

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.	HES1.5-36-143TC	Item No.	Rev. No. []
Project Name		Project No.	Quantity sets

GENERAL SPECIFICATION		PERFORMANCE DATA				
Frame Size	143TC	Rated Output	1.1 kW 1.5 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	1.57 A	1.96 A	
Insulation Class	F		Locked-rotor**	1000 %	1,000 %	1,000 %
Temp. Rise at full load (by resistance method)		Efficiency				
at 1.0 S.F	80 deg. C	50% Load		81.0 %		
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	75% Load		83.0 %		
Altitude	Less than 1,000 meter	100% Load		84.0 %		
Relative Humidity	Less than 80 %	Power Factor(p.u)				
Ambient Temp.	40 deg. C (Max.)	50% Load		0.690		
Duty Type	Continuous (S1)	75% Load		0.790		
Service Factor	1.15	100% Load		0.840		
Mounting	B35	Speed at Full Load		3485 r.p.m		
Bearing	Type	Anti-Friction				
	DE/N-DE	6205ZZC3 / 6204ZZC3				
	Lubricant	Grease(Polyrex-EM)				
External Thrust	Not applicable					
Coupling Method	<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt	Torque				
Shaft Extension	Single	Full Load		2.2 lb.ft		
Terminal Box	Main	Locked-rotor**		185 %		
	Aux.	Breakdown**		260 %		
Box Location	Refer to Outline Drawing	Moment of Inertia (J)				
Application		Load(Max.)		2.119 lb.ft2		
Area classification	Hazardous	Motor		0.033 lb.ft2		
Type of Ex-Protection	Class I&II, Division 2	Sound Pressure Level (No-load & mean value at 1m from motor)				
Applicable Standard	NEMA MG1, CSA C390			69 dB(A)		
ACCESSORIES		Vibration				3.8 mm/sec (peak)
		Permissible number of consecutive starts		Cold	3 times	
				Hot	2 times	
		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		
SPARE PARTS		SUBMITTAL DRAWING				
		Outline Dimension Drawing		Motor Weight(Approx.)		
		B35	LM-T2143C4PLV23	65 lb.		
REMARK		<ol style="list-style-type: none"> 1. Premium efficiency according to NEMA MG1 2. Inverter Duty @ 1.0 Service Factor & F Temperature rise <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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
		2024-09-10	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.

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REV	DATE	CONTENTS	REVD BY CHKD BY CHKD BY APPD BY

3.94

CROWN TRITON G2 Premium Efficiency AC 3 Phase Motor Cat. No. HES1.5-36-143TC

1.5HP	2P	230/460V	Amps	3.91/1.96	Type	HLS	Amb.	40°C
Frame	143TC	Duty	CONT	Encl.	TEFC	Model	HLS143PL135	NEMA Nom. Eff. 84%
RPM	3485	Hertz	60Hz	S.F.	1.15	INS Class	F HD-F1	3/4 Eff. 83%
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 1.5HP 380V 2.55A 2845rpm S.F.: 1.15 Eff.: 81.2% Code: H							
	50Hz 1.5HP 400/415V 2.41/2.36A 2865/2875rpm S.F.: 1.15 Eff.: 82.5/82.5% Code: J/K							
CSA Certified for	Model	LATER		Type	PJP	Temp. Code	Frame	140-320FR
	CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2, Gr. E, F & G (Gr. E: up to 320FR)			(Sine Wave)	Amb.40°C	T3C (160°C)
CLASS I, Zone 2, Gr. IIA, IIB & IIC						Amb.55°C	T3A (180°C)	
No.	-		Date	-		Weight	65 lb	

4M-136021 **MARINE DUTY IEEE45** Made in Vietnam H4
Designed By HYUNDAI, Korea

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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 NAMEPLATE DRAWING		
DSND BY	S.H.LEE	DATE	2024.06.07			
				REF. NO	4M-136021	Sheet No. of
				DWG NO	NP-HES1.5-36-143TC	Revision No. 0

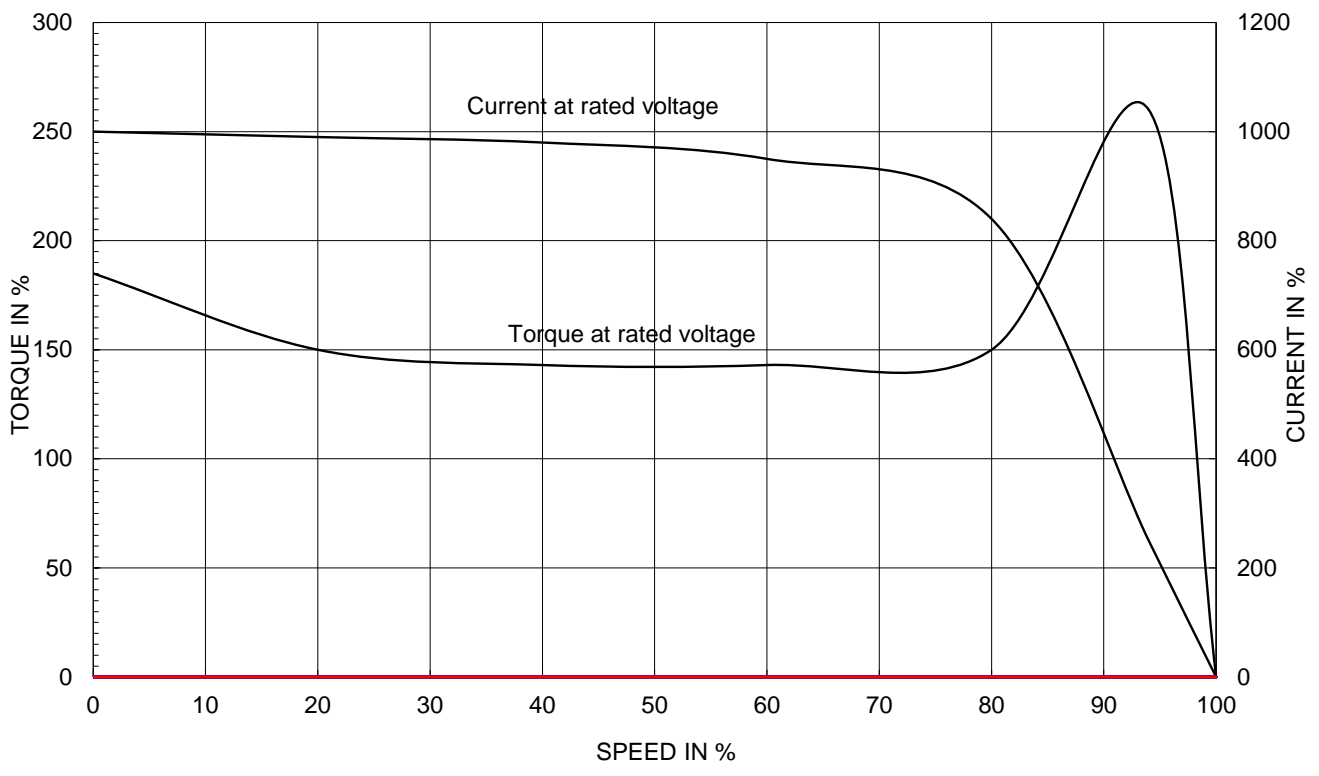


PERFORMANCE CURVE

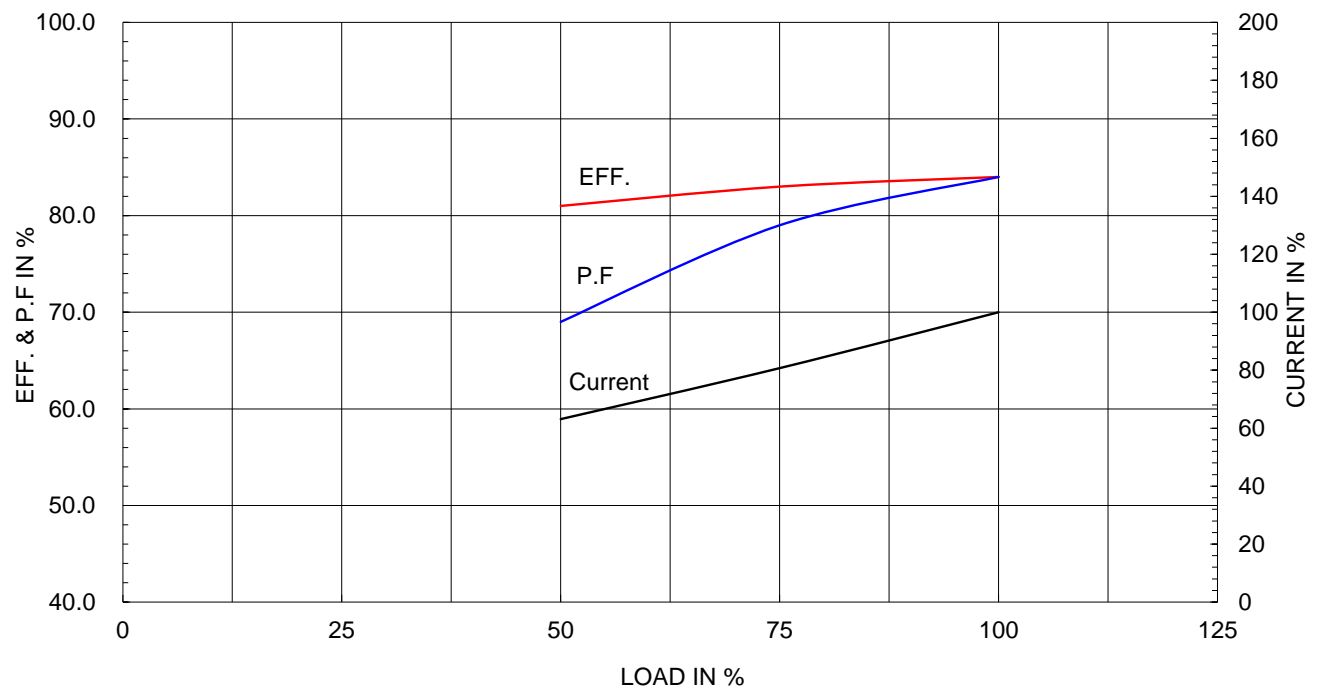
CURVE NO.
PC-HES1.5-36-143TC

Type :	PJP	1.1kW 1.5HP	2 P	60 Hz
Full Load Torque :	2.2 lb.ft	Speed at Full Load : 3485 RPM		
Load moment of Inertia (J) :	2.119 lb.ft2	Rated Voltage		
Motor moment of Inertia (J) :	0.033 lb.ft2	575V	460V	230V
		Full Load Current		
		1.6A	2.0A	3.9A

SPEED VS TORQUE & CURRENT CURVE



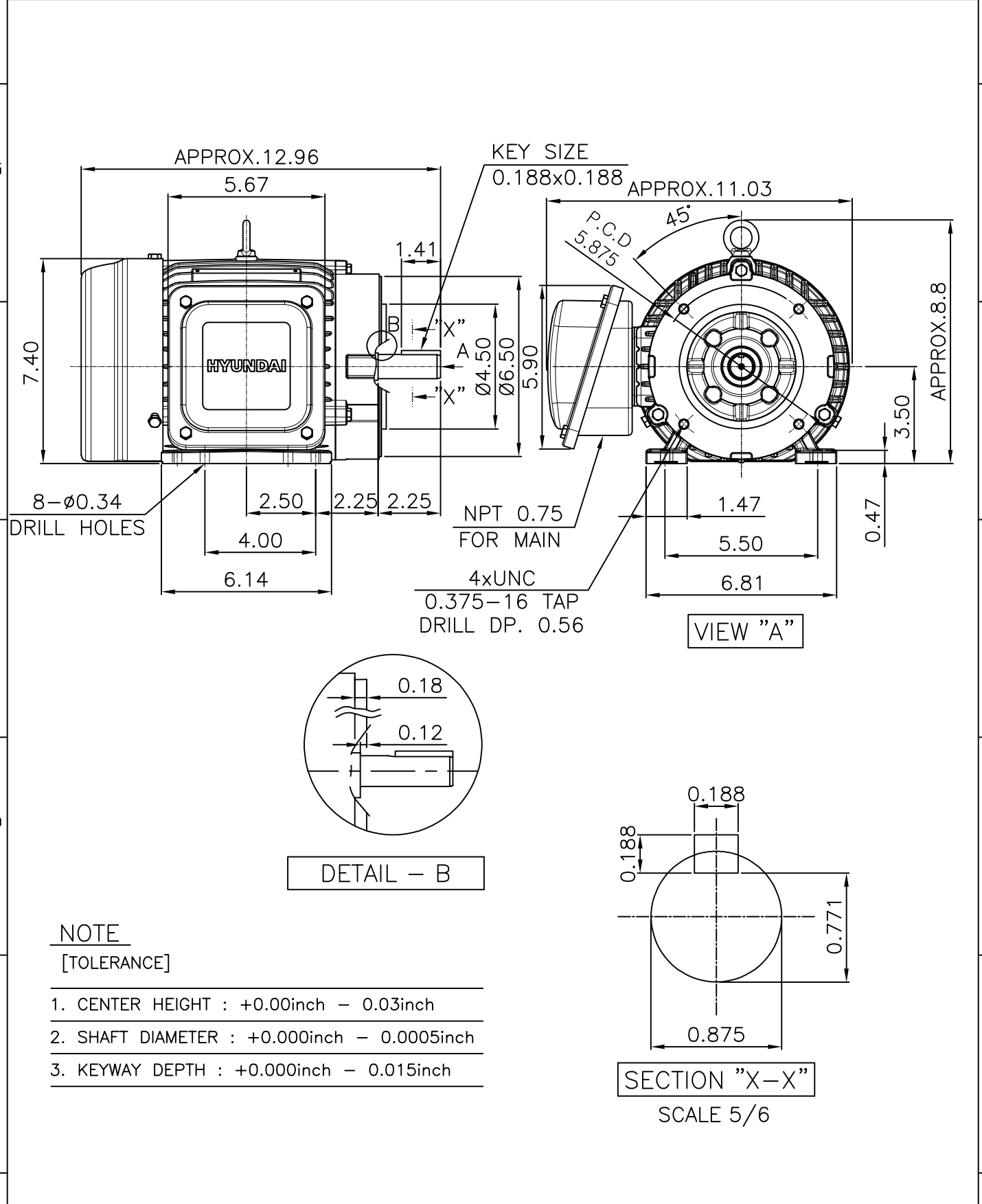
OUTPUT VS EFF., P.F & CURRENT CURVE



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

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



APPD BY	S.Y.KIM	UNIT	inch	SUBJECT	NEMA 143TC	DWG SIZE	A4 (1:5)
CHKD BY	R.G.KIM	SCALE	1/5	TITLE	OUTLINE		
CHKD BY		PROJEC'N	3rd Angle				
DSND BY	주유람	DATE	2021-04-29				



REF. NO	.	Sheet No.	of
DWG NO	LM-T2143C4PLV23	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

