Manufacturer	Bharat Bijlee Ltd.		Customer			
	3 phase Induction Motor					
Гуре of motor Quantity	5 phase multion wrotor		BBL Enquiry reference No Customer P.O.Number			
Application	CUSTOME	R TO FURNISH	W.O. No. / SAP No.			
	CUSIOME		Output kW / Pole	37	1	4P
Гад no. BBL type Ref.		MD22S413	Frame size	57	/ MJ225	41
Installation detai	 i1c	NID225415	Applicable standards (latest edition)		IVIJ 223	
		Hazardous area		FLP Motor	rs. IS/IFC	50079_
		Dimensions: IS 1231/IS 2223/IS:8223		15. 10/ 1LC	50075-	
Altitude (meters) 1000 or less		Vibrations: IS 12075				
Intitude (Ineters)			Noise level: IS 12075			
Hazardous area	details		Supply conditions and permissible variations (grid	sunnly)		
		Supply conditions and permissible variations (grid supply) Number of phases Three				
Gas group		IIA, IIB	Voltage (Volts) and permisible variation	415 ±10%)%
Temp.class		T5	Frequency (Hz) and permissible variation	$50 \pm 5\%$		
rype or Explosion	-	Ex 'd'	Combined variation (absolute sum)		±10%	/0
Approving authority for hazardous area		If Mine application then DGMS else PESO			21070	
Electrical param	eters					
Starting perform						
Method of startin	0	DOL	Starting current (%FLC)		600	
Load speed (rpm)	-	CUSTOMER TO FURNISH	Starting torque (%FLT)	230		
Motor GD ² (kgm ²	2)	1.41	Pull out torque (%FLT)		240	
Load GD ^{2} (kgm ^{2})	CUSTOMER TO FURNISH	Locked rotor withstand time (hot/cold) (sec)	15	/	30
oad torque-speed curve		Parabolic TS curve	Number of consecutive starts (hot/cold) (nos.) provided Load GD2 = Motor GD2		2/3	
Starting time at ra	ated voltage (sec)	PLEASE FURNISH ALL ABOVE DETAILS				
Running Perform	nance			_		
Efficiency class		<u> </u>	Duty and designation	Continuous (S1)		S1)
Ambient temp./te	mp.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.	65.3	Rotor type (Squirrel Cage/ Slip ring)	Squirrel Cage		ge
Full load speed (rpm)		1470	Rotor voltage/rotor current (RV/RA) (Volts/Amps)	Not applicable		ole
Full load torque (FLT) kg-m		24.5	Stator/rotor time constant (min)	108/146		
Efficiency in % at	t FL/0.75FL/0.5FL	93.0 93.0 91.0	Power factor at FL/0.75FL/0.5FL	0.85	0.82	0.75
Mechanical para	meters			1		
Mounting		B8	Mounting dimensions	Refer GA drawing		ving
Shaft extention		Single cylindrical	Direction of rotation viewed from DE	Clockwise		,
Degree of protect	tion	IP 55	Suitable for bidirectional rotation	Yes		
Method of cooling	g (TEFC/forced cooled/TESC)	TEFC (IC 411)	Paint type	Acid Alkali Proof		roof
Net weight of motor (kg)		386	Paint shade Earthing provision (two terminals on stator body)	63	32 as per IS Yes	S 5
Bearings			Terminal box			
Coupling (Direct/flexible/Belt & Pulley/Gearbox)		Direct	Terminal box location when viewed from DE	As per GA drawing		
Dimensions of pulley (OD x width) mm		-	Direction of cable entry	Ası	per GA dra	wing
Bearings (roller/ball/angular contact)		Ball /Ball	Cable size and type(Aluminium)	2R X 3C X 120 SQ M		SQ MM
earing size DE/NDE 6		6213 C3/6213 C3	Earthing provision (one terminal in TB)		Yes	
		SKF LGMT3- GREASE	torminale	3 / DELTA / 6		
Accessories						
RTDs - 3 number	rs simplex(w/o controller)		Arrow plate for direction of rotation			
BTDs - 1 number	per bearing(w/o controller)		Double compression glands (main cable)			
NDACE heaters - single phase DUZ 23UV			Double compression glands (Space heater/Thermisters/RTDs)			
	С		Brake (Type/voltage/torque)			
Thermisters - PTC				-		

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	

			Revison	
Project:	Contractor/Client		Date:	
Consultant	Package			