HYUNDAI HEAVY INDUSTRIES CO.,LTD.

# DATA SHEET of AC INDUCTION MOTOR

**60 HP - 6 P TE**

DESIGN NO : KS C4202-1996

| | | | | | |
|---|---|---|---|---|---|
| Model No.or RFQ No. | | Item No. | | Rev. No. | [ 0 ] |
| Project Name | | Project No. | | Quantity : | |

## GENERAL SPECIFICATION

| | | |
|---|---|---|
| Frame No. | | 225S |
| Type | | TNB |
| Enclosure(Protection) | | Totally Enclosed (IP IP54 ) |
| Cooling Method | | IC411(FC) |
| Frequency | | 60 Hz |
| Phase | | 3 Φ |
| Insulation Class | | ■ F ☐ B ☐ H |
| Temp. Rise at full load (by resistance method) | | |
| | at 1.0 S.F | 105 ℃ |
| Location | | ☐ Indoor ☐ Outdoor |
| Altitude | | Less than 1000 meter |
| Humidity | | Less than 80 % |
| Ambient Temp. | | 40 ℃ (Max.) |
| Duty | | CONT.(S1) |
| Service Factor | | 1.00 |
| Electric Design | | NEMA Design B |
| Construction | | ☐ B3 ☐ B5 ☐ V1 ☐ |
| Bearing | Type | Anti-friction |
| | DE/ODE | 6314C3 \ 6213C3 |
| | Lubricant | GREASE(ALVANIA#2) |
| External Thrust | | Not applicable |
| Coupling Method | | ■ Direct ☐ V-Belt |
| Shaft Extension | | ■ Single ☐ Double |
| Terminal Box | Main | ☐ Steel ■ Cast Iron |
| | Aux. | ☐ Yes ■ No |
| | Location | ■ Left ☐ Right |
| | | (Viewed from Drive End) |
| Application | | |
| Area Classification | | Not applicable |
| Applicable Standard | | KS |
| Inspection and Performance Test | | |
| | HHI Stand. | Maker Test Report |

## PERFORMANCE DATA

| | | | | |
|---|---|---|---|---|
| Output | | 60 HP | 45 KW | |
| Poles | | 6 P | | |
| Rotor Type | | Squirrel Cage | | |
| Starting Method(*) | | ■ D.O.L. | ☐ Y-△ | |
| Rated Voltage | | 440 V | 380 V | 220 V |
| Current | Rated Load | 79.1 A | 91.6 A | 158.3 A |
| | Start'g-D.O.L | 498.5 A | 577.2 A | 997.0 A |
| Efficiency | | | | |
| | 50% Load | 90.1 % | | |
| | 75% Load | 91.0 % | | |
| | 100% Load | 91.0 % | | |
| Power Factor | | | | |
| | 50% Load | 74.5 % | | |
| | 75% Load | 80.5 % | | |
| | 100% Load | 82.0 % | | |
| Speed at Rated Load | | 1176 RPM / SLIP 2.00 % | | |
| Torque (D.O.L) | | | | |
| | Rated | 37.3 Kg.m | 100 % | |
| | Starting | 63.4 Kg.m | 170 % | |
| | Break down | 74.5 Kg.m | 200 % | |
| Allowable Load GD² referred to motor shaft | | 351.500 Kg.m² | | |
| Motor GD² | | 4.790 Kg.m² | | |
| Noise Level (dB(A)) | | 73 dB(A) at 1m from motor(No-load) | | |
| Vibration(Velocity) | | 3.8 mm/sec.(peak) | | |
| Starting Duty | | Cold 2 times \ Hot 1 time | | |
| Paint | Munsell No. | 4.0PB5.4/5.5(VL-451) | | |

## SUBMITTAL DRAWING

| Outline Dimension Drawing \ Motor Weight(Approx.) | | |
|---|---|---|
| ☐ B3 | TJ2SAP51 | 370 Kg |
| ☐ B5 | TJ25BP51 | 400 Kg |
| ☐ V1 | TJ25PP51 | 400 Kg |
| Main T-Box Ass'y | 3M-016881 | |

## ACCESSORIES(OPTION ITEM)

## SPARE PARTS

## REMARK

Note: Others not mentioned in this specification shall be in accordance with HHI standard.
Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.

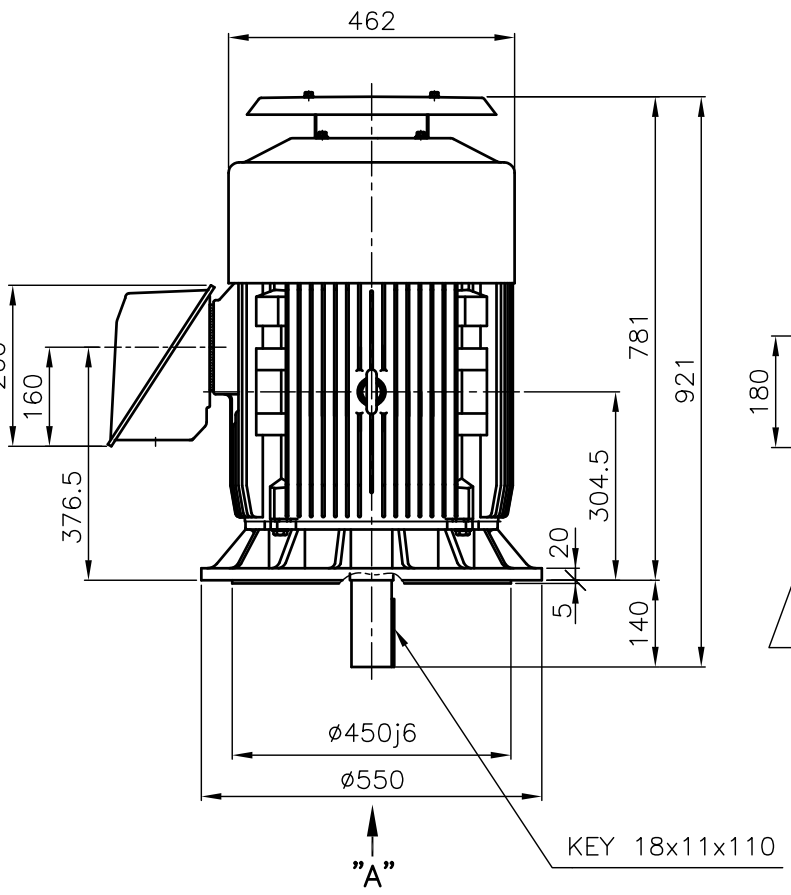
| Date | DSND | CHKD | CHKD | APPD |
|---|---|---|---|---|
| 2004.01.27 | KIM R.G. | | KIM O.J. | KANG K.G. |

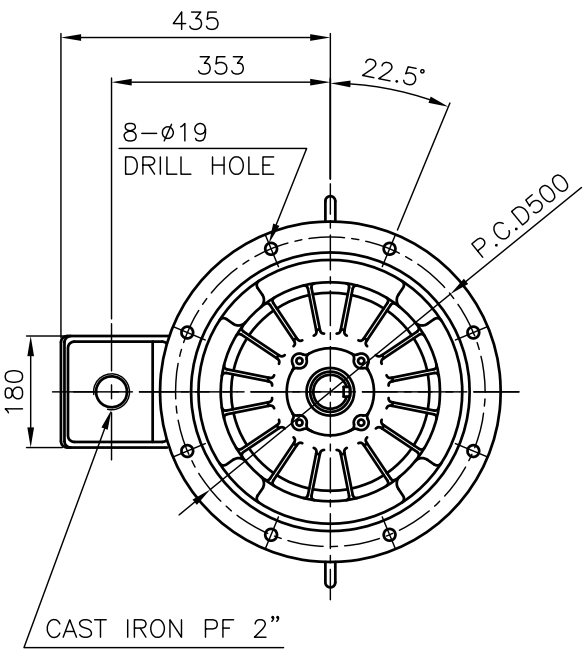
HYUNDAI HEAVY INDUSTRIES CO., LTD.

# TEFC

## THREE PHASE INDUCTION MOTOR

| TYPE | (1) TNB , TDB |
|---|---|
| | CAST IRON FRAME |



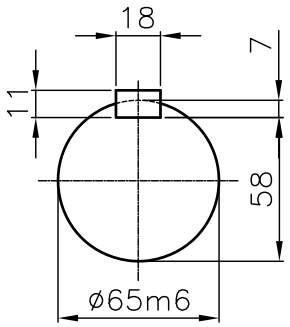




NOTE

1.TOLERANCE :

| | | |
|---|---|---|
| RABBET DIAMETER | ø450j6 | ±0.020 |
| SHAFT DIAMETER | ø65m6 | +0.030 +0.011 |
| KEYWAY WIDTH | 18P9 | −0.018 −0.061 |
| KEYWAY DEPTH | 7 | +0.2 0 |

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




VIEW "Q"

SCALE 4/1

| | | | |
|---|---|---|---|
| APPD BY | KANG K.J. | UNIT | MM |
| CHKD BY | KIM O.J. | SCALE | 1/13 |
| CHKD BY | LEE N.D. | PROJEC'N | 3rd Angle |
| DSND BY | KIM RYANG GYU | DATE | 2007.03.23 |

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

| | | |
|---|---|---|
| SUBJECT | KS Fr.225 TEFC | TEFC STANDARD |
| | | CAD PROJ \ FILE: MMSTDMTR/TJ25PP51 |
| TITLE | OUTLINE<br>THREE−PHASE INDUCTION MOTOR | |
| REF. NO | L3−SERIES | Sheet No. of |
| DWG NO | TJ25PP51 | Revision No. 0 |

HYUNDAI HEAVY INDUSTRIES CO., LTD.

# PERFORMANCE CURVE

CURVE NO.

P-TNBJ2S06045

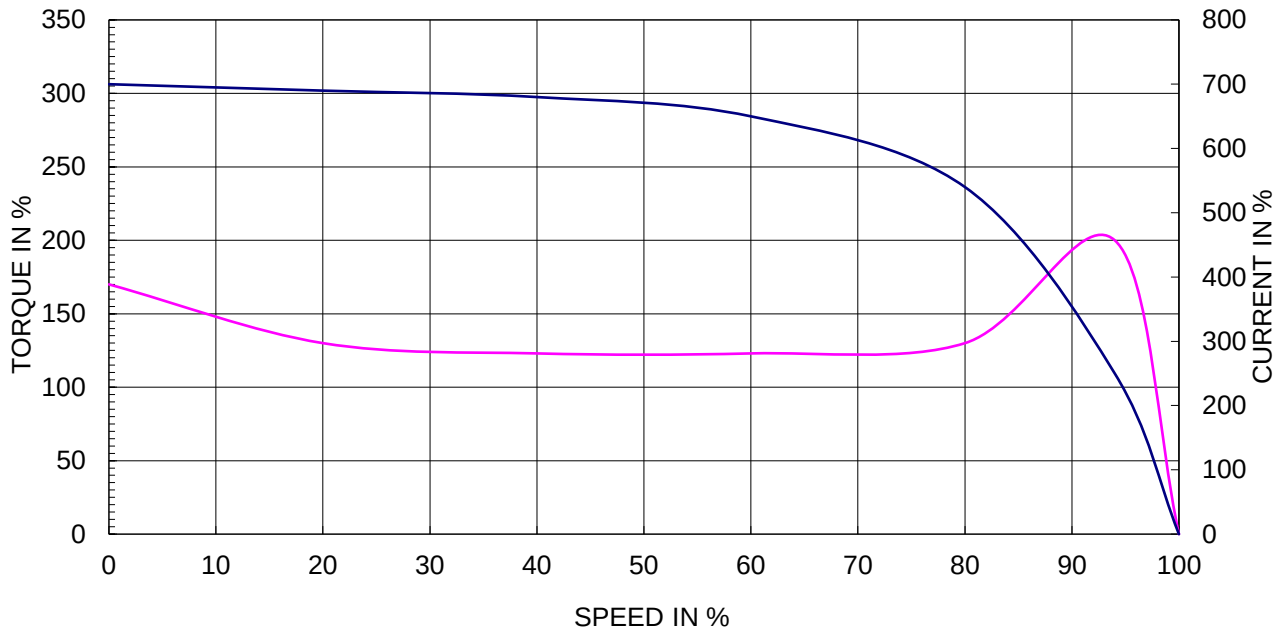
| | | |
|---|---|---|
| TYPE | : | |
| RATED TORQUE : | 37.3 | Kg.m |
| GD2 OF MOTOR : | 4.8 | $Kg.m^2$ |
| (ALLOWABLE) GD2 OF LOA | 351.5 | $Kg.m^2$ |

45 kW 6 P 60 Hz

RATED SPEED : 1176 RPM

| VOLTAGE | 440V | 380 V | 220V |
|---|---|---|---|
| RATED CURRENT | 79.1A | 91.6 A | 158.3A |

SPEED VS TORQUE & CURRENT CURVE




OUTPUT VS EFF., P.F & CURRENT CURVE