

EMT SERIES CAST IRON MOTORS

Premium Efficiency Three-phase Induction Motors

NEMA T FRAME 143T THRU 449T 1~ 250HP
TEFC NEMA PREMIUM EFFICIENT



Applications: Typical applications include operations where continuous or frequent duty is required.

Features: Low-loss electrical grade lamination steel. Cast iron frames. IP55 protection. Double lip seal keeps out moisture and contamination. Oversized bearings. Conduit box with gasket. Ground lug in conduit box. Stainless steel nameplate. Inverter Duty Rated 5:1CT & 10:1VT, Design: "B", VPI applied for best electrical performance, Corrosion resistant epoxy coated, F1 / F2 Convertible, 230/460V 60Hz, Usable at 208V (444T and up 460V only), Double rated for 190/380V 50Hz, Suitable for Y/delta starting and part winding starting, Double drilled feet, CSA-US certified, DOE approved, CE marked, Class F insulated, Service factor 1.15, C face kits available

Performance Data

575V 60Hz rated

Type	HP	Frame	Conn.	Code	Full load r/min	Current at 575V			Torque			Efficiency			Power Factor		
						Idle	Full load (A)	Locked rotor (A)	Full load (LB-FT)	Locked rotor %	Break down %	Full load %	3/4 load %	1/2 load %	Full load %	3/4 load %	1/2 load %
EMT604	1	143T	Y	K	3495	0.59	1.2	7.68	1.50	220	265	77.0	81.08	78.29	82	74.75	62.34
EMT605	1.5	143T	Y	K	3490	0.7	1.6	11.04	2.26	215	250	84.0	84.34	83.46	84	79.20	68.59
EMT606	2	145T	Y	J	3485	0.72	2.1	15.1	3.01	210	240	85.5	86.16	85.91	85	83.61	74.69
EMT654	1	143T	Y	K	1745	0.88	1.3	8.94	3.01	280	300	85.5	84.84	81.54	70	61.33	48.58
EMT655	1.5	145T	Y	K	1735	1.06	1.8	11.54	4.54	250	280	86.5	86.93	82.77	74	66.41	53.42
EMT656	2	145T	Y	J	1730	1.38	2.3	14.28	6.07	245	270	86.5	86.88	82.63	75	67.63	54.57
EMT704	1	145T	Y	J	1155	1.04	1.4	8.07	4.55	260	280	82.5	81.96	77.97	65	55.57	42.55
EMT607	3	182T	Y	J	3530	1.01	3	24.16	4.46	200	230	86.5	86.26	83.85	87	84.69	77.0
EMT608	5	184T	Y	H	3520	1.25	4.8	36.08	7.46	180	215	88.5	88.75	87.64	88	85.51	78.01
EMT657	3	182T	Y	J	1760	1.13	2.9	21.75	8.95	215	250	89.5	90.06	88.51	86	81.77	71.87
EMT658	5	184T	Y	H	1755	1.69	4.9	32.29	14.96	185	225	89.5	90.45	90.05	86	83.93	75.48
EMT705	1.5	182T	Y	H	1180	1.22	1.8	10.41	6.68	190	250	87.5	86.77	84.20	70	61.28	48.19
EMT706	2	184T	Y	J	1180	1.58	2.4	14.48	8.90	180	240	88.5	88.0	85.52	70	60.84	47.80
EMT609	7.5	213T	Δ	H	3535	1.74	7.1	48.01	11.14	250	290	89.5	90.02	88.85	89	89.52	84.33
EMT60A	10	215T	Δ	G	3530	2.06	9.3	60.81	14.88	240	280	90.2	90.79	89.57	89	87.69	84.29
EMT659	7.5	213T	Δ	G	1765	2.68	7.2	45.52	22.32	250	280	91.7	92.23	90.94	85	82.41	73.63
EMT65A	10	215T	Δ	G	1765	3.34	9.6	62.32	29.76	240	200	91.7	92.27	91.13	85	82.09	72.98
EMT707	3	213T	Y	J	1185	1.88	3.4	22.99	13.30	185	230	89.5	89.35	87.78	74	66.83	55.17
EMT708	5	215T	Y	H	1180	2.73	5.7	33.8	22.26	170	215	89.5	89.20	88.31	74	68.4	57.98
EMT60B	15	254T	Δ	G	3560	3.38	13.7	88.13	22.13	220	250	91.0	90.83	89.12	90	90.52	85.65



Performance Data

575V 60Hz rated

Type	HP	Frame	Conn.	Code	Full load r/min	Current at 575V			Torque			Efficiency			Power Factor		
						Idle	Full load (A)	Locked rotor (A)	Full load (LB-FT)	Locked rotor %	Break down %	Full load %	3/4 load %	1/2 load %	Full load %	3/4 load %	1/2 load %
EMT60C	20	256T	Δ	F	3555	3.98	18.3	111.88	29.55	220	250	91.0	91.16	90.03	90	89.71	85.40
EMT65B	15	254T	Δ	G	1780	4.03	14.3	83.08	44.26	180	230	92.4	93.12	92.86	85	83.55	77.75
EMT65C	20	256T	Δ	G	1780	5.3	19	112.24	59.02	160	200	93.0	93.74	93.52	85	83.33	77.39
EMT709	7.5	254T	Δ	G	1190	3.86	8.2	47.21	33.10	190	230	91.0	91.41	90.59	75	70.72	60.96
EMT70A	10	256T	Δ	G	1185	5.55	11	62.07	44.33	180	220	91.0	91.59	90.71	75	70.39	60.27
EMT60D	25	284TS	Δ	F	3560	5.8	22.7	128.85	36.89	180	220	91.7	91.97	89.28	90	89.0	84.88
EMT60E	30	286TS	Δ	F	3560	6.14	27.2	145.2	44.26	180	220	91.7	91.72	90.07	90	89.6	85.78
EMT65D	25	284T	Δ	F	1780	8.26	23.5	125.33	73.77	180	230	93.6	94.01	93.49	85	82.08	73.42
EMT65E	30	286T	Δ	F	1780	8.99	28.2	142.52	88.53	175	220	93.6	94.31	94.22	85	82.72	75.73
EMT70B	15	284T	Δ	G	1185	6.62	15.1	82.69	66.49	170	200	91.7	91.91	90.92	81	76.06	65.29
EMT70C	20	286T	Δ	F	1185	8.31	20.2	105.97	88.65	170	200	91.7	92.06	91.31	81	77.09	67.1
EMT60F	40	324TS	Δ	F	3560	6.87	36	224.96	59.02	200	225	92.4	92.62	91.55	90	89.69	86.33
EMT60G	50	326TS	Δ	F	3560	8.52	44.7	284.43	73.77	200	225	93.0	93.33	92.88	90	89.35	85.71
EMT65F	40	324T	Δ	F	1775	9.42	36.2	223.93	118.37	195	235	94.1	94.81	94.76	88	86.37	81.45
EMT65G	50	326T	Δ	F	1775	11.35	45	284.07	147.96	195	235	94.5	95.17	95.18	88	86.78	82.15
EMT70G	50	365T	Δ	F	1175	6.78	24.6	134.22	111.76	175	220	93.0	93.59	93.82	82	81.18	75.75
EMT70H	60	404T	Δ	E	1175	7.97	29.5	157.04	134.11	170	210	93.0	94.17	94.59	82	81.15	75.98
EMT60H	60	364TS	Δ	F	3575	9.24	52.8	318.8	88.16	160	205	93.6	93.79	93.07	91	90.59	88.21
EMT60I	75	365TS	Δ	F	3575	10.48	66	386.47	110.20	160	205	93.6	93.84	93.44	91	90.95	89.87
EMT65H	60	364T	Δ	G	1785	14.42	54.4	342	176.56	175	210	95.0	95.4	95.08	87	86.11	80.73
EMT65I	75	365T	Δ	G	1785	17.47	67.7	398.2	220.70	170	200	95.4	96.01	95.91	87	86.26	81.96
EMT70I	75	405T	Δ	F	1190	11.74	38.8	197.68	176.56	150	200	94.1	94.94	94.35	82	81.74	75.22
EMT70J	50	365T	Δ	G	1190	13.54	48.5	238.66	220.70	150	200	94.1	94.83	94.28	82	80.48	75.03
EMT60J	100	405TS	Δ	F	3575	17.92	87.5	533.97	146.93	180	250	94.1	94.17	94.01	91	92.74	90.20
EMT75A	100	405T	Δ	F	1785	26.4	90.3	539.56	294.27	180	250	95.4	94.81	94.39	87	86.20	79.69
EMT70K	60	404T	Δ	F	1190	17.28	55.3	324.92	264.84	190	240	94.5	94.43	94.09	86	84.95	78.0
EMT70L	75	405T	Δ	G	1190	20.64	69.1	424.68	331.05	190	230	94.5	94.69	94.32	86	85.15	78.46
EMT60K	125	444TS	Δ	F	3580	19.28	108	646.09	183.40	165	230	95.0	95.01	94.00	91	92.01	89.01
EMT60L	150	445TS	Δ	F	3580	28.64	130	784	220.08	160	230	95.0	95.05	93.80	91	92.08	89.38
EMT60M	200	447TS	Δ	F	3580	28.8	171	1028.88	293.44	170	220	95.4	95.12	93.81	92	92.34	90.54
EMT60N	250	449TS	Δ	F	3580	26.8	212	1237.2	366.80	185	220	95.8	95.41	94.30	92	92.41	91.03
EMT75B	125	444T	Δ	F	1790	26.32	112	665.25	366.80	180	240	95.4	95.03	94.67	88	89.50	85.07
EMT75C	150	445T	Δ	F	1790	29.12	133	783.95	440.16	170	240	95.8	95.28	94.94	88	90.34	86.60
EMT75D	200	447T	Δ	F	1790	33.68	177	1060.24	586.89	185	240	96.2	95.59	95.23	88	90.47	86.70
EMT75E	250	449T	Δ	F	1790	37.28	221	1332.39	733.61	185	230	96.2	95.82	95.49	88	91.13	88.01
EMT70M	100	444T	Δ	F	1190	29.2	91.7	552.92	441.40	180	230	95.0	94.77	94.28	86	83.25	75.54
EMT70N	125	445T	Δ	F	1190	32.32	115	683.74	551.75	180	230	95.0	95.02	94.57	86	84.28	77.29
EMT70P	150	447T	Δ	F	1190	34	136	830.36	662.10	170	230	95.8	95.28	94.78	86	85.25	78.75
EMT70Q	200	449T	Δ	F	1190	40.64	182	1101.77	882.80	170	220	95.8	95.49	95.06	86	86.06	80.34

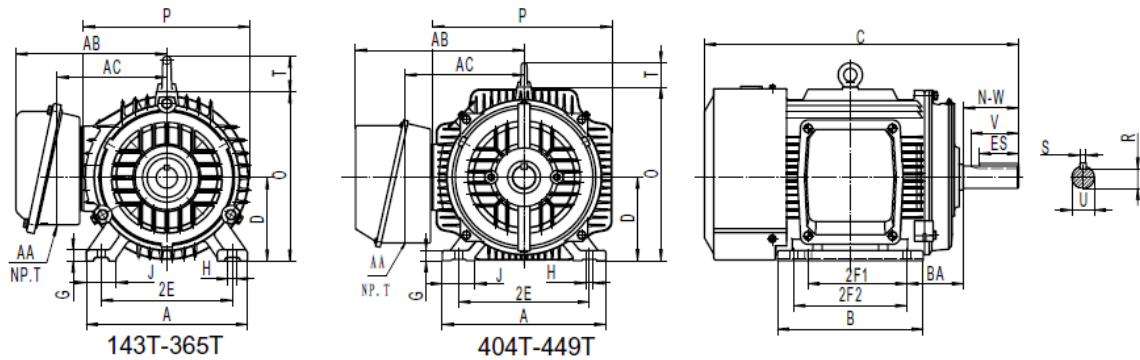


Performance Data

230 / 460V 60Hz rated

Type	HP	Frame	Conn.	Code	Full load RPM	Current at 230/ 460			Torque			Efficiency			Power Factor		
						Idle	Full load	Locked rotor	Full Load	Locked rotor	Break down	Full load	3/4 Load	1/2 Load	Full load	3/4 load	1/2 load
						(A)	(A)	(A)	(LB-FT)	%	%	%	%	%	%	%	%
EMT674	1	143/5T	Y	K	1745	2.2/1.1	3.2/1.6	22./11.0	3.01	280	300	85.5	84.84	81.54	70	61.33	48.58
EMT675	1.5	143/5T	Y	K	1735	2.64/1.32	4.4/2.2	28.2/14.1	4.54	250	280	86.5	86.93	82.77	74	66.41	53.42
EMT676	2	143/5T	Y	J	1730	3.44/1.72	5.8/2.9	36.0/18.0	6.07	245	270	86.5	86.88	82.63	75	67.63	54.57
EMT774	1	143/5T	Y	J	1155	2.6/1.3	3.4/1.7	19.6/9.8	4.55	260	280	82.5	81.96	77.97	65	55.57	42.55
EMT677	3	182/4T	Y	J	1760	2.81/1.41	7.2/3.6	54.0/27.0	8.95	215	250	89.5	90.06	88.51	86	81.77	71.87
EMT678	5	182/4T	Y	H	1755	4.22/2.11	12.2/6.1	80.4/40.2	14.96	185	225	89.5	90.45	90.05	86	83.93	75.48
EMT775	1.5	182/4T	Y	H	1180	3.06/1.53	4.6/2.3	26.6/13.6	6.68	190	250	87.5	86.77	84.2	70	61.28	48.19
EMT776	2	182/4T	Y	J	1180	3.96/1.98	3.0/6.0	36.2/18.1	8.9	180	240	88.5	88	85.52	70	60.84	47.8
EMT679	7.5	213/5T	Δ	G	1765	6.7/3.35	18.0/9.0	113.8/56.9	22.32	250	280	91.7	92.23	90.94	85	82.41	73.63
EMT67A	10	213/5T	Δ	G	1765	8.36/4.18	24/12.0	155.8/77.9	29.76	240	200	91.7	92.27	91.13	85	82.09	72.98
EMT777	3	213/5T	Y	J	1185	4.7/2.35	8.4/4.2	56.8/28.4	13.3	185	230	89.5	89.35	87.78	74	66.83	55.17
EMT778	5	213/5T	Y	H	1180	6.82/3.41	14.2/7.1	84.2/42.1	22.26	170	215	89.5	89.2	88.31	74	68.4	57.98
EMT779	7.5	254/6T	Δ	G	1190	9.64/4.82	20.6/10.3	108.6/59.3	33.1	190	230	91	91.41	90.59	75	70.72	60.96
EMT77A	10	254/6T	Δ	G	1185	13.88/6.94	27.4/13.7	154.6/77.3	44.33	180	220	91	91.59	90.71	75	70.39	60.27
EMT77B	15	284/6T	Δ	G	1185	16.54/8.27	37.8/18.9	313.6/156.8	66.49	170	200	91.7	91.91	90.92	81	76.06	65.29
EMT77C	20	284/6T	Δ	F	1185	20.78/10.39	50.4/25.2	356.8/178.4	88.65	170	200	91.7	92.06	91.31	81	77.09	67.1
EMT77D	25	324/6T	Δ	F	1175	16.94/8.47	61.4/30.7	559.2/279.6	111.76	175	220	93	93.59	93.82	82	81.18	75.75
EMT80A	100	444/5T	Δ	F	1190	73.0/36.5	229.2/114.6	1382.0/691.0	441.4	180	230	95	94.77	94.28	86	83.25	75.54

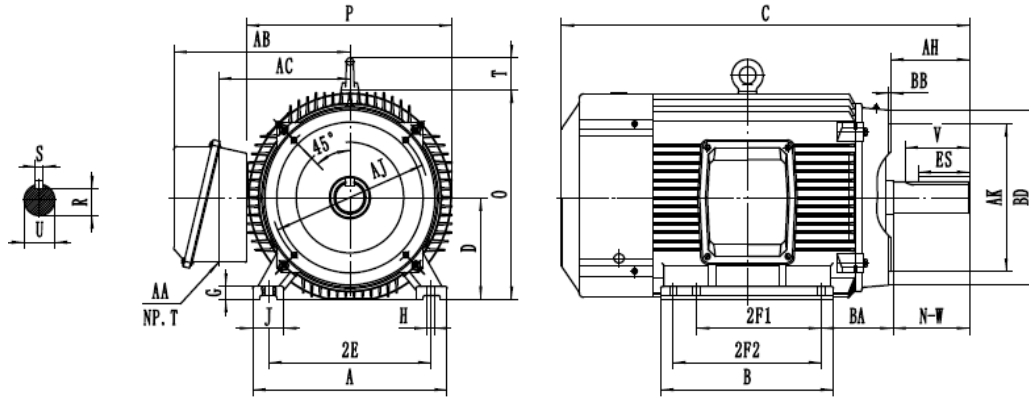
"C" Dimensions (in)



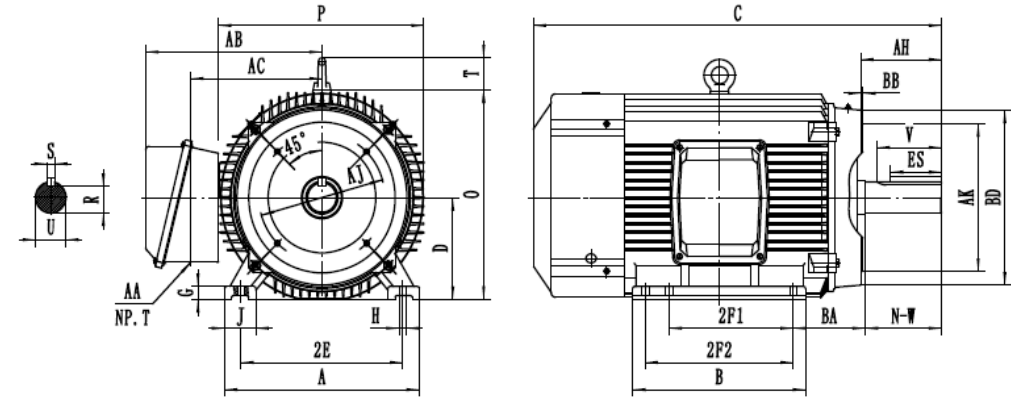
Type	Frame	"C"
EMT604	143T	13.5
EMT605	143T	13.5
EMT606	145T	14.5
EMT654	143T	13.5
EMT655	145T	14.5
EMT656	145T	14.5
EMT704	145T	14.5
EMT607	182T	16.2
EMT608	184T	17.1
EMT657	182T	16.2
EMT658	184T	17.1
EMT705	182T	16.2
EMT706	184T	17.1
EMT609	213T	18
EMT60A	215T	20
EMT659	213T	18
EMT65A	215T	20
EMT707	213T	18
EMT708	215T	20
EMT60B	254T	23.55
EMT60C	256T	25.2
EMT65B	254T	23.55
EMT65C	256T	25.2
EMT709	254T	23.55
EMT70A	256T	25.2
EMT60D	284TS	25.2
EMT60E	286TS	28.1
EMT65D	284T	26.6
EMT65E	286T	28.1
EMT70B	284T	26.6

Type	Frame	"C"
EMT70C	286T	28.1
EMT60F	324TS	30.2
EMT60G	326TS	31.7
EMT65F	324T	31.7
EMT65G	326T	33.3
EMT70G	324T	31.7
EMT70H	326T	33.3
EMT60H	364TS	31.5
EMT60I	365TS	34.65
EMT65H	364T	33.7
EMT65I	365T	37.1
EMT70I	364T	33.7
EMT70J	365T	37.1
EMT60J	405TS	36.5
EMT75A	405T	39
EMT70K	404T	39
EMT70L	405T	39
EMT60K	444TS	41.4
EMT60L	445TS	41.4
EMT60M	447TS	50
EMT60N	449TS	50
EMT75B	444T	45.1
EMT75C	445T	45.1
EMT75D	447T	53.6
EMT75E	449T	53.6
EMT70M	444T	45.1
EMT70N	445T	45.1
EMT70P	447T	53.6
EMT70Q	449T	53.6

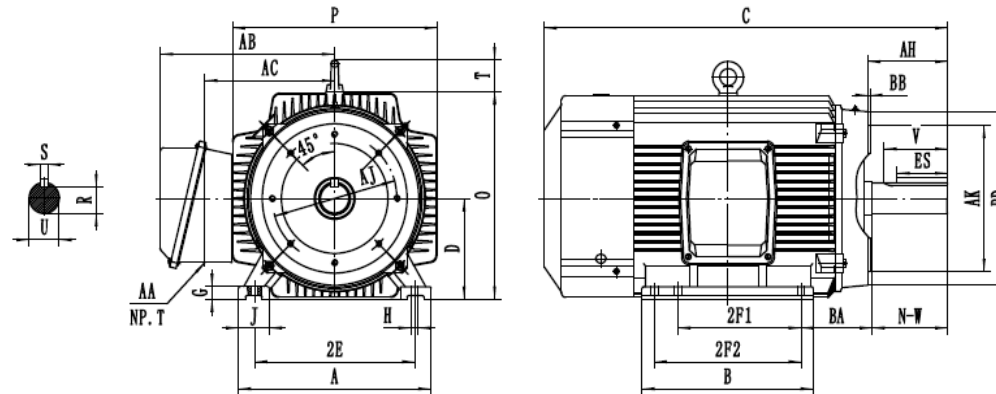
TEFC C-FACE MOUNTING DIMENSIONS (in)



NEP140-180



NEP210-360



400-440

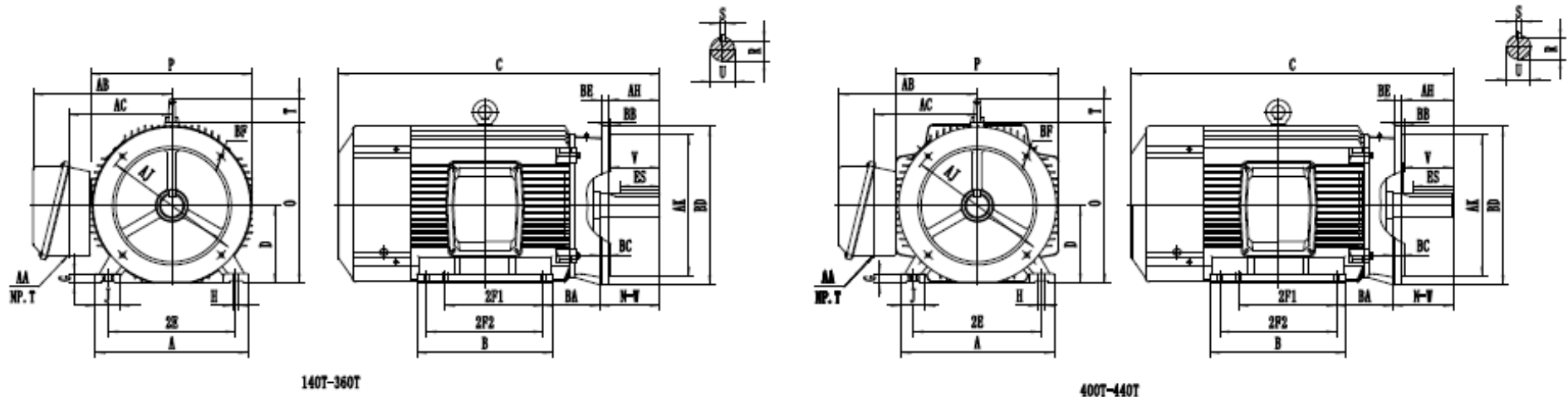
FRAME	AJ	AK	BA	MIN BB	BC	MAX BD	NUMBER OF HOLE	SCREW	DEPTH OF HOLE	U	AH	R	ES	S
143TC .145TC	5.875	4.500	2.25	0.16	0.12	6.50	4	3/8-16	0.56	0.875	2.12	0.771	1.41	0.188
182TC.184TC	7.25	8.500	2.75	0.25	0.12	9	4	1/2-13	0.75	1.125	2.62	0.986	1.78	0.250

eMotortek™

213TC.215TC	7.25	8.500	3.75	0.25	0.25	9	4	1/2-13	0.75	1.375	3.12	1.201	2.41	0.312
254TC.256TC	7.25	8.500	4.25	0.25	0.25	10	4	1/2-13	0.75	1.625	3.75	1.416	2.91	0.375

FRAME	AJ	AK	BA	MIN BB	BC	MAX BD	NUMBER OF HOLE	SCREW	DEPTH OF HOLE	U	AH	R	ES	S
284TC.286TC	9.000	10.500	4.75	0.25	0.25	11.25	4	1/2-13	0.75	1.875	4.38	1.591	3.28	0.500
284TSC.286TSC	9.000	10.500	4.75	0.25	0.25	11.25	4	1/2-13	0.75	1.625	3.00	1.416	1.91	0.375
324TC.326TC	11.000	12.500	5.25	0.25	0.25	14.00	4	5/8-11	0.94	2.125	5.00	1.845	3.91	0.500
324TSC.326TSC	11.000	12.500	5.25	0.25	0.25	14.00	4	5/8-11	0.94	1.875	3.50	1.591	2.03	0.500
364TC.365TC	11.000	12.500	5.88	0.25	0.25	14.00	8	5/8-11	0.94	2.375	5.62	2.021	4.28	0.625
364TSC.365TSC	11.000	12.500	5.88	0.25	0.25	14.00	8	5/8-11	0.94	1.875	3.50	1.591	2.03	0.500
404TC.405TC	11.000	12.500	6.62	0.25	0.25	15.50	8	5/8-11	0.94	2.875	7.00	2.45	5.65	0.750
404TSC.405TSC	11.000	12.500	6.62	0.25	0.25	15.50	8	5/8-11	0.94	2.125	4.00	1.845	2.78	0.500
444TC.445TC	14.000	16.000	7.5	0.25	0.25	18.00	8	5/8-11	0.94	3.375	8.25	2.88	6.91	0.875
444TSC.445TSC	14.000	16.000	7.5	0.25	0.25	18.00	8	5/8-11	0.94	2.375	4.50	2.021	3.03	0.625
447TC.449TC	14.000	16.000	7.5	0.25	0.25	18.00	8	5/8-11	0.94	3.375	8.25	2.88	6.91	0.875
447TSC.449TSC	14.000	16.000	7.5	0.25	0.25	18.00	8	5/8-11	0.94	2.375	4.50	2.021	3.03	0.625

TEFC D-FACE MOUNTING DIMENSIONS (in)





FRAME	AJ	AK	BA	MIN BB	BC	MAX BD	BE	NUMBER OF HOLE	BF	DEPTH OF HOLE	U	AH	R	ES	S
143TD.145TD	10.00	9.000	2.25	0.25	0.00	11.00	0.5	4	0.53	1.25	0.875	2.25	0.771	1.41	0.188
182TD.184TD	10.00	9.000	2.75	0.25	0.00	11.00	0.5	4	0.53	1.25	1.125	2.75	0.986	1.78	0.250
213TD.215TD	10.00	9.000	3.5	0.25	0.00	11.00	0.5	4	0.53	1.25	1.375	3.38	1.201	2.41	0.312
254TD.256TD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.625	4.00	1.416	2.91	0.375
284TD.286TD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.875	4.62	1.591	3.28	0.500
284TSD.286TSD	12.50	11.000	4.75	0.25	0.00	14.00	0.75	4	0.81	2.00	1.625	3.25	1.416	1.91	0.375
324TD.326TD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	2.125	5.25	1.845	3.91	0.500
324TSD.326TSD	16.00	14.000	5.25	0.25	0.00	18.00	0.75	4	0.81	2.00	1.875	3.75	1.591	2.03	0.500
364TD.365TD	16.00	14.000	5.88	0.25	0.00	18.00	0.75	4	0.81	2.00	2.375	5.88	2.021	4.28	0.625
364TSD.365TSD	16.00	14.000	5.88	0.25	0.00	18.00	0.75	4	0.81	2.00	1.875	3.75	1.591	2.03	0.500
404TD.405TD	20.00	18.000	6.62	0.25	0.00	22.00	1.00	8	0.81	2.25	2.875	7.25	2.45	5.65	0.750
404TSD.405TSD	20.00	18.000	6.62	0.25	0.00	22.00	1.00	8	0.81	2.25	2.125	4.25	1.845	2.78	0.500

NOTE:

1. Tolerance on dimension D: +0.00inch, -1/32 inch for frame 143~326; +0.00 inch -1/16 inch for frames 364~449.
2. Tolerance on shaft diameter U: +0.0000 inch, -0.0005 inch for frames 143~215; +0.000 inch, 0.001 inch for frame 254~449.
3. Tolerance on dimension R: +0.000 inch, -0.015 inch.
4. Dimension V is length of straight part shaft.
5. The conduit box can be rotated 90° increments so that conduit can be received from any direction. Conduit box can be located on either side of the motor.
6. The last letter "Z" designated suitability for belt drive application.

ALL DATA SUBJECT TO CHANGE WITHOUT NOTICE.

1. : 143T~326T+0.00-1/32 ; 364T~449T+0.00-1/16
2. : 143T~215T+0.00-0.0005 ; 254T~449T+0.000 0.001
3. : +0.000-0.015