

# TXC IEEE-841 Three-Phase Motor Petrochem motor-NEMA premium efficiency

## Description

TXC NEMA Premium motors meet or exceed all NEMA Premium requirements for energy efficiency. These TXC IEEE 841 NEMA Premium efficiency mill and chemical duty motors are specially suited for pulp and paper mills, Steel mills and applications requiring severe duty long life motors.

## Applications

- Pumping applications
- Pulp and paper mills
- Petrochemical

## Standard Features

- Three-phase, 2, 4, 6pole, 60Hz
- Voltage: 460 or 575V(3 wire)
- Totally enclosed fan cooled (TEFC)
- Degree of protection: IP55
- Class: "F" insulation ("B" Temperature rise at full load)
- 104°F (40°C ) ambient temperature

## Service Factor:

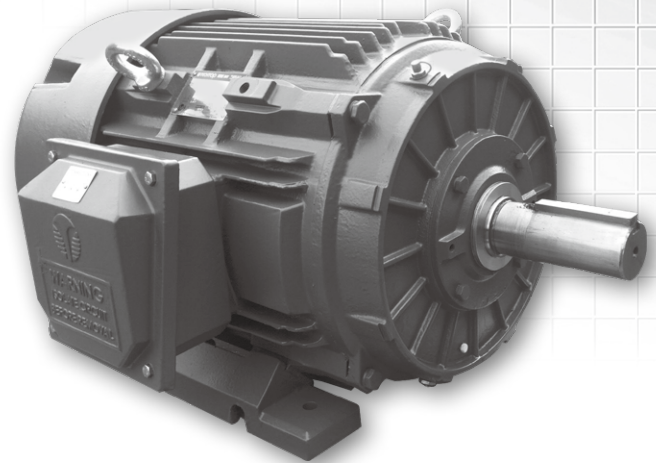
- -1.25-up to 100 HP, -1.15-from 125HP and up
- Squirrel cage rotor/ Aluminum die cast
- 143T up to 449T cast iron frame
- All cast iron reinforced construction: frame, endshields, terminal box and fan cover
- F1 mounting
- Stainless steel nameplate
- Labyrinth type oil seal on drive end and opposite drive end
- External paint: Epoxy polyamide enamel, meets 240h salt spray as per ASTM B117-03
- Internal corrosion resistant epoxy finish
- Regreasable ball bearings D.E. and O.D.E
- Grease outlet through the fan cover
- High tensile steel shaft (for frame 404T and up -4 poles and up)
- Fan: Conductive plastic or Bronze
- "T" type stainless steel condensate drain
- Balance quality grade G1
- Solid milled feet
- Foot flatness 0.005 in (0.127 mm)
- Hex-head bolts or socket-head cap screws and organometallic surface lining
- Stainless steel grease inlet extension
- Minimum Bearing life L10h:50,000 hours for directed-connected loads and 26,280 hours belted

## Optional Features

- Special voltages
- Specialty designed shaft
- Space heaters
- Additional terminal box
- Drip cover(canopy) for shaft down applications
- Cable glands
- Terminal block
- Flange mounting
- Roller bearings

## Notes

All motors supplied with IEEE 841 Test Report ALL TECHTOP motors are energy efficiency verified by UL addition to the DOE



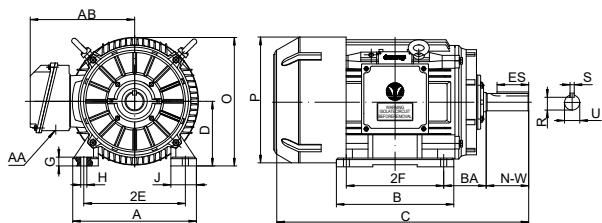


Figure 1 NEMA Foot Mounted

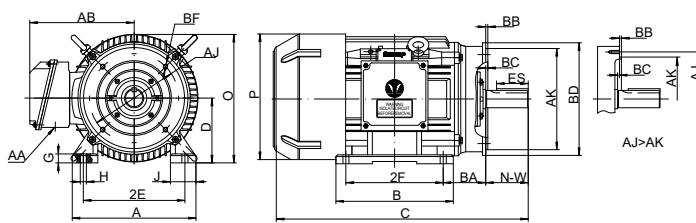


Figure 2 NEMA C-Face Foot Mounted

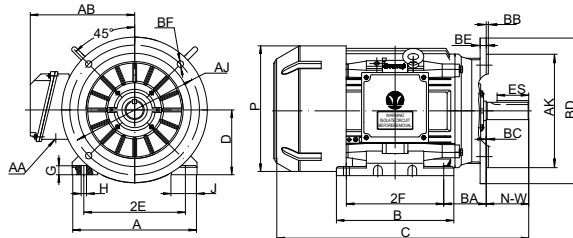


Figure 2 NEMA D-Face Foot Mounted

## Overall & Installation Dimensions

Frame	Foot Mounting								Shaft					General											
	A	B	G	J	2E	2F	H	BA	N-W	U	S	R	ES	C	D	O	AA	AB	P						
143T	7	5.12	0.55	1.46	5.5	4	0.34	2.25	2.25	0.875	0.188	0.771	1.41	13.38	3.5	7.01	3/4	5.69	7.25						
145T		6.1				5								14.38											
182T	9	6.1	0.675	1.77	7.5	4.5	0.41	2.75	2.75	1.125	0.25	0.986	1.78	15.9	4.5	8.83	3/4	7.37	9.06						
184T						7.09								5.5						16.9					
213T	10.27	7.48	0.71	1.81	8.5	5.5	0.41	3.5	3.38	1.375	0.312	1.201	2.42	19.1	5.25	10.35	1	8.13	10.63						
215T						8.98								7						20.6					
254T	12.36	10.35	0.63	2.36	10	8.25	0.53	4.25	4	1.625	0.375	1.416	2.91	24.28	6.25	12.44	1-1/4	10.24	12.68						
256T						12.05								10						25.98					
284T	13.8	12.2	0.985	2.95	11	9.5	0.53	4.75	4.62	1.875	0.5	1.591	3.28	27.73	7	13.9	1-1/2	10.91	14.53						
286T						13.7								11						29.23					
284TS	13.8	12.2	0.985	2.95	11	9.5	0.53	4.75	3.25	1.625	0.375	1.416	1.91	26.36	7	13.9	1-1/2	10.91	14.53						
286TS						13.7								11						27.86					
324T	15.4	13	1.12	3.15	12.5	10.5	0.66	5.25	5.25	2.125	0.5	1.845	3.91	30.2	8	15.9	2	13	16.06						
326T						14.5								12						31.7					
324TS	15.4	13	1.12	3.15	12.5	10.5	0.66	5.25	3.75	1.875	0.5	1.591	2.03	28.7	8	15.9	2	13	16.06						
326TS						14.5								12						30.2					
364T	17.17	14.2	1.24	3.15	14	11.25	0.66	5.88	5.88	2.375	0.625	2.021	4.28	33.83	9	18	3	15.3	18.425						
365T						15.2								12.25						34.83					
364TS	17.17	14.2	1.24	3.15	14	11.25	0.66	5.88	3.75	1.875	0.5	1.591	2.03	31.7	9	18	3	15.3	18.425						
365TS						15.2								12.25						32.7					
404T	19.06	17.44	1.33	3.15	16	12.25	0.81	6.62	7.25	2.875	0.75	2.45	5.65	38.75	10	20	3	16.1	20.32						
405T									13.75											4.25	2.125	0.5	1.845	2.78	35.75
405TS																									
444T	21.93	20.08	1.315	3.94	18	14.5	0.81	7.5	8.5	3.375	0.875	2.88	6.91	44.52	11	22	3	17.72	22.36						
445T																				16.5					
444TS	21.93	20.08	1.315	3.94	18	14.5	0.81	7.5	4.75	2.375	0.625	2.021	3.03	40.77	11	22	3	17.72	22.36						
445TS																				16.5					
447T	21.93	28.6	1.315	3.94	18	20	0.81	7.5	8.5	3.375	0.875	2.88	6.91	53.02	11	22	3	17.72	22.36						
449T																				25					
447TS	21.93	28.6	1.315	3.94	18	20	0.81	7.5	4.75	2.375	0.625	2.021	3.03	49.27	11	22	3	17.72	22.36						
449TS																				25					

Frame	C-Face						D-Face						
	AJ	AK	BB	BC	BD	BF	AJ	AK	BB	BC	BD	BE	BF
143-145T	5.875	4.5	0.16	0.12	6.5	4*3/8-16	10.0	9.0	0.25	0	11	0.5	4*0.53
182-184T	7.25	8.5	0.25	0.12	9	4*1/2-13	10.0	9.0	0.25	0	11	0.5	4*0.53
213-215T	7.25	8.5	0.25	0.25	8.95	4*1/2-13	10.0	9.0	0.25	0	11	0.5	4*0.53
254-256T	7.25	8.5	0.25	0.25	10	4*1/2-13	12.5	11.0	0.25	0	14	0.75	4*0.81
284-286T/TS	9	10.5	0.25	0.25	11.25	4*1/2-13	12.5	11.0	0.25	0	14	0.75	4*0.81
324-326T/TS	11	12.5	0.25	0.25	14	4*5/8-11	16.0	14.0	0.25	0	18	0.75	4*0.81
364-365T/TS	11	12.5	0.25	0.25	14	8*5/8-11	16.0	14.0	0.25	0	18	0.75	4*0.81
404-405T/TS	11	12.5	0.25	0.25	15.5	8*5/8-11	20.0	18.0	0.25	0	22	1	8*0.81
444-449T/TS	14	16	0.25	0.25	18	8*5/8-11	20.0	18.0	0.25	0	22	1	8*0.81

# IEEE-841 NEMA Premium Efficiency TEFC Motor Design B Technical Data (60Hz)

HP	Full Load Speed (r/min)	NEMA Frame	Full Load Current		Eff. 100%FL	Power Factor (cos Φ)	Full Load Torque lbf-ft	KVA Code	Locked Rotor		BDT (%FL)	Service Factor	Moment of Inertia (lb*ft <sup>2</sup> )	Net weight (lbs)
			I <sub>1,460V</sub> (A)	I <sub>1,575V</sub> (A)					LRA 230V (A)	LRT (%FL)				
1	3500	143T	1.5	1.2	77	0.83	1.50	K	22	220	300	1.25	0.0278	41.1
	1740	143T	1.5	1.2	85.5	0.75	3.02	J	19	280	300	1.25	0.0657	48.5
	1150	145T	1.7	1.3	82.5	0.68	4.57	H	17	200	270	1.25	0.1153	57.3
1.5	3500	143T	2.0	1.6	84	0.84	2.25	K	32	220	300	1.25	0.0373	45.0
	1740	145T	2.2	1.7	86.5	0.75	4.53	L	34	280	300	1.25	0.0886	58.7
	1175	182T	2.4	1.9	87.5	0.66	6.71	L	35	220	300	1.25	0.4287	99.3
2	3500	145T	2.6	2.1	85.5	0.85	3.00	L	47	220	300	1.25	0.0470	53.2
	1740	145T	2.8	2.2	86.5	0.78	6.04	K	42	280	300	1.25	0.1113	63.8
	1175	184T	3.1	2.5	88.5	0.68	8.94	L	46	220	300	1.25	0.5701	117.6
3	3510	182T	3.6	2.9	86.5	0.9	4.49	K	61	200	280	1.25	0.1115	87.3
	1750	182T	3.8	3.1	89.5	0.82	9.01	K	64	220	300	1.25	0.2971	101.1
	1175	213T	4.4	3.5	89.5	0.72	13.41	K	64	200	250	1.25	1.0708	158
5	3510	184T	5.7	4.6	88.5	0.92	7.48	J	92	180	250	1.25	0.1688	105
	1750	184T	6.2	4.9	89.5	0.85	15.01	J	92	185	250	1.25	0.3808	116
	1175	215T	6.9	5.5	89.5	0.76	22.36	J	92	190	240	1.25	1.2916	178
7.5	3510	213T	8.5	6.8	89.5	0.92	11.23	H	127	180	250	1.25	0.3652	135
	1750	213T	9.5	7.6	91.7	0.81	22.52	H	127	180	220	1.25	1.0107	176
	1175	254T	10.3	8.2	91	0.75	33.54	H	127	180	220	1.25	2.5083	274
10	3510	215T	11.2	8.9	90.2	0.93	14.97	H	162	180	250	1.25	0.4878	156
	1750	215T	12.6	10.1	91.7	0.81	30.02	H	162	180	220	1.25	1.2516	203
	1175	256T	13.5	10.8	91	0.76	44.72	H	162	180	220	1.25	2.7766	294
15	3530	254T	16.8	13.4	91	0.92	22.33	G	232	180	220	1.25	1.2285	236
	1770	254T	17.3	13.8	92.4	0.88	44.53	G	232	180	220	1.25	2.3774	283
	1180	284T	20.2	16.1	91.7	0.76	66.79	G	232	180	210	1.25	6.6291	404
20	3530	256T	22.6	18.1	91	0.91	29.77	G	290	180	220	1.25	1.3265	256
	1770	256T	22.9	18.3	93	0.88	59.37	G	290	180	220	1.25	2.9431	320
	1180	286T	26.9	21.5	91.7	0.76	89.05	G	290	180	210	1.25	7.7218	446
25	3530	284TS	28.1	22.4	91.7	0.91	37.21	G	365	170	200	1.25	1.8022	379
	1770	284T	30.5	24.4	93.6	0.82	74.21	G	365	180	220	1.25	3.5723	392
	1175	324T	31.9	25.5	93	0.79	111.79	G	365	150	200	1.25	9.6109	532
30	3530	286TS	33.7	26.9	91.7	0.91	44.65	G	435	170	200	1.25	1.9980	405
	1770	286T	35.3	28.2	93.6	0.85	89.05	G	435	180	220	1.25	4.2699	435
	1175	326T	38.2	30.6	93	0.79	134.15	G	435	150	200	1.25	11.7133	605
40	3550	324TS	45.0	36.0	92.4	0.9	59.20	G	580	180	210	1.25	3.6853	523
	1770	324T	45.7	36.6	94.1	0.87	118.74	G	580	180	210	1.25	7.1443	568
	1180	364T	48.0	38.4	94.1	0.83	178.11	G	580	180	200	1.15	19.0074	809
50	3550	326TS	55.3	44.3	93	0.91	74.00	G	725	180	210	1.25	4.8563	618
	1770	326T	56.3	45.0	94.5	0.88	148.42	G	725	180	210	1.25	8.6799	646
	1180	365T	60.0	48.0	94.1	0.83	222.63	G	725	180	200	1.15	22.1113	886
60	3560	364TS	66	53	93.6	0.91	88.55	G	870	140	210	1.15	7.6386	806
	1775	364T	68.8	55	95	0.86	177.61	G	870	160	210	1.15	16.1908	790
	1185	404T	72	57	94.5	0.83	266.03	G	870	180	210	1.15	32.8267	1052
75	3560	365TS	82.5	66	93.6	0.91	110.69	G	1085	160	210	1.15	9.0204	885
	1775	365T	84.6	68	95.4	0.87	222.01	G	1085	160	210	1.15	19.0010	865
	1185	405T	90	72	94.5	0.83	332.54	G	1085	180	210	1.15	38.7353	1149
100	3560	405TS	112	89	94.1	0.89	147.59	G	1450	150	210	1.15	13.6840	1084
	1780	405T	117	93	95.4	0.84	295.18	G	1450	200	210	1.15	27.0284	1171
	1190	444T	119	94	95	0.83	441.53	G	1450	200	210	1.15	83.6230	1591
125	3560	444TS	137	110	95	0.9	184.49	G	1815	160	210	1.15	22.4032	1397
	1785	444T	138	110	95.4	0.89	367.94	G	1815	190	200	1.15	45.1689	1444
	1190	445	147	117	95	0.84	551.91	G	1815	200	210	1.15	93.5276	1680
150	3565	445TS	162	130	95	0.91	221.07	G	2170	160	210	1.15	30.3624	1645
	1785	445T	165	132	95.8	0.89	441.53	G	2170	200	200	1.15	57.2815	1637
	1190	447T	172	138	95.8	0.85	662.29	G	2170	200	210	1.15	111.3609	2051
200	3570	447TS	216	173	95.4	0.91	294.35	G	2900	200	210	1.15	35.1399	1973
	1785	447T	219	175	96.2	0.89	588.70	G	2900	200	200	1.15	71.6246	2048
	1190	449T	230	184	95.8	0.85	883.05	G	2900	200	210	1.15	136.1224	2310
250	3570	449TS	269	215	95.8	0.91	367.94	G	3650	200	210	1.15	45.7522	2309
	1785	449T	273	219	96.2	0.89	735.88	G	3650	200	200	1.15	88.9282	2321