

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.	HES1.5-18-145TC	Item No.	Rev. No. [     ]
Project Name		Project No.	Quantity                      sets

GENERAL SPECIFICATION		PERFORMANCE DATA				
Frame Size	145TC	Rated Output	1.1 kW                      1.5 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	1.77 A	2.22 A	4.43 A
Insulation Class	F		Locked-rotor**	900 %	900 %	900 %
Temp. Rise at full load (by resistance method)		Efficiency				
at 1.0 S.F	80 deg. C	50% Load		83.5 %		
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	75% Load		85.5 %		
Altitude	Less than 1,000 meter	100% Load		86.5 %		
Relative Humidity	Less than 80 %	Power Factor(p.u)				
Ambient Temp.	40 deg. C (Max.)	50% Load		0.570		
Duty Type	Continuous ( S1 )	75% Load		0.670		
Service Factor	1.15	100% Load		0.720		
Mounting	B35	Speed at Full Load	1750 r.p.m			
Bearing	Type	Anti-Friction	Torque			
	DE/N-DE	6205ZZC3 / 6204ZZC3	Full Load	4.4 lb.ft		
	Lubricant	Grease(Polyrex-EM)	Locked-rotor**	260 %		
External Thrust	Not applicable	Breakdown**	290 %			
Coupling Method	<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt	Moment of Inertia (J)				
Shaft Extension	Single	Load(Max.)	11.865 lb.ft2			
Terminal Box	Main	Cast Iron	Motor	0.076 lb.ft2		
	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)			
Location	Refer to Outline Drawing	56 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.)
	B35      LM-T2145C4PLV23      65 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.										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Date</td> <td style="width: 15%;">DSND</td> <td style="width: 15%;">CHKD</td> <td style="width: 15%;">CHKD</td> <td style="width: 15%;">APPD</td> </tr> <tr> <td>2024-07-13</td> <td>S.H. Lee</td> <td>I.K. Kim</td> <td>R.G. Kim</td> <td>S.W. Kim</td> </tr> </table>	Date	DSND	CHKD	CHKD	APPD	2024-07-13	S.H. Lee	I.K. Kim	R.G. Kim	S.W. Kim
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

3.94

**CROWN TRITON G2** Premium Efficiency AC 3 Phase Motor Cat. No. HES1.5-18-145TC

1.5HP	4P	230/460V	Amps	4.43/2.22	Type	HLS	Amb.	40°C	
Frame	145TC	Duty	CONT	Encl.	TEFC	Model	HLS145PL235	NEMA Nom. Eff.	86.5%
RPM	1750	Hertz	60Hz	S.F.	1.15	INS. Class	F HD-F1	3/4 Eff.	85.5%
Bearing	Drive	6205ZZC3	S.F.1.25 (When 100HP or less, Temp Rise F & Non-Hazardous)				NEMA Design	B	
	Opp.	6204ZZC3	S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)				Code	L	
Usable at	50Hz 1HP 380V 2.2A 1460rpm S.F.: 1.0 Eff.: 79.6% Code: L								
	50Hz 1HP 400/415V 2.2/2.3A 1465/1465rpm S.F.: 1.0 Eff.: 79.6/79.6% Code: L/L								
CSA Certified for	Model	LATER	Type	PJP	Temp. Code	Frame	140-320FR	CE	
	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)		
	CLASS I, Zone 2, Gr. IIA, IIB & IIC		(Gr. E: up to 320FR)			Amb.55°C	T3A (180°C)		
No.	-		Date	-		Weight	65 lb		






4M-136021  
**MARINE DUTY IEEE45**

Made in Vietnam H4  
Designed By HYUNDAI, Korea



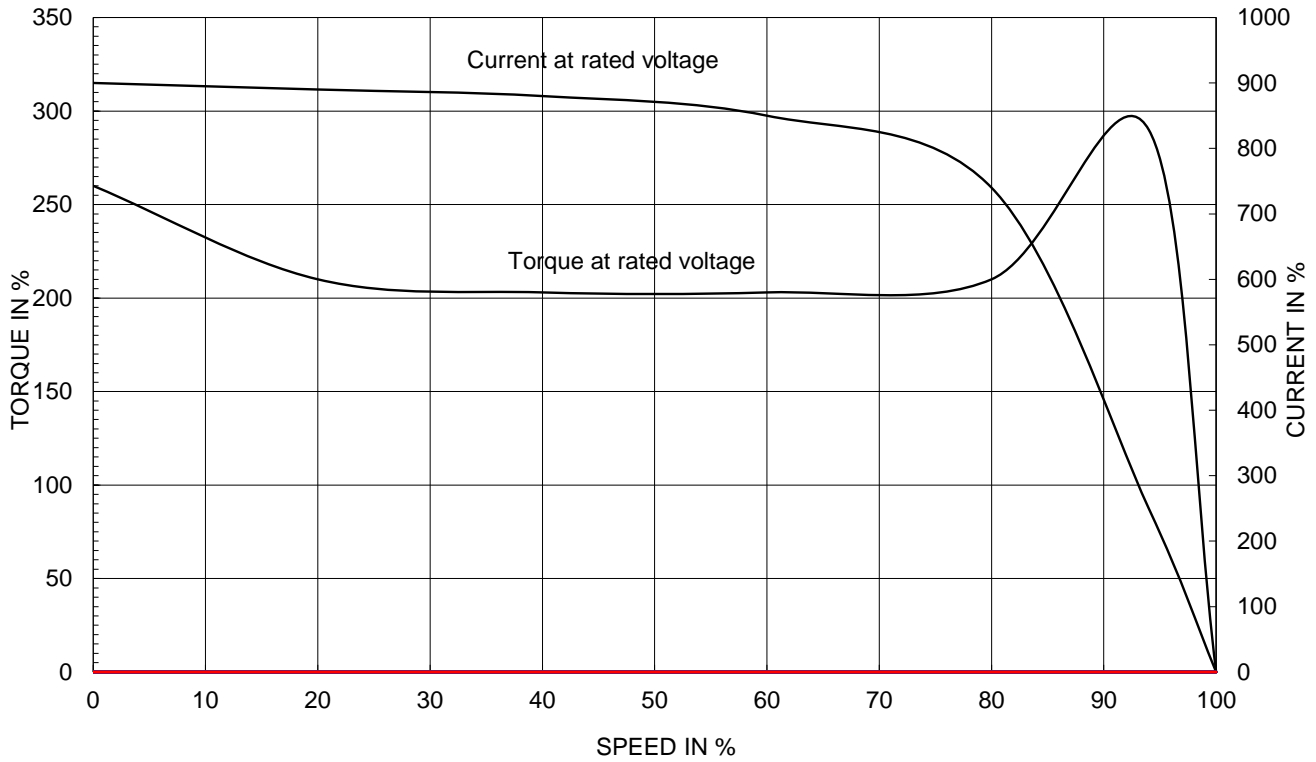

1.57

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HES, 143-215)	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-136021</b>	Sheet No. of
				DWG NO	<b>NP-HES1.5-18-145TC</b>	Revision No. <b>0</b>

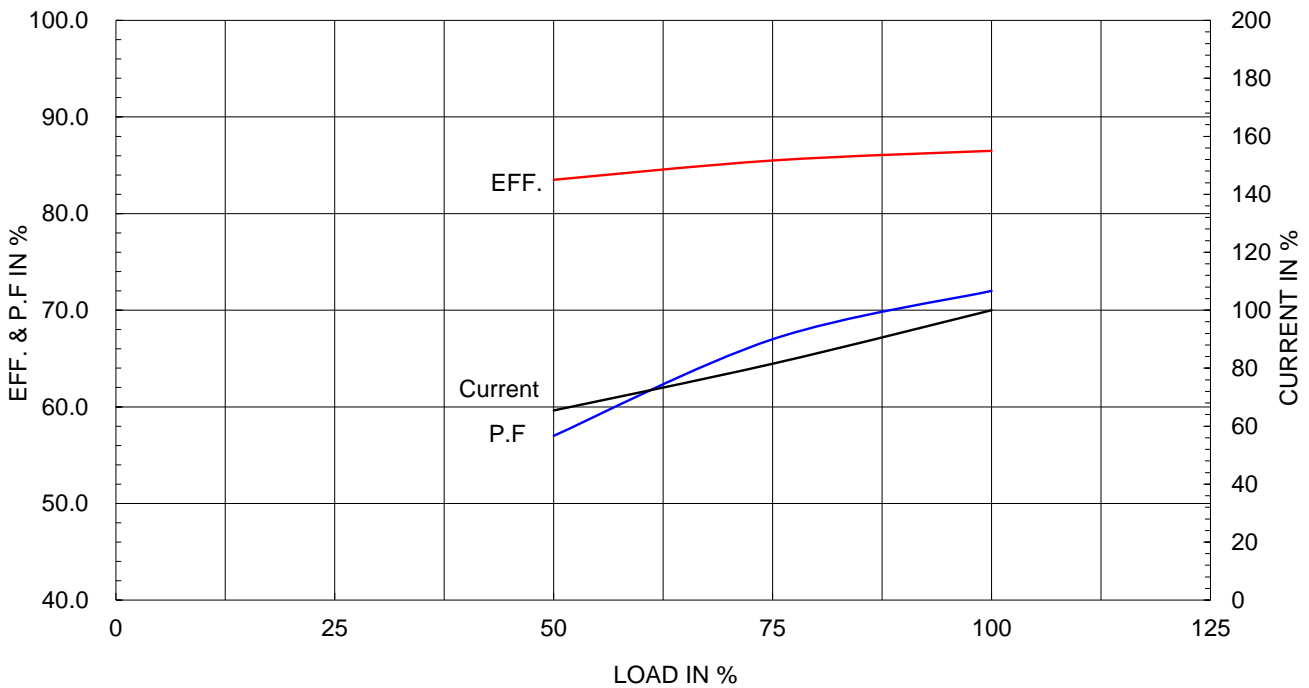
Type :	PJP
Full Load Torque :	4.4 lb.ft
Load moment of Inertia (J) :	11.865 lb.ft2
Motor moment of Inertia (J) :	0.076 lb.ft2

1.1kW 1.5HP	4 P	60 Hz
Speed at Full Load :		1750 RPM
Rated Voltage	575V	460V 230V
Full Load Current	1.8A	2.2A 4.4A

SPEED VS TORQUE & CURRENT CURVE



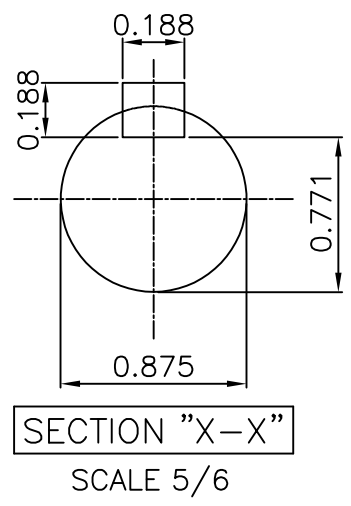
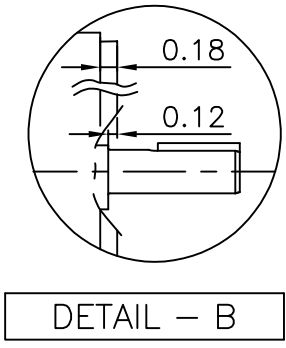
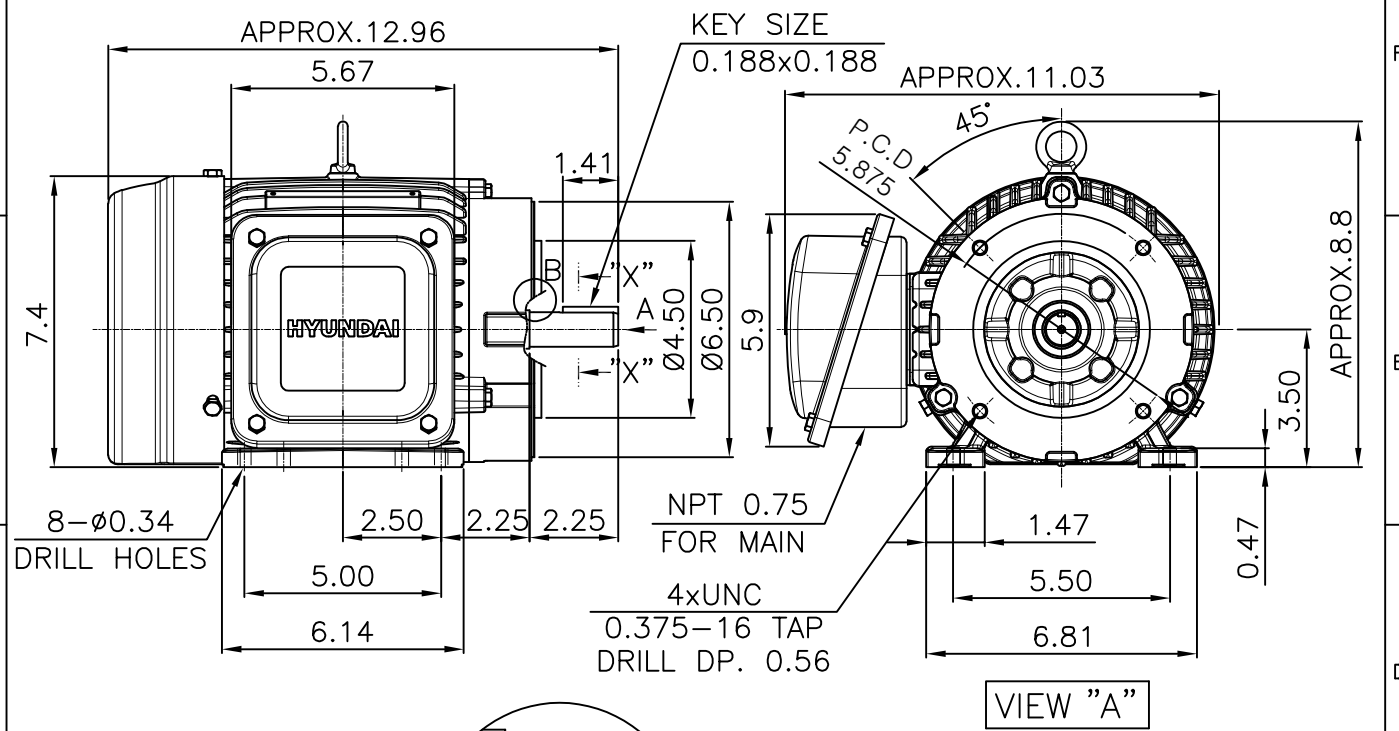
OUTPUT VS EFF., P.F & CURRENT CURVE



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

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

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▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		

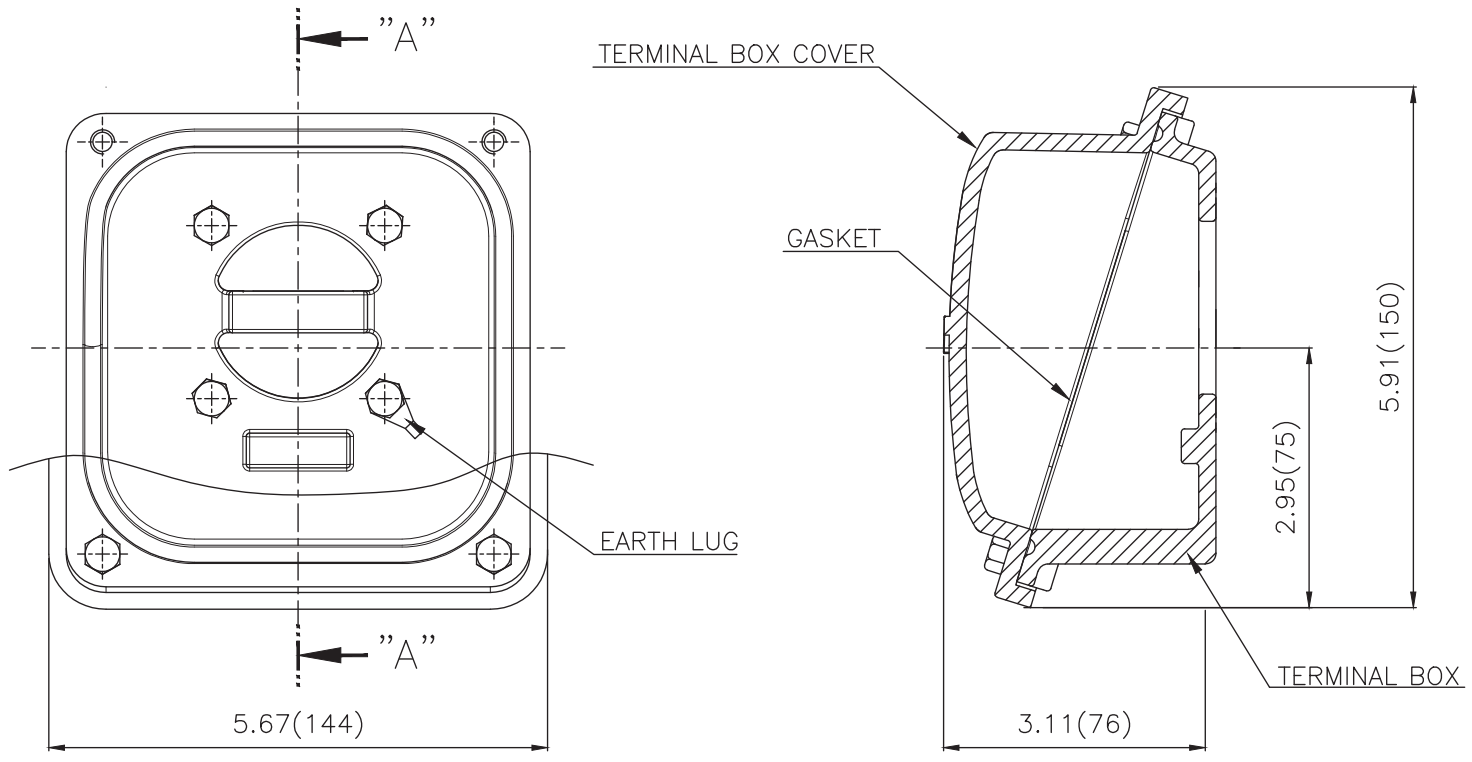


- NOTE**  
[TOLERANCE]
- 1. CENTER HEIGHT : +0.00inch - 0.03inch
  - 2. SHAFT DIAMETER : +0.000inch - 0.0005inch
  - 3. KEYWAY DEPTH : +0.000inch - 0.015inch

APPD BY	S.Y.KIM	UNIT	mm	SUBJECT	NEMA 145TC	DWG SIZE	
CHKD BY	R.G.KIM	SCALE	1/5	TITLE	OUTLINE	A4 ( 15 )	
CHKD BY		PROJEC'N	3rd Angle				
DSND BY	주유림	DATE	2021-04-29				
				REF. NO		Sheet No.	of
				DWG NO	LM-T2145C4PLV23	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. 140-180 (CAST IRON)	DWG SIZE	A3 (1:1.5)
CHKD BY		SCALE	1/1.5	TITLE			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TERMINAL BOX ASS'Y			
DSND BY	배승희	DATE	2023-10-19	REF. NO		Sheet No.	of
				DWG NO	3M-248456	Revision No.	0