

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.	HES30-36-286TS	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA			
Frame Size	286TS		Rated Output	22 kW		30 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	27.1 A	33.8 A
Insulation Class	F			Locked-rotor**	685 %	685 %
Temp. Rise at full load (by resistance method)			Efficiency			
	at 1.0 S.F	80 deg. C		50% Load	88.7 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor			75% Load	90.7 %	
Altitude	Less than 1,000 meter			100% Load	91.7 %	
Relative Humidity	Less than 80 %		Power Factor(p.u)			
Ambient Temp.	40 deg. C (Max.)			50% Load	0.740	
Duty Type	Continuous (S1)			75% Load	0.840	
Service Factor	1.15			100% Load	0.890	
Mounting	B3		Speed at Full Load	3560 r.p.m		
Bearing	Type	Anti-Friction	Torque			
	DE/N-DE	6310ZC3 / 6310ZC3		Full Load	43.5 lb.ft	
	Lubricant	Grease(Polyrex-EM)		Locked-rotor**	160 %	
External Thrust	Not applicable			Breakdown**	230 %	
Coupling Method	<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt		Moment of Inertia (J)			
Shaft Extension	Single			Load(Max.)	28.400 lb.ft2	
Terminal Box	Main	Cast Iron		Motor	2.089 lb.ft2	
	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)			
	Location	Refer to Outline Drawing			80 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	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.)		
B3	LM-T2286B3CLV23	410 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
- CSA Certification
 - Class I, Division 2, Group A, B, C & D
 - Class II, Division 2 Group E, F & G (Group E : up to 320Fr.)
- Service Factor 1.15 and Temperature rise B are applicable under the condition of sine wave power.
- Service Factor 1.25 is applicable to motors of 100HP or less with temperature rise F & Non-Hazardous.

SPARE PARTS

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

30HP	2P	230/460V	Cat. No.	HES30-36-286TS					
Model	HLS286SR13		INS. Class	F	HD-F1	Amps	67.7/33.8		
Type	HLS	Duty	CONT	Code	G	Amb.	40°C		
Frame	286TS	Encl.	TEFC	S.F.	1.15	RPM	3560		
Bearing	Drive	6310ZC3		S.F.1.25 (When 100HP or less, Temp Rise F & Non-Hazardous)		3/4 Eff.	90.7%		
	Opp.	6310ZC3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		NEMA Design	B		
Usable at	50Hz 25HP 380V 39.3A 2960rpm S.F.: 1.0 Eff.: 90.9% Code: H								
	50Hz 25HP 400/415V 37.9/37.1A 2960/2965rpm S.F.: 1.0 Eff.: 90.9/90.9% Code: J/J								
CSA Certified for	Model	LATER		Type	PJP	Temp. Code			
	CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2 Gr. E, F & G		(sine wave)	Amb. 40°C	T3C (160°C)	T3B (165°C)	T3A (180°C)
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC		(Gr. E: Up to 320FR)			Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)
No.	-		Date	-		Weight	410 lb		

4M-136024
MARINE DUTY IEEE45

Made in Vietnam H4
Designed By HYUNDAI, Korea

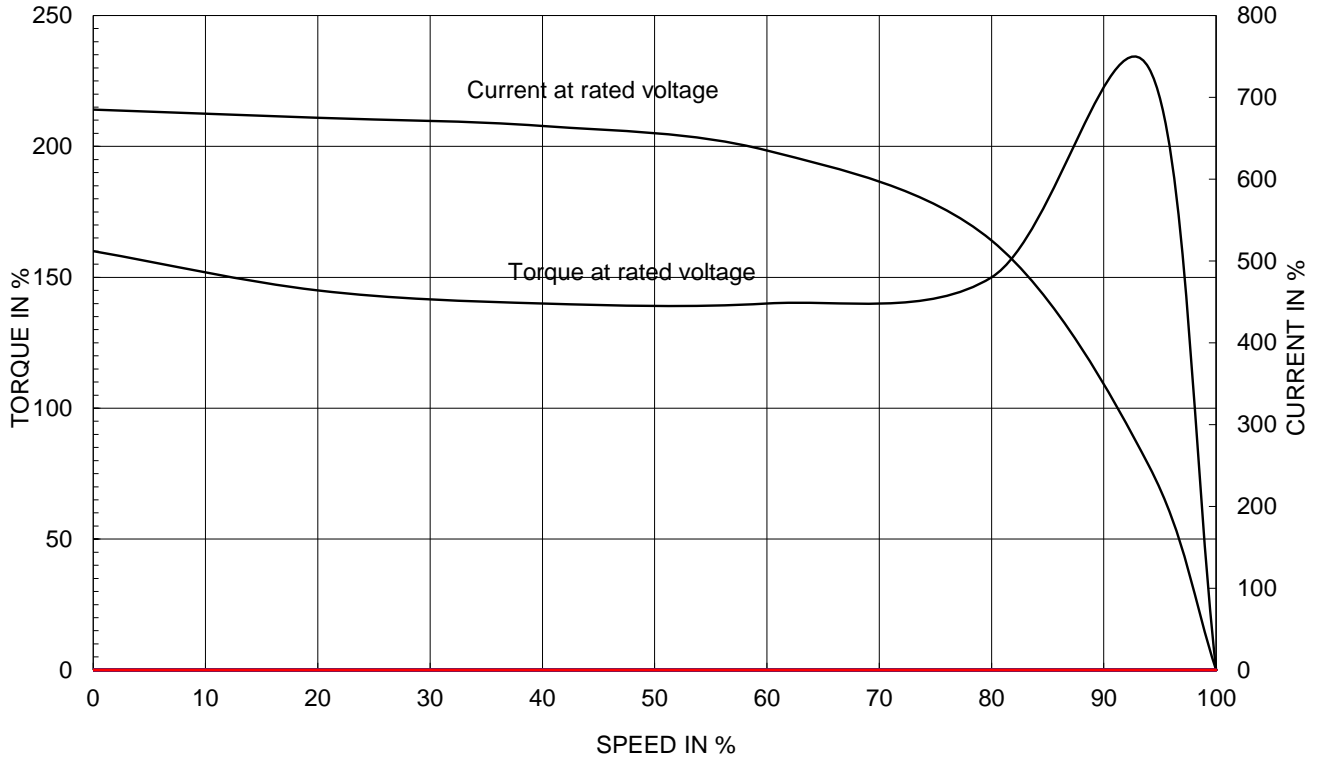
2.36

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HES, 254-326)	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-136024	Sheet No. of
				DWG NO	NP-HES30-36-286TS	Revision No. 0

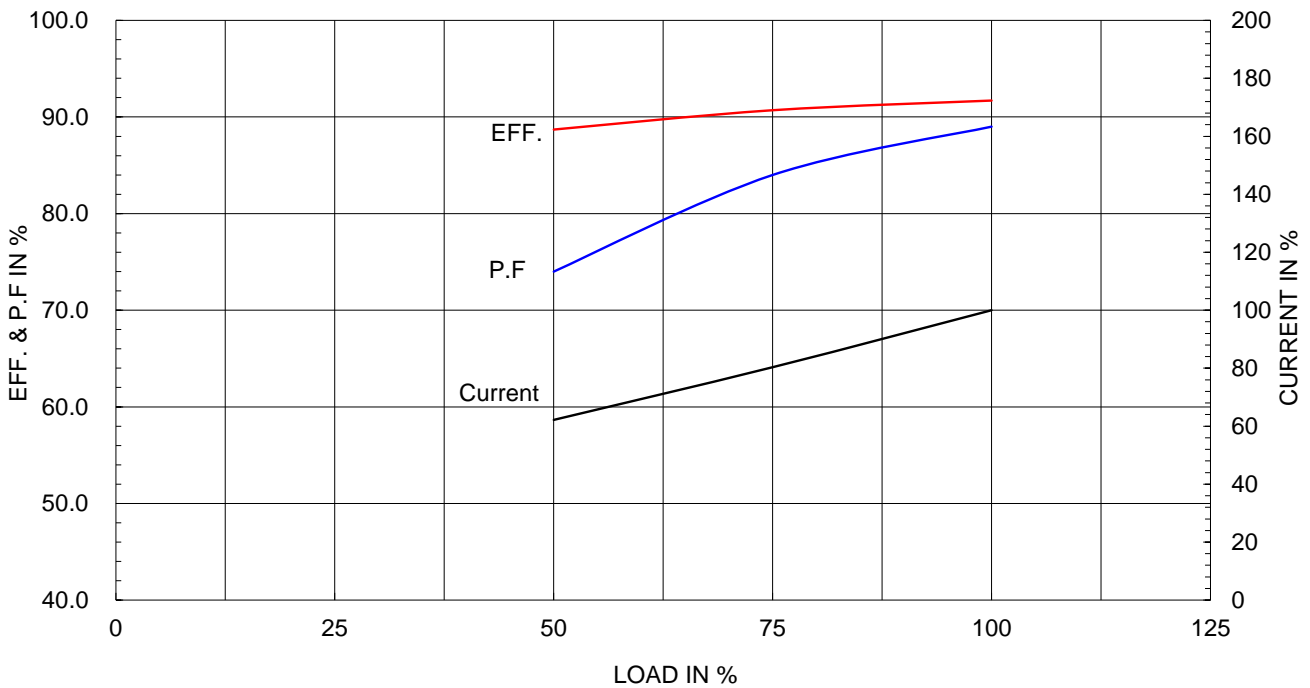
Type :	PJP
Full Load Torque :	43.5 lb.ft
Load moment of Inertia (J) :	28.400 lb.ft ²
Motor moment of Inertia (J) :	2.089 lb.ft ²

22kW	30HP	2 P	60 Hz
Speed at Full Load :			3560 RPM
Rated Voltage	575V	460V	230V
Full Load Current	27.1A	33.8A	67.7A

SPEED VS TORQUE & CURRENT CURVE



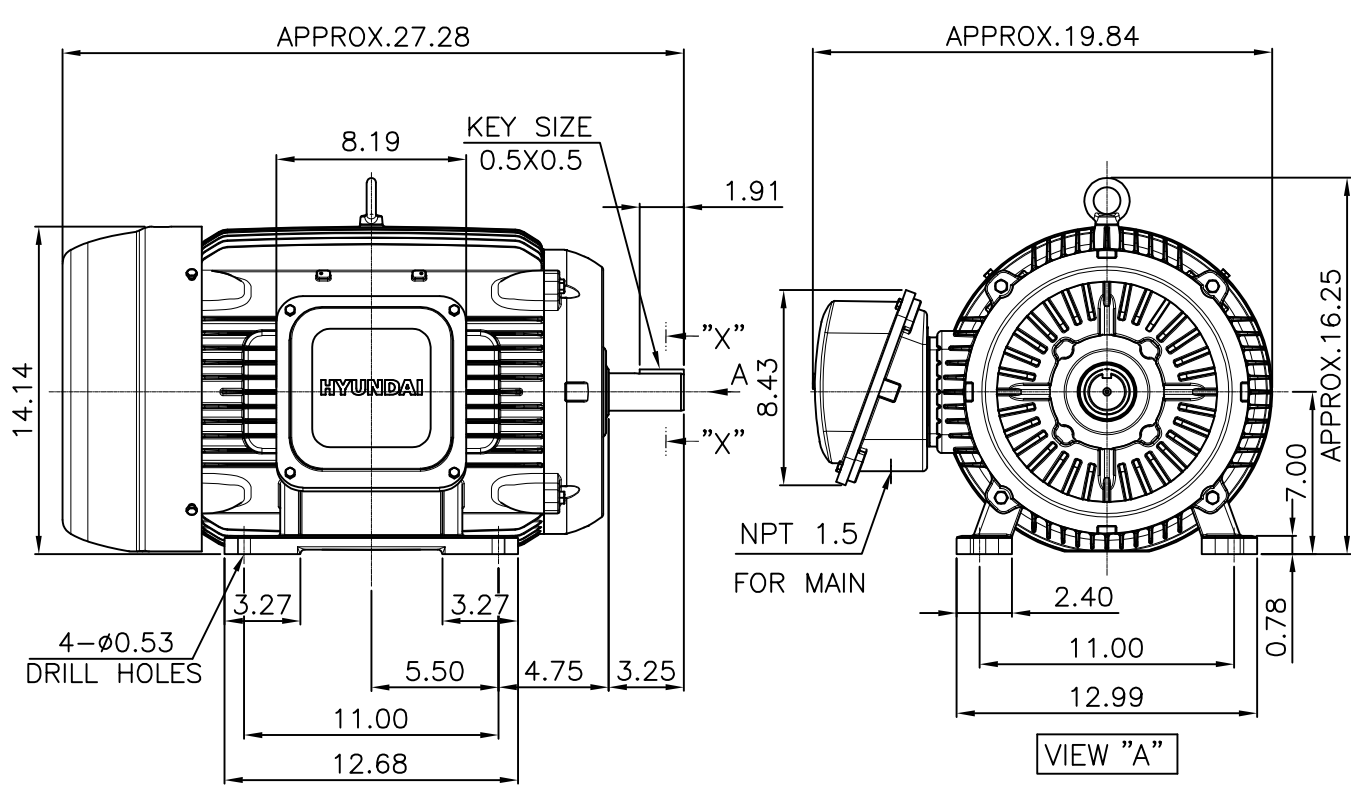
OUTPUT VS EFF., P.F & CURRENT CURVE



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

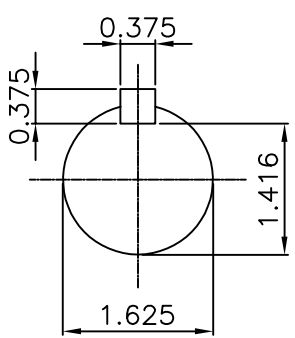
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▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							



NOTE
[TOLERANCE]

- CENTER HEIGHT : +0.00inch - 0.03inch
- SHAFT DIAMETER : +0.000inch - 0.001inch
- KEYWAY DEPTH : +0.000inch - 0.015inch

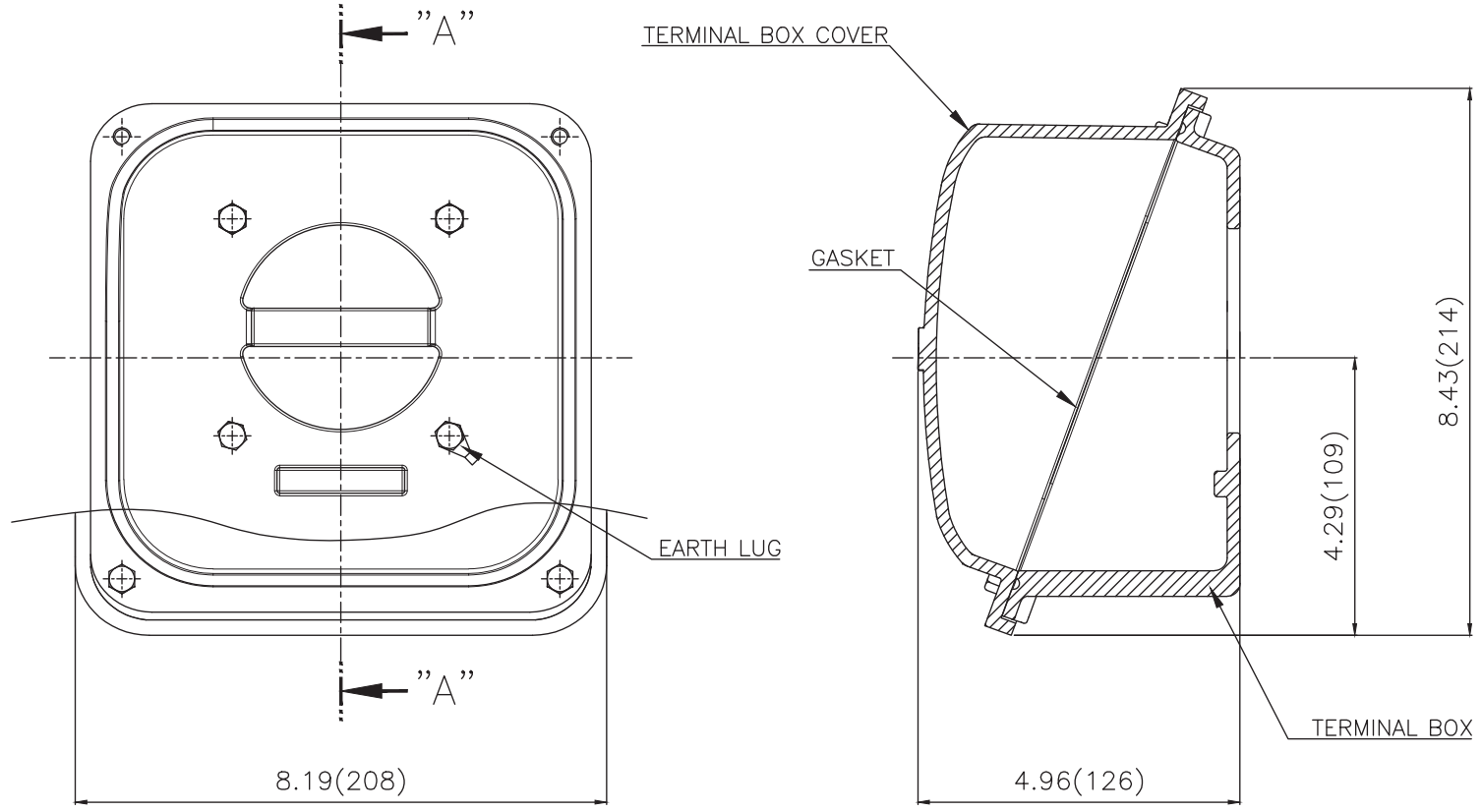


SECTION "X-X"
SCALE 4/8.5

APPD BY	S.Y.KIM	UNIT	mm	SUBJECT	NEMA 286TS	DWG SIZE	A4 (1:8.5)
CHKD BY	R.G.KIM	SCALE	1/8.5	TITLE	OUTLINE		
CHKD BY		PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	주유림	DATE	2021-04-28	DWG NO	LM-T2286B3CLV23	Revision No.	0



Cls. I&II, Div. 2 IEEE 841



▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

일반가공공차		일반제관공차	
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. 250-280 (CAST IRON)	DWG SIZE	
CHKD BY		SCALE	1/2	TITLE	TERMINAL BOX ASS'Y		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	DATE	2023-10-19		
DSND BY	배승희						
REF. NO		Sheet No.	of				
DWG NO	3M-248458	Revision No.	0				

