

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.	IEEE100-18-405TC	Item No.	Rev. No.	[      ]
Project Name		Project No.	Quantity	sets

GENERAL SPECIFICATION		PERFORMANCE DATA			
Frame Size	405TC	Rated Output	75 kW      100 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	91.3 A	114.1 A
Insulation Class	F		Locked-rotor**	650 %	650 %
Temp. Rise at full load (by resistance method)		Efficiency			
at 1.0 S.F	80 deg. C	50% Load		92.4 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	75% Load		94.4 %	
Altitude	Less than 1,000 meter	100% Load		95.4 %	
Relative Humidity	Less than 80 %	Power Factor(p.u)			
Ambient Temp.	40 deg. C (Max.)	50% Load		0.715	
Duty Type	Continuous ( S1 )	75% Load		0.815	
Service Factor	1.15	100% Load		0.865	
Mounting	B35	Speed at Full Load	1780 r.p.m		
Bearing	Type	Anti-Friction	Torque		
	DE/N-DE	6316C3 / 6313C3	Full Load	296.8 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.)	1,337.213 lb.ft2		
Terminal	Main	Motor	35.910 lb.ft2		
Box	Aux.	Sound Pressure Level (No-load & mean value at 1m from motor)			
	Location	82 dB(A)			
Application		Vibration	3.8 mm/sec (peak)		
Area classification	Hazardous	Permissible number of consecutive starts	Cold	3 times	
Type of Ex-Protection	Class I&II, Division 2		Hot	2 times	
Applicable Standard	IEEE841, NEMA MG1, CSA C390	Paint	Munsell No.	7.5BG6/1.5	

ACCESSORIES

SUBMITTAL DRAWING		
Outline Dimension Drawing	Motor Weight(Approx.)	
B35	LM-I1405C4PL001	1165 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 -. 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.

1	2	3	4
REV	DATE	CONTENTS	REVD BY   CHKD BY   CHKD BY   APPD BY

4.72

100HP	4P	460V	Cat. No.	IEEE100-18-405TC				
Model	HLS405PR04		INS. Class	F	HD-F1	Amps	114.1	
Type	HLS	Duty	CONT	Code	G	Amb.	40°C	
Frame	405TC	Encl.	TEFC	S.F.	1.15	RPM	1780	
Bearing	Drive	6316C3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	94.4%	
	Opp.	6313C3				NEMA Design	B	
Usable at	50Hz 100HP 380V 137.5A 1475rpm S.F.: 1.0 Eff.: 94.5% Code: E							
	50Hz 100HP 400/415V 132.6/130.6A 1478/1479rpm S.F.: 1.0 Eff.: 94.8/94.9% Code: F/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**

4M-135701

**MARINE DUTY IEEE45**

Made in Korea H1

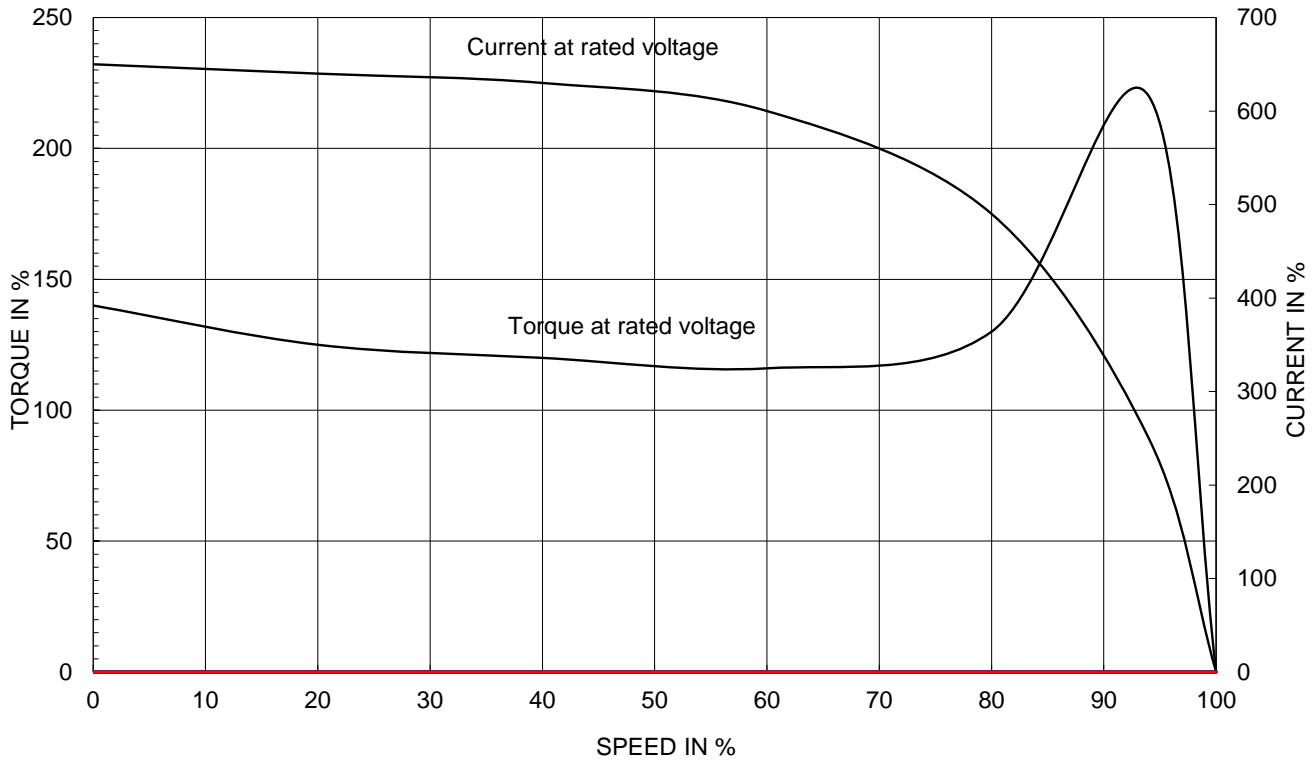
2.36

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 <b>NAMEPLATE DRAWING</b>		
DSND BY	S.H.LEE	DATE	2024.06.07			
				REF. NO	<b>4M-135701</b>	Sheet No. of
				DWG NO	<b>NP-IEEE100-18-405TC</b>	Revision No. <b>0</b>

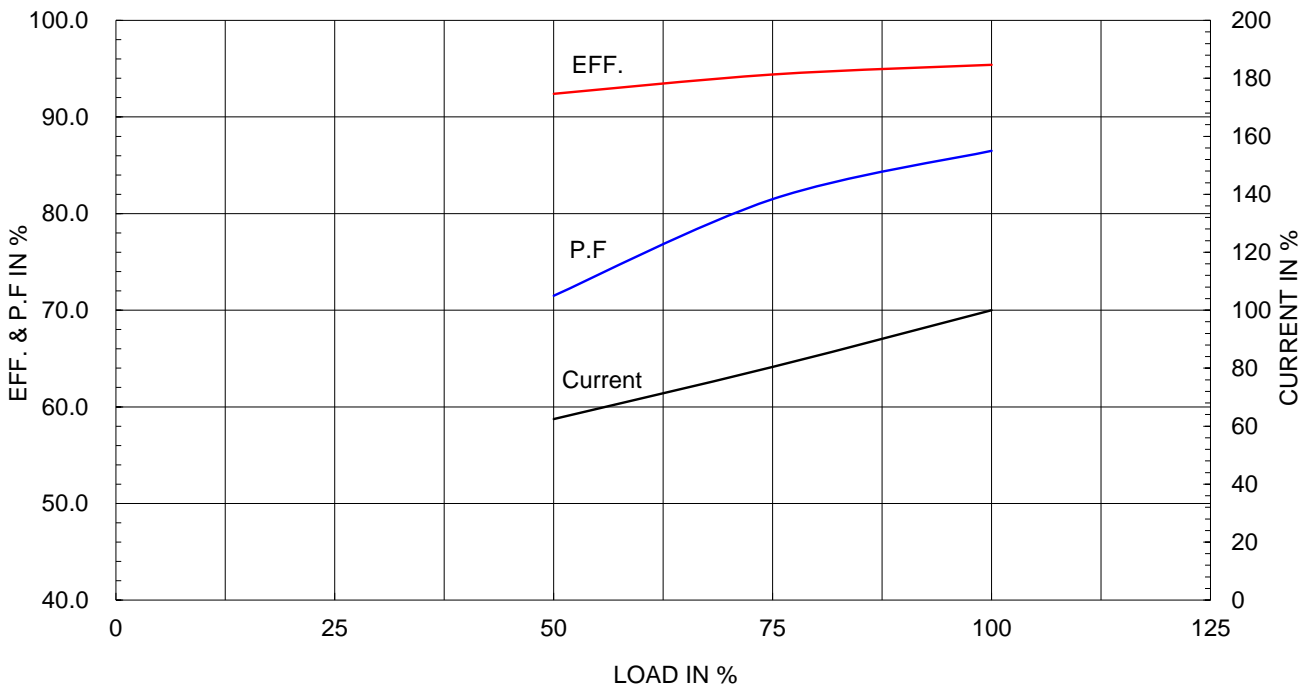
Type :	PJP
Full Load Torque :	296.8 lb.ft
Load moment of Inertia (J) :	1337.213 lb.ft2
Motor moment of Inertia (J) :	35.910 lb.ft2

75kW 100HP	4 P	60 Hz
Speed at Full Load :		1780 RPM
Rated Voltage	575V	460V 230V
Full Load Current	91.3A	114.1A 228.1A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

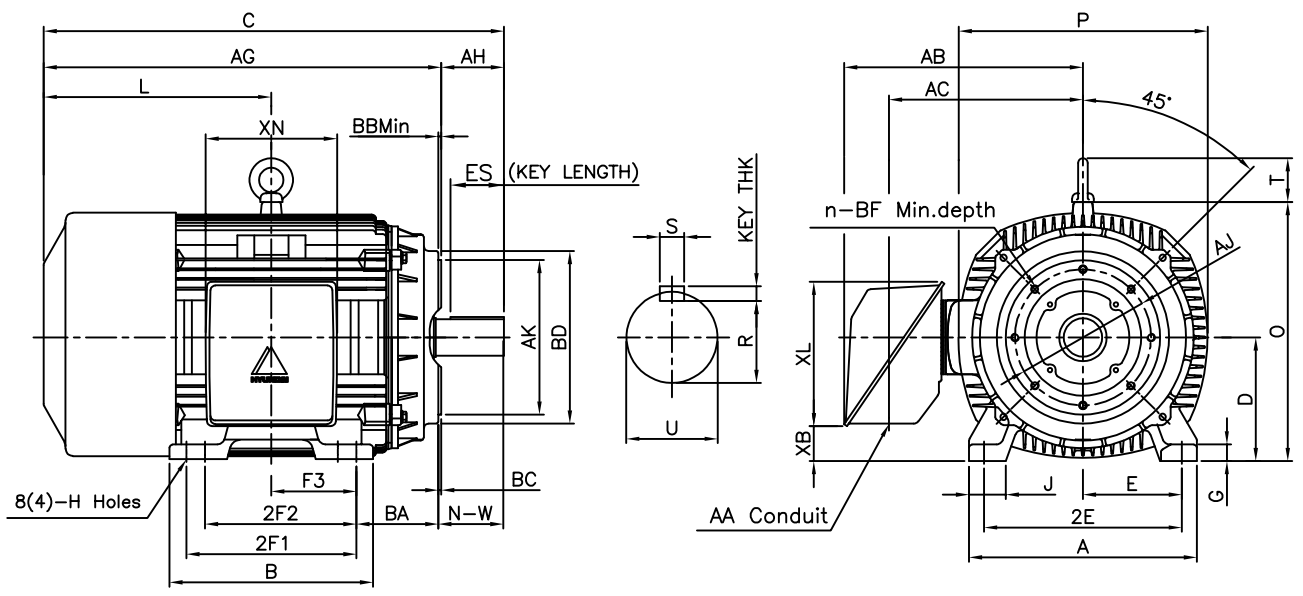


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급주의)

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▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	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 405TC	DWG SIZE	A4 ( 1:1 )
CHKD BY	R.G.KIM	SCALE	NONE				
CHKD BY	Y.H.BAE	PROJEC'N	3각법(3rd Angle)	TITLE <b>OUTLINE</b>			
DSND BY	H.K.LEE	DATE	2021-05-06				



REF. NO	350A8316AA	Sheet No.	of
DWG NO	LM-I1405C4PL001	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
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	배승희	DATE	2023-10-19	DWG NO	3M-248451	Revision No.	0

