

AC INVERTER DUTY MOTORS

NEW!

From the leader in AC variable speed products

from **MARATHON ELECTRIC®**

AUTOMATIONDIRECT is proud to partner with Marathon Electric to provide our customers with premium quality motors at great prices.

Marathon Electric has over 15 years experience in the design, manufacturing and application of AC variable speed motors, and well over 15,000 hours of laboratory testing in state-of-the-art facilities, Marathon Electric's expertise in the application of AC drives with induction motors is unsurpassed.

Over two dozen premier manufacturers of AC variable frequency drives specify Marathon Electric's performance-matched motors in their drive systems. These are cost-effective, high performance motors that, in conjunction with today's drive technology, provide enhanced performance in virtually any industrial or commercial application.

Products that exceed your expectations



1/4 to 10 hp

MARATHON ELECTRIC®

The microMAX™ motor, when teamed up with AUTOMATIONDIRECT's DURAPULSE or GS series drives, provides exceptional performance throughout its rated speed range. This revolutionary design features up to a 1000:1 constant torque and 2:1 constant horsepower range, rivaling much more expensive variable speed motors.

Other design features include linear torque characteristics, superior starting torque (up to 400%), excellent torque-to-inertia, and smooth low speed performance.

Features:

- 1/4 to 10 hp models
- Available voltages include 230 VAC and 230/460 VAC
- 1800RPM base speed
- Constant Torque speed range (TENV) 1000:1
- Constant Torque speed range (TEFC) 20:1
- Meet all applicable UL, CSA and NEMA standards, including NEMA MG1-1998, Part 31
- Utilize Marathon's exclusive CR²⁰⁰ corona-resistant magnet wire for long life

GET MATCHING DRIVES AND MOTORS

Team up with our AC drives

Save a bundle and team up one of our GS AC drives with a Marathon Electric motor. We have a drive that matches every motor we currently carry.

Upto 100hp

We are also carrying the Black Max, Blue Max, Black max with Encoder and high efficiency drives from Marathon. See the complete specifications for these motors, available up to 100 hp.



MARATHON
ELECTRIC



It's time to save on AC motor solutions

Whether you're replacing another variable or fixed speed system, or building your machine design around the new microMAX™, you can be assured of high performance, low cost of ownership, ease of installation, long life and the best warranty in the business (three years). **The virtually seamless transition, along with the cooler running, lighter weight design, will satisfy the most demanding engineer or plant manager...and the cost savings will make Purchasing happy too!**

DRIVES /
MOTORS

microMAX™ AC INVERTER DUTY MOTORS

1000:1 Constant Torque (TENV), 20:1 Constant Torque (TEFC)



Features

- Constant torque operation from 0 to base speed (TENV ratings)
- Constant torque operation from 1/20 speed to base speed (TEFC ratings)
- Constant horsepower to twice base speed (RPM)
- Class H insulation with CR²⁰⁰ (corona-resistant) magnet wire
- Continuous duty at 40 °C ambient
- Dual Mounting (C-Face with rigid base and C-Face with removable rigid base)
- Service Factor: 1.0
- Utilizes double shielded ball bearings
- Exxon Polyrex® EM bearing grease
- Eliminates brush and commutator maintenance
- UL recognized and CSA certified
- Three year warranty

Applications

- Replaces 90 volt and 180 volt PMDC motors (when used with AC variable frequency drives)
- Typical uses include: machine tools, conveyors, packaging machines, batching machines, and printing equipment.



Motor Shipping Schedule		
Same day	Same to 1 day	1 - 3 days

Color indicates shipping lead time in business days.

Motor Specifications									
Part Number	HP	Base RPM	Volts	Encl.	NEMA Frame	Model No.	F.L. Amps	Weight Lbs.	Footnotes
Y500	1/4	1800	230	TENV	56C	56H17T2011	1.0	18	N,Q
Y360	1/2	1800	230/460	TENV	56C	56H17T2017	1.8/0.9	20	N
Y364	1	1800	230/460	TEFC	56C	56H17F2021	3.2/1.6	28	-
Y368	2	1800	230/460	TEFC	145TC	145THFR5329	5.8/2.9	51	6
Y999	3	1800	230/460	TEFC	182TC	182THFR7729	8.4/4.2	70	6
Y372	5	1800	230/460	TEFC	184TC	184THFR7726	13.0/6.5	88	6
Y994	7 1/2	1800	230/460	TEFC	213TC	213THFW7726	21.4/10.7	98	6
Y996	10	1800	230/460	TEFC	215TC	215THFW7726	27.6/13.8	125	6

Footnotes:
 N Totally Enclosed Non Ventilated
 Q "Quick Connect" terminal board
 6 Bolt-on, removable base for footless mounting option

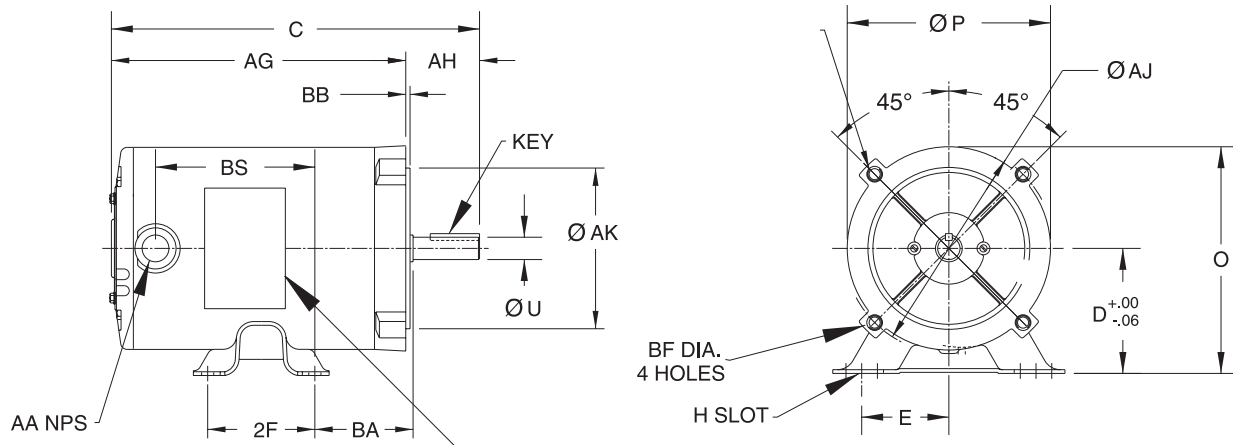
Note: Please review the AutomationDirect Terms & Conditions for this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.automationdirect.com.

Performance Data (460 Volt except as indicated)													
Part Number	HP	NEMA Design	F.L. RPM	Min. RPM	F.L. AMPS 460 V	N.L. AMPS 460 V	F.L. Torque (LB-FT)	B.D. Torque (LB-FT)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (LB-FT ²)
Y500	1/4 (230V)	B	1725	0	1.0	0.7	0.75	3.7	3520	5400	72.0	65.0	0.040
Y360	1/2	B	1730	0	0.9	0.5	1.5	6.8	3520	5400	80.0	72.0	0.075
Y364	1	B	1725	45	1.6	0.9	3.0	12.0	3520	5400	78.5	77.5	0.090
Y368	2	B	1740	60	2.9	1.6	6.0	29.0	3530	5400	82.5	77.0	0.140
Y999	3	A	1760	80	4.2	2.5	9.0	35.0	3540	5400	87.5	76.0	0.30
Y372	5	A	1750	90	6.7	3.5	15.0	61.0	3480	5400	88.5	79.0	0.45
Y994	7 1/2	A	1770	90	10.7	6.2	22.3	80.0	3565	4200	89.5	72.5	0.75
Y996	10	A	1770	90	13.8	7.8	30.0	110	3570	4200	91.0	74.0	1.00

* Maximum Constant HP RPM is for direct coupled loads.

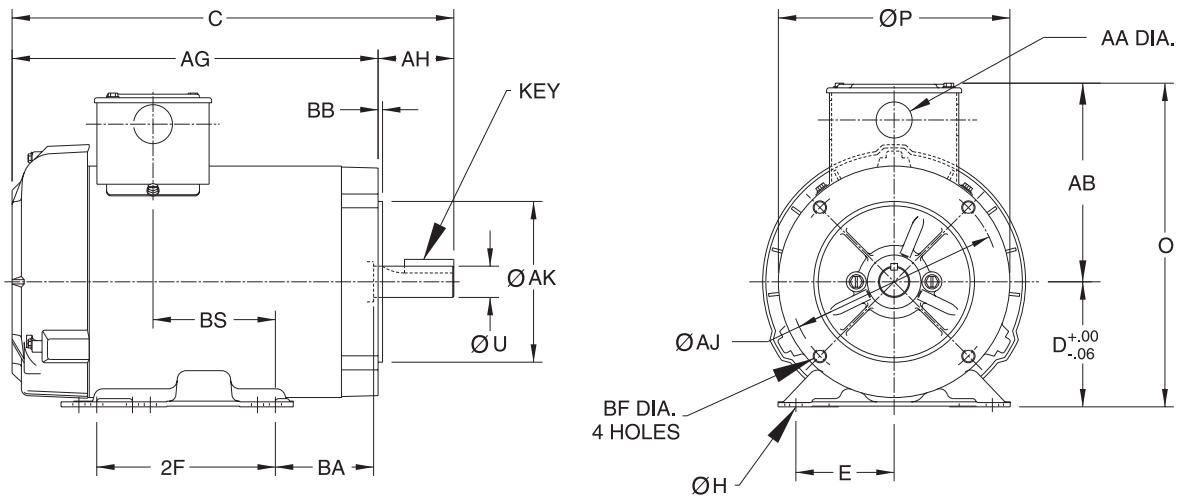
microMAX™ MOTOR DIMENSIONS

Figure 1



Note: conduit box on 1/2 HP only, 1/4 HP motor has "Quick Connect" terminal board.

Figure 2



Motor Dimensions [Inches]																						
Part Number	HP	Fig.	NEMA Frame	C	D	E	2F	H	O Max.	P Max.	U	AA	AB Max.	AG Max.	AH	AJ	AK	BA	BB	BF	BS	Key
Y500	1/4	1	56C	9.80	3.50	2.44	3.00	.34 Slot	6.35	5.69	.625	None	None	7.74	2.06	5.875	4.500	2.75	.12	3/8-16	3.96	.19x.19x1.38
Y360	1/2	1	56C	10.55	3.50	2.44	3.00	.34 Slot	6.35	5.69	.625	None	None	8.49	2.06	5.875	4.500	2.75	.12	3/8-16	4.71	.19x.19x1.38
Y364	1	2	56C	12.44	3.50	2.44	3.00	.35	7.87	5.69	.625	.88	4.44	10.38	2.06	5.875	4.500	2.75	.12	3/8-16	4.06	.19x.19x1.38
Y368	2	2	145TC	14.87	3.50	2.75	5.00	.35	9.06	6.48	.875	1.09	5.56	7.74	2.12	5.875	4.500	2.75	.12	3/8-16	6.36	.19x.19x1.38
Y999	3	2	182TC	16.19	4.50	3.75	4.50	.44	10.06	6.48	.875	1.09	5.56	8.49	2.12	5.875	4.500	2.75	.12	3/8-16	5.88	.19x.19x1.38
Y372	5	2	184TC	16.69	4.50	3.75	5.50	.44	11.65	10.55	1.125	1.09	7.19	16.07	2.62	7.250	8.500	3.50	.27	1/2-13	3.75	.25x.25x1.75
Y994	7 1/2	2	213TC	20.97	5.25	4.25	7	.46	12.97	11.13	1.375	1.09	7.75	17.85	3.12	7.265	8.500	4.25	.31	1/2-13	6.93	.31x.31x2.38
Y996	10	2	215TC	22.22	5.25	4.25	7	.46	12.97	11.13	1.375	1.09	7.75	19.10	3.12	7.265	8.500	4.25	.31	1/2-13	8.18	.31x.31x2.38

Black Max® VECTOR DUTY MOTORS



Features

- Class F MAX GUARD® insulation system
- Constant torque operation from 0 to base speed on vector drive
- Constant horsepower operation to twice base RPM
- Continuous duty at 40° C ambient
- Optimized for operation with IGBT inverter (NEMA Design A)
- Class F N/C thermostats (one per phase)
- Utilizes double shielded ball bearings
- Exxon Polyrex® EM bearing grease
- Dual Mounting (C-Face with rigid base and C-Face with removable rigid base, as noted)
- F1 standard conduit box location, field reversible to F2 (except as noted)
- Encoder and brake provisions included on opposite drive end
- UL recognized and CSA certified
- Three year warranty

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.

Motor Shipping Schedule

Same day	Same to 1 day	1 - 3 days
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Color indicates shipping lead time in business days.

Motor Specifications

Part Number	HP	Base RPM	Volts	Encl.	NEMA Frame	Model No.	F.L. Amps	Weight Lbs.	Footnotes
Y592	1/4	1800	230/460	TENV	56C	56H17T2001	1.2/0.6	19	N, S, 13
Y534	1/2	1800	230/460	TENV	56C	56H17T5301	1.6/0.8	28	N, S, 6, 13
Y535	1	1800	230/460	TENV	56C	56H17T5302	3.0/1.5	39	N, S, 6, 13
Y536	1	1800	230/460	TENV	143TC	143THTR5326	3.0/1.5	43	N, S, 6, 13
Y537	1	1200	230/460	TENV	145TC	145THTR5376	3.8/1.9	49	N, S, 6, 13
Y538	1 1/2	1800	230/460	TENV	145TC	145THTR5326	4.8/2.4	50	N, S, 6, 13
Y551	2	1800	230/460	TENV	145TC	145THTN6046	6.0/3.0	70	N
Y540	2	1200	230/460	TENV	184TC	184THTL7776	6.6/3.3	88	N, AL
Y541	3	1800	230/460	TENV	182TC	182THTL7726	8.4/4.2	93	N, AL
Y542	3	1200	230/460	TENV	213TC	213THTL7776	9.4/4.7	118	N, AL
Y543	5	1800	230/460	TENV	184TC	184THTL7726	14.0/7.0	103	N, AL
Y544	5	1200	230/460	TENV	215TC	215THTL7776	15.4/7.7	128	N, AL
Y545	7 1/2	1800	230/460	TENV	213TC	213THTL7726	21.0/10.5	146	N, AL
Y546	7 1/2	1200	230/460	TENV	254TC	254THTL5776	22.0/11.0	209	N, AL
Y547	10	1800	230/460	TENV	215TC	215THTL7726	27.0/13.5	159	N, AL
Y548	10	1200	230/460	TENV	256TC	256THTL5776	28.0/14.0	275	N, AL
Y549	15	1800	230/460	TENV	254TC	254THTL5726	40.0/20.0	250	N, AL, I
Y552	20	1800	230/460	TENV	256TC	256THTNA7026	50.0/25.0	320	N, I
Y553	25	1800	230/460	TENV	284TC	284THTNA7026	62.0/31.0	525	N, I
Y393	30	1800	230/460	TENV	286TC	286THTNA7026	80.0/40.0	575	N, I

Footnotes:

- | | | | |
|---|--|----|--|
| N | Totally Enclosed, Non-Ventilated | 13 | F1 Mounting Only, cannot modify to F2 |
| S | Steel Frame Construction | AL | Aluminum Frame Construction |
| 6 | Bolt-on, removable base for footless mounting option | I | Intermittent duty from 90-120 Hz operation |

Note: Please review the AutomationDirect Terms & Conditions for this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.automationdirect.com.

Black Max[®] VECTOR DUTY MOTORS

Motor Performance Data (460 Volt) *

Part Number	HP	F.L. RPM	F.L. AMPS 460 V	N.L. AMPS 460 V	F.L. Torque (LB-FT)	B.D. Torque (LB-FT)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (LB-FT ²)	Ohms/Ph - Equiv. Wye Circuit (460 VAC) (at rated operating temp. in 40° C ambient)				
												R1	R2	X1	X2	XM
Y592	1/4	1755	0.6	0.45	0.75	4.5	3540	5400	70.0	58.0	0.045	26.300	23.000	30.240	14.700	572.000
Y534	1/2	1735	0.8	0.52	1.5	5.8	3510	5400	80.0	72.0	0.056	22.307	17.028	24.123	18.163	532.976
Y535	1	1750	1.5	1.0	3.0	15.0	3505	5400	84.0	75.0	0.110	8.378	5.623	10.707	9.912	278.036
Y536	1	1750	1.5	1.0	3.0	15.0	3505	5400	84.0	75.0	0.110	8.378	5.623	10.707	9.912	278.036
Y537	1	1145	1.9	1.3	4.5	16.0	2260	5400	80.0	62.5	0.140	10.302	8.372	13.793	15.325	193.835
Y538	1 1/2	1755	2.4	1.6	4.5	29.0	3518	5400	85.5	69.0	0.140	4.257	3.538	5.998	5.884	161.009
Y551	2	1750	3.0	1.7	6.0	28.5	3525	5400	85.5	78.0	0.130	3.834	2.897	5.950	5.637	154.800
Y540	2	1160	3.3	2.1	9.0	34.0	2315	5400	82.5	67.5	0.380	3.948	3.436	7.725	12.113	116.900
Y541	3	1755	4.2	2.2	9.0	48.0	3515	4200	85.5	80.0	0.420	2.356	1.731	4.266	4.304	123.930
Y542	3	1158	4.7	3.0	13.6	49.0	2300	4200	82.5	72.5	0.600	2.469	2.318	6.508	4.125	83.910
Y543	5	1765	7.0	4.2	14.8	70.0	3555	4200	89.5	74.5	0.550	1.242	0.947	2.534	4.236	64.128
Y544	5	1165	7.7	4.8	22.5	87.0	2320	4200	84.0	71.0	0.900	1.130	1.250	3.709	2.573	51.972
Y545	7 1/2	1765	10.5	5.5	22.3	95.5	3525	4200	90.2	76.0	0.850	0.699	0.567	1.765	2.260	38.178
Y546	7 1/2	1170	11.0	6.0	34.0	118.0	2325	4200	87.5	73.0	1.200	0.510	0.680	2.846	3.247	42.714
Y547	10	1774	13.5	7.4	29.5	125.0	3540	4200	90.2	76.0	1.300	0.369	0.334	1.423	2.281	34.932
Y548	10	1160	14.0	7.0	45.5	135.0	2320	4200	89.5	75.5	1.500	0.534	0.693	2.258	2.323	30.530
Y549	15	1765	20.0	11.0	45.0	170.0	3550	3600	92.4	76.0	1.600	0.134	0.316	1.047	1.569	22.151
Y552	20	1768	25.0	13.5	59.5	290.0	3560	3600	93.6	80.0	3.100	0.234	0.213	0.746	0.689	18.204
Y553	25	1770	31.0	14.0	74.2	330.0	3530	3600	93.6	75.0	4.400	0.143	0.160	0.724	0.678	13.965
Y393	30	1772	40.0	23.5	89.0	375.0	3560	3600	94.5	74.0	5.500	0.113	0.123	0.543	0.557	11.200

* Maximum Constant HP RPM is for direct coupled loads.

Encoder shaft mounted to motor

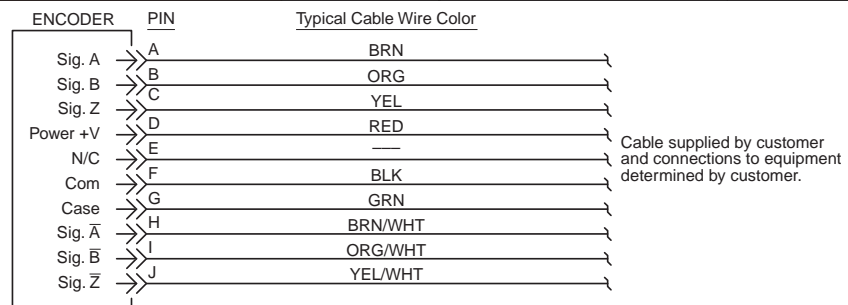
A Dynapar Model HS35 shaft mounted encoder can be supplied with the motor as shown in the price table below. The encoder requires a 5-26 VDC power source, provides a count of 1024 pulses per revolution (PPR), differential line driver output and includes a 10 pin connector.

Motor with Shaft Mounted Encoder

Part Number	HP	Part Number	HP	Part Number	HP
Y592-A772	1/4	Y540-A772	2	Y547-A772	10
Y534-A772	1/2	Y541-A772	3	Y548-A772	10
Y535-A772	1	Y542-A772	3	Y549-A772	15
Y536-A772	1	Y543-A772	5	Y552-A772	20
Y537-A772	1	Y544-A772	5	Y553-A772	25
Y538-A772	1 1/2	Y545-A772	7 1/2	Y393-A772	30
Y551-A772	2	Y546-A772	7 1/2		

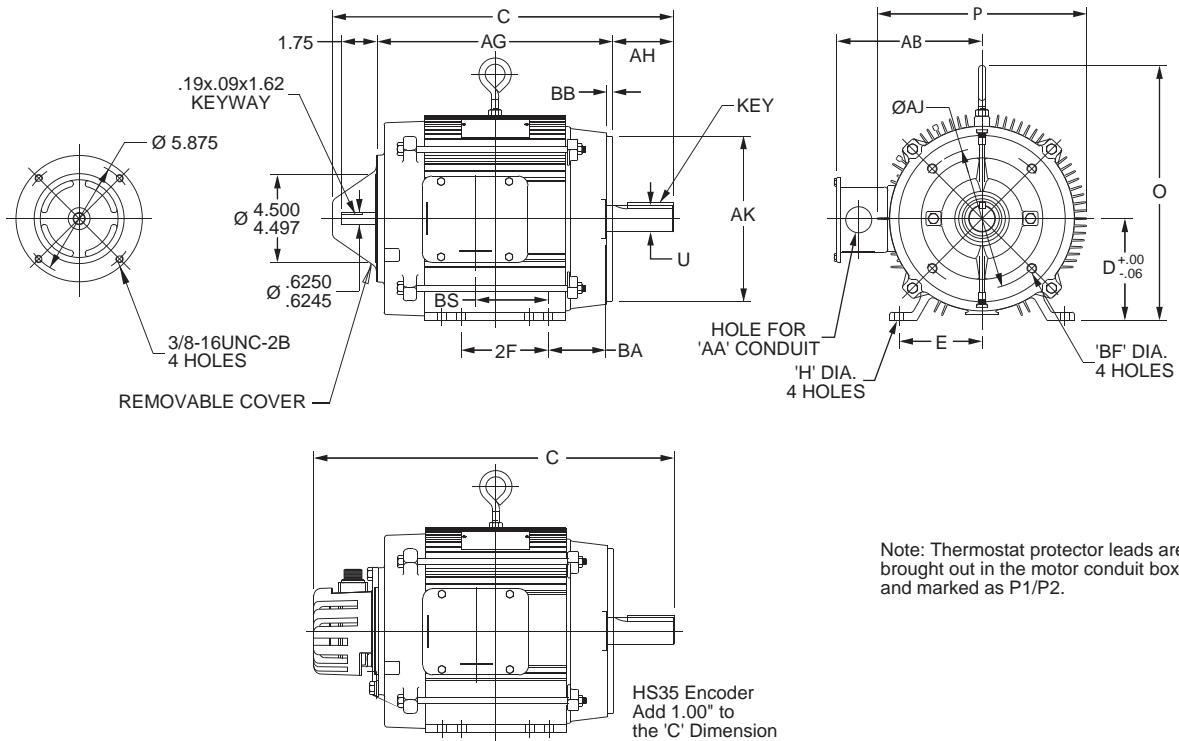
Encoder connector pinout

Note: A mating connector is supplied with the encoder.



Black Max® VECTOR DUTY MOTORS

Motor Dimensions



Note: Thermostat protector leads are brought out in the motor conduit box and marked as P1/P2.

Motor Dimensions [Inches]																						
Part Number	HP	NEMA Frame	Frame Construction	C	D	E	2F	H	O Max.	P Max.	U	AA	AB Max.	AG Max.	AH	AJ	AK	BA	BB	BF	BS	Key
Y592	1/4	56C	Rolled Steel	11.88	3.50	2.44	3.00	.34	6.35	7.21	.625	None	4.37	7.50	2.06	5.875	4.500	2.75	.13	3/8-16	2.84	.19x.19x1.38
Y534	1/2	56C	Rolled Steel	13.48	3.50	2.44	3.00	.35	6.71	6.48	.625	None	5.56	10.61	2.06	5.875	4.500	2.75	.13	3/8-16	5.25	.19x.19x1.38
Y535	1	56C	Rolled Steel	14.98	3.50	2.44	3.00	.35	6.71	6.48	.625	None	5.56	10.61	2.06	5.875	4.500	2.75	.13	3/8-16	5.25	.19x.19x1.38
Y536	1	143TC	Rolled Steel	15.04	3.50	2.75	4.00	.35	6.71	6.48	.875	None	5.56	10.61	2.12	5.875	4.500	2.75	.13	3/8-16	4.93	.19x.19x1.38
Y537	1	145TC	Rolled Steel	16.04	3.50	2.75	5.00	.35	6.71	6.48	.875	None	5.56	11.61	2.12	5.875	4.500	2.75	.13	3/8-16	5.93	.19x.19x1.38
Y538	1 1/2	145TC	Rolled Steel	16.04	3.50	2.75	5.00	.35	6.71	6.48	.875	None	5.56	11.61	2.12	5.875	4.500	2.75	.13	3/8-16	5.93	.19x.19x1.38
Y551	2	145TC	Cast Iron	14.68	3.50	2.75	5.00	.35	6.71	6.48	.875	None	5.56	11.61	2.12	5.875	4.500	2.75	.13	3/8-16	5.93	.19x.19x1.38
Y540	2	184TC	Aluminum	16.94	4.50	3.75	5.50	.44	9.38	9.78	1.125	1.09	7.02	15.00	2.62	7.250	8.500	3.50	.27	1/2-13	4.25	.25x.25x1.75
Y541	3	182TC	Aluminum	16.94	4.50	3.75	4.50	.44	9.38	9.78	1.125	1.09	7.02	13.00	2.62	7.250	8.500	3.50	.27	1/2-13	3.25	.25x.25x1.75
Y542	3	213TC	Aluminum	20.04	5.25	4.25	5.50	.44	10.62	10.78	1.375	1.34	7.50	14.81	3.12	7.250	8.500	4.25	.28	1/2-13	5.25	.31x.31x2.38
Y543	5	184TC	Aluminum	18.94	4.50	3.75	5.50	.44	9.38	9.78	1.125	1.09	7.02	15.00	2.62	7.250	8.500	3.50	.27	1/2-13	4.25	.25x.25x1.75
Y544	5	215TC	Aluminum	21.54	5.25	4.25	7.00	.44	10.62	10.78	1.375	1.34	7.50	17.81	3.12	7.250	8.500	4.25	.28	1/2-13	9.25	.31x.31x2.38
Y545	7 1/2	213TC	Aluminum	20.54	5.25	4.25	5.50	.44	10.62	10.78	1.375	1.34	7.50	14.81	3.12	7.250	8.500	4.25	.28	1/2-13	5.25	.31x.31x2.38
Y546	7 1/2	254TC	Aluminum	25.37	6.25	5.00	8.25	.56	11.62	10.78	1.625	1.25	8.10	20.81	3.75	7.250	8.500	4.75	.27	1/2-13	10.40	.38x.38x2.88
Y547	10	215TC	Aluminum	23.04	5.25	4.25	7.00	.44	10.62	10.78	1.375	1.34	7.50	17.81	3.12	7.250	8.500	4.25	.28	1/2-13	9.25	.31x.31x2.38
Y548	10	256TC	Aluminum	26.87	6.25	5.00	10.00	.56	14.07	18.41	1.625	1.25	11.25	19.06	3.75	7.250	8.500	4.75	.27	1/2-13	5.00	.38x.38x2.88
Y549	15	254TC	Aluminum	26.87	6.25	5.00	8.25	.56	11.62	10.78	1.625	1.25	8.10	20.81	3.75	7.250	8.500	4.75	.27	1/2-13	10.40	.38x.38x2.88
Y552	20	256TC	Cast Iron	25.13	6.25	5.00	10.00	.56	11.62	10.78	1.625	1.25	11.08	18.82	3.75	7.250	8.500	4.75	.27	1/2-13	5.00	.38x.38x2.88
Y553	25	284TC	Cast Iron	27.08	7.00	5.50	9.50	.53	15.57	21.26	1.875	2.00	13.31	20.39	4.38	9.000	10.500	4.75	.27	3/8-16	4.75	.50x.50x3.25
Y393	30	286TC	Cast Iron	28.58	7.00	5.50	11.00	.53	15.57	21.26	1.875	2.00	13.31	21.89	4.38	9.000	10.500	4.75	.27	3/8-16	5.50	.50x.50x3.25

Blue Max[®] 2000 VECTOR DUTY MOTORS



Features

- Class H MAX GUARD[®] insulation system
- Constant torque operation from 0 to base speed on vector drive, including TEFC (on V/Hz drives, TEFC motors are limited to 20:1 constant torque)
- Constant horsepower operation to 1.5 times base RPM
- Continuous duty at 40° C ambient
- Optimized for operation with IGBT inverter (NEMA Design A)
- C-Face foot mount through 100 HP (NEMA frame type TC motors)
- Class F N/C thermostats (one per phase)
- Cast iron frame and brackets
- Utilizes double shielded ball bearings with Exxon Polyrex[®] EM grease
- "Class B" temperature rise on blower-cooled motors
- F1 standard conduit box location, field reversible to F2
- Encoder and brake provisions included on opposite drive end
- UL recognized and CSA certified
- Three year warranty

Applications

- Designed for inverter or vector applications. 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.

Motor Shipping Schedule

Same day	Same to 1 day	1 - 3 days
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Color indicates shipping lead time in business days.

Motor Specifications

Part Number	HP	Base RPM	Volts	Encl.	NEMA Frame	Model No.	F.L. Amps	Weight Lbs.
Y571	40	1800	230/460	TEFC	324T	324THFPA28	100/50.0	540
Y513	40	1800	230/460	TEBC	324TC	324THFPA38	100/50.0	620
Y572	50	1800	230/460	TEFC	326T	326THFS8028	121/60.5	540
Y514	50	1800	230/460	TEBC	326TC	326THFS8038	120/60.0	640
Y573	60	1800	230/460	TEFC	364T	364THFS8036	147/73.5	965
Y515	60	1800	230/460	TEBC	364TC	364THFS8046	147/73.5	1062
Y574	75	1800	230/460	TEFC	365T	365THFS8036	184/92.0	1006
Y516	75	1800	230/460	TEBC	365TC	365THFS8046	180/90.0	1106
Y575	100	1800	230/460	TEFC	405T	405THFS8036	230/115	1308
Y517	100	1800	230/460	TEBC	405TC	405THFS8046	230/115	1429

Note: Please review the AutomationDirect Terms & Conditions for this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.automationdirect.com.

Performance Data (460 Volt)

Part Number	HP	F.L. RPM	F.L. AMPS 460 V	N.L. AMPS 460 V	F.L. Torque (LB-FT)	B.D. Torque (LB-FT)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (LB-FT ²)	Ohms/Ph - Equiv. Wye Circuit (460 VAC) (at rated operating temp. in 40° C ambient)				
												R1	R2	X1	X2	XM
Y571	40	1770	50.0	20.0	118.0	320.0	2642	3600	91.7	81.5	5.000	0.082	0.077	0.435	0.592	10.280
Y513	40	1770	50.0	20.0	118.0	320.0	2642	3600	91.7	81.5	5.000	0.082	0.077	0.435	0.592	10.280
Y572	50	1780	60.5	26.5	148.0	400.0	2675	3600	92.4	81.0	10.000	0.063	0.046	0.424	0.596	10.000
Y514	50	1765	60.0	25.0	149.0	525.0	3525	3600	93.0	83.5	5.500	0.088	0.092	0.437	0.358	9.662
Y573	60	1782	73.5	28.0	177.0	525.0	2665	2700	91.7	83.0	14.500	0.063	0.042	0.338	0.455	8.850
Y515	60	1782	74.0	28.0	177.0	525.0	2665	2700	91.7	83.0	14.500	0.063	0.042	0.338	0.455	8.850
Y574	75	1780	92.0	40.0	221.0	740.0	2665	2700	94.1	82.0	16.500	0.047	0.031	0.267	0.313	6.275
Y516	75	1780	90.0	33.0	222.0	645.0	2685	2700	93.0	84.0	16.000	0.054	0.038	0.299	0.420	8.203
Y575	100	1785	115.0	38.0	295.0	900.0	2675	2700	94.5	86.5	27.500	0.034	0.021	0.236	0.219	6.820
Y517	100	1785	115.0	38.0	295.0	900.0	2675	2700	94.5	86.5	27.500	0.034	0.021	0.236	0.219	6.816

* Maximum Constant HP RPM is for direct coupled loads.

Blue Max® 2000 VECTOR DUTY MOTORS

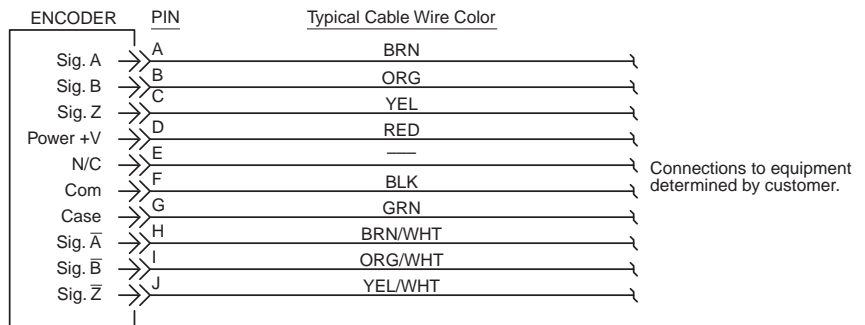
Encoder shaft mounted to motor

A Dynapar Model HS35 shaft mounted encoder can be supplied with the selected motor, either TEFC or TEBC type, as shown in the table below. The encoder requires a 5-26 VDC power source, provides a count of 1024 pulses per revolution (PPR) differential line driver output and includes a 10 pin connector. There is a mating connector supplied with the TEFC (totally enclosed fan cooled) motor encoders with the customer responsible for supplying the wiring cable and determining the connections to the equipment being used in their application. The encoder adds 1 inch to the TEFC motor's "C" dimension as shown in the drawing below. The TEBC (totally enclosed blower cooled) motor encoders have the mating connector pre-wired, installed and ending in a pigtail loacted inside a conduit box that is mounted on the motor. (See Figure 2 under the motor dimensional information on the next page.) The customer is responsible to determine the connections to the equipment being used in their application.

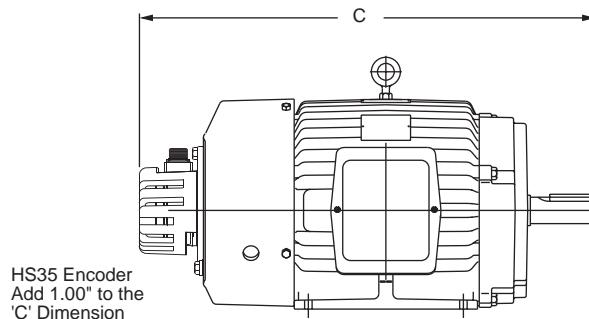
Motor with Shaft Mounted Encoder		
HP	Part Number (TEFC)	Part Number (TEBC)
40	Y571-A774	Y513-A775
50	Y572-A774	Y514-A775
60	Y573-A774	Y515-A775
75	Y574-A774	Y516-A775
100	Y575-A774	Y517-A775

Encoder connector pinout

Note: A mating connector is supplied loose for the customer's wiring on encoder equipped TEFC motors and a mating connector pre-wired to a cable and pig-tailed in a conduit box on encoder equipped TEBC motors.



TEFC Motor Dimension with Encoder Installed



Blue Max[®] 2000 VECTOR DUTY MOTORS

Motor Dimensions

Figure 1 (TEFC)

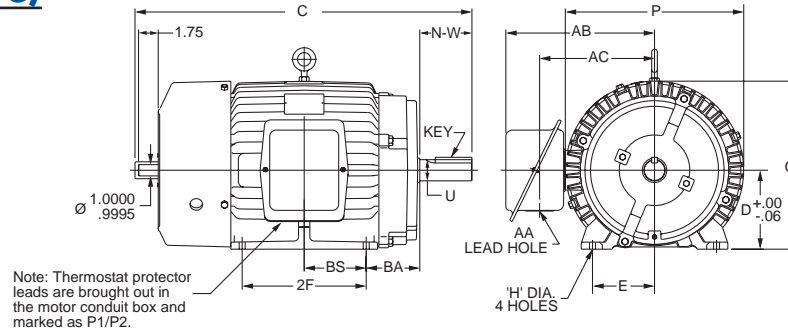
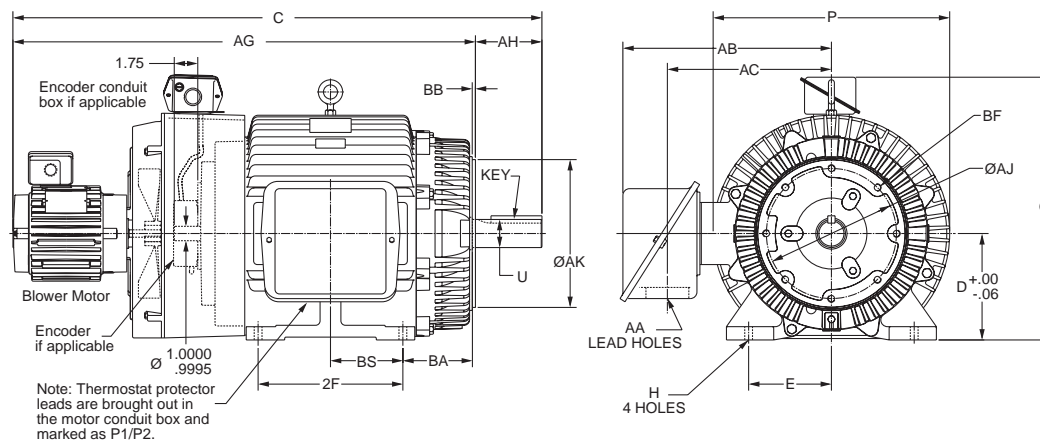


Figure 2 (TEBC)



Motor Dimensions [Inches]																								
Part No.	HP	Fig.	NEMA Frame	C	D	E	2F	H	O Max.	P Max.	U	AA	AB Max.	AC Max.	AG Max.	AH	AJ	AK	BA	BB	BF	BS	N-W	Key
Y571	40	1	324T	30.71	8.00	6.25	10.50	.66	16.00	15.88	2.12	2.00	13.69	10.69	-	-	-	-	5.25	-	-	5.25	5.25	.50x.50x3.88
Y513	40	2	324TC	40.41	8.00	6.25	10.50	.66	20.25	18.25	2.12	2.00	14.81	10.69	34.84	5.00	11.000	12.500	5.25	.25	5/8-11	5.25	-	.50x.50x3.88
Y572	50	1	326T	32.44	8.00	6.25	12.00	.66	16.00	15.88	2.12	2.00	13.69	10.69	-	-	-	-	5.25	-	-	6.00	5.25	.50x.50x3.88
Y514	50	2	326TC	41.91	8.00	6.25	12.00	.66	20.25	18.25	2.12	2.00	14.81	10.69	36.34	5.00	11.000	12.500	5.25	.25	5/8-11	6.00	-	.50x.50x3.88
Y573	60	1	364T	33.70	9.00	7.00	11.25	.66	19.00	20.00	2.38	3.62	17.85	14.56	-	-	-	-	5.88	-	-	5.62	5.88	.62x.62x4.25
Y515	60	2	364TC	42.67	9.00	7.00	11.25	.66	22.62	20.00	2.38	3.62	17.85	14.56	36.22	5.62	11.000	12.500	5.88	.25	5/8-11	5.62	-	.62x.62x4.25
Y574	75	1	365T	34.70	9.00	7.00	12.25	.66	19.00	20.00	2.38	3.62	17.85	14.56	-	-	-	-	5.88	-	-	6.12	5.88	.62x.62x4.25
Y516	75	2	365TC	43.67	9.00	7.00	12.25	.66	22.62	20.00	2.38	3.62	17.85	14.56	37.22	5.62	11.000	12.500	5.88	.25	5/8-11	6.12	-	.62x.62x4.25
Y575	100	1	405T	39.32	10.00	8.00	13.75	.81	20.88	21.75	2.88	3.62	19.75	16.25	-	-	-	-	6.62	-	-	6.88	7.25	.75x.75x5.62
Y517	100	2	405TC	49.72	10.00	8.00	13.75	.81	24.06	21.75	2.88	3.62	18.75	16.25	40.39	7.00	11.000	12.500	6.62	.25	5/8-11	6.88	-	.75x.75x5.62

TEBC Blower Motor Specifications (NEMA Frame Type TC Motors)									
Fits Frame Sizes	Type	HP	RPM	Frame Construction	Volts	Hz	FLA's	Sound Pressure	Watts
213T - 445T	Axial	1/75	1735/1460	Cast Iron S.D.	230/460-190/380	60/50	3.0/1.5	40	850

BLUE CHIP XRI® - ULTRA HIGH EFFICIENCY MOTORS



Features

- Meets NEMA premium efficiencies
- Inverter duty
- 10:1 variable torque, 20:1 constant torque on VFD with 1.0 service factor
- Class F insulation
- Continuous duty at 40° C ambient
- Cast iron frame construction with rigid base mounting
- F1 standard conduit box location, non-reversible
- 1.15 service factor
- Shaft slinger
- Utilizes double shielded ball bearings
- Exxon Polyrex® EM bearing grease
- UL recognized and CSA certified
- Three year warranty

Applications

- Typical uses include: material handling, machine tools, fans, conveyors, crane and hoist, metal processing, test stands, pumps, compressors, textile processing, and other industrial machinery installed in dusty or dirty environments.



Motor Shipping Schedule		
Same day	Same to 1 day	1 - 3 days

Note: Color indicates shipping lead time in business days.

Motor Specifications								
Part Number	HP	Base RPM	Volts	Encl.	NEMA Frame	Model No.	F.L. Amps	Weight Lbs.
E205	15	1800	230/460	TEFC	254T	254TTFNA6026	37.5/18.8	322
E206	20	1800	230/460	TEFC	256T	256TTFNA6026	48/24.1	368
E207	25	1800	230/460	TEFC	284T	284TTFNA6026	62/31	495
E208	30	1800	230/460	TEFC	286T	286TTFNA6026	73/36.5	423
E209	40	1800	230/460	TEFC	324T	324TTFNA6026	95/47.5	675
E210	50	1800	230/460	TEFC	326T	326TTFNA6026	120/60	745
E211	60	1800	230/460	TEFC	364T	364TTFNA6036	138/69	920
E212	75	1800	230/460	TEFC	365T	365TTFNA6036	172/86	1125
E213	100	1800	230/460	TEFC	405T	405TTFNA6036	226/113	1400

Note: Please review the AutomationDirect Terms & Conditions for this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.automationdirect.com.

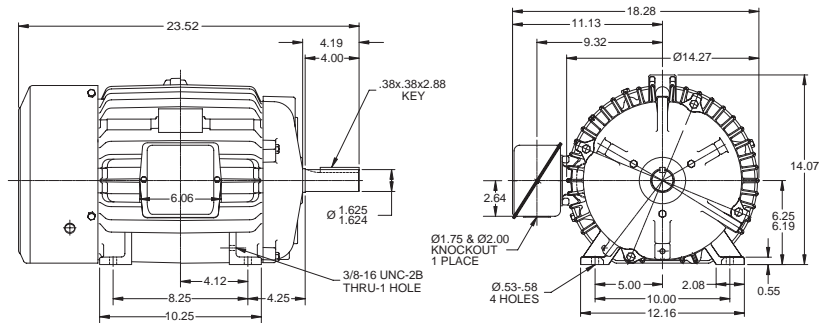
Motor Performance Data (460 Volt)														
Part Number	HP	F.L. RPM	F.L. AMPS 460 V	N.L. AMPS 460 V	F.L. Torque (LB-FT)	B.D. Torque (LB-FT)	F.L. Effic.	F.L. Power Factor	Rotor Inertia (LB-FT ²)	Ohms/Ph - Equiv. Wye Circuit (460 VAC) (at rated operating temp. in 40° C ambient)				
										R1	R2	X1	X2	XM
E205	15	1775	19	8	44.5	126.4	92.4	81	2.4	0.376	0.238	1.351	1.777	32.508
E206	20	1775	24	8	59.5	144.6	93	84	3.2	0.267	0.207	0.990	1.491	28.4
E207	25	1775	31	14	74	215	93.6	81	4.2	0.150	0.154	0.852	1.066	20.064
E208	30	1773	36	15	89	245	94.1	82	4.5	0.125	0.136	0.724	0.937	17.785
E209	40	1780	48	18	118	304	94.1	83	8.5	0.082	0.066	0.597	0.798	13.514
E210	50	1775	60	24	148	340	94.5	82	9.2	0.068	0.062	0.483	0.648	11.068
E211	60	1780	69	22	177	449	95	86	16	0.065	0.047	0.412	0.473	11.447
E212	75	1780	86	28	221	574	95.4	86	18	0.048	0.037	0.319	0.386	9.238
E213	100	1780	113	28	295	773	95.4	87	28	0.034	0.028	0.307	0.287	8.920

* Maximum Constant HP RPM is for direct coupled loads.

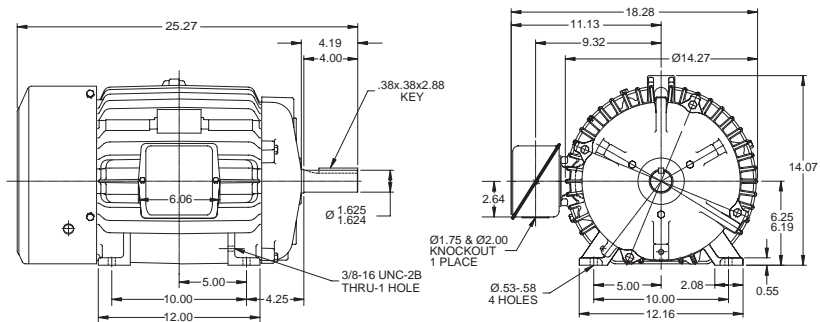
BLUE CHIP XRI® - ULTRA HIGH EFFICIENCY MOTORS

Motor Dimensions

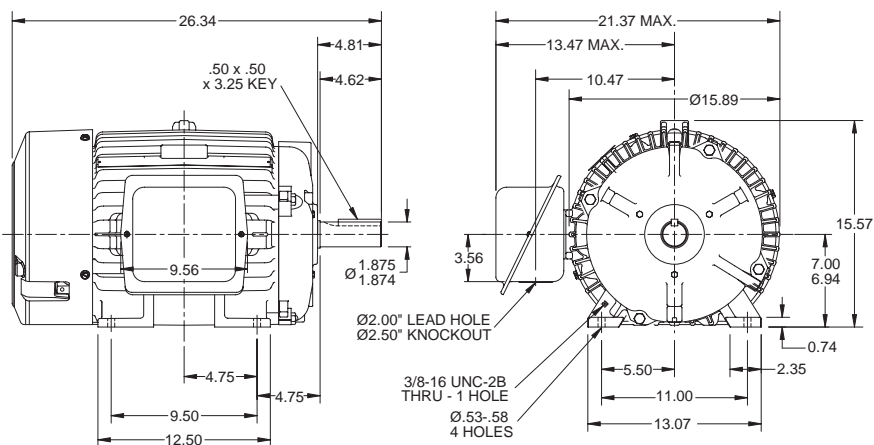
254T frame - part number E205



256T frame - part number E206



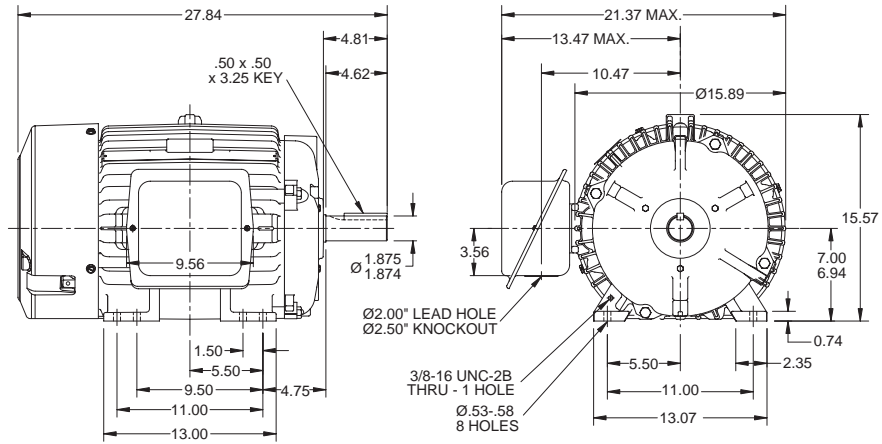
284T frame - part number E207



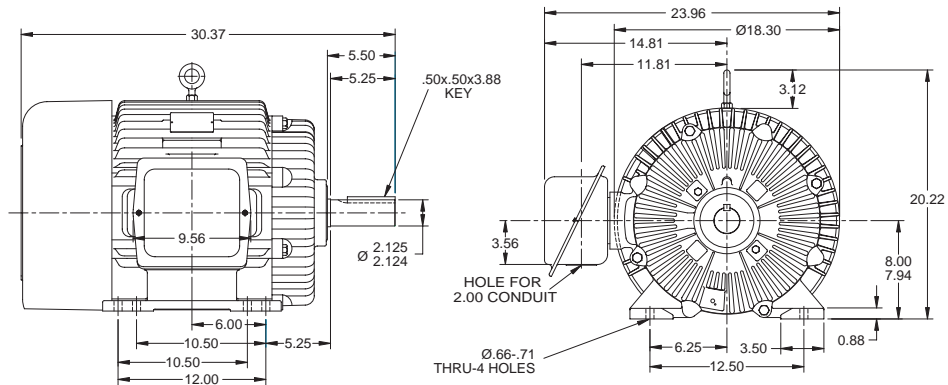
BLUE CHIP XRI® - ULTRA HIGH EFFICIENCY MOTORS

Motor Dimensions

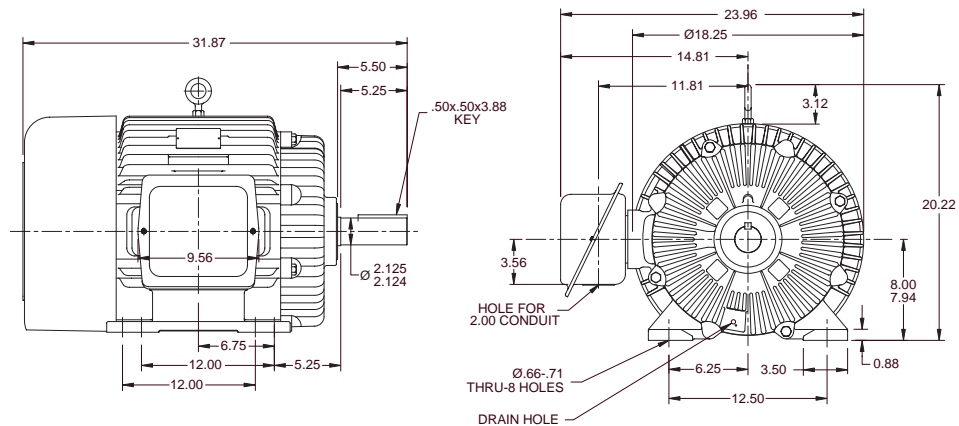
286T frame - part number E208



324T frame - part number E209



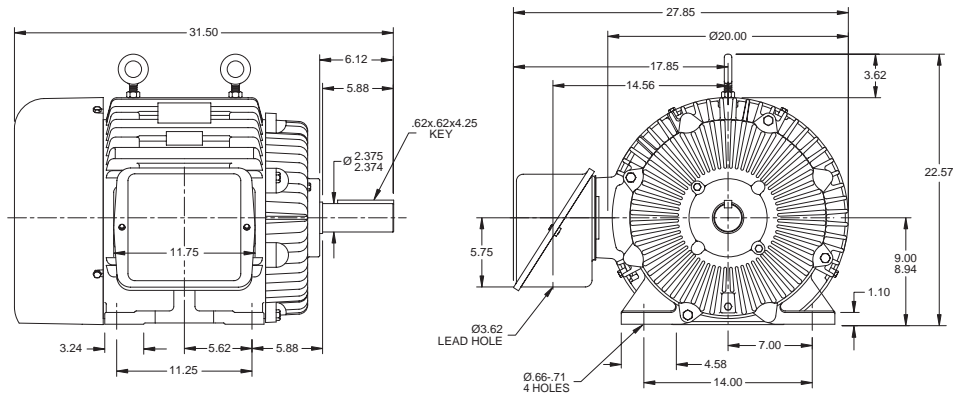
326T frame - part number E210



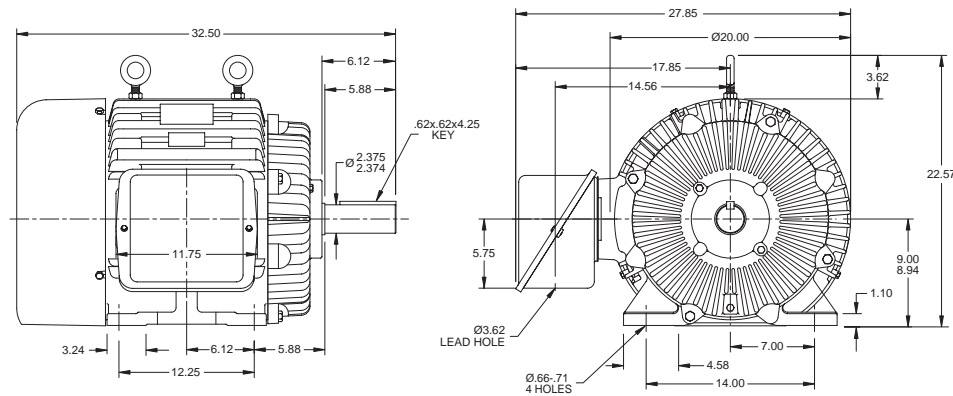
BLUE CHIP XRI[®] - ULTRA HIGH EFFICIENCY MOTORS

Motor Dimensions

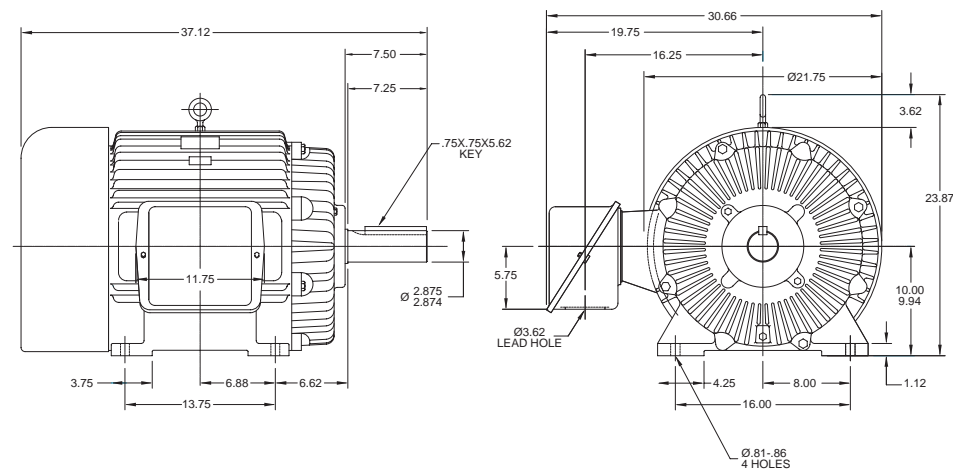
364T frame - part number E211



365T frame - part number E212



405T frame - part number E213



MOTORS - PERFORMANCE & SPECIFICATION COMPARISONS

Characteristic	microMAX™	Black Max®	Blue Max® 2000	Blue Chip XRI®
Electrical Characteristics				
Horsepower Range	1/4 - 10	1/4 - 30	40 - 100	15 - 100
Base Speed (# Poles)	1800 (4)	1800 (4) and 1200 (6)	1800 (4)	1800 (4)
Standard Voltage	230/460 (1/4 HP is 230 V only)	230/460	230/460	230/460
Insulation Class	H	F	H	F
Insulation System	CR ²⁰⁰ magnet wire	MAX GUARD®	MAX GUARD®	MAX GUARD®
Service Factor (inverter power)	1.0	1.0	1.0	1.15
Phase/Base Frequency	3/60	3/60	3/60	3/60
Design Code (NEMA)	A and B for 1/4 - 2 HP	A	A	B
Duty Cycle	Continuous	Continuous	Continuous	Continuous
Thermal Protection	None	Class F thermostats	Class F thermostats	None
Mechanical Characteristics				
Frame Size (mounting)	56C - 215TC	56C - 286TC	324T(C) - 405T(C)	254T - 405T
Normal NEMA Frame Size	Yes	Yes	Yes	Yes
Enclosure	TENV and TEFC	TENV	TEFC and TEBC	TEFC
Frame Material	Rolled Steel	Rolled Steel, Aluminum & Cast Iron	Cast Iron	Cast Iron
End Bracket Material	Aluminum	Aluminum, Cast Iron	Cast Iron	Cast Iron
Conduit Box Material	Steel	Steel	Cast Iron	Cast Iron
Fan Guard Material	Polypropylene	None (all ratings TENV)	Cast Iron	Cast Iron
Fan Material	Polypropylene	None (all ratings TENV)	Polypropylene	Polypropylene
Lead Termination	Conduit box (1/4 HP - terminal block)	Conduit box	Conduit box	Conduit box
Standard Mounting	C-Face with Rigid Base and C-Face Round Body	C-Face with Rigid Base	C-Face with Rigid Base	Rigid Base
Drive End Shaft Slinger	No	No	Yes	Yes
Paint	Black powder-coat	Black enamel	Blue enamel	epoxy paint
Bearings	Ball (C3 fit)	Ball (C3 fit)	Ball (C3 fit)	Ball (C3 fit)
Grease	Exxon POLYREX EM	Exxon POLYREX EM	Exxon POLYREX EM	Exxon POLYREX EM
Standard Conduit Box Assembly Position	F3	F1, reversible to F2	F1, reversible to F2	F1
Performance Characteristics				
Constant Torque Speed Range	20:1 (TEFC), 1000:1 (TENV)	1000:1 (TENV)	2000:1 (all enclosures)	20:1
Constant Horsepower Speed Range	2:1 (90-120 Hz intermittent)	2:1 (90-120 Hz intermittent)	2:1	2:1
Temperature Rise	B	F	F (TEFC) and B (TEBC)	B
Encoder Provisions	No	Yes	Yes	No
Other Characteristics				
Agency Listings	UL Recognized, CSA Certified	UL Recognized, CSA Certified	UL Recognized, CSA Certified	UL Recognized, CSA Certified
Warranty	3 years	3 years	3 years	3 years