	Dhowot Dillog T 4-1		Customan			
	Bharat Bijlee Ltd.		Customer BBI Enguing reference No			
Fype of motor Image: Constraint of the second	3 phase Induction Motor		BBL Enquiry reference No Customer P.O.Number			
Application	CUSTOME	R TO FURNISH	W.O. No. / SAP No.			
Tag no.	CUSIOME		Output kW / Pole	90	/	4P
BBL type Ref.		MD28M433	Frame size		, MJ280	
Installation details	Ś		Applicable standards (latest edition)			
	(Safe / Hazardous)	Hazardous area	Performance: IS/IEC 60034-1 Maintenance IS:900	FLP Mote	ors: IS/IEC	60079-
		Dimensions: IS 1231/IS 2223/IS:8223				
Altitude (meters)		1000 or less	Vibrations: IS 12075			
			Noise level: IS 12065			
Hazardous area d	letails		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 permisible variation	415 ±10%		0%
Temp.class		T4	Frequency (Hz) and permissible variation	50 ±5%		5%
Type of Explosion protection (ELD/Type 'e'/Type 'e')		Ex 'd'	Combined variation (absolute sum)	±10%		
Approving authorit	ty for hazardous area	If Mine application then DGMS else PESO				
Electrical parame Starting performa						
Method of starting		DOL	Starting current (%FLC)	600		
Load speed (rpm)	,	CUSTOMER TO FURNISH	Starting torque (%FLT)	210		
Motor GD^2 (kgm ²))	6	Pull out torque (%FLT)		280	
Load GD ² (kgm ²)		CUSTOMER TO FURNISH	Locked rotor withstand time (hot/cold) (sec)	15	/	30
Load torque-speed		Parabolic TS curve	Number of consecutive starts (hot/cold) (nos.)	2/3		
Starting time at rat	ted voltage (sec)	PLEASE FURNISH ALL ABOVE	provided Load GD2 = Motor GD2			
Running Perform		DETAILS				
Efficiency class		_	Duty and designation	Continuous (S1)		(S1)
Ambient temp./tem	np.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.		154.0	Rotor type (Squirrel Cage/ Slip ring)	Squirrel Cage		ige
Full load speed (rpm)		1485	Rotor voltage/rotor current (RV/RA) (Volts/Amps)	Not applicable		•
Full load torque (FLT) kg-m		59	Stator/rotor time constant (min)	144/194		
Efficiency in % at	FL/0.75FL/0.5FL	94.7 94.5 93.5	Power factor at FL/0.75FL/0.5FL	0.86	0.83	0.75
Mechanical paran	neters	·				
Aounting		B8	Mounting dimensions	Refer GA drawing		wing
Shaft extention		Single cylindrical	Direction of rotation viewed from DE	Clockwise		e
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 (kg)		725	Paint shade Earthing provision (two terminals on stater hody)	632 as per IS 5 Yes		
Bearings			Earthing provision (two terminals on stator body) <i>Terminal box</i>		1 5	
Coupling (Direct/f.	lexible/Belt &	Direct	Terminal box location when viewed from DE	As per GA drawing		
Pulley/Gearbox)	lley (OD x width) mm		Direction of cable entry	As per GA drowing		
X	all/angular contact)	- Ball /Ball	Cable size and type(Aluminium)	As per GA drawing 2R X 3C X 120 SQ MN		
C						-
Bearing size DE/N		6317 C3/6316 C3	Earthing provision (one terminal in TB)	Yes		16
Γype of lubrication	1	SKF LGMT3- GREASE	tominala		3 / DELTA	/ 0
Accessories	simplex (w/a controller)		Arrow plata for direction of rotation			
	simplex(w/o controller)		Arrow plate for direction of rotation			
וועני - ארים - ארים	per bearing(w/o controller)		Double compression glands (main cable) Double compression glands (Space			
Space heaters - single phase 50z, 230V			heater/Thermisters/RTDs)			
Space heaters - sin						
•	۱ ٬		Brake (Type/voltage/torque)			
Space heaters - sin Thermisters - PTC Additional T-Box 1 Additional namepla	for Accessories		Brake (Type/voltage/torque)			

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			