

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.	HHI100-36-405TSC	Item No.		Rev. No.	[     ]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA			
Frame Size	405TSC		Rated Output	75 kW     100 HP		
Type	PJP		Number of Poles	2		
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	88.1 A	110.1 A
Insulation Class	F			Locked-rotor**	700 %	700 %
Temp. Rise at full load (by resistance method)			Efficiency			
at 1.0 S.F			80 deg. C		50% Load	
					75% Load	
					100% Load	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		Power Factor(p.u)			
Altitude	Less than 1,000 meter		50% Load		0.755	
Relative Humidity	Less than 80 %		75% Load		0.855	
Ambient Temp.	40 deg. C (Max.)		100% Load		0.905	
Duty Type	Continuous ( S1 )		Speed at Full Load			
Service Factor	1.15		3570 r.p.m			
Mounting	B35		Torque			
Bearing	Type	Anti-Friction		Full Load		
	DE/N-DE	6313C3 / 6313C3		148.0 lb.ft		
	Lubricant	Grease(Polyrex-EM)		Locked-rotor**		
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.)		214.761 lb.ft2	
Terminal Box	Main	Cast Iron		Motor		
	Aux.	No		18.450 lb.ft2		
	Location	Refer to Outline Drawing		Sound Pressure Level (No-load & mean value at 1m from motor)		
Application			Vibration		87 dB(A)	
Area classification	Hazardous		Permissible number of consecutive starts		3.8 mm/sec (peak)	
Type of Ex-Protection	Class I&II, Division 2		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.)	
B35	LM-T1405C4CL001	1165 lb.

SPARE PARTS

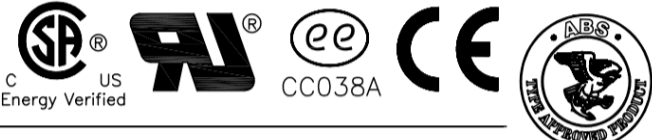
REMARK				
1. Premium efficiency according to NEMA MG1 2. Inverter Duty @ 1.0 Service Factor & F Temperature rise -. 10:1 VT (20:1 VT at 50% load) -. 10:1 CT -. CHP up to 1.5 times base speed, NEMA MG1 Part31 3. CSA Certification -. Class I, Division 2, Group A, B, C & D -. Class II, Division 2 Group 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

4.72

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



100HP	2P	230/460V	Cat. No.	HHI100-36-405TSC				
Model	HLS405PR02		INS. Class	F	HD-F1	Amps	220.1/110	
Type	HLS	Duty	CONT	Code	G	Amb.	40°C	
Hertz	60Hz							
Frame	405TSC	Encl.	TEFC	S.F.	1.15	RPM	3570	
			NEMA Nom. Eff.	94.5%				
Bearing	Drive	6313C3		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	
Usable at	50Hz 75HP 380V 97.8A 2970rpm S.F.: 1.0 Eff.: 94.4% Code: H							
	50Hz 75HP 400/415V 93.1/90.2A 2973/2975rpm S.F.: 1.0 Eff.: 94.6/94.7% Code: J/J							
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	

4M-135702
Made in Korea H1


2.36

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HHI, 364-449)	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			

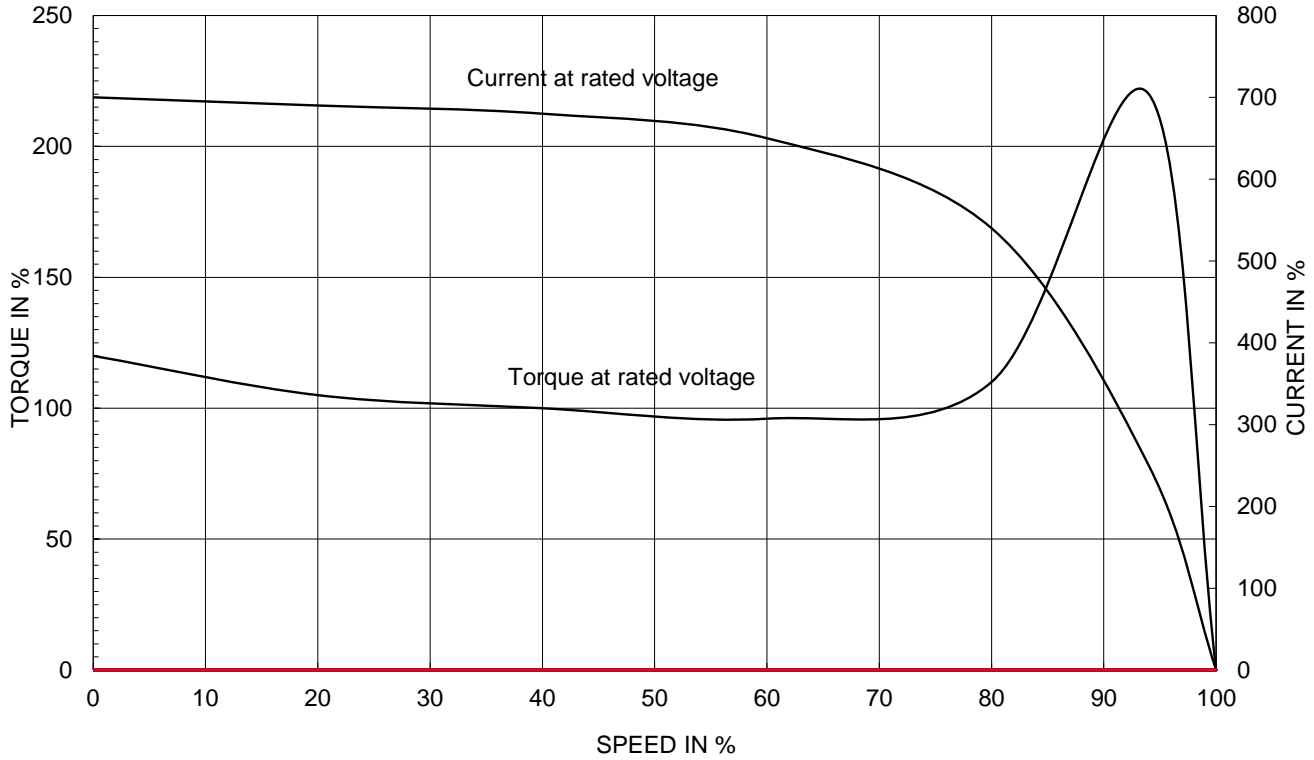


REF. NO	<b>4M-135702</b>	Sheet No.	of
DWG NO	<b>NP-HHI100-36-405TSC</b>	Revision No.	<b>0</b>

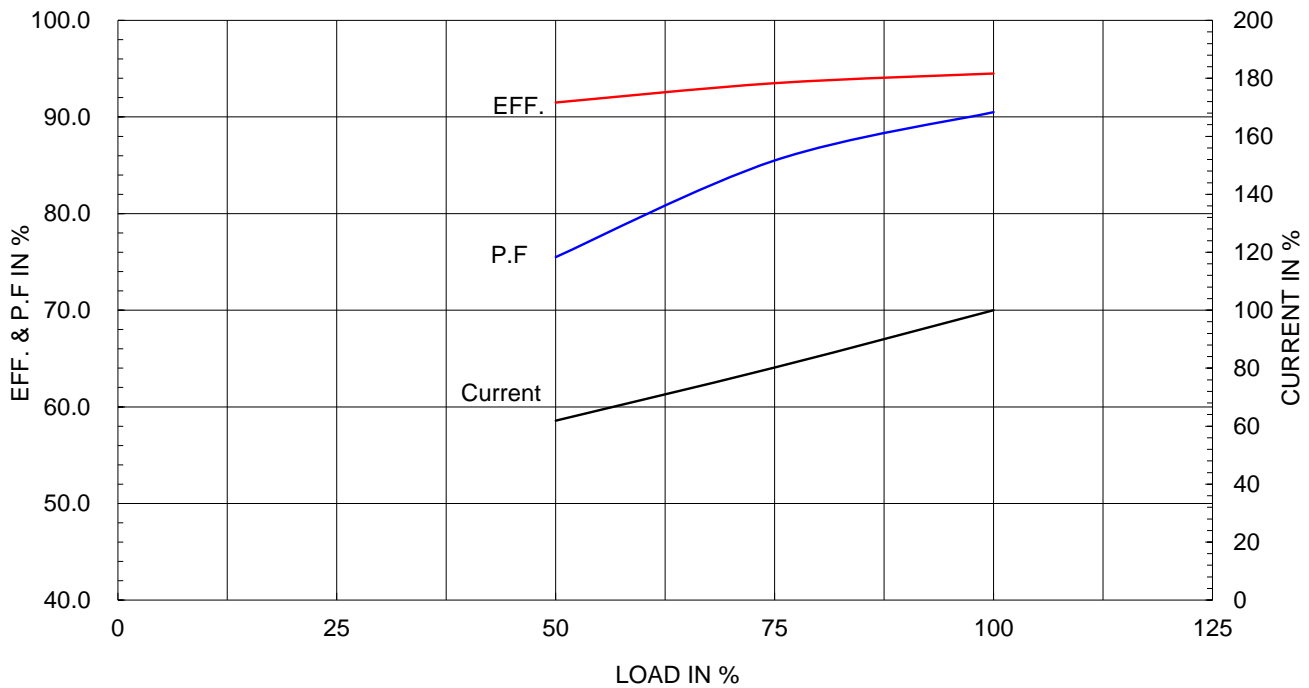
Type :	PJP	
Full Load Torque :	148.0	lb.ft
Load moment of Inertia (J) :	214.761	lb.ft <sup>2</sup>
Motor moment of Inertia (J) :	18.450	lb.ft <sup>2</sup>

75kW	100HP	2 P	60 Hz
Speed at Full Load :			3570 RPM
Rated Voltage	575V	460V	230V
Full Load Current	88.1A	110.1A	220.1A

SPEED VS TORQUE & CURRENT CURVE



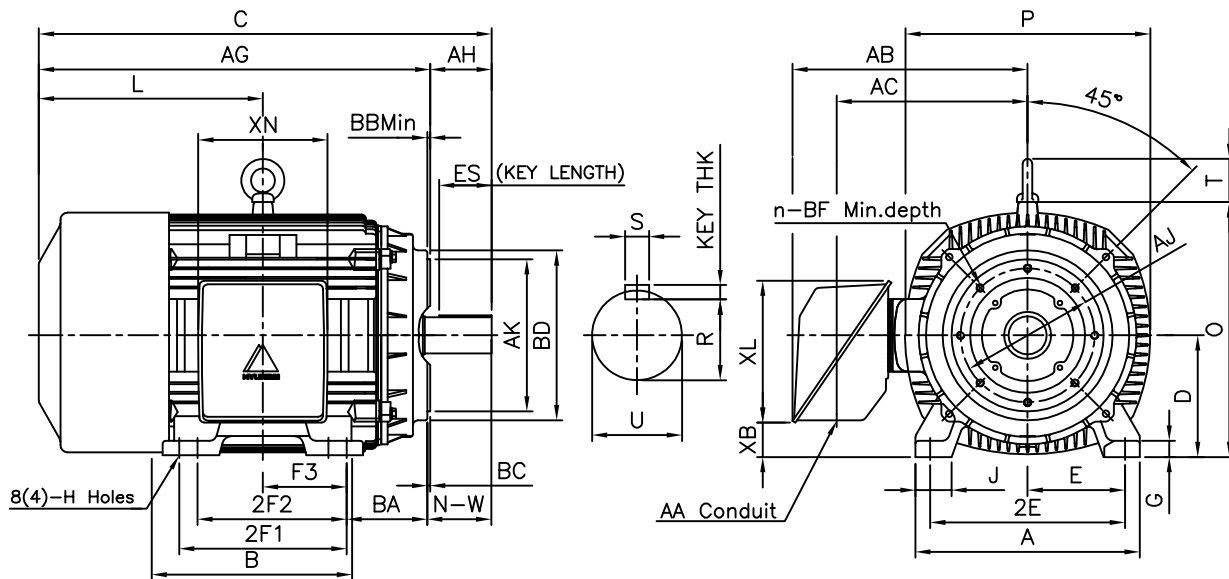
OUTPUT VS EFF., P.F & CURRENT CURVE



본 도면은 HD현대일렉트릭(주) 재산이며  
허가없이 복사할 수 없습니다 (취급유의)

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



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	APPROX. WGT.(LB)
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

B E A R I N G

BA	C	D	L	O	P	T	AG	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
										R	ES	S			
6.62	36.42	10.00	18.68	20.79	19.69	3.55	32.17	2.125	4.25	1.845	2.80	0.500	0.500	6313C3	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	4.00

**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.K.HAN	UNIT	inch	SUBJECT	NEMA 405TSC	DWG SIZE	A4 ( 11 )
CHKD BY	S.Y.KIM	SCALE	None	TITLE	OUTLINE		
CHKD BY	Y.H.BAE	PROJEC'N	3rd Angle				
DSND BY	H.C.LIM	DATE	2019-06-05				
REF. NO	350A1316BA	Sheet No.					
DWG NO	LM-T1405C4CL001	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	MAIN TERMINAL BOX ASS'Y		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	DATE	2023-10-19	REF. NO	Sheet No. of
DSND BY	배승희	DATE	2023-10-19	DWG NO	3M-248451	Revision No.	0

