## (B) Bharat Bijlee Data sheet for motors Customer Bharat Bijlee Ltd. Manufacturer 3 Phase Induction Motor Type of motor **BBL** Enquiry reference No **Customer P.O.Number** Quantity **CUSTOMER TO FURNISH** W.O. No. / SAP No. Application 2P Output kW / pole 110 Tag no. 2J31S233 BBL type tef. Frame size MJ315 Installation details Applicable standards (latest edition) Performance: IS/IEC 60034-1 Maintenance IS:900 FLP Motors: IS/IEC 60079-1 Area classification (Safe / Hazardous) Hazardous Location: indoor/outdoor/deck Dimensions: IS 1231/IS 2223/IS:8223 Indoor 1000 or less Vibrations: IS 12075 Altitude (meters) Noise level: IS 12065 Hazardous area details Supply conditions and permissible variations (grid supply) Area classification GAS (Zone 1/Zone 2) **ZONE I** Number of phases Three Voltage (Volts) and permisible variation IIA, IIB 415 ±10% Gas group T4 Temp.class Frequency (Hz) and permissible variation 50 ±5% Type of Explosion protection (FLP/Type Ex d ±10% Combined variation (absolute sum) 'e'/Type 'n') If Coal Mine application then Approving authority for hazardous area DGMS else PESO Electrical parameters Starting performance DOL Starting current (%FLC) Method of starting 700 Load speed (rpm) **CUSTOMER TO FURNISH** Starting torque (%FLT) 220 Motor $GD^2$ (kgm<sup>2</sup>) Pull out torque (%FLT) 250 Load GD<sup>2</sup>(kgm<sup>2</sup>) **CUSTOMER TO FURNISH** 30 Locked rotor withstand time (hot/cold) (sec) 15 Number of consecutive starts (hot/cold) (nos.) Parabolic TS curve 2/3 Load torque-speed curve provided Load GD2 = Motor GD2 PLEASE FURNISH ALL ABOVE Starting time at rated voltage (sec) **DETAILS** Running Performance Continuous (S1) Efficiency class IE2 Duty and designation 45 75 CDF/Equivalent starts per hour/FI Ambient temp./temp.rise by resistance (deg.C) TEFC (TOTALLY ENCLOSED F/B Insulation class / utilisation class on DOL Enclosure FAN COOLED) 180 Full load current (FLC) amps. Rotor type (Squirrel Cage/ Slip ring) Squirrel Cage Not applicable Full load speed (rpm) 2982 Rotor voltage/rotor current (RV/RA) (Volts/Amps) 35.9 Stator/rotor time constant (min) 108/146 Full load torque (FLT) kg-m Power factor at FL/0.75FL/0.5FL Efficiency in % at FL/0.75FL/0.5FL 94.3 94.1 91.5 0.90 0.86 0.80Mechanical parameters Mounting **B**3 Mounting dimensions Refer GA drawing Shaft extention Single cylindrical Direction of rotation viewed from DE Clockwise Degree of protection IP 55 Yes Suitable for bidirectional rotation Method of cooling (TEFC/forced TEFC (IC 411) Acid Alkali Proof Paint type cooled/TESC) Paint shade Net weight of motor (kgs.) 1050 632 as per IS 5 Earthing provision (two terminals on stator body) Yes Terminal box Bearings Coupling (Direct/flexible/Belt & Direct Terminal box location when viewed from DE As per GA drawing Pulley/Gearbox) Dimenssions of pulley (OD x width) mm Direction of cable entry As per GA drawing Bearings (roller/ball/angular contact) Ball/Ball 2R X 3C X 185 SQ MM Cable size and type(Aluminium) Earthing provision (one terminal in TB) Bearing size DE/NDE 6319 C3 6319 C3 Yes No of phases/Winding connection/number of Unirex-N3 - GREASE 3 / DELTA / 6 Type of lubrication terminals 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) Double compression glands (Space Space heaters - single phase 50z, 230V heater/thermisters/RTDs) Thermisters - 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  $GD^2$  = Load  $GD^2$  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"

		Prepared by	
		Approved by	
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<b>Project:</b>	Contractor/Client	Data	
Consultant	Package	Date:	