HYUNDAI HEAVY INDUSTRIES CO.,LTD.

AC INDUCTION MOTOR DATA SHEET

Model No.or RFQ No.		Item No.		Rev. No.	[0]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION

Frame Size		280LL
Type		HS-160/2
Enclosure(Protection)		Totally Enclosed (IP55)
Method of Cooling		IC411(FC)
Rated Frequency		60 Hz
Number of Phases		3
Insulation Class		■ F □ B □ H
Temp. Rise at full load (by resistance method)		
	at 1.0 S.F	80 deg. C
Motor Location		■ Indoor □ Outdoor
Altitude		Less than 1000 meter
Relative Humidity		Less than 80 %
Ambient Temp.		40 deg. C (Max.)
Duty Type		Continuous (S1)
Service Factor		1.00
Mounting		■ B3 □ B5 □ V1 □ B3/B5
Bearing	Type	Anti-Friction
	DE/N-DE	6314C3 / 6314C3
	Lubricant	Grease(Gadus S2 V 100 2)
External Thrust		Not applicable
Coupling Method		■ Direct □ V-Belt
Shaft Extension		■ Single □ Double
Terminal Box	Main	□ Steel ■ Cast Iron
	Aux.	□ Yes ■ No
	Location	Refer to Outline Drawing
Application		
Area classification		Hazardous
Type of Ex-Protection		Ex e II T3
Applicable Standard		KS,IEC

PERFORMANCE DATA

Rated Output		160 kW	214 HP	
Number of Poles		2		
Rotor Type		Squirrel Cage		
Starting Method*		■ D.O.L	■ Y- △	
Rated Voltage		440 V	380 V	220 V
Current	Full Load	241.5 A	279.7 A	483.0 A
	Locked-rotor**	650 %	650 %	650 %
Efficiency				
	50% Load	93.8 %		
	75% Load	94.9 %		
	100% Load	95.0 %		
Power Factor(p.u)				
	50% Load	0.912		
	75% Load	0.915		
	100% Load	0.915		
Speed at Full Load		3570 r.p.m		
Torque				
	Full Load	43.7 kg·m		
	Locked-rotor**	150 %		
	Breakdown**	230 %		
Moment of Inertia (J)				
	Load(Max.)	19.550 kg·m²		
	Motor	3.595 kg·m²		
Sound Pressure Level (No-load & mean value at 1m from motor)		82 dB(A)		
Vibration		2.2 mm/sec (r.m.s)		
Permissible number of consecutive starts		Cold 2 times		
		Hot 1 times		
Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		

ACCESSORIES

SUBMITTAL DRAWING

Outline Dimension Drawing		\ Motor Weight(Approx.)	
B3	EJ8XAC55	1100	kg
B5	-	-	kg
V1	-	-	kg
B3/B5	-	-	kg
Main T-Box Ass'y	3M-051288		

SPARE PARTS

REMARK

High Efficiency

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.

HYUNDAI HEAVY INDUSTRIES CO.,LTD.

PERFORMANCE CURVE

CURVE NO.

P-HS-160/2

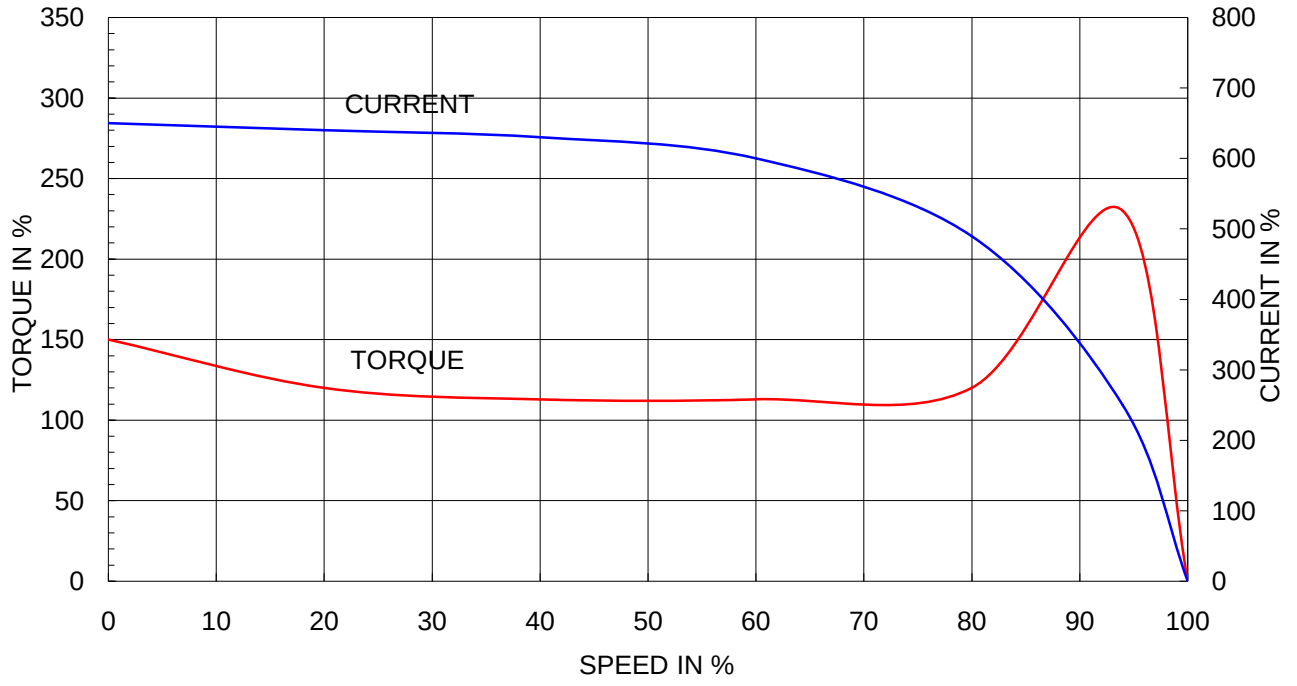
Type	:	HL-XP(280LL)	
Full Load Torque :		43.7	Kg.m
Motor moment of Inertia (J) :		3.595	$Kg.m^2$
Load moment of Inertia (J) :		19.550	$Kg.m^2$

160 kW 2 P 60 Hz

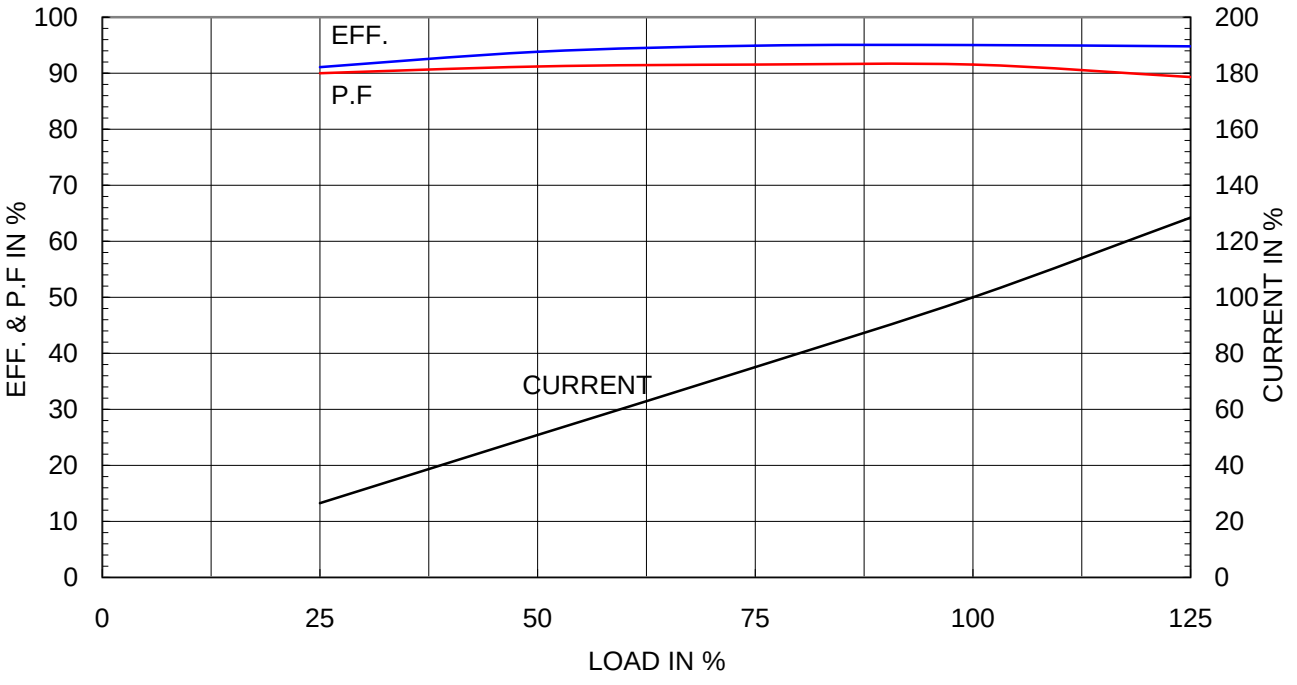
Speed at Full Load : 3570 RPM

Rated Voltage	440V	380V	220V	
Full Load Current	241.5A	279.7A	483.1A	

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

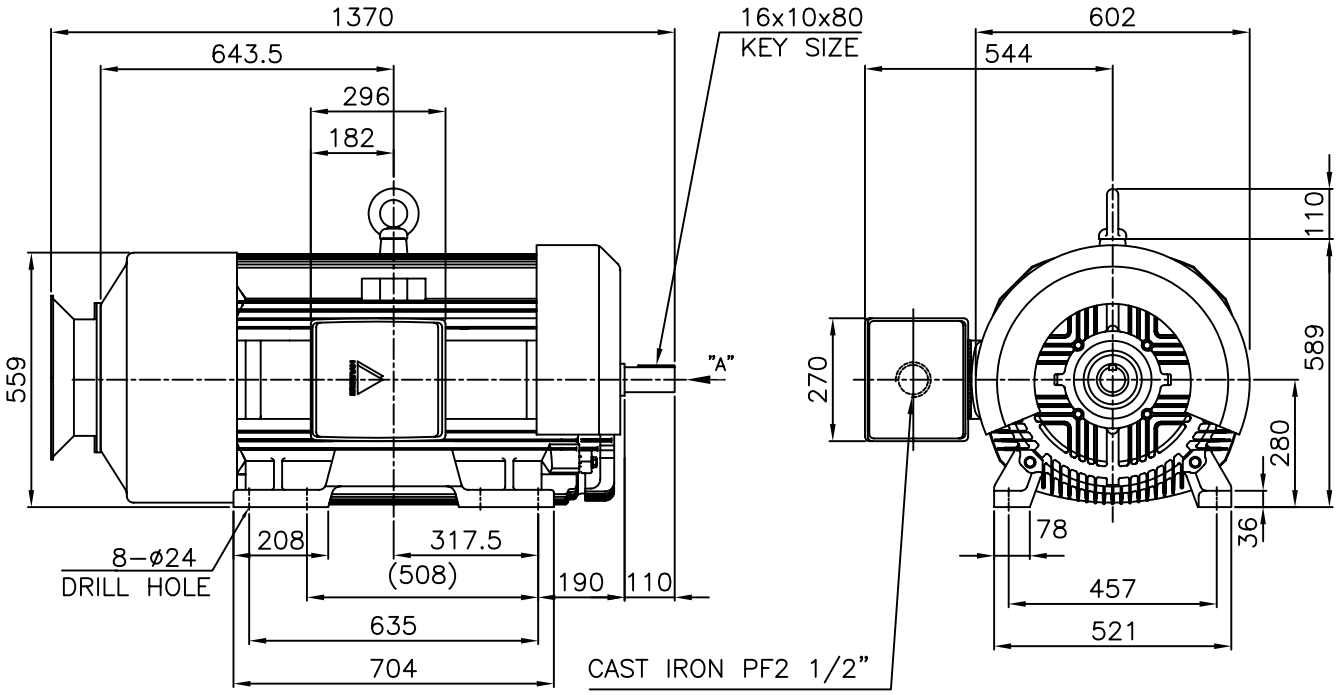


HYUNDAI HEAVY INDUSTRIES CO., LTD.

TEFC

THREE PHASE INDUCTION MOTOR

TYPE	(1) ENB , EDB
	CAST IRON FRAME

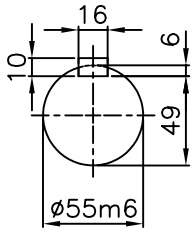


NOTE

1.TOLERANCE :

CENTER HEIGHT	$280\ ^{0}_{-1.0}$
BASE HOLE	$ø24\ ^{+0.43}_{0}$
SHAFT DIAMETER	$ø55\ ^{+0.030}_{+0.011}$
KEYWAY WIDTH	$16\ ^{-0.018}_{-0.061}$
KEYWAY DEPTH	$6\ ^{+0.2}_{0}$
KEY WIDTH	$16\ ^{0}_{-0.043}$
KEY HEIGHT	$10\ ^{0}_{-0.090}$

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



VIEW "A"
SCALE 4/1

TEFC STANDARD

Ex e II T3

APPD BY	KIM J.H.	UNIT	MM
CHKD BY	KIM O.J.	SCALE	1/17
CHKD BY		PROJEC'N	3rd Angle
DSND BY	LEE NOH DUK	DATE	2005.05.20

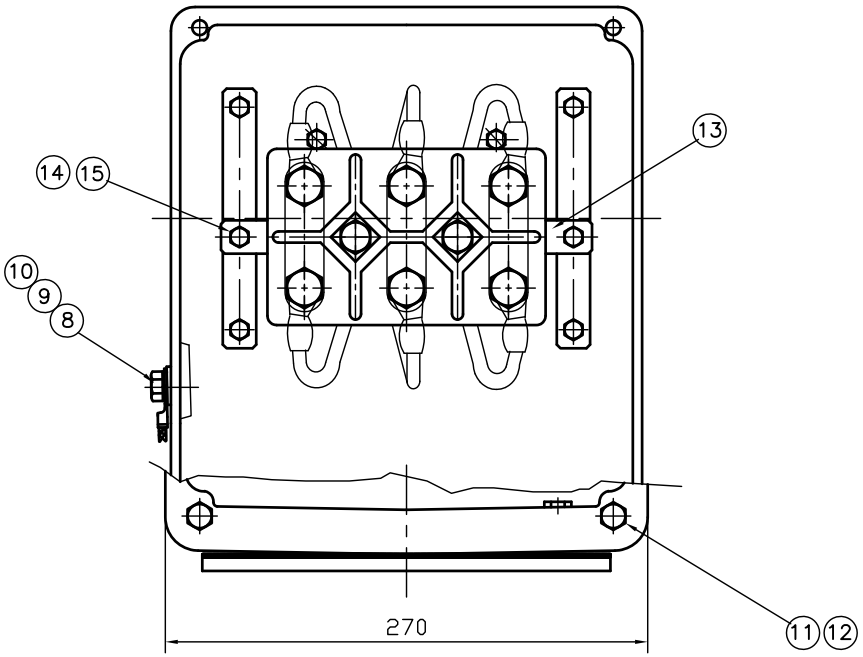
SUBJECT	KS Fr.280LL TEFC
CAD PROJ \ FILE	MMSTDMTR/EJ8XAC55
TITLE	OUTLINE THREE–PHASE INDUCTION MOTOR

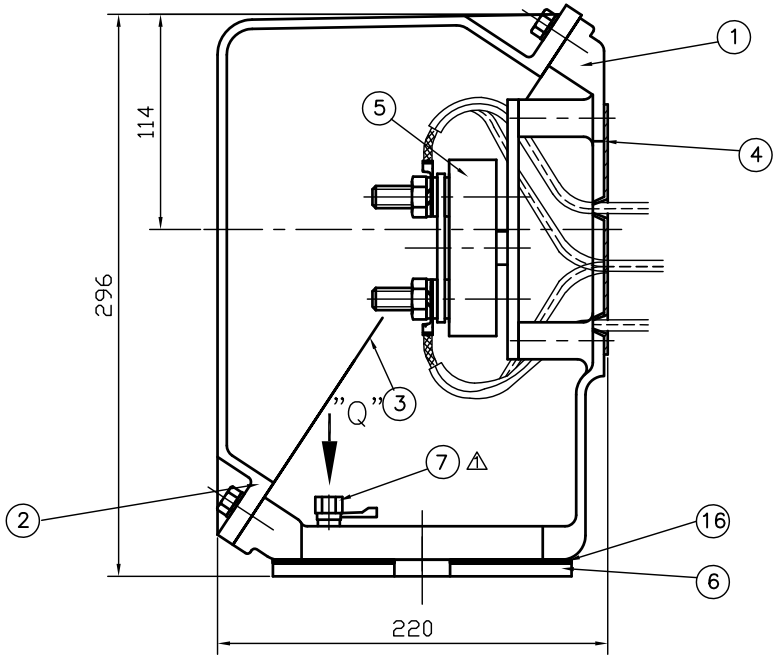
HYUNDAI HEAVY INDUSTRIES CO., LTD.
INDUSTRIAL & POWER SYSTEMS

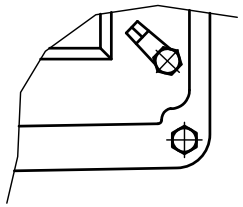
REF. NO	L2–Series	Sheet No. of
DWG NO	EJ8XAC55	Revision No. 0

HYUNDAI HEAVY INDUSTRIES CO., LTD.

REV	DATE	CONTENTS	REVD BY	Q.P CHK	APPD BY
⚠	98.10.01	EARTH TER. LUG REVISED	AHN H.K	KIM O.J	KANG K.J







VIEW "Q"

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	PART
1	PACKING	NBR		16
2	SPRING WASHER	SUP3		15
2	HEX BOLT	S45C		14
1	BASE PLATE	SS41		13
4	SPRING WASHER	SUP3		12
4	HEX. BOLT	S45C		11
1	EARTH TERMINAL LUG	ST'D		10
1	SPRING WASHER	SUP3		9
1	EARTH BOLT	BRASS		8
1	EARTH TERMINAL LUG	ST'D		7
1	CABLE ENTRY PLATE	SS41		6
1	TERMINAL BLOCK			5
1	GASKET	NBR		4
1	PACKING	NBR		3
1	T/B COVER	CAST IRON	2M-003339	2
1	T/B BODY	CAST IRON	2M-003340	1

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.

APPD BY	KANG K.J	UNIT	MM
Q.P CHK	KIM O.J	SCALE	1/3
CHKD BY		PROJEC'N	3 각법(3rd Angle)
DSND BY	HAN K.J	DATE	96.08.08

SUBJECT: HLA6 250,280FR

CAD PROJ 명 \ FILE 명: T-BOX-M/3R051288

TITLE: CAST IRON WITH T/BLOCK
TERMINAL BOX ASS'Y

HYUNDAI HEAVY INDUSTRIES CO., LTD.

REF. NO

DWG NO: 3M-051288

Sheet No. of

Revision No. 1