COMPRESSOR MOTOR DATA SHEET FOR NITROGEN GAS BOOSTER

Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
05	31/01/2022	Approved for Construction	KP	LDM	PW	
04	06/01/2022	Approved for Construction	KP	LDM	PW	
03	09/11/2021	Approved for Construction	KP	LDM	PW	
02	14/10/2021	For approval	KP	LDM	PW	
01	20/09/2021	For approval	KP	LDM	PW	
00	08/12/2020	For approval	KP	LdM	PW	
					Class: 1	Phase: P

TABULATION OF REVISED PAGES

Page	D00	D01	D02	D03	D04	D05	D06	D07	D08	D09	D10
1.	X	X	X	X	X	X					
2.	X	X	X	X	X	X					
3.	X	X	X	X	X	X					
4.	X	X	X	X	X	X					
5.		X									
6.											
7.											
8.											
9.											
10.											

OWNER:	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT	EPC CONTRACTOR:
MC :	Motor Data Sheet (Item No: P-2007 A/B)	VENDOR:

Document Number:	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
	BU	20	VD	303	EL	DSH	0051	Rev.: 05	Page: 3 of 4

General Design Data

Tag Nos :	**20-C-1002-M**	Manufacturer :	**WEG**
QTY. :	**1**	Plant Location :	**Busher**
Client :	**Bushehr Petrochemical Company**	Purchase Order No. :	**-**

Applicable Document		Enviromental Condition	
Project Specification :	BU-20-D-000-EL-SPC-521	Location :	**Outdoor**
Paint Specification :	BU-20-D-000-PI-SPC-409	Ambient Air Temperature :	**Min. 5ºC** **Max. 52ºC**
Applicable Standard :	**IEC 60034**	Humidity :	**80%**
		Altitude :	**8.5m above Sea Level**
		Area Classification(IEC 60079-10) :	**Zone 2, IIB, T3**

Power System			
System Voltage &Variations :	**400V ± 5%**	System Earthing :	**Solidly Earthed**
System Frequency &Variations :	**50Hz ± 2%**	Short circuit capacity at input :	

	Particulars of Equipment	Unit	Purchaser's Requirements	Vendor's Data
Basic Data	Frame Size		**VTA**	225S/M
	Rated Voltage	V	**400**	400
	Rated Frequency	Hz	**50**	50
	Required Shaft Brake Power	KW	*	37
	Rated Power	KW	*	45
	No. of Phases		**3 phases**	3
	Duty / Service Factor		**S1 / 1**	S1
	No. of Poles / Synchronous Speed		*	4 / 1500
	Stator Connection		**Delta**	Delta
	Insulation Class		**Class F**	F
	Design Temperature		**48 ºC**	55
	Temperature Rise		**Class B**	B
	Ingress Protection Classification (IEC 60529)		**IP55**	IP55
	Cooling Type (IEC 60034-6)		**TEFC, IC 411**	TEFC
Performance Characteristics	Full Load Current	A	**VTA**	85,1
	Efficiency (FL / 3/4 FL / 1/2FL)	PU	**VTA**	95,4 / 94,8 / 94,1
	Power Factor (FL / 3/4 FL / 1/2FL)	PU	**VTA**	0,80 / 0,74 / 0,61
	Full Load Turque	Nm	**VTA**	290
	Break Down Torque	%	**VTA**	400
	Pull Up Torque	%	**VTA**	370
	Full Load Speed	rpm	**VTA**	1484
	Slip at Full Load / 75% Load	%	**VTA**	1,07
	Over Speed Capability		**VTA**	No overspeed capability
	No Load Losses	watt	**VTA**	290
Starting Characteristics	Starting Method		**Direct on Line**	DOL
	Starting Performance (IEC60034-12)		**VTA**	8,3
	Maximum Allowable Stall Time (Hot / Cold)		**VTA**	19 / 35
	Maximum No. of Successive Starts		**VTA**	3
	Starting Current	PU	**VTA**	9,4
	Starting Current	A	**VTA**	800
	Locked Rotor Power Factor	PU	**VTA**	0,42
	Locked Rotor Torque	%	**VTA**	370
	Run-Up Time	Sec.	**VTA**	6
	Allowable Run-Up Time from Cold State	Sec.	**VTA**	35
	Allowable Run-Up Time from Hot State	Sec.	**VTA**	19
Hazardous Area Certification	Motor Explosion Protection Type / Gas Group / Temp. Class	--	**Ex d IIB T3**	Ex d IIB T4
	Terminal Boxes Explosion Protection Type / Gas Group / Temp. Class	--	**Ex d IIB T3**	Ex d IIB T4
	Ex "e" Motor t_e Time	Sec.	**VTA**	N/A
	Recommended Thermal O/L Relay		**VTA**	10
	Certifying Authority	--	**VTA**	as per IECex certificate

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	Particulars of Equipment	Unit	Purchaser's Requirements	Vendor's Data
Mechanical Detail	Mounting (IEC 60034-7)		*	B3T
	Stator Frame Material		**Ferromagnetic Material**	Ferromagnetic Material
	Enclousure Material		**Sheet Steel/ Cast Iron**	cast iron
	Rotor Cage Material		**Copper/ Die Cast Aluminium**	Die cast aluminium
	Cooling Fan Material		**Aluminium, Cast Iron, Steel, Brass, Bronze**	aluminium
	Rotation Facing Drive End (CW/CCW)		*	Both
	Finish Color		**Gentian Blue RAL-5010**	RAL 5010
	Motor Weight	Kg	**VTA**	561
	Rotor (Uncoupled) Inertia	Kg.m2	**VTA**	0,7346
	Driven Load Inertia (Related to Motor Speed)	Kg.m2	*	TBC
	Coupling Type		**Direct/ Gear Box/ Pulley**	Pulley
	Maximum Sound Pressure Level at one Meter (Full Load)	dB(A)	**Comply with IEC 60034-9 & Note 5**	63
	Sound Power level	dB	**VTA**	N/A
	Noise Silencer	Yes/No	**VTA**	No
	Integral Breather / Drain (IEC60034-5)	Yes/No	**VTA**	No
	Drive End Bearing Type/ Make & Size		**VTA**	6314-C3
	No. of Drive End Bearings		**VTA**	1
	None Drive End Bearing Type / Make & Size		**VTA**	6314-C3
	No. of None Drive End Bearings		**VTA**	1
	Method of Bearing Lubrication		**VTA**	grease nipple
	Bearing Ingress Protection (IEC 60529)		**IP55**	IP55
	Minimum Bearing Lifetime, Motor Only	hr	**40000**	40000
	Maximum Relubrication Interval	hr	**4000/2000 for horizontal/vertical motors**	7000
	Shaft		**Extended / Solid / Hollow**	solid
	Max. Shaft Voltage	mV rms	**VTA**	N/A
	Insulated Bearings	Yes/No	**(Note 4)**	No
	Bearing Insulation Rating	KV	**VTA**	N/A
	Rotor Axial Float + / -	mm	**VTA (If applicable)**	N/A
	Vibration at No Load, Self Mounted, Peak to Peak	mm/S	**VTA (Comply with IEC 60034-14)**	as per IEC 60034-14
	Critical Speed	rpm	**(Note 6)**	N/A
	Lifting Lug	Yes/No	**Yes**	Yes
Accessories	Anti Condensation Heater	Yes/No	**No**	No
	Anti Condensation Heater Power	W	**-**	N/A
	Anti Condensation Heater Voltage	VAC	**-**	N/A
	Winding Temperature Detector	Yes/No	**No**	No
	Bearing Temperature Detector	Yes/No	**No**	No
	Frame Earth / Terminal Box Earth	Yes/No	**Yes (External Stud /Internal Terminal)**	Yes (External Stud /Internal Terminal)
	Accelerometer Shock Pulse Measurement Device	Yes/No	**VTA**	No
	Anti Rotational Device	Yes/No	**VTA**	No
	Vibration Switch	Yes/No	**VTA**	No
	Sun Canopy	Yes/No	**VTA**	No
	Differential Protection CT's in Neutral Terminal Box	Yes/No	**NO**	No
Terminal Box & Cable Connection	Ingress Protection of Terminal Box	--	**IP55**	IP56
	Power Terminal Box Type	--	**Phase Insulated**	Phase (Air) Insulated
	Power Terminal Box Location (IEC 60034-7)	--	**Top or Right (looking from drive end)**	Top
	Power Cable Type	--	**Cu/XLPE/SWA/PVC**	Cu/XLPE/SWA/PVC
	Power Cable No. & Size	--	**	4 X 25 Sqmm
	Power Cable Gland & Entries	--	**	1 x M40
	Power Cable Entry Direction	--	**	Side
	Heater Cable Type	--	-	N/A
	Heater Cable No. & Size	--	-	N/A
	Heater Cable Gland & Entry	--	-	N/A
	Instrument Cable Type		**	N/A
	Instrument Cable No. & Size	--	**	N/A
	Instrument Cable Gland & Entry	--	**	N/A

Note 1: Vendor to Advise
Note 2: (*) in "Purchaser Requirement" column should be filled out by driven equipment vendor.
Note 3: (**) Will be informed to motor vendor after receiving preliminary motor data.
Note 4: The shaft voltage shall not exceed 300mV RMS, unless bearings shall be fully insulated from the motor carcase and/or bedplate to prevent a flow of shaft current.
Note 5: The sound pressure level of the loaded machine shall not exceed 77 dB(A) in the work area, measured in accordance with ISO 1680.
Note 6: The machine shall have a rigid, under critical rotor-bearing system with first critical speed not lower than 125 % of the synchronous speed.