

# AC INDUCTION MOTOR DATA SHEET

|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------|-------------------------|----------|-----------|
| Model No.or RFQ No.                                                                                                                    |                                                                                             | Item No.                                                                     |                                                         | Rev. No. [ 0 ]                                               |                         |          |           |
| Project Name                                                                                                                           |                                                                                             | Project No.                                                                  |                                                         | Quantity sets                                                |                         |          |           |
| <b>GENERAL SPECIFICATION</b>                                                                                                           |                                                                                             |                                                                              | <b>PERFORMANCE DATA</b>                                 |                                                              |                         |          |           |
| Frame Size                                                                                                                             | 250S                                                                                        |                                                                              | Rated Output                                            | 75 kW 100 HP                                                 |                         |          |           |
| Type                                                                                                                                   | HS-75/4                                                                                     |                                                                              | Number of Poles                                         | 4                                                            |                         |          |           |
| Enclosure(Protection)                                                                                                                  | Totally Enclosed ( IP55 )                                                                   |                                                                              | Rotor Type                                              | Squirrel Cage                                                |                         |          |           |
| Method of Cooling                                                                                                                      | IC411(FC)                                                                                   |                                                                              | Starting Method*                                        | <input type="checkbox"/> D.O.L <input type="checkbox"/> Y- Δ |                         |          |           |
| Rated Frequency                                                                                                                        | 60 Hz                                                                                       |                                                                              | Rated Voltage                                           | 440 V                                                        | 380 V 220 V             |          |           |
| Number of Phases                                                                                                                       | 3                                                                                           |                                                                              | Current                                                 | Full Load                                                    | 120.4 A 139.4 A 240.8 A |          |           |
| Insulation Class                                                                                                                       | <input checked="" type="checkbox"/> F <input type="checkbox"/> B <input type="checkbox"/> H |                                                                              |                                                         | Locked-rotor**                                               | 670 % 670 % 670 %       |          |           |
| Temp. Rise at full load (by resistance method)                                                                                         |                                                                                             |                                                                              | Efficiency                                              |                                                              |                         |          |           |
| at 1.0 S.F 80 deg. C                                                                                                                   |                                                                                             |                                                                              | 50% Load 94.2 %                                         |                                                              |                         |          |           |
| Motor Location <input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor                                             |                                                                                             |                                                                              | 75% Load 94.6 %                                         |                                                              |                         |          |           |
| 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 0.826                                          |                                                              |                         |          |           |
| Duty Type Continuous ( S1 )                                                                                                            |                                                                                             |                                                                              | 75% Load 0.860                                          |                                                              |                         |          |           |
| Service Factor 1.15                                                                                                                    |                                                                                             |                                                                              | 100% Load 0.865                                         |                                                              |                         |          |           |
| Mounting <input checked="" type="checkbox"/> B3 <input type="checkbox"/> B5 <input type="checkbox"/> V1 <input type="checkbox"/> B3/B5 |                                                                                             |                                                                              | Speed at Full Load 1780 r.p.m                           |                                                              |                         |          |           |
| Bearing                                                                                                                                | Type                                                                                        | Anti-Friction                                                                |                                                         | Torque                                                       |                         |          |           |
|                                                                                                                                        | DE/N-DE                                                                                     | 6316C3 / 6313C3                                                              |                                                         | Full Load 41.0 kg·m                                          |                         |          |           |
|                                                                                                                                        | Lubricant                                                                                   | Grease(Gadus S2 V 100 2)                                                     |                                                         | Locked-rotor** 150 %                                         |                         |          |           |
| External Thrust Not applicable                                                                                                         |                                                                                             |                                                                              | Breakdown** 250 %                                       |                                                              |                         |          |           |
| Coupling Method <input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-Belt                                             |                                                                                             |                                                                              | Moment of Inertia (J)                                   |                                                              |                         |          |           |
| Shaft Extension <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double                                             |                                                                                             |                                                                              | Load(Max.) 56.350 kg·m²                                 |                                                              |                         |          |           |
| Terminal Box                                                                                                                           | Main                                                                                        | <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Cast Iron |                                                         | Motor 1.723 kg·m²                                            |                         |          |           |
|                                                                                                                                        | Aux.                                                                                        | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No          |                                                         | Sound Pressure Level (No-load & mean value at 1m from motor) |                         |          |           |
| Location Refer to Outline Drawing                                                                                                      |                                                                                             |                                                                              | 82 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)    |          |           |
| <b>ACCESSORIES</b>                                                                                                                     |                                                                                             |                                                                              | <b>SUBMITTAL DRAWING</b>                                |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              | Outline Dimension Drawing \ Motor Weight(Approx.)       |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              | B3                                                      | TJ5SAP51                                                     | 500 kg                  |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              |                                                         |                                                              |                         |          |           |
| <b>SPARE PARTS</b>                                                                                                                     |                                                                                             |                                                                              | <b>REMARK</b>                                           |                                                              |                         |          |           |
|                                                                                                                                        |                                                                                             |                                                                              | 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 |

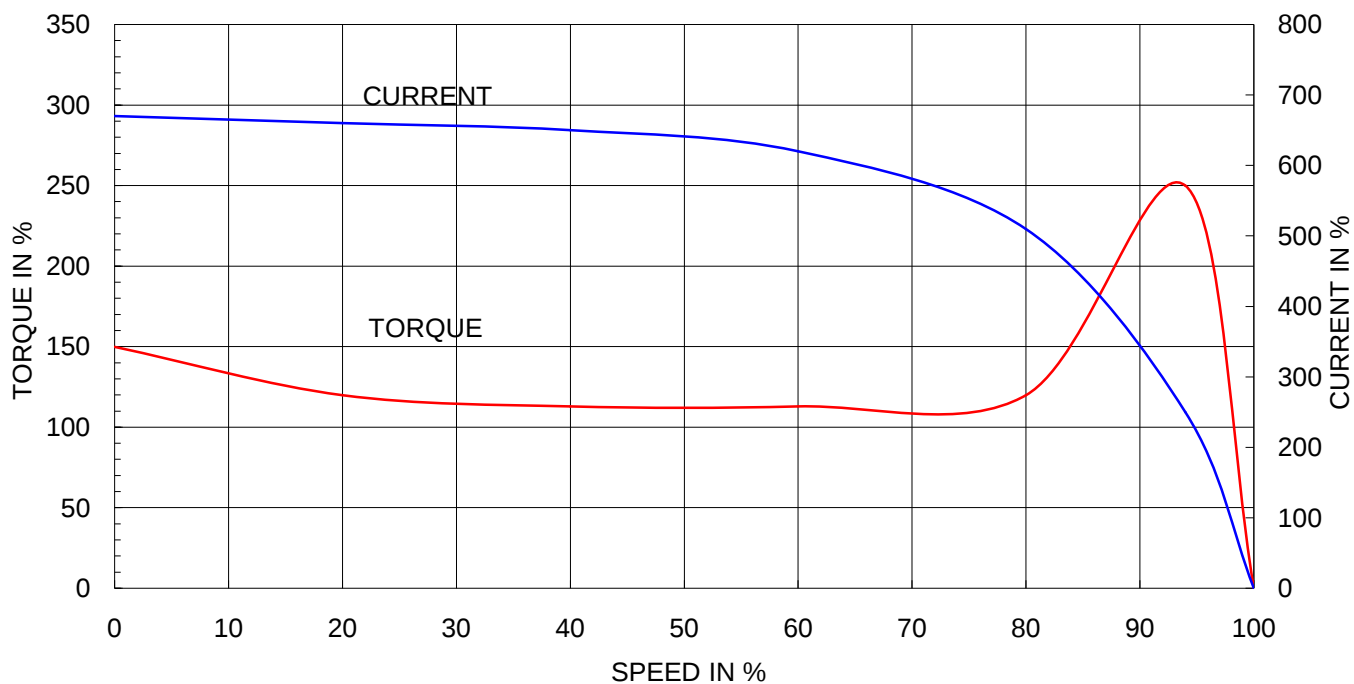
Note: Others not mentioned in this data sheet shall be in accordance with maker standard.  
 Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.  
 Inspection and performance test shall be maker standard, if not mentioned.  
 \* In case of Inverter-Fed 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)

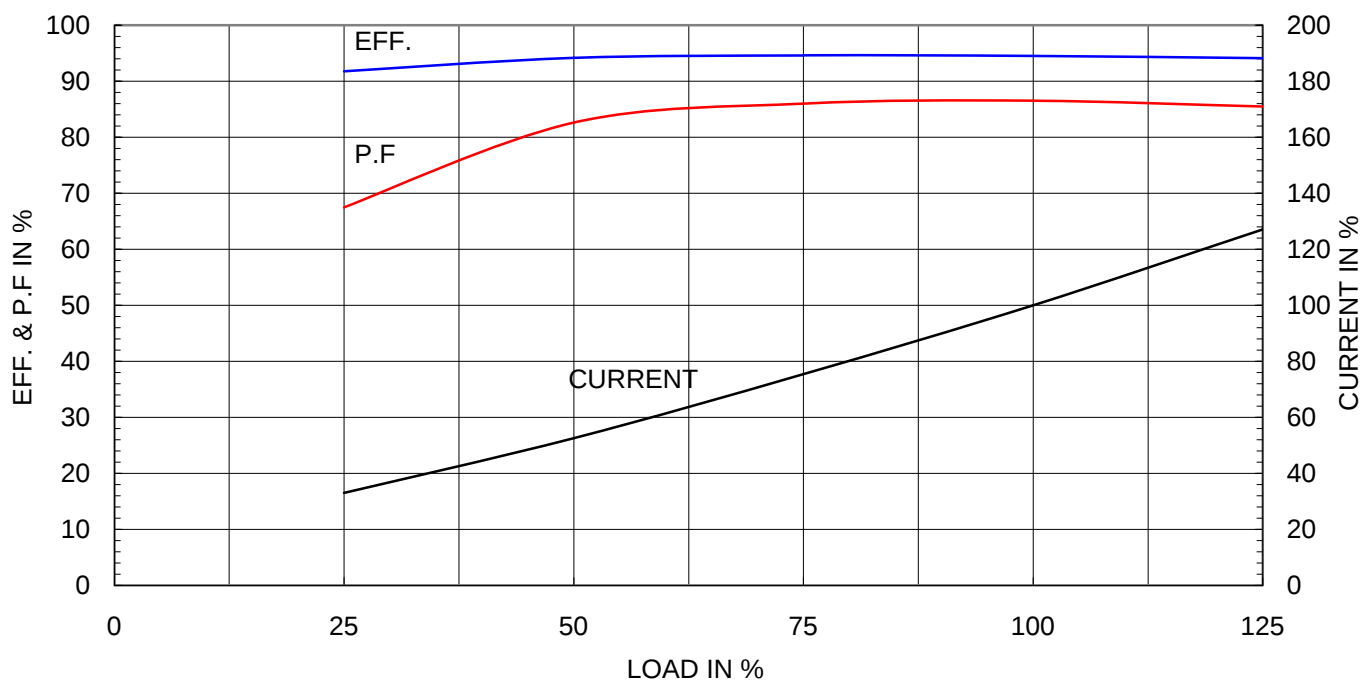
|                             |   |                          |
|-----------------------------|---|--------------------------|
| Type                        | : | HS                       |
| Full Load Torque            | : | 41.0 Kg.m                |
| Motor moment of Inertia (J) | : | 1.723 Kg.m <sup>2</sup>  |
| Load moment of Inertia (J)  | : | 56.350 Kg.m <sup>2</sup> |

|                      |        |        |        |          |  |
|----------------------|--------|--------|--------|----------|--|
| 75 kW                |        | 4 P    |        | 60 Hz    |  |
| Speed at Full Load : |        |        |        | 1780 RPM |  |
| Rated Voltage        | 440V   | 380V   | 220V   |          |  |
| Full Load Current    | 120.4A | 139.4A | 240.8A |          |  |

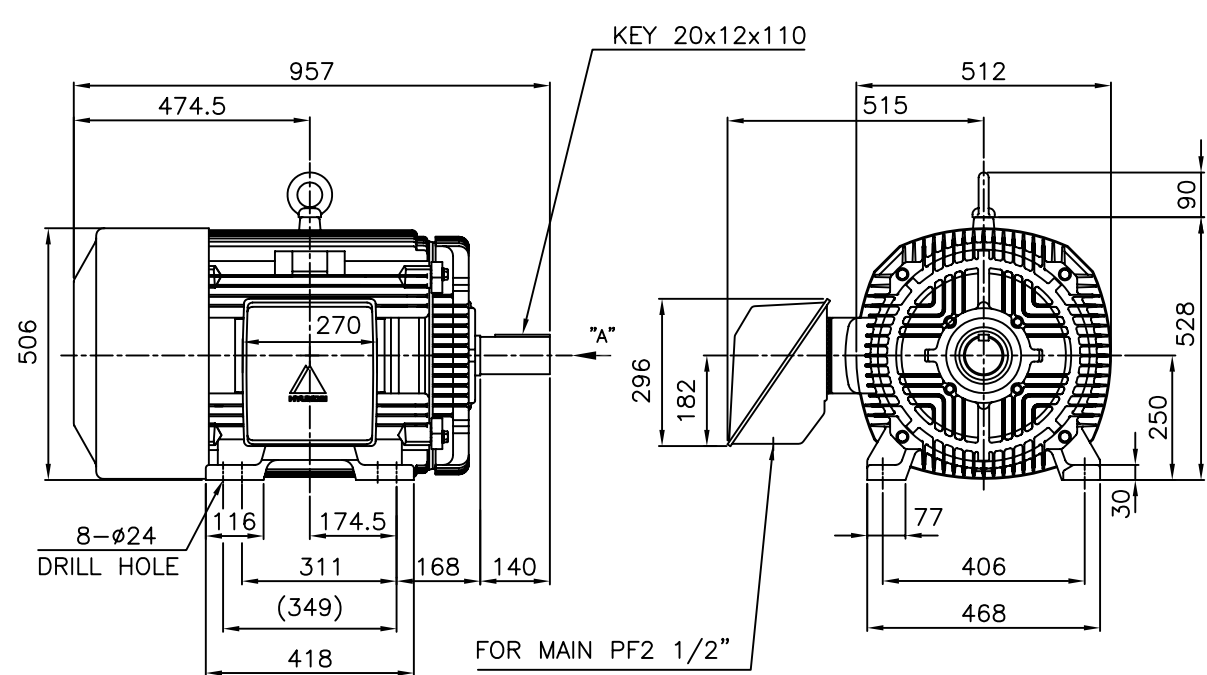
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



|                                                                                                                                |   |                                                   |                                                            |
|--------------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------|------------------------------------------------------------|
| 1                                                                                                                              | 2 | 3                                                 | 4                                                          |
|  <b>HYUNDAI</b><br>HEAVY INDUSTRIES CO., LTD. |   | <b>TEFC</b><br><b>THREE PHASE INDUCTION MOTOR</b> | <b>TYPE</b><br><sup>(1)</sup> TNB , TDB<br>CAST IRON FRAME |

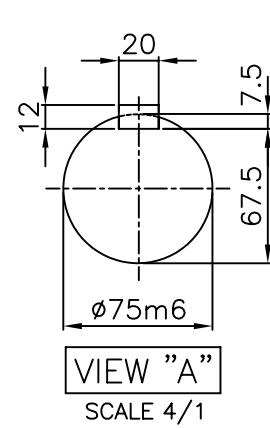


**NOTE**

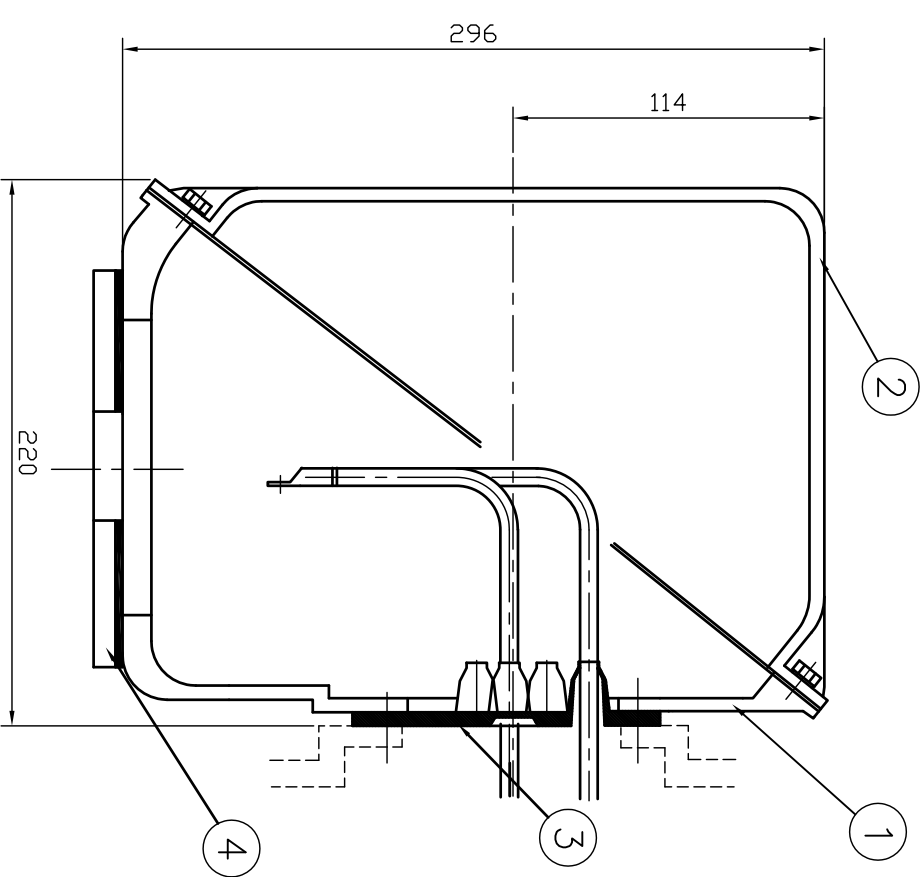
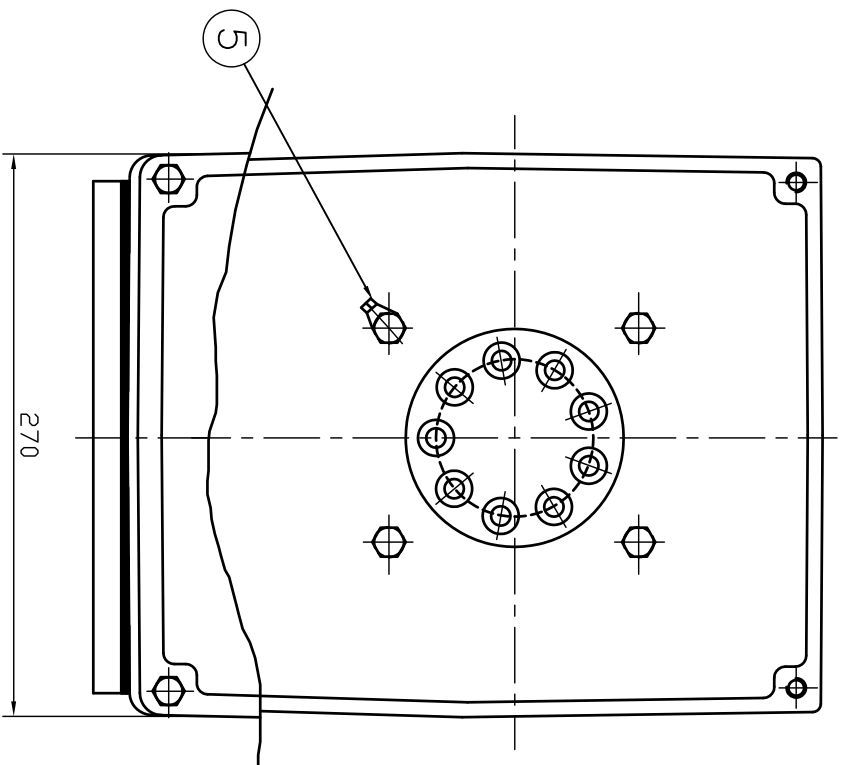
1.TOLERANCE :

|                |                                         |
|----------------|-----------------------------------------|
| CENTER HEIGHT  | 250 <sup>0</sup> <sub>-0.5</sub>        |
| BASE HILE      | ø24 <sup>+0.43</sup> <sub>0</sub>       |
| SHAFT DIAMETER | ø75 <sup>+0.030</sup> <sub>+0.011</sub> |
| KEYWAY WIDTH   | 20 <sup>-0.022</sup> <sub>-0.074</sub>  |
| KEYWAY DEPTH   | 7.5 <sup>+0.2</sup> <sub>0</sub>        |
| KEY WIDTH      | 20 <sup>0</sup> <sub>-0.052</sub>       |
| KEY HEIGHT     | 12 <sup>0</sup> <sub>-0.110</sub>       |

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                                                                                                                                                        | Y.S.KIM     | UNIT     | MM         | SUBJECT                                | KS Fr.250S TEFC   |
| CHKD BY                                                                                                                                                        |             | SCALE    | 1/15       | TITLE                                  | CAD PROJ \ FILE   |
| CHKD BY                                                                                                                                                        |             | PROJEC'N | 3rd Angle  |                                        | MMSTDMTR/TJ5SAP51 |
| DSND BY                                                                                                                                                        | LEE NOH DUK | DATE     | 2008.01.18 |                                        |                   |
|  <b>HYUNDAI</b><br>HEAVY INDUSTRIES CO., LTD.<br>INDUSTRIAL & POWER SYSTEMS |             |          |            | OUTLINE<br>THREE-PHASE INDUCTION MOTOR |                   |
|                                                                                                                                                                |             |          |            | REF. NO                                | L2-Series         |
|                                                                                                                                                                |             |          |            | DWG NO                                 | TJ5SAP51          |
|                                                                                                                                                                |             |          |            | Sheet No.                              | of                |
|                                                                                                                                                                |             |          |            | Revision No.                           | 0                 |



| REV | DATE | CONTENTS | REV'D BY | CHK'D BY | Q.P. CHK | APP'D BY |
|-----|------|----------|----------|----------|----------|----------|
| 1   |      |          |          |          |          |          |

| 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.         |
| APP'D BY | 김진오                | UNIT      | MM            |         |                   |                    |
| Q.P. CHK | 주영걸                | SCALE     | NONE          |         |                   |                    |
| CHK'D BY | 권오철                | PROJEC'T  | 3번(3rd Angle) |         |                   |                    |
| DSND BY  | 김헌태                | DATE      | 92.06.05      |         |                   |                    |
|          |                    |           |               | SUBJECT | HLA6 - 250,280Fr. | CAD PROJ. & FILE   |
|          |                    |           |               | TITLE   | (CAST IRON)       | T-BOX-M \ 38016882 |
|          |                    |           |               | REF. NO | 3M-016882         | Sheet No. of       |
|          |                    |           |               | DWG NO  | 3M-016882         | Revision No.       |

