

3.0 Adjustable Speed Motors

3.1 A\$D Ultra®

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Adjustable Speed Drive—A\$D Ultra®

Standard Features



HP Range	1.5-300
Poles	4 and 6
Voltage	230/460, 460
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 feet
Ambient	40°C
Balance/Vibration	0.040 in/sec (P) @ 60 Hz 0.055 in/sec (P) at others frequency
Bearing Housing Rise	65°C
Bearing Caps	Both ends. 143-286: ODE is gasketed, 324-449: both ends are gasketed
Bearing Protection	Aegis shaft ground ring installed inside the motor in DE bearing cap 140-449 frame. Recessed Slinger. Inpro seal kit available
Bearing Type	Ball, roller bearing available as an option 360 frame and higher. Insulated Opposite Drive End Bearing 444- 449 Frame.
Centered Core	Allows F1-F2 field conversion
Conduit Box	Gasketed and rotatable, Fabricated Steel above 250 Amps, All other: Cast iron
Cooling	143-182: Non-Vent, 184-449: Totally Enclosed Fan Cooled, 364-449: Blower Cooled also available.
DE Mounting	143-286: NEMA C-face mount
Drains	Stainless Steel T-drains
End Shield	Cast Iron—C-face std through 286 frame
Fan	Non-Sparking Plastic or Bronze
Fan Cover	Cast Iron
Fasteners	SAE, Grade 5
Foot Draft Angle	+/- 1.5 degrees
Foot Flatness	0.005 inches
Frame Material	Cast Iron
Frame Size	143-449
Frequency	60 Hz
Grease	Polyurea
Ground	Ground lug in Conduit Box
Insulation Class	H
Insulation System	GEGUARD2400 Non-Hygroscopic, AntiFungus, 2800Volt @ .1microsecond rise time. Exceeds NEMA MG1-31
Inverter Capabilities	Variable Torque inf:1, Constant Torque inf:1, Constant Horsepower to 1.5 times base speed.
L10 Bearing Life	Direct Coupled: 130,000 hrs, Belted: 26,280 hrs, Belted L10a 50,000
Lifting Means	4 Lugs cast into frame
Mounting	F1 as Standard and Modifiable to F2
Mounting Holes	1 per foot (324 frame), 2 per foot (all other frames)
Nameplate	Stainless Steel includes Weight, Vibration Limit, Service Factor, Speed Range, Constant Torque, and Constant HP
NEMA Design	NEMA A
Paint	Buff, Epoxy ester
Relubrication	Both ends, extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.0 SF for PWM operation
Shaft TIR	Meets IEEE 841, .001 in. for shaft diameter 1.625 in and smaller, .0015 in for shaft diameter greater than 1.625 in.
Tach Mounting	ODE C-face provision for tach mounting. 143-184: 4.5" rabbet, 213-449: 8.5" rabbet
Temperature Rise	80°C by resistance TEBC & TENV: 105°C by resistance TEFC
Tests	NEMA Routine Report including Vibration supplied with motor, IEEE 112. 100% CIV tested.
Thermal Protection	140-280, 2 NC Thermostats; 320-449, 3 NC Thermostats
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first Extended warranty from Electro Static Technology guarantees against bearing failure due to fluting damage for the expected (L10) life of the original bearings.

3.1
A\$D Ultra®

Adjustable Speed Drive—A\$D Ultra®

Pricing

Volts: 230/460, 460
HP: 1.5 – 300



A\$D Totally Enclosed – Infinite: 1 Constant Torque Speed Range

HP	RPM	Volts	Frame	Enclosure	Base	FLA	Nom. Eff.	Cat. No.	List Price	Price Symbol	Norm. Stk.	Wt. (lbs)	C Dim. (in.)	Notes
1.5	1800	230/460	143TC	TENV	Ftd	4.2/2.2	85.5	M9300	\$1,455	G4-7AS	Y	43	13.32	
2	1800	230/460	145TC	TENV	Ftd	5.6/2.8	85.5	M9301	\$1,494	G4-7AS	Y	50	13.32	
3	1800	230/460	182TC	TENV	Ftd	7.8/3.9	89.5	M9302	\$1,875	G4-7AS	Y	76	16.95	
5	1800	230/460	184TC	TEFC	Ftd	13.2/6.6	89.5	M9303	\$2,097	G4-7AS	Y	101	19.36	
7.5	1800	230/460	213TC	TEFC	Ftd	18.6/9.3	91.7	M9304	\$2,454	G4-7AS	Y	200	24.00	
10	1800	230/460	215TC	TEFC	Ftd	24.8/12.4	91.7	M9305	\$2,931	G4-7AS	Y	300	24.00	
15	1800	230/460	254TC	TEFC	Ftd	36.4/18.2	92.4	M9306	\$3,531	G4-7AS	Y	315	29.32	
20	1800	230/460	256TC	TEFC	Ftd	49.4/24.7	93.0	M9307	\$3,908	G4-7AS	Y	350	29.32	
25	1800	230/460	284TC	TEFC	Ftd	59.8/29.9	93.6	M9308	\$4,880	G4-7AS	Y	460	32.14	
25	1200	230/460	324T	TEFC	Ftd	63.0/31.5	93.0	M9328	\$7,028	G4-7AS	N	660	32.81	
30	1800	230/460	286TC	TEFC	Ftd	72.8/36.4	94.1	M9309	\$5,577	G4-7AS	Y	510	32.14	
30	1200	230/460	326T	TEFC	Ftd	73.6/36.8	93.0	M9329	\$8,690	G4-7AS	N	690	34.31	
40	1800	230/460	324T	TEFC	Ftd	96.6/48.3	94.5	M9310	\$7,223	G4-7AS	Y	670	32.81	
40	1200	230/460	364T	TEFC	Ftd	95.8/47.9	93.6	M9330	\$11,748	G4-7AS	N	960	37.93	
50	1800	230/460	326T	TEFC	Ftd	131.2/65.6	94.5	M9311	\$8,934	G4-7AS	Y	740	34.31	
50	1200	230/460	365T	TEFC	Ftd	119.8/59.9	94.1	M9331	\$13,308	G4-7AS	N	1010	37.93	
60	1800	230/460	364T	TEFC	Ftd	142.4/71.2	95.0	M9312	\$11,516	G4-7AS	Y	970	37.93	
60	1800	230/460	364T	TEBC	Ftd	140.0/70.0	95.0	M9313	\$12,639	G4-7AS	N	960	41.04	
60	1200	230/460	404T	TEFC	Ftd	142.4/71.2	94.5	M9332	\$22,665	G4-7AS	N	1390	42.51	
60	1200	230/460	404T	TEBC	Ftd	145.8/72.9	94.5	M9333	\$25,358	G4-7AS	N	1370	45.59	
75	1800	230/460	365T	TEFC	Ftd	174.2/87.1	95.4	M9314	\$13,047	G4-7AS	Y	1020	37.93	
75	1800	230/460	365T	TEBC	Ftd	187.4/93.7	95.4	M9315	\$15,858	G4-7AS	Y	1030	41.01	
75	1200	230/460	405T	TEFC	Ftd	181.2/90.6	94.5	M9334	\$25,469	G4-7AS	N	1430	42.51	
75	1200	230/460	405T	TEBC	Ftd	180.0/90.0	94.5	M9335	\$28,161	G4-7AS	N	1410	43.51	
100	1800	230/460	405T	TEFC	Ftd	238.0/119	95.8	M9316	\$17,654	G4-7AS	Y	1420	43.51	
100	1800	230/460	405T	TEBC	Ftd	232.0/116	95.8	M9317	\$21,090	G4-7AS	Y	1420	43.51	
100	1200	460	444T	TEFC	Ftd	230.0/115/0	95.0	M9336	\$24,462	G4-7AS	N	1850	49.33	103
100	1200	460	444T	TEBC	Ftd	238.0/119.0	95.0	M9337	\$27,162	G4-7AS	N	1760	50.69	103
125	1800	460	444T	TEFC	Ftd	145.0	95.8	M9318	\$23,984	G4-7AS	Y	1760	49.33	103
125	1800	460	444T	TEBC	Ftd	169.0	95.8	M9319	\$26,876	G4-7AS	N	1740	50.69	103
125	1200	460	445T	TEFC	Ftd	145.0	95.4	M9338	\$27,362	G4-7AS	N	2020	49.33	103
125	1200	460	445T	TEBC	Ftd	149.0	149.0	M9339	\$30,339	G4-7AS	N	1880	50.69	103
150	1800	460	445T	TEFC	Ftd	172.0	95.8	M9320	\$26,825	G4-7AS	Y	1880	49.33	103
150	1800	460	445T	TEBC	Ftd	169.0	95.8	M9321	\$30,467	G4-7AS	Y	1830	50.69	103
150	1200	460	447T	TEFC	Ftd	174.0	95.8	M9340	\$33,030	G4-7AS	N	2510	57.83	103
150	1200	460	447T	TEBC	Ftd	174.0	95.8	M9341	\$36,780	G4-7AS	N	1440	60.91	103
200	1800	460	447T	TEFC	Ftd	224.0	96.2	M9322	\$32,379	G4-7AS	Y	2420	57.83	103
200	1800	460	447T	TEBC	Ftd	224.0	96.2	M9323	\$36,021	G4-7AS	N	2420	60.91	103
200	1200	460	449T	TEFC	Ftd	236.0	96.2	M9342	\$46,842	G4-7AS	N	2820	57.93	103
200	1200	460	449T	TEBC	Ftd	230.0	96.2	M9343	\$50,592	G4-7AS	N	2680	60.91	103
250	1800	460	449T	TEFC	Ftd	281.0	96.2	M9324	\$40,332	G4-7AS	Y	2630	57.93	103
250	1800	460	449T	TEBC	Ftd	275.0	96.2	M9325	\$45,119	G4-7AS	N	2520	60.91	103
300	1800	460	449T	TEFC	Ftd	365.0	96.5	M9326	\$45,923	G4-7AS	N	2890	57.93	103
300	1800	460	449T	TEBC	Ftd	334.0	96.2	M9327	\$50,709	G4-7AS	N	2800	60.91	103

Notes:

103 Insulated O.D.E. bearing and shaft ground brush on DE

Adjustable Speed Drive—A\$D Ultra®

Typical Performance Data



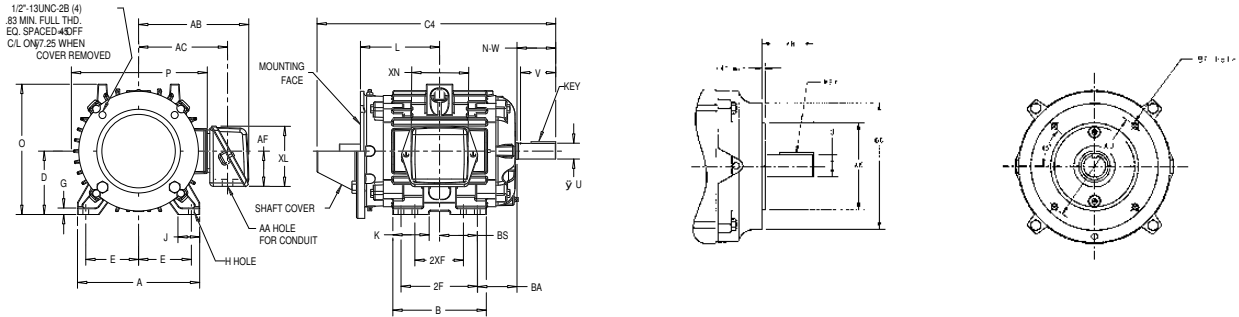
Volts: 460
HP: 1.5 – 300

HP	RPM	Frame	Enclosure	FLA	LR Amps	KVA Code	Power Factor	FL Torque Lb-ft	LR Torque Lt-ft	BD Torque Lb-ft	Nom. Eff.	Min. Guar. Eff.
1.5	1800	143TC	TENV	2.2	19.2	M	74.0	4.5	19.0	22.4	85.5	84.0
2	1800	145TC	TENV	2.8	23.7	L	77.0	6.1	24.3	28.1	85.5	84.0
3	1800	182TC	TENV	3.9	28.1	J	80.5	8.9	22.1	28.9	89.5	88.5
5	1800	184TC	TEFC	6.6	42.9	J	79.0	15.0	35.1	44.1	89.5	88.5
7.5	1800	213TC	TEFC	9.3	84.3	K	82.5	22.2	45.3	80.4	91.7	91.0
10	1800	215TC	TEFC	12.4	115.7	L	82.0	29.6	64.0	110.4	91.7	91.0
15	1800	254TC	TEFC	18.2	157.6	K	83.5	44.3	89.7	184.2	92.4	91.7
20	1800	256TC	TEFC	24.7	244.7	L	81.5	59.0	147.9	286.7	93.0	92.4
25	1800	284TC	TEFC	29.8	219.3	H	83.5	73.6	154.3	218.0	93.6	93.0
25	1200	324T	TEFC	31.5	184.1	G	80.0	111.0	108.9	291.1	93.0	92.4
30	1800	286TC	TEFC	36.4	288.3	J	82.0	88.4	203.7	272.2	94.1	93.6
30	1200	326T	TEFC	36.8	199.4	G	82.0	133.5	119.5	314.5	93.0	92.4
40	1800	324T	TEFC	48.3	282.1	H	82.0	118.0	101.1	322.4	94.5	94.1
40	1200	364T	TEFC	47.9	319.8	H	83.5	177.5	221.0	546.7	93.6	93.0
50	1800	326T	TEFC	65.6	490.4	J	75.5	147.0	189.3	555.5	94.5	94.1
50	1200	365T	TEFC	59.9	440.7	H	83.0	221.6	318.0	758.3	94.1	93.6
60	1800	364T	TEFC	70.4	499.6	H	83.0	176.5	204.2	557.4	95.0	94.5
60	1800	364T	TEBC	69.1	444.1	G	84.5	176.7	178.5	495.5	95.0	94.5
60	1200	404T	TEFC	71.2	447.7	G	83.5	265.1	305.6	741.5	94.5	94.1
60	1200	404T	TEBC	72.9	454.0	G	81.5	265.1	303.3	751.8	94.5	94.1
75	1800	365T	TEFC	87.1	711.1	J	84.5	220.4	313.6	791.2	95.4	95.0
75	1800	365T	TEBC	93.7	894.9	L	78.5	220.0	401.2	993.1	95.4	95.0
75	1200	405T	TEFC	90.6	621.9	H	82.0	331.2	446.4	1030.7	94.5	94.1
75	1200	405T	TEBC	90.0	576.1	G	82.5	331.5	404.5	953.7	94.5	94.1
100	1800	405T	TEFC	119.0	962.5	J	82.0	293.4	388.2	1091.3	95.8	95.4
100	1800	405T	TEBC	116.0	746.8	G	84.5	294.0	286.1	849.1	95.8	95.4
100	1200	444T	TEFC	115.0	815.1	H	85.5	441.1	466.2	1345.0	95.0	94.5
100	1200	444T	TEBC	119.0	795.9	H	83.0	441.4	436.6	1313.5	95.0	94.5
125	1800	444T	TEFC	145.0	940.9	G	84.0	367.0	290.7	1106.9	95.8	95.4
125	1800	444T	TEBC	143.0	829.7	G	85.5	367.3	182.8	979.2	95.8	95.4
125	1200	445T	TEFC	145.0	1222.9	J	84.5	550.7	756.0	2022.1	95.4	94.5
125	1200	445T	TEBC	149.0	1124.7	J	82.5	551.3	663.7	1858.7	95.4	94.5
150	1800	445T	TEFC	172.0	1292.6	H	85.0	440.0	438.7	1516.2	95.8	95.4
150	1800	445T	TEBC	169.0	1076.0	G	86.5	440.5	351.5	1265.6	95.8	95.4
150	1200	447T	TEFC	174.0	1516.5	K	84.0	660.8	1027.0	2749.3	95.8	95.4
150	1200	447T	TEBC	174.0	1442.2	J	84.0	661.1	959.2	2615.3	95.8	95.4
200	1800	445T	TEFC	224.0	1737.5	H	87.0	586.7	665.3	2162.0	96.2	95.8
200	1800	445T	TEBC	224.0	1737.5	H	87.0	586.5	665.1	2163.6	96.2	95.8
200	1200	449T	TEFC	236.0	2373.6	L	82.5	880.4	1709.0	4300.8	96.2	95.8
200	1200	449T	TEBC	230.0	2028.7	K	84.5	881.4	1430.2	3681.6	96.2	95.8
250	1800	449T	TEFC	281.0	2530.3	K	86.5	732.7	1050.7	3124.2	96.2	95.8
250	1800	449T	TEBC	275.0	2046.3	H	88.5	733.6	819.4	2538.3	96.2	95.8
300	1800	449T	TEFC	350.0	3859.2	M	83.5	878.4	173.1	4736.3	96.2	95.8
300	1800	449T	TEBC	328.0	3122.6	K	87.5	879.2	1362.8	3845.6	96.2	95.8

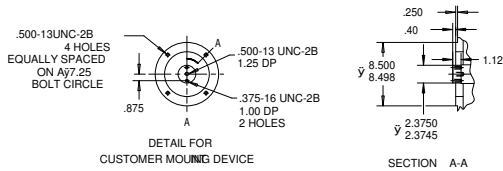
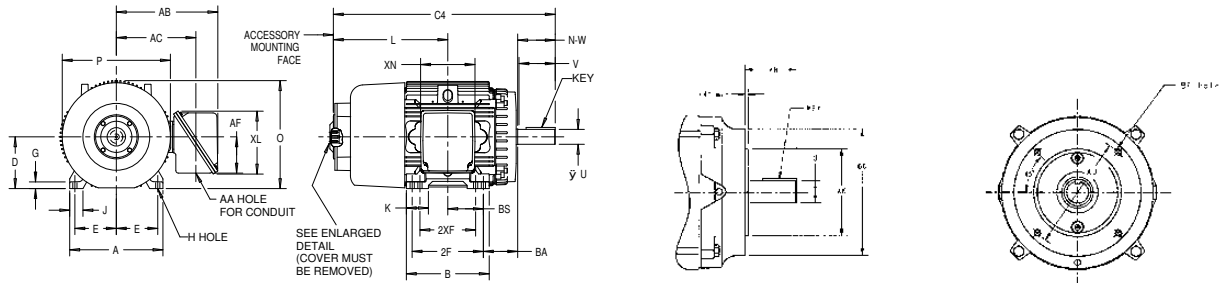
Adjustable Speed Drive—A\$D Ultra®

Motor Dimensions

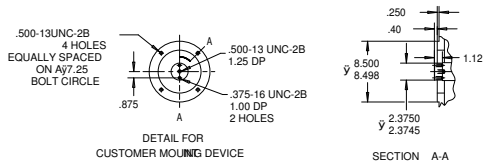
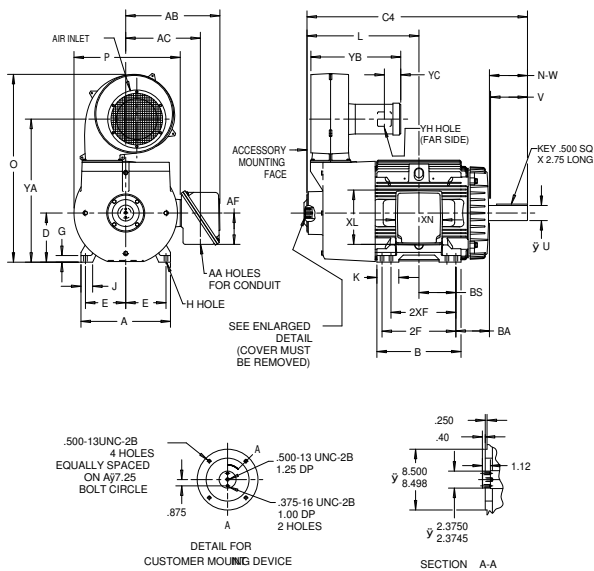
140-180 Frame (Tenn)



360-5013 Frame (TEFC)



364-5013 Frame (TEBC)



Adjustable Speed Drive—A\$D Ultra®

Motor Dimensions (cont.)

Dimensions correspond to figures on page 3.4

TENV Dimensions

Frame	Net Wt. Lbs	Shaft							Mounting ⁽²⁵⁾														
		Keyway		Key Length	N-W	U ⁽¹⁹⁾	V ⁽²⁰⁾	E	H	BA	BS	2F	2XF	A	B	C	D ⁽²¹⁾	G	J	K	L	O	P
		W	D																				
143TC	43	0.187	0.0935	1.38	2.13	0.88	2.12	2.75	0.37	2.75	2.50	-	4.00	6.88	5.88	13.32	3.50	0.40	1.39	2.32	5.25	7.25	7.34
145TC	43	0.187	0.0935	1.38	2.13	0.88	2.12	2.75	0.37	2.75	2.50	5.00	-	6.88	5.88	13.32	3.50	0.40	1.39	2.32	5.25	7.25	7.34
182TC	76	0.250	0.1250	1.75	2.63	1.12	2.62	3.75	0.46	3.5	2.75	-	4.50	8.68	6.64	16.95	4.50	0.46	1.54	2.58	6.38	9.25	9.50

TEFC Dimensions

Frame	Net Wt. Lbs	Shaft							Mounting ⁽²⁵⁾														
		Keyway		Key Length	N-W	U ⁽¹⁹⁾	V ⁽²⁰⁾	E	H	BA	BS	2F	2XF	A	B	C	D ⁽²¹⁾	G	J	K	L	O	P
		W	D																				
184TC	101	0.250	0.1250	1.75	2.62	1.12	2.62	3.75	0.46	3.50	2.75	5.50	-	8.68	6.64	19.36	4.50	0.46	1.54	2.58	8.78	9.54	9.92
213TC	200	0.310	0.1560	2.38	3.13	1.38	3.38	4.25	0.46	4.25	3.50	-	5.50	9.60	8.00	24.00	5.25	0.57	1.47	3.12	11.23	11.00	11.37
215TC	220	0.310	0.1560	2.38	3.13	1.38	3.38	4.25	0.46	4.25	3.50	7.00	-	9.60	8.00	24.00	5.25	0.57	1.47	3.12	11.23	11.00	11.37
254TC	315	0.380	0.1900	2.88	4.00	1.62	3.75	5.00	0.53	4.75	5.00	-	8.25	11.20	11.30	29.32	6.25	0.65	1.52	3.93	13.93	12.88	13.25
256TC	350	0.380	0.1900	2.88	4.00	1.62	3.75	5.00	0.53	4.75	5.00	10.00	-	11.20	11.30	29.32	6.25	0.65	1.52	3.93	13.93	12.88	13.25
284TC	460	0.500	0.2500	3.25	4.38	1.88	4.38	5.50	0.53	5.25	5.50	-	9.50	12.40	12.80	32.14	7.00	0.80	1.75	4.12	18.76	14.29	14.50
286TC	510	0.500	0.2500	3.25	4.38	1.88	4.38	5.50	0.53	5.25	5.50	11.00	-	12.40	12.80	32.14	7.00	0.80	1.75	4.12	18.76	14.29	14.50
324T	685	0.500	0.1900	3.88	5.25	2.12	5.00	6.25	0.66	5.25	5.50	-	10.50	14.40	12.30	32.81	8.00	1.00	2.02	2.88	20.15	17.05	18.38
326T	740	0.500	0.1900	3.88	5.25	2.13	5.00	6.25	0.66	5.25	6.00	12.00	-	14.40	13.80	34.31	8.00	1.00	2.01	3.63	20.90	17.07	18.38
364T	965	0.625	0.2500	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	-	11.25	16.00	14.40	37.93	9.00	1.10	2.26	3.40	23.12	19.02	20.34
365T	1070	0.625	0.2500	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	12.25	-	16.00	14.40	37.93	9.00	1.10	2.26	3.40	23.12	19.02	20.34
405T	1560	0.750	0.3750	5.62	7.25	2.88	7.00	8.00	0.81	6.62	6.88	13.75	-	18.00	16.00	42.51	10.00	1.30	2.64	4.00	24.85	22.97	21.29
444T	2050	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	-	14.50	20.00	18.80	49.33	11.00	1.50	2.64	4.90	25.69	22.98	24.22
445T	2050	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	16.50	-	20.00	18.80	49.33	11.00	1.50	2.64	4.90	25.69	22.98	24.22
447T	2830	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	12.50	-	20.00	20.00	27.30	57.83	11.00	1.50	2.64	8.81	32.41	24.80	27.11
449T	3110	0.875	0.4400	6.88	8.50	3.38	8.25	9.00	0.81	7.50	12.50	25.00	-	20.00	27.30	57.83	11.00	1.50	2.64	8.81	32.41	24.80	27.11

TEBC Dimensions

Frame	Net Wt. Lbs	Shaft							Mounting ⁽²⁵⁾														
		Keyway		Key Length	N-W	U ⁽¹⁹⁾	V ⁽²⁰⁾	E	H	BA	BS	2F	2XF	A	B	C	D ⁽²¹⁾	G	J	K	L	O	P
		W	D																				
364T	965	0.625	0.250	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	-	11.25	16.00	14.40	41.01	9.00	1.10	2.26	3.40	23.12	29.66	20.34
365T	1025	0.625	0.250	4.25	5.88	2.38	5.62	7.00	0.69	5.88	6.12	12.30	-	16.00	14.40	41.01	9.00	1.10	2.26	3.40	23.12	29.66	20.34
405T	1600	0.750	0.250	5.63	7.25	2.88	7.00	8.00	0.81	6.62	6.88	13.75	-	18.00	16.00	45.59	10.00	1.30	2.64	4.0	24.85	30.66	22.94
444T	1750	0.875	0.310	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	-	14.50	20.00	18.80	50.69	11.00	1.50	2.64	4.90	28.16	40.66	27.31
445T	2000	0.875	0.310	6.88	8.50	3.38	8.25	9.00	0.81	7.50	8.25	16.50	-	20.00	18.80	50.69	11.00	1.50	2.64	4.90	28.16	40.66	27.31
449T ⁽²⁶⁾	2650	0.875	0.440	6.88	8.50	3.38	8.25	9.00	0.81	7.50	12.50	25.00	-	20.00	37.30	60.91	11.00	1.50	2.64	8.81	32.41	40.66	27.31

Notes:

- 19 Shaft diameters 1.5 inches and smaller will come within the limits of +0.000 inch -0.0005 inch; diameters 1.625 inches and larger +0.000 inch -0.001 inch
- 20 Dimension "V" represents length of straight part of shaft extension
- 21 Tolerance on "D" dimension will be: On frames 182T-362T +0.000 inch -0.032 inch; On frames 364T-449T +0.000 inch -0.060 inch
- 25 Motor feet have 2 holes = per foot allowing NEMA F-1 or F-2 assembly while maintaining critical NEMA dimensions
- 26 Cast iron motors in 449 frame also have mounting holes meeting 447 frame dimensions

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Motor Dimensions (cont.)

Conduit Box Dimensions

Frame	Normal HP ⁽⁴⁰⁾	Approx. Volume	AA	AB	AC ⁽²³⁾	AF	XL	XN
182T-184T	5	32	0.75	7.83	6.32	2.50	4.30	5.40
213T-215T	10	32	1.00	9.50	7.42	3.50	5.78	4.16
254T-256T	20	76	1.25	12.15	9.12	4.59	7.38	5.38
284T-286T	30	137	1.50	12.91	9.88	4.59	7.38	5.38
324T-326T	50	346	3.00	16.13	12.43	6.44	10.12	7.00
364T-365T	75	346	3.00	17.13	13.43	6.44	10.12	7.00
404T-405T	100	700	3.00	20.54	16.28	7.00	12.13	10.50
444T-449T	300	1260	4.00	22.06	17.80	7.00	12.35	16.25

Notes:

23 Insulated ODE bearing and shaft ground brush on DE

40 Conduit box size is determined by full load amps. Nominal horsepower is stated as a reference only. Providing mounting conditions permit, conduit box may be turned so that entrance can be made upward, downward or from either side.

Blower Dimensions

Frame	YA	YB	YE	YH
364T-365T	25.22	13.54	3.57	0.875
404T-405T	27.58	13.54	2.84	0.875
444T-449T	33.95	20.08	2.44	1.094

C-Face Mounting

NEMA Frame	All Dimensions in Inches						
	AH	AJ	AK	U	Key Width	Key Thickness	Key Length
143TC-145TC	2.12	5.88	4.50	0.875	0.19	0.19	1.38
182TC-184TC	2.62	7.25	8.50	1.125	0.25	0.25	1.75
213TC-215TC	3.12	7.25	8.50	1.375	0.31	0.31	2.38
254TC-256TC	3.75	7.25	8.50	1.625	0.38	0.38	2.88
284TC-286TC	4.38	9.00	10.50	1.875	0.50	0.50	3.25

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Kits and Accessories

C-Face Kits

Part No.	Frame	Poles	Cat. No.	List Price	Price Symbol	Norm. Stk.
249A4321AMG01	324T-326T	4-6	A761	\$392	G4-7KITS	Y
249A4321AMG03	364T-365T	4-6	A763	\$842	G4-7KITS	Y
249A4321AMG05	404T-405T	4-6	A765	\$885	G4-7KITS	Y
249A4321AMG07	444T-445T	4-6	A767	\$2,112	G4-7KITS	Y

Inpro-Seals® Kits

Part No.	Frame	Cat. No.	List Price	Price Symbol	Norm. Stk.
4002B5914AN1	140T-145T	A1001	\$218	G4-7KITS	N
4002B5914AN2	182T-184T	A1002	\$218	G4-7KITS	Y
4002B5914AN3	213T-215T	A1003	\$237	G4-7KITS	Y
4002B5914AN4	254T-256T	A1004	\$285	G4-7KITS	Y
4002B5914AN5	284T-286T	A1005	\$369	G4-7KITS	Y
235A4575GE1	320T	A826	\$504	G4-7KITS	N
235A4575GE3	360T	A828	\$588	G4-7KITS	N
235A4575GE5	400T	A830	\$689	G4-7KITS	N
235A4575GE7	440T	A832	\$824	G4-7KITS	N

Space Heater Kits

Part No.	Frame	Volts	Cat. No.	List Price	Price Symbol	Norm. Stk.
153B1073BE-G01	182T-184T	110-120	A233	\$161	G4-7KITS	N
153B1073BD-G02	182T-184T	220-240	A239	\$161	G4-7KITS	N
153B1069AA-G01	213T-326T	110-120	A234	\$167	G4-7KITS	N
153B1069AA-G02	213T-326T	220-240	A235	\$167	G4-7KITS	N
153B1069AA-G03	213T-326T	440-480	A236	\$167	G4-7KITS	N
153B1069AN-G01	364T-405T	110-120	A237	\$282	G4-7KITS	N
153B1069AN-G05	364T-405T	200-208, 220-240	A238	\$282	G4-7KITS	N
153B1069AN-G03	364T-405T	440-480	A240	\$282	G4-7KITS	N
153B1069AN-G02	444T-449T	110-120	A241	\$305	G4-7KITS	N
153B1069AN-G06	444T-449T	200-208, 220-240	A242	\$305	G4-7KITS	N
153B1069AN-G04	444T-449T	440-480	A244	\$305	G4-7KITS	N

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Kits and Accessories (cont.)

Encoder Kits

Part No.	Frame	Brand	Model	PPR	VDC	Connector	Output	Cat. No.	List Price	Price Symbol	Norm. Stk.
153B4404CS2	140	Avtron	HS35A Optical Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	A150	\$863	G4-7KITS	Y
153B4404CS3	140	Avtron	HS35A Optical Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	A151	\$863	G4-7KITS	N
153B4404CW1	140	Avtron	HS35M Magnetic Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	A154	\$1,088	G4-7KITS	Y
153B4404CW2	140	Avtron	HS35M Magnetic Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	A155	\$1,088	G4-7KITS	N
153B4404DB1	140	Dynapar	HS35R Optical Encoder with basket guard	1024	5-26V in/out	10 Pin + Mating	Single	A170	\$825	G4-7KITS	Y
153B4404DB2	140	Dynapar	HS35R Optical Encoder with basket guard	2048	5-26V in/out	10 Pin + Mating	Single	A171	\$825	G4-7KITS	N
153B4404DA1	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	A172	\$1,125	G4-7KITS	N
153B4404DA2	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	A173	\$1,125	G4-7KITS	Y
153B4404DA3	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	A174	\$1,950	G4-7KITS	N
153B4404DA4	140	Dynapar	NorthStar SLIM Tach SL56 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	A175	\$1,950	G4-7KITS	N
153B4404CS4	180-360	Avtron	HS35A Optical Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	A152	\$863	G4-7KITS	Y
153B4404CS5	180-360	Avtron	HS35A Optical Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	A153	\$863	G4-7KITS	N
153B4404CW3	180-360	Avtron	HS35M Magnetic Encoder with basket guard	1024	5-28V	10 Pin MS "A" with plug	Single	A156	\$1,088	G4-7KITS	Y
153B4404CW4	180-360	Avtron	HS35M Magnetic Encoder with basket guard	2048	5-28V	10 Pin MS "A" with plug	Single	A157	\$1,088	G4-7KITS	N
153B4404CT13	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	A158	\$3,450	G4-7KITS	Y
153B4404CT15	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	A160	\$3,450	G4-7KITS	N
153B4404CT17	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	A162	\$5,250	G4-7KITS	Y
153B4404CT19	180-360	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	A164	\$5,250	G4-7KITS	N
153B4404DD1	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	A176	\$1,500	G4-7KITS	N
153B4404DD2	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	A177	\$1,500	G4-7KITS	Y
153B4404DD3	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	512	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	A178	\$2,475	G4-7KITS	N
153B4404DD4	180-360	Dynapar	NorthStar SLIM Tach SL85 Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	A179	\$2,475	G4-7KITS	N
153B4404DC1	180-360	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	A180	\$2,513	G4-7KITS	Y
153B4404DC3	180-360	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	A182	\$3,150	G4-7KITS	N
153B4404CT14	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	A159	\$3,450	G4-7KITS	Y
153B4404CT16	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Single	A161	\$3,450	G4-7KITS	N
153B4404CT18	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	1024	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	A163	\$5,250	G4-7KITS	Y
153B4404CT20	440	Avtron	AV850 SMARTTach II Magnetic Modular Encoder	2048	5-24V in/ 5-15V out	Industrial Connector w/ 1/2" NPT	Dual	A165	\$5,250	G4-7KITS	N
153B4404DC2	440	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Single	A181	\$2,625	G4-7KITS	Y
153B4404DC4	440	Dynapar	NorthStar RIM Tach 8500 NexGen Magnetic	1024	5-15V in/out	Latching Connector w/ 1/2" NPT	Dual	A183	\$3,300	G4-7KITS	N