

Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



0		For Bidding			
No.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HHI250-18-449TCRD	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA						
Frame Size		449TC	Rated Output		190 kW		250 HP		
Type		PJP	Number of Poles		4				
Enclosure(Protection)		Totally Enclosed / IP55	Rotor Type		Squirrel Cage				
Method of Cooling		IC411(FC)	Starting Method*		D.O.L				
Rated Frequency		60 Hz	Rated Voltage		575 V	460 V	230 V		
Number of Phases		3	Current	Full Load	225.4 A	281.7 A	563.4 A		
Insulation Class		F		Locked-rotor**	700 %	700 %	700 %		
Temp. Rise at full load (by resistance method)			Efficiency						
at 1.0 S.F		80 deg. C							
Motor Location		☐ Indoor ☐ Outdoor						50% Load	93.2 %
Altitude		Less than 1,000 meter						75% Load	95.2 %
Relative Humidity		Less than 80 %	100% Load		96.2 %				
Ambient Temp.		40 deg. C (Max.)	Power Factor(p.u)						
Duty Type		Continuous (S1)							
Service Factor		1.15						50% Load	0.730
Mounting		B5						75% Load	0.830
Bearing		Type Anti-Friction	Speed at Full Load		1785 r.p.m				
		DE/N-DE 6318C3 / 6316C3	Torque						
		Lubricant Grease(Polyrex-EM)						Full Load	749.88 lb.ft
External Thrust		Not applicable						Locked-rotor**	140 %
Coupling Method		☒ Direct ☐ V-belt						Breakdown**	220 %
Shaft Extension		Single	Moment of Inertia (J)						
Terminal		Main Cast Iron						Load(Max.)	3,318.708 lb.ft2
Box		Aux. No						Motor	105.370 lb.ft2
		Location Refer to Outline Drawing							
Application			Vibration		85 dB(A)				
Area classification			Permissible number of		3.8 mm/sec (peak)				
Type of Ex-Protection			consecutive starts		Cold 3 times				
Applicable Standard			NEMA MG1, CSA C390		Hot 2 times				
			Paint	Munsell No.	4.0PB5.4/5.5(VL-451)				

ACCESSORIES	SUBMITTAL DRAWING
	Outline Dimension Drawing \ Motor Weight(Approx.)
	B5 LM-T1449C5PL001 2590 lb.
SPARE PARTS	REMARK
	1. Premium efficiency according to NEMA MG1
	2. Inverter Duty @ 1.0 Service Factor & F Temperature rise
	- 10:1 VT (20:1 VT at 50% load)
	- 10:1 CT (1 hour duty, 4:1 continuous)
	- CHP up to 1.5 times base speed, NEMA MG1 Part31
	3. CSA Certification
	- Class I, Division 2, Group A, B, C & D
	- Class II, Division 2 Group E, F & G (Group E : up to 320Fr.)
	4. Service Factor 1.15 and Temperature rise B are applicable under the condition of sine wave power.
	5. Service Factor 1.25 is applicable to motors of 100HP or less with temperature rise F & Non-Hazardous.
	6. Temp. code : T3A(180°C) at sine wave
	Date DSND CHKD CHKD APPD
	2025-07-22 S.H. LEE I.K. KIM R.G. KIM S.W. KIM

[Note] Others not mentioned in this data sheet shall be in accordance with maker standard.

Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.

Inspection and performance test shall be done according to maker standard, if not mentioned.

* In case of Inverter-Fed Motor, performance data is based on sine wave tests. It may be different from test data of Inverter combined motor.

** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

250HP		4P	460V	Cat. No.	HHI250-18-449TCRD				
Model	HLS449PR0408			INS. Class	F	HD-F1	Amps	281.7A	
Type	HLS	Duty	CONT	Code	G	Amb.	40°C	Hertz	60Hz
Frame	449TC	Encl.	TEFC	S.F.	1.15	RPM	1785	NEMA Nom. Eff.	96.2%
Bearing	Drive	6318C3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			3/4 Eff.	95.2%	
	Opp.	6316C3					NEMA Design	B	
Usable at	50Hz 250HP 380V 340.8A 1480rpm S.F.: 1.0 Eff.: 95.6% Code: F								
	50Hz 250HP 400/415V 325.3/316.1A 1482/1484rpm S.F.: 1.0 Eff.: 95.9/96.0% Code: G/G								
CSA Certified for	Model	LATER	Type	PJP	Temp. Code	Frame	140~320FR	360~400FR	440FR
	CLASS I, Div. 2, Gr. A, B, C & D	CLASS II, Div. 2 Gr. E, F & G		(Gr. E : Up to 320FR)		Amb. 40°C	T3C (160°C)	T3B (165°C)	T3A (180°C)
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC					Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)
No.	-			Date	-			Weight	2590 lb
4M-135702				Made in Korea H1				HD HYUNDAI ELECTRIC	
MARINE DUTY IEEE45									

WIRING DIAGRAM

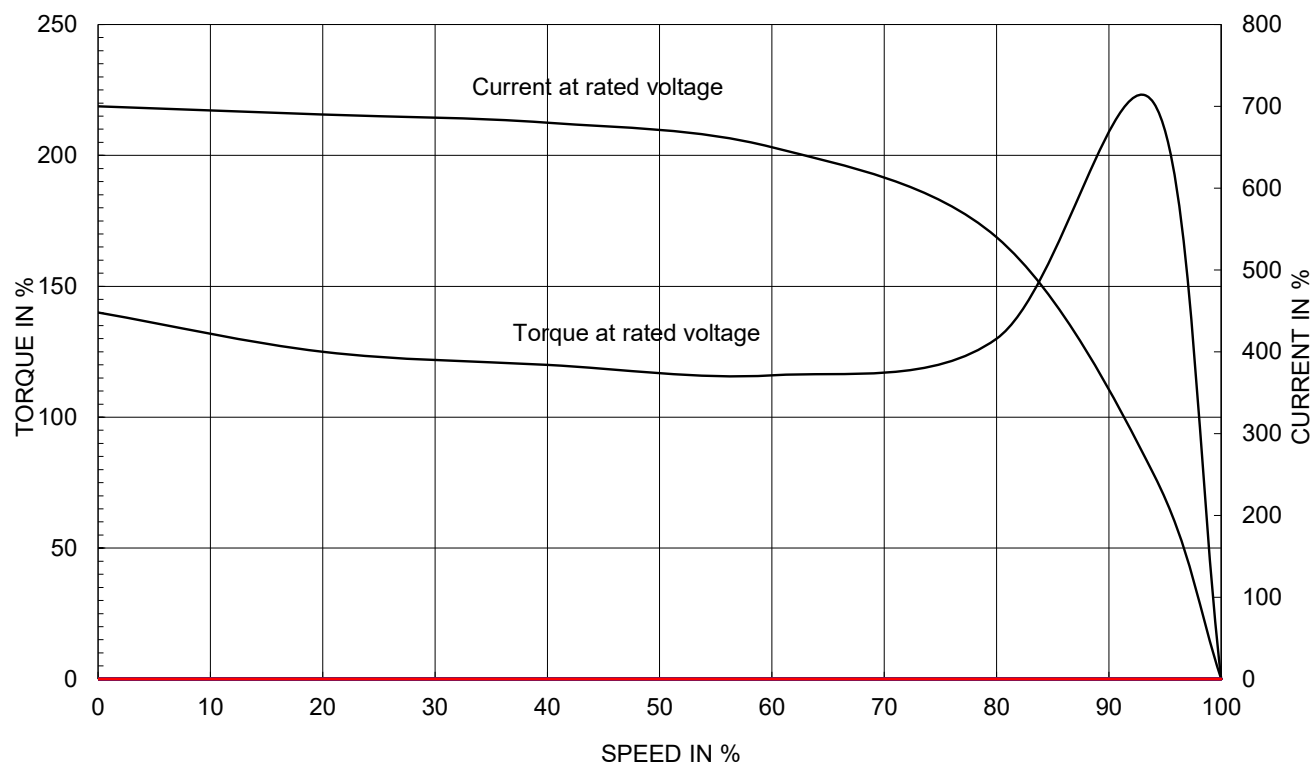
D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-129326	WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-128852

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HHI, 364-449)	DWG SIZE	A4 (1:1)
CHKD BY	I.K.KIM	SCALE	NONE	TITLE NAMEPLATE DRAWING			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle				
DSND BY	S.H.LEE	DATE	2024.06.07				
				REF. NO	4M-135702 / 4M-129326	Sheet No.	of
				DWG NO	NP-HHI250-18-449TCRD	Revision No.	0

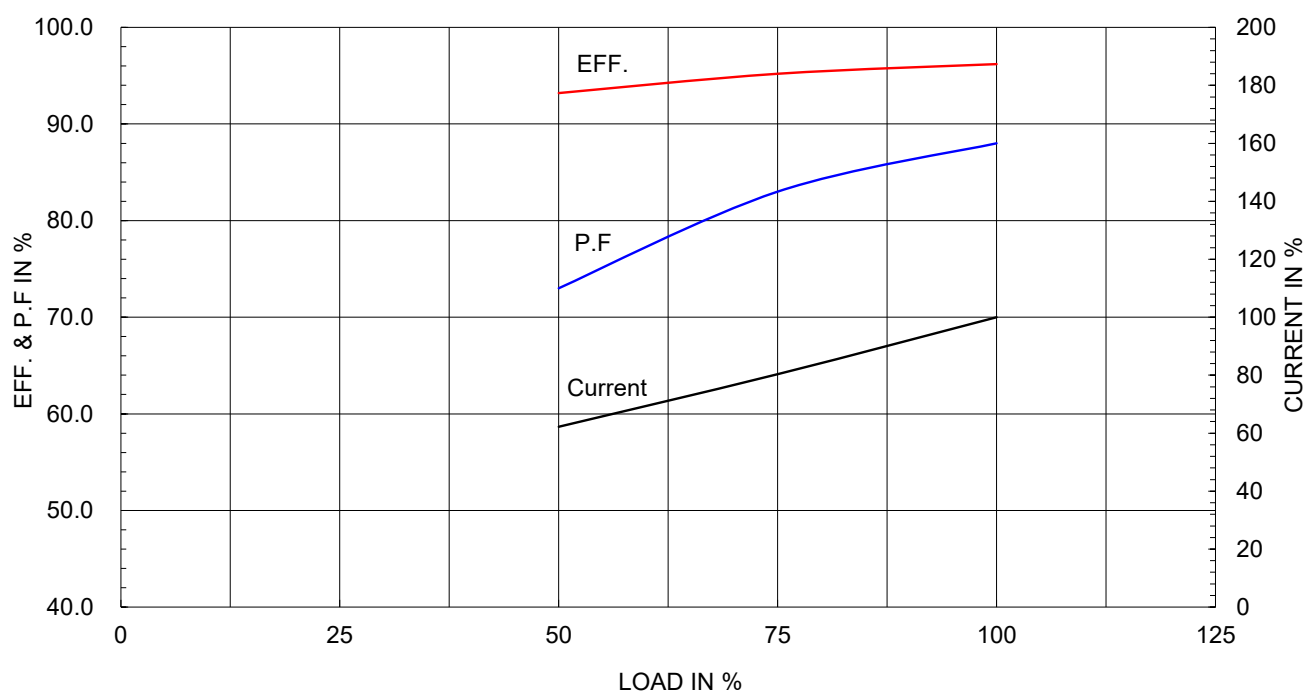
Type :	PJP	
Full Load Torque :	749.88	lb.ft
Load moment of Inertia (J) :	3318.708	lb.ft2
Motor moment of Inertia (J) :	105.370	lb.ft2

190kW	250HP	4 P	60 Hz
Speed at Full Load :			1785 RPM
Rated Voltage	575V	460V	230V
Full Load Current	225.4A	281.7A	563.4A

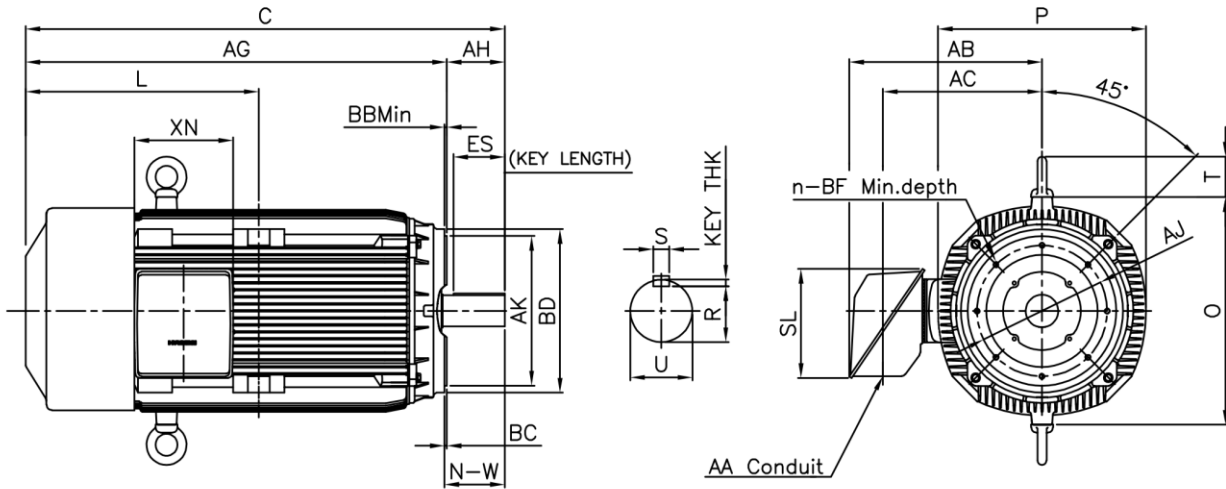
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



1	2	3	4
▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		



DIMENSIONS

Unit : inch

C - F A C E									CONDUIT BOX					APPROX. WGT.(LB)
AJ	AK	BB Min	BC	BD	BF	BF depth	n	AH	AA	AB	AC	XL	XN	
14.00	16.00	0.25	0.25	17.48	5/8-11	0.94	8	8.25	3.00	21.26	18.03	11.65	10.63	2590

O V E R A L L						S H A F T					KEY	BEARING	
C	L	O	P	T	AG	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
								R	ES	S			
53.83	25.33	24.33	22.44	4.33	45.33	3.375	8.50	2.880	6.93	0.875	0.875	6318C3	6316C3

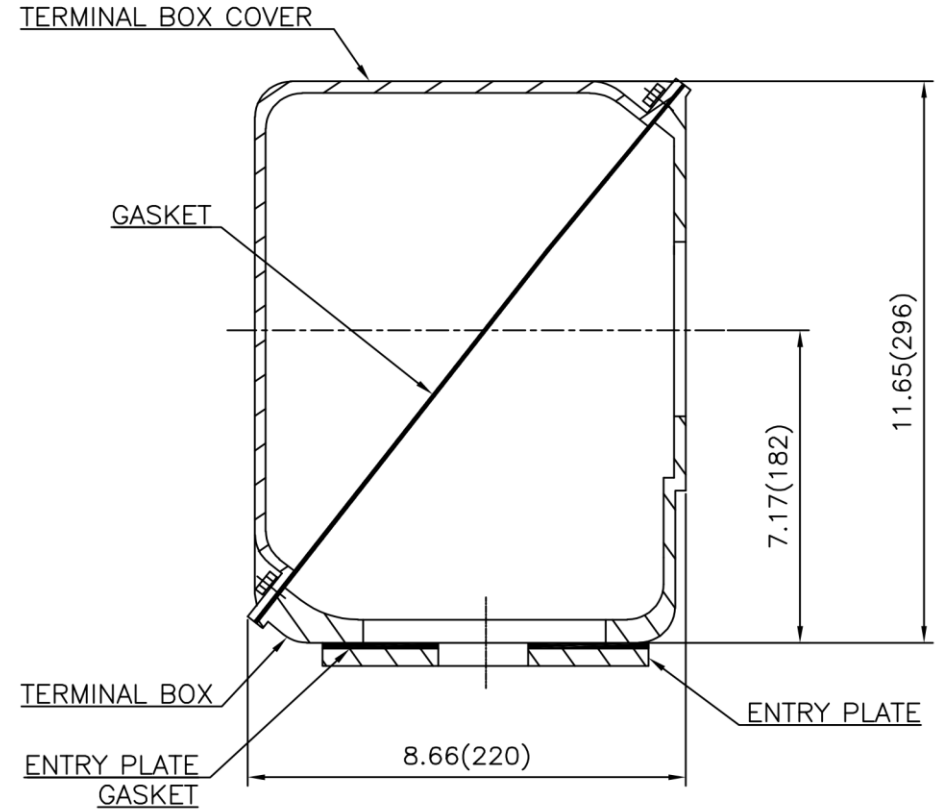
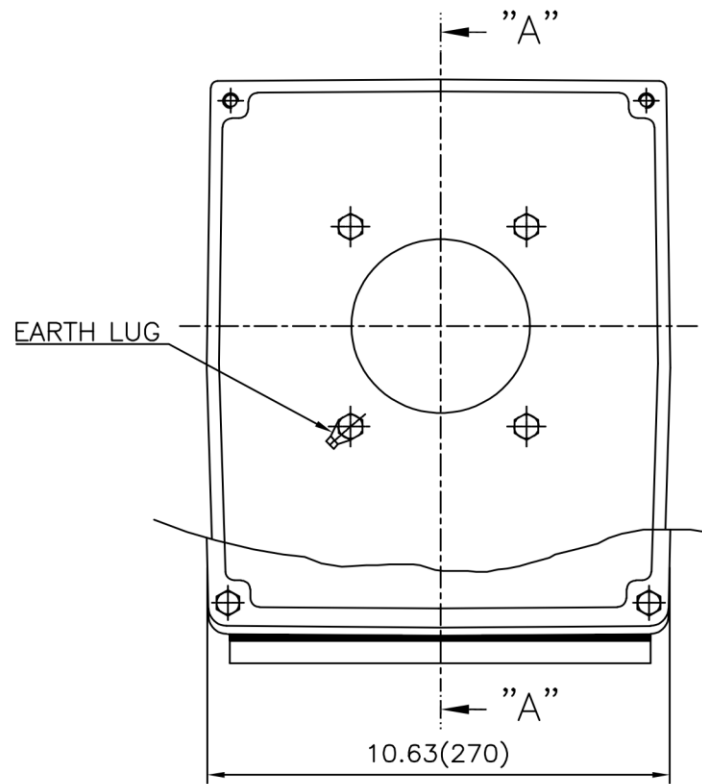
NOTE

- 1.Dimension "U" tolerance : +0.000inch ~ -0.0005inch (143TC-215TC): +0.000inch ~ -0.001inch (254TC-449TC)
- 2.Dimension "R" tolerance : +0.000inch ~ - 0.015inch
- 3.Dimension "AK" tolerance : +0.000inch ~ -0.003inch (143TC-286TC): +0.000inch ~ -0.005inch (324TC-449TC)

APPD BY	S.K.HAN	UNIT	INCH	SUBJECT	NEMA 449TC	DWG SIZE
CHKD BY	S.Y.KIM	SCALE	NONE	TITLE		A4 (1:1)
CHKD BY	Y.H.BAE	PROJEC'N	3각법 (3rd Angle)			
DSND BY	N.R.LEE	DATE	2019-06-03			
				REF. NO	350A1520AA	Sheet No. of
				DWG NO	LM-T1449C5PL001	Revision No. 0

Cls. I&II, Div. 2

IEEE 841



SEC. "A" - "A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REV'D BY	CHK'D BY	CHK'D BY	APP'D BY
1						
2						
3						
4						

일반가공공차		일반재관공차	
1-4	±0.1	6-30	±0.5
4-18	±0.2	30-120	±0.8
18-63	±0.3	120-315	±1.2
63-250	±0.5	315-1000	±2.0
250-	±0.8	1000-	±3.0

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. 400-440 (CAST IRON)	DWG SIZE	
CHKD BY		SCALE	1/1.2	TITLE	MAIN TERMINAL BOX ASS'Y		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	네슬피	DATE	2023-10-19	DWG NO	3M-248451	Revision No.	0

