


|  <b>Bharat Bijlee</b>    |                                    | Data sheet for motors  |                     |
|---|------------------------------------|--|---------------------|
| Manufacturer  | Bharat Bijlee Ltd.                 | Customer   |                     |
| Type of motor   | 3 Phase Induction Motor            | BBL Enquiry reference No   |                     |
| Quantity  |                                    | Customer P.O.Number  |                     |
| Application   | CUSTOMER TO FURNISH                | W.O. No. / SAP No.   |                     |
| Tag no.   |                                    | Output kW / pole   | 250 / 6P            |
| BBL type tef.   |                                    | Frame size   | 355L                |
| Installation details  |                                    | Applicable standards (latest edition)  |                     |
| Area classification (Safe / Hazardous)  | Industrial safe area               | Performance: IS/IEC 60034-1 Maintenance IS:900                               |                     |
| Location: indoor/outdoor/deck   | Indoor                             | Dimensions: IS 1231/IS 2223/IS:8223  |                     |
| Altitude (meters)   | 1000 or less                       | Vibrations: IS 12075   |                     |
|   |                                    | Noise level: IS 12065  |                     |
| Hazardous area details  |                                    | Supply conditions and permissible variations (grid supply)                   |                     |
| Area classification GAS (Zone 1/Zone 2)   | N.A.                               | Number of phases   | Three               |
| Gas group   | N.A.                               | Voltage (Volts) and permissible variation                                    | 415 ±10%            |
| Temp.class  | N.A.                               | Frequency (Hz) and permissible variation                                     | 50 ±5%              |
| Type of Explosion protection (FLP/Type 'e'/Type 'n')  | N.A.                               | Combined variation (absolute sum)  | ±10%                |
| Approving authority for hazardous area  | Not Applicable                     |  |                     |
| Electrical parameters   |                                    |  |                     |
| Starting performance  |                                    |  |                     |
| Method of starting  | DOL                                | Starting current (%FLC)  | 600                 |
| Load speed (rpm)  | CUSTOMER TO FURNISH                | Starting torque (%FLT)   | 200                 |
| Motor GD <sup>2</sup> (kgm <sup>2</sup> )   | 35.5                               | Pull out torque (%FLT)   | 250                 |
| Load GD <sup>2</sup> (kgm <sup>2</sup> )  | CUSTOMER TO FURNISH                | Locked rotor withstand time (hot/cold) (sec)                                 | 15 / 30             |
| Load torque-speed curve   | Parabolic TS curve                 | Number of consecutive starts (hot/cold) (nos.) provided Load GD2 = Motor GD2 | 2 / 3               |
| Starting time at rated voltage (sec)  | PLEASE FURNISH ALL ABOVE DETAILS   |  |                     |
| Running Performance   |                                    |  |                     |
| Efficiency class  | IE2                                | Duty and designation   | Continuous (S1)     |
| Ambient temp./temp.rise by resistance (deg.C)   | 50 / 70                            | CDF/Equivalent starts per hour/FI  | -                   |
| Enclosure   | TEFC (TOTALLY ENCLOSED FAN COOLED) | Insulation class / utilisation class on DOL                                  | F/B                 |
| Full load current (FLC) amps.   | 436                                | Rotor type (Squirrel Cage/ Slip ring )                                       | Squirrel Cage       |
| Full load speed (rpm)   | 990                                | Rotor voltage/rotor current (RV/RA) (Volts/Amps)                             | Not applicable      |
| Full load torque (FLT) kg-m   | 246                                | Stator/rotor time constant (min)   | 156/211             |
| Efficiency in % at FL/0.75FL/0.5FL  | 95.0 94.7 93.4                     | Power factor at FL/0.75FL/0.5FL  | 0.84 0.80 0.70      |
| Mechanical parameters   |                                    |  |                     |
| Mounting  | B5                                 | Mounting dimensions  | Refer GA drawing    |
| Shaft extention   | Single cylindrical                 | Direction of rotation viewed from DE   | Clockwise           |
| Degree of protection  | IP 55                              | Suitable for bidirectional rotation  | Yes                 |
| Method of cooling (TEFC/forced cooled/TEFC)   | TEFC (IC 411)                      | Paint type   | Acrylic             |
| Net weight of motor (kgs.)  | 1780                               | Paint shade  | RAL 5000            |
|   |                                    | Earthing provision (two terminals on stator body)                            | Yes                 |
| Bearings  |                                    | Terminal box   |                     |
| Coupling (Direct/flexible/Belt & Pulley/Gearbox)  | Direct                             | Terminal box location when viewed from DE                                    | As per GA drawing   |
| Dimensions of pulley (OD x width) mm  | -                                  | Direction of cable entry   | As per GA drawing   |
| Bearings (roller/ball/angular contact)  | Ball /Ball                         | Cable size and type(Aluminium)   | 2R X 3C X 300 SQ MM |
| Bearing size DE/NDE   | 6322 C3 / 6322 C3                  | Earthing provision (one terminal in TB)                                      | Yes                 |
| Type of lubrication   | Unirex-N3 - GREASE                 | No of phases/Winding connection/number of terminals                          | 3 / DELTA / 6       |
| Accessories   |                                    |  |                     |
| RTDs - 3 numbers simplex (w/o controller)   |                                    | Arrow plate for direction of rotation  |                     |
| BTDS - 1 number per bearing (w/o controller)  |                                    | Double compression glands (main cable)                                       |                     |
| Space heaters - single phase 50z, 230V  |                                    | Double compression glands (Space heater/thermistors/RTDs)                    |                     |
| Thermistors - PTC , 1 number per phase  |                                    | Brake (Type/voltage/torque)  |                     |
| Additional T-Box for Accessories  |                                    |  |                     |
| Additional nameplate  |                                    |  |                     |
| Notes:  |                                    |  |                     |
| 1)All performance values are subject to IS/IEC 60034-1 tolerances, unless otherwise specified.          |                                    |  |                     |
| 2)Performance values are at rated voltage and rated frequency condition and for DOL starting condition. |                                    |  |                     |
| 3)Motor GD <sup>2</sup> = Load GD <sup>2</sup> assumed wherever not mentioned.                          |                                    |  |                     |
| 4)Where starting time is more than 10 seconds, provision of heavy duty relays is mandatory.             |                                    |  |                     |
| 5)Kilowatt rating is mandatory and HP is approximate.   |                                    |  |                     |
| 6) Accessories provided are marked as "YES"   |                                    |  |                     |
|   |                                    | <div>Prepared by</div> <div>Approved by</div> <div>Revision</div>            |                     |
| Project:  |                                    | Contractor/Client  |                     |
| Consultant  |                                    | Package  |                     |
|   |                                    | Date:  |                     |