

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

## IEEE841 TYPE

Catalog No.	IEEE500-12-5011C-IBSH	Item No.		Rev. No.	[ ]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA			
Frame Size	5011C		Rated Output	375 kW		500 HP
Type	PJP		Number of Poles	6		
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	467.9 A	584.9 A
Insulation Class	F			Locked-rotor**	675 %	675 %
Temp. Rise at full load (by resistance method)			Efficiency			
at 1.0 S.F	80 deg. C		50% Load		92.8 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		75% Load		94.8 %	
Altitude	Less than 1,000 meter		100% Load		95.8 %	
Relative Humidity	Less than 80 %		Power Factor(p.u)			
Ambient Temp.	40 deg. C (Max.)		50% Load		0.690	
Duty Type	Continuous ( S1 )		75% Load		0.790	
Service Factor	1.15		100% Load		0.840	
Mounting	B35		Speed at Full Load	1185 r.p.m		
Bearing	Type	Anti-Friction	Torque			
	DE/N-DE	6324C3 / 6320C3-INS.	Full Load	2,229.4 lb.ft		
	Lubricant	Grease(Polyrex-EM)	Locked-rotor**	135 %		
External Thrust	Not applicable		Breakdown**	220 %		
Coupling Method	<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt		Moment of Inertia (J)			
Shaft Extension	Single		Load(Max.)	4,666.000 lb.ft2		
Terminal Box	Main	Cast Iron	Motor	272.448 lb.ft2		
	Aux.	Yes	Sound Pressure Level (No-load & mean value at 1m from motor)			
Location	Refer to Outline Drawing				84 dB(A)	
Application			Vibration			
Area classification	Hazardous				3.8 mm/sec (peak)	
Type of Ex-Protection	Class I&II, Division 2		Permissible number of consecutive starts		Cold 2 times	
Applicable Standard	IEEE841, NEMA MG1, CSA C390				Hot 1 time	
			Paint	Munsell No.	7.5BG6/1.5	

### ACCESSORIES

\*. Space Heater : 1EA/Motor

### SPARE PARTS

### SUBMITTAL DRAWING

Outline Dimension Drawing		Motor Weight(Approx.)	
B35	LM-I0511C4PE001	4990 lb.	

### REMARK

- Premium efficiency according to NEMA MG1
- Inverter Duty @ 1.0 Service Factor & F Temperature rise
  - 10:1 VT (20:1 VT at 50% load)
  - 10:1 CT
  - CHp up to 1.5 times base speed, NEMA MG1 Part31
- NDE side : Insulated bearing
- CSA Certification
  - Class I, Division 2, Group A, B, C & D; Temp code : T3
  - Class II, Division 2 Group F & G; Temp code : T3
- Shaft material : AISI4140

Date	DSND	CHKD	CHKD	APPD
2024-09-22	E.J.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.

본 도면은 HD현대일렉트릭(주) 재산이며  
허가없이 복사할 수 없음 (취급주의)

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**4.72**

**2.36**

**CROWN TRITON**  
Premium Efficiency AC 3 Phase Motor

500HP 6P 460V	Cat. No. IEE500-12-5011C-IBSH	
Model LATER	INS. Class F	Amps 584.9
Type PJP	Duty CONT	Code G
Frame 5011C	Encl. TEFC	Amb. 40°C
	S.F. 1.15	RPM 1185
		NEMA Nom. Eff. 95.8%
Bearing	Drive 6324C3	S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)
	Opp. 6320C3-INS.	NEMA Design B Torque
Usable at	50Hz 420HP 380V 594.73A 985rpm S.F.: 1.0 Eff.: 95.8% Code: G	
	50Hz 420HP 400/415V 515.87/571.74A 986/987rpm S.F.: 1.0 Eff.: 95.8/95.81% Code: G/J	
CSA Certified for	CLASS I, Div. 2, Gr. A, B, C & D CLASS I, Zone 2, Gr. IIA, IIB, & IIC	CLASS II, Div. 2, Gr. F & G
	Temp. Code (sine wave)	Frame L440FR - 500FR
		Amb. 40°C T3 (200°C)
		Amb. 55°C T3 (200°C)
No. -	Date -	Weight 4990 lb

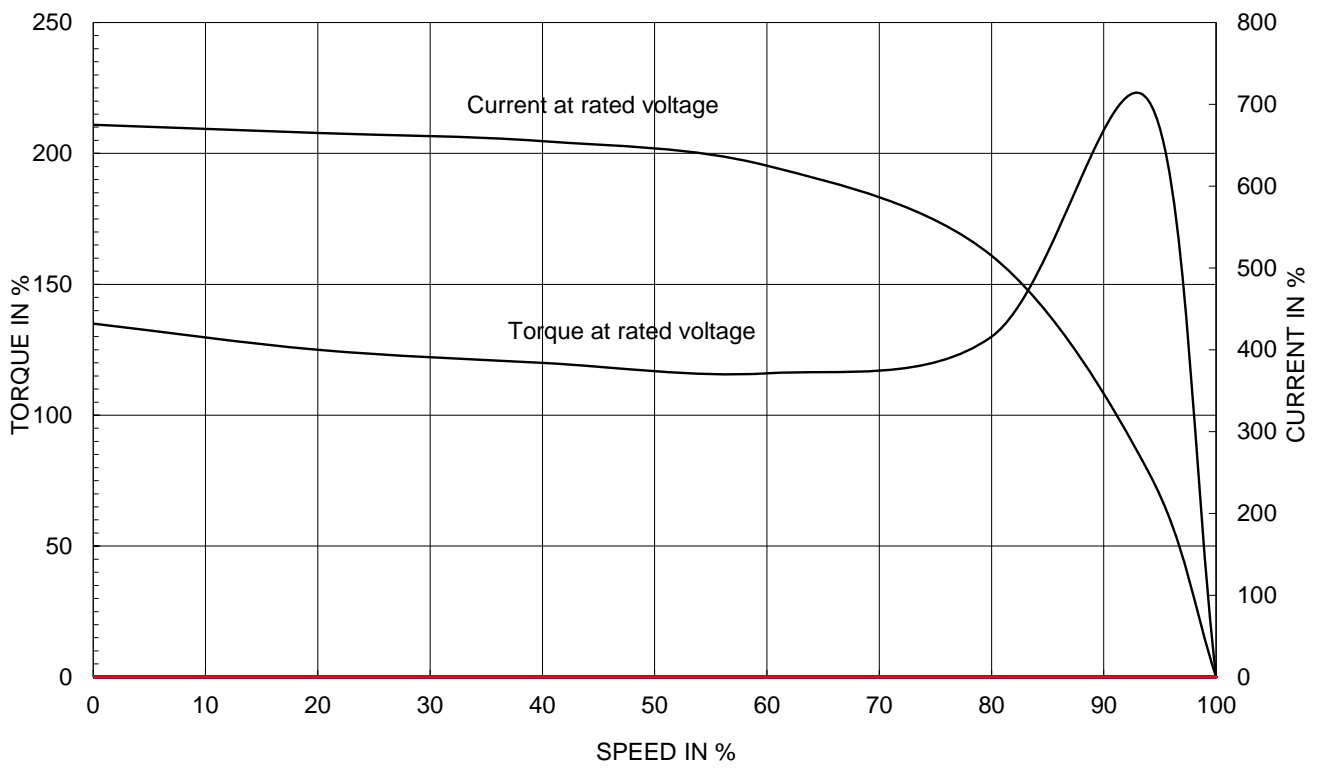
**IEEE Std 841-2021 MARINE DUTY IEE45**  
 4M-136054 Made in Korea H1

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 IEE45 (XL)	DWG SIZE
CHKD BY	I.K.KIM	SCALE	NONE			A4 ( 1:1 )
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	<b>NAMEPLATE DRAWING</b>		
DSND BY	S.H.LEE	DATE	2024.06.07			
				REF. NO	<b>4M-136054</b>	Sheet No. of
				DWG NO	NP-IEE500-12-5011C-IBSH	Revision No. <b>0</b>

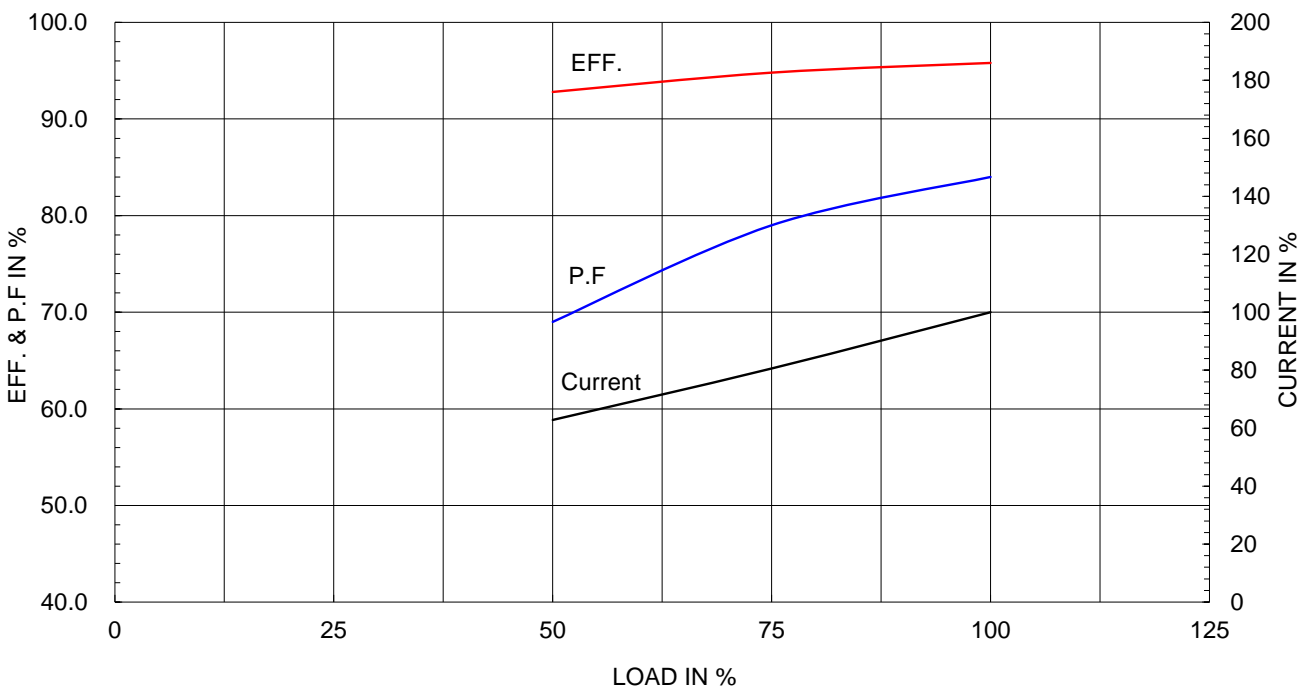
Type :	PJP
Full Load Torque :	2229.4 lb.ft
Load moment of Inertia (J) :	4666.000 lb.ft <sup>2</sup>
Motor moment of Inertia (J) :	272.448 lb.ft <sup>2</sup>

375kW 500HP	6 P	60 Hz
Speed at Full Load :		1185 RPM
Rated Voltage	575V	460V 230V
Full Load Current	467.9A	584.9A 1169.8A

SPEED VS TORQUE & CURRENT CURVE

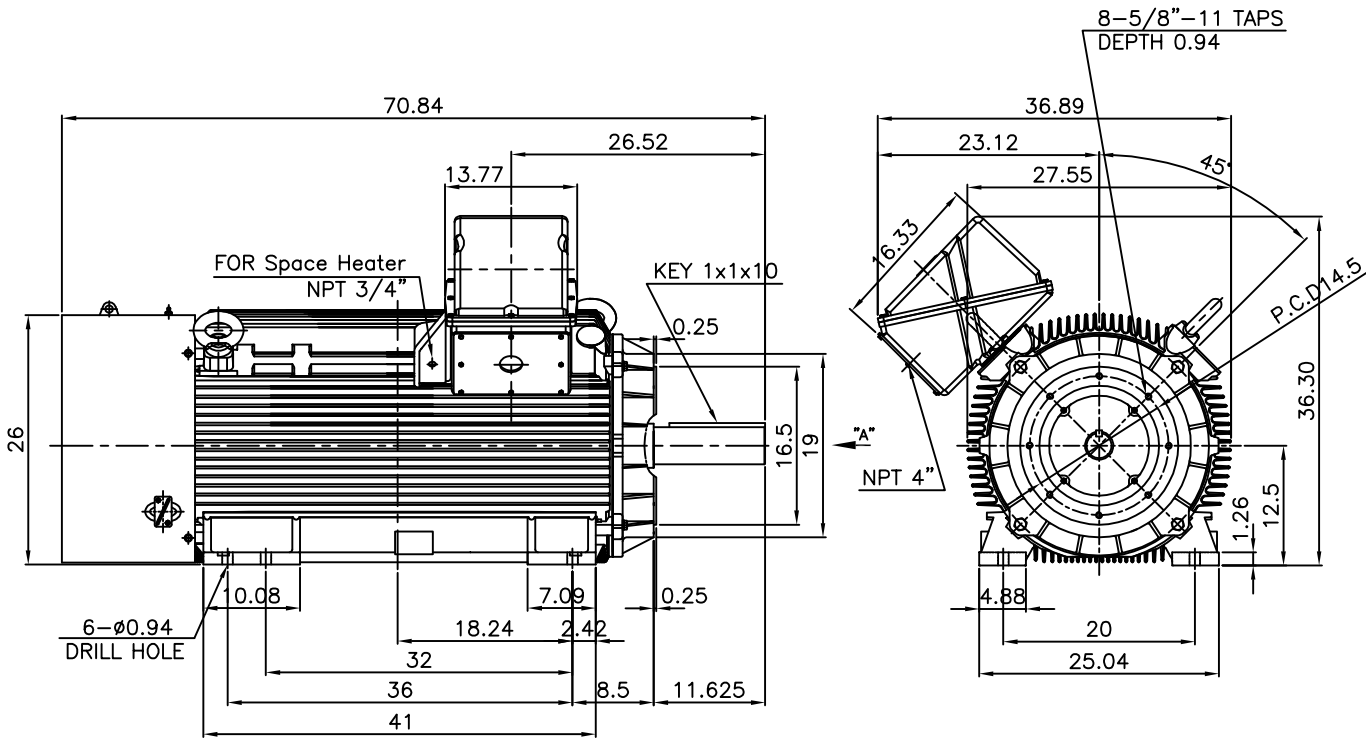


OUTPUT VS EFF., P.F & CURRENT CURVE



▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							

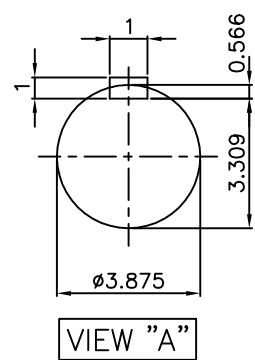
**IEEE841**



**NOTE**

1.TOLERANCE :

CENTER HEIGHT	12.5	+0.000	-0.060
RABBET DIAMETER	ø16.5	+0.000	-0.005
SHAFT DIAMETER	ø3.875	+0.000	-0.001
KEYWAY WIDTH	1	+0.003	-0.000



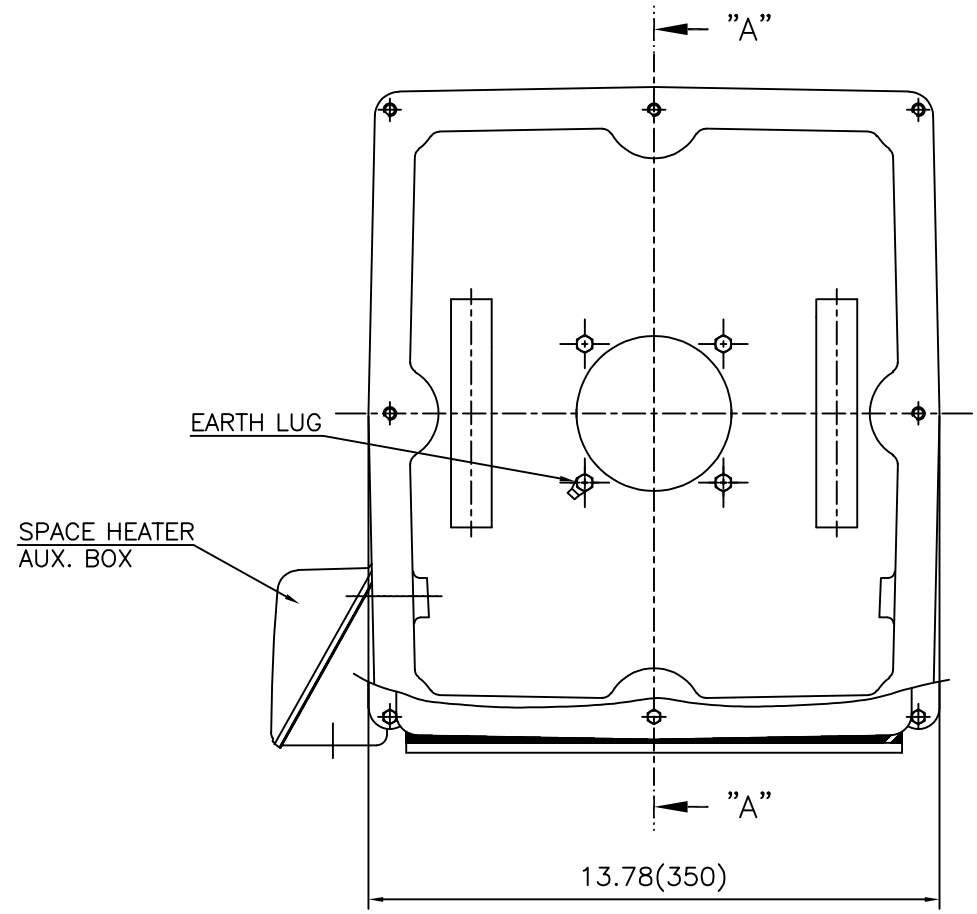
VIEW "A"

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5010/5011C	DWG SIZE	A4 (1:20)
CHKD BY	O.J.KIM	SCALE	1/20	TITLE	OUTLINE		
CHKD BY	R.G.KIM	PROJEC'N	3각법(3rd Angle)				
DSND BY	H.K.LEE	DATE	2021-04-27	REF. NO		Sheet No.	of



DWG NO	LM-I0511C4PE001	Revision No.	0
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**Cls. I&II, Div. 2  
IEEE 841**



SEC. "A" - "A"

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. L440 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/3.5	TITLE	MAIN TERMINAL BOX ASS'Y	A3 (1:3.5)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	최승희	DATE	2023-10-19			
				REF. NO		Sheet No. of
				DWG NO	3M-248452	Revision No. 0

**Cls. I&II, Div. 2  
IEEE 841**



REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.180 (CAST IRON)	DWG SIZE	A3 (1:1.1)
CHKD BY		SCALE	1/1	TITLE	SUB. TERMINAL BOX ASS'Y		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	배승희	DATE	2024-01-18	DWG NO	3M-165278	Revision No.	0

