

PREMIUM T-FRAME CAST IRON MOTORS

1 - 250HP, PREMIUM EFFICIENT, THREE PHASE, TEFC



PRODUCT OVERVIEW

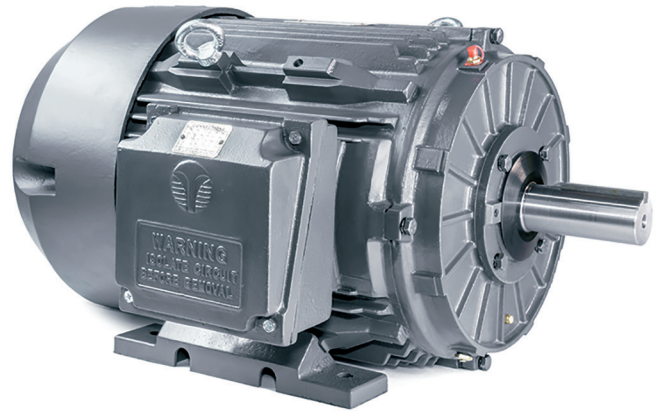
Three phase, enhanced performance cast iron, premium efficient NEMA design B torque motors. Features a multi-mount arrangement incorporating bolt on feet* or flange mount configuration. 2, 4 and 6 pole, 1 to 250HP, ideal for numerous light and heavy duty industrial and severe applications.

BASIC SPECIFICATIONS

- Power Ratings from 1 to 250HP
- Three Phase, 2, 4 and 6 pole, 50/60Hz
- 230/460V (Usable @ 208V), 460V & 575V 60Hz, 190/380V 50Hz
- Totally Enclosed Fan Cooled (TEFC)

STANDARD FEATURES

- *Removable feet F1, F2, F0 field convertible up to and including 326T frame, F2 convertible 364T and larger
- 1.25 Service Factor through 326T frame, 1.15 Service Factor for larger frames with 60Hz operation / 1.0 Service Factor with 50Hz operation
- 36 Month warranty
- Cast iron construction with C and D flange kits available
- Cast iron fan cover standard for all frame sizes
- Cast iron Conduit Box is 90° rotatable
- 1045 Steel shaft though 405T, 4140 grade for 444T and larger
- Regreasable bearings 254T frame and larger
- Mobil Polyrex EM polyurea grease
- CSA Certified for Class I, Division II, Groups A, B, C and D / Class I, Zone 2, Groups IIC, IIB, IIA
- IEEE 45 Marine Duty
- Anti-microbial (tropicalization) on stator winding
- Surface finish:
 - 2-Part epoxy coating RAL7024 - Graphite Gray
- Stainless steel nameplate
- Corrosion resistant hardware
- Ultra high strength, reusable lifting straps included with motors 254T frame and larger



AMPRO ELECTRIC LTD.

ECRA / ESA LICENCE #7015465

OPERATING PARAMETERS

- Continuous (S1) duty
- Ambient temperatures up to 40°C
- Installation up to 1000 MASL (3300 ft.)

CONNECTION

Up to and including 215T Frame:

- 9-Lead 230V parallel-wye / 460V series-wye connection
- 3-Lead 575V wye connection

254T Frame and larger:

- 12-Lead 230V parallel-delta / 460V delta connection
- 6-Lead 460V or 575V single voltage delta connection

INGRESS PROTECTION

The standard degree of enclosure protection is IP55 (increased IP protection is available). Both drive end and non-drive end are fitted with double lip oil seals, including a rubber shaft slinger on the drive end. Terminal box is double gasketed including nipple seals between conduit box and stator body. DE and NDE end bell fitted with sintered brass one-way drain.

INSULATION AND INVERTER RATING

- Class F Insulation (Impregnation resin, magnet wire and insulation materials are Class H)
- Designed to Class B temperature rise
- Vacuum Impregnated
- Inverter Rated 15:1 Constant Torque, 30:1 Variable Torque (1.0 S.F. on VFD Power).
- Exceeds NEMA MG 1 Part 31.4.4.2



PURCHASING DATA

143T - 449T Frame Foot-Mount												NEMA Premium Efficiency			
HP	MODEL	MFG Number	Sync. RPM	NEMA Frame	Full Load Current I _n (A)				FL Eff. (%)	Shipping Weight (lbs.)	"C" Dim. (in.)	List Price			
					208V	230V	460V	575V				Rigid	C-Flange	D-Flange	
1	GRC0002[]	TXC143T1U2B	3600	143T	3.36	3.04	1.52	1.22	77.0	41.2	13.38	\$422	\$462	\$525	
	GRC0004[]	TXC143T1U4B	1800	143T	3.32	3.00	1.50	1.20	85.5	46.3	13.38	\$422	\$462	\$525	
	GRC0006[]	TXC145T1U6B	1200	145T	3.75	3.39	1.69	1.36	82.5	52.9	14.38	\$475	\$515	\$578	
1.5	GRC0012[]	TXC143T1.5U2B	3600	143T	4.42	4.00	2.00	1.61	84.0	41.9	13.38	\$444	\$484	\$547	
	GRC0014[]	TXC145T1.5U4B	1800	145T	4.79	4.33	2.16	1.73	86.5	54.0	14.38	\$459	\$499	\$562	
	GRC0016[]	TXC182T1.5U6B	1200	182T	5.30	4.79	2.40	1.92	87.5	93.7	15.90	\$560	\$618	\$721	
2	GRC0022[]	TXC145T2U2B	3600	145T	5.70	5.15	2.58	2.06	85.5	48.5	14.38	\$492	\$532	\$595	
	GRC0024[]	TXC145T2U4B	1800	145T	6.14	5.55	2.78	2.22	86.5	59.5	14.38	\$491	\$531	\$594	
	GRC0026[]	TXC184T2U6B	1200	184T	6.88	6.22	3.11	2.49	88.5	112.5	16.90	\$656	\$714	\$817	
3	GRC0032[]	TXC182T3U2B	3600	182T	8.07	7.30	3.65	2.92	86.5	82.7	15.90	\$651	\$709	\$812	
	GRC0034[]	TXC182T3U4B	1800	182T	8.79	7.95	3.97	3.18	89.5	94.8	15.90	\$639	\$697	\$800	
	GRC0036[]	TXC213T3U6B	1200	213T	9.78	8.84	4.42	3.54	89.5	147.7	19.10	\$901	\$990	\$1,106	
5	GRC0052[]	TXC184T5U2B	3600	184T	13.00	11.76	5.88	4.70	88.5	97.0	16.90	\$714	\$772	\$875	
	GRC0054[]	TXC184T5U4B	1800	184T	13.94	12.60	6.30	5.04	89.5	110.3	16.90	\$721	\$779	\$882	
	GRC0056[]	TXC215T5U6B	1200	215T	15.22	13.77	6.88	5.51	89.5	172.0	20.60	\$1,175	\$1,264	\$1,380	
7.5	GRC0072[]	TXC213T7.5U2B	3600	213T	19.07	17.24	8.62	6.90	89.5	140.0	19.10	\$1,003	\$1,092	\$1,208	
	GRC0074[]	TXC213T7.5U4B	1800	213T	20.16	18.23	9.12	7.29	91.7	158.8	19.10	\$1,017	\$1,106	\$1,222	
	GRC0076[]	TXC254T7.5U6B	1200	254T	22.46	20.31	10.15	8.12	91.0	247.0	24.28	\$1,463	\$1,591	\$1,808	
10	GRC0102[]	TXC215T10U2B	3600	215T	24.95	22.57	11.28	9.03	90.2	165.4	20.60	\$1,150	\$1,239	\$1,355	
	GRC0104[]	TXC215T10U4B	1800	215T	26.54	24.00	12.00	9.61	91.7	181.9	20.60	\$1,163	\$1,252	\$1,368	
	GRC0106[]	TXC256T10U6B	1200	256T	29.55	26.73	13.36	10.69	91.0	277.8	26.01	\$1,900	\$2,028	\$2,245	
15	GRC0152[]	TXC254T15U2B	3600	254T	38.79	35.08	17.54	14.03	91.0	254.7	24.28	\$1,679	\$1,807	\$2,024	
	GRC0154[]	TXC254T15U4B	1800	254T	40.02	36.19	18.10	14.48	92.4	278.9	24.28	\$1,682	\$1,810	\$2,027	
	GRC0156[]	TXC284T15U6B	1200	284T	44.57	40.30	20.15	16.12	91.7	363.8	27.73	\$2,376	\$2,569	\$2,811	
20	GRC0202[]	TXC256T20U2B	3600	256T	50.01	45.23	22.61	18.09	91.0	275.6	26.01	\$1,951	\$2,079	\$2,296	
	GRC0204[]	TXC256T20U4B	1800	256T	50.60	45.76	22.88	18.31	93.0	330.8	26.01	\$1,970	\$2,098	\$2,315	
	GRC0206[]	TXC286T20U6B	1200	286T	56.45	51.05	25.53	20.42	91.7	403.5	29.23	\$2,716	\$2,909	\$3,151	
25	GRC0252[]S	TXC256T25U2B	3600	256T	66.41	60.1	30.03	24.0	91.7	341.0	26.01	\$2,285	\$2,413	\$2,630	
	GRC0252[]	TXC284T25U2B	3600	284TS	66.42	60.06	30.03	24.02	91.7	353.9	26.36	\$2,325	\$2,518	\$2,760	
	GRC0254[]	TXC284T25U4B	1800	284T	65.07	58.84	29.42	23.54	93.6	366.0	27.73	\$2,352	\$2,545	\$2,787	
30	GRC0256[]	TXC324T25U6B	1200	324T	67.88	61.39	30.69	24.56	93.0	500.5	30.20	\$3,576	\$3,819	\$4,174	
	GRC0302[]	TXC286T30U2B	3600	286TS	77.87	70.42	35.21	28.17	91.7	374.9	27.86	\$2,780	\$2,973	\$3,215	
	GRC0304[]	TXC286T30U4B	1800	286T	76.29	68.99	34.49	27.60	93.6	396.9	29.23	\$2,772	\$2,965	\$3,207	
40	GRC0306[]	TXC326T30U6B	1200	326T	80.48	72.78	36.39	29.11	93.0	648.3	31.70	\$4,145	\$4,388	\$4,743	
	GRC0402[]S	TXC286T40U2B	3600	286TS	99.61	90.1	45.04	36.0	92.4	423.4	27.86	\$3,365	\$3,558	\$3,800	
	GRC0402[]	TXC324T40U2B	3600	324TS	99.60	90.07	45.04	36.03	92.4	485.1	28.70	\$3,535	\$3,778	\$4,133	
	GRC0404[]	TXC324T40U4B	1800	324T	107.34	97.07	48.54	38.83	94.1	539.1	30.20	\$3,626	\$3,869	\$4,224	
50	GRC0406[]	TXC364T40U6B	1200	364T	103.55	93.65	46.82	37.46	94.1	725.4	33.83	\$4,980	\$5,338	\$6,007	
	GRC0502[]	TXC326T50U2B	3600	326TS	125.09	113.12	56.56	45.25	93.0	529.2	30.20	\$4,168	\$4,411	\$4,766	
	GRC0504[]	TXC326T50U4B	1800	326T	130.43	117.95	58.98	47.18	94.5	600.9	31.70	\$4,314	\$4,557	\$4,912	
	GRC0506[]	TXC365T50U6B	1200	365T	132.56	119.88	59.94	47.95	94.1	791.6	34.83	\$6,242	\$6,600	\$7,269	

Voltage: Replace [] with D for 230/460V, or F for 575V
Flange: Add "-TC" to the end of Model for C-Flange or "-TD" for D-Flange

For Flange Kits refer to Motor Accessories on page 51

PREMIUM T-FRAME CAST IRON MOTORS

1 - 250HP, PREMIUM EFFICIENT, THREE PHASE, TEFC



PURCHASING DATA

143T - 449T Frame Foot-Mount											NEMA Premium Efficiency			
HP	MODEL	MFG Number	Sync. RPM	NEMA Frame	Full Load Current I _n (A)			FL Eff. (%)	Shipping Weight (lbs.)	"C" Dim. (in.)	List Price			
					230V	460V	575V				Rigid	C-Flange	D-Flange	
60	GRC0602 []	TXC364TS60U2B	3600	364TS	136.41	68.20	54.56	93.6	761.8	31.70	\$5,739	\$6,097	\$6,766	
	GRC0604 []	TXC364T60U4B	1800	364T	135.94	67.97	54.38	95.0	782.8	33.83	\$5,747	\$6,105	\$6,774	
	GRC0606 []	TXC404T60U6B	1200	404T	141.54	70.77	56.62	94.5	975.7	38.75	\$7,355	\$7,849	\$8,469	
75	GRC0752 []	TXC365TS75U2B	3600	365TS	166.72	83.36	66.69	93.6	785.0	32.70	\$6,685	\$7,043	\$7,712	
	GRC0754 []	TXC365T75U4B	1800	365T	167.29	83.65	66.92	95.4	873.2	34.83	\$6,801	\$7,159	\$7,828	
	GRC0756 []	TXC405T75U6B	1200	405T	172.81	86.41	69.13	94.5	1045.2	38.75	\$7,978	\$8,472	\$9,092	
100	GRC1002 []	TXC405TS100U2B	3600	405TS	218.69	109.34	87.47	94.1	1020.9	35.75	\$8,130	\$8,624	\$9,244	
	GRC1004 []	TXC405T100U4B	1800	405T	230.93	115.47	92.37	95.4	1025.3	38.75	\$8,168	\$8,662	\$9,282	
	GRC1006 []	TXC444T100U6B	1200	444T	229.21	114.60	91.68	95.0	1589.8	44.52	\$12,373	\$12,994	\$13,641	
125	GRC1252 []	TXC444TS125U2B	3600	444TS	--	136.89	109.51	95.0	1437.7	40.77	\$12,345	\$12,966	\$13,613	
	GRC1254 []	TXC444T125U4B	1800	444T	--	142.65	114.12	95.4	1479.6	44.52	\$12,417	\$13,038	\$13,685	
	GRC1256 []	TXC445T125U6B	1200	445T	--	148.43	118.74	95.0	1730.9	44.52	\$13,665	\$14,286	\$14,933	
150	GRC1502 []	TXC445TS150U2B	3600	445TS	--	164.27	131.42	95.0	1543.5	40.77	\$14,725	\$15,346	\$15,993	
	GRC1504 []	TXC445T150U4B	1800	445T	--	168.51	134.81	95.8	1631.7	44.52	\$14,845	\$15,466	\$16,113	
	GRC1506 []	TXC447T150U6B	1200	447T	--	183.26	146.61	95.8	2041.8	53.02	\$17,273	\$17,894	\$18,541	
200	GRC2002 []	TXC447TS200U2B	3600	447TS	--	218.10	174.48	95.4	1858.8	49.27	\$17,701	\$18,322	\$18,969	
	GRC2004 []	TXC447T200U4B	1800	447T	--	223.75	179.00	96.2	2055.1	53.02	\$18,559	\$19,180	\$19,827	
	GRC2006 []	TXC449T200U6B	1200	449T	--	232.70	186.16	95.8	2244.7	53.02	\$21,594	\$22,215	\$22,862	
250	GRC2502 []	TXC449TS250U2B	3600	449TS	--	271.49	217.19	95.8	2024.2	49.27	\$20,086	\$20,707	\$21,354	
	GRC2504 []	TXC449T250U4B	1800	449T	--	273.40	218.72	96.2	2288.8	53.02	\$21,060	\$21,681	\$22,328	

Voltage: Replace [] with D for 230/460V, F for 575V, or E for 460V

For Flange Kits refer to Motor Accessories on page 51

Flange: Add "-TC" to the end of Model for C-Flange or "-TD" for D-Flange

General Purpose 3Φ

Pump Motors 3Φ

Brake Motors 3Φ

General Purpose 1Φ

Farm Duty 1Φ

PM DC

Accessories

DIMENSIONAL DRAWINGS

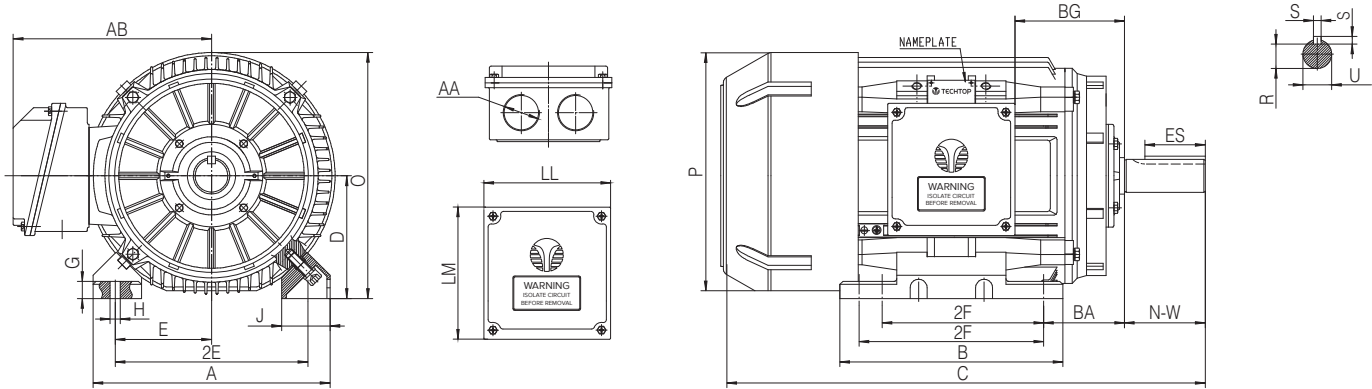


Figure 1 - Foot Mount

Dimensions are in inches

NEMA Frame	Foot Mounting					Shaft					General							Terminal Box					
	2E	2F	2F	H	BA	N-W	U	S	R	ES	A	B	C	D	G	J	O	P	AA	AB	BG	LL	LM
143T	5.5	4.0	--	0.34	2.25	2.25	0.875	0.188	0.771	1.41	7.0	5.12	13.38	3.5	0.55	1.46	7.01	6.93	1-NPT 3/4"	5.9	1.94	4.57	4.8
145T		5.0	--									2.43											
182T	7.5	4.5	--	0.41	2.75	2.75	1.125	0.25	0.986	1.78	9.0	6.1	15.90	4.5	0.675	1.77	8.83	8.66	1-NPT 3/4"	7.17	2.17	5.67	5.75
184T		5.5	--									2.67											
213T	8.5	5.5	--	0.41	3.5	3.38	1.375	0.312	1.201	2.41	10.27	7.48	19.10	5.25	0.71	1.81	10.35	10.2	1-NPT 1"	7.95	2.22	5.67	5.75
215T		7.0	--									20.60											
254T	10.0	8.25	--	0.53	4.25	4.0	1.625	0.375	1.416	2.91	12.36	10.35	24.28	6.25	0.63	2.36	12.44	12.36	1-NPT 1-1/4"	10.1	3.48	6.54	6.77
256T		10.0	--									26.01											
284T	11.0	9.5	--	0.53	4.75	4.62	1.875	0.50	1.591	3.28	13.8	12.2	27.73	7.0	0.985	2.95	13.9	13.78	1-NPT 1-1/2"	10.83	6.23	6.54	6.77
286T			11.0									--	29.23										
284TS			--									--	26.36										
286TS			11.0									--	27.86										
324T	12.5	10.5	--	0.66	5.25	5.25	2.125	0.50	1.845	3.91	15.4	13.0	30.20	8.0	1.12	3.15	15.9	15.71	1-NPT 2"	13.0	6.37	8.27	8.62
326T			12.0									--	31.70										
324TS			--									--	28.70										
326TS			12.0									--	30.20										
364T	14.0	11.25	--	0.66	5.88	5.88	2.375	0.625	2.021	4.28	17.17	14.2	33.83	9.0	1.24	3.15	18.0	--	1-NPT 2"	14.2	7.36	8.27	8.62
365T			12.25									--	34.83										
364TS			--									--	31.70										
365TS			12.25									--	32.70										
404T	16.0	12.25	13.75	0.81	6.62	7.25	2.875	0.75	2.45	5.65	19.06	17.44	38.75	10.0	1.33	3.15	20.0	--	1-NPT 3"	15.3	8.53	9.92	11.1
405T						4.25	2.125	0.50	1.845	2.78			35.75										
444T	18.0	14.5	16.5	0.81	7.5	8.5	3.375	0.875	2.88	6.91	21.93	20.08	44.52	11.0	1.315	3.94	22.0	--	1-NPT 3"	18.0	9.685	12.13	13.98
445T						4.75	2.375	0.625	2.021	3.03			40.77										
444TS						4.75	2.375	0.625	2.021	3.03			40.77										
445TS						4.75	2.375	0.625	2.021	3.03			40.77										
447T	18.0	20.0	25.0	0.81	7.5	8.5	3.375	0.875	2.88	6.91	21.93	28.6	53.02	11.0	1.315	3.94	22.0	--	1-NPT 3"	18.0	13.94	12.13	13.98
449T						4.75	2.375	0.625	2.021	3.03			49.27										
447TS						4.75	2.375	0.625	2.021	3.03			49.27										
449TS						4.75	2.375	0.625	2.021	3.03			49.27										

DIMENSIONAL DRAWINGS

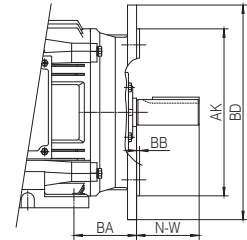
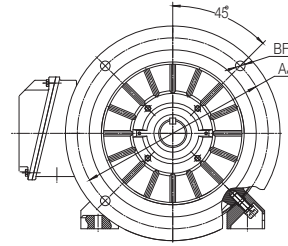
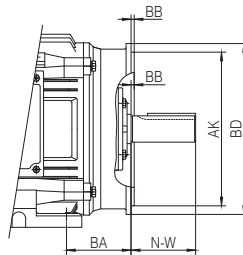
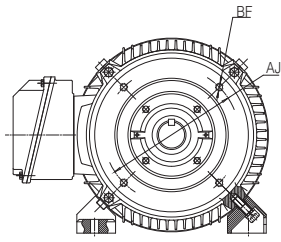


Figure 2 - C-Flange

Figure 3 - D-Flange

Dimensions are in inches

NEMA Frame	NEMA C-Flange Dimensions								NEMA D-Flange Dimensions						
	AJ	AK	BA*	BB	BC	BD	BF	N-W	AJ	AK	BA	BB	BD	BF	N-W
143T	5.875	4.5	2.25	0.16	0.12	6.5	4-UNC 3/8-16	2.25	10.0	9.0	2.25	0.25	11.0	4* 0.53	2.25
145T															
182T	7.25	8.5	2.75	0.25	0.12	9.0	4-UNC 1/2-13	2.75	10.0	9.0	2.75	0.25	11.0	4* 0.53	2.75
184T															
213T	7.25	8.5	3.5	0.25	0.25	8.95	4-UNC 1/2-13	3.38	10.0	9.0	3.5	0.25	11.0	4* 0.53	3.38
215T															
254T	7.25	8.5	4.25	0.25	0.25	10.0	4-UNC 1/2-13	4.0	12.5	11.0	4.25	0.25	14.0	4* 0.81	4.0
256T															
284/6T	9.0	10.5	4.75	0.25	0.25	11.25	4-UNC 1/2-13	4.62	12.5	11.0	4.75	0.25	14.0	4* 0.81	4.62
284/6TS								3.25							3.25
324/6T	11.0	12.5	5.25	0.25	0.25	14.0	4-UNC 5/8-11	5.25	16.0	14.0	5.25	0.25	18.0	4* 0.81	5.25
324/6TS								3.75							3.75
364/5T	11.0	12.5	5.88	0.25	0.25	14.0	8-UNC 5/8-11	5.88	16.0	14.0	5.88	0.25	18.0	4* 0.81	5.88
364/5TS								3.75							3.75
404/5T	11.0	12.5	6.62	0.25	0.25	15.5	8-UNC 5/8-11	7.25	20.0	18.0	6.62	0.25	22.0	8* 0.81	7.25
404/5TS								4.25							4.25
444/5T	14.0	16.0	7.5	0.25	0.25	18.0	8-UNC 5/8-11	8.5	20.0	18.0	7.5	0.25	22.0	8* 0.81	8.5
444/5TS								4.75							4.75
447/9T	14.0	16.0	7.5	0.25	0.25	18.0	8-UNC 5/8-11	8.5	20.0	18.0	7.5	0.25	22.0	8* 0.81	8.5
447/9TS								4.75							4.75

*Non-standard NEMA BA dimension for flanged models frames 143T - 256T frame

General Purpose 3Φ

Pump Motors 3Φ

Brake Motors 3Φ

General Purpose 1Φ

Farm Duty 1Φ

PM DC

Accessories

