS365XAA218	M9392	1040	$11,759	G4-7UX	2.22
5KS365XAA253W6	M6632	1050	$13,169	G4-7UXHE	2.35
5KS365XAA254W8	M6633	1085	$13,169	G4-7UXHE	2.35
5KS365XAA304	M9589	1070	$11,343	G4-7UX	2.21
5KS365XAA308	M9456	1070	$11,343	G4-7UX	2.21
5KS365XAA404	M9586	1090	$14,937	G4-7UX	2.21
5KS365XAA408	M9453	1090	$14,937	G4-7UX	2.21
5KS365XAE5421	V792	1010	$12,138	G6-7VIL	7.23
5KS365XAE5723	V779	1010	$13,487	G6-7VIL	7.22
5KS365XAE6424	V796	1070	$12,351	G6-7VIL	7.23
5KS365XAE6721	V791	1070	$13,724	G6-7VIL	7.22
5KS404ATE118	E7501	1092	$8,228	G4-7D$Z1	1.4
5KS404ATE204	E7340	1090	$5,939	G4-7D$Z1	1.4
5KS404ATE205	E7401	1090	$5,939	G4-7D$Z1	1.4
5KS404ATE205F2	E740	1090	$5,939	G4-7D$Z1	1.4
5KS404ATE215	E7257	1090	$5,939	G4-7D$Z1	1.4
5KS404ATE308	E7029	1090	$6,701	G4-7D$Z1	1.4
5KS404CAG308	E9298	1560	$12,556	G6-7X$P	5.3
5KS404DAE6021	V885	1560	$9,475	G5-7VHSB	7.8
5KS404DTT6013A	V3952	1590	$6,661	G5-7VHSB	7.2
5KS404LAA304	M7957	1390	$11,025	G4-7S$P	1.11
5KS404LAA305	M7164	1390	$11,025	G4-7S$P	1.11
5KS404LAA308	M7958	1390	$11,025	G4-7S$P	1.11
5KS404LAA308F2	M7697	1390	$11,025	G4-7S$P	1.11
5KS404SAA304	M9837	1430	$11,691	G4-7U	2.5
5KS404SAA305	M9192	1430	$11,691	G4-7U	2.6
5KS404SAA308	M9128	1430	$11,691	G4-7U	2.5
5KS404SAA404	M9535	1420	$14,654	G4-7U	2.5
5KS404SAA405	M9189	1420	$14,654	G4-7U	2.5
5KS404SAA408	M9773	1420	$14,654	G4-7U	2.5
5KS404XAA304	M9593	1480	$13,245	G4-7UX	2.22
5KS404XAA308	M9460	1480	$13,245	G4-7UX	2.22
5KS404XAA370	M9480	1410	$14,347	G4-7UX	2.22
5KS404XAA404	M9590	1490	$18,023	G4-7UX	2.21
5KS404XAA408	M9457	1490	$18,023	G4-7UX	2.21
5KS405ATE118	E7502	1194	$8,808	G4-7D$Z1	1.4
5KS405ATE208	E741	1150	$7,113	G4-7D$Z1	1.4
5KS405ATE218	E7342	1150	$7,113	G4-7D$Z1	1.4
5KS405ATE308	E7032	1150	$7,575	G4-7D$Z1	1.4
5KS405CAG118	E9280	1470	$16,048	G6-7X$P	5.3
5KS405CAG208	E9291	1560	$22,464	G6-7X$P	5.3
5KS405CAG308	E9299	1570	$14,260	G6-7X$P	5.3
5KS405DAE6024	V886	1590	$11,570	G5-7VHSB	7.8
5KS405DTT6012A	V3954	1735	$8,700	G5-7VHSB	7.2
5KS405LAA114	M7913	1430	$13,727	G4-7S$P	1.11
5KS405LAA118	M7914	1430	$13,727	G4-7S$P	1.11
5KS405LAA126	M7654	1530	$15,099	G4-7S$P	1.18
5KS405LAA204	M7935	1440	$12,662	G4-7S$P	1.11
5KS405LAA208	M7936	1440	$12,662	G4-7S$P	1.11
5KS405LAA243	M7664	1480	$14,044	G4-7S$P	1.18
5KS405LAA248	M7694	1440	$12,662	G4-7S$P	1.11
5KS405LAA304	M7959	1420	$12,300	G4-7S$P	1.11
5KS405LAA305	M7165	1420	$12,300	G4-7S$P	1.11
5KS405LAA308	M7960	1420	$12,300	G4-7S$P	1.11
5KS405LAA325	M7691	1420	$12,300	G4-7S$P	1.11
5KS405SAA114	M9831	1530	$14,013	G4-7U	2.6
5KS405SAA118	M9510	1530	$14,013	G4-7U	2.6
5KS405SAA204	M9779	1450	$12,926	G4-7U	2.6

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS405SAA208	M9924	1450	$12,926	G4-7U	2.6
5KS405SAA2084	M7754	1450	$12,926	G4-7U	2.6
5KS405SAA218	M9925	1450	$12,926	G4-7U	2.6
5KS405SAA304	M9868	1460	$12,996	G4-7U	2.6
5KS405SAA305	M9196	1460	$12,996	G4-7U	2.6
5KS405SAA308	M9131	1460	$12,996	G4-7U	2.6
5KS405SAA355	M7753	1460	$12,996	G4-7U	2.6
5KS405SAA358	M7762	1460	$12,996	G4-7U	2.6
5KS405SAA404	M9536	1490	$18,000	G4-7U	2.6
5KS405SAA405	M9193	1490	$18,000	G4-7U	2.6
5KS405SAA408	M9778	1490	$18,000	G4-7U	2.6
5KS405SAE6027	V913	1560	$15,175	G5-7VHSB	7.13
5KS405XAA114	M8918	1530	$15,783	G4-7UX	2.22
5KS405XAA118	M9466	1530	$15,783	G4-7UX	2.22
5KS405XAA204	M9693	1480	$14,477	G4-7UX	2.22
5KS405XAA208	M9467	1480	$14,477	G4-7UX	2.22
5KS405XAA2088	M9356	1450	$14,477	G4-7UX	2.22
5KS405XAA2122	M9484	1440	$14,877	G4-7UX	2.22
5KS405XAA218	M9393	1450	$14,477	G4-7UX	2.22
5KS405XAA304	M9597	1540	$14,547	G4-7UX	2.22
5KS405XAA308	M9464	1540	$14,547	G4-7UX	2.22
5KS405XAA370	M9355	1460	$14,547	G4-7UX	2.22
5KS405XAA379	M9481	1430	$14,947	G4-7UX	2.22
5KS405XAA404	M9594	1570	$20,340	G4-7UX	2.22
5KS405XAA408	M9461	1570	$20,340	G4-7UX	2.22
5KS405XAE5429	V793	1480	$13,120	G6-7VIL	7.23
5KS405XAE5721	V872	1480	$14,578	G6-7VIL	7.22
5KS405XAE6431	V797	1540	$13,514	G6-7VIL	7.23
5KS405XAE6720	V871	1540	$15,016	G6-7VIL	7.22
5KS444ATE118	E7503	1590	$15,510	G4-7D$Z1	1.4
5KS444ATE208	E742	1494	$9,791	G4-7D$Z1	1.4
5KS444ATE218	E7259	1494	$9,791	G4-7D$Z1	1.4
5KS444ATE308	E7034	1494	$9,594	G4-7D$Z1	1.4
5KS444CAG118	E9281	1990	$19,575	G6-7X$P	5.3
5KS444CAG208	E9302	1960	$18,480	G6-7X$P	5.3
5KS444CAG308	E9300	1990	$21,185	G6-7X$P	5.3
5KS444DAE6023	V887	2050	$14,095	G5-7VHSB	7.8
5KS444DTT6013A	V3955	2075	$10,060	G5-7VHSB	7.2
5KS444LAA114	M7915	1810	$17,124	G4-7S$P	1.11
5KS444LAA118	M7916	1810	$17,124	G4-7S$P	1.11
5KS444LAA124	M7655	1790	$18,836	G4-7S$P	1.18
5KS444LAA204	M7937	1780	$15,909	G4-7S$P	1.11
5KS444LAA208	M7938	1780	$15,909	G4-7S$P	1.11
5KS444LAA236	M7665	1970	$17,636	G4-7S$P	1.18
5KS444LAA239	M7695	1780	$15,909	G4-7S$P	1.11
5KS444LAA304	M7961	1860	$16,200	G4-7S$P	1.11
5KS444LAA308	M7962	1860	$16,200	G4-7S$P	1.11
5KS444LAA333	M7692	1860	$16,200	G4-7S$P	1.11
5KS444SAA114	M9538	1900	$18,305	G4-7U	2.6
5KS444SAA118	M9511	1900	$18,305	G4-7U	2.6
5KS444SAA2018	M7756	1830	$17,006	G4-7U	2.6
5KS444SAA204	M9832	1830	$17,006	G4-7U	2.6
5KS444SAA208	M9926	1830	$17,006	G4-7U	2.6
5KS444SAA218	M9927	1830	$17,006	G4-7U	2.6
5KS444SAA304	M9846	1860	$17,504	G4-7U	2.6
5KS444SAA308	M9133	1860	$17,504	G4-7U	2.6
5KS444SAA373	M7755	1860	$17,504	G4-7U	2.6
5KS444SAA383	M7763	1860	$17,504	G4-7U	2.6

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS444SAA404	M9537	1700	$22,523	G4-7U	2.6
5KS444SAA405	M9197	1700	$22,523	G4-7U	2.6
5KS444SAA408	M9780	1700	$22,523	G4-7U	2.6
5KS444SAE6031	V914	2050	$21334	G5-7VHSB	7.13
5KS444XAA114	M8919	1790	$20,169	G4-7UX	2.22
5KS444XAA118	M9470	1790	$20,169	G4-7UX	2.22
5KS444XAA2028	M9358	1830	$18,651	G4-7UX	2.22
5KS444XAA204	M9697	1970	$18,651	G4-7UX	2.22
5KS444XAA2058	M9539	1810	$19,251	G4-7UX	2.22
5KS444XAA208	M9471	1970	$18,651	G4-7UX	2.22
5KS444XAA304	M9694	2060	$18,723	G4-7UX	2.22
5KS444XAA308	M9468	2060	$18,723	G4-7UX	2.22
5KS444XAA366	M9357	1860	$18,723	G4-7UX	2.22
5KS444XAA373	M9533	1880	$19,323	G4-7UX	2.22
5KS444XAA404	M9598	1950	$25,449	G4-7UX	2.22
5KS444XAA408	M9465	1950	$25,449	G4-7UX	2.22
5KS444XAE5421	V794	1990	$17,045	G6-7VIL	7.23
5KS444XAE5720	V876	1990	$18,939	G6-7VIL	7.22
5KS444XAE6427	V798	2050	$17,557	G6-7VIL	7.23
5KS444XAE6721	V869	1990	$19,508	G6-7VIL	7.22
5KS445ATE118	E7504	1800	$18,042	G4-7D$Z1	1.4
5KS445ATE208	E743	1715	$12,728	G4-7D$Z1	1.4
5KS445ATE218	E7360	1715	$12,728	G4-7D$Z1	1.4
5KS445ATE308	E7036	1715	$11,783	G4-7D$Z1	1.4
5KS445CAG118	E9282	1990	$23,959	G6-7X$P	5.3
5KS445CAG208	E9303	2050	$22,464	G6-7X$P	5.3
5KS445CAG308	E9301	1950	$22,645	G6-7X$P	5.3
5KS445DTT6012A	V3956	2260	$13,854	G5-7VHSB	7.2
5KS445LAA114	M7917	1830	$20,592	G4-7S$P	1.12
5KS445LAA118	M7918	1830	$20,592	G4-7S$P	1.12
5KS445LAA125	M7656	1930	$22,651	G4-7S$P	1.18
5KS445LAA204	M7939	1880	$18,509	G4-7S$P	1.12
5KS445LAA208	M7940	1880	$18,509	G4-7S$P	1.12
5KS445LAA235	M7666	2130	$20,360	G4-7S$P	1.18
5KS445LAA238	M7696	1880	$18,509	G4-7S$P	1.12
5KS445LAA304	M7963	1950	$19,500	G4-7S$P	1.11
5KS445LAA308	M7964	1950	$19,500	G4-7S$P	1.11
5KS445LAA322	M7686	1950	$19,500	G4-7S$P	1.11
5KS445SAA114	M8955	1930	$22,011	G4-7U	2.7
5KS445SAA118	M9512	1930	$22,011	G4-7U	2.7
5KS445SAA2029	M7758	2000	$19,785	G4-7U	2.7
5KS445SAA204	M9854	2000	$19,785	G4-7U	2.7
5KS445SAA208	M9928	2000	$19,785	G4-7U	2.7
5KS445SAA218	M9929	2000	$19,785	G4-7U	2.7
5KS445SAA304	M9870	1950	$21,086	G4-7U	2.6
5KS445SAA308	M9135	1950	$21,086	G4-7U	2.6
5KS445SAA349	M7757	1950	$21,086	G4-7U	2.6
5KS445SAA352	M7764	1950	$21,086	G4-7U	2.6
5KS445SAA404	M8953	1830	$28,538	G4-7U	2.6
5KS445SAA408	M9782	1830	$28,538	G4-7U	2.6
5KS445SAE6033	V915	2010	$24,941	G5-7VHSB	7.13
5KS445XAA114	M8920	1930	$23,874	G4-7UX	2.23
5KS445XAA118	M9474	1930	$23,874	G4-7UX	2.23
5KS445XAA204	M9384	2060	$21,431	G4-7UX	2.23
5KS445XAA2054	M9360	2000	$21,431	G4-7UX	2.23
5KS445XAA208	M9475	2090	$21,431	G4-7UX	2.23
5KS445XAA2083	M9599	1970	$22,031	G4-7UX	2.23
5KS445XAA304	M9698	2130	$22,307	G4-7UX	2.23

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS445XAA308	M9472	2130	$22,307	G4-7UX	2.22
5KS445XAA371	M9359	1950	$22,307	G4-7UX	2.22
5KS445XAA380	M9595	1970	$22,907	G4-7UX	2.23
5KS445XAA404	M9695	2020	$32,247	G4-7UX	2.22
5KS445XAA408	M9469	2020	$32,247	G4-7UX	2.22
5KS445XAE5421	V795	1990	$20,455	G6-7VIL	7.23
5KS445XAE5720	V877	1990	$22,727	G6-7VIL	7.22
5KS445XAE6427	V799	2020	$21,068	G6-7VIL	7.23
5KS445XAE6720	V870	2020	$23,409	G6-7VIL	7.22
5KS447ATE208	E7272	2100	$15,801	G4-7D$Z1	1.4
5KS447ATE218	E7370	2100	$15,801	G4-7D$Z1	1.4
5KS447ATE308	E7962	2100	$12,995	G4-7D$Z1	1.4
5KS447DAE6028	V889	2580	$22,998	G5-7VHSB	7.8
5KS447DAE6029	V888	1890	$18,197	G5-7VHSB	7.8
5KS447LAA114	M7919	2420	$26,069	G4-7S$P	1.15
5KS447LAA118	M7920	2420	$26,069	G4-7S$P	1.15
5KS447LAA125	M7657	2840	$28,676	G4-7S$P	1.18
5KS447LAA204	M7941	2590	$23,217	G4-7S$P	1.15
5KS447LAA208	M7942	2590	$23,217	G4-7S$P	1.15
5KS447LAA234	M7671	2590	$23,217	G4-7S$P	1.15
5KS447LAA242	M7698	2590	$23,217	G4-7S$P	1.15
5KS447LAA245	M7667	2800	$25,539	G4-7S$P	1.18
5KS447LAA304	M7965	2560	$22,350	G4-7S$P	1.15
5KS447LAA308	M7966	2560	$22,350	G4-7S$P	1.15
5KS447LAA323	M7693	2560	$22,350	G4-7S$P	1.15
5KS447SAA114	M8957	2650	$27,866	G4-7U	2.7
5KS447SAA118	M9961	2650	$27,866	G4-7U	2.7
5KS447SAA201	M9991	2770	$24,818	G4-7U	2.7
5KS447SAA204	M9959	2770	$24,818	G4-7U	2.7
5KS447SAA2047	M7761	2770	$24,818	G4-7U	2.7
5KS447SAA208	M9958	2770	$24,818	G4-7U	2.7
5KS447SAA304	M9869	2940	$25,545	G4-7U	2.7
5KS447SAA308	M9137	2940	$25,545	G4-7U	2.7
5KS447SAA341	M7759	2940	$25,545	G4-7U	2.7
5KS447SAA344	M7765	2940	$25,545	G4-7U	2.7
5KS447SAA404	M8954	2420	$31,778	G4-7U	2.6
5KS447SAA408	M9784	2420	$31,778	G4-7U	2.6
5KS447SAE6033	V916	2800	$33,201	G5-7VHSB	7.13
5KS447SAG120	E9520	2490	$21,816	G4-7TAN	6.19
5KS447XAA114	M8939	2560	$29,729	G4-7UX	2.23
5KS447XAA118	M9477	2560	$29,729	G4-7UX	2.23
5KS447XAA204	M9387	2800	$26,421	G4-7UX	2.23
5KS447XAA2044	M9362	2770	$26,421	G4-7UX	2.23
5KS447XAA2045	M9363	2770	$26,421	G4-7UX	2.23
5KS447XAA208	M9478	2800	$26,421	G4-7UX	2.23
5KS447XAA304	M9385	2860	$27,162	G4-7UX	2.23
5KS447XAA308	M9476	2860	$27,162	G4-7UX	2.23
5KS447XAA363	M9361	2940	$27,162	G4-7UX	2.23
5KS447XAA374	M9386	2940	$27,762	G4-7UX	2.23
5KS447XAA404	M9699	2580	$35,909	G4-7UX	2.23
5KS447XAA408	M9473	2580	$35,909	G4-7UX	2.23
5KS449ATE208	E7273	2150	$19,488	G4-7D$Z1	1.4
5KS449ATE308	E7963	2150	$18,596	G4-7D$Z1	1.4
5KS449DAE6020	V850	2980	$27,759	G5-7VHSB	7.8
5KS449DAE6021	V851	2980	$31,533	G5-7VHSB	7.8
5KS449DAE6030	V890	2610	$26,694	G5-7VHSB	7.8
5KS449LAA114	M7921	2510	$33,588	G4-7S$P	1.16
5KS449LAA118	M7922	2510	$33,588	G4-7S$P	1.16

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS449LAA123	M7658	2750	$36,947	G4-7S$P	1.18
5KS449LAA124	M7659	2790	$48,032	G4-7S$P	1.18
5KS449LAA204	M7943	2840	$27,149	G4-7S$P	1.16
5KS449LAA208	M7944	2840	$27,149	G4-7S$P	1.16
5KS449LAA210	M7160	2840	$27,149	G4-7S$P	1.16
5KS449LAA211	M7161	2840	$27,149	G4-7S$P	1.16
5KS449LAA259	M7668	3010	$29,864	G4-7S$P	1.18
5KS449LAA260	M7669	2980	$34,968	G4-7S$P	1.18
5KS449LAA261	M7678	2910	$31,492	G4-7S$P	1.16
5KS449LAA262	M7679	2910	$31,492	G4-7S$P	1.16
5KS449LAA263	M7680	2910	$31,492	G4-7S$P	1.16
5KS449LAA264	M7681	2910	$31,492	G4-7S$P	1.16
5KS449LAA265	M7682	3010	$39,530	G4-7S$P	1.16
5KS449LAA266	M7683	3010	$39,530	G4-7S$P	1.16
5KS449LAA267	M7684	3050	$39,530	G4-7S$P	1.16
5KS449LAA268	M7685	3050	$39,530	G4-7S$P	1.16
5KS449LAA304	M7967	2730	$27,800	G4-7S$P	1.15
5KS449LAA307	M7672	2940	$36,406	G4-7S$P	1.16
5KS449LAA308	M7968	2730	$27,800	G4-7S$P	1.15
5KS449LAA309	M7673	2940	$36,406	G4-7S$P	1.16
5KS449LAA310	M7157	2730	$27,800	G4-7S$P	1.15
5KS449LAA311	M7158	2730	$27,800	G4-7S$P	1.15
5KS449LAA317	M7674	2940	$36,406	G4-7S$P	1.16
5KS449LAA319	M7675	2940	$36,406	G4-7S$P	1.16
5KS449SAA1007	M9394	2860	$35,903	G4-7U	2.7
5KS449SAA1008	M9398	2790	$44,522	G4-7U	2.7
5KS449SAA1009	M9399	2790	$44,522	G4-7U	2.7
5KS449SAA118	M9514	2860	$35,903	G4-7U	2.7
5KS449SAA122	M8959	2860	$35,903	G4-7U	2.7
5KS449SAA123	M8960	2790	$44,522	G4-7U	2.7
5KS449SAA124	M8961	2790	$44,522	G4-7U	2.7
5KS449SAA146	M9996	2860	$35,903	G4-7U	2.7
5KS449SAA201	M9988	2660	$29,021	G4-7U	2.7
5KS449SAA202	M9989	2660	$29,021	G4-7U	2.7
5KS449SAA204	M9851	2660	$29,021	G4-7U	2.7
5KS449SAA208	M9933	2660	$29,021	G4-7U	2.7
5KS449SAA209	M9906	3050	$33,981	G4-7U	2.7
5KS449SAA212	M9990	3050	$33,981	G4-7U	2.7
5KS449SAA223	M8962	3050	$33,981	G4-7U	2.7
5KS449SAA254	M9907	3050	$33,981	G4-7U	2.7
5KS449SAA301	M8963	3150	$36,180	G4-7U	2.7
5KS449SAA304	M9845	3070	$28,580	G4-7U	2.7
5KS449SAA308	M9139	3070	$28,580	G4-7U	2.7
5KS449SAA382	M9198	3070	$28,580	G4-7U	2.7
5KS449SAA383	M9199	3070	$28,580	G4-7U	2.7
5KS449SAA384	M9395	3150	$36,180	G4-7U	2.7
5KS449SAA385	M9396	3150	$36,180	G4-7U	2.7
5KS449SAA386	M9397	3150	$36,180	G4-7U	2.7
5KS449SAA404	M8956	2660	$34,653	G4-7U	2.7
5KS449SAA408	M9785	2660	$34,653	G4-7U	2.7
5KS449SAG122	E9521	2610	$23,117	G4-7TAN	6.19
5KS449SAG124	E9522	2610	$24,541	G4-7TAN	6.19
5KS449SAG124	E9523	2490	$21,623	G4-7TAN	6.19
5KS449SAG222	E9525	2720	$23,887	G4-7TAN	6.19
5KS449SAG223	E9524	2610	$22,250	G4-7TAN	6.19
5KS449SAG320	E9527	2750	$22,568	G4-7TAN	6.19
5KS449SAG321	E9526	2750	$21,956	G4-7TAN	6.19
5KS449XAA123	M8943	2770	$37,578	G4-7UX	2.23

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS449XAA124	M8944	2770	$37,578	G4-7UX	2.23
5KS449XAA125	M8979	2770	$37,578	G4-7UX	2.23
5KS449XAA134	M8948	2790	$40,170	G4-7UX	2.24
5KS449XAA143	M9367	2860	$37,578	G4-7UX	2.23
5KS449XAA144	M9372	2790	$40,170	G4-7UX	2.24
5KS449XAA145	M9373	2790	$40,170	G4-7UX	2.24
5KS449XAA146	M9374	2790	$40,170	G4-7UX	2.24
5KS449XAA208	M8949	2980	$35,624	G4-7UX	2.24
5KS449XAA224	M8945	2790	$30,654	G4-7UX	2.23
5KS449XAA225	M8946	2790	$30,654	G4-7UX	2.23
5KS449XAA275	M9640	2980	$35,624	G4-7UX	2.24
5KS449XAA287	M9368	3100	$37,578	G4-7UX	2.23
5KS449XAA288	M9369	3100	$37,578	G4-7UX	2.23
5KS449XAA289	M9375	2940	$35,624	G4-7UX	2.24
5KS449XAA290	M9376	3000	$35,624	G4-7UX	2.24
5KS449XAA304	M8941	3070	$30,213	G4-7UX	2.23
5KS449XAA308	M8940	3070	$30,213	G4-7UX	2.23
5KS449XAA337	M8947	3150	$35,990	G4-7UX	2.23
5KS449XAA345	M9630	3150	$35,990	G4-7UX	2.23
5KS449XAA350	M9364	3070	$30,213	G4-7UX	2.23
5KS449XAA351	M9365	3070	$30,213	G4-7UX	2.23
5KS449XAA352	M9370	3210	$35,990	G4-7UX	2.23
5KS449XAA353	M9371	3210	$35,990	G4-7UX	2.23
5KS449XAA404	M8938	3120	$39,158	G4-7UX	2.23
5KS449XAA408	M8937	3150	$39,158	G4-7UX	2.23
5KS449XAA409	M8942	3120	$41,250	G4-7UX	2.23
5KS449XAA439	M9366	3210	$41,250	G4-7UX	2.23
5KS509DAE6020	V852	3570	$41,106	G5-7VHSB	7.8
5KS509SAA121	Q500	4500	$28,336	G4-7U5MV	6.10
5KS509SAA122	Q550	4500	$28,336	G4-7U5MV	6.10
5KS509SAA124	Q532	4650	$22,649	G4-7U5LV	6.2
5KS509SAA125	Q533	4650	$22,649	G4-7U5LV	6.2
5KS509SAA126	Q539	4650	$22,649	G4-7U5LV	6.2
5KS509SAA127	Q545	4650	$22,649	G4-7U5LV	6.2
5KS509SAA234	Q507	4350	$28,125	G4-7U5MV	6.10
5KS509SAA235	Q508	4550	$30,192	G4-7U5MV	6.10
5KS509SAA257	Q575	4550	$20,114	G4-7U5LV	6.2
5KS509SAA258	Q576	4550	$20,614	G4-7U5LV	6.2
5KS509SAA259	Q577	4550	$20,114	G4-7U5LV	6.2
5KS509SAA260	Q578	4550	$20,614	G4-7U5LV	6.2
5KS509SAA261	Q583	4650	$22,885	G4-7U5LV	6.2
5KS509SAA262	Q584	4650	$23,385	G4-7U5LV	6.2
5KS509SAA263	Q585	4650	$22,885	G4-7U5LV	6.2
5KS509SAA264	Q586	4650	$23,385	G4-7U5LV	6.2
5KS509SAA265	Q591	4750	$25,685	G4-7U5LV	6.2
5KS509SAA266	Q592	4750	$26,185	G4-7U5LV	6.2
5KS509SAA267	Q593	4750	$25,685	G4-7U5LV	6.2
5KS509SAA268	Q594	4750	$26,185	G4-7U5LV	6.2
5KS509SAA269	Q5031	4350	$28,625	G4-7U5MV	6.10
5KS509SAA270	Q5032	4550	$30,692	G4-7U5MV	6.10
5KS509SAA326	Q514	4450	$28,693	G4-7U5MV	6.10
5KS509SAA327	Q515	4475	$31,913	G4-7U5MV	6.10
5KS509SAA335	Q534	4450	$28,193	G4-7U5MV	6.10
5KS509SAA336	Q535	4475	$31,413	G4-7U5MV	6.10
5KS509SAA346	Q579	4650	$22,917	G4-7U5LV	6.2
5KS509SAA347	Q580	4650	$23,417	G4-7U5LV	6.2
5KS509SAA348	Q581	4650	$22,917	G4-7U5LV	6.2
5KS509SAA349	Q582	4650	$23,417	G4-7U5LV	6.2

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS509XAA123	Q814	4650	$26,182	G4-7U5XLV	6.6
5KS509XAA123	Q814	4650	$29,847	G4-7U5XLV	6.7
5KS509XAA124	Q815	4650	$26,182	G4-7U5XLV	6.6
5KS509XAA125	Q816	4650	$26,182	G4-7U5XLV	6.6
5KS509XAA126	Q830	4650	$34,764	G4-7U5XMV	6.14
5KS509XAA127	Q831	4650	$34,764	G4-7U5XMV	6.14
5KS509XAA130	Q8120	4650	$26,182	G4-7U5XLV	6.6
5KS509XAA232	Q861	4650	$26,413	G4-7U5XLV	6.6
5KS509XAA236	Q862	4750	$28,237	G4-7U5XLV	6.6
5KS509XAA246	Q846	4550	$23,308	G4-7U5XLV	6.6
5KS509XAA247	Q847	4550	$23,808	G4-7U5XLV	6.6
5KS509XAA248	Q848	4550	$23,308	G4-7U5XLV	6.6
5KS509XAA249	Q849	4550	$23,808	G4-7U5XLV	6.6
5KS509XAA250	Q856	4650	$26,913	G4-7U5XLV	6.6
5KS509XAA251	Q857	4650	$26,913	G4-7U5XLV	6.6
5KS509XAA252	Q860	4750	$29,237	G4-7U5XLV	6.6
5KS509XAA253	Q865	4750	$29,237	G4-7U5XLV	6.6
5KS509XAA254	Q880	4350	$34,718	G4-7U5XMV	6.14
5KS509XAA255	Q881	4350	$35,218	G4-7U5XMV	6.14
5KS509XAA256	Q884	4550	$37,142	G4-7U5XMV	6.14
5KS509XAA257	Q885	4550	$37,642	G4-7U5XMV	6.14
5KS509XAA261	Q8104	4650	$26,413	G4-7U5XLV	6.6
5KS509XAA262	Q8105	4750	$28,737	G4-7U5XLV	6.6
5KS509XAA350	Q878	4450	$34,452	G4-7U5XMV	6.14
5KS509XAA351	Q879	4450	$34,952	G4-7U5XMV	6.14
5KS509XAA352	Q882	4475	$37,997	G4-7U5XMV	6.14
5KS509XAA353	Q883	4475	$38,497	G4-7U5XMV	6.14
5KS511SAA1015	Q551	4950	$33,749	G4-7U5MV	6.10
5KS511SAA1016	Q501	4950	$33,749	G4-7U5MV	6.10
5KS511SAA140	Q502	4950	$36,588	G4-7U5MV	6.10
5KS511SAA141	Q503	5300	$40,637	G4-7U5MV	6.10
5KS511SAA142	Q504	5550	$44,106	G4-7U5MV	6.10
5KS511SAA143	Q527	5400	$23,916	G4-7U5LV	6.2
5KS511SAA144	Q528	5400	$26,137	G4-7U5LV	6.2
5KS511SAA145	Q529	5475	$29,901	G4-7U5LV	6.3
5KS511SAA146	Q530	5750	$31,368	G4-7U5LV	6.3
5KS511SAA167	Q552	4950	$36,588	G4-7U5MV	6.10
5KS511SAA168	Q553	5300	$40,637	G4-7U5MV	6.10
5KS511SAA169	Q554	5550	$44,106	G4-7U5MV	6.10
5KS511SAA176	Q540	5400	$23,916	G4-7U5LV	6.2
5KS511SAA177	Q541	5400	$26,137	G4-7U5LV	6.2
5KS511SAA178	Q542	5475	$29,901	G4-7U5LV	6.3
5KS511SAA179	Q543	5750	$31,368	G4-7U5LV	6.3
5KS511SAA185	Q546	5400	$23,916	G4-7U5LV	6.2
5KS511SAA186	Q547	5400	$23,916	G4-7U5LV	6.2
5KS511SAA187	Q548	5400	$26,137	G4-7U5LV	6.2
5KS511SAA188	Q549	5400	$26,137	G4-7U5LV	6.2
5KS511SAA189	Q557	5475	$29,901	G4-7U5LV	6.3
5KS511SAA190	Q558	5475	$29,901	G4-7U5LV	6.3
5KS511SAA191	Q559	5750	$31,368	G4-7U5LV	6.3
5KS511SAA192	Q560	5750	$31,368	G4-7U5LV	6.3
5KS511SAA2001	Q5000	5400	$28,668	G4-7U5LV	6.3
5KS511SAA2002	Q5001	5400	$28,168	G4-7U5LV	6.3
5KS511SAA2003	Q5002	5400	$28,668	G4-7U5LV	6.3
5KS511SAA2004	Q5007	5700	$30,256	G4-7U5LV	6.3
5KS511SAA2005	Q5008	5700	$30,756	G4-7U5LV	6.3
5KS511SAA2006	Q5009	5700	$30,256	G4-7U5LV	6.3
5KS511SAA2007	Q5010	5700	$30,756	G4-7U5LV	6.3

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS511SAA2008	Q5033	5200	$36,802	G4-7U5MV	6.10
5KS511SAA2009	Q5034	5800	$38,616	G4-7U5MV	6.10
5KS511SAA2010	Q5035	5800	$40,522	G4-7U5MV	6.10
5KS511SAA244	Q509	5200	$36,302	G4-7U5MV	6.10
5KS511SAA245	Q510	5800	$38,116	G4-7U5MV	6.10
5KS511SAA276	Q511	5800	$40,022	G4-7U5MV	6.10
5KS511SAA299	Q599	5400	$28,168	G4-7U5LV	6.3
5KS511SAA338	Q516	5400	$36,021	G4-7U5MV	6.10
5KS511SAA339	Q517	5500	$40,554	G4-7U5MV	6.10
5KS511SAA340	Q518	5700	$43,272	G4-7U5MV	6.10
5KS511SAA357	Q538	5700	$42,772	G4-7U5MV	6.10
5KS511SAA358	Q536	5400	$35,521	G4-7U5MV	6.10
5KS511SAA359	Q537	5500	$40,054	G4-7U5MV	6.10
5KS511SAA367	Q587	5150	$26,528	G4-7U5LV	6.2
5KS511SAA368	Q588	5150	$27,028	G4-7U5LV	6.2
5KS511SAA369	Q589	5150	$26,528	G4-7U5LV	6.2
5KS511SAA370	Q590	5150	$27,028	G4-7U5LV	6.2
5KS511SAA371	Q595	5400	$29,278	G4-7U5LV	6.2
5KS511SAA372	Q596	5400	$29,778	G4-7U5LV	6.2
5KS511SAA373	Q597	5400	$29,278	G4-7U5LV	6.2
5KS511SAA374	Q598	5400	$29,778	G4-7U5LV	6.2
5KS511SAA375	Q5003	5700	$32,565	G4-7U5LV	6.3
5KS511SAA376	Q5004	5700	$33,065	G4-7U5LV	6.3
5KS511SAA377	Q5005	5700	$32,565	G4-7U5LV	6.3
5KS511SAA378	Q5006	5700	$33,065	G4-7U5LV	6.3
5KS511XAA140	Q817	5400	$27,535	G4-7U5XLV	6.6
5KS511XAA141	Q818	5400	$27,535	G4-7U5XLV	6.6
5KS511XAA142	Q819	5400	$29,765	G4-7U5XLV	6.6
5KS511XAA143	Q825	5400	$29,765	G4-7U5XLV	6.6
5KS511XAA144	Q826	5475	$33,841	G4-7U5XLV	6.7
5KS511XAA145	Q827	5475	$33,841	G4-7U5XLV	6.7
5KS511XAA146	Q828	5750	$35,308	G4-7U5XLV	6.7
5KS511XAA147	Q829	5750	$35,308	G4-7U5XLV	6.7
5KS511XAA148	Q834	4950	$43,711	G4-7U5XMV	6.14
5KS511XAA149	Q835	4950	$43,711	G4-7U5XMV	6.14
5KS511XAA150	Q836	5300	$48,218	G4-7U5XMV	6.14
5KS511XAA151	Q837	5300	$48,218	G4-7U5XMV	6.14
5KS511XAA152	Q838	5550	$51,987	G4-7U5XMV	6.14
5KS511XAA153	Q839	5550	$51,987	G4-7U5XMV	6.14
5KS511XAA155	Q8121	5400	$27,535	G4-7U5XLV	6.6
5KS511XAA156	Q8100	5400	$27,535	G4-7U5XLV	6.6
5KS511XAA157	Q8122	5400	$29,765	G4-7U5XLV	6.6
5KS511XAA158	Q8101	5400	$29,765	G4-7U5XLV	6.6
5KS511XAA159	Q8123	5475	$33,841	G4-7U5XLV	6.7
5KS511XAA160	Q8102	5475	$33,841	G4-7U5XLV	6.7
5KS511XAA161	Q8124	5750	$35,308	G4-7U5XLV	6.7
5KS511XAA162	Q8103	5750	$35,308	G4-7U5XLV	6.7
5KS511XAA175	Q832	4950	$41,718	G4-7U5XMV	6.14
5KS511XAA176	Q833	4950	$41,718	G4-7U5XMV	6.14
5KS511XAA234	Q864	5700	$34,097	G4-7U5XLV	6.7
5KS511XAA238	Q863	5400	$31,907	G4-7U5XLV	6.7
5KS511XAA243	Q868	5400	$32,407	G4-7U5XLV	6.7
5KS511XAA244	Q869	5400	$32,407	G4-7U5XLV	6.7
5KS511XAA245	Q872	5700	$34,597	G4-7U5XLV	6.7
5KS511XAA246	Q873	5700	$34,597	G4-7U5XLV	6.7
5KS511XAA247	Q888	5200	$44,183	G4-7U5XMV	6.14
5KS511XAA248	Q889	5200	$44,683	G4-7U5XMV	6.14
5KS511XAA249	Q892	5800	$45,997	G4-7U5XMV	6.14

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS511XAA250	Q893	5800	$46,497	G4-7U5XMV	6.14
5KS511XAA251	Q896	5800	$47,903	G4-7U5XMV	6.14
5KS511XAA252	Q897	5800	$48,403	G4-7U5XMV	6.14
5KS511XAA253	Q8106	5400	$31,907	G4-7U5XLV	6.7
5KS511XAA254	Q8107	5700	$34,097	G4-7U5XLV	6.7
5KS511XAA340	Q852	5150	$30,022	G4-7U5XLV	6.6
5KS511XAA341	Q853	5400	$32,968	G4-7U5XLV	6.6
5KS511XAA342	Q854	5700	$36,388	G4-7U5XLV	6.7
5KS511XAA350	Q858	5150	$30,522	G4-7U5XLV	6.6
5KS511XAA351	Q859	5150	$30,522	G4-7U5XLV	6.6
5KS511XAA352	Q866	5400	$33,468	G4-7U5XLV	6.6
5KS511XAA353	Q867	5400	$33,468	G4-7U5XLV	6.6
5KS511XAA354	Q870	5700	$36,888	G4-7U5XLV	6.7
5KS511XAA355	Q871	5700	$36,888	G4-7U5XLV	6.7
5KS511XAA356	Q886	5400	$42,715	G4-7U5XMV	6.14
5KS511XAA357	Q887	5400	$43,215	G4-7U5XMV	6.14
5KS511XAA358	Q890	5500	$47,935	G4-7U5XMV	6.14
5KS511XAA359	Q891	5500	$48,435	G4-7U5XMV	6.14
5KS511XAA360	Q894	5700	$50,653	G4-7U5XMV	6.14
5KS511XAA361	Q895	5700	$51,153	G4-7U5XMV	6.14
5KS511XAA364	Q8109	5150	$30,022	G4-7U5XLV	6.6
5KS511XAA365	Q8110	5400	$32,968	G4-7U5XLV	6.6
5KS511XAA366	Q8111	5700	$36,388	G4-7U5XLV	6.7
5KS511XAA367	Q8108	5150	$27,982	G4-7U5XLV	6.6
5KS511XAA368	Q850	5150	$28,482	G4-7U5XLV	6.6
5KS511XAA369	Q851	5150	$27,982	G4-7U5XLV	6.6
5KS511XAA370	Q855	5150	$28,482	G4-7U5XLV	6.6
5KS513SAA126	Q505	6350	$47,559	G4-7U5MV	6.10
5KS513SAA127	Q506	6700	$55,057	G4-7U5MV	6.10
5KS513SAA128	Q531	6700	$35,963	G4-7U5LV	6.3
5KS513SAA143	Q555	6350	$47,559	G4-7U5MV	6.10
5KS513SAA144	Q556	6700	$55,057	G4-7U5MV	6.10
5KS513SAA145	Q544	6700	$35,963	G4-7U5LV	6.3
5KS513SAA171	Q561	6700	$35,963	G4-7U5LV	6.3
5KS513SAA172	Q562	6700	$35,963	G4-7U5LV	6.3
5KS513SAA173	Q563	6900	$39,033	G4-7U5LV	6.3
5KS513SAA174	Q564	6900	$39,033	G4-7U5LV	6.3
5KS513SAA175	Q565	6900	$39,033	G4-7U5LV	6.3
5KS513SAA176	Q566	6900	$39,033	G4-7U5LV	6.3
5KS513SAA177	Q567	6900	$58,440	G4-7U5MV	6.11
5KS513SAA178	Q568	6900	$58,440	G4-7U5MV	6.11
5KS513SAA179	Q569	6900	$61,824	G4-7U5MV	6.11
5KS513SAA180	Q570	6900	$61,824	G4-7U5MV	6.11
5KS513SAA226	Q512	7000	$46,369	G4-7U5MV	6.10
5KS513SAA227	Q513	7150	$53,730	G4-7U5MV	6.10
5KS513SAA256	Q5015	6900	$35,755	G4-7U5LV	6.3
5KS513SAA258	Q5017	6900	$35,755	G4-7U5LV	6.3
5KS513SAA260	Q5023	7150	$38,826	G4-7U5LV	6.3
5KS513SAA262	Q5025	7150	$38,826	G4-7U5LV	6.3
5KS513SAA266	Q5041	7150	$62,120	G4-7U5MV	6.11
5KS513SAA268	Q5043	7150	$64,226	G4-7U5MV	6.11
5KS513SAA326	Q519	6600	$47,547	G4-7U5MV	6.10
5KS513SAA327	Q520	7150	$53,559	G4-7U5MV	6.10
5KS513SAA328	Q521	7150	$59,200	G4-7U5MV	6.11
5KS513SAA357	Q5011	6700	$37,901	G4-7U5LV	6.3
5KS513SAA359	Q5013	6700	$37,901	G4-7U5LV	6.3
5KS513SAA361	Q5019	7150	$40,152	G4-7U5LV	6.3
5KS513SAA363	Q5021	7150	$40,152	G4-7U5LV	6.3

Cross Reference Guide

Model to Catalog Number (cont.)

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number
5KS513SAA365	Q5027	7150	$43,610	G4-7U5LV	6.3
5KS513SAA367	Q5029	7150	$43,610	G4-7U5LV	6.3
5KS513XAA126	Q840	6350	$55,440	G4-7U5XMV	6.14
5KS513XAA127	Q841	6350	$55,440	G4-7U5XMV	6.14
5KS513XAA232	Q8000	7000	$54,250	G4-7U5XMV	6.14
5KS513XAA322	Q874	6700	$41,702	G4-7U5XLV	6.7
5KS513XAA324	Q876	6700	$41,702	G4-7U5XLV	6.7
5KS513XAA326	Q898	6600	$55,428	G4-7U5XMV	6.14
5KS513XAA328	Q8002	7150	$59,907	G4-7U5XMV	6.14
---	V3685	1590	$7,773	G5-7VHSB	7.3
---	V3686	1590	$10,176	G5-7VHSB	7.3
---	V951	2630	$35,733	G5-7VHSB	7.8
---	V952	3620	$44,453	G5-7VHSB	7.8
---	V953	4380	$49,953	G5-7VHSB	7.8

Model	Cat. No.	Wt. (lbs)	List Price	Price Symbol	Page Number

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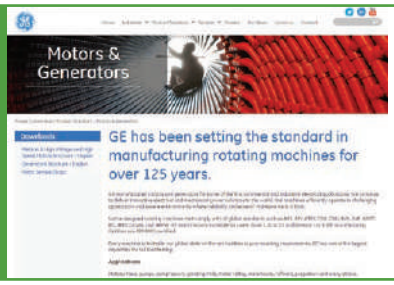

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