Mf4	Dhowat Dillag T 4-1			Customer			
Manufacturer	Bharat Bijlee Ltd.3 phase Induction Motor			Customer BBL Enquiry reference No			
<b>Type of motor</b> Quantity	5 phase induction wrotor			BBL Enquiry reference No Customer P.O.Number			
Application	CUSTOME	R TO FURNISH		W.O. No. / SAP No.			
Fag no.	CUSTOME			Output kW / Pole	9.3	1	4P
BBL type Ref.		MD16M4A5		Frame size	9.5	/ MJ160	41
Installation deta	ils			Applicable standards (latest edition)		1013 100	
	on (Safe / Hazardous)	Hazardous area		Performance: IS/IEC 60034-1 Maintenance IS:900	FLP Moto	rs: IS/IEC 6	0079-
Location: indoor/outdoor/deck				Dimensions: IS 1231/IS 2223/IS:8223			0017
Altitude (meters)		1000 or less		Vibrations: IS 12075			
				Noise level: IS 12065			
Hazardous area	details			Supply conditions and permissible variations (grid	supply)		
Area classificatio	on GAS (Zone 1/Zone 2)	ZONE I		Number of phases		Three	
Gas group		IIA, IIB		Voltage (Volts) and permisible variation	415 ±10%		%
Temp.class		T5		Frequency (Hz) and permissible variation	50 ±5%		
rypé or Explosio	-	Ex 'd'		Combined variation (absolute sum)	±10%		
Approving authority for hazardous area		If Mine application ther else PESO	n DGMS				
Electrical param							
Starting perform					1		
Method of starting		DOL		Starting current (%FLC)	600		
Load speed (rpm)		CUSTOMER TO FURNISH		Starting torque (%FLT)	200		
Motor $GD^2$ (kgm <sup>2</sup> )		0.141		Pull out torque (%FLT)	250		
Load GD <sup>2</sup> (kgm <sup>2</sup> )		CUSTOMER TO FUI	RNISH	Locked rotor withstand time (hot/cold) (sec)	8	/	16
Load torque-speed curve		Parabolic LS curve		Number of consecutive starts (hot/cold) (nos.) provided Load GD2 = Motor GD2	2/3		
Starting time at ra	ated voltage (sec)	PLEASE FURNISH ALI DETAILS	L ABOVE				
Running Perform	mance	Ι					
Efficiency class		-		Duty and designation	Continuous (S1)		51)
Ambient temp./temp.rise by resistance (deg.C)				CDF/Equivalent starts per hour/FI	-		
Enclosure		FAN COOLED)		Insulation class / utilisation class on DOL	F/B		
Full load current (FLC) amps.				Rotor type (Squirrel Cage/ Slip ring )	Squirrel Cage		
Full load speed (rpm)				Rotor voltage/rotor current (RV/RA) (Volts/Amps)	Not applicable 90/122		le
Full load torque (FLT) kg-m Efficiency in % at FL/0.75FL/0.5FL		88.5 88.0		Stator/rotor time constant (min) Power factor at FL/0.75FL/0.5FL	0.84	0.80	0.72
Mechanical para		00.3 00.0	07.0	rower factor at rL/0.73rL/0.3rL	0.84	0.80	0.72
Mounting		B5		Mounting dimensions	Re	fer GA draw	ving
Shaft extention		Single cylindrical		Direction of rotation viewed from DE	Refer GA drawing Clockwise		
Degree of protection		<b>C i</b>		Suitable for bidirectional rotation	Yes		
0 1							
Method of coolin	ng (TEFC/forced cooled/TESC)	TEFC (IC 411)		Paint type	Acid Alkali Proof		
Net weight of mo	otor (kg)	136		Paint shade	632 as per IS 5		
				Earthing provision (two terminals on stator body)	Yes		
Bearings				Terminal box	1		
Coupling (Direct	/flexible/Belt &	Direct		Terminal box location when viewed from DE	As	per GA draw	ving
Pulley/Gearbox)							
Dimenssions of p	oulley (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 35 SQ MM		
Bearing size DE/NDE				Earthing provision (one terminal in TB)	Yes		
Type of lubrication	on	LITHIUM SOAP BASE	GREASE	tompinolo	3	/ DELTA /	6
Accessories	• 1 / / • • • • •				1		
RTDs - 3 numbers simplex(w/o controller)			Arrow plate for direction of rotation				
BTDs - 1 number per bearing(w/o controller) Space heaters - single phase 50z, 230V				Double compression glands (main cable) Double compression glands (Space			
•				heater/Thermisters/RTDs)			
Thermisters - PT				Brake (Type/voltage/torque)			
Additional T-Box Additional name	x for Accessories						
	овле	I			1		

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	

			Revison	
<b>Project:</b>	Contractor/Client		Date:	
Consultant	Package			