

 <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>			W.O. No. / SAP No.				
Tag no.				Output kW / pole		9.3	/ 8P	
BBL type tef.		2J18L833		Frame size		MJ180		
<i>Installation details</i>				<i>Applicable standards (latest edition)</i>				
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				
<i>Hazardous area details</i>				<i>Supply conditions and permissible variations (grid supply)</i>				
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						
<i>Electrical parameters</i>								
<i>Starting performance</i>								
Method of starting		DOL		Starting current (%FLC)		500		
Load speed (rpm)		CUSTOMER TO FURNISH		Starting torque (%FLT)		170		
Motor GD <sup>2</sup> (kgm <sup>2</sup> )		0.705		Pull out torque (%FLT)		210		
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						
<i>Running Performance</i>								
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.		19.5		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		12.5		Stator/rotor time constant (min)		108/146		
Efficiency in % at FL/0.75FL/0.5FL		86.3	86.3	85.0	Power factor at FL/0.75FL/0.5FL	0.77	0.74 0.64	
<i>Mechanical parameters</i>								
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.)		210		Paint shade		632 as per IS 5		
				Earthing provision (two terminals on stator body)		Yes		
<i>Bearings</i>				<i>Terminal box</i>				
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 50 SQ MM		
Bearing size DE/NDE		6310 2Z C3 / 6310 2Z C3		Earthing provision (one terminal in TB)		Yes		
Type of lubrication		LITHIUM SOAP BASE GREASE		No of phases/Winding connection/number of terminals		3 / DELTA / 6		
<i>Accessories</i>								
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								
<i>Notes:</i>								
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>						

