

<b>Manufacturer</b>	<b>Bharat Bijlee Ltd.</b>		<b>Customer</b>	
<b>Type of motor</b>	<b>3 Phase Induction Motor</b>		<b>BBL Enquiry reference No</b>	
<b>Quantity</b>			<b>Customer P.O.Number</b>	
<b>Application</b>	<b>CUSTOMER TO FURNISH</b>		<b>W.O. No. / SAP No.</b>	
Tag no.			Output kW / pole	11 / 4P
BBL type tef.			Frame size	160M
<b>Installation details</b>			<b>Applicable standards (latest edition)</b>	
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	
<b>Hazardous area details</b>			<b>Supply conditions and permissible variations (grid supply)</b>	
Area classification GAS (Zone 1/Zone 2)	N.A.		Number of phases	
Gas group	N.A.		Voltage (Volts) and permissible variation	
Temp.class	N.A.		Frequency (Hz) and permissible variation	
Type of Explosion protection (FLP/Type 'e'/Type 'n')	N.A.		Combined variation (absolute sum)	
Approving authority for hazardous area	Not Applicable			
<b>Electrical parameters</b>				
<b>Starting performance</b>				
Method of starting	DOL		Starting current (%FLC)	
Load speed (rpm)	CUSTOMER TO FURNISH		Starting torque (%FLT)	
Motor GD <sup>2</sup> (kgm <sup>2</sup> )	0.285		Pull out torque (%FLT)	
Load GD <sup>2</sup> (kgm <sup>2</sup> )	CUSTOMER TO FURNISH		Locked rotor withstand time (hot/cold) (sec)	
Load torque-speed curve	Parabolic TS curve		Number of consecutive starts (hot/cold) (nos.)	
Starting time at rated voltage (sec)	PLEASE FURNISH ALL ABOVE DETAILS		provided Load GD2 = Motor GD2	
<b>Running Performance</b>				
Efficiency class	IE2		Duty and designation	
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	
Full load current (FLC) amps.	20.5		Rotor type (Squirrel Cage/ Slip ring )	
Full load speed (rpm)	1465		Rotor voltage/rotor current (RV/RA) (Volts/Amps)	
Full load torque (FLT) kg-m	7.31		Stator/rotor time constant (min)	
Efficiency in % at FL/0.75FL/0.5FL	89.8 89.8 88.5		Power factor at FL/0.75FL/0.5FL	
<b>Mechanical parameters</b>				
Mounting	B3		Mounting dimensions	
Shaft extention	Single cylindrical		Direction of rotation viewed from DE	
Degree of protection	IP 55		Suitable for bidirectional rotation	
Method of cooling (TEFC/forced cooled/TEFC)	TEFC (IC 411)		Paint type	
Net weight of motor (kgs.)	109		Paint shade	
			Earthing provision (two terminals on stator body)	
<b>Bearings</b>			<b>Terminal box</b>	
Coupling (Direct/flexible/Belt & Pulley/Gearbox)	Direct		Terminal box location when viewed from DE	
Dimenssions of pulley (OD x width) mm	-		Direction of cable entry	
Bearings (roller/ball/angular contact)	Ball /Ball		Cable size and type(Aluminium)	
Bearing size DE/NDE	6309 2Z C3 / 6209 2Z C3		Earthing provision (one terminal in TB)	
Type of lubrication	LITHIUM SOAP BASE GREASE		No of phases/Winding connection/number of terminals	
<b>Accessories</b>				
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				
<b>Notes:</b>				
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"				
			Prepared by	
			Approved by	
			Revision	
<b>Project:</b>		<b>Contractor/Client</b>		Date:
<b>Consultant</b>		<b>Package</b>		