

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.	HSDE450-36-5009S-IBBRSRSHSP	Item No.	Rev. No. []
Project Name		Project No.	Quantity sets

GENERAL SPECIFICATION		PERFORMANCE DATA		
Frame Size	5009S	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	B3	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	3.8 mm/sec (peak)	
Area classification	Hazardous	Permissible number of consecutive starts	Cold	2 times
Type of Ex-Protection	Class I&II, Division 2		Hot	1 time
Applicable Standard	NEMA MG1, CSA C390	Paint	Munsell No.	4.0PB5.4/5.5(VL-451)

ACCESSORIES
*. B.T.D.(Pt 100 Ω at 0°C,Single) : 2EA/Motor
*. W.T.D.(Pt 100 Ω at 0°C) : 2EA/Ph.
*. Space Heater : 1EA/Motor

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

SUBMITTAL DRAWING		
Outline Dimension Drawing	Motor Weight(Approx.)	
B3	LM-T0509B3C7001	3860 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.

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REV	DATE	CONTENTS	REVD BY CHKD BY CHKD BY APPD BY

4.72

CROWN TRITON

Premium Efficiency AC 3 Phase Motor



450HP 2P 460V		Cat. No. HSDE450-36-5009S-IBBRSRSHSP	
Model	LATER	INS. Class	F
Type	PJP	Duty	CONT
Frame	5009S	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	CLASS II, Div. 2, Gr. F & G	Temp. Code (sine wave)
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC		Frame L440FR - 500FR
No.	-	Date	-
4M-136053		Weight 3860 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			

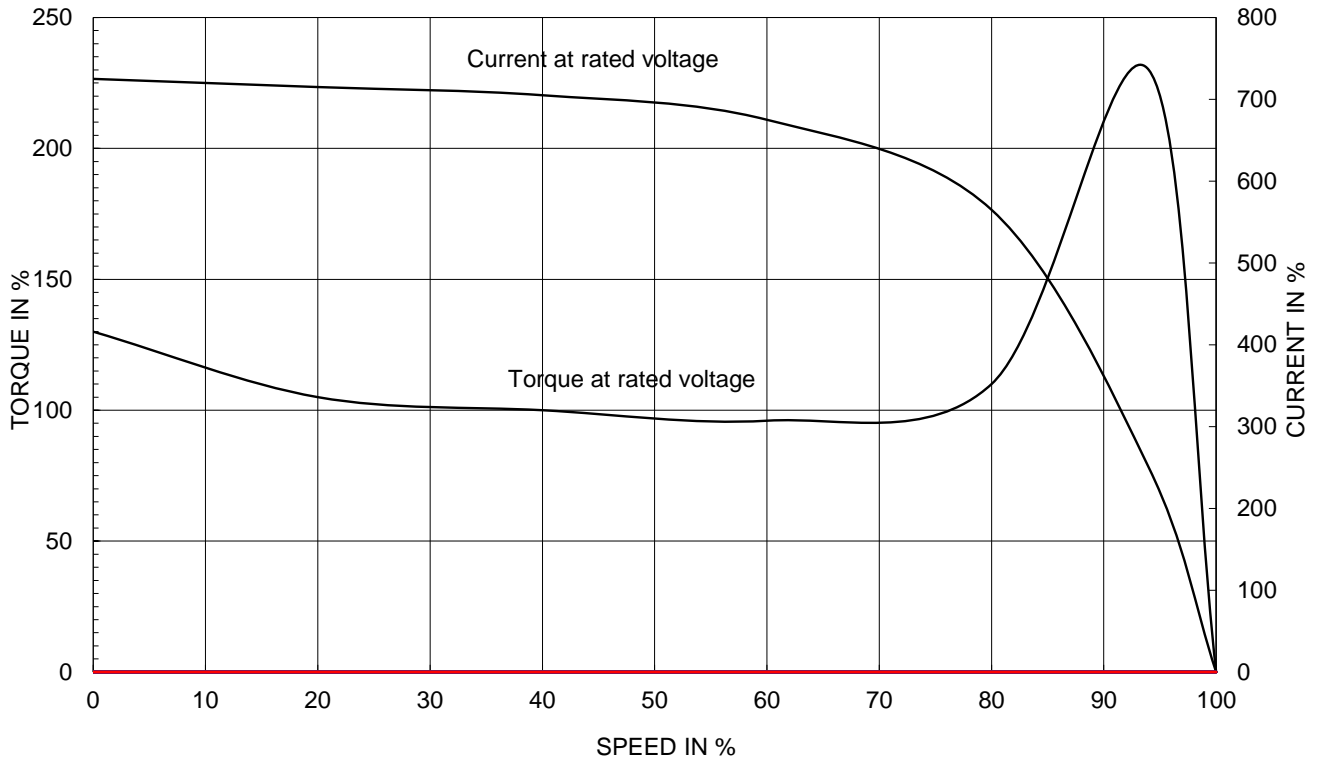


REF. NO	4M-136053	Sheet No.	of
DWG NO	NP-HSDE450-36-5009S-IBBRSRSHSP	Revision No.	0

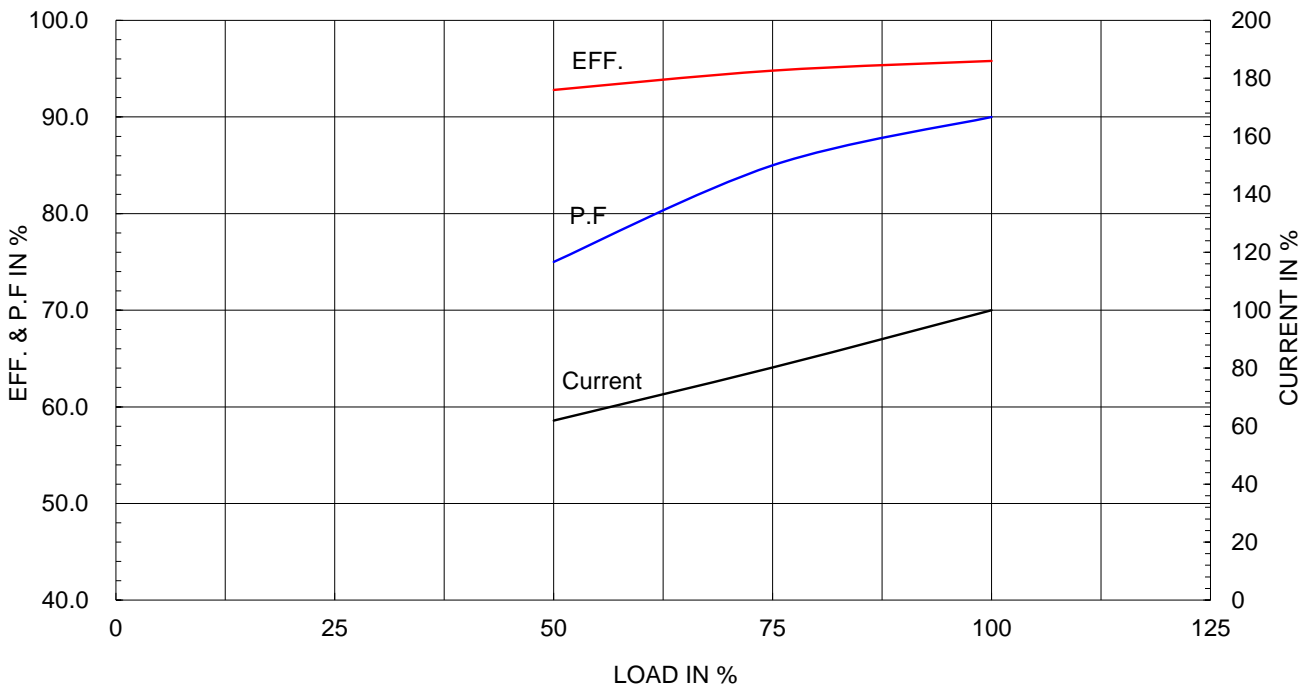
Type :	PJP
Full Load Torque :	661.1 lb.ft
Load moment of Inertia (J) :	349.000 lb.ft2
Motor moment of Inertia (J) :	70.485 lb.ft2

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



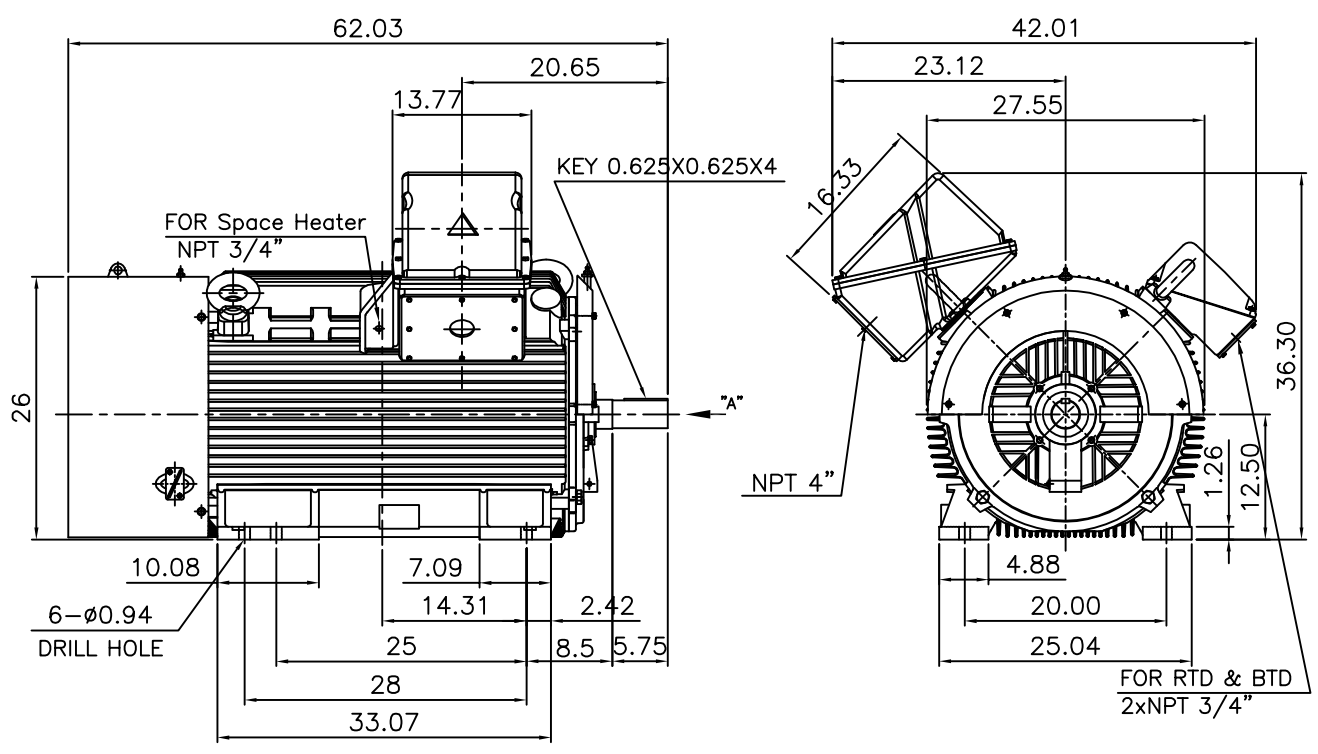
OUTPUT VS EFF., P.F & CURRENT CURVE



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

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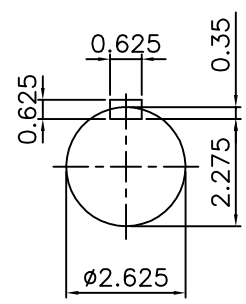
▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							



NOTE

1.TOLERANCE :

CENTER HEIGHT	12.5	+0.000	-0.060
SHAFT DIAMETER	ø2.625	+0.000	-0.001
KEYWAY WIDTH	0.625	+0.002	-0.000



VIEW "A"

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5008/5009TS	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		REF. NO	Sheet No. of
DSND BY	H.K.LEE	DATE	2021-04-27			DWG NO	LM-T0509B3C7001

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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

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REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.360 (CAST IRON)	DWG SIZE	A3 (1:2.2)
CHKD BY		SCALE	1/1	TITLE	AUX. TERMINAL BOX ASS'Y	REF. NO	Sheet No. of
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	DSND BY		네슬렉	DATE
				DWG NO	3M-165277	Revision No. 0	

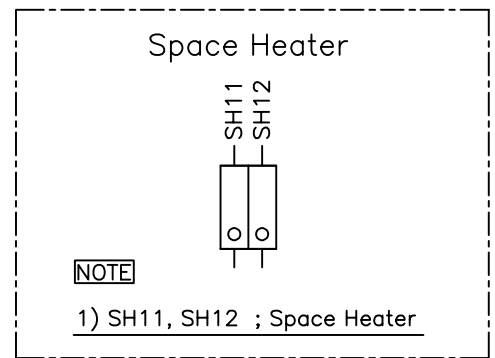
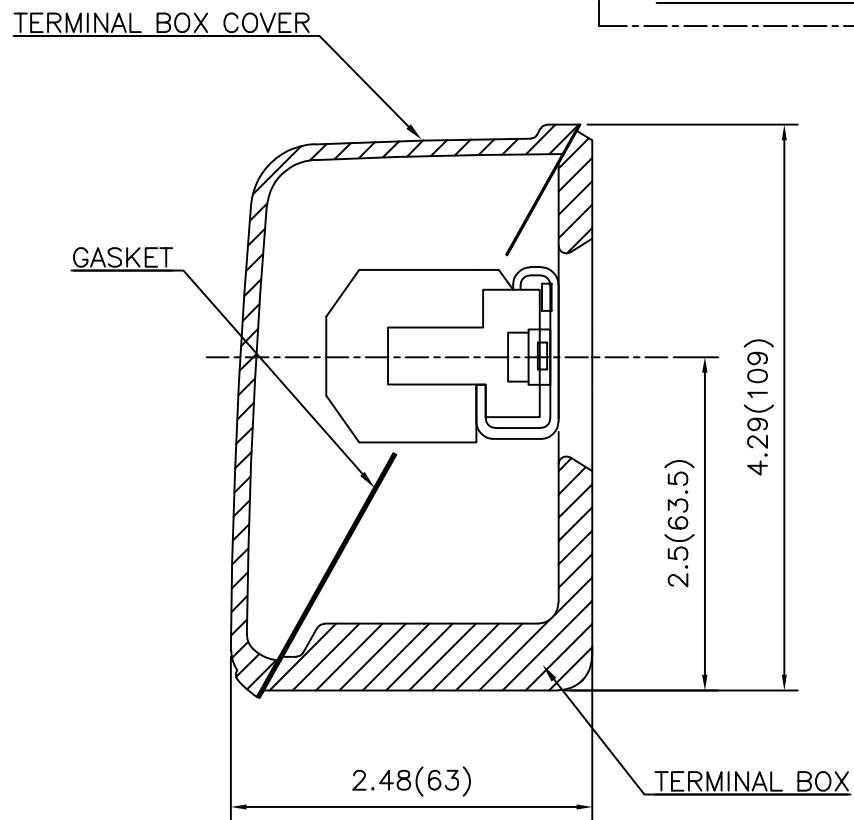
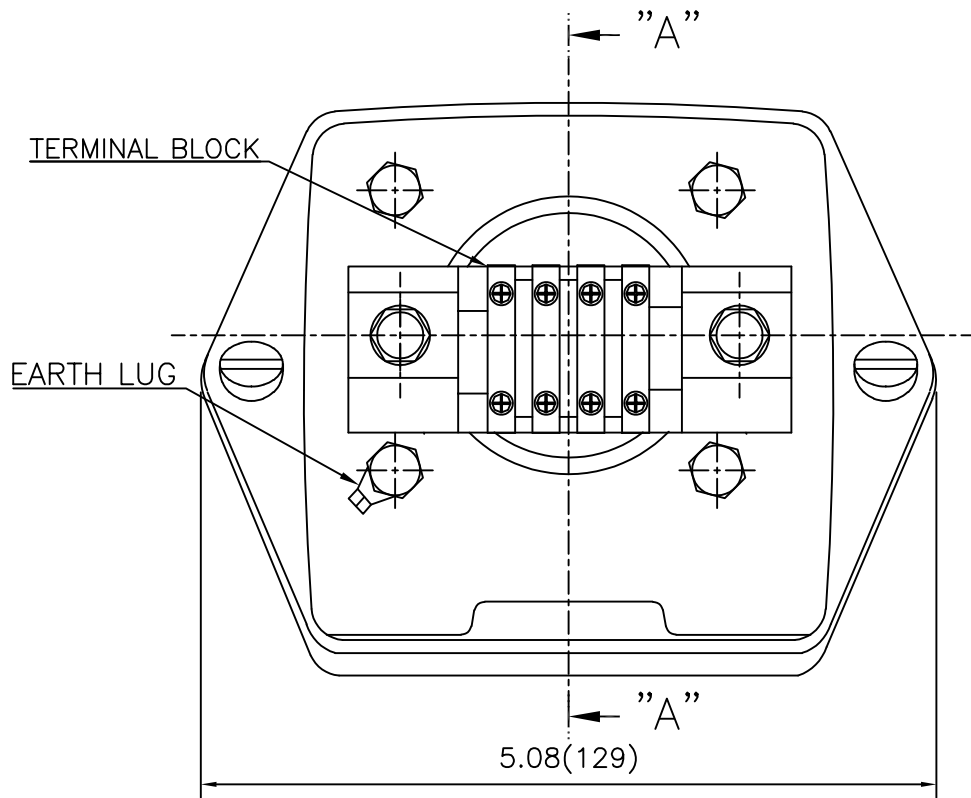
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REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

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	A3 (1:1.1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	배승희	DATE	2024-01-18			
				REF. NO		Sheet No. of
				DWG NO	3M-165277	Revision No. 0