



Compliance Certificate No. CC014A

INDUCTION MOTORS
SUPER-MAX
PREMIUM®
HIGH EFFICIENCY SERIES

FRAMES:143T~449T

HORIZONTAL
OPEN DRIP-PROOF
SQUIRREL CAGE
3-PHASE CONTINUOUS RATING
F INSULATION
SERVICE FACTOR:1.15

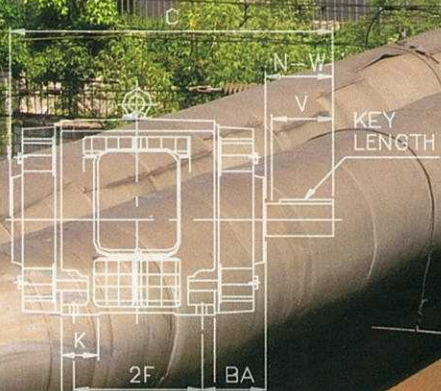
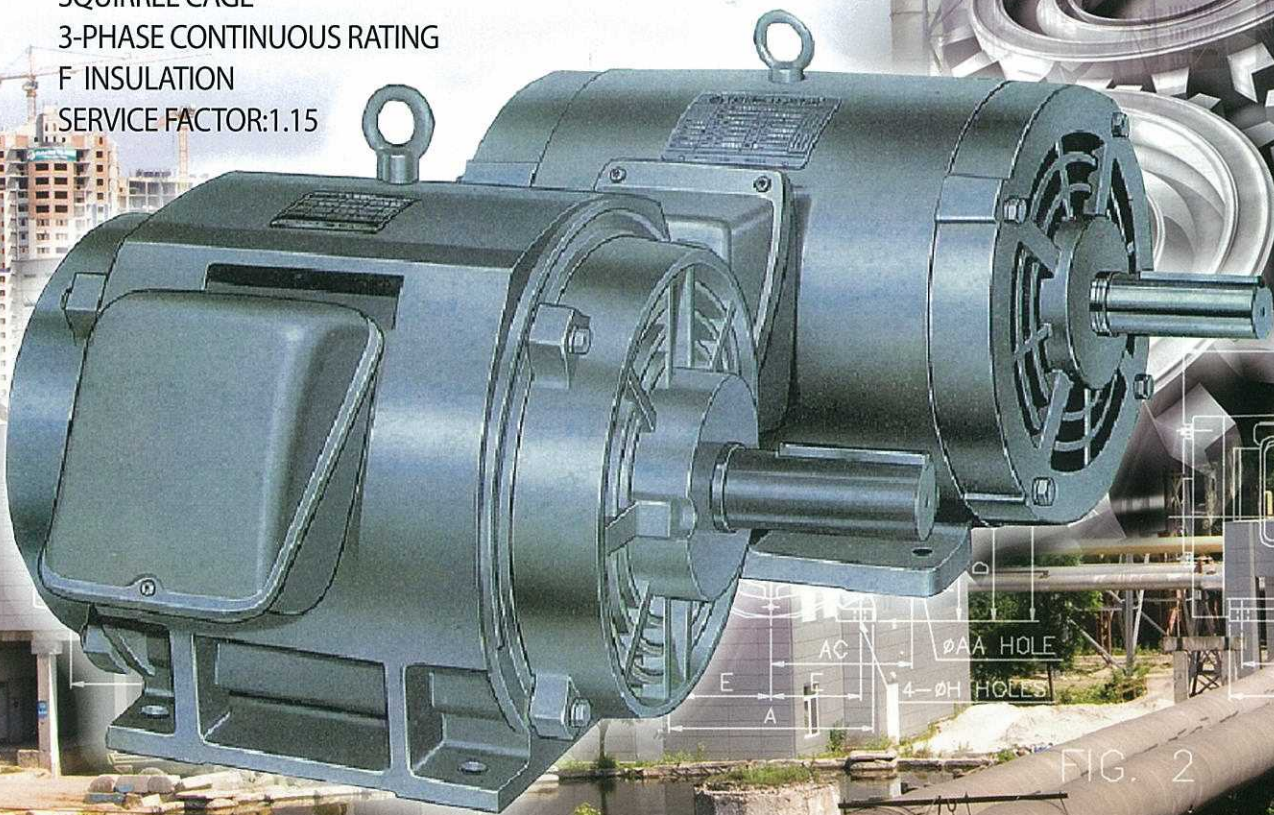
Super-Max
ULTRA ENERGY SAVING

VERIFIED ENERGY PERFORMANCE

CSA
E EV-58484

VÉRIFIÉ RENDEMENT ÉNERGÉTIQUE

NEMA Premium™



NEMA STANDARD

DESIGN FEATURE

Power Supply

AC. Three phase, 60Hz, 230/460 and 575V.
Other voltages and Hz are also available on request.

Time Rating

Continuous duty with service factor of 1.15.

Ambient Temperature

Standard motors are suitable for ambient temperature range -10° C to 40° C applications.

Altitude

Standard motors are designed for applications at an altitude not exceeding 3,300 feet (1,000meters) above sea level.

Frame and End Brackets

Main frame and end brackets are all cast iron for excellent corrosion resistance. Cast iron main frames with integral cast feet and cast iron end brackets will better withstand stresses and vibrations under normal and severe duty.

Conduit Box

Oversized conduit box made of pressed steel provides ample space for connections. Diagonally split, rotatable in 90 degree positions which allow for conduit to be received from any direction. Rubber gasket between frame and conduit box assures perfect seal and prevents lead wire damage.

Earthing terminal is provided inside the main terminal box.

Standard position of T-box is at left side viewed from drive end (F1).

Cast iron terminal box are available on request.

Rotor

Die cast aluminum rotor bars with integrally cast end rings and cooling fan. Surface treated for corrosion resistance. Rotor and shaft assembly is dynamically balanced to assure vibration free, reliable and quiet operation. Optimum slot design contributes to higher torques, low temperature rise, and quiet operation.

Bearings

Oversized, prelubricated, double shielded ball bearings are used up to 280T. And oversized, regreaseable bearings are used for frame 320T and larger.

All bearings are manufactured from vacuum degassed steels, doubles the bearing life with minimum maintenance.

A high-quality, wide temperature range and rust inhibiting grease, provides minimum friction losses and longer operating life.

Grease pipes and relief vents with plugs are provided for all regreaseable bearing constructions.

Laminations

Premium-grade low-loss core steel reduces eddy current losses.

Longer core reduces losses due to lower operating flux densities.

More Copper In Winding

Use of more copper and larger conductors increases cross sectional area of stator windings. This lowers resistance of the windings and reduces losses due to current flow.

Larger Rotor Bar

Use of larger rotor conductor bars increases size of cross section, lowering conductor resistance and losses due to current flow.

Insulation

All windings are dipped and baked with non-hygroscopic varnish. Ensures reliable motor operation in humid, corrosive and abrasive industrial environment.

Direction of Rotation

All standard motors are suitable for Bi-Directional operation.

Normal direction of rotation is C.C.W. looking at drive end.

Leads

Rating RPM	140T 180T	UP TO 150HP		200HP and Larger		320T and Below	360T and Above
		3600	1800/1200	3600	1800/1200		
Volts	230/460	230/460		460V		575V	
Leads	9	12	12	6	12	3	6
D.O.L.	YES	YES	YES	YES	YES	YES	YES
Y-Δ	N/A	YES	YES	YES	YES	N/A	YES
Part Winding	N/A	N/A	YES (230V)	N/A	YES	N/A	N/A

Interchangeability

All motors are built to standardized designs, machined to fine limits and all spare parts are interchangeable.

F1 and F2 mounting interchangeable ability (frame 250T thru 447T).

Nameplate

Permanent, long life corrosion-free stainless steel nameplate complete with connection diagram.

Hardware

High strength, plated for resistance to corrosion.

Finish

All inside exposed surfaces are cleaned and applied with rust-proof coating.

Outside exterior is painted with Alkyd Resin Primer and with finish coat of Alkyd Resin enamel.

Standard colour is Wood smoke grey (Munsell notation 7.5Y8.9/0.4).

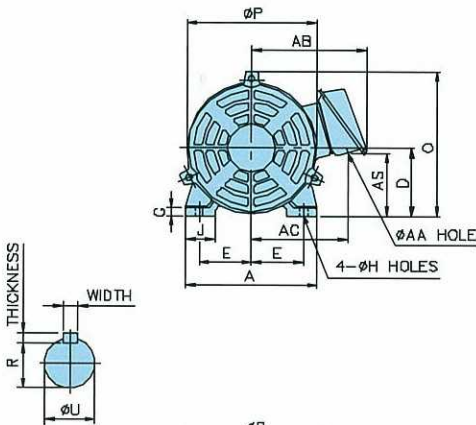


FIG. 1

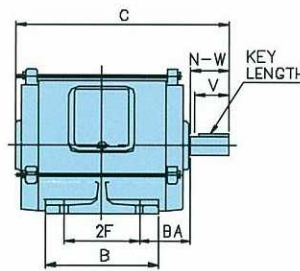


FIG. 2

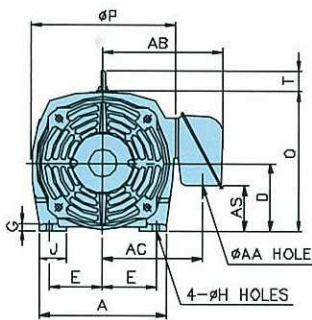
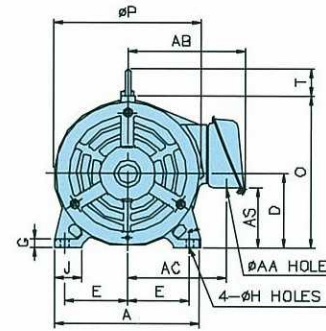


FIG. 4

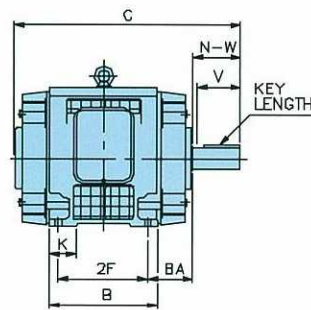
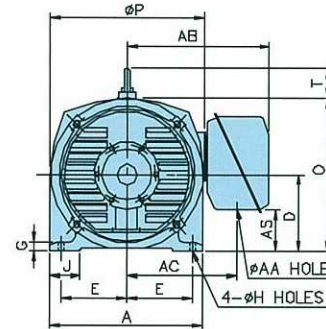


FIG. 5



FRAME NO.	FIG. NO.	MOUNTING				A	B	C	D	G	J	K	O+T	P	
		E	2F	φH	BA										
143T	1	2.75	4.00	0.34	2.25	6.92	4.92	10.53	3.50	0.35	1.57	—	7.54	6.81	
145T		2.75	5.00	0.34	2.25	6.92	5.90	11.50	3.50	0.35	1.57	—	7.54	6.81	
182T	2	3.75	4.50	0.41	2.75	8.66	5.62	12.53	4.50	0.56	1.57	—	10.77	8.70	
184T		3.75	5.50	0.41	2.75	8.66	6.61	13.53	4.50	0.56	1.57	—	10.77	8.70	
213T		4.25	5.50	0.41	3.50	10.24	7.09	15.85	5.25	0.76	1.97	—	12.45	10.55	
215T		4.25	7.00	0.41	3.50	10.24	8.66	17.38	5.25	0.76	1.97	—	12.45	10.55	
254T	3	5.00	8.25	0.53	4.25	12.20	9.84	20.67	6.25	0.66	3.15	—	14.55	12.80	
256T		5.00	10.00	0.53	4.25	12.20	11.57	22.40	6.25	0.66	3.15	—	14.55	12.80	
284T	4	5.50	9.50	0.53	4.75	12.76	11.26	23.82	7.00	0.70	3.15	—	16.84	14.76	
284TS		5.50	9.50	0.53	4.75	12.76	11.26	22.45	7.00	0.70	3.15	—	16.84	14.76	
286T		5.50	11.00	0.53	4.75	12.76	12.76	25.32	7.00	0.70	3.15	—	16.84	14.76	
286TS		5.50	11.00	0.53	4.75	12.76	12.76	23.95	7.00	0.70	3.15	—	16.84	14.76	
324T		6.25	10.50	0.66	5.25	14.88	12.68	26.26	8.00	0.91	3.15	3.15	18.82	16.69	
324TS		6.25	10.50	0.66	5.25	14.88	12.68	24.76	8.00	0.91	3.15	3.15	18.82	16.69	
326T		6.25	12.00	0.66	5.25	14.88	14.17	27.76	8.00	0.91	3.15	3.15	18.82	16.69	
326TS		6.25	12.00	0.66	5.25	14.88	14.17	26.26	8.00	0.91	3.15	3.15	18.82	16.69	
364T		7.00	11.25	0.66	5.88	16.38	13.43	29.13	9.00	1.01	3.55	2.95	21.05	18.31	
364TS		7.00	11.25	0.66	5.88	16.38	13.43	27.00	9.00	1.01	3.55	2.95	21.05	18.31	
365T		7.00	12.25	0.66	5.88	16.38	14.41	30.13	9.00	1.01	3.55	2.95	21.05	18.31	
365TS		7.00	12.25	0.66	5.88	16.38	14.41	28.00	9.00	1.01	3.55	2.95	21.05	18.31	
404T		5	8.00	12.25	0.81	6.62	19.69	14.96	33.10	10.00	1.03	3.94	4.13	23.78	20.24
404TS			8.00	12.25	0.81	6.62	19.69	14.96	30.10	10.00	1.03	3.94	4.13	23.78	20.24
405T			8.00	13.75	0.81	6.62	19.69	16.54	34.60	10.00	1.03	3.94	4.13	23.78	20.24
405TS			8.00	13.75	0.81	6.62	19.69	16.54	31.60	10.00	1.03	3.94	4.13	23.78	20.24
444T	9.00		14.50	0.81	7.50	22.05	17.32	37.70	11.00	1.18	4.33	4.72	26.35	22.05	
444TS	9.00		14.50	0.81	7.50	22.05	17.32	33.95	11.00	1.18	4.33	4.72	26.35	22.05	
445T	9.00		16.50	0.81	7.50	22.05	19.29	39.70	11.00	1.18	4.33	4.72	26.35	22.05	
445TS	9.00		16.50	0.81	7.50	22.05	19.29	35.95	11.00	1.18	4.33	4.72	26.35	22.05	
447T	9.00		20.00	0.81	7.50	22.05	22.83	43.20	11.00	1.18	4.33	4.72	27.14	22.05	
447TS	9.00		20.00	0.81	7.50	22.05	22.83	39.45	11.00	1.18	4.33	4.72	27.14	22.05	
449T	9.00		25.00	0.81	7.50	22.05	27.83	49.77	11.00	1.18	4.33	4.72	27.14	22.05	

NOTE: Tolerance on dimension D: +0.00 inch, -0.06 inch.

Tolerance on dimension U: +0.000 inch, -0.0005 inch for frame 143~215, +0.000 inch, -0.001 inch for frames 254~449.

Tolerance on dimension R: +0.000 inch, -0.015 inch

Dimension V is length of straight part shaft.

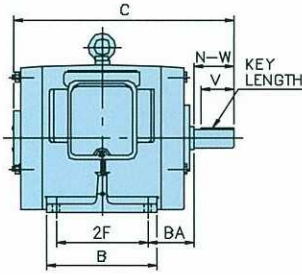


FIG. 2

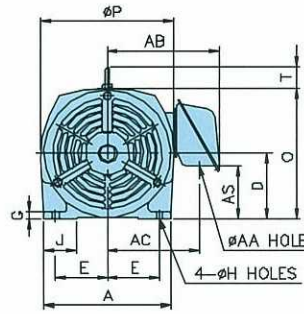


FIG. 3

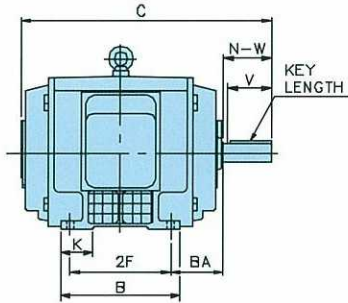
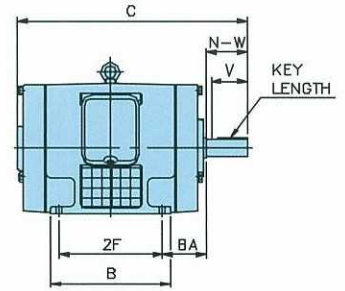


FIG. 5

3RD ANGLE PROJECTION / DIMENSIONS IN INCHES

KEY			KEYSEAT R	CONDUIT BOX				SHAFT EXTENSION			BEARINGS		APPR.WT (LBS.)	FRAME NO.
WIDTH	THICKNESS	LENGTH		ϕAA	AB	AC	AS	N-W	ϕU	V	DRIVE END	OPPOSITE DRIVE END		
0.188	0.188	1.375	0.771	1.10	6.84	4.68	3.27	2.25	0.875	2.20	6205ZZ	6205ZZ	41	143T
0.188	0.188	1.375	0.771	1.10	6.84	4.68	3.27	2.25	0.875	2.20	6205ZZ	6205ZZ	50	145T
0.250	0.250	1.750	0.986	1.10	7.78	5.90	3.54	2.75	1.125	2.70	6207ZZ	6206ZZ	72	182T
0.250	0.250	1.750	0.986	1.10	7.78	5.90	3.54	2.75	1.125	2.70	6207ZZ	6206ZZ	91	184T
0.312	0.312	2.375	1.201	1.38	8.66	7.01	2.69	3.38	1.375	3.30	6308ZZ	6208ZZ	128	213T
0.312	0.312	2.375	1.201	1.38	8.66	7.01	2.69	3.38	1.375	3.30	6308ZZ	6208ZZ	157	215T
0.375	0.375	2.875	1.416	2.05	11.10	8.82	5.09	4.00	1.625	3.90	6310ZZ	6208ZZ	260	254T
0.375	0.375	2.875	1.416	2.05	11.10	8.82	5.09	4.00	1.625	3.90	6310ZZ	6208ZZ	310	256T
0.500	0.500	3.250	1.591	2.48	13.18	10.55	4.05	4.62	1.875	4.50	6312ZZ	6310ZZ	394	284T
0.375	0.375	1.875	1.416	2.48	13.18	10.55	4.05	3.25	1.625	3.20	6312ZZC3	6310ZZC3	420	284TS
0.500	0.500	3.250	1.591	2.48	13.18	10.55	4.05	4.62	1.875	4.50	6312ZZ	6310ZZ	350	286T
0.375	0.375	1.875	1.416	2.48	13.18	10.55	4.05	3.25	1.625	3.20	6312ZZC3	6310ZZC3	350	286TS
0.500	0.500	3.875	1.845	2.48	14.09	11.61	5.44	5.25	2.125	5.00	6312	6312	770	324T
0.500	0.500	2.000	1.591	2.48	14.09	11.61	5.44	3.75	1.875	3.50	6312C3	6312C3	606	324TS
0.500	0.500	3.875	1.845	2.48	14.09	11.61	5.44	5.25	2.125	5.00	6312	6212	639	326T
0.500	0.500	2.000	1.591	2.48	14.09	11.61	5.44	3.75	1.875	3.50	6312C3	6212C3	692	326TS
0.625	0.625	4.250	2.021	3.58	16.58	13.04	3.58	3.58	2.375	5.75	6314	6313	770	364T
0.500	0.500	2.000	1.591	3.58	16.58	13.04	3.58	3.58	1.875	3.50	6313C3	6313C3	692	364TS
0.625	0.625	4.250	2.021	3.58	16.58	13.04	3.58	3.58	2.375	5.75	6314	6313	838	365T
0.500	0.500	2.000	1.591	3.58	16.58	13.04	3.58	3.58	1.875	3.50	6313C3	6313C3	815	365TS
0.750	0.750	5.625	2.450	4.64	20.08	15.08	4.29	7.25	2.875	7.00	6317	6313	1090	404T
0.500	0.500	2.750	1.845	4.64	20.08	15.08	4.29	4.25	2.125	4.00	6313C3	6313C3	1090	404TS
0.750	0.750	5.625	2.450	4.64	20.08	15.08	4.29	7.25	2.875	7.00	6317	6313	1150	405T
0.500	0.500	2.750	1.845	4.64	20.08	15.08	4.29	4.25	2.125	4.00	6313C3	6313C3	1195	405TS
0.875	0.875	6.875	2.880	4.64	20.86	15.75	5.51	8.50	3.375	8.25	6318	6318	1495	444T
0.625	0.625	3.000	2.021	4.64	20.86	15.75	5.51	4.75	2.375	4.50	6313C3	6313C3	1590	444TS
0.875	0.875	6.875	2.880	4.64	20.86	15.75	5.51	8.50	3.375	8.25	6318	6318	1715	445T
0.625	0.625	3.000	2.021	4.64	20.86	15.75	5.51	4.75	2.375	4.50	6313C3	6313C3	1800	445TS
0.875	0.875	6.875	2.880	4.64	20.86	15.75	5.51	8.50	3.375	8.25	6318	6318	2100	447T
0.625	0.625	3.000	2.021	4.64	20.86	15.75	5.51	4.75	2.375	4.50	6313C3	6313C3	2078	447TS
0.875	0.875	6.875	2.880	4.64	20.86	15.75	5.51	8.50	3.375	8.25	6318	6318	2150	449T

