

 <b>Bharat Bijlee</b>		<i>Data sheet for motors</i>							
<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	22	/ 8P				
BBL type tef.		2J22M833	Frame size	MJ225					
<b>Installation details</b>			<b>Applicable standards (latest edition)</b>						
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						
<b>Hazardous area details</b>			<b>Supply conditions and permissible variations (grid supply)</b>						
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		T5	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							
<b>Electrical parameters</b>									
<b>Starting performance</b>									
Method of starting		DOL	Starting current (%FLC)	550					
Load speed (rpm)		CUSTOMER TO FURNISH	Starting torque (%FLT)	200					
Motor GD <sup>2</sup> (kgm <sup>2</sup> )		2.41	Pull out torque (%FLT)	220					
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							
<b>Running Performance</b>									
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.		41.9	Rotor type (Squirrel Cage/ Slip ring )	Squirrel Cage					
Full load speed (rpm)		725	Rotor voltage/rotor current (RV/RA) (Volts/Amps)	Not applicable					
Full load torque (FLT) kg-m		29.6	Stator/rotor time constant (min)	108/146					
Efficiency in % at FL/0.75FL/0.5FL	89.1	89.1 88.1	Power factor at FL/0.75FL/0.5FL	0.82	0.80 0.72				
<b>Mechanical parameters</b>									
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.)		430	Paint shade	632 as per IS 5					
			Earthing provision (two terminals on stator body)	Yes					
<b>Bearings</b>			<b>Terminal box</b>						
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 120 SQ MM					
Bearing size DE/NDE	6213 C3	/ 6213 C3	Earthing provision (one terminal in TB)	Yes					
Type of lubrication		SKF LGMT3- GREASE	No of phases/Winding connection/number of terminals	3 / DELTA / 6					
<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>							

