

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.	IEEE60-12-404TC	Item No.	Rev. No.	[]
Project Name		Project No.	Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA			
Frame Size	404TC		Rated Output	45 kW		60 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	56.9 A	71.2 A
Insulation Class	F			Locked-rotor**	670 %	670 %
Temp. Rise at full load (by resistance method)			Efficiency			
at 1.0 S.F	80 deg. C		50% Load		91.5 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		75% Load		93.5 %	
Altitude	Less than 1,000 meter		100% Load		94.5 %	
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	6316C3 / 6313C3	Full Load		267.5 lb.ft	
	Lubricant	Grease(Polyrex-EM)	Locked-rotor**		140 %	
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.)		2,397.965 lb.ft2	
Terminal Box	Main	Cast Iron	Motor		46.280 lb.ft2	
	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)			
	Location	Refer to Outline Drawing			75 dB(A)	
Application			Vibration		3.8 mm/sec (peak)	
Area classification	Hazardous		Permissible number of consecutive starts		Cold 3 times Hot 2 times	
Type of Ex-Protection	Class I&II, Division 2		Paint	Munsell No.	7.5BG6/1.5	
Applicable Standard	IEEE841, NEMA MG1, CSA C390					

ACCESSORIES

SUBMITTAL DRAWING		
Outline Dimension Drawing	Motor Weight(Approx.)	
B35	LM-I1404C4PL001	1165 lb.

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
 - 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.

Date	DSND	CHKD	CHKD	APPD
2024-07-13	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.

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REV	DATE	CONTENTS	REVD BY CHKD BY CHKD BY APPD BY

4.72

CROWN TRITON
Premium Efficiency AC 3 Phase Motor

60HP	6P	460V	Cat. No.	IEEE60-12-404TC				
Model	HLS404PR06		INS. Class	F	HD-F1	Amps	71.2	
Type	HLS	Duty	CONT	Code	H	Amb.	40°C	
Frame	404TC	Encl.	TEFC	S.F.	1.15	RPM	1185	
Bearing	Drive	6316C3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	93.5%	
	Opp.	6313C3				NEMA Design	B Torque	
Usable at	50Hz 60HP 380V 86.5A 981rpm S.F.: 1.0 Eff.: 93.3% Code: F							
	50Hz 60HP 400/415V 82.5/80.1A 983/984rpm S.F.: 1.0 Eff.: 93.6/93.8% Code: G/G							
CSA Certified for	Model	LATER		Type	PJP			
	CLASS I, Div. 2, Gr. A, B, C & D CLASS I, Zone 2, Gr. IIA, IIB, & IIC	CLASS II, Div. 2, Gr. E, F & G (Gr. E : Up to 320FR)		Temp. Code (sine wave)	Frame	140~320FR	360~400FR	440FR
		Amb. 40°C	T3C (160°C)		T3B (165°C)	T3A (180°C)		
Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)					
No.	-		Date	-		Weight	1165 lb	

IEEE Std 841-2021 **MARINE DUTY IEEE45**

4M-135701 Made in Korea H1

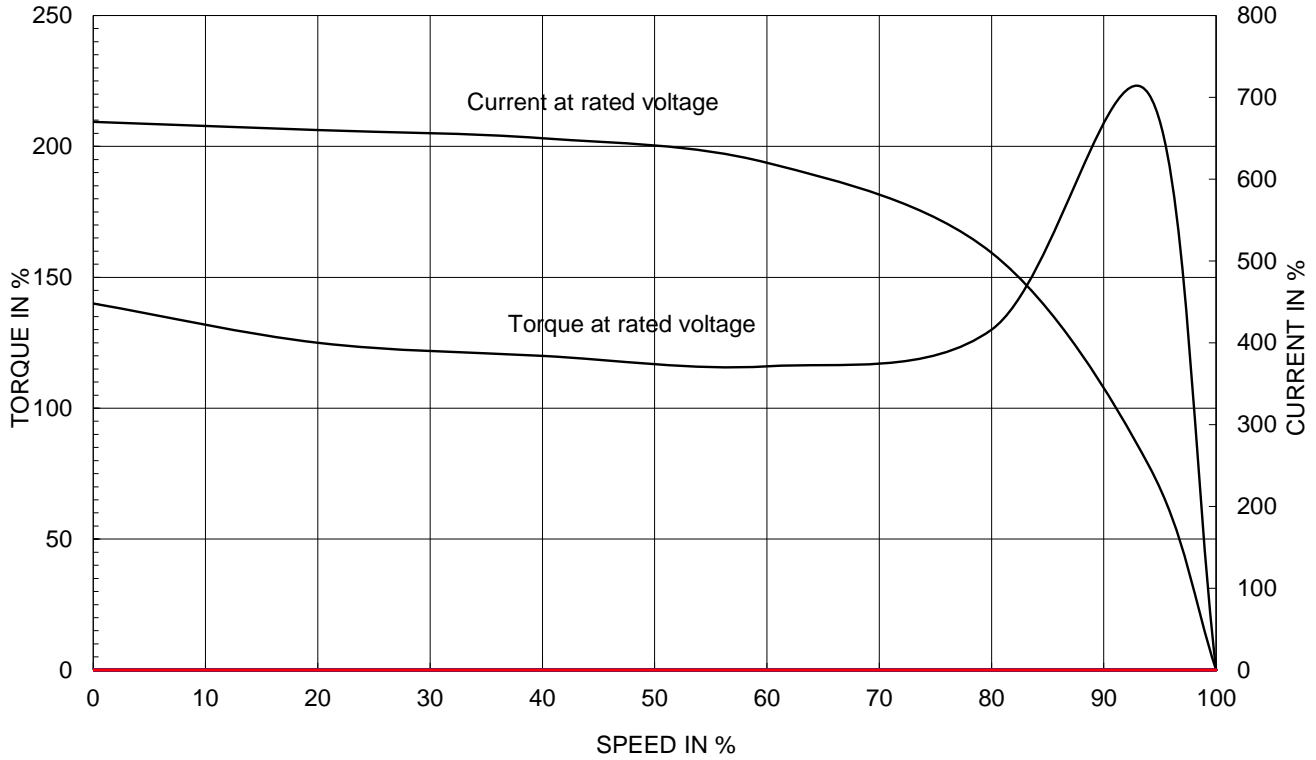
2.36

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 IEEE841 (HL)	DWG SIZE
CHKD BY	I.K.KIM	SCALE	NONE			A4 (1:1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TITLE NAMEPLATE DRAWING		
DSND BY	S.H.LEE	DATE	2024.06.07			
				REF. NO	4M-135701	Sheet No. of
				DWG NO	NP-IEEE60-12-404TC	Revision No. 0

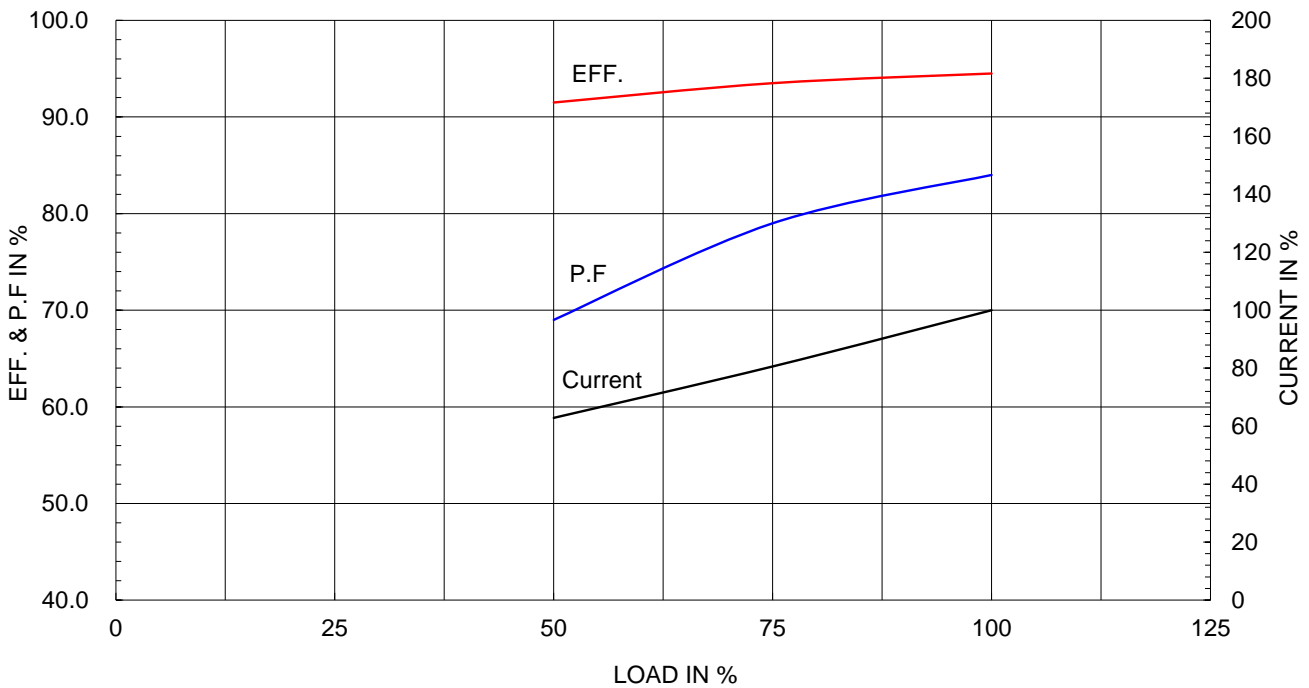
Type :	PJP	
Full Load Torque :	267.5	lb.ft
Load moment of Inertia (J) :	2397.965	lb.ft2
Motor moment of Inertia (J) :	46.280	lb.ft2

45kW	60HP	6 P	60 Hz
Speed at Full Load :			1185 RPM
Rated Voltage	575V	460V	230V
Full Load Current	56.9A	71.2A	142.3A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

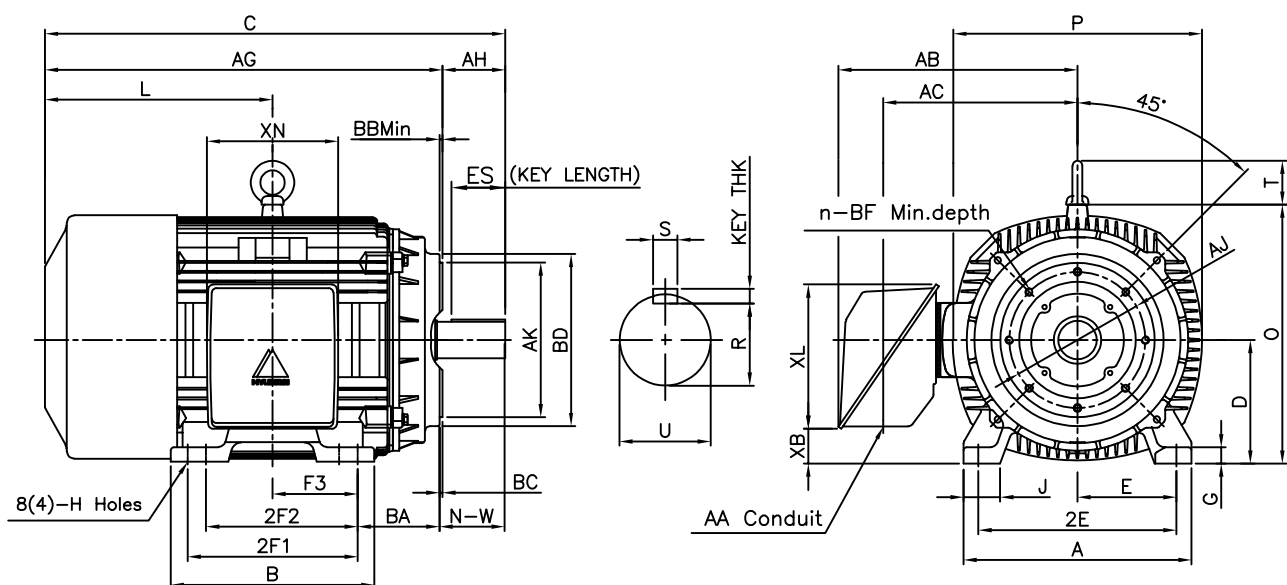


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급주의)

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

IEEE841



DIMENSIONS

Unit : inch

M O U N T I N G									C O N D U I T B O X						APPROX. WGT.(LB)
A	B	2E	2F1	2F2	F3	G	J	H	AA	AB	AC	XB	XL	XN	
18.43	16.46	16.00	(13.75)	12.25	6.870	1.18	3.03	0.81	3.00	20.28	14.85	2.83	11.65	10.63	1165

O V E R A L L								S H A F T					KEY	BEARING	
BA	C	D	L	O	P	T	AG	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
										R	ES	S			
6.62	41.01	10.00	20.57	20.79	19.69	3.55	32.17	2.875	7.25	2.450	5.65	0.750	0.750	6316C3	6313C3

C - F A C E									
AJ	AK	BB Min	BC	BD	BF	BF depth	n	AH	
11.00	12.50	0.25	0.25	13.94	5/8-11	0.94	8	7.00	

NOTE

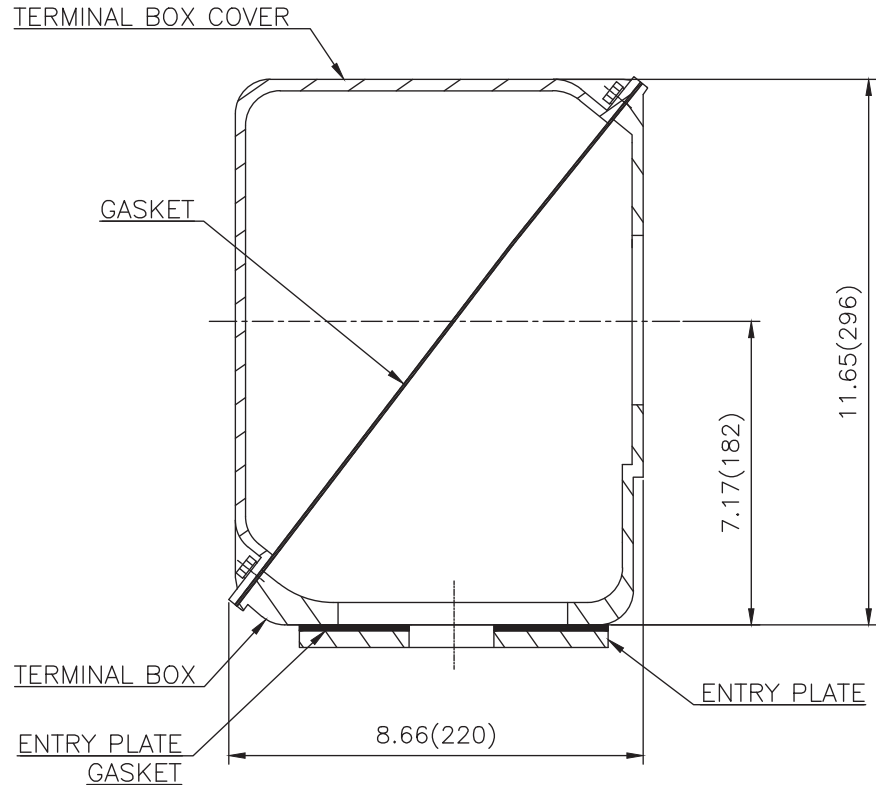
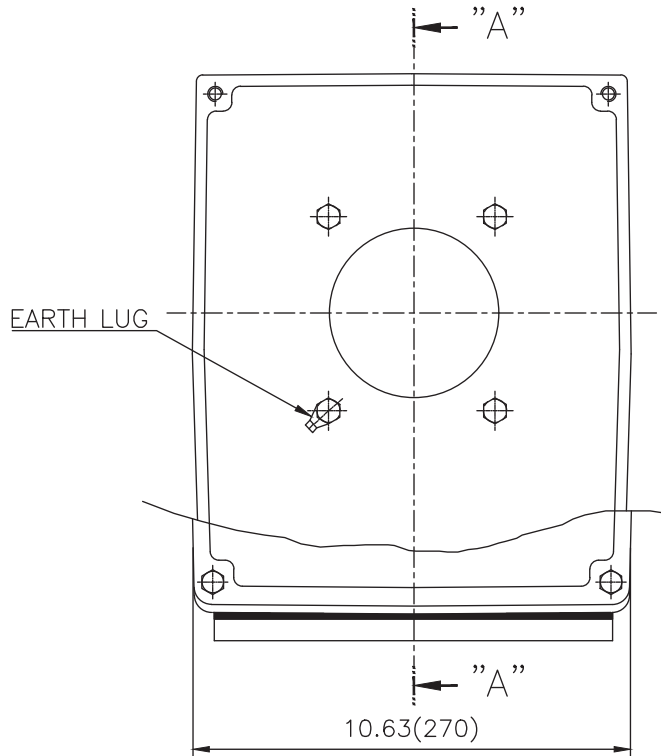
- 1.Dimension "D" tolerance : +0.00inch ~ -0.03inch (143TC-365TC) : +0.000inch ~ -0.06inch (404TC-449TC)
- 2.Dimension "U" tolerance : +0.000inch ~ -0.0005inch (143TC-215TC): +0.000inch ~ -0.001inch (254TC-449TC)
- 3.Dimension "R" tolerance : +0.000inch ~ - 0.015inch
- 4.Dimension "AK" tolerance : +0.000inch ~ -0.003inch (143TC-286TC): +0.000inch ~ -0.005inch (324TC-449TC)

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	NEMA 404TC	DWG SIZE	A4 (1:1)
CHKD BY	R.G.KIM	SCALE	NONE				
CHKD BY	Y.H.BAE	PROJEC'N	3각법(3rd Angle)	TITLE OUTLINE			
DSND BY	H.K.LEE	DATE	2021-05-06				



REF. NO	350A8315AA	Sheet No.	of
DWG NO	LM-I1404C4PL001	Revision No.	0

Cls. I&II, Div. 2
IEEE 841



SEC. "A" - "A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

일반기준공차		일반재판공차	
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	A3 (1:1.2)
CHKD BY		SCALE	1/1.2	TITLE			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	MAIN TERMINAL BOX ASS'Y			
DSND BY	배승희	DATE	2023-10-19	REF. NO		Sheet No.	of
				DWG NO	3M-248451	Revision No.	0

