

AC INDUCTION MOTOR DATA SHEET

Model No.or RFQ No.		Item No.		Rev. No. [0]			
Project Name		Project No.		Quantity sets			
GENERAL SPECIFICATION			PERFORMANCE DATA				
Frame Size	250M		Rated Output	90 kW 120 HP			
Type	HS-90/2		Number of Poles	2			
Enclosure(Protection)	Totally Enclosed (IP55)		Rotor Type	Squirrel Cage			
Method of Cooling	IC411(FC)		Starting Method*	☒ D.O.L ☐ Y- Δ			
Rated Frequency	60 Hz		Rated Voltage	440 V	380 V 220 V		
Number of Phases	3		Current	Full Load	138.1 A 159.9 A 276.2 A		
Insulation Class	☒ F ☐ B ☐ H			Locked-rotor**	650 % 650 % 650 %		
Temp. Rise at full load (by resistance method)			Efficiency				
at 1.0 S.F 80 deg. C			50% Load 92.8 %				
Motor Location ☒ Indoor ☐ Outdoor			75% Load 94.1 %				
Altitude Less than 1000 meter			100% Load 94.5 %				
Relative Humidity Less than 80 %			Power Factor(p.u)				
Ambient Temp. 40 deg. C (Max.)			50% Load 0.869				
Duty Type Continuous (S1)			75% Load 0.898				
Service Factor 1.15			100% Load 0.905				
Mounting ☒ B3 ☐ B5 ☐ V1 ☐ B3/B5			Speed at Full Load 3570 r.p.m				
Bearing	Type	Anti-Friction		Torque			
	DE/N-DE	6313C3 / 6313C3		Full Load 24.6 kg·m			
	Lubricant	Grease(Gadus S2 V 100 2)		Locked-rotor** 130 %			
External Thrust Not applicable			Breakdown** 230 %				
Coupling Method ☒ Direct ☐ V-Belt			Moment of Inertia (J)				
Shaft Extension ☒ Single ☐ Double			Load(Max.) 10.050 kg·m²				
Terminal Box	Main	☐ Steel ☒ Cast Iron		Motor 1.143 kg·m²			
	Aux.	☐ Yes ☒ No		Sound Pressure Level (No-load & mean value at 1m from motor)			
	Location	Refer to Outline Drawing		88 dB(A)			
Application			Vibration 2.2 mm/sec (r.m.s)				
Area classification Non-Hazardous			Permissible number of				
Type of Ex-Protection Not applicable			consecutive starts Cold 3 times				
Applicable Standard KS,IEC,NEMA MG1 Part30(Vpeak)			Hot 2 times				
			Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		
ACCESSORIES			SUBMITTAL DRAWING				
			Outline Dimension Drawing \ Motor Weight(Approx.)				
			B3	TJ5MAC50	530 kg		
			B5		kg		
			V1		kg		
			B3/B5		kg		
			Main T-Box Ass'y	3M-016882			
SPARE PARTS			REMARK				
			High Efficiency				
			*. For use on PWM VFD 10:1VT, 3:1CT@1.0S.F&F Temp. rise				
			Date	DSND	CHKD	CHKD	APPD
			2010-05-28	R.G. KIM	O.J. KIM	J.H. KIM	K.J. KANG

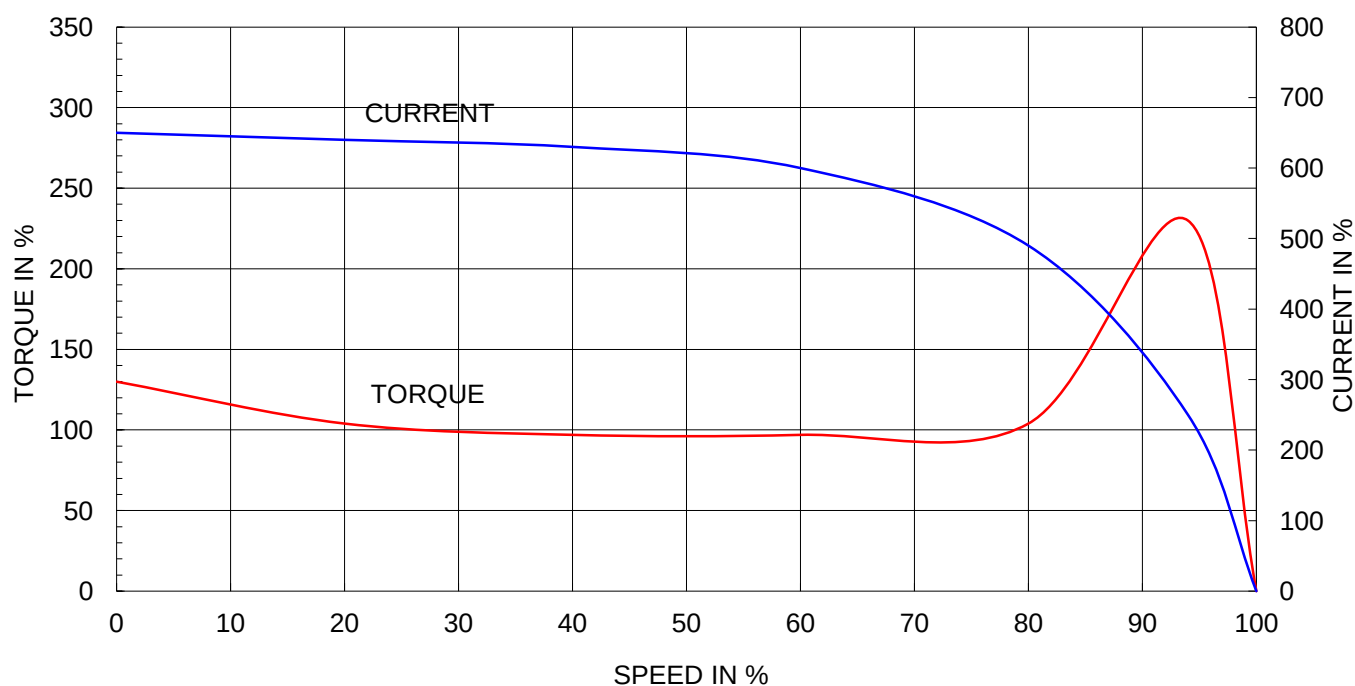
Note: Others not mentioned in this data sheet shall be in accordance with maker standard.
 Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.
 Inspection and performance test shall be maker standard, if not mentioned.
 * In case of Inverter-Fed Motor, performance data is based on sine wave tests.
 ** Data is based on when the motor is supplied at rated voltage & frequency. and the data is expressed as a percentage of full-load value.

HHI W230-131-1 * In case of Inverter or V.V.V.F Motor:Performance data is based on sine wave tests. A4(210mm X 297mm)

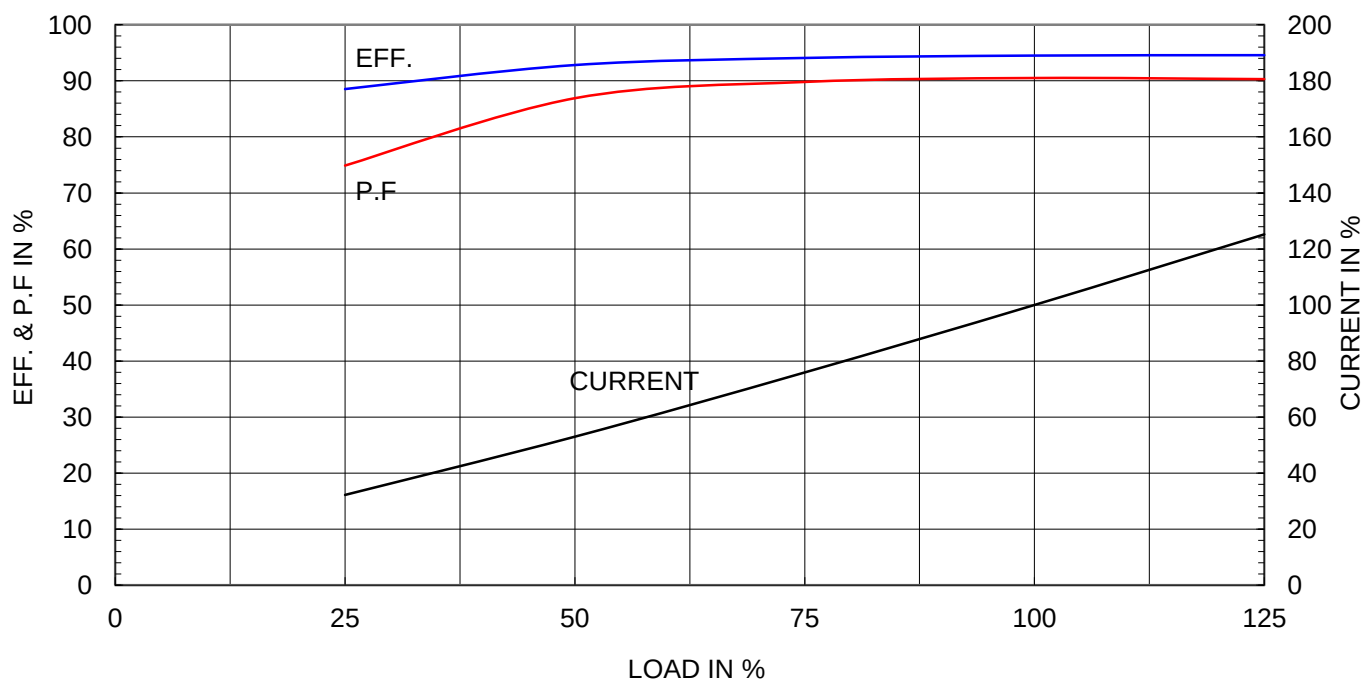
Type	:	HS
Full Load Torque	:	24.6 Kg.m
Motor moment of Inertia (J)	:	1.143 Kg.m ²
Load moment of Inertia (J)	:	10.050 Kg.m ²

90 kW		2 P		60 Hz	
Speed at Full Load :				3570 RPM	
Rated Voltage	440V	380V	220V		
Full Load Current	138.1A	159.9A	276.2A		

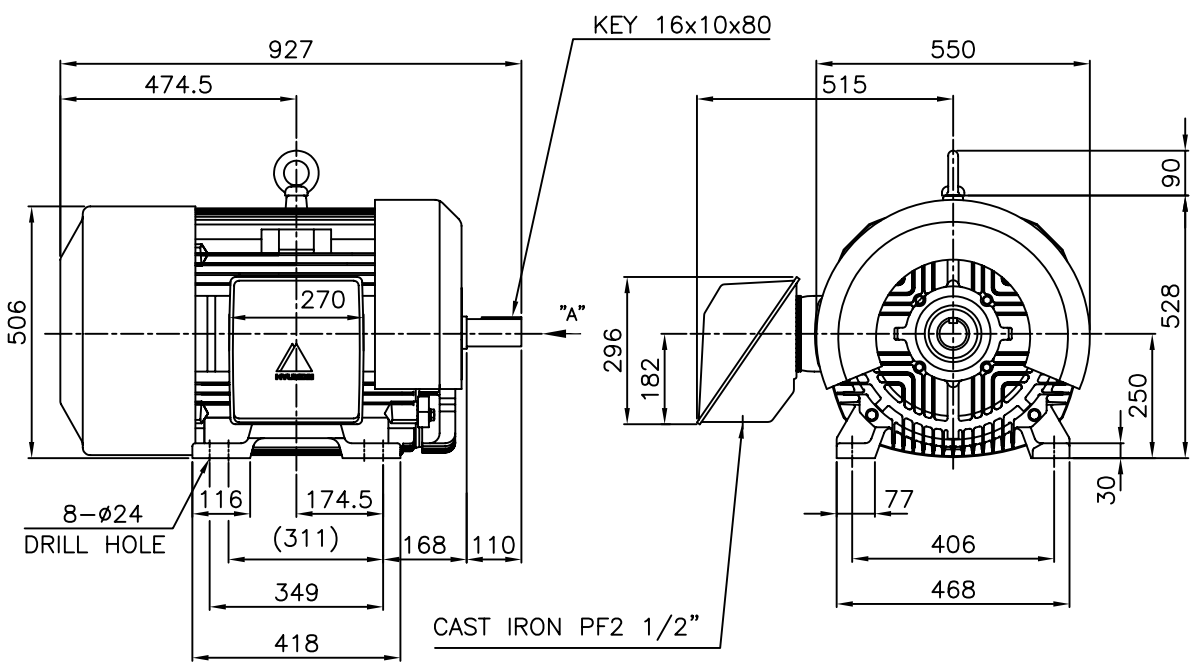
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



1	2	3	4
 HYUNDAI HEAVY INDUSTRIES CO., LTD.		TEFC THREE PHASE INDUCTION MOTOR	TYPE (1) TNB , TDB CAST IRON FRAME

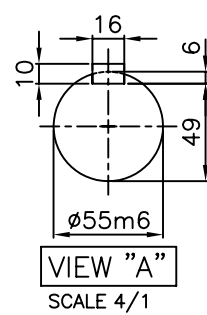


NOTE

1.TOLERANCE :

CENTER HEIGHT	250	$\begin{smallmatrix} 0 \\ -0.5 \end{smallmatrix}$
BASE HOLE	$\phi 24$	$\begin{smallmatrix} +0.43 \\ 0 \end{smallmatrix}$
SHAFT DIAMETER	$\phi 55$	$\begin{smallmatrix} +0.030 \\ +0.011 \end{smallmatrix}$
KEYWAY WIDTH	16	$\begin{smallmatrix} -0.018 \\ -0.061 \end{smallmatrix}$
KEYWAY DEPTH	6	$\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$
KEY WIDTH	16	$\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$
KEY HEIGHT	10	$\begin{smallmatrix} 0 \\ -0.090 \end{smallmatrix}$

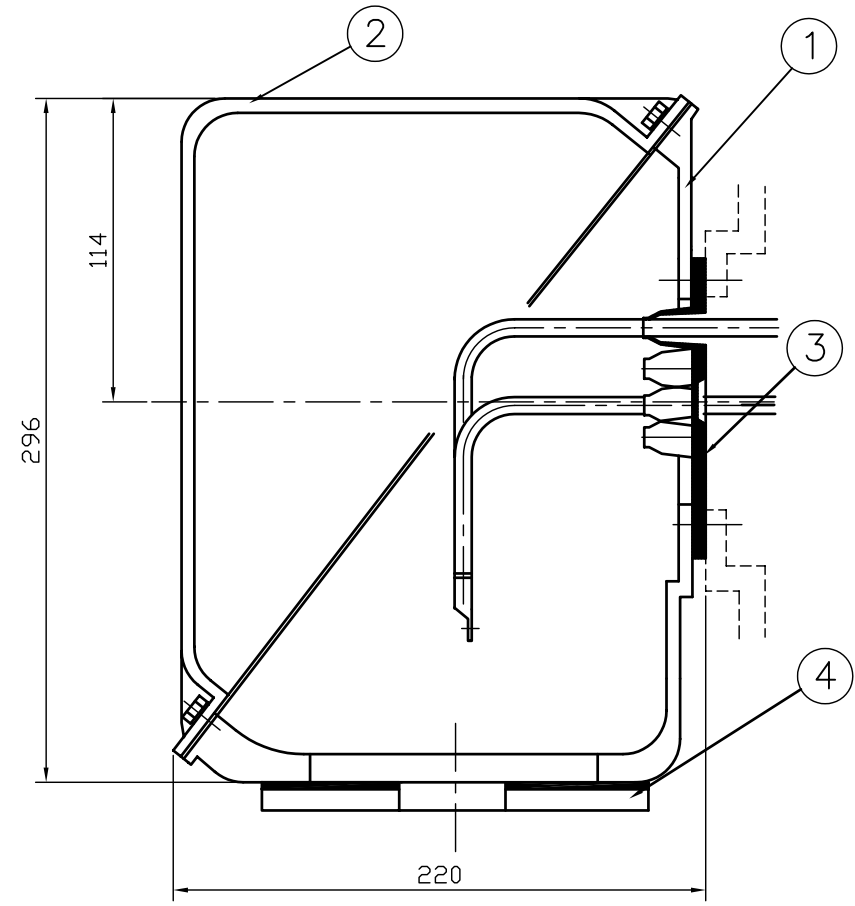
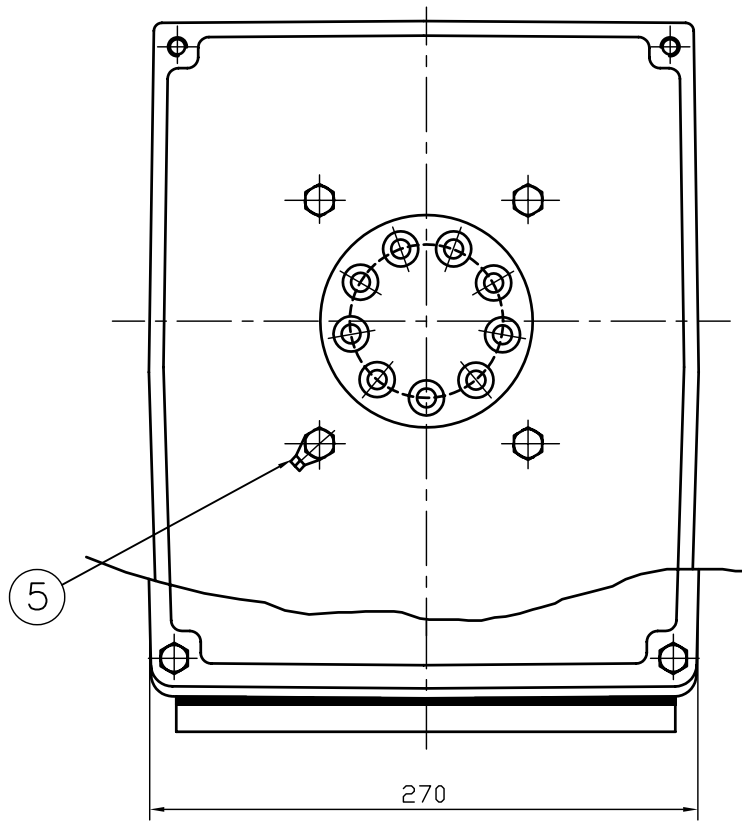
2.The type (1)-"TNB , TDB" is for HHI's standard products and it can be changed for customer's requirements or detail designing.



				TEFC STANDARD	
APPD BY	KANG K.J.	UNIT	MM	SUBJECT	KS Fr.250M TEFC
CHKD BY	KIM O.J.	SCALE	1/15	TITLE	CAD PROJ \ FILE
CHKD BY		PROJEC'N	3rd Angle		MMSTDMTR/TJ5MAC50
DSND BY	KIM RYANG GYU	DATE	2003.08.30		
 HYUNDAI HEAVY INDUSTRIES CO., LTD. INDUSTRIAL & POWER SYSTEMS				OUTLINE THREE-PHASE INDUCTION MOTOR	
				REF. NO	L2-Series
				DWG NO	TJ5MAC50
				Sheet No.	of
				Revision No.	0

G
F
E
D
C
B
A

본 도면은 현대중공업(주) 재산이므로 허가없이
복사할 수 없음 (도면제출 시 유의하시기 바랍니다.)



1	EARTH TERMINAL LUG							5
1	CABLE ENTRY PLATE							4
1	GASKET	NBR						3
1	TERMINAL BOX COVER	CAST IRON						2
1	TERMINAL BOX BODY	CAST IRON						1
Q'TY	DESCRIPTION	MATERIAL	DIMENSION		WEIGHT	PART NO.	REMARK	NO.
APPD BY	김 진 오	UNIT	MM		SUBJECT	HLA6 - 250,280Fr.	CAD PROJ ㉠ \ FILE ㉠ T-BOX-M \ 3R016882	
Q.P. CHK	주 영 겅	SCALE	NONE		TITLE (CAST IRON) TERMINAL BOX ASS'Y			
CHKD BY	권 오 철	PROJEC'N	3 각법 (3rd Angle)					
DSND BY	김 현 태	DATE	92.06.05		REF. NO		Sheet No. of	
 HYUNDAI ELECTRICAL ENGINEERING CO., LTD.					DWG NO	3M-016882	Revision No.	

REV	DATE	CONTENTS	REVD BY	CHKD BY	Q.P. CHK	APPD BY
1						
2						
3						
4						