

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.	HES20-12-286T	Item No.		Rev. No.	[      ]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA			
Frame Size	286T		Rated Output	15 kW      20 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	21.3 A	26.7 A      53.3 A
Insulation Class	F			Locked-rotor**	650 %	650 %      650 %
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      0.620			
Duty Type	Continuous ( S1 )		75% Load      0.720			
Service Factor	1.15		100% Load      0.770			
Mounting	B3		Speed at Full Load	1175 r.p.m		
Bearing	Type	Anti-Friction	Torque			
	DE/N-DE	6310ZC3 / 6310ZC3	Full Load      89.9 lb.ft			
	Lubricant	Grease(Polyrex-EM)	Locked-rotor**      150 %			
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.)      336.373 lb.ft2			
Terminal Box	Main	Cast Iron	Motor      6.100 lb.ft2			
	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)			
Location	Refer to Outline Drawing		65 dB(A)			
Application			Vibration      3.8 mm/sec (peak)			
Area classification	Hazardous		Permissible number of consecutive starts			
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.)	
B3	LM-T2286B3PLV23	410 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

**CROWN TRITON G2**

**Premium Efficiency AC 3 Phase Motor**

20HP	6P	230/460V	Cat. No.	HES20-12-286T						
Model	HLS286SR33		INS. Class	F	HD-F1	Amps	53.3/26.7			
Type	HLS	Duty	CONT	Code	H	Amb.	40°C	Hertz	60Hz	
Frame	286T	Encl.	TEFC	S.F.	1.15	RPM	1175	NEMA Norm. Eff.	91.7%	
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 Torque			
Usable at	50Hz 15HP 380V 26.5A 975rpm S.F.: 1.0 Eff.: 88.7% Code: J									
	50Hz 15HP 400/415V 27.1/28A 975/980rpm S.F.: 1.0 Eff.: 88.7/88.7% Code: K/K									
CSA Certified for	Model	LATER		Type	PJP	Temp. Code	Frame	140~320FR	360~400FR	440FR
	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)		(sine wave)	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	410 lb			

4M-136024  
**MARINE DUTY IEEE45**
Made in Vietnam H4  
Designed By HYUNDAI, Korea
 **HD HYUNDAI ELECTRIC**

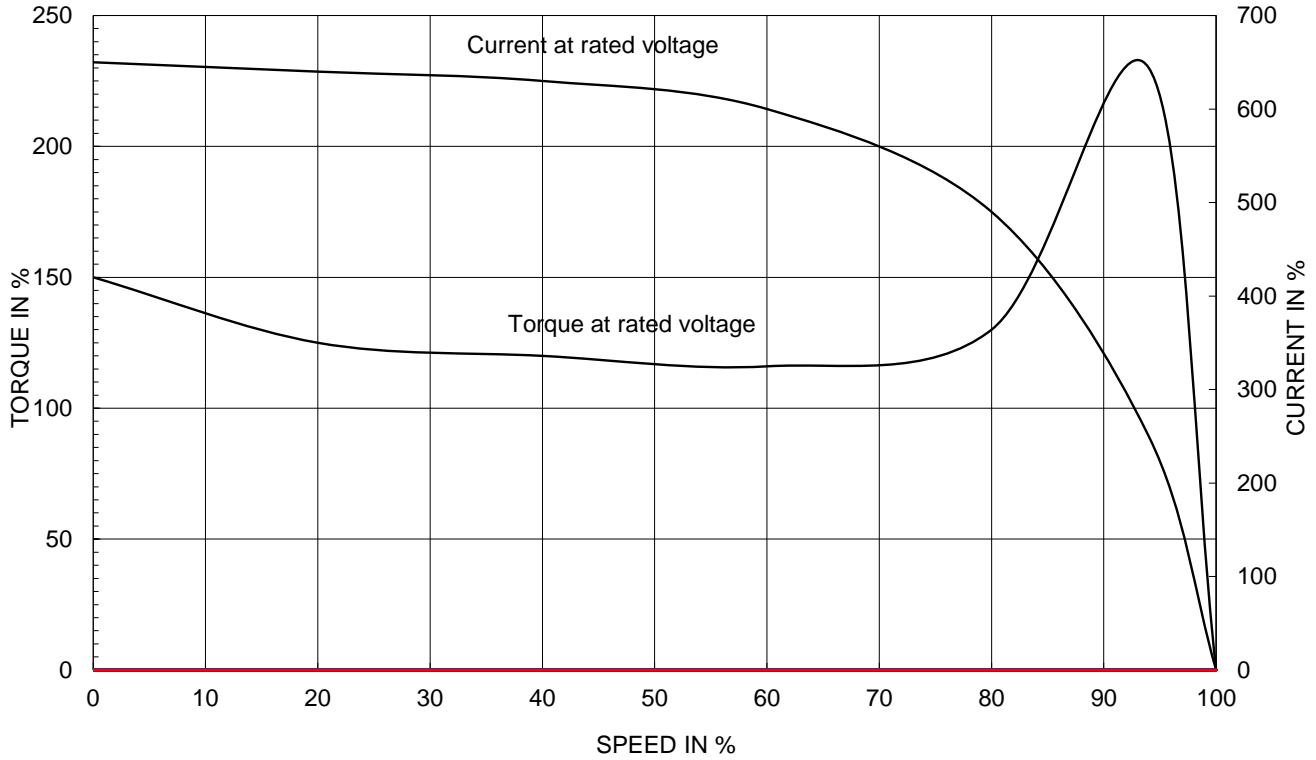
2.36

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	<b>NAMEPLATE DRAWING</b>		
DSND BY	S.H.LEE	DATE	2024.06.07			
<b>HD HYUNDAI ELECTRIC</b>	REF. NO	<b>4M-136024</b>		Sheet No. of		
	DWG NO	<b>NP-HES20-12-286T</b>		Revision No. <b>0</b>		

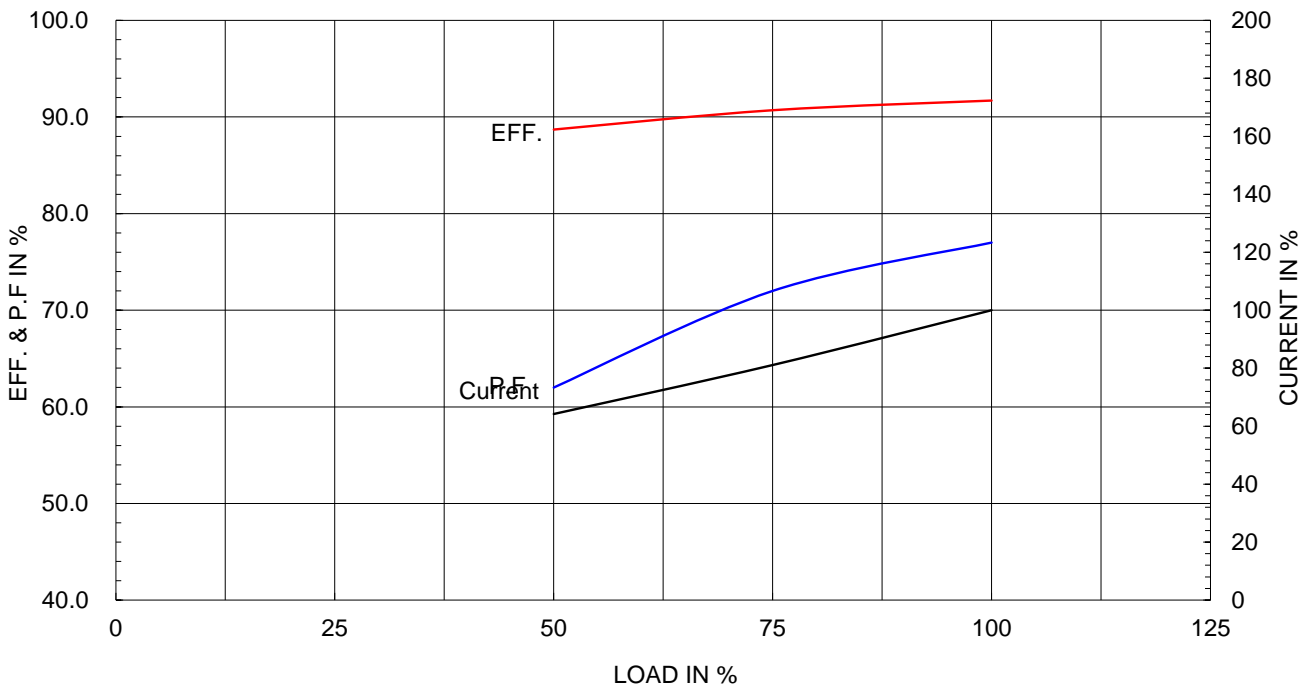
Type :	PJP
Full Load Torque :	89.9 lb.ft
Load moment of Inertia (J) :	336.373 lb.ft2
Motor moment of Inertia (J) :	6.100 lb.ft2

15kW	20HP	6 P	60 Hz
Speed at Full Load :			1175 RPM
Rated Voltage	575V	460V	230V
Full Load Current	21.3A	26.7A	53.3A

SPEED VS TORQUE & CURRENT CURVE



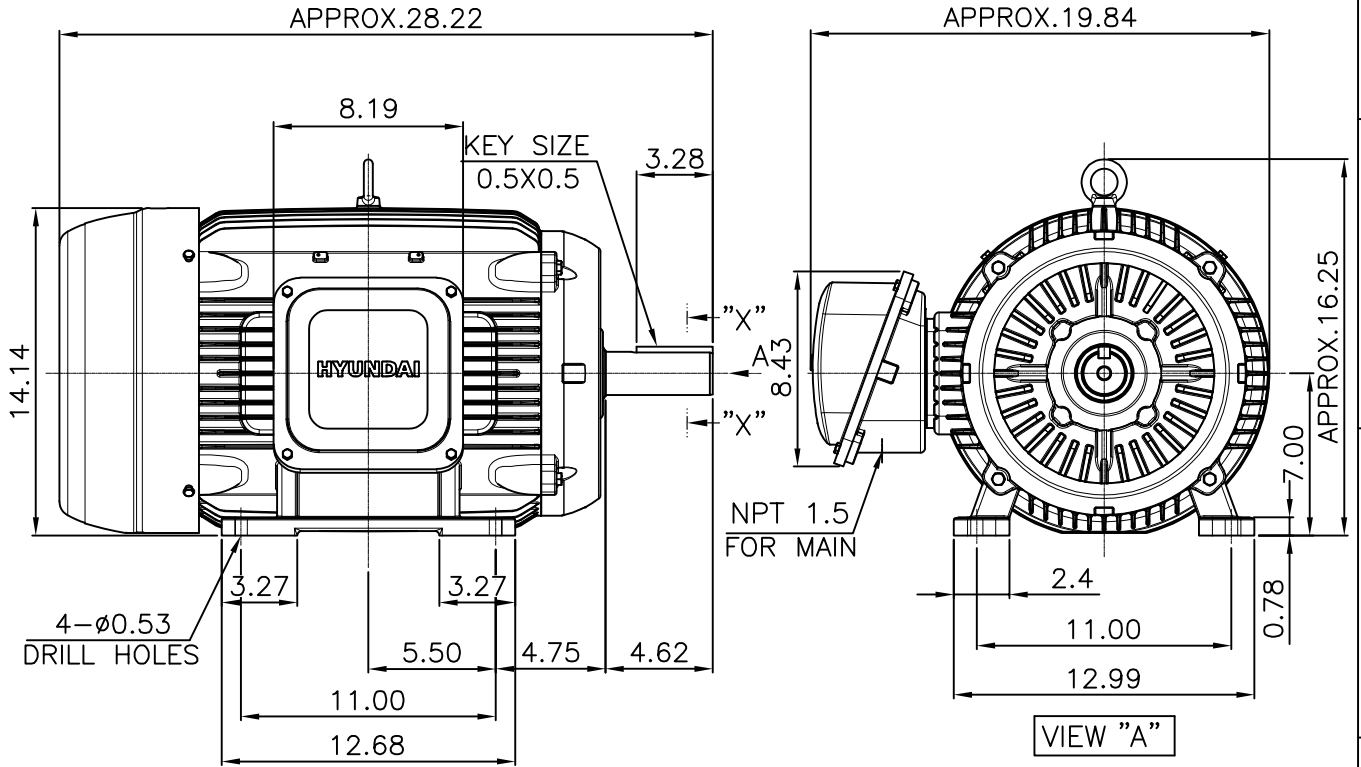
OUTPUT VS EFF., P.F & CURRENT CURVE



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

THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING MAY BE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

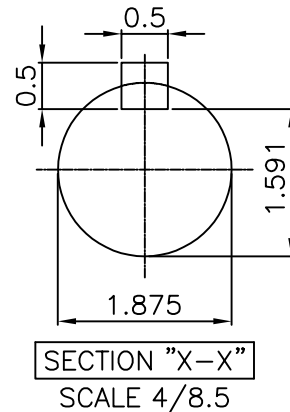
▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							



**NOTE**

[TOLERANCE]

- 1. CENTER HEIGHT : +0.00inch - 0.03inch
- 2. SHAFT DIAMETER : +0.000inch - 0.001inch
- 3. KEYWAY DEPTH : +0.000inch - 0.015inch



APPD BY	S.Y.KIM	UNIT	mm	SUBJECT	NEMA 286T	DWG SIZE	A4 ( 1:8.5 )
CHKD BY	R.G.KIM	SCALE	1/8.5	TITLE <b>OUTLINE</b>			
CHKD BY		PROJEC'N	3rd Angle				
DSND BY	주유림	DATE	2021-04-28				
				REF. NO	.	Sheet No.	of
				DWG NO	LM-T2286B3PLV23	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

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

