

 Bharat Bijlee		<i>Data sheet for motors</i>							
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	90	/ 6P				
BBL type tef.	2J31M633		Frame size	MJ315					
Installation details			Applicable standards (latest edition)						
Area classification (Safe / Hazardous)	Hazardous		Performance: IS/IEC 60034-1 Maintenance IS:900	FLP Motors: IS/IEC 60079-1					
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)	ZONE I		Number of phases	Three					
Gas group	IIA, IIB		Voltage (Volts) and permissible variation	415	±10%				
Temp.class	T4		Frequency (Hz) and permissible variation	50	±5%				
Type of Explosion protection (FLP/Type 'e'/Type 'n')	Ex d		Combined variation (absolute sum)	±10%					
Approving authority for hazardous area	If Coal Mine application then DGMS else PESO								
Electrical parameters									
Starting performance									
Method of starting	DOL		Starting current (%FLC)	600					
Load speed (rpm)	CUSTOMER TO FURNISH		Starting torque (%FLT)	220					
Motor GD ² (kgm ²)	12.4		Pull out torque (%FLT)	250					
Load GD ² (kgm ²)	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)	45 / 75		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.	159		Rotor type (Squirrel Cage/ Slip ring)	Squirrel Cage					
Full load speed (rpm)	989		Rotor voltage/rotor current (RV/RA) (Volts/Amps)	Not applicable					
Full load torque (FLT) kg-m	88.6		Stator/rotor time constant (min)	120/162					
Efficiency in % at FL/0.75FL/0.5FL	94.0	94.0 92.9	Power factor at FL/0.75FL/0.5FL	0.84	0.80 0.74				
Mechanical parameters									
Mounting	B3		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/TESC)	TEFC (IC 411)		Paint type	Acid Alkali Proof					
Net weight of motor (kgs.)	1005		Paint shade	632 as per IS 5					
			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					
Dimenssions 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 185 SQ MM					
Bearing size DE/NDE	6319 C3	/ 6319 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 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			
						Revision			
Project:		Contractor/Client		Date:					
Consultant		Package							

