



2019

PRODUCT CATALOGUE



TABLE OF CONTENTS

GENERAL PURPOSE 3 PHASE MOTORS

	BRAND	PAGE
TEFC Totally Enclosed Fan Cooled NEMA	MaxMotion, Marathon	4,5,6,7,53,54,55
TEFC Totally Enclosed Fan Cooled NEMA Blue Chip XRI Severe Duty IP54	Marathon	56,57,58,59,60
TEFC Totally Enclosed Fan Cooled NEMA Blue Chip XRI Severe Duty IP56 IEEE-841	Marathon	61,62,63,64
TEFC Totally Enclosed Fan Cooled IEC	MaxMotion	22,23,24,25,26,27
ODP Open Drip Proof	MaxMotion, Marathon	8,9,10,50,51,52
Large Medium Voltage Motors	HICO	174

GENERAL PURPOSE 1 & 3 PHASE FRACTIONAL HP

ODP Single Phase	Marathon	43,44,45
TEFC Single Phase	MaxMotion, Marathon	20,40,41,42
EPFC Explosion Proof Single Phase	Marathon	46,47
ODP Three Phase	Marathon	48,49
TEFC Three Phase	MaxMotion, Marathon	18,19,38,39
EPFC Explosion Proof Three Phase	Marathon	65,66,74

DEFINITE PURPOSE

Close Coupled Pump Motors JM & JP Three Phase	MaxMotion	11,12,13
Close Coupled Pump Motors JM & JP Single Phase	Marathon	105,106
Belted Fan Single Phase & Three Phase	Marathon	114,115,116,117
Farm & Agricultural Duty	Marathon	85,86,87,88
Brake Motors Three Phase	Marathon	83,85
Air Compressor Single Phase	Marathon	120
Stainless Steel Three Phase NEMA	MaxMotion, Marathon	14,15,16,17
Stainless Steel Single Phase NEMA	Marathon	93,94
Stainless Steel Three Phase IEC	MaxMotion	28,29,95,96,97,98,99
White Epoxy Three Phase	Marathon	90,91,92
White Epoxy Single Phase	Marathon	89
DC Permanent Magnet (PMDC) 90 & 180VDC	MaxMotion, Marathon	31,81,82
DC Low Voltage 12, 24, 48VDC	MaxMotion, Marathon	32
Inverter and Vector Duty Black and Blue Max	Marathon	73,75,76,77,78
Inverter and Vector Duty MicroMax	Marathon	71,72
PMAC	Marathon	79,80
Jet Pump Three Phase	MaxMotion, Marathon	21,103,104
Jet Pump Single Phase	Marathon	100,101,102
Two Speed Variable Torque ODP	Marathon	118,119
HVAC, Heating, Ventilation, Refrigeration	MaxMotion, Marathon Alltemp, ROTOM	8,107,108,109,110,111,112,113 122,123

SPEED REDUCERS

Right Angle Aluminum Worm Reducers 5 to 100:1 NEMA Input	MaxMotion	33
Right Angle 304 Stainless Steel Worm Reducers 7.5 to 100:1 NEMA Input	MaxMotion	34
Right Angle & Parallel Reducers to 3,500,000 In.Lbs	HICO	174
Parallel Shaft Gearmotors, Inline, Offset, Right Angle and Custom Gear Reducers	Klauber (KMG)	202

MOTOR ACCESSORIES

Slide Bases, Transition Bases
Sheaves, Pulleys
Shaft Grounding Rings
Incremental Encoders, Cables
Magnetic Optical, Hall Effect Pick Ups
Run & Start Capacitors
Refridgeration, Service Tools
NEMA Brake Kits Single & Three Phase
DC Spring Loaded Brakes
C & D NEMA Flanges, NEMA Dripcovers, B5 & B14 Flanges

BRAND

PAGE

MaxMotion, Overly	35
Master Drive	175-203
AEGIS	121
BEI	124
Dart	165
Packard	168,169,170,171,172
Alltemp	
Marathon	18,40
INTORQ	166,167
MaxMotion	36,37

AC VARIABLE SPEED DRIVES

SMV Series 1/3 to 60HP 120/230 - 460 - 575 NEMA 1
SMV Series 1/3 to 60HP 120/230 - 460 - 575 NEMA 4
SMV Series 1/2 to 30HP 120/230 - 460 - 575 NEMA 4 with Integrated Disconnect
SMV Series 1/2 to 30HP 230 - 460 NEMA 4 with Filtered Input
SMV Series 1/2 to 30HP 230 - 460 NEMA 4 with Filtered Input and Integrated Disconnect
SMV Series Accessories
MS300 Series 1/4 to 30HP 120/230 - 460 - 575 NEMA 1
MS300HS Series 2 to 30HP 230 - 460 NEMA 1
MS300N4X Series 1/2 to 15HP 230 - 460 - 575 NEMA 4
C2000 Series 1 to 600HP 230 - 460 - 575/690 NEMA 1
CP2000 Series 1 to 600HP 230 - 460 - 575/690 NEMA 1
B Series 1 to 100HP 230 - 460 - 575 NEMA 1
Accessories and Resistors
690+ 4-IN-ONE 1 to 500HP
890 Stand Alone Advance 1 to 1500HP

Lenze	125,126
Lenze	127,128,129,130
Lenze	131,132
Lenze	133
Lenze	134
Lenze	135
Delta	136,137,138
Delta	139,140
Delta	141,142
Delta	143,144,145
Delta	146,147,148
Delta	149,150
Delta	151,152,153,154
Parker, Eurotherm	155
Parker, Eurotherm	155

OPTIMIZED DRIVE & MOTOR REACTORS

3% & 5% Impedance, 208-240, 460-480, 575/600VAC
Optional NEMA 1 Ventilated Enclosures CSA, UL & CE
V1K Superior DV/DT Protection for Motors

TCI	156,157,158
TCI	159
TCI	160,161

DC VARIABLE SPEED DRIVES

125 Series
253 Series
530 Series

Dart	162
Dart	163
Dart	164

Footnotes

Terms and Conditions

NEMA Quick Reference Dimension Chart

IEC Quick Reference Dimension Chart

All	205
MEP	206
MaxMotion	See Back Cover
MaxMotion	See Back Cover

PREMIUM DESIGN B NEMA 12-12

CAST IRON CONSTRUCTION RIGID BASE

TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds NEMA Premium Efficiencies
- Factory Certified Division 2, Class I Groups A, B, C, D, Class II Groups F&G
- Meets Temperature Code T2B
- IP55 enclosure
- Rated and Nameplated 60/50 Hertz 190/380-415 or 380-415 @ 1.0 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque 1.0 SF meets MG1 parts 31.4.4.2
- 1.25 Service Factor 1-50HP, 1.15 60-300HP
- Class F Insulation
- F1 Standard Assembly, Reversible to F2 Assembly
- Provision to accept Drip Cover, See Accessories Page
- CSAus & CE Certified
- Three Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	D-FLANGE KITS	FOOT NOTES
1	3600	208-230/460	143T	MQP-1	77	3.7-3.5/1.75	41	12.6	W 140TC	W 140TD	68
	3600	575	143T	MPP-1	77	1.4	41	12.6	W 140TC	W 140TD	
	1800	208-230/460	143T	MQP-2	85.5	3.2-3/1.5	47	13.6	W 140TC	W 140TD	68
	1800	575	143T	MPP-2	85.5	1.2	47	13.6	W 140TC	W 140TD	
	1200	208-230/460	145T	MQP-3	82.5	4-3.6/1.8	52	14.6	W 140TC	W 140TD	68
	1200	575	145T	MPP-3	82.5	1.44	52	14.6	W 140TC	W 140TD	
	900	208-230/460	182T	MQP-4	75.5	4.2-3.8/1.9	64	16.1	W 180TC	W 180TD	68
	900	575	182T	MPP-4	75.5	1.55	64	16.4	W 180TC	W 180TD	
1.5	3600	208-230/460	143T	MQP-6	84.1	4.4-4/2.2	46	13.6	W 140TC	W 140TD	68
	3600	575	143T	MPP-6	84.1	1.76	46	13.6	W 140TC	W 140TD	
	1800	208-230/460	145T	MQP-7	86.5	4.7-4.4/2.2	55	14.6	W 140TC	W 140TD	68
	1800	575	145T	MPP-7	86.5	1.8	55	14.6	W 140TC	W 140TD	
	1200	208-230/460	182T	MQP-8	87.5	5.2-4.8/2.4	95	16.1	W 180TC	W 180TD	68
	1200	575	182T	MPP-8	87.5	1.9	95	16.1	W 180TC	W 180TD	
	900	208-230/460	184T	MQP-9	78.5	5.97-5.4/2.7	64	17.1	W 180TC	W 180TD	68
	900	575	184T	MPP-9	78.5	2.16	64	17.1	W 180TC	W 180TD	
2	3600	208-230/460	145T	MQP-11	85.5	5.8-5.3/2.65	52	14.6	W 140TC	W 140TD	68
	3600	575	145T	MPP-11	85.5	2.05	52	14.6	W 140TC	W 140TD	
	1800	208-230/460	145T	MQP-12	86.5	6.6-6.2/3.1	56	14.6	W 140TC	W 140TD	68
	1800	575	145T	MPP-12	86.5	2.4	56	14.6	W 140TC	W 140TD	
	1200	208-230/460	184T	MQP-13	88.5	6.4-5.9/2.95	103	17.1	W 180TC	W 180TD	68
	1200	575	184T	MPP-13	88.5	2.4	103	17.1	W 180TC	W 180TD	
	900	208-230/460	213T	MQP-14	84	7.52-6.8/3.4	150	18.9	W 210TC	W 210TD	68
	900	575	213T	MPP-14	84	2.65	150	18.9	W 210TC	W 210TD	
3	3600	208-230/460	145T	MQP-16S	86.5	7.9-7.4/3.7	90	14.6	W 140TC	W 140TD	68
	3600	575	145T	MPP-16S	86.5	3	90	14.6	W 140TC	W 140TD	
	3600	208-230/460	182T	MQP-16	86.5	7.9-7.4/3.7	97	16.1	W 180TC	W 180TD	68
	3600	575	182T	MPP-16	86.5	3	97	16.1	W 180TC	W 180TD	
	1800	208-230/460	182T	MQP-17	89.5	8.2-7.6/4	97	16.1	W 180TC	W 180TD	68
	1800	575	182T	MPP-17	89.5	3.2	97	16.1	W 180TC	W 180TD	
	1200	208-230/460	213T	MQP-18	89.5	9.2-8.4/4.2	136	18.9	W 210TCP	N/A	68
	1200	575	213T	MPP-18	89.5	3.4	136	18.9	W 210TCP	N/A	
	900	208-230/460	215T	MQP-19	85.5	10.17-9.2/4.6	167	20.4	W 210TC	W 210TD	68
	900	575	215T	MPP-19	85.5	3.68	167	20.4	W 210TC	W 210TD	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

CAST IRON CONSTRUCTION RIGID BASE

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	D-FLANGE KITS	FOOT NOTES
5	3600	208-230/460	184T	MQP-21	88.5	13-11.6/5.8	110	17.1	W 180TC	W 180TD	68
	3600	575	184T	MPP-21	88.5	4.6	110	17.1	W 180TC	W 180TD	
	1800	208-230/460	184T	MQP-22	89.5	14-13.6/6.8	112	17.1	W 180TC	W 180TD	68
	1800	575	184T	MPP-22	89.5	5.4	112	17.1	W 180TC	W 180TD	
	1200	208-230/460	215T	MQP-23	89.5	15.6-14.2/7.1	162	20.4	W 210TCP	N/A	68
	1200	575	215T	MPP-23	89.5	5.68	162	20.4	W 210TCP	N/A	
	900	208-230/460	254T	MQP-24	86.5	17.69-16/8	286	23.2	W 250TC	W 250TD	68
	900	575	254T	MPP-24	86.5	6.5	286	23.2	W 250TC	W 250TD	
7.5	3600	208-230/460	184T	MQP-26S	86.5	18.8-17.6/8.8	134	17.1	W 180TC	W 180TD	68
	3600	575	184T	MPP-26S	89.5	7	134	17.1	W 180TC	W 180TD	
	3600	208-230/460	213T	MQP-26	89.5	18.8-17.6/8.8	150	18.9	W 210TC	W 210TD	68
	3600	575	213T	MPP-26	89.5	7	150	18.9	W 210TC	W 210TD	
	1800	208-230/460	213T	MQP-27	91.7	19.8-18.4/9.2	150	18.9	W 210TCP	N/A	68
	1800	575	213T	MPP-27	91.7	7.4	150	18.9	W 210TCP	N/A	
	1200	208-230/460	254T	MQP-28	91	23-20.8/10.4	272	23.2	W 250TC	W 250TD	68
	1200	575	254T	MPP-28	91	7.8	272	23.2	W 250TC	W 250TD	
	900	208-230/460	256T	MQP-29	86.5	26.54-24/11.5	315	25	W 250TC	W 250TD	68
	900	575	256T	MPP-29	86.5	9.6	315	25	W 250TC	W 250TD	
10	3600	208-230/460	215T	MQP-31	90.2	23.9-22.8/11.4	167	20.4	W 210TC	W 210TD	68
	3600	575	215T	MPP-31	90.2	9.1	167	20.4	W 210TC	W 210TD	
	1800	208-230/460	215T	MQP-32	91.7	26-24/12	167	20.4	W 210TCP	N/A	68
	1800	575	215T	MPP-32	91.7	9.6	167	20.4	W 210TCP	N/A	
	1200	208-230/460	256T	MQP-33	91	27.2-25.6/12.8	293	25	W 250TCP	W 250TDP	68
	1200	575	256T	MPP-33	91	10.2	293	25	W 250TCP	W 250TDP	
	900	208-230/460	284T	MQP-34	89.5	34.28-31/15.5	392	26.6	W 280TC	W 280TD	68
	900	575	284T	MPP-34	89.5	12.5	392	26.6	W 280TC	W 280TD	
15	3600	208-230/460	215T	MQP-36S	91	36.2-34.4/17.2	162	20.4	W 210TCP	N/A	68
	3600	575	215T	MPP-36S	91	13.8	162	20.4	W 210TCP	N/A	
	3600	208-230/460	254T	MQP-36	91	36.2-34.4/17.2	286	23.2	W 250TC	W 250TD	68
	3600	575	254T	MPP-36	91	13.8	286	23.2	W 250TC	W 250TD	
	1800	208-230/460	254T	MQP-37	92.4	37.2-36.4/18.2	297	23.2	W 250TCP	W 250TDP	68
	1800	575	254T	MPP-37	92.4	14.6	297	23.2	W 250TCP	W 250TDP	
	1200	208-230/460	284T	MQP-38	91.7	41-38/19	363	26.6	W 280TC	W 280TD	68
	1200	575	284T	MPP-38	91.7	15.2	363	26.6	W 280TC	W 280TD	
	900	208-230/460	286T	MQP-39	89.5	50.87-46/23	394	13.2	W 280TC	W 280TD	68
	900	575	286T	MPP-39	89.5	18.5	394	13.2	W 280TC	W 280TD	
20	3600	208-230/460	256T	MQP-41	91	48.5-46/23	315	25	W 250TC	W 250TD	68
	3600	575	256T	MPP-41	91	18.4	315	25	W 250TC	W 250TD	
	1800	208-230/460	256T	MQP-42	93	51.8-48.4/24.2	315	25	W 250TCP	W 250TDP	68
	1800	575	256T	MPP-42	93	19.1	315	25	W 250TCP	W 250TDP	
	1200	208-230/460	284T	MQP-43	91.7	54.7-50/25	394	28.1	W 280TC	W 280TD	68
	1200	575	284T	MPP-43	91.7	20	394	28.1	W 280TC	W 280TD	
	900	208-230/460	324T	MQP-44	90.2	64.13-58/28	444	13.2	W 280TC	W 280TD	68
	900	575	324T	MPP-44	90.2		444	13.2	W 280TC	W 280TD	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

CAST IRON CONSTRUCTION RIGID BASE

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	D-FLANGE KITS	FOOT NOTES
25	3600	208-230/460	284TS	MQP-46	91.7	61-57/28.5	385	25.2	W 280TC	W 280TD	68
	3600	575	284TS	MPP-46	91.7	22.4	385	25.2	W 280TC	W 280TD	
	1800	208-230/460	284T	MQP-47	93.6	65-60/30	392	26.6	W 280TC	W 280TD	68
	1800	575	284T	MPP-47	93.6	24	392	26.6	W 280TC	W 280TD	
	1200	208-230/460	324T	MQP-48	93	67-61/30.5	508	29.8	W 320TC	W 320TD	68
	1200	575	324T	MPP-48	93	24.4	508	29.8	W 320TC	W 320TD	
	900	208-230/460	326T	MQP-49	90.2	84.04-76/38	469	31.3	W 320TC	W 320TD	68
	900	575	326T	MPP-49	90.2	30.5	469	31.3	W 320TC	W 320TD	
30	3600	208-230/460	286TS	MQP-51	91.7	74-69/34.5	409	13.2	W 280TC	W 280TD	68
	3600	575	286TS	MPP-51	91.7	27.6	409	13.2	W 280TC	W 280TD	
	1800	208-230/460	286T	MQP-52	93.6	76-70.6/35.3	418	13.2	W 280TC	W 280TD	68
	1800	575	286T	MPP-52	93.6	28.2	418	13.2	W 280TC	W 280TD	
	1200	208-230/460	326T	MQP-53	93	78-71.8/35.9	537	31.3	W 320TC	W 320TD	68
	1200	575	326T	MPP-53	93	28.7	537	31.3	W 320TC	W 320TD	
	900	208-230/460	364T	MQP-54	91.7	97.31-88/44	607	32.5	W 360TC	W 360TD	68
	900	575	364T	MPP-54	91.7	35	607	32.5	W 360TC	W 360TD	
40	3600	208-230/460	324TS	MQP-56	92.4	94.9-91/45.5	510	28.3	W 320TC	W 320TD	68
	3600	575	324TS	MPP-56	92.4	36.4	510	28.3	W 320TC	W 320TD	
	1800	208-230/460	324T	MQP-57	94.1	100-93.2/46.6	519	29.8	W 320TC	W 320TD	68
	1800	575	324T	MPP-57	94.1	37.3	519	29.8	W 320TC	W 320TD	
	1200	208-230/460	364T	MQP-58	94.1	110-100/50	697	32.5	W 360TCP	W 360TDP	68
	1200	575	364T	MPP-58	94.1	40	697	32.5	W 360TCP	W 360TDP	
	900	208-230/460	365T	MQP-59	91.7	123.85-112/56	902	33.5	W 360TC	W 360TD	68
	900	575	365T	MPP-59	91.7	36	902	33.5	W 360TC	W 360TD	
50	3600	208-230/460	324TS	MQP-61	93	124-116.2/58.1	548	29.8	W 320TC	W 320TD	68
	3600	575	324TS	MPP-61	93	46.4	548	29.8	W 320TC	W 320TD	
	1800	208-230/460	326T	MQP-62	93	124-116.2/58.1	594	31.3	W 320TC	W 320TD	68
	1800	575	326T	MPP-62	94.5	46.6	594	31.3	W 320TC	W 320TD	
	1200	208-230/460	364T	MQP-63	94.1	139-126/63	752	33.5	W 360TCP	W 360TDP	68
	1200	575	364T	MPP-63	94.1	50	752	33.5	W 360TCP	W 360TDP	
	900	208-230/460	404T	MQP-64	92.4	147.07-133/66.5	902	33.5	W 360TC	W 360TD	68
	900	575	404T	MPP-64	92.4	53.2	902	33.5	W 360TC	W 360TD	
60	3600	208-230/460	364TS	MQP-66	93.6	146-132/66	704	31.4	W 360TC	W 360TD	68
	3600	575	364TS	MPP-66	93.6	52.8	704	31.4	W 360TC	W 360TD	
	1800	208-230/460	364T	MQP-67	95	154-139/69.5	766	32.5	W 360TCP	W 360TDP	68
	1800	575	364T	MPP-67	95	55.6	766	32.5	W 360TDP	W 360TDP	
	1200	208-230/460	404T	MQP-68	94.5	154-140/70	1000	38	W 400TCP	W 400TDP	68, RB
	1200	575	404T	MPP-68	94.5	56	1000	38	W 400TCP	W 400TDP	RB
	900	208-230/460	405T	MQP-69	92.4	176.92-160/80	1010	38	W 400TC	W 400TD	68, RB
	900	575	405T	MPP-69	92.4	64	1010	38	W 400TC	W 400TD	RB
75	3600	208-230/460	365TS	MQP-71	93.6	184-166/83	766	31.4	W 360TC	W 360TD	68
	3600	575	365TS	MPP-71	93.6	66.5	766	31.4	W 360TC	W 360TD	
	1800	208-230/460	365T	MQP-72	95.4	193-174/87	783	33.5	W 360TCP	W 360TDP	68
	1800	575	365T	MPP-72	95.4	70	783	33.5	W 360TCP	W 360TDP	
	1200	208-230/460	405T	MQP-73	94.5	196.8-178/89	1120	38	W 400TCP	W 400TDP	68, RB
	1200	575	405T	MPP-73	94.5	70	1120	38	W 400TCP	W 400TDP	RB
	900	460	444T	MQP-74	93.6	214.52-194/97	1353	44.3	W 440TC	W 440TD	68, RB
	900	575	444T	MPP-74	93.6	77.6	1353	44.3	W 440TC	W 440TD	RB

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * RB = Roller Bearing Installed on DE

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

CAST IRON CONSTRUCTION RIGID BASE

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	D-FLANGE KITS	FOOT NOTES
100	3600	208-230/460	405TS	MQP-76	94.1	243.3-220/110	1040	35	W 400TC	W 400TD	68
	3600	575	405TS	MPP-76	94.1	89	1040	35	W 400TC	W 400TD	
	1800	208-230/460	405T	MQP-77	95.4	248-224/112	1058	38	W 400TCP	W 400TDP	68, RB
	1800	575	405T	MPP-77	95.4	89.6	1058	38	W 400TCP	W 400TDP	68, RB
	1200	460	444T	MQP-78	95	122	1320	44.3	W 440TCP	W 440TDP	68, RB
	1200	575	444T	MPP-78	95	96	1320	44.3	W 440TCP	W 440TDP	RB
	900	460	445T	MQP-79	93.6	126	1373	44.3	W 440TC	W 440TD	68, RB
	900	575	445T	MPP-79	93.6	100.8	1373	44.3	W 440TC	W 440TD	RB
125	3600	460	444TS	MQP-81	95	140	1247	40.6	W 440TCP	W 440TDP	68
	3600	575	444TS	MPP-81	95	111	1247	40.6	W 440TCP	W 440TDP	
	1800	460	444T	MQP-82	95.4	145	1342	44.3	W 440TC	W 440TD	68, RB
	1800	575	444T	MPP-82	95.4	115	1342	44.3	W 440TC	W 440TC	RB
	1200	460	445T	MQP-83	95	147	1400	44.3	W 440TCP	W 440TDP	68, RB
	1200	575	445T	MPP-83	95	117.6	1400	44.3	W 440TCP	W 440TDP	RB
	900	460	447T	MQP-84	94.1	158	1680	47.8	W 440TC	W 440TD	68, RB
	900	575	447T	MPP-84	94.1	126.4	1680	47.8	W 440TC	W 440TD	RB
150	3600	460	445TS	MQP-86	95	166	1408	40.6	W 440TCP	W 440TDP	68
	3600	575	445TS	MPP-86	95	133	1408	40.6	W 440TCP	W 440TDP	RB
	1800	460	445T	MQP-87	95.8	171	1672	47.8	W 440TCP	W 440TDP	68, RB
	1800	575	445T	MPP-87	95.8	137	1672	47.8	W 440TCP	W 440TDP	RB
	1200	460	447T	MQP-88	95.8	173	1800	47.8	W 440TCP	W 440TDP	68, RB
	1200	575	447T	MPP-88	95.8	138	1800	47.8	W 440TCP	W 440TDP	RB
	900	460	449T	MQP-89	94.1	186	1800	52.8	W 440TC	W 440TD	68, RB
	900	575	449T	MPP-89	94.1	148.8	1800	52.8	W 440TC	W 440TD	RB
200	3600	460	447TS	MQP-96	95.4	222	2185	44.1	W 440TCP	W 440TDP	68
	3600	575	447TS	MPP-96	95.4	170	2185	44.1	W 440TCP	W 440TDP	
	1800	460	447T	MQP-97	96.2	220	2260	47.8	W 440TCP	W 440TDP	68, RB
	1800	575	447T	MPP-97	96.2	176	2260	47.8	W 440TCP	W 440TDP	RB
	1200	460	449T	MQP-98	95.8	220	3100	52.8	W 440TCP	W 440TDP	68, RB
	1200	575	449T	MPP-98	95.8	184	3100	52.8	W 440TCP	W 440TDP	RB
250	3600	460	449TS	MQP-101	95.8	266	2700	49.1	W 440TCP	W 440TDP	68
	3600	575	449TS	MPP-101	95.8	212.6	2700	49.1	W 440TCP	W 440TDP	
	1800	460	449T	MQP-102	96.2	275	3100	52.8	W 440TCP	W 440TDP	68, RB
	1800	575	449T	MPP-102	96.2	220	3100	52.8	W 440TCP	W 440TDP	68
300	3600	460	449TS	MQP-106	95.8	320	2900	49.1	W 440TCP	W 440TDP	68
	3600	575	449TS	MPP-106	95.8	256	2900	49.1	W 440TCP	W 440TDP	
	1800	460	449T	MQP-107	330	330	3220	52.8	W 440TCP	W 440TDP	68, RB
	1800	575	449T	MPP-107	96.2	264	3220	52.8	W 440TCP	W 440TDP	RB

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

* RB = Roller Bearing Installed on DE



PREMIUM DESIGN B NEMA 12-12

ROLLED STEEL & CAST IRON CONSTRUCTION RIGID BASE

ODP OPEN DRIPROOF



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds NEMA Premium Efficiencies
- IP23 enclosure
- Rated and Nameplated 60/50 Hertz 190/380-415 or 380-415 @ 1.0 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque 1.0 SF meets MG1 parts 31.4.4.2
- Class F Insulation
- 1.15 Service Factor
- F1 Standard Assembly, Reversible to F2 Assembly
- Provision to accept Drip Cover, See Accessories Page
- CSAus & CE Certified
- Three Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	CONSTRUCTION	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	D-FLANGE KITS	FOOT NOTES
1	3600	208-230/460	143T	MQOP-1	Rolled Steel	77	3.5-3.2/1.6	41	11.2	W 140TCO-6205	W 140TDO-6205	68
	3600	575	143T	MPOP-1	Rolled Steel	77	1.3	41	11.2	W 140TCO-6205	W 140TDO-6205	
	1800	208-230/460	143T	MQOP-2	Rolled Steel	85.5	3.5-3.2/1.5	47	11.2	W 140TCO-6205	W 140TDO-6205	68
	1800	575	143T	MPOP-2	Rolled Steel	85.5	1.3	47	12	W 140TCO-6205	W 140TDO-6205	
	1200	208-230/460	145T	MQOP-3	Rolled Steel	82.5	3.7-3.4/1.7	52	12	W 140TCO-6205	W 140TDO-6205	68
	1200	575	145T	MPOP-3	Rolled Steel	82.5	1.4	52	12	W 140TCO-6205	W 140TDO-6205	
1.5	3600	208-230/460	143T	MQOP-6	Rolled Steel	84	4.4-4/2	46	11.2	W 140TCO-6205	W 140TDO-6205	68
	3600	575	143T	MPOP-6	Rolled Steel	84	1.6	46	11.2	W 140TCO-6205	W 140TDO-6205	
	1800	208-230/460	145T	MQOP-7	Rolled Steel	86.5	5.1-4.6/2.3	55	12	W 140TCO-6205	W 140TDO-6205	68
	1800	575	145T	MPOP-7	Rolled Steel	86.5	1.9	55	12	W 140TCO-6205	W 140TDO-6205	
	1200	208-230/460	182T	MQOP-8	Rolled Steel	86.5	5.3-4.8/2.4	95	14.1	W 180TCO-6206	W 180TDO-6206	68
	1200	575	182T	MPOP-8	Rolled Steel	86.5	1.9	95	14.1	W 180TCO-6206	W 180TDO-6206	
2	3600	208-230/460	145T	MQOP-11	Rolled Steel	85.5	5.7-5.2/2.6	52	12	W 140TCO-6205	W 140TDO-6205	68
	3600	575	145T	MPOP-11	Rolled Steel	85.5	2.1	52	12	W 140TCO-6205	W 140TDO-6205	
	1800	208-230/460	145T	MQOP-12	Rolled Steel	86.5	6.6-6/3	56	12	W 140TCO-6205	W 140TDO-6205	68
	1800	575	145T	MPOP-12	Rolled Steel	86.5	2.4	56	12	W 140TCO-6205	W 140TDO-6205	
	1200	208-230/460	184T	MQOP-13	Rolled Steel	87.5	6.6-6/3	103	14.9	W 180TCO-6206	W 180TDO-6206	68
	1200	575	184T	MPOP-13	Rolled Steel	87.5	2.4	103	14.9	W 180TCO-6206	W 180TDO-6206	
3	3600	208-230/460	145T	MQOP-16	Rolled Steel	85.5	8.1-7.4/3.7	90	12	W 140TCO-6205	W 140TDO-6205	68
	3600	575	145T	MPOP-16	Rolled Steel	85.5	3	90	12	W 140TCO-6205	W 140TDO-6205	
	1800	208-230/460	182T	MQOP-17	Rolled Steel	89.5	9-8.2/4.1	97	14.1	W 180TCO-6206	W 180TDO-6206	68
	1800	575	182T	MPOP-17	Rolled Steel	89.5	3.3	97	14.1	W 180TCO-6206	W 180TDO-6206	
	1200	208-230/460	213T	MQOP-18	Rolled Steel	88.5	9.5-8.6/4.3	136	16.54	W 210TCO-6208	N/A	68
	1200	575	213T	MPOP-18	Rolled Steel	88.5	3.4	136	16.54	W 210TCO-6208	N/A	
5	3600	208-230/460	184T	MQOP-21	Rolled Steel	86.5	13.6-12.4/6.2	110	14.9	W 180TCO-6206	W 180TDO-6206	68
	3600	575	184T	MPOP-21	Rolled Steel	86.5	5	110	14.9	W 180TCO-6206	W 180TDO-6206	
	1800	208-230/460	184T	MQOP-22	Rolled Steel	89.5	14.7-13.4/6.7	112	14.9	W 180TCO-6206	W 180TDO-6206	68
	1800	575	184T	MPOP-22	Rolled Steel	89.5	5.4	112	14.9	W 180TCO-6206	W 180TDO-6206	
	1200	208-230/460	215T	MQOP-23	Rolled Steel	89.5	15.4-14/7	162	17.52	W 210TCO-6208	N/A	68
	1200	575	215T	MPOP-23	Rolled Steel	89.5	5.6	162	17.52	W 210TCO-6208	N/A	
7.5	3600	208-230/460	184T	MQOP-26	Rolled Steel	88.5	19.4-17.6/8.8	145	14.9	W 180TCO-6206	W 180TDO-6206	68
	3600	575	184T	MPOP-26	Rolled Steel	88.5	7	145	14.9	W 180TCO-6206	W 180TDO-6206	
	1800	208-230/460	213T	MQOP-27	Rolled Steel	91	21.1-19.2/9.6	150	16.54	W 210TCO-6208	N/A	68
	1800	575	213T	MPOP-27	Rolled Steel	91	7.7	150	16.54	W 210TCO-6208	N/A	
	1200	208-230/460	254T	MQOP-28	Cast Iron	90.2	22.9-20.8/10.4	272	22.15	W 250TCO-6309	W 250TDO-6309	68
	1200	575	254T	MPOP-28	Cast Iron	90.2	8.3	272	22.15	W 250TCO-6309	W 250TDO-6309	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12
ROLLED STEEL & CAST IRON CONSTRUCTION RIGID BASE
 ODP OPEN DRIPROOF



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	CONSTRUCTION	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	D-FLANGE KITS	FOOT NOTES
10	3600	208-230/460	215T	MQOP-31	Rolled Steel	89.5	28.2-25.6/12.8	167	17.52	W 210TCO-6208	N/A	68
	3600	575	215T	MPOP-31	Rolled Steel	89.5	10.2	167	17.52	W 210TCO-6208	N/A	
	1800	208-230/460	215T	MQOP-32	Rolled Steel	91.7	28.6-26/13	167	17.52	W 210TCO-6208	N/A	68
	1800	575	215T	MPOP-32	Rolled Steel	91.7	10.5	167	17.52	W 210TCO-6208	N/A	
	1200	208-230/460	256T	MQOP-33	Cast Iron	91.7	29.7-27/13.5	293	22.15	W 250TCO-6309	W 250TDO-6309	68
	1200	575	256T	MPOP-33	Cast Iron	91.7	10.8	293	22.15	W 250TCO-6309	W 250TDO-6309	
15	3600	208-230/460	215T	MQOP-36	Rolled Steel	90.2	41.8-38/19	286	17.52	W 210TCO-6208	N/A	68
	3600	575	215T	MPOP-36	Rolled Steel	90.2	15.5	286	17.52	W 210TCO-6208	N/A	
	1800	208-230/460	254T	MQOP-37	Cast Iron	93	40-36/18	297	22.15	W 250TCO-6309	W 250TDO-6309	68
	1800	575	254T	MPOP-37	Cast Iron	93	14.4	297	22.15	W 250TCO-6309	W 250TDO-6309	
	1200	208-230/460	284T	MQOP-38	Cast Iron	91.7	44-40/20	363	24.8	W 280TCO-6311	W 280TDO-6311	68
	1200	575	284T	MPOP-38	Cast Iron	91.7	16	363	24.8	W 280TCO-6311	W 280TDO-6311	
20	3600	208-230/460	254T	MQOP-41	Cast Iron	91	51-46/23	315	22.15	W 250TCO-6309	W 250TDO-6309	68
	3600	575	254T	MPOP-41	Cast Iron	91	18.5	315	22.15	W 250TCO-6309	W 250TDO-6309	
	1800	208-230/460	256T	MQOP-42	Cast Iron	93	53-48/24	315	22.15	W 250TCO-6309	W 250TDO-6309	68
	1800	575	256T	MPOP-42	Cast Iron	93	19.2	315	22.15	W 250TCO-6309	W 250TDO-6309	
	1200	208-230/460	284T	MQOP-43	Cast Iron	92.4	57-52/26	394	24.8	W 280TCO-6311	W 280TDO-6311	68
	1200	575	284T	MPOP-43	Cast Iron	92.4	21	394	24.8	W 280TCO-6311	W 280TDO-6311	
25	3600	208-230/460	256T	MQOP-46	Cast Iron	91.7	63-57/28.5	385	22.15	W 250TCO-6309	W 250TDO-6309	68
	3600	575	256T	MPOP-46	Cast Iron	91.7	23	385	22.15	W 250TCO-6309	W 250TDO-6309	
	1800	208-230/460	284T	MQOP-47	Cast Iron	93.6	66-60/30	392	24.8	W 280TCO-6311	W 280TDO-6311	68
	1800	575	284T	MPOP-47	Cast Iron	93.6	24	392	24.8	W 280TCO-6311	W 280TDO-6311	
	1200	208-230/460	324T	MQOP-48	Cast Iron	93	70-64/32	508	27.1	W 320TCO-6312	W 320TDO-6312	68
	1200	575	324T	MPOP-48	Cast Iron	93	26	508	27.1	W 320TCO-6312	W 320TDO-6312	
30	3600	208-230/460	284TS	MQOP-51	Cast Iron	91.7	77-70/35	409	23.43	W 280TCO-6311	W 280TDO-6311	68
	3600	575	284TS	MPOP-51	Cast Iron	91.7	28	409	23.43	W 280TCO-6311	W 280TDO-6311	
	1800	208-230/460	286T	MQOP-52	Cast Iron	94.1	77-70/35	418	24.8	W 280TCO-6311	W 280TDO-6311	68
	1800	575	286T	MPOP-52	Cast Iron	94.1	28	418	24.8	W 280TCO-6311	W 280TDO-6311	
	1200	208-230/460	326T	MQOP-53	Cast Iron	93.6	84-76/38	537	27.1	W 320TCO-6312	W 320TDO-6312	68
	1200	575	326T	MPOP-53	Cast Iron	93.6	30.5	537	27.1	W 320TCO-6312	W 320TDO-6312	
40	3600	208-230/460	286TS	MQOP-56	Cast Iron	92.4	99-90/45	510	23.43	W 280TCO-6311	W 280TDO-6311	68
	3600	575	286TS	MPOP-56	Cast Iron	92.4	36	510	23.43	W 280TCO-6311	W 280TDO-6311	
	1800	208-230/460	324T	MQOP-57	Cast Iron	94.1	106-96/48	519	27.1	W 320TCO-6312	W 320TDO-6312	68
	1800	575	324T	MPOP-57	Cast Iron	94.1	38.4	519	27.1	W 320TCO-6312	W 320TDO-6312	
	1200	208-230/460	364T	MQOP-58	Cast Iron	94.1	110-100/50	697	29.3	W 360TCO-6313	W 360TDO-6313	68
	1200	575	364T	MPOP-58	Cast Iron	94.1	40	697	29.3	W 360TCO-6313	W 360TDO-6313	
50	3600	208-230/460	324TS	MQOP-61	Cast Iron	93	122-110/55	548	25.6	W 320TCO-6312	W 320TDO-6312	68
	3600	575	324TS	MPOP-61	Cast Iron	93	44	548	25.6	W 320TCO-6312	W 320TDO-6312	
	1800	208-230/460	326T	MQOP-62	Cast Iron	94.5	130-118/59	594	27.1	W 320TCO-6312	W 320TDO-6312	68
	1800	575	326T	MPOP-62	Cast Iron	94.5	48	594	27.1	W 320TCO-6312	W 320TDO-6312	
	1200	208-230/460	365T	MQOP-63	Cast Iron	94.1	139-126/63	752	29.3	W 360TCO-6313	W 360TDO-6313	68
	1200	575	365T	MPOP-63	Cast Iron	94.1	50	752	29.3	W 360TCO-6313	W 360TDO-6313	
60	3600	208-230/460	326TS	MQOP-66	Cast Iron	93.6	145-132/66	704	25.6	W 320TCO-6312	W 320TDO-6312	68
	3600	575	326TS	MPOP-66	Cast Iron	93.6	52.8	704	25.6	W 320TCO-6312	W 320TDO-6312	
	1800	208-230/460	364T	MQOP-67	Cast Iron	95	154-140/70	766	29.3	W 360TCO-6313	W 360TDO-6313	68
	1800	575	364T	MPOP-67	Cast Iron	95	56	766	29.3	W 360TCO-6313	W 360TDO-6313	
	1200	208-230/460	404T	MQOP-68	Cast Iron	94.5	154-140/70	1000	33.3	W 400TCO-6318	W 400TDO-6318	68, RB
	1200	575	404T	MPOP-68	Cast Iron	94.5	56	1000	33.3	W 400TCO-6318	W 400TDO-6318	RB

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * RB = Roller Bearing Installed on DE

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

ROLLED STEEL & CAST IRON CONSTRUCTION RIGID BASE

ODP OPEN DRIPROOF



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	CONSTRUCTION	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	D-FLANGE KITS	FOOT NOTES
75	3600	208-230/460	364TS	MQOP-71	Cast Iron	93.6	183-166/83	766	27.17	W 360TCO-6313	W 360TDO-6313	68
	3600	575	364TS	MPOP-71	Cast Iron	93.6	67	766	27.17	W 360TCO-6313	W 360TDO-6313	
	1800	208-230/460	365T	MQOP-72	Cast Iron	95	191-174/87	783	29.3	W 360TCO-6313	W 360TDO-6313	68
	1800	575	365T	MPOP-72	Cast Iron	95	70	783	29.3	W 360TCO-6313	W 360TDO-6313	
	1200	208-230/460	405T	MQOP-73	Cast Iron	94.5	192-174/87	1120	33.3	W 400TCO-6318	W 400TDO-6318	68, RB
	1200	575	405T	MPOP-73	Cast Iron	94.5	70	1120	33.3	W 400TCO-6318	W 400TDO-6318	RB
100	3600	208-230/460	365TS	MQOP-76	Cast Iron	93.6	245-222/112	1040	27.17	W 360TCO-6313	W 360TDO-6313	68
	3600	575	365TS	MPOP-76	Cast Iron	93.6	90	1040	27.17	W 360TCO-6313	W 360TDO-6313	
	1800	208-230/460	404T	MQOP-77	Cast Iron	95.4	246-224/112	1058	33.3	W 400TCO-6318	W 400TDO-6318	68, RB
	1800	575	404T	MPOP-77	Cast Iron	95.4	90	1058	33.3	W 400TCO-6318	W 400TDO-6318	RB
	1200	208-230/460	444T	MQOP-78	Cast Iron	95	257-234/117	1320	39.5	W 440TCO-6319	W 440TDO-6319	68, RB
	1200	575	444T	MPOP-78	Cast Iron	95	94	1320	39.5	W 440TCO-6319	W 440TDO-6319	RB
125	3600	460	404TS	MQOP-81	Cast Iron	94.1	138	1247	33.3	W 400TSCO-6314	W 400TSCO-6314	68
	3600	575	404TS	MPOP-81	Cast Iron	94.1	110	1247	33.3	W 400TSCO-6314	W 400TSCO-6314	
	1800	460	405T	MQOP-82	Cast Iron	95.4	141	1342	33.3	W 400TCO-6318	W 400TDO-6318	68, RB
	1800	575	405T	MPOP-82	Cast Iron	95.4	113	1342	33.3	W 400TCO-6318	W 400TDO-6318	RB
	1200	460	445T	MQOP-83	Cast Iron	95	146	1400	39.5	W 440TCO-6319	W 440TDO-6319	68, RB
	1200	575	445T	MPOP-83	Cast Iron	95	118	1400	39.5	W 440TCO-6319	W 440TDO-6319	RB
150	3600	460	405TS	MQOP-86	Cast Iron	94.1	166	1408	33.3	W 400TSCO-6314	W 400TSCO-6314	68
	3600	575	405TS	MPOP-86	Cast Iron	94.1	132	1408	33.3	W 400TSCO-6314	W 400TSCO-6314	
	1800	460	444T	MQOP-87	Cast Iron	95.8	167	1672	39.5	W 440TCO-6319	W 440TDO-6319	68, RB
	1800	575	444T	MPOP-87	Cast Iron	95.8	134	1672	39.5	W 440TCO-6319	W 440TDO-6319	RB
	1200	460	447T	MQOP-88	Cast Iron	95.4	173	1800	43	W 440TCO-6319	W 440TDO-6319	68, RB
	1200	575	447T	MPOP-88	Cast Iron	95.4	138	1800	43	W 440TCO-6319	W 440TDO-6319	RB
200	3600	460	444TS	MQOP-96	Cast Iron	95	219	1584	34.75	W 440TSCO-6314	W 440TSDO-6314	68
	3600	575	444TS	MPOP-96	Cast Iron	95	175	1584	34.75	W 440TSCO-6314	W 440TSDO-6314	
	1800	460	445T	MQOP-97	Cast Iron	95.8	220	1782	39.5	W 440TCO-6319	W 440TDO-6319	68, RB
	1800	575	445T	MPOP-97	Cast Iron	95.8	176	1782	39.5	W 440TCO-6319	W 440TDO-6319	RB
	1200	460	449T	MQOP-98	Cast Iron	95.4	230	2100	48	W 440TCO-6319	W 440TDO-6319	68, RB
	1200	575	449T	MPOP-98	Cast Iron	95.4	185	2100	48	W 440TCO-6319	W 440TDO-6319	RB
250	3600	460	445TS	MQOP-101	Cast Iron	95	270	1870	34.75	W 440TSCO-6314	W 440TSDO-6314	68
	3600	575	445TS	MPOP-101	Cast Iron	95	216	1870	34.75	W 440TSCO-6314	W 440TSDO-6314	
	1800	460	447T	MQOP-102	Cast Iron	95.8	280	2150	43	W 440TCO-6319	W 440TDO-6319	68, RB
	1800	575	447T	MPOP-102	Cast Iron	95.8	224	2150	43	W 440TCO-6319	W 440TDO-6319	RB
300	3600	460	447TS	MQOP-106	Cast Iron	95.4	322	2002	38.25	W 440TSCO-6314	W 440TSDO-6314	68
	3600	575	447TS	MPOP-106	Cast Iron	95.4	258	2002	38.25	W 440TSCO-6314	W 440TSDO-6314	
	1800	460	449T	MQOP-107	Cast Iron	95.8	335	2220	48	W 440TCO-6319	W 440TDO-6319	68, RB
	1800	575	449T	MPOP-107	Cast Iron	95.8	260	2220	48	W 440TCO-6319	W 440TDO-6319	RB
350	3600	460	449TS	MQOP-111	Cast Iron	95.4	373	2400	43.25	W 440TSCO-6314	W 440TSDO-6314	68
	3600	575	449TS	MPOP-111	Cast Iron	95.4	299	2400	43.25	W 440TSCO-6314	W 440TSDO-6314	

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * RB = Roller Bearing Installed on DE



PREMIUM DESIGN B NEMA 12-12

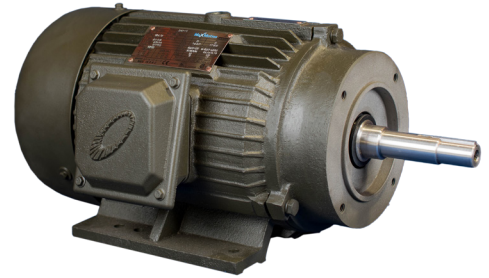
CLOSE COUPLED PUMP MOTORS JM STYLE | CAST IRON

CONSTRUCTION RIGID BASE TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds NEMA Premium Efficiencies
- Factory Certified Division 2, Class I Groups A, B, C, D, Class II Groups F&G
- Meets Temperature Code T2B
- IP55 enclosure
- Rated and Nameplated 60/50 Hertz 190/380-415 @ 1.0 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque 1.0 SF meets MG1 parts 31.4.4.2
- 1.25 Service Factor
- Class F Insulation
- F1 Standard Assembly, Reversible to F2 Assembly
- Provision to accept Drip Cover, See Accessories Page
- CSAus & CE Certified
- Three Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1	1800	208-230/460	143JM	JMQP-2	85.5	3.2-3/1.5	47	16.23	68
	1800	575	143JM	JMPP-2	85.5	1.2	47	16.23	
	1200	208-230/460	145JM	JMQP-3	82.5	4.1-3.7/1.85	52	17.23	68
	1200	575	145JM	JMPP-3	82.5	1.45	52	17.23	
1.5	1800	208-230/460	145JM	JMQP-7	86.5	5.1-4.6/2.3	55	17.23	68
	1800	575	145JM	JMPP-7	86.5	1.9	55	17.23	
	1200	208-230/460	182JM	JMQP-8	87.5	5.2-4.8/2.4	95	19.48	68
	1200	575	182JM	JMPP-8	87.5	1.9	95	19.48	
2	3600	208-230/460	145JM	JMQP-11	85.5	5.8-5.3/2.65	52	17.23	68
	3600	575	145JM	JMPP-11	85.5	2.05	52	17.23	
	1800	208-230/460	145JM	JMQP-12	86.5	6.6-6/3	56	17.23	68
	1800	575	145JM	JMPP-12	96.5	2.4	56	17.23	
	1200	208-230/460	184JM	JMQP-13	88.5	6.6-6/3	103	19.48	68
	1200	575	184JM	JMPP-13	88.5	2.4	103	19.48	
3	3600	208-230/460	145JM	JMQP-16S	86.5	8.84-8/4	90	17.23	68
	3600	575	145JM	JMPP-16S	86.5	3.2	90	17.23	
	3600	208-230/460	182JM	JMQP-16	86.5	8.4-7.6/3.8	95	18.48	68
	3600	575	182JM	JMPP-16	86.5	3	95	18.48	
	1800	208-230/460	182JM	JMQP-17	89.5	8.2-7.6/3.8	97	18.48	68
	1800	575	182JM	JMPP-17	89.5	3	97	18.48	
	1200	208-230/460	213JM	JMQP-18	89.5	9.2-8.4/4.2	136	20.78	68
	1200	575	213JM	JMPP-18	89.5	3.4	136	20.78	
5	3600	208-230/460	184JM	JMQP-21	88.5	13-11.6/5.8	110	19.48	68
	3600	575	184JM	JMPP-21	88.5	4.6	110	19.48	
	1800	208-230/460	184JM	JMQP-22	89.5	14-13.6/6.8	112	19.48	68
	1800	575	184JM	JMPP-22	89.5	5.4	112	19.48	
	1200	208-230/460	215JM	JMQP-23	89.5	15.6-14.2/7.1	162	22.28	68
	1200	575	215JM	JMPP-23	89.5	5.68	162	22.28	

CHART CONTINUES ON NEXT PAGE

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz



PREMIUM DESIGN B NEMA 12-12

CLOSE COUPLED PUMP MOTORS JM STYLE | CAST IRON

CONSTRUCTION RIGID BASE TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
7.5	3600	208-230/460	184JM	JMQP-26S	89.5	18.8-17.6/8.8	134	19.48	68
	3600	575	184JM	JMPP-26S	89.5	7	134	19.48	
	3600	208-230/460	213JM	JMQP-26	89.5	18.8-17.6/8.5	145	20.78	68
	3600	575	213JM	JMPP-26	89.5	7	145	20.78	
	1800	208-230/460	213JM	JMQP-27	91.7	19.8-18.4/9.2	150	20.78	68
	1800	575	213JM	JMPP-27	91.7	7.4	150	20.78	
	1200	208-230/460	254JM	JMQP-28	91	21-19.6/9.5	272	24.7	68
	1200	575	254JM	JMPP-28	91	7.8	272	24.7	
10	3600	208-230/460	215JM	JMQP-31	90.2	23.9-22.8/11.4	167	22.28	68
	3600	575	215JM	JMPP-31	90.2	9.1	167	22.28	
	1800	208-230/460	215JM	JMQP-32	91.7	26-24/12	167	22.28	68
	1800	575	215JM	JMPP-32	91.7	9.6	167	22.28	
	1200	208-230/460	256JM	JMQP-33	91	27.2-25.6/12.8	293	26.5	68
	1200	575	256JM	JMPP-33	91	10.2	293	26.5	
15	3600	208-230/460	215JM	JMQP-36S	91	36.2-34.4/17.2	162	22.28	68
	3600	575	215JM	JMPP-36S	91	13.8	162	22.28	
	3600	208-230/460	254JM	JMQP-36	91	36.2-34.4/17.2	286	24.7	68
	3600	575	254JM	JMPP-36	91	13.8	286	24.7	
	1800	208-230/460	254JM	JMQP-37	92.4	37.2-36.4/18.2	297	24.7	68
	1800	575	254JM	JMPP-37	92.4	14.6	297	24.7	
	1200	208-230/460	284JM	JMQP-38	91.7	41-38/19	363	27.47	68
	1200	575	284JM	JMPP-38	91.7	15.2	363	27.47	
20	3600	208-230/460	256JM	JMQP-41	91	48.5-46/23	315	26.5	68
	3600	575	256JM	JMPP-41	91	18.4	315	26.5	
	1800	208-230/460	256JM	JMQP-42	93	51.8-48.4/24.2	315	26.5	68
	1800	575	256JM	JMPP-42	93	19.1	315	26.5	
25	3600	208-230/460	256JM	JMQP-46S	91.7	60-55/27.5	365	26.5	68
	3600	575	256JM	JMPP-46S	91.7	22	365	26.5	
	3600	208-230/460	284JM	JMQP-46	91.7	61-57/28.5	385	24.47	68
	3600	575	284JM	JMPP-46	91.7	22.8	385	24.47	
	1800	208-230/460	284JM	JMQP-47	93.6	65-60/30	392	24.47	68
	1800	575	284JM	JMPP-47	93.6	24	392	24.47	
30	3600	208-230/460	286JM	JMQP-51	91.7	74-69/34.5	409	24.47	68
	3600	575	286JM	JMPP-51	91.7	18.4	409	24.47	
	1800	208-230/460	286JM	JMQP-52	93.6	76-70.6/35.3	418	28.97	68
	1800	575	286JM	JMPP-52	93.6	28.2	418	28.97	
40	3600	208-230/460	286JM	JMQP-56S	92.4	95-90/45	435	28.97	68
	3600	575	286JM	JMPP-56S	92.4	36	435	28.97	
	3600	208-230/460	324JM	JMQP-56	92.4	94.9-91/45.5	486	30.05	68
	3600	575	324JM	JMPP-56	92.4	36.4	486	30.05	
	1800	208-230/460	324JM	JMQP-57	94.1	100-93.2/46.6	519	30.05	68
	1800	575	324JM	JMPP-57	94.1	37.3	519	30.05	
50	3600	208-230/460	326JM	JMQP-61	93	124-116.2/58.1	548	31.55	68
	3600	575	326JM	JMPP-61	93	46.4	548	31.55	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz



PREMIUM DESIGN B NEMA 12-12

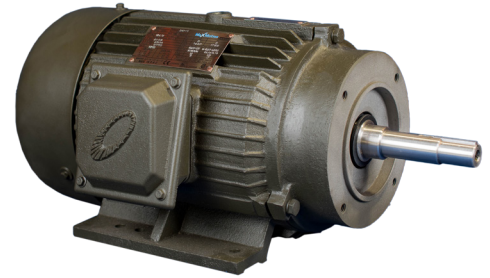
CLOSE COUPLED PUMP MOTORS JP STYLE | CAST IRON

CONSTRUCTION RIGID BASE TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds NEMA Premium Efficiencies
- Factory Certified Division 2, Class I Groups A, B, C, D, Class II Groups F&G
- Meets Temperature Code T2B
- IP55 enclosure
- Rated and Nameplated 60/50 Hertz 190/380-415 @ 1.0 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque 1.0 SF meets MG1 parts 31.4.4.2
- 1.25 Service Factor
- Class F Insulation
- F1 Standard Assembly, Reversible to F2 Assembly
- Provision to accept Drip Cover, See Accessories Page
- CSAus & CE Certified
- Three Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
2	1800	208-230/460	145JP	JPQP-12	86.5	6.6-6/3	56	20.30	68
	1800	575	145JP	JPPP-12	86.5	2.4	56	20.30	
3	1800	208-230/460	182JP	JPQP-17	89.5	8.2-7.6/3.8	97	21.55	68
	1800	575	182JP	JPPP-17	89.5	3	97	21.55	68
5	1800	208-230/460	184JP	JPQP-22	89.5	14-13.6/6.8	112	22.55	68
	1800	575	184JP	JPPP-22	89.5	5.4	112	22.55	
7.5	1800	208-230/460	213JP	JPQP-27	91.7	19.8-18.4/9.2	150	24.65	68
	1800	575	213JP	JPPP-27	91.7	7.4	150	24.65	
10	3600	208-230/460	215JP	JPQP-31	90.2	23.9-22.8/11.4	167	26.15	68
	3600	575	215JP	JPPP-31	90.2	9.1	167	26.15	
	1800	208-230/460	215JP	JPQP-32	91.7	26-24/12	167	26.15	68
	1800	575	215JP	JPPP-32	91.7	9.6	167	26.15	
15	3600	208-230/460	215JP	JPQP-36S	91	36.2-34.4/17.2	162	26.15	68
	3600	575	215JP	JPPP-36S	91	13.8	162	26.15	
	3600	208-230/460	254JP	JPQP-36	91	36.2-34.4/17.2	286	27.58	68
	3600	575	254JP	JPPP-36	91	13.8	286	27.58	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds MEPS (Minimum Efficiency Performance Standards) as described by US Department of Energy in docket 10CFR431 and Natural Resources Canada's Amendment 14
- IP66 enclosure
- Rated and Nameplated 60/50 Hertz 190/380 @ 1.0 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque @ 1.0 SF meets MG1 parts 31.4.4.2
- Class F Insulation
- CSAus & CE Certified
- Three Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	ENCLOSURE	BASE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
0.33	1800	208-230/460	56C	MQS-134L	TENV	Rigid	73.4	1.22-1.1/.55	28	9.8	68
	1800	575	56C	MPS-134L	TENV	Rigid	73.4	0.44	28	9.8	
	1800	208-230/460	56C	MQS-134RB	TENV	Round body	73.4	1.22-1.1/.55	28	9.8	68
	1800	575	56C	MPS-134RB	TENV	Round body	73.4	0.44	28	9.8	
	1800	208-230/460	56C	MQS-134LFC	TEFC	Rigid	73.4	1.22-1.1/.55	28	11.59	68
	1800	575	56C	MPS-134LFC	TEFC	Rigid	73.4	0.44	28	11.59	
	1800	208-230/460	56C	MQS-134RBFC	TEFC	Round body	73.4	1.22-1.1/.55	28	11.59	68
	1800	575	56C	MPS-134RBFC	TEFC	Round body	73.4	0.44	28	11.59	
0.50	3600	208-230/460	56C	MQS-122L	TENV	Rigid	73.4	1.66-1.5/.75	29	9.8	68
	3600	575	56C	MPS-122L	TENV	Rigid	73.4	0.6	29	9.8	
	3600	208-230/460	56C	MQS-122RB	TENV	Round body	73.4	1.66-1.5/.75	29	9.8	68
	3600	575	56C	MPS-122RB	TENV	Round body	73.4	0.6	29	9.8	
	1800	208-230/460	56C	MQS-124L	TENV	Rigid	78.2	1.9-1.72/.86	31	9.8	68
	1800	575	56C	MPS-124L	TENV	Rigid	78.2	0.688	31	9.8	
	1800	208-230/460	56C	MQS-124RB	TENV	Round body	78.2	1.9-1.72/.86	31	9.8	68
	1800	575	56C	MPS-124RB	TENV	Round body	78.2	0.688	31	9.8	
	1800	208-230/460	56C	MQS-124LFC	TEFC	Rigid	78.2	1.9-1.72/.86	31	11.59	68
	1800	575	56C	MPS-124LFC	TEFC	Rigid	78.2	0.688	31	11.59	
	1800	208-230/460	56C	MQS-124RBFC	TEFC	Round body	78.2	1.9-1.72/.86	31	11.59	68
	1800	575	56C	MPS-124RBFC	TEFC	Round body	78.2	0.688	31	11.59	
	1200	208-230/460	56C	MQS-126L	TENV	Rigid	75.3	1.99-1.8/.9	31	9.8	68
	1200	575	56C	MPS-126L	TENV	Rigid	75.3	75.3	31	9.8	
	1200	208-230/460	56C	MQS-126RB	TENV	Round body	75.3	1.99-1.8/.9	31	9.8	68
	1200	575	56C	MPS-126RB	TENV	Round body	75.3	75.3	31	9.8	
0.75	3600	208-230/460	56C	MQS-342L	TENV	Rigid	76.8	2.65-2.4/1.2	33	10.78	68
	3600	575	56C	MPS-342L	TENV	Rigid	76.8	0.96	33	10.78	
	3600	208-230/460	56C	MQS-342RB	TENV	Round body	76.8	2.65-2.4/1.2	33	10.78	68
	3600	575	56C	MPS-342RB	TENV	Round body	76.8	0.96	33	10.78	
	1800	208-230/460	56C	MQS-344L	TENV	Rigid	81.1	2.65-2.4/1.2	33	10.78	68
	1800	575	56C	MPS-344L	TENV	Rigid	81.1	0.96	33	10.78	
	1800	208-230/460	56C	MQS-344RB	TENV	Round body	81.1	2.65-2.4/1.2	33	10.78	68
	1800	575	56C	MPS-344RB	TENV	Round body	81.1	0.96	33	10.78	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILTED & TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	ENCLOSURE	BASE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
0.75	1800	208-230/460	56C	MQS-344LFC	TEFC	Rigid	81.1	2.65/2.4/1.2	33	12.57	68
	1800	575	56C	MPS-344LFC	TEFC	Rigid	81.1	0.96	33	12.57	
	1800	208-230/460	56C	MQS-344RBFC	TEFC	Round body	81.1	2.65/2.4/1.2	33	12.57	68
	1800	575	56C	MPS-344RBFC	TEFC	Round body	81.1	0.96	33	12.57	
	1200	208-230/460	56C	MQS-346L	TENV	Rigid	81.7	2.88-2.6/1.3	34	10.78	68
	1200	575	56C	MPS-346L	TENV	Rigid	81.7	1.04	34	10.78	
	1200	208-230/460	56C	MQS-346RB	TENV	Round body	81.7	2.88-2.6/1.3	34	10.78	68
	1200	575	56C	MPS-346RB	TENV	Round body	81.7	1.04	34	10.78	
1	3600	208-230/460	56C	MQSP-102L	TEFC	Rigid	77	3.1-2.8/1.4	35	12.57	68
	3600	575	56C	MPSP-102L	TEFC	Rigid	77	1.12	35	12.57	
	3600	208-230/460	56C	MQSP-102RB	TEFC	Round body	77	3.1-2.8/1.4	35	12.57	68
	3600	575	56C	MPSP-102RB	TEFC	Round body	77	1.12	35	12.57	
	3600	208-230/460	56C	MQSP-102LNV	TENV	Rigid	77	3.1-2.8/1.4	35	10.78	68
	3600	575	56C	MPSP-102LNV	TENV	Rigid	77	1.12	35	10.78	
	3600	208-230/460	56C	MQSP-102RBNV	TENV	Round body	77	3.1-2.8/1.4	35	10.78	68
	3600	575	56C	MPSP-102RBNV	TENV	Round body	77	1.12	35	10.78	
	1800	208-230/460	56C	MQSP-104L	TEFC	Rigid	86.7	3.36-3.0/1.52	36	12.57	68
	1800	575	56C	MPSP-104L	TEFC	Rigid	86.7	1.216	36	12.57	
	1800	208-230/460	56C	MQSP-104RB	TEFC	Round body	86.7	3.36-3.0/1.52	36	12.57	68
	1800	575	56C	MPSP-104RB	TEFC	Round body	86.7	1.216	36	12.57	
	1800	208-230/460	56C	MQSP-104LNV	TENV	Rigid	86.7	3.36-3.0/1.52	36	10.78	68
	1800	575	56C	MPSP-104LNV	TENV	Rigid	86.7	1.216	36	10.78	
	1800	208-230/460	143TC	MQSP-104RBNV	TENV	Round body	86.7	3.36-3.0/1.52	36	10.78	68
	1800	575	143TC	MPSP-104RBNV	TENV	Round body	86.7	1.216	36	10.78	
	1800	208-230/460	56C	MQSP-104TL	TEFC	Rigid	86.7	3.36-3.0/1.52	36	12.63	68
	1800	575	56C	MPSP-104TL	TEFC	Rigid	86.7	1.216	36	12.63	
	1800	208-230/460	143TC	MQSP-104TLNV	TENV	Rigid	86.7	3.36-3.0/1.52	36	10.84	68
	1800	575	143TC	MPSP-104TLNV	TENV	Rigid	86.7	1.216	36	10.84	
	1200	208-230/460	56C	MQSP-106L	TEFC	Rigid	82.5	3.87-3.5/1.75	36	12.57	68
	1200	575	56C	MPSP-106L	TEFC	Rigid	82.5	1.4	36	12.57	
	1200	208-230/460	56C	MQSP-106RB	TEFC	Round body	82.5	3.87-3.5/1.75	36	12.57	68
	1200	575	56C	MPSP-106RB	TEFC	Round body	82.5	1.4	36	12.57	
1200	208-230/460	143TC	MQSP-106TL	TEFC	Rigid	82.5	3.87-3.5/1.75	42	13.81	68	
1200	575	143TC	MPSP-106TL	TEFC	Rigid	82.5	1.4	42	13.81		
1.5	3600	208-230/460	56C	MQSP-152L	TEFC	Rigid	84	4.64-4.2/2.1	28	12.57	68
	3600	575	56C	MPSP-152L	TEFC	Rigid	84	1.68	28	12.57	
	3600	208-230/460	56C	MQSP-152RB	TEFC	Round body	84	4.64-4.2/2.1	28	12.57	68
	3600	575	56C	MPSP-152RB	TEFC	Round body	84	1.68	28	12.57	
	3600	208-230/460	56C	MQSP-152LNV	TENV	Rigid	84	4.64-4.2/2.1	28	11.96	68
	3600	575	56C	MPSP-152LNV	TENV	Rigid	84	1.68	28	11.96	
	3600	208-230/460	56C	MQSP-152RBNV	TENV	Round body	84	4.64-4.2/2.1	28	11.96	68
	3600	575	56C	MPSP-152RBNV	TENV	Round body	84	1.68	28	11.96	
	3600	208-230/460	143TC	MQSP-152TL	TEFC	Rigid	84	4.42-2.2/1.92	39	12.63	68
	3600	575	143TC	MPSP-152TL	TEFC	Rigid	84	1.6	39	12.63	
	3600	208-230/460	143TC	MQSP-152TLNV	TENV	Rigid	84	4.42-2.2/1.92	39	12.02	68
	3600	575	143TC	MPSP-152TLNV	TENV	Rigid	84	1.6	39	12.02	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILTED & TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	ENCLOSURE	BASE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES	
1.5	1800	208-230/460	56C	MQSP-154L	TEFC	Rigid	86.5	4.87-4.4/2.2	36	12.57	68	
	1800	575	56C	MPSP-154L	TEFC	Rigid	86.5	1.76	36	12.57		
	1800	208-230/460	56C	MQSP-154RB	TEFC	Round body	86.5	4.87-4.4/2.2	36	12.57	68	
	1800	575	56C	MPSP-154RB	TEFC	Round body	86.5	1.76	36	12.57		
	1800	208-230/460	56C	MQSP-154LNV	TENV	Rigid	86.5	4.87-4.4/2.2	36	11.96	68	
	1800	575	56C	MPSP-154LNV	TENV	Rigid	86.5	1.76	36	11.96		
	1800	208-230/460	56C	MQSP-154RBNV	TENV	Round body	86.5	4.87-4.4/2.2	36	11.96	68	
	1800	575	56C	MPSP-154RBNV	TENV	Round body	86.5	1.76	36	11.96		
	1800	208-230/460	145TC	MQSP-154TL	TEFC	Rigid	86.5	4.87-4.4/2.2	42	13.81	68	
	1800	575	145TC	MPSP-154TL	TEFC	Rigid	86.5	1.76	42	13.81		
	1800	208-230/460	145TC	MQSP-154TLNV	TENV	Rigid	86.5	4.87-4.4/2.2	42	12.02	68	
	1800	575	145TC	MPSP-154TLNV	TENV	Rigid	86.5	1.76	42	12.02		
	1200	208-230/460	56C	MQSP-156L	TEFC	Rigid	87.5	5.42-4.9/2.45	36	13.75	68	
	1200	575	56C	MPSP-156L	TEFC	Rigid	87.5	1.96	36	13.75		
	1200	208-230/460	56C	MQSP-156RB	TEFC	Round body	87.5	5.42-4.9/2.45	36	13.75	68	
	1200	575	56C	MPSP-156RB	TEFC	Round body	87.5	1.96	36	13.75		
	1200	208-230/460	182TC	MQSP-156TL	TEFC	Rigid	87.5	5.42-4.9/2.45	79	17	68	
	1200	575	182TC	MPSP-156TL	TEFC	Rigid	87.5	1.96	79	17		
	2	3600	208-230/460	145TC	MQSP-202TL	TEFC	Rigid	85.5	5.31-4.8-2.4	46	13.81	68
		3600	575	145TC	MPSP-202TL	TEFC	Rigid	85.5	1.92	46	13.81	
3600		208-230/460	145TC	MQSP-202TLNV	TENV	Rigid	85.5	5.31-4.8-2.4	46	13.81	68	
3600		575	145TC	MPSP-202TLNV	TENV	Rigid	85.5	1.92	46	13.81		
1800		208-230/460	56C	MQSP-204L	TEFC	Rigid	86.5	6.41-5.8/2.7	36	13.75	68	
1800		575	56C	MPSP-204L	TEFC	Rigid	86.5	2.16	36	13.75		
1800		208-230/460	56C	MQSP-204RB	TEFC	Round body	86.5	6.41-5.8/2.7	36	13.75	68	
1800		575	56C	MPSP-204RB	TEFC	Round body	86.5	2.16	36	13.75		
1800		208-230/460	56C	MQSP-204LNV	TENV	Rigid	86.5	6.41-5.8/2.7	36	13.75	68	
1800		575	56C	MPSP-204LNV	TENV	Rigid	86.5	2.16	36	13.75		
1800		208-230/460	56C	MQSP-204RBNV	TENV	Round body	86.5	6.41-5.8/2.7	36	13.75	68	
1800		575	56C	MPSP-204RBNV	TENV	Round body	86.5	2.16	36	13.75		
1800		208-230/460	145TC	MQSP-204TL	TEFC	Rigid	86.5	5.97-5.4/2.7	49	13.81	68	
1800		575	145TC	MPSP-204TL	TEFC	Rigid	86.5	2.16	49	13.81		
1800		208-230/460	145TC	MQSP-204TLNV	TENV	Rigid	86.5	5.97-5.4/2.7	49	13.81	68	
1800		575	145TC	MPSP-204TLNV	TENV	Rigid	86.5	2.16	49	13.81		
1800		575	145TC	MPSP-204TRB	TEFC	Round body	86.5	2.16	49	13.81	68	
1200		208-230/460	184TC	MQSP-206TL	TEFC	Rigid	88.5	6.86-6.2/3.1	95	17	68	
1200		575	184TC	MPSP-206TL	TEFC	Rigid	88.5	2.48	95	17		
3		3600	208-230/460	145TC	MQSP-302TSL	TEFC	Rigid	86.5	8.96-8.1/4.05	81	15.58	68
	3600	575	145TC	MPSP-302TSL	TEFC	Rigid	86.5	3.24	81	15.58		
	3600	208-230/460	182TC	MQSP-302TL	TEFC	Rigid	86.5	8.96-8.1/4.05	81	17.00	68	
	3600	575	184TC	MPSP-302TL	TEFC	Rigid	86.5	3.24	81	17.00		
	3600	208-230/460	182TC	MQSP-302TLNV	TENV	Rigid	86.5	8.96-8.1/4.05	81	14.70	68	
	3600	575	184TC	MPSP-302TLNV	TENV	Rigid	86.5	3.24	81	14.70		

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILTED & TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	ENCLOSURE	BASE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES	
3	1800	208-230/460	56C	MQSP-304TL-56C	TEFC	Rigid	89.5	8.85-8/4	63	15.52	68	
	1800	575	56C	MPSP-304TL-56C	TEFC	Rigid	89.5	3.2	63	15.52		
	1800	208-230/460	56C	MQSP-304TRB-56C	TEFC	Rigid	89.5	8.85-8/4	63	15.52	68	
	1800	575	56C	MPSP-304TRB-56C	TEFC	Rigid	89.5	3.2	63	15.52		
	1800	208-230/460	145TC	MQSP-304TSL	TEFC	Rigid	89.5	8.85-8/4	78	15.58	68	
	1800	575	145TC	MPSP-304TSL	TEFC	Rigid	89.5	3.2	78	15.58		
	1800	575	145TC	MPSP-304TSL-F0	TEFC	Rigid	89.5	3.2	78	15.58	F0	
	1800	208-230/460	182TC	MQSP-304TL	TEFC	Rigid	89.5	8.85-8/4	89	17	68	
	1800	575	182TC	MPSP-304TL	TEFC	Rigid	89.5	3.2	89	17		
	1800	208-230/460	182TC	MQSP-304TLNV	TENV	Rigid	89.5	8.85-8/4	89	14.70	68	
	1800	575	182TC	MPSP-304TLNV	TENV	Rigid	89.5	3.2	89	14.70		
	5	1200	208-230/460	213TC	MQSP-306TL	TEFC	Rigid	89.5	9.51-8.6/4.3	110	20.7	68
1200		575	213TC	MPSP-306TL	TEFC	Rigid	89.5	3.44	110	20.7		
3600		208-230/460	184TC	MQSP-502TL	TEFC	Rigid	88.5	13.49-12.2/6.1	95	17	68	
3600		575	184TC	MPSP-502TL	TEFC	Rigid	88.5	4.88	95	17		
1800		208-230/460	184TC	MQSP-504TL	TEFC	Rigid	89.5	13.82-12.5/6.25	104	17	68	
1800		575	184TC	MPSP-504TL	TEFC	Rigid	89.5	5	104	17		
1200		208-230/460	215TC	MQSP-506TL	TEFC	Rigid	89.5	15.04-13.6/6.8	171	21.5	68	
1200		575	215TC	MPSP-506TL	TEFC	Rigid	89.5	5.44	171	21.5		
7.5		3600	208-230/460	213TC	MQSP-702TL	TEFC	Rigid	89.5	20.79-18.8/9.4	110	20.7	68
		3600	575	213TC	MPSP-702TL	TEFC	Rigid	89.5	7.52	110	20.7	
		1800	208-230/460	213TC	MQSP-704TL	TEFC	Rigid	91.7	20.57-18.6/9.3	163	20.7	68
10		1800	575	213TC	MPSP-704TL	TEFC	Rigid	91.7	7.44	163	20.7	
	3600	208-230/460	215TC	MQSP-1002TL	TEFC	Rigid	90.2	26.98-24.4/12.2	175	22.3	68	
	3600	575	215TC	MPSP-1002TL	TEFC	Rigid	90.2	9.76	175	22.3		
15	1800	208-230/460	215TC	MQSP-1004TL	TEFC	Rigid	91.7	26.98-24.4/12.2	200	21.5	68	
	1800	575	215TC	MPSP-1004TL	TEFC	Rigid	91.7	9.79	200	21.5		
	3600	208-230/460	254TC	MQSP-1502TL	TEFC	Rigid	91	40-37/18.5	363	23.2	68	
	3600	575	254TC	MPSP-1502TL	TEFC	Rigid	91	14.8	363	23.2		
20	1800	208-230/460	254TC	MQSP-1504TL	TEFC	Rigid	92.4	39.81-36/18	286	23.2	68	
	1800	575	254TC	MPSP-1504TL	TEFC	Rigid	92.4	14.4	286	23.2		
	3600	208-230/460	256TC	MQSP-2002TL	TEFC	Rigid	91	50-46/23	422	24.8	68	
	3600	575	256TC	MPSP-2002TL	TEFC	Rigid	91	18.4	422	24.8		
20	1800	208-230/460	256TC	MQSP-2004TL	TEFC	Rigid	93	54.18-49/24.4	352	24.8	68	
	1800	575	256TC	MPSP-2004TL	TEFC	Rigid	93	19.6	352	24.8		

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * F0 = Terminal box is located in F0 position, on top



THREE PHASE ALL-IN-ONE 56HC AC MOTORS

HEAVY GAUGE ROLLED STEEL CONSTRUCTION

TEFC TOTALLY ENCLOSED FAN COOLED | ALL-IN-ONE FRAME 56HC



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds MEPS (Minimum Efficiency Performance Standards) as described by US Department of Energy in docket 10CFR431 and Natural Resources Canada's Amendment 14
- IP55 enclosure
- Rated and Nameplated 60/50 Hertz 190/380 at next lowest HP @ 1.15 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque @ 1.0 SF meets MG1 parts 31.4.4.2
- 1.15 Service Factor
- Class F Insulation
- F1 Standard Assembly
- Suitable for Horizontal and Vertical Operation
- Brake Kit Provision on NDE on frame 56
- CSAus & CE Certified
- One Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	BRAKE KITS	BRAKE VOLTAGE	FT.LBS	FOOT NOTES
0.33	3600	208-230/460	56HC	MQR-132CW	63	1.46-1.32/.66	21	13.95	A301	230/460	3	68
	3600	575	56HC	MPR-132CW	63	0.53	21	13.95	A297	575	3	
	1800	208-230/460	56HC	MQR-134CW	72	1.55-1.4/.7	22	12.38	A301	230/460	3	68
	1800	575	56HC	MPR-134CW	72	0.56	22	12.38	A297	575	3	
	1200	208-230/460	56HC	MQR-136CW	63	2.63-2.38/1.18	24	12.38	A301	230/460	3	68
	1200	575	56HC	MPR-136CW	63	0.94	24	12.38	A297	575	3	
0.50	3600	208-230/460	56HC	MQR-122CW	70	1.99-1.8/.90	21	12.38	A301	230/460	3	68
	3600	575	56HC	MPR-122CW	70	0.72	21	12.38	A297	575	3	
	1800	208-230/460	56HC	MQR-124CW	74	2.10-1.90/.95	24	12.38	A301	230/460	3	68
	1800	575	56HC	MPR-124CW	74	0.76	24	12.38	A297	575	3	
	1200	208-230/460	56HC	MQR-126CW	68	2.88-2.6/1.3	25	12.38	A302	230/460	6	68
	1200	575	56HC	MPR-126CW	68	1.04	25	12.38	A298	575	6	
0.75	3600	208-230/460	56HC	MQR-342CW	73	2.63-2.38/1.12	22.5	12.38	A301	230/460	3	68
	3600	575	56HC	MPR-342CW	73	0.95	22.5	12.38	A297	575	3	
	1800	208-230/460	56HC	MQR-344CW	77	3.01-2.72/1.36	25.3	12.38	A302	230/460	6	68
	1800	575	56HC	MPR-344CW	77	1.09	25.3	12.38	A298	575	6	
	1200	208-230/460	56HC	MQR-346CW	74	3.76-3.4/1.7	34	12.38	A302	230/460	6	68
	1200	575	56HC	MPR-346CW	74	1.36	34	12.38	A298	575	6	
1	3600	208-230/460	56HC	MQRP-102CW	77	3.37-3.05/1.53	25	12.38	A301	230/460	3	68
	3600	575	56HC	MPRP-102CW	77	1.22	25	12.38	A297	575	3	
	1800	208-230/460	56HC	MQRP-104CW	85.5	3.4-3.08/1.54	27	12.38	A302	230/460	6	68
	1800	575	56HC	MPRP-104CW	85.5	1.23	27	12.38	A298	575	6	
	1200	208-230/460	56HC	MQRP-106CW	82.5	4.34-3.92/1.97	28	12.38	A303	230/460	10	68
	1200	575	56HC	MPRP-106CW	82.5	1.57	28	12.38	A299	575	10	
1.5	3600	208-230/460	56HC	MQRP-152CW	84	4.51-4.08/2.04	36	12.38	A302	230/460	6	68
	3600	575	56HC	MPRP-152CW	84	1.63	28	12.38	A298	575	6	
	1800	208-230/460	56HC	MQRP-154CW	86.5	4.92-4.45/2.23	31	12.38	A303	230/460	10	68
	1800	575	56HC	MPRP-154CW	86.5	1.78	31	12.38	A299	575	10	
	1200	208-230/460	56HC	MQRP-156CW	87.5	5.97-5.4/2.7	35	13.95	A303	230/460	10	68
	1200	575	56HC	MPRP-156CW	87.5	2.16	35	13.95	A299	575	10	
2	3600	208-230/460	56HC	MQRP-202CW	85.5	5.69-5.15/2.58	32	13.52	A302	230/460	6	68
	3600	575	56HC	MPRP-202CW	85.5	2.06	32	13.52	A298	575	6	
	1800	208-230/460	56HC	MQRP-204CW	86.5	6.36-5.75/2.88	37	13.95	A303	230/460	10	68
	1800	575	56HC	MPRP-204CW	86.5	2.3	37	13.95	A299	575	10	
3	3600	208-230/460	56HC	MQRP-302CW	86.5	8.02-7.25/3.63	42	14.54	A303	230/460	10	68
	3600	575	56HC	MPRP-302CW	86.5	2.9	42	14.54	A299	575	10	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

GENERAL PURPOSE PREMIUM ROLLED STEEL

HEAVY GAUGE ROLLED STEEL CONSTRUCTION

TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds MEPS (Minimum Efficiency Performance Standards) as described by US Department of Energy in docket 10CFR431 and Natural Resources Canada's Amendment 14
- IP55 enclosure
- Rated and Nameplated 60/50 Hertz 190/380 at next lowest HP @ 1.15 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque @ 1.0 SF meets MG1 parts 31.4.4.2
- 1.15 Service Factor
- Class F Insulation
- F1 Standard Assembly
- Suitable for Horizontal and Vertical Operation
- Auger Adaptor Plate 56C to 56N Available
- CSAus & CE Certified
- One Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
0.33	3600	208-230/460	56C	MQR-132CH	64	1.32-1.38/.69	21	10.7	68, 40
	3600	575	56C	MPR-132CH	64	0.62	21	12	40
	1800	208-230/460	56C	MQR-134CH	64.5	1.52-1.61/.8	22	12	68, 40
	1800	575	56C	MPR-134CH	64.5	0.71	22	12	40
0.50	3600	208-230/460	56C	MQR-122CH	70	1.86-1.82/.91	21	12	68, 40
	3600	575	56C	MPR-122CH	70	0.8	21	12	40
	1800	208-230/460	56C	MQR-124CH	70	1.9-1.96/.98	24	12	68, 40
	1800	575	56C	MPR-124CH	70	1.05	24	12	40
0.75	3600	208-230/460	56C	MQR-342CH	75	2.45-2.38/1.19	22.5	12	68, 40
	3600	575	56C	MPR-342CH	75	1.1	22.5	10.7	40
	1800	208-230/460	56C	MQR-344CH	72	2.61-2.52/1.26	25.3	10.7	68, 40
	1800	575	56C	MPR-344CH	72	1.1	25.3	10.7	40
1	3600	208-230/460	56C	MQRP-102CH	83	2.9-2.7/1.35	25	10.7	68, 40
	3600	575	56C	MPPR-102CH	83	1.45	25	10.7	40
	1800	208-230/460	56C	MQRP-104CH	85.5	3.3-3.0/1.5	27	10.7	68, 40
	1800	575	56C	MPPR-104CH	85.5	1.2	27	10.7	40
1.5	3600	208-230/460	56C	MQRP-152CH	84.5	4.2-3.8/1.9	36	10.7	68, 40
	3600	575	56C	MPPR-152CH	84.5	1.6	28	10.7	40
	1800	208-230/460	56C	MQRP-154CH	86.5	4.8-4.4/2.2	31	12.5	68, 40
	1800	575	56C	MPPR-154CH	86.5	1.8	31	12.5	40
2	3600	208-230/460	56C	MQRP-202CH	86.7	5.4-5/2.5	32	12.5	68, 40
	3600	575	56C	MPPR-202CH	86.7	2.1	32	12.5	40
	1800	208-230/460	56HC	MQRP-204CH	86.5	5.9-5.7/2.85	37	13.7	68, 40
	1800	575	56HC	MPPR-204CH	86.5	2.4	37	13.7	40
3	3600	208-230/460	56HC	MQRP-302CH	87.5	8.2-7.6/3.8	40	13.7	68, 40
	3600	575	56HC	MPPR-302CH	87.5	3.1	40	13.7	40

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * 40 = Suitable with Auger Adaptor Plate 56C to 56N



SINGLE PHASE GENERAL PURPOSE AC MOTORS

HEAVY GAUGE ROLLED STEEL CONSTRUCTION

TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- Ball bearings Mechanically locked on Shaft End
- Capacitor Start/Capacitor Run Design
- Totally Enclosed and Fully Gasketed for Dirty Enviroments
- Suitable for Horizontal and Vertical Operation
- 1.15 Service Factor
- Class F Insulation
- F1 Standard Assembly
- Auger Adaptor Plate 56C to 56N Available
- CSA Certified, CE Mark
- One Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	FOOT NOTES
0.33	3600	115/208-230	56C	MTR-132FDCH	MANUAL	60,7	3.83/2.12-1.92	22	10.7	INCLUDED	40
	1800	115/208-230	56C	MTR-134FDCH	MANUAL	65	3.92/2.17-1.96	26	10.7	INCLUDED	40
0.50	3600	115/208-230	56C	MTR-122FDCH	MANUAL	70,8	5.03/2.78-2.52	25	10.7	INCLUDED	40
	1800	115/208-230	56C	MTR-124FDCH	MANUAL	74,6	5.7/3.15-2.85	27	10.7	INCLUDED	40
0.75	3600	115/208-230	56C	MTR-342FDCH	MANUAL	75,1	6.82/3.77-3.41	26	10.7	INCLUDED	40
	1800	115/208-230	56C	MTR-344FDCH	MANUAL	77	7.33/4.05-3.66	31	11.5	INCLUDED	40
1	3600	115/208-230	56C	MTR-102FDCH	MANUAL	76,1	8.26/4.76-4.31	30	11.5	INCLUDED	40
	1800	115/208-230	56HC	MTR-104FDCH	MANUAL	79,8	9.09/5.02-4.54	38	11.5	INCLUDED	40
1.5	3600	115/208-230	56HC	MTR-152FDCH	MANUAL	81,3	12.47/6.89-6.23	36	11.5	INCLUDED	40
	1800	115/208-230	56HC	MTR-154FDCH	MANUAL	81,7	12.41/6.86-6.2	44	12.5	INCLUDED	40
2	3600	115/208-230	56HC	MTR-202FDCH	MANUAL	82,3	15.92/8.8-7.96	40	12.5	INCLUDED	40
	1800	115/208-230	56HC	MTR-204FDCH	MANUAL	83,6	16.17/8.94-8.08	50	13.7	INCLUDED	40
	1800	115/208-230	145TC	MTR-204FDTCH	MANUAL	83,6	16.17/8.94-8.08	51	13.8	INCLUDED	
3	1800	208-230	184TC	MTR-304FDCH	NONE	87,4	12.5-11.3	96	16.5	INCLUDED	
5	1800	208-230	184TC	MTR-504FDCH	NONE	85,9	22.9-19.2	108,8	16.9	INCLUDED	

Footnotes:

* 40 = Suitable with Auger Adaptor Plate 56C to 56N

CENTRIFUGAL THREE PHASE 56J AC MOTORS

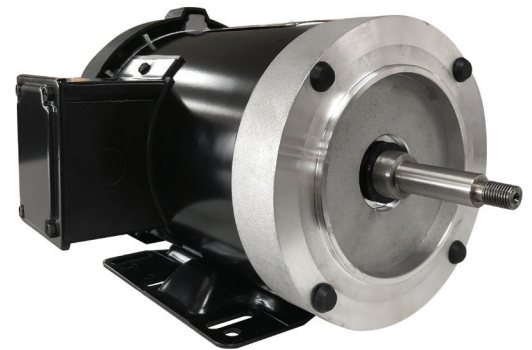
HEAVY GAUGE ROLLED STEEL CONSTRUCTION

TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds MEPS (Minimum Efficiency Performance Standards) as described by US Department of Energy in docket 10CFR431 and Natural Resources Canada's Amendment 14
- Inverter Duty 5:1 Constant Torque, 10:1 Variable Torque 1.0 SF meets MG1 parts 31.4.4.2
- IP55 Enclosure
- Rated and Nameplated 60/50 Hertz 190/380 at next lowest HP @ 1.15 SF
- NEMA C-Face Output w/316SS Threaded Shaft
- Removable 56H Rigid Base
- 1.15 Service Factor
- Class F Insulation
- F1 Standard Assembly
- CSAus & CE Certified
- One Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
0.33	3600	208-230/460	56J	MQR-132J	63	1.43-1.32/.66	21	12.88	68
	3600	575	56J	MPR-132J	63	0.528	21	12.88	
0.50	3600	208-230/460	56J	MQR-122J	70	1.99-1.8/.9	21	12.88	68
	3600	575	56J	MPR-122J	70	0.72	21	12.88	
0.75	3600	208-230/460	56J	MQR-342J	73	2.63-2.37/1.87	22.5	12.88	68
	3600	575	56J	MPR-342J	73	0.95	22.5	12.88	
1	3600	208-230/460	56J	MQRP-102J	77	3.37-3.05/1.53	25	12.88	68
	3600	575	56J	MPRP-102J	77	1.22	25	12.88	
1.5	3600	208-230/460	56J	MQRP-152J	84	4.51-4.08/2.04	28	12.88	68
	3600	575	56J	MPRP-152J	84	1.63	28	12.88	
2	3600	208-230/460	56J	MQRP-202J	85.5	5.69-5.15/2.58	32	12.88	68
	3600	575	56J	MPRP-202J	85.5	2.06	32	12.88	
3	3600	208-230/460	56J	MQRP-302J	86.5	8.02-7.25/3.63	42	14.92	68
	3600	575	56J	MPRP-302J	86.5	2.9	42	14.92	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

METRIC IE1 & IE3 ALUMINUM & CAST IRON MOTORS

IEC DESIGN, WITH NEMA B TORQUE CURVES

TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- Class H Insulation, with B Temp Rise
- SKF High Temperature Bearings
- Inverter Duty Magnet Wire meets MG1 Part 31 10:1 CT and 20:1 VT
- IP55 enclosure
- Rated and Nameplated 60/50 Hertz 190/380-415 or 380-415 @ 1.0 SF
- Aluminum Construction 56-160 Frame, Cast Iron 180-500 Frame
- Rotatable & Removable Bases 56-160 Frame, Rigid Base 180 and larger
- 56-112 Frames come with Sealed Bearings, 132 and larger are Re-Greasable
- PTC Installed on frames 132 and larger
- CSA Certified, CE Mark
- Three Year Warranty



HP	KW	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	EFF	B14 FLANGE	B5 FLANGE	FOOT NOTES
0.13	0.09	1800	208-230/460	56	IJA562-4-24	54	.76-.69/.34	7.7	198.5	IE1	IJAB14-56	IJAB5-56	68
		1800	333/575	56	IJA562-4-35	54	.47/.27	7.7	198.5	IE1	IJAB14-56	IJAB5-56	
		1200	333/575	63	IJA631-6-35	44	.61/.35	9.9	217	IE1	IJAB14-63	IJAB5-63	
0.17	0.12	3600	208-230/460	56	IJA562-2-24	64	.72-.65/.33	7.7	198.5	IE1	IJAB14-56	IJAB5-56	68
		3600	333/575	56	IJA562-2-35	64	.45/.26	7.7	198.5	IE1	IJAB14-56	IJAB5-56	
		1800	208-230/460	63	IJA631-4-24	62	.83-.76/.38	8.6	217	IE1	IJAB14-63	IJAB5-63	68
		1800	333/575	63	IJA631-4-35	62	.53/.31	8.6	217	IE1	IJAB14-63	IJAB5-63	
		1200	333/575	63	IJA632-6-35	48	.72/.42	11	217	IE1	IJAB14-63	IJAB5-63	
0.25	0.19	3600	208-230/460	63	IJA631-2-24	63	1.02-.92/.46	9.46	217	IE1	IJAB14-63	IJAB5-63	68
		3600	333/575	63	IJA631-2-35	63	.61/.35	9.46	217	IE1	IJAB14-63	IJAB5-63	
		1800	208-230/460	63	IJA632-4-24	66	1.04-.94/.47	8.8	217	IE1	IJAB14-63	IJAB5-63	68
		1800	208-230/460	63	IJA632-4-24-B34	66	1.04-.94/.47	8.8	217	IE1	Included	-	68, B34
		1800	208-230/460	63	IJA632-4-24-B35	66	1.04-.94/.47	8.8	217	IE1	-	Included	68, B35
		1800	333/575	63	IJA632-4-35	66	.65/.38	8.8	217	IE1	IJAB14-63	IJAB5-63	
		1800	333/575	63	IJA632-4-35-B34	66	.65/.38	8.8	217	IE1	Included	-	B34
		1800	333/575	63	IJA632-4-35-B35	66	.65/.38	8.8	217	IE1	-	Included	B35
		1200	208-230/460	71	IJA711-6-24	52.5	1.44-1.3/.65	15.4	245	IE1	IJAB14-71	IJAB5-71	68
1200	333/575	71	IJA711-6-35	52.5	.90/.52	15.4	245	IE1	IJAB14-71	IJAB5-71			
0.33	0.25	3600	208-230/460	63	IJA632-2-24	64	1.34-1.21/.61	8.8	217	IE1	IJAB14-63	IJAB5-63	68
		3600	333/575	63	IJA632-2-35	64	.84/.48	8.8	217	IE1	IJAB14-63	IJAB5-63	
		1800	208-230/460	63	IJA633-4-24	68	1.38-1.25/.62	11	217	IE1	IJAB14-63	IJAB5-63	68
		1800	208-230/460	63	IJA633-4-24-B34	68	1.38-1.25/.62	11	217	IE1	Included	-	68, B34
		1800	333/575	63	IJA633-4-35	68	.86/.50	11	217	IE1	IJAB14-63	IJAB5-63	
		1800	333/575	63	IJA633-4-35-B34	68	.86/.50	11	217	IE1	Included	-	B34
		1800	208-230/460	71	IJA711-4-24	68	1.38-1.25/.62	11	245	IE1	IJAB14-71	IJAB5-71	68
		1800	208-230/460	71	IJA711-4-24-B34	68	1.38-1.25/.62	11	245	IE1	Included	-	68, B34
		1800	333/575	71	IJA711-4-35	68	.86/.50	11	245	IE1	IJAB14-71	IJAB5-71	
		1800	333/575	71	IJA711-4-35-B34	68	.86/.50	11	245	IE1	Included	-	
		1200	208-230/460	71	IJA712-6-24	57.5	1.77-1.6/.80	15.4	245	IE1	IJAB14-71	IJAB5-71	68
		1200	333/575	71	IJA712-6-35	57.5	1.11/.64	15.4	245	IE1	IJAB14-71	IJAB5-71	

Footnotes:

- * 68 = Rated and Nameplate 60/50 Hertz, 190-220/380-415 or 380-415 at 1.0SF
- * B34 = Foot w/B14 Flange Installed
- * B35 = Foot w/B5 Flange Installed

CHART CONTINUES ON NEXT PAGE



METRIC IE1 & IE3 ALUMINUM & CAST IRON MOTORS

IEC DESIGN, WITH NEMA B TORQUE CURVES

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	KW	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	EFF	B14 FLANGE	B5 FLANGE	FOOT NOTES		
0.5	0.37	3600	208-230/460	63	IJA633-2-24	70	1.81-1.64/.82	11	217	IE1	IJAB14-63	IJAB5-63	68		
		3600	208-230/460	63	IJA633-2-24-B34	70	1.81-1.64/.82	11	217	IE1	Included	-	68, B34		
		3600	333/575	63	IJA633-2-35	70	1.13/.66	11	217	IE1	IJAB14-63	IJAB5-63			
		3600	333/575	63	IJA633-2-35-B34	70	1.13/.66	11	217	IE1	Included	-	B34		
		3600	208-230/460	71	IJA711-2-24	70	1.81-1.64/.82	11	245	IE1	IJAB14-71	IJAB5-71	68		
		3600	208-230/460	71	IJA711-2-24-B34	70	1.81-1.64/.82	11	245	IE1	Included	-	68, B34		
		3600	333/575	71	IJA711-2-35	70	1.13/.66	11	245	IE1	IJAB14-71	IJAB5-71			
		3600	333/575	71	IJA711-2-35-B34	70	1.13/.66	11	245	IE1	Included	-	B34		
		1800	208-230/460	71	IJA712-4-24	70	1.96-1.77/.88	12.1	245	IE1	IJAB14-71	IJAB5-71	68		
		1800	208-230/460	71	IJA712-4-24-B34	70	1.96-1.77/.88	12.1	245	IE1	Included	-	68, B34		
		1800	208-230/460	71	IJA712-4-24-B35	70	1.96-1.77/.88	12.1	245	IE1	-	Included	68, B35		
		1800	333/575	71	IJA712-4-35	70	1.22/.71	12.1	245	IE1	IJAB14-71	IJAB5-71			
		1800	333/575	71	IJA712-4-35	70	1.22/.71	12.1	245	IE1	Included	-	B34		
		1800	333/575	71	IJA712-4-35	70	1.22/.71	12.1	245	IE1	-	Included	B35		
		1200	208-230/460	80	IJA801-6-24	62	2.37-2.14/1.04	20.24	286	IE1	IJAB14-80-IE1	IJAB5-80-IE1	68		
		1200	333/575	80	IJA801-6-35	62	1.48/.86	20.24	286	IE1	IJAB14-80-IE1	IJAB5-80-IE1			
0.75	0.56	3600	208-230/460	71	IJA712-2-24	72	2.59-2.34/1.17	13.2	245	IE1	IJAB14-71	IJAB5-71	68		
		3600	208-230/460	71	IJA712-2-24-B34	72	2.59-2.34/1.17	13.2	245	IE1	Included	-	68, B34		
		3600	208-230/460	71	IJA712-2-24-B35	72	2.59-2.34/1.17	13.2	245	IE1	-	Included	68, B35		
		3600	333/575	71	IJA712-2-35	72	1.62/.94	13.2	245	IE1	IJAB14-71	IJAB5-71			
		3600	333/575	71	IJA712-2-35-B34	72	1.62/.94	13.2	245	IE1	Included	-	B34		
		3600	333/575	71	IJA712-2-35-B35	72	1.62/.94	13.2	245	IE1	-	Included	B35		
		1800	208-230/460	71	IJA713-4-24	74	2.75-2.49/1.24	16.5	245	IE1	IJAB14-71	IJAB5-71	68		
		1800	333/575	71	IJA713-4-35	74	1.72/1	16.4	245	IE1	IJAB14-71	IJAB5-71			
		1800	208-230/460	80	IJA801-4-24	74	2.75-2.49/1.24	17.6	286	IE1	IJAB14-80-IE1	IJAB5-80-IE1	68		
		1800	208-230/460	80	IJA801-4-24-B35	74	2.75-2.49/1.24	17.6	286	IE1	-	Included	68, B35		
		1800	333/575	80	IJA801-4-35	74	1.72/1	17.6	286	IE1	IJAB14-80-IE1	IJAB5-80-IE1			
		1800	333/575	80	IJA801-4-35-B35	74	1.72/1	17.6	286	IE1	-	Included	B35		
		1200	208-230/460	80	IJA802-6-24	72	3.21-2.91/1.45	22	286	IE1	IJAB14-80-IE1	IJAB5-80-IE1	68		
		1200	333/575	80	IJA802-6-35	72	2.01/1.16	22	286	IE1	IJAB14-80-IE1	IJAB5-80-IE1			
		1	0.75	3600	208-230/460	71	IJA713-2-24	77	3.3-2.98/1.49	16.5	245	IE1	IJAB14-71	IJAB5-71	68
				3600	208-230/460	71	IJA713-2-24-B34	77	3.3-2.98/1.49	16.5	245	IE1	Included	-	68, B34
3600	333/575			71	IJA713-2-35	77	2.06/1.19	16.5	245	IE1	IJAB14-71	IJAB5-71			
3600	333/575			71	IJA713-2-35-B34	77	2.06/1.19	16.5	245	IE1	Included	-	B34		
3600	208-230/460			80	IJA801-2-24	77	3.30-2.98/1.49	19.8	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	68		
3600	208-230/460			80	IJA801-2-24-B35	77	3.30-2.98/1.49	19.8	300	IE3	-	Included	68, B35		
3600	333/575			80	IJA801-2-35	77	2.06/1.19	19.8	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3			
3600	333/575			80	IJA801-2-35-B35	77	2.06/1.19	19.8	300	IE3	-	Included	B35		
1800	208-230/460			80	IJA802-4-24	83.5	3.32-3.01/1.50	27.5	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	68		
1800	208-230/460			80	IJA802-4-24-B35	83.5	3.32-3.01/1.50	27.5	300	IE3	-	Included	68, B35		
1800	333/575			80	IJA802-4-35	83.5	2.08/1.2	27.5	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3			
1800	333/575			80	IJA802-4-35-B35	83.5	2.08/1.2	27.5	300	IE3	-	Included	B35		
1200	208-230/460			90	IJA90S-6-24	82.5	3.55-3.21/1.61	35.2	320	IE3	IJAB14-80-IE3	IJAB5-80-IE3	68		
1200	333/575			90	IJA90S-6-35	82.5	2.22/1.29	35.2	320	IE3	IJAB14-80-IE3	IJAB5-80-IE3			

Footnotes:

- * 68 = Rated and Nameplate 60/50 Hertz, 190-220/380-415 or 380-415 at 1.0SF
- * B34 = Foot w/B14 Flange Installed
- * B35 = Foot w/B5 Flange Installed

CHART CONTINUES ON NEXT PAGE



METRIC IE1 & IE3 ALUMINUM & CAST IRON MOTORS

IEC DESIGN, WITH NEMA B TORQUE CURVES

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	KW	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	EFF	B14 FLANGE	B5 FLANGE	FOOT NOTES
1.5	1.12	3600	208-230/460	80	IJA802-2-24	84	4.38-3.96/1.98	23.1	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	68
		3600	208-230/460	80	IJA802-2-24-B35	84	4.38-3.96/1.98	23.1	300	IE3	-	Included	68, B35
		3600	333/575	80	IJA802-2-35	84	2.74/1.58	23.1	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	
		3600	333/575	80	IJA802-2-35-B35	84	2.74/1.58	23.1	300	IE3	-	Included	B35
		1800	208-230/460	80	IJA803-4-24-IE1	79	5.02-4.54/2.27	23.1	300	IE1	IJAB14-80-IE1	IJAB5-80-IE1	68, d
		1800	208-230/460	80	IJA803-4-24-IE3	79	5.02-4.54/2.27	23.1	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	68
		1800	333/575	80	IJA803-4-35-IE1	79	3.14/1.82	23.1	300	IE1	IJAB14-80-IE3	IJAB5-80-IE3	d
		1800	333/575	80	IJA803-4-35-IE3	79	3.14/1.82	23.1	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	
		1800	208-230/460	90	IJA90S-4-24	86.5	4.64-4.2/2.1	35.2	320	IE3	IJAB14-90	IJAB5-90	68
		1800	333/575	90	IJA90S-4-35	86.5	2.90/1.68	35.2	320	IE3	IJAB14-90	IJAB5-90	
		1200	208-230/460	90	IJA90L-6-24	87.5	4.78-4.32/2.16	45.1	345	IE3	IJAB14-90	IJAB5-90	68
		1200	333/575	90	IJA90L-6-35	87.5	2.99/1.73	45.1	345	IE3	IJAB14-90	IJAB5-90	
2	1.49	3600	208-230/460	80	IJA803-2-24-IE1	79	6.12-5.53/2.77	26.4	300	IE1	IJAB14-80-IE1	IJAB5-80-IE1	68, d
		3600	208-230/460	80	IJA803-2-24-IE3	85.5	5.80-5.24/2.62	26.4	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	68
		3600	208-230/460	80	IJA803-2-24-IE3-B35	85.5	5.80-5.24/2.62	26.4	300	IE3	-	Included	68, B35
		3600	333/575	80	IJA803-2-35-IE1	79	3.82/2.21	24.5	300	IE1	IJAB14-80-IE1	IJAB5-80-IE1	d
		3600	333/575	80	IJA803-2-35-IE3	85.5	3.62/2.10	26.4	300	IE3	IJAB14-80-IE3	IJAB5-80-IE3	
		3600	333/575	80	IJA803-2-35-IE3-B35	85.5	3.62/2.10	26.4	300	IE3	-	Included	B35
		3600	208-230/460	90	IJA90S-2-24	85.5	5.8-5.24/2.62	29.7	320	IE3	IJAB14-90	IJAB5-90	68
		3600	333/575	90	IJA90S-2-35	85.5	3.62/2.10	29.7	320	IE3	IJAB14-90	IJAB5-90	
		1800	208-230/460	90	IJA90L-4-24	86.5	6.25-5.65/2.83	39.6	345	IE3	IJAB14-90	IJAB5-90	68
		1800	333/575	90	IJA90L-4-35	86.5	3.90/2.26	39.6	345	IE3	IJAB14-90	IJAB5-90	
		1200	208-230/460	100	IJA100L-6-24	88.5	6.44-5.83/2.91	51.7	405	IE3	IJAB14-100	IJAB5-100	68
		1200	333/575	100	IJA100L-6-35	88.5	4.02/2.33	51.7	405	IE3	IJAB14-100	IJAB5-100	
2.4	1.79	1800	208-230/460	90	IJA90L2-4-24	86.5	7.41-6.70/3.35	45.1	345	IE3	IJAB14-90	IJAB5-90	68
		1800	333/575	90	IJA90L2-4-35	86.5	4.63/2.68	45.1	345	IE3	IJAB14-90	IJAB5-90	
3	2.24	3600	208-230/460	90	IJA90L-2-24	86.5	8.31-7.51/3.76	37.4	345	IE3	IJAB14-90	IJAB5-90	68
		3600	333/575	90	IJA90L-2-35	86.5	5.19/3.00	37.4	345	IE3	IJAB14-90	IJAB5-90	
		1800	208-230/460	100	IJA100L1-4-24	89.5	8.42-7.62/3.81	55	405	IE3	IJAB14-100	IJAB5-100	68
		1800	333/575	100	IJA100L1-4-35	89.5	5.26/3.05	55	405	IE3	IJAB14-100	IJAB5-100	
		1200	208-230/460	112	IJA112M-6-46	89.5	9.22-8.34/4.17	56	400	IE3	IJAB14-112	IJAB5-112	68
		1200	575/990	112	IJA112M-6-59	89.5	3.34/1.94	66	400	IE3	IJAB14-112	IJAB5-112	
		1200	575/990	112	IJA112M-6-59-B34	89.5	3.34/1.94	66	400	IE3	Included	-	B34
4	2.98	3600	208-230/460	90	IJA90L2-2-24	88.5	10.8-9.78/4.89	42.9	345	IE3	IJAB14-90	IJAB5-90	68
		3600	333/575	90	IJA90L2-2-35	88.5	6.76/3.91	42.9	345	IE3	IJAB14-90	IJAB5-90	68
		3600	208-230/460	100	IJA100L-2-24	88.5	10.80-9.78/4.89	50.6	405	IE3	IJAB14-100	IJAB5-100	68
		3600	333/575	100	IJA100L-2-35	88.5	3.76/3.91	50.6	405	IE3	IJAB14-100	IJAB5-100	
		1800	208-230/460	100	IJA100L2-4-24	89.5	11.30-10.30/5.13	67.1	405	IE3	IJAB14-100	IJAB5-100	68
		1800	333/575	100	IJA100L2-4-35	89.5	7.09/4.10	67.1	405	IE3	IJAB14-100	IJAB5-100	
		1200	208-230/460	132	IJA132S-6-46	89.5	12.60-11.40/5.69	91.3	445	IE3	IJAB14-132	IJAB5-132	68
		1200	575/990	132	IJA132S-6-59	89.5	4.55/2.64	91.3	445	IE3	IJAB14-132	IJAB5-132	
		1200	575/990	132	IJA132S-6-59-B35	89.5	4.55/2.64	91.3	445	IE3	Included	-	B34

Footnotes:

- * 68 = Rated and Nameplate 60/50 Hertz, 190-220/380-415 or 380-415 at 1.0SF
- * B34 = Foot w/B14 Flange Installed
- * B35 = Foot w/B5 Flange Installed
- * d = Discontinued and Replaced with Premium Version

CHART CONTINUES ON NEXT PAGE



METRIC IE1 & IE3 ALUMINUM & CAST IRON MOTORS

IEC DESIGN, WITH NEMA B TORQUE CURVES

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	KW	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	EFF	B14 FLANGE	B5 FLANGE	FOOT NOTES
5.5	4.1	3600	208-230/460	112	IJA112M-2-46	88.5	14.30-12.90/6.45	88.5	400	IE3	IJAB14-112	IJAB5-112	68
		3600	575/990	112	IJA112M-2-59	88.5	5.16/3.00	88.5	400	IE3	IJAB14-112	IJAB5-112	
		1800	208-230/460	112	IJA112M-4-46	89.5	15.10-13.70/6.84	82.5	400	IE3	IJAB14-112	IJAB5-112	
		1800	575/990	112	IJA112M-4-59	89.5	5.47/3.18	82.5	400	IE3	IJAB14-112	IJAB5-112	
		1200	208-230/460	132	IJA132M1-6-46	89.5	16.80-15.20/7.58	108.9	485	IE3	IJAB14-132	IJAB5-132	
		1200	575/990	132	IJA132M1-6-59	89.5	6.10/3.52	108.9	485	IE3	IJAB14-132	IJAB5-132	
7.5	5.6	3600	208-230/460	112	IJA112M2-2-46	89.5	19.40-17.50/8.76	79.2	400	IE3	IJAB14-112	IJAB5-112	68
		3600	575/990	112	IJA112M2-2-59	89.5	7.01/4.07	79.2	400	IE3	IJAB14-112	IJAB5-112	
		3600	208-230/460	132	IJA132S1-2-46	89.5	19.40-17.50/8.76	94.6	445	IE3	IJAB14-132	IJAB5-132	68
		3600	575/990	132	IJA132S1-2-59	89.5	7.01/4.07	94.6	445	IE3	IJAB14-132	IJAB5-132	
		1800	208-230/460	132	IJA132S-4-46	91.7	20.10-18.10/9.07	107.8	445	IE3	IJAB14-132	IJAB5-132	68
		1800	575/990	132	IJA132S-4-59	91.7	7.26/4.21	107.8	445	IE3	IJAB14-132	IJAB5-132	
		1200	208-230/460	132	IJA132M2-6-46	91	22.40-20.20/10.10	133	485	IE3	IJAB14-132	IJAB5-132	68
		1200	575/990	132	IJA132M2-6-59	91	8.09/4.70	133	485	IE3	IJAB14-132	IJAB5-132	
10	7.46	3600	208-230/460	112	IJA112M3-2-46	90.2	26.2-23.7/11.9	84.7	400	IE3	IJAB14-112	IJAB5-112	68
		3600	575/990	112	IJA112M3-2-59	90.2	9.49/5.51	84.7	400	IE3	IJAB14-112	IJAB5-112	
		3600	208-230/460	132	IJA132S2-2-46	90.2	26.20-23.70/11.90	105.6	445	IE3	IJAB14-132	IJAB5-132	68
		3600	575/990	132	IJA132S2-2-59	90.2	9.49/5.51	105.6	445	IE3	IJAB14-132	IJAB5-132	
		1800	208-230/460	132	IJA132M-4-46	91.7	27-24.40/12.20	128.7	485	IE3	IJAB14-132	IJAB5-132	68
		1800	575/990	132	IJA132M-4-59	91.7	9.78/5.68	128.7	485	IE3	IJAB14-132	IJAB5-132	
		1200	208-230/460	160	IJA160M-6-46	91	29-26.20/13.10	184.8	615	IE3	N/A	IJAB5-160	68
		1200	575/990	160	IJA160M-6-59	91	10.50/6.08	184.8	615	IE3	N/A	IJAB5-160	
12.4	9.25	3600	208-230/460	132	IJA132M1-2-46	90.2	32.20-28.90/14.50	125.4	485	IE3	IJAB14-132	IJAB5-132	68
		3600	575/990	132	IJA132M1-2-59	90.2	11.60/6.72	125.4	485	IE3	IJAB14-132	IJAB5-132	
		1800	208-230/460	132	IJA132M1-4-46	90.4	33.80-30.60/15.30	158.4	485	IE3	IJAB14-132	IJAB5-132	68
		1800	575/990	132	IJA132M1-4-59	90.4	12.20/7.10	158.4	485	IE3	IJAB14-132	IJAB5-132	
15	11.19	3600	208-230/460	132	IJA132M2-2-46	91	37.70-34.10/17	129.8	485	IE3	IJAB14-132	IJAB5-132	68
		3600	575/990	132	IJA132M2-2-59	91	13.60/7.92	129.8	485	IE3	IJAB14-132	IJAB5-132	
		3600	208-230/460	160	IJA160M1-2-46	91	37.70-34.10/17	185.9	615	IE3	N/A	IJAB5-160	68
		3600	575/990	160	IJA160M1-2-59	91	13.60/7.92	185.9	615	IE3	N/A	IJAB5-160	
		1800	208-230/460	160	IJA160M-4-46	92.4	38.90-35.20/17.60	221.1	615	IE3	N/A	IJAB5-160	68
		1800	575/990	160	IJA160M-4-59	92.4	14.10/8.17	221.1	615	IE3	N/A	IJAB5-160	
		1200	208-230/460	160	IJA160L-6-46	91.7	41.60-37.60/18.80	236.5	660	IE3	N/A	IJAB5-160	68
		1200	575/990	160	IJA160L-6-59	91.7	15.04/8.71	236.5	660	IE3	N/A	IJAB5-160	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



METRIC IE1 & IE3 ALUMINUM & CAST IRON MOTORS

IEC DESIGN, WITH NEMA B TORQUE CURVES

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	KW	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	EFF	B14 FLANGE	B5 FLANGE	FOOT NOTES
20	14.92	3600	208-230/460	132	IJA132M3-2-46	91	51.4-46.5/23.2	143	485	IE3	IJAB14-132	IJAB5-132	68
		3600	575/990	132	IJA132M3-2-59	91	18.6/10.8	143	485	IE3	IJAB14-132	IJAB5-132	
		3600	208-230/460	160	IJA160M2-2-46	91	51.40-46.50/23.20	210.1	615	IE3	N/A	IJAB5-160	68
		3600	575/990	160	IJA160M2-2-59	91	18.60/10.80	210.1	615	IE3	N/A	IJAB5-160	
		1800	208-230/460	160	IJA160L-4-46	93	52.10-47.10/23.50	237.6	660	IE3	N/A	IJAB5-160	68
		1800	575/990	160	IJA160L-4-59	93	18.80/10.90	237.6	660	IE3	N/A	IJAB5-160	
		1200	208-230/460	180	IJC180L-6-46	91.7	56.10-50.70/25.30	430	690	IE3	N/A	IJCB5-180	68
		1200	575/990	180	IJC180L-6-59	91.7	20.24/11.73	430	690	IE3	N/A	IJCB5-180	
25	18.65	3600	208-230/460	160	IJA160L-2-46	91.7	92.90-56.90/28.50	238.7	660	IE3	N/A	IJAB5-160	68
		3600	575/990	160	IJA160L-2-59	91.7	22.80/13.20	238.7	660	IE3	N/A	IJAB5-160	
		1800	208-230/460	180	IJC180M-4-46	93.6	63.80-57.70/28.80	406	652	IE3	N/A	IJCB5-180	68
		1800	575/990	180	IJC180M-4-59	93.6	23.10/13.40	406	652	IE3	N/A	IJCB5-180	
		1200	460/796	200	IJC200L1-6-47	93	30.80/17.80	507.8	746	IE3	N/A	IJCB5-200	68
		1200	575/990	200	IJC200L1-6-59	93	24.64/14.30	507.8	746	IE3	N/A	IJCB5-200	
30	22.38	3600	208-230/460	160	IJA160L2-2-46	91.7	74.80-67.70/33.80	245.3	660	IE3	N/A	IJAB5-160	68
		3600	575/990	160	IJA160L2-2-59	91.7	27.10/15.70	245.3	660	IE3	N/A	IJAB5-160	
		3600	208-230/460	180	IJC180M-2-46	91.7	74.80-67.70/33.80	412.7	652	IE3	N/A	IJCB5-180	68
		3600	575/990	180	IJC180M-2-59	91.7	27.10/15.70	412.7	652	IE3	N/A	IJCB5-180	
		1800	208-230/460	180	IJC180L-4-46	93.6	75.90-68.60/34.30	467	690	IE3	N/A	IJCB5-180	68
		1800	575/990	180	IJC180L-4-59	93.6	27.40/15.90	467	690	IE3	N/A	IJCB5-180	
		1200	460/796	200	IJC200L2-6-47	93	36.70/21.20	358.8	746	IE3	N/A	IJCB5-200	68
		1200	575/990	200	IJC200L2-6-59	93	29.36/26.10	358.8	746	IE3	N/A	IJCB5-200	
40	29.84	3600	460/796	200	IJC200L1-2-47	92.4	45.80/26.50	550	746	IE3	N/A	IJCB5-200	68
		3600	575/990	200	IJC200L1-2-59	92.4	36.60/21.30	550	746	IE3	N/A	IJCB5-200	
		1800	460/796	200	IJC200L-4-47	94.1	46.50/26.90	583	746	IE3	N/A	IJCB5-200	68
		1800	575/990	200	IJC200L-4-59	94.1	37.20/21.60	583	746	IE3	N/A	IJCB5-200	
		1200	460/796	225	IJC225M-6-47	94.1	48.20/27.990	667	810	IE3	N/A	IJCB5-225	68
		1200	575/990	225	IJC225M-6-59	94.1	38.56/22.40	667	810	IE3	N/A	IJCB5-225	
50	37.3	3600	460/796	200	IJC200L2-2-47	93	56.10/32.40	567.6	746	IE3	N/A	IJCB5-200	68
		3600	575/990	200	IJC200L2-2-59	93	44.90/26.10	567.6	746	IE3	N/A	IJCB5-200	
		1800	460/796	225	IJC225S-4-47	94.5	57.10/33	727	780	IE3	N/A	IJCB5-225	68
		1800	575/990	225	IJC225S-4-59	94.5	45.70/26.60	727	780	IE3	N/A	IJCB5-225	
		1200	460/796	250	IJC250M-6-47	94.1	58.80/34	874.5	900	IE3	N/A	IJCB5-250	68
		1200	575/990	250	IJC250M-6-59	94.4	47.04/27.30	874.5	900	IE3	N/A	IJCB5-250	
60	44.76	3600	460/796	225	IJC225M-2-47	93.6	67/38.70	716	780	IE3	N/A	IJCB5-225	68
		3600	575/990	225	IJC225M-2-59	93.6	53.60/31.20	716	780	IE3	N/A	IJCB5-225	
		1800	460/796	225	IJC225M-4-47	95	69.10/39.90	797	810	IE3	N/A	IJCB5-250	68
		1800	575/990	225	IJC225M-4-59	95	55.30/32.10	797	810	IE3	N/A	IJCB5-250	
		1200	460/796	250	IJC280S-6-47	93.7	70.30/40.60	1107	982	IE3	N/A	IJCB5-280	68
		1200	575/990	250	IJC280S-6-59	93.7	56.24/32.60	1107	982	IE3	N/A	IJCB5-280	
75	55.95	3600	460/796	250	IJC250M-2-47	93.6	81.90/47.40	910.7	900	IE3	N/A	IJCB5-250	68
		3600	575/990	250	IJC250M-2-59	93.6	65.60/38.10	910.7	900	IE3	N/A	IJCB5-250	
		1800	460/796	250	IJC250M-4-47	95.4	84.10/48.60	979	900	IE3	N/A	IJCB5-250	68
		1800	575/990	250	IJC250M-4-59	95.4	67.30/39.10	979	900	IE3	N/A	IJCB5-250	
		1200	460/796	280	IJC280M-6-47	94.5	85.90/49.60	1263.5	1033	IE3	N/A	IJCB5-280	68
		1200	575/990	280	IJC280M-6-59	94.5	68.72/39.80	1263.5	1033	IE3	N/A	IJCB5-280	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz

CHART CONTINUES ON NEXT PAGE



METRIC IE1 & IE3 ALUMINUM & CAST IRON MOTORS

IEC DESIGN, WITH NEMA B TORQUE CURVES

TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	KW	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	EFF	B14 FLANGE	B5 FLANGE	FOOT NOTES
100	74.6	3600	460/796	280	IJC280S-2-47	94.1	111/64.20	1203.9	982	IE3	N/A	IJCB5-280-2POLE	68
		3600	575/990	280	IJC280S-2-59	94.1	88.90/51.60	1203.9	982	IE3	N/A	IJCB5-280-2POLE	
		1800	460/796	280	IJC280S4-4-47	95.4	112/64.80	1292	982	IE3	N/A	IJCB5-280	68
		1800	575/990	280	IJC280S4-4-59	95.4	89.70/52.10	1292	982	IE3	N/A	IJCB5-280	
		1200	460/796	315	IJC315S-6-47	95	117/67.60	1858.8	1208	IE3	N/A	IJCB5-315	68
		1200	575/990	315	IJC315S-6-59	95	93.60/54.60	1858.8	1208	IE3	N/A	IJCB5-315	
125	93.25	3600	460/796	280	IJC280M-2-47	95	134/77.40	1304.6	1033	IE3	N/A	IJCB5-280-2POLE	68
		3600	575/990	280	IJC280M-2-59	95	106/61.40	1304.6	1033	IE3	N/A	IJCB5-280-2POLE	
		1800	460/796	280	IJC280M-4-47	95.4	136/78.60	1409	1033	IE3	N/A	IJCB5-280	68
		1800	575/990	280	IJC280M-4-59	95.4	108.80/63.20	1409	1033	IE3	N/A	IJCB5-280	
		1200	460/796	315	IJC315M-6-47	95	140/80.90	2074.9	1318	IE3	N/A	IJCB5-315	68
		1200	575/990	315	IJC315M-6-59	95	112/65	2074.9	1318	IE3	N/A	IJCB5-315	
150	111.19	3600	460/796	315	IJC315S-2-47	95	161/93	1977.9	1178	IE3	N/A	IJCB5-315	68
		3600	575/990	315	IJC315S-2-59	95	128.80/74.8	1977.9	1178	IE3	N/A	IJCB5-315	
		1800	460/796	315	IJC315S-4-47	95.8	164/94.80	2070.5	1208	IE3	N/A	IJCB5-315	68
		1800	575/990	315	IJC315S-4-59	95.8	131.20/76	2070.5	1208	IE3	N/A	IJCB5-315	
		1200	460/796	315	IJC315L1-6-47	95.8	168/97.10	2242.5	1318	IE3	N/A	IJCB5-315	68
		1200	575/990	315	IJC315L1-6-59	95.8	134.40/77.70	2242.5	1318	IE3	N/A	IJCB5-315	
180	134.28	3600	460/796	315	IJC315M-2-47	95.4	193/111.50	2268.9	1288	IE3	N/A	IJCB5-315	68
		3600	575/990	315	IJC315M-2-59	95.4	154.40/89.32	2268.9	1288	IE3	N/A	IJCB5-315	
		1800	460/796	315	IJC315M-4-47	96.2	196/113.3	2277.7	1318	IE3	N/A	IJCB5-315	68
		1800	575/990	315	IJC315M-4-59	96.2	156.80/91.10	2277.7	1318	IE3	N/A	IJCB5-315	
		1200	460/796	315	IJC315L2-6-47	86.5	201/116.20	2471.8	1318	IE3	N/A	IJCB5-315	68
		1200	575/990	315	IJC315L2-6-59	86.5	160.80/93.40	2471.8	1318	IE3	N/A	IJCB5-315	
200	149.2	3600	460/796	315	IJC315L1-2-47	95.4	234/135.20	2352.7	1288	IE3	N/A	IJCB5-315	68
		3600	575/990	315	IJC315L1-2-59	95.4	187.20/108.50	2352.7	1288	IE3	N/A	IJCB5-315	
		1800	460/796	315	IJC315L1-4-47	96.2	237/137	2482.8	1318	IE3	N/A	IJCB5-315	68
		1800	575/990	315	IJC315L1-4-59	96.2	189.60/110.20	2482.8	1318	IE3	N/A	IJCB5-315	
270	201.42	3600	460/796	315	IJC315L2-2-47	95.8	288/166.50	2632.77	1288	IE3	N/A	IJCB5-315	68
		3600	575/990	315	IJC315L2-2-59	95.8	230/40/133.40	2632.77	1288	IE3	N/A	IJCB5-315	
		1800	460/796	315	IJC315L2-4-47	96.2	297/171.60	2729.8	1318	IE3	N/A	IJCB5-315	68
		1800	575/990	315	IJC315L2-4-59	96.2	237.60/138	2729.8	1318	IE3	N/A	IJCB5-315	

Footnotes:

* 68 = Rated and Nameplated 60/50 Hertz



PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED



Features:

- MG-1 Design B and MG-1 Part 31
- Meets or exceeds NEMA Premium Efficiencies (1HP)
- IP66 enclosure
- Rated and Nameplated 60/50 Hertz 190/380-415 @ 1.0 SF
- Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque 1.0 SF meets MG1 parts 31.4.4.2
- Class F Insulation
- CSAus & CE Certified
- Three Year Warranty



HP	RPM	VOLTS	FRAME	CAT NO.	ENCLOSURE	NOM EFF.	F.L. AMPS	WT (Lbs)	"L" Dimension (Inch)	B14 FLANGE	B5 FLANGE	FOOT NOTES
0.25	3600	208-230/460	63	MQSJ-6312	TENV	73	1.17-1.06/.53	17.6	9.53	63JB14SS	63JB5SS	68,B3
	3600	575	63	MPSJ-6312	TENV	73	0.424	17.6	9.53	63JB14SS	63JB5SS	B3
	1800	208-230/460	63	MQSJ-6324	TENV	75	1.17-1.06/.53	17.6	9.53	63JB14SS	63JB5SS	68,B3
	1800	575	63	MPSJ-6324	TENV	75	0.424	17.6	9.53	63JB14SS	63JB5SS	B3
	1800	208-230/460	63	MQSJ-6324NVB14	TENV	75	1.06-1.06/.53	17.6	9.53	Included	-	68,B14
	1200	208-230/460	71	MQSJ-7116NVB14	TENV	63	1.46-1.32/.66	20.9	12.24	Included	-	68,B14
	1200	575	71	MPSJ-7116NVB14	TENV	63	0.528	20.9	12.24	Included	-	B14
0.33	3600	208-230/460	63	MQSJ-6322	TENV	74	1.26-1.14/.57	17.6	9.53	63JB14SS	63JB5SS	68,B3
	3600	575	63	MPSJ-6322	TENV	74	0.456	17.6	9.53	63JB14SS	63JB5SS	B3
	1800	208-230/460	71	MQSJ-7114NVB14	TENV	78	1.26-1.14/.57	18.7	9.84	Included	-	68,B14
	1200	208-230/460	71	MQSJ-7126	TENV	67	1.59-1.44/.72	25.3	12.24	71JB14SS	71JB5SS	68,B3
	1200	575	71	MPSJ-7126	TENV	67	0.576	25.3	12.24	71JB14SS	71JB5SS	B3
0.50	3600	208-230/460	71	MQSJ-7112	TENV	80	1.71-1.55/.775	25.3	9.84	71JB14SS	71JB5SS	68,B3
	3600	575	71	MPSJ-7112	TENV	80	0.62	25.3	9.84	71JB14SS	71JB5SS	B3
	1800	208-230/460	71	MQSJ-7124	TENV	78	1.65-1.5/.75	26	9.84	71JB14SS	71JB5SS	68,B3
	1800	575	71	MPSJ-7124	TENV	78	0.648	23.1	9.84	71JB14SS	71JB5SS	B3
	1800	208-230/460	71	MQSJ-7124NVB14	TENV	78	1.65-1.5/.75	26	9.84	Included	-	68,B14
	1800	575	71	MPSJ-7124NVB14	TENV	78	0.648	23.1	9.84	Included	-	B14
	1200	208-230/460	80	MQSJ-8016	TENV	77	1.94-1.75/0.875	38.5	12.8	80JB14SS	80JB5SS	68,B3
	1200	575	80	MPSJ-8016	TENV	77	0.7	38.5	12.8	80JB14SS	80JB5SS	B3
0.75	3600	208-230/460	71	MQSJ-7122	TENV	80	2.29-2.075/1.037	28.6	9.84	71JB14SS	71JB5SS	68,B3
	3600	575	71	MPSJ-7122	TENV	80	0.83	28.6	9.84	71JB14SS	71JB5SS	B3
	1800	208-230/460	80	MQSJ-8014	TENV	81.1	2.43-2.2/1.1	35	12.8	80JB14SS	80JB5SS	68,B3
	1800	575	80	MPSJ-8014	TENV	79	0.896	35	12.8	80JB14SS	80JB5SS	B3
	1800	208-230/460	80	MQSJ-8014NVB14	TENV	81.1	2.43-2.2/1.1	35	12.8	Included	-	68,B14
	1800	575	80	MPSJ-8014NVB14	TENV	79	0.896	35	12.8	Included	-	B14
1	3600	208-230/460	80	MQSPJ-8012	TENV	77	2.8-2.6/1.3	37	12.8	80JB14SS	80JB5SS	68,B3
	3600	575	80	MPSPJ-8012	TENV	77	1.072	37	12.8	80JB14SS	80JB5SS	B3
	3600	208-230/460	80	MQSPJ-8012NVB14	TENV	77	2.8-2.6/1.3	37	14.21	Included	-	68,B14
	3600	575	80	MPSPJ-8012NVB14	TENV	77	1.072	37	14.21	Included	-	B14
	3600	208-230/460	80	MQSPJ-8012FC	TEFC	77	2.8-2.6/1.3	37	14.21	80JB14SS	80JB5SS	68,B3
	3600	575	80	MPSPJ-8012FC	TEFC	77	1.072	37	14.21	80JB14SS	80JB5SS	B3

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * B14 = Round Body, B14 Flange Installed
- * B3 = Rigid Base, no Flange

CHART CONTINUES ON NEXT PAGE



PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	ENCLOSURE	NOM EFF.	F.L. AMPS	WT (Lbs)	"L" Dimension (Inch)	B14 FLANGE	B5 FLANGE	FOOT NOTES
1	1800	208-230/460	80	MQSPJ-8024	TENV	85.5	3.5-3.2/1.6	48	12.8	80JB14SS	80JB5SS	68,B3
	1800	575	80	MPSPJ-8024	TENV	85.5	1.3	48	12.8	80JB14SS	80JB5SS	B3
	1800	208-230/460	80	MQSPJ-8024NVB14	TENV	85.5	3.5-3.2/1.6	48	12.8	Included	-	68 ,B14
	1800	575	80	MPSPJ-8024NVB14	TENV	85.5	1.3	48	12.8	Included	-	B14
	1800	208-230/460	80	MQSPJ-8024NVB34	TENV	85.5	3.5-3.2/1.6	48	12.8	Included	-	68 ,B34
	1800	208-230/460	80	MQSPJ-8024FC	TEFC	85.5	3.5-3.2/1.6	48	14.21	80JB14SS	80JB5SS	68,B3
	1800	575	80	MPSPJ-8024FC	TEFC	85.5	1.3	48	14.21	80JB14SS	80JB5SS	B3
	1200	208-230/460	90	MQSPJ-90S6FC	TEFC	82.5	4.64-4.2/2.1	44	14.53	90JB14SS	90JB5SS	68, B3
	1200	575	80	MPSPJ-90S6FC	TEFC	82.5	1.68	44	14.53	90JB14SS	90JB5SS	B3
1.5	3600	208-230/460	80	MQSPJ-8022FC	TEFC	86.5	3.98-3.6/1.8	48	14.21	80JB14SS	80JB5SS	68,B3
	3600	575	80	MPSPJ-8022FC	TEFC	86.5	1.44	48	14.21	80JB14SS	80JB5SS	B3
	3600	208-230/460	80	MQSPJ-90S4FC	TEFC	86.5	4.74-4.29/2.145	48.4	14.53	90JB14SS	90JB5SS	68,B3
	3600	575	80	MPSPJ-90S4FC	TEFC	86.5	1.716	48.4	14.53	90JB14SS	90JB5SS	B3
	1200	208-230/460	90	MQSPJ-90L6FC	TEFC	87.5	5.31-4.8/2.4	57.2	16.3	90JB14SS	90JB5SS	68,B3
		1200	575	90	MPSPJ-90L6FC	TEFC	87.5	1.92	57.2	16.3	90JB14SS	90JB5SS
2	3600	208-230/460	90	MQSPJ-90S2FC	TEFC	85.5	5.64-5.1/2.55	48.4	14.53	90JB14SS	90JB5SS	68,B3
	3600	575	90	MPSPJ-90S2FC	TEFC	85.5	2.04	48.4	14.53	90JB14SS	90JB5SS	B3
	1800	208-230/460	90	MQSPJ-90L4FC	TEFC	86.5	6.44-5.82/2.91	59.4	16.33	90JB14SS	90JB5SS	68,B3
	1800	575	90	MPSPJ-90L4FC	TEFC	86.5	2.328	59.4	16.33	90JB14SS	90JB5SS	B3
	1200	208-230/460	100	MQSPJ-100L6FC	TEFC	88.5	6.41-5.8/2.7	83.6	17.05	100JB14SS	100JB5SS	68,B3
		1200	575	100	MPSPJ-100L6FC	TEFC	88.5	2.16	83.6	17.05	100JB14SS	100JB5SS
3	3600	208-230/460	90	MQSPJ-90L2FC	TEFC	86.5	7.96-7.2/3.6	64.9	16.33	90JB14SS	90JB5SS	68,B3
	3600	575	90	MPSPJ-90L2FC	TEFC	86.5	2.88	64.9	16.33	90JB14SS	90JB5SS	B3
	1800	208-230/460	100	MQSPJ-100L14FC	TEFC	89.5	7.93-7.2/3.6	74.8	17.05	100JB14SS	100JB5SS	68,B3
	1800	575	100	MPSPJ-100L14FC	TEFC	89.5	2.88	74.8	17.05	100JB14SS	100JB5SS	B3
	1200	208-230/460	112	MQSPJ-112M6FC	TEFC	89.5	9.29-8.4/4.2	111.1	18.46	112JB14SS	112JB5SS	68,B3
		1200	575	112	MPSPJ-112M6FC	TEFC	89.5	3.36	111.1	18.46	112JB14SS	112JB5SS
4	3600	208-230/460	100	MQSPJ-100L2FC	TEFC	88.5	10.73-9.7/4.85	81.4	16.3	100JB14SS	100JB5SS	68,B3
	3600	575	100	MPSPJ-100L2FC	TEFC	88.5	3.88	81.4	16.3	100JB14SS	100JB5SS	B3
	1800	208-230/460	100	MQSPJ-100L24FC	TEFC	89.5	11.01-9.96/4.98	92.4	17.05	100JB14SS	100JB5SS	68,B3
	1800	575	100	MPSPJ-100L24FC	TEFC	89.5	3.984	92.4	17.05	100JB14SS	100JB5SS	B3
5.5	3600	208-230/460	112	MQSPJ-112M2FC	TEFC	88.5	14.22-12.86/6.43	99	18.46	112JB14SS	112JB5SS	68,B3
	3600	575	112	MPSPJ-112M2FC	TEFC	88.5	5.144	99	18.46	112JB14SS	112JB5SS	B3
	1800	208-230/460	112	MQSPJ-112M4FC	TEFC	89.5	14.6-13.2/6.6	111.1	18.46	112JB14SS	112JB5SS	68,B3
	1800	575	112	MPSPJ-112M4FC	TEFC	89.5	5.28	111.1	18.46	112JB14SS	112JB5SS	B3
7.5	3600	208-230/460	132	MQSPJ-132S12FC	TEFC	89.5	20.5-18.54/9.27	145.2	20.63	132JB14SS	132JB5SS	68,B3
	3600	575	132	MPSPJ-132S12FC	TEFC	89.5	7.416	145.2	20.63	132JB14SS	132JB5SS	B3
	1800	208-230/460	132	MQSPJ-132S4FC	TEFC	91.7	19.9-18/9	173.8	20.63	132JB14SS	132JB5SS	68,B3
	1800	575	132	MPSPJ-132S4FC	TEFC	91.7	7.2	173.8	20.63	132JB14SS	132JB5SS	B3
10	3600	208-230/460	132	MQSPJ-132S22FC	TEFC	90.2	26.23-23.72/11.86	171.6	20.63	132JB14SS	132JB5SS	68,B3
	3600	575	132	MPSPJ-132S22FC	TEFC	90.2	9.488	171.6	20.63	132JB14SS	132JB5SS	B3
	1800	208-230/460	132	MQSPJ-132M4FC	TEFC	91.7	26.1-23.6/11.8	200.2	20.2	132JB14SS	132JB5SS	68,B3
	1800	575	132	MPSPJ-132M4FC	TEFC	91.7	9.44	200.2	20.2	132JB14SS	132JB5SS	B3

Footnotes:

* **68** = Rated and Nameplated 60/50 Hertz
* **B3** = Rigid Base, no Flange

* **B14** = Round Body, B14 Flange Installed
* **B34** = Rigid Base, B14 Flange installed



FAN and BLOWER MOTOR DIRECT DRIVE PSC

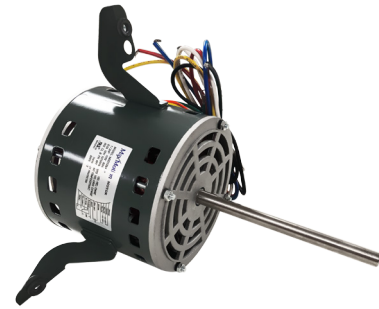
HEAVY GAUGE ROLLED STEEL CONSTRUCTION

OPEN AIR OVER DESIGN FLEX MOUNT MOTORS



Features:

- Open Frames and Brackets
- Multi-speed Capacity
- Weather Resistant Reversing Plug
- 30" Long Leads
- Automatic Reset Thermal Protector
- Ball Bearings
- UL reconized and CSA Certified
- Capacitor Included
- Shaft 1/2" X 6"



HP	RPM	VOLTS	FRAME	CAT NO.	S.F	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)
0.25	1075/4	115	48Y	MDD146/4SP	1.0	14	14	4.25
0.33	1075/4	115	48Y	MDD136/4SP	1.0	15	15	4.5
0.50	1075/4	115	48Y	MDD126/4SP	1.0	18	18	5

FARM DUTY PSC MOTOR

TEAO TOTALLY ENCLOSED AIR OVER DESIGN

VARIABLE SPEEDS | VARIABLE SPEED CONTROLLED 1 PHASE INPUT

Features:

- Ball Bearings
- Continuous Duty
- Extended Thru-Bolts
- Automatic Reset Thermal Overload
- Full Gasketed
- 1/2" x 2-1/2" Long Shaft with Two Flats, 90 Degree Apart
- UL reconized and CSA Certified



HP	RPM	VOLTS	FRAME	CAT NO.	S.F	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)
0.33	1625	115/230	48YZ	MVS-134SB	1.0	3.8/1.9	22.15	11.81
0.50	1625	115/230	48YZ	MVS-124SB	1.0	5.4/2.7	24.4	11.81

DC PERMANENT MAGNET MOTOR

HEAVY GAUGE ROLLED STEEL CONSTRUCTION | TENV TOTALLY NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED SCR RATED, 90VDC, 180VDC



Features:

- Class F Insulation
- IP45 Rated
- NEMA C-Face with Removable Base
- Highest Quality Permanent Magnets for High Starting Torque and Increased Efficiency
- Permanently Lubricated Sealed Ball Bearings
- Linear Speed/Torque Throughout Speed Range 20:1 CT
- ROHS Compliant
- UL Recognized and CSA Certified



HP	RPM	ARMATURE DC VOLTS	FRAME	CAT NO.	ENCLOSURE	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	TORQUE (IN.LBS)
0.25	1750	90	56C	MM2590NV	TENV	2.05	21	8	9
	1750	90	56C	MM2590FC	TEFC	2.05	21	9.6	9
	1750	180	56C	MM2518NV	TENV	2.55	21	8	9
	1750	180	56C	MM2518FC	TEFC	2.55	21	9.6	9
0.33	1750	90	56C	MM3390NV	TENV	5.1	23	8	13.5
	1750	90	56C	MM3390FC	TEFC	5.1	23	9.6	13.5
	1750	180	56C	MM3318NV	TENV	2.55	23	8	13.5
	1750	180	56C	MM3318FC	TEFC	2.55	23	9.6	13.5
0.5	1750	90	56C	MM5090NV	TENV	6.28	25	8.88	18
	1750	90	56C	MM5090FC	TEFC	6.28	25	10.4	18
	1750	180	56C	MM5018NV	TENV	3.14	25	8.88	18
	1750	180	56C	MM5018FC	TEFC	3.14	25	10.4	18
0.75	1750	90	56C	MM7590FC	TEFC	9.82	30	11.45	27
	1750	180	56C	MM7518FC	TEFC	4.9	30	11.45	27
1	1750	90	56C	MM1090FC	TEFC	12.7	33	12.24	36
	1750	180	56C	MM1018FC	TEFC	6.4	33	12.24	36
1.5	1750	180	56C	MM1518FC-56C	TEFC	7.86	45	14.39	54
	1750	180	145TC	MM1518FC	TEFC	7.86	45	13.8	54
2	1750	180	56C	MM2018FC-56C	TEFC	10.4	55	10.77	72
	1750	180	145TC	MM2018FC	TEFC	10.77	55	14.8	72
3	1750	180	145TC	MM3018FC	TEFC	18.6	70	16.9	108

LOW VOLTAGE DC PERMANENT MAGNET MOTOR

HEAVY GAUGE ROLLED STEEL CONSTRUCTION | TENV TOTALLY NON-

VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED SCR RATED, 12, 24, 48VDC



Features:

- Class F Insulation
- IP45 Rated
- NEMA C-Face with Removable Base
- Highest Quality Permanent Magnets for High Starting Torque and Increased Efficiency
- Permanently Lubricated Sealed Ball Bearings
- Linear Speed/Torque Throughout Speed Range 20:1 CT
- ROHS Compliant
- UL Recognized and CSA Certified



HP	RPM	ARMATURE DC VOLTS	FRAME	CAT NO.	ENCLOSURE	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	TORQUE (IN.LBS)
0.25	1750	12	56C	MM2512NV	TENV	30.9	21	8	9
	1750	12	56C	MM2512FC	TEFC	30.9	21	10.4	9
	1750	24	56C	MM2524FC	TEFC	15.46	21	8	9
	1750	48	56C	MM2548FC	TEFC	7.73	21	10.4	9
0.33	1750	12	56C	MM3312NV	TENV	38.3	23	8	11.9
	1750	12	56C	MM3312FC	TEFC	38.3	23	10.4	11.9
	1750	24	56C	MM3324FC	TEFC	19.1	23	10.4	11.9
	1750	48	56C	MM3348FC	TEFC	9.56	23	10.4	11.9
0.5	1750	12	56C	MM5012NV	TENV	47.16	25	8.88	18
	1750	12	56C	MM5012FC	TEFC	47.12	25	10.4	18
	1750	24	56C	MM5024FC	TEFC	23.56	25	10.4	18
	1750	48	56C	MM5048FC	TEFC	11.78	25	10.4	18
0.75	1750	12	56C	MM7512FC	TEFC	73.6	30	11.45	27
	1750	24	56C	MM7524FC	TEFC	31.8	30	11.45	27
1	1750	12	56C	MM1012FC	TEFC	95.4	32	12.24	36
	1750	24	56C	MM1024FC	TEFC	47.7	32	12.24	36

RIGHT ANGLE SPEED REDUCER

ALUMINUM CONSTRUCTION



Features:

- Aluminum alloy Housing with heat sink design
- Two bearings on Input shaft
- NEMA 56C Input
- Double Lip Seals
- O Rings on input and output covers
- Hardened worm shaft
- Permanently sealed with Synthetic lubrication
- See Accessories page for Single and Double Output shafts, Torque arm and Flanges.



MODEL	RATIO	OUTPUT RPM	OUTPUT TORQUE In.Lbs	MAX HP INPUT @ 1750RPM	MAX OHL Lbs	BORE SIZE	SINGLE O.P SHAFT	DOUBLE O.P SHAFT	TORQUE ARM	OUTPUT FLANGE
MMR50-5-56C	5	350	549	3.43	322	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-7.5-56C	7.5	23	638	2.64	369	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-10-56C	10	175	637	2.06	406	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-15-56C	15	117	655	1.48	464	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-20-56C	20	88	646	1.14	510	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-25-56C	25	70	619	.90	551	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-30-56C	30	58	743	.96	586	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-40-56C	40	44	672	.70	643	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-50-56C	50	35	646	.57	694	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-60-56C	60	29	602	.47	739	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-80-56C	80	22	575	.38	810	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR50-100-56C	100	18	487	.28	866	1.000"	MMR50-SS	MMR50-DS	MMR50-ARM	MMR50-FLANGE
MMR63-7.5-56C	7.5	233	1133	4.77	463	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-10-56C	10	175	1150	3.67	510	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-15-56C	15	117	1239	2.76	583	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-20-56C	20	88	1194	2.05	641	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-25-56C	25	70	1150	1.64	692	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-30-56C	30	58	1416	1.77	736	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-40-56C	40	44	1283	1.27	807	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-50-56C	50	35	1194	1.01	871	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-60-56C	60	29	1150	.86	928	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-80-56C	80	22	1079	.66	1017	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR63-100-56C	100	15	1044	.57	1088	1.000"	MMR63-SS	MMR63-DS	MMR63-ARM	MMR63-FLANGE
MMR75-50-56C	50	35	1880	1.47	1093	1.250"	MMR75-SS	MMR75-DS	MMR75-ARM	MMR75-FLANGE
MMR75-60-56C	60	29	1778	1.22	1162	1.250"	MMR75-SS	MMR75-DS	MMR75-ARM	MMR75-FLANGE
MMR75-80-56C	80	22	1632	.91	1279	1.250"	MMR75-SS	MMR75-DS	MMR75-ARM	MMR75-FLANGE
MMR75-100-56C	100	18	1517	.94	1378	1.250"	MMR75-SS	MMR75-DS	MMR75-ARM	MMR75-FLANGE
MMR90-80-56C	80	22	2396	1.27	1415	1.375"	MMR90-SS	MMR90-DS	MMR90-ARM	MMR90-FLANGE
MMR90-100-56C	100	18	2270	1.03	1524	1.375"	MMR90-SS	MMR90-DS	MMR90-ARM	MMR90-FLANGE

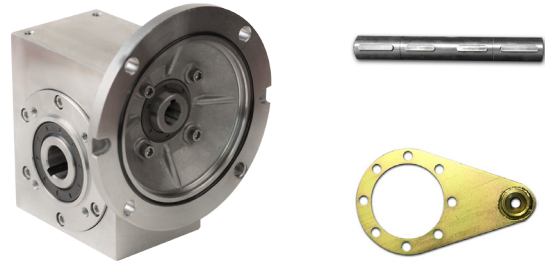
RIGHT ANGLE SPEED REDUCER

304 STAINLESS STEEL CONSTRUCTION



Features:

- 304 Stainless Steel construction
- Two bearings on Input shaft
- NEMA 56C Face Input
- Double Lip Viton Seals
- O Rings on input and output covers
- Hardened worm shaft
- Permanently sealed with Food Grade Oil
- 140TC come's with 5/8" Stainless Reduction Bushing



MODEL	RATIO	OUTPUT RPM	OUTPUT TORQUE In.Lbs	MAX INPUT HP @ 1750RPM	MAX OHL Lbs	BORE SIZE	SINGLE O.P SHAFT	DOUBLE O.P SHAFT	TORQUE ARM
MRS50-5-56C	5	350	549	3.43	322	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-7.5-56C	7.5	23	638	2.64	369	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-10-56C	10	175	637	2.06	406	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-15-56C	15	117	655	1.48	464	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-20-56C	20	88	646	1.14	510	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-25-56C	25	70	619	.90	551	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-30-56C	30	58	743	.96	586	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-40-56C	40	44	672	.70	643	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50M-40-56C	40	44	672	.70	643	25MM	N/A	N/A	MRS50-ARM
MRS50-50-56C	50	35	646	.57	694	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-60-56C	60	29	602	.47	739	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50M-60-56C	60	29	602	.47	739	25MM	N/A	N/A	MRS50-ARM
MRS50-80-56C	80	22	575	.38	810	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS50-100-56C	100	18	487	.28	866	1.000"	MRS50-SS-SS	MRS50-DS-SS	MRS50-ARM
MRS63-7.5-56C	7.5	233	1133	4.77	463	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-10-56C	10	175	1150	3.67	510	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-15-56C	15	117	1239	2.76	583	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-20-56C	20	88	1194	2.05	641	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-25-56C	25	70	1150	1.64	692	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-30-56C	30	58	1416	1.77	736	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-40-56C	40	44	1283	1.27	807	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63M-40-56C	40	44	1283	1.27	807	25MM	N/A	N/A	MRS63-ARM
MRS63-50-56C	50	35	1194	1.01	871	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-60-56C	60	29	1150	.86	928	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63M-60-56C	60	29	1150	.86	928	25MM	N/A	N/A	MRS63-ARM
MRS63-80-56C	80	22	1079	.66	1017	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS63-100-56C	100	15	1044	.57	1088	1.000"	MRS63-SS-SS	MRS63-DS-SS	MRS63-ARM
MRS75-7.5-180TC	7.5	233	1555	6.44	581	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-10-180TC	10	175	1656	5.20	639	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-15-180TC	15	117	1900	4.07	732	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-20-140TC	20	88	1953	3.24	806	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-25-140TC	25	70	1784	2.43	868	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-30-140TC	30	58	2027	2.41	922	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-40-56C	40	44	2029	1.90	1015	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-50-56C	50	35	1880	1.47	1093	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-60-56C	60	29	1778	1.22	1162	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-80-56C	80	22	1632	.91	1279	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM
MRS75-100-56C	100	15	1517	0.74	1378	1.250"	MRS75-SS-SS	MRS75-DS-SS	MRS75-ARM

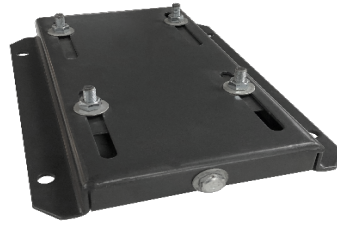


NEMA MOTOR BASES

FRAME ADJUSTABLE BASES and U to T FRAME TRANSITION BASES

SINGLE ADJUSTMENT SLIDE BASES

FRAME	CATALOGUE
56	56W
143T	143W
145T	145W



SINGLE ADJUSTMENT SLIDE BASES

FRAME	STANDARD DUTY CAT NO.	HEAVY DUTY CAT NO.
182T	182B2W	182A2HD
184T	184B2W	184A2HD
213T	213B2W	213A2HD
215T	215B2W	215A2HD
254T	254B2W	254C2HD
256T	256B2W	256C2HD
284T	284B2W	284C2HD
286T	286B2W	286C2HD
324T	324B2W	324C2HD
326T	326B2W	326C2HD
364T	364B2W	364C2HD
365T	365B2W	365C2HD
404T	404B2W	404C2HD
405T	405B2W	405C2HD
444T	444B2W	444C2HD
445T	445B2W	445C2HD
447T	447B2W	447C2HD
449T	449B2W	449C2HD
504T	504B2W	N/A
505T	505B2W	N/A



TRANSITION BASES

CONVERTS FROM	CONVERTS TO	CATALOGUE
182/184	143T/145T	1814T
213/215	182T/184T	2118T
254U/256U	213T/215T	25U21T
284U/286U	254T/256T	28U25T
324U/326U	284T/286T	32U28T
364U/365U	324T/326T	36U32T
404/405U	364T/365T	40U36T
444U/445U	364T/365T	44U36T
444U/445U	404/405T	44U40T



ACCESSORIES

"C", and "D" FLANGES FOR NEMA MAXMOTION MOTORS



MAXMOTION CAST IRON EPACT and PREMIUM TEFC MOTORS

FRAME	CATALOGUE		
	"C" FLANGE	"D" FLANGE	DRIP COVER
143/145T	W 140TC	W 140TD	W 140FCS-DC
182/184T	W 180TC	W 180TD	W 180FCS-DC
213/215T	W 210TC / W 210TCP	W 210TD / W 210TDP	W 210FCS-DCE / W 210FCS-DCP
254T/256T	W 250TC / W250TCP	W 250TD / W 250TDP	W 250FCS-DCE / W 250FCS-DCP
284/286T	W 280TC	W 280TD	W 280FCS-DC
324/326T	W 320TC	W 320TD	W 320FCS-DC
364/365T	W 360TC / W 360TCP	W 360TD / W 360TDP	W 360FCS-DCE / W 360FCS-DCP
404/405T	W 400TC / W 400TCP	W 400TD / W 400TDP	W 400FCS-DCE / W 400FCS-DCP
444/445T	W 440TC / W 440TCP	W 440TD / W 440TDP	W 440FCS-DCE / W 440FCS-DCP
444/49T	W 440TC / W 440TCP	W 440TD / W 440TDP	W 440FCS-DCE / W 440FCS-DCP

MAXMOTION PREMIUM ROLLED STEEL and CAST IRON ODP MOTORS

FRAME	CATALOGUE		
	"C" FLANGE	"D" FLANGE	DRIP COVER
143/145T	W 140TCO-6205	W 140TDO-6205	W 140TCO-DC
182/184T	W 180TCO-6206	W 180TDO-6206	W 180TCO-DC
213/215T	W 210TCO-6208	W 210TDO-6208	W 210TCO-DC
254T/256T	W 250TCO-6309	W 250TDO-6309	W 250TCO-DC
284/286T	W 280TCO-6311	W 280TDO-6311	W 280TCO-DC
324/326T	W 320TCO-6312	W 320TDO-6312	W 320TCO-DC
364/365T	W 360TCO-6313	W 360TDO-6313	W 360TCO-DC
404/405TS	W 400TSCO-6314	W 400TSDO-6314	W 400TCO-DC
404/405T	W 440TCO-6318	W 440TDO-6318	W 440TCO-DC
444/445/7/9TS	W 440TSCO-6314	W 440TSDO-6314	W 440TCO-DC
444/445/7/9T	W 440TCO-6319	W 440TDO-6319	W 440TCO-DC



ACCESSORIES

“B14”, and “B5” FLANGES FOR IEC MAXMOTION MOTORS



ALUMINUM and CAST IRON TEFC MOTORS

FRAME	CATALOGUE	
	B14	B5
56	IJAB14-56	IJAB5-56
63	IJAB14-63	IJAB5-63
71	IJAB14-71	IJAB5-71
80	IJAB14-80	IJAB5-80
90	IJAB14-90	IJAB5-90
100	IJAB14-100	IJAB5-100
112	IJAB14-112	IJAB5-112
132	IJAB14-132	IJAB5-132
160		IJAB5-160
180		IJCB5-180
200		IJCB5-200
225		IJCB5-225
250		IJCB5-250
280		IJCB5-280
315		IJCB5-315
355		IJCB5-355

MAXMOTION STAINLESS STEEL TENV & TEFC MOTORS

FRAME	CATALOGUE	
	B14	B5
63	63B14SS	63B5SS
71	71B14SS	71B5SS
80	80B14SS	80B5SS
90	90B14SS	90B14SS
100	100B14SS	100B5SS
112	112B14SS	112B5SS
132	132B14SS	132B5SS

4-IN-ONE THREE PHASE

THREE PHASE

TOTALLY ENCLOSED MOTORS

Features:

- Meets or exceeds all NEMA Premium® efficiencies
- Ball bearings, mechanically locked on shaft end
- F1 Mounting Only
- 1.15 Service factor (except as noted)
- Class F insulation (except as noted)
- Rated 60/50 hertz, 190/380 at next lower horsepower
- All TEFC will Accept Brake Kits where noted
- CR200 corona resistant magnet wire
- Bolt-on, removable rigid base
- Suitable for horizontal and vertical mounting
- Will accept drip cover kits, see accessories section
- Three year warranty
- UL recognized, CSA certified and CE mark



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	CT SPEED RANGE	BRAKE KITS	BRAKE VOLTAGE	FT. LBS	FOOT NOTES
0.33	3600	208-230/460	56C	D390	66	1.7-1.8/0.9	20	10.43	1000:1	N/A			24, 68, N
	3600	575	56C	K702	64	0.8	19	9.93	1000:1	N/A			24, N
	1800	208-230/460	56C	G580	68	1.4-1.6/0.8	20	9.93	1000:1	N/A			24, 68, N
	1800	575	56C	K703	68	0.7	20	9.93	1000:1	N/A			N
	1200	208-230/460	56C	G587	62	1.9-2.1/1.1	20	11.31	10:1	A301	230/460	3	68
0.50	3600	208-230/460	56C	D391	66	2.1-2.2/1.1	22	11.81	10:1	A301	230/460	3	68
	3600	575	56C	K704	66	0.9	22	11.81	10:1	A297	575	3	
	1800	208-230/460	56C	G581	68	2.3-2.4/1.2	24	11.81	10:1	A301	230/460	3	68
	1800	575	56C	K705	68	1	23	11.81	10:1	A297	575	3	
	1200	208-230/460	56C	G588	68	2.4-2.7/1.35	23	11.81	10:1	A302	230/460	6	68
0.75	3600	208-230/460	56C	D392	68	3.0-3.2/1.6	23	11.81	4:1	A301	230/460	3	68
	3600	575	56C	K706	68	1.3	23	11.81	4:1	A297	575	3	
	1800	208-230/460	56C	G582	75.5	3.3-3.0/1.5	40	11.81	10:1	A302	230/460	6	68
	1800	575	56C	K707	75.5	1.2	24	11.81	10:1	A298	575	6	
	1200	208-230/460	56C	G589	74	3.1-3.2/1.6	27	11.81	4:1	A302	230/460	6	68
1	3600	230/460	56C	D393A	78.5	3.0/1.5	24	11.81	10:1	A301	230/460	3	68
	3600	575	56C	K708A	78.5	1.2	26	11.81	10:1	A297	575	3	
	1800	230/460	56HC	G583A	85.5	3.3/1.6	42	14.15	10:1	A302	230/460	6	68
	1800	575	56HC	K709A	85.5	1.3	42	14.15	10:1	A298	575	6	
	1200	230/460	56HC	K701A	82.5	3.8/1.9	47	15.15	10:1	A303	230/460	10	68
1.5	3600	230/460	56C	D394A	84	4.0/2.0	37	13.31	10:1	A302	230/460	6	68
	3600	575	56C	K721A	84	1.6	37	13.31	10:1	A298	575	6	
	1800	230/460	56HC	G584A	86.5	4.6/2.3	45	14.65	10:1	A303	230/460	10	68
	1800	575	56HC	K722A	86.5	1.8	45	14.65	10:1	A299	575	10	
2	3600	230/460	56HC	D395A	85.5	5.0/2.5	45	14.31	10:1	A302	230/460	6	68
	3600	575	56HC	K723A	85.5	2	48	14.31	10:1	A298	575	6	
	1800	230/460	56HC	G585A	85.5	6.0/3.0	48	15.15	10:1	A303	230/460	10	68
	1800	575	56HC	K724A	85.5	2.4	48	15.15	10:1	A299	575	10	

CHART CONTINUES ON NEXT PAGE

Footnotes:

- * 24 = Motor Will Not Accept Brake Kit
- * 68 = Rated and Nameplated 60/50 Hertz
- * A = NEMA Design A
- * N = Totally Enclosed Non-Ventilated

4-IN-ONE THREE PHASE

THREE PHASE

TOTALLY ENCLOSED MOTORS

Features:

- Meets or exceeds all NEMA Premium® efficiencies
- Ball bearings, mechanically locked on shaft end
- F1 Mounting Only
- 1.15 Service factor (except as noted)
- Class F insulation (except as noted)
- Rated 60/50 hertz, 190/380 or 380 volt at next lower horsepower
- All TEFC will Accept Brake Kits where noted
- CR200 corona resistant magnet wire
- Bolt-on, removable rigid base
- Suitable for horizontal and vertical mounting
- Will accept drip cover kits, see accessories section
- Three year warranty
- UL recognized, CSA certified and CE mark



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	CT SPEED RANGE	BRAKE KITS	BRAKE VOLTAGE	FT. LBS	FOOT NOTES
3	3600	230/460	56HC	D396A	87.5	7.6/3.8	52	13.31	10:1	A303	230/460	10	68
	3600	575	56HC	K725A	87.5	3	46	14.31	10:1	A299	575	10	
	3600	230/460	182TC	C381B	86.5	7.6/3.8	73	14.47	10:1	N/A			24, 68
	1800	230/460	182TC	C382B	89.5	7.8/3.9	75	14.47	10:1	N/A			24, 68
	1800	575	182TC	C383B	89.5	3.2	75	15.5	10:1	N/A			24
5	3600	230/460	184TC	C385B	88.5	12.0/6.0	85	14.97	10:1	N/A			24, 68
	1800	230/460	184TC	C386B	89.5	12.6/6.3	87	14.97	10:1	N/A			24, 68
	1800	575	184TC	C387B	89.5	5.1	87	16.5	10:1	N/A			24
	1200	208-230/460	215TC	C388B	90.2	14.8-14.0/7.0	158	20.97	10:1	N/A			24, 68, A
7.5	3600	208-230/460	213TC	C389B	90.2	19.7-18.6/9.3	100	19.47	10:1	N/A			24, 68
	1800	208-230/460	213TC	C390B	91.7	20.8-19.6/9.8	146	19.47	10:1	N/A			24, 68
	1800	575	213TC	C391B	91.7	7.9	157	19.47	10:1	N/A			24
10	3600	208-230/460	215TC	C392B	91.7	25.9-23.6/11.8	139	19.47	10:1	N/A			24, 68
	1800	208-230/460	215TC	C393B	91.7	14-26.4/13.2	189	20.97	10:1	N/A			24, 68

Footnotes:

- * 24 = Motor Will Not Accept Brake Kit
- * 68 = Rated and Nameplated 60/50 Hertz
- * A = NEMA Design A
- * N = Totally Enclosed Non-Ventilated

GENERAL PURPOSE, SINGLE PHASE MOTORS

TOTALLY ENCLOSED

4-IN-1® MOTORS

marathon™
Motors

Features:

- Double sealed ball bearings, mechanically locked on shaft end
- Heavy gauge steel constructions
- Bolt-on, removable rigid base
- Suitable for horizontal or vertical mounting
- Capacitor start design for high starting torque
- Capacitor start/capacitor run design for higher efficiency, as noted
- 1.15 Service factor (except as noted)
- Will accept brake kits, see accessory section
- Will accept drip cover kits, see accessories section
- UL recognized and CSA certified
- IP43 Protection



HP	RPM	VOLTS	FRAME	CAT. NO	OVER-LOAD	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	BRAKE KITS	BRAKE VOLTAGE	FT. LBS	FOOT NOTES
0.25	1200	115/208-230	56C	G577	NONE	47.5	6.8/3.1-3.4	24	11.82	A306	115/230	3	
0.33	1800	115/208-230	56C	G570	NONE	55	6.6/3.1-3.3	23	11.82	A306	115/230	3	
	1200	115/208-230	56C	G576	NONE	52.5	7.8/3.6-3.9	27	12.32	A306	115/230	3	
0.50	3600	115/208-230	56C	D311	NONE	59.5	8.4/4.0-4.2	22	11.82	A306	115/230	3	
	1800	115/208-230	56C	G571	NONE	66	8.8/4.2-4.4	24	11.82	A306	115/230	3	
	1200	115/208-230	56C	G578	NONE	64	9.6/4.7-4.8	35	13.32	A306	115/230	3	1
	3600	115/208-230	56C	D312	NONE	66	10.6/5.3-5.3	27	12.32	A306	115/230	3	
0.75	1800	115/208-230	56C	G572	NONE	70.5	11.0/5.4-5.5	30	12.32	A307	115/230	6	
	1200	115/208-230	56C	G579	NONE	68	11.4/5.8-5.7	39	13.82	A307	115/230	6	1
1	3600	115/208-230	56C	D313	NONE	78.5	11.2/5.7-5.6	30	12.32	A306	115/230	3	
	1800	115/208-230	56HC	G573	NONE	72	13.4/6.8-6.7	31	12.82	A307	115/230	6	5
1.5	3600	115/208-230	56C	D314	NONE	78.5	14.2/7.7-7.1	32	12.82	A307	115/230	6	1
	1800	115/208-230	56HC	G574	NONE	80	15.2/8.2-7.6	40	13.82	A303	230/460	10	1,5
2	3600	115/208-230	56HC	D315	NONE	79	16.6/9.1-8.3	37	13.82	A307	115/230	6	1,5
	1800	115/208-230	56HC	G575	NONE	80	20.0/10.8-10.0	51	14.82	A303	230/460	10	1,5,17
3	3600	208-230	56HC	D316	NONE	84	13.1-11.8	50	14.82	A303	230/460	10	1,5

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 17 = 1.0 Service Factor

GENERAL PURPOSE, SINGLE PHASE MOTORS

TOTALLY ENCLOSED MOTORS



Features:

- Ball bearings
- Heavy gauge steel constructions
- Economical split phase or capacitor start designs, as noted
- Service factor, as noted
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KIT	FOOT NOTES
1/6	1800	115	48	H116	NONE	4	15	9.92		3, 17
	900	115/230	56	C248	NONE	5.6/2.8	28	12.43		2, 17
1/4	1800	115	48	HG121	AUTO	5.1	15	9.92		3, 17
	1800	115	48	HG120	NONE	5.1	15	9.92		3, 17
	1800	115/230	48	C243	AUTO	5.4/2.7	17	10		2, 17
	1800	115/230	48	C242	NONE	5.4/2.7	17	10		2, 17
	1800	230	48	H243	AUTO	2.7	17	9.92		3, 17
	1500	110/220	48	C462	NONE	5.4/2.7	18	10.17		2, 17, 50
	1800	115/208-230	56	G314	MANUAL	4.2/2.1-2.1	20	10.22		2, 18
	1800	115/230	56	CG251	AUTO	5.4/2.7	17	10.38		2, 17
	1800	115/230	56	G1312	NONE	5.4/2.7	16	10.38		2, 17
	1200	115/230	56	G1316	NONE	6.2/3.1	27	11.43		2, 17
1/3	3600	115	48	HG123	NONE	6.4	16	10.17		3, 17
	1800	115/230	56	G1331	AUTO	6.0/3.0	20	10.93		2, 18
	1800	115/208-230	56	G332	MANUAL	6.0/3.0-3.0	20	10.47		2, 18
	1800	100-120/200-400	56	E258	NONE	4.0-3.8/2.0-1.9	25	11.83		ES, 1, 20
	1800	115/230	56	G1330	NONE	6.0/3.0	17	10.93		2, 18
	1200	115/230	56	CI333	NONE	8.6/4.3	31	12.43		2, 18
1/2	3600	115/208-230	56	G393	MANUAL	8.4/4.0-4.2	22	11.82	A437	2, 14, 18
	1800	100-120/200-240	56	E267	NONE	5.8-5.6/2.9-2.8	27	11.83		ES, 1, 19
	1800	115/230	56	C262	AUTO	8.6/4.3	21	11		2, 18
	1800	115/208-230	56	G339	MANUAL	8.0/4.0-4.0	23	11.22		2, 18
	1800	115/230	56	C261	NONE	8.6/4.3	21	11		2, 18
	1800	115/230	48	CG260	NONE	8.8/4.4	23	11.38		2, 17
	1200	115/230	56	C264	NONE	9.4/4.7	40	12.96		2, 18
3/4	3600	115/208-230	56	G379	MANUAL	10.6/5.3-5.3	26	12.32	A437	2, 14, 18
	3600	115/208-230	56	G352	NONE	10.6/5.3-5.3	26	12.32	A437	2, 14, 18
	1800	100-120/200-240	56	EG276	NONE	9.0-8.8/4.5-4.4	31	12.43		ES, 1, 7, 19
	1800	115/230	56	C269	AUTO	10.4/5.2	31	11.83		2, 17
	1800	115/208-230	56	G356	MANUAL	11.0/5.4-5.5	29	12.32	A437	2, 14, 18
	1800	115/208-230	56	C268	NONE	11.0/5.4-5.5	31	11.83		2, 18
	1200	115/230	56	C271	NONE	10.6/5.3	44	13.82		ES, 1, 17

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 3 = Split Phase Design
- * 4 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 7 = Shaft Extension 1-1/2" Long By 1/2" Diameter

- * 13 = F1 Mounting Only
- * 14 = Will Accept C-Flange Kit
- * 17 = 1.0 Service Factor
- * 18 = 1.15 Service Factor
- * ES = Energy Saver Design

CHART CONTINUES ON NEXT PAGE



GENERAL PURPOSE, SINGLE PHASE MOTORS

TOTALLY ENCLOSED MOTORS



Features:

- Ball bearings
- Heavy gauge steel constructions
- Economical split phase or capacitor start designs, as noted
- Service factor, as noted
- UL recognized and CSA certified
- Motors will accept C-flange kits where shown



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KIT	FOOT NOTES
1	3600	115/208-230	56	G359	NONE	12.4/6.7-6.2	30	12.32	A437	2, 14, 18
	3600	115/230	56	C273	AUTO	13.0/6.5	29	12.43		2, 17
	3600	115/208-230	56	G390	MANUAL	12.4/6.7-6.2	31	12.32	A437	2, 14, 18
	3600	115/230	56	C274	MANUAL	13.0/6.5	21	12.43		2, 17
	1800	115/230	56	C275	NONE	13.2/6.6	38	12.96		2, 18
	1800	100-120/200-240	56	E285	NONE	11.8-11.4/5.9-5.7	40	12.96		ES, 1
	1800	115/208-230	56	G373	MANUAL	13.4/6.8-6.7	30	12.82	A437	2, 14, 18
	1800	115/230	56	C276	AUTO	13.2/6.6	36	12.96		2, 17
1 1/2	3600	115/208-230	143T	C295	NONE	13.2/6.6	38	13.33		2, 17
	3600	115/208-230	56H	G391	MANUAL	14.2/7.7-7.1	33	12.82	A437	1, 5, 14, 18
	3600	115/208-230	56H	G374	NONE	14.2/7.7-7.1	32	12.82	A437	1, 5, 14
	3600	115/208-230	143T	I220	NONE	14.2/7.7-7.1	33	12.87	A438	1, 14, 18
	1800	115/208-230	56H	G378	MANUAL	15.2/8.2-7.6	40	13.82	A437	1, 5, 14, 18
	1800	115/208-230	56H	G1376	NONE	14.5/7.1-7.3	44	13.82		ES, 1, 5, 18
	1800	115/208-230	56H	G1377	AUTO	14.5/7.1-7.3	44	13.82		ES, 1, 5, 18
	1800	115/208-230	145T	I201	MANUAL	15.2/8.2-7.6	41	13.87		1, 14, 18
2	1800	115/208-230	145T	C297	NONE	14.5/7.1-7.3	44	14.07		1, 18
	3600	115/230	56	G1392	MANUAL	17.8/8.9	38	14.27		ES, 1, 18
	3600	115/208-230	145T	I221	NONE	18.0/10.0-9.0	39	13.37	A438	1, 14, 18
	1800	115/230	145T	I700	NONE	18.8/9.4	50	14.87	A438	1, 14, 18
3	1800	115/208-230	182T	I212	NONE	20.0/10.8-10.0	52	15.65		F, 1, 18
	3600	115/208-230	182T	I206	NONE	24.6/13.9-12.3	57	15.81		1, 17
5	1800	115/208-230	184T	I213A	NONE	28.4/14.8-14.2	72	14.96	A666	1, 13, 14, 17
	3600	208-230	184T	I223A	NONE	22.0-19.8	98	16.49	A666	1, 13, 14, 17
	1800	208-230	184T	I214A	NONE	21.5-19.5	103	17.46	A666	1, 13, 14, 18
7 1/2	1800	208-230	213T	I216	NONE	24.5-22.0	106	18.73	A609	1, 14, 17
	3600	208-230	213T	I224	NONE	36.0-32.0	112	20.23	A609	1, 14, 17
	1800	208-230	215T	I215	NONE	35.0-30.0	133	21.48	A609	1, 14, 17, F
10	3600	208-230	215T	I225	NONE	44.0-41.5	141	20.23	A609	1, 14, 17, F
	1800	230	215T	I217	NONE	41.5	144	21.48	A609	1, 14, 17

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 3 = Split Phase Design
- * 4 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 7 = Shaft Extension 1-1/2" Long By 1/2" Diameter
- * 13 = F1 Mounting Only
- * 14 = Will Accept C-Flange Kit
- * 17 = 1.0 Service Factor
- * 18 = 1.15 Service Factor
- * ES = Energy Saver Design



GENERAL PURPOSE, SINGLE PHASE MOTORS

(NEMA® SERVICE FACTOR)

DRIPPROOF MOTORS



Features:

- Heavy gauge steel frame and base
- Ball bearings (except as noted)
- Economical split phase or capacitor start designs, as noted
- Service factor, as noted
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/6	1800	115	48	4349	AUTO	3.9	12	8.94	3, 20
	1800	115	48	4354	NONE	5.1	13	8.94	3, 20
1/4	1800	115	48	4362	AUTO	5.1	13	8.94	3, 20
	1800	115/230	48	G078A	MANUAL	2.4/1.2	17	10.34	1, 20
	1800	115/230	48	C147A	NONE	2.4/1.2	17	10.34	1, 20
	1800	115/230	48	C148A	AUTO	2.4/1.2	17	10.34	1, 20
	1500	110/220	48	C431	NONE	5.6/2.8	17	9.66	2, 20, 50
	1800	115/230	48	C153A	NONE	3.8/1.9	20	10.59	1, 20
1/3	1800	115/230	48	C154A	AUTO	3.8/1.9	20	10.59	1, 20
	1800	115/230	56	C158A	NONE	3.8/1.9	21	10.97	1, 20
	1800	115/230	56	E253A	NONE	3.65/1.8	21	10.97	ES, 1, 20
	1800	115/230	56	C159A	AUTO	3.8/1.9	21	10.97	1, 20
	1800	115/230	56	G095A	MANUAL	3.8/1.9	21	10.97	1, 20
	1200	115/230	56	C1252A	NONE	3.4/1.7	26	11.97	1, 20
	1/2	3600	115/230	48	G1098A	NONE	4.4/2.2	20	10.59
3600		115/230	56	C1474A	MANUAL	4.4/2.2	21	10.97	1, 17
3000		110/220	48	C459	NONE	7.8/3.9	20	10.06	2, 19, 50
1800		115/230	48	C164A	NONE	4.6/2.3	22	11.09	1, 19
1800		115/230	56	E262A	NONE	4.4/2.2	23	11.47	ES, 1, 19
1800		115/230	56	C167A	NONE	4.6/2.3	23	11.47	1, 19
1800		115/230	56	C168A	AUTO	4.6/2.3	23	11.47	1, 19
1200		115/230	56	C1263A	NONE	5.6/2.8	35	12.12	1, 19
3/4		3600	115/230	56	G915A	NONE	7.2/3.6	25	11.47
	3600	115/230	56	C1475A	MANUAL	7.2/3.6	52	11.47	1, 19
	1800	115/230	56	EG271A	NONE	6.4/3.2	41	13.12	ES, 1, 19
	1800	115/230	56	C175A	NONE	6.6/3.3	42	13.12	1, 19
	1800	115/208-230	56	C176A	AUTO	6.6/3.5-3.3	27	12.49	1, 19
	1800	115/208-230	56	G919A	MANUAL	6.6/3.5-3.3	25	12.49	1, 19
	1800	115/208-230	56	C1298A	MANUAL	6.6/3.5-3.3	25	12.49	1, 19
	1800	115/208-230	56	C177A	MANUAL	6.6/3.5-3.3	25	12.49	1, 19
	1200	115/230	56	C178A	NONE	6.5/3.25	45	13.62	ES, 1, 18

CHART CONTINUES ON NEXT PAGE

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 3 = Split Phase Design
- * 7 = Shaft Extension 1-1/2" Long By 1/2" Diameter
- * 11 = Shaft Extension 2-1/4" Long By 7/8" Diameter
- * 13 = F1 Mounting Only

- * 18 = 1.15 Service Factor
- * 19 = 1.25 Service Factor
- * 20 = 1.35 Service Factor
- * 50 = Design for 50 Hertz Operation
- * ES = Energy Saver Design
- * F = Class F Insulation



GENERAL PURPOSE, SINGLE PHASE MOTORS

(NEMA® SERVICE FACTOR)

DRIPPROOF MOTORS



Features:

- Heavy gauge steel frame and base
- Ball bearings (except as noted)
- Economical split phase or capacitor start designs, as noted
- Service factor, as noted
- UL recognized and CSA certified



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1	3600	115/230	56	C179A	NONE	8.8/4.4	30	12.31	1, 19
	3600	115/230	56	C180A	AUTO	8.8/4.4	31	12.33	1, 19
	3600	115/230	56	C702A	MANUAL	8.8/4.4	31	12.33	1, 18
	1800	115/230	56H	E280A	NONE	8.2/4.1	49	13.12	ES, 1, 18
	1800	115/230	56	C181A	NONE	8.4/4.2	42	13.12	1, 18
	1800	115/208-230	56	C182A	AUTO	8/4.4-4	31	12.49	1, 18
	1800	115/208-230	143T	C188A	NONE	13.4/6.7-6.7	31	12.36	2, 11, 18
1 1/2	3600	115/230	56	G937A	NONE	13.6/6.8	35	12.93	1, 18
	3600	115/230	56	C1477A	MANUAL	13.2/6.6	36	12.95	1, 18
	1800	115/230	56H	C185A	NONE	12.6/6.3	45	13.62	ES, 1, 18
	1800	115/208-230	56H	C186A	AUTO	12.6/6.4-6.3	40	13.99	ES, 1, 18
	1800	115/208-230	145T	C191	NONE	18.2/9.0-8.7	35	12.30	ES, 1, 18
2	3600	115/230	56	C187A	NONE	14.2/7.1	38	12.94	1, 18
	3600	115/230	56	C703A	MANUAL	17.8/8.9	31	12.69	1, 18
	3600	115/208-230	145T	I102	NONE	19.1/10.6-9.5	35	11.49	1, 18
	1800	115/230	56HZ	C193A	NONE	17.6/8.8	50	14.18	ES, 1, 11, 18
	1800	115/208-230	56HZ	CG381	AUTO	22.0/10.9-11.0	44	14.33	ES, 1, 11, 18
	1800	115/208-230	145T	I127	MANUAL	18.8/10.2-9.4	48	13.49	1, 11, 18
	1800	115/208-230	182T	I112A	NONE	23.0/12.3-11.5	62	13.19	2, 13, 18
	1200	115/208-230	213T	I143	NONE	30.0/15.5-15.0	138	16.55	2, 18
3	3600	115/230	145T	C194	NONE	29.4/14.7	38	13.13	ES, 1, 18
	3600	115/208-230	182T	I103A	NONE	32.0/17.1-16.1	62	13.69	2, 13, 18
	1800	115/208-230	184T	I113A	NONE	34.0/17.4-16.9	78	14.21	2, 13, 18
5	3600	208-230	184T	I104A	NONE	24.0-22.0	79	14.69	2, 13, 18
	1800	208-230	184T	I114A	NONE	23.0-21.0	82	14.71	1, 13, 18
7 1/2	3600	208-230	184T	I108A	NONE	34.0-31.0	103	16.69	1, 13, 18
	3600	208-230	213T	I105	NONE	40.0-37.0	102	16.55	2, 18, F
	1800	208-230	215T	I115	NONE	37.5-34.5	115	18.05	1, 18
10	3600	208-230	215T	I106	NONE	50.0-46.0	193	18.05	2, 18, F
	1800	208-230	215T	I116	NONE	49.0-44.0	140	19.30	1, 7, 18

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 3 = Split Phase Design
- * 7 = Shaft Extension 1-1/2" Long By 1/2" Diameter
- * 11 = Shaft Extension 2-1/4" Long By 7/8" Diameter
- * 13 = F1 Mounting Only
- * 18 = 1.15 Service Factor
- * 19 = 1.25 Service Factor
- * 20 = 1.35 Service Factor
- * ES = Energy Saver Design
- * F = Class F Insulation



GENERAL PURPOSE, SINGLE PHASE MOTORS

(NEMA® SERVICE FACTOR)

DRIPPROOF MOTORS



Features:

- Ball bearings mechanically locked on shaft end (excludes 5K models)
- Heavy gauge steel frame and base
- Capacitor start design for high starting torque, as noted
- Capacitor start/capacitor run design for higher efficiency • Service factor, as noted
- UL recognized and CSA certified • C-Face Footless (Round Body)



HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	F.L. AMPS	WT (Lbs)	"C" Dim. (Inch)	FOOT NOTES
1/4	1800	115/230	56C	G212A	NONE	2.4/1.2	17	10.69	20
	1800	115/230	56C	C354A	AUTO	2.4/1.2	17	10.31	20
1/3	3600	115/230	56C	G216A	NONE	3.0/1.5	17	10.44	20
	1800	115/230	56C	E251A	NONE	3.65/1.8	19	10.94	ES, 20
	1800	115/230	56C	C356A	AUTO	3.8/1.9	19	10.56	20
	1800	115/230	56C	G230A	NONE	3.8/1.9	19	10.94	20
1/2	3600	115/230	56C	G232A	NONE	4.4/2.2	20	10.94	19
	1800	115/230	56C	E260A	NONE	4.4/2.2	25	11.44	ES, 19
	1800	115/230	56C	G234A	NONE	4.6/2.3	25	11.44	19
	1800	115/230	56C	C359A	AUTO	4.6/2.3	25	11.44	19
	1200	115/208-230	56C	C1422A	NONE	5.6/2.8	32	12.15	19
3/4	3600	115/230	56C	G238A	NONE	7.2/3.6	23	11.44	19
	1800	115/230	56C	E269A	NONE	6.4/3.2	41	13.06	ES, 19
	1800	115/208-230	56C	CG362A	AUTO	6.6/3.5-3.3	25	12.31	19
	1800	115/230	56C	CG361A	NONE	6.6/3.3	42	13.06	19
1	3600	115/230	56C	G254A	NONE	8.8/4.4	32	12.31	19
	1800	115/208-230	56C	CG363A	AUTO	8/4.4-4	34	12.31	18
	1800	115/230	56C	G256A	NONE	8.4/4.2	41	13.06	18
1 1/2	3600	115/230	56C	G258A	NONE	13.6/6.8	48	12.93	18
	1800	115/230	56C	G270A	NONE	12.6/6.3	46	13.68	18
2	3600	115/230	56C	G272A	NONE	19.1/9.5	39	13.18	18
	1800	115/230	56C	G274A	NONE	12.6/6.3	54	14.06	18
3	3600	115/208-230	182TC	C173	NONE	32.0/19.0-16.0	76	13.96	2, 18

Features:

- Ball bearings, mechanically locked on shaft end (excludes 5K models)
- NEMA service factors
- Heavy gauge steel frame and base
- Capacitor start/capacitor run design for higher efficiency
- UL recognized and CSA certified
- C-Face Footed (Rigid Base)



HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	F.L. AMPS	WT (Lbs)	"C" Dim. (Inch)	FOOT NOTES
1/3	1800	115/230	56C	K235A	AUTO	3.8/1.9	21	10.94	20
	1800	115/230	56C	E250A	MANUAL	3.65/1.8	21	10.94	20
	1800	100-120/200-240	56C	E252A	AUTO	3.8-3.65/1.9-1.8	21	10.94	20
1/2	1800	100-120/200-240	56C	E261A	AUTO	5.2-4.4/2.6-2.2	25	11.44	19
3/4	1800	100-120/200-240	56C	E270A	AUTO	6.8-6.2/3.4-3.1	25	12.31	19
	1800	115/230	56C	E268A	MANUAL	6.2/3.1	35	12.31	19
2	3600	115/230	56C	C1269A	MANUAL	17.8/8.9	31	12.69	18
3	3600	230	56C	C1270A	MANUAL	11.6	45	13.75	18

Footnotes:

* 2 = Capacitor Start Induction Run Design * 18 = 1.15 Service Factor * 19 = 1.25 Service Factor * 20 = 1.35 Service Factor * ES = Energy Saver Design



**HAZARDOUS DUTY® DIVISION 1 EXPLOSION
PROOF MOTORS** CLASS I AND II, GROUPS C, E (AS NOTED),
D, F & G STEEL FRAME SINGLE PHASE MOTORS



Features:

- 1.0 service factor
- Automatic reset thermal protector
- Meets temperature code T3B
- Economical split phase or capacitor start designs, as noted
- Explosion proof conduit box included, shipped loose
- UL listed file no. E12044
- CSA certified file no. LR47504



RESILENT BASE

HP	RPM	VOLTS	FRAME	CAT NO.	GROUP C	GROUP E	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/4	1200	115	56	K033	N	N	5.4	31	14.46	2, 37

RIGID BASE

HP	RPM	VOLTS	FRAME	CAT NO.	GROUP C	GROUP E	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/12	1800	115	48	H454	N	N	1.9	17	9.68	3, N
1/8	1200	115	48	HG455	N	N	3.0	23	10.74	3, N
1/6	1800	115	48	HG456	Y	N	3.3	21	10.31	3, N
	1200	115	56	H891	N	N	3.8	29	12.47	2, N
1/4	1800	115	48	HG458	N	N	4.4	24	10.74	3, N
	1800	115/208-230	56	G639	Y	Y	4.8/2.3-2.4	26	11.97	2, N
	1800	115/208-230	56	G639A	N	N	4.8/2.3-2.4	25	11.97	2, N
	1800	115/230	48	C646	Y	N	4.2/2.1	24	10.74	2, N
	1200	115	56	C1801	Y	N	5.6	31	13.94	2
	1200	115/208-230	56	G650	Y	N	6.8/3.1-3.4	28	13.94	2
1/3	1800	115/208-230	56	G651	Y	Y	6.6/3.1-3.3	27	13.44	2
	1800	115/208-230	56	G651A	Y	N	6.6/3.1-3.3	27	13.44	2
	1500	110/220-230	56	C1803	Y	N	5.0/2.5-2.5	28	13.44	2, 50
	1200	115/208-230	56	G652	Y	N	7.8/3.6-3.9	31	13.94	2
1/2	3600	115/208-230	56	G653	Y	N	8.4/4.0-4.2	26	13.44	2
	1800	115/208-230	56	G654	Y	Y	8.8/4.2-4.4	30	13.94	2
	1800	115/208-230	56	G654A	Y	N	8.8/4.2-4.4	29	13.94	2
	1500	110/220	56	C1807	Y	N	7.8/3.9	33	14.44	2, 50
	1200	115/208-230	56	G655	Y	N	9.6/4.7-4.8	39	14.94	1
3/4	1800	115/208-230	56	G657	Y	Y	11.0/5.4-5.5	33	14.44	2
	1800	115/208-230	56	G657A	Y	N	11.0/5.4-5.5	33	14.44	2
1	1800	115/208-230	56	G659	Y	Y	13.4/6.8-6.7	34	14.44	2
	1800	115/208-230	56H	G659A	Y	Y	13.4/6.8-6.7	36	14.08	2, 5
1 1/2	1800	208-230	56H	G691	Y	Y	8.1-7.8	53	16.08	1, 5

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 3 = Split Phase Design
- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 50 = Design for 50 Hertz Operation
- * N = Totally Enclosed Non-Ventilated



**HAZARDOUS DUTY® DIVISION 1 EXPLOSION
PROOF MOTORS** CLASS I AND II, GROUPS C, D, F & G STEEL FRAME
SINGLE PHASE MOTORS



Features:

- 1.0 service factor
- Automatic reset thermal protector
- Meets temperature code T3B
- 56CZ frame motors have 2-1/4 x 5/8 shaft dimensions
- Capacitor start design for high starting torque
- Explosion proof conduit box included, shipped loose
- UL listed file no. E12044
- CSA certified file no. LR47504



C-FACE FOOTLESS (ROUND BODY)

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (INCH)	FOOT NOTES
1/4	1800	115/208-230	56C	G852	4.8/2.3-2.4	25	11.97	N
	1200	115	56CZ	C1818	5.6	31	14.30	
1/3	1800	115/208-230	56C	G853	6.6/3.1-3.3	27	13.44	
	3600	115/208-230	56C	G854	8.4/4.0-4.2	26	13.44	
1/2	3600	115/208-230	56J	C1814	8.4/4.0-4.2	26	13.95	
	1800	115/208-230	56C	G855	8.8/4.2-4.4	28	13.94	
	1200	115	56CZ	C1817	8.0	40	15.30	
	1800	115/208-230	56C	G857	11.0/5.4-5.5	33	14.44	
1	1800	115/208-230	56C	G870	13.4/6.8-6.7	34	14.44	

C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (INCH)	FOOT NOTES
1/3	1800	115/208-230	56C	G871	6.6/3.1-3.3	30	13.44	
1/2	1800	115/208-230	56C	G872	8.8/4.2-4.4	29	13.94	
3/4	3600	115/208-230	56C	G873	10.6/5.3-5.3	30	13.94	
	1800	115/208-230	56C	G874	11.0/5.4-5.5	34	14.44	
1	1800	115/208-230	56C	G876	13.4/6.8-6.7	35	14.44	

Footnotes:

* N = Totally Enclosed Non-Ventilated

Features:

- Meets or exceeds all USA mandated efficiencies
- Motors are suitable for 10:1 VT on all frame sizes and 10:1 CT up to 365T frame
- 1.15 Service factor on sinewave (except as noted), 1.0 service factor on IGBT power
- Bearing Current Protection (BCP), as noted
- Class F Insulation, as noted
- Nameplated 60/50 hertz, as noted
- Thermal Protection, as noted
- Will accept C-face kits, see accessory section, as noted
- UL recognized, CSA certified and CE mark



HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	FOOT NOTES
1/4	1800	230/460	48	G044A	NONE	69.5	1.0/0.5	18	10.34	N/A	13, 20, 68
	3600	230/460	48	K113A	NONE	69.5	1.4/0.7	17	10.45	N/A	20, 68
1/3	1800	230/460	48	K527A	NONE	73.4	1.2/0.6	20	10.84	N/A	13, 20, 68
	1800	230/460	56	G047A	NONE	73.4	1.2/0.6	20	11.22	N/A	13, 20, 68
1/2	3600	230/460	48	K115A	NONE	77.0	1.8/0.9	17	10.45	N/A	19, 68
	1800	208	56	G062A	NONE	78.2	1.9	29	11.32	N/A	19
	1800	208-230/460	56	G905A	AUTO	78.2	1.7-1.8/0.9	25	11.99	N/A	13, 19, 6 8, VC
	1800	230/460	56	G063A	NONE	78.2	1.7/0.85	28	11.32	N/A	19, 68
	1800	575	56	G065A	NONE	78.2	0.7	31	11.32	N/A	19
	1200	230/460	56	G067A	NONE	75.3	2.8/1.4	28	12.08	N/A	19, 68
3/4	3600	230/460	56	G080A	NONE	76.8	2.2/1.1	19	11.70	N/A	19, 68
	1800	208	56	G082A	NONE	81.1	2.9	31	11.32	N/A	19
	1800	230/460	56	G084A	NONE	81.1	2.6/1.3	32	11.32	N/A	19, 68
	1800	208-230/460	56	G908A	AUTO	81.1	2.6-2.6/1.3	29	12.49	A435	13, 19, 68
	1800	575	56	G086A	NONE	81.1	2.9	31	11.32	N/A	19
1	3600	230/460	56	K000A	NONE	77.0	3.0/1.5	19	11.43	N/A	13, 19, 68
	3600	230/460	56	U244	TSTATS	78.5	3.0-2.8/1.4	25	10.44	A435	13, 68
	1800	208	56	K003A	NONE	83.5	3.3	34	11.72	N/A	
	1800	230/460	56	K004A	NONE	83.5	3.0/1.5	34	11.69	N/A	68
	1800	208-230/460	56	G921A	AUTO	83.5	3.2-3.0/1.5	42	13.99	N/A	VC, 13, 68
	1800	575	56	K049A	NONE	83.5	1.2	35	11.72	N/A	
	1800	200	143T	E901A	NONE	85.5	3.45	42	13.99	N/A	5, 13
	1800	200-208	143T	U416A	AUTO	85.5	3.3/3.3	44	12.99	A436	5, 13
	1800	230/460	143T	E927A	NONE	85.5	3.45	42	12.99	A436	5, 13, 68
	1800	208-230/460	143T	U417A	AUTO	85.5	3.2-3.0/1.5	45	12.99	A436	5, 13, 68
	1800	208-230/460	143T	U418A	AUTO	85.5	3.2-3.0/1.5	45	12.99	A436	5, 13, 68
	1800	208-230/460	143T	U758	TSTAT	85.5	3.5-3.2/1.6	30	12.12	A600	13, 68
	1800	208-230/460	143T	U758-P	NONE	85.5	3.5-3.2/1.6	30	12.50	A436	13, 68, P
	1800	575	143T	E912A	NONE	85.5	1.3	30	12.99	A436	13
	1200	230/460	145T	U265	TSTAT	82.5	3.8/1.9	41	12.62	A600	13, 68
	1200	575	145T	E934A	NONE	82.5	1.5	46	13.49	A436	13

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = F1 Mounting Only
- * 19 = 1.25 Service Factor
- * 20 = 1.35 Service Factor
- * 25 = Will Not Accept C-Face
- * 68 = Rated 60/50 Hertz At Next Lowest HP
- * 99 = Suitable for 2:1 Constant Torque

CHART CONTINUES ON NEXT PAGE

- * A = NEMA A Design
- * B = NEMA B Design
- * H = Class H Insulation
- * P = BCP (Bearing Current Protection)
- * VC = Voltage Change Device Feature for Quick Voltage Change
- * YD = 12 Leads for Wye-Delta, Part Winding on Low Voltage, or Across the Line

XRI GENERAL PURPOSE, THREE PHASE

DRIPPROOF MOTORS

CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	FOOT NOTES
1 1/2	3600	230/460	56	K009A	NONE	84.0	4.2/2.1	64	12.70	N/A	68
	3600	230/460	143T	E783A	NONE	84.0	3.8/1.9	64	12.49	A436	5, 13, 68
	3600	208-230/460	143T	U245	TSTAT	84.0	4.4-4.0/2.0	64	12.28	A600	5, 13, 68
	3600	575	143T	E798A	NONE	84.0	1.6	64	12.28	A436	5, 13
	1800	230/460	56H	K022A	NONE	86.5	4.6/2.3	44	14.07	N/A	5, 68
	1800	208-230/460	56H	G923A	AUTO	86.5	4.4-4.4/2.2	40	13.99	A436	5, 13, 68, VC
	1800	575	56H	K061A	NONE	86.5	1.9	44	14.07	N/A	
	1800	230/460	145T	E928A	NONE	86.5	4.4/2.2	52	12.99	A436	5, 13, 68
	1800	208-230/460	145T	U420A	AUTO	86.5	4.4-4.4/2.2	48	12.49	A436	5, 13, 68
	1800	208-230/460	145T	U759	TSTAT	86.5	4.8-5.6/2.4	35	12.62	A600	13, 68
	1800	208-230/460	145T	U759-P	NONE	86.5	4.8-5.6/2.4	35	13.00	A436	13, 68, P
	1800	575	145T	E913A	NONE	86.5	1.8	35	12.62	A600	13
	1200	200	182T	E799B	NONE	86.5	6.1	70	13.19	A666	13
	1200	208-230/460	182T	U1266	TSTAT	86.5	6.2/3.1	68	13.19	A666	13, 68
1200	575	182T	U914	NONE	86.5	2.5	68	13.19	A666	13	
2	3600	230/460	56H	K025A	NONE	85.5	5.4/2.7	37	13.44	N/A	68, B
	3600	200	145T	U905A	NONE	85.5	5.9	43	13.12	A436	5, 13
	3600	208-230/460	145T	U246	TSTAT	85.5	5.2-4.8/2.4	43	13.12	A436	5, 13, 68
	3600	575	145T	U906A	NONE	85.5	2.1	43	13.12	A436	5, 13
	1800	230/460	56H	K041A	NONE	86.5	6.0/3.0	47	13.44	A436	5, 13, 68, B
	1800	575	56H	K062A	NONE	86.5	2.4	47	13.44	N/A	B
	1800	208	145T	E903A	NONE	86.5	6.6	56	14.49	N/A	B
	1800	200-208	145T	U422A	AUTO	86.5	6.6-6.6	58	14.49	A436	5, 13
	1800	200-208	145T	L607A	NONE	86.5	4.87-4.85	47	14.02	A436	5, F2
	1800	230/460	145T	E929A	NONE	86.5	6.0/3.0	46	13.49	A436	5, 13, 68
	1800	208-230/460	145T	U423A	AUTO	86.5	6.2-6.0/3.0	56	12.49	A436	5, 13, 68
	1800	208-230/460	145T	U424A	AUTO	86.5	6.2-6.0/3.0	56	12.99	A436	5, 13, 68, B, VC
	1800	208-230/460	145T	U760	TSTAT	86.5	6.4-5.8/2.9	37	13.62	A600	13, 68
	1800	208-230/460	145T	U760-P	NONE	86.5	6.4-5.8/2.9	37	14.00	A436	5, 13, 68, P
	1800	575	145T	E914A	NONE	86.5	2.4	37	13.62	A600	5, 13
	1800	575	145T	U924A	AUTO	86.5	2.4	56	13.49	A436	5, 13
	1200	200	184T	E918A	NONE	88.5	8.3	90	15.19	N/A	13
	1200	208-230/460	184T	U1267	TSTAT	87.5	7.2/3.6	90	15.19	A666	13, 68
	1200	575	184T	U915	NONE	87.5	2.9	90	15.19	A666	13
	900	230/460	213T	H184B	NONE	85.5	8.0/4.0	137	17.30	N/A	B
3	3600	208-230/460	145T	U247	TSTAT	86.5	8.0-7.2/3.6	45	13.12	A600	5, 13, 68
	3600	575	145T	E932A	NONE	86.5	2.9	45	13.12	A600	5, 13
	1800	200	182T	E904B	NONE	89.5	9.5	70	13.19	A666	13
	1800	230/460	182T	U426B	AUTO	89.5	8.0/4.0	71	13.19	A666	13, 68
	1800	208-230/460	182T	E1930	TSTAT	89.5	8.4-8.0/4.0	76	14.19	A666	13, 68
	1800	208-230/460	182T	E1930-P	NONE	89.5	8.4-8.0/4.0	76	14.56	A666	13, 68, P
	1800	575	182T	E915B	NONE	89.5	3.4	76	14.19	A666	13, B
	1200	200	213T	U907A	NONE	88.5	10.4	110	17.30	A606	
	1200	208-230/460	213T	U268	NONE	88.5	10.2-10.0/5.0	156	16.38	A602	
	1200	575	213T	U279	NONE	88.5	4	156	16.38	A602	13

CHART CONTINUES ON NEXT PAGE

Footnotes: Please see notes on page 46.

CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KITS	FOOT NOTES
5	3600	208-230/460	182T	U1248	TSTAT	86.5	13.0-12.0/6.0	86	15.19	A666	13, 68
	3600	575	182T	U908A	NONE	86.5	5.6	86	13.19	A666	13
	1800	200	184T	E905B	NONE	89.5	14.5	81	14.19	A666	13
	1800	200	184T	U427B	AUTO	89.5	14.5	81	14.19	A666	
	1800	230/460	184T	U428B	AUTO	89.5	12.6/6.3	80	14.19	A666	13, 68
	1800	230/460	184T	E719A	NONE	89.5	12.6/6.3	80	14.19	A666	13, 68
	1800	208-230/460	184T	E1931	TSTAT	89.5	13.6-12.8/6.4	89	14.19	A666	13, 68
	1800	208-230/460	184T	E1931-P	NONE	89.5	13.6-12.8/6.4	89	14.56	A666	13, 68, P
	1800	575	184T	E916B	NONE	89.5	5.1	80	14.19	A666	13
	1200	200	215T	E935A	NONE	89.5	15.9	162	18.55	A606	13, B
	1200	208-230/460	215T	U269	NONE	90.2	15.8-15.0/7.5	185	16.38	A602	
	1200	575	215T	U280	NONE	90.2	6	185	16.38	A602	
7.5	3600	208-230/460	184T	U249A	TSTAT	88.5	19.6-17.6/8.8	106	16.19	A666	68
	3600	575	184T	E938A	NONE	88.5	7	106	16.19	A666	13
	1800	200	213T	E906B	NONE	91.0	23	145	17.30	A606	B
	1800	230/460	213T	U430B	AUTO	91.0	20.0/10.0	135	19.29	A606	68
	1800	230/460	213T	U430B-P	NONE	91.0	20.0/10.0	135	19.29	A606	P
	1800	208-230/460	213T	U763	NONE	91.0	20.6-19.8/9.9	160	16.38	A602	
	1800	575	213T	U281	NONE	91.0	7.8	160	16.38	A602	
	1200	230/460	254T	E733A	NONE	92.4	21.0/10.5	240	22.40	N/A	13, 68
	1200	575	254T	U282	NONE	92.4	8.1	281	20.94	A622	YD
	900	230/460	256T	H187B	NONE	89.5	23.0/12.5	300	24.37	N/A	
10	3600	208-230/460	213T	U764	NONE	91.0	25.0-23.6/11.8	150	16.38	A602	
	3600	230/460	213T	E706A	NONE	86.5	23.4/11.7	133	17.30	A606	68
	3600	575	213T	U283	NONE	91.0	9.4	150	17.87	A602	
	1800	200	215T	E907A	NONE	91.7	30	120	17.30	A606	
	1800	230/460	215T	U431B-P	NONE	91.7	26.2/13.1	145	18.25	A606	68, P
	1800	208-230/460	215T	U765	NONE	91.7	28.5-25.6/12.8	198	17.87	A602	
	1800	575	215T	U284	NONE	91.7	10.0	195	17.87	A602	A
	1200	230/460	256T	E734A	NONE	91.7	27.4/13.7	305	23.90	A612	13, 68
	1200	575	256T	U285	NONE	91.7	10.8	305	22.60	A622	YD
	15	3600	200	215T	E788A	NONE	90.2	42.0	112	18.55	A606
3600		208-230/460	215T	U766	NONE	91.0	38.0-34.6/17.3	184	17.87	A602	99
3600		575	215T	U286	NONE	91.0	13.8	184	17.87	A602	99
1800		200	254T	E908A	NONE	93.0	42.5	240	22.10	N/A	B
1800		230/460	254T	E722A	NONE	93.0	38.0/18.9	230	22.10	A612	13, 68
1800		230/460	254T	E722A-P	NONE	93.0	38.0/18.9	230	22.50	A612	68, P
1800		208-230/460	254T	U767	NONE	93.0	40.5-37.0/18.5	310	20.94	A622	A, YD
1800		575	254T	E760A	NONE	93.0	15.0	180	22.10	N/A	
1800		575	254T	U287	NONE	93.0	15.0	310	20.94	A622	A, YD
1200		230/460	284T	E1002	NONE	91.7	43.0/21.5	340	24.30	A210	13, 68
1200		208-230/460	284T	U256	NONE	92.4	42.0-39.5/19.7	414	23.54	A626	YD
1200		575	284T	U288	NONE	92.4	16.0	414	23.54	A626	YD

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = F1 Mounting Only
- * 19 = 1.25 Service Factor
- * 20 = 1.35 Service Factor
- * 25 = Will Not Accept C-Face
- * 68 = Rated 60/50 Hertz At Next Lowest HP
- * 99 = Suitable for 2:1 Constant Torque

- * A = NEMA A Design
- * B = NEMA B Design
- * H = Class H Insulation
- * P = BCP (Bearing Current Protection)
- * VC = Voltage Change Device Feature for Quick Voltage Change
- * YD = 12 Leads for Wye-Delta, Part Winding on Low Voltage, or Across the Line

CHART CONTINUES ON NEXT PAGE



XRI GENERAL PURPOSE, THREE PHASE

DRIPPROOF MOTORS

CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KITS	FOOT NOTES
20	3600	200	254T	U900	NONE	91.0	53.0	214	20.57	A612	B
	3600	230/460	254T	E708A	NONE	91.0	48.0/24.0	243	22.10	A612	13, 68
	3600	575	254T	U289	NONE	93.0	18.4	300	20.94	A622	YD
	1800	200	256T	E909A	NONE	93.6	57.0	260	22.10	N/A	B
	1800	230/460	256T	E723B	NONE	93.6	49.0/24.5	259	22.10	N/A	13, 68
	1800	230/460	256T	E723B-P	NONE	93.6	49.0/24.5	259	22.50	N.A	68, P
	1800	208-230/460	256T	U769	NONE	93.0	55.0-51.0/25.5	360	22.60	A622	YD
	1800	575	256T	E761A	NONE	93.0	25.0	195	22.10	N/A	
	1800	575	256T	U290	NONE	93.0	19.2	360	22.60	A626	YD
	1200	208-230/460	286T	U257	NONE	92.4	58.0-55.0/27.5	408	25.00	A626	YD
25	3600	200	256T	E786A	NONE	91.7	65.5	225	22.10	N/A	
	3600	230/460	256T	E709A	NONE	91.7	57.0/28.5	261	22.10	N/A	13, 68
	3600	575	256T	U291	NONE	93.0	23.0	315	22.60	A626	YD
	1800	200	284T	E910A	NONE	93.6	73.5	424	24.94	A287	
	1800	230/460	284T	E1006	NONE	93.6	70.2/35.1	292	24.30	A210	13, 68
	1800	230/460	284T	E1006-P	NONE	93.6	70.2/35.1	292	24.68	A210	68, P
	1800	208-230/460	284T	U771	NONE	93.6	66.0-59.6/29.8	424	23.54	A626	YD
	1800	575	284T	E762A	NONE	93.6	23.8	424	23.54	A627	YD
	1200	208-230/460	324T	U798	NONE	93.0	72-67/33.5	695	23.54	A627	YD
	900	230/460	326T	H191B	NONE	91.0	73.0/36.5	469	28.50	N/A	
30	3600	230/460	284TS	E1008	NONE	91.7	69.0/34.5	270	22.90	A210	13, 68
	3600	200	284TS	U901A	NONE	93.6	78.0	367	23.57	A287	
	3600	575	284TS	U292	NONE	94.1	28.1	396	22.17	A626	YD
	1800	200	286T	E911A	NONE	94.1	85.0	485	26.81	A287	
	1800	230/460	286T	E1009	NONE	94.1	73.2/36.6	303	25.80	A210	13, 68
	1800	230/460	286T	E1009-P	NONE	94.1	73.2/36.6	202	26.18	A210	68, P
	1800	575	286T	E763A	NONE	94.1	28.6	483	25.00	A627	YD
	3600	230/460	286TS	E1010	NONE	92.4	103.5/51.8	369	22.90	A210	68
	3600	575	286TS	U293	NONE	92.4	36.5	452	23.62	A626	99, A, YD
	1800	200	324T	E787A	NONE	94.1	112	540	28.00	A213	
	1800	230/460	324T	U775-P	NONE	94.1	96.0/48.0	540	28.00	A213	68,P
	1800	208-230/460	326TS	E789A	NONE	94.1	100/50.0	581	26.00	A613	
	1800	575	324T	E764A	NONE	94.1	38.0	581	26.02	A627	YD
	1200	208-230/460	364T	U1927	NONE	94.1	107-100/50.0	875	31.60	A626	YD
50	3600	575	324TS	U294	NONE	93.0	44.8	590	24.53	A627	13, YD
	1800	200	326T	E790A	NONE	94.5	139	535	28.50	A213	
	1800	208-230/460	326TS	E791A	NONE	94.5	121/60.5	535	27.00	A213	68, B
	1800	230/460	326T	E791A-P	NONE	94.5	121/60.5	535	27.38	A213	68, P
	1800	208-230/460	326T	U777	NONE	94.5	130-118/59.0	710	27.52	A627	YD
	1800	575	326T	E765A	NONE	94.5	48.0	710	27.52	A627	13, YD
60	1800	208-230/460	364T	U1779	NONE	95.4	152-139/69.5	1077	31.60	A629	19, 68, YD
	1800	208-230/460	365TS	E768C	NONE	95.4	153-139/69.5	1005	27.50	A219	
	1200	230/460	404T	U270	TSTAT	95.0	146/73.0	975	32.50	A222	B

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = F1 Mounting Only
- * 19 = 1.25 Service Factor
- * 20 = 1.35 Service Factor
- * 25 = Will Not Accept C-Face
- * 68 = Rated 60/50 Hertz At Next Lowest HP
- * 99 = Suitable for 2:1 Constant Torque

- * A = NEMA A Design
- * B = NEMA B Design
- * H = Class H Insulation
- * P = BCP (Bearing Current Protection)
- * VC = Voltage Change Device Feature for Quick Voltage Change
- * YD = 12 Leads for Wye-Delta, Part Winding on Low Voltage, or Across the Line

CHART CONTINUES ON NEXT PAGE



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	OVERLOAD	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KITS	NOTES
75	1800	208-230/460	365TS	E782C	NONE	95.0	194-174/87.0	1030	27.50	A219	
	1200	230/460	405T	U271	TSTAT	95.0	180/90.0	1100	34.00	A222	
100	1800	230/460	404T	E922	NONE	95.4	226/113	1025	32.50	A222	YD
	1800	230/460	404TS	E780A	NONE	95.4	226/113	1025	29.50	A225	
125	3600	460	404TS	U250	NONE	95.0	140	973	29.50	A225	YD
	1800	460	405T	E923	NONE	95.4	141	1150	34.00	A222	YD
	1800	460	405TS	E781A	NONE	95.4	141	1150	31.00	A225	PW
	1200	460	445T	U273	TSTAT	95.0	145	1500	39.75	A228	YD
150	3600	460	405TS	U251	NONE	95.0	165	1075	31.00	A225	YD
	1800	460	444T	E924	NONE	95.8	170	1275	37.75	A228	YD
	1800	460	444TS	E792A	NONE	95.8	170	1275	34.00	A231	PW
	1200	460	447T	U274	TSTAT	95.4	185	2050	43.25	N/A	25
200	3600	460	444TS	U252	TSTAT	95.8	216	1277	34.00	A231	YD
	1800	460	445T	E925	NONE	95.8	225	1500	39.75	A228	YD
	1800	460	445TS	U400A	NONE	95.8	225	1500	36.00	A231	PW
	1200	460	449T	U275	TSTAT	95.4	245	2200	48.25	N/A	YD
250	3600	460	447TS	U785	NONE	95.8	274	2028	39.50	A293	YD
	1800	460	447T	U786	tSTAT	96.2	292	2220	43.25	N/A	YD
300	3600	460	447TS	U788	NONE	95.4	330	1745	39.50	A293	YD
	1800	460	447TS	U496	NONE	96.2	340	2179	39.58	A293	68, YD
350	3600	460	447TS	U791	NONE	95.4	385	1745	39.50	A293	YD
	1800	460	447TS	U497	NONE	95.8	395	2298	39.50	A293	68, YD
400	3600	460	449TS	U793	NONE	95.8	450	2508	44.50	A293	68, H, YD
	1800	460	447T	U792	NONE	95.8	395	2153	43.29	N/A	68, YD
	1800	460	447TS	U498	NONE	96.5	452	2220	39.50	A293	68, YD
450	3600	460	449TS	U795	NONE	96.2	495	2112	44.50	A293	YD
500	3600	460	449TS	U797	NONE	96.2	538	2649	44.50	A293	68, H, YD

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = F1 Mounting Only
- * 19 = 1.25 Service Factor
- * 20 = 1.35 Service Factor
- * 25 = Will Not Accept C-Face
- * 68 = Rated 60/50 Hertz At Next Lowest HP
- * 99 = Suitable for 2:1 Constant Torque

- * A = NEMA A Design
- * B = NEMA B Design
- * H = Class H Insulation
- * P = BCP (Bearing Current Protection)
- * VC = Voltage Change Device Feature for Quick Voltage Change
- * YD = 12 Leads for Wye-Delta, Part Winding on Low Voltage, or Across the Line



GLOBETROTTER® GENERAL PURPOSE MOTORS

THREE PHASE

TOTALLY ENCLOSED MOTORS



Features:

- Meets or exceeds NEMA Premium efficiencies
- NEMA Premium models are in compliance with EISA 2007
- Cast iron frame material, as noted
- Rolled steel C-face models are Hazardous Duty® Division 2
- Hazardous Duty Division 2 UL certification nameplate, as noted
- Division 2 / Zone 2 Class 1 (gases), Groups A, B, C, D
- IP55 enclosure on cast iron frames, as noted
- Rated and Nameplated 60/50 Hertz 190/380 at next lowest HP @ 1.15 SF
- Inverter duty 10:1 variable torque and 10:1 constant torque, 1.0 SF
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Meets temperature code T2B
- Class F Insulation
- Standard assembly F1, reversible to F2 assembly
- For C-Face, D-Flange, or cast iron upgrade kits, see accessory section
- UL recognized, CSA certified, CE mark
- Three year warranty



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KITS	NOTES
1 1/2	1800	230/460	145T	GT1004	86.5	4.0/2.0	62	14.20	---	68,75
	1200	230/460	182T	GT1005A	87.5	4.8/2.4	89	14.80	A420	68,75
	1200	575	182T	GT1105A	87.5	1.9	89	14.80	A420	68,75
2	1800	230/460	145T	GT1007	86.5	5.0/2.5	60	14.20	---	68,75
	1200	230/460	184T	GT1008A	88.5	6.0/3.0	125	15.81	A420	68,75
	1200	575	184T	GT1108A	88.5	2.4	125	15.81	A420	68,75
3	3600	230/460	182T	GT1009A	86.5	7.6/3.8	94	14.80	A420	68,75, A
	3600	575	182T	GT1109A	86.5	3.1	94	14.80	A420	
	1800	230/460	182T	GT1010A	89.5	7.8/3.9	102	14.80	A420	68,75
	1800	575	182T	GT1110A	89.5	3.1	102	14.80	A420	68,75
	1200	230/460	213T	GT1011A	89.5	8.6/4.3	173	18.53	A421	68,75
	1200	575	213T	GT1111A	89.5	3.5	173	18.53	A421	68,75
5	3600	230/460	184T	GT1012A	88.5	12.0/6.0	109	15.81	A420	68,75, A
	3600	575	184T	GT1112A	88.5	4.8	109	15.81	A420	68,75
	1800	230/460	184T	GT1013A	89.5	12.4/6.2	117	15.81	A420	68,75, A
	1800	575	184T	GT1113A	89.5	5.0	117	15.81	A420	68,75
	1200	230/460	215T	GT1014A	89.5	13.6/6.8	168	20.03	A421	68,75
	1200	575	215T	GT1114A	89.5	5.5	158	20.03	A421	68,75
7 1/2	3600	230/460	213T	GT1015A	89.5	18.4/9.2	185	18.53	A421	68,75, A
	3600	575	213T	GT1115A	90.3	7.4	185	18.53	A421	68,75
	1800	230/460	213T	GT1016A	93.3	19.0/9.5	194	18.53	A421	68,75
	1800	575	213T	GT1116A	93.3	7.6	194	18.53	A421	68,75
	1200	230/460	254T	GT1017A	91.0	19.8/9.9	223	24.15	A173A	68,75
	1200	575	254T	GT1117A	91.0	7.9	223	24.15	A173A	68,75
10	3600	230/460	215T	GT1018A	90.2	23.6/11.8	171	20.03	A421	68,75
	3600	575	215T	GT1118A	90.2	9.5	220	20.03	A421	68,75
	1800	230/460	215T	GT1019A	92.1	25.0/12.5	183	20.03	A421	68,75
	1800	575	215T	GT1119A	92.1	10.0	183	20.03	A421	68,75
	1200	230/460	256T	GT1020A	91.0	25.8/12.9	368	25.89	A173A	68,75
	1200	575	256T	GT1120A	91.0	10.3	368	25.89	A173A	68,75

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * A = NEMA Design A

CHART CONTINUES ON NEXT PAGE



GLOBETROTTER® GENERAL PURPOSE MOTORS

THREE PHASE

TOTALLY ENCLOSED MOTORS



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KITS	NOTES
15	3600	230/460	254T	GT1021A	91.0	35.5/17.8	393	24.15	A173A	68,75
	3600	575	254T	GT1121A	91.0	14.3	350	24.15	A173A	68,75
	1800	230/460	254T	GT1022A	92.4	37.5/18.8	229	24.15	A173A	68,75
	1800	575	254T	GT1122A	92.4	15.1	375	24.15	A173A	68,75
	1200	230/460	284T	GT1023A	91.7	40.0/20.0	475	26.65	A175A	
	1200	575	284T	GT1123A	91.7	16.0	475	26.65	A175A	
20	3600	230/460	256T	GT1024A	91.0	47.5/23.7	375	25.89	A173A	68
	3600	575	256T	GT1124A	91.0	19.0	375	25.89	A172A	
	1800	208-230/460	256T	GT1025A	93.0	53.0-48.5/24.2	335	25.89	A173A	68
	1800	575	256T	GT1125A	93.0	19.4	425	25.89	A173A	
	1200	230/460	286T	GT1026A	91.7	52.0/26.0	550	28.14	A175A	68
	1200	575	286T	GT1126A	91.7	20.8	550	28.14	A175A	
25	3600	230/460	284TS	GT1027A	91.7	60.0/30.0	386	25.28	A175A	68
	3600	575	284TS	GT1127A	91.7	24.0	386	25.28	A175A	
	1800	230/460	284T	GT1028A	93.6	61.0/30.5	400	26.65	A175A	68
	1800	230/460	284TS	GT1057	93.6	61.0/30.5	400	25.28	A175A	68
	1800	575	284T	GT1128A	93.6	24.3	500	26.65	A175A	
	1200	230/460	324T	GT1029A	93.0	64.0/32.0	675	29.69	A177A	68
	1200	575	324T	GT1129A	93.0	25.6	675	29.69	A177A	
	1200	575	324T	GT1129A	93.0	25.6	675	29.69	A177A	
30	3600	230/460	286TS	GT1030A	91.7	71.0/35.5	500	26.77	A175A	68
	3600	575	286TS	GT1130A	91.7	28.5	500	26.77	A175A	
	1800	230/460	286T	GT1031A	93.6	72.5/36.5	492	28.14	A175A	68
	1800	230/460	286TS	GT1058	93.6	72.5/36.5	492	26.77	A175A	68
	1800	575	286T	GT1131A	93.6	29.1	492	28.14	A175A	
	1200	230/460	326T	GT1032A	93.0	76.0/38.0	725	31.19	A177A	68
	1200	575	326T	GT1132A	93.0	30.5	725	31.19	A177A	
	1200	575	326T	GT1132A	93.0	30.5	725	31.19	A177A	
40	3600	230/460	324TS	GT1033A	92.4	92.5/46.0	675	28.19	A177A	68
	3600	575	324TS	GT1133A	92.4	37.0	675	28.19	A177A	
	1800	230/460	324T	GT1034A	94.1	95.0/47.5	750	29.69	A177A	68
	1800	230/460	324TS	GT1059	94.1	95.0/47.5	750	28.19	A177A	68
	1800	575	324T	GT1134A	94.1	38.0	750	29.69	A177A	
	1200	230/460	364T	GT1035A	94.1	96.0/48.0	950	33.32	A179A	68
	1200	575	364T	GT1135A	94.1	38.5	950	33.32	A179A	
	1200	575	364T	GT1135A	94.1	38.5	950	33.32	A179A	
50	3600	230/460	326TS	GT1036A	93.0	113/56.5	725	29.69	A177A	68
	3600	575	326TS	GT1136A	93.0	45.0	725	29.69	A177A	
	1800	230/460	326T	GT1037A	94.5	117/58.5	775	31.19	A177A	68
	1800	230/460	326TS	GT1060	94.5	117/58.5	775	29.69	A177A	68
	1800	575	326T	GT1137A	94.5	47.0	775	31.19	A177A	
	1200	230/460	365T	GT1038A	94.1	121/60.5	1000	34.30	A179A	68
	1200	575	365T	GT1138A	94.1	48.5	1000	34.30	A179A	
	1200	575	365T	GT1138A	94.1	48.5	1000	34.30	A179A	
60	3600	230/460	364TS	GT1039A	93.6	135/67.5	925	31.19	A179A	68
	3600	575	364TS	GT1139A	93.6	54.0	925	31.19	A179A	
	1800	230/460	364T	GT1040A	95.0	138/69.0	1000	33.32	A179A	68
	1800	230/460	364TS	GT1061	95.0	138/69.0	1000	31.19	A179A	68
	1800	575	364T	GT1140A	95.0	55.0	1000	33.32	A179A	
	1200	230/460	404T	GT1041A	94.5	143/71.5	1200	38.77	A425A	68
	1200	575	404T	GT1141A	94.5	57.0	1200	38.77	A425A	
	1200	575	404T	GT1141A	94.5	57.0	1200	38.77	A425A	

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * A = NEMA Design A

CHART CONTINUES ON NEXT PAGE



GLOBETROTTER® GENERAL PURPOSE MOTORS

THREE PHASE

TOTALLY ENCLOSED MOTORS



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KITS	NOTES
75	3600	230/460	365TS	GT1042A	94.1	168/84.0	1025	32.17	A179A	68
	3600	575	365TS	GT1142A	94.1	67.0	1025	32.17	A179A	
	1800	230/460	365T	GT1043A	95.4	171/85.5	1100	34.30	A179A	68
	1800	230/460	365TS	GT1062	95.4	171/85.5	1100	32.17	A179A	68
	1800	575	365T	GT1143A	95.4	68.5	100	34.30	A179A	
	1200	230/460	405T	GT1044A	94.5	178/89.0	1300	38.77	A425A	68
	1200	575	405T	GT1144A	94.5	71.0	1300	38.77	A425A	
100	3600	230/460	405TS	GT1045A	94.5	222/111	1250	35.77	A424A	68
	3600	575	405TS	GT1145A	94.5	89.0	1250	35.77	A424A	
	1800	230/460	405T	GT1046A	95.4	226/113	1375	38.77	A425A	68
	1800	230/460	405TS	GT1063	95.4	226/113	1375	35.77	A424A	68
	1800	575	405T	GT1146A	95.4	90.5	1375	38.77	A425A	
	1200	230/460	444T	GT1047A	95.0	229/115	2000	46.71	A427A	68
	1200	575	444T	GT1147A	95.0	91.5	2000	46.71	A427A	
125	3600	460	444TS	GT1048A	95.0	138	1750	42.96	A426A	68
	3600	575	444TS	GT1148A	95.0	110	1750	42.96	A426A	
	1800	460	444T	GT1049A	95.4	140	1850	46.71	A427A	68
	1800	460	444TS	GT1064	95.4	140	1850	42.96	A427A	68
	1800	575	444T	GT1149A	95.4	112	1850	46.71	A427A	
	1200	460	445T	GT1050A	95.0	143	2050	46.71	A427A	68
	1200	575	445T	GT1150A	95.0	114	2050	46.71	A427A	
150	3600	460	445TS	GT1051A	95.0	167	2050	42.96	A426A	68
	3600	575	445TS	GT1151A	95.0	131	2050	42.96	A426A	
	1800	460	445T	GT1052A	95.8	169	1880	46.71	A427A	68
	1800	460	445TS	GT1065	95.8	169	1880	42.96	A426A	68
	1800	575	445T	GT1152A	95.8	135	1880	46.71	A427A	
	1200	460	447T	GT1053A	95.8	171	2500	55.21	A427A	68
	1200	575	447T	GT1153A	95.8	136	2500	55.21	A427A	
200	3600	460	447TS	GT1054A	95.4	217	2300	51.46	A426A	68
	3600	575	447TS	GT1154A	95.4	174	2300	51.46	A426A	
	1800	460	447T	GT1055A	96.2	219	2350	55.21	A427A	68
	1800	460	447TS	GT1066	96.2	219	2350	51.46	A427A	68
	1800	575	447T	GT1155A	96.2	175	2350	55.21	A427A	
	1200	460	449T	GT1056A	95.8	227	2900	55.21	A427A	68
	1200	575	449T	GT1156A	95.8	182	2900	55.21	A427A	

Footnotes:

- * 68 = Rated and Nameplated 60/50 Hertz
- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * A = NEMA Design A



Applications:

Chemical plants, paper mills, refineries, mines, food processing, foundries, and other severe duty environments where long life and ultra-high efficiency are desired. Guaranteed efficiencies offer an eXtra Return on your Investment when using these premium efficiency motors on high cycle or long run applications.

Features:

- Meets or exceeds NEMA Premium® efficiencies; NEMA Premium models are in compliance with EISA 2007
- Bearing Current Protection (BCP), as noted
- Blue Chip Series® quality, 100% cast iron construction for rigidity and reduced vibration
- Provisions to add stub shaft for an encoder (182T-449T, TEFC only)
- Internal and external epoxy paint
- MAX GUARD® motor Class F insulation system
- Constant torque speed range is listed in CT speed range column
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Bearing caps (254T and larger)
- Precision balanced to .08"/sec
- Extended grease tubes, regreasable in service
- Brass drain and breather
- Meets IEEE45 USCG Marine Duty, IP54 construction
- Meets Ford® EM1 automotive duty specification
- BCP (-P) models are not Hazardous Duty® motors certified for Division 2 locations
- Hazardous Duty® motor Division 2 CSA certification nameplate
- Division 2 / Zone 2 Class I (gases), Groups A, B, C, D
- Meets temperature code T2B
- Actual test and vibration data supplied with each motor
- Ball bearings (except as noted)
- UL recognized (through 449T) and CSA certified and CE mark
- Three year warranty

MODELS THROUGH 40 HP ARE CAPABLE OF MODIFICATION AS FOLLOWS (CONTACT FACTORY TO CONFIRM):

- 1.25 service factor (sinewave only)
- 50Hz at same HP, 1.0 service factor (sinewave only)



HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KIT	NOTES
3/4	1200	460	143T	E648	✓	1000:1	80	1.14	53	10.43	A603	75, 76, N, NE
	1800	460	143T	E649	✓	1000:1	85.5	1.5	55	10.43	A603	75, 76, N
1	1800	230/460	143T	E461	✓	1000:1	85.5	3.1/1.5	55	12.95	A603	75, 76, N
	1800	230/460	143T	E375		20:1	85.5	3.1/1.5	71	12.95	A603	75, 76
	1800	575	143T	E666	✓	1000:1	85.5	1.2	55	10.43	A603	75, 76, N
	1800	575	143T	E376		20:1	85.5	1.2	71	14.17	A603	75, 76
	1200	460	145T	E650A		1000:1	82.5	1.7	75	11.43	A655	75, 76, N
	1200	460	145T	E858	✓	20:1	82.5	1.8	71	14.17	A603	75, 76
	1200	230/460	145T	E462A	✓	1000:1	82.5	3.3/1.65	60	11.43	A655	75, 76, N
	1200	230/460	145T	E499		20:1	82.5	3.6/1.8	69	14.17	A603	75, 76

CHART CONTINUES ON NEXT PAGE

Footnotes:

- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * 76 = C-Face Addition Results in Non-NEMA "AH" Dimension.
- * 77 = Frame is Drilled with 3 Sets of FootHoles, 5010, 5011,5012 as A Standard. 5009 Frame Drilled Available as BUILD UP.
- * 78 = Frame is Drilled with Two Sets of FootHoles, 5012, and 5013
- * 79 = Ball Bearings
- * 90 = Not UL Recognized
- * H = Class H Insulation
- * P = BCP (Bearing Current Protection)
- * RB = Roller Bearing

BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE DUTY MOTORS NEMA PREMIUM® XRI® MOTORS TOTALLY ENCLOSED



THREE PHASE

CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KIT	NOTES
1 1/2	3600	460	143T	E651	√	1000:1	86.5	2	58	10.43	A603	75, 76, N
	3600	230/460	143T	E463		1000:1	86.5	4.0/2.0	58	10.43	A603	75, 76, N
	3600	230/460	143T	E378		20:1	85.5	4.0/2.0	64	14.17	A603	75, 76
	3600	575	143T	E851		1000:1	86.5	1.6	58	10.43	A603	75,76,N
	3600	575	143T	E379		20:1	85.5	1.6	64	14.17	A603	75, 76, N
	1800	460	145T	E652A	√	1000:1	86.5	2.3	65	11.43	A655	75, 76, N
	1800	230/460	145T	E464A	√	1000:1	86.5	4.6/2.3	65	11.43	A655	75, 76, N
	1800	575	145T	E667A		1000:1	86.5	1.8	65	11.43	A655	75, 76, N
	1200	460	182T	E632	√	1000:1	87.5	2.2	100	12.71	A644	75, N
	1200	460	182T	E380A		20:1	87.5	2.2	110	15.19	A644	75
	1200	230/460	182T	E465		1000:1	87.5	4.4/2.2	100	12.71	A644	75, N
	2	3600	460	145T	E653	√	1000:1	85.5	2.5	68	11.43	A655
3600		460	145T	E382		20:1	85.5	2.0	80	14.17	A655	75, 76
3600		230/460	145T	E466		1000:1	85.5	5.0/2.5	68	11.43	A655	75, 76, N
3600		230/460	145T	E383		20:1	85.5	4.0/2.0	80	14.17	A655	75, 76
3600		575	145T	E852		1000:1	85.5	2.0	68	11.43	A655	75, 76, N
1800		460	145T	E654A	√	1000:1	86.5	3.0	65	11.43	A655	N, 75, 76
1800		230/460	145T	E467A	√	1000:1	86.5	6.0/3.0	65	11.43	A655	N, 75, 76
1800		230/460	145T	E386A		20:1	86.5	6.0/3.0	76	14.17	A655	75, 76
1800		575	145T	E668A		1000:1	86.5	2.4	65	11.43	A655	N, 75, 76
1200		460	184T	E633	√	1000:1	88.5	3.0	112	13.71	A644	75, N
1200		460	184T	E388A		20:1	88.5	3.0	171	17.87	A641	75
1200		230/460	184T	E468	√	1000:1	88.5	6.0/3.0	112	13.71	A644	75, N
3	3600	460	182T	E601	√	1000:1	87.5	3.8	98	12.71	A644	75, N
	3600	230/460	182T	E390		20:1	87.5	3.8	105	15.19	A644	75
	3600	575	182T	E853		1000:1	87.5	3.0	105	12.71	A644	75, N
	3600	575	182T	E392		20:1	87.5	3.0	105	21.57	A644	75
	1800	460	182T	E616	√	1000:1	90.2	4.0	102	12.71	A644	75, N
	1800	230/460	182T	E470	√	1000:1	90.2	8.0/4.0	102	12.71	A644	75, N
	1800	575	182T	E669	√	1000:1	90.2	3.2	102	12.71	A644	75, N
	1200	460	213T	E634A	√	20:1	89.5	4.4	208	19.63	A646	75
	5	3600	460	184T	E602	√	2:1	89.5	5.9	142	16.19	A644
3600		230/460	184T	E472	√	2:1	89.5	11.8/5.9	142	16.19	A644	75
3600		575	184T	E655	√	20:1	89.5	4.7	142	16.19	A644	75
1800		460	184T	E617	√	20:1	90.2	6.2	130	16.19	A644	75
1800		230/460	184T	E473	√	20:1	90.2	12.4/6.2	130	16.19	A644	75
1800		575	184T	E670	√	20:1	90.2	5.0	130	16.19	A644	75
1200		460	215T	E635	√	20:1	89.5	6.9	202	19.72	A206	75
1200		460	215T	E635A	√	20:1	89.5	6.9	202	19.63	A646	75
1200		230/460	215T	E474A	√	20:1	89.5	13.8/6.9	215	19.63	A646	75
7 1/2	3600	460	213T	E603A	√	1000:1	91.7	8.9	200	17.19	A646	75
	3600	230/460	213T	E475A	√	1000:1	91.7	17.8/8.9	200	17.19	A646	75, N
	3600	575	213T	E656A	√	20:1	91.0	7.1	200	17.51	A646	75, N
	1800	460	213T	E618A	√	20:1	91.7	9.6	225	19.63	A646	75
	1800	230/460	213T	E476A	√	20:1	91.7	19.2/9.6	220	19.63	A646	75
	1800	575	213T	E671A	√	20:1	91.7	7.7	221	19.63	A646	75
	1200	460	254T	E636	√	20:1	91.0	9.9	326	23.52	A284	75
	1200	230/460	254T	E477	√	20:1	91.0	19.8/9.9	326	23.52	A284	75
	1200	575	254T	E684		20:1	91.0	7.9	326	23.52	A284	75

Footnotes: Please see notes on page 56.

CHART CONTINUES ON NEXT PAGE



**BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE
DUTY MOTORS** NEMA PREMIUM® XRI® MOTORS TOTALLY ENCLOSED



THREE PHASE

CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KIT	NOTES
10	3600	460	215T	E604A	✓	2:1	91.7	11.9	215	19.63	A646	75
	3600	230/460	215T	E478	✓	2:1	91.7	23.6/11.8	218	19.72	A206	75
	3600	575	215T	E657		2:1	91.7	9.5	218	19.72	A206	75
	1800	460	215T	E619A	✓	20:11	91.7	13.3	240	19.63	A646	75
	1800	230/460	215T	E479A	✓	20:1	91.7	26.6/13.13	252	22.63	A646	75
	1800	230/460	215T	E479-P	✓	20:1	91.7	25.0/12.5	254	22.63	A646	75, P
	1800	575	215T	E672A	✓	20:1	91.7	10.7	175	22.63	A646	75
	1200	460	256T	E637	✓	20:1	91.0	13.1	405	25.27	A284	75
	1200	230/460	256T	E480	✓	20:1	91.0	26.2/13.1	405	25.27	A284	75
	1200	575	256T	E685		20:1	91.0	10.5	405	25.27	A284	75
15	3600	460	254T	E605	✓	2:1	91.7	17.5	345	23.52	A284	75
	3600	230/460	254T	E481	✓	2:1	91.7	35.0/17.5	345	23.52	A284	75
	3600	575	254T	E658		2:1	91.7	14.2	345	23.52	A284	75
	1800	460	254T	E620	✓	20:1	92.4	18.8	350	23.52	A284	75
	1800	460	254T	E620-P	✓	20:1	92.4	18.8	330	23.52	A284	75
	1800	230/460	254T	E482	✓	20:1	92.4	37.6/18.8	350	23.52	A284	75
	1800	575	254T	E673	✓	20:1	92.4	15.0	350	23.52	A284	75
	1200	460	284T	E638	✓	20:1	91.7	20.4	479	26.34	A618	
	1200	230/460	284T	E483	✓	20:1	91.7	40.8/20.4	479	26.34	A618	
	1200	575	284T	E694		20:1	91.7	16.3	479	26.34	A618	
20	3600	460	256T	E606	✓	2:1	92.4	23.4	375	25.27	A284	75
	3600	230/460	256T	E484		2:1	92.4	47.0/23.4	375	25.27	A284	75
	3600	575	256T	E659	✓	2:1	92.4	18.7	375	25.27	A284	75
	1800	460	256T	E621	✓	20:1	93.0	24.1	425	25.27	A284	75
	1800	460	256T	E621-P	✓	20:1	93.0	24.1	425	25.27	A284	75, P
	1800	230/460	256T	E485	✓	20:1	93.0	48.2/24.1	425	25.27	A284	75
	1800	575	256T	E674	✓	20:1	93.0	19.3	425	25.27	A284	75
	1200	460	286T	E639	✓	20:1	91.7	26.8	550	27.84	A618	
	1200	230/460	286T	E486		20:1	91.7	53.5/26.8	550	27.84	A618	
	1200	575	286T	E695		20:1	91.7	21.4	550	27.84	A618	
25	3600	460	284TS	E607	✓	2:1	93.6	28.1	481	24.97	A618	
	3600	575	284TS	E660		2:1	93.6	22.5	481	24.97	A618	
	1800	460	284T	E622	✓	20:1	93.6	31.0	478	26.34	A618	
	1800	460	284T	E622-P	✓	20:1	93.6	31.0	478	26.34	A618	P
	1800	230/460	284T	E488	✓	20:1	93.6	62.0/31.0	478	26.34	A618	
	1800	575	284T	E675	✓	20:1	93.6	24.8	478	26.34	A618	
	1200	460	324T	E640	✓	20:1	93.0	32.5	675	28.87	A214	
	1200	575	324T	E696		20:1	93.0	26.0	675	28.87	A214	
30	3600	460	286TS	E608	✓	2:1	93.6	34.1	500	26.47	A618	
	3600	230/460	286TS	E490	✓	2:1	93.6	67.5/34.0	500	26.47	A618	
	1800	460	286T	E623	✓	20:1	94.1	36.5	525	27.84	A618	
	1800	460	286T	E623-P	✓	20:1	94.1	36.5	525	27.84	A618	P
	1800	230/460	286T	E491	✓	20:1	94.1	73.0/36.5	525	27.84	A618	
	1800	575	286T	E676	✓	20:1	94.1	29.2	525	27.84	A618	
	1200	460	326T	E641	✓	20:1	93.0	38.5	725	30.37	A214	
	1200	575	326T	E400		20:1	93.0	31.0	725	30.37	A214	

CHART CONTINUES ON NEXT PAGE

Footnotes: Please see notes on page 56.



BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE DUTY MOTORS NEMA PREMIUM® XRI® MOTORS TOTALLY ENCLOSED

THREE PHASE

CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KIT	NOTES
40	3600	460	324TS	E609	√	2:1	93.6	47.0	656	27.37	A214	
	3600	575	324TS	E662		2:1	93.6	37.5	656	27.37	A214	
	1800	460	324T	E624	√	2:1	94.1	47.5	700	30.37	A214	
	1800	460	324T	E624-P	√	2:1	94.1	47.5	700	30.37	A214	P
	1800	575	324T	E677	√	2:1	94.1	38.0	700	30.37	A214	
	1200	460	364T	E642A	√	2:1	94.1	50.0	882	31.50	A395	
	1200	575	364T	E401A		2:1	94.1	40.0	882	31.50	A395	
50	3600	460	326TS	E610	√	2:1	93.6	58.0	725	27.37	A214	
	3600	575	326TS	E663		2:1	93.6	46.5	725	27.37	A214	
	1800	460	326T	E625	√	2:1	94.5	60.0	775	30.37	A214	
	1800	460	326T	E625-P	√	2:1	94.5	60.0	775	30.37	A214	P
	1800	460	326TS	E453		2:1	94.5	60.0	775	30.37	A214	
	1800	575	326T	E678	√	2:1	94.5	48.0	775	30.37	A214	
	1200	460	365T	E643A	√	2:1	94.1	61.5	946	31.50	A395	
	1200	575	365T	E402A		2:1	94.1	49.0	946	31.50	A395	
60	3600	460	364TS	E611	√	2:1	94.5	67.0	954	29.38	A396	
	3600	575	364TS	E664		2:1	94.5	53.5	954	29.38	A396	
	1800	460	364T	E626	√	2:1	95.0	69.0	980	31.50	A395	P
	1800	460	364T	E626-P	√	2:1	95.0	69.0	980	31.50	A395	
	1800	460	364TS	E454		2:1	95.0	69.0	980	29.38	A396	
	1800	575	364T	E679	√	2:1	95.0	55.0	980	31.50	A395	
	1200	460	404T	E644	√	2:1	94.5	72.0	1156	35.62	A223	
	1200	575	404T	E403		2:1	94.5	57.5	1156	35.62	A223	
75	3600	460	365TS	E612	√	2:1	94.5	84.0	1002	30.38	A396	
	3600	575	365TS	E665	√	2:1	94.5	67.0	1002	30.38	A396	
	1800	460	365T	E627	√	2:1	95.4	86.0	1100	32.50	A395	
	1800	460	365T	E627-P	√	2:1	95.4	86.0	1100	32.50	A395	P
	1800	460	365TS	E455	√	2:1	95.4	86.0	1100	30.38	A396	
	1800	575	365T	E680	√	2:1	95.4	69.0	1100	32.50	A395	
	1200	460	405T	E645	√	2:1	94.5	90.0	1280	37.12	A223	
	1200	575	405T	E404		2:1	94.5	71.5	1280	37.12	A223	
100	3600	460	405TS	E613	√	2:1	95.0	108.0	1295	34.12	A226	
	3600	575	405TS	E493		2:1	95.0	87.0	1295	34.12	A226	
	1800	460	405T	E628	√	2:1	95.4	113.0	1330	37.12	A223	
	1800	460	405T	E628-P	√	2:1	95.4	113.0	1330	37.12	A223	P
	1800	460	405TS	E456	√	2:1	95.4	113.0	1330	34.12	A226	
	1800	575	405T	E681	√	2:1	95.4	90.5	1330	37.12	A223	
	1200	460	444T	E327		2:1	95.0	124.0	1970	41.34	A620	
	1200	460	444T	E646A	√	2:1	95.0	124.0	1806	43.35	A620	
	1200	575	444T	E405A		2:1	95.0	94.5	1690	41.25	A229	
125	3600	460	444TS	E614	√	2:1	95.4	136.0	1725	37.50	A232	
	3600	575	444TS	E494		2:1	95.4	109.0	1725	37.50	A232	
	1800	460	444T	E629	√	2:1	95.4	141.0	1725	41.25	A229	
	1800	460	444T	E629-P	√	2:1	95.4	141.0	1725	41.25	A229	P
	1800	460	444TS	E457	√	2:1	95.4	141.0	1725	37.50	A232	
	1800	575	444T	E697		2:1	95.4	113.0	1725	41.25	A229	
	1200	460	445T	E647	√	2:1	95.0	155.0	2000	43.26	A620	
	1200	575	445T	E406		2:1	95.0	124.0	2000	43.26	A620	

CHART CONTINUES ON NEXT PAGE

Footnotes: Please see notes on page 56.

**BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE
DUTY MOTORS** NEMA PREMIUM® XRI® MOTORS TOTALLY ENCLOSED

THREE PHASE



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KIT	NOTES
150	3600	460	445TS	E615	√	2:1	95.8	165.0	2187	39.44	A621	
	3600	575	445TS	E495		2:1	95.8	132.0	2187	39.44	A621	
	1800	460	445T	E630	√	2:1	95.8	172.0	2070	43.26	A620	
	1800	460	445TS	E458	√	2:1	95.8	172.0	2070	39.44	A621	
	1800	575	445T	E682		2:1	95.8	138.0	2070	43.26	A620	
	1200	460	445T	E448	√	2:1	95.8	180.0	2500	43.26	N/A	H, RB
	1200	575	445T	E407		2:1	95.8	145.0	2500	43.26	N/A	RB
200	3600	460	445TS	E449	√	2:1	95.8	222.0	2300	39.44	A621	H
	3600	575	445TS	E496		2:1	95.8	178.0	2300	39.44	A621	
	1800	460	445T	E631	√	2:1	96.2	226.0	2437	43.26	N/A	RB
	1800	460	445TS	E459	√	2:1	96.2	226.0	2437	39.44	A621	H
	1800	460	447/9T	E770	√	2:1	96.5	225.0	2700	51.69	A623	H
	1800	575	447/9T	E856		2:1	96.5	180.0	2700	51.69	N/A	H, RB
	1200	460	447/9T	E773	√	2:1	95.8	240.0	2927	51.69	A623	H
	1200	460	447/9T	E687	√	2:1	95.8	240.0	2927	51.69	N/A	H, RB
	1200	575	447/9T	E408		2:1	95.8	192.0	2927	51.69	N/A	H, RB
250	3600	460	447/9TS	E699	√	2:1	95.8	275.0	2700	47.88	A624	H
	1800	460	447/9T	E771	√	2:1	96.5	285.0	2830	51.69	A623	H
	1800	460	447/9T	E690	√	2:1	96.5	285.0	2830	51.69	N/A	H, RB
	1200	460	L447/9T	E774		2:1	95.8	300.0	3415	51.69	A623	H
	1200	460	L447/9T	E688		2:1	95.8	300.0	3415	51.69	N/A	H, RB
300	3600	460	447/9TS	E698	√	2:1	96.2	330.0	2700	47.88	A624	H
	1800	460	447/9T	E691	√	2:1	96.5	339.0	3211	51.69	N/A	H, RB
	1800	460	447/9T	E772	√	2:1	96.5	339.0	3211	51.69	A623	H
	1800	575	447/9T	E345		2:1	96.5	271.0	3211	51.69	N/A	H, RB
350	3600	460	447/9TS	E769	√	2:1	95.8	380.0	3064	47.88	A624	H
	1800	460	447/9T	E692	√	2:1	96.2	395.0	3350	51.69	N/A	H, RB
400	3600	460	5011S	E369		N/A	95.8	432.0	5500	67.19	N/A	90
	1800	460	L447/9T	E776		2:1	96.2	448.0	3800	56.71	N/A	79, H
	1200	460	5011LS	E362		N/A	95.8	468.0	5500	67.19	N/A	77, 79, 90
450	1800	460	L447/9T	E777		N/A	96.5	515.0	3800	56.71	N/A	79, H
	1200	460	5013LS	E363		N/A	96.2	525.0	7200	67.19	N/A	77, 79, 90, A
500	1800	460	5011LS	E364		N/A	96.2	555.0	5500	67.19	N/A	77, 79, 90
	1200	460	5013LS	E365		N/A	96.2	580.0	7200	76.19	N/A	78, 79, 90
600	1800	460	5011LS	E366		N/A	96.2	655.0	5500	67.19	N/A	77, 79, 90, A

Footnotes:

- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * 76 = C-Face Addition Results in Non-NEMA "AH" Dimension.
- * 77 = Frame is Drilled with 3 Sets of FootHoles, 5010, 5011,5012 as A Standard. 5009 Frame Drilled Available as BUILD UP.
- * 78 = Frame is Drilled with Two Sets of FootHoles, 5012, and 5013
- * 79 = Ball Bearings
- * 90 = Not UL Recognized
- * H = Class H Insulation
- * P = BCP (Bearing Current Protection)
- * RB = Roller Bearing



BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE DUTY MOTORS NEMA PREMIUM® XRI® MOTORS IEEE-841

TOTALLY ENCLOSED, RIGID BASE THREE PHASE



Applications:

For extreme applications in the process industries such as chemical plants, pulp and paper mills, refineries, above-ground mines, food processing, foundries, and other severe duty environments where long life and ultra-high efficiency are required. Guaranteed efficiencies offer an eXtra return on your investment when using these premium efficiency motors on high cycle or long run time applications.

Features:

- Meets or exceeds NEMA Premium® efficiencies; NEMA Premium models are in compliance with EISA 2007
- Meets IEEE-841 standard for severe duty motor applications
- Bearing current protection (BCP), as noted
- Blue Chip Series® motor quality, 100% cast iron construction for rigidity and reduced vibration
- Inpro/Seal® VBX® bearing isolators on drive end shaft extension TENV and on both ends of TEFC
- Provisions to add stub shaft for an encoder (182T-449T, TEFC only)
- Internal and external epoxy paint
- MAX GUARD® motor Class F insulation system
- Constant torque speed range is listed in CT speed range column
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Bearing caps (254T and larger)
- Precision balanced to .08"/sec
- Extended grease tubes, regreasable in service
- Brass drain and breather

- Meets General Motors® GM® 7E-TA automotive duty specification
- Meets IEEE45 USCG marine duty, API RPI4F for offshore platforms, IP56
- Meets NEMA® MG1 - 1.26.6 waterproof specification
- BCP (-P) models are not Hazardous Duty® motors certified for Division 2 locations
- Hazardous Duty® motor division 2 CSA certification nameplate
- Division 2 / zone 2 class I (gases), groups A, B, C, D
- Meets temperature code T2B
- Actual test and vibration data supplied with each motor
- Ball bearings (except as noted)
- UL recognized (through 449T) and CSA certified and CE marked
- Five year warranty



MODELS THROUGH 40 HP ARE CAPABLE OF MODIFICATION AS FOLLOWS (CONTACT FACTORY TO CONFIRM):

- 1.25 service factor (sinewave only)
- 50Hz at same HP, 1.0 service factor (sinewave only)
- Any nameplate changes are subject to modification charges (see MOD central section)
- Contact your sales representative for optional nameplate markings on 50 HP and larger

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KIT	NOTES
1	1800	460	143T	W501	√	1000:1	85.5	1.5	58	10.43	A181	75, 76, N
	1800	575	143T	W502		1000:1	85.5	1.2	58	10.43	A181	75, 76, N
	1200	460	145T	W503A		1000:1	82.5	1.6	48	13.99	A262	75, 76, N
	1200	575	145T	W638A		1000:1	82.5	1.4	48	13.99	A262	75, 76, N
	900	460	182T	W504		20:1	78.5	1.9	81	15.40	A182	75
1 1/2	3600	460	143T	W505		1000:1	86.5	2.0	62	10.43	A181	75, 76, N
	3600	575	143T	W506		1000:1	86.5	1.6	57	10.43	A181	75, 76, N
	1800	460	145T	W507A	√	1000:1	86.5	2.3	70	11.43	A262	75, 76, N
	1800	575	145T	W508A		1000:1	86.5	1.8	70	11.43	A262	75, 76, N
	1200	460	182T	W509		1000:1	87.5	2.2	130	12.71	A182	75, N

CHART CONTINUES ON NEXT PAGE

Footnotes:

- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * 76 = C-Face Addition Results in Non-NEMA "AH" Dimension.
- * H = Class H Insulation

- * P = BCP (Bearing Current Protection)
- * RB = Roller Bearing
- * SL = Sound Level Exceeds Standard



BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE DUTY MOTORS NEMA PREMIUM® XRI® MOTORS IEEE-841

TOTALLY ENCLOSED, RIGID BASE THREE PHASE



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KIT	NOTES
2	3600	460	145T	W511		1000:1	85.5	2.5	67	11.43	A262	75, 76, N
	3600	575	145T	W512		1000:1	86.5	2.1	68	11.43	A262	75, 76, N
	1800	460	145T	W513A	✓	1000:1	86.5	3.0	100	11.43	A262	75, 76, N
	1800	575	145T	W514A		1000:1	86.5	2.4	100	11.43	A262	75, 76, N
	1200	460	184T	W515		1000:1	88.5	3.0	135	13.71	A182	75, N
3	3600	460	182T	W517		1000:1	89.5	3.8	103	12.71	A182	75, N
	1800	460	182T	W519	✓	1000:1	90.2	4.0	104	12.71	A182	75, N
	1800	575	182T	W520		1000:1	90.2	3.2	110	12.71	A182	75, N
	1200	460	213T	W521A	✓	20:1	89.5	4.4	206	19.63	A183A	75
	900	460	215T	W522		20:1	86.5	5.0	167	19.72	A183	75
5	3600	575	184T	W524	✓	2:01	88.5	4.7	126	16.18	A182	75
	1800	460	184T	W525	✓	20:1	90.2	6.2	131	16.18	A182	75
	1800	575	184T	W526	✓	20:1	90.2	5.0	130	16.18	A182	75
	1200	460	215T	W527A	✓	20:1	89.5	6.9	220	19.63	A183A	75
	1200	575	215T	W528		20:1	89.5	5.5	215	19.72	A183	75
	900	460	254T	W529		10:1	88.5	7.5	370	23.65	A184	75
7 1/2	3600	575	213T	W531	✓	2:01	91.7	7.1	191	17.18	A183	75, N
	1800	460	213T	W532A	✓	20:1	91.7	9.6	222	19.63	A183A	75
	1800	575	213T	W533	✓	20:1	91.7	7.7	204	19.72	A183	75
	1800	575	213T	W533A	✓	2:1	91.7	7.7	230	19.62	A183A	75
	1200	460	254T	W534	✓	20:1	91.0	9.9	260	23.65	A184	75
	900	460	256T	W536		20:1	88.5	11.0	340	25.40	A184	75
10	3600	460	215T	W537A	✓	2:01	90.2	11.9	258	19.63	A183A	75
	3600	575	215T	W538		2:1	91.7	9.5	225	19.72	A183	75
	1800	460	215T	W539A	✓	20:1	91.7	13.3	250	22.63	A183A	75
	1800	575	215T	W540	✓	20:1	91.7	10.0	257	19.73	A183	75
	1200	460	256T	W541	✓	20:1	91.0	13.1	383	25.40	A184	75
	1200	575	256T	W542	✓	20:1	91.0	10.5	265	25.40	A184	75
	900	460	284T	W543		20:1	90.2	15.5	524	26.21	A186	
15	1800	460	254T	W546	✓	20:01	92.4	18.8	319	23.65	A184	75
	1800	460	254T	W546-P	✓	20:1	92.4	18.8	410	25.40	A184	P, 75
	1800	575	254T	W547	✓	20:1	92.4	15.0	362	23.65	A184	75
	1200	460	284T	W548	✓	20:1	91.7	20.4	489	26.21	A186	
	1200	575	284T	W549	✓	20:1	91.7	16.3	460	26.34	A186	
	900	460	286T	W550	✓	20:1	90.2	22.0	326	27.71	A186	
20	1800	460	256T	W553	✓	20:01	93	24.1	406	25.4	A184	75
	1800	460	256T	W553-P	✓	20:1	93.0	24.1	392	25.40	A184	75, P
	1800	575	256T	W554	✓	20:1	93.0	19.5	355	25.40	A184	75
	1200	460	286T	W555	✓	20:1	91.7	26.8	550	27.71	A186	
	1200	575	286T	W556	✓	20:1	91.7	21.5	468	27.71	A186	
25	3600	460	284TS	W558	✓	2:1	93.0	28.8	472	25.06	A186	
	3600	575	284TS	W559		2:1	93.0	23.1	461	25.06	A186	
	1800	460	284T	W560	✓	20:1	93.6	31.0	489	26.21	A186	
	1800	460	284T	W560-P	✓	20:1	93.6	31.0	458	26.21	A186	P
	1800	575	284T	W561	✓	20:1	93.6	24.8	635	26.21	A186	
	1200	460	324T	W562	✓	20:1	93.0	32.5	671	28.87	A187	
	1200	575	324T	W563		20:1	93.0	26.0	715	28.87	A187	

Footnotes:

- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * 76 = C-Face Addition Results in Non-NEMA "AH" Dimension.
- * H = Class H Insulation

- * P = BCP (Bearing Current Protection)
- * RB = Roller Bearing
- * SL = Sound Level Exceeds Standard

CHART CONTINUES ON NEXT PAGE



BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE DUTY MOTORS NEMA PREMIUM® XRI® MOTORS IEEE-841

TOTALLY ENCLOSED, RIGID BASE THREE PHASE



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KIT	NOTES
30	3600	460	286TS	W565	✓	2:1	93.6	34.0	368	26.56	A186	P
	1800	460	286T	W567	✓	20:1	94.1	36.5	528	27.71	A186	
	1800	460	286T	W567-P	✓	20:1	94.1	36.5	490	27.71	A186	
	1800	575	286T	W568		20:1	94.1	29.2	650	27.71	A186	
	1200	460	326T	W569	✓	2:1	93.0	38.5	700	30.37	A187	
	1200	575	326T	W643	✓	2:1	93.0	31.0	752	30.37	A187	
40	3600	460	324TS	W571	✓	2:1	93.6	47.0	656	27.37	A187	P
	1800	460	324T	W573	✓	2:1	94.1	47.5	700	28.87	A187	
	1800	460	324T	W573-P	✓	2:1	94.1	47.5	700	28.87	A187	
	1800	575	324T	W574		2:1	94.1	38.0	700	30.37	A187	
	1200	460	364T	W575A	✓	2:1	94.1	50.0	950	31.50	A188	
	1200	575	364T	W639		2:1	94.1	40.0	950	31.50	A188	
	900	460	365T	W576		2:1	91.7	53.0	975	32.50	A188	
50	3600	460	326TS	W577	✓	2:1	93.6	58.0	725	28.87	A187	P
	3600	575	326TS	W578		2:1	93.6	46.5	725	28.87	A187	
	1800	460	326T	W580	✓	2:1	94.5	60.0	775	30.37	A187	
	1800	460	326T	W580-P	✓	2:1	94.5	60.0	775	30.37	A187	
	1800	460	326TS	W579		2:1	94.5	60.0	775	28.87	A187	
	1800	575	326T	W581		2:1	94.5	48.0	775	30.37	A187	
	1200	460	365T	W582A	✓	2:1	94.1	61.5	975	32.50	A188	
	1200	575	365T	W640		2:1	94.1	49.0	975	32.50	A188	
	900	460	404T	W583		2:1	93.6	66.0	1264	35.62	A190	
60	3600	460	364TS	W584	✓	2:1	94.5	67.0	925	29.38	A189	P
	1800	460	364T	W587	✓	2:1	95.0	69.0	1000	31.50	A188	
	1800	460	364T	W587-P	✓	2:1	95.0	69.0	1000	31.50	A188	
	1800	460	364TS	W586		2:1	95.0	69.0	1000	29.38	A189	
	1800	575	364T	W588		2:1	95.0	55.0	1000	31.50	A188	
	1200	460	404T	W589		2:1	94.5	72.0	1156	35.62	A190	
	900	460	405T	W590		2:1	93.6	80.0	1350	37.12	A190	
	75	3600	460	365TS	W591	✓	2:1	94.5	84.0	1002	30.38	
3600		575	365TS	W592		2:1	94.5	67.0	1002	30.38	A189	
1800		460	365T	W594	✓	2:1	95.4	86.0	1100	32.50	A188	
1800		460	365T	W594-P	✓	2:1	95.4	86.0	1100	32.50	A188	
1800		460	365TS	W593A		2:1	95.4	86.0	1100	30.38	A189	
1800		575	365T	W595		2:1	95.4	69.0	1100	32.50	A188	
1200		575	405T	W686	✓	2:1	94.5	72.0	1297	37.14	A190	
1200		460	405T	W596		2:1	95.0	90.0	1280	37.12	A190	
900		460	444T	W597		2:1	93.6	100.0	1734	41.25	A192	
100	3600	460	405TS	W598	✓	2:1	95.0	108.0	1295	34.12	A191	P
	1800	460	405T	W600	✓	2:1	95.4	113.0	1330	37.12	A190	
	1800	460	405T	W600-P	✓	2:1	95.4	113.0	1330	37.12	A190	
	1800	460	405TS	W599		2:1	95.4	113.0	1330	34.12	A191	
	1800	575	405T	W601	✓	2:1	95.4	90.0	1330	37.12	A190	
	1200	460	444T	W636		2:1	95.0	124.0	2100	41.25	A194	
	900	460	445T	W603		2:1	94.1	142.0	2350	43.19	A194	

CHART CONTINUES ON NEXT PAGE

Footnotes:

- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * 76 = C-Face Addition Results in Non-NEMA "AH" Dimension.
- * H = Class H Insulation

- * P = BCP (Bearing Current Protection)
- * RB = Roller Bearing
- * SL = Sound Level Exceeds Standard



BLUE CHIP SERIES® SEVERE DUTY / AUTOMOTIVE DUTY MOTORS NEMA PREMIUM® XRI® MOTORS IEEE-841

TOTALLY ENCLOSED, RIGID BASE THREE PHASE



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	C-FACE KIT	NOTES
200	3600	460	445TS	W616		2:1	95.4	224	2276	39.60	A195	H, SL
	1800	460	445T	W618		2:1	96.2	226	2355	43.35	A194	RB
	1800	460	445T	W618-P	√	2:1	96.2	226	2202	43.35	A194	P, RB
	1800	460	445TS	W617		2:1	96.2	226	2200	39.60	A195	
	1800	460	447/449T	W619		2:1	96.5	225	2538	51.84	N/A	
	1800	575	445T	W642	√	2:1	96.2	181	2376	43.19	A194	
	1200	460	447/449T	W621		2:1	95.8	240	2950	51.84	N/A	
	1200	460	447/449T	W622		2:1	95.8	240	2930	51.84	N/A	RB
	1200	575	447/449T	W630		2:1	95.8	192	2882	51.69	N/A	RB
250	3600	460	447/449TS	W624		2:1	96.2	270	2635	47.88	N/A	
	1800	460	447/449T	W626		2:1	96.5	285	2834	51.84	N/A	
	1800	460	447/449T	W626-P	√	2:1	96.5	285	2736	51.84	N/A	P
	1200	460	447/449T	W629		10:1	95.8	300	3216	51.85	N/A	RB
300	1800	460	447/449T	W632		2:1	96.5	339	3039	51.84	N/A	
350	3600	460	447/449TS	W634		2:1	95.8	380	2888	47.94	N/A	SL
	1800	460	447/449T	W635		2:1	96.2	395	3082	51.84	N/A	RB, SL

Footnotes:

- * 75 = C-Face Addition May Result in Non-NEMA "BA" Dimension.
- * 76 = C-Face Addition Results in Non-NEMA "AH" Dimension.
- * H = Class H Insulation

- * P = BCP (Bearing Current Protection)
- * RB = Roller Bearing
- * SL = Sound Level Exceeds Standard



HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS CLASS I AND II, GROUPS C, D, E (AS NOTED), F & G

STEEL FRAME, STANDARD & NEMA® PREMIUM EFFICIENCIES THREE PHASE MOTORS



Features:

- 1.0 service factor (except as noted)
- Meets temperature code T3B
- Explosion proof conduit box included, shipped loose
- UL listed file no. E12044
- CSA certified file no. LR47504
- K717 is rated for Class I Group D, Class II Groups F & G only
- Thermal Protection, 48 & 56 frame auto overload, 143-145T-Stats
- Inverter Duty only available on 143-145 frames
- Rigid Base



HP	RPM	VOLTS	FRAME	GROUP E	CAT NO.	STOCK	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (INCH)	NOTES
1/4	1800	230/460	48	N	K717	✓	62.5	1.2/0.6	19	9.68	
	1800	208-230/460	56	N	G646	✓	71.0	1.1-1.1/.55	25	11.97	N
	1800	575	56	N	G664	✓	71.0	0.43	25	11.97	N
1/3	1800	208-230/460	56	N	G647	✓	74.0	1.3-1.2/.60	25	11.97	N
	1800	575	56	N	G665		74.0	0.5	25	11.97	N
	1200	230/460	56	N	K2101	✓	62.0	2.2/1.1	29	13.44	
1/2	3600	208-230/460	56	N	G648		66.5	2.1-2.4/1.2	30	13.44	
	1800	208-230/460	56	N	G649	✓	68.0	2.3-2.4/1.2	28	13.94	
	1800	200	56	N	K2102		68.0	2.75	29	13.94	
	1800	575	56	N	G666	✓	68.0	1.0	28	13.94	
	1200	230/460	56	N	K2104	✓	68.0	2.7/1.35	34	13.44	
3/4	3600	208-230/460	56	N	G660		74.0	3.0-3.2/1.6	30	13.44	
	1800	208-230/460	56	N	G661	✓	75.5	2.9-3.0/1.5	30	13.94	
	1800	200	56	N	K2105		75.5	3.45	31	13.94	18
	1800	575	56	N	G667	✓	75.5	1.2	29	13.94	
	1200	208-230/460	143T	N	K2107	✓	74.0	3.2-3.2/1.6	42	14.00	
	1200	208-230/460	56	N	K2116	✓	74.0	3.2-3.2/1.6	42	13.94	
1	3600	230/460	56	N	G662A	✓	80.0	3.0/1.5	33	13.94	
	1800	230/460	56	N	G663A	✓	85.5	3.2/1.6	67	15.58	A
	1800	230/460	143T	Y	I502	✓	85.5	3.3/1.65	49	16.00	TS
	1800	575	56	N	G668A	✓	85.5	1.3	75	15.58	A
	1800	575	143T	Y	I503		85.5	1.3	48	16.00	A, TS
	1200	230/460	56H	N	K2110A	✓	82.5	3.8/1.9	50	16.08	
	1200	230/460	145T	Y	I504	✓	82.5	3.8/1.9	53	16.50	TS
	1200	575	145T	Y	I505		82.5	1.5	58	16.50	TS
1 1/2	3600	230/460	143T	Y	I506	✓	84.0	4.0/2.0	44	14.50	TS
	3600	575	143T	Y	I507	✓	84.0	1.6	44	14.50	TS
	1800	230/460	56H	N	K2111A	✓	86.5	4.6/2.3	50	15.58	18
	1800	230/460	145T	Y	I508	✓	86.5	4.6/2.3	51	16.00	18,TS
	1800	575	145T	Y	I509	✓	86.5	1.85	42	16.00	TS
2	3600	230/460	145T	Y	I512	✓	85.5	5.0/2.5	55	16.50	18, TS
	3600	575	145T	Y	I513		85.5	2.0	55	16.50	TS
	1800	230/460	145T	Y	I514	✓	86.5	5.6/2.8	55	16.50	18, TS
	1800	575	145T	Y	I515	✓	86.5	2.4	55	16.50	A, TS

Footnotes:

- * 18 = 1.15 Service Factor
- * A = NEMA Design A
- * TS = Normally Closed Thermostats Installed

HAZARDOUS DUTY® DIVISION 1 EXPLOSION PROOF MOTORS CLASS I AND II, GROUPS C, D, F & G

SEVERE DUTY THREE PHASE MOTORS



Features:

- 56 frame rolled steel, 143-256TC cast iron “Blue Chip®” thermal protection
- Thermal protection, 56 frame auto overload, 143-256TC T-stats
- Conduit box shipped loose on 56 frame, installed on 143-256TC
- Service factor 1.0 unless otherwise noted
- 56 frame Class I, Groups C & D, Class II, Groups F & G
- 143-256T Class I, Group D, Group C as noted, Class II, Groups F & G
- T3B temperature code
- UL file # E12044
- CSA file #LR47504
- C-FACE Round Body



HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1800	208-230/460	56C	G827	√	--	71.0	1.1-1.1/0.55	25	11.97	CD, N
	1800	575	56C	G842		--	71.0	0.43	25	11.97	CD, N
1/3	1800	208-230/460	56C	G828	√	--	74.5	1.3-1.2/0.6	25	11.97	CD, N
	1800	575	56C	G843	√	--	74.5	0.50	25	11.97	CD, N
1/2	1800	208-230/460	56C	G829	√	--	68.0	2.3-2.4/1.2	28	13.94	CD
	1800	575	56C	G844		--	68.0	1.0	32	13.94	CD
3/4	1800	208-230/460	56C	G840	√	--	75.5	2.9-3.0/1.5	29	13.94	CD
	1800	575	56C	G845	√	--	75.5	1.2	29	13.94	CD
1	1800	230/460	56C	G841A		--	85.5	3.3/1.65	44	15.94	CD,
	1800	575	56C	G846A		--	85.5	1.3	47	15.94	CD,
	1800	230/460	143TC	C320B	√	10:1	85.5	3.3/1.65	83	15.18	18, 68
1 1/2	3600	230/460	143TC	C301B		10:1	85.5	4.0/2.0	70	13.98	18, 68
	1800	230/460	56C	K2115A		--	86.5	4.6/2.3	57	15.94	18, CD
	1800	230/460	145TC	C321B	√	--	86.5	4.6/2.3	87	15.18	18, 68
2	3600	230/460	145TC	C302B	√	--	86.5	230/460	72	15.18	18, 68
	1800	230/460	145TC	C322B	√	--	86.5	6.0/3.0	85	15.18	18, 68
3	3600	230/460	182TC	C303B	√	--	87.5	7.6/3.8	165	18.62	68
	1800	230/460	182TC	C323A	√	--	90.2	8.8-8.0/4.0	164	18.62	68
5	3600	230/460	184TC	C304B	√	--	88.5	12.4/6.2	175	18.62	68
	1800	230/460	184TC	C324B	√	--	90.2	12.4/6.2	220	18.62	68
7 1/2	3600	230/460	213TC	C305B	√	10:1	89.5	18.2/9.1	245	23.45	68
	1800	230/460	213TC	C325C	√	--	91.7	19.2/9.6	261	23.45	68
10	3600	230/460	215TC	C306B	√	10:1	90.2	23.8/11.9	260	23.45	68
	1800	230/460	215TC	C326B	√	--	91.7	26.6/13.3	266	23.45	68, CD
15	3600	230/460	254TC	C307B		2:1	91.0	36.0/18.0	376	25.77	68, CD
	1800	230/460	254TC	C327B	√	10:1	92.4	37.5/18.8	399	25.77	68, CD
20	3600	230/460	256TC	C308B		10:1	92.4	47.0/23.4	436	25.77	68, CD, 18
	1800	230/460	256TC	C328B		2:1	93.0	48.0/24.1	441	25.77	68, CD

Footnotes:

- * 18 = 1.15 Service Factor
- * 68 = Rated 60/50 Hertz
- * CD = Suitable For Group C
- * N = Totally Enclosed Non Ventilated



**HAZARDOUS DUTY® DIVISION 1 EXPLOSION
PROOF MOTORS** CLASS I AND II, GROUPS D, F & G BLUE CHIP
SERIES® SEVERE DUTY, NEMA® PREMIUM EFFICIENCY THREE PHASE MOTORS



Features:

- 10:1 variable torque, constant torque, as noted
- CR200 corona resistant, 200°C rated magnet wire
- 1.15 service factor
- Normally closed thermostats (must be connected to control circuit)
- Meets temperature code T3B
- All cast iron construction (except as noted)
- External surface treated with epoxy paint
- Nameplated 60/50 hertz, 190/380 volts, at next lower horsepower, as noted
- UL listed file no. E12044
- CSA certified file no. LR47504
- Three year warranty



HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1	1800	208-230/460	143TC	C361A	√	10:1	85.5	3.0-3.0/1.5	72	15.23	68, 80
1 1/2	1800	230/460	145TC	C362A	√	10:1	86.5	4.6/2.3	88	15.23	68, 80
2	1800	230/460	145TC	C363A	√	10:1	86.5	6.0/3.0	90	15.23	68, 80
3	1800	230/460	182TC	C364A	√	10:1	90.2	8.0/4.0	154	16.62	68
	1800	575	182TC	C368A	√		90.2	3.2	119	16.62	
5	1800	230/460	184TC	C365A	√	10:1	90.2	12.4/6.2	168	18.62	68
	1800	575	184TC	C369A	√	10:1	90.2	5.0	167	18.62	
7 1/2	1800	230/460	213TC	C366B	√	10:1	91.7	19.2/9.6	256	20.45	68
	1800	575	213TC	C370B	√	10:1	91.7	7.7	250	20.45	
10	1800	230/460	215TC	C367B	√	2:1	91.7	26.6/13.3	268	23.45	68, CD
	1800	575	215TC	C371A		2:1	91.7	10.0	280	23.45	

Footnotes:

- * 68 = Rated 60/50 Hertz
- * 80 = Rolled Steel Fan Cover
- * CD = Suitable for Group C



**HAZARDOUS DUTY® DIVISION 1 EXPLOSION
PROOF MOTORS** NEMA® PREMIUM XRI® MOTOR, CLASS I AND II,
GROUPS C, D, F & G BLUE CHIP SERIES® SEVERE DUTY THREE PHASE MOTORS



Features:

- Meets NEMA Premium efficiencies
- Bearing Current Protection (BCP), as noted
- 10:1 variable torque, see Inverter Duty column for constant torque
- MAX GUARD® Class F insulation
- Blue Chip Series® motor quality, 100% cast iron construction for rigidity and reduced vibration
- Internal and external surfaces treated with epoxy paint
- 1.15 service factor on sinewave or 1.0 service factor on IBGT power
- Precision balanced to .08"/sec.
- Extended grease tubes
- Normally closed thermostats (must be connected to control circuit)
- Meets temperature code T3B
- Shaft slinger
- Nameplated 60/50 Hz, 190/380 volts, at next lower HP, as noted



SEE MOD CENTRAL FOR:

- C-Face kit modifications
- Ball bearings (except as noted)
- UL listed file no. E12044
- CSA certified file no. LR47504
- Three year warranty

HP	RPM	VOLTS	FRAME	GROUP C	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
3/4	1200	230/460	143T	N	H350	✓	10:1	74.0	3.2/1.6	55	12.48	25, 68, 80, 91
	1800	230/460	143T	N	U001A	✓	10:1	85.5	3.0/1.5	68	13.48	25, 68, 80, 91
1	1800	230/460	143T	Y	U986A		10:1	85.5	3.0/1.5	68	13.48	25, 80, 91
	1800	575	143T	N	U020A	✓	10:1	85.5	1.3	68	14.73	25, 80
	1200	230/460	145T	N	U039A	✓	10:1	82.5	3.6/1.8	76	15.87	25, 68, 80, 91
	3600	230/460	143T	N	U058A	✓	10:1	84.0	4.0/2.0	70	13.48	25, 68, 80, 91
1 1/2	1800	230/460	145T	N	U002A	✓	10:1	86.5	4.6/2.3	83	14.73	25, 68, 80, 91
	1800	230/460	145T	Y	U987A		10:1	86.5	4.6/2.3	81	14.73	25, 68, 80, 91
	1800	575	145T	N	U021A	✓	10:1	86.5	1.8	85	14.73	25, 80
	1200	230/460	182T	N	U040A	✓	10:1	87.5	4.4/2.2	147	15.87	25, 68, 80, 91
	3600	230/460	145T	N	U059A	✓	10:1	85.5	5.2/2.6	70	13.48	25, 68, 80, 91
2	1800	230/460	145T	N	U003A	✓	10:1	86.5	6.0/3.0	86	14.73	25, 68, 80, 91
	1800	575	145T	N	U022A	✓	10:1	86.5	2.4	86	14.73	25, 80
	1800	230/460	145T	Y	U988A		10:1	86.5	6.0/3.0	83	14.73	25, 80, 91
	1200	230/460	184T	Y	U041A	✓	10:1	88.5	6.0/3.0	154	17.87	25, 68, 91
	3600	230/460	182T	Y	U060A	✓	10:1	87.5	7.6/3.8	141	15.87	25, 68, 91
3	1800	230/460	182T	Y	U004A	✓	10:1	89.5	8.0/4.0	143	15.87	25, 68, 91
	1800	230/460	182T	Y	U989-P	✓	10:1	89.5	8.0/4.0	161	15.87	25, 68, 91, P
	1800	575	182T	N	U023A	✓	10:1	89.5	3.2	141	15.87	25
	1200	230/460	213T	N	U042A	✓	10:1	89.5	8.8/4.4	244	22.63	25, 68

CHART CONTINUES ON NEXT PAGE

Footnotes:

- * 17 = 1.0 Service Factor
- * 25 = Motor Will Not Accept C-Face
- * 68 = Rated 60/50 Hertz
- * 80 = Rolled Steel Fan Cover
- * 87 = 10:1 Constant Torque As Build UP
- * 91 = Suitable For Use With VFD @ 208V
- * A = NEMA Design A
- * BCP = BCP (Bearing Current Protection)
- * RB = Roller Bearing



**HAZARDOUS DUTY® DIVISION 1 EXPLOSION
PROOF MOTORS** NEMA® PREMIUM XRI® MOTOR, CLASS I AND II,
GROUPS C, D, F & G BLUE CHIP SERIES® SEVERE DUTY THREE PHASE MOTORS



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	GROUP C	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
5	3600	230/460	184T	N	U061A	✓	10:1	88.5	12.0/6.0	161	17.87	25, 68, 91
	1800	230/460	184T	Y	U005A	✓	10:1	89.5	12.4/6.2	155	17.87	25, 68, 91
	1800	230/460	184T	Y	U990-P	✓	10:1	89.5	12.4/6.2	150	17.87	25, 68, 91, P
	1800	575	184T	Y	U024A	✓	10:1	89.5	5.0	156	17.87	25
	1200	230/460	215T	N	U043B	✓	10:1	89.5	13.8/6.9	206	22.63	25, 68
7 1/2	3600	230/460	213T	N	U062B	✓	10:1	89.5	18.2/9.1	220	19.63	25, 68, 91
	1800	230/460	213T	Y	U006B	✓	10:1	91.7	19.2/9.6	240	19.63	25, 68, 91
	1800	230/460	213T	Y	U991A	✓	10:1	91.7	19.2/9.6	251	22.63	d, 25, 68, 91
	1800	230/460	213T	Y	U991B	✓	10:1	91.7	19.2/9.6	250	19.63	25, 68, 91
	1800	230/460	213T	Y	U991A-P	✓	10:1	91.7	19.2/9.6	251	22.63	d, 25, 68, 91, P
	1800	230/460	213T	Y	U991B-P	✓	10:1	91.7	19.2/9.6	250	19.63	25, 68, 91, P
	1800	575	213T	N	U025B	✓	10:1	91.7	7.7	234	19.63	25
	1200	230/460	254T	Y	E500	✓	10:1	91.0	19.8/9.9	345	23.52	68
10	3600	230/460	215T	Y	U063B	✓	10:01	90.2	23.8/11.9	252	19.63	25, 68
	1800	230/460	215T	Y	U007B	✓	10:1	91.7	26.6/13.3	257	22.63	25, 68, 91
	1800	230/460	215T	Y	U992A	✓	2:1	91.7	25.0/12.5	253	22.63	d, 25, 68
	1800	230/460	215T	Y	U992B	✓	2:1	91.7	26.6/13.3	264	22.63	25, 68
	1800	230/460	215T	Y	U992A-P	✓	2:1	91.7	25.0/12.5	253	22.63	d, 25, 68, P
	1800	230/460	215T	Y	U992B-P	✓	2:1	91.7	26.6/13.3	270	22.63	25, 68, P
	1800	575	215T	N	U026B	✓	10:1	91.7	10.7	220	22.63	25
	1200	230/460	256T	Y	E501	✓	10:1	91.0	26.2/13.1	360	25.27	68
15	3600	230/460	254T	Y	E502	✓	10:1	91.7	35.0/17.5	253	23.52	68
	1800	230/460	254T	Y	E503	✓	10:1	92.4	37.5/18.8	385	23.52	68
	1800	230/460	254T	Y	E503-P	✓	10:1	92.4	37.5/18.8	385	23.52	68, P
	1800	575	254T	Y	U027A	✓	10:1	92.4	15.1	402	23.52	
	1200	230/460	284T	Y	E504	✓	10:1	91.7	41.0/20.4	536	26.34	68
20	3600	230/460	256T	Y	E505	✓	10:1	92.4	47.0/23.4	275	25.27	68
	1800	230/460	256T	Y	E506	✓	10:1	93.0	48.0/24.1	409	25.27	68
	1800	230/460	256T	Y	E506-P	✓	10:1	93.0	48.0/24.1	409	25.27	68, P
	1800	575	256T	Y	U028A	✓	2:1	93.0	19.3	417	25.27	
	1200	230/460	286T	Y	E507	✓	10:1	91.7	53.6/26.8	593	27.69	
25	3600	230/460	284TS	Y	E546	✓	10:1	93.6	56.0/28.1	412	24.97	68
	1800	230/460	284TS	Y	U076A		10:1	93.6	62.0/31.0	484	24.97	68
	1800	230/460	284T	Y	E547	✓	10:1	93.6	62.0/31.0	536	26.34	68
	1800	230/460	284T	Y	E547-P	✓	10:1	93.6	62.0/31.0	536	26.34	68, P
	1800	575	284T	Y	U029A	✓	2:1	93.6	24.8	358	26.34	
	1200	230/460	324T	Y	U048A	✓	10:1	93.0	65.0/32.5	681	28.87	68
30	3600	230/460	286TS	Y	E563	✓	10:1	93.6	67.5/34.0	487	26.47	68
	1800	230/460	286TS	Y	U077A		2:1	93.6	73.0/36.5	462	26.47	68
	1800	230/460	286T	Y	E564	✓	10:1	94.1	73.0/36.5	588	27.84	68
	1800	230/460	286T	Y	E564-P	✓	10:1	94.1	73.0/36.5	588	27.84	68, P
	1800	575	286T	Y	U030A	✓	10:1	93.6	29.2	546	27.84	
	1200	230/460	326T	Y	E565	✓	10:1	93.0	77.0/38.5	900	30.37	68
40	3600	230/460	324TS	Y	E566	✓	10:1	93.6	94.0/47.0	734	28.87	68
	1800	230/460	324TS	Y	U078A		10:1	94.1	95.0/47.5	770	28.87	17, 68
	1800	230/460	324T	Y	E567	✓	10:1	94.1	95.0/47.5	749	30.37	68
	1800	230/460	324T	Y	E567-P	✓	10:1	94.1	95.0/47.5	749	30.37	68, P
	1800	575	324T	Y	U031A	✓	10:1	94.1	38.0	572	30.37	17
	1200	230/460	364T	Y	E568A	✓	10:1	93.6	100.0/50.0	1151	31.50	68

Footnotes: Please see notes on page 68.

CHART CONTINUES ON NEXT PAGE



**HAZARDOUS DUTY® DIVISION 1 EXPLOSION
PROOF MOTORS** NEMA® PREMIUM XRI® MOTOR, CLASS I AND II,
GROUPS C, D, F & G BLUE CHIP SERIES® SEVERE DUTY THREE PHASE MOTORS



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	GROUP C	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
50	3600	230/460	326TS	Y	E569	✓	10:1	93.6	118.0/59.0	831	30.37	68
	1800	230/460	326TS	Y	U079A		2:1	94.5	120.0/60.0	688	28.87	68
	1800	230/460	326T	Y	E570	✓	2:1	94.5	123.0/61.5	791	30.37	68
	1800	230/460	326T	Y	E570-P	✓	2:1	94.5	123.0/61.5	791	30.37	68, P
	1800	575	326T	Y	U032A	✓	2:1	94.5	49.0	572	30.37	17, 68
	1200	230/460	365T	Y	E571	✓	2:1	94.5	123.0/61.5	1099	32.50	87
60	3600	230/460	364TS	Y	E572	✓	2:1	94.5	134.0/67.0	1033	29.38	87
	1800	230/460	364TS	Y	U080A		2:1	95.0	138.0/69.0	1145	29.38	17, 68
	1800	230/460	364T	Y	E573A	✓	10:1	95.0	138.0/69.0	1178	31.50	17, 87
	1800	575	364T	Y	U033A	✓	2:1	95.0	55.0	1161	31.50	
	1200	230/460	404T	Y	E574	✓	10:1	94.5	144.0/72.0	1295	35.62	
75	1800	230/460	365T	Y	E576A	✓	2:01	95.4	174.0/87.0	1124	32.5	68, A
	1800	575	365T	Y	U034A	✓	2:1	95.4	69.0	1094	32.50	A
	1800	230/460	365TS	Y	U081A		2:1	95.4	174.0/87.0	1087	30.38	68, A
	1200	230/460	405T	Y	E577	✓	2:1	94.5	180.0/90.0	1388	37.12	87
100	3600	230/460	405TS	Y	E578		10:1	94.5	216.0/108.0	1349	34.12	87
	1800	230/460	405T	Y	E594	✓	2:1	95.4	226.0/113.0	1479	37.12	68
	1800	575	405T	Y	U035A	✓	2:1	95.4	90.5	1365	37.12	68, 87
	1800	230/460	405TS	Y	U082A		2:1	95.4	226.0/113.0	1333	34.12	68, 87
	1200	230/460	444T	Y	E580A	✓	---	95.0	248.0/124.0	1813	41.35	68, 87
125	3600	460	444TS	Y	U073A		2:1	94.5	139.0	1824	36.70	68
	1800	460	444T	Y	E582A	✓	2:1	95.4	143.0	1845	41.35	68
	1800	575	444T	Y	U036A	✓	2:1	95.4	114.0	1808	41.35	
	1800	460	444TS	Y	U083A		2:1	95.4	143.0	1835	37.60	
	1200	460	445T	Y	E583		---	95.0	155.0	2200	43.25	
150	3600	460	445TS	Y	E584		2:1	95.0	168.0	1941	39.60	
	1800	460	445T	Y	E585	✓	2:1	95.4	172.0	2173	43.35	68
	1800	575	445T	Y	U037A	✓	10:1	95.4	138.0	2236	43.35	
	1800	460	445TS	Y	U084A		10:1	95.4	172.0	2163	39.60	68
	1200	460	445T	Y	U090A	✓	10:1	95.8	181.0	2384	43.35	68, RB
200	3600	460	445TS	Y	U075A		---	95.4	226.0	2395	39.60	
	1800	460	445T	Y	E588	✓	2:1	96.2	224.0	2500	43.19	68
	1800	575	445T	Y	U038A	✓	2:1	96.2	179.0	2384	43.35	68, RB
	1200	460	449T	Y	U091A		10:1	95.8	240.0	2878	51.85	68, RB
250	3600	460	449TS	Y	E595A		2:1	95.8	270.0	2750	48.19	17, 68
	1800	460	449T	Y	E591	✓	10:1	96.5	285.0	3012	51.85	RB
300	1800	460	449T	Y	E596		2:01	96.5	339.0	3240	51.85	17, 68, RB
350	1800	460	449T	Y	H504A	✓	2:1	69.2	395.0	3300	51.85	17, RB

Footnotes:

- * 17 = 1.0 Service Factor
- * 25 = Motor Will Not Accept C-Face
- * 68 = Rated 60/50 Hertz
- * 80 = Rolled Steel Fan Cover
- * 87 = 10:1 Constant Torque As Build UP
- * 91 = Suitable For Use With VFD @ 208V
- * A = NEMA Design A
- * BCP = BCP (Bearing Current Protection)
- * RB = Roller Bearing



INVERTER (VECTOR) DUTY: MICROMAX[®] MOTORS

1000:1 CONSTANT TORQUE (TENV), 20:1 CONSTANT TORQUE (TEFC)

TOTALLY ENCLOSED THREE PHASE MOTORS

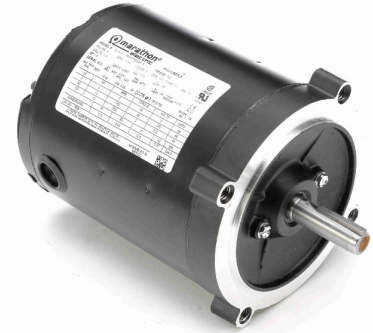


Applications:

Designed for direct replacement of PMDC or any other variable speed application where up to a 1000:1 constant torque speed range is required. Typical uses include: machine tools, conveyors, packaging machines, batching machines, and printing equipment.

Features:

- Designed to replace PMDC motors (when used with a VFD)
- Constant horsepower to twice base speed (RPM)
- Class H insulation with CR200 corona resistant magnet wire
- Removable base for C-Face footless mounting, as noted
- Continuous duty at 40°C ambient
- “Quick Connect” terminal board, as noted
- Top mounted conduit box as found on PMDC motors
- Eliminates brush and commutator maintenance
- UL recognized, CSA certified, and CE mark
- Three year warranty



C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/8	1800	230	56C	Y606	√	0.7	15	9.16	N, Q
1/4	1800	230	56C	Y501	√	1.0	16	9.91	N, Q
1/3	1800	230	56C	Y503	√	1.2	17	9.91	N, Q
1/2	1800	230	56C	Y505	√	1.8	24	9.91	N, Q
	1800	230/460	56C	Y374	√	1.8/0.9	24	9.91	N
	1800	575	56C	Y375		0.7	24	9.91	N, Q
3/4	1800	230	56C	Y507		2.8	21	11.19	
	1800	230/460	56C	Y376	√	2.8/1.4	21	11.19	
	1800	575	56C	Y377		1.1	21	11.19	
1	1800	230	56C	Y521		3.2	27	12.44	
	1800	230/460	56C	Y378	√	3.2/1.6	27	12.44	
	1800	575	56C	Y379		1.3	27	12.44	

Footnotes:

* 6 = Bolt-On Removable Base

* 13 = F1 Mounting Only

* 88 = 182T Base and Shaft Height, 145TC Face and Shaft

* 99 = Suitable for 2:1 CT

* Q = Quick Connect Terminal Board

* N = Totally Enclosed Non-Ventilated

INVERTER (VECTOR) DUTY: MICROMAX® MOTORS

1000:1 CONSTANT TORQUE (TENV), 20:1 CONSTANT TORQUE (TEFC)

TOTALLY ENCLOSED, THREE PHASE MOTORS



Applications:

Designed for direct replacement of PMDC or any other variable speed application where up to a 1000:1 constant torque speed range is required. Typical uses include: machine tools, conveyors, packaging machines, batching machines, and printing equipment.

Features:

- Designed to replace PMDC motors (when used with a VFD)
- Constant horsepower to twice base speed (RPM)
- Class H insulation with CR200 corona resistant magnet wire
- Removable base for C-Face footless mounting, as noted
- Continuous duty at 40°C ambient
- “Quick Connect” terminal board, as noted
- Top mounted conduit box as found on PMDC motors
- Eliminates brush and commutator maintenance
- UL recognized, CSA certified, and CE mark
- Three year warranty



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
1/8	1800	230	56C	Y605	✓	0.7	18	9.16	N, Q
1/4	1800	230	56C	Y500	✓	1.0	17	9.91	N, Q
1/3	1800	230	56C	Y502	✓	1.2	17	9.91	N, Q
1/2	1800	230	56C	Y504	✓	1.8	22	9.91	N, Q
	1800	230/460	56C	Y360	✓	1.8/0.9	22	9.91	N
	1800	575	56C	Y361		0.7	22	9.91	N, Q
3/4	1800	230	56C	Y506	✓	2.8	24	11.19	
	1800	230/460	56C	Y362	✓	2.8/1.4	24	11.19	
	1800	575	56C	Y363	✓	1.1	24	11.19	
1	1800	230	56C	Y508		3.2	28	12.44	
	1800	230/460	56C	Y364	✓	3.2/1.6	28	12.44	
	1800	575	56C	Y365	✓	1.3	28	12.44	
1 1/2	1800	230	145TC	Y522	✓	4.8	48	13.48	N, 6
	1800	230/460	145TC	Y366	✓	4.8/2.4	48	13.48	N, 6
	1800	575	145TC	Y367		1.9	48	13.48	N, 6
2	1800	230	145TC	Y523		5.8	53	14.95	6
	1800	230/460	145TC	Y368	✓	5.8/2.9	53	14.95	6
	1800	575	145TC	Y369	✓	2.3	53	14.95	6
3	1800	230/460	182TCZ	Y370	✓	8.4/4.2	52	14.87	88, 99
	1800	230/460	182TC	Y1999	✓	8.4/4.2	64	13.97	6, 13
	1800	575	182TCZ	Y371		3.4	52	14.87	88, 99
	1800	575	182TC	Y270A		2.9	86	14.97	6, 13
5	1800	230/460	184TC	Y1372	✓	13.0/6.5	92	13.97	6, 13
	1800	575	184TC	373A	✓	5.2	95	13.97	6, 13
7 1/2	1800	230/460	213TC	Y994	✓	21.4/10.7	128	20.97	6
	1800	575	213TC	Y995		8.5	128	20.97	6
10	1800	230/460	215TC	Y996	✓	27.6/13.8	157	22.22	6
	1800	575	215TC	Y997		11.1	157	22.22	6

Footnotes:

* 6 = Bolt-On Removable Base

* 13 = F1 Mounting Only

* 88 = 182T Base and Shaft Height, 145TC Face and Shaft

* 99 = Suitable for 2:1 CT

* Q = Quick Connect Terminal Board

* N = Totally Enclosed Non-Ventilated



INVERTER (VECTOR) DUTY: BLACK MAX® MOTORS

1000:1 CONSTANT TORQUE TENV THREE PHASE MOTORS



Applications:

Designed for inverter or vector applications where up to a 1000:1 constant torque speed range is required. Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps compressors, textile processing, and other industrial machinery installed in dusty or dirty environments.



Features:

- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on vector drive
- Constant horsepower operation up to twice base RPM
- Continuous duty at 40°C ambient
- Optimized for operation with IGBT inverter (NEMA® Design A)
- Normally closed thermostats (one per phase, Class F)
- Removable rigid base, as noted
- Ball bearings
- Field reversible to F2 (except as noted)
- Encoder and brake provisions included on opposite drive end, (maximum 10 lb-ft brake, see modifications and/or accessory kits sections)
- UL recognized, CSA certified, and CE mark
- Three year warranty

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1800	230/460	56C	TSTAT	Y592	1.2/0.6	19	11.88	S, 13
1/2	1800	230/460	56C	TSTAT	Y534	1.6/0.8	35	13.48	S, 6, 13
	1800	575	56C	TSTAT	Y555	0.6	35	13.48	S, 6, 13
1	1800	230/460	56C	TSTAT	Y535	3.0/1.5	39	14.98	S, 6, 13
	1800	575	56C	TSTAT	Y556	1.2	39	14.98	S, 6, 13
	1800	230/460	143TC	TSTAT	Y536	3.0/1.5	48	15.04	S, 6, 13
	1200	230/460	145TC	TSTAT	Y537	3.8/1.9	49	16.04	S, 6, 13
1 1/2	1800	230/460	145TC	TSTAT	Y538	4.8/2.4	50	16.04	S, 6, 13
2	1800	230/460	145TC	TSTAT	Y612	6.0/3.0	65	16.04	S, 6, 13
	1800	230/460	145TC	TSTAT	Y551	6.0/3.0	73	14.68	CI
	1800	575	145TC	TSTAT	Y611	2.4	65	16.04	S, 6, 13
	1800	575	145TC	TSTAT	Y557	2.4	73	14.68	CI
	1200	230/460	184TC	TSTAT	Y540	6.6/3.3	88	16.93	AL
3	1800	230/460	182TC	TSTAT	Y541A	8.2/4.1	77	16.19	AL
	1800	575	182TC	TSTAT	Y558A	3.4	89	16.19	AL
	1200	230/460	213TC	TSTAT	Y542	9.4/4.7	118	19.04	AL
5	1800	230/460	184TC	TSTAT	Y543A	13.4/6.7	92	17.69	AL
	1800	575	184TC	TSTAT	Y559A	5.4	96	17.69	AL
	1200	230/460	215TC	TSTAT	Y544	15.4/7.7	146	20.54	AL
7 1/2	1800	230/460	213TC	TSTAT	Y545	21.0/10.5	146	20.54	AL
	1800	575	213TC	TSTAT	Y560	8.4	146	20.54	AL
	1200	230/460	254TC	TSTAT	Y546	22.0/11.0	223	25.37	AL, I
10	1800	230/460	215TC	TSTAT	Y547	27.0/13.5	219	23.04	AL
	1800	575	215TC	TSTAT	Y561	10.8	219	23.04	AL
	1200	230/460	256TC	TSTAT	Y548	28.0/14.0	229	26.87	AL, I
15	1800	230/460	254TC	TSTAT	Y549	40.0/20.0	260	26.87	AL, I
	1800	575	254TC	TSTAT	Y562	16.0	260	26.87	AL, I
20	1800	230/460	256TC	TSTAT	Y552	52.0/26.0	300	27.13	CI
	1800	575	256TC	TSTAT	Y563	20.8	300	27.13	CI
25	1800	230/460	284TC	TSTAT	Y553	62.0/31.0	379	27.08	CI, I
	1800	575	284TC	TSTAT	Y567	24.8	379	27.08	CI, I
30	1800	230/460	286TC	TSTAT	Y393	74.0/37.0	575	28.58	CI, I
	1800	575	286TC	TSTAT	Y394	29.6	575	28.58	CI, I

Footnotes:

* 6 = Bolt-On Removable Base

* 13 = F1 Mounting Only

* AL = Aluminum Frame Construction

* S = Steel Frame Construction

* CI = Cast Iron Construction

* I = Reduced HP @ 120HZ



Applications:

For use in material handling, machine tools, conveyors, crane & hoist, and other variable speed applications requiring up to 1000:1 constant torque speed range, to be installed in hazardous environments as defined by the motor's explosion proof class and group rating. Refer to the General Information sections contained in this catalog for information on explosion proof classifications. Consult the National Electrical Code and your local regulations for the proper selection of motors in hazardous locations.

Features:

- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on vector drive
- Constant horsepower operation up to twice base RPM
- Continuous duty at 40°C ambient
- Optimized for operation with IGBT inverter (NEMA® Design A)
- Normally closed thermostats (one per phase, Class F)
- Ball bearings
- Top mount (F3) conduit box included, shipped loose
- No encoder provisions provided
- Meets temperature code T3B
- UL listed, under file #E12044
- CSA certified, under file numbers LR47504 and LR21839



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
1/4	1800	230/460	56C	TSTAT	Y600	1.1/0.55	26	11.97	
1/3	1800	230/460	56C	TSTAT	Y601	1.2/0.6	26	11.97	
1/2	1800	230/460	56C	TSTAT	Y602	1.6/0.8	31	12.47	
3/4	1800	230/460	56C	TSTAT	Y603	2.4/1.2	38	13.47	
1	1800	230/460	56C	TSTAT	Y604	3.0/1.5	43	13.97	

Footnotes:

* CD = Suitable for Group C

INVERTER (VECTOR) DUTY: BLUE MAX® 2000
HAZARDOUS DUTY® (WITH ENCODER) 2000:1 CONSTANT TORQUE
 MOTORS EXPLOSION PROOF THREE PHASE CLASS I AND II (GASES AND DUST)



GROUPS C (AS NOTED), D, F & G, TENV MOTORS

Applications:

Designed for industrial applications with vector drives where up to a 2000:1 constant torque speed range and/or precise speed or torque regulation is required, including positioning equipment. Used in dirty, dusty or caustic environments where cast iron construction is required, and installed in hazardous environments as defined by the motor's explosion proof class and group rating. Consult the National Electrical Code and your local regulations for the proper selection of motors in hazardous locations.

Features:

- BEI* H38 explosion proof encoder 1024 ppr, Class I
 Groups C & D, Class II Groups E, F, G included
- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on vector drive
- Constant HP operation up to twice base speed
- Continuous duty at 40°C ambient
- Optimized for operation with IGBT inverter (NEMA® design A)
- Normally closed thermostats (one per phase, Class F)
- Ball bearings
- Cast iron frame and brackets
- F1 standard, NOT field reversible to F2



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
1	1800	230/460	143TC	TSTAT	Y978	3.0/1.5	86	21.44	CD
2	1800	230/460	145TC	TSTAT	Y979	5.8/2.9	90	21.44	CD
3	1800	230/460	182TC	TSTAT	Y980	8.2/4.1	117	24.82	CD
5	1800	230/460	213TC	TSTAT	Y981	13.0/6.5	240	26.17	
7 1/2	1800	230/460	254TC	TSTAT	Y982	22.0/11.0	344	30.20	CD
10	1800	230/460	254TC	TSTAT	Y983	27.0/13.5	376	30.20	CD
15	1800	230/460	256TC	TSTAT	Y984	36.0/18.0	432	31.95	CD
20	1800	230/460	284TC	TSTAT	Y985	53.0/26.5	555	33.16	CD

Footnotes:

* CD = Suitable for Group C



INVERTER (VECTOR) DUTY: BLUE MAX® 2000 MOTORS

2000:1 CONSTANT TORQUE, TOTALLY ENCLOSED

THREE PHASE MOTORS



Applications:

Designed for inverter or vector applications where up to a 2000:1 constant torque speed range is required. Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps compressors, textile processing, and other industrial machinery installed in dusty or dirty environments where cast iron construction is required.

Features:

- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on vector drive, including TEFC (On volts/hertz drives, TEFC motors are limited to to 20:1 constant torque)
- Constant HP operation to twice base speed (143-256 frame); 1.5 times base (all others)
- Optimized for operation with IGBT inverter
- Bearing current protection (BCP), mounted internally
- C-Face foot mount through 100 HP, as noted
- Normally closed thermostats (one per phase, Class F)
- Continuous duty at 40° C ambient
- 1.0 service factor ("B" rise on TEBC motors)
- Blue Chip Series® quality, cast iron frame and brackets
- Patented "fracket" design (TEBC enclosure)
- Ball bearings (roller bearing available 360 frame & larger)
- Field reversible to F2
- Encoder provisions included on opposite drive end (see modification and/or accessory kits sections)
- Three year warranty



RIGID BASE AND C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1	1800	230/460	TENV	143TC	Y525	3.0/1.5	61	13.68	B
1 1/2	1800	230/460	TENV	145TC	Y590	4.6/2.3	65	14.68	
2	1800	230/460	TENV	145TC	Y526	6.0/3.0	71	14.68	
3	1800	230/460	TENV	182TC	Y527	8.0/4.0	113	16.68	
5	1800	230/460	TENV	184TC	Y564	13.4/6.7	147	17.68	
7 1/2	1800	230/460	TEFC	213TC	Y595	19.4/9.7	192	21.03	
	1800	230/460	TENV	213TC	Y565	21.0/10.5	212	20.56	
10	1800	230/460	TEFC	215TC	Y596	25.4/12.7	212	22.53	
	1800	230/460	TENV	215TC	Y566	26.0/13.0	272	22.74	
15	1800	230/460	TEFC	254TC	Y597	37.0/18.5	350	26.34	
	1800	230/460	TENV	254TC	Y509	40.4/20.2	334	23.38	
20	1200	230/460	TEBC	284TC	Y395	40.0/20.0	500	37.48	BP
	1800	230/460	TEFC	256TC	Y598	52.0/26.0	377	28.09	
25	1800	230/460	TENV	256TC	Y510	52.0/26.0	425	27.13	
	1200	230/460	TEBC	286TC	Y582	52.4/26.2	660	38.98	BP
30	1800	230/460	TEFC	284T	Y569	63.0/31.5	393	28.58	
	1800	230/460	TEBC	284TC	Y511	63.0/31.5	470	37.48	BP
30	1200	230/460	TEBC	324TC	Y583	67.0/33.5	633	40.41	B, BP
	1800	230/460	TEFC	286T	Y570	77.0/38.5	371	29.91	
30	1800	230/460	TEBC	286TC	Y512	74.0/37.0	507	38.98	BP
	1200	230/460	TEBC	326TC	Y584	80.4/40.2	550	41.91	B, BP

Footnotes:

- * B = NEMA Design B
- * BP = Separate Power Supply Required For Blower Motor
- * CT = Suitable for 20:1 CT On Vector Drive, Continuous Duty 2000:1

CHART CONTINUES ON NEXT PAGE



INVERTER (VECTOR) DUTY: BLUE MAX® 2000 MOTORS

2000:1 CONSTANT TORQUE, TOTALLY ENCLOSED

THREE PHASE MOTORS



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
40	1800	230/460	TEFC	324T	Y571	100.0/50.0	545	30.71	
	1800	230/460	TEBC	324TC	Y513	100.0/50.0	531	40.41	BP
	1200	230/460	TEBC	364TC	Y585	107.0/53.5	1011	42.67	BP
50	1800	230/460	TEFC	326T	Y572	121.0/60.5	765	32.44	
	1800	230/460	TEBC	326TC	Y514	120.0/60.0	686	41.91	BP
	1200	230/460	TEBC	365TC	Y586	130.0/65.0	1081	43.78	BP
60	1800	230/460	TEFC	364T	Y573	147.0/73.5	987	33.7	
	1800	230/460	TEBC	364TC	Y515	147.0/73.5	1062	42.67	BP
	1200	230/460	TEBC	404TC	Y587	142.0/71.0	1339	48.22	BP
75	1800	230/460	TEFC	365T	Y574	184.0/92.0	1061	34.69	
	1800	230/460	TEBC	365TC	Y516	180.0/90.0	1129	43.67	BP
	1200	230/460	TEBC	405TC	Y588	180.0/90.0	1387	49.72	B, BP
100	1800	230/460	TEFC	405T	Y575	230/115	1308	39.32	
	1800	230/460	TEBC	405TC	Y517	230/115	1529	49.72	BP
	1200	230/460	TEBC	444TC	Y589	250/125	2117	52.72	BP
125	1800	460	TEFC	444T	Y576	143	2053	43.27	
	1800	460	TEBC	444T	Y518	138	2010	52.72	B, BP
150	1800	460	TEFC	445T	Y577	170	2247	45.27	
	1800	460	TEBC	445T	Y519	170	2310	54.72	BP
200	1800	460	TEFC	445T	Y578	230	2388	45.27	
	1800	460	TEBC	445T	Y520	230	2430	54.72	BP
250	1800	460	TEFC	449T	Y579	280	2900	53.89	CT
	1800	460	TEBC	449T	Y531	295	2991	63.21	BP
300	1800	460	TEFC	449T	Y580	330	3077	53.89	CT
	1800	460	TEBC	449T	Y532	327	2950	63.21	BP
350	1800	460	TEBC	449T	Y533	385	3099	63.21	BP

Footnotes:

- * B = NEMA Design B
- * BP = Separate Power Supply Required For Blower Motor
- * CT = Suitable for 20:1 CT On Vector Drive, Continuous Duty 2000:1



Applications:

Designed for vector applications where up to a 2000:1 constant torque speed range is required. For use on conveyors, machine tools, cranes, hoists, and other industrial machinery requiring quick stop and/or holding torque.

Features:

- Includes 140% rated spring-set self-adjusting NEMA 2 disk brake (Brake coil voltage matches motor)
- Universal mounting up to 15 Lb-Ft, (see comment below and Mod Central for vertical mounting)
- Horizontal mounting (see comment below and Mod Central for vertical mounting)
- UL recognized, CSA certified, and CE mark
- Three year warranty (brake disks are exempt)



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	TORQUE (FT.LBS)
1	1800	230/460	143TC	Y986	3.0/1.5	72	17.00	6
2	1800	230/460	145TC	Y987	6.0/3.0	83	18.00	10
3	1800	230/460	182TC	Y988	8.2/4.1	118	19.67	15
5	1800	230/460	184TC	Y989	13.4/6.7	161	25.58	25
7 1/2	1800	230/460	213TC	Y990	21.0/10.5	256	27.58	35
10	1800	230/460	254TC	Y991	26.0/13.0	302	28.83	50
15	1800	230/460	254TC	Y992	40.5/20.2	384	31.53	75
20	1800	230/460	256TC	Y993	52.0/26.0	427	33.28	105

BRAND	MODEL	CAT. NO	FITS BRAKE MOTOR CAT. NO.	WT (Lbs)
Avtron	AV56	A748	Y986, Y987	4
		A749	Y988	4
	AV85	A750	Y989	5
		A751	Y990, Y991	8
		A752	Y992, Y993	8
NorthStar	ST56	A786	Y986, Y987	4
		A789	Y988	4
	ST85	A790	Y989	8
		A791	Y990, Y991	8
		A792	Y992, Y993	8

Applications:

Condenser fan. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- High efficiency over wide RPM range
- Integrated electronic control programmed for constant speed
- Built-in intelligence and electronic protection
- Multiple speed/HP operations (3-Speeds)
- Class F insulation system
- UL and CSA recognition
- Permanent magnet rotor
- IP54 ingress protection
- Reliable ball bearings (6205 on both ends)
- 60° degrees C ambient
- Heavy duty rolled steel construction
- Accommodates smaller frame size, lighter weight
- 4 Locating screws 90 degrees apart



Benefits:

- Drop in replacement for 56-Frame induction motors
- Suitable for outdoor environments, longer service life
- Noise reduction
- Easy installation
- Lower operation cost

ROUND FRAME

HP	RPM	VOLTS	FRAME	CAT NO.	NOM. EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)
3/4	850	200-230	56Y	S1202	82.2 - 81.9	2.4 - 2.2	25	16.02
1	1025				83.1 - 83.0	3.0 - 2.8		
1	1140				84.3 - 84.1	3.0 - 2.8		
3/4	850	460	56Y	S1402	81.3	1.0	25	16.02
1	1025				83.7	1.3		
1	1140				84.9	1.3		
1	850	200-230	56Y	S1203	84.6 - 84.3	3 - 2.8	30	16.52
1 1/3	1025				85.5 - 85.3	3.8 - 3.5		
1 1/2	1140				86.2 - 85.8	4.2 - 3.9		
1	850	460	56Y	S1403	84.7	1.3	30	16.52
1 1/3	1025				87.0	1.6		
1 1/2	1140				87.6	1.9		
2	850	200-230	56Y	S1204	84.8 - 84.5	5.5 - 5.0	38	17.77
2	1025				86.9 - 86.6	5.4 - 4.9		
2	1140				87.6 - 87.4	5.3 - 4.8		
2	850	460	56Y	S1404	85.9	2.4	38	17.77
2	1025				87.6	2.3		
2	1140					2.3		

Features:

- TENV - Operational to 20:1 constant torque open-loop (1000:1 closed-loop)
- TEFC - Operational to 20:1 constant torque open-loop or closed-loop
- Totally enclosed non-ventilated (TENV), as noted
- High power density, low weight design
- Three year warranty
- Ball bearing
- Requires drive for operation

**COMMERCIAL, ROLLED STEEL FRAME
(NEMA 56-215 FRAME MODELS)**

Additional Features:

- Meets or exceeds NEMA Premium® (IE3)
- Class F MAX GUARD® insulation system
- IP43 ingress protection



**INDUSTRIAL, CAST IRON FRAME
(NEMA 182-286T FRAME MODELS)**

Additional Features:

- Ultra Efficient Premium-Plus exceeds NEMA Premium (IE4)
- Class H MAX GUARD insulation system
- IP54 ingress protection
- Cast iron construction for rigidity and reduced vibration, as shown
- Premium severe duty
- Normally closed thermostats (one per phase, Class F)
- Provisions for "BCP" (Bearing Current Protection)
- UL, CSA and CE mark



HP	RPM	VOLTS	FRAME	TORQUE (LB.FT)	CAT NO.	NOM. EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/2	1800	230/460	56C	1.5	SY001	82.2	1.9/0.93	15	7.68	N
1	1800	230/460	56C	2.9	SY003	87.5	3.6/1.8	18	8.68	N
1 1/2	1800	230/460	56C	4.4	SY004	87.5	5.5/2.1	23	9.68	N
2	1800	230/460	56C	5.8	SY005	89.0	6.3/3.2	28	10.68	N
	1200	230/460	56C	8.7	SY035	89.5	5.1/2.6	30	6.18	
3	1800	230/460	182TC	8.8	SY006A	92.9	6.8/3.4	137	17.50	CI, N
	1800	230/460	182TC	8.8	SY006A	91.4	6.6/3.3	110	16.42	CI, N
	1200	230/460	182TC	13.1	SY036	93.0	7.0/3.5	116	14.97	
5	1800	230/460	184TC	14.6	SY007A	94.9	11.6/5.8	140	17.50	CI, N
	1800	230/460	184TC	14.6	SY067	93.9	11.7/5.8	130	16.42	
7.5	1800	230/460	213TC	21.9	SY008A	94.3	18.2/9.3	190	20.41	CI, N
	1800	230/460	213TC	21.9	SY068	93.8	17.2/8.6	125	19.47	
	1800	230/460	215TC	29.2	SY009A	93.9	24.6/12.3	208	20.41	CI, N
	1800	230/460	215TC	29.2	SY069	94.5	24.7/12.4	139	20.97	
15	1800	460	254TC	43.8	SY010	94.0	18.0	392	25.68	CI
20	1800	460	256TC	58.4	SY011	94.5	24.0	386	25.68	CI
25	1800	460	284TC	72.9	SY012	94.5	30.0	408	26.21	CI
30	1800	460	286TC	87.5	SY013	95.4	35.5	456	27.71	CI

Footnotes:

- * N = Totally Enclosed Non-Ventilated
- * CI = Cast Iron Frame Construction

DC PERMANENT MAGNET MOTOR

SCR RATED, TOTALLY ENCLOSED

C-FACE FOOTED (REMOVABLE BASE AND NO BASE)

Features:

- Class F insulation (Class H as noted)
- NEMA® C-face with removable rigid base, as noted
- Oversized brushes for extra long life
- Permanently lubricated sealed ball bearings
- Linear speed/torque characteristics over entire speed range
- High starting torque, high peak current capability
- Usable on PWM type DC adjustable speed drives at higher HP rating
- Easy brush access with unique brush holder design
- UL recognized and CSA certified



HP	RPM	DC VOLTS	FRAME	ENCLOSURE	CAT NO.	STOCK	CT SPEED RANGE	F.L. AMPS	PWM HP RATING	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1750	90	56C	TEFC	Z602	✓	20:1	2.5	0.4	22	10.81	
	1750	180	56C	TEFC	Z603	✓	20:1	1.4	0.5	22	11.31	
1/3	1750	90	56C	TEFC	Z604	✓	20:1	3.5	0.5	24	11.31	
	1750	180	56C	TEFC	Z605		20:1	1.7	0.5	22	11.31	
1/2	1750	90	56C	TEFC	Z606	✓	20:1	5.0	0.7	26	11.81	
	1750	180	56C	TEFC	Z607	✓	20:1	2.5	0.6	25	11.81	
3/4	1750	90	56C	TEFC	Z610	✓	20:1	7.6	1.0	34	13.81	
	1750	180	56C	TEFC	Z611	✓	20:1	3.8	1.0	34	13.81	
1	1750	90	56C	TEFC	Z612	✓	20:1	10.0	1.25	45	14.81	
	1750	180	56C	TEFC	Z613	✓	20:1	5.0	1.25	41	14.81	
1 1/2	1750	180	56C	TEFC	Z614	✓	20:1	7.6	1.75	52	16.81	
	1750	180	145TC	TEFC	Z615	✓	20:1	7.5	1.5	74	18.34	H
2	1750	180	145TC	TEFC	Z616	✓	20:1	9.5	2.0	86	19.34	H
	1750	180	182/145TC	TEFC	Z617	✓	20:1	9.5	2.0	83	19.34	H, 84

Footnotes:

- * B = Nema 145T C-Face Mounting with Removable 182T Rigid Base
- * 85 = Not Tach Adaptable
- * H = Class Insulation

WASH DOWN DUTY® DC PERMANENT MAGNET MOTOR SCR RATED, TOTALLY ENCLOSED

C-FACE FOOTED (REMOVABLE BASE)

Features:

- Class F insulation
- NEMA® C-face with removable rigid base
- Oversized brushes for extra long life
- Double sealed, oversized ball bearings
- Corrosion resistant 303 stainless steel shaft
- “V” ring Forsheda® seals
- High temperature, moisture resistant lubricant
- Exterior and interior components protected with enamel & polyester compounds
- Aluminum conduit box, threaded and gasketed
- Drains at 3:00, 6:00, 9:00 and 12:00 locations
- Sealed machine fits
- Stainless steel nameplate
- USDA approved white epoxy paint
- UL recognized and CSA certified



HP	RPM	DC VOLTS	FRAME	ENCLOSURE	CAT NO.	STOCK	CT SPEED RANGE	F.L. AMPS	PWM HP RATING	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1750	90	56C	TENV	Z630	√	20:1	2.7	0.30	24	10.69	
1/3	1750	90	56C	TENV	Z631		20:1	3.5	0.56	30	11.69	
1/2	1750	90	56C	TENV	Z634	√	20:1	4.9	0.75	37	13.69	
	1750	180	56C	TENV	Z635	√	20:1	2.4	0.70	41	13.69	
3/4	1750	90	56C	TENV	Z636	√	20:1	7.0	1.25	51	14.67	
	1750	180	56C	TENV	Z637	√	20:1	3.5	1.25	50	14.17	
1	1750	90	56C	TEFC	Z638	√	2:1	10.0	1.25	45	14.81	
	1750	180	56C	TEFC	Z639	√	2:1	5.0	1.25	41	14.81	
1 1/2	1750	180	56C	TEFC	Z641		2:1	7.6	1.75	51	16.81	

DC PERMANENT MAGNET MOTOR SCR RATED, TOTALLY ENCLOSED

C-FACE FOOTED (REMOVABLE BASE AND NO BASE)

APPLICATIONS

Low voltage permanent magnet DC motors are suitable for installations having batteries or generator supplied low voltage DC.

Features:

- Permanently lubricated sealed ball bearings
- NEMA® C-face with removable base
- Class H insulation
- Easy brush access with unique brush holder design
- Oversized brushes for extra long life
- High starting torque
- U.L. recognized and CSA certified



HP	RPM	DC VOLTS	FRAME	ENCLOSURE	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1750	12	56C	TENV	Z660	√	21.0	22	10.27	85
1/3	1750	12	56C	TENV	Z662	√	27.0	24	10.77	85
	1750	24	56C	TENV	Z663	√	13.5	23	10.77	85
1/2	1750	12	56C	TENV	Z664	√	39.0	30	11.77	85
3/4	1750	12	56C	TEFC	Z666	√	58.0	35	13.81	85
	1750	24	56C	TEFC	Z667	√	29.0	32	12.81	85
1	1750	12	56C	TEFC	Z668	√	80.0	39	13.81	85
	1750	24	56C	TEFC	Z669	√	39.0	34	13.81	85
1 1/2	1750	24	56CZ	TEFC	Z670	√	60.0	53	17.38	85
2	1750	24	56CZ	TEFC	Z671	√	70.0	68	16.74	85

Footnotes:

- * B = Nema 145T C-Face Mounting with Removable 182T Rigid Base
- * 85 = Not Tach Adaptable
- * H = Class Insulation

BRAKE MOTORS, THREE PHASE

TOTALLY ENCLOSED

Features:

- Meets or exceeds NEMA Premium® efficiencies. NEMA Premium models are in compliance with EISA 2007
- Brake has manual wear adjustment for longer pad life
- Brake leads routed through motor conduit box (TENV only)
- Universal mounting, no modifications needed
- CR200 corona resistant magnet wire (motor can be operated 10:1 variable torque)



RIGID BASE

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	BRAKE (LB.FT)	NOTES
1/2	1800	230/460	56	K456	1.8/.9	31	14.06	3	17, N, PR
	1800	208-230/460	56	K455	2.3-2.4/1.2	30	16.23	3	68
	1200	208-230/460	56	K435	2.4-2.7/1.35	32	16.23	6	68
	1200	230/460	56	K526	2.4/1.2	33	15.56	3	17, N
3/4	1800	230/460	56	K458	2.5/1.25	36	14.56	6	17, N
	1800	208-230/460	56	K436	2.9-3/1.5	33	16.23	6	68
	1200	208-230/460	56	K437	3.2-3.2/1.6	36	16.73	6	68
1	1800	230/460	56	K459A	3.2/1.6	45	17.23	6	17, PR
	1800	230/460	56	K438	3.3/1.65	54	18.81	6	68, PR
	1800	230/460	143T	K461A	3.2/1.6	48	17.66	6	17, PR
	1200	230/460	145T	K2044	3.8/1.9	60	19.26	10	68, PR
1 1/2	1800	230/460	56H	K440	4.6/2.3	62	18.72	10	68, PR
	1800	230/460	145T	K441	4.6/2.3	62	18.76	10	68, PR
2	1800	230/460	145T	K2045A	5.8/2.9	56	18.66	10	17, PR

Footnotes:

- * B = Bolt On Removable Base
- * 17 = Service Factor
- * AL = Aluminum Frame Construction
- * F = Class F Insulation
- * N = Totally Enclosed Non-Ventilated
- * PR = Premium Efficient

BRAKE MOTORS, THREE PHASE

C-FACE FOOTED

C-FACE FOOTED (REMOVABLE BASE FOR ROLLED STEEL FRAMES)

Features:

- Meets or exceeds NEMA Premium® efficiencies. NEMA Premium models are in compliance with EISA 2007
- Brake has manual wear adjustment up to 25 lb-ft. for longer pad life
- Stearns® brakes, 56,000 series through 25 Lb-Ft, 87 series above 35 Lb-Ft and larger
- Brake leads routed through motor conduit box (TENV only)
- Universal mounting up to 15 Lb-Ft, C406 has verticle springs included, for larger brakes, see mod section
- CR200 corona resistant magnet wire (motor can be operated 10:1 variable torque and 2:1 constant torque)
- 1.15 service factor, 1.0 service factor where foot noted

RIGID BASE

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	BRAKE (LB.FT)	NOTES
1/3	1800	208-230/460	56C	D450	1.5-1.6/0.8	30	15.73	3	6
	1200	208-230/460	56C	D451	1.9-2.2/1.1	30	15.73	3	6
1/2	1800	208-230/460	56C	D452	2.3-2.4/1.2	32	16.23	3	6
	1200	208-230/460	56C	D453	2.4-2.7/1.4	33	16.23	6	6
3/4	1800	208-230/460	56C	D454	2.9-3.0/1.5	33	16.23	6	6
	1200	208-230/460	56C	D455	3.1-3.2/1.6	37	16.73	6	6
1	1800	230/460	56C	D456A	3.3/1.65	35	16.73	6	6, PR
	1200	230/460	145TC	C400A	3.8/1.9	60	19.26	10	6, PR
1 1/2	1800	230/460	56HC	D457A	4.6/2.3	38	18.72	10	6, PR
	1800	230/460	145TC	C401A	4.6/2.3	62	18.76	10	6, PR
	1200	230/460	184TC	C402A	5.2/2.6	80	18.39	15	AL, F, N, PR
2	1800	230/460	145TC	C403A	6.0/3.0	62	18.77	10	6, PR
	1200	230/460	184TC	C404A	6.4/3.2	90	19.23	15	AL, F, N, PR
3	1800	230/460	182TC	C405	8.0/4.0	100	19.68	15	AL, F, N, PR
5	1800	230/460	184TC	C406	12.4/6.2	115	20.68	25	AL, F, N, 17, PR
7 1/2	1800	230/460	213TC	C407A	19.2/9.6	200	27.64	35	AL, F, N, 17, PR
10	1800	230/460	215TC	C408	25.0/12.5	211	28.64	50	AL, F, N, 17, PR

Footnotes:

- * B = Bolt On Removable Base
- * 17 = Service Factor
- * AL = Aluminum Frame Construction
- * F = Class F Insulation
- * N = Totally Enclosed Non-Ventilated
- * PR = Premium Efficient

FARM DUTY / AGRICULTURE, HIGH TORQUE MOTORS

SINGLE PHASE, TEFC MOTORS



Features:

- Shaft end mechanically locked on C-face models
- Ball bearings
- 1.15 service factor (except as noted)
- Capacitor start design for high starting torque
- Capacitor start/capacitor run design for higher efficiency, as noted
- Low temperature manual reset thermal protector
- Totally enclosed and fully gasketed construction for dirty environments
- Condensate drains
- Shaft slinger
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	C-FACE KIT	NOTES
1/3	1800	115/208-230	56	F101	6.6/3.1-3.3	24	11.82	A437	
	1800	115/208-230	56C	F131	6.6/3.1-3.3	24	11.82	Included	
1/2	1800	115/208-230	56	F102	8.8/4.2-4.4	25	11.82	A437	
	1800	115/208-230	56C	F132	8.8/4.2-4.4	25	11.82	Included	
	1800	115/208-230	56	C661	0.0/4.5-4.5	44	11.83	N/A	
	3600	115/230	56	C664	7.4/3.7	17	11.36	N/A	
3/4	1800	115/208-230	56	F103	11.0/5.4-5.5	29	12.32	A437	
	1800	115/208-230	56C	F133	11.0/5.4-5.5	29	12.32	Included	
1	1800	115/208-230	143T	Z123	13.4/6.8-6.7	31	12.87	A438	
	1800	115/208-230	56	F104	13.4/6.8-6.7	30	12.82	A437	
	1800	115/208-230	56C	F134	13.4/6.8-6.7	31	12.82	Included	
	3600	115/230	56	C663	13.2/6.6	29	12.43	N/A	19
1.5	1800	115/208-230	145T	Z118	15.2/8.2-7.6	40	13.87	A438	1
	1800	115/208-230	56H	F105	15.2/8.2-7.6	41	13.82	A437	ES, 1
	1800	115/208-230	56HC	F135	15.2/8.2-7.6	41	13.82	Included	
	1800	115/208-230	56H	C659	14.5/7.1-7.3	44	13.82	N/A	ES, 1
	1800	115/230	56	C660	13.2/6.6	38	12.96	N/A	ES
	3600	115/230	56	C662	16.4/8.2	35	12.96	N/A	ES
2	1800	115/230	56C	K319	18.8/9.4	50	14.82	Included	1, 5
	1800	115/230	145T	Z128	18.8/9.4	49	14.87	A438	1
	1800	115/230	182T	Z119A	24.0/12.0	66	14.46	A644	F, 2, 13
	1800	115/230	182TZ	Z112A	24.0/12.0	68	14.46	A644	2, 13, X
3	1800	230	184T	Z120A	14.2	92	14.96	A666	1, 13
	1800	230	184TC	I314A	12.8	86	14.96	Included	1, 13
	1800	230	184T	Z113A	19.0	90	16.46	A666	2, 13, X
5	1800	230	184T	Z121A	19.5	103	17.45	A666	1, 13
	1800	230	184TC	I315A	19.5	101	17.47	Included	1, 13
	1800	208-230	184T	Z114A	23.8/21.8	98	14.46	A666	1, 13, X
	1800	230	213TZ	Z117	23.0	119	18.73	N/A	1, X
7 1/2	1800	230	215T	Z122	30.0	138	21.48	A609	1
	1800	230	215TZ	Z115	32.0	155	21.48	N/A	1, X
	1800	230	215TZ	Z115-OLD	32.0	117	21.45	N/A	1, AL, X
10	1800	230	215T	Z116	40.0	133	21.48	A609	X
	1800	230	215T	Z116-OLD	40.0	139	21.48	N/A	1, 17, AL, X
15	1800	230	256T	Z129	64.0	309	27.65	N/A	1, 17, X
16	1800	230	256TZ	Z319	61.0	308	25.52	N/A	ES

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design For Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 13 = F1 Mounting Only
- * 17 = 1.0 Service Factor

- * AL = Aluminum Frame Construction
- * ES = Energy Saver Design
- * X = Extra-High Torque Chore Motor 300%



FARM DUTY / AGRICULTURE, AUGER DRIVE MOTORS

SINGLE PHASE, TEFC, N FLANGE MOTORS



Features:

- NEMA® N flange mounting
- Manual reset thermal protector
- 48NZ: 1/2" dia. X 1.5" long shaft with flat
- 56NZ: 5/8" dia. X 2.06" long shaft with flat
- Extended (ODE) shaft with flats for manual jogging
- F1201, F1202, F1203, F1204, and F1205 utilize a solid state electronic starting switch
- Ball bearings
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	1800	115/230	48NY	HG646	5.3/2.7	22	11.07	N, 3, 83
	1800	115/208-230	56NY	C1291	5.8/2.8-2.9	21	12.00	
	1800	115/230	48NZ	F1201	6.2/3.1	22	10.31	E, 2
1/2	1800/1500	115/208-230	56NY	C1292	8.4/4.0-4.2	23	12.00	2, 49, 50
	1800	115/208-230	48NZ	F1202	8.0/3.8-4.0	22	10.56	E, 2
3/4	1800	115/208-230	56NY	C1293	8.4/4.5-4.2	31	13.13	ES, 1
	1800	115/208-230	48NZ	F1203	10.8/5.3-5.4	20	11.31	E, 2
1	1800/1500	115/208-230	56NY	C1294	10.8/6.0-5.4	40	14.51	ES, 1, 50, 83
	1800	115/230	56NZ	F1204	13.4/6.7	36	13.38	E, 2
1.5	1800	115/208-230	56NY	C1295	14.5/7.1-7.3	44	14.51	ES, 1, 83

FARM DUTY / AGRICULTURE, AUGER DRIVE MOTORS

SINGLE PHASE, TEFC, N FLANGE MOTORS

Applications:

Designed for demanding agricultural fan applications such as poultry houses and barn exhaust fans. Must be mounted within the airstream for proper cooling. Variable speed capabilities when used with a single phase speed control unit - NOT supplied. Super variable speed motors, catalog X030, X031 and X032 are designed for lower temperature rise throughout a greater speed range.

Features:

- Ball bearings
- Continuous duty
- Extended thru-bolts
- Automatic reset thermal protector
- Fully gasketed
- 48/56 Frame mounting holes
- 1/2" dia. x 2-1/2" long shaft with two flats, 90° apart
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1625	115/230	48YZ	X030	3.6/1.8	20	11.06	
	1625	115/230	48YZ	X024	3.2/1.6	18	10.09	
	1075	115/230	48YZ	X027	3.2/1.6	15	10.09	
1/3	1625	115/230	48YZ	X031	3.8/1.9	23	11.81	
	1625	115/230	48YZ	X025	4.4/2.2	18	10.09	
	1075	115/230	48YZ	X028	4.2/2.1	21	10.84	
1/2	1625	115/230	48YZ	X032	5.4/2.7	24	11.81	
	1625	115/230	48YZ	X026	6.0/3.0	22	10.84	
	1075	115/230	48YZ	X029	6.4/3.2	22	10.84	

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design For Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 3 = Split Phase Design
- * 49 = Space Heaters and 100 Ohm Platinum Stator RTDs Included
- * 50 = Designed for 50HZ
- * E = Design Incorporates Electronic Switch
- * ES = Energy Saver



FARM DUTY / AGRICULTURAL MOTORS

SINGLE PHASE, TENV, RESILIENT BASE-THRU BOLT MOTORS

Features:

- Split phase and PSC, as noted
- Ball bearings
- Extended thru-bolts on X1903, X1904, P250, and P251
- 48Z frame has 1/2" dia. x 2-1/2" long shaft with two flats
- 56Z frame has 1/2" dia. x 1-7/8" long with 1-5/8" flat
- 48Y & 48YZ have 48/56 fr. mounting holes
- 1.0 service factor (except as noted)
- Thermal protection, as noted
- Fully gasketed



HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/6	1800	115	48	AUTO	HG196	3.5	13	8.94	3
	1800	115	48	NONE	H195	3.5	13	8.94	3
	1200	115	48	AUTO	H198	3.7	17	9.57	3
	1200	115	48	NONE	H197	3.7	17	9.57	3
1/4	1800	115	48Z	AUTO	X1903	5.1	14	9.68	3, 9
	1800	115/208-230	48	AUTO	H649	3.0/1.6-1.5	16	10.40	3
	1800	115	48	AUTO	H135	5.1	15	8.94	3
	1800	115/230	48Z	AUTO	P250	3.6/1.8	16	10.57	93
	1800	115	48	NONE	H134	5.1	15	8.94	3
	1800	230	48	AUTO	H277	2.3	15	9.19	3
	1800/1200	115	48	NONE	H203	4.2/2.7	20	10.00	3
	1200	115	56	AUTO	H137	5.6	22	10.48	3
1/3	1200	115	56	NONE	H136	5.6	23	10.48	3
	1800	115	48Z	AUTO	X1904	6.2	15	9.93	3, 9
	1800	115	48	AUTO	H139	6.2	18	9.19	3
	1800	115	48	NONE	HG138	6.2	18	9.19	3
	1800	115/208-230	48	AUTO	HG648	4.1/2.1-2.0	17	10.40	3
	1800	230	48	NONE	HG140	2.5	18	10.00	3
	1800	230	48	AUTO	HG141	2.5	18	10.00	3
	1200	115/230	56	AUTO	HG699	7.0/3.5	26	11.48	3
1/2	1200	115/230	56	NONE	HG142	7.0/3.5	27	11.48	3
	1800	115/208-230	56	AUTO	H247	8.0/4.0-4.0	21	10.05	3
	1200	115/230	48Z	AUTO	P251	7.2/3.6	18	11.00	93
	1800	115/208-230	56	NONE	H276	8.0/4.0-4.0	21	10.05	3
	1800	115/208-230	56	AUTO	H647	5.2/2.7-2.6	19	10.05	3
3/4	1800	115	56	NONE	HG143	8.0	21	10.05	3, 19
	1800	115/208-230	56	AUTO	C1314	7.0/3.8-3.5	30	11.38	1, 50, 111
1	1800	115/208-230	56	AUTO	C1303	8.2/4.0-4.1	28	10.78	1, 19
	1800	115/208-230	56	AUTO	C1303	8.2/4.0-4.1	28	10.78	1, 19
1 1/2	1800	115/208-230	56	AUTO	C1315	10.6/5.5-5.3	34	11.85	1, 111
	1800	115/208-230	56	AUTO	C1302	9.6/5.2-4.8	35	11.91	1, 50, 111
	1800	115/208-230	56	AUTO	C1909	14.0/7.2-7.0	49	13.96	1, 50, 111

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design For Reduced Amperage
- * 3 = Split Phase Design
- * 9 = Shaft Extension 1-7/8" Long by 1/2" Diameter

- * 19 = 1.25 Service Factor
- * 50 = Designed For 50Hz Operation
- * 93 = Permanent Split Capacitor-Switchless
- * 111 = 1.3 Service Factor

Features:

- Economical split phase design
- X909 has 1/2" diameter x 1.5" shaft with flat
- X910 and X911 have 1/2" dia. X2-1/2" long shaft with two flats, 90 degrees apart
- Thermal protection, as noted
- Ball bearings



SINGLE SPEED

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1725	115	48Y	MANUAL	X909	4	10	7.62	3
1/2	900	208-230	56Y	AUTO	F780	3.9-3.6	40	11.91	93

TWO SPEED

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1725/1140	115	48YZ	AUTO	X910	4.1/2.5	17	11.09	3
1/3	1725/1140	115	48YZ	AUTO	X911	5.3/2.9	18	11.34	3

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design For Reduced Amperage
- * 3 = Split Phase Design
- * 9 = Shaft Extension 1-7/8" Long by 1/2" Diameter

- * 19 = 1.25 Service Factor
- * 50 = Designed For 50Hz Operation
- * 93 = Permanent Split Capacitor-Switchless
- * 111 = 1.3 Service Factor

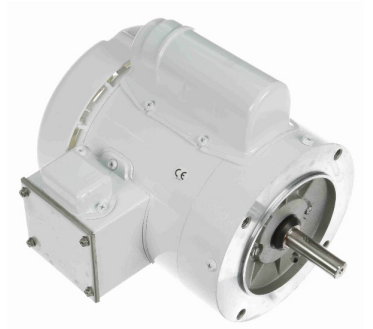
POWERWASH™ XT WASH DOWN DUTY®, SINGLE PHASE MOTORS

WHITE EPOXY, TOTALLY ENCLOSED MOTORS



Features:

- Encapsulated electronic starting switch is impervious to moisture
- Capacitor start induction run design for high starting torque unless otherwise noted
- Class F insulation
- 1.15 service factor
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each endshield
- Stainless steel conduit box cover, nameplate, fan guard (TEFC) and hardware
- Cast oversized conduit box with high temperature nitrile gaskets and threaded entrance
- Plugged drain holes in each endshield for all angle mounting
- Internal corrosion resistant coatings on frame, base, endshields, rotor and stator
- USDA-approved, white epoxy RUST-OLEUM® paint
- UL recognized, CSA certified and CE mark



RIGID BASE

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/2	1800	115/208-230	56	N680	8.8/4.4-4.4	30	10.81	13
3/4	1800	115/208-230	56	N681	10.8/5.4-5.4	25	11.31	13
1	1800	115/208-230	56	N682	12.8/6.4-6.4	34	11.81	13
	1800	115/208-230	143T	N685	12.8/6.4-6.4	78	12.43	13
1 1/2	1800	115/208-230	145T	N683	19.0/9.5-9.5	50	13.75	13
2	1800	115/208-230	182T	N684A	25.2/12.6-2.6	65	13.46	13

C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115/208-230	56C	N530	5.2/2.8-2.6	28	10.69	13
	1800	115/208-230	56C	N531	6.4/3.2-3.2	23	10.69	13
1/2	3600	115/208-230	56C	N532	7.6/4.0-3.8	27	10.69	13
	1800	115/208-230	56C	N523	8.8/4.4-4.4	26	11.19	13
3/4	3600	115/208-230	56C	N524	10.0/5.2-5.0	30	11.69	13
	1800	115/208-230	56C	N525	10.8/5.4-5.4	31	11.69	13
1	3600	115/208-230	56C	N526	12.0/6.2-6.0	32	12.19	13
	1800	115/208-230	56C	N527	12.8/6.4-6.4	33	12.19	13
1 1/2	3600	115/208-230	56C	N528	17.0/8.5-8.5	50	12.69	13
	1800	115/208-230	56C	N529	19.0/9.5-9.5	23	13.69	13

C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115/208-230	56C	N556	5.2/2.7-2.6	50	10.41	13
	1800	115/208-230	56C	N557	6.4/3.2-3.2	25	10.69	13
1/2	3600	115/208-230	56C	N558	7.6/4.0-3.8	26	10.69	13
	1800	115/208-230	56C	N559	8.8/4.4-4.4	27	11.19	13
3/4	3600	115/208-230	56C	N540	10.0/5.2-5.0	31	11.69	13
	1800	115/208-230	56C	N541	10.8/5.4-5.4	31	11.69	13
1	3600	115/208-230	56C	N542	12.0/6.2-6.0	33	12.19	13
	1800	115/208-230	56C	N543	12.8/6.4-6.4	34	12.19	13
1 1/2	3600	115/208-230	56C	N544	17.0/8.5-8.5	36	12.69	13
	1800	115/208-230	56HC	N545	19.0/9.5-9.5	43	13.69	5, 13
2	3600	115/208-230	56HC	N546	20.0/11.4-10.0	55	12.87	5, 13

Footnotes:

* 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes * 13 = F1 Mounting only



POWERWASH™ XT WASH DOWN DUTY®, THREE PHASE MOTORS

WHITE EPOXY, TOTALLY ENCLOSED MOTORS



Features:

- 10:1 variable torque, constant torque speed range as listed below
- MAX GUARD® class F insulation system
- 1.15 service factor on sine wave, 1.0 service factor on IGBT power
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each endshield (Drive end only on TENV motors)
- Stainless steel conduit box cover, nameplate, fan guard (TEFC only) and hardware
- Cast oversized conduit box with high temperature nitrile gaskets and threaded entrance
- Plugged drain holes in each endshield for all angle mounting
- Internal corrosion resistant coatings on frame, base, endshields, rotor and stator
- USDA-approved, white epoxy RUST-OLEUM® paint
- UL recognized, CSA certified and CE mark



RIGID BASE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	1800	208-230/460	56	E286	✓	10:1	75.5	1.2-1.6/.8	24	9.68	ES, N, 20, 50
1/2	1800	208-230/460	56	N322	✓	10:1	74.0	2.0-2.0/1.0	25	10.81	V
3/4	1800	208-230/460	56	N320	✓	10:1	77.0	2.8-2.8/1.4	25	10.81	V
1	1800	208-230/460	56	N326	✓	10:1	85.5	3.2/1.6	37	12.25	V
	1800	230/460	143T	N310A	✓	10:1	85.5	3.2/1.6	39	12.75	V
	1200	230/460	145T	N323		10:1	82.5	4.2/2.1	45	13.25	V
1 1/2	1800	230/460	145T	N321A	✓	10:1	86.5	4.4/2.2	51	12.75	V
2	1800	230/460	145T	N312A	✓	10:1	86.5	5.6/2.8	46	13.75	V
3	3600	230/460	145T	N324	✓	10:1	86.5	8.0/4.0	52	13.68	V
	1800	230/460	182T	N314B	✓	10:1	89.5	8.2/4.1	69	13.96	V, 13
5	3600	230/460	184T	N315A	✓	10:1	88.5	12.0/6.0	75	14.46	V, 13
	1800	230/460	184T	N316B	✓	10:1	89.5	13.0/6.5	85	14.96	V, 13
7 1/2	3600	230/460	184T	N317A	✓	10:1	89.5	16.8/8.4	87	15.96	V, 13
	3600	230/460	213T	N325	✓	10:1	89.5	17.6/8.8	87	16.59	V, 68
	1800	208-230/460	213T	N318B	✓	10:1	91.7	20.8-19.6/9.8	137	18.04	V
10	1800	208-230/460	215T	N319B	✓	10:1	91.7	14.0-26.4/13.2	165	19.54	V

Footnotes:

- * 1 = F1 Mounting Only
- * 20 = 1.35 Service Factor
- * 50 = Design For 50HZ Operation
- * 68 = Rated 60/50 Hertz At Next Lowest HP
- * ES = Energy Saver Design
- * N = Totally Enclosed Non-Ventilated
- * V = Suitable for 10:1 CT 60 Minute Duty, Otherwise 2:1 CT



POWERWASH™ XT WASH DOWN DUTY®, THREE PHASE MOTORS

WHITE EPOXY, TOTALLY ENCLOSED MOTORS



C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1800	208-230/460	56C	N640	✓	1000:1	68.0	1.1-1.1/.55	21	9.56	N
	3600	208-230/460	56C	N665	✓	1000:1	77.0	1.1-1.1/.55	19	10.06	N
1/3	1800	208-230/460	56C	N641	✓	1000:1	72.0	1.3-1.3/.65	21	9.56	N
	1800	208-230/460	56C	N666	✓	10:1	68.0	1.7-1.7/.85	21	10.69	V
1/2	3600	208-230/460	56C	N667	✓	1000:1	82.5	1.7-1.6/.80	22	10.06	N
	1800	208-230/460	56C	N642	✓	1000:1	78.5	1.8-1.8/.9	25	10.06	N
	1800	208-230/460	56C	N668	✓	10:1	74.0	2.7-2.8/1.4	25	11.19	V
3/4	3600	208-230/460	56C	N643	✓	1000:1	84.0	2.6-2.4/1.2	50	11.06	N
	1800	208-230/460	56C	N644	✓	1000:1	80.0	2.5-2.5/1.25	30	10.56	N
	1800	208-230/460	56C	N669	✓	10:1	77.0	2.7-2.8/1.4	28	11.69	V
1	3600	208-230/460	56C	N645	✓	1000:1	78.5	2.8-2.6/1.3	34	11.56	N
	1800	230/460	56C	N646A	✓	1000:1	85.5	3.1/1.55	39	12.87	V
	1800	230/460	143TC	N647A	✓	10:1	85.5	3.2/1.6	39	12.72	V
1 1/2	3600	208-230/460	56C	N648	✓	1000:1	84.0	4.2-3.8/1.9	42	12.56	N
	1800	230/460	56C	N649A	✓	10:1	86.5	4.3/2.15	51	13.37	V
	1800	230/460	145TC	N650A	✓	10:1	86.5	4.8/2.4	51	13.22	V
2	3600	230/460	56C	N651A	✓	10:1	85.5	4.8/2.4	51	13.37	V
	3600	230/460	145TC	N652A	✓	10:1	85.5	4.8/2.4	51	16.62	V
	1800	230/460	56C	N653A	✓	10:1	86.5	5.8/2.9	45	13.87	V
	1800	230/460	145TC	N654B	✓	10:1	86.5	5.8/2.9	47	13.72	V
3	3600	230/460	56C	N662A	✓	10:1	86.5	8.0/4.0	56	13.87	V
	3600	230/460	145TC	N655B	✓	10:1	86.5	8.0/4.0	56	13.47	V
	1800	230/460	182TC	N656C	✓	10:1	89.5	7.8/3.9	79	14.47	V
5	3600	230/460	184TC	N657C	✓	10:1	88.5	12.0/6.0	81	14.97	V
	1800	230/460	184TC	N658C	✓	10:1	89.5	12.6/6.3	108	14.97	V
7.5	3600	230/460	213TC	N659B	✓	10:1	89.5	18.6/9.3	110	18.77	V
	1800	230/460	213TC	N660A	✓	10:1	91.7	19.6/9.8	130	18.77	V
10	3600	230/460	215TC	N663	✓	10:1	91.7	23.6/11.8	170	21.83	V
	1800	230/460	215TC	N661A	✓	10:1	91.7	26.4/13.2	174	20.27	V
15	3600	230/460	215TC	N664A	✓	10:1	91.0	35.0/17.6	152	20.96	V

Footnotes:

- * 1 = F1 Mounting Only
- * 20 = 1.35 Service Factor
- * 50 = Design For 50HZ Operation
- * 68 = Rated 60/50 Hertz At Next Lowest HP

- * ES = Energy Saver Design
- * N = Totally Enclosed Non-Ventilated
- * V = Suitable for 10:1 CT 60 Minute Duty, Otherwise 2:1 CT



POWERWASH™ XT WASH DOWN DUTY®, THREE PHASE MOTORS

WHITE EPOXY, TOTALLY ENCLOSED MOTORS



RIGID BASE WITH C-FACE

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/4	1800	208-230/460	56C	N564	✓	1000:1	68.0	1.1-1.1/.55	24	10.08	13, N
	1800	575	56C	N620A	✓	1000:1	68.0	0.44	23	10.06	13, N
1/3	3600	208-230/460	56C	N631	✓	10:1	77.0	1.1-1.1/.55	22	10.08	13, V
	1800	208-230/460	56C	N628	✓	10:1	68.0	1.7-1.7/.85	23	10.69	13, V
	1800	575	56C	N621	✓	10:1	68.0	0.68	20	10.69	13, V
1/2	3600	208-230/460	56C	N566	✓	1000:1	76.0	1.7-1.6/.8	27	10.58	13, N
	1800	208-230/460	56C	N567	✓	1000:1	78.5	1.8-1.8/.9	26	10.06	13, N
	1800	208-230/460	56C	N632	✓	10:1	74.0	1.9-2.0/1.0	22	11.19	13, V
	1800	575	56C	N622	✓	1000:1	78.5	0.8	25	10.08	13, N
	1200	208-230/460	56C	N568	✓	1000:1	77.0	2.3-2.3/1.15	23	11.56	13, N
3/4	3600	208-230/460	56C	N569	✓	1000:1	75.5	2.6-2.4/1.2	50	11.08	13, N
	1800	208-230/460	56C	N599	✓	1000:1	80.0	2.5-2.5/1.25	31	10.56	13, N
	1800	208-230/460	56C	N633	✓	10:1	77.0	2.9-2.8/1.4	26	11.19	13, V
	1800	575	56C	N623	✓	10:1	77.0	1.1	31	11.19	13, V
	1200	208-230/460	56C	N600	✓	1000:1	78.5	3.0-3.0/1.5	25	13.06	13, N
1	3600	208-230/460	56C	N601	✓	1000:1	78.5	2.8-2.6/1.3	35	11.56	13, N
	1800	230/460	56C	N602A	✓	10:1	85.5	3.1/1.6	42	12.62	13, V
	1800	575	56C	N627A	✓	10:1	85.5	1.3	42	12.41	13, V
	1800	230/460	143TC	N626A	✓	10:1	85.5	3.2/1.6	42	12.75	13, V
	1200	230/460	56HC	N604A	✓	10:1	82.5	3.8/1.9	42	13.16	13, V
1 1/2	3600	208-230/460	56C	N605	✓	1000:1	84.0	4.2-3.8/1.9	43	12.56	13, N
	1800	230/460	56C	N606A	✓	10:1	86.5	4.8/2.4	47	13.37	13, V
	1800	230/460	145TC	N607A	✓	10:1	86.5	4.3/2.1	47	13.22	13, V
	1200	575	145TC	N629A	✓	10:1	86.5	1.9	47	13.22	13, V
	1200	230/460	182TC	N608A	✓	10:1	87.5	5.2/2.6	80	14.97	V
2	3600	230/460	56HC	N609A	✓	10:1	85.5	4.8/2.4	49	13.62	5, 17, V
	3600	230/460	145TC	N610A	✓	10:1	85.5	4.8/2.4	49	13.22	13, V
	1800	230/460	56C	N611A	✓	10:1	86.5	6.0/3.0	49	13.66	13, V
	1800	575	145TC	N630	✓	10:1	86.5	2.3	46	13.75	13, V
	1800	230/460	145TC	N612A	✓	10:1	86.5	5.6/2.8	46	13.75	13, V
3	3600	230/460	145TC	N613A	✓	10:1	86.5	8.0/4.0	46	13.75	13, V
	3600	230/460	182TC	N634	✓	10:1	86.5	7.6/3.8	80	14.97	13, 19, V
	1800	230/460	182TC	N614B	✓	10:1	89.5	7.8/3.9	80	14.47	V
5	3600	230/460	184TC	N615B	✓	10:1	88.5	12.0/6.0	79	14.47	V
	1800	230/460	184TC	N616B	✓	10:1	88.5	12.8/6.4	84	14.97	V
7 1/2	3600	208-230/460	213TC	N617B	✓	10:1	89.5	19.7-18.6/9.3	145	118.77	V
	3600	230/460	184TC	N635	✓	10:1	89.5	17.6/8.8	94	15.97	V
	1800	208-230/460	213TC	N618B	✓	10:1	91.7	20.8-19.6/9.8	150	18.77	V
10	3600	230/460	215TC	N637A	✓	10:1	90.2	23.6/11.8	143	20.27	V
	1800	230/460	215TC	N619A	✓	10:1	91.7	26.6/13.3	145	18.71	V
	1800	208-230/460	215TC	N619B	✓	10:1	91.7	14.0-26.4/13.2	162	20.27	V

Footnotes:

- * 1 = F1 Mounting Only
- * 20 = 1.35 Service Factor
- * 50 = Design For 50HZ Operation
- * 68 = Rated 60/50 Hertz At Next Lowest HP
- * ES = Energy Saver Design
- * N = Totally Enclosed Non-Ventilated
- * V = Suitable for 10:1 CT 60 Minute Duty, Otherwise 2:1 CT



POWERWASH™ SXT WASH DOWN DUTY®, SINGLE PHASE MOTORS IP55

ALL STAINLESS STEEL, TOTALLY ENCLOSED MOTORS

Features:

- Capacitor start induction run design for high starting torque unless otherwise noted
- 1.15 service factor on sinewave
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each end
- 300 series stainless steel external construction: frame, endshields, conduit box, fan guard, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator
- 100% paint-free constructions
- One way condensation drains in each endshield and conduit box for all angle mounting
- Nitrile Buna - N gaskets and seals on conduit box, through bolts and endshields
- Nameplate information laser etched on frame
- UL recognized, CSA certified and CE mark



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/2	3600	115/208-230	56C	N340	7.4/3.7	29.5	11.10	
	1800	115/208-230	56C	N341	8.2/4.1	31.5	11.10	
3/4	3600	115/208-230	56C	N342	9.2/4.6	31.5	11.80	
	1800	115/208-230	56C	N343	9.8/4.9	39.0	11.80	
1	3600	115/208-230	56C	N344	12.4/6.2	39.0	12.30	
	1800	115/208-230	56C	N345	13.6/6.8	42.5	12.30	
1 1/2	3600	115/208-230	56C	N346	16.4/8.5-8.2	42.5	13.20	
	1800	115/208-230	56C	N347	15.8/7.9	52.5	13.20	
2	3600	115/208-230	145TC	N348	19.0/9.5	64.5	14.20	
	1800	115/208-230	145TC	N349	16.4/8.2	64.5	14.20	

POWERWASH™ SXT-PLUS WASH DOWN DUTY®, SINGLE PHASE MOTORS IP56

STAINLESS/BISSC, TOTALLY ENCLOSED MOTORS



Features:

- Encapsulated electronic starting switch is impervious to moisture
- Capacitor start induction run design for high starting torque, except as noted
- 1.15 service factor on sine wave
- Double sealed ball bearings with moisture resistant, high temperature grease
- 303 stainless steel shaft with spring loaded contact seals in each end.
- 300 series stainless steel external construction: frame, endshields, conduit box, fan guard, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator.
- 100% Paint-free constructions
- Viton® o-rings, shaft seals, and gaskets for superior sealing against chemicals
- Hydrophobic breather in opposite endshield and conduit box equalize air pressure
- Nameplate information laser etched on frame
- BISSC certified for baking industry
- UL recognized, CSA certified and CE mark



C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	1800	115/208-230	56C	N270	5.4/3.0-2.7	35	11.70	N
1/2	1800	115/208-230	56C	N271	6.6/3.5-3.3	38	12.70	N
3/4	1800	115/208-230	56C	N272	7.6/4.2-3.8	42	12.70	N, 1
1	1800	115/208-230	56C	N273	9.0/5.0-4.5	49	13.70	N, 1
1 1/2	1800	115/208-230	145TC	N274	14.8/7.8-7.4	53	14.87	1
2	1800	115/208-230	145TC	N275	20.0/10.2-10.0	57	14.87	1

C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	1800	115/208-230	56HC	N280	5.4/3.0-2.7	35	12.20	N, 5
1/2	3600	115/208-230	56HC	N281	7.6/4.0-3.8	38	12.20	N, 5
	1800	115/208-230	56HC	N282	6.6/3.5-3.3	38	12.70	N, 5
3/4	1800	115/208-230	56HC	N283	7.6/4.2-3.8	42	12.70	N, 1, 5
1	3600	115/208-230	56HC	N284	12.0/6.8-6.0	49	13.70	N, 5
	1800	115/208-230	56HC	N285	9.0/5.0-4.5	49	13.70	N, 1, 5
1 1/2	3600	115/208-230	56HC	N286	13.6/7.2-6.8	49	13.81	1
	1800	115/208-230	145TC	N287	14.8/7.8-7.4	53	14.81	1
2	3600	115/208-230	145TC	N288	17.6/9.8-8.8	57	14.81	1
	1800	115/208-230	145TC	N289	20.0/10.2-10.0	57	14.81	1

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design For Reduced Amperage
- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * N = Totally Enclosed Non-Ventilated

POWERWASH™ SXT WASH DOWN DUTY®, THREE PHASE MOTORS IP55

ALL STAINLESS STEEL, TOTALLY ENCLOSED MOTORS

Features:

- Suitable for use on VFD 10:1 variable torque, 10:1 (TEFC) or 1000:1 (TENV) constant torque
- MAX GUARD® Class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each end. (Drive end only on TENV)
- 300 series stainless steel external construction: frame, endshields, conduit box, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator
- 100% Paint-free construction
- One way condensation drains in each endshield and conduit box for all angle mounting
- Nitrile Buna - N gaskets and seals on conduit box, through bolts and endshields
- Rated 60/50 hertz, 190/380 volt at next lower horsepower
- Nameplate information laser etched on frame
- UL recognized, CSA certified and CE mark



C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	1800	208-230/460	56C	N430	1000:1	78.5	1.2-1.3/.65	30	9.78	N
	1200	208-230/460	56C	N426	1000:1	80.0	2.1-2/1	33	9.76	N
1/2	1800	208-230/460	56C	N431	1000:1	81.5	1.5-1.6/.8	30	9.78	N
	1200	208-230/460	56C	N426	1000:1	80.0	2.1-2/1	33	9.76	N
3/4	1800	208-230/460	56C	N432	1000:1	82.5	2.4-2.3/1.15	35	9.78	N
	1200	208-230/460	56C	N427	1000:1	80.0	3 -3/1.5	46	9.78	N
1	1800	208-230/460	56C	N428A	1000:1	85.5	3.0/1.5	42	11.00	N
	1800	208-230/460	56C	N433A	10:1	85.5	3.2-3/1.5	43	13.77	
	1800	208-230/460	143TC	N434B	10:1	85.5	3.2-3/1.5	43	13.62	
	1200	208-230/460	56C	N429	10:1	82.5	3.8-3.8/1.9	44	13.10	
1 1/2	1800	208-230/460	56C	N435A	10:1	86.5	4.8-4.4/2.2	46	13.77	
	1800	208-230/460	145TC	N436A	10:1	86.5	4.8-4.4/2.2	48	13.62	
2	1800	208-230/460	56C	N437A	10:1	86.5	5.8-5.4/2.7	52	13.77	
	1800	208-230/460	145TC	N438B	10:1	86.5	5.8-5.4/2.7	52	13.62	

Footnotes:

* 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes

* N = Totally Enclosed Non-Ventilated

POWERWASH™ SXT WASH DOWN DUTY®, THREE PHASE MOTORS IP55

ALL STAINLESS STEEL, TOTALLY ENCLOSED MOTORS



Features:

- Suitable for use on VFD 10:1 variable torque, 10:1 (TEFC) or 1000:1 (TENV) constant torque
- MAX GUARD® Class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Double sealed ball bearings
- 303 stainless steel shaft with spring loaded contact seals in each end. (Drive end only on TENV)
- 300 series stainless steel external construction: frame, endshields, conduit box, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator
- 100% Paint-free construction
- One way condensation drains in each endshield and conduit box for all angle mounting
- Nitrile Buna - N gaskets and seals on conduit box, through bolts and endshields
- Rated 60/50 hertz, 190/380 volt at next lower horsepower
- Nameplate information laser etched on frame
- UL recognized, CSA certified and CE mark



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	CT SPEED RANGE	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	208-230/460	56C	N450	1000:1	74.0	1.1-1/.5	20	9.78	N
	1800	208-230/460	56C	N410	1000:1	78.5	1.2-1.3/.65	30	9.78	N
1/2	3600	208-230/460	56C	N451	1000:1	77.0	1.6-1.5/.75	25	9.78	N
	1800	208-230/460	56C	N411	1000:1	81.5	1.5-1.6/.8	31	9.78	N
	1800	208-230/460	56C	N494	10:1	72.0	1.9-2.0/1.0	31	13.77	
	1200	208-230/460	56C	N495	1000:1	80.0	2.1-2/1	31	9.78	N
3/4	3600	208-230/460	56C	N452	1000:1	78.5	2.2-2/1	31	9.78	N
	1800	208-230/460	56C	N412	1000:1	82.5	2.4-2.3/1.15	34	9.78	N
	1800	208-230/460	56HC	N496	10:1	84.0	6-5.6/2.8	32	13.77	
	1200	208-230/460	56C	N497	1000:1	80.0	3 -3/1.5	46	11.30	N
1	3600	208-230/460	56C	N453	10:1	80.0	2.9-2.6/1.3	25	13.77	5
	3600	230/460	143TC	N454A	10:1	80.0	2.6/1.3	44	13.62	
	1800	208-230/460	56HC	N419A	10:1	85.5	3.2-3/1.5	46	13.77	
	1800	230/460	143TC	N414A	10:1	85.5	3.0/1.5	45	13.62	
	1200	230/460	56HC	N498	10:1	82.5	3.8/1.9	46	9.78	5
	1200	230/460	145TC	N499	10:1	82.5	3.8/1.9	46	13.20	
	3600	208-230/460	56HC	N455A	10:1	84.0	4.2-3.8/1.9	42	13.77	
	3600	230/460	143TC	N456A	10:1	84.0	3.8/1.9	45	13.62	
	1800	208-230/460	56HC	N415A	10:1	86.5	4.8-4.4/2.2	46	13.77	
	1800	230/460	145 C	N416A	10:1	86.5	4.8-4.4/2.2	47	13.62	
2	3600	208-230/460	56HC	N457A	10:1	85.5	5.3-5/2.5	45	13.77	
	3600	230/460	145TC	N458A	10:1	85.5	5.3-5/2.5	47	13.62	
	1800	208-230/460	56HC	N417A	10:1	86.5	5.8-5.4/2.7	52	13.77	
	1800	230/460	145TC	N418A	10:1	86.5	5.8-5.4/2.7	57	13.62	
3	3600	230/460	145TC	N459	10:1	86.5	7.2/3.6	57	14.12	

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * N = Totally Enclosed Non-Ventilated



POWERWASH™ SXT-PLUS WASH DOWN DUTY®, THREE PHASE MOTORS IP56

STAINLESS/BISSC, TOTALLY ENCLOSED MOTORS

Features:

- Suitable for use on VFD 10:1 variable torque, 10:1 (TEFC) or 1000:1 (TENV) constant torque, 1.0 service factor
- MAX GUARD® Class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Double sealed ball bearings with moisture resistant, high temperature grease
- 300 series stainless steel external construction: frame, end-shields, shaft, conduit box, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator
- 100% paint-free construction
- Viton® o-rings, shaft seals, and gaskets for superior sealing against chemicals
- Hydrophobic breather in OP endshield and conduit box equalize air pressure
- Nameplate information laser etched on frame
- BISSC certified for baking industry
- UL recognized, CSA certified and CE mark



C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	NOM. EFF	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	1800	208-230/460	48C	N460	72.0	1.4-1.4/.7	37	9.83	N, 13
	3600	208-230/460	56C	N480A	82.5	1.8-1.7/.85	31	10.47	N, 13
1/2	1800	208-230/460	48C	N461	76.0	2.3-2.2/1	35	11.58	N, 13
	1800	208-230/460	56C	N462A	78.5	1.9-1.8/.9	36	11.22	N, 13
3/4	3600	208-230/460	56C	N481A	84.0	2.8-2.6/1.3	35	10.97	N, 13
	1800	208-230/460	56C	N463A	80.0	2.7-2.5/1.25	41	11.72	N, 13
1	3600	208-230/460	56C	N482A	85.5	3.2-3/1.5	45	12.22	N, 13
	1800	230/460	56C	N464B	85.5	3.6/1.8	44	11.94	
	1800	230/460	56C	N465B	85.5	3.6/1.8	49	11.94	
	1800	230/460	143TC	N466A	85.5	3.6/1.8	45	12.00	
	1800	230/460	143TC	N467A	85.5	3.6/1.8	46	12.00	13
	3600	230/460	143TC	N483A	84.0	5.0/2.5	43	12.00	
1 1/2	1800	230/460	56C	N468B	86.5	5.4/2.7	49	12.69	
	1800	230/460	145TC	N469A	86.5	5.4/2.7	54	12.75	
	3600	230/460	145TC	N484A	85.5	5.4/2.7	40	12.75	13
2	1800	230/460	56C	N470B	86.5	6.4/3.2	53	13.19	13
	1800	230/460	145TC	N471A	86.5	6.4/3.2	82	13.25	
	3600	230/460	145TC	N485A	86.5	9.2/4.6	56	13.00	13
3	1800	230/460	182TC	N448B	89.5	8.8/4.4	65	14.77	13
	3600	230/460	184TC	N486A	88.5	13.6/6.8	97	15.27	13
5	1800	230/460	184TC	N449B	89.5	14.4/7.2	75	15.77	

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = F1 Mounting Only
- * N = Totally Enclosed Non-Ventilated

POWERWASH™ SXT-PLUS WASH DOWN DUTY®, THREE PHASE MOTORS IP56

STAINLESS/BISSC, TOTALLY ENCLOSED MOTORS



Features:

- Suitable for use on VFD 10:1 variable torque, 10:1 (TEFC) or 1000:1 (TENV) constant torque, 1.0 service factor
- MAX GUARD® Class F insulation system
- 1.15 service factor on sinewave, 1.0 service factor on IGBT power
- Double sealed ball bearings with moisture resistant, high temperature grease
- 300 series stainless steel external construction: frame, end-shields, shaft, conduit box, mounting base and hardware for superior corrosion resistance
- Internal corrosion resistant coatings on rotor and heavy polyester varnish on the stator
- 100% paint-free construction
- Viton® o-rings, shaft seals, and gaskets for superior sealing against chemicals
- Hydrophobic breather in OP endshield and conduit box equalize air pressure
- Nameplate information laser etched on frame
- BISSC certified for baking industry
- UL recognized, CSA certified and CE mark



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	NOM. EFF	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/2	3600	208-230/460	56HC	N439A	82.5	1.8-1.7/.85&2/1	34	10.47	N,5,13
	1800	208-230/460	56HC	N400	78.5	1.8/.9	37	12.54	N, 5, 13
	1200	208-230/460	56HC	N180A	77.0	2.45-2.4/1.2&2/1	41	11.47	N, 5, 13
3/4	3600	208-230/460	56HC	N440A	84.0	2.8-2.6/1.3&2.2/1.1	35	10.97	N, 5, 13
	1800	208-230/460	56HC	N401	80.0	2.7-2.5/1.25	42	13.04	N, 5, 13
	1200	208-230/460	56HC	N181A	78.5	3.4-3.2/1.6&2.6/1.3	51	13.22	N, 5, 13
1	3600	208-230/460	56C	N441A	85.5	3.2-3/1.5&2.8/1.4	46	13.22	N, 5, 13
	1800	230/460	56HC	N402A	85.5	3.6/1.8	45	13.81	
	1800	230/460	56C	N291A	85.5	3.6/1.8&3.8/1.9	38	11.94	
	1800	230/460	143TC	N403A	85.5	3.6/1.8	44	12.37	
	1800	230/460	143TC	N292	85.5	3.6/1.8&4.0/2.0	44	12.00	13
	1200	230/460	56HC	N182B	82.5	4.2/2.0/1.0&4.0/2.0	50	12.69	13
1 1/2	3600	230/460	143TC	N442A	84.0	5.0/2.5&4.0/2.0	41	11.75	13
	1800	230/460	56HC	N293A	86.5	5.4/2.7&4.0/2.0	50	12.69	
	1800	230/460	145TC	N404A	86.5	5.4/2.7&6.1-6.3	49	12.75	
	1200	230/460	182TC	N183B	87.5	6.4/3.2&5.6/2.8	89	14.77	13
2	3600	230/460	145TC	N443A	85.5	5.6/2.8&6.8/3.4	58	12.75	13
	1800	230/460	56HC	N294A	86.5	6.4/3.2&6.2/3.1	56	13.19	13
	1800	230/460	145TC	N405A	86.5	7.0/3.5&8.0/4.0	49	13.25	
3	3600	230/460	145TC	N444	86.5	9.2/4.6&7.8/3.0	52	13.00	13
	1800	230/460	182TC	N406A	89.5	8.8/4.0	88	14.77	13
5	3600	230/460	184TC	N445A	88.5	14.0/7.0&16.0/8.0	99	15.27	13
	1800	230/460	184TC	N407A	89.5	14.4/7.2	96	15.77	
7 1/2	3600	230/460	213TC	N446A	90.2	20.0/10.0&16.6/8.3	145	18.69	13
	1800	230/460	213TC	N408A	91.7	25.2/12.6&24.8/12.4	174	18.69	13
10	3600	230/460	215TC	N447A	91.7	26.0/13.0&24.8/12.4	192	18.69	13
	1800	230/460	213TC	N409A	91.7	32.4/16.2&31.2/15.6	189	18.69	13

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = F1 Mounting Only
- * N = Totally Enclosed Non-Ventilated



POWERWASH™ EXTREME WASH DOWN DUTY®, THREE PHASE MOTORS IP66

STAINLESS/BISSC, TOTALLY ENCLOSED MOTORS



Features:

- Complete motor encapsulation
- Suitable for use on VFD 10:1 variable torque, 10:1 (TEFC) or 1000:1 (TENV) constant torque, 1.0 service factor
- MAX GUARD® Class F insulation system
- Potted lead entrance
- 1.15 service factor on sinewave, 1.0 service factor on IGT power
- Double sealed ball bearings with moisture resistant, high temperature grease
- 300 series stainless steel external construction: frame, endshields, shaft, conduit box, mounting base and hardware for superior corrosion resistance
- 100% paint-free construction
- Viton® o-rings, shaft seals, and gaskets for superior sealing against chemicals
- Nameplate information laser etched on frame
- BISSC certified for baking industry
- UL recognized, CSA certified and CE mark



C-FACE FOOTLESS

HP	RPM	VOLTS	FRAME	CAT NO.	NOM. EFF	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	1800	208-230/460	48C	N701	70.5	1.4-1.4/.7	38	9.58	N
	3600	208-230/460	56C	N703	82.5	1.8-1.7/.85	36	10.47	N
1/2	1800	208-230/460	48C	N704	76.0	2.3-2.2/1.1	41	11.33	N
	1800	208-230/460	56C	N705	78.5	1.9-1.8/.9	44	10.97	N
3/4	3600	208-230/460	56C	N707	84.0	2.8-2.6/1.3	40	10.72	N
	1800	208-230/460	56C	N708	80.0	2.7-2.5/1.25	45	11.47	N
1	3600	208-230/460	56C	N710	85.5	3.2-3/1.5	47	11.22	N
	1800	230/460	56C	N711A	85.5	3.6/1.8	32	11.94	
1 1/2	3600	230/460	143TC	N713	84.0	5.0/2.5	46	11.69	
	1800	230/460	56C	N715A	86.5	5.4/2.7	80	17.75	
	1800	230/460	143TC	N716	86.5	5.4/2.7	52	12.69	
2	3600	230/460	145TC	N718	85.5	5.6/2.8	57	12.69	
	1800	230/460	56C	N720A	86.5	6.4/3.2	58	13.19	
	1800	230/460	145TC	N721	86.5	7.0/3.5	53	13.19	

C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	NOM. EFF	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/2	3600	208-230/460	56C	N753	82.5	1.7-1.6/.8	37	10.47	N
	1800	208-230/460	56C	N755	78.5	1.7-1.6/.8	44	10.97	N
3/4	3600	208-230/460	56C	N757	84.0	2.6-2.4/1.2	41	10.72	N
	1800	208-230/460	56C	N758	80.0	2.4-2.3/1.15	46	11.47	N
1	3600	208-230/460	56C	N760	85.5	2.8-2.6/1.3	44	11.22	N
	1800	230/460	56C	N761A	85.5	3.2/1.6	43	11.94	
1 1/2	3600	230/460	143TC	N763	84.0	4.0/2.0	47	11.75	
	1800	230/460	56C	N765A	86.5	4.8/2.4	49	12.44	
	1800	230/460	143TC	N766	86.5	4.8/2.4	55	12.75	
2	3600	230/460	145TC	N768	85.5	4.8/2.4	55	12.75	
	1800	230/460	56C	N770A	86.5	5.8/2.9	62	13.25	
	1800	230/460	145TC	N771	86.5	5.8/2.9	58	13.25	

Footnotes:

* N = Totally Enclosed Non-Ventilated

JET PUMP, TWO-COMPARTMENT MOTORS

SINGLE PHASE, DRIPPROOF MOTORS



Features:

- Two-compartment design for easy servicing
- Not for use in pool pump applications
- 50° C ambient, as noted
- Fixed CW rotation, viewed opposite shaft end
- UL recognized and CSA certified



C-FACE FOOTLESS, 56C/56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115	56C	H439	1.75	6.2	18	11.03	3, 69
	3600	115	56J	H440	1.75	6.2	18	11.54	3, 69
	3600	115/230	56C	C1081	1.75	6.2/3.1	15	11.03	2, 69
	3600	115/230	56J	C1087	1.75	6.2/3.1	15	11.54	2, 69
1/2	3600	115/230	56C	C1082	1.60	8.2/4.1	15	11.03	2, 69
	3600	115/230	56J	C1088	1.60	8.2/4.1	15	11.54	2, 69
3/4	3600	115/230	56C	C1083	1.50	11.6/5.8	17	12.01	18, 82
	3600	115/230	56C	C1083A	1.50	13.0/6.5	17	13.47	18, 69, 8 2
	3600	115/230	56J	C1089	1.50	11.6/5.8	17	12.42	2
	3600	115/230	56J	C1089A	1.50	13.0/6.5	17	12.52	2, 69
1	3600	115/230	56C	C1084	1.40	14.2/7.1	25	13.47	2, 69
	3600	115/230	56J	C1090	1.40	14.2/7.1	26	13.98	2, 69
1 1/2	3600	115/230	56C	C1085	1.30	15.8/7.9	21	13.47	1, 69
	3600	115/230	56J	C1091	1.30	15.8/7.9	21	13.98	1, 69
2	3600	115/230	56C	C1086	1.20	19.2/9.6	23	13.47	1, 69
	3600	115/230	56J	C1092	1.20	19.2/9.6	23	13.98	1, 69

C-FACE FOOTED (RIGID BASE), 56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115	56J	H685	1.75	6.2	13	11.54	3, 69
1/2	3600	115/230	56J	C1462	1.60	8.2/4.1	16	11.54	18, 69
3/4	3600	115/230	56J	C1463	1.50	11.6/5.8	19	12.42	2
	3600	115/230	56J	C1463A	1.50	13.0/6.5	19	12.52	2, 69
1	3600	115/230	56J	C1464	1.40	14.2/7.1	26	13.98	2, 69
1.5	3600	115/230	56J	C1465	1.30	15.8/7.9	21	13.98	1, 69
2	3600	115/230	56J	C1466	1.20	19.2/9.6	23	13.98	1, 69

SQUARE - FLANGE

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115/230	56Y	C1168	1.95	6.4/3.2	15	11.59	2
1/2	3600	115/230	56Y	C1169	1.90	10.8/5.4	17	11.59	2
3/4	3600	115/230	56Y	C1170	1.65	12.6/6.3	19	12.59	2
1	3600	115/230	56Y	C1171	1.65	16.4/8.2	21	12.59	2
1 1/2	3600	230	56Y	C1172	1.50	7.6	23	13.12	1
2	3600	230	56Y	C1173	1.30	8.7	23	13.12	1

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 3 = Split Phase Design

- * 8 = Shaft Extension 1-7/8" Long By 1/2" Diameter
- * 18 = 1.15 Service Factor
- * 69 = 50 Degree Ambient

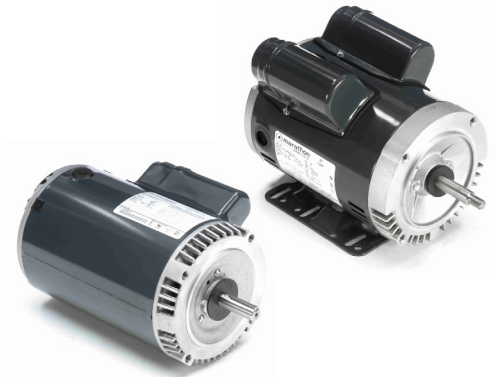


CENTRIFUGAL PUMP (JET PUMP) MOTORS

SINGLE PHASE, DRIPPROOF MOTORS

Features:

- Service factor, as noted
- Double sealed ball bearings, mechanically locked on shaft end
- Capacitor start/capacitor run design for higher efficiency, as noted
- Fixed CW rotation, viewed opposite shaft end
- Automatic reset thermal protector
- 56C = carbon steel shaft with key
- 56J = 416 stainless steel threaded shaft with slinger
- Drip cover not included, see accessories section
- UL recognized and CSA certified



C-FACE FOOTLESS, 56C/56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115/230	56C	J1025	1.75	6.4/3.2	14	10.71	
	3600	115/230	56J	C329	1.75	6.4 / 3.0-3.2	14	11.22	15
	1800/1500	115/208-230	56J	C683	1.35	6.0/3.2-3.0	17	10.82	15, 50
1/2	3600	115/230	56C	C330	1.60	7.6/3.8	18	10.31	
	3600	115/230	56J	C331	1.60	7.6/3.8	18	10.82	15
3/4	3600	115/230	56C	C332	1.50	11.2/5.6	19	11.84	
	3600	115/230	56J	C333	1.50	11.2/5.6	18	12.40	15
	3000	110/220	56C	CG732	1.50	9.8/4.9	28	12.60	50
1	3600	115/230	56C	C334	1.40	13.2/6.6	22	12.59	
	3600	115/230	56J	C335	1.40	13.2/6.6	22	13.14	15
1 1/2	3600	115/208-230	56C	C336	1.30	18.4/9.8-9.2	27	11.38	
	3600	115/230	56J	C337	1.30	18.4/9.2	26	11.89	
2	3600	115/208-230	56C	C338	1.20	21.2/11.5-10.6	38	13.22	
	3600	115/208-230	56J	C339	1.20	21.2/10.6	36	13.73	
3	3600	115/230	56C	C340	1.15	29.4/14.7	38	12.66	1
	3600	115/230	56J	C341	1.15	29.4/14.7	38	13.17	1, 15

C-FACE FOOTED (RIGID BASE), 56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115/208-230	56J	J054	1.75	5.6/2.7-2.8	15	10.94	
1/2	3600	115/208-230	56J	J055	1.60	7.4/3.5-3.7	17	11.19	
3/4	3600	115/208-230	56J	J056	1.50	9.8/4.8-4.9	20	11.44	
1	3600	115/208-230	56J	J057	1.40	12.0/6.2-6.0	23	12.44	
1 1/2	3600	115/208-230	56J	J058	1.30	13.4/7.4-6.7	23	12.43	1
2	3600	115/208-230	56J	J059	1.20	18.2/9.8-9.1	33	11.94	1

Footnotes:

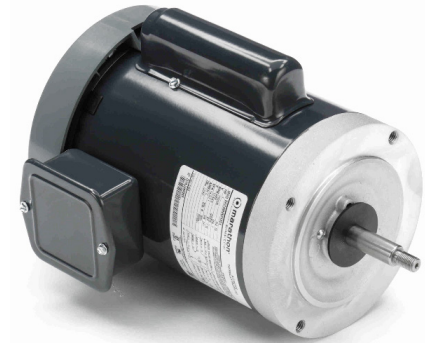
- * 5 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 15 = Fixed CW Rotation, Viewing Opposite Shaft
- * 50 = Design for 50 Hertz Operation
- * ES = Energy Saver Design

CENTRIFUGAL PUMP (JET PUMP) MOTORS

SINGLE PHASE, TOTALLY ENCLOSED MOTORS

Features:

- Service factor, as noted
- Double sealed ball bearings, mechanically locked on shaft end
- Capacitor start/capacitor run design for higher efficiency, as noted
- Reversible CW rotation, viewed opposite shaft end
- Automatic reset thermal protector
- 56C = carbon steel shaft with key
- 56J = 416 stainless steel threaded shaft with slinger
- Drip cover not included, see accessories section
- UL recognized and CSA certified



C-FACE FOOTLESS, 56C/56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	115/230	56J	C1336	1.00	5.6/2.8	14	11.87	
1/2	3600	115/230	56J	C465	1.15	7.4/3.7	19	11.9	15
3/4	3600	115/230	56C	C847	1.00	9.8/4.9	22	11.76	
1	3600	115/230	56J	C352	1.15	13.0/6.5	27	12.95	15
2	3600	115/230	56J	C878	1.00	17.8/8.9	38	14.79	ES,1,15

Footnotes:

- * 5 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 15 = Fixed CW Rotation, Viewing Opposite Shaft
- * 50 = Design for 50 Hertz Operation
- * ES = Energy Saver Design

CENTRIFUGAL PUMP (JET PUMP) MOTORS

SINGLE PHASE, DRIPPROOF MOTORS

Features:

- Service factor, as noted
- Double sealed ball bearings, mechanically locked on shaft end
- Continuous duty
- Nameplated 60/50 hertz, 190/380 volts at next lower HP, as noted
- 56C = carbon steel shaft with key
- 56J = 416 stainless steel threaded shaft with slinger
- UL recognized, CSA certified, and CE mark
- Drip cover not included, see accessories section



C-FACE FOOTLESS, 56C/56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	208-230/460	56C	KG215	1.75	1.5-1.8/0.9	14	9.90	68
	3600	208-230/460	56J	K748	1.75	1.5-1.8/0.9	14	10.40	48
1/2	3600	208-230/460	56C	K216	1.60	2.0-2.0/1.0	16	10.31	48, 68
	3600	208-230/460	56J	K217	1.60	2.0-2.0/1.0	16	10.82	48, 68
	1800	208-230/460	56J	K553	1.25	2.3-2.2/1.1	18	10.41	48
3/4	3600	208-230/460	56C	K218	1.50	2.6-2.6/1.3	18	10.70	48, 68
	3600	208-230/460	56J	K1483	1.50	2.6-2.6/1.3	17	11.22	48
	1800	208-230/460	56J	K555	1.25	3.3-3.0/1.5	24	11.24	48
1	3600	208-230/460	56C	K220	1.40	3.3-3.2/1.6	19	11.30	48, 68
	3600	208-230/460	56J	K221	1.40	3.3-3.2/1.6	19	11.82	48, 68
	1800	208-230/460	56J	K750	1.15	3.6-3.8/1.9	27	11.24	48
1 1/2	3600	208-230/460	56C	K222	1.30	5.0-4.8/2.4	24	10.73	48, 68
	3600	208-230/460	56J	K223	1.30	5.0-4.8/2.4	23	11.24	48, 68
	3600	208-230/460	56J	K1484	1.15	5.0-4.8/2.4	24	11.24	48
	1800	208-230/460	56J	K751	1.15	5.8-5.6/2.8	28	11.84	48
2	3600	208-230/460	56C	K224	1.20	6.0-6.0/3.0	27	11.33	48, 68
	3600	208-230/460	56J	K225	1.20	6.0-6.0/3.0	27	11.84	48, 68
3	3600	208-230/460	56C	K226	1.15	8.9-8.2/4.1	38	12.61	48, 68
	3600	208-230/460	56J	K227	1.15	8.9-8.2/4.1	38	13.12	48, 68

C-FACE FOOTED (RIGID BASE), 56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	NOTES
1/3	3600	208-230/460	56J	J047	1.75	1.2-1.1/.55	21	10.43	68
1/2	3600	208-230/460	56J	J048	1.60	2.1-2.2/1.1	21	10.93	68
3/4	3600	208-230/460	56J	J049	1.50	2.6-2.6/1.3	22	11.22	68
1	3600	208-230/460	56J	J050	1.40	3.7-3.7/1.85	23	10.93	68
1 1/2	3600	208-230/460	56J	J051	1.15	5.0-4.8/2.4	23	11.24	68
2	3600	208-230/460	56J	J052	1.20	6.4-6.2/3.1	30	10.93	68
3	3600	208-230/460	56J	J053	1.15	8.9-8.4/4.2	32	11.93	68

Footnotes:

- * 48 = 48 - Connected for CW Rotation (Canadian Standard)
- * 68 = Rated and Nameplated 60/50 Hertz, 190/380-415 or 380-415 at 1.0 SF

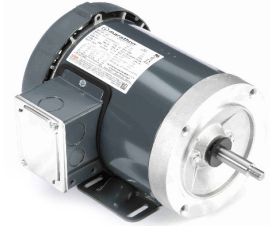
CENTRIFUGAL PUMP (JET PUMP) MOTORS

THREE PHASE, TOTALLY ENCLOSED MOTORS



Features:

- Service factor, as noted
- Double sealed ball bearings, mechanically locked on shaft end
- Continuous duty
- Nameplated 60/50 hertz, 190/380 volts at next lower HP, as noted
- 56C = carbon steel shaft with key
- 56J = 416 stainless steel threaded shaft with slinger
- UL recognized, CSA certified, and CE mark
- Drip cover not included, see accessories section



C-FACE FOOTLESS, 56C/56J

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
1/3	3600	208-230/460	56C	P101	1.35	1.7-2.0/1.0	18	9.94	N, 68
	3600	208-230/460	56C	P102	1.15	2.1-2.2/1.1	21	11.82	12, 18
1/2	3600	200-230/460	56J	K230	1.60	2.1-2.0/1.0	17	11.40	18
	1800	208-230/460	56J	K550	1.00	2.3-2.2/1.1	22	11.52	48
3/4	3600	208-230/460	56C	P103	1.15	3.0-3.2/1.6	22	11.82	68
1	3600	208-230/460	56C	P104A	1.15	3.2-3.0/1.5	45	11.82	68
	3600	230/460	56J	KG234A	1.40	3.0/1.5	24	12.32	68
1 1/2	3600	208-230/460	56C	P105A	1.15	4.2-4.0/2.0	36	13.32	68
	3600	230/460	56J	KG236A	1.30	4.0/2.0	37	13.82	68
2	3600	230/460	56C	P106A	1.15	5.0/2.5	47	14.32	68
	3600	230/460	56J	K238A	1.25	5.0/2.5	46	14.82	68
3	3600	208-230/460	56C	P107A	1.15	8.2-7.6/3.8	45	14.32	68
	3600	230/460	56J	K240A	1.00	7.6/3.8	45	14.82	

HP	RPM	VOLTS	FRAME	CAT NO.	SERVICE FACTOR	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
1/3	3600	208-230/460	56J	J060	1.15	1.7-2.0/1.0	21	10.44	N, 68
1/2	3600	208-230/460	56J	J061	1.15	2.1-2.2/1.1	23	12.32	68
3/4	3600	208-230/460	56J	J062	1.15	3.0-3.2/1.6	23	12.32	68
1	3600	230/460	56J	J063A	1.15	3.0/1.5	24	12.32	68
1 1/2	3600	208-230/460	56J	J064A	1.15	4.2-4.0/2.0	39	13.82	68
2	3600	230/460	56J	J065A	1.15	5.0/2.5	49	14.82	68
3	3600	230/460	56J	J066A	1.15	7.6/3.8	48	14.82	68

Footnotes:

- * 12 = 1.35 Service Factor
- * 18 = 1.15 Service Factor
- * 48 = Connected for CW Rotation (Canadian Standard)
- * 68 = Rated and Nameplated 60/50 Hertz, 190/380-415 or 380-415 at 1.0 SF
- * N = Totally Enclosed Non-Ventilated



CLOSE-COUPLED PUMP, JM MOTORS

SINGLE PHASE, DRIPPROOF MOTORS

Applications:

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in environments that are relatively clean and dry.

Features:

- EMA® JM pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Capacitor start design for high starting torque
- Capacitor start / capacitor run design for higher efficiency, as noted
- Continuous duty
- 1.15 service factor
- UL recognized and CSA certified



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	NOM. EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
1	1800	115/208-230	143JM	Z401		72.0	13.4/6.8-6.7	34	13.62	
1 1/2	1800	115/208-230	145JM	Z403		77.0	18.0/9.3-9.0	43	14.62	
2	3600	115/208-230	145JM	Z404		78.5	19.2/10.5-9.6	36	13.62	1
	1800	115/230	182JM	Z405A	✓	72.0	23.0/11.5	69	16.09	13
3	3600	115/230	182JM	Z406A	✓	75.5	32.0/16.1	60	15.32	13
	1800	115/230	184JM	Z407A	✓	75.5	33.0/16.5	77	17.59	13
5	3600	230	184JM	Z408A	✓	80.0	22.0	93	16.32	1, 13
	1800	230	213JM	Z409	✓	78.5	28.0	115	19.92	
7 1/2	3600	230	213JM	Z410	✓	78.5	37.0	106	18.42	
	1800	230	215JM	Z411	✓	84.0	34.5	120	19.92	1
10	3600	230	215JM	Z412	✓	81.5	47.0	150	19.92	
	1800	230	215JM	Z413	✓	82.5	44.0	159	21.17	1

CLOSE-COUPLED PUMP, JM MOTORS

SINGLE PHASE, TOTALLY ENCLOSED MOTORS

Applications:

Close-coupled pumps where the pump impeller is mounted directly on the motor shaft in damp, dusty, or dirty environments.

Features:

- NEMA JM pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Capacitor start / capacitor run design for higher
- Continuous duty
- 1.0 service factor (except as noted)
- UL recognized and CSA certified



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	NOM. EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
5	3600	230	184JM	Z433A	✓	82.5	19.2	89	18.59	13
7 1/2	3600	230	213JM	Z434	✓	81.5	32.0	90	20.59	
10	3600	230	215JM	Z435	✓	85.5	41.5	236	22.09	18

Footnotes:

* 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage * 13 = F1 Mounting Only * 18 = Service Factor

CLOSE-COUPLED PUMP, JP MOTORS

SINGLE PHASE, DRIPPROOF MOTORS



Features:

- NEMA® JP pump shaft dimensions
- Ball bearings, mechanically locked on shaft end
- Capacitor start design for high starting torque
- Capacitor start / capacitor run design for higher efficiency, as noted
- Continuous duty
- 1.15 service factor
- UL recognized and CSA certified.



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	NOM. EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	NOTES
1	1800	115/208-230	143JP	Z420		72.0	13.4/6.8-6.7	35	16.68	95
1 1/2	1800	115/208-230	145JP	Z422		77.0	18.6/9.9-9.3	43	17.68	95
2	1800	115/230	182JP	Z424		72.0	23.0/11.5	78	19.15	13
3	3600	115/230	182JP	Z425		74.0	32.0/16.0	87	18.65	13
	1800	115/230	184JP	Z426		75.5	33.0/16.5	94	20.65	13
5	3600	230	184JP	Z427A	√	80.0	22.0	89	19.46	1, 13
	1800	230	213JP	Z428		78.5	28.0	130	23.79	95
7 1/2	3600	230	213JP	Z429	√	78.5	37.0	118	22.29	95
	1800	230	215JP	Z430		84.0	34.5	132	23.79	1, 95
10	3600	230	215JP	Z431	√	81.5	47.0	135	23.79	95
	1800	230	215JP	Z432		82.5	44.0	325	25.04	1, 95

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 13 = F1 Mounting Only
- * 95 = Will Not Accept Drip Cover Kit



UNIT HEATER FAN, PSC, TEAO MOTORS

RESILIENT BASE MOTORS

Applications:

Replacement motors for unit heaters. Air over motors need to be mounted within the airstream for proper cooling.

Features:

- Totally enclosed
- Direct drive, air over
- Ball bearings
- Horizontal or vertical mount
- Weather resistant reversing plug
- BX connector mounted in frame



C-FACE FOOTED (RIGID BASE)

HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/6	1625	115	48Y	X305	2.0	13	4 3/4	1/2 x 2 3/4	
	1625	115	48Y	X301	2.0	13	5 1/4	1/2 x 2 3/4	
	1075	115	48Y	X302	3.0	13	4 3/4	1/2 x 2 3/4	
1/4	1075	115	48Y	X303	4.1	14	4 3/4	1/2 x 2 3/4	
1/3	1075	115	48Y	X304	6.5	21	6	1/2 x 2 3/4	

FAN & BLOWER - DIRECT DRIVE, PSC MOTORS

OPEN AIR OVER, TORSION FLEX MOUNT MOTORS

Applications:

Residential and commercial furnaces, air conditioners, exhaust fans, and other air handling equipment installed in clean and dry environments.

Features:

- Open frames and brackets
- Three lug mount fits 9" or 10" bolt circle. Mounting holes on lugs are 0.435" dia. with gromets and sleeves for .26" dia. option.
- Multi-speed capacity
- Weather resistant reversing plug
- 30" long leads
- Automatic reset thermal protector
- Ball bearings
- UL recognized and CSA certified
- Capacitor not included, see Accessories



HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/6	1625	115	48Y	X305	2.0	13	4 3/4	1/2 x 2 3/4	
	1625	115	48Y	X301	2.0	13	5 1/4	1/2 x 2 3/4	
	1075	115	48Y	X302	3.0	13	4 3/4	1/2 x 2 3/4	
1/4	1075	115	48Y	X303	4.1	14	4 3/4	1/2 x 2 3/4	
1/3	1075	115	48Y	X304	6.5	21	6	1/2 x 2 3/4	

FAN AND BLOWER - DIRECT DRIVE, PSC MOTORS

OPEN AIR OVER, RESILIENT RING, THRU-BOLT MOUNT MOTORS



Features:

- Open frames and brackets (except X011 and X012) have enclosed shaft end bracket
- Single and multi-speed models as noted
- Grommeted lead exit
- Weather resistant reversing plug
- 2-1/4" resilient ring mounting except where noted (base not included, see accessories section)
- 2 1/2" adapter rings supplied, shipped loose in box
- Extended thru-bolts on shaft end
- 30" long leads
- Automatic reset thermal protector
- Ball bearings
- UL recognized and CSA certified
- Capacitor not included, see accessories section



HP	RPM	VOLTS	FRAME	CAT NO.	F.L. AMPS	WT (Lbs)	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/5	1075/3	115	48Y	X219	3.5	11	4	1/2 x 4	39
	1625/3	115	48Y	X013	2.9	12	5	1/2 x 4	32
1/4	1625/3	208-230	48Y	X014	1.8-1.35	11	4 1/4	1/2 x 4	32
	1625/1	208-230	48Y	X012	1.8-1.8	12	4 1/2	1/2 x 6	34, 44
	1075/3	115	48Y	X000	3.4	12	4 1/4	1/2 x 4	32
	1075/3	208-230	48Y	X001	1.5-1.5	12	4 1/2	1/2 x 4	32
	1075/3	277	48Y	X018	1.6	11	4 1/4	1/2 x 4	32
	1075/1	208-230	48Y	X006	2.0-2.0	11	4 1/4	1/2 x 4	32
	1075/1	208-230	48Y	X417	2.0-2.2	13	4 1/4	1/2 x 6	51, 116
1/3	1625/3	115	48Y	X015	4.0	13	4 3/4	1/2 x 4	32
	1625/3	208-230	48Y	X011	2.3-2.3	14	4 3/4	1/2 x 6	34, 44
	1075/4	115	48Y	X236	6.4	16	4 3/4	1/2 x 6	39
	1075/4	208-230	48Y	X237	4.8-4.8	16	5 1/4	1/2 x 6	39
	1075/3	115	48Y	X002	4.6	14	4 3/4	1/2 x 4	32
	1075/3	208-230	48Y	X003	3.3-3.3	14	4 3/4	1/2 x 4	32
	1075/3	277	48Y	X019	2.7	15	4 3/4	1/2 x 4	32
	1075/2	460	48Y	X037	1.0	14	4 3/4	1/2 x 6	51
	1075/1	208-230	48Y	X418	3.1-3.1	14	4 1/2	1/2 x 6	51, 116
	825/1	230	48Y	X209	2.8	17	5 3/4	1/2 x 5 1/2	34, 43
1/2	1625/3	115	48Y	X016	5.0	16	5 1/4	1/2 x 4	32
	1625/3	208-230	48Y	X017	4.1-4.1	16	5 1/4	1/2 x 4	32
	1075/4	115	48Y	X033	6.1	15	5	1/2 x 5	31, 73
	1075/3	115	48Y	X004	6.2	17	5 1/2	1/2 x 4	32
	1075/3	208-230	48Y	X005	2.65-2.6	17	5 1/2	1/2 x 4	32
	1075/3	277	48Y	X020	3.6	17	5 1/2	1/2 x 4	32
	1075/1	208-230	48Y	X419	4.2	17	5 1/4	1/2 x 6	51, 116
3/4	1625/3	230	48Y	X022	3.7	18	5 1/2	1/2 x 5 1/2	39, 43
	1075/4	208-230	48Y	X241	5.4-5.4	17	5 1/2	1/2 x 6	39
	1075/3	115	48Y	X009	10.2	20	5 3/4	1/2 x 4	32
	1075/3	208-230	48Y	X010	5.6	19	5 1/2	1/2 x 4	32
	1075/3	277	48Y	X021	5.0	20	5 3/4	1/2 x 4	32
1	1625/2	208-230	48Y	X211	6.2	20	6 1/4	1/2 x 2 1/2	39, 42, 43
	1075/3	230	48Y	X023	5.3	24	6 1/2	1/2 x 5	34
	1075/3	208-230	48YZ	X242	6.2	26	7 1/4	5/8 x 4	39, 51

Footnotes:

- * 31 = 5/8" Thru-Bolts Shaft End
- * 32 = 3/4" Thru-Bolts Shaft End
- * 34 = 1" Thru-Bolts Shaft End
- * 39 = No Thru-Bolts Shaft End
- * 43 = 2-1/2" Resilient Rings, Included
- * 51 = Resilient Rings Not Included, See Accessories
- * 73 = No Hubs Included
- * 116 = 1-3/4" Thru-Bolts Extension on Shaft End



CONDENSER FAN/HEAT PUMP, PSC, OPEN AIR OVER MOTORS THRU-BOLT, SHAFT UP OR HORIZONTAL MOTORS

Applications:

Direct drive condenser fans mounted vertically, shaft up. Models with open brackets should be mounted where they are shielded from rain. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Frame and shaft end bracket enclosed, except X011, X012, and X208 have open frames and X426 has open frame and brackets
- Single and multi-speed models as noted
- Ball bearings
- Weather resistant reversing plug
- 30" long leads
- Shaft with flat, unless otherwise noted
- 60°C ambient (as noted)
- Shaft slinger
- 1-5/8" extended thru-bolts on shaft end, except where noted
- Automatic reset thermal protector
- Lug mount kits and other accessories available, see accessories section
- UL recognized and CSA certified
- Capacitor not included, see Accessories



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/4	1625/1	208-230	48Y	X012	1.8-1.8	12	4 1/2	1/2 x 6	30, 34, 44
	1625/1	460	48Y	X420	1.0	12	4	1/2 x 6	34
	1075/2	208-230	48Y	X081	1.9-1.9	12	4 1/4	1/2 x 6	
	1075/1	208-230	48Y	X213	1.4-1.2	12	4 1/4	1/2 x 6	37, 44
	1075/1	208-230	48Y	X087	2.0-2.0	12	4 1/4	1/2 x 6	
	1075/1	460	48Y	X423	1.0	13	4 1/4	1/2 x 6	36
	825/1	208-230	48Y	X097	1.8-1.8	13	4 1/2	1/2 x 6	
1/3	1625/3	208-230	48Y	X011	2.3-2.3	14	4 3/4	1/2 x 6	30, 34, 44
	1075/2	208-230	48Y	X083	3.0-3.0	18	4 3/4	1/2 x 6	
	1075/1	208-230	48Y	X214	2.3-2.6	13	4 1/2	1/2 x 6	45
	1075/1	208-230	48Y	X088	3.0-3.0	14	4 3/4	1/2 x 6	
	1075/1	460	48Y	X424	1.4	15	4 3/4	1/2 x 6	36
	825/1	208-230	48Y	X086	2.4-2.4	17	5 1/4	1/2 x 6	
1/2	1625/1	460	48Y	X422	1.7	15	5	1/2 x 6	36
	1625/1	575	48Y	X454	1.35	15	5	1/2 x 6	36
	1075/1	208-230	48Y	X096	4.2-4.2	18	5 1/2	1/2 x 6	
	1075/1	208-230	48Y	X221	2.7-2.6	15	5	1/2 x 6	45
	1075/1	460	48Y	X400	1.8	16	5	1/2 x 6	35
	1075/1	575	48Y	X453	1.15	17	5	1/2 x 6	35
	825/1	208-230	48Y	X098	3.3-3.3	18	5 1/2	1/2 x 6	
	825/1	208-230	56Z	X208	3.4-3.4	22	8 5/8	5/8 x 6 w/key/flat	30
3/4	1075/2	208-230	48Y	X085	5.1-5.1	19	5 1/2	1/2 x 6	
	1075/1	208-230	48Y	X298	4.0-4.2	17	5 1/4	1/2 x 6	
	1075/1	208-230	48Y	X090	4.6-4.6	17	5 1/2	1/2 x 6	
	1075/1	460	48Y	X099	2.5	19	5 1/2	1/2 x 6	34
	1075/1	460	48YZ	X426	2.2	19	5 1/2	5/8 x 4.5 w/key	69
	1075/1	575	48Y	X455	1.7	19	5 1/2	1/2 x 6	35
1	1075/1	200-230/460	56Z	P190	6.7-6.8/3.4	40	9	5/8 x 4	

Footnotes:

- * 30 = Resilient Ring Mount, No Base
- * 34 = 1" Thru-Bolts Shaft End
- * 35 = 1-1/8" Thru-Bolts Shaft End

- * 36 = 1-1/4" Thru-Bolts Shaft End
- * 44 = 1" Thru-Bolts Opposite Shaft End
- * 69 = 50 Degree Ambient

CONDENSER FAN/HEAT PUMP, THREE PHASE MOTORS

OPEN AIR, BELLY BAND/RESILIENT RING MOTORS

RIGID BODY, NO FEET

Applications:

Commercial condenser fans may be installed outdoors. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- 70°C ambient (except as noted)
- Enclosed shaft end bracket, vented frame
- Automatic reset thermal protector
- Nameplate 60/50 hertz 190/380 volts, at next lower HP (except as noted)
- Double sealed ball bearings
- 5/8" Dia. x 5" long shaft with flat and keyway
- Ball bearings
- Threaded lead exit
- Patented VCD™ - Voltage Change Device
- Nameplate 60/50 hertz 190/380 volts, at next lower HP (except as noted)
- Double sealed ball bearings
- 5/8" Dia. x 5" long shaft with flat and keyway

HP	RPM	VOLTS	FRAME	CAT NO.	BRAND	AMBIENT	INSULATION SYSTEM
0.33	850	208-230/460	56Y	X511	Marathon	70°C	MaxGuard
	1140	200-230/460	56Y	X500	Marathon	70°C	MaxGuard
0.5	1140	200-230/460	56Y	X500-P	Marathon	70°C	MaxGuard
	1140	575	56Y	K1500	GE 5K	65°C	MaxGuard
	1140	200-230/460	56Y	H564	Century	60°C	Full Phase Insul.
	1140	208-230/460	56Y	K378	GE 5K	65°C	MaxGuard
0.75	1140	200-230/460	56Y	X501	Marathon	70°C	MaxGuard
	1140	200-230/460	56Y	X501-P	Marathon	70°C	MaxGuard
	1140	575	56Y	K1505	GE 5K	65°C	MaxGuard
	1140	200-230/460	56Y	H567	Century	60°C	Full Phase Insul.
	850	208-230/460	56Y	X506	Marathon	70°C	MaxGuard
	850	208-230/460	56Y	X506-P	Marathon	70°C	MaxGuard
	1140	208-230/460	56Y	K379	GE 5K	65°C	MaxGuard
	1140	200-230/460	56Y	X502	Marathon	70°C	MaxGuard
1	1140	200-230/460	56Y	X502-P	Marathon	70°C	MaxGuard
	1140	200-230/460	56Y	H667V1	Century	60°C	Full Phase Insul.
	1140	575	56Y	X522	Marathon	70°C	MaxGuard
	1140	575	56Y	K1510	GE 5K	65°C	MaxGuard
	1140	575	56Y	H671	Century	60°C	Full Phase Insul.
	850	208-230/460	56Y	K1482	GE 5K	65°C	MaxGuard
	850	200-230/460	56Y	X507	Marathon	70°C	MaxGuard
	850	200-230/460	56Y	X507-P	Marathon	70°C	MaxGuard
	850	575	56Y	K1511	GE 5K	65°C	MaxGuard
	850	575	56Y	X527	Marathon	70°C	MaxGuard
	850	200-230/460	56Y	OKR1503	Century	60°C	Full Phase Insul.
	850	200-230/460	56Y	H686	Century	60°C	Full Phase Insul.
	850	575	56Y	H962	Century	60°C	Full Phase Insul.
	1.5	1140	200-230/460	56Y	X503	Marathon	70°C
1140		200-230/460	56Y	X503-P	Marathon	70°C	MaxGuard
1140		575	56Y	X524	Marathon	70°C	MaxGuard
1140		575	56Y	K1515	GE 5K	65°C	MaxGuard
1140		200-230/460	56Y	H767V1	Century	60°C	Full Phase Insul.
1140		575	56Y	H963	Century	60°C	Full Phase Insul.
850		208-230/460	56Y	X530	Marathon	70°C	MaxGuard
850		208-230/460	56Y	X530-P	Marathon	70°C	MaxGuard
2	1140	208-230/460	56Y	X509	Marathon	70°C	MaxGuard
	1140	575	56Y	K1520	GE 5K	65°C	MaxGuard
	1140	575	56Y	X526	Marathon	70°C	MaxGuard
	1140	208-230/460	56Y	H699	Century	70°C	Full Phase Insul.

Footnotes:

* 33 = Shaft Ext 6" L By 5/8 Diam. With Full Length Flat Key 90 Degree
 * 45 = 60 Degree C Ambient

* 46 = 65 Degree C Ambient
 * 70 = Not Nameplated 50Hz

* 73 = No Hubs Included
 * 136 = No Keyway, Double Flat





- 4 locating screws 90 degrees apart, 3.33" from outer edge of shaft slinger
- Hubs on both ends will accept resilient base kits, see accessories section (except X524& X526 - horizontal only)
- UL recognized and CSA certified

INSULATION CLASS	BEARING PROTECTION	BEARING GROUNDING	HIGH TEMP GREASE	WT (Lbs)	FRAME LENGTH (Inch)	"C" DIMENSION (Inch)	FOOT NOTES
H	Ext. DE Slinger	-	DC44M	23	9.5	14.56	VC
H	Ext. DE Slinger	-	DC44M	21	9	14.06	VC
H	Ext. DE Slinger	Ext. Ring	DC44M	21	9	14.01	P, VC
B	Internal ODE Slinger	-	-	27	9.49	15.49	33, 46
B	Ext. DE Slinger	-	-	27	10.31	16.31	45
B	Internal ODE Slinger	-	-	25	8.89	14.89	VC, 46
H	Ext. DE Slinger	-	DC44M	24	9.5	14.56	VC
H	Ext. DE Slinger	Ext. Ring	DC44M	24	9.5	14.51	P, VC
B	Internal ODE Slinger	-	-	25	8.89	14.89	33, 46
B	Ext. DE Slinger	-	-	26	10.27	16.36	45
H	Ext. DE Slinger	-	DC44M	39	9.5	14.56	VC
H	Ext. DE Slinger	Ext. Ring	DC44M	39	9.5	16.01	P, VC
B	Internal ODE Slinger	-	-	33	10.02	16.02	VC, 46
H	Ext. DE Slinger	-	DC44M	28	10	15.06	VC
H	Ext. DE Slinger	Ext. Ring	DC44M	28	10	15.01	P, VC
B	Ext. DE Slinger	-	-	34	10.43	16.52	45
H	Ext. DE Slinger	-	DC44M	28	10	15.06	70
B	Internal ODE Slinger	-	-	33	9.9	16.02	33, 46
B	Ext. DE Slinger	-	-	32	10.25	16.31	45
B	Internal ODE Slinger	-	-	44	10.77	16.77	VC, 46
H	Ext. DE Slinger	-	DC44M	46	12	17.06	VC
H	Ext. DE Slinger	Ext. Ring	DC44M	46	12	17.01	P, VC
B	Internal ODE Slinger	-	-	44	10.77	16.77	33, 46
B	Ext. DE Slinger	-	DC44M	34	12	17.06	70
B	Ext. DE Slinger	-	-	34	10.25	13.56	45, 146
B	Ext. DE Slinger	-	-	32	9.27	14.24	45, 136
B	Ext. DE Slinger	-	-	32	10.285	13.56	45, 136
H	Ext. DE Slinger	-	DC44M	35	11	16.06	VC
H	Ext. DE Slinger	Ext. Ring	DC44M	35	11	16.01	P, VC
H	Ext. DE Slinger	-	DC44M	35	11	16.06	73
B	Internal ODE Slinger	-	-	38	10.77	16.77	33, 46
B	Ext. DE Slinger	-	-	34	10.96	17.02	45
B	Ext. DE Slinger	-	-	35	10.71	16.81	45
H	Ext. DE Slinger	-	DC44M	47	11.25	17.06	VC
H	Ext. DE Slinger	Ext. Ring	DC44M	47	12	17.01	P, VC
H	Ext. DE Slinger	-	DC44M	46	12	17.06	VC
B	Internal ODE Slinger	-	-	49	11.97	16.97	33, 46
H	Ext. DE Slinger	-	DC44M	45	11.63	16.68	73
B	Ext. DE Slinger	-	-	44	12.19	18.19	-

* P = BCB (Bearing Current Protection)

* DC44M = (-40 - 180 Degree C)

* VC =Voltage Change Device Feature, Quick Voltage Changes

CONDENSER FAN/HEAT PUMP, THREE PHASE MOTORS

OPEN AIR, BELLY BAND/RESILIENT RING MOTORS

RIGID BASE

Applications:

Commercial condenser fans may be installed outdoors. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- 70°C ambient (except as noted)
- Enclosed shaft end bracket, vented frame
- Automatic reset thermal protector
- Nameplate 60/50 hertz 190/380 volts, at next lower HP (except as noted)
- Double sealed ball bearings
- 5/8" Dia. x 5" long shaft with flat and keyway
- Ball bearings
- Threaded lead exit
- Patented VCD™ - Voltage Change Device
- Nameplate 60/50 hertz 190/380 volts, at next lower HP (except as noted)
- Double sealed ball bearings
- 5/8" Dia. x 5" long shaft with flat and keyway

HP	RPM	VOLTS	FRAME	CAT NO.	BRAND	AMBIENT	INSULATION SYSTEM
0.33	850	208-230/460	56HZ	X532	Marathon	60°C	MaxGuard
	1140	208-230/460	56HZ	X533	Marathon	60°C	MaxGuard
0.5	1140	208-230/460	56HZ	X533-P	Marathon	70°C	MaxGuard
	1140	200-230/460	56HZ	H1055A	Century	70°C	Full Phase Insul.
	850	208-230/460	56HZ	X529	Marathon	70°C	MaxGuard
	850	208-230/460	56HZ	X529-P	Marathon	70°C	MaxGuard
	1140	208-230/460	56HZ	X512	Marathon	70°C	MaxGuard
0.75	1140	208-230/460	56HZ	X512-P	Marathon	70°C	MaxGuard
	1140	200-230/460	56HZ	H1056A	Century	70°C	Full Phase Insul.
	1140	208-230/460	56HZ	X513	Marathon	70°C	MaxGuard
1	1140	208-230/460	56HZ	X513-P	Marathon	70°C	MaxGuard
	1140	200-230/460	56HZ	H1050RBV1	Century	70°C	Full Phase Insul.
	1140	200-230/460	56HZ	H1050AV1	Century	70°C	Full Phase Insul.
	850	208-230/460	56HZ	X528	Marathon	70°C	MaxGuard
	850	208-230/460	56HZ	X528-P	Marathon	70°C	MaxGuard
	850	200-230/460	56HZ	H1053AV1	Century	70°C	Full Phase Insul.
	850	200-230/460	56HZ	H1053RB	Century	70°C	Full Phase Insul.
	1140	208-230/460	56HZ	X523	Marathon	70°C	MaxGuard
1.5	1140	208-230/460	56HZ	X523-P	Marathon	70°C	MaxGuard
	1140	200-230/460	56HZ	H1051A	Century	70°C	Full Phase Insul.
	1140	200-230/460	56HZ	H1051RB	Century	70°C	Full Phase Insul.
	850	208-230/460	56HZ	X531	Marathon	70°C	MaxGuard
	850	208-230/460	56HZ	X531-P	Marathon	70°C	MaxGuard
	850	200-230/460	56HZ	H1054AV1	Century	70°C	Full Phase Insul.
	850	200-230/460	56HZ	H1054RBV1	Century	70°C	Full Phase Insul.
	1140	208-230/460	56HZ	X525	Marathon	70°C	MaxGuard
2	1140	200-230/460	56HZ	H1052AV1	Century	70°C	Full Phase Insul.
	1140	200-230/460	56HZ	H1052RBV1	Century	70°C	Full Phase Insul.

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 6 = Bolt-On Removable Base for Footless Mounting Option
- * 33 = Shaft Ext 6" L By 5/8 Diam. With Full Length Flat Key 90 Degree
- * 45 = 60 Degree C Ambient
- * 46 = 65 Degree C Ambient
- * 50 = Design for 50 Hertz Operation
- * 70 = Not Nameplated 50Hz
- * 73 = No Hubs Included
- * 82 = Welded base
- * 136 = No Keyway, Double Flat
- * P = BCB (Bearing Current Protection)
- * VC = Voltage Change Device Feature, Quick Voltage Changes
- * DC44M = (-40 - 180 Degree C)
- * Polyrex EM = (-20 - 150 Degree C)





- 4 locating screws 90 degrees apart, 3.33" from outer edge of shaft slinger
- Hubs on both ends will accept resilient base kits, see accessories section (except X524& X526 - horizontal only)
- UL recognized and CSA certified

INSULATION CLASS	BEARING PROTECTION	BEARING GROUNDING	HIGH TEMP GREASE	WT (Lbs)	FRAME LENGTH (Inch)	"C" DIMENSION (Inch)	FOOT NOTES
B	Ext. DE Slinger	-	Multitemp SRL	22	8.31"	13.37"	45, 50
B	Ext. DE Slinger	-	Multitemp SRL	20	8.31"	13.37"	45, 50
B	Ext. DE Slinger	Ext. Ring	Multitemp SRL	20	8.25"	13.31"	P, 45, 50
F	Ext. DE Slinger	Int. Ring	Non Conductive	44	10.34"	16.40"	6
H	Ext. DE Slinger	-	DC44M	31	9.59"	14.65"	VC, 5
H	Ext. DE Slinger	Ext. Ring	DC44M	31	9.95"	15.01"	P, VC, 5
H	Ext. DE Slinger	-	DC44M	27	9.12"	14.18"	VC, 5
H	Ext. DE Slinger	Ext. Ring	DC44M	27	9.45"	14.51"	P, VC, 5
F	Ext. DE Slinger	Int. Ring	Non Conductive	28	10.45"	16.51"	6
H	Ext. DE Slinger	-	DC44M	29	9.62"	14.68"	VC, 5
H	Ext. DE Slinger	Ext. Ring	DC44M	29	9.95"	15.01"	P, VC, 5
F	Ext. DE Slinger	Int. Ring	Non Conductive	30	9.96"	16.02"	82
F	Ext. DE Slinger	Int. Ring	Non Conductive	29	10.29"	16.35"	6
H	Ext. DE Slinger	-	DC44M	49	12.00"	17.06"	VC, 5
H	Ext. DE Slinger	Ext. Ring	DC44M	49	12.00"	17.06"	P, VC, 5
F	Ext. DE Slinger	Int. Ring	Non Conductive	46	12.79"	18.85"	6
F	Ext. DE Slinger	Int. Ring	Non Conductive	43	12.26"	18.32"	82
H	Ext. DE Slinger	-	DC44M	36	10.62"	15.68"	VC, 5
H	Ext. DE Slinger	Ext. Ring	Polyrex EM	36	10.95"	16.01"	P, VC, 5
F	Ext. DE Slinger	Int. Ring	Non Conductive	38	11.57"	17.63"	6
F	Ext. DE Slinger	Int. Ring	Non Conductive	38	11.25"	17.31"	82
H	Ext. DE Slinger	-	DC44M	47	11.62"	16.68"	VC, 5
H	Ext. DE Slinger	Ext. Ring	DC44M	47	11.95"	17.01"	P, VC, 5
F	Ext. DE Slinger	Int. Ring	Non Conductive	47	12.79"	18.85"	6
F	Ext. DE Slinger	Int. Ring	Non Conductive	47	12.46"	18.52"	82
B	Ext. DE Slinger	-	DC44M	47	11.62"	16.68"	VC, 5
F	Ext. DE Slinger	Int. Ring	Non Conductive	45	12.28"	18.34"	6
F	Ext. DE Slinger	Int. Ring	Non Conductive	45	11.95"	18.01"	82

Features:

- Ball bearings (except as noted)
- Service factor, as noted
- Thermal protection, as noted
- Variable torque on two speed motors
- Extended thru-bolts, as noted
- Heavy gauge steel frame and base
- 48Y and 48YZ frame have 48/56 frame mounting holes
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/12	1140	115	48Z	AUTO	HG152	√	2.4	15	9.32	8, 112
1/8	1140	115	48Z	AUTO	HG154	√	3.8	17	10.38	8, 112
	850	115	56	AUTO	HG155	√	4.6	32	10.88	112
1/6	1725/1140	115	48Z	NONE	H169	√	3.4/1.9	17	10.38	8, 20
	1725/1140	115	48Z	AUTO	H170	√	3.4/1.9	17	10.38	8, 20
	1725/1140	115	48	NONE	4322	√	3.4/1.9	15	10.00	20
	1725/1140	115	48	AUTO	4389	√	3.4/1.9	18	10.00	20
	1725	115	48Y	AUTO	D107	√	3.6	12	8.99	CF, 20
	1725	115	48	NONE	4304	√	3.9	12	8.93	20
	1725	115	48Z	NONE	HG156		3.9	12	9.32	8, 20
	1725	115	48YZ	NONE	B300	√	3.6	13	9.32	CF, 20, 31, 52
	1725	115	48Z	AUTO	H157	√	3.9	12	9.32	8, 20
	1725	115	48YZ	AUTO	B322	√	3.6	13	9.32	CF, 20, 31, 52
	1725	115	56Z	AUTO	4350	√	3.9	13	9.19	8, 20, 26
	1140	115	48	NONE	H112	√	4.0	20	10.40	20
	1140	115	48Z	AUTO	H159	√	4.0	21	10.78	8, 20
	1140	115	48	NONE	HG695	√	4.0	24	10.40	20
	1140	115	48Z	NONE	H158	√	4.0	21	10.78	8, 20
	1140	115	48	AUTO	HG113	√	4.0	20	10.40	20
	850	115	56	NONE	H620	√	6.1	31	11.48	20

CHART CONTINUES ON NEXT PAGE

Footnotes:

- * 3 = Split Phase Design
- * 4 = Sleeve Bearing
- * 7 = Shaft Extension 1-1/2" Long By 1/2" Diameter
- * 8 = Shaft Extension 1-7/8" Long By 1/2" Diameter
- * 9 = Shaft Extension 2-1/4" Long By 1/2" Diameter
- * 10 = Shaft Extension 2-1/4" Long By 5/8" Diameter
- * 17 = 1.0 Service Factor
- * 18 = 1.15 Service Factor
- * 19 = 1.25 Service Factor
- * 20 = 1.35 Service Factor
- * 26 = 5/8" Shaft Adapter Included
- * 28 = Steel Endsheids
- * 31 = 5/8" Thru-Bolts Shaft End
- * 32 = 3/4" Thru-Bolts Shaft End
- * 48 = Connected for CW Rotation (Canadian Standard)
- * 50 = Design for 50 Hertz Operation
- * 51 = Resilient Rings Not Included, See Accessories
- * 52 = 1/2" x 1-7/8" Shaft With 1-5/8" Flat
- * 53 = 1/2" Shaft With 5/8" Adaptor and Key
- * CF = Consult Factory For Accessories

FAN & BLOWER - SPLIT PHASE, DRIPPROOF MOTORS

RESILIENT BASE MOTORS (SINGLE & TWO-SPEED)



Features:

- Ball bearings (except as noted)
- Service factor, as noted
- Thermal protection, as noted
- Variable torque on two speed motors
- Extended thru-bolts, as noted
- Heavy gauge steel frame and base
- 48Y and 48YZ frame have 48/56 frame mounting holes
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/4	1725/1140	115	48Y	AUTO	D180		4.1/2.5	18	10.06	20
	1725/1140	115	48Z	AUTO	H172	✓	4.2/2.7	21	10.69	8, 20
	1725/1140	115	48Z	NONE	H171	✓	4.2/2.7	21	10.69	8, 20
	1725/1140	115	48	AUTO	4399	✓	4.2/2.7	22	10.40	20
	1725/1140	115	56Z	AUTO	HG704	✓	5.2/2.8	17	10.18	17, 20, 48
	1725/1140	230	48	AUTO	4412	✓	2.1/1.3	22	10.40	20, 39
	1725	115	48	AUTO	S103		5.7	13	9.06	3, 7, 31, 17
	1725	115	48	NONE	S102	✓	5.7	13	9.06	3, 7, 17
	1725	115	48	NONE	H675	✓	5.0	14	9.19	D, 3, 7, 17
	1725	115	48	AUTO	4305	✓	5.1	13	8.93	20
	1725	115	48	NONE	4355	✓	5.1	13	8.93	20, 47
	1725	115	48Y	AUTO	4701	✓	5.1	12	9.12	CF, 20, 53
	1725	115	48YZ	AUTO	B206	✓	5.0	14	9.62	8, 20, 26
	1725	115	48Z	NONE	H160	✓	5.1	14	9.32	CF, 20, 31, 52
	1725	115	48YZ	NONE	B302	✓	5.0	14	9.57	9, 20, 28
	1725	115	48Z	AUTO	H915	✓	5.6	14	9.99	7, 20, 26
	1725	115/230	48Y	AUTO	4702	✓	5.2/2.6	15	9.62	20, 48
	1725	115	48Y	AUTO	HG701	✓	5.1	13	8.94	9, 20
	1725	115/208-230	48Z	AUTO	4680	✓	5.0/2.5	13	9.94	8, 20
	1725	115	48Z	AUTO	HG161	✓	5.1	14	9.32	CF, 20, 31, 52
	1725	115	48YZ	AUTO	B303	✓	5.0	14	9.57	20, 32, 53
	1725	115	48Z	AUTO	S126	✓	5.3	14	9.72	3, 53, 17
	1725	115	56Z	AUTO	4364	✓	5.7	13	9.19	3, 4, 7, 17
	1725	115	56Z	NONE	4359	✓	5.7	13	9.19	3, 4, 7, 17
	1725	115	56Z	AUTO	B201	✓	5.0	14	9.47	8, 20, 26
	1725	115	56Z	AUTO	4363	✓	5.1	14	9.19	20
	1725	230	48	AUTO	4306	✓	2.5	13	9.09	20
	1725	230	48	NONE	4360	✓	2.5	13	8.93	20, 31, 52
	1725	277	48YZ	NONE	B606	✓	2.1	13	9.47	20, 31
	1500	220	48	NONE	H645	✓	3.4	14	9.57	3, 7, 50, 17
	1500	110/220	56Z	AUTO	HG690	✓	5.2/2.6	15	9.51	3, 7, 50, 17
	1140/850	115	56	NONE	H300	✓	5.8/3.6	30	12.01	20
	1140	115	56	AUTO	H163	✓	5.6	23	10.88	20
	1140	115	56	NONE	H162	✓	5.6	27	10.88	19
	850	115	56	NONE	H296	✓	6.9	30	12.01	20

CHART CONTINUES ON NEXT PAGE

Footnotes: Please see notes on page 114.



FAN & BLOWER - SPLIT PHASE, DRIPPROOF MOTORS
RESILIENT BASE MOTORS (SINGLE & TWO-SPEED)



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/3	3450	115	48	NONE	H114	✓	5.6	15	9.57	20
	3450	115	48	AUTO	HG115	✓	5.6	15	9.57	9, 20
	3450	115/230	48Z	AUTO	4798	✓	6.8/3.4	13	10.25	9, 20
	1725/1140	115	48	AUTO	4319	✓	6.3/3.1	22	10.40	20, 94
	1725/1140	115	48	NONE	4396	✓	6.3/3.1	21	10.40	17, 54
	1725/1140	115	48Y	AUTO	D181	✓	5.3/2.9	20	10.06	20
	1725/1140	115	56	NONE	H173	✓	5.7/3.2	24	10.88	20, 31
	1725/1140	115	56	AUTO	H174	✓	5.7/3.2	32	10.88	20, 31
	1725/1140	115	56Z	AUTO	HG706	✓	6.0/3.8	20	11.01	17, 48
	1725/850	115	56Z	AUTO	HG705	✓	4.7/2.6	25	10.90	17, 48
	1725	115	48	NONE	4369	✓	6.2	14	8.94	3, 17
	1725	115	48	NONE	S106	✓	6.5	14	9.31	3, 31, CF, 17
	1725	115	48	AUTO	4310	✓	6.2	14	8.94	3, 17
	1725	115	48Y	AUTO	S127	✓	6.6	14	9.72	3, 53, 17
	1725	115	48	NONE	H674	✓	6.6	15	9.57	3, 17
	1725	115	48Y	AUTO	D143	✓	6.1	15	9.34	3, 20
	1725	115	48Y	AUTO	B703	✓	3.2	17	9.84	20, 74
	1725	115	48Y	AUTO	HG711	✓	6.6	14	8.94	4, 20, 26, 48
	1725	115	48Y	AUTO	HG700	✓	3.7	24	10.39	ES, 20, 26, 47
	1725	115	48Y	AUTO	4706	✓	6.6	15	8.94	3, 7, 20,
	1725	115	48YZ	AUTO	B207	✓	5.5	15	9.62	CF, 20, 53
	1725	115	48Z	NONE	H164	✓	6.2	15	9.32	8, 20
	1725	115	48YZ	NONE	B304	✓	5.5	15	9.32	CF, 20, 31, 52
	1725	115	48Z	AUTO	H917		6.9	15	10.37	9, 20, 28
	1725	115	48Z	AUTO	H165	✓	6.2	16	9.32	8, 20
	1725	115	48YZ	AUTO	B305	✓	5.5	15	9.32	CF, 20, 31, 52
	1725	115	56Z	NONE	4377	✓	6.2	15	9.19	3, 7, 17
	1725	115	56Z	AUTO	4381	✓	6.2	15	9.19	3, 7, 17
	1725	115	56Z	AUTO	B202	✓	6.1	15	9.72	20, 32, 53
	1725	230	48Z	AUTO	H167	✓	3.3	16	9.95	8, 20
	1725	230	48	NONE	4371	✓	3.3	14	8.94	3, 17
	1725	230	48	AUTO	4311	✓	3.3	14	8.93	3, 17
	1725	230	48	AUTO	4309	✓	3.1	15	9.18	20
	1725	115	48	NONE	4370	✓	6.2	15	9.18	20
	1725	115/208-230	56Z	AUTO	4682	✓	6.2/3.1	16	10.26	9, 20, 26, 72
	1725	230	48Z	NONE	H166	✓	3.3	16	9.95	8, 20
	1725	230	56Z	AUTO	4757	✓	3.1	16	9.19	7, 20, 26
	1725	277	48YZ	NONE	B607	✓	2.5	15	9.72	20, 31, 52
	1725	115	56Z	AUTO	4383	✓	6.2	15	9.19	8, 26
	1500	110/220	56Z	AUTO	HG692	✓	7.0/3.5	17	9.94	3, 50, 17
	1500	220	56Z	NONE	H673	✓	3.5	17	9.19	3, 7, 50, 17
	1140	115/230	56	NONE	H168A	✓	6.8/3.4	28	11.47	3, 20
1140	115/230	56	AUTO	HG621A	✓	6.8/3.4	32	11.54	3, 20	

CHART CONTINUES ON NEXT PAGE

Footnotes: Please see notes on page 114.



FAN & BLOWER - SPLIT PHASE, DRIPPROOF MOTORS

RESILIENT BASE MOTORS (SINGLE & TWO-SPEED)



CHART CONTINUED FROM PREVIOUS PAGE

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/2	1725/1140	115	56	NONE	H175	✓	8.0/4.2	31	11.48	19, 31
	1725/1140	115	56	AUTO	H176	✓	8.0/4.2	31	11.48	19, 31
	1725/1140	115	56	NONE	H130	✓	8.4/4.8	22	10.32	17
	1725/1140	115	56	AUTO	H131	✓	8.4/4.8	22	10.32	17, 31
	1725/1140	115	56Z	AUTO	HG715	✓	7.8/4.8	25	11.44	17, 48
	1725/1140	230	56	NONE	H275	✓	3.8/1.9	28	11.48	19, 31
	1725/1140	230	56	AUTO	H133	✓	4.1/2.4	22	10.32	17, 31
	1725	115	48Y	AUTO	D162	✓	7.2	19	10.09	19
	1725	115	48Y	AUTO	HG703	✓	7.9	15	10.32	19, 48
	1725	115	48Z	AUTO	HG710	✓	7.9	15	9.93	3, 9, 17
	1725	115	48Z	AUTO	S128	✓	9.2	17	10.22	3, 53, 17
	1725	115	48YZ	AUTO	B208	✓	7.5	20	10.43	CF, 19, 53
	1725	115	48YZ	NONE	B306	✓	7.5	18	10.32	CF, 19, 31, 52
	1725	115	48	AUTO	HG694	✓	7.1	19	9.99	19
	1725	115	48YZ	AUTO	B307	✓	7.5	18	10.32	CF, 19, 31, 52
	1725	115	56Z	AUTO	H919	✓	8.7	18	10.80	10, 19, 28
	1725	115	56	AUTO	4392	✓	7.9	21	10.32	19
	1725	115	56	NONE	4390	✓	7.9	17	10.32	19
	1725	115	56	AUTO	D149	✓	7.2	19	10.47	19
	1725	115	56	AUTO	H248	✓	9.3	18	10.32	19
	1725	115	56	NONE	H286	✓	9.3	18	10.32	19
	1725	115	56	NONE	S120	✓	9.2	18	10.22	3, 31, 17
	1725	115	56Z	AUTO	4778	✓	8.3	20	9.57	3, 7, 17
	1725	115	56Z	AUTO	B200	✓	7.2	19	10.47	19, 32, 53
	1725	115	56Z	AUTO	4758	✓	7.9	22	9.99	7, 19, 26
	1725	115/230	56	AUTO	B100	✓	7.2/3.6	20	10.47	19
	1725	115/230	56Z	AUTO	4684	✓	8.9/4.5	18	10.69	9, 26
	1725	230	56	AUTO	4602	✓	4.2	19	10.32	3, 17
	1725	230	56	NONE	4387	✓	4.2	19	10.32	3, 17
	1725	230	56	AUTO	4393	✓	4.5	21	10.32	19
	1725	230	56Z	AUTO	4759	✓	4.0	17	9.99	19
	1725	230	48Y	AUTO	D163	✓	3.6	19	10.09	19
	1500	110/220	56	AUTO	H693	✓	9.2/4.6	23	10.55	3, 17
1140	115/230	56	AUTO	H298	✓	9.0/4.5	32	12.76	19	
3/4	1725	115	56	NONE	4422	✓	11.2	21	10.72	3, 17
	1725	115	56	AUTO	4338	✓	11.4	21	10.72	18

Footnotes: Please see notes on page 114.



Applications:

Commercial and industrial fans, blowers, pumps, and other machinery that have variable torque characteristics. Prolonged use at low speed can result in significant energy savings. Dripproof motors are intended for use in environments that are relatively clean and dry.

Features:

- Ball bearings
- 1.15 service factor
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	FOOT NOTES
3/.75	1800/900	200-230	182T	Y1484	√	84.5	9-8.2	65	13.19	F, 13
	1800/900	460	182T	Y485A		84.5	4.1	58	13.19	13, 25
	1800/900	575	182T	Y485-575	√	84.5	3.05	58	13.19	13, 25
5/1.25	1800/900	200-230	184T	Y486A	√	85.5	14.5-13.8	80	14.19	F, 13
	1800/900	460	184T	Y1487	√	85.5	6.9	80	14.72	13
	1800/900	575	184T	Y487-575	√	85.5	5.4	80	14.72	13
7.5/1.88	1800/900	200-230	213T	Y488		86.5	21.6-19.8	110	17.30	
	1800/900	460	213T	Y489	√	87.5	9.6	118	17.30	
	1800/900	575	213T	Y489-575	√	87.5	7.7	118	17.30	
10/2.5	1800/900	200-230	215T	Y490		86.5	29.0-26.4	87	18.55	F, 13
	1800/900	460	215T	Y491		86.5	12.5	106	17.30	
15/3.75	1800/900	460	256T	Y492		87.5	18.4	217	22.32	
20/5	1800/900	460	284T	Y493		87.5	25.0	320	23.49	CI

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = Mounting Only

MULTI-SPEED: TWO-SPEED, TWO-WINDING, VARIABLE TORQUE MOTORS

Applications:

Commercial and industrial fans, blowers, pumps, and other machinery that have variable torque characteristics. Prolonged use at low speed can result in significant energy savings. Dripproof motors are intended for use in environments that are relatively clean and dry.



Features:

- Ball bearings
- 1.15 service factor
- UL recognized and CSA certified
- Economical two-winding design

HP	RPM	VOLTS	FRAME	CAT NO.	STOCK	NOM EFF.	F.L. AMPS	WT (Lbs)	"C" Dimension (Inch)	FOOT NOTES
1/.25	1800/900	460	145T	Y465	√	79.5	1.5	42	12.99	5, 13
	1800/900	575	145T	Y465-575	√	79.5	1.2	42	12.99	5, 13
1/.44	1800/1200	200-230	145T	Y449	√	80.0	3.4-3.2	42	12.99	5, 13
	1800/1200	460	145T	Y450		78.5	1.5	39	12.49	5, 13
	1800/1200	575	145T	Y450-575	√	78.5	1.2	39	12.49	5, 13
1.5/.37	1800/900	460	145T	Y466	√	78.5	2.2	47	13.49	5, 13
	1800/900	575	145T	Y466-575	√	78.5	1.8	47	13.49	5, 13
1.5/.67	1800/1200	200-230	145T	Y451	√	80.0	5-4.8	47	13.49	5, 13
	1800/1200	460	145T	Y452	√	78.5	2.3	42	12.99	5, 13
	1800/1200	575	145T	Y452-575	√	78.5	1.85	42	12.99	5, 13
2/.5	1800/900	460	182T	Y467A	√	82.0	2.8	68	13.69	13
	1800/900	575	182T	Y467-575	√	82.0	2.25	68	13.69	13
2/.88	1800/1200	200-230	182T	Y1453	√	80.0	6.6-6.4	60	12.69	13
	1800/1200	575	182T	Y453-575	√	80.0	2.6	60	12.69	13
2/.9	1800/1200	460	182T	Y409A	√	80.0	3.2	60	12.69	13
3/.75	1800/900	460	184T	Y468A	√	82.5	4.0	80	13.19	13
	1800/900	575	184T	Y468-575	√	82.5	3.45	80	13.19	13
3/1.3	1800/1200	200-230	184T	Y454A	√	81.5	9.2-8.6	74	13.69	13
	1800/1200	460	184T	Y412A	√	81.5	4.3	74	13.69	13
	1800/1200	575	184T	Y454-575	√	81.5	3.45	74	13.69	13
5/1.25	1800/900	460	215T	Y469	√	86.5	6.8	118	17.30	
	1800/900	575	215T	Y469-575	√	86.5	5.5	118	17.30	
5/2.22	1800/1200	200-230	215T	Y455	√	85.5	14.5-14.0	116	17.30	
	1800/1200	460	215T	Y415	√	85.5	6.5	106	17.30	
	1800/1200	575	215T	Y455-575	√	85.5	5.2	106	17.30	
7.5/1.9	1800/900	460	254T	Y470		85.5	10.5	135	20.57	
7.5/3.3	1800/1200	200-230	254T	Y456	√	87.5	20.8-18.4	175	22.32	
	1800/1200	460	254T	Y418	√	84.0	10.0	154	20.57	
	1800/1200	575	254T	Y456-575	√	84.0	7.3	154	20.57	
10/2.5	1800/900	460	256T	Y471		86.5	12.9	145	22.32	
10/4.4	1800/1200	200-230	256T	Y457		88.5	28-26	214	22.32	
	1800/1200	460	256T	Y458	√	87.5	12.0	214	22.32	
	1800/1200	575	256T	Y458-575	√	87.5	9.6	214	22.32	
15/3.8	1800/900	460	284T	Y472		88.5	18.0	300	23.49	CI
15/6.7	1800/1200	460	284T	Y459	√	87.5	18.5	325	24.44	CI
20/5	1800/900	460	286T	Y473		88.5	25.0	321	24.99	CI
20/8.9	1800/1200	460	286T	Y460	√	88.5	25.0	326	24.99	CI

Footnotes:

- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 13 = Mounting Only

AIR COMPRESSOR, SINGLE PHASE MOTORS

DRIPPROOF, RIGID BASE MOTORS



Features:

- Capacitor start/capacitor run design for low amps and high efficiency, as noted
- High starting and breakdown torque
- Heavy gauge steel frame and base
- Continuous duty at nameplate ratings
- Thermal protection, as noted
- UL recognized and CSA certified



HP	RPM	VOLTS	FRAME	OVER LOAD	CAT NO.	STOCK	F.L. AMPS	WT (Lbs)	"C" DIMENSION (Inch)	FOOT NOTES
1/2	3600	115	56	MANUAL	9031	✓	11.5	20	11.14	2, 17
1/3	1800	115/230	56	MANUAL	C169	✓	8.8/4.4	21	10.38	2
3/4	3600	115	56	MANUAL	9032	✓	12.5	27	11.14	2, 17
	3600	115/230	56	MANUAL	CP1072L	✓	12.5/6.75	24	10.60	2
	1800	115/208-230	56	MANUAL	K016	✓	11.0/5.5	25	11.47	1
	1800	115/230	56	NONE	C639	✓	10.0/5.0	27	11.10	2
1	3600	115/208-230	56	MANUAL	D010	✓	10.6/5.5-5.3	23	11.72	1
	3600	115/230	56	MANUAL	CP1102L	✓	12.0/6.0	26	11.40	2
	1800	115/208-230	56	MANUAL	C1480	✓	13.6/6.8	31	11.38	2
1 1/2	3600	115/208-230	56	MANUAL	C704	✓	21.3/10.6	31	11.91	2, 18
	3600	115/230	56	MANUAL	CP1152L	✓	12.5/6.3	32	11.90	1, 48
	1800	115/208-230	56H	MANUAL	G951	✓	18.0/9.3-9.0	39	12.44	2, 5, 7
2	3600	115/208-230	56H	MANUAL	9035	✓	15.0/7.5	38	11.14	ES, 1, 17, 48
	3600	115/230	56	MANUAL	CP1202L	✓	24.0/12.0	33	12.70	2, 57, 48
	1800	115/208-230	145T	MANUAL	I127	✓	18.8/10.2-9.4	48	13.49	1, 7
3	3600	230	56H	MANUAL	9036	✓	15.0	40	11.44	ES, 1, 17, 48
	3600	208-230	56	MANUAL	CP1302L	✓	13.1-12.3	33	12.70	1
	1800	230	184T	NONE	Z502	✓	12.6	51	14.27	1
	1800	115/230	184T	NONE	V201M2	✓	34.0/17.0	78	14.70	2, 16, 18
SPCL	3600	230	56	MANUAL	9040	✓	15.0	40	12.10	ES, 1
SPCL	3600	230	56H	MANUAL	CP1502LV1	✓	15.0	38	12.80	1
5	3600	208-230	56Y	MANUAL	B384	✓	22.0	50	14.60	1, 15, 18, 125
	3600	230	56H	MANUAL	9038B	✓	21.0	49	15.04	ES, 1, 5, 17, 48
	3600	230	56H	MANUAL	D017	✓	20.0	55	13.94	1, 5
	3600	208-230	56HZ	MANUAL	D019	✓	22.0	47	14.60	1, 15, 18
	3600	230	56HZ	MANUAL	CP1502L	✓	19.7	44	14.10	1, 48, Z
	3600	230	56HZ	MANUAL	B813	✓	22.0	45	14.10	1, 15
	3600	208-230	56HZ	MANUAL	B386	✓	22.0	47	14.60	1, 15, 18
	3600	230	184T	NONE	Z504	✓	20.0	62	14.77	1
	3600	230	184T	NONE	V211M2		25.6	82	14.70	2, 16, 18
	1800	208-230	184T	MANUAL	I119	✓	25.0-24.1	83	16.22	1, 13
	1800	230	184T	NONE	V208M2		22.0	84	15.00	1, 16, 18
	1800	208-230	184T	NONE	I114A	✓	23.0-21.0	82	14.69	1, 13
	1800	208-230	184T	NONE	Z506A	✓	22.0-20.0	81	15.21	1, 13
	6	3600	230	56Y	MANUAL	B387		24.0	53	14.60
7 1/2	3600	208-230	184T	NONE	I108A	✓	34.0-31.0	103	16.69	1, 13
	3600	208-230	213T	NONE	I105	✓	40.0-37.0	102	16.55	2, F
	1800	208-230	215T	NONE	I115	✓	37.2-34.5	115	18.05	1
10	1800	208-230	215T	NONE	I116	✓	49.0-44.0	140	19.30	1

Footnotes:

- * 1 = Capacitor Start/Capacitor Run Design for Reduced Amperage
- * 2 = Capacitor Start Induction Run Design
- * 5 = 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * 7 = Shaft Extension 1-1/2" Long By 1/2" Diameter
- * 13 = F1 Mounting Only
- * 15 = Fixed CW Rotation, Viewing Opposite Shaft
- * 16 = Fixed CCW Rotation, Viewed Opposite Shaft
- * 17 = 1.0 Service Factor
- * 18 = 1.15 Service Factor
- * 48 = Connected for CW Rotation (Canadian Standard)
- * 57 = Open Construction
- * 125 = 56Y = 7/8" Diameter Keyed Shaft 2.25" Long
- * 132 = 184T Base, 4.5" Shaft Height
- * ES = Energy Saver Design
- * F = Class F Insulation



AEGIS UKIT WITH UNIVERSAL MOUNTING

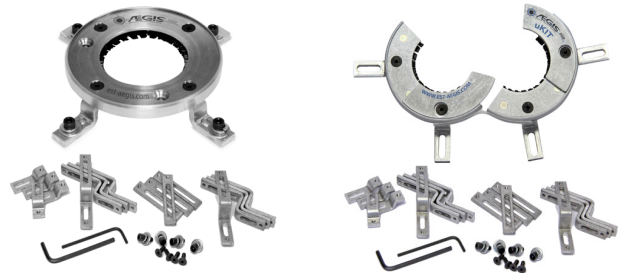
FOR LOW VOLTAGE MOTORS UP TO 500HP



Features:

Kit is designed to avoid any slinger or shaft shoulder. Order based on NEMA and IEC Frame size.

- Install with 3 or 4 brackets depending on motor end bracket design.
- uKIT can be attached to motor with screws/ washers provided or with conductive epoxy. AEGIS® EP2400 Conductive Epoxy sold separately.
- See AEGIS® website for bolt hole circle and installation.



NEMA Ukit - Solid Ring Catalogue No.	NEMA Ukit - Solid Ring Catalogue No.	Motor Shaft Dia. "U"	NEMA Frame
SGR-0.625-UKIT	SGR-0.625-UKIT-1A4	.625"	56
SGR-0.875-UKIT	SGR-0.875-UKIT-1A4	.875"	56HZ, 143T, 145T
SGR-1.125-UKIT	SGR-1.125-UKIT-1A4	1.125"	182T, 184T
SGR-1.375-UKIT	SGR-1.375-UKIT-1A4	1.375"	213T, 215T
SGR-1.625-UKIT	SGR-1.625-UKIT-1A4	1.625"	254T, 256T, 284TS, 286TS
SGR-1.875-UKIT	SGR-1.875-UKIT-1A4	1.875"	284T, 286T, 324TS, 326TS, 364TS, 365TS
SGR-2.125-UKIT	SGR-2.125-UKIT-1A4	2.125"	324T, 326T, 404TS, 405TS
SGR-2.375-UKIT	SGR-2.375-UKIT-1A4	2.375"	364T, 365T, 444TS, 445TS, 447TS, 449TS
SGR-2.875-UKIT	SGR-2.875-UKIT-1A4	2.875"	404T, 405T
SGR-3.375-UKIT	SGR-3.375-UKIT-1A4	3.375"	444T, 445T, 447T, 449T
SGR-3.625-UKIT	SGR-3.625-UKIT-1A4	3.625"	
SGR-3.875-UKIT	SGR-3.875-UKIT-1A4	3.875"	
SGR-4.375-UKIT	SGR-4.375-UKIT-1A4	4.375"	
SGR-4.875-UKIT	SGR-4.875-UKIT-1A4	4.875"	

NEMA Ukit - Solid Ring Catalogue No.	NEMA Ukit - Solid Ring Catalogue No.	Motor Shaft Dia. "U"	NEMA Frame
SGR-19-UKIT	SGR-19-UKIT-2A4	19mm	IEC 80S, 80L (2, 4, 6, 8 pole)
SGR-24-UKIT	SGR-24-UKIT-2A4	24mm	IEC 90S, 90L (2, 4, 6, 8 pole)
SGR-28-UKIT	SGR-28-UKIT-2A4	28mm	IEC 100L, 112M (2, 4, 6, 8 pole)
SGR-38-UKIT	SGR-38-UKIT-2A4	38mm	IEC 132S, 132M (2, 4, 6, 8 pole)
SGR-42-UKIT	SGR-42-UKIT-2A4	42mm	IEC 160M, 160L (2, 4, 6, 8 pole)
SGR-48-UKIT	SGR-48-UKIT-2A4	48mm	IEC 180M, 180L (2, 4, 6, 8 pole)
SGR-55-UKIT	SGR-55-UKIT-2A4	55mm	IEC 200L (2, 4, 6, 8 pole), IEC 225S, 225M (2 pole)
SGR-60-UKIT	SGR-60-UKIT-2A4	60mm	IEC 225S, 225 (4, 6, 8 pole), IEC 250 (2 pole)
SGR-65-UKIT	SGR-65-UKIT-2A4	65mm	IEC 250 (4, 6, 8 pole), IEC 280M, 280S, 315S, 315M, 315L (2 pole)
SGR-70-UKIT	SGR-70-UKIT-2A4	70mm	
SGR-75-UKIT	SGR-75-UKIT-2A4	75mm	IEC 280S, 280M, (4, 6, 8 pole), IEC 355, 355L (2 pole)
SGR-80-UKIT	SGR-80-UKIT-2A4	80mm	IEC 315S, 315M, 315L, (4, 6, 8 pole)
SGR-85-UKIT	SGR-85-UKIT-2A4	85mm	
SGR-90-UKIT	SGR-90-UKIT-2A4	90mm	
SGR-95-UKIT	SGR-95-UKIT-2A4	95mm	IEC 335L, 335M, 355L (4, 6, 8, 10 pole)
SGR-100-UKIT	SGR-100-UKIT-2A4	100mm	
SGR-110-UKIT	SGR-110-UKIT-2A4	110mm	

AEGIS Colloidal Silver Shaft Coating

Catalogue No CS015

20-25 Applications based on a 3" Shaft Diameter.

Used to improve the conductivity of the steel shaft surface. Apply to any VFD driven motor shaft prior to installing the AEGIS Bearing Protection Ring.

Note: Shelf life is 6 Months. Non-Returnable



AEGIS Conductive Epoxy

Catalogue No EP2400

2-3 Applications

Used to install the AEGIS Bearing Protection Ring without drilling and tapping into the motor end bell.

Note: Shelf life is 9 Months. Non-Returnable.



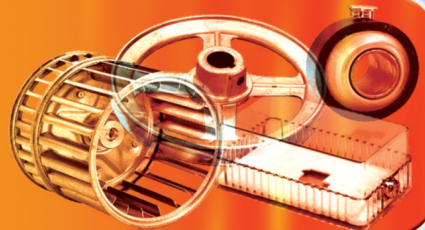
ALLTEMP

*Your single source
for quality products*

Refrigeration



Heating & A/C



Electrical



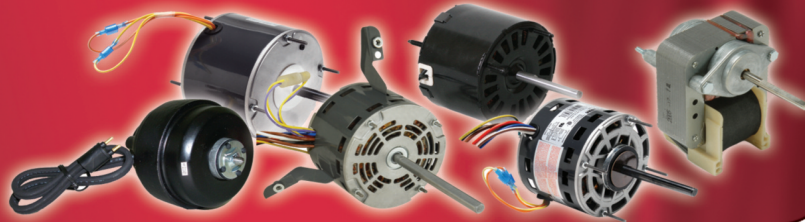
Service Tools



ROTOM C A N A D A

Your single source for quality motors

Motors



Blowers



OEM



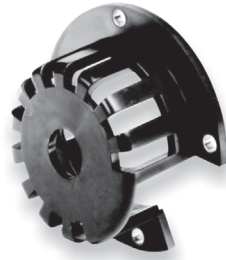
Components



The HS35 encoders are built rugged with heavy duty features designed to NEMA 4, 13, and IP65 environmental conditions. These hollow shaft encoders come in a kit complete with hardware and ready to fit on Marathon Black Max and Blue Max inverter duty and vector duty motors.



HS35 Incremental Optical Encoder



Protective Cover



Encoder Cable w/ Connector

BEI

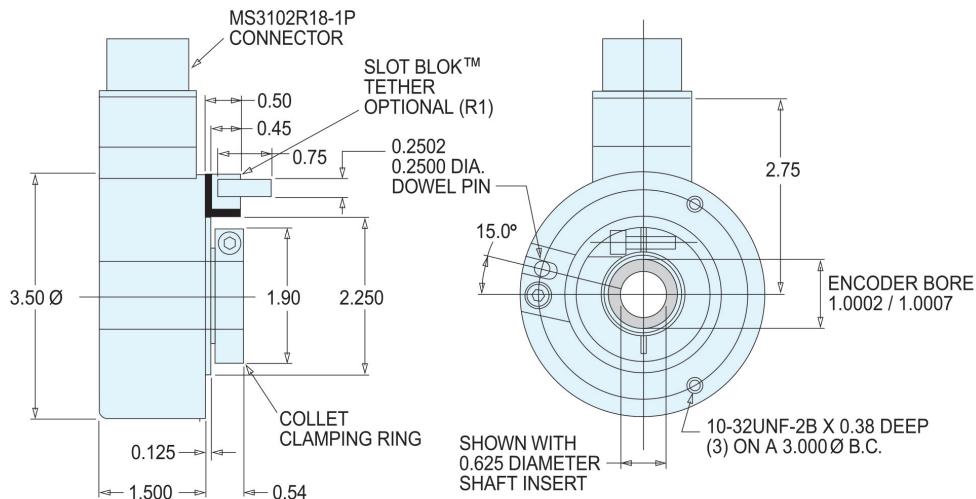
Part Number	PPR	Bore Size
HS35F-1024S	1024	5/8" & 1"
HS35F-2048S	2048	5/8" & 1"

MAXMOTION ALUMINUM PREMIUM TEFC MOTORS

Part Number	BEI
26068-001	Protective Cover
31186-1810	Encoder Cable 10' w/ Connector
31186-1820	Encoder Cable 20' w/ Connector
31186-1830	Encoder Cable 30' w/ Connector
31186-1850	Encoder Cable 50' w/ Connector
37048-003-500	Encoder Cable Bulk 500'

MS Connector Termination

TOLERANCES: .XX = ±0.01, .XXX = ±0.005



SMV VECTOR SERIES VFD'S OPEN LOOP FLUX VECTOR -
 SPEED OR TORQUE CONTROL ENHANCED V/Hz WITH AUTO TUNING -
 V/Hz (CONSTANT OR VARIABLE) NEMA 1 (IP31) ENCLOSURE



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional

Switching Frequency:

- 4, 6, 8, 10,12 or 16 kHz

Universal Logic Assertion (Selectable):

- Positive or Negative Logic Input

Braking Functions:

- DC Injection Braking
- Optional Regenerative Braking

Over Temperature Protection

Speed Commands:

- Keypad
- Potentiometer
- Jog

- Floating Point Control & 8 Preset Speeds
- Voltage: Scalable 0 – 10 VDC
- Current: Scalable 4 – 20 mA

Process Control:

- PID Modes: Direct and Reverse Acting
- PID Sleep Mode

Voltage Monitoring:

- High - Low DC Bus V Protection
- Low Line V Compensation

Current Monitoring:

- Motor Overload Protection
- Current Limiting Safeguard
- Phase Loss Protection
- Ground Fault
- Short Circuit Protection

Loss of Follower Management:

- Protective Fault
- Go to Preset Speed or Preset Setpoint
- Initiate System Notification



SINGLE PHASE INPUT / THREE PHASE OUTPUT (120-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/3	120-240	230-3PH	ESV251N01SXB	1.7	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 4.35
1/2	120-240	230-3PH	ESV371N01SXB	2.4	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 4.35
1	120-240	230-3PH	ESV751N01SXB	4.2	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 4.35
1 1/2	120-240	230-3PH	ESV112N01SXB	6	NEMA 1 (IP31)	4	7.5 x 3.9 x 4.35

SINGLE OR THREE PHASE INPUT / THREE PHASE OUTPUT (200-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/3	200-240	230-3PH	ESV251N02SXB *	1.7	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 4.35
1/2	200-240	230-3PH	ESV371N02YXB	2.4	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 4.35
1	200-240	230-3PH	ESV751N02YXB	4.2	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 4.35
1 1/2	200-240	230-3PH	ESV112N02YXB	6	NEMA 1 (IP31)	4	7.5 x 3.9 x 4.35
2	200-240	230-3PH	ESV152N02YXB	7	NEMA 1 (IP31)	4	7.5 x 3.9 x 4.35
3	200-240	230-3PH	ESV222N02YXB	9.6	NEMA 1 (IP31)	4	7.5 x 3.9 x 4.35

THREE PHASE INPUT / THREE PHASE OUTPUT (208-230VAV)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
5	208-240	230-3PH	ESV402N02TXB	16.5	NEMA 1 (IP31)	4.4	7.5 x 3.9 x 5.8
7 1/2	208-240	230-3PH	ESV552N02TXB	23	NEMA 1 (IP31)	7.4	9.83 x 5.12 x 6.3
10	208-240	230-3PH	ESV752N02TXB	29	NEMA 1 (IP31)	7.4	9.83 x 5.12 x 6.3
15	208-240	230-3PH	ESV113N02TXB	42	NEMA 1 (IP31)	15.2	12.33 x 6.88 x 8.08
20	208-240	230-3PH	ESV153N02TXB	54	NEMA 1 (IP31)	16.6	12.33 x 6.88 x 8.08

Footnotes:

* Model ESV251N02SXB is Single Phase Input Only

CHART CONTINUES ON NEXT PAGE



SMV VECTOR SERIES VFD'S OPEN LOOP FLUX VECTOR -
 SPEED OR TORQUE CONTROL ENHANCED V/Hz WITH AUTO TUNING -
 V/Hz (CONSTANT OR VARIABLE) NEMA 1 (IP31) ENCLOSURE



THREE PHASE INPUT / THREE PHASE OUTPUT (400-480VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	400-480	400-480-3PH	ESV371N04TXB	1.3/1.1	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 5.8
1	400-480	400-480-3PH	ESV751N04TXB	2.4/2.1	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 5.8
1.5	400-480	400-480-3PH	ESV112N04TXB	3.5/3.0	NEMA 1 (IP31)	4	7.5 x 3.9 x 5.8
2	400-480	400-480-3PH	ESV152N04TXB	4.0/4.35	NEMA 1 (IP31)	4	7.5 x 3.9 x 5.8
3	400-480	400-480-3PH	ESV222N04TXB	5.5/4.8	NEMA 1 (IP31)	4	7.5 x 3.9 x 5.8
5	400-480	400-480-3PH	ESV402N04TXB	9.4/8.2	NEMA 1 (IP31)	4.4	7.5 x 3.9 x 5.8
7 1/2	400-480	400-480-3PH	ESV552N04TXB	12.6/11	NEMA 1 (IP31)	7.4	9.83 x 5.12 x 6.3
10	400-480	400-480-3PH	ESV752N04TXB	16.1/14	NEMA 1 (IP31)	7.4	9.83 x 5.12 x 6.3
15	400-480	400-480-3PH	ESV113N04TXB	24/21	NEMA 1 (IP31)	16.4	12.33 x 6.88 x 8.08
20	400-480	400-480-3PH	ESV153N04TXB	31/27	NEMA 1 (IP31)	16.4	12.33 x 6.88 x 8.08
25	400-480	400-480-3PH	ESV183N04TXB	39/34	NEMA 1 (IP31)	16.5	12.33 x 6.88 x 8.08
30	400-480	400-480-3PH	ESV223N04TXB	40	NEMA 1 (IP31)	16.6	12.50 x 6.92 x 8.09
40	400-480	400-480-3PH	ESV303N04TXB	52	NEMA 1 (IP31)	29	14.19 x 8.72 x 10.07
50	400-480	400-480-3PH	ESV373N04TXB	65	NEMA 1 (IP31)	36	17.19 x 8.72 x 10.07
60	400-480	400-480-3PH	ESV453N04TXB	77	NEMA 1 (IP31)	43	20.19 x 8.72 x 10.07

THREE PHASE INPUT / THREE PHASE OUTPUT (480-600VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1	480-600	480-600-3PH	ESV751N06TXB	1.7	NEMA 1 (IP31)	3.7	7.5 x 3.9 x 5.8
2	480-600	480-600-3PH	ESV152N06TXB	2.7	NEMA 1 (IP31)	4	7.5 x 3.9 x 5.8
3	480-600	480-600-3PH	ESV222N06TXB	3.9	NEMA 1 (IP31)	4	7.5 x 3.9 x 5.8
5	480-600	480-600-3PH	ESV402N06TXB	6.1	NEMA 1 (IP31)	4.4	7.5 x 3.9 x 5.8
7 1/2	480-600	480-600-3PH	ESV552N06TXB	9	NEMA 1 (IP31)	7.4	9.83 x 5.12 x 6.3
10	480-600	480-600-3PH	ESV752N06TXB	11	NEMA 1 (IP31)	7.4	9.83 x 5.12 x 6.3
15	480-600	480-600-3PH	ESV113N06TXB	17	NEMA 1 (IP31)	16.4	12.33 x 6.88 x 8.08
20	480-600	480-600-3PH	ESV153N06TXB	22	NEMA 1 (IP31)	16.4	12.33 x 6.88 x 8.08
25	480-600	480-600-3PH	ESV183N06TXB	27	NEMA 1 (IP31)	16.5	12.33 x 6.88 x 8.08
30	480-600	480-600-3PH	ESV223N06TXB	32	NEMA 1 (IP31)	16.5	12.50 x 6.92 x 8.09
40	480-600	480-600-3PH	ESV303N06TXB	41	NEMA 1 (IP31)	29	14.19 x 8.72 x 10.07
50	480-600	480-600-3PH	ESV373N06TXB	52	NEMA 1 (IP31)	36	17.19 x 8.72 x 10.07
60	480-600	480-600-3PH	ESV453N06TXB	62	NEMA 1 (IP31)	43	20.19 x 8.72 x 10.07

Footnotes:

* Model ESV251N02SXB is Single Phase Input Only



SMV VECTOR OPEN LOOP FLUX VECTOR - SPEED OR TORQUE CONTROL
 ENHANCED V/HZ WITH AUTO TUNING - V/HZ (CONSTANT OR VARIABLE)
 NEMA 4 (IP65) ENCLOSURE INDOOR USE



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional

Switching Frequency:

- 4, 6, 8, 10,12 or 16 kHz

Universal Logic Assertion (Selectable):

- Positive or Negative Logic Input

Braking Functions:

- DC Injection Braking
- Optional Regenerative Braking

Over Temperature Protection

Speed Commands:

- Keypad
- Potentiometer
- Jog

- Floating Point Control & 8 Preset Speeds
- Voltage: Scalable 0 – 10 VDC
- Current: Scalable 4 – 20 mA

Process Control:

- PID Modes: Direct and Reverse Acting
- PID Sleep Mode

Voltage Monitoring:

- High - Low DC Bus V Protection
- Low Line V Compensation

Current Monitoring:

- Motor Overload Protection
- Current Limiting Safeguard
- Phase Loss Protection
- Ground Fault
- Short Circuit Protection

Loss of Follower Management:

- Protective Fault
- Go to Preset Speed or Preset Setpoint
- Initiate System Notification



SINGLE PHASE INPUT / THREE PHASE OUTPUT (120-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	120-240	230-3PH	ESV371N01SXC	2.4	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1	120-240	230-3PH	ESV751N01SXC	4.2	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1 1/2	120-240	230-3PH	ESV112N01SXC	6	NEMA 4 (IP65)	8	8 x 6.3 x 6.3

SINGLE OR THREE PHASE INPUT / THREE PHASE OUTPUT (200-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	200-240	230-3PH	ESV371N02YXC	2.4	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1	200-240	230-3PH	ESV751N02YXC	4.2	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1 1/2	200-240	230-3PH	ESV112N02YXC	6	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
2	200-240	230-3PH	ESV152N02YXC	7	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
3	200-240	230-3PH	ESV222N02YXC	9.6	NEMA 4 (IP65)	8	8 x 7.1 x 6.8

THREE PHASE INPUT / THREE PHASE OUTPUT (208-230VAV)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
5	208-240	230-3PH	ESV402N02TXC	16.5	NEMA 4 (IP65)	13	10 x 9 x 8
7 1/2	208-240	230-3PH	ESV552N02TXD	23	NEMA 4 (IP65)	12	10 x 8.1 x 8
10	208-240	230-3PH	ESV752N02TXD	29	NEMA 4 (IP65)	13	10 x 8.1 x 8
15	208-240	230-3PH	ESV113N02TXD	42	NEMA 4 (IP65)	25	14.4 x 9.4 x 9.5
20	208-240	230-3PH	ESV153N02TXD	54	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5

Footnotes:

- * C = Indoor Only, Convection Cooled
- * D = Indoor Only, Fan Cooled

CHART CONTINUES ON NEXT PAGE



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional



THREE PHASE INPUT / THREE PHASE OUTPUT (400-480VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	400-480	400-480-3PH	ESV371N04TXC	1.3/1.1	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1	400-480	400-480-3PH	ESV751N04TXC	2.4/2.1	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1.5	400-480	400-480-3PH	ESV112N04TXC	3.5/3.0	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
2	400-480	400-480-3PH	ESV152N04TXC	4.0/4.35	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
3	400-480	400-480-3PH	ESV222N04TXC	5.5/4.8	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
5	400-480	400-480-3PH	ESV402N04TXC	9.4/8.2	NEMA 4 (IP65)	13	10 x 9 x 8
7 1/2	400-480	400-480-3PH	ESV552N04TXC	12.6/11	NEMA 4 (IP65)	13	10 x 9 x 8
10	400-480	400-480-3PH	ESV752N04TXD	16.1/14	NEMA 4 (IP65)	13	10 x 8.1 x 8
15	400-480	400-480-3PH	ESV113N04TXD	24/21	NEMA 4 (IP65)	25	14.4 x 9.4 x 9.5
20	400-480	400-480-3PH	ESV153N04TXD	31/27	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
25	400-480	400-480-3PH	ESV183N04TXD	39/34	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
30	400-480	400-480-3PH	ESV223N04TXD	40	NEMA 4 (IP65)	31	18.5 x 9.4 x 9.5

THREE PHASE INPUT / THREE PHASE OUTPUT (480-600VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1	480-600	480-600-3PH	ESV751N06TXC	1.7	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
2	480-600	480-600-3PH	ESV152N06TXC	2.7	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
3	480-600	480-600-3PH	ESV222N06TXC	3.9	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
5	480-600	480-600-3PH	ESV402N06TXC	6.1	NEMA 4 (IP65)	13	10 x 9 x 8
7 1/2	480-600	480-600-3PH	ESV552N06TXC	9	NEMA 4 (IP65)	13	10 x 9 x 8
10	480-600	480-600-3PH	ESV752N06TXD	11	NEMA 4 (IP65)	13	10 x 8.1 x 8
15	480-600	480-600-3PH	ESV113N06TXD	17	NEMA 4 (IP65)	25	14.4 x 9.4 x 9.5
20	480-600	480-600-3PH	ESV153N06TXD	22	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
25	480-600	480-600-3PH	ESV183N06TXD	27	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
30	480-600	480-600-3PH	ESV223N06TXD	32	NEMA 4 (IP65)	31	18.5 x 9.4 x 9.5

Footnotes:

- * C = Indoor Only, Convection Cooled
- * D = Indoor Only, Fan Cooled

SMV VECTOR OPEN LOOP FLUX VECTOR - SPEED OR TORQUE CONTROL
 ENHANCED V/HZ WITH AUTO TUNING - V/HZ (CONSTANT OR VARIABLE)
 NEMA 4 (IP65) ENCLOSURE INDOOR / OUTDOOR USE



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional

Switching Frequency:

- 4, 6, 8, 10,12 or 16 kHz

Universal Logic Assertion (Selectable):

- Positive or Negative Logic Input

Braking Functions:

- DC Injection Braking
- Optional Regenerative Braking

Over Temperature Protection

Speed Commands:

- Keypad
- Potentiometer
- Jog

- Floating Point Control & 8 Preset Speeds
- Voltage: Scalable 0 – 10 VDC
- Current: Scalable 4 – 20 mA

Process Control:

- PID Modes: Direct and Reverse Acting
- PID Sleep Mode

Voltage Monitoring:

- High - Low DC Bus V Protection
- Low Line V Compensation

Current Monitoring:

- Motor Overload Protection
- Current Limiting Safeguard
- Phase Loss Protection
- Ground Fault
- Short Circuit Protection

Loss of Follower Management:

- Protective Fault
- Go to Preset Speed or Preset Setpoint
- Initiate System Notification



SINGLE PHASE INPUT / THREE PHASE OUTPUT (120-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	120-240	230-3PH	ESV371N01SXE	2.4	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1	120-240	230-3PH	ESV751N01SXE	4.2	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1 1/2	120-240	230-3PH	ESV112N01SXE	6	NEMA 4 (IP65)	8	8 x 6.3 x 6.3

SINGLE OR THREE PHASE INPUT / THREE PHASE OUTPUT (200-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	200-240	230-3PH	ESV371N02YXE	2.4	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1	200-240	230-3PH	ESV751N02YXE	4.2	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1 1/2	200-240	230-3PH	ESV112N02YXE	6	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
2	200-240	230-3PH	ESV152N02YXE	7	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
3	200-240	230-3PH	ESV222N02YXE	9.6	NEMA 4 (IP65)	8	8 x 7.1 x 6.8

THREE PHASE INPUT / THREE PHASE OUTPUT (208-230VAV)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
5	208-240	230-3PH	ESV402N02TXE	16.5	NEMA 4 (IP65)	13	10 x 9 x 8
7 1/2	208-240	230-3PH	ESV552N02TXF	23	NEMA 4 (IP65)	12	10 x 8.1 x 8
10	208-240	230-3PH	ESV752N02TXF	29	NEMA 4 (IP65)	13	10 x 8.1 x 8
15	208-240	230-3PH	ESV113N02TXF	42	NEMA 4 (IP65)	25	14.4 x 9.4 x 9.5
20	208-240	230-3PH	ESV153N02TXF	54	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5

Footnotes:

- * E = Indoor /Outdoor, Convection Cooled
- * F = Indoor / Outdoor, Fan Cooled

CHART CONTINUES ON NEXT PAGE



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional



THREE PHASE INPUT / THREE PHASE OUTPUT (400-480VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	400-480	400-480-3PH	ESV371N04TXE	1.3/1.1	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1	400-480	400-480-3PH	ESV751N04TXE	2.4/2.1	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
1.5	400-480	400-480-3PH	ESV112N04TXE	3.5/3.0	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
2	400-480	400-480-3PH	ESV152N04TXE	4.0/4.35	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
3	400-480	400-480-3PH	ESV222N04TXE	5.5/4.8	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
5	400-480	400-480-3PH	ESV402N04TXE	9.4/8.2	NEMA 4 (IP65)	13	10 x 9 x 8
7 1/2	400-480	400-480-3PH	ESV552N04TXE	12.6/11	NEMA 4 (IP65)	13	10 x 9 x 8
10	400-480	400-480-3PH	ESV752N04TXF	16.1/14	NEMA 4 (IP65)	13	10 x 8.1 x 8
15	400-480	400-480-3PH	ESV113N04TXF	24/21	NEMA 4 (IP65)	25	14.4 x 9.4 x 9.5
20	400-480	400-480-3PH	ESV153N04TXF	31/27	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
25	400-480	400-480-3PH	ESV183N04TXF	39/34	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
30	400-480	400-480-3PH	ESV223N04TXF	40	NEMA 4 (IP65)	31	18.5 x 9.4 x 9.5

THREE PHASE INPUT / THREE PHASE OUTPUT (480-600VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1	480-600	480-600-3PH	ESV751N06TXE	1.7	NEMA 4 (IP65)	5	8 x 6.3 x 4.5
2	480-600	480-600-3PH	ESV152N06TXE	2.7	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
3	480-600	480-600-3PH	ESV222N06TXE	3.9	NEMA 4 (IP65)	7	8 x 6.3 x 6.3
5	480-600	480-600-3PH	ESV402N06TXE	6.1	NEMA 4 (IP65)	13	10 x 9 x 8
7 1/2	480-600	480-600-3PH	ESV552N06TXE	9	NEMA 4 (IP65)	13	10 x 9 x 8
10	480-600	480-600-3PH	ESV752N06TXF	11	NEMA 4 (IP65)	13	10 x 8.1 x 8
15	480-600	480-600-3PH	ESV113N06TXF	17	NEMA 4 (IP65)	25	14.4 x 9.4 x 9.5
20	480-600	480-600-3PH	ESV153N06TXF	22	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
25	480-600	480-600-3PH	ESV183N06TXF	27	NEMA 4 (IP65)	26	14.4 x 9.4 x 9.5
30	480-600	480-600-3PH	ESV223N06TXF	32	NEMA 4 (IP65)	31	18.5 x 9.4 x 9.5

Footnotes:

- * E = Indoor /Outdoor, Convection Cooled
- * F = Indoor / Outdoor, Fan Cooled

SMV VECTOR OPEN LOOP FLUX VECTOR - SPEED OR TORQUE CONTROL
 ENHANCED V/HZ WITH AUTO TUNING - V/HZ (CONSTANT OR VARIABLE)
 NEMA 4 (IP65) ENCLOSURE INDOOR WITH INTEGRATED DISCONNECT



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional

Switching Frequency:

- 4, 6, 8, 10,12 or 16 kHz

Universal Logic Assertion (Selectable):

- Positive or Negative Logic Input

Braking Functions:

- DC Injection Braking
- Optional Regenerative Braking

Over Temperature Protection

Speed Commands:

- Keypad
- Potentiometer
- Jog

- Floating Point Control & 8 Preset Speeds
- Voltage: Scalable 0 – 10 VDC
- Current: Scalable 4 – 20 mA

Process Control:

- PID Modes: Direct and Reverse Acting
- PID Sleep Mode

Voltage Monitoring:

- High - Low DC Bus V Protection
- Low Line V Compensation

Current Monitoring:

- Motor Overload Protection
- Current Limiting Safeguard
- Phase Loss Protection
- Ground Fault
- Short Circuit Protection

Loss of Follower Management:

- Protective Fault
- Go to Preset Speed or Preset Setpoint
- Initiate System Notification



SINGLE PHASE INPUT / THREE PHASE OUTPUT (120-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	120-240	230-3PH	ESV371N01SMC	2.4	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1	120-240	230-3PH	ESV751N01SMC	4.2	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1 1/2	120-240	230-3PH	ESV112N01SMC	6	NEMA 4 (IP65)	11	11 x 6.3 x 7.2

SINGLE OR THREE PHASE INPUT / THREE PHASE OUTPUT (200-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	200-240	230-3PH	ESV371N02YMC	2.4	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1	200-240	230-3PH	ESV751N02YMC	4.2	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1 1/2	200-240	230-3PH	ESV112N02YMC	6	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
2	200-240	230-3PH	ESV152N02YMC	7	NEMA 4 (IP65)	11	11 x 6.2 x 7.2
3	200-240	230-3PH	ESV222N02YMC	9.6	NEMA 4 (IP65)	13	11 x 7.1 x 7.7

THREE PHASE INPUT / THREE PHASE OUTPUT (208-230VAV)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
5	208-240	230-3PH	ESV402N02TMC	16.5	NEMA 4 (IP65)	18	13 x 9 x 9
7 1/2	208-240	230-3PH	ESV552N02TMD	23	NEMA 4 (IP65)	19	13 x 8.1 x 8.9
10	208-240	230-3PH	ESV752N02TMD	29	NEMA 4 (IP65)	18	13 x 8.1 x 8.9
15	208-240	230-3PH	ESV113N02TMD	42	NEMA 4 (IP65)	34	18.5 x 9.4 x 11.2
20	208-240	230-3PH	ESV153N02TMD	54	NEMA 4 (IP65)	34	18.5 x 9.4 x 11.2

Footnotes:

- * C = Indoor Only, Convection Cooled
- * D = Indoor Only, Fan Cooled

CHART CONTINUES ON NEXT PAGE



THREE PHASE INPUT / THREE PHASE OUTPUT (400-480VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	400-480	400-480-3PH	ESV371N04TMC	1.3/1.1	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1	400-480	400-480-3PH	ESV751N04TMC	2.4/2.1	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1.5	400-480	400-480-3PH	ESV112N04TMC	3.5/3.0	NEMA 4 (IP65)	11	11 x 6.3 x 5.5
2	400-480	400-480-3PH	ESV152N04TMC	4.0/4.35	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
3	400-480	400-480-3PH	ESV222N04TMC	5.5/4.8	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
5	400-480	400-480-3PH	ESV402N04TMC	9.4/8.2	NEMA 4 (IP65)	18	13 x 9 x 9
7 1/2	400-480	400-480-3PH	ESV552N04TMC	12.6/11	NEMA 4 (IP65)	19	13 x 9 x 9
10	400-480	400-480-3PH	ESV752N04TMD	16.1/14	NEMA 4 (IP65)	18	13 x 8.1 x 8.9
15	400-480	400-480-3PH	ESV113N04TMD	24/21	NEMA 4 (IP65)	26	14.4 x 9.4 x 10.3
20	400-480	400-480-3PH	ESV153N04TMD	31/27	NEMA 4 (IP65)	27	14.4 x 9.4 x 10.3
25	400-480	400-480-3PH	ESV183N04TMD	39/34	NEMA 4 (IP65)	34	18.5 x 9.4 x 11.2
30	400-480	400-480-3PH	ESV223N04TMD	40	NEMA 4 (IP65)	34	18.5 x 9.4 x 11.2

THREE PHASE INPUT / THREE PHASE OUTPUT (480-600VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1	480-600	480-600-3PH	ESV751N06TMC	1.7	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
2	480-600	480-600-3PH	ESV152N06TMC	2.7	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
3	480-600	480-600-3PH	ESV222N06TMC	3.9	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
5	480-600	480-600-3PH	ESV402N06TMC	6.1	NEMA 4 (IP65)	18	13 x 9 x 9
7 1/2	480-600	480-600-3PH	ESV552N06TMC	9	NEMA 4 (IP65)	19	13 x 9 x 9
10	480-600	480-600-3PH	ESV752N06TMC	11	NEMA 4 (IP65)	18	13 x 8.1 x 8.9
15	480-600	480-600-3PH	ESV113N06TMC	17	NEMA 4 (IP65)	26	14.4 x 9.4 x 10.3
20	480-600	480-600-3PH	ESV153N06TMC	22	NEMA 4 (IP65)	27	14.4 x 9.4 x 10.3
25	480-600	480-600-3PH	ESV183N06TMC	27	NEMA 4 (IP65)	34	18.5 x 9.4 x 11.2
30	480-600	480-600-3PH	ESV223N06TMC	32	NEMA 4 (IP65)	34	18.5 x 9.4 x 11.2

Footnotes:

- * C = Indoor Only, Convection Cooled
- * D = Indoor Only, Fan Cooled

SMV VECTOR OPEN LOOP FLUX VECTOR - SPEED OR TORQUE CONTROL
 ENHANCED V/HZ WITH AUTO TUNING - V/HZ (CONSTANT OR VARIABLE)
 NEMA 4 (IP65) ENCLOSURE INDOOR USE FILTERED INPUT



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional

Switching Frequency:

- 4, 6, 8, 10,12 or 16 kHz

Universal Logic Assertion (Selectable):

- Positive or Negative Logic Input

Braking Functions:

- DC Injection Braking
- Optional Regenerative Braking

Over Temperature Protection

Speed Commands:

- Keypad
- Potentiometer
- Jog

- Floating Point Control & 8 Preset Speeds
- Voltage: Scalable 0 – 10 VDC
- Current: Scalable 4 – 20 mA

Process Control:

- PID Modes: Direct and Reverse Acting
- PID Sleep Mode

Voltage Monitoring:

- High - Low DC Bus V Protection
- Low Line V Compensation

Current Monitoring:

- Motor Overload Protection
- Current Limiting Safeguard
- Phase Loss Protection
- Ground Fault
- Short Circuit Protection

Loss of Follower Management:

- Protective Fault
- Go to Preset Speed or Preset Setpoint
- Initiate System Notification



SINGLE OR THREE PHASE INPUT / THREE PHASE OUTPUT (200-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	200-240	230-3PH	ESV371N02SFC	2.4	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1	200-240	230-3PH	ESV751N02SFC	4.2	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1 1/2	200-240	230-3PH	ESV112N02SFC	6	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
2	200-240	230-3PH	ESV152N02SFC	7	NEMA 4 (IP65)	11	11 x 6.2 x 7.2
3	200-240	230-3PH	ESV222N02SFC	9.6	NEMA 4 (IP65)	13	11 x 7.1 x 7.7

THREE PHASE INPUT / THREE PHASE OUTPUT (400-480VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	400-480	400-480-3PH	ESV371N04TFC	1.3/1.1	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1	400-480	400-480-3PH	ESV751N04TFC	2.4/2.1	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1.5	400-480	400-480-3PH	ESV112N04TFC	3.5/3.0	NEMA 4 (IP65)	11	11 x 6.3 x 5.5
2	400-480	400-480-3PH	ESV152N04TFC	4.0/4.35	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
3	400-480	400-480-3PH	ESV222N04TFC	5.5/4.8	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
4	400-480	400-480-3PH	ESV302N04TFC	7.6/6.3	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
5	400-480	400-480-3PH	ESV402N04TFC	9.4/8.2	NEMA 4 (IP65)	19	13 x 9 x 9
7 1/2	400-480	400-480-3PH	ESV552N04TFC	12.6/11	NEMA 4 (IP65)	20	13 x 9 x 9
10	400-480	400-480-3PH	ESV752N04TFD	16.1/14	NEMA 4 (IP65)	19	13 x 8.1 x 8.9
15	400-480	400-480-3PH	ESV113N04TFD	24/21	NEMA 4 (IP65)	28	14.4 x 9.4 x 10.3
20	400-480	400-480-3PH	ESV153N04TFD	31/27	NEMA 4 (IP65)	29	14.4 x 9.4 x 10.3
25	400-480	400-480-3PH	ESV183N04TFD	39/34	NEMA 4 (IP65)	36	18.5 x 9.4 x 11.2
30	400-480	400-480-3PH	ESV223N04TFD	40	NEMA 4 (IP65)	36	18.5 x 9.4 x 11.2

Footnotes:

- * C = Indoor Only, Convection Cooled
- * D = Indoor Only, Fan Cooled
- * F = Integral Input Line Filter



Features:

- Dynamic Torque Response
- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type, Auxiliary Ramp-to-Stop
- Fixed Accel Boost for Improved Starting
- 500 Hz Output Frequency
- 1,000 Hz Optional

Switching Frequency:

- 4, 6, 8, 10,12 or 16 kHz

Universal Logic Assertion (Selectable):

- Positive or Negative Logic Input

Braking Functions:

- DC Injection Braking
- Optional Regenerative Braking

Over Temperature Protection

Speed Commands:

- Keypad
- Potentiometer
- Jog

- Floating Point Control & 8 Preset Speeds
- Voltage: Scalable 0 - 10 VDC
- Current: Scalable 4 - 20 mA

Process Control:

- PID Modes: Direct and Reverse Acting
- PID Sleep Mode

Voltage Monitoring:

- High - Low DC Bus V Protection
- Low Line V Compensation

Current Monitoring:

- Motor Overload Protection
- Current Limiting Safeguard
- Phase Loss Protection
- Ground Fault
- Short Circuit Protection

Loss of Follower Management:

- Protective Fault
- Go to Preset Speed or Preset Setpoint
- Initiate System Notification



SINGLE OR THREE PHASE INPUT / THREE PHASE OUTPUT (200-240VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	200-240	230-3PH	ESV371N02SLC	2.4	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1	200-240	230-3PH	ESV751N02SLC	4.2	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1 1/2	200-240	230-3PH	ESV112N02SLC	6	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
2	200-240	230-3PH	ESV152N02SLC	7	NEMA 4 (IP65)	11	11 x 6.2 x 7.2
3	200-240	230-3PH	ESV222N02SLC	9.6	NEMA 4 (IP65)	13	11 x 7.1 x 7.7

THREE PHASE INPUT / THREE PHASE OUTPUT (400-480VAC)

HP	Input Voltage	Output Voltage	Catalogue No	Continuous Amps	Enclosure	Weight (Lbs)	Dimensions H x W x D (IN.)
1/2	400-480	400-480-3PH	ESV371N04TLC	1.3/1.1	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1	400-480	400-480-3PH	ESV751N04TLC	2.4/2.1	NEMA 4 (IP65)	8	11 x 6.3 x 5.4
1.5	400-480	400-480-3PH	ESV112N04TLC	3.5/3.0	NEMA 4 (IP65)	11	11 x 6.3 x 5.5
2	400-480	400-480-3PH	ESV152N04TLC	4.0/4.35	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
3	400-480	400-480-3PH	ESV222N04TLC	5.5/4.8	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
4	400-480	400-480-3PH	ESV302N04TLC	7.6/6.3	NEMA 4 (IP65)	11	11 x 6.3 x 7.2
5	400-480	400-480-3PH	ESV402N04TLC	9.4/8.2	NEMA 4 (IP65)	19	13 x 9 x 9
7 1/2	400-480	400-480-3PH	ESV552N04TLC	12.6/11	NEMA 4 (IP65)	20	13 x 9 x 9
10	400-480	400-480-3PH	ESV752N04TLD	16.1/14	NEMA 4 (IP65)	19	13 x 8.1 x 8.9
15	400-480	400-480-3PH	ESV113N04TLD	24/21	NEMA 4 (IP65)	28	14.4 x 9.4 x 10.3
20	400-480	400-480-3PH	ESV153N04TLD	31/27	NEMA 4 (IP65)	29	14.4 x 9.4 x 10.3
25	400-480	400-480-3PH	ESV183N04TLD	39/34	NEMA 4 (IP65)	36	18.5 x 9.4 x 11.2
30	400-480	400-480-3PH	ESV223N04TLD	40	NEMA 4 (IP65)	36	18.5 x 9.4 x 11.2

Footnotes:

- * C = Indoor Only, Convection Cooled
- * L = Integral Disconnect and Input Filter
- * D = Indoor Only, Fan Cooled

SMV VECTOR SERIES

DRIVE ACCESSORIES



Accessory Description	Catalogue No
Keypads	
SMVector Remote Keypad w/ drive interface module and cable - up to 10HP (7.5kW)	ESVZXX1
SMVector Remote Keypad with cable - 15HP (11kW) and higher.	ESVZXHO
Potentiometers	
SMVector Remote Keypad w/ drive interface module and cable - up to 10HP (7.5kW)	ESVZXX1
SMVector Remote Keypad with cable - 15HP (11kW) and higher.	ESVZXHO
NEMA 4X terminal cover with integral speed potentiometer (W = 9.4in)	ESVZXM3
Communication Devices	
CANopen Communications Interface module	ESVZACO
RS485 / Modbus Communications Interface module	ESVZARO
DeviceNet Communications Interface module	ESVZADO
Profibus Communications Interface module	ESVZAPO
Ethernet/IP Communications Interface module	ESVZAE0
Relays	
Additional Form C Relay Output Module	ESVZALO
Additional I/O module: includes 1 form C relay and 2 digital inputs	ESVZAL1
Dynamic Braking Modules c/w Resistors - 240Volt	
Dynamic Braking Module with Resistors - 0.5HP, 240V	EZXDB3712A1
Dynamic Braking Module with Resistors - 1.5HP, 240V	EZXDB1122A1
Dynamic Braking Module with Resistors - 3HP, 240V	EZXDB2222A1
Dynamic Braking Module with Resistors - 5HP, 240V	EZXDB4022A1
Dynamic Braking Module with Resistors - 7.5HP, 240V	EZXDB5522A1
Dynamic Braking Module with Resistors - 10HP, 240V	EZXDB7522A1
Dynamic Braking Modules c/w Resistors - 480Volt	
Dynamic Braking Module with Resistors - 0.5HP, 480V	EZXDB3714A1
Dynamic Braking Module with Resistors - 1.5HP, 480V	EZXDB1124A1
Dynamic Braking Module with Resistors - 3HP, 480V	EZXDB2224A1
Dynamic Braking Module with Resistors - 5HP, 480V	EZXDB4024A1
Dynamic Braking Module with Resistors - 7.5HP, 480V	EZXDB5524A1
Dynamic Braking Module with Resistors - 10HP, 480V	EZXDB7524A1
Dynamic Braking Modules c/w Resistors - 600Volt	
Dynamic Braking Module with Resistors - 1.5HP, 600V	EZXDB1126A1
Dynamic Braking Module with Resistors - 3HP, 600V	EZXDB2226A1
Dynamic Braking Module with Resistors - 5HP, 600V	EZXDB4026A1
Dynamic Braking Modules without Resistors	
Dynamic Braking Module without Resistors - 240V	EZXDC1532A1
Dynamic Braking Module without Resistors - 480V	EZXDC2234A1
Dynamic Braking Module without Resistors - 600V	EZXDC2236A1

MS300 SERIES COMPACT VECTOR DRIVE SUITABLE FOR IM, IPM & SPM MOTORS.

1/4 - 30HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



Features:

- Volt/Hertz, Sensorless Vector
- Suitable for Induction motors (IM), Interior Permanent Magnet motor (IPM), & Surface Permanent motors (SPM).
- All MS300 drives are Heavy Duty and Normal Duty rated.
- Compact design saves 40% space compared to existing models
- *Voltages available:*
 - 115Vac 1 phase input, 230Vac 3 phase output (HD 1/4 - 1HP)
 - 230Vac 1 phase input, 230Vac 3 phase output (HD 1/4 - 3HP)
 - 230Vac 3 phase input, 230Vac 3 phase output (HD 1/4 - 20HP)
 - 460Vac 3 phase input, 460Vac 3 phase output (HD 1/4 - 30HP)
 - 575Vac 3 phase input, 575Vac 3 phase output (coming soon) (HD 1 - 10HP)
- Programmable (0 - 599Hz) for high speed applications.
- Delivers 200% High Starting Torque with low speed control of 0.5Hz (IM), 0.0Hz (PM).
- IP 20, IP21 with optional conduit box
- Conformal coated circuit boards, conforms to IEC60721-3-3, class 3C2.
- Adaptable to 50°C environment.
- RFI switch for IT mains
- Deb Deceleration Energy Back function
- Built in Application Macros Compressor, Fan, Pump, Conveyor, Packaging, Textiles & Machine Tool for Fast Startup
- Realtime clock & calendar functions.
- Built-in 2K step capacity PLC.
- The output current is adjustable up to 120% of the drive's nominal capacity.
- All MS300 series drives have built-in dynamic braking transistors.
- Quick connect spring set control terminals.
- Digital Inputs: 9, (2 dedicated (STO) & 7 programmable), NPN or PNP configurable.
- Power removal safety (Safe Torque Off), function for Emergency Stop.
- 2 Analog Inputs, selectable (0 - 10V, -10 - +10V, 0 - 20ma, 4 - 20ma, PTC thermistor & RTD PT100)
- Digital Outputs: 1 dry contact (1 NO, 1 NC), 2 open collector transistors & 1 digital frequency output.
- Analog Outputs: 1; programmable, selectable 0 - 10V, 0 - 20ma or 4 - 20ma.
- Communication serial ports: Channel 1 USB, Channel 2 RS-485, (RJ-45 & SG+, SG-, SGND terminals)
- Resident communication protocol: Modbus RTU & ASCII.
- Optional communication protocols: Profibus DP, DeviceNet, Modbus TCP, Ethernet/IP & CANopen
- 1 option card slot: 1 for communication cards

Please refer to the "VFD Accessories" section for all available options.

MS300 SERIES COMPACT VECTOR DRIVE SUITABLE FOR IM, IPM & SPM MOTORS.

1/4 - 30HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



NORMAL DUTY		FACTORY DEFAULT HEAVY DUTY		OUTPUT AMPS (ND)	OUTPUT AMPS (HD)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	FRAME	WEIGHT KG	MODEL
HP	KW	HP	KW							
PNP / NPN 115/1/60 IP10 (No EMC Filter)										
0.33	0.24	0.25	0.2	1.8	1.6	0.16-1.92A	68 x 128 x 96	A1	0.65	VFD1A6MS11ANSAA
0.75	0.55	0.5	0.4	2.7	2.5	0.25-3.0A	68 x 128 x 125	A3	0.74	VFD2A5MS11ANSAA
1.5	1.10	1	0.75	5.5	4.8	0.48-5.76A	87 x 157 x 152	C1	1.24	VFD4A8MS11ANSAA
PNP / NPN 240/1/60 IP20 (No EMC Filter)										
0.33	0.24	0.25	0.2	1.8	1.6	0.16-1.92A	68 x 128 x 96	A1	0.65	VFD1A6MS21ANSAA
0.75	0.55	0.50	0.4	3.2	2.8	0.25-3.0A	68 x 128 x 125	A3	0.76	VFD2A8MS21ANSAA
1.5	1.10	1	0.75	5.0	4.8	0.48-5.76A	72 x 142 x 143	B2	0.95	VFD4A8MS21ANSAA
3	2.2	2	1.5	8.5	7.5	0.75-9.0A	87 x 157 x 152	C1	1.24	VFD7A5MS21ANSAA
5	3.7	3	2.2	12.5	11.0	1.1-13.2A	87 x 157 x 152	C1	1.24	VFD11AMS21ANSAA
PNP / NPN 240/3/60 IP20 (No EMC Filter)										
0.33	0.24	0.25	0.2	1.8	1.6	0.16-1.92A	68 x 128 x 96	A1	0.65	VFD1A6MS23ANSAA
0.75	0.55	0.50	0.4	3.2	2.8	0.25-3.0A	68 x 128 x 110	A2	0.68	VFD2A8MS23ANSAA
1.5	1.10	1	0.75	5.0	4.8	0.48-5.76A	68 x 128 x 143	A5	0.81	VFD4A8MS23ANSAA
3	2.2	2	1.5	8.5	7.5	0.75-9.0A	72 x 142 x 143	B1	1.05	VFD7A5MS23ANSAA
5	3.7	3	2.2	12.5	11.0	1.1-13.2A	87 x 157 x 152	C1	1.24	VFD11AMS23ANSAA
7.5	5.5	5	3.7	19.5	17.0	1.7-20.4A	87 x 157 x 152	C1	1.2	VFD17AMS23ANSAA
10	7.5	7.5	6	27.0	25.0	2.5-30A	109 x 207 x 154	D1	2.1	VFD25AMS23ANSAA
15	11.0	10	7.5	36.0	33.0	3.3-39.6A	130 x 250 x 185	E1	3.97	VFD33AMS23ANSAA
20	15.0	15	11.0	51.0	49.0	4.9-58.8A	130 x 250 x 185	E1	3.97	VFD49AMS23ANSAA
25	18.5	20	15	69.0	65.0	6.5-78A	175 x 300 x 192	F1	6.25	VFD65AMS23ANSAA
PNP / NPN 460/3/60 IP20 (No EMC Filter)										
0.75	0.55	0.5	0.4	1.8	1.5	0.15-1.8A	68 x 128 x 129	A4	0.76	VFD1A5MS43ANSAA
1.5	1.1	1	0.8	3.0	2.7	0.27-3.24A	68 x 128 x 143	A5	0.81	VFD2A7MS43ANSAA
3	2.2	2	1.5	4.6	4.2	0.42-5.04A	72 x 142 x 143	B1	1.05	VFD4A2MS43ANSAA
5	3.7	3	2.2	6.5	5.5	0.55-6.6A	87 x 157 x 152	C1	1.24	VFD5A5MS43ANSAA
7.5	5.5	5	4.0	10.5	9.0	0.9-10.8A	87 x 157 x 152	C1	1.24	VFD9A0MS43ANSAA
10	7.5	7.5	5.5	15.7	13.0	1.3-15.6A	109 x 207 x 154	D1	2.91	VFD13AMS43ANSAA
15	11.0	10	7.5	20.5	17.0	1.7-20.4A	109 x 207 x 154	D1	2.91	VFD17AMS43ANSAA
20	15.0	15	11	28.0	25.0	2.8-30A	130 x 250 x 185	E1	5.15	VFD25AMS43ANSAA
25	18.5	20	15	36.0	32.0	3.2-38.4A	130 x 250 x 185	E1	5.15	VFD32AMS43ANSAA
30	22.0	25	19	41.5	38.0	3.8-45.6A	175 x 300 x 192	F1	8.50	VFD38AMS43ANSAA
40	30.0	30	22.0	49.0	45.0	4.5-54A	175 x 300 x 192	F1	8.50	VFD45AMS43ANSAA

Dimensions with IP21 Conduit Box:

(MKM-CBA0) Size A1 : 71,5mm x 218mm x 96mm
 (MKM-CBA0) Size A2 : 71,5mm x 218mm x 110mm
 (MKM-CBA) Size A3 : 71,5mm x 218mm x 125mm
 (MKM-CBA) Size A4 : 71,5mm x 218mm x 129mm
 (MKM-CBA) Size A5 : 71,5mm x 218mm x 143mm
 (MKM-CBB) Size B1 : 72mm x 218mm x 143mm
 (MKM-CBB) Size B2 : 72mm x 218mm x 143mm
 (MKM-CBB) Size B3 : 72mm x 218mm x 159mm

(MKM-CBC) Size C1 : 87mm x 219mm x 152mm
 (MKM-CBC) Size C2 : 87mm x 219mm x 179mm
 (MKM-CBD) Size D1 : 109mm x 244mm x 154mm
 (MKM-CBD) Size D2 : 109mm x 244mm x 187mm
 (MKM-CBE) Size E1 : 130mm x 292mm x 185mm
 (MKM-CBE) Size E2 : 130mm x 292mm x 219mm
 (MKM-CBF) Size F1 : 175mm x 356mm x 192mm

MS300 SERIES COMPACT VECTOR DRIVE SUITABLE FOR IM, IPM & SPM MOTORS.

1/4 - 30HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



NORMAL DUTY		FACTORY DEFAULT HEAVY DUTY		OUTPUT AMPS (ND)	OUTPUT AMPS (HD)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	FRAME	WEIGHT KG	MODEL
HP	KW	HP	KW							
PNP / NPN 5750/3/60 IP20 (No EMC Filter)										
1.00	0.75	1.0	0.8	2.1	1.7	0.17-2.1A	68 x 128 x 143	A5	0.85	VFD1A7MS53ANSAA
2	1.5	2	1.5	3.6	3.0	0.3-3.6A	72 x 142 x 143	B1	0.87	VFD3A0MS53ANSAA
3	2.2	3	2.2	5.0	4.2	0.42-5.04A	87 x 157 x 152	C1	1.18	VFD4A2MS53ANSAA
5	3.7	5	3.7	8.0	6.6	0.66-8.0A	87 x 157 x 152	C1	1.29	VFD6A6MS53ANSAA
7.5	5.5	7.5	5.5	11.5	9.9	0.99-11.5A	109 x 207 x 154	D1	2.04	VFD9A9MS53ANSAA
10	7.5	10	7.5	15.0	12.2	1.22-15A	109 x 207 x 154	D1	2.04	VFD12AMS53ANSAA
PNP / NPN 240/1/60 IP20 (With EMC Filter)										
0.33	0.24	0.25	0.2	1.8	1.6	0.16-1.92A	72 x 142 x 159	B3	1.32	VFD1A6MS21AFSAA
0.75	0.55	0.50	0.4	3.2	2.8	0.25-3.0A	72 x 142 x 159	B3	1.32	VFD2A8MS21AFSAA
1.5	1.10	1	0.75	5.0	4.8	0.48-5.76A	72 x 142 x 159	B3	1.32	VFD4A8MS21AFSAA
3	2.2	2	1.5	8.5	7.5	0.75-9.0A	87 x 157 x 179	C2	1.80	VFD7A5MS21AFSAA
5	3.7	3	2.2	12.5	11.0	1.1-13.2A	87 x 157 x 179	C2	1.80	VFD11AMS21AFSAA
PNP / NPN 460/3/60 IP20 (With EMC Filter)										
0.75	0.55	0.5	0.4	1.8	1.5	0.15-1.8A	72 x 142 x 159	B3	1.32	VFD1A5MS43AFSAA
1.5	1.1	1	0.8	3.0	2.7	0.27-3.24A	72 x 142 x 159	B3	1.32	VFD2A7MS43AFSAA
3	2.2	2	1.5	4.6	4.2	0.42-5.04A	72 x 142 x 159	B3	1.32	VFD4A2MS43AFSAA
5	3.7	3	2.2	6.5	5.5	0.55-6.6A	87 x 157 x 179	C2	1.80	VFD5A5MS43AFSAA
7.5	5.5	5	4.0	10.5	9.0	0.9-10.8A	87 x 157 x 179	C2	1.80	VFD9A0MS43AFSAA
10	7.5	7.5	5.5	15.7	13.0	1.3-15.6A	109 x 207 x 187	D2	2.07	VFD13AMS43AFSAA
15	11.0	10	7.5	20.5	17.0	1.7-20.4A	109 x 207 x 187	D2	2.07	VFD17AMS43AFSAA
20	15.0	15	11	28.0	25.0	2.8-30A	130 x 250 x 219	E2	3.97	VFD25AMS43AFSAA
25	18.5	20	15	36.0	32.0	3.2-38.4A	130 x 250 x 219	E2	3.97	VFD32AMS43AFSAA
30	22.0	25	19	41.5	38.0	3.8-45.6A	175 x 300 x 244	F2	6.25	VFD38AMS43AFSAA
40	30.0	30	22.0	49.0	45.0	4.5-54A	175 x 300 x 244	F2	6.25	VFD45AMS43AFSAA

Dimensions with IP21 Conduit Box:

(MKM-CBA0)
(MKM-CBA0)
(MKM-CBA)
(MKM-CBA)
(MKM-CBA)
(MKM-CBB)
(MKM-CBB)
(MKM-CBB)

Size A1 : 71,5mm x 218mm x 96mm
Size A2 : 71,5mm x 218mm x 110mm
Size A3 : 71,5mm x 218mm x 125mm
Size A4 : 71,5mm x 218mm x 129mm
Size A5 : 71,5mm x 218mm x 143mm
Size B1 : 72mm x 218mm x 143mm
Size B2 : 72mm x 218mm x 143mm
Size B3 : 72mm x 218mm x 159mm

(MKM-CBC)
(MKM-CBC)
(MKM-CBD)
(MKM-CBD)
(MKM-CBE)
(MKM-CBE)
(MKM-CBF)

Size C1 : 87mm x 219mm x 152mm
Size C2 : 87mm x 219mm x 179mm
Size D1 : 109mm x 244mm x 154mm
Size D2 : 109mm x 244mm x 187mm
Size E1 : 130mm x 292mm x 185mm
Size E2 : 130mm x 292mm x 219mm
Size F1 : 175mm x 356mm x 192mm



MS300HS HIGH SPEED SERIES COMPACT VECTOR DRIVE SUITABLE FOR IM, IPM & SPM MOTORS.

2 - 30HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



Features:

- Volt/Hertz
- Suitable for Induction motors (IM)
- All MS300 High Speed drives are Heavy Duty rated.
- Compact design saves 40% space compared to existing models
- *Voltages available:*
 - 230Vac 1 phase input, 230Vac 3 phase output (2 - 3HP)
 - 230Vac 3 phase input, 230Vac 3 phase output (2 - 20HP)
 - 460Vac 3 phase input, 460Vac 3 phase output (2 - 30HP)
- Programmable (0 - 1500Hz) for high speed applications.
- Delivers 200% High Starting Torque with low speed control of 0.5Hz (IM), 0.0Hz (PM).
- IP 20, IP21 with optional conduit box
- Conformal coated circuit boards, conforms to IEC60721-3-3, class 3C2.
- Adaptable to 50°C environment.
- RFI switch for IT mains
- Deb Deceleration Energy Back function
- Built-in Application PCB Macro for Fast Startup
- Realtime clock & calendar functions.
- Built-in 2K step capacity PLC.
- The output current is adjustable up to 120% of the drive's nominal capacity.
- All MS300 series drives have built-in dynamic braking transistors.
- Quick connect spring set control terminals.
- Digital Inputs: 9, (2 dedicated (STO) & 7 programmable), NPN or PNP configurable.
- Power removal safety (Safe Torque Off), function for Emergency Stop.
- 2 Analog Inputs, selectable (0 - 10V, -10 - +10V, 0 - 20ma, 4 - 20ma, PTC thermistor & RTD PT100)
- Digital Outputs: 1 dry contact (1 NO, 1 NC), 2 open collector transistors & 1 digital frequency output.
- Analog Outputs: 1; programmable, selectable 0 - 10V, 0 - 20ma or 4 - 20ma.
- Communication serial ports: Channel 1 USB, Channel 2 RS-485, (RJ-45 & SG+, SG-, SGND terminals)
- Resident communication protocol: Modbus RTU & ASCII.
- Optional communication protocols: Profibus DP, DeviceNet, Modbus TCP, Ethernet/IP & CANopen
- 1 option card slot: 1 for communication cards

Please refer to the "VFD Accessories" section for all available options.

MS300HS HIGH SPEED SERIES COMPACT VECTOR DRIVE SUITABLE FOR IM, IPM & SPM MOTORS.

2 - 30HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



HEAVY DUTY		OUTPUT AMPS (HD)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	FRAME	WEIGHT KG	MODEL
HP	KW						
PNP / NPN 240/1/60 IP20 (No EMC Filter) High Speed							
2	1.5	7.5	0,75-9.0A	87 x 157 x 152	C1	1.24	VFD7A5MS21ANSHA
3	2.2	11	1.1-13.2A	87 x 157 x 152	C1	1.24	VFD11AMS21ANSHA
PNP / NPN 240/3/60 IP20 (No EMC Filter) High Speed							
2	1.50	7.5	0,75-9.0A	72 x 142 x 143	B1	1.05	VFD7A5MS23ANSHA
3	2.2	11	1.1-13.2A	87 x 157 x 152	C1	1.24	VFD11AMS23ANSHA
5	3.7	17	1.7-20.4,2A	87 x 157 x 152	C1	1.24	VFD17AMS23ANSHA
7.5	5.5	25	2.5-30A	109 x 207 x 154	D1	2.07	VFD25AMS23ANSHA
10	7.5	33	3.3-39.6A	130 x 250 x 185	E1	3.97	VFD33AMS23ANSHA
15	11.0	49	4.9-58.8A	130 x 250 x 185	E1	3.97	VFD49AMS23ANSHA
20	15	65	6.5-78A	175 x 300 x 192	F1	6.3	VFD65AMS23ANSHA
PNP / NPN 460/3/60 IP20 (No EMC Filter) High Speed							
2	0.4	4.2	0.42-5.04A	72 x 142 x 143	B1	1.05	VFD4A2MS43ANSHA
3	0.8	5.5	0.55-6.6A	87 x 157 x 152	C1	1.24	VFD5A5MS43ANSHA
5	1.5	9	0.9-10.8A	87 x 157 x 152	C1	1.24	VFD9A0MS43ANSHA
7.5	5.5	13	1.3-15.6A	109 x 207 x 154	D1	2.91	VFD13AMS43ANSHA
10	7.5	17	1.7-20.4A	109 x 207 x 154	D1	2.91	VFD17AMS43ANSHA
15	11	25	2.5-30A	130 x 250 x 185	E1	5.15	VFD25AMS43ANSHA
20	15	32	3.2-38.4A	130 x 250 x 185	E1	5.15	VFD32AMS43ANSHA
25	18.5	38	3.8-45.6A	175 x 300 x 192	F1	8.50	VFD38AMS43ANSHA
30	22.0	45	4.5-54A	175 x 300 x 192	F1	8.50	VFD45AMS43ANSHA
PNP / NPN 240/1/60 IP20 (With Built-in EMC Filter) High Speed							
2	1.5	7.5	0,75-9.0A	87 x 157 x 179	C2	1.80	VFD7A5MS21AFSHA
3	2.2	11	1.1-13.2A	87 x 157 x 179	C2	1.80	VFD11AMS21AFSHA
PNP / NPN 460/3/60 IP20 (With Built-in EMC Filter) High Speed							
2	0.4	4.2	0.42-5.04A	72 x 142 x 159	B3	1.32	VFD4A2MS43AFSHA
3	0.8	5.5	0.55-6.6A	87 x 157 x 179	C2	1.80	VFD5A5MS43AFSHA
5	1.5	9	0.9-10.8A	87 x 157 x 179	C2	1.80	VFD9A0MS43AFSHA
7.5	5.5	13	1.3-15.6A	109 x 207 x 187	D2	2.07	VFD13AMS43AFSHA
10	7.5	17	1.7-20.4A	109 x 207 x 187	D2	2.07	VFD17AMS43AFSHA
15	11	25	2.5-30A	130 x 250 x 219	E2	3.97	VFD25AMS43AFSHA
20	15	32	3.2-38.4A	130 x 250 x 219	E2	3.97	VFD32AMS43AFSHA
25	18.5	38	3.8-45.6A	175 x 300 x 244	F2	6.25	VFD38AMS43AFSHA
30	22.0	45	4.5-54A	175 x 300 x 244	F2	6.25	VFD45AMS43AFSHA

Dimensions with IP21 Conduit Box:

(MKM-CBB)	Size B1 : 72mm x 218mm x 143mm	(MKM-CBD)	Size D2 : 109mm x 244mm x 187mm
(MKM-CBB)	Size B3 : 72mm x 218mm x 159mm	(MKM-CBE)	Size E1 : 130mm x 292mm x 185mm
(MKM-CBC)	Size C1 : 87mm x 219mm x 152mm	(MKM-CBE)	Size E2 : 130mm x 292mm x 219mm
(MKM-CBC)	Size C2 : 87mm x 219mm x 179mm	(MKM-CBF)	Size F1 : 175mm x 356mm x 192mm
(MKM-CBD)	Size D1 : 109mm x 244mm x 154mm	(MKM-CBF)	Size F2 : 175mm x 356mm x 244mm

MS300 SERIES COMPACT VECTOR DRIVE SUITABLE FOR IM, IPM & SPM MOTORS..

1/2 - 15HP - IP66 NEMA 4X ENCLOSURE - UL, CUL & CE APPROVED



Features:

- Volt/Hertz, Sensorless Vector
- Suitable for Induction motors (IM), Interior Permanent Magnet motor (IPM), & Surface Permanent motors (SPM).
- All MS300 drives are Heavy Duty and Normal Duty rated.
- Compact design with IP66 / NEMA4X Enclosure Protection
- *Voltages available:*
 - 230Vac 1 phase input, 230Vac 3 phase output (HD 1/2 - 5HP)
 - 230Vac 3 phase input, 230Vac 3 phase output (HD 1/2 - 5HP)
 - 460Vac 3 phase input, 460Vac 3 phase output (HD 1/2 - 15HP)
 - 575Vac 3 phase input, 575Vac 3 phase output (coming soon)
- Programmable (0 - 599Hz) for high speed applications.
- Delivers 200% High Starting Torque with low speed control of 0.5Hz (IM), 0.0Hz (PM).
- IP 20, IP21 with optional conduit box
- Conformal coated circuit boards, conforms to IEC60721-3-3, class 3C2.
- Adaptable to 50°C environment.
- RFI switch for IT mains
- Deb Deceleration Energy Back function
- Built in Application Macros Compressor, Fan, Pump, Conveyor, Packaging, Textiles & Machine Tool for Fast Startup
- Realtime clock & calendar functions.
- Built-in 2K step capacity PLC.
- The output current is adjustable up to 120% of the drive's nominal capacity.
- All MS300 series drives have built-in dynamic braking transistors.
- Quick connect spring set control terminals.
- Digital Inputs: 9, (2 dedicated (STO) & 7 programmable), NPN or PNP configurable.
- Power removal safety (Safe Torque Off), function for Emergency Stop.
- 2 Analog Inputs, selectable (0 - 10V, -10 - +10V, 0 - 20ma, 4 - 20ma, PTC thermistor & RTD PT100)
- Digital Outputs: 1 dry contact (1 NO, 1 NC), 2 open collector transistors & 1 digital frequency output.
- Analog Outputs: 1; programmable, selectable 0 - 10V, 0 - 20ma or 4 - 20ma.
- Communication serial ports: Channel 1 USB, Channel 2 RS-485, (RJ-45 & SG+, SG-, SGND terminals)
- Resident communication protocol: Modbus RTU & ASCII.
- Optional communication protocols: Profibus DP, DeviceNet, Modbus TCP, Ethernet/IP & CANopen
- 1 option card slot: 1 for communication cards

Please refer to the "VFD Accessories" section for all available options.

MS300 SERIES COMPACT VECTOR DRIVE SUITABLE FOR IM, IPM & SPM MOTORS

1/2 - 15HP - IP66 NEMA 4X ENCLOSURE - UL, CUL & CE APPROVED



NORMAL DUTY		FACTORY DEFAULT HEAVY DUTY		OUTPUT AMPS (ND)	OUTPUT AMPS (HD)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	FRAME	WEIGHT KG	MODEL
HP	KW	HP	KW							
PNP / NPN 240/1/60 IP66 NEMA4X (No EMC Filter)										
0.75	0.55	0.50	0.4	3.2	2.8	0.25-3.0A	160 x 230 x 132	-	-	VFD2A8MS21MNSAA
1.5	1.10	1	0.75	5.0	4.8	0.48-5.76A	160 x 230 x 144	-	-	VFD4A8MS21MNSAA
3	2.2	2	1.5	8.5	7.5	0.75-9.0A	160 x 230 x 160	-	-	VFD7A5MS21MNSAA
5	3.7	3	2.2	12.5	11.0	1.1-13.2A	175 x 280 x 183	-	-	VFD11AMS21MNSAA
PNP / NPN 240/1/60 IP66 NEMA4X (With built-in EMC Filter)										
0.75	0.55	0.50	0.4	3.2	2.8	0.25-3.0A	160 x 230 x 132	-	-	VFD2A8MS21MFSAA
1.5	1.10	1	0.75	5.0	4.8	0.48-5.76A	160 x 230 x 144	-	-	VFD4A8MS21MFSAA
3	2.2	2	1.5	8.5	7.5	0.75-9.0A	160 x 230 x 160	-	-	VFD7A5MS21MFSAA
5	3.7	3	2.2	12.5	11.0	1.1-13.2A	175 x 280 x 183	-	-	VFD11AMS21MFSAA
PNP / NPN 240/3/60 IP66 NEMA4X (No EMC Filter)										
0.75	0.55	0.50	0.4	3.2	2.8	0.25-3.0A	160 x 230 x 132	-	-	VFD2A8MS23MNSAA
1.5	1.10	1	0.75	5.0	4.8	0.48-5.76A	160 x 230 x 144	-	-	VFD4A8MS23MNSAA
3	2.2	2	1.5	8.5	7.5	0.75-9.0A	160 x 230 x 160	-	-	VFD7A5MS23MNSAA
5	3.7	3	2.2	12.5	11.0	1.1-13.2A	175 x 280 x 183	-	-	VFD11AMS23MNSAA
PNP / NPN 460/3/60 IP66 NEMA4X (No EMC Filter)										
0.75	0.55	0.5	0.4	1.8	1.5	0.15-1.8A	160 x 230 x 132	-	-	VFD1A5MS43MNSAA
1.5	1.1	1	0.8	3.0	2.7	0.27-3.24A	160 x 230 x 144	-	-	VFD2A7MS43MNSAA
3	2.2	2	1.5	4.6	4.2	0.42-5.04A	160 x 230 x 160	-	-	VFD4A2MS43MNSAA
5	3.7	3	2.2	6.5	5.5	0.55-6.6A	175 x 280 x 183	-	-	VFD5A5MS43MNSAA
7.5	5.5	5	4.0	10.5	9.0	0.9-10.8A	175 x 280 x 183	-	-	VFD9A0MS43MNSAA
10	7.5	7.5	5.5	15.7	13.0	1.3-15.6A	195 x 300 x 183	-	-	VFD13AMS43MNSAA
15	11.0	10	7.5	20.5	17.0	1.7-20.4A	195 x 300 x 183	-	-	VFD17AMS43MNSAA
PNP / NPN 460/3/60 IP66 NEMA4X (With built-in EMC Filter)										
0.75	0.55	0.5	0.4	1.8	1.5	0.15-1.8A	160 x 230 x 132	-	-	VFD1A5MS43MFSAA
1.5	1.1	1	0.8	3.0	2.7	0.27-3.24A	160 x 230 x 144	-	-	VFD2A7MS43MFSAA
3	2.2	2	1.5	4.6	4.2	0.42-5.04A	160 x 230 x 160	-	-	VFD4A2MS43MFSAA
5	3.7	3	2.2	6.5	5.5	0.55-6.6A	175 x 280 x 183	-	-	VFD5A5MS43MFSAA
7.5	5.5	5	4.0	10.5	9.0	0.9-10.8A	175 x 280 x 183	-	-	VFD9A0MS43MFSAA
10	7.5	7.5	5.5	15.7	13.0	1.3-15.6A	195 x 300 x 183	-	-	VFD13AMS43MFSAA
15	11.0	10	7.5	20.5	17.0	1.7-20.4A	195 x 300 x 183	-	-	VFD17AMS43MFSAA

DC Reactor Optional
Disconnect Switch Optional



C2000 SERIES

VECTOR DRIVE WITH FLUX ORIENTATED CONTROL

1-600HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



Features:

- Volt/Hertz, Position, Torque, Sensorless vector, FOC & Closed loop vector control
 - Suitable for Induction motors (IM), Interior Permanent Magnet motor (IPM) & Surface Permanent motors (SPM).
 - All C2000 drives are Constant and Variable Torque rated.
 - C2000 230/460VAC drives are Normal & Heavy duty rated.
 - C2000 575/690VAC drives are Light, Normal & Heavy duty rated.
 - *Voltages available:*
 - 230Vac 3 phase input, 230Vac 3 phase output (HD 1 - 125HP)
 - 460Vac 3 phase input, 230Vac 3 phase output (HD 1 - 600HP)
 - 575/690Vac 3 phase input, 460Vac 3 phase output (HD 1/4 - 500HP)
 - Programmable 0.01 - 599Hz (Light Duty & Normal Duty); 0.00 - 300.00Hz Heavy Duty.
 - Can output 150% starting torque at extremely low speeds for precise & stable speed control.
 - 4 quadrant torque control & limit.
 - Conformal coated circuit boards, conforms to IEC60721-3-3, class 3C2.
 - Adaptable to 50°C environment.
 - RFI switch for IT mains
 - Realtime clock & calendar functions.
 - Built-in 10K step capacity PLC.
 - Removable IP66 Keypad
 - The output current is adjustable up to 120% of the drive's nominal capacity.
 - C2000 series drives have built-in dynamic braking transistors frames A, B & C.
 - Inputs: 12 digital (4 dedicated & 8 programmable) & 3 analog.
 - Power removal safety (Safe Torque Off), function for Emergency Stop.
 - Optional Digital I/Os: upto 6 DI & 6 relays. (Total possible: 10 DI / 6 DO)
 - 2 Analog Inputs, selectable (0 - 10V, -10 - +10V, 0 - 20ma, 4 - 20ma, PTC thermistor & RTD PT100)
 - Optional Analog I/Os: +2 in / 2 out. (total possible: 4 AI / 3 AO)
 - Digital Outputs: 2 dry contact relays (1 NO, 1 NC), 2 open collector transistors & 1 digital frequency output.
 - Analog Outputs: 1; programmable, selectable 0 - 10V, 0 - 20ma or 4 - 20ma.
 - Communication serial ports: 2 RS-485, (2 RJ-45)
 - Resident communication protocol: CANopen, Modbus RTU & ASCII.
 - Optional communication protocols: Profibus DP, DeviceNet, Modbus TCP, Ethernet/IP & CANopen
 - 3 option card slots: 1 for I/O cards, 1 for PG Feedback & 1 for communication cards
- Please refer to the "VFD Accessories" section for all available options.**

C2000 SERIES

VECTOR DRIVE WITH FLUX ORIENTATED CONTROL

1-600HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



LIGHT DUTY		RATING (ND)		DEFAULT RATING (HD)		OUT-PUT AMPS (LD)	OUTPUT AMPS (ND)	OUTPUT AMPS (HD)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D L X H X P	FRAME	WEIGHT KG	MODEL
HP	KW	HP	KW	HP	KW								
PNP / NPN 240/3/60													
-	-	1.5	1.1	1	0.7	-	5.0	4.8	0.5-6.0A	130 x 250 x 170	A	2.6	VFD007C23A
-	-	3	2.2	2	1.5	-	8.0	7.1	0.8-9.6A	130 x 250 x 170	A	2.6	VFD015C23A
-	-	5	3.7	3	2.2	-	11.0	10.0	1.1-13.2A	130 x 250 x 170	A	2.6	VFD022C23A
-	-	7.5	5.5	5	3.7	-	17.0	16.0	1.7-20.4A	130 x 250 x 170	A	2.6	VFD037C23A
-	-	10	7.5	7.5	5.5	-	25.0	24.0	2.5-30.0A	190 x 320 x 190	B	5.4	VFD055C23A
-	-	15	11.0	10	7.5	-	33.0	31.0	3.3-39.6A	190 x 320 x 190	B	5.4	VFD075C23A
-	-	20	15	15	11	-	49.0	47.0	4.9-58.84A	190 x 320 x 190	B	5.4	VFD110C23A
-	-	25	19	20	15	-	65.0	62.0	6.5-78.0A	250 x 400 x 210	C	9.8	VFD150C23A
-	-	30	22	25	18.5	-	75.0	71.0	7.5-90.0A	250 x 400 x 210	C	9.8	VFD185C23A
-	-	40	30	30	22	-	90.0	86.0	9.0-108.0A	250 x 400 x 210	C	9.8	VFD220C23A
-	-	50	37	40	30	-	120.0	114.0	12-144.0A	330 x 550 x 275	D*	38.5	VFD300C23A
-	-	60	45	50	37	-	146.0	139.0	14.6-175.2A	330 x 550 x 275	D*	38.5	VFD370C23A
-	-	75	55	60	45	-	180.0	171.0	18.0-216.0A	370 x 589 x 300	E*	64.8	VFD400C23A
-	-	100	75	75	55	-	215.0	204.0	21.5-258A	370 x 589 x 300	E*	64.8	VFD550C23A
-	-	125	90	100	75	-	255.0	242.0	25.5-306.0A	370 x 589 x 300	E*	64.8	VFD750C23A
-	-	150	110	125	90	-	346.0	329.0	34.64-415.2A	420 x 800 x 300	F*	86.5	VFD900C23A
PNP / NPN 480/3/60													
-	-	2	1.1	1	0.7	-	3.0	2.9	0.3-3.6A	130 x 250 x 170	A	2.6	VFD007C43A
-	-	3	2.2	2	1.5	-	4.0	3.8	0.4-4.8A	130 x 250 x 170	A	2.6	VFD015C43A
-	-	5	3.7	3	2.2	-	6.0	5.7	0.6-7.2A	130 x 250 x 170	A	2.6	VFD022C43A
-	-	7.5	5.5	5	3.7	-	9.0	8.1	0.9-10.8A	130 x 250 x 170	A	2.6	VFD037C43A
-	-	5.5	4.0	5.5	4.0	-	10.5	9.5	1.05-12.6A	130 x 250 x 170	A	2.6	VFD040C43A
-	-	10	7.5	7.5	5.5	-	12.0	11.0	1.2-14.4A	130 x 250 x 170	A	2.6	VFD055C43A
-	-	15	11.0	10	7.5	-	18.0	17.0	1.8-21.6A	190 x 320 x 190	B	5.4	VFD075C43A
-	-	20	15	15	11	-	24.0	23.0	2.4-28.8A	190 x 320 x 190	B	5.4	VFD110C43A
-	-	25	19	20	15	-	32.0	30.0	3.2-38.4A	190 x 320 x 190	B	5.4	VFD150C43A
-	-	30	22.0	25	18.5	-	38.0	36.0	3.8-45.6A	250 x 400 x 210	C	9.8	VFD185C43A
-	-	40	30	30	22	-	45.0	43.0	4.5-54.0A	250 x 400 x 210	C	9.8	VFD220C43A
-	-	50	37	40	30	-	60.0	57.0	6.04-72.0A	250 x 400 x 210	C	9.8	VFD300C43A
-	-	60	45	50	37	-	73.0	69.0	7.3-87.6A	280 x 550 x 255	DO*	38.5	VFD370C43A
-	-	75	55	60	45	-	91.0	86.0	9.1-109.2A	280 x 550 x 255	DO*	38.5	VFD450C43A
-	-	100	75	75	55	-	110.0	105.0	11-132A	330 x 550 x 275	D*	38.5	VFD550C43A
-	-	125	90	100	75	-	150.0	143.0	15-180A	330 x 550 x 275	D*	38.5	VFD750C43A
-	-	150	110	125	90	-	180.0	171.0	18-216A	370 x 589 x 300	E*	64.8	VFD900C43A
-	-	175	132	150	110	-	220.0	209.0	22-264A	370 x 589 x 300	E*	64.8	VFD1100C43A
-	-	200	150	200	132	-	260.0	247.0	26-312A	420 x 800 x 300	F*	86.5	VFD1320C43A
-	-	250	185	215	160	-	310.0	295.0	31-372A	420 x 800 x 300	F*	86.5	VFD1600C43A
-	-	300	220	250	185	-	370.0	352.0	37-444A	500 x 1000 x 397	G*	86.5	VFD1850C43A
-	-	375	280	300	220	-	460.0	437.0	46-552A	500 x 1000 x 397	G*	134.0	VFD2200C43A
-	-	425	315	375	280	-	550.0	523.0	55-660A	700 x 1435 x 398	H*	134.0	VFD2800C43A
-	-	475	355	425	315	-	616.0	585.0	61.6-729.2A	700 x 1435 x 398	H*	228.0	VFD3150C43A
-	-	500	370	475	355	-	683.0	649.0	68.3-819.6A	700 x 1435 x 398	H*	228.0	VFD3550C43A
-	-	700	522	600	450	-	866.0	815.0	86.6-1,039.2A	700 x 1435 x 398	H*	228.0	VFD4500C43A

Dimensions with IP21 Conduit Box:

MKC-DON1CB **Size D0:** 280mm x 614.4mm x 255mm
 MKC-DN1CB **Size D :** 330mm x 688.3mm x 275mm
 MKC-EN1CB **Size E :** 370mm x 715.8mm x 300mm

MKC-FN1CB **Size F :** 420mm x 940mm x 300mm
 MKC-GN1CB **Size G :** 500mm x 1240.2mm x 397mm
 MKC-HN1CB **Size H :** 700mm x 1745mm x 404mm



C2000 SERIES VECTOR DRIVE WITH FLUX ORIENTATED CONTROL

1 ~ 600HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



LIGHT DUTY		FACTORY DEFAULT NORMAL DUTY		HEAVY DUTY		OUTPUT AMPS (LD)	OUTPUT AMPS (ND)	OUTPUT AMPS (HD)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D L X H X P	FRAME	WEIGHT KG	MODEL
HP	KW	HP	KW	HP	KW								
PNP / NPN 600/690/3/60													
3	2.2	2	1.49	1.5	1.12	3.0	2.5	2.1	0.3-3.6A	130 x 250 x 170	A	3	VFD015C53A-21
5	3.7	3	2.2	2	1.5	4.30	3.6	3.0	0.43-5.16A	130 x 250 x 170	A	3	VFD022C53A-21
7.5	5.6	5	3.7	5	3.7	6.7	5.5	4.6	0.67-8.04A	130 x 250 x 170	A	3	VFD037C53A-21
10	7.5	7.5	5.6	7.5	5.6	9.9	8.2	6.9	0.99-11.88A	190 x 320 x 190	B	4.8	VFD055C53A-21
15	11.2	10	7.5	7.5	5.6	12.1	10	8.3	1.21-14.52A	190 x 320 x 190	B	4.8	VFD075C53A-21
20	14.9	15	11.2	15	11.2	18.7	15.5	13	1.86-22.32A	190 x 320 x 190	B	4.8	VFD110C53A-21
25	18.7	20	14.9	20	14.9	24.2	20	16.8	2.41-28.92A	190 x 320 x 190	B	4.8	VFD150C53A-21
25	18.7	20	14.9	15	11.2	24	20	14	2.4-28.80A	250 x 400 x 210	C	10	VFD185C63B-21
30	22.4	25	18.7	20	14.9	30	24	20	3.0-36.0A	250 x 400 x 210	C	10	VFD220C63B-21
40	30	30	22	25	19	36.0	30.0	24.0	3.6-43.2A	250 x 400 x 210	C	10.0	VFD300C63B-21
50	37	40	30	30	22	45.0	36.0	30.0	4.5-54.0A	250 x 400 x 210	C	10.0	VFD370C63B-21
60	45	50	37	40	30	54.0	45.0	36.0	5.4-64.8A	330 x 550 x 275	D*	39.0	VFD450C63B-00
75	56	60	45	50	37	67.0	54.0	45.0	6.7-80.4A	330 x 550 x 275	D*	39.0	VFD550C63B-00
100	75	75	56	60	45	86.0	67.0	54.0	8.6-103.2A	370 x 589 x 300	E*	39.0	VFD750C63B-00
125	93	100	75	75	56	104.0	86.0	67.0	10.4-124.8A	370 x 589 x 300	E*	61.0	VFD900C63B-00
150	112	125	93	100	75	125.0	104.0	86.0	12.5-150.0A	370 x 589 x 300	E*	61.0	VFD1100C63B-00
200	149	150	112	125	93	150.0	125.0	104.0	15.0-180.0A	370 x 589 x 300	E*	61.0	VFD1320C63B-00
200	149	200	149	150	112	180.0	150.0	125.0	18.0-216.0A	420 x 800 x 300	F*	88.0	VFD1600C63B-00
250	187	200	149	200	149	220.0	180.0	150.0	22.0-264.0A	420 x 800 x 300	F*	88.0	VFD2000C63B-00
350	261	250	187	200	149	290.0	220.0	180.0	29.0-348.0A	500 x 1000 x 397	G*	135.0	VFD2500C63B-00
400	298	350	261	250	187	350.0	290.0	220.0	35.0-420.0A	500 x 1000 x 397	G*	135.0	VFD3150C63B-00
500	373	400	298	350	261	430.0	350.0	290.0	43.0-516.0A	700 x 1435 x 398	H*	243.0	VFD4000C63B-00
600	448	500	373	400	298	465.0	385.0	310.0	46.5-558.0A	700 x 1435 x 398	H*	243.0	VFD4500C63B-00
700	522	600	448	500	373	590.0	465.0	420.0	40.8-489.6A	700 x 1435 x 398	H*	243.0	VFD5600C63B-00
800	597	700	522	600	448	675.0	631.0	590.0	67.5-810.0A	700 x 1435 x 398	H*	243.0	VFD6300C63B-00

Dimensions with IP21 Conduit Box:

MKC-DON1CB **Size D0:** 280mm x 614.4mm x 255mm
 MKC-DN1CB **Size D :** 330mm x 688.3mm x 275mm
 MKC-EN1CB **Size E :** 370mm x 715.8mm x 300mm

MKC-FN1CB **Size F :** 420mm x 940mm x 300mm
 MKC-GN1CB **Size G :** 500mm x 1240.2mm x 397mm
 MKC-HN1CB **Size H :** 700mm x 1745mm x 404mm



Features:

- Volt/Hertz, Sensorless vector
- Suitable for induction motors & permanent magnet motors.
- All CP2000 drives are Variable Torque rated & default set to Light Duty .
- All CP2000 drives are Light & Normal duty rated.
- Programmable output frequency: 0.01 ~ 599Hz.
230VAC models 0.01 ~ 599Hz (55kW @ 230VAC and above, 0.01 ~ 400.00Hz)
460VAC models 0.01 ~ 599Hz (90kW @ 230VAC and above, 0.01 ~ 400.00Hz)
575/690VAC models 0.01 ~ 599Hz
- Fire mode & bypass functions: continuous pressure to extract smoke when emergencies occur.
- Built in Application Macros Compressor, Fan, Pump, & Air Handling Unit for Fast Startup
- Can output 160% starting torque at extremely low speeds for precise & stable speed control.
- Conformal coated circuit boards, conforms to IEC60721-3-3, class 3C2.
- Adaptable to 50°C environment.
- RFI switch for IT mains
- Realtime clock & calendar functions.
- Built-in 10K step capacity PLC.
- Removable IP66 Keypad
- Inputs: 12 digital (4 dedicated & 8 programmable) & 3 analog.
- Power removal safety (Safe Torque Off), function for Emergency Stop.
- The output current is adjustable up to 120% of the drive's nominal capacity.
- 3 Analog Inputs, selectable (0 ~ 10V,-10 ~ +10V, 0 ~ 20ma, 4 ~ 20ma, PTC thermistor & RTD PT100, pulsed input)
- CP2000 series drives have built-in dynamic braking transistors frames A, B & C.
- Digital Outputs: 1 dry contact relays (1 NO, 1 NC), 1 dry contact relay (NC),
2 open collector transistors & 1 digital frequency output.
- Optional Digital I/Os: Inputs upto 6 DI & 6 DO relays. (Total possible: 20 DI / 10 DO)
- Analog Outputs: 2; programmable, selectable 0 ~ 10V, 0 ~ 20ma or 4 ~ 20ma.
- Communication serial ports: 2 RS-485, (2 RJ-45)
- Resident communication protocol: BACnet MS/TP, Modbus RTU & ASCII.
- Optional communication protocols: Profibus DP, DeviceNet, Modbus TCP, Ethernet/IP & CANopen
- 2 option card slots: for I/O cards & communication cards

Please refer to the "VFD Accessories" section for all available options.

CP2000 SERIES VARIABLE TORQUE DRIVE WITH BACNET COMMUNICATION PROTOCOL BUILT-IN

1 ~ 600HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



FACTORY DEFAULT LIGHT DUTY		NORMAL DUTY		OUTPUT AMPS (LD)	OUTPUT AMPS (ND)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	FRAME	WEIGHT KG	MODEL
HP	KW	HP	KW							
PNP / NPN 240/3/60										
1	0.7	0.5	0.4	5	3	0.5-6.0A	130 x 250 x 170	A	2.6	VFD007CP23A-21
2	1.5	1	0.7	7.5	5	0.75-9.0A	130 x 250 x 170	A	2.6	VFD015CP23A-21
3	2.2	3	2.2	10	8	1.0-12.0A	130 x 250 x 170	A	2.6	VFD022CP23A-21
5	3.7	3	2.2	15	11	1.5-18A	130 x 250 x 170	A	2.6	VFD037CP23A-21
7.5	5.5	5	3.7	21	17	2.1-25.2A	130 x 250 x 170	A	2.6	VFD055CP23A-21
10	7.5	7.5	5.5	31	25	3.1-37.2A	190 x 320 x 190	B	5.4	VFD075CP23A-21
15	11	10	8	46	33	4.6-55.24A	190 x 320 x 190	B	5.4	VFD110CP23A-21
20	15	15	11	61	49	6.1-73.2A	190 x 320 x 190	B	5.4	VFD150CP23A-21
25	18.5	20	15.0	75	65	7.5-90.0A	250 x 400 x 210	C	9.8	VFD185CP23A-21
30	22	25	19	90	75	9.0-108.0A	250 x 400 x 210	C	9.8	VFD220CP23A-21
40	30	30	22	105	90	10.5-126.0A	250 x 400 x 210	C	9.8	VFD300CP23A-21
50	37	40	30	146	120	14.6-175.2A	330 x 550 x 275	D	38.5	VFD370CP23A-00
60	45	50	37	180	146	18.0-216.0A	330 x 550 x 275	D	38.5	VFD450CP23A-00
75	55	60	45	215	180	21.5-258.0A	370 x 589 x 300	E	64.8	VFD550CP23A-00
100	75	75	55	276	215	27.6-331.2A	370 x 589 x 300	E	64.8	VFD750CP23A-00
125	90	100	75	322	255	32.2-386.4A	370 x 589 x 300	E	64.8	VFD900CP23A-00
PNP / NPN 480/3/60										
1	0.7	0.5	0.4	3.0	1.7	0.3-3.6A	130 x 250 x 170	A	2.6	VFD007CP4EA-21
2	1.5	1	0.7	4.2	3	0.4-5.04A	130 x 250 x 170	A	2.6	VFD015CP4EB-21
3	2.2	2	1.5	5.5	4	0.6-6.6A	130 x 250 x 170	A	2.6	VFD022CP4EB-21
5	3.7	3	2.2	8.5	6	0.9-10.2A	130 x 250 x 170	A	2.6	VFD037CP4EB-21
7.5	5.6	5	3.7	13	10.5	1.2-15.6A	130 x 250 x 170	A	2.6	VFD055CP4EB-21
10	7.5	7.5	5.6	18	12	1.8-21.0A	130 x 250 x 170	A	2.6	VFD075CP4EB-21
15	11.2	10	7.5	24	18	2.4-28.8A	190 x 320 x 190	B	5.4	VFD110CP4EB-21
20	14.9	15	11.2	32	24	3.2-38.4A	190 x 320 x 190	B	5.4	VFD150CP4EB-21
25	18.7	20	14.9	38	32	3.8-45.6A	190 x 320 x 190	B	5.4	VFD185CP4EB-21
30	22.4	25	18.7	45	38	4.5-54.0A	250 x 400 x 210	C	9.8	VFD220CP4EA-21
40	29.8	30	22.4	60	45	6.04-72.0A	250 x 400 x 210	C	9.8	VFD300CP4EB-21
50	37.3	40	29.8	73	60	7.3-87.6A	250 x 400 x 210	C	38.5	VFD370CP4EB-21
60	44.8	50	37.3	91	73	9.1-109.2A	280 x 614.4 x 255	D0	38.5	VFD450CP43S-21
75	56.0	60	44.8	110	91	11-132A	280 x 614.4 x 255	D0	38.5	VFD550CP43S-21
100	74.6	75	56	150	110	15-180A	330 x 550 x 275	D	38.5	VFD750CP43B-00
125	93.3	100	74.6	180	150	18-216A	330 x 550 x 275	D	38.5	VFD900CP43A-00
150	111.9	125	93.3	220	180	22-264A	370 x 589 x 300	E	64.8	VFD1100CP43A-00
175	130.6	150	111.9	260	220	26-312A	370 x 589 x 300	E	64.8	VFD1320CP43B-00
215	160.4	175	130.6	310	260	31-372A	420 x 800 x 300	F	86.5	VFD1600CP43A-00
250	186.5	215	160.4	370	310	37-444A	420 x 800 x 300	F	86.5	VFD1850CP43B-00
300	223.8	250	186.5	460	370	46-552A	500 x 1000 x 397	G	134	VFD2200CP43A-00
375	279.8	300	223.8	530	460	53-636A	500 x 1000 x 397	G	134	VFD2800CP43A-00
425	317.1	375	279.8	616	550	61.6-739.2A	700 x 1435 x 398	H	228	VFD3150CP43C-00
475	354.4	425	317.1	683	616	68.3-819.6A	700 x 1435 x 398	H	228	VFD3550CP43C-00
536	399.9	475	354.4	770	683	77-924A	700 x 1435 x 398	H	228	VFD4000CP43C-00
675	503.6	600	447.6	930	866	93-1116A	700 x 1435 x 398	H	228	VFD5000CP43C-00

Dimensions with IP21 Conduit Box:

MKC-DON1CB **Size D0:** 280mm x 614.4mm x 255mm
 MKC-DN1CB **Size D :** 330mm x 688.3mm x 275mm
 MKC-EN1CB **Size E :** 370mm x 715.8mm x 300mm

MKC-FN1CB **Size F :** 420mm x 940mm x 300mm
 MKC-GN1CB **Size G :** 500mm x 1240.2mm x 397mm
 MKC-HN1CB **Size H :** 700mm x 1745mm x 404mm



CP2000 SERIES VARIABLE TORQUE DRIVE WITH BACNET COMMUNICATION PROTOCOL BUILT-IN

1 ~ 600HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



FACTORY DEFAULT LIGHT DUTY		NORMAL DUTY		OUTPUT AMPS (LD)	OUTPUT AMPS (ND)	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	FRAME	MODEL
HP	KW	HP	KW						
PNP / NPN 600/690/3/60									
2	1.5	1	0.75	3	2.5	0.3-3.6A	130 x 250 x 170	A	VFD015CP53A-21
3	2.2	2	1.5	4.3	3.6	0.43-5.16A	130 x 250 x 170	A	VFD022CP53A-21
7.5	5.6	5	3.7	6.7	5.5	0.67-8.04A	130 x 250 x 170	A	VFD037CP53A-21
10	7.5	7.5	5.6	9.9	8.2	0.99-11.88A	190 x 320 x 190	B	VFD055CP53A-21
15	11.2	10	7.5	12.1	10	1.21-14.52A	190 x 320 x 190	B	VFD075CP53A-21
15	11.2	10	7.5	18.7	15.4	1.87-22.44A	190 x 320 x 190	B	VFD110CP53A-21
20	14.9	15	11.2	24.2	20	2.42-29.04A	190 x 320 x 190	B	VFD150CP53A-21
25	18.7	15	11.2	24	20	2.4-28.80A	250 x 400 x 210	C	VFD185CP63A-21
30	22.4	20	14.9	29	24	2.9-34.8A	250 x 400 x 210	C	VFD220CP63A-21
40	30	25	19	36	30	3.6-43.2A	250 x 400 x 210	C	VFD300CP63A-21
50	37	30	22	43	36	4.3-51.6A	250 x 400 x 210	C	VFD370CP63A-21
60	45	40	30	54	45	5.4-64.8A	330 x 688.3 x 275	D	VFD450CP63A-21
75	56	50	37	67	54	6.7-80.4A	330 x 688.3 x 275	D	VFD550CP63A-21
100	75	60	45	86	67	8.6-103.2A	370 x 715.8 x 300	E	VFD750CP63A-21
125	93	75	56	104	86	1.04-124.8A	370 x 715.8 x 300	E	VFD900CP63A-21
150	112	100	75	125	104	12.5-150.0A	370 x 715.8 x 300	E	VFD1100CP63A-21
200	149	125	93	150	125	15.0-180.0A	370 x 589 x 300	E	VFD1320CP63A-00
200	149	150	112	179	150	17.9-214.8A	420 x 800 x 300	F	VFD1600CP63A-00
300	224	200	149	220	179	22.0-264.0A	420 x 800 x 300	F	VFD2000CP63A-00
350	261	250	187	290	220	29.0-348.0A	500 x 1000 x 397	G	VFD2500CP63A-00
400	298	300	224	350	290	35.0-420.0A	500 x 1000 x 397	G	VFD3150CP63A-00
450	336	350	261	430	350	43.0-516.0A	700 x 1435.2 x 398	H	VFD4000CP63A-00
500	373	450	336	465	430	46.5-558.0A	700 x 1435.2 x 398	H	VFD4500CP63A-00
600	448	500	373	590	465	50.9-708.0A	700 x 1435.2 x 398	H	VFD5600CP63A-00
700	522	600	448	675	590	67.5-810.0A	700 x 1435.2 x 398	H	VFD6300CP63A-00

Dimensions with IP21 Conduit Box:

MKC-D0N1CB **Size D0:** 280mm x 614.4mm x 255mm
 MKC-DN1CB **Size D :** 330mm x 688.3mm x 275mm
 MKC-EN1CB **Size E :** 370mm x 715.8mm x 300mm

MKC-FN1CB **Size F :** 420mm x 940mm x 300mm
 MKC-GN1CB **Size G :** 500mm x 1240.2mm x 397mm
 MKC-HN1CB **Size H :** 700mm x 1745mm x 404mm



B SERIES VARIABLE FREQUENCY VECTOR DRIVE

1 ~ 100HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



Features:

- Volt/Hertz, Sensorless vector & Closed loop vector control
- All VFD-B drives are Constant Torque rated.
- Programmable (0 ~ 2000Hz) for high speed applications.
- The output current is adjustable up to 120% of the drive's nominal capacity.
- All "240/1/60" models also accept three phase input.
- Inputs: 11 digital (4 dedicated & 7 programmable) & 3 analog.
- Outputs: 4 digital, 1 analog & 1 digital frequency output.
- RS-485 communication port, standard protocol Modbus RTU & ASCII.
- B series drives have built-in dynamic braking transistors up to 15HP.



Please refer to the "VFD Accessories" section for all available options.

Please refer to the "Delta Braking Resistors & Modules" for prices.

RATING		OUTPUT KVA	INPUT AMPS	OUTPUT AMPS	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	WEIGHT KG	MODEL
HP	KW							
PNP/NPN 240/1/60 NEMA 1								
1	0.7	1.9	11.9	5.0	1.5 - 6A	118 x 185 x 160	2.7	VFD007B21A
2	1.5	2.5	15.3	7.0	2.1 - 8.4A	118 x 185 x 145	3.2	VFD015B21B
3	2.2	4.2	22.0	11	3.3 - 13.2A	150 x 260 x 160.2	4.5	VFD022B21A
PNP/NPN 240/3/60 NEMA 1								
1	0.7	1.9	5.7	5.0	1.5 - 6A	118 x 185 x 145	2.7	VFD007B21A
2	1.5	2.5	7.6	7.0	2.1 - 8.4A	118 x 185 x 145	3.2	VFD015B21B
3	2.2	4.2	15.5	11	3.3 - 13.2A	150 x 260 x 160.2	4.5	VFD022B21A
5	3.7	6.5	20.6	17	5.1 - 20.4A	150 x 260 x 160.2	6.8	VFD037B23A
7.5	5.5	9.5	26	25	7.5 - 30A	200 x 323 x 183.2	8.0	VFD055B23A
10	7.5	12.5	34	33	9.9 - 39.6A	200 x 323 x 183.2	10.0	VFD075B23A
15	11	18.3	50	49	14.7 - 58.8A	200 x 323 x 183.2	13.0	VFD110B23A
20	15	24.7	60	65	19.5 - 78A	250 x 403.8 x 205.4	13.0	VFD150B23A
25	18.5	28.6	75	75	22.5 - 90A	250 x 403.8 x 205.4	13.0	VFD185B23A
30	22	34.3	90	90	20 - 108A	250 x 403.8 x 205.4	13.0	VFD220B23A
40	30	45.7	110	120	36 - 144A	370 x 589 x 260	36.0	VFD300B23A
50	37	55.0	142	145	43.5 - 174A	370 x 589 x 260	36.0	VFD370B23A

B SERIES VARIABLE FREQUENCY VECTOR DRIVE

1 ~ 100HP - NEMA 1 ENCLOSURE - UL, CUL & CE APPROVED



RATING		OUTPUT KVA	INPUT AMPS	OUTPUT AMPS	OUTPUT CURRENT PROTECTION	DIMENSIONS (MM) W X H X D	WEIGHT KG	MODEL
HP	KW							
PNP/NPN 480/3/60 NEMA 1								
1	0.7	2.3	3.2	2.7	0.81 - 3.24A	118 x 185 x 145	2.7	VFD007B43A
2	1.5	3.2	4.3	4.2	1.26 - 5.04A	118 x 185 x 160	3.2	VFD015B43A
3	2.2	4.2	5.9	5.5	1.65 - 6.6A	118 x 185 x 160	4.5	VFD022B43B
5	3.7	6.5	11.2	8.5	2.55 - 10.2A	150 x 260 x 160.2	6.8	VFD037B43A
7.5	5.5	9.9	14	13	3.9 - 15.6A	200 x 323 x 183.2	8.0	VFD055B43A
10	7.5	13.7	19	18	5.4 - 21.6A	200 x 323 x 183.2	10.0	VFD075B43A
15	11	18.3	25	24	7.2 - 28.8A	200 x 323 x 183.2	13.0	VFD110B43A
20	15	24.4	32	32	9.6 - 38.4A	250 x 403.8 x 205.4	13.0	VFD150B43A
25	18.5	28.9	39	38	11.4 - 45.6A	250 x 403.8 x 205.4	13.0	VFD185B43A
30	22	34.3	49	45	13.5 - 54A	250 x 403.8 x 205.4	13.0	VFD220B43A
40	30	45.7	60	60	18 - 72A	370 x 589 x 260	36.0	VFD300B43A
50	37	55.6	63	73	21.9 - 87.6A	370 x 589 x 260	36.0	VFD370B43A
60	45	69.3	90	91	27.3 - 109.2A	370 x 589 x 260	36.0	VFD450B43A
75	55	84.0	130	110	33 - 132A	525 x 660 x 264	50.0	VFD550B43A
100	75	114.0	160	150	45 - 180A	525 x 660 x 264	50.0	VFD750B43A
PNP/NPN 600/3/60 NEMA 1								
1	0.7	1.7	2.0	1.7	0.51 - 2.04A	118 x 185 x 145	2.7	VFD007B53A
2	1.5	3.5	3.6	3.5	1.05 - 4.2A	118 x 185 x 145	3.2	VFD015B53A
3	2.2	4.5	4.9	4.5	1.35 - 5.4A	118 x 185 x 160	4.5	VFD022B53A
5	3.7	7.5	9.9	7.5	2.25 - 9A	150 x 260 x 160.2	6.8	VFD037B53A
7.5	5.5	10.0	10.8	10.0	3 - 12A	200 x 323 x 183.2	8.0	VFD055B53A
10	7.5	13.4	14.3	13.5	4.05 - 16.2A	200 x 323 x 183.2	10.0	VFD075B53A
15	11	18.9	19.8	19.0	5.7 - 22.8A	200 x 323 x 183.2	13.0	VFD110B53A
20	15	22.0	22.0	22.0	6.6 - 26.4A	250 x 403.8 x 205.4	13.0	VFD150B53A
25	18.5	26.9	27.7	27.0	8.1 - 32.4A	250 x 403.8 x 205.4	13.0	VFD185B53A
30	22	33.9	37.0	34.0	10.2 - 40.8A	250 x 403.8 x 205.4	13.0	VFD220B53A
40	30	40.8	41.0	41.0	12.3 - 49.2A	370 x 589 x 260	36.0	VFD300B53A
50	37	51.8	52.0	52.0	15.6 - 62.4A	370 x 589 x 260	36.0	VFD370B53A
60	45	61.7	62.0	62.0	18.6 - 74.4A	370 x 589 x 260	36.0	VFD450B53A
75	55	79.7	95.0	80.0	24 - 96A	370 x 589 x 260	50.0	VFD550B53A
100	75	99.6	117.0	100.0	30 - 120A	370 x 589 x 260	50.0	VFD750B53A



PART #		DESCRIPTION
KEYPAD EXTENSION CABLES		
EG1010A	Length: 1 m	Use with B, M, MS-300 & MH-300 Series drive standard keypads only.
EG2010A	Length: 2 m	
EG3010A	Length: 3 m	
EG5010A	Length: 5 m	
MOUNTING ADAPTER KITS		
MKM-DRB	Din Rail Adapter. Use with MS-300 Frame A & B.	
MKM-DRC	Din Rail Adapter. Use with MS-300 Frame C.	
MKM-MAPB	Wiring Adapter Plate. Use with MS-300 Frame A & B.	
MKM-MAPC	Wiring Adapter Plate. Use with MS-300 Frame C.	
MOUNTING ADAPTER KITS		
LC-M02E	Standard keypad shipped all VFD-M drives.	
VFD-PU01	Standard keypad shipped all VFD-B drives.	
KPC-CC01	Standard keypad shipped with C2000 series. Also compatible with EL series, MS-300 & MH-300.	
VFD-PU05	Keypad shipped with V & VE series.	
VFD-PU06	Keypad with "upload / download" memory used with B, E, EL, M & S series.	
KPMS-LE01	Standard keypad shipped with MS-300 series.	
KPMH-LC01	Standard keypad shipped with MH-300 series.	
KPE-LE02	Standard keypad optional with E series.	
RPA-01	Nema 1 recessed keypad holder for flush mounting the VFD-PU01.	
MKC-KPPK	IP56 recessed keypad holder for flush mounting of KPC-CC01.	
ENCODER FEEDBACK CARDS		
PG-02	Encoder feedback card 5 or 12V for B series.	
PG-03	Encoder feedback card 5 or 12V for B series, V series & VE series.	
EMC-PG01L	PG card 5V/12V, 2 inputs (Line driver or Open collector) & 1 output (5V), C/CP2000 series.	
EMC-PG01O	PG card 5V/12V, 2 inputs (Line driver or Open collector) & 1 output (Open collector), C/CP2000 series.	
EMC-PG01R	PG card 5V/12V 2 inputs (1 Resolver & 1 Line driver or Open collector), & 1 output (5V), C/CP2000 series.	
EMM-PG01L	PG card 5V/12V, 2 inputs (2 Line driver, or 1 Line driver & 1r Open collector) & 1 output (5V), MH300 series.	
EMM-PG01O	PG card 5V/12V, 2 inputs (Line driver or Open collector) & 1 output (Open collector), MH300 series.	
EMM-PG01R	PG card 5V/12V 2 inputs (1 Resolver & 1 Line driver or Open collector), & 1 output (5V), MH-300 series.	

PART #	DESCRIPTION
MOUNTING ADAPTER KITS	
DN-02	External Module for Device Net Communication. (B, S, & M series)
PD-01	External Module for Profibus Communication. (B, S, & M series)
LN-01	External Module for Lon Works Communication. (B, S, & M series)
CMM-COP1	Plug-in CANopen Communication Card (MH/MS-300 series)
CMM-DN01	Plug-in DeviceNet Communication Card (MH/MS-300 series)
CMM-EIP01	Plug-in Modbus TCP/EtherNet IP Communication Card (MH/MS-300 series)
CMM-PD01	Plug-in Profibus DP Communication Card (MH/MS-300 series)
CMM-EC01	Plug-in EtherCat Communication Card (MH/MS-300 series)
CMM-MOD1	Plug-in Modbus TCP Communication Card (MH/MS-300 series)
EMM-BPS01	Plug-in Backup Power Supply Card (MH/MS-300 series)
CMC-COP1	Plug-in CANopen Communication Card (C/CP2000 series)
CMC-DN01	Plug-in DeviceNet Communication Card (C/CP2000 series)
CMC-EIP01	Plug-in Modbus TCP/EtherNet IP Communication Card (C/CP2000 series)
CMC-PD01	Plug-in Profibus DP Communication Card (C/CP2000 series)
CMC-MOD1	Plug-in Modbus TCP Communication Card (C/CP2000 series)
EMM-BPS01	Plug-in Backup Power Supply Card (MH/MS-300 series)
IFD6500	USB/RS-485 converter for PC link to Delta Products . (B, S, & M series)
IFD6530	USB/RS-485 converter for PC link to C2000 series.
OPTIONS	
RC-01	Remote Control steel enclosure: pot., output frequency display, Run/Stop, Fwd/Rev, & Jog/Reset.
T60004L2016W620	Zero Phase Reactor with hole diameter 10.7mm. (Control wire)
T60004L2025W622	Zero Phase Reactor with hole diameter 17.5mm. (Control wire)
T60006L2040W453	Zero Phase Reactor with hole diameter 22.5mm. (Cable max. size 4 AWG)
T60006L2050W565	Zero Phase Reactor with hole diameter 36.3mm. (Cable max. size 2/0 AWG)
RF008X00A	Zero Phase Reactor with mounting feet. (Cable max. size 1 AWG)
RF220X00A	Zero Phase Reactor with mounting feet. (Cable max. size 1 AWG)
MKM-EPA	EMC shield plate Frame size A for shielded cables (MH/MS-300 series)
MKM-EPB	EMC shield plate Frame size B for shielded cables (MH/MS-300 series)
MKM-EPC	EMC shield plate Frame size C for shielded cables (MH/MS-300 series)
MKM-EPD	EMC shield plate Frame size D for shielded cables (MH/MS-300 series)
MKM-EPE	EMC shield plate Frame size E for shielded cables (MH/MS-300 series)
MKM-EPF	EMC shield plate Frame size F for shielded cables (MH/MS-300 series)

PART #	DESCRIPTION
CONDUIT BOX	
MKM-CBA0	NEMA 1 conduit box for Frame A1 & A2 size. (MS/MH-300 series)
MKM-CBA	NEMA 1 conduit box for Frame A3 & A5 size. (MS/MH-300 series)
MKM-CBB	NEMA 1 conduit box for Frame B size. (MS/MH-300 series)
MKM-CBC	NEMA 1 conduit box for Frame C size. (MS/MH-300 series)
MKM-CBD	NEMA 1 conduit box for Frame D size. (MS/MH-300 series)
MKM-CBE	NEMA 1 conduit box for Frame E size. (MS/MH-300 series)
MKM-CBF	NEMA 1 conduit box for Frame F size. (MS/MH-300 series)
MKC-D0N1CB	NEMA 1 conduit box for Frame D0 size. (C2000)
MKC-DN1CB	NEMA 1 conduit box for Frame D size. (C2000)
MKC-EN1CB	NEMA 1 conduit box for Frame E size. (C2000)
MKC-FN1CB	NEMA 1 conduit box for Frame F size. (C2000)
MKC-GN1CB	NEMA 1 conduit box for Frame G size. (C2000)
I/O CARDS	
EMC-D42A	Plugin I/O expansion card, 4DI (MI10 - MI13)/ 2DO (MO10 - MO11), 24vdc. (C/CP2000)
EMC-D611A	Plugin I/O expansion card, 6DI (MI10 - MI15), 110Vac. (C/CP2000)
EMC-R6AA	Plugin expansion card, 6 relay outputs (RA10 - RA15, RC10 - RC15). (C/CP2000)
EMM-D33A	Plugin I/O expansion card, 3 DI (MI10 - MI12), 3 DO (MO10 - MO12). MH-300.
EMM-A22A	Plugin I/O expansion card, 2 AI (AI10 - AI11), 2 AO (AO10 - AO11). MH-300.
EMM-R2CA	Plugin I/O expansion card, 2 output relays (RA10 - RA11, RB10 - RB11, RC10 - RC11). MH-300.
EMM-R3AA	Plugin I/O expansion card, 3 output relays (RA10 - RA11, RC10 - RC11). MH-300.

DELTA BRAKING MODULES

PART #	DESCRIPTION	SERIES	LNSTALLATION	DIMENSIONS (MM) W X H X D	WEIGHT (KG)
VFDB2022	22kW Braking module, 240VAC	B, C/CP2000	External	121 x 200 x 130	2.00
VFDB4045	45kW Braking module, 460VAC	B, C/CP2000	External	121 x 200 x 130	2.00
VFDB4160	160kW Braking module, 480VAC	B, C/CP2000	External	233.5 x 343 x 190	2.00
VFDB4185	185kW Braking module, 480VAC	B, C/CP2000	External	233.5 x 343 x 190	2.00
VFDB5055	15kW Braking module, 240VAC	B, C/CP2000	External	121 x 200 x 130	2.00
VFDB6055	22kW Braking module, 240VAC	C/CP2000	External	233.5 x 343 x 190	2.00
VFDB6110	30kW Braking module, 480VAC	C/CP2000	External	233.5 x 343 x 190	2.00
VFDB6160	45kW Braking module, 480VAC	C/CP2000	External	233.5 x 343 x 190	2.00
VFDB6200	132kW Braking module, 480VAC	C/CP2000	External	233.5 x 343 x 190	2.00

PART #	POWER / OHMIC VALUE	TYPE	DIMENSIONS (MM) W X H X D	LEAD LENGTH (MM)	DRAWING	WEIGHT (KG)
BR080W200	80W, 200Ω	Aluminum Bar	140 x 20 x 40	150	2	0.16
BR080W750	80W, 750Ω	Aluminum Bar	140 x 20 x 40	150	2	0.16
BR200W091	200W, 91Ω	Aluminum Bar	165 x 30 x 60	200	1	0.50
BR200W360	200W, 360Ω	Aluminum Bar	165 x 30 x 60	200	1	0.50
BR300W025	300W, 25Ω	Aluminum Bar	215 x 30 x 60	150	2	0.75
BR300W070	300W, 70Ω	Aluminum Bar	215 x 30 x 60	150	2	0.75
BR300W100	300W, 100Ω	Aluminum Bar	215 x 30 x 60	150	2	0.75
BR300W110	300W, 110Ω	Aluminum Bar	215 x 30 x 60	150	2	0.75
BR300W250	300W, 250Ω	Aluminum Bar	215 x 30 x 60	150	2	0.75
BR300W400	300W, 400Ω	Aluminum Bar	215 x 30 x 60	150	2	0.75
BR400W040	400W, 040Ω	Aluminum Bar	265 x 30 x 60	150	2	0.93
BR400W150	400W, 150Ω	Aluminum Bar	265 x 30 x 60	150	2	0.93
BR500W030	500W, 30Ω	Aluminum Bar	265 x 30 x 60	150	3	1.10
BR500W100	500W, 100Ω	Aluminum Bar	265 x 30 x 60	150	3	1.10
BR750W033	750W, 033Ω	Wire Wound	405 x 95 x 48	Lugs	5	1.00
BR750W140	750W, 140Ω	Wire Wound	405 x 95 x 48	Lugs	5	1.00
BR1K0W4P3	1000W, 4.3Ω	Wire Wound	405 x 95 x 48	Lugs	6	1.00
BR1K0W5P1	1000W, 5.1Ω	Wire Wound	405 x 95 x 48	Lugs	6	1.00
BR1K0W016	1000W, 16Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K0W020	1000W, 20Ω	Aluminum Bar	400 x 50 x 100	Lugs	4	2.80
BR1K0W050	1000W, 50Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K0W075	1000W, 75Ω	Aluminum Bar	400 x 50 x 100	Lugs	4	2.80
BR1K0W091	1000W, 91Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K1W039	1100W, 39Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K2W3P9	1200W, 3.9Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K2W6P8	1200W, 6.8Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K2W008	1200W, 8Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K2W013	1200W, 130Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K2W015	1200W, 15Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K2W033	1200W, 33Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W3P3	1500W, 3.3Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W005	1500W, 5Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W012	1500W, 123Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W013	1500W, 13Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W015	1500W, 15Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W027	1500W, 27Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W040	1500W, 40Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W043	1500W, 43Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20
BR1K5W107	1500W, 107Ω	Wire Wound	465 x 95 x 50	Lugs	6	1.20

KBAC Hybrid Drive™ – NEMA 4X / IP65



The KBAC Series of Adjustable Frequency Drives are inverter models rated for 1/8 to 10 horsepower motors. These drives are housed in heavy duty NEMA 4X / IP65 die-cast aluminum washdown/watertight enclosures for indoor or outdoor use. Hybrid drives are a digital drive with an analog interface.

Options: On/Off AC Line Switch (P/N's 9482, 9523, 9532, factory installed on Models KBAC-217S, 217SF, 416S, 416SF); Forward-Stop-Reverse Switch (P/N's 8888, 9480); Run-Stop-Jog Switch (P/N's 8889, 9340); Auto/Manual Switch Kit (P/N's 8891, 9481); Signal Isolator with Power Supply (P/N's 8890, 9600); Signal Isolator with Power Supply and an Auto/Manual Switch Kit (P/N's 8893, 9605); Class A (CE) RFI Filter (P/N's 9468, 9479, 9507, 9512, 9515, 9516, factory installed on Models KBAC-217F, 217SF, 416F, 416SF); and Liquidtight Fittings (P/N's 8892, 9526).

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.		Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW				Gray	White*				Lbs.	kg	
1	0.75	115	1	KBAC-24D	9987	9988	14.4	0 – 208/230	3.6	5.9	2.7	A
		208/230										
1½	1.13	115	1	KBAC-27D	9520	9521	22	0 – 208/230	5.5	10.3	4.7	B
2	1.5	208/230										
3	2.25	208/230	1	KBAC-29 (1P)	10001	10002	20.5	0 – 208/230	9	10.3	4.7	B
2	1.5	208/230	1	KBAC-29	9528	9529	16.7	0 – 208/230	6.7	10.3	4.7	B
3	2.25		3									
3	2.25	400/460	3	KBAC-45	9530	9531	7.2	0 – 400/460	5.5	10.3	4.7	B
5	3.75	400/460	3	KBAC-48	9540	9541	11	0 – 400/460	8.3	10.3	4.7	B
5	3.75	208/230	3	KBAC-217	8868	8879	22.1	0 – 208/230	17	22	10	0
				KBAC-217S	8863	8855						
				KBAC-217F	8861	8853						
				KBAC-217SF	8869	8880						
10	7.5	400/460	3	KBAC-416	8870	8881	20.8	0 – 400/460	16	22	10	0
				KBAC-416S	8864	8856						
				KBAC-416F	8874	8883						
				KBAC-416SF	8871	8882						

*FDA approved (white cases only).

KBDA Digital Drive – NEMA 4X / IP65



The KBDA Series of Digital Adjustable Frequency Drives are inverter models rated for 1/8 to 10 horsepower motors. These drives are housed in heavy duty NEMA 4X / IP65 die-cast aluminum washdown/watertight enclosures for indoor or outdoor use.

Options: IODA Input/Output Multi-Function Module (P/N's 8873, 9668); On/Off AC Line Switch (P/N's 9482, 9523, 9532, factory installed on Models KBDA-217S, 217SF, 416S, 416SF); Class A (CE) RFI Filter (P/N's 9468, 9470, 9507, 9512, 9515, 9516, factory installed on Models KBDA-217F, 217SF, 416F 416SF); and Liquidtight Fittings (P/N's 8892, 9526).

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.		Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW				Gray	White*				Lbs.	kg	
1	0.75	115	1	KBDA-24D	9536	9537	14.4	0 – 208/230	3.6	5.9	2.7	A
		208/230										
1½	1.13	115	1	KBDA-27D	9543	9544	22	0 – 208/230	5.5	10.3	4.7	B
2	1.5	208/230										
3	2.25	208/230	1	KBDA-29 (1P)	10003	10004	20.5	0 – 208/230	9	10.3	4.7	B
1	0.75	208/230	3	KBDA-24P	9766	9767	4.8	0 – 208/230	3.6	5.9	2.7	A
2	1.5											
3	2.25	208/230	3	KBDA-29	9545	9546	16.7	0 – 208/230	6.7	10.3	4.7	B
1	0.75	400/460	3	KBDA-42	9763	9764	2.1	0 – 400/460	2	5.9	2.7	A
3	2.25											
3	2.25	400/460	3	KBDA-45	9659	9660	7.2	0 – 400/460	5.5	10.3	4.7	B
5	3.75	400/460	3	KBDA-48	9661	9662	11	0 – 400/460	8.3	10.3	4.7	B
5	3.75	208/230	3	KBDA-217	8862	8854	22.1	0 – 208/230	17	22	10	0
				KBDA-217S	8865	8857						
				KBDA-217F	8875	8884						
				KBDA-217SF	8876	8885						
10	7.5	400/460	3	KBDA-416	8866	8958	20.8	0 – 400/460	16	22	10	0
				KBDA-416S	8867	8859						
				KBDA-416F	8877	8886						
				KBDA-416SF	8878	8887						

*FDA approved (white cases only).



KBMA Hybrid Drive™ – NEMA 1 / IP50

The KBMA Series of Adjustable Frequency Drives are inverter models rated for 1/8 to 1 horsepower motors. These drives are housed in NEMA 1 / IP50 aluminum enclosures. The KBMA-24DF contains a built-in CE approved AC Line Class A Industrial Standard RFI (EMI) Filter. Hybrid drives are a digital drive with an analog interface.

Option: Forward-Stop-Reverse Switch (P/N 9519).

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1	0.75	115	1	KBMA-24D	9533	14.4	0 – 208/230	3.6	2.42	1.09	C
		208/230				9.5					
1	0.75	115	1	KBMA-24DF	9534	9.5	0 – 208/230	3.6	2.48	1.12	C
		208/230									



KBMK Digital Drive – NEMA 1 / IP50

The KBMK Series of Digital Adjustable Frequency Drives are inverter models rated for 1/8 to 1 horsepower motors. These drives are housed in NEMA 1 / IP50 aluminum enclosures. The KBMK-24DF contains a built-in CE approved AC Line Class A Industrial Standard RFI (EMI) Filter.

Options: IODA Input/Output Multi-Function Module (P/N 9668) and On/Off AC Line Switch (P/N 9683).

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1	0.75	115	1	KBMK-24D	9680	14.4	0 – 208/230	3.6	2.26	1.03	C
		208/230				9.5					
1	0.75	115	1	KBMK-24DF	9681	9.5	0 – 208/230	3.6	2.26	1.03	C
		208/230									



KBVF Hybrid Drive™ – Chassis / IP20

The KBVF Series of Adjustable Frequency Drives are inverter models rated for 1/10 to 5 horsepower motors. These chassis / IP20 drives are ideal for OEM applications where digital programming and displays are not required. Hybrid drives are a digital drive with an analog interface.

Options: Drive-Link™ Programming Kit, SIVFR Signal Isolator and Run Fault Relay (Standard on 460 VAC models) (P/N 9597), DIVF Modbus Serial Communication Module (P/N 9568), Class A or B (CE) RFI Filter, DBVF Dynamic Brake Module (P/N 9598), Multi-Speed Board, KBRK Remote Digital Keypad (OEM applications only), and IOVF Input/Output Multi-Function Module.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1/2	0.37	115	1	KBVF-13	9957	9.6	0 – 208/230	2.4	1.3	0.6	D
1	0.75	115	1	KBVF-14	9977	14	0 – 208/230	4	2.2	1.0	E
1/2	0.37	208/230	1	KBVF-23	9958	6	0 – 208/230	2.4	1.3	0.6	D
		208/230				10					
1	0.75	208/230	1	KBVF-24	9978	10	0 – 208/230	4	2.2	1	E
1/10	0.07	115	1	KBVF-21D*	9581	4	0 – 208/230	1	0.7	0.3	F
		208/230				2.5					
1/4	0.18	115	1	KBVF-22D*	9572	6	0 – 208/230	1.5	1.3	0.6	D
		208/230				3.8					
1/2	0.37	115	1	KBVF-23D*	9959	9.7	0 – 208/230	2.4	1.3	0.6	D
		208/230				6					
1	0.75	115	1	KBVF-24D*	9979	14	0 – 208/230	4	2.2	1	E
		208/230				10					
1½	1.13	115	1	KBVF-26D*	9496	22	0 – 208/230	5.5	2.9	1.3	G
		208/230				14					
3	2.25	208/230	1	KBVF-29 (1P)	9910	22.5	0 – 208/230	9	4.6	2.1	H
1/2	0.37	208/230	3	KBVF-23P	9676	3.1	0 – 208/230	2.4	1.1	0.5	D
1	0.75	208/230	3	KBVF-24P	9677	5.2	0 – 208/230	4	2.2	1	E
2	1.5	208/230	1	KBVF-27	9591	17	0 – 208/230	6.7	4.1	1.9	H
			3			8.7					
2	1.5	208/230	1	KBVF-29	9593	16.7	0 – 208/230	6.7	4.6	2.1	H
			3			11.7					
1	0.75	400/460	3	KBVF-42**	9645	2.6	0 – 400/460	2	2.8	1.3	I
3	2.25	400/460	3	KBVF-45**	9590	5.3	0 – 400/460	4.6	4.1	1.9	J
5	3.75	400/460	3	KBVF-48**	9592	11	0 – 400/460	8.3	4.6	2.1	J

*Models KBVF-21D, 22D, 23D, 24D and 26D are available in single voltage AC line input (115 or 208/230 VAC) and also contain a built-in Motor Filter to eliminate winding and bearing failures.

**Contains SIVFR signal input isolation with Run/Fault output relay.



KBWA Hybrid Drive™ – NEMA 1 Enclosures*

The KBWA Series of Adjustable Frequency Drives are inverter models rated for 1/8 to 1/2 horsepower** motors. These drives are housed in NEMA 1 enclosures*. Both models contain an On/Off AC Line Switch and a Main Speed Potentiometer. Hybrid drives are a digital drive with an analog interface.

Option: Forward-Stop-Reverse Switch (included).

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1/4	0.19	115	1	KBWA-22D	9926	5.2	0 – 208/230	1.3	1.58	0.72	K
		208/230				3.8		1.5			
1/2	0.37	115	1	KBWA-23D	9946	8.8	0 – 208/230	2.2	1.58	0.72	
		208/230				6		2.4			

* Model KBWA-22D (IP50), model KBWA-23D (IP20). **Lower horsepower models available (KBWA-21D, 2P3D, 2P6D).



KBWK Digital Drive – NEMA 1 / IP20

The KBWK Adjustable Frequency Drive is rated for 1/8 to 1/2 horsepower* motors. This drive is housed in a NEMA 1 / IP20 enclosure. It contains a front panel Power On/Off Switch and an ultra bright digital display with LED status indicators.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1/2	0.37	115	1	KBWK-23D	8860	8.8	0 – 208/230	2.2	1.58	0.72	L
		208/230				6		2.4			

*Lower horsepower models available (KBWK-21D, 2P3D, 2P6D).



KBDF Digital Drive – IP20

The KBDF Series of Adjustable Frequency Drives are inverter models rated for 1/8 to 5 horsepower motors. These drives are housed in IP20 enclosures. They are ideal for OEM applications where digital programming and displays are required. All models are available with a built-in CE approved AC Line Class A Industrial Standard RFI (EMI) Filter¹.

Options: Memory Module (P/N 9634), IODF Input/Output Multi-Function Expansion Module (P/N 9646), Drive-Link™ Programming Kit and Modbus Serial Communication Module.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1/2	0.37	115	1	KBDF-13	9623	9.6	0 – 208/230	2.4	2.8	1.27	M
1	0.75	115	1	KBDF-14	9624	16	0 – 208/230	4	2.8	1.27	
1½	1.13	115	1	KBDF-16	9625	22	0 – 208/230	5.5	2.8	1.27	
1/2	0.37	208/230	1	KBDF-23 ¹	9688	6	0 – 208/230	2.4	2.8	1.27	
1	0.75	208/230	1	KBDF-24 ¹	9689	10	0 – 208/230	4	2.8	1.27	
2	1.5	208/230	1	KBDF-27 ¹	9690	17	0 – 208/230	6.7	2.8	1.27	
3	2.25	208/230	1	KBDF-29 (1P)	9700	22	0 – 208/230	9	4.2	1.93	N
1/2	0.37	115	1	KBDF-23D	9673	9.6	0 – 208/230	2.4	2.8	1.27	M
		208/230				6					
1	0.75	115	1	KBDF-24D	9674	16	0 – 208/230	4	2.8	1.27	
		208/230				10					
1½	1.13	115	1	KBDF-27D	9675	22	0 – 208/230	5.5	2.8	1.27	
2	1.5	208/230				17		6.7			
2	1.5	208/230	1	KBDF-29 ¹	9641	16.7	0 – 208/230	6.7	4.2	1.93	
3	2.25		3			11.7		9			
1	0.75	400/460	3	KBDF-42 ¹	9642	2.6	0 – 400/460	2	4.2	1.93	N
3	2.25	400/460	3	KBDF-45 ¹	9643	7.2	0 – 400/460	5.5	4.2	1.93	
5	3.75	400/460	3	KBDF-48 ¹	9644	10.8	0 – 400/460	8.3	4.2	1.93	

1. Add "F" Suffix to Model Number for Built-In Class A (CE) RFI (EMI) AC Line Filter. Ex. KBDF-24F.

Inverter Accessories

SIVFR Signal Isolator and Run/Fault Relay Part No. 9597



The SIVFR is used to isolate, amplify, and condition DC voltage and current signals from any source (power supplies, motors, tach-generators, transducers, and potentiometers). It also provides isolated inputs to control motor direction and an isolated power supply for transducer or potentiometer operation. All input connections are isolated from the AC line and motor wiring. The SIVFR installs easily onto the side of the drive with the mounting base and two screws (provided). An adapter bracket is provided for use with 1/2 HP model drives. The SIVFR is supplied with a finger-safe panel, which may be used with the enclosure cover to close the unused exposed area of the SIVFR between Terminal Blocks TB1 and TB2.

Model where used: KBVF



Dynamic Brake Module Part No. 9598

The DBVF is a transistor controlled dynamic brake. It increases the standard braking torque of the KBVF from 25% to over 100%. It is designed for all 230 VAC output models.

Model where used: KBVF

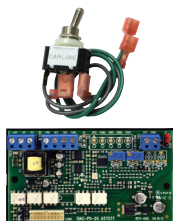
Multi-Speed Board Part No. 9503



The KBVF Multi-Speed Board (MSB) provides four user selectable preset speeds to control a motor connected to the KBVF Adjustable Frequency Drive. The motor speed for each preset is adjustable via trimpot settings which can be fine tuned by using the Hi-Lo range jumpers. Motor direction is set by the position of Jumper R/F (reverse/forward) which is provided for each preset. Connections to the Multi-Speed Board are made with a barrier terminal block. The MSB mounts onto the side of the KBVF.

Models where used: KBVF

SIAC-PS Signal Isolator with Power Supply and A/M Switch Kit Part Nos. 8893, 9605



The SIAC-PS Signal Isolator with Power Supply provides an isolated interface between non-isolated signal sources and the drive. It is used to isolate, amplify and condition DC voltage and current signals from any source; such as tach-generators, transducers, PLC's and potentiometers. It provides an isolated input to control motor direction and an isolated 5 Volt DC power supply for potentiometer operation. In addition, it contains an isolated 50 ma 24 Volt DC power supply for transducers or auxiliary equipment. All input connections and power supplies are isolated from the AC line and motor wiring.

The Auto/Manual Switch is designed for installation on the front cover of the drive. It is used with the SIAC-PS to select a signal input from either the SIAC-PS or the Main Speed Potentiometer of the drive.

Model where used: KBAC Series

AC Line Filters Part Nos. 9479, 9507, 9512, 9515, 9516, factory installed on Models KBAC-217F, 217SF, 416F, 416SF, and KBDA-217F, 217SF, 416F, 416SF

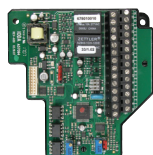


The RFAC Line Filters are used to suppress electrical interference to within acceptable levels as determined by the CE Council Directive 89/336/EEC relating to the Class A Industrial Standard. The RFAC-24 is rated 10 Amps at 230 Volts AC, the RFAC-27D is rated 22 Amps at 230 Volts AC and the RFAC-4X is rated 10 Amps at 460 VAC.

Note: Suffix "NS" indicates line filter must be used without the Power On/Off Switch Kit.

Models where used: KBAC or KBDA-24D (P/N 9507), KBAC or KBDA-27D (P/N 9512), KBAC or KBDA-29, 45, 48 (P/N 9479), KBAC or KBDA-29NS, 45NS, 48NS (P/N 9515), KBAC or KBDA-217, 217S, 416, 416S (P/N 9516).

IODA Part Nos. 8873, 9668



The IODA Input/Output Multi-Function Board provides a variety of functions which include preset frequency, up/down frequency control, signal isolation, isolated output voltage for controlling auxiliary devices, output relay contacts, and open collector outputs. The IODA mounts on the drive's PC board with two snap-ins (located on the bottom of the mounting base) and two screws (provided). All of the IODA inputs and outputs are isolated from the AC line.

Models where used: KBDA (P/N's 8873, 9668), KBMK (P/N 9668)



IODF Input/Output Module Part No. 9646

The IODF is used on the KBDF Series Drives to provide additional input/output lines and increase the functionality of the standard inputs/outputs of the drive. An additional Multi-Function Relay is also provided.

Model where used: KBDF



MMDF-Memory Module Part No. 9634

The Memory Module can store up to four programs and easily mounts onto the drive's PC board header. A program stored on the drive can be uploaded to the Memory Module and a program stored on the Memory Module can be downloaded to the drive.

Model where used: KBDF



Liquid Tight Fittings Part Nos. 8892, 9526

The fittings are designed to provide a liquid tight seal when using cables to wire the drive.

Models where used: KBAC, KBDA



Forward-Stop-Reverse Switch Kit Part No. 9519

The Forward-Stop-Reverse Switch assembly is designed for installation on the front cover of the drive and is used to provide electronic reversing.

Model where used: KBMA



On/Off AC Line Switch Kit Part No. 9683

The Power On/Off Switch assembly is designed to provide a positive AC line power disconnect. It can be installed in lieu of, or in addition to, the factory installed Start/Stop Switch assembly.

Model where used: KBMK



Run-Stop-Jog Switch Kit Part Nos. 8889, 9340

The Run-Stop-Jog Switch provides selection between the Main Speed Potentiometer setting or a momentary jog speed, which can be used to index a machine into position.

Model where used: KBAC



Forward-Stop-Reverse Switch Kit Part Nos. 8888, 9480

The Forward-Stop-Reverse Switch Kit is designed for installation on the front cover of the inverters and provide electronic reversing.

Model where used: KBAC



Power On/Off Switch Kit Part Nos. 9482, 9523, 9532, factory installed on Models KBAC-217S, 217SF, 416S, 416SF and KBDA-217S, 217SF, 416S, 416SF

The Power On/Off Switch Kit is designed to provide a positive AC line power disconnect. It can be installed in lieu of, or in addition to, the factory installed Start/Stop Switch assembly. For Models KBAC or KBDA -24D, 27D, the switch is double pole, which is used to disconnect both AC line wires. If only one AC line is to be disconnected, a single pole can be used. Refer to local electrical codes that apply. For Models KBAC or KBDA-29, 45, 48, the switch is triple pole, which is used to disconnect all three AC line wires.

Models where used: KBAC or KBDA-24D (P/N 9482); KBAC or KBDA-27D, 29 (1P) (P/N 9523); KBDA-42, KBAC or KBDA-29, 45, 48 (P/N 9532)



Potentiometer Kits Part Nos. 9111, 9114, and 9831

The Potentiometer Kits consist of a 5k ohm linear potentiometer with mounting hardware and front panel insulator. Part No. 9111 contains a conductive plastic element and is fitted with a nylon shaft and isolated brass mounting bushing. Part No. 9114 is the same as Part No. 9111 except that it contains an On/Off Switch. Part No. 9831 contains a 5 watt rated wire wound potentiometer with excellent linearity.

Models where used: KBVF Series



Knob and Dial Kits Part Nos. 9832 (Large) and 9815 (Small)

Two Knob/Dial Kits are available. Both contain black knobs with silver inserts. Dial Plates are .040" aluminum with 3/8" mounting hole. Dimensions (L x W approx.): large dial plate: 2.25" x 2.06", small dial plate: 1.62" x 1.50".

Models where used: KBVF Series



KBRF-250 CE Approved AC Line Filter (Class A) Part No. 9509

The KBRF-250 is an RFI filter used to suppress electronic interference caused by motor speed controls. The KBRF-250 is primarily designed as an integral mounting base for speed controls with industry standard mounting requirements such as the KBVF Series Inverter, PWM DC Speed Controls, and SCR Speed Controls. Installation is easily accomplished with quick-connect terminals. It is housed in a plated steel case which is to be grounded with the external ground screw or mounting tab. Rated 10 Amps at 230 Volts AC. CE approved meets (Class A) industrial.

Models where used: KBVF thru 2 HP, single phase input only.



KBRF-300 CE Approved AC Line Filter (Class B) Part No. 9484

The KBRF-300 is an RFI filter used to suppress electronic interference caused by motor speed controls to within acceptable levels as determined by the CE Council Directive 89/336/EEC relating to EMC. Rated 16 Amps at 115 or 208/230 Volts AC – 115/230 VAC, 50/60 Hz. CE approved meets (Class B) residential.

Models where used: All Controls



KBRF-350 CE Approved AC Line Filter (Class B) Part No. 9511

The KBRF-350 is an RFI filter used to suppress electronic interference caused by motor speed controls. The KBRF-350 is primarily designed as an integral mounting base for speed controls with industry standard mounting requirements such as the KBVF Series Inverter, PWM DC Speed Controls, and SCR Speed Controls. Installation is easily accomplished with quick-connect terminals. It is housed in a plated steel case which is to be grounded with the external ground screw or mounting tab. Rated 10 Amps at 230 Volts AC. CE approved meets (Class B) residential.

Models where used: KBVF thru 2 HP, single phase input only.

Dimensions (W x L x D)

Ref. Code	Inches	Millimeters
A	5.51 x 9.53 x 5.86	140 x 242 x 149
B	7.55 x 9.80 x 7.25	192 x 249 x 184
C	4.95 x 7 x 4.15	126 x 178 x 105
D	3.9 x 4.3 x 2.75	99 x 109 x 70
E	4.7 x 4.3 x 5	119 x 109 x 127

Ref. Code	Inches	Millimeters
F	3.9 x 4.3 x 2	99 x 109 x 51
G	4.7 x 5.7 x 4.5	119 x 145 x 114
H	4.7 x 7.5 x 4.45	119 x 191 x 113
I	4.1 x 9.31 x 2.75	103 x 236 x 70
J	4.7 x 8.75 x 4.45	119 x 222 x 113

Ref. Code	Inches	Millimeters
K	3.92 x 6.06 x 3.65	99.6 x 154 x 92.7
L	3.92 x 6.06 x 4.40	99.6 x 154 x 112
M	3.4 x 7.25 x 5.1	86.4 x 184 x 130
N	4.4 x 7.8 x 6.1	112 x 199 x 155
O	14 x 10.5 x 9	356 x 267 x 227

OPTIMIZED DRIVE REACTORS Z = 3% IMPEDANCE

CSA, UL & CE



	CHASSIS MODEL	ENCLOSURE	HP	MAX. CURRENT	WATT LOSS	INDUCTANCE (µH)	STD. TERMINALS	DIMENSIONS (IN./PO.) H X W X D	WEIGHT (LBS)
3% 208/240 VAC	KDRA54L	C1	0.5	3	7	4200	TB	4.00 x 4.18 x 3.75	4
	KDRA53L	C1	0.75	4.2	12	3000	TB	4.00 x 4.18 x 3.75	4
	KDRA25L	C1	1	5.5	11	2460	TB	4.00 x 4.18 x 3.75	4
	KDRA26L	C1	1.5	8	18	1650	TB	4.00 x 4.18 x 3.75	4
	KDRA27L	C1	2	10	21	1350	TB	4.00 x 4.18 x 3.75	4
	KDRA28L	C1	3	12	29	971	TB	4.00 x 4.18 x 3.75	4
	KDRB22L	C1	5	19	38	626	TB	5.00 x 6.00 x 4.00	8
	KDRB23L	C2	7.5	25	48	434	TB	5.00 x 6.00 x 4.00	8
	KDRD25L	C2	10	34	64	342	TB	5.75 x 7.20 x 4.25	12
	KDRD24L	C2	15	48	85	220	TB	5.75 x 7.20 x 4.25	12
	KDRD26L	C2	20	62	94	172	TB	5.75 x 7.20 x 4.25	12
	KDRC22L	C2	25	80	114	138	CB	5.75 x 7.20 x 5.00	15
	KDRF24L	C4	30	100	135	116	CB	7.00 x 9.00 x 6.00	30
	KDRF25L	C4	40	118	149	88.6	CB	7.00 x 9.00 x 6.00	30
KDRF26L	C4	50	152	154	69.9	CB	7.00 x 9.00 x 6.00	30	

	CHASSIS MODEL	ENCLOSURE	HP	MAX. CURRENT	WATT LOSS	INDUCTANCE (µH)	STD. TERMINALS	DIMENSIONS (IN./PO.) H X W X D	WEIGHT (LBS)
3% 480 VAC	KDRA6L	C1	0.5	1.5	5.6	16300	TB	4.00 x 4.18 x 3.75	4
	KDRA7L	C1	0.75	1.6	10	11716	TB	4.00 x 4.18 x 3.75	4
	KDRA8L	C1	1	2.1	10.4	8927	TB	4.00 x 4.18 x 3.75	4
	KDRA9L	C1	1.5	3	17	6248	TB	4.00 x 4.18 x 3.75	4
	KDRA1L	C1	2	6.4	19	5790	TB	4.00 x 4.18 x 3.75	4
	KDRA2L	C1	3	6	23	4270	TB	4.00 x 4.18 x 3.75	4
	KDRA3L	C1	5	9.6	49	2770	TB	4.00 x 4.18 x 3.75	4
	KDRA4L	C1	7.5	14	40	1680	TB	4.00 x 4.18 x 3.75	4
	KDRA5L	C1	10	14	64	1290	TB	4.00 x 4.18 x 3.75	5
	KDRB2L	C1	15	30	65	912	TB	5.00 x 6.00 x 4.00	8
	KDRB1L	C1	20	30	79	694	TB	5.00 x 6.00 x 4.00	8
	KDRD1L	C2	25	50	96	569	TB	5.75 x 7.20 x 4.25	10
	KDRD2L	C2	30	45	105	469	TB	5.75 x 7.20 x 4.25	10
	KDRC1L	C2	40	55	114	387	TB	5.75 x 7.20 x 5.00	15
	KDRF2L	C3	50	65	114	295	TB	7.00 x 9.00 x 6.00	25
	KDRF4L	C3	60	77	169	227	TB	7.00 x 9.00 x 6.00	25
	KDRF3L	C4	75	110	193	196	CB	7.00 x 9.00 x 6.00	30
	KDRH3L	C4	100	150	225	152	CB	7.00 x 9.00 x 7.00	40
	KDRH2L	C4	125	165	254	117	CB	9.00 x 11.00 x 7.00	40
	KDRH1L	C4	150	185	299	103	CB	9.00 x 11.00 x 7.00	40
KDRG3L	C4	200	240	280	83.9	CB	9.00 x 11.00 x 8.00	65	
KDRG1L	C4	250	340	337	65.4	CB	9.00 x 11.00 x 8.00	65	
KDRG2L	C4	300	370	381	56.5	CB	9.00 x 11.00 x 8.00	65	



OPTIMIZED DRIVE REACTORS Z = 3% IMPEDANCE

CSA, UL & CE



	CHASSIS MODEL	ENCLOSURE	HP	MAX. CURRENT	WATT LOSS	INDUCTANCE (uH)	STD. TERMINALS	DIMENSIONS (IN./PO.) H X W X D	WEIGHT (LBS)
3% 575-600VAC	KDRA55L	C1	0.5	1.5	6	30300	TB	4.00 x 4.18 x 3.75	4
	KDRA56L	C1	0.75	2.1	9.3	21200	TB	4.00 x 4.18 x 3.75	4
	KDRA50L	C1	1	2.1	12	15900	TB	4.00 x 4.18 x 3.75	4
	KDRA51L	C1	1.5	2.8	19	10200	TB	4.00 x 4.18 x 3.75	4
	KDRA46L	C1	2	3.3	22	9290	TB	4.00 x 4.18 x 3.75	4
	KDRA52L	C1	3	5	23.3	6740	TB	4.00 x 4.18 x 3.75	4
	KDRA47L	C1	5	7	34.7	4510	TB	4.00 x 4.18 x 3.75	4
	KDRA48L	C1	7.5	10.4	42.9	3100	TB	4.00 x 4.18 x 3.75	4
	KDRA49L	C1	10	11	43.8	2470	TB	4.00 x 4.18 x 3.75	5
	KDRB45L	C1	15	19.5	66.2	1590	TB	5.00 x 6.00 x 4.00	8
	KDRB44L	C1	20	24	71.2	1280	TB	5.00 x 6.00 x 4.00	8
	KDRB43L	C1	25	30	76.7	883	TB	5.00 x 6.00 x 4.00	8
	KDRD42L	C2	30	32	106	853	TB	5.75 x 7.20 x 4.25	12
	KDRC43L	C2	40	41	109	672	TB	5.75 x 7.20 x 5.00	15
	KDRC44L	C2	50	52	123	529	TB	5.75 x 7.20 x 5.00	15
	KDRF46L	C3	60	62	181	432	TB	7.00 x 9.00 x 6.00	30
	KDRF47L	C3	75	77	194	363	TB	7.00 x 9.00 x 6.00	30
KDRF45L	C4	100	99	194	272	CB	7.00 x 9.00 x 6.00	30	

OPTIMIZED DRIVE REACTORS Z =5% IMPEDANCE

CSA, UL & CE

	CHASSIS MODEL	ENCLOSURE	HP	MAX. CURRENT	WATT LOSS	INDUCTANCE (uH)	STD. TERMINALS	DIMENSIONS (IN./PO.) H X W X D	WEIGHT (LBS)
5% 208/240 VAC	KDRA54H	C1	0.5	3	14	7040	TB	4.00 x 4.18 x 3.75	4
	KDRA53H	C1	0.75	5	16.8	4900	TB	4.00 x 4.18 x 3.75	4
	KDRA25H	C1	1	5	23.6	3750	TB	4.00 x 4.18 x 3.75	4
	KDRA27H	C1	1.5	7.5	30.6	2750	TB	4.00 x 4.18 x 3.75	4
	KDRA26H	C1	2	10	30.5	2310	TB	4.00 x 4.18 x 3.75	4
	KDRA28H	C1	3	11	43.1	1570	TB	4.00 x 4.18 x 3.75	4
	KDRB25H	C1	5	17	53.1	1030	TB	5.00 x 6.00 x 4.00	8
	KDRB26H	C1	7.5	26	66.5	699	TB	5.00 x 6.00 x 4.00	8
	KDRD21H	C1	10	31	91.8	554	TB	5.75 x 7.20 x 4.25	12
	KDRD22H	C2	15	47	107.8	375	TB	5.75 x 7.20 x 4.25	12
	KDRC22H	C2	20	62	113.1	278	TB	5.75 x 7.20 x 5.00	15
	KDRF28H	C3	25	75	151	226	TB	7.00 x 9.00 x 6.00	30
	KDRF25H	C4	30	92	179.2	189	CB	7.00 x 9.00 x 6.00	30
	KDRF26H	C4	40	114	192.8	152	CB	7.00 x 9.00 x 6.00	30
	KDRF27H	C4	50	143	200.6	120	CB	7.00 x 9.00 x 6.00	30

OPTIMIZED DRIVE REACTORS Z =5% IMPEDANCE

CSA, UL & CE



	CHASSIS MODEL	ENCLOSURE	HP	MAX. CURRENT	WATT LOSS	INDUCTANCE (µH)	STD. TERMINALS	DIMENSIONS (IN./PO.) H X W X D	WEIGHT (LBS)
5% 480 VAC	KDRA6H	C1	0.5	1.5	9	28400	TB	4.00 x 4.18 x 3.75	4
	KDRA7H	C1	0.75	1.6	15	19525	TB	4.00 x 4.18 x 3.75	4
	KDRA8H	C1	1	2.1	12	14878	TB	4.00 x 4.18 x 3.75	4
	KDRA9H	C1	1.5	3	23	10414	TB	4.00 x 4.18 x 3.75	4
	KDRA1H	C1	2	4	33	10300	TB	4.00 x 4.18 x 3.75	4
	KDRA2H	C1	3	6	38	7290	TB	4.00 x 4.18 x 3.75	4
	KDRA3H	C1	5	8	80	3980	TB	4.00 x 4.18 x 3.75	4
	KDRA4H	C1	7.5	12	77	3000	TB	4.00 x 4.18 x 3.75	5
	KDRA5H	C1	10	14	111	2232	TB	4.00 x 4.18 x 3.75	5
	KDRB2H	C1	15	27	133	1690	TB	5.00 x 6.00 x 4.00	7
	KDRC3H	C2	20	27	108	1210	TB	5.75 x 7.20 x 5.00	15
	KDRC1H	C2	25	35	112	980	TB	5.75 x 7.20 x 5.00	15
	KDRE2H	C2	30	45	141	850	TB	5.75 x 7.20 x 5.00	16
	KDRF4H	C3	40	60	169	581	TB	7.00 x 9.00 x 6.00	25
	KDRF1H	C3	50	85	191	465	TB	7.00 x 9.00 x 6.00	25
	KDRF2H	C3	60	77	226	408	TB	7.00 x 9.00 x 6.00	25
	KDRH2H	C4	75	100	212	315	CB	9.00 x 11.00 x 7.00	45
	KDRI2H	C4	100	125	297	252	CB	9.00 x 11.00 x 7.00	50
	KDRG3H	C4	125	160	274	209	CB	9.00 x 11.00 x 8.00	55
	KDRG1H	C4	150	185	359	181	CB	9.00 x 11.00 x 8.00	55
KDRJ1H	C5	200	240	420	126	CB	9.00 x 11.00 x 9.00	70	
KDRL1H	C5	250	310	548	106	CB	11.38 x 14.50 x 9.50	110	
KDRL2H	C5	300	365	786	86	CB	11.38 x 14.50 x 9.31	95	

	CHASSIS MODEL	ENCLOSURE	HP	MAX. CURRENT	WATT LOSS	INDUCTANCE (µH)	STD. TERMINALS	DIMENSIONS (IN./PO.) H X W X D	WEIGHT (LBS)
5% 575/600 VAC	KDRA55H	C1	0.5	1.5	9	51900	TB	4.00 x 4.18 x 3.75	4
	KDRA52H	C1	0.75	2.1	13	37100	TB	4.00 x 4.18 x 3.75	4
	KDRA50H	C1	1	2.1	17	29400	TB	4.00 x 4.18 x 3.75	4
	KDRA51H	C1	1.5	2.8	26	20600	TB	4.00 x 4.18 x 3.75	4
	KDRA43H	C1	2	3.2	24	17900	TB	4.00 x 4.18 x 3.75	4
	KDRA44H	C1	3	5	35	12000	TB	4.00 x 4.18 x 3.75	4
	KDRA45H	C1	5	7.5	48	7580	TB	4.00 x 4.18 x 3.75	4
	KDRB42H	C2	7.5	10	61	5370	TB	5.00 x 6.00 x 4.00	8
	KDRB43H	C2	10	11	71	4340	TB	5.00 x 6.00 x 4.00	8
	KDRB44H	C2	15	18.5	73	2630	TB	5.00 x 6.00 x 4.00	8
	KDRD41H	C2	20	23	106	2070	TB	5.75 x 7.20 x 4.25	12
	KDRC43H	C2	25	30	107	1670	TB	5.75 x 7.20 x 5.00	15
	KDRE42H	C2	30	32	140	1430	TB	5.75 x 7.20 x 5.00	16
	KDRF44H	C3	40	44	172	1090	TB	7.00 x 9.00 x 6.00	30
	KDRF45H	C3	50	58	166	870	TB	7.00 x 9.00 x 6.00	30
	KDRH43H	C4	60	62	205	750	TB	9.00 x 11.00 x 6.00	45
	KDRH42H	C4	75	82	251	597	TB	9.00 x 11.00 x 6.00	45
	KDRI41H	C4	100	99	268	471	CB	9.00 x 11.00 x 7.00	50



OPTIONAL NEMA 1 VENTILATED ENCLOSURES FOR DRIVE REACTORS

CSA, UL & CE



ENCLOSURE SIZE	NEMA 1 ENCLOSURE	MODEL	WATT LOSS	WEIGHT (LBS)	DIMENSIONS (IN./PO.) H X W X D
C1		M411000C1	14.0	4	6.50 x 8.00 x 6.00
C2		M411000C2	16.8	6	7.50 x 10.00 x 7.00
C3		M411000C3	23.6	12	9.00 x 12.00 x 8.00
C4		M411000C4	30.6	35	15.50 x 15.00 x 13.00
C5		M411000C5	30.5	50	18.50 x 20.00 x 16.00
C7		M411000C7	53.1	160	36.00 x 28.50 x 30.30

Features:

- V1k provides Motor Protection by limiting voltage spikes to below 1,000V applications with leads lengths greater than 100ft.
- Greatly extends the life of the motor and cable.
- Specific applications can reach 3,000'.
- 30% Reduction in common mode current.



Reflective Wave Phenomenon

Voltage wave reflection is a function of the voltage rise time (dv/dt) and the length of the motor cables. The impedance on either end of the cable run does not match, causing voltage pulses to be reflected back in the direction from which it arrived.

As these reflected waves encounter other waves, their values add, causing higher peak voltage. As wire length or carrier frequency increases, the overshoot peak voltage also increases.

Peak Voltages on a 460 V system can reach 1200 to 1600 V, causing rapid breakdown of motor insulation, leading to motor failure.

On 575 V systems, the peak voltages can easily reach 2100 V. If this is left uncontrolled, insulation failure may occur.

Mitigate Reflective Wave

By combining a patented dampening circuit with a low pass filter, V1k filters:

- Increase the voltage rise time (dt out of dv/dt)
- Prevent voltages spikes from exceeding 1,000 V
- Slow pulse transistions, reduce dv/dt
- Protect motor and cable insulation

Applications

- Oil and Gas Pumps
- Irrigation Fields, Farms
- Water, Waste Water
- HVAC
- Pulp, and Paper

CATALOGUE NO	NEC MOTOR HP			RATED CURRENT	DIMENSIONS H X W X D	WEIGHT (LBS)	ENCLOSURE
	480V	600V	240V				
V1K2A00	0.75	1	-	2	9 x 5.5 x 7.25	8	Open Style
V1K3A00	1 - 1.5	2	0.5	3	9 x 5.5 x 7.25	8	Open Style
V1K4A00	2	3	0.75	4	9 x 5.5 x 7.25	8	Open Style
V1K6A00	-	-	1 - 1.5	6	9 x 5.5 x 7.25	8	Open Style
V1K8A00	5	5	2	8	9 x 5.5 x 8.25	8	Open Style
V1K12A00	7.5	10	3	12	9 x 5.5 x 8.25	8	Open Style
V1K16A00	10	-	5	16	9 x 5.5 x 8.25	12	Open Style
V1K18A00	10	15	-	18	9 x 5.5 x 8.25	12	Open Style
V1K21A00	15	-	-	21	9 x 5.5 x 8.25	12	Open Style
V1K25A00	15	20	7.5	25	9 x 5.5 x 8.25	12	Open Style
V1K27A00	20	25	-	27	9 x 5.5 x 8.25	14	Open Style
V1K35A00	25	30	10	35	12 x 8 x 9	17	Open Style
V1K45A00	30	40	15	45	12 x 8 x 9	17	Open Style
V1K55A00	40	50	20	55	12 x 8 x 9	23	Open Style
V1K80A00	50 - 60	75	25 - 30	80	12 x 8 x 9	23	Open Style
V1K110A00	75	100	40	110	12 x 8 x 9	40	Open Style
V1K130A00	100	125	50	130	8.5 x 11.75 x 9.5	55	Open Style

CHART CONTINUES ON NEXT PAGE

V1K SUPERIOR DV/DT PROTECTION FOR MOTORS

V1000 KLC- SERIES MOTOR FILTERS



CATALOGUE NO	NEC MOTOR HP			RATED CURRENT	DIMENSIONS H X W X D	WEIGHT (LBS)	ENCLOSURE
	480V	600V	240V				
V1K160A00	125	150	60	160	8.5 x 11.75 x 10.5	60	Open Style
V1K200A00	150	200	75	200	8.5 x 11.75 x 9.25	60	Open Style
V1K250A00	200	250	100	250	8.5 x 11.75 x 9.25	65	Open Style
V1K305A00	250	300	-	305	8.75 x 11.75 x 12.25	80	Open Style
V1K362A00	300	350	150	362	8.75 x 11.75 x 12	80	Open Style
V1K420A00	350	450	-	420	10 x 11.75 x 13.75	95	Open Style
V1K480A00	400	500	200	480	10 x 11.75 x 13.75	100	Open Style
V1K600A00	500	600	-	600	12.75 x 15 x 13.75	130	Open Style
V1K750A00	600	700	-	750	12.75 x 15 x 14.5	135	Open Style

CATALOGUE NO	NEC MOTOR HP			RATED CURRENT	DIMENSIONS H X W X D	WEIGHT (LBS)	ENCLOSURE
	480V	600V	240V				
V1K2A01	0.75	1	-	2	9 x 5.5 x 10	11	UL NEMA 1
V1K3A01	1 - 1.5	2	0.5	3	9 x 5.5 x 10	11	UL NEMA 1
V1K4A01	2	3	0.75	4	9 x 5.5 x 10	11	UL NEMA 1
V1K6A01	3	-	1 - 1.5	6	9 x 5.5 x 10	11	UL NEMA 1
V1K8A01	5	5	2	8	9 x 5.5 x 10	11	UL NEMA 1
V1K12A01	7.5	10	3	12	9 x 5.5 x 10	11	UL NEMA 1
V1K16A01	10	-	5	16	9 x 5.5 x 10	15	UL NEMA 1
V1K18A01	10	15	-	18	9 x 5.5 x 10	15	UL NEMA 1
V1K21A01	15	-	-	21	9 x 5.5 x 10	15	UL NEMA 1
V1K25A01	15	20	7.5	25	9 x 5.5 x 10	15	UL NEMA 1
V1K27A01	20	25	-	27	9 x 5.5 x 10	15	UL NEMA 1
V1K35A01	25	30	10	35	12 x 8 x 11.5	23	UL NEMA 1
V1K45A01	30	40	15	45	12 x 8 x 11.5	23	UL NEMA 1
V1K55A01	40	50	20	55	12 x 8 x 11.5	23	UL NEMA 1
V1K80A01	50 - 60	75	25 - 30	80	12 x 8 x 11.5	29	UL NEMA 1
V1K110A01	75	100	40	110	16.5 x 18 x 15	68	UL NEMA 1
V1K130A01	100	125	50	130	16.5 x 18 x 15	83	UL NEMA 1
V1K160A01	125	150	60	160	16.5 x 18 x 15	83	UL NEMA 1
V1K200A01	150	200	75	200	16.5 x 18 x 15	93	UL NEMA 1
V1K250A01	200	250	100	250	16.5 x 18 x 15	93	UL NEMA 1
V1K305A01	250	300	-	305	16.5 x 18 x 30	117	UL NEMA 1
V1K362A01	300	350	150	362	16.5 x 18 x 30	117	UL NEMA 1
V1K420A01	350	450	-	420	16.5 x 18 x 30	132	UL NEMA 1
V1K480A01	400	500	200	480	16.5 x 18 x 30	138	UL NEMA 1
V1K600A01	500	600	-	600	16.5 x 18 x 30	168	UL NEMA 1
V1K750A01	600	700	-	750	16.5 x 18 x 30	180	UL NEMA 1

Features:

- Dual voltage via a slide selector switch, chassis & NEMA 4X models available, adjustable min./max. speed, accel / decel (Enclosed models), I.R. compensation and current limit, 50:1 speed range.
- Overload capacity: 200% for one minute, rated up to 2HP, line voltage fluctuation compensation, armature or tach feedback.
- AC fusing (Enclosed models), transient protection, and speed potentiometer with leads, knob & dial.
- Options include Forward - O - Reverse without dynamic braking.
- Suitable for PMDC, shunt wound (100/200V, 1A field) and universal motors.

CHASSIS "C" DUAL VOLTAGE

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT VOLTAGE	WEIGHT
123D-C*	150ma - 5.5ADC	24VAC 36VAC	0 - 20VDC 0 - 30VDC	.77
125D-12C	1/50 - 1/4HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	.77
125DV-C*	1/8 - 1HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	.78



*With a suitable external heatsink, UL rating for output amps can be increased from 5.5 ADC to 10 ADC.

ENCLOSED "E" (ALUMINUM EXTRUSION, POLYCARBONATE COVER, NEMA 4X)

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT VOLTAGE	WEIGHT
125DV200EB	1/8 - 2 HP	115VAC 230VAC	0 - 90VDC 0 - 180VDC	2.00
125DV200EW	1/8 - 2 HP	115VAC 230VAC	0 - 90VDC 0 - 180VDC	2.00
125DV200EW-29	1/8 - 2 HP	115VAC 230VAC	0 - 90VDC 0 - 180VDC	2.00
125DV200EB-29-4	1/8 - 2 HP	115VAC 230VAC	0 - 90VDC 0 - 180VDC	2.00
125DV200EW-29-4	1/8 - 2 HP	115VAC 230VAC	0 - 90VDC 0 - 180VDC	2.00



FIELD INSTALLED OPTIONAL ACCESSORIES

FIELD	NORMAL LEAD TIME
-1	Electronic Speed Control Interlock (C versions)
-2A	Independently Adjustable Linear Accel & Decel (0,5 - 8.0 sec.)
	Jog (125DV200EB/EW-29-4 Included)
-5	4 - 20ma isolated analog input signal (C versions only)
-7	4 - 20ma isolated analog input signal with Manual / Auto function (C versions only)
	Extended Acceleration time (Approx. 4 sec.) (C Versions only)
	Extended Acceleration time (Approx. 6 sec.) (C Versions only)
	Forward - O - Reverse 4PDT Switch (C versions only)
-29 B	Voltage (0 - 5, 25 or 250VDC) isolated analog input signal (E versions only)
	Voltage (0 - 5, 25 or 250VDC) isolated analog input signal (C versions only)
55H125	Voltage (0 - 5, 50VDC or 250VDC) isolated analog input signal with Manual / Auto function (All Models)
56H125	Voltage (0 - 5, 50VDC or 4 - 20ma) isolated analog input signal with Manual / Auto function (E versions only)
-HS (125D)	Auxiliary Heatsink (6.00" long x 7.05" wide x 1.0" deep)

Features:

- Dual voltage via a slide selector switch, chassis, NEMA 4/12 and 4X models available, adjustable min./max. speed, accel / decel, I.R. compensation and current limit, 50:1 speed range.
- Overload capacity: 150% for one minute, rated up to 2HP, line voltage fluctuation compensation, armature or tach feedback.
- AC fusing, transient protection, and speed potentiometer with leads, knob & dial.
- Options include Forward - Reverse without dynamic braking.
- Suitable for PMDC, shunt wound (100/200V, 1A field) and universal motors.

CHASSIS “C” DUAL VOLTAGE

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT VOLTAGE	WEIGHT
251G-12C*	1/50 - 1/4 HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	1.39
253G-200C*	1/4 - 2 HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	1.39

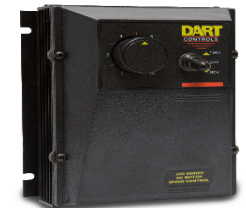
* Option -7, Chassis versions require a customer supplied 3PDT switch and wiring



ENCLOSED “E” (ALUMINUM EXTRUSION, NORYL COVER, NEMA 4/12)

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT VOLTAGE	WEIGHT
251G-12E**	1/8 - 2 HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	2.00
253G-200E**	1/8 - 2 HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	2.00

* Option -7, E version factory installed only.



OPTIONAL ACCESSORIES

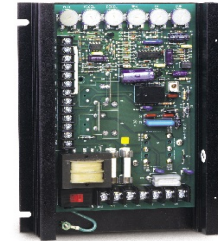
MODEL		DESCRIPTION
FIELD	FACTORY	
	-4X	NEMA 4X Enclosure (E version only)
-5	-5	4 - 20ma isolated analog input signal (C versions only) order as a separate item
-7	-7	4 - 20ma isolated analog input signal with Auto / Manual function (all models, See Notes)
	-17B	Extended Accel / Decel range (20 sec.) (All models)
	-29	Forward - O - Reverse 4PDT Switch (E versions only)
-29B		Forward - O - Reverse 4PDT Switch (C versions only)
	-34A	Torque control (E versions only)
-55H2	-55H2	Voltage (0 - 5, 25 or 250VDC) isolated analog input signal (C versions only) order as a separate item
	-56H2	Voltage (0 - 5, 25 or 250VDC) isolated analog input signal with Auto / Manual function (E versions only)

Features:

- Dual voltage via a slide selector switch, chassis, NEMA 4/12 models available, adjustable min./max. speed, accel / decel, I.R. compensation and current limit, 50:1 speed range.
- Overload capacity: 200% for one minute, rated up to 3HP, line voltage fluctuation compensation, armature or tach feedback.
- AC fusing, transient protection, and speed potentiometer with leads, knob & dial.
- Options include Forward - Reverse with dynamic braking and zero speed detection.
- Suitable for PMDC, shunt wound (100/200V, 1A field) and universal motors.

CHASSIS "C" DUAL VOLTAGE

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT VOLTAGE	WEIGHT
530BC*	1/8 - 2HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	2.92
533BC*	1/4 - 3HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	2.92



CHASSIS WITH RELAY "RC" DUAL VOLTAGE

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT VOLTAGE	WEIGHT
530BRC	1/8 - 2 HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	3.03



ENCLOSED "RE" ALUMINUM EXTRUCTION NORYL COVER NEMA 4/12

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT VOLTAGE	WEIGHT
530BRE	1/8 - 2 HP	120VAC 240VAC	0 - 90VDC 0 - 180VDC	3.75

* Option - 5 is the only option for this model

OPTIONAL ACCESSORIES (Please read notes below; multiple options may not fit on terminal strip. Consult factory)

MODEL		DESCRIPTION
FIELD	FACTORY	
	4	Jog (RE version only)
5	5	4 - 20ma isolated analog input signal (C & RC versions only) order as a separate item
7	7	4 - 20ma isolated analog input signal with Auto / Manual function (all models)
	-15A	Extended Accel / Decel range (30 sec.) (All models)
29B		Forward - O - Reverse 4PDT Switch (C & RC versions only)
36M	36M	Forward - Reverse with Zero Speed Detection & Dynamic Braking (5ff 30W) Option Board 115VAC (RC & RE versions only)
	36MA	Forward - Reverse with Zero Speed Detection & Dynamic Braking (5ff 50W) Extrusion mount 115VAC (RE version only)
38M	38M	Forward - Reverse with Zero Speed Detection & Dynamic Braking (10ff 30W) Option Board 230VAC (RC & RE versions only)
	38MA	Forward - Reverse with Zero Speed Detection & Dynamic Braking (10ff 50W) extrusion mount 230VAC (RE version only)

VSI2 VOLTAGE ISOLATOR CONVERTS SIGNAL INTO 4-20ma or 0-10VDC DESIGNED FOR 530 SERIES

MODEL	ADJUSTMENT RANGE	INPUT VOLTAGE	OUTPUT	WEIGHT
VSI2	120 / 240VAC	120VAC 240VAC	0 - 10VDC 4 - 20MA	0.84



PU HALL EFFECT PICKUP, MOLDED PLASTIC ENCLOSURE AND 6' CORD.



PU HALL EFFECT PICKUP, MOLDED PLASTIC ENCLOSURE AND 6' CORD.

MODEL	PULSES	DESCRIPTION	WEIGHT LBS
PU-2E	1	Hall Effect Pickup, sealed encoded wheel with screw for easy shaft mounting.	.55
PU-4E	2	Hall Effect Pickup, sealed encoded wheel with screw for easy shaft mounting.	.55
PU-20E	10	Hall Effect Pickup, sealed encoded wheel with screw for easy shaft mounting.	.55
PU-40E	20	Hall Effect Pickup, sealed encoded wheel with screw for easy shaft mounting.	.55
PU-2R	1	Hall Effect Pickup, sealed encoded wheel, with screw for easy shaft mounting, Outdoor Duty.	.55
PU-4R	2	Hall Effect Pickup, sealed encoded wheel, with screw for easy shaft mounting, Outdoor Duty.	.55
PU-20R	10	Hall Effect Pickup, sealed encoded wheel, with screw for easy shaft mounting, Outdoor Duty.	.55
PU-40R	20	Hall Effect Pickup, sealed encoded wheel, with screw for easy shaft mounting, Outdoor Duty.	.55

CF HALL EFFECT PICKUP, MOUNTS DIRECTLY TO MOTOR'S NEMA "C" FLANGE.

MODEL	PULSES	DESCRIPTION	WEIGHT LBS
CF-H1	1	Hall Effect Pickup, encoded wheel, mounts to a NEMA 56C, 5/8" shaft.	.55
CF-H2	2	Hall Effect Pickup, encoded wheel, mounts to a NEMA 56C, 5/8" shaft.	.55
CF-H15	15	Hall Effect Pickup, encoded wheel, mounts to a NEMA 56C, 5/8" shaft.	.55
CF-H60	60	Hall Effect Pickup, encoded wheel, mounts to a NEMA 56C, 5/8" shaft.	.55
CF-J1	1	Hall Effect Pickup, encoded wheel, mounts to a NEMA 140TC, 7/8" shaft.	.59
CF-J2	2	Hall Effect Pickup, encoded wheel, mounts to a NEMA 140TC, 7/8" shaft.	.55
CF-J15	15	Hall Effect Pickup, encoded wheel, mounts to a NEMA 140TC, 7/8" shaft.	.59
CF-J60	60	Hall Effect Pickup, encoded wheel, mounts to a NEMA 140TC, 7/8" shaft.	.55
H1	1	Encoded wheel only, shaft mount 5/8".	.59
H2	2	Encoded wheel only, shaft mount 5/8".	.55
H15	15	Encoded wheel only, shaft mount 5/8".	.59
H60	60	Encoded wheel only, shaft mount 5/8".	.55
J1	1	Encoded wheel only, shaft mount 7/8".	.59
J2	2	Encoded wheel only, shaft mount 7/8".	.55
J15	15	Encoded wheel only, shaft mount 7/8".	.59
J60	60	Encoded wheel only, shaft mount 7/8".	.55
CF	-	Hall Effect Pickup only, to 56C or 140TC NEMA C flange.	.59

OPTICAL PICKUP, CYLINDRICAL BODY, MOUNTS BY 1/4 - 18STD NPT BODY

MODEL	PULSES	DESCRIPTION	WEIGHT LBS
OPU	-	Optical Pickup, +5VDC supply, shielded 6' cable, up to 600,000 PPM.	.55

HALL EFFECT PICKUP, CYLINDRICAL BODY, MOUNTS BY 15/32 - 32T PI BODY

MODEL	PULSES	DESCRIPTION	WEIGHT LBS
MPU-A	-	Hall Effect Pickup, +4.5 - 24VDC supply, shielded 6' cable, NPN Open Collector.	.55

KBIC SCR Drive – Chassis



The KBIC Series of DC Drives consist of six models rated for 1/100 to 3 horsepower motors. All models can be used on a wide range of motor horsepower by inserting a Plug-In Horsepower Resistor[®]*, which is required to operate the drive. Speed range is 50:1 with load regulation of 1% of base speed. These chassis drives include MOV transient protection, trimpot adjustments for MIN, MAX, ACCEL, IR, CL, and a 5k ohm potentiometer. This drive also contains Auto Inhibit[®] which provides a smooth, safe start during rapid switching of the AC line.

Options: Auxiliary Heat Sink (P/N 9861), Barrier Terminal Kit (P/N 9863) Barrier Terminal Board (P/N 9884), SI-5 Signal Isolator (P/N 9443), Combination Fuse kit (P/N 9849). AC line and Armature fuse supplied separately.

*Plug-In Horsepower Resistor[®] supplied separately. See page 12.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹			
HP	kW							Lbs.	kg				
1/2	0.37	115	KBIC-120	9429	9	0 – 90	6	0.58	0.26	A			
3/4	0.56	115	KBIC-125	9433	12	0 – 90	8						
1	0.75	208/230	KBIC-240	9428	9	0 – 180	6						
1½	1.13	208/230	KBIC-225	9432	12	0 – 180	8						
1/2	0.37	115	KBIC-240D	9464	9	0 – 90	6						
1	0.75	208/230				0 – 90, 180							
1/2	0.37	115	KBIC-240DS	9423	9	0 – 90	6	Ratings with Auxiliary Heat Sink (P/N 9861)					
		208/230											
1	0.75	115	KBIC-120	9429	18	0 – 90	12				2.5	1.14	B
1½	1.13	115	KBIC-125	9433	24	0 – 90	16						
2	1.5	208/230	KBIC-240	9428	18	0 – 180	12						
3	2.25	208/230	KBIC-225	9432	24	0 – 180	16						
1	0.75	115	KBIC-240D	9464	18	0 – 90	12						
2	1.5	208/230				0 – 90, 180							
1	0.75	115	KBIC-240DS	9423	18	0 – 90	12				Ratings with Auxiliary Heat Sink (P/N 9861)		
		208/230											

KBMM SCR Drive – Chassis



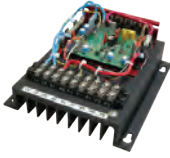
The KBMM Series of DC Drives consist of three models rated for 1/100 to 3 horsepower motors. This chassis full-wave DC motor control is the ultimate in reliability and performance. The drive contains Direct-Fed[™] CL that helps protect the SCR power bridge against shorts due to commutator arcing and prevents motor demagnetization. 25 Amp SCRs and AC line and armature fusing* further enhance reliability. A Plug-in Horsepower Resistor[®]* is required to operate the drive and eliminates the need for recalibration when used over a wide range of motor horsepower. They include an AC line fuse holder and an Armature fuse holder, MOV transient protection, trimpot adjustments for MIN, MAX, ACCEL, DECEL, IR, CL, and a 5k ohm potentiometer. This drive also contains Auto Inhibit[®] which provides a smooth, safe start during rapid switching of the AC line.

Options: Auxiliary Heat Sink (P/N 9861), Barrier Terminal Kit (P/N 9883), Barrier Terminal Board (P/N 9897), Finger Safe Cover (P/N 9564), and SI-6 Signal Isolator (P/N 9444).

*Plug-In Horsepower Resistor[®], AC line fuse and Armature fuse supplied separately. See page 12.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
3/4	0.56	115	KBMM-125	9449	12	0 – 90	8	0.58	0.26	A
1½	1.13	208/230	KBMM-225	9450	12	0 – 180	8			
3/4	0.56	115	KBMM-225D	9451	12	0 – 90	8			
1½	1.13	208/230				0 – 90, 180				
Ratings with Auxiliary Heat Sink (P/N 9861)										
1½	1.13	115	KBMM-125	9449	24	0 – 90	16	2.5	1.14	B
3	2.25	208/230	KBMM-225	9450	24	0 – 180	16			
1½	1.13	115	KBMM-225D	9451	24	0 – 90	16			
3	2.25	208/230				0 – 90, 180				

KBCC SCR Drive – Chassis



The KBCC Series of DC Drives consist of two models rated for 1/100 to 3 horsepower motors. These chassis drives utilize the KBMM speed control to provide a low-cost, reliable SCR drive. Features include an Auxiliary Heat Sink, Barrier Terminal Block, AC line fuse, and an Armature fuse holder. This drive requires a Plug-In Horsepower Resistor®* to operate. The controls are ruggedly constructed and contain a 5k ohm potentiometer. This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

*Plug-In Horsepower Resistor® and Armature fuse supplied separately. See page 12.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
1½	1.13	115	KBCC-125	9936	24	0 – 90	16	2.74	1.25	C
3	2.25	208/230	KBCC-225	9938		0 – 180				

KBCC-255 SCR Drive – Chassis



The KBCC-255 is designed for 5 horsepower DC Shunt and PM motors. It is built on a rugged aluminum chassis and utilizes the KBMM™ speed control. The drive contains Direct-Fed™ CL that helps protect the SCR power bridge against shorts due to commutator arcing and prevents motor demagnetization. The unit contains a 42 Amp power bridge and both armature and control fusing, which enhance reliability. They include an armature or tach feedback, supplied Armature fuse and trimpots for MIN, MAX, IR Comp, CL, Linear ACCEL, DECEL, and a 5k ohm speed potentiometer. This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current* (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
5	3.75	208/230	KBCC-255	9940	38	0 – 180	26	3.85	1.75	D

KBCC “R” SCR Drive “Relay Reversing” – Chassis



The KBCC “R” chassis control consists of two models rated for 1/100 to 3 horsepower. It is designed to provide anti-plug “instant” reversing, solid state dynamic braking and rapid cycling. They combine all of the features of the KBCC™ control with the features of the KB APRM®. The APRM® eliminates contact arcing by allowing armature switching to take place only when voltage levels are near zero. Specific functions that can be performed by the KBCC-R™ are Run-Brake, Forward-Brake-Reverse, Run-Stop and Forward-Reverse (instant reverse). This drive requires a Plug-In Horsepower Resistor® to operate and includes an AC Line fuse and an Armature fuse holder.* This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line. A 5k ohm potentiometer is included.

*Plug-In Horsepower Resistor® and Armature fuse supplied separately. See page 12.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current* (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
1½	1.13	115	KBCC-125R	9937	24	0 – 90	16	4.00	1.82	E
3	2.25	208/230	KBCC-225R	9924		0 – 180				

KBCC-240D SCR Drive – Chassis



The KBCC-240D DC drive is rated for 1/100 to 2 horsepower motors. The exclusive Short Circuit and Timed Current Limit (TCL) circuitry prevents motor burnout and demagnetization of PM motors. Included is jumper selectable motor current that eliminates unnecessary calibration of the IR and CL trimpots. Other selectable features are: Input Voltage, Output Voltage, Current Range, Input Signal, Armature or Tachometer Feedback, and Tachometer Voltage. Trimpot adjustments include: MIN, MAX, ACCEL, DECEL, IR, CL and TCL. Standard features include an Armature fuse, Electronic Start-Stop, and diagnostic LED Indicator Array for “power on”, “stop” and “overload.” This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line. A 5k ohm potentiometer is included.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
1	0.75	115	KBCC-240D	9947	15	0 – 90	10.2	2.68	1.22	F
2	1.5	208/230				0 – 90, 180				

KBPB SCR Drive “Relay Reversing” – Chassis



The KBPB Series of DC Drives consist of two models rated for 1/100 to 3 horsepower motors. These chassis drives are a compact version of the KBCC “R” control. The APRM® eliminates contact arcing by allowing armature switching to take place only when voltage levels are near zero. Built-in terminal blocks and its small size make the control ideal for installation where space is at a premium. The KBPB is equipped with a built-in dynamic brake resistor, ACCEL and DECEL trimpots, and includes a 5k ohm potentiometer. This control provides functions identical to that of the KBCC-R. This drive requires a Plug-in Horsepower Resistor® to operate and includes an AC line fuse and an Armature fuse holder.* This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

Option: Auxiliary Heat Sink (P/N 9861).

*Plug-In Horsepower Resistor® and Armature fuse supplied separately. See page 12.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
3/4	0.56	115	KBPB-125	8900	12	0 – 90	8	1.38	0.63	G
1½	1.13	208/230	KBPB-225	8901	12	0 – 180	8			
Ratings with Auxiliary Heat Sink (P/N 9861)										
1½	1.13	115	KBPB-125	8900	24	0 – 90	16	3.31	1.50	H
3	2.25	208/230	KBPB-225	8901	24	0 – 180	16			

KBWD PWM Drive – Chassis



The KBWD Series of DC Drives provide a low cost solution for pulse-width-modulated (PWM) control applications. Their compact size allows for direct replacement of SCR drives. Features include instantaneous short circuit and under voltage protection. A 5k ohm potentiometer is included. This drive requires a Plug-in Horsepower Resistor®, which eliminates the need for IR Comp and CL calibration. If signal isolation is required, please see models KBWS-22D and -25D. This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

Options: Combination Fuse kit (P/N 9849). (AC line and Armature fuse supplied separately).

*Plug-In Horsepower Resistor®. See page 12.

Maximum HP**		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
1/3	0.25	115	KBWD-13	8609	6	0 – 130	3	0.62	0.28	I
1/2	0.37	115	KBWD-16	8607	10	0 – 130	5	0.70	0.32	

KBWS PWM Drive – Chassis



The KBWS PWM Series of DC Drives contain a fully isolated input and are designed to operate PWM and SCR rated Permanent Magnet motors. They provide high motor efficiency with quiet motor operation. The KBWS uses pulse-by-pulse current sensing to protect the SCR power bridge against shorts due to commutator arcing and prevents motor demagnetization. The controls contain an AC line inrush current limiter (ICL) which reduces AC line surge currents during startup. The drives contain built-in isolation for all inputs. This includes: Signal Voltage, Main Speed Potentiometer, Inhibit Circuit and +5VDC Power Supply. This drive requires a Plug-In Horsepower Resistor® to operate and contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line. A 5k ohm potentiometer is included.

Options: Combination Fuse kit (P/N 9849). (AC line and Armature fuse supplied separately).

*Plug-In Horsepower Resistor®. See page 12.

Maximum HP**		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
1/3	0.25	115	KBWS-22D	9492	4	0 – 90, 130	2.5	0.64	0.29	J
3/4	0.56					0 – 180, 220				
1/3	0.25	208/230	KBWS-25D	9493	8	0 – 90, 130	5	0.70	0.32	K
3/4	0.56	115				0 – 90, 130				
1½	1.13	208/230	KBWS-25D	9493	8	0 – 180, 220	5	0.70	0.32	K
3/4	0.56					0 – 90, 130				

**Horsepower ratings are for PWM rated motors. For SCR rated motors, the maximum horsepower rating is reduced by 20%.

KBWT PWM Drive – Chassis



The KBWT series Pulse-Width Modulated (PWM) DC Drives are rated for 1/2 to 2.2 horsepower motors. This chassis drive series consists of five models that are designed for high current applications. Several models are offered, which provide the user a choice of input voltage and output current. An important feature of these chassis drives is its active bridge circuitry, which limits inrush current during AC line startup and prevents control runaway due to a shorted output transistor. The KBWT also contains Timed Current Limit (TCL) which provides motor burnout protection. The drive also contains a Potentiometer Safety Circuit (PSC), which prevents motor rotation unless the signal input is first set to zero when power is applied. Features include an Armature fuse holder.* This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line. An optional Potentiometer Safety Circuit requires the pot to be at zero for start up.

*Armature fuse supplied separately. See page 12.

Maximum HP**		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
.75	.5	115	KBWT-16	8614	8.5	0 – 130	6	1.57	0.71	L
1.5	1.1	208/230	KBWT-26	8615	8.5	0 – 260	6			
1.2	0.9	115	KBWT-110	8603	15	0 – 130	8.5	2.9	1.32	M
1.5	1.1	115	KBWT-112	8612	18	0 – 130	10.5			
2.2	1.7	208/230	KBWT-210	8610	15	0 – 260	8.5			

**Horsepower ratings are for PWM rated motors. For SCR rated motors, the maximum horsepower rating is reduced by 20%.

KBMG SCR Drive “Regen Reversing” – Chassis



The KBMG Series of DC Drives consist of two models rated for 1/100 to 2 horsepower motors. This chassis ultra-compact, full-wave regenerative drive is capable of operating DC PM or Shunt motors in a bidirectional mode. Its 4-quadrant operation provides forward and reverse torque in both speed directions. Jumper selections include: Input AC Line Voltage, Armature Current, Motor Armature Voltage, Analog Input Voltage, Control Mode (Speed or Torque) and Coast to Stop (CTS) or Regenerate to Stop (RTS). The Overspeed Protect Circuit prevents failure of the power bridge in extreme overhauling conditions. Reliability of the KBMG is further enhanced with the use of a high speed current limit circuit and MOV Transient Protection. LEDs, which can be used for diagnostics, are provided for power on and motor overload. Power connections are made via quick connect terminals and signal input connections are made via a removable terminal block. This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line. A 5k ohm potentiometer is included.

Options: Auxiliary Heat Sink (P/N 9861), Bipolar Signal Isolator (P/N 8832), Multi-Speed Board (P/N 8833).

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
1/12	0.06	115	KBMG-21D	8830	1.5	0 – 90	1	0.98	0.44	N
1/6	0.11	208/230				0 – 90, 180				
3/4	0.56	115	KBMG-212D	8831	12	0 – 90	8			
1½	1.13	208/230				0 – 90, 180				
Ratings with Auxiliary Heat Sink (P/N 9861)										
1	0.75	115	KBMG-212D	8831	16	0 – 90	11	2.92	1.33	0
2	1.5	208/230				0 – 90, 180				

KBRG SCR Drive “Regen Reversing” – Chassis



The KBRG Series of DC Drives consist of three models rated for 1/8 to 5 horsepower DC, Permanent Magnet and Shunt motors. These are full-wave regenerative controls, which allow forward and reverse torque in both speed directions. Features include armature and tachometer feedback, built-in horsepower selection, an AC Line fuse, and an Armature fuse. Trimpots adjustments for Fwd CL, Rev CL, IR Comp, Resp, Max Spd, Offset, Deadband, Fwd Accel, Rev Accel, Timed Current Limit (TCL), and two torque modes. LED indicators for power on, current limit, Fwd Enable, and Rev Enable. This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line. A 5k ohm potentiometer is included.

The KBRG-255 is designed specifically for 5 HP shunt wound and PM DC motors. It is similar to the KBRG-225D (3 HP), however, the SCR ratings and heat sink size have been enhanced.

Option: KBRG SI-4X Bipolar Signal Isolator* (P/N 8801).

*All models except the KBRG-212D.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
3/4	0.56	115	KBRG-212D	8819	12	0 – 90	7.5	1.1	0.5	P
1½	1.13	208/230				0 – 90, 180				
1	0.75	115	KBRG-240D	8802	16	0 – 90	12.2	3.00	1.36	Q
2	1.5	208/230				0 – 90, 180				
1½	1.13	115	KBRG-225D	8800	24	0 – 90	16	5.00	2.27	R
3	2.25	208/230				0 – 90, 180				
5	3.75	208/230	KBRG-255	8821	38	0 – 180	25	5.85	2.67	S

KBWM SCR Drive – NEMA 1



The KBWM Series of DC Drives, housed in a NEMA 1 enclosure, consist of two models rated for 1/100 to 3/4 horsepower motors. These drives are the compact version of the Multi Drive™ (KBMD). This unidirectional SCR drive utilizes the KBMM speed control module, which prevents motor failure due to demagnetization. It requires a Plug-in Horsepower Resistor® to operate and includes an AC line fuse and an Armature fuse holder.* This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line and a terminal block to facilitate wiring.

*Plug-In Horsepower Resistor® and Armature fuse supplied separately. See page 12.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
1/3	0.25	115	KBWM-120	9380	5	0 – 90	3.5	1	0.45	T
3/4	0.56	208/230	KBWM-240	9381	5	0 – 90, 180	3.5			

KBMD SCR Drive – NEMA 1



The Model KBMD-240D, also called Multi-Drive™, is rated for 1/100 to 2 horsepower motors and is an SCR drive housed in a NEMA 1 enclosure. It utilizes the KBMM speed control for its electronics. It handles both 115 and 208/230 Volt AC line inputs by setting the built-in Dual Voltage Switch. The single model can be used on a wide range of motor horsepower by inserting the appropriate Plug-In Horsepower Resistor®, which is required to operate this drive. It includes an AC line fuse and an Armature fuse holder.* This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

Options: Auxiliary Heat Sink (P/N 9861), Forward-Brake-Reverse Switch Kit** (P/N 9860).

*Plug-In Horsepower Resistor® and Armature fuse supplied separately. See page 12.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW							Lbs.	kg	
3/4	0.56	115	KBMD-240D	9370	12	0 – 90	8	2	0.9	U
1½	1.13	208/230				0 – 180				
Ratings with Auxiliary Heat Sink (P/N 9861)										
1	0.75	115	KBMD-240D	9370	16	0 – 90	11	3.92	1.78	V
2	1.5	208/230				0 – 90, 180				

**For KBMD-240D with built-in Forward-Brake-Reverse Switch, order Part No. 9371.

KBPC SCR Drive – NEMA 4X / IP65



The KBPC Series of DC Drives consist of four models and is rated for 1/100 to 3 horsepower motors. These drives are housed in a NEMA 4X / IP 65 die-cast aluminum washdown/watertight enclosure for indoor or outdoor use. The exclusive Short Circuit and Timed Current Limit (TCL) circuitry prevents motor burnout and demagnetization of PM motors. Features, such as a selectable motor current, eliminate unnecessary calibration of the IR and CL trimpots. Other selectable features are: Input Voltage, Output Voltage, Current Range, Input Signal, Armature or Tachometer Feedback, and Tachometer Voltage. Trimpot adjustments include: MIN, MAX, ACCEL, DECEL, IR, CL and TCL. Standard features include an Armature fuse, Electronic Start-Stop, and diagnostic LED Indicator Array for “power on”, “stop” and “overload.” This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

The KBPC-225D contains all of the features of the KBPC-240D except it does not contain an Armature fuse.

Options: Signal Isolator (P/N 9431), ON/OFF AC Line Switch (P/N 9341), Run-Stop-Jog Switch (P/N 9340), Auto/Manual Switch (P/N 9377). Forward-Brake-Reverse Switch (P/N 9339) and Anti-Plug Reversing Module (P/N 9378) are for the KBPC-240D only.

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.		Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW			Black	White*				Lbs.	kg	
1	0.75	115	KBPC-240D	9338	9342	15	0 – 90	10.2	4.6	2.1	W
2	1.5	208/230					0 – 90, 180				
1½	1.13	115	KBPC-225D	9391	9392	22	0 – 90	15			
3	2.25	208/230									

KBPW PWM Drive – NEMA 4X / IP65



The KBPW-240D DC Drive is a Pulse-Width Modulated (PWM) control housed in a NEMA 4X / IP 65 washdown/watertight enclosure for indoor or outdoor use. It is designed to operate Permanent Magnet and Shunt Wound motors from 1/100 to 2 horsepower.

PWM provides high motor efficiency whisper quiet operation along with less motor heating. This allows for a smaller, less costly motor to be used in most applications. A unique feature of the KBPW-240D is its active bridge, which substantially reduces the AC line surge current during cycling of the AC line. This allows the control to be turned on and off rapidly without damage to critical components. The active bridge is coupled with a failsafe circuit that will shut down the control if the main power transistor shorts, preventing a dangerous high-speed runaway condition. Motor burnout is prevented with the Timed Current Limit circuit (TCL). This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

Options: Signal Isolator (P/N 9431), ON/OFF AC Line Switch (P/N 9341), Run-Stop-Jog Switch (P/N 9340), Forward-Brake-Reverse Switch (P/N 9339), Anti-Plug Reversing Module (P/N 9378).

Maximum HP**		AC Line Voltage (50/60 Hz)	Model Number	Part No.		Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹		
HP	kW			Black	White*				Lbs.	kg			
1	0.75	115	KBPW-240D	8401	8402	11.5	0 – 90, 130	7.5	4.6	2.1	W		
2	1.5	208/230											0 – 90, 130
													0 – 180, 260

KBRC SCR Drive “Regen Reversing” – NEMA 4X / IP65



The KBRC-240D DC Drive is a Full-Wave Regenerative Drive housed in a NEMA 4X / IP 65 washdown/watertight enclosure for indoor or outdoor use. It is designed to operate Permanent Magnet and Shunt Wound DC motors from 1/100 to 2 horsepower, in a bidirectional mode. It has 4-quadrant operation, which provides forward and reverse torque in both speed directions. An important feature, Timed Current Limit (TCL), provides motor burnout protection. The KBRC-240D can be operated from a two or three wire start/stop circuit or can be started from the AC line. A set of dedicated normally open or normally closed relay contacts are provided, which are activated via the start/stop circuit. Main features of the KBRC-240D include speed or dual torque control modes. In addition, Regenerate-to-Stop (RTS) or Coast-to-Stop (CTS) modes can be selected. This drive also contains Auto Inhibit® which provides a smooth, safe start during rapid switching of the AC line.

Options: SIRC Bipolar Signal Isolator (P/N 8842), KBRC Forward-Stop-Reverse Switch (P/N 9485), On/Off AC Line Switch (P/N 9486), KBRC Auto/Manual Switch (P/N 9487).

Maximum HP		AC Line Voltage (50/60 Hz)	Model Number	Part No.		Max. AC Line Current (Amps AC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code ¹
HP	kW			Black	White*				Lbs.	kg	
1	0.75	115	KBRC-240D	8840	8841	15	0 – 90	11	4.6	2.1	W
2	1.5	208/230									

*FDA approved (white cases only). **Horsepower ratings are for PWM rated motors. For SCR rated motors, the maximum horsepower rating is reduced by 20%.

KBBC DC/DC Drive – Chassis



The KBBC series of battery powered variable speed controls are designed for PM and Series Wound DC motors from 1/100 to 4* horsepower. The chassis and Microcontroller design provides superior performance and ease of tailoring to specific applications. Operating in a regenerative mode, precise and efficient control is obtained using state-of-the-art MOSFET technology. The KBBC contains standard features such as current limit, short circuit protection, speed potentiometer fault detector, over-temperature sensing, reverse polarity protection and undervoltage/overvoltage protection. The KBBC can be controlled in several ways, such as single-ended or wigwag speed potentiometer and 0 - 5 Volts DC signal following. The controls contain a built-in heat sink that also serves as a mounting base.

Maximum HP		Nominal Battery Voltage (Volts DC)	Model Number	Part No.	Max. DC Input Current (Amps DC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code
HP	kW							Lbs.	kg	
1/2	0.37	12	KBBC-24M	9500	40	0 – 12	40	1	0.45	X
1	0.75	24				0 – 24				
1/2	0.37	12	KBBC-44M	9501	40	0 – 12	40	1	0.45	X
1	0.75	24				0 – 24				
1½	1.13	36				0 – 36				
2	1.5	48				0 – 48				

*Peak Duty Operation (7 seconds): 4 HP (3 kW), 80 Amps DC.

KBSL DC/DC Drive – Chassis



The KBSL-200 is a battery powered control specifically designed for OEM lift applications. The Pulse Width Modulated (PWM) DC Drive provides forward and reverse operation for 3/4 to 1* horsepower Permanent Magnet and Series Wound DC motors. The drive provides continuous duty operation to 22 Amps and peak duty operation (for 7 seconds) to 33 Amps with a 24 Volt DC input. The 16 kHz PWM allows for high motor efficiency and quiet operation.

Standard features include an audible annunciator to provide indication of drive and remote control operations; a power control relay to automatically connect and disconnect power from the battery to the drive; and quick-connect terminals, connectors, and removable terminal blocks to facilitate wiring. Selectable jumpers are provided for Preset Speeds, Start-Up Delay Time, Remote Control ID, and optional Brake Enable.

Options: Ten built-in programmable functions and user defined logic inputs for applications requiring PLC, limit switches, latching circuits, key switch, emergency stop, sensors, actuators, etc. Infrared remote control provides operation of the drive from up to 50 feet (15.25 m).

Maximum HP		Nominal Battery Voltage (Volts DC)	Model Number	Part No.	Max. DC Input Current (Amps DC)	Voltage Range (Volts DC)	Max. Load Current (Amps DC)	Net Weight		Dim. Ref. Code
HP	kW							Lbs.	kg	
3/4	0.56	24	KBSL-200	9902	22	0 – 24	22	1.14	0.52	Y

*Peak Duty Operation (7 seconds): 1 HP (3 kW), 33 Amps DC.

Dimensions (W x L x D)

Ref. Code	Inches	Millimeters
A	4.3 x 3.63 x 1.25	109 x 92 x 32
B	6.25 x 7 x 2.63	159 x 178 x 67
C	6.25 x 7 x 4	159 x 178 x 102
D	6.25 x 10 x 3.5	159 x 254 x 89
E	6.25 x 9 x 4	159 x 229 x 102
F	6.25 x 7 x 3	159 x 178 x 76
G	4.88 x 4.25 x 5	124 x 108 x 127
H	6.25 x 7 x 6.5	159 x 178 x 165
I	4.3 x 3.63 x 2.5	109 x 92 x 64

Ref. Code	Inches	Millimeters
J	4.3 x 3.63 x 2.2	109 x 92 x 56
K	4.3 x 3.63 x 3.17	109 x 92 x 81
L	7 x 5 x 2	178 x 127 x 51
M	6.75 x 7 x 3.25	172 x 178 x 83
N	4.3 x 3.63 x 1.75	109 x 92 x 45
O	6.25 x 7 x 3.13	159 x 178 x 79
P	4.75 x 7 x 1.7	120 x 178 x 43
Q	7.7 x 10 x 2.57	196 x 254 x 65
R	7.7 x 10 x 3.4	196 x 254 x 87

Ref. Code	Inches	Millimeters
S	7.7 x 12 x 3.4	196 x 305 x 87
T	3.7 x 6.8 x 2.9	94 x 173 x 74
U	5.1 x 7 x 4	129 x 178 x 102
V	6.25 x 7 x 5.35	159 x 178 x 136
W	6 x 9.5 x 5	150 x 241 x 127
X	4.1 x 6.26 x 1.67	104 x 159 x 43
Y	6 x 4.45 x 2.25	152 x 113 x 57

Speed Control Accessories



Combination Fuse Kit Part No. 9849

The AC Line/Armature Fuse Block Kit consists of two fuse blocks suitable for 1/4" x 1-1/4" 3AG type fuses (fuses supplied separately). Also included are (2) 6x32 screws for mounting and red and black leads with Q-D terminals.

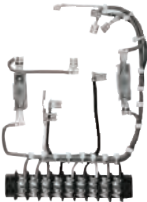
Models where used: KBIC, KBWD, KBWS.

KBSI-240D Signal Isolator Part No. 9431



The Model KBSI-240D Signal Isolator provides an isolated interface between non-isolated signals and KB motor speed controls. The maximum output voltage of the KBSI is 10 Volts DC, which is a linear function of the input. The unit is versatile, since a single model accepts a wide range of voltages (0-25, 0-120 and 0-550 Volts DC) and current signals (1-5, 4-20 and 10-50mA); multi-turn trimpots are provided for MIN and MAX. The KBSI can be operated from either 115V or 208/230 Volts AC, 50/60Hz.

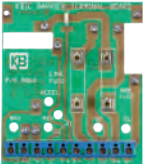
Models where used: All controls.



Barrier Terminal Kits Part Nos. 9863, 9883

The Barrier Terminal Accessory Kit converts a standard KBIC® or KBMM from 1/4" Q-D terminals to barrier terminals. It installs easily with its preformed wiring harness and is compatible with KB's 7" Auxiliary Heat Sink. The Kit contains AC line and Armature fuse holders (fuses supplied separately).

Models where used: KBIC (9863), KBMM (9883).



Barrier Terminal Boards Part Nos. 9884, 9897

The Barrier Terminal Boards easily convert a standard control with quick-connect terminals to barrier terminals with AC line and armature fuse holders (fuses supplied separately). The Barrier Terminal Board installs directly over the control by mating the Q-D terminals. A separate .110" jumper wire can be used to connect to the I1 Inhibit terminal.

Models where used: KBIC (9884), KBMM (9897).



SI-5 & SI-6 Signal Isolators Part Nos. 9443, 9444

The Signal Isolators convert a standard control to an isolated input. By using external resistors, the input signal can be changed to 0-100VDC, 0-200VDC and 4-20mA. The output voltage is 0-10VDC which can be rescaled with the built-in MIN and MAX trimpots. Selectable AC line jumpers allow the SI-5 to be used either with 115 or 208/230 Volts AC controls. Installation is made by simply mating the unit to the speed control with the built-in quick-connect terminals.

Models where used: KBIC, SI-5 (9443) and KBMM, SI-6 (9444).



Finger Safe Cover Part No. 9564

The Finger Safe Cover converts the KBMM from an "open chassis" to the IP-20 standard. Constructed of high temperature ABS, it installs easily with the two screws provided. Note: the AC line and armature fuse holders must be removed before installing the Finger Safe Cover.

Model where used: KBMM.

KBRG SI-4X Bipolar Signal Isolator Part No. 8801



The SI-4X provides complete electrical isolation between input voltage signals which are derived from programmable controllers, transducers and digital/analog converters and the KBRG. The Module contains two input ranges (± 25 , ± 250 VDC) which are jumper selectable. The input/output ratio can be scaled via the included "ZERO" and "MAX" trimpots. The SI-4X installs easily onto the KBRG chassis.

Models where used: All KBRG models except KBRG-212D.

SIRC Bipolar Signal Isolator Part No. 8842



The SIRC is used with the KBRC-240D to isolate, amplify and condition DC voltage signals from any source (tach-generators, transducers, PLCs and potentiometers). It also provides an isolated input to control motor direction and an isolated power supply for transducer or potentiometer operation.

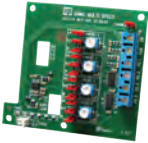
Model where used: KBRC.



SIMG Bi-Polar Signal Isolator Part No. 8832

The SIMG is used to isolate, amplify, and condition DC voltage signals from any source (power supplies, motors, tach-generators, transducers, and potentiometers) to control the KBMG Series of Regenerative Drive. Input connections (+15V, -15V, SIG, COM, and EN) are made with a barrier terminal block and are isolated from AC line and motor wiring. The SIMG is factory calibrated to accept a signal input voltage of -10V to +10V DC. OFFSET and MAX trim pots are provided in order to recalibrate the SIMG for a specific application.

Model where used: KBMG.



KBMG-MSB Multi-Speed Board Part No. 8833

The KBMG Multi-Speed Board provides 4-user selectable preset speeds to control a motor connected to the KBMG Series Regenerative Drive. A preset (PS 1, PS 2, PS 3, PS 4) is selected with a contact closure or open collector. Motor direction is set by the position of Jumper R/F (reverse/forward) which is provided for each preset. Connections to the Multi-Speed Board are made with a barrier terminal block. A connector is available for a tach-generator, if required.

Model where used: KBMG.



Forward-Brake-Reverse Switch Part No. 9339, 9860

The Forward-Brake-Reverse Switch Kit is designed to mount in the cover of the KBPC, KBPW and KBMD speed controls. It includes a "hesitation" feature which is designed to eliminate "plug reversing" which will prevent damage to the motor. A dynamic brake resistor is included, providing for up to 3 cycles per minute.

Models where used: KBPC and KBPW (9339), KBMD (9860).



APRM-PC Anti Plug Reversing Module, with Reversing Switch Part No. 9378

The APRM-PC is designed to provide anti-plug "instant" reversing and solid state dynamic braking for the KBPC and KBPW controls. The APRM-PC mounts inside the front cover of the control. It connects using the wiring harness (provided) with QD terminals and includes a three position Forward-Brake-Reverse switch which also mounts on the cover.

Models where used: KBPC-240D and KBPW-240D.



Run-Stop-Jog Switch Kit Part No. 9340

The Run-Stop-Jog Switch provides selection between the Main Speed Potentiometer setting or a momentary jog speed, which can be used to index a machine into position.

Models where used: KBPC and KBPW.



KBRC Forward-Stop-Reverse Switch Kit Part No. 9485

The Forward-Stop-Reverse Switch assembly is designed for installation on the front cover of the drive and is used to provide electronic reversing for the KBRC-240D.

Model where used: KBRC.



On/Off AC Line Switch Kit Part Nos. 9341, 9486

The Power On/Off Switch assembly is designed to provide a positive AC line power disconnect. It can be installed in lieu of, or in addition to, the factory installed Start/Stop Switch assembly.

Models where used: KBPC-240D and KBPW-240D, P/N 9341 – KBRC, P/N 9486 .



Auto/Manual Switch Kit Part No. 9377

The Auto/Manual Switch Kit provides the ability to select the control's speed reference from either the Main Speed Potentiometer or a remote signal when used with the optional Signal Isolator (Part No. 9431). The switch mounts in the Brake switch position, and a separate AUTO-MANUAL label is included.

Models where used: KBPC and KBPW.



KBRC Auto/Manual Switch Kit Part No. 9487

The Auto/Manual Switch assembly is designed for installation on the front cover of the KBRC-240D. It is used to select either the Main Speed Potentiometer for "manual operation" or a remote voltage following analog signal for "automatic operation." It is suggested that the SIRC Bipolar Signal Isolator option (Part No. 8842) be used with the Auto/Manual Switch assembly to provide signal isolation between the signal source and the KBRC-240D.

Model where used: KBRC.



7" Auxiliary Heat Sink Part No. 9861

The Auxiliary Heat Sink is used to increase the rating of several KB control models. It is constructed of black anodized aluminum and has keyhole slots to facilitate mounting. When used with the KBIC® and KBMM™ models, the Auxiliary Heat Sink has provision for mounting the Barrier Terminal Accessory Kit.

Models where used: KBIC, KBMM, KBPB, KBMG-212D and KBMD.



Din Rail Mounting Kit Part No. 9995

The DIN Rail Mounting Kit consists of a mounting plate and two mounting clips. This accessory makes it possible to mount any "L" bracket control onto a DIN rail. The kit can be attached on the short side or long side of the "L" bracket. When used on the long side, it allows for either horizontal or vertical mounting of the control. For short side mounting, only one clip is used.

Models where used: All controls.



Potentiometer Kits Part Nos. 9111, 9114, and 9831

The Potentiometer Kits consist of a 5k ohm linear potentiometer with mounting hardware and front panel insulator. Part No. 9111 contains a conductive plastic element and is fitted with a nylon shaft and isolated brass mounting bushing. Part No. 9114 is the same as Part No. 9111 except that it contains an On/Off Switch. Part No. 9831 contains a 5 watt rated wire wound potentiometer with excellent linearity.

Models where used: All controls.



Knob & Dial Kits Part Nos. 9832 (Large) and 9115 (Small)

Two Knob/Dial Kits are available. Both contain black knobs with silver inserts. Dial Plates are .040" aluminum with 3/8" mounting hole. Dimensions (L x W approx.): large dial plate: 2.25" x 2.06", small dial plate: 1.62" x 1.50".

Models where used: All controls.



KBRF-200A CE Approved AC Line Filter (Class A) Part No. 9945

The KBRF-200A is an RFI filter used to suppress electronic interference caused by motor speed controls to within acceptable levels as determined by the CE Council Directive 89/336/EEC relating to EMC. Rated 24 Amps AC Maximum – 115/230 VAC, 50/60 Hz. CE approved meets (Class A) industrial.

Models where used: All controls.



KBRF-250 CE Approved AC Line Filter (Class A) Part No. 9509

The KBRF-250 is an RFI filter used to suppress electronic interference caused by motor speed controls. The KBRF-250 is primarily designed as an integral mounting base for speed controls with industry standard mounting requirements such as the KBVF Series Inverter, PWM DC Speed Controls, and SCR Speed Controls. Installation is easily accomplished with quick-connect terminals. It is housed in a plated steel case which is to be grounded with the external ground screw or mounting tab. Rated 10 Amps at 230 Volts AC. CE approved meets (Class A) industrial.

Models where used: KBIC, KBMM, KBWD, KBWS, KBMG.



KBRF-300 CE Approved AC Line Filter (Class B) Part No. 9484

The KBRF-300 is an RFI filter used to suppress electronic interference caused by motor speed controls to within acceptable levels as determined by the CE Council Directive 89/336/EEC relating to EMC. Rated 16 Amps at 115 or 208/230 Volts AC – 115/230 VAC, 50/60 Hz. CE approved meets (Class B) residential.

Models where used: All controls.



KBRF-350 CE Approved AC Line Filter (Class B) Part No. 9511

The KBRF-350 is an RFI filter used to suppress electronic interference caused by motor speed controls. The KBRF-350 is primarily designed as an integral mounting base for speed controls with industry standard mounting requirements such as the KBVF Series Inverter, PWM DC Speed Controls, and SCR Speed Controls. Installation is easily accomplished with quick-connect terminals. It is housed in a plated steel case which is to be grounded with the external ground screw or mounting tab. Rated 10 Amps at 230 Volts AC. CE approved meets (Class B) residential.

Models where used: KBIC, KBMM, KBWD, KBWS, KBMG.

KB Plug-In Horsepower Resistor® Selection Chart



Motor Characteristics SCR Controls (KBIC, KBMM, KBPB, KBCC, KBWM, KBMD)		Plug-In Horsepower Resistor® Ordering Information				Motor Characteristics PWM Controls (KBWD, KBWS)				
Armature Voltage		Motor Current (Amps DC)	Plug-In Horsepower Resistor Value (Ohms)	Individual Plug-In Horsepower Resistor Part No.	Reorder Kit 50 pcs. per Value Part No.	SCR Rated Motor Horsepower @ 90 VDC	SCR Rated Motor Horsepower @ 180 VDC	PWM Rated Motor Horsepower @ 130 VDC	PWM Rated Motor Horsepower @ 200 VDC	Motor Current (Amps DC)
90 – 130 VDC	180 VDC									
Motor Horsepower Range										
—	—	—	2	9949	9950	1/100 – 1/50	1/50 – 1/25	1/50 – 1/25	1/25 – 1/20	.2
1/100 – 1/50	1/50 – 1/25	.1 – .2	1	9833	9885	1/30 – 1/20	1/15 – 1/10	1/20 – 1/15	1/8 – 1/6	.4
1/50 – 1/30	1/25 – 1/15	.2 – .3	.51	9834	9886	1/15 – 1/10	1/6 – 1/5	1/12 – 1/8	1/6 – 1/4	.7 – 1
1/30 – 1/20	1/15 – 1/10	.3 – .5	.35	9835	9887	—	—	—	—	—
1/20 – 1/12	1/10 – 1/6	.5 – .7	.25	9836	9888	1/8 – 1/6	1/4 – 1/3	1/6 – 1/4	1/3 – 1/2	1.3 – 2
1/12 – 1/8	1/6 – 1/4	.7 – 1	.18	9837	9889	1/4	1/2	1/3	3/4	2.5
1/8 – 1/6	1/4 – 1/3	1.2 – 1.8	.1	9838	9890	1/3 – 1/2	3/4 – 1	1/2 – 3/4	1 – 1½	3.3 – 6
1/4	1/2	2.5	.05	9839	9891	3/4 – 1	—	1 – 1½	—	7.5 – 10
1/3	3/4	3.3	.035	9840	9892	—	—	—	—	—
1/2	1	5	.025	9841	9893	—	—	—	—	—
3/4	1 – 1/2	7.5	.015	9842	9894	—	—	—	—	—
1	2	10	.01	9843	9895	—	—	—	—	—
1½	3	15	.006	9850	9896	—	—	—	—	—

KB Fuse Selection Chart



90 VDC Motor	180 VDC Motor	Motor Current	Fuse Rating (AC Amps)	Individual Fuse Part No.	Reorder Kit 100 Pcs. per Value Part No.
Horsepower					
1/30	1/15	.33	1/2	9736	9871
1/20	1/10	.5	3/4	9737	9872
1/15	1/8	.65	1	9738	9873
1/12	1/6	.85	1¼	9739	9874
1/8	1/4	1.3	2	9740	9875
1/6	1/3	1.7	2½	9741	9876
1/4	1/2	2.5	4	9742	9877
1/3	3/4	3.3	5	9743	9878
1/2	1	5	8	9744	9879
3/4	1½	7.5	12	9745	9880
1	2	10	15	9746	9881
1½	3	15	25	9747	9882

The information in this selection guide is intended to be accurate. However, KB Electronics, Inc. bears no responsibility for any inconvenience or damage as a result of the information contained herein. The KB logo is a registered trademark of KB Electronics, Inc.

THE VERSATILE MODULAR SYSTEM INTORQ BFK458

Features:

- Braking torque: 1,5-600 Nm
- 9 sizes in CSA-CUS design
- DC voltages: 24, 103, 180, 205 V
- Thermal class F (155 °C)
- Preset air gap
- Braking torque can be reduced (module E)
- Long rotor/hub guide with low rate of wear
- Optional manual release available for all sizes
- Air gap and wear monitoring (optional)



Application areas:

Brake motors, cranes, warehousing, wood working machines, industrial trucks, stage machinery, vehicles for the disabled and escalators

COMPACT AND QUICKLY INSTALLED INTORQ BFK457

Features:

- Braking torque: 0.12-125 Nm
- 11 sizes
- DC voltages: 24, 205 V
- Thermal class F (155 °C)
- Compact construction with rotor and flange
- Integral fixing screws for quick and easy installation
- Fixed air gap
- Noise-reduced double spring-applied brake <50 dB(A)

Application areas:

Small motors, vehicles for the disabled, wood working machines, automation systems and general mechanical engineering



LONG MAINTANCE CYCLES AND ROBUSTNESS INTORQ BFK470-14/-16/-18

Features:

- Three sizes with braking torques of 35 to 250 Nm
- Enclosure corresponding to IP66 also with manual release
- Suitable for fitting a rotary transducer
- Wear measurement in the mounted state
- Can be used to -40°C (cold climate version CCV)
- Stable braking torque and specific mode of emergency manner even after a failure
- Reduction of the power consumption by up to 75% through control via bridge/half-wave rectifier
- Can be controlled via pulse width modulation (PWM)



COST-SAVING ALTERNATIVE FOR STANDARD SOLUTIONS INTORQ BFK471-25

Features:

- High braking torque and low space requirements
- 1500 Nm in dual rotor design, 750 Nm with single rotor
- Enclosure corresponding to IP66 also with manual release
- High degree of corrosion protection
- Non-contact sensor for air gap monitoring
- Reduction of the power consumption by up to 75% through control via bridge/half-wave rectifier
- Can replace existing brake solutions



Features:

- These motor start capacitors are dry, electrolytic, non polarized types for intermittent duty in AC motor starting circuits. The round cases are made of moisture and oil resistant molded phenolic resin or plastic. They have standard dual blade terminals.
- Rated 3-second start
- 20 starts per hour
- Operating temperature range : 40 to 65C (-40 to 149F)
- Meet or exceed (EIA) Standard RS-463 Type 2
- Hertz : 50/60
- UL recognized and CUL approved



165V START CAPACITORS

CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
PSMJ72	72-88	1 7/16	2 3/4	165
PSMJ88	88-108	1 7/16	2 3/4	165
PSMJ108	108-130	1 7/16	2 3/4	165
PSMJ124	124-149	1 7/16	2 3/4	165
PSMJ130	130-156	1 7/16	3 3/8	165
PSMJ145	145-174	1 7/16	3 3/8	165
PSMJ161	161-193	1 7/16	3 3/8	165
PSMJ189	189-227	1 7/16	3 3/8	165
PSMJ216	216-259	1 13/16	3 3/8	165
PSMJ233	233-280	1 13/16	3 3/8	165
PSMJ243	243-292	1 13/16	3 3/8	165
PSMJ270	270-324	1 13/16	3 3/8	165
PSMJ340	340-408	1 13/16	3 3/8	165
PSMJ378A	378-455	1 13/16	4 3/8	165
PSMJ400	400-480	1 13/16	3 3/8	165
PSMJ540	540-648	1 13/16	3 3/8	165
PSMJ710	710-850	2 1/16	3 3/8	165
PSMJ710A	710-850	2 1/16	4 3/8	165
PSMJ810A	810-972	2 1/16	4 3/8	165

330V START CAPACITORS

CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
PRMJ21	21-25	1 7/16	3 3/8	330
PRMJ25	25-30	1 7/16	3 3/8	330
PRMJ30	30-36	1 7/16	3 3/8	330
PRMJ36	36-43	1 7/16	3 3/8	330
PRMJ43	43-53	1 13/16	3 3/8	330
PRMJ47	47-56	1 13/16	3 3/8	330
PRMJ56	53-64	1 13/16	3 3/8	330
PRMJ64	64-77	1 13/16	3 3/8	330
PRMJ72	72-88	1 13/16	3 3/8	330
PRMJ88	88-108	2 1/16	3 3/8	330
PRMJ108	108-130	2 1/16	4 3/8	330
PRMJ108R	108-130	1 13/16	3 3/8	330
PRMJ124	124-149	2 1/16	4 3/8	330
PRMJ130	130-158	2 1/16	4 3/8	330
PRMJ135	135-162	2 1/16	4 3/8	330
PRMJ145	145-174	2 1/16	4 3/8	330
PRMJ145A	145-174	2 9/16	4 3/8	330
PRMJ161	161-193	2 1/16	4 3/8	330
PRMJ189	189-227	2 1/16	4 3/8	330
PRMJ216	216-259	2 9/16	4 3/8	330
PRMJ216A	216-259	2 1/16	4 3/8	330
PRMJ270	270-324	2 9/16	4 3/8	330
PRMJ300	300-360	2 9/16	4 3/8	330

220-250 VOLT START CAPACITORS

Features:

- These motor start capacitors are dry, electrolytic, non polarized types for intermittent duty in AC motor starting circuits. The round cases are made of moisture and oil resistant molded phenolic resin or plastic. They have standard dual blade terminals.
- Rated 3-second start
- 20 starts per hour
- Operating temperature range : 40 to 65C (-40 to 149F)
- Meet or exceed (EIA) Standard RS-463 Type 2
- Hertz : 50/60
- UL recognized and CUL approved



CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
PTMJ21	21-25	1 7/16	2 3/4	220-250
PTMJ25	25-30	1 7/16	2 3/4	220-250
PTMJ30	30-36	1 7/16	2 3/4	220-250
PTMJ36	36-43	1 7/16	2 3/4	220-250
PTMJ43	43-53	1 7/16	2 3/4	220-250
PTMJ47	47-56	1 7/16	2 3/4	220-250
PTMJ56	56-72	1 7/16	2 3/4	220-250
PTMJ56A	56-72	1 7/16	2 3/4	220-250
PTMJ59	59-71	2 1/16	3 3/8	220-250
PTMJ64	64-77	1 7/16	2 3/4	220-250
PTMJ72	72-88	1 13/16	3 3/8	220-250
PTMJ86	86-108	1 13/16	3 3/8	220-250
PTMJ88	88-108	2 1/16	3 3/8	220-250
PTMJ105	105-126	1 13/16	3 3/8	220-250
PTMJ108	108-130	2 1/16	3 3/8	220-250
PTMJ124	124-149	1 13/16	4 3/8	220-250
PTMJ124A	124-149	1 13/16	3 3/8	220-250
PTMJ130	130-158	1 13/16	3 3/8	220-250
PTMJ145	145-174	1 13/16	3 3/8	220-250

CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
PTMJ161	161-193	2 1/16	3 3/8	220-250
PTMJ161A	161-193	1 13/16	4 3/8	220-250
PTMJ189	189-227	2 1/16	3 3/8	220-250
PTMJ189A	189-227	2 1/16	4 3/8	220-250
PTMJ216	216-259	2 1/16	3 3/8	220-250
PTMJ216A	216-259	2 1/16	4 3/8	220-250
PTMJ233	233-280	2 1/16	3 3/8	220-250
PTMJ233A	233-280	2 1/16	4 3/8	220-250
PTMJ243	243-292	2 1/16	3 3/8	220-250
PTMJ243A	243-292	2 1/16	4 3/8	220-250
PTMJ270	270-324	2 1/16	3 3/8	220-250
PTMJ270A	270-324	2 1/16	4 3/8	220-250
PTMJ280	280-336	2 1/16	4 3/8	220-250
PTMJ284	284-333	2 9/16	4 3/8	220-250
PTMJ320	320-384	2 1/16	4 3/8	220-250
PTMJ340	340-408	2 1/16	4 3/8	220-250
PTMJ378	378-455	2 9/16	4 3/8	220-250
PTMJ400	400-480	2 1/16	4 3/8	220-250
PTMJ400A	400-480	2 9/16	4 3/8	220-250
PTMJ430	430-516	2 9/16	4 3/8	220-250
PTMJ630	630-750	2 9/16	4 3/8	220-250

Features:

- These motor start capacitors are dry, electrolytic, non polarized types for intermittent duty in AC motor starting circuits. The round cases are made of moisture and oil resistant molded phenolic resin or plastic. They have standard dual blade terminals.
- Rated 3-second start
- 20 starts per hour
- Operating temperature range : 40 to 65C (-40 to 149F)
- Meet or exceed (EIA) Standard RS-463 Type 2
- Hertz : 50/60
- UL recognized and CUL approved



CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
PMJ21	21-25	1 7/16	2 3/4	110 -125
PMJ25	25-30	1 7/16	2 3/4	110 -125
PMJ30	30-36	1 7/16	2 3/4	110 -125
PMJ36	36-43	1 7/16	2 3/4	110 -125
PMJ43	43-53	1 7/16	2 3/4	110 -125
PMJ47	47-56	1 7/16	2 3/4	110 -125
PMJ56	56-75	1 7/16	2 3/4	110 -125
PMJ64	67-77	1 7/16	2 3/4	110 -125
PMJ72	72-88	1 7/16	2 3/4	110 -125
PMJ88	88-108	1 7/16	2 3/4	110 -125
PMJ108	108-130	1 7/16	2 3/4	110 -125
PMJ124	124-149	1 7/16	2 3/4	110 -125
PMJ130	130-156	1 7/16	2 3/4	110 -125
PMJ145	145-174	1 7/16	2 3/4	110 -125
PMJ161	161-193	1 7/16	2 3/4	110 -125
PMJ189	189-227	1 7/16	2 3/4	110 -125
PMJ200	200-240	1 7/16	2 3/4	110 -125
PMJ216	216-259	1 7/16	2 3/4	110 -125
PMJ233	233-280	1 7/16	2 3/4	110 -125
PMJ243	243-292	1 7/16	2 3/4	110 -125
PMJ270	270-324	1 7/16	2 3/4	110 -125
PMJ270A	270-324	1 7/16	3 3/8	110 -125
PMJ295	295-354	1 7/16	2 3/4	110 -125
PMJ300	300-360	1 7/16	4 3/8	110 -125
PMJ324	324-388	1 7/16	2 3/4	110 -125
PMJ324A	324-388	1 13/16	3 3/8	110 -125

CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
PMJ340	340-408	1 7/16	3 3/8	110-125
PMJ340A	340-408	1 13/16	3 3/8	110-125
PMJ378	378-455	1 7/16	3 3/8	110-125
PMJ378A	378-455	1 13/16	3 3/8	110-125
PMJ400	400-480	1 7/16	3 3/8	110-125
PMJ400A	400-480	1 13/16	3 3/8	110-125
PMJ430	430-516	1 7/16	3 3/8	110-125
PMJ430A	430-516	1 13/16	3 3/8	110-125
PMJ430B	430-516	2 1/16	3 3/8	110-125
PMJ460	460-552	1 7/16	3 3/8	110-125
PMJ460A	460-552	1 13/16	3 3/8	110-125
PMJ540	540-648	1 13/16	4 3/8	110-125
PMJ540A	540-648	1 13/16	3 3/8	110-125
PMJ590	590-708	1 13/16	4 3/8	110-125
PMJ590A	590-708	1 13/16	3 3/8	110-125
PMJ645	645-774	1 13/16	4 3/8	110-125
PMJ708	708-850	1 13/16	4 3/8	110-125
PMJ708A	708-850	2 1/16	4 3/8	110-125
PMJ708B	708-850	1 13/16	3 3/8	110-125
PMJ800	800-960	1 13/16	3 3/8	110-125
PMJ815	815-978	1 13/16	4 3/8	110-125
PMJ829	829-995	1 13/16	4 3/8	110-125
PMJ829A	829-995	2 1/16	4 3/8	110-125
PMJ850	850-1020	2 1/16	4 3/8	110-125
PMJ860	860-1032	1 13/16	3 3/8	110-125
PMJ1000	1000-1200	2 1/16	4 3/8	110-125
PMJ1290	1290-1548	2 1/16	4 3/8	110-125

370 VOLT / 440 VOLT ROUND RUN CAPACITORS

Features:

- UL listed and CUL approved
- Individually boxed
- Metal cases
- Metalized film
- Oil filled
- Non PCB oil
- Insulated terminals
- Hertz : 50/60

370 VOLT ROUND RUN CAPACITORS

CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
TRC5	5	1 9/16	2 3/4	370
TRC7.5	7.5	1 9/16	2 3/4	370
TRC10	10	1 9/16	2 3/4	370
TRC12.5	12.5	1 9/16	2 3/4	370
TRC15	15	1 9/16	2 3/4	370
TRC16	16	1 9/16	2 3/4	370
TRC17.5	17.5	1 9/16	2 3/4	370
TRC20	20	1 9/16	2 3/4	370
TRC25	25	1 3/4	3 1/2	370
TRC30	30	2	4 1/8	370
TRC31.5	31.5	2	4 1/8	370
TRC35	35	2	4 1/8	370
TRC40	40	2	4 1/8	370
TRC45	45	2	4 1/8	370
TRC50	50	2	4 3/4	370
TRC55	55	2	4 3/4	370
TRC60	60	2	4 3/4	370
TRC70	70	2 3/8	4 3/4	370
TRC80	80	2 3/8	4 3/4	370
TRC100	100	2 3/8	4 3/4	370

440 VOLT ROUND RUN CAPACITORS

CAT#	MFD	DIAMETER (IN.)	HEIGHT (IN.)	VOLTS
TRCF5	5	1 9/16	2 3/4	440
TRCF7.5	7.5	1 9/16	2 3/4	440
TRCF10	10	1 9/16	2 3/4	440
TRCF12.5	12.5	1 9/16	2 3/4	440
TRCF15	15	1 9/16	2 3/4	440
TRCF17.5	17.5	1 9/16	2 3/4	440
TRCF20	20	1 9/16	2 3/4	440
TRCF25	25	2	4 1/8	440
TRCF30	30	2	4 1/8	440
TRCF35	35	2	4 1/8	440
YRCF40	40	2	4 1/8	440
TRCF45	45	2	4 1/8	440
TRCF50	50	2	4 3/4	440
TRCF55	55	2	4 3/4	440
TRCF60	60	2	4 3/4	440
TRCF70	70	2 3/8	4 3/4	440
TRCF80	80	2 3/8	4 3/4	440
TRCF90	90	2 3/8	4 3/4	440

Features:

- UL listed and CUL approved
- Individually boxed
- Metal cases
- Metallized film
- Oil filled
- Non PCB oil
- Insulated terminals
- Hertz : 50/60



370 VOLT OVAL RUN CAPACITORS

CAT#	MFD	WIDTH (IN.)	DEPTH (IN.)	HEIGHT (IN.)	VOLTS
POC2	2	1 1/4	2	2 5/32	370
POC3	3	1 1/4	2	2 5/32	370
POC4	4	1 1/4	2	2 5/32	370
POC5	5	1 1/4	2	2 5/32	370
POC5B	5	1 1/4	2	2 5/32	370
POC6	6	1 1/4	2	2 5/32	370
POC7.5	7.5	1 1/4	2	2	370
POC7.5B	7.5	1 1/4	2	2	370
POC10	10	1 1/4	2	2 5/32	370
POC10B	10	1 1/4	2	2 5/32	370
POC12.5	12.5	1 1/4	2	2 7/8	370
POC15	15	1 1/4	2	2 7/8	370
POC17.5	17.5	1 1/4	2	2 7/8	370
POC20	20	1 1/4	2 13/16	4 1/8	370
POC25	25	1 3/4	2 13/16	4 1/8	370
POC30	30	1 3/4	2 13/16	4 1/8	370
POC35	35	1 3/4	2 13/16	4 1/8	370
POC40	40	1 3/4	2 13/16	4 1/8	370
POC45	45	1 3/4	2 13/16	4 1/8	370
POC50	50	1 3/4	2 13/16	4 3/4	370
POC55	55	1 3/4	2 13/16	4 3/4	370
POC60	60	1 3/4	2 13/16	4 3/4	370
POC70	70	1 3/4	2 13/16	4 3/4	370
POC80	80	1 3/4	2 13/16	4 3/4	370

440 VOLT OVAL RUN CAPACITORS

CAT#	MFD	WIDTH (IN.)	DEPTH (IN.)	HEIGHT (IN.)	VOLTS
POCF2	2	1 1/4	2	2	440
POCF2.5	2.5	1 1/4	2	2	440
POCF3	3	1 1/4	2	2	440
POCF4	4	1 1/4	2	2	440
POCF5	5	1 1/4	2	2	440
POCF6	6	1 1/4	2	2	440
POCF7.5	7.5	1 1/4	2	2	440
POCF10	10	1 1/4	2	2 7/8	440
POCF12.5	12.5	1 1/4	2	2 7/8	440
POCF15	15	1 3/4	2 13/16	2 7/8	440
POCF17.5	17.5	1 3/4	2 13/16	2 7/8	440
POCF20	20	1 3/4	2 13/16	4 1/8	440
POCF25	25	1 3/4	2 13/16	4 3/4	440
POCF25A	25	1 3/4	2 13/16	4 3/4	440
POCF30	30	1 3/4	2 13/16	4	440
POCF35	35	1 3/4	2 13/16	4 3/4	440
POCF40	40	1 3/4	2 13/16	4 1/8	440
POCF45	45	1 3/4	2 13/16	4 3/4	440
POCF50	50	1 3/4	2 13/16	4 3/4	440
POCF55	55	1 3/4	2 13/16	4 3/4	440
POCF60	60	1 3/4	2 13/16	4 3/4	440
POCF70	70	1 3/4	2 13/16	4 3/4	440
POCF80	80	1 3/4	2 13/16	4 3/4	440
POC80	80	1 3/4	2 13/16	4 3/4	370

With over 52,000 field operating units all over the world, from 250 HP to 20,000 HP, Hyosung Industries Co., Ltd is a leading world manufacturer of large medium voltage AC motors.

Features:

Range: Up to 20,000 HP

Frequency: 50/60Hz

Voltage: Up to 13.2KV

Enclosures: TEFC, TEAAC, TEAO, ODP, WPI, WPIL, Water Cooled or Pipe Ventilated, & Explosion Proof

Frames: NEMA & IEC

Insulation: Class F & H

Applications:

- Power Plants
- Water Treatment Plants
- Sewage Treatment Plants
- Pulp & Paper Mills
- Petro-Chemical Refineries
- HVAC
- Mining Operations



PARALLEL AND RIGHT ANGLE SPEED REDUCERS

Hyosung Industries Co. Ltd (HICO) is a leading manufacture of large high quality speed reducers built to AGM standards using the latest manufacturing processes and designs available in the industry today.

Torque ratings are available to 3,500,00 In.lbs.

Ratios are from 2:1 to 500:1 in Single, Double, Triple and Quadruple reduction.

Gears and Pinions are manufactures of high grade alloy steel, carburized and precision ground AGM level 12.

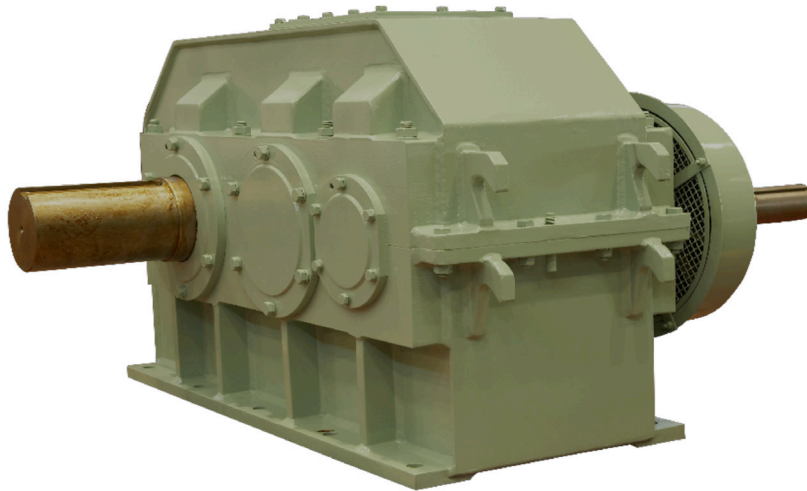
Bearings are high capacity large diameter roller bearing for long life and high capacity overhung loads.

Seals are dual lip. Grease purged and labyrinth seals are available upon request.

Housing are rugged fabricated steel. Custom made to order designs are available.

Lubrication is continuous splash type. Forced lubrication utilizing oil pumps, filters, and heat exchangers are available on required applications.

Inspection Ports are oversized for easy inspection on all reducers. Sight gauges are standard on all models and dip stick arrangements are availble as optional.



A/B QD SHEAVES

3B 124 SK

NUMBER OF GROOVES	BELT SIZE	PITCH DIAMETER	BUSHING
3	A and B	12.4"	SK

C QD SHEAVES

8C 80 E

NUMBER OF GROOVES	BELT SIZE	PITCH DIAMETER	BUSHING
8	C	8.0"	E

3V, 5V AND 8V QD SHEAVES

4/5V550SD

NUMBER OF GROOVES	BELT SIZE	OUTSIDE DIAMETER	BUSHING
4	5V/5VX	5.50"	SD

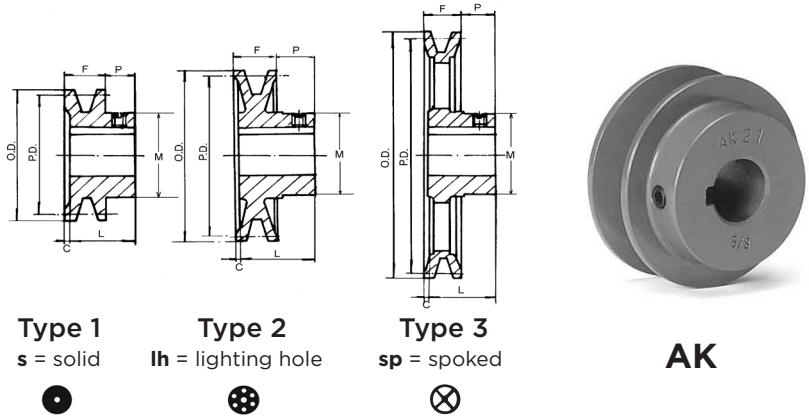
BORED-TO-SIZE SHEAVES

ONE GROOVE AK17 - AK184 PAGE 1 of 3



Cast Iron Sheaves - **Light Duty**
 Bored-to Size - **One Groove**
AK17 to AK184

Ordering part number size + bore
 Example: AK20 - 1/2
 AK39 - 1-1/8



PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES IN.	HUB DIAM	AV. WEIGHT
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
AK17	1.75	1.16	1.50	1 s	21/32	15/16	7/16	5/32	1/2, 5/8	1.6	.40
AK20	2.00	1.46	1.80	1 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4	1.6	.53
AK21	2.10	1.56	1.90	1 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4	1.6	.57
AK22	2.20	1.66	2.00	1 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4	1.6	.60
AK23	2.30	1.76	2.10	1 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8	1.6	.63
AK25	2.50	1.96	2.30	2 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8	1.6	.73
AK26	2.60	2.06	2.40	2 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8	1.6	.75
AK27	2.70	2.16	2.50	2 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8	1.6	.83
AK28	2.80	2.26	2.60	2 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8 1	1.6 1.7	.84
AK30	3.05	2.46	2.80	2 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8 1	1.6 1.7	.98
AK32	3.25	2.66	3.00	2 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8 1	1.6 1.7	1.1
AK34	3.45	2.86	3.20	2 s	21/32	15/16	7/16	5/32	1/2, 5/8, 3/4, 7/8 1	1.6 1.7	1.2
AK39	3.75	3.16	3.50	2 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8 15/16, 1 1/2, 11/8	1.6 1.7 1.9	1.5
AK41	3.95	3.36	3.70	2 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8 15/16, 1 1/2	1.6 1.7 1.9	1.8
AK44	4.25	3.66	4.00	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8 15/16, 1 1/2, 11/8	1.6 1.7 1.9	1.9
AK46	4.45	3.86	4.20	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8 15/16, 1 1/2, 11/8	1.6 1.7 1.9	2.0
AK49	4.75	4.16	4.50	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8 15/16, 1 1/2, 11/8	1.6 1.7 2.0	2.2
AK51	4.95	4.36	4.70	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8 1 1/2, 11/8	1.6 1.7 2.0	2.4



BORED-TO-SIZE SHEAVES

ONE GROOVE AK17 - AK184 PAGE 2 of 3



CHART CONTINUED FROM PREVIOUS PAGE

PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES IN.	HUB DIAM	AV. WEIGHT
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
AK54	5.25	4.66	5.00	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8	1.6	2.6
									15/16, 1	1.7	
									1/2, 1 1/8, 1 3/16	2.0	
AK56	5.45	4.86	5.20	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8	1.6	2.7
									15/16, 1	1.7	
									1/2, 1 1/8, 1 3/16	2.0	
AK59	5.75	5.16	5.50	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8	1.6	2.9
									15/16, 1	1.7	
									1/2, 1 1/8, 1 3/16	2.0	
AK61	5.95	5.36	5.70	3 s	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8	1.6	3.2
									15/16, 1	1.7	
									1/2, 1 1/8, 1 3/16	2.0	
AK64	6.25	5.66	6.00	3 lh	3/4	15/32	15/32	1/16	5/8, 3/4, 7/8	1.6	3.0
									15/16, 1	1.7	
									1/2, 1 1/8, 1 3/16	2.0	
AK66	6.45	5.86	6.20	3 lh	3/4	15/32	15/32	1/16	5/8, 3/4	1.6	3.1
									1	1.7	
									11/8	2.0	
AK69	6.75	6.16	6.50	3 lh	3/4	115/32	23/32	0	3/4	1.6	3.5
									1	1.7	
									11/8	2.2	
AK71	6.95	6.36	6.70	3 lh	3/4	115/32	23/32	0	5/8, 3/4, 7/8	1.6	3.8
									1	1.7	
									11/8	2.2	
									1 7/16	2.5	
AK74	7.25	6.66	7.00	3 lh	3/4	115/32	23/32	0	5/8, 3/4	1.6	4.2
									15/16, 1	1.7	
									1 1/8, 1 3/16, 1 1/4	2.2	
									1/2, 1 7/16	2.5	
AK79	7.75	7.16	7.50	3 lh	3/4	115/32	23/32	0	3/4	1.6	4.5
									1	1.7	
									11/8	2.2	
									1 7/16	2.5	
AK84	8.25	7.66	8.00	3 lh	3/4	115/32	23/32	0	5/8, 3/4	1.6	5.0
									15/16, 1	1.7	
									1 3/16	2.2	
									1/2, 1 7/16	2.5	
AK89	8.75	8.16	8.50	3 lh	3/4	115/32	23/32	0	3/4	1.6	5.4
									1	1.7	
									11/8	2.2	
									1 7/16	2.5	
AK94	9.25	8.66	9.00	3 lh	3/4	115/32	23/32	0	5/8, 3/4	1.6	5.9
									15/16, 1	1.7	
									1 3/16, 1 1/4	2.2	
									1/2, 1 7/16	2.5	



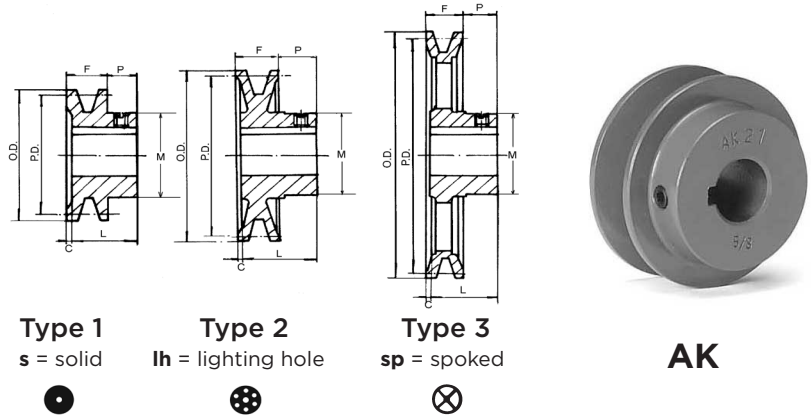
BORED-TO-SIZE SHEAVES

ONE GROOVE AK17 - AK184 PAGE 3 of 3



Cast Iron Sheaves - **Light Duty**
 Bored-to Size - **One Groove**
AK17 to AK184

Ordering part number size + bore
 Example: AK20 - 1/2
 AK39 - 1-1/8



Type 1
s = solid



Type 2
lh = lighting hole



Type 3
sp = spoked



AK

PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES INCHES	HUB DIAM	AV. WEIGHT
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
AK99	9.75	9.16	9.50	3 sp	3/4	1 15/32	23/32	0	3/4, 1 1 7/16	1.7 2.5	6.1
AK104	10.25	9.66	10.00	3 sp	3/4	1 15/32	23/32	0	5/8, 3/4, 1 1 3/16, 1 1/4 1 3/8, 1 7/16	1.7 2.2 2.5	6.9
AK109	10.75	10.16	10.50	3 sp	3/4	1 15/32	23/32	0	3/4, 1 1 3/8	1.7 2.2	7.3
AK114	11.25	10.66	11.00	3 sp	3/4	1 15/32	23/32	0	1 7/16	2.5	
AK124	12.25	11.66	12.00	3 sp	3/4	1 15/32	23/32	0	3/4, 1 1 3/16	1.7 2.2	7.4
AK124	12.25	11.66	12.00	3 sp	3/4	1 15/32	23/32	0	1 7/16	2.5	
AK134	13.25	12.66	13.00	3 sp	3/4	1 15/32	23/32	0	5/8, 3/4, 7/8, 1 1 3/16, 1 1/4	1.7 2.2	8.3
AK134	13.25	12.66	13.00	3 sp	3/4	1 15/32	23/32	0	1 7/16	2.5	
AK144	14.25	13.66	14.00	3 sp	3/4	1 15/32	23/32	0	3/4, 1 1 3/8, 1 7/16	1.7 2.5	9.3
AK144	14.25	13.66	14.00	3 sp	3/4	1 15/32	23/32	0	1 7/16	2.5	
AK154	15.25	14.66	15.00	3 sp	3/4	1 15/32	23/32	0	3/4, 1 1 3/16	1.7 2.2	10.8
AK154	15.25	14.66	15.00	3 sp	3/4	1 15/32	23/32	0	1 7/16	2.5	
AK184	18.25	17.66	18.00	3 sp	3/4	1 15/32	23/32	0	3/4, 1 1 3/16	1.7 2.2	12.6
AK184	18.25	17.66	18.00	3 sp	3/4	1 15/32	23/32	0	1 7/16	2.5	

STANDARD KEY DIMENSIONS	
SHAFT DIA.	KEYSEAT W X D
1/2	None
5/8 - 7/8	3/16 x 3/32
15/16 - 1 1/4	1/4 x 1/8
1 5/16 - 1 3/8	5/16 x 5/32
1 7/16 - 1 3/4	3/8 x 3/16

AK Sheaves are accurately machined from gray cast iron, statically balanced, painted and individually packaged. They are furnished with standard keyway & set screw. All set screws are 5/16-18 knurled. Recommended tightening torque is 110-130 inch-lbs.

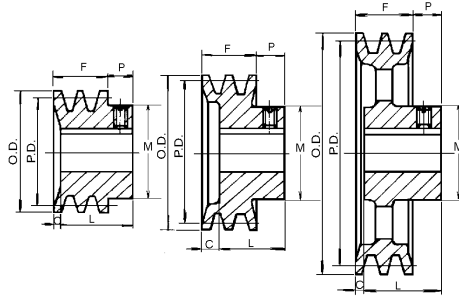


BORED-TO-SIZE SHEAVES

TWO GROOVE 2AK20 - 2AK184 PAGE 1 of 2

Cast Iron Sheaves - **Light Duty**
Bored-to Size - **Two Groove**
2AK20 to 2AK184

Ordering part number size + bore
Example: AK20 - 1/2
AK39 - 1-1/8



Type 1
s = solid



Type 2
lh = lighting hole



Type 3
sp = spoked



2AK

PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES IN.	HUB DIAM	SERIES AVERAGE WEIGHT
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
2AK20	2.00	1.46	1.80	1 s	1 3/8	1 21/32	15/32	3/16	1/2, 5/8, 3/4, 7/8	1.6	.83
2AK21	2.15	1.56	1.90	1 s	1 3/8	1 21/32	15/32	3/16	1/2, 5/8, 3/4	1.6	.97
2AK22	2.25	1.66	2.00	1 s	1 3/8	1 21/32	15/32	3/16	1/2, 5/8, 3/4, 7/8	1.6	1.0
2AK23	2.35	1.76	2.10	1 s	1 3/8	1 21/32	15/32	3/16	5/8, 3/4, 7/8, 1	1.7	1.1
2AK25	2.55	1.96	2.30	1 s	1 3/8	1 21/32	15/32	3/16	5/8, 3/4, 7/8, 1	1.7	1.3
2AK26	2.65	2.06	2.40	1 s	1 3/8	1 21/32	15/32	3/16	5/8, 3/4, 7/8, 1	1.7	1.4
2AK27	2.75	2.16	2.50	1 s	1 3/8	1 21/32	15/32	3/16	5/8, 3/4, 7/8, 1	1.9	1.6
2AK28	2.85	2.26	2.60	1 s	1 3/8	1 21/32	15/32	3/16	5/8, 3/4, 7/8, 1	1.9	1.7
2AK30	3.05	2.46	2.80	1 s	1 3/8	1 21/32	15/32	3/16	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.0
2AK32	3.25	2.66	3.00	1 s	1 3/8	1 21/32	15/32	3/16	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.3
2AK34	3.45	2.86	3.20	1 s	1 3/8	1 21/32	15/32	3/16	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.5
2AK39	3.75	3.16	3.50	2 s	1 3/8	1 11/32	15/32	1/2	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.6
2AK41	3.95	3.36	3.70	2 s	1 3/8	1 11/32	15/32	1/2	5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.8
2AK44	4.25	3.66	4.00	2 s	1 3/8	1 11/32	15/32	1/2	5/8, 3/4, 7/8, 1, 1 1/8	1.9	3.2
2AK46	4.45	3.86	4.20	2 s	1 3/8	1 11/32	15/32	1/2	7/8, 1, 1 1/8	1.6 1.9	2.9
2AK49	4.75	4.16	4.50	2 s	1 3/8	1 11/32	15/32	1/2	3/4, 7/8, 1, 1 1/8, 1 3/8	1.6 1.9 2.4	3.2
2AK51	4.95	4.36	4.70	2 s	1 3/8	1 11/32	15/32	1/2	3/4, 7/8, 1, 1 1/8, 1 3/8	1.6 1.9 2.4	3.4
2AK54	5.25	4.66	5.00	3 s	1 3/8	1 11/32	15/32	1/2	5/8, 3/4, 7/8, 1, 1 1/8, 1 3/8	1.6 1.9 2.4	3.7
2AK56	5.45	4.86	5.20	3 s	1 3/8	1 11/32	15/32	1/2	5/8, 3/4, 1, 1 1/8, 1 3/8	1.6 1.9 2.4	3.9
2AK59	5.75	5.16	5.50	3 s	1 3/8	1 11/32	15/32	1/2	1, 1 1/8, 1 3/8	1.9 2.4	4.4
2AK61	5.95	5.36	5.70	3 s	1 3/8	1 11/32	15/32	1/2	3/4, 7/8, 1, 1 1/8, 1 3/8	1.6 1.9 2.4	4.5

BORED-TO-SIZE SHEAVES

TWO GROOVE 2AK20 - 2AK184 PAGE 2 of 2



Cast Iron Sheaves - Light Duty Bored-to Size - Two Groove 2AK20 to 2AK184

Ordering part number size + bore

Example: AK20 - 1/2

AK39 - 1-1/8

CHART CONTINUED FROM PREVIOUS PAGE

PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES IN.	HUB DIAM	SERIES AVERAGE WEIGHT
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
2AK64	6.25	5.66	6.00	3 s	1 3/8	1 19/32	11/32	1/8	3/4, 1 1 1/8, 1 3/16 1 3/8, 1 7/16	1.7 2.0 2.5	5.2
2AK74	7.25	6.66	7.00	3 lh	1 3/8	1 19/32	11/32	1/8	3/4, 1 1 1/8, 1 3/16 1 3/8, 1 7/16	1.7 2.0 2.5	6.0
2AK84	8.25	7.66	8.00	3 lh	1 3/8	1 19/32	11/32	1/8	3/4, 15/16, 1 1 1/8, 1 3/16, 1 1/4 1 3/8, 1 7/16	1.7 2.0 2.5	7.0
2AK94	9.25	8.66	9.00	3 lh	1 3/8	1 19/32	11/32	1/8	3/4, 1 1 1/8, 1 3/16 1 3/8, 1 7/16	1.7 2.0 2.5	8.2
2AK104	10.25	9.66	10.00	3 sp	1 3/8	1 19/32	11/32	1/8	3/4, 15/16, 1 1 7/16	1.7 2.5	9.6
2AK114	11.25	10.66	11.00	3 lh	1 3/8	1 19/32	11/32	1/8	3/4, 1 1 3/16 1 3/8, 1 7/16	1.7 2.2 2.5	11.2
2AK124	12.25	11.66	12.00	3 sp	1 3/8	1 19/32	11/32	1/8	3/4, 1 1 3/16 1 7/16	1.7 2.2 2.5	12.1
2AK134	13.25	12.66	13.00	3 sp	1 3/8	1 19/32	11/32	1/8	1 3/16 1 7/16	2.2 2.5	13.6
2AK144	14.25	13.66	14.00	3 sp	1 3/8	1 19/32	11/32	1/8	1 1 7/16	1.7 2.5	14.6
2AK154	15.25	14.66	15.00	3 sp	1 3/8	1 19/32	11/32	1/8	1 3/16 1 7/16	2.2 2.5	16.5
2AK184	18.25	17.66	18.00	3 sp	1 3/8	1 19/32	11/32	1/8	1 3/16 1 7/16	2.2 2.5	22.7

STANDARD KEY DIMENSIONS	
SHAFT DIA.	KEYSEAT W X D
1/2	None
5/8 - 7/8	3/16 x 3/32
15/16 - 1 1/4	1/4 x 1/8
1 5/16 - 1 3/8	5/16 x 5/32
1 7/16 - 1 3/4	3/8 x 3/16

2AK Sheaves are accurately machined from gray cast iron, statically balanced, painted and individually packaged. They are furnished with standard keyway & set screw. All set screws are 5/16-18 knurled. Recommended tightening torque is 110-130 inch-lbs.

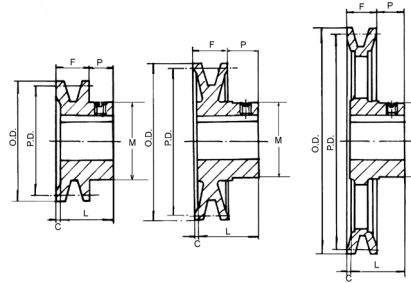


BORED-TO-SIZE SHEAVES

ONE GROOVE BK24 - BK190 PAGE PAGE 1 of 3

Cast Iron Sheaves - **Light Duty**
Bored-to Size - **One Groove**
BK24 to BK190

Ordering part number size + bore
Example: BK20 - 1/2
BK39 - 1-1/8



Type 1
s = solid



Type 2
lh = lighting hole



Type 3
sp = spoked



BK

PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES IN.	HUB DIAM	SERIES AVE.
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
BK24	2.40	1.80	2.20	1 s	13/16	11/16	13/32	5/32	1/2, 5/8, 3/4, 7/8	1.6	.73
BK25	2.50	1.90	2.30	1 s	13/16	11/16	13/32	5/32	1/2, 5/8, 3/4, 7/8 1	1.6 1.7	.74
BK26	2.60	2.00	2.40	1 s	13/16	11/16	13/32	5/32	1/2, 5/8, 3/4, 7/8	1.6	.80
BK27	2.70	2.10	2.50	2 s	13/16	11/16	13/32	5/32	1/2, 5/8, 3/4, 7/8 1	1.6 1.7	.84
BK28	2.95	2.20	2.60	2 s	13/16	11/16	13/32	5/32	1/2, 5/8, 3/4, 7/8 1, 1 1/8	1.6 1.9	1.0
BK30	3.15	2.40	2.80	2 s	13/16	11/16	13/32	5/32	1/2, 5/8, 3/4, 7/8 1, 1 1/8	1.6 1.9	1.2
BK32	3.35	2.60	3.00	2 s	13/16	11/16	13/32	5/32	1/2, 5/8, 3/4, 7/8 1, 1 1/8	1.6 1.9	1.2
BK34	3.55	2.80	3.20	2 s	7/8	15/32	13/32	1/8	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	1.7
BK36	3.75	3.00	3.40	2 s	7/8	15/32	13/32	1/8	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	1.9
BK40	3.95	3.20	3.60	2 s	7/8	15/32	13/32	1/8	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.1
BK45	4.25	3.50	3.90	2 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8 1 1/2, 1 1/8	1.6 1.7 1.9	2.1
BK47	4.45	3.70	4.10	2 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8 1 1/2, 1 1/8	1.6 1.7 1.9	2.2
BK50	4.75	4.00	4.40	3 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8 1 1/2, 1 1/8	1.6 1.7 1.9	2.5
BK52	4.95	4.20	4.60	3 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8 1 1/2, 1 1/8	1.6 1.7 1.9	2.6
BK55	5.25	4.50	4.90	3 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8 1 1/2, 1 1/8, 1 3/16	1.6 1.7 2.0	3.0
BK57	5.45	4.70	5.10	3 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8 15/16, 1 1 1/8, 1 3/16	1.6 1.7 2.0	3.1

BORED-TO-SIZE SHEAVES

ONE GROOVE BK24 - BK190 PAGE PAGE 2 of 3



CHART CONTINUED FROM PREVIOUS PAGE

PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES IN.	HUB DIAM	SERIES AVE.
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
BK60	5.75	5.00	5.40	3 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8	1.6	3.4
									1	1.7	
									1/2, 1 1/8, 1 3/16	2.0	
BK62	5.95	5.20	5.60	3 s	7/8	15/32	13/32	1/8	5/8, 3/4, 7/8	1.6	3.6
									15/16, 1	1.7	
									1/2, 1 1/8, 1 3/16	2.0	
BK65	6.25	5.50	5.90	3 s	7/8	15/32	13/32	1/8	5/8, 3/4	1.6	3.9
									1	1.7	
									1 1/8	2.0	
BK67	6.45	5.70	6.10	3 s	7/8	15/32	13/32	1/8	5/8, 3/4	1.6	3.7
									1	1.7	
									1 1/8, 1 3/16	2.0	
BK70	6.75	6.00	6.40	3 s	7/8	115/32	21/32	1/16	5/8, 3/4, 7/8	1.6	4.6
									15/16, 1	1.7	
									1 1/8, 1 3/16	2.0	
									1 7/16	2.5	
BK72	6.95	6.20	6.60	3 lh	7/8	115/32	21/32	1/16	3/4	1.6	4.4
									1	1.7	
									1 1/8	2.0	
									1 3/8	2.5	
BK75	7.25	6.50	6.90	3 lh	7/8	115/32	21/32	1/16	3/4	1.6	4.6
									1, 1 1/8	1.9	
BK77	7.45	6.70	7.10	3 lh	7/8	115/32	21/32	1/16	3/4	1.6	5.1
									1, 1 1/8	1.9	
									1 3/8	2.5	
BK80	7.75	7.00	7.40	3 lh	7/8	115/32	21/32	1/16	5/8, 3/4, 7/8	1.6	5.4
									1, 1 1/8	1.9	
									1 3/16, 1 1/4	2.2	
									1 3/8, 1 7/16	2.5	
BK85	8.25	7.50	7.90	3 lh	7/8	115/32	21/32	1/16	3/4	1.6	5.8
									1	1.7	
									1 1/8,	2.2	
									1 3/8, 1 7/16	2.5	
BK90	8.75	8.00	8.40	3 lh	7/8	115/32	21/32	1/16	3/4, 7/8	1.6	6.1
									15/16, 1	1.7	
									1 1/8, 1 3/16	2.2	
									1 3/8, 1 7/16	2.5	
BK95	9.25	8.50	8.90	3 lh	7/8	115/32	21/32	1/16	3/4	1.6	7.0
									1	1.7	
									1 1/8	2.2	
									1 3/8	2.5	
BK100	9.75	9.00	9.40	3 lh	7/8	115/32	21/32	1/16	3/4, 7/8	1.6	7.4
									15/16, 1	1.7	
									1 1/8, 1 3/16, 1 1/4	2.2	
									1 3/8, 1 7/16	2.5	



BORED-TO-SIZE SHEAVES

ONE GROOVE BK24 - BK190 PAGE 3 of 3



CHART CONTINUED FROM PREVIOUS PAGE

PART No.	DIAMETERS			TYPE	DIMENSIONS				STOCK BORES IN.	HUB DIAM	SERIES AVE.
	O.D.	PITCH			F	L	P	C			
		3L	4L or A								
BK105	10.25	9.50	9.90	3 lh	7/8	1 15/32	2 1/32	1/16	1 1 3/8, 1 7/16	1.7 2.5	8.0
BK110	10.75	10.00	10.40	3 sp	7/8	1 15/32	2 1/32	1/16	3/4, 1 1 1/8, 1 3/16 1 3/8, 1 7/16	1.7 2.2 2.5	8.5
BK115	11.25	10.50	10.90	3 sp	7/8	1 15/32	2 1/32	1/16	1 1 7/16	1.7 2.5	8.9
BK120	11.75	11.00	11.40	3 sp	7/8	1 15/32	2 1/32	1/16	3/4, 1 1 3/16 1 7/16	1.7 2.2 2.5	10.0
BK130	12.75	12.00	12.40	3 sp	7/8	1 15/32	2 1/32	1/16	3/4, 1 1 1/8, 1 3/16, 1 1/4 1 7/16	1.7 2.2 2.5	10.8
BK140	13.75	13.00	13.40	3 sp	7/8	1 15/32	2 1/32	1/16	3/4, 1 1 3/16, 1 7/16	1.7 2.2	12.1
BK160	15.75	15.00	15.40	3 sp	7/8	1 15/32	2 1/32	1/16	1, 1 1/8, 1 3/16, 1 1/4 1 7/16	1.7 2.2 2.5	14.4
BK190	18.75	18.00	18.40	3 sp	7/8	1 15/32	2 1/32	1/16	1 1 3/16, 1 1/4 1 7/16	1.7 2.2 2.5	21.3

STANDARD KEY DIMENSIONS	
SHAFT DIA.	KEYSEAT W X D
1/2	None
5/8 - 7/8	3/16 x 3/32
15/16 - 1 1/4	1/4 x 1/8
1 5/16 - 1 3/8	5/16 x 5/32
1 7/16 - 1 3/4	3/8 x 3/16

2AK Sheaves are accurately machined from gray cast iron, statically balanced, painted and individually packaged. They are furnished with standard keyway and set screw. All set screws are 5/16-18 knurled. Recommended tightening torque is 110-130 inch-lbs.

BORE SIZE		G8 TOLERANCE		KEY TOLERANCES		
NOMINAL DIMENSION				KEY WIDTH RANGE		
MM	INCHES	MM	INCHES	>	<	INCHES
6-10	.2362 - .3937	High + .027 mm Low + .005 mm	High + .0010" Low + .0001"	1/2"	+ .002"	
10-18	.3937 - .7087	High + .033 mm Low + .006 mm	High + .0013" Low + .0020"	1/2" 3/4"	3/4" 1"	+ .003" + .003"
18-30	.7087 - 1.1811	High + .040mm Low + .007mm	High + .0016" Low + .0003"	1"	1 1/2"	+ .004"
30-50	1.1811 - 1.9685	High + .048mm Low + .009mm	High + .0019" Low + .0003"			
50-80	1.9685 - 3.1496	High + .056mm Low + .010mm	High + .0022" Low + .0003"			
80-120	3.1496 - 4.7244	High + .066mm Low + .012mm	High + .0026" Low + .0004"			
120-180	4.7244 - 7.0866	High + .077mm Low + .014mm	High + .0030" Low + .0005"			
180-250	7.0866 - 9.8425	High + .087mm Low + .015mm	High + .0034" Low + .0005"			



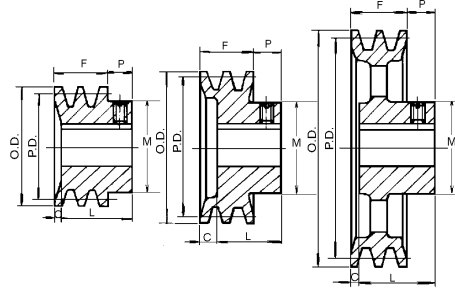
BORED-TO-SIZE SHEAVES

TWO GROOVE 2BK25 - 2BK190 PAGE 1 of 2



Cast Iron Sheaves - **Light Duty**
 Bored-to Size - **Two Groove**
2BK25 to 2BK190

Ordering part number size + bore
 Example: 2BK25-1/2
 2BK47-1-1/8



Type 1
s = solid



Type 2
lh = lighting hole



Type 3
sp = spoked



2BK

PART No.	DIAMETERS			TYPE	DIMENSIONS				DIA STOCK BORES IN.	HUB AVERAGE M	SERIES
	O.D.	PITCH			F	L	P	C			
		4L or A	5L or B								
2BK25	2.50	1.90	2.30	1 s	1 3/4	1 31/32	15/32	1/4	1/2, 5/8, 3/4, 7/8	1.6	1.5
2BK27	2.70	2.10	2.50	1 s	1 3/4	1 31/32	15/32	1/4	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.7	1.7
2BK28	2.95	2.20	2.60	1 s	1 3/4	1 31/32	15/32	1/4	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.1
2BK30	3.15	2.40	2.80	1 s	1 3/4	1 31/32	15/32	1/4	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.9	2.3
2BK32	3.35	2.60	3.00	1 s	1 3/4	1 31/32	15/32	1/4	1 3/8 5/8, 3/4, 7/8 1, 1 1/8	1.6 1.9	2.7
2BK34	3.55	2.80	3.20	1 s	1 3/4	1 31/32	15/32	1/4	5/8, 3/4, 7/8 1, 1 1/8	1.6 1.9	3.1
2BK36	3.75	3.00	3.40	1 s	1 3/4	1 31/32	15/32	1/4	5/8, 3/4, 7/8 1, 1 1/8 1 3/8	1.6 1.9 2.4	3.4
2BK40	3.95	3.20	3.60	2 s	1 3/4	1 15/32	15/32	3/4	5/8, 3/4, 7/8 1, 1 1/8	1.6 1.9	3.4
2BK45	4.25	3.50	3.90	2 s	1 3/4	1 15/32	15/32	3/4	1, 1 1/8 1 3/8	1.9 2.4	4.0
2BK47	4.45	3.70	4.10	2 s	1 3/4	1 15/32	15/32	3/4	7/8 1, 1 1/8 1 3/8	1.6 1.9 2.4	4.2
2BK50	4.75	4.00	4.40	2 s	1 3/4	1 15/32	15/32	3/4	3/4 1, 1 1/8 1 3/8	1.6 1.9 2.4	4.8
2BK52	4.95	4.20	4.60	2 s	1 3/4	1 15/32	15/32	3/4	5/8, 7/8 1, 1 1/8 1 3/8	1.6 1.9 2.4	5.2
2BK55	5.25	4.50	4.90	2 s	1 3/4	1 15/32	15/32	3/4	1 1/8 1 3/8	1.9 2.4	5.8
2BK57	5.45	4.70	5.10	2 s	1 3/4	1 15/32	15/32	3/4	1, 1 1/8 1 3/8	1.9 2.4	5.4
2BK60	5.75	5.00	5.40	3 s	1 3/4	1 15/32	15/32	3/4	3/4, 7/8 1, 1 1/8 1 3/8	1.6 1.9 2.4	5.7



BORED-TO-SIZE SHEAVES

TWO GROOVE 2BK25 - 2BK190 PAGE 2 of 2

CHART CONTINUED FROM PREVIOUS PAGE

PART No.	DIAMETERS			TYPE	DIMENSIONS				DIA STOCK BORES IN.	HUB AVERAGE M	SERIES
	O.D.	PITCH			F	L	P	C			
		4L or A	5L or B								
2BK62	5.95	5.20	5.60	3 s	1 3/4	115/32	15/32	3/4	1, 1 1/8	1.9	6.0
2BK65	6.25	5.50	5.90	3 s	1 3/4	115/32	15/32	3/4	1, 1 1/8 1 3/8	1.9 2.4	6.5
2BK67	6.45	5.70	6.10	3 s	1 3/4	115/32	15/32	3/4	1, 1 1/8 1 3/8	1.9 2.4	6.8
2BK70	6.75	6.00	6.40	3 s	1 3/4	119/32	11/32	1/2	3/4 1, 1 1/8 1 3/16 1 3/8, 1 7/16	1.6 1.9 2.0 2.4	7.6
2BK80	7.75	7.00	7.40	3 lh	1 3/4	119/32	11/32	1/2	3/4 1, 1 1/8 1 3/16, 1 1/4 1 3/8, 1 7/16	1.6 1.9 2.0 2.5	8.7
2BK90	8.75	8.00	8.40	3 lh	1 3/4	119/32	11/32	1/2	3/4 1, 1 1/8 1 3/16 1 3/8, 1 7/16	1.6 1.9 2.0 2.5	10.0
2BK100	9.75	9.00	9.40	3 lh	1 3/4	119/32	11/32	1/2	3/4 1 1 3/16 1 3/8, 1 7/16	1.6 1.9 2.0 2.5	11.8
2BK110	10.75	10.00	10.40	3 sp	1 3/4	119/32	11/32	1/2	1 1 3/16 1 7/16	1.7 2.2 2.5	14.0
2BK120	11.75	11.00	11.40	3 sp	1 3/4	119/32	11/32	1/2	1 1 3/16 1 7/16	1.7 2.2 2.5	15.6
2BK130	12.75	12.00	12.40	3 sp	1 3/4	119/32	11/32	1/2	1 1 3/16 1 7/16	1.7 2.2 2.5	17.0
2BK140	13.75	13.00	13.40	3 sp	1 3/4	119/32	11/32	1/2	1 1 3/16 1 7/16	1.7 2.2 2.5	19.0
2BK160	15.75	15.00	15.40	3 sp	1 3/4	119/32	11/32	1/2	1 1 3/16 1 7/16	1.7 2.2 2.5	23.7
2BK190	18.75	18.00	18.40	3 sp	1 3/4	119/32	11/32	1/2	1 3/16, 1 1/4 1 7/16	2.2 2.5	30.3

2AK Sheaves are accurately machined from gray cast iron, statically balanced, painted and individually packaged. They are furnished with standard keyway & set screw. All set screws are 5/16-18 knurled. Recommended tightening torque is 110-130 inch-lbs.

H BUSHING SHEAVES

ONE GROOVE & TWO GROOVE AK30H - AK184H - 2AK30H - 2AK184H PAGE 1 of 2



Cast Iron Sheaves - **Light Duty Bushed**
 Bored-to Size - **One Groove & Two Groove**
AK30H to AK184H -
2AK30H to 2AK184H

Order part number size
 Example: AK30H
 2AK32H

**For All
 1 Groove Sheaves**
 F= 3/4
 L= 1 1/4
 G= 7/16
 E= 3/16

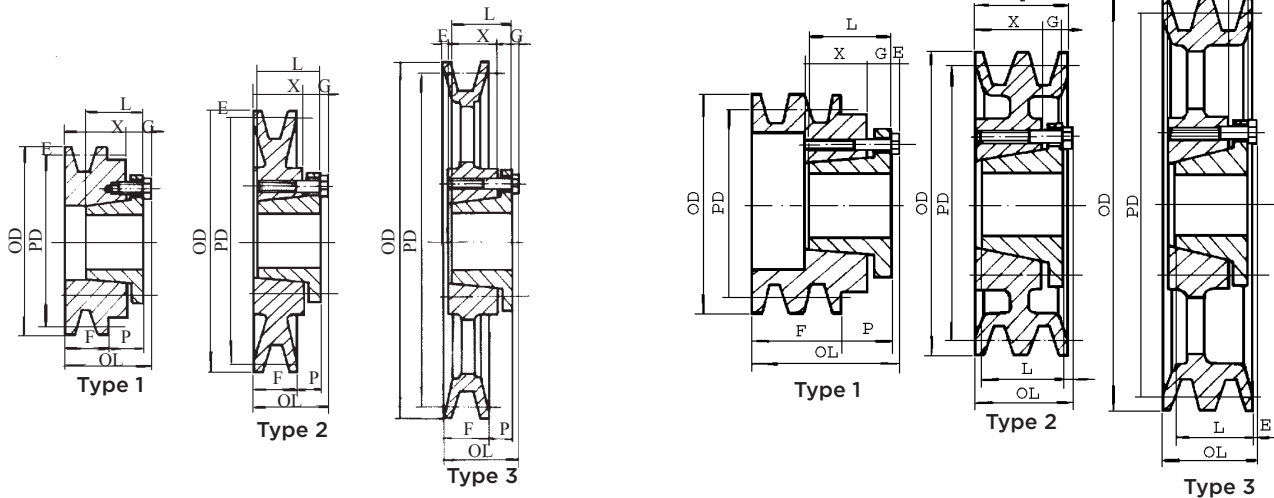


AKH

**For All
 2 Groove Sheaves**
 F= 1 3/8
 L= 1 1/4
 X= 7/8
 G= 7/16
 E= 3/16



2AKH



Type 1 **Type 2** **Type 3**
 s = solid lh = lighting hole sp = spoked



PART No.	DIAMETERS			TYPE	DIMENSIONS			
	O.D.	PITCH			O.L.	P	X	WT.
		3L	4L or A					
AK30H	3.05	2.46	2.80	1 s	1 13/16	7/8	1 3/16	1.30
AK32H	3.30	2.66	3.00	1 s	1 13/16	7/8	1 3/16	1.30
AK34H	3.45	2.86	3.20	2 s	1 1/2	9/16	7/8	1.20
AK39H	3.75	3.16	3.50	2 s	1 1/2	9/16	7/8	1.50
AK41H	3.95	3.36	3.70	2 s	1 1/2	9/16	7/8	1.80
AK44H	4.25	3.66	4.00	2 s	1 1/2	9/16	7/8	2.00
AK46H	4.45	3.86	4.20	2 s	1 1/2	9/16	7/8	2.30
AK49H	4.75	4.16	4.50	2 s	1 1/2	9/16	7/8	2.60
AK51H	4.95	4.36	4.70	2 s	1 1/2	9/16	7/8	2.70
AK54H	5.25	4.66	5.00	2 s	1 1/2	9/16	7/8	2.60
AK56H	5.45	4.86	5.20	2 s	1 1/2	9/16	7/8	2.80
AK59H	5.75	5.16	5.50	2 s	1 1/2	9/16	7/8	3.00
AK61H	5.95	5.36	5.70	3 s	1 1/2	9/16	7/8	3.10
AK64H	6.25	5.66	6.00	3 s	1 1/2	9/16	7/8	3.30
AK66H	6.45	5.86	6.20	3 s	1 1/2	9/16	7/8	3.60
AK69H	6.75	6.16	6.50	3 lh	1 1/2	9/16	7/8	3.50



H BUSHING SHEAVES

ONE GROOVE & TWO GROOVE AK30H - AK184H - 2AK30H - 2AK184H PAGE 2 of 2



CHART CONTINUED FROM PREVIOUS PAGE

PART No.	DIAMETERS			TYPE	DIMENSIONS			
	O.D.	PITCH			O.L.	P	X	WT.
		3L	4L or A					
AK71H	6.95	6.36	6.70	3 lh	1 1/2	9/16	7/8	3.50
AK74H	7.25	6.66	7.00	3 lh	1 1/2	9/16	7/8	3.80
AK79H	7.75	7.16	7.50	3 lh	1 1/2	9/16	7/8	4.20
AK84H	8.25	7.66	8.00	3 lh	1 1/2	9/16	7/8	4.60
AK89H	8.75	8.16	8.50	3 lh	1 1/2	9/16	7/8	4.80
AK94H	9.25	8.66	9.00	3 lh	1 1/2	9/16	7/8	5.60
AK99H	9.75	9.16	9.50	3 lh	1 1/2	9/16	7/8	5.90
AK104H	10.25	9.66	10.00	3 sp	1 1/2	9/16	7/8	6.80
AK109H	10.75	10.16	10.50	3 sp	1 1/2	9/16	7/8	7.10
AK114H	11.25	10.66	11.00	3 sp	1 1/2	9/16	7/8	7.50
AK124H	12.25	11.66	12.00	3 sp	1 1/2	9/16	7/8	8.00
AK134H	13.25	12.66	13.00	3 sp	1 1/2	9/16	7/8	10.70
AK144H	14.25	13.66	14.00	3 sp	1 1/2	9/16	7/8	11.10
AK154H	15.25	14.66	15.00	3 sp	1 1/2	9/16	7/8	12.50
AK184H	18.25	17.66	18.00	3 sp	1 1/2	9/16	7/8	17.30
2AK30H - 2AK184H								
2AK30H	3.05	2.46	2.80	1 s	2 7/16	7/8	15/16	1.70
2AK32H	3.25	2.66	3.00	1 s	2 7/16	7/8	15/16	1.80
2AK34H	3.45	2.86	3.20	1 s	2	7/16	1/2	1.70
2AK39H	3.75	3.16	3.50	1 s	2	7/16	1/2	2.10
2AK41H	3.95	3.36	3.70	2 s	1 1/2	1/16	-	2.40
2AK44H	4.25	3.66	4.00	2 s	1 1/2	1/16	-	2.90
2AK46H	4.45	3.86	4.20	2 s	1 1/2	1/16	-	3.20
2AK49H	4.75	4.16	4.50	2 s	1 1/2	1/16	-	3.70
2AK51H	4.95	4.36	4.70	2 s	1 1/2	1/16	-	3.20
2AK54H	5.25	4.66	5.00	2 s	1 1/2	1/16	-	3.50
2AK56H	5.45	4.86	5.20	2 s	1 1/2	1/16	-	3.80
2AK59H	5.75	5.16	5.50	3 s	1 1/2	1/16	-	4.10
2AK61H	5.95	5.36	5.70	3 s	1 1/2	1/16	-	4.30
2AK64H	6.25	5.66	6.00	3 s	1 1/2	1/16	-	4.60
2AK74H	7.25	6.66	7.00	3 lh	1 1/2	1/16	-	5.10
2AK84H	8.25	7.66	8.00	3 lh	1 1/2	1/16	-	6.10
2AK94H	9.25	8.66	9.00	3 lh	1 1/2	1/16	-	7.40
2AK104H	10.25	9.66	10.00	3 sp	1 1/2	1/16	-	9.20
2AK114H	11.25	10.66	11.00	3 sp	1 1/2	1/16	-	10.00
2AK124H	12.25	11.66	12.00	3 sp	1 1/2	1/16	-	10.90
2AK134H	13.25	12.66	13.00	3 sp	1 1/2	1/16	-	13.10
2AK144H	14.25	13.66	14.00	3 sp	1 1/2	1/16	-	14.60
2AK154H	15.25	14.66	15.00	3 sp	1 1/2	1/16	-	16.20
2AK184H	18.25	17.66	18.00	3 sp	1 1/2	1/16	-	21.60

AK Sheaves are accurately machined from gray cast iron, statically balanced, painted and individually packaged.

Note: Cast iron sheaves may not exceed 6500 FPM. This speed **DOES NOT** specify if dynamic balancing (2 plane) is required. Contact customer service to verify whether dynamic balancing is required.



HR BUSHING SHEAVES

ONE GROOVE & TWO GROOVE BK36HR - BK90HR - 2BK50HR - 2BK90HR PAGE 1 of 2



Cast Iron Sheaves - Light Duty

Bushed, **One Groove & Two Groove**

**BK36HR to BK190HR -
2BK50HR to 2BK190HR**

Order part number size

Example: BK36HR

Example: 2BK50HR

Order H bushings separately

All HR sheaves use standard
MasterDrive H bushings.

**For All
1 Groove Sheaves**
F= 7/8
L= 1 1/4
G= 7/16
E= 3/16
X= 7/8

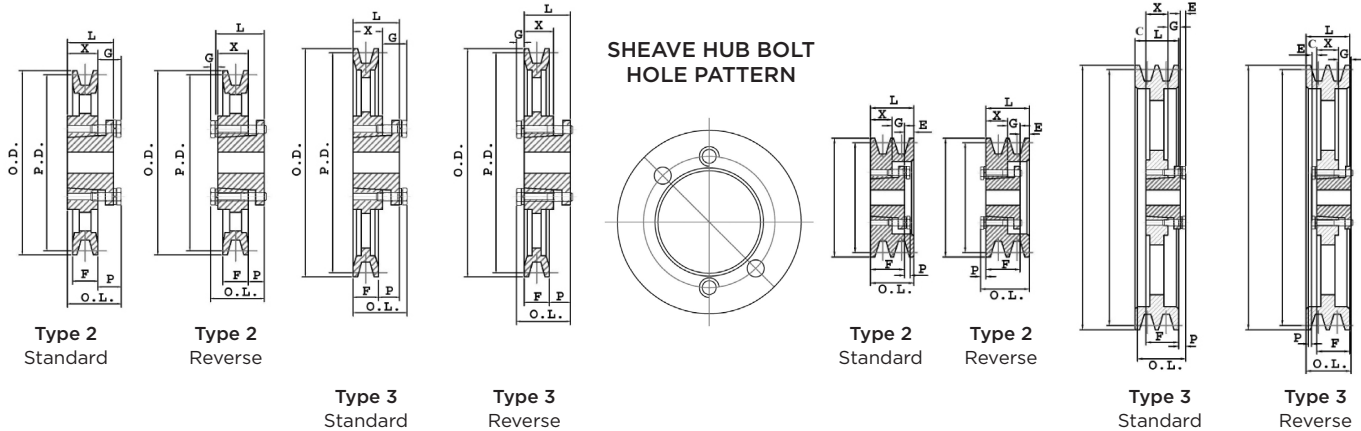


BKHR

**For All
2 Groove Sheaves**
F= 1 3/4
L= 1 1/4
X= 7/8
G= 7/16
E= 3/16
P= 7/16
O.L.= 1 3/4



2BKHR



s = solid ● lh = lighting hole ● sp = spoked ⊗

PART No.	DIAMETERS			TYPE	DIMENSIONS			
	O.D.	PITCH			O.L.	P	X	WT.
		4L or A	5L or B					
BK36HR	3.75	3.00	3.40	2 s	1 1/2	7/16	-	1.5
BK40HR	3.95	3.20	3.60	2 s	1 1/2	7/16	-	1.7
BK45HR	4.25	3.50	3.90	2 s	1 1/2	7/16	-	2.1
BK47HR	4.45	3.70	4.10	2 s	1 1/2	7/16	-	2.3
BK50HR	4.75	4.00	4.40	2 s	1 1/2	7/16	-	2.7
BK52HR	4.95	4.20	4.60	2 s	1 1/2	7/16	-	3.0
BK55HR	5.25	4.50	4.90	2 s	1 1/2	7/16	-	3.5
BK57HR	5.45	4.70	5.10	2 s	1 1/2	7/16	-	3.6
BK60HR	5.75	5.00	5.40	2 s	1 1/2	7/16	-	3.5
BK62HR	5.95	5.20	5.60	2 s	1 1/2	7/16	-	3.7
BK65HR	6.25	5.50	5.90	2 s	1 1/2	7/16	-	4.0
BK67HR	6.45	5.70	6.10	2 s	1 1/2	7/16	-	4.0
BK70HR	6.75	6.00	6.40	3 s	1 9/16	1/2	1/16	4.7
BK72HR	6.95	6.20	6.60	3 s	1 9/16	1/2	1/16	4.7
BK75HR	7.25	6.50	6.90	3 lh	1 9/16	1/2	1/16	4.7
BK77HR	7.45	6.70	7.10	3 lh	1 9/16	1/2	1/16	4.8
BK80HR	7.75	7.00	7.40	3 lh	1 9/16	1/2	1/16	5.3
BK85HR	8.25	7.50	7.90	3 lh	1 9/16	1/2	1/16	5.5
BK90HR	8.75	8.00	8.40	3 lh	1 9/16	1/2	1/16	6.0



HR BUSHING SHEAVES

ONE GROOVE & TWO GROOVE BK36HR - BK90HR - 2BK50HR - 2BK90HR PAGE 2 of 2



CHART CONTINUED FROM PREVIOUS PAGE

PART No.	DIAMETERS			TYPE	DIMENSIONS			
	O.D.	PITCH			O.L.	P	X	WT.
		4L or A	5L or B					
BK95HR	9.25	8.50	8.90	3 lh	1 9/16	1/2	1/16	6.7
BK100HR	9.75	9.00	9.40	3 lh	1 9/16	1/2	1/16	7.1
BK105HR	10.25	9.50	9.90	3 lh	1 9/16	1/2	1/16	7.5
BK110HR	10.75	10.00	10.40	3 sp	1 9/16	1/2	1/16	8.6
BK115HR	11.25	10.50	10.90	3 sp	1 9/16	1/2	1/16	8.8
BK120HR	11.75	11.00	11.40	3 sp	1 9/16	1/2	1/16	9.2
BK130HR	12.75	12.00	12.40	3 sp	1 9/16	1/2	1/16	10.6
BK140HR	13.75	13.00	13.40	3 sp	1 9/16	1/2	1/16	12.9
BK150HR	14.75	14.00	14.40	3 sp	1 9/16	1/2	1/16	14.4
BK160HR	15.75	15.00	15.40	3 sp	1 9/16	1/2	1/16	15.5
BK190HR	18.75	18.00	18.40	3 sp	1 9/16	1/2	1/16	21.1

PART No.	DIAMETERS			TYPE	DIMENSIONS	
	O.D.	PITCH			C	WT.
		4L or A	5L or B			
2BK50HR	4.75	4.00	4.40	2 s	-	4.4
2BK52HR	4.95	4.20	4.60	2 s	-	4.8
2BK55HR	5.25	4.50	4.90	2 s	-	5.4
2BK57HR	5.45	4.70	5.10	2 s	-	5.3
2BK60HR	5.75	5.00	5.40	2 s	-	5.6
2BK62HR	5.95	5.2	5.60	2 s	-	.8
2BK65HR	6.25	5.50	5.90	3 s	1/4	6.4
2BK67HR	6.45	5.70	6.10	3 s	1/4	6.7
2BK70HR	6.75	6.00	6.40	3 s	1/4	7.2
2BK80HR	7.75	7.00	7.40	3 lh	1/4	8.3
2BK90HR	8.75	8.00	8.40	3 lh	1/4	9.8
2BK100HR	9.75	9.00	9.40	3 lh	1/4	11.5
2BK110HR	10.75	10.00	10.40	3 sp	1/4	13.6
2BK120HR	11.75	11.00	11.40	3 sp	1/4	15.0
2BK130HR	12.75	12.00	12.40	3 sp	1/4	16.7
2BK140HR	13.75	13.00	13.40	3 sp	1/4	19.8
2BK160HR	15.75	15.00	15.40	3 sp	1/4	24.5
2BK190HR	18.75	18.00	18.40	3 sp	1/4	26.0

All HR sheaves use standard MasterDrive H bushings.

Each HR Sheave includes an **HRBK** bolt kit to use in place of standard H bushing bolts.

BK Sheaves are accurately machined from gray cast iron, statically balanced, painted and individually packaged.

Note: Cast iron sheaves may not exceed 6500 FPM. This speed **DOES NOT** specify if dynamic balancing (2 plane) is required. Contact customer service to verify whether dynamic balancing is required.



VARIABLE PITCH ADJUSTABLE SHEAVES

ONE GROOVE & TWO GROOVE 1VP DIMENSIONS

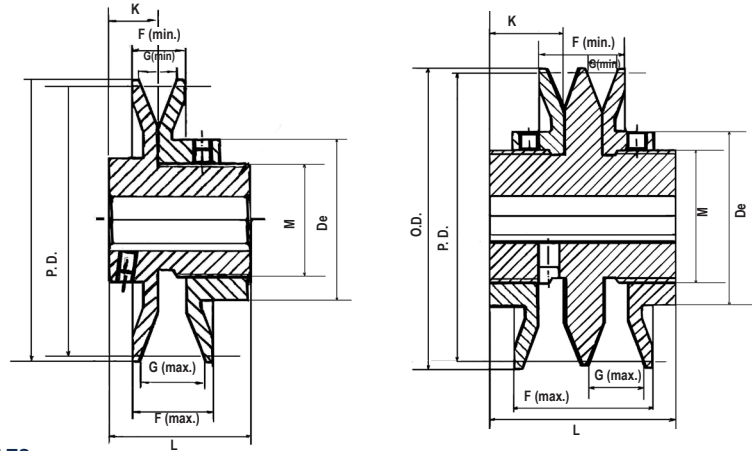
Cast Iron Sheaves - **Light Duty**

Bored-to Size - **One Groove & Two Groove**

1VP and 2VP Dimensions



VP



1VP SHEAVES MAY BE USED WITH 3L, 4L, 5L, A, B AND 5V BELTS

PART No.	O.D.	F		G		L	K	BORE	M	DE	AVG. WT
		MAX	MIN	MAX	MIN						
1VP25	2.380	0.810	0.560	0.630	0.380	1.590	0.620	1/2, 5/8, 3/4	1.375	2.0	1.0
1VP30	2.870	0.810	0.560	0.630	0.380	1.660	0.630	1/2, 5/8, 3/4	1.500	2.13	1.4
1VP34	3.150	1.000	0.690	0.810	0.500	1.880	0.780	1/2, 5/8, 3/4	1.500	2.13	1.5
1VP40	3.750	1.060	0.690	0.880	0.500	1.880	0.660	1/2, 5/8, 3/4	1.500	2.13	2.0
								7/8, 1, 1 1/8	1.750	2.38	2.0
1VP44	4.150	1.060	0.690	0.880	0.500	1.880	0.660	1/2, 5/8, 3/4	1.500	2.13	2.2
								7/8, 1, 1 1/8	1.750	2.38	2.2
1VP50	4.750	1.060	0.690	0.880	0.500	2.000	0.780	1/2, 5/8, 3/4	1.500	2.13	2.7
								7/8, 1, 1 1/8	1.750	2.38	2.8
1VP56	5.350	1.060	0.690	0.880	0.500	2.000	0.780	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	1.750	2.38	3.4
1VP60	6.000	1.250	0.880	1.031	0.660	2.160	0.850	5/8, 3/4, 7/8, 1 1/8	2.000	2.62	4.6
								1 3/8, 1 5/8	2.500	3.29	5.3
1VP62	5.950	1.250	0.880	1.031	0.660	2.000	0.780	5/8, 3/4, 7/8, 1, 1 1/8	2.000	2.62	4.6
								1 1/4, 1 3/8	2.500	3.29	5.1
1VP65	6.500	1.250	0.880	1.030	0.660	2.160	0.850	3/4, 7/8, 1 1/8	2.000	2.62	5.3
								1 3/8	2.500	3.29	5.8
1VP68	6.550	1.250	0.880	1.030	0.660	2.000	0.780	5/8, 3/4, 7/8, 1, 1 1/8	2.000	2.62	5.2
								1 1/4, 1 3/8	2.500	3.29	5.8
1VP71	7.100	1.250	0.880	1.030	0.660	2.160	0.850	3/4, 7/8, 1 1/8	2.000	2.62	6.5
								1 3/8, 1 5/8	2.500	3.29	6.8
1VP75	7.500	1.250	0.880	1.030	0.660	2.160	0.850	3/4, 7/8, 1 1/8	2.000	2.62	7.0
								1 3/8, 1 5/8	2.500	3.29	7.6

All 1VP & 2VP sheaves are furnished with standard keyway and (2) 5/16-18 knurled setscrews over each slot & in bore.

VARIABLE PITCH ADJUSTABLE SHEAVES

ONE GROOVE & TWO GROOVE 2VP DIMENSIONS

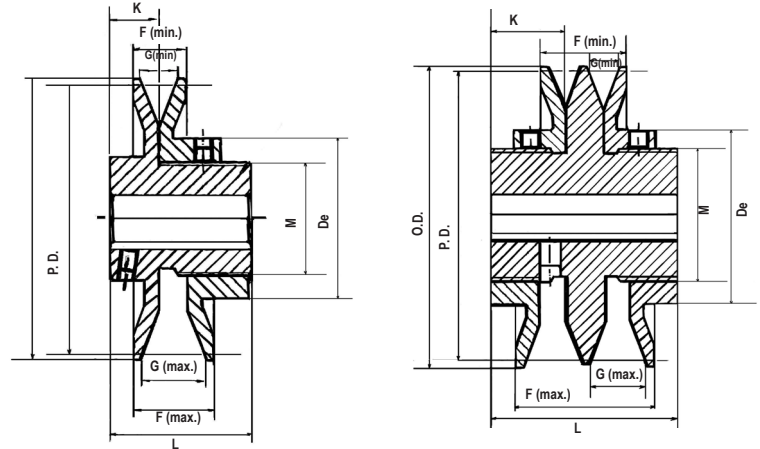
Cast Iron Sheaves - Light Duty

Bored-to Size - One Groove & Two Groove

1VP and 2VP Dimensions



VP



2VP SHEAVES MAY BE USED WITH 3L, 4L, 5L, A, B AND 5V BELTS.

PART No.	O.D.	F		G		L	K	BORE	M	DE	AVG. WT
		MAX	MIN	MAX	MIN						
2VP36	3.350	2.000	1.380	0.810	0.500	3.000	1.190	1/2, 5/8, 3/4, 7/8, 1, 1 1/8	2.000	2.62	3.8
2VP42	3.950	2.130	1.380	0.880	0.500	3.000	1.190	5/8, 3/4, 7/8, 1, 1 1/8	2.000	2.62	4.7
2VP50	4.750	2.130	1.380	0.880	0.500	3.000	1.190	5/8, 3/4, 7/8, 1, 1 1/8	2.125	2.75	6.3
2VP56	5.350	2.130	1.380	0.880	0.500	3.000	1.190	5/8, 3/4, 7/8, 1, 1 1/8	2.125	2.75	7.7
								1 3/8, 1 5/8	2.500	3.29	8.0
2VP60	6.000	2.380	1.630	1.030	0.660	3.250	1.250	3/4, 7/8, 1, 1 1/8	2.125	2.75	9.8
								1 3/8, 1 5/8	2.500	3.29	9.8
2VP62	5.950	2.380	1.630	1.030	0.660	3.000	1.190	3/4, 7/8, 1, 1 1/8	2.125	2.75	9.0
								1 3/8, 1 5/8	2.500	3.29	9.4
2VP65	6.500	2.380	1.630	1.030	0.660	3.250	1.250	3/4, 7/8, 1 1/8	2.125	2.75	11.0
								1 3/8, 1 5/8	2.500	3.29	12.2
2VP68	6.550	2.380	1.630	1.030	0.660	3.000	1.190	3/4, 7/8, 1, 1 1/8	2.125	2.75	10.4
								1 1/4, 1 3/8, 1 5/8	2.500	3.29	10.9
2VP71	7.100	2.380	1.630	1.030	0.660	3.250	1.250	3/4, 7/8, 1 1/8	2.125	2.75	13.4
								1 3/8, 1 5/8	2.500	3.29	14.3
2VP75	7.500	2.380	1.630	1.030	0.660	3.250	1.250	3/4, 7/8, 1 1/8	2.125	2.75	14.6
								1 3/8, 1 5/8	2.500	3.29	15.0

All 1VP & 2VP sheaves are furnished with standard keyway and (2) 5/16-18 knurled setscrews over each slot & in bore.

LIGHT DUTY ADJUSTABLE SHEAVES

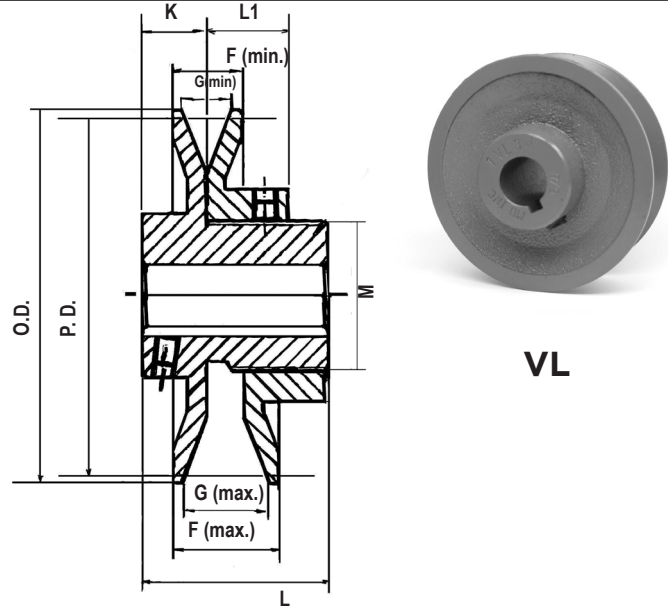
ONE GROOVE VL SHEAVES



Cast Iron Sheaves - **Light Duty**
 Bored-to Size - **One Groove**
VL Sheaves

Ordering part number size
 Example: 1VL25-5/8

VL SHEAVES MAY BE USED WITH 3L, 4L, 5L,
 A AND B BELTS.



ALL VL SHEAVES ARE FURNISHED WITH STANDARD KEYWAY AND (1) 5/16-18 X 5/16 KNURLED SETSCREW OVER KEYWAY.

PART No.	O.D.	F		G		L	L1	K	M	BORE	AVG. WT
		MAX	MIN	MAX	MIN						
1VL25	2.500	0.781	0.531	0.625	0.375	1.634	0.728	0.697	1.125	1/2, 5/8	.85
1VL30	2.870	0.781	0.531	0.625	0.375	1.634	0.728	0.697	1.125	1/2, 5/8	1.1
1VL34	3.150	1.000	0.625	0.875	0.500	1.933	0.815	0.744	1.125	1/2, 5/8	1.1
									1.375	3/4	1.3
1VL40	3.750	1.000	0.625	0.875	0.500	1.933	0.815	0.744	1.125	1/2, 5/8	1.5
									1.375	3/4, 7/8	1.5
1VL44	4.150	1.000	0.625	0.875	0.500	1.933	0.815	0.744	1.125	1/2, 5/8	1.6
									1.375	3/4, 7/8	1.7
1VM50	4.750	1.060	0.688	0.875	0.500	1.996	0.846	0.776	1.125	1/2, 5/8	2.4
									1.375	3/4, 7/8	2.4



LIGHT DUTY ADJUSTABLE SHEAVES

ONE GROOVE AL SHEAVES

Cast Iron Sheaves - **Light Duty**
Bored-to Size - **One Groove**
AL Sheaves

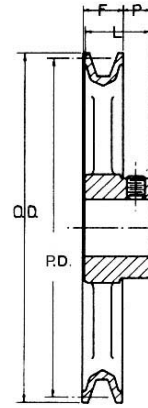
Order part number size

Example:

No keyway = AL54-5/8

With keyway = AL54-5/8KW

AL Sheaves may be used with 4L, A Belts.



AL

AL SHEAVES COME WITH OR WITHOUT KEYWAY AND ARE FOR LIGHT APPLICATIONS - FANS, AIR CONDITIONING UNITS, FURNACE BLOWERS ETC.

PART No.	O.D.	PITCH	F	L	P	BORE	HUB O.D.	AVG. WT
AL54	4.93	4.78	.593	1.062	.468	5/8, 3/4, 1	1.7	1.2
AL64	5.93	5.78	.593	1.062	.468	5/8, 3/4, 1	1.7	1.4
AL74	6.93	6.78	.593	1.062	.468	5/8, 3/4, 1	1.7	1.7
AL84	7.93	7.78	.593	1.062	.468	5/8, 3/4, 1	1.7	1.9
AL94	8.93	8.78	.593	1.062	.468	3/4, 1	1.9	2.6
AL104	9.93	9.78	.593	1.062	.468	3/4, 1	2.0	3.0
AL114	10.93	10.78	.593	1.062	.468	3/4, 1	2.0	3.5
AL124	11.93	11.78	.593	1.062	.468	3/4, 1	2.0	4.0
AM144	14.16	14.00	.687	1.750	.406	1	2.0	5.2

Rework Charges for:

Rebores, Keyways, additional setscrews - P.O.R. All AL sheaves are statically balanced and include (1) 5/16-18 knurled setscrew.

PART No.	DIAMETER RANGES											
	"3L" BELTS				"4L" OR "A" BELTS				"5L" OR "B" BELTS			
	MIN PITCH	TURNS OPEN	MAX PITCH	TURNS OPEN	MIN. DATUM	TURNS OPEN	MAX. DATUM	TURNS OPEN	MIN. DATUM	TURNS OPEN	MAX. DATUM	TURNS OPEN
1VL25	1.6	4	2.4	0	-	-	-	-	-	-	-	-
1VL30	1.8	4	2.7	0	-	-	-	-	-	-	-	-
1VL34	1.7	4	2.5	0	1.9	5	2.9	0	2.4	5	3.2	1
1VL40	2.3	4	3.1	0	2.4	5	3.4	0	2.7	6	3.7	1
1VL44	2.7	4	3.5	0	2.8	5	3.8	0	3.1	6	4.1	1
1VM50	3.3	4	4.1	0	3.4	5	4.4	0	3.7	6	4.7	1

PART No.	DIAMETER RANGES															
	"3L" BELTS				"4L" OR "A" BELTS				"5L" OR "B" BELTS				"5V" BELTS			
	MIN PITCH	TURNS OPEN	MAX PITCH	TURNS OPEN	MIN. DATUM	TURNS OPEN	MAX. DATUM	TURNS OPEN	MIN. DATUM	TURNS OPEN	MAX. DATUM	TURNS OPEN	MIN PITCH	TURNS OPEN	MAX PITCH	TURNS OPEN
2VP36	1.9	4	2.7	0	2.0	5	3.0	0	2.5	5	3.3	1	-	-	-	-
2VP42	2.5	4	3.3	0	2.6	5	3.6	0	2.9	6	3.9	1	-	-	-	-
2VP50	3.3	4	4.1	0	3.4	5	4.4	0	3.7	6	4.7	1	-	-	-	-
2VP56	3.9	4	4.7	0	4.0	5	5.0	0	4.3	6	5.3	1	-	-	-	-
2VP60	-	-	-	-	4.2	5	5.2	0	4.3	6	5.5	0	4.7	6	5.9	0
2VP62	-	-	-	-	4.2	5	5.2	0	4.3	6	5.5	0	4.7	6	5.9	0
2VP65	-	-	-	-	4.7	5	5.7	0	4.8	6	6.0	0	5.2	6	6.4	0
2VP68	-	-	-	-	4.7	5	5.7	0	4.8	6	6.0	0	5.2	6	6.4	0
2VP71	-	-	-	-	5.3	5	6.3	0	5.4	6	6.6	0	5.8	6	7.0	0
2VP75	-	-	-	-	5.7	5	6.7	0	5.8	6	7.0	0	6.2	6	7.4	0

PART No.	DIAMETER RANGES															
	"3L" BELTS				"4L" OR "A" BELTS				"5L" OR "B" BELTS				"5V" BELTS			
	MIN PITCH	TURNS OPEN	MAX PITCH	TURNS OPEN	MIN. DATUM	TURNS OPEN	MAX. DATUM	TURNS OPEN	MIN. DATUM	TURNS OPEN	MAX. DATUM	TURNS OPEN	MIN PITCH	TURNS OPEN	MAX PITCH	TURNS OPEN
1VP25	1.6	4	2.4	0	-	-	-	-	-	-	-	-	-	-	-	-
1VP30	1.8	4	2.7	0	-	-	-	-	-	-	-	-	-	-	-	-
1VP34	1.7	4	2.5	0	1.9	5	2.9	0	2.4	5	3.2	1	-	-	-	-
1VP40	2.3	4	3.1	0	2.4	5	3.4	0	2.7	6	3.7	1	-	-	-	-
1VP44	2.7	4	3.5	0	2.8	5	3.8	0	3.1	6	4.1	1	-	-	-	-
1VP50	3.3	4	4.1	0	3.4	5	4.4	0	3.7	6	4.7	1	-	-	-	-
1VP56	3.9	4	4.7	0	4.0	5	5.0	0	4.3	6	5.3	1	-	-	-	-
1VP60	-	-	-	-	4.2	5	5.2	0	4.3	6	5.5	0	-	-	-	-
1VP62	-	-	-	-	4.2	5	5.2	0	4.3	6	5.5	0	4.7	6	5.9	0
1VP65	-	-	-	-	4.7	5	5.7	0	4.8	6	6.0	0	5.2	6	6.4	0
1VP68	-	-	-	-	4.7	5	5.7	0	4.8	6	6.0	0	5.2	6	6.4	0
1VP71	-	-	-	-	5.3	5	6.3	0	5.4	6	6.6	0	5.8	6	7.0	0
1VP75	-	-	-	-	5.7	5	6.7	0	5.8	6	7.0	0	6.2	6	7.4	0

INSTALLATION AND OPERATION INSTRUCTIONS VL-VP FHP ADJUSTABLE SHEAVES

Continued on the following page

1. Loosen all setscrews on the sheave. Rotate the adjustable flange(s) to make the face width of the adjustable sheave the same as the face width of the companion sheave.
2. Inspect the motor shaft and key for any nicks or burrs and remove if present. Install shaft key. Slide the sheave onto the motor shaft.
3. Align the adjustable sheave with the companion sheave by using a straight edge or piece of string. This is most easily accomplished by using the four-point method shown below.

Note: Dimensions, A, B, C and D must be equal for correct alignment.



4. Secure the sheave to motor shaft by tightening the setscrew over the key to the proper torque (110-130 in. lbs. torque for 5/16" setscrews and 50-70 in. lbs. torque for 1/4").
Note: On two groove sheaves the setscrew is located at the base of the center flange. You may need to adjust the flange open to expose it.
5. Adjust the sheave to the desired pitch diameter. Each turn of the flange changes the pitch diameter approximately .16 inches. Six turns are required to adjust the sheave from minimum to maximum for B (5L) belts, six turns for A (4L) belts, five turns for (3L) belts; and seven turns for (5V) belts.
Note: You must adjust both flanges of a two-groove sheave equality so belts will ride evenly.
6. Lock the adjustable flange(s) into position by tightening the setscrew(s) to the proper torque (5/16" setscrew - 110-130 in. lbs. torque, 1/4" setscrews - 60-70 in. lbs. torque).
Warning: To prevent damage to hub threads, the set screw(s) must be over the flats or in the machined groove. If the flange is not properly locked, the sheave will fail prematurely.
7. Install and properly tension belts.

WARNING

Rotating equipment can cause personal injury. BE SAFE install a guard around the drive to keep anything from coming into contact with moving parts.

8. Start the drive. If a speed correction is necessary, stop the drive and remove the guard and belts. Adjust the sheave as per steps 5 through 7.

MASTERDRIVE INTERCHANGE FROM MASKA

X-REF. MASKA L.D. BORED-TO-SIZE



AK-MA SINGLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
AK17	MA18
AK20	MA20
AK21	MA21
AK22	MA22
AK23	MA23
AK25	MA25
AK26	MA26
AK27	MA27
AK28	MA28
AK30	MA30
AK32	MA33
AK34	MA35
AK39	MA38
AK41	MA40
AK44	MA43
AK46	MA45
AK49	MA48
AK51	MA50
AK54	MA53
AK56	MA55
AK59	MA58
AK61	MA60
AK64	MA63
AK66	MA65
AK69	MA68
AK71	MA70
AK74	MA73
AK79	MA78
AK84	MA83
AK89	MA88
AK94	MA93
AK99	MA98
AK104	MA103
AK109	MA108
AK114	MA113
AK124	MA123
AK134	MA133
AK144	MA143
AK154	MA153
AK184	MA183

2AK-2MA DOUBLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
2AK20	2MA20
2AK21	2MA22
2AK22	2MA23
2AK23	2MA24
2AK25	2MA25
2AK26	2MA27
2AK27	2MA28
2AK28	2MA29
2AK30	2MA30
2AK32	2MA33
2AK34	2MA35
2AK39	2MA38
2AK41	2MA40
2AK44	2MA43
2AK46	2MA45
2AK49	2MA48
2AK51	2MA50
2AK54	2MA53
2AK56	2MA55
2AK59	2MA58
2AK61	2MA60
2AK64	2MA63
2AK74	2MA73
2AK84	2MA83
2AK94	2MA93
2AK104	2MA103
2AK114	2MA113
2AK124	2MA123
2AK134	2MA133
2AK144	2MA143
2AK154	2MA153
2AK184	2MA183

BK-MB SINGLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
BK24	MB24
BK25	MB25
BK26	MB26
BK27	MB28
BK28	MB30
BK30	MB31
BK32	MB34
BK34	MB35
BK36	MB38
BK40	MB40
BK45	MB43
BK47	MB45
BK50	MB48
BK52	MB50
BK55	MB53
BK57	MB55
BK60	MB58
BK62	MB60
BK65	MB63
BK67	MB65
BK70	MB68
BK72	MB70
BK75	MB73
BK77	MB75
BK80	MB78
BK85	MB83
BK90	MB88
BK95	MB93
BK100	MB98
BK105	MB103
BK110	MB108
BK115	MB113
BK120	MB118
BK130	MB128
BK140	MB138
BK160	MB158
BK190	MB188

2BK-2MB DOUBLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
2BK25	2MB25
2BK27	2MB28
2BK28	2MB30
2BK30	2MB32
2BK32	2MB34
2BK34	2MB35
2BK36	2MB38
2BK40	2MB40
2BK45	2MB43
2BK47	2MB45
2BK50	2MB48
2BK52	2MB50
2BK55	2MB53
2BK57	2MB55
2BK60	2MB58
2BK62	2MB60
2BK65	2MB63
2BK67	2MB65
2BK70	2MB68
2BK80	2MB78
2BK90	2MB88
2BK100	2MB98
2BK110	2MB108
2BK120	2MB118
2BK130	2MB128
2BK140	2MB138
2BK160	2MB158
2BK190	2MB188



MASTERDRIVE INTERCHANGE FROM MASKA

X-REF. MASKA L.D. LIGHT DUTY BUSHED TYPE



AKH-MAL SINGLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
AK30H	MAL30
AK32H	MAL32
AK34H	MAL34
AK39H	MAL37
AK41H	MAL39
AK44H	MAL42
AK46H	MAL44
AK49H	MAL47
AK51H	MAL49
AK54H	MAL52
AK56H	MAL54
AK59H	MAL57
AK61H	MAL59
AK64H	MAL62
AK66H	MAL64
AK69H	MAL67
AK71H	MAL69
AK74H	MAL72
AK79H	MAL77
AK84H	MAL82
AK89H	MAL87
AK94H	MAL92
AK99H	MAL97
AK104H	MAL102
AK109H	MAL107
AK114H	MAL112
AK124H	MAL122
AK134H	MAL132
AK144H	MAL142
AK154H	MAL152
AK184H	MAL182

2AKH-2MAL DOUBLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
2AK30H	2MAL30
2AK32H	2MAL32
2AK34H	2MAL34
2AK39H	2MAL37
2AK41H	2MAL39
2AK44H	2MAL42
2AK46H	2MAL44
2AK49H	2MAL47
2AK51H	2MAL49
2AK54H	2MAL52
2AK56H	2MAL54
2AK59H	2MAL57
2AK61H	2MAL59
2AK64H	2MAL62
2AK74H	2MAL72
2AK84H	2MAL82
2AK94H	2MAL92
2AK104H	2MAL102
2AK114H	2MAL112
2AK124H	2MAL122
2AK134H	2MAL132
2AK144H	2MAL142
2AK154H	2MAL152
2AK184H	2MAL182

BKH-MBL SINGLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
BK30H	MBL31
BK32H	MBL33
BK34H	MBL35
BK36H	MBL37
BK40H	MBL39
BK45H	MBL42
BK47H	MBL44
BK50H	MBL47
BK52H	MBL49
BK55H	MBL52
BK57H	MBL54
BK60H	MBL57
BK62H	MBL59
BK65H	MBL62
BK67H	MBL64
BK70H	MBL67
BK72H	MBL69
BK75H	MBL72
BK77H	MBL74
BK80H	MBL77
BK85H	MBL82
BK90H	MBL87
BK95H	MBL92
BK100H	MBL97
BK105H	MBL102
BK110H	MBL107
BK115H	MBL112
BK120H	MBL117
BK130H	MBL127
BK140H	MBL137
BK150H	MBL147
BK160H	MBL157
BK190H	MBL187

2BKH-2MBL DOUBLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
2BK32H	2MBL33
2BK34H	2MBL35
2BK36H	2MBL37
2BK40H	2MBL39
2BK45H	2MBL42
2BK47H	2MBL44
2BK50H	2MBL47
2BK52H	2MBL49
2BK55H	2MBL52
2BK57H	2MBL54
2BK60H	2MBL57
2BK62H	2MBL59
2BK65H	2MBL62
2BK67H	2MBL64
2BK70H	2MBL67
2BK80H	2MBL77
2BK90H	2MBL87
2BK100H	2MBL97
2BK110H	2MBL107
2BK120H	2MBL117
2BK130H	2MBL127
2BK140H	2MBL137
2BK160H	2MBL157
2BK190H	2MBL187

AIR HANDLING

VL/VM LIGHT DUTY	
MASTERDRIVE PART#	MASKA PART#
1VL25	MVL25
1VL30	MVL30
1VL34	MVL34
1VL40	MVL40
1VL44	MVL44
1VM50	1VM50

AL/AM SINGLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
AL54	MFAL54
AL64	MFAL64
AL74	MFAL74
AL84	MFAL84
AL94	MFAL94
AL104	MFAL104
AL114	MFAL114
AL124	MFAL124
AM144	MFAM144

VARIABLE PITCH

2VP DOUBLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
2VP36	D8350
2VP42	D8400
2VP50	D8450
2VP56	D8550
2VP60/2VP62/ /2VP65	D8600
2VP68/2VP71	D8740
2VP75	D8740

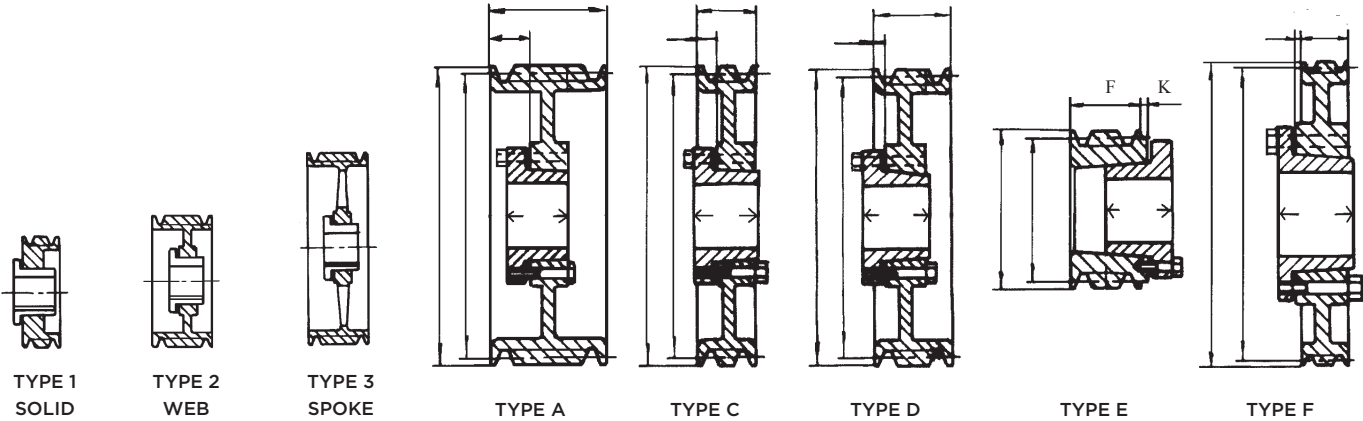
1VP SINGLE GROOVE	
MASTERDRIVE PART#	MASKA PART#
1VP25	-
1VP30	-
1VP34	8325
1VP40	8350
1VP44	8400
1VP50	8450
1VP56	8550
1VP60/1VP62/ 1VP65	8600
1VP68/ 1VP71	8670
1VP75	8740



Cast Iron Sheaves - **Heavy Duty**
 Bushed, **One and Two Groove**
A-B QD Sheaves

Ordering part number size
 Example: 1B34SH

Order QD bushings separately



O.D.	P.D.		1 Groove F =						2 GROOVE F = 1 3/4					
	A	B	PART NO.	BUSH	TYPE	1B34SH THRU 1B64SDS = 7/8 1B66SDS THRU 1B300SF = 1	K	L	WT.	PART NO.	BUSH	TYPE	K	L
3.75	3.00	3.40	1B34SH	SH	D-1	0	1 5/16	1.4	*2B34SH	SH	E-1	0	1 5/16	2.4
3.95	3.20	3.60	1B36SH	SH	D-1	0	1 5/16	1.6	*2B36SH	SH	D-1	3/16	1 5/16	2.7
4.15	3.40	3.80	1B38SH	SH	D-1	0	1 5/16	1.7	*2B38SH	SH	D-1	3/16	1 5/16	2.9
4.35	3.60	4.00	1B40SH	SH	C-1	1/16	1 5/16	1.9	+2B40SH	SH	A-1	11/16	1 5/16	3.2
4.55	3.80	4.20	1B42SH	SH	C-1	1/16	1 5/16	2.2	+2B42SH	SH	A-1	11/16	1 5/16	3.7
4.75	4.00	4.40	1B44SH	SH	C-1	1/16	1 5/16	2.5	2B44SH	SH	A-1	11/16	1 5/16	4.1
4.95	4.20	4.60	1B46SDS	SDS	C-1	1/8	1 5/16	2.5	2B46SDS	SDS	A-1	11/16	1 5/16	4.2
5.15	4.40	4.80	1B48SDS	SDS	C-1	1/8	1 5/16	2.8	2B48SDS	SDS	A-1	11/16	1 5/16	4.6
5.35	4.60	5.00	1B50SDS	SDS	C-1	1/8	1 5/16	3.1	2B50SDS	SDS	A-1	11/16	1 5/16	5.0
5.55	4.80	5.20	1B52SDS	SDS	C-1	1/8	1 5/16	3.3	2B52SDS	SDS	A-1	11/16	1 5/16	5.4
5.75	5.00	5.40	1B54SDS	SDS	C-1	1/8	1 5/16	3.7	2B54SDS	SDS	A-1	11/16	1 5/16	5.8
5.95	5.20	5.60	1B56SDS	SDS	C-1	1/8	1 5/16	4.2	2B56SDS	SDS	A-1	11/16	1 5/16	6.1
6.15	5.40	5.80	1B58SDS	SDS	C-1	1/8	1 5/16	3.9	2B58SDS	SDS	A-1	11/16	1 5/16	6.1
6.35	5.60	6.00	1B60SDS	SDS	C-2	1/8	1 5/16	4.0	2B60SDS	SDS	A-2	11/16	1 5/16	6.4
6.55	5.80	6.20	1B62SDS	SDS	C-2	1/8	1 5/16	4.2	2B62SDS	SDS	A-2	11/16	1 5/16	6.7
6.75	6.00	6.40	1B64SDS	SDS	C-2	1/8	1 5/16	4.3	2B64SDS	SDS	A-2	11/16	1 5/16	7.1
6.95	6.20	6.60	1B66SDS	SDS	C-2	1/4	1 5/16	5.1	2B66SDS	SDS	A-2	11/16	1 5/16	7.6
7.15	6.40	6.80	1B68SDS	SDS	C-2	1/4	1 5/16	5.3	2B68SDS	SDS	A-2	11/16	1 5/16	7.8
7.35	6.60	7.00	1B70SDS	SDS	C-2	1/4	1 5/16	5.6	2B70SK	SK	D-2	7/16	1 15/16	9.5
7.75	7.00	7.40	1B74SDS	SDS	C-2	1/4	1 5/16	6.0	2B74SK	SK	D-2	7/16	1 15/16	10.2

* = Can only be mounted from one direction.

+ = Includes socket head cap screws to be used in place of hex head cap screws that come with the bushing.

Note: Cast iron sheaves may not exceed 6500 FPM. This speed

DOES NOT specify if dynamic balancing (2 plane) is required.

Contact customer service to verify whether dynamic balancing is required.

Cast Iron Sheaves - **Heavy Duty**
 Bushed, **One and Two Groove**
A-B QD Sheaves

Ordering part number size
 Example: 1B34SH

Order QD bushings separately

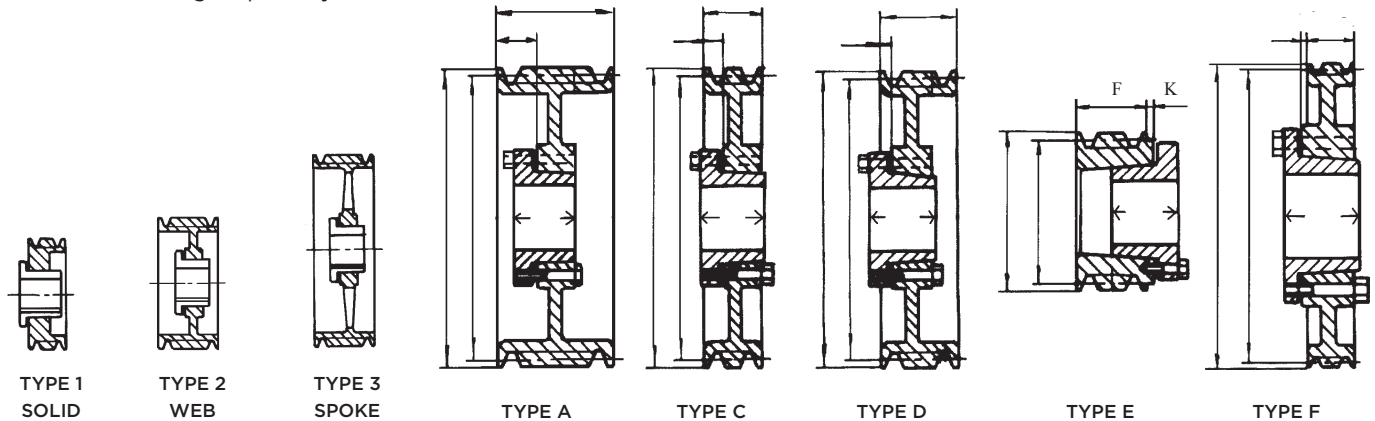


CHART CONTINUED FROM PREVIOUS PAGE

O.D.	P.D.		1 Groove F =						2 GROOVE F = 1 3/4					
	A	B	PART NO.	BUSH	TYPE	K	L	WT.	PART NO.	BUSH	TYPE	K	L	WT.
8.35	7.60	8.00	1B80SDS	SDS	C-2	1/4	1 5/16	6.6	2B80SK	SK	D-2	7/16	1 15/16	10.8
8.95	8.20	8.60	1B86SDS	SDS	C-3	1/4	1 5/16	6.8	2B86SK	SK	D-3	7/16	1 15/16	11.7
9.35	8.60	9.00	1B90SDS	DS	C-3	1/4	1 5/16	7.0	2B90SK	SK	D-3	7/16	1 15/16	13.0
9.75	9.00	9.40	1B94SDS	SDS	C-3	1/4	1 5/16	7.4	2B94SK	SK	D-3	7/16	1 15/16	13.2
11.35	10.60	11.00	1B110SDS	SDS	C-3	1/4	1 5/16	10.5	2B110SK	SK	D-3	7/16	1 15/16	16.4
12.75	12.00	12.40	1B124SDS	SDS	C-3	1/4	1 5/16	11.5	2B124SK	SK	D-3	7/16	1 15/16	18.3
13.95	13.20	13.60	1B136SDS	SDS	C-3	1/4	1 5/16	12.9	2B136SK	SK	D-3	7/16	1 15/16	20.3
15.75	15.00	15.40	1B154SK	SK	F-3	1/4	1 15/16	17.1	2B154SK	SK	D-3	7/16	1 15/16	23.8
16.35	15.60	16.00	1B160SK	SK	F-3	1/4	1 15/16	18.6	2B160SK	SK	D-3	7/16	1 15/16	24.3
18.75	18.00	18.40	1B184SK	SK	F-3	1/4	1 15/16	23.8	2B184SK	SK	D-3	7/16	1 15/16	31.8
20.35	19.60	20.00	1B200SK	SK	F-3	1/4	1 15/16	27.0	2B200SF	SF	D-3	3/8	2 1/16	33.4
25.35	24.60	25.00	1B250SF	SF	F-3	1/4	1 1/4	39.0	2B250SF	SF	D-3	3/8	2 1/16	45.0
30.35	29.60	30.00	1B300SF	SF	F-3	1/4	1 1/4	57.0	2B300SF	SF	D-3	3/8	2 1/16	71.2
38.35	37.60	38.00							2B380SF	SF	D-3	3/8	2 1/16	103.0

* = Can only be mounted from one direction.

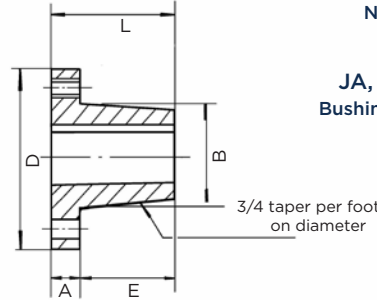
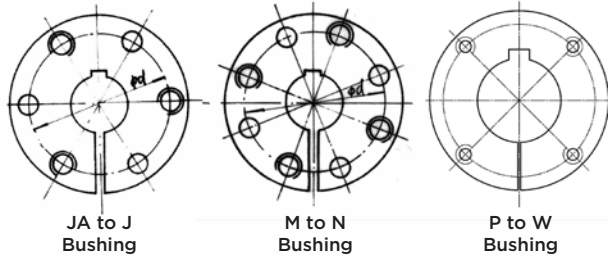
+ = Includes socket head cap screws to be used in place of hex head cap screws that come with the bushing.

Note: Cast iron sheaves may not exceed 6500 FPM. This speed

DOES NOT specify if dynamic balancing (2 plane) is required.

Contact customer service to verify whether dynamic balancing is required.

JA-N bushings are reverse mountable



Note: All bushings include a set screw over the keyway. Except JA.

JA, SH, SDS, SD, SK, SF, E, F, J & M Bushings are machined out of ductile iron.

***Shallow Keyseat** - Keystock supplied with bushing

***Oversize Key**

Note: A rectangular key is supplied with bushings that have shallow keyseats. This key will fit the standard depth keyseat on the shaft and the shallow keyseat on the bushing.

Ordering Example: (JA1.1/16)

QD BUSHINGS - DIMENSIONS (INCHES)

BUSHING	A	B	D	E	L	Ø D BOLT REQUIRED	CAP SCREW GRADE 5		SET SCREW SIZE
							QTY.	SIZE	
JA	5/16	1.375	2	11/16	1	1 21/32	3	10 x 1	-
SH	7/16	1.871	2 11/16	7/8	1 5/16	2 1/4	3	1/4 x 1 3/8	1/4
SDS	7/16	2.187	3 1/8	7/8	1 5/16	2 11/16	3	1/4 x 1 3/8	1/4
SD	7/16	2.187	3 1/8	1 3/8	1 13/16	2 11/16	3	1/4 x 1 7/8	1/4
SK	9/16	2.812	3 7/8	1 3/8	1 15/16	3 5/16	3	5/16 x 2	5/16
SF	5/8	3.125	4 5/8	1 7/16	2 1/16	3 7/8	3	3/8 x 2	3/8
E	7/8	3.834	6	1 7/8	2 3/4	5	3	1/2 x 2 3/4	3/8
F	1	4.437	6 5/8	2 3/4	3 3/4	5 5/8	3	9/16 x 3 5/8	1/2
J	1 1/8	5.148	7 1/4	3 1/2	4 5/8	6 1/4	3	5/8 x 4 1/2	5/8
M	1 1/4	6.500	9	5 1/2	6 3/4	7 7/8	4	3/4 x 6 3/4	3/4
N	1 1/2	7.000	10	6 5/8	8 1/8	8 1/2	4	7/8 x 8	3/4
P	1 3/4	8.250	11 3/4	7 5/8	9 3/8	10	4	1 x 9 1/2	3/4
W	2	10.437	15	9 3/8	11 3/8	12 3/4	4	1 1/8 x 11 1/2	3/4

BUSHING	BORE RANGE INCH	KEY SEAT INCH	WT.
JA	1/2, 9/16	1/8 x 1/16	.50
	5/8, 11/16, 3/4, 13/16, 7/8	3/16 x 3/32	.45
	15/16, 1	1/4 x 1/8	.35
	1 1/16, 1 1/8, 1 3/16	1/4 x 1/16*	.35
	1 1/4	No Key	.30
SH	1/2, 9/16	1/8 x 1/16	1.20
	5/8, 11/16, 3/4, 13/16, 7/8	3/16 x 3/32	1.20
	15/16, 1, 1 1/16, 1 1/8, 1 3/16, 1 1/4	1/4 x 1/8	.95
	1 1/4†, 1 5/16, 1 3/8	5/16 x 5/32	.80
	1 7/16, 1 1/2, 1 9/16, 1 5/8	3/8 x 1/16*	.75
	1 11/16	No Key	60
SDS	1/2, 9/16	1/8 x 1/16	1.70
	5/8, 11/16, 3/4, 13/16, 7/8	3/16 x 3/32	1.65
	15/16, 1, 1 1/16, 1 1/8, 1 3/16, 1 1/4	1/4 x 1/8	1.45
	1 1/4†, 1 5/16, 1 3/8	5/16 x 5/32	1.30
	1 3/8†, 1 7/16, 1 1/2, 1 9/16, 1 5/8, 1 11/16	3/8 x 3/16	1.10
	1 3/4	3/8 x 1/8*	1.00
	1 13/16	1/2 x 1/8*	1.00
	1 7/8, 1 15/16	1/2 x 1/16*	.90
	2	No Key	.80

BUSHING	BORE RANGE INCH	KEY SEAT INCH	WT.
SD	1/2, 9/16	1/8 x 1/16	2.00
	5/8, 11/16, 3/4, 13/16, 7/8	3/16 x 3/32	2.00
	15/16, 1, 1 1/16, 1 1/8, 1 3/16, 1 1/4	1/4 x 1/8	1.80
	1 1/4†, 1 5/16, 1 3/8	5/16 x 5/32	1.60
	1 3/8†, 1 7/16, 1 1/2, 1 9/16, 1 5/8, 1 11/16	3/8 x 3/16	1.40
	1 3/4	3/8 x 1/8*	1.20
	1 13/16	1/2 x 1/8*	1.20
	1 7/8, 1 15/16	1/2 x 1/16*	1.00
SK	2	No Key	.80
	1/2, 9/16	1/8 x 1/16	3.80
	5/8, 11/16, 3/4, 13/16, 7/8	3/16 x 3/32	3.75
	15/16, 1, 1 1/16, 1 1/8, 1 3/16, 1 1/4	1/4 x 1/8	3.50
	1 1/4†, 1 5/16, 1 3/8	5/16 x 5/32	3.25
	1 5/16†, 1 3/8†, 1 7/16, 1 1/2, 1 9/16, 1 5/8,	3/8 x 3/16	3.00
	1 11/16, 1 3/4	3/8 x 3/16	2.75
	1 3/4†, 1 13/16, 1 7/8, 1 15/16, 2, 2 1/16, 2 1/8	1/2 x 1/4	2.40
	2 3/16, 2 1/4	1/2 x 1/8*	2.00
	2 1/4†, 2 5/16, 2 3/8, 2 7/16, 2 1/2	5/8 x 1/16*	1.75
2 9/16, 2 5/8	No Key	1.20	

Note: All bushings include a set screw over the keyway. Except JA.
JA, SH, SDS, SD, SK, SF, E, F, J & M Bushings are machined out of ductile iron.

BUSH-ING	BORE RANGE INCH	KEY SEAT INCH	WT.	BUSH-ING	BORE RANGE INCH	KEY SEAT INCH	WT.	
SF	1/2, 9/16	1/8 x 1/16	5.45	J	1 7/16, 1 1/2, 1 11/16, 1 3/4	3/8 x 3/16	28.00	
	5/8, 3/4, 7/8	3/16 x 3/32	5.25		1 7/8, 1 15/16, 2, 2 1/16, 2 1/8, 2 3/16, 2 1/4	1/2 x 1/4	26.50	
	15/16, 1, 1 1/16, 1 1/8, 1 3/16, 1 1/4	1/4 x 1/8	5.00		2 5/16, 2 3/8, 2 7/16, 2 1/2, 2 5/8,	5/8 x 5/16	24.50	
	1 5/16, 1 3/8	5/16 x 5/32	4.80		2 11/16, 2 3/4	5/8 x 5/16	23.50	
	1 3/8†, 1 7/16, 1 1/2, 1 9/16, 1 5/8,	3/8 x 3/16	4.50		2 7/8, 2 15/16, 3, 3 1/8, 3 3/16, 3 1/4	3/4 x 3/8	21.50	
	1 11/16, 1 3/4	3/8 x 3/16	4.25		3 5/16, 3 3/8, 3 7/16, 3 1/2,	7/8 x 7/16	19.50	
	1 13/16, 1 7/8, 1 15/16, 2, 2 1/16	1/2 x 1/4	4.00		3 5/8, 3 11/16, 3 3/4	7/8 x 7/16	17.80	
	2 1/8, 2 3/16, 2 1/4	1/2 x 1/4	3.55		3 13/16, 3 7/8, 3 15/16	1 x 3/8*	17.50	
	2 1/4†	5/8 x 5/16	3.50		4, 4 1/8, 4 3/16, 4 1/4, 4 3/8, 4 7/16, 4 1/2	1 x 1/8*	14.00	
	2 5/16, 2 3/8, 2 7/16, 2 1/2	5/8 x 3/16*	3.30		M	1 15/16, 2, 2 3/16, 2 1/4	1/2 x 1/4	61.50
	2 9/16, 2 5/8, 2 11/16, 2 3/4	5/8 x 1/16*	2.80			2 3/8, 2 7/16, 2 1/2, 2 5/8, 2 11/16, 2 3/4	5/8 x 5/16	57.00
	2 13/16, 2 7/8	3/4 x 1/16*	2.45			2 7/8, 2 15/16, 3, 3 1/8, 3 3/16, 3 1/4	3/4 x 3/8	53.50
	2 15/16	No Key	2.30			3 3/8, 3 7/16, 3 1/2, 3 5/8, 3 11/16, 3 3/4	7/8 x 7/16	50.00
E	7/8, 15/16	3/16 x 3/32	11.45	3 13/16, 3 7/8, 3 15/16, 4, 4 1/8, 4 3/16, 4 1/4,		1 x 1/2	45.00	
	1, 1 1/8, 1 3/16, 1 1/4	1/4 x 1/8	11.30	4 3/8, 4 7/16, 4 1/2		1 x 1/2	40.00	
	1 5/16, 1 3/8	5/16 x 5/32	11.00	4 5/8, 4 11/16, 4 3/4		1 1/4 x 5/8	37.00	
	1 3/8†, 1 7/16, 1 1/2, 1 9/16, 1 5/8,	3/8 x 3/16	10.60	4 7/8, 4 15/16, 5, 5 3/16, 5 1/4, 5 3/8, 5 7/16,		1 1/4 x 1/4*	34.00	
	1 11/16, 1 3/4	3/8 x 3/16	10.30	5 1/2		1 1/4 x 1/4*	28.70	
	1 13/16, 1 7/8, 1 15/16, 2, 2 1/16,	1/2 x 1/4	9.80	N		2 15/16, 3, 3 1/4	3/4 x 3/8	80.00
	2 1/8, 2 3/16, 2 1/4	1/2 x 1/4	9.30			3 3/8, 3 7/16, 3 1/2	7/8 x 7/16	76.50
	2 1/4†, 2 5/16, 2 3/8, 2 7/16, 2 1/2,	5/8 x 5/16	8.70			3 5/8, 3 3/4	7/8 x 7/16	73.50
	2 9/16, 2 5/8, 2 11/16, 2 3/4	5/8 x 5/16	8.00			3 7/8, 3 15/16, 4, 4 3/16, 4 1/4, 4 3/8, 4 7/16,	1 x 1/2	68.00
	2 13/16, 2 7/8, 2 15/16, 3, 3 1/8, 3 3/16, 3 1/4	3/4 x 1/8*	7.00		4 1/2	1 x 1/2	63.00	
	3 5/16, 3 3/8, 3 7/16, 3 1/2	7/8 x 1/16*	5.80		4 5/8, 4 3/4, 4 7/8, 4 15/16, 5	1 1/4 x 5/8	58.00	
	F	1, 1 1/8, 1 3/16, 1 1/4	1/4 x 1/8		18.60	5 3/16, 5 7/16, 5 1/2	1 1/4 x 1/4*	53.00
		1 3/8	5/16 x 5/32		18.60	5 7/8	1 1/2 x 1/4*	44.00
1 7/16, 1 1/2, 1 9/16, 1 5/8, 1 11/16, 1 3/4		3/8 x 3/16	18.00		6	1 1/2 x 1/8*	44.00	
1 13/16, 1 7/8, 1 15/16, 2, 2 1/16,		1/2 x 1/4	16.80		P	3 3/4	7/8 x 7/16	97.00
2 1/8, 2 3/16, 2 1/4		1/2 x 1/4	16.00			3 15/16, 4 7/16, 4 1/2	1 x 1/2	122.00
2 1/4†, 2 5/16, 2 3/8, 2 7/16, 2 1/2, 2 9/16,		5/8 x 5/16	15.50			4 7/8, 4 15/16, 5, 5 7/16, 5 1/2	1 1/4 x 5/8	115.00
2 5/8, 2 11/16, 2 3/4		5/8 x 5/16	14.20			5 15/16	1 1/2 x 3/4	95.00
2 13/16, 2 7/8, 2 15/16, 3, 3 1/8, 3 3/16, 3 1/4		3/4 x 3/8	12.50	6, 6 7/16		1 1/2 x 1/4*	95.00	
3 5/16, 3 3/8, 3 7/16, 3 1/2, 3 5/8, 3 11/16,		7/8 x 3/16*	10.50	6 3/4, 7		1 3/4 x 1/8*	97.00	
3 3/4		7/8 x 3/16*	9.80	W		6, 6 1/2	1 1/2 x 3/4	190.00
3 7/8, 3 15/16		1 x 1/8*	9.00			7, 7 1/4, 7 1/2	1 3/4 x 7/8	200.00
4		No Key	7.90			7 3/4, 8, 8 1/2	2 x 1/8*	198.00

*Shallow Keyseat - Keystock supplied with bushing

†Oversize Key

Note: A rectangular key is supplied with bushings that have shallow keyseats. This key will fit the standard depth keyseat on the shaft and the shallow keyseat on the bushing. Ordering Example: (JA1.1/16)

Note: All bushings include a set screw over the keyway. Except JA.

JA, SH, SDS, SD, SK, SF, E, F, J & M Bushings are machined out of ductile iron.

BUSH-ING	BORE RANGE MM	KEY SEAT MM	WT.	BUSH-ING	BORE RANGE MM	KEY SEAT MM	WT.	
JA	15, 16	5 x 2.3	50	E	35, 38	10 x 3.3	10.90	
	19, 20, 22	6 x 2.8	.40		40, 42	12 x 3.3	10.50	
	24, 25, 28	8 x 3.3	.40		45, 48, 50	14 x 3.8	10.00	
SH	15	5 x 2.3	1.20		55	16x 4.3	9.30	
	20, 22	6 x 2.8	1.15		60, 65	18 x 4.4	8.60	
	24, 25,	8 x 3.3	1.00		70, 75	20x 4.9	7.50	
	28, 30	8 x 3.3	.95		80	22 x 4.4	6.50	
	32, 35, 38	10 x 3.3	.80		F	42	12 x 3.3	17.80
SDS	15	5 x 2.3	1.50			45, 48, 50	14x 3.8	17.10
	20	6 x 2.8	1.50			55	16 x 4.3	16.40
	24, 25, 28, 30	8 x 3.3	1.50	60, 65		18 x 4.4	15.20	
	32, 35, 38	10 x 3.3	1.30	70, 75		20 x 4.9	13.50	
	40, 42	12 x 3.3	1.10	80, 85		22 x 5.4	11.00	
SD	24, 25, 28, 30	8 x 3.3	1.80	90	25x 5.4	10.30		
	32, 35, 38	10x 3.3	1.60	J	50	14 x 3.8	27.00	
	40, 42	12 x 3.3	1.30		55	16 x 4.3	26.20	
SK	14	5 x 2.3	3.80		60, 65	18 x 4.8	24.50	
	20	6 x 2.8	3.30		70, 75	20x 4.9	22.90	
	24, 25, 28, 30	8 x 3.3	3.50		80, 85	22 x 5.4	20.80	
	32, 35, 38	10 x 3.3	3.20		90, 95	25x 5.4	18.00	
	40, 42	12 x 3.3	3.00	100	28 x 6.4	18.20		
	45, 48, 50	14 x 3.8	2.50	M	80	22 x 5.4	54.40	
	55	16 x 4.3	2.10		90	25 x 5.4	50.80	
	60	18 x 4.4	1.70		100	28 x 6.4	46.00	
SF	28, 30	8x 3.3	5.00		120	32x 7.4	37.40	
	32, 35, 38	10x 3.3	4.70	N	90	25 x 5.4	72.30	
	40, 42	12 x 3.3	4.50		100	28 x 6.4	72.30	
	45, 48, 50	14 x 3.8	4.00		120	32 x 7.4	59.75	
	55	16 x 4.3	3.60	P	120	32 x 7.4	100.00	
60, 65	18x 4.4	3.00	150		36 x 8.4	95.80		

Ordering Example: (JA15MM) or (E35MM)

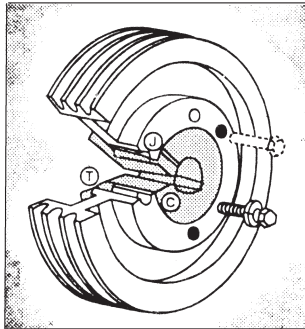
* **Shallow Keyseat** - (Ductile Iron) Keystock supplied with bushing

† **Oversize Key**

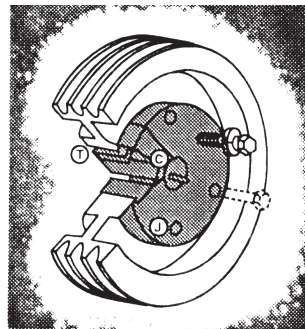
Note: A rectangular key is supplied with bushings that have shallow keyseats. This key will fit the standard depth keyseat on the shaft and the shallow keyseat on the bushing.

Ordering Example: (F1) or (F1.1/8) or (N5.7/8)

QD bushing sizes JA through N can be assembled in either of the two positions shown below. Sizes P through S should be assembled in position one. **Position One** is the conventional or standard mounting. **Position Two** (Reverse Mounting) may be necessary in some cases, such as mounting small sheaves with blind holes (not drilled through).



Position 1



Position 2

*For Normal Applications. For Severe (Rock-crusher type) applications these values can be increased by a maximum of 50%

Caution: Excessive cap-screw torque can cause sheave and/or bushing breakage. The use of lubricants can cause sheave breakage. Therefore,

DO NOT USE LUBRICANTS IN THIS INSTALLATION!

INSTALLATION:

1. Make sure the tapered-cone surface of the bushing and the mating bore of the sheave are free of all foreign substances, such as dirt, excess paint accumulations, metal chips, lubricants, etc.
2. For position one or two (whichever applies), line up the unthreaded holes (C) with the threaded holes (t) and insert cap screws with lock washers engaging only two or three threads. (*a)
3. With key in shaft keyway, slide the loosely-assembled unit onto shaft and position for good belt alignment. (*b, *c) **Use no lubricants or anti-seize compound on threads or tapered surfaces.**
4. Carefully tighten the capscrews alternately and progressively until the tapers are seated (at approximately half the recommended torque).
5. Check alignment and sheave runout (wobble) and correct as necessary.
6. Continue careful alternate and progressive tightening of the cap screws to the recommended torque values shown in the table. **Maximum torque should be achieved on each individual bolt only two times in the consecutive tightening.**

Note: When properly mounted, there will be a gap between the bushing flange and sheave after the screws are tightened.

Caution: Use of Lubricants and or excessive screw torque can cause breakage

7. Tighten the set screw, when available, to hold the key securely during installation and until cap screws are securely tightened.

REMOVAL

1. Loosen and remove all mounting cap screws.
2. Insert cap screws in all threaded jack screw holes (J).
3. Start with the screws furthest from the bushing saw slot and tighten all jack screws alternately and progressively. Keep turning the screws in small equal amounts until the tapered surfaces disengage.

(*a) When mounting a sheave on M through W size bushing, position the threaded jack-apart hole (J) as far from the bushing saw as possible to reduce the possibility of bushing breakage.

(*b) When installing large or heavy parts in *Position One*, it may be easier to mount the key and bushing on the shaft first. Then place the sheave on the bushing and align the holes.

(*c) **Caution:** When mounting on a vertical shaft, provisions must be made, which will positively prevent the sheave and/or bushing from dropping during installation.

BUSING SIZE	CAP SCREW SIZE-THREAD	FOOT POUNDS WRENCH TORQUE*
JA	10-24	3
SH-SDS-SD	1/4-20	6
SK	5/16-18	10
SF	3/8-16	20
E	1/2-13	40
F	9/16-12	50
J	5/8-11	90
M	3/4-10	150
N	7/8-9	200
P	1-8	300
W	1-1/8-7	400
S	1-1/4-7	500

Parallel Shaft - Inline Gearmotors

Parallel Shaft - Offset Inline Gearmotors

Right Angle Gearmotors

Custom Gearmotors and gear Reducers

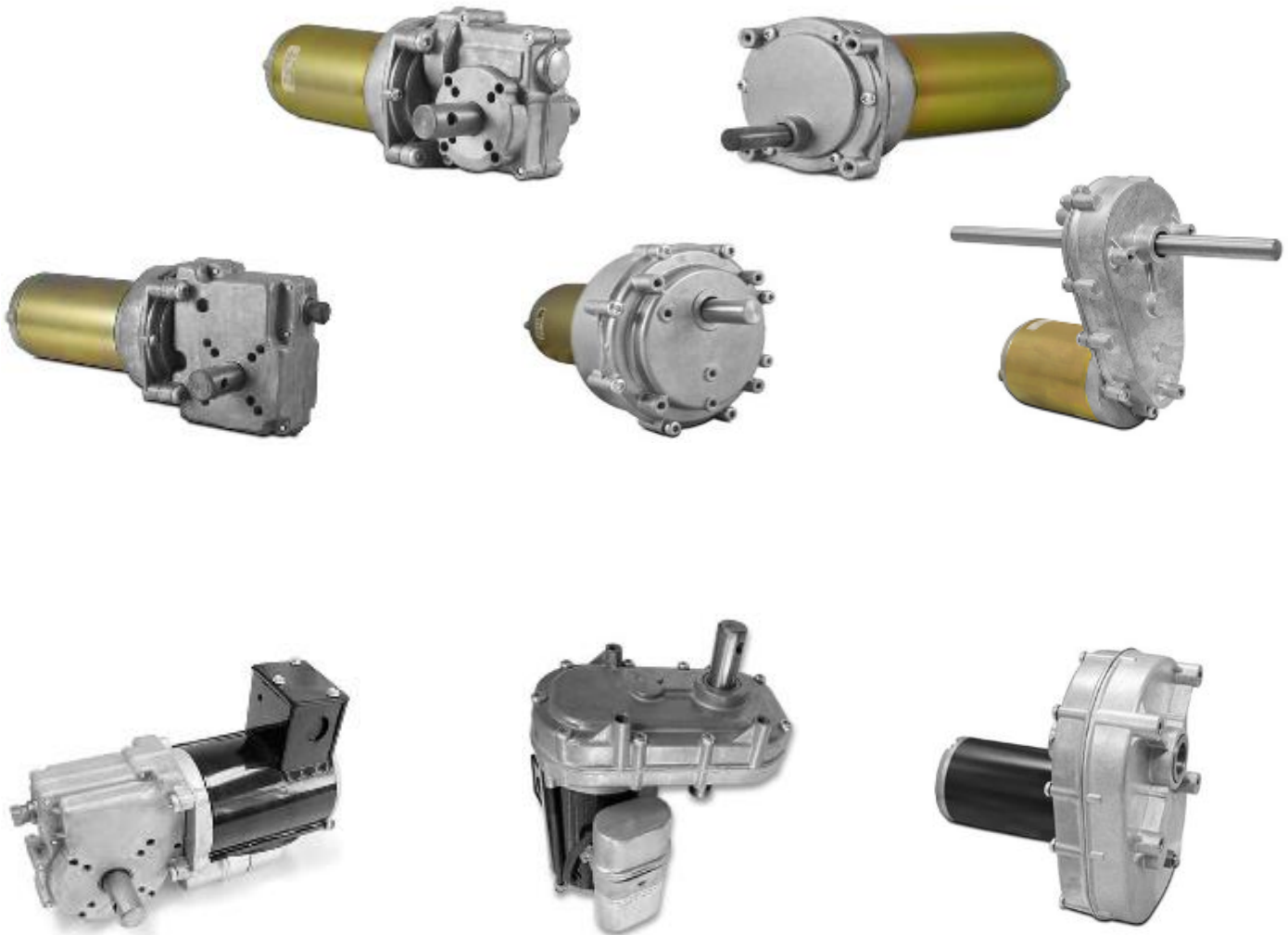
Open Gearing to spec.

AC & DC Motor Designs

Brake and Encoder Options

Direct Cross References to Industry

- **Baldor**
- **Bodine**
- **Bison**
- **Von Weisse**
- **Dayton**
- **Brother**



FOOTNOTES

- * **1** - Capacitor Start/Capacitor Run Design for Reduced Amperage
- * **2** - Capacitor Start Induction Run Design
- * **3** - Split Phase Design
- * **4** - Sleeve Bearing
- * **5** - 56H, 143T, 145T Combination Base with 12 Mounting Holes
- * **6** - Bolt-On Removable Base for Footless Mounting Option
- * **7** - Shaft Extension 1-1/2" Long By 1/2" Diameter
- * **8** - Shaft Extension 1-7/8" Long By 1/2" Diameter
- * **9** - Shaft Extension 2-1/4" Long By 1/2" Diameter
- * **10** - Shaft Extension 2-1/4" Long By 5/8" Diameter
- * **12** - 1.35 Service Factor
- * **13** - F1 Mounting Only
- * **14** - Will Accept C-Flange Kit
- * **15** - Fixed CW Rotation, Viewed Opposite Shaft
- * **16** - Fixed CCW Rotation, Viewed Opposite Shaft
- * **17** - 1.0 Service Factor
- * **18** - 1.15 Service Factor
- * **19** - 1.25 Service Factor
- * **20** - 1.35 Service Factor
- * **24** - Motor Will Not Accept Brake Kit
- * **26** - 5/8" Shaft Adapter Included
- * **28** - Steel Endsheids
- * **30** - Resilent Ring Mount, No Base
- * **31** - 5/8" Thru-Bolts Shaft End
- * **32** - 3/4" Thru-Bolts Shaft End
- * **33** - Shaft Ext 6" L By 5/8 Diam. With Full Length Flat Key 90 Degree
- * **34** - 1" Thru-Bolts Shaft End
- * **35** - 1-1/8" Thru-Bolts Shaft End
- * **36** - 1-1/4" Thru-Bolts Shaft End
- * **39** - No Thru-Bolts Shaft End
- * **43** - 2-1/2" Resilent Rings, Included
- * **44** - 1" Thru-Bolts Opposite Shaft End
- * **45** - 60 Degree C Ambient
- * **46** - 65 Degree C Ambient
- * **48** - Connected for CW Rotation (Canadian Standard)
- * **50** - Design for 50 Hertz Operation
- * **51** - Resilient Rings Not Included, See Accessories
- * **52** - 1/2" x 1-7/8" Shaft With 1-5/8" Flat
- * **53** - 1/2" Shaft With 5/8" Adaptor and Key
- * **57** - Open Construction
- * **68** - Rated and Nameplated 60/50 Hertz, 190/380-415 or 380-415 at 1.0 SF
- * **69** - 50 Degree Ambient
- * **70** - Not Nameplated 50Hz
- * **73** - No Hubs Included
- * **82** - Welded base
- * **95** - Will Not Accept Drip Cover Kit
- * **116** - 1-3/4" Thru-Bolts Extension on Shaft End
- * **125** - 56Y = 7/8" Diameter Keyed Shaft 2.25" Long
- * **132** - 184T Base, 4.5" Shaft Height
- * **136** - No Keyway, Double Flat
- * **A** - NEMA Design A
- * **CF** - Consult Factory For Accessories
- * **ES** - Energy Saver Design
- * **F** - Class F Insulation
- * **N** - Totally Enclosed Non-Ventilated
- * **P** - BCB (Bearing Current Protection)
- * **VC** - Voltage Change Device Feature, Quick Voltage Changes
- * **X** - Extra-High Torque Chore Motor 300%



PAYMENT TERMS:

Payment terms are net 30 days from date of Invoice for accounts with credit approval. MEP reserves the right to charge a fee of 2% per month for overdue accounts.

WARRANTY:

Warranties on products listed in this catalogue are subject to the manufacturers original warranties for each product. Contact MEP Inc. for details of each product guarantee. These warranties are against manufacturing defects only and do not apply to improper storage, installation, or modification or repair without MEP's prior authorization, and any other fault beyond MEP's control. MEP will, at their option either repair or replace the defective unit. MEP makes no warranties with respect to suitability or product selection for any particular purpose or application. MEP will not be liable for any loss of profit, direct or indirect, and incidental or consequential damages. Warranties will not exceed buyers original purchase price. Unless previously authorized by MEP, MEP will not accept any claims for field service, removal, replacement, inspection, freight or travel charges.

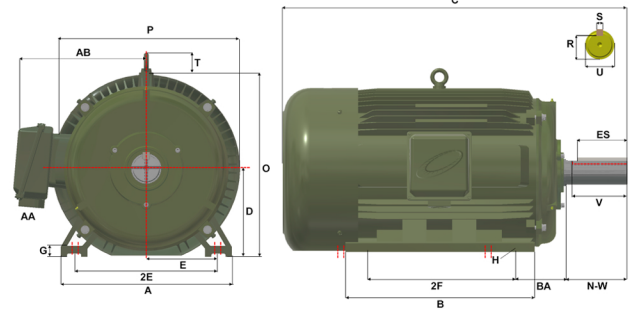
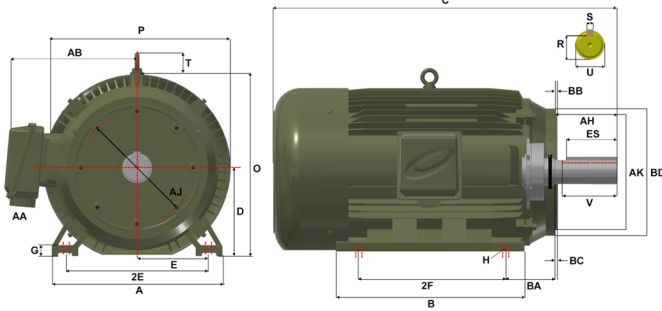
RETURN GOODS:

Goods for return must be accompanied by a return goods authorization (RGA) number issued by MEP. All goods returned must be in new saleable condition in the original packaging with the original documents (manuals). Goods are to be returned prepaid to MEP or its authorized repair centres.

NEMA Quick Reference Dimensional Chart

Typical C-face Motor

Typical Rigid Base Motor

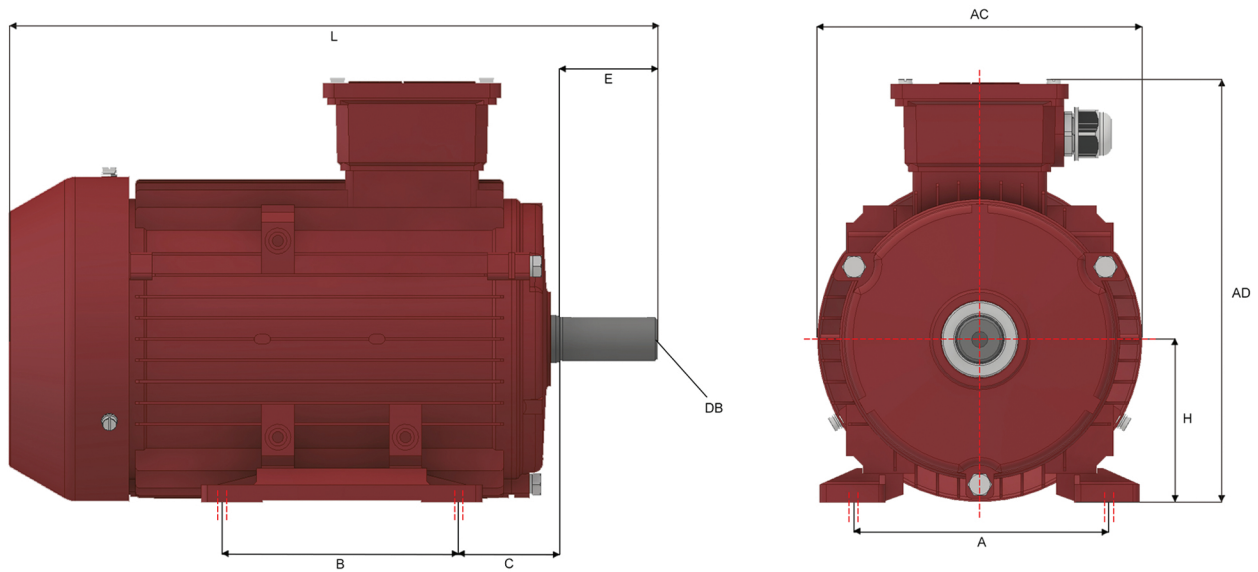


Contact your MEP sales rep. for "AB", "O" & "P" Dim.

Refer to your MEP catalog for "C" Dim.

FRAME	D	E	2F	H	U	N-W	AA	AH	AJ	AK	BA	BB (MIN)	BD (MAX)	H (HOLES)
48	3.00	2.12	2.75	.34 SLOT	.5000	1.50	1/2	1.69	3.750	3.000	2.50	.13	5.62	1/4-20
56	3.50	2.44	3.00	.34 SLOT	.6250	1.88	1/2	2.06	5.875	4.500	2.75	.13	6.50	3/8-16
56H	3.50	2.44	5.00	.34 SLOT	.6250	1.88	1/2	2.06	5.875	4.500	2.75	.13	6.50	3/8-16
143T	3.50	2.75	4.00	.34	.8750	2.25	3/4	2.12	5.875	4.500	2.25	.13	6.50	3/8-16
145T	3.50	2.75	5.00	.34	.8750	2.25	3/4	2.12	5.875	4.500	2.25	.13	6.50	3/8-16
182	4.50	3.75	4.50	.41	.8750	2.25	3/4	2.12	5.875	4.500	2.75	.13	6.50	3/8-16
184	4.50	3.75	5.50	.41	.8750	2.25	3/4	2.12	5.875	4.500	2.75	.13	6.50	3/8-16
182T	4.50	3.75	4.50	.41	1.125	2.75	3/4	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
184T	4.50	3.75	5.50	.41	1.125	2.75	3/4	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
213	5.25	4.25	5.50	.41	1.125	3.00	1	2.75	7.250	8.500	3.50	.25	9.00	1/2-13
215	5.25	4.25	7.00	.41	1.125	3.00	1	2.75	7.250	8.500	3.50	.25	9.00	1/2-13
213T	5.25	4.25	5.50	.41	1.375	3.38	1	3.12	7.250	8.500	3.50	.25	9.00	1/2-13
215T	5.25	4.25	7.00	.41	1.375	3.38	1	3.12	7.250	8.500	3.50	.25	9.00	1/2-13
254U	6.25	5.00	8.25	.53	1.375	3.75	1-1/4	3.50	7.250	8.500	4.25	.25	10.00	1/2-13
256U	6.25	5.00	10.00	.53	1.375	3.75	1-1/4	3.50	7.250	8.500	4.25	.25	10.00	1/2-13
254T	6.25	5.00	8.25	.53	1.625	4.00	1-1/4	3.75	7.250	8.500	4.25	.25	10.00	1/2-13
256T	6.25	5.00	10.00	.53	1.625	4.00	1-1/4	3.75	7.250	8.500	4.25	.25	10.00	1/2-13
284U	7.00	5.50	9.50	.53	1.625	4.88	1-1/2	4.62	9.000	10.500	4.75	.25	11.25	1/2-13
286U	7.00	5.50	11.00	.53	1.625	4.88	1-1/2	4.62	9.000	10.500	4.75	.25	11.25	1/2-13
284T	7.00	5.50	9.50	.53	1.875	4.62	1-1/2	4.38	9.000	10.500	4.75	.25	11.25	1/2-13
286T	7.00	5.50	11.00	.53	1.875	4.62	1-1/2	4.38	9.000	10.500	4.75	.25	11.25	1/2-13
284TS	7.00	5.50	9.50	.53	1.625	3.25	1-1/2	3.00	9.000	10.500	4.75	.25	11.25	1/2-13
286TS	7.00	5.50	11.00	.53	1.625	3.25	1-1/2	3.00	9.000	10.500	4.75	.25	11.25	1/2-13
324U	8.00	6.25	10.50	.66	1.875	5.62	2	5.38	11.000	12.500	5.25	.25	14.00	5/8-11
326U	8.00	6.25	12.00	.66	1.875	5.62	2	5.38	11.000	12.500	5.25	.25	14.00	5/8-11
324T	8.00	6.25	10.50	.66	2.125	5.25	2	5.00	11.000	12.500	5.25	.25	14.00	5/8-11
326T	8.00	6.25	12.00	.66	2.125	5.25	2	5.00	11.000	12.500	5.25	.25	14.00	5/8-11
324TS	8.00	6.25	10.50	.66	1.875	3.75	2	3.50	11.000	12.500	5.25	.25	14.00	5/8-11
326TS	8.00	6.25	12.00	.66	1.875	3.75	2	3.50	11.000	12.500	5.25	.25	14.00	5/8-11
364U	9.00	7.00	11.25	.66	2.125	6.38	2-1/2	6.12	11.000	12.500	5.88	.25	14.00	5/8-11
365U	9.00	7.00	12.25	.66	2.125	6.38	2-1/2	6.12	11.000	12.500	5.88	.25	14.00	5/8-11
364T	9.00	7.00	11.25	.66	2.375	5.88	2-1/2	5.62	11.000	12.500	5.88	.25	14.00	5/8-11
365T	9.00	7.00	12.25	.66	2.375	5.88	2-1/2	5.62	11.000	12.500	5.88	.25	14.00	5/8-11
364TS	9.00	7.00	11.25	.66	1.875	3.75	2-1/2	3.50	11.000	12.500	5.88	.25	14.00	5/8-11
365TS	9.00	7.00	12.25	.66	1.875	3.75	2-1/2	3.50	11.000	12.500	5.88	.25	14.00	5/8-11
404U	10.00	8.00	12.25	.81	2.375	7.12	3	6.88	11.000	12.500	6.62	.25	15.50	5/8-11
405U	10.00	8.00	13.75	.81	2.375	7.12	3	6.88	11.000	12.500	6.62	.25	15.50	5/8-11
404T	10.00	8.00	12.25	.81	2.875	7.25	3	7.00	11.000	12.500	6.62	.25	15.50	5/8-11
405T	10.00	8.00	13.75	.81	2.875	7.25	3	7.00	11.000	12.500	6.62	.25	15.50	5/8-11
404TS	10.00	8.00	12.25	.81	2.125	4.25	3	4.00	11.000	12.500	6.62	.25	15.50	5/8-11
405TS	10.00	8.00	13.75	.81	2.125	4.25	3	4.00	11.000	12.500	6.62	.25	15.50	5/8-11
444U	11.00	9.00	14.50	.81	2.875	8.62	3	8.38	14.000	16.000	7.50	.25	18.00	5/8-11
445U	11.00	9.00	16.50	.81	2.875	8.62	3	8.38	14.000	16.000	7.50	.25	18.00	5/8-11
444T	11.00	9.00	14.50	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
445T	11.00	9.00	16.50	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
444TS	11.00	9.00	14.50	.81	2.375	4.75	3	4.50	14.000	16.000	7.50	.25	18.00	5/8-11
445TS	11.00	9.00	16.50	.81	2.375	4.75	3	4.50	14.000	16.000	7.50	.25	18.00	5/8-11
447T	11.00	9.00	20.00	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
449T	11.00	9.00	25.00	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
447TS	11.00	9.00	20.00	.81	2.375	4.75	4 NPT	4.50	14.000	16.000	7.50	.25	18.00	5/8-11
449TS	11.00	9.00	25.00	.81	2.375	4.75	4 NPT	4.50	14.000	16.000	7.50	.25	18.00	5/8-11

IEC QUICK REFERENCE KEY DIMENSIONS CHART

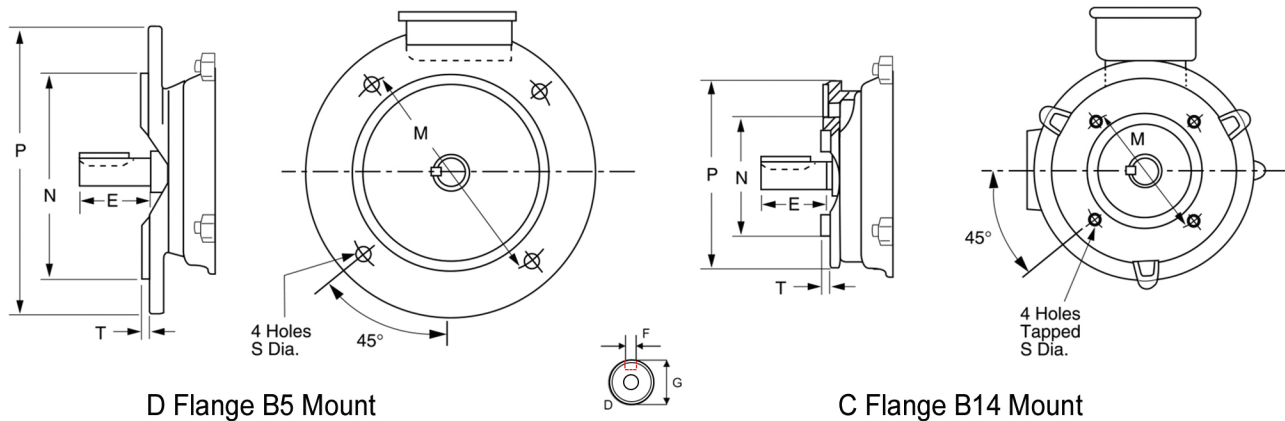


IEC Frame Dimensions (Millimeters)

FRAME	Mounting				Shaft				General			B5 Flange			B14 Flange		
	A	B	C	H	D	E	F	DB	L	AC	AD	M	N	P	M	N	P
56	90	71	36	56	9	20	3	M3	199	113	97	100	80	120	65	50	80
63	100	80	40	63	11	23	4	M4	217	120	103	115	95	140	75	60	90
71	112	90	45	71	14	30	5	M5	245	136	112	130	110	160	85	70	105
80	125	100	50	80	19	40	6	M6	300	158	135	165	130	200	100	80	120
90 S	140	100	56	90	24	50	8	M8	320	175	138	165	130	200	115	95	140
90 L	140	125	56	90	24	50	8	M8	345	175	138	165	130	200	115	95	140
100L	160	140	63	100	28	60	8	M10	405	198	160	215	180	250	130	110	160
112M	190	140	70	112	28	60	8	M10	400	230	178	215	180	250	130	110	160
132 S	216	140	89	132	38	80	10	M12	445	258	188	265	230	300	165	130	200
132M	216	178	89	132	38	80	10	M12	485	258	188	265	230	300	165	130	200
160 M	254	210	108	160	42	110	12	M16	615	315	242	300	250	350	215	180	250
160L	254	254	108	160	42	110	12	M16	660	315	242	300	250	350	215	180	250
180 M	279	241	121	180	48	110	14	M16	652	355	267	300	250	350			
180 L	279	279	121	180	48	110	14	M16	690	355	267	300	250	350			
200 L	318	305	133	200	55	110	16	M20	746	400	304	350	300	400			
225 S	356	286	149	225	55*/60	110*/140	16*/18	M20	780	446	326	400	350	450			
225 M	356	311	149	225	55*/60	110*/140	16*/18	M20	810	446	326	400	350	450			
250 M	406	349	168	250	60*/65	140	18	M20	900	485	358	500	450	550			
280 S	457	368	190	280	65*/75	140	18*/20	M20	982	547	387	500	450	550			
280 M	457	419	190	280	65*/75	140	18*/20	M20	1033	547	387	500	450	550			
315 S	508	406	216	315	65*/80	140*/170	18*/20	M20	1208	620	527	550	600	660			
315 M	508	457	216	315	65*/80	140*/170	18*/20	M20	1318	620	527	550	600	660			
315 L	508	508	216	315	65*/80	140*/170	18*/20	M20	1388	620	527	550	600	660			

* Denotes dimensions in mm for 2 Pole - 3600 RPM Motors

GENERAL Notes - Dimensions are specific to MaxMotion Design and may vary from different manufacturers



*Speciality increasing/reducing flanges available on request

MaxMotion
marathon™
Motors

Lenze



INTORQ



ALLTEMP

Packard

MASTERDRIVE®



MEP INC

ONTARIO, WESTERN CANADA,
NEWFOUNDLAND, LABRADOR AND USA

2831 BRISTOL CIRCLE UNIT 3

OAKVILLE, ON L6H 6X5

TEL: 905-829-1020

TOLL FREE: 877-812-7788

EMAIL: INFORMATION@MEP.CA

QUEBEC AND MARITIMES

10500 BOUL. DU GOLF

ANJOU, QC H1J 2Y7

TEL: 514-352-1229

TOLL FREE: 888-668-3877

EMAIL: INFO@MEP.CA