

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.	HSDE450-36-5009SC-IBSHSP	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA			
Frame Size	5009SC		Rated Output	335 kW 450 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	390.1 A	487.7 A 975.3 A
Insulation Class	F			Locked-rotor**	725 %	725 % 725 %
Temp. Rise at full load (by resistance method)			Efficiency			
at 1.0 S.F	80 deg. C		50% Load		92.8 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		75% Load		94.8 %	
Altitude	Less than 1,000 meter		100% Load		95.8 %	
Relative Humidity	Less than 80 %		Power Factor(p.u)			
Ambient Temp.	40 deg. C (Max.)		50% Load		0.750	
Duty Type	Continuous (S1)		75% Load		0.850	
Service Factor	1.15		100% Load		0.900	
Mounting	B35		Speed at Full Load	3570 r.p.m		
Bearing	Type	Anti-Friction		Torque		
	DE/N-DE	6315C3 / 6315C3-INS.		Full Load	661.1 lb.ft	
	Lubricant	Grease(Polyrex-EM)		Locked-rotor**	130 %	
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.)		349.000 lb.ft2	
Terminal Box	Main	Cast Iron		Motor		70.485 lb.ft2
	Aux.	Yes		Sound Pressure Level (No-load & mean value at 1m from motor)		
Location	Refer to Outline Drawing		87 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 2 times	
Applicable Standard	NEMA MG1, CSA C390		Hot		1 time	
	Paint	Munsell No.	4.0PB5.4/5.5(VL-451)			

ACCESSORIES
*. Space Heater : 1EA/Motor

SPARE PARTS
1. Spare Axial Fan (C.W Direction)

SUBMITTAL DRAWING			
Outline Dimension Drawing		Motor Weight(Approx.)	
B35	LM-T0509C4CE001	4000 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. NDE side : Insulated bearing
4. CSA Certification
 - . Class I, Division 2, Group A, B, C & D; Temp code : T3
 - . Class II, Division 2 Group F & G; Temp code : T3
5. Shaft material : AISI4140
6. Uni-directional CCW viewed from drive end.

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

450HP 2P 460V		Cat. No. HSDE450-36-5009SC-IBSHSP	
Model	LATER	INS. Class	F
Type	PJP	Duty	CONT
Frame	5009SC	Encl.	TEFC
Bearing	Drive	6315C3	S.F. 1.15
	Opp.	6315C3-INS.	RPM 3570
Usable at		NEMA Nom. Eff. 95.8%	
CSA Certified for	CLASS I, Div. 2, Gr. A, B, C & D		Temp. Code (sine wave)
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC		
	CLASS II, Div. 2, Gr. F & G		
No.	-	Date	-
4M-136053		Weight 4000 lb	

MARINE DUTY IEEE45 Made in Korea H1 **HD HYUNDAI ELECTRIC**

2.36

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HSDE ,L449-500)	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-136053	Sheet No. of
				DWG NO	NP-HSDE450-36-5009SC-IBSHSP	Revision No. 0



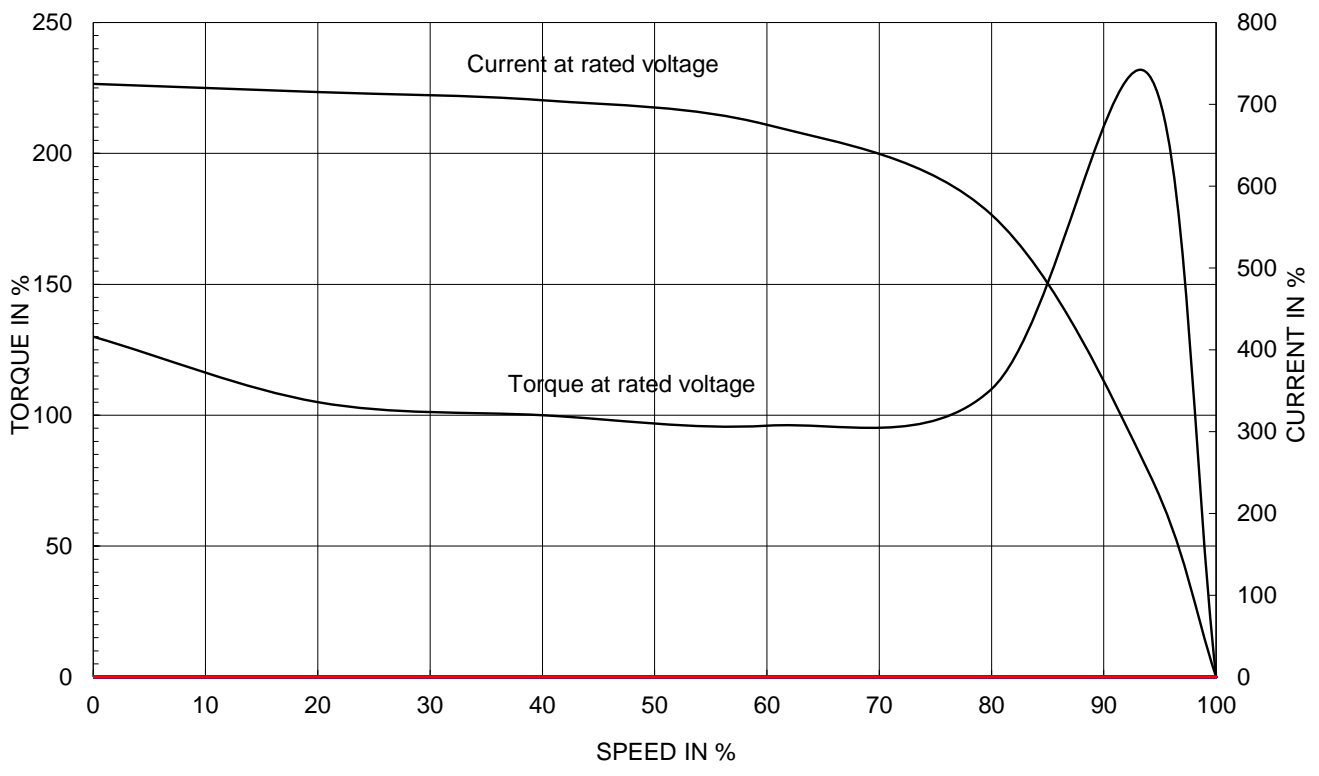
PERFORMANCE CURVE

CURVE NO.
PC-HSDE450-36-5009SC-IBSHSP

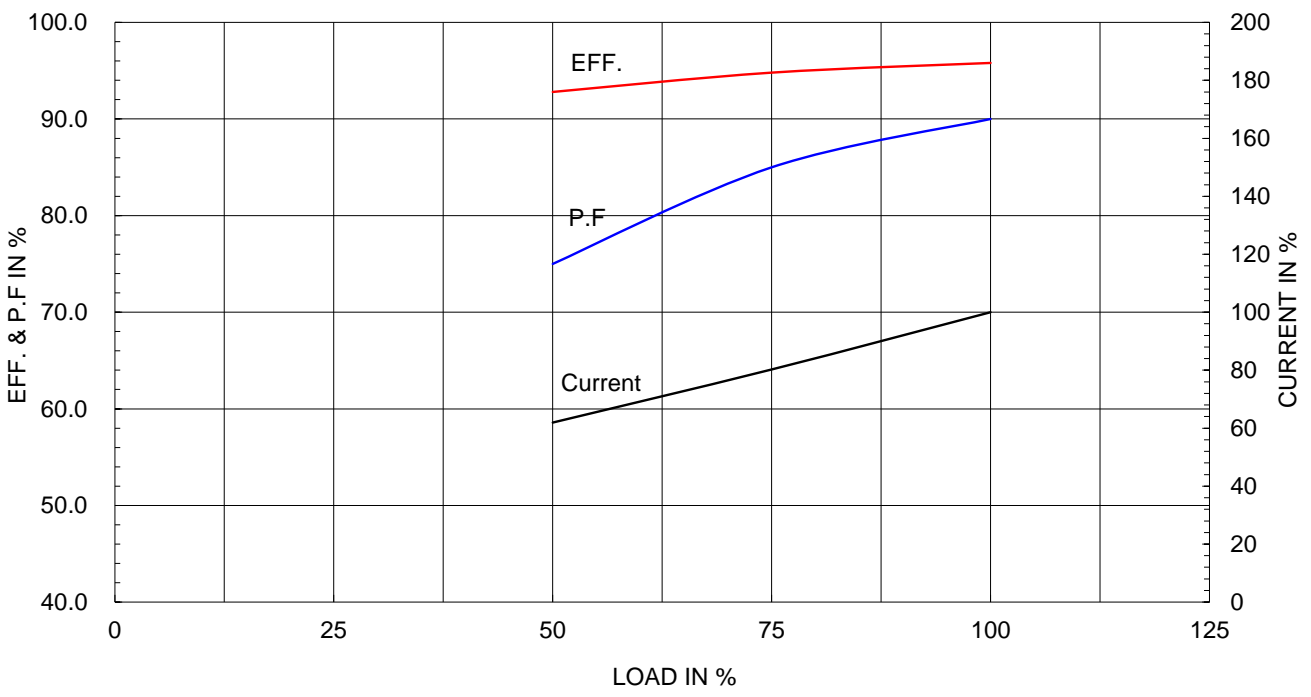
Type :	PJP	
Full Load Torque :	661.1	lb.ft
Load moment of Inertia (J) :	349.000	lb.ft2
Motor moment of Inertia (J) :	70.485	lb.ft2

335kW	450HP	2 P	60 Hz
Speed at Full Load :			3570 RPM
Rated Voltage	575V	460V	230V
Full Load Current	390.1A	487.7A	975.3A

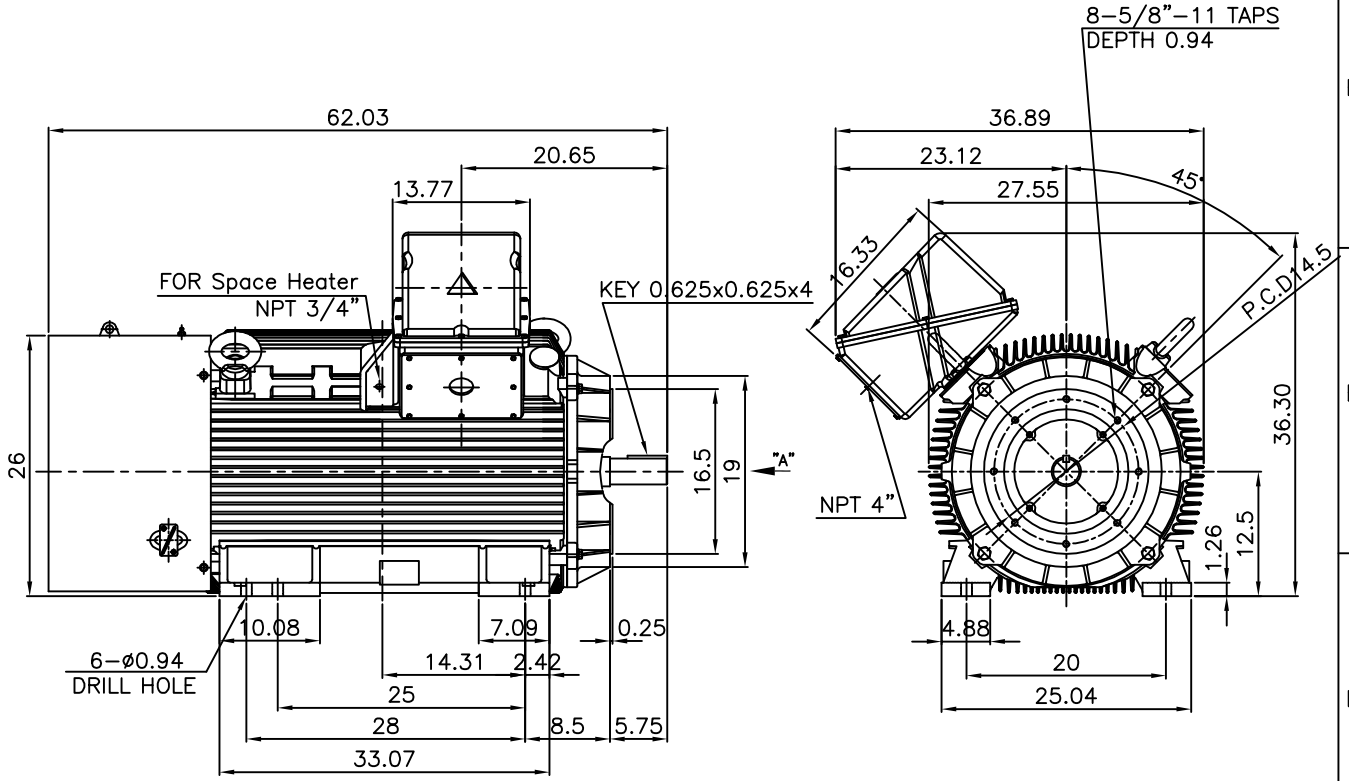
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



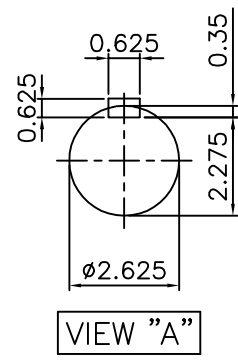
1	2	3	4
▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		
		CONTENTS	REVD BY
			CHKD BY
			CHKD BY
			APPD BY



NOTE

1.TOLERANCE :

CENTER HEIGHT	12.5	+0.000	-0.060
RABBET DIAMETER	Ø16.5	+0.000	-0.005
SHAFT DIAMETER	Ø2.625	+0.000	-0.001
KEYWAY WIDTH	0.625	+0.002	-0.000



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5008/5009TSC	DWG SIZE	A4 (1:19)
CHKD BY	O.J.KIM	SCALE	1/19	TITLE	CAST IRON T-BOX		
CHKD BY	R.G.KIM	PROJEC'N	3각법 (3rd Angle)	OUTLINE			
DSND BY	H.K.LEE	DATE	2021-04-27				
				REF. NO		Sheet No.	of
				DWG NO	LM-T0509C4CE001	Revision No.	0

**Cls. I&II, Div. 2
IEEE 841**



SEC. "A" - "A"

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. L440 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/3.5	TITLE	MAIN TERMINAL BOX ASS'Y	A3 (1:3.5)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	최승희	DATE	2023-10-19			
				REF. NO		Sheet No. of
				DWG NO	3M-248452	Revision No. 0

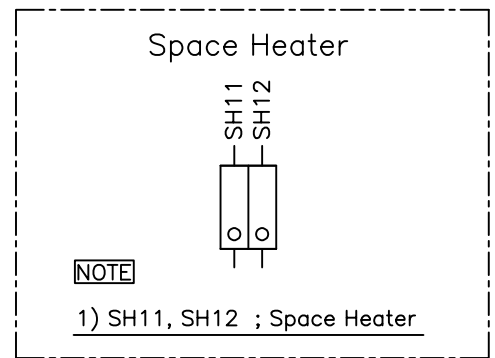
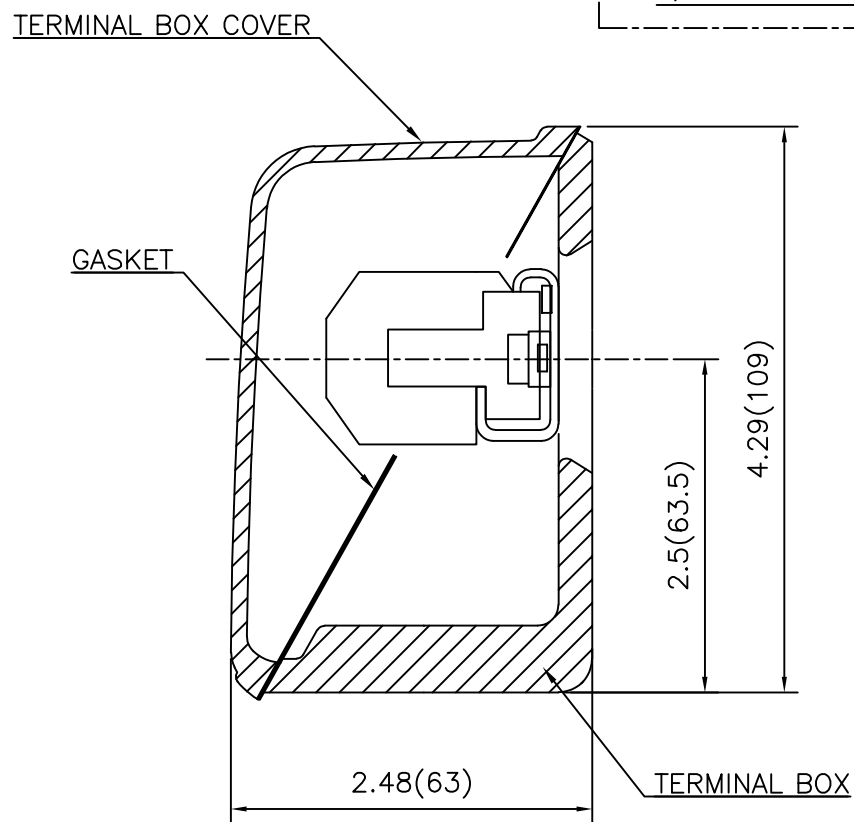
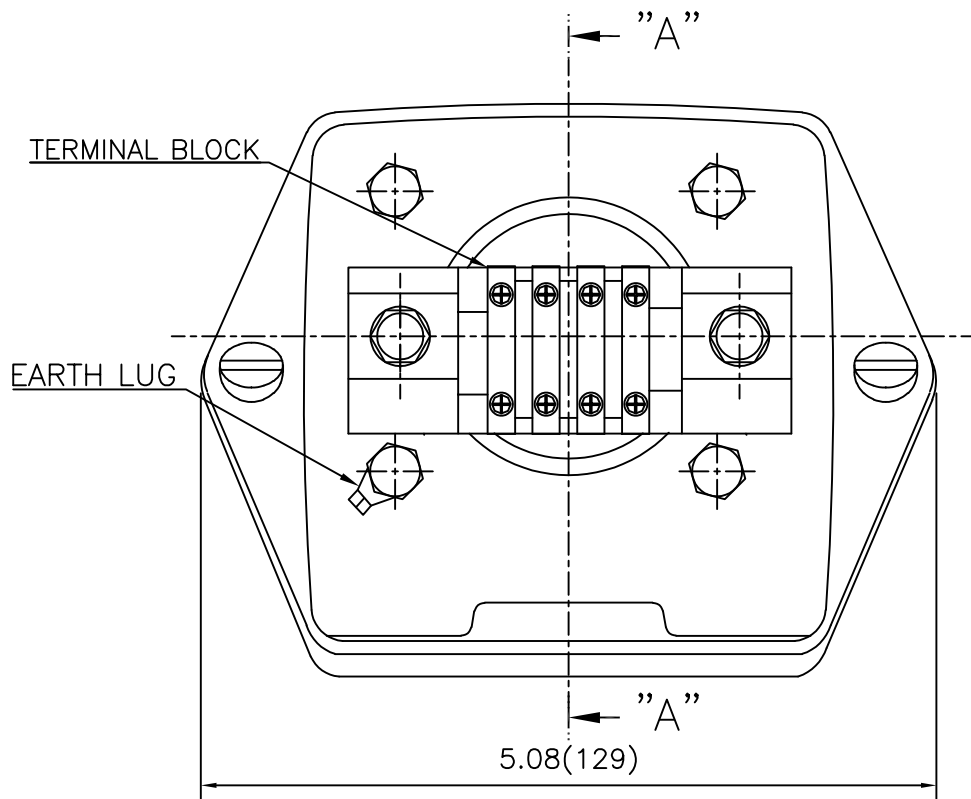
THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING MAY BE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

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

HD HYUNDAI ELECTRIC

Cls. I&II, Div. 2

IEEE 841



REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.180 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/1	TITLE	SUB. TERMINAL BOX ASS'Y	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No. of
DSND BY	백승희	DATE	2024-01-18	DWG NO	3M-165277	Revision No. 0

