

OWNER:



شرکت مست و نوبی توسعه ایرانلیان
(سهامی عامه)

**BUSHEHR PETROCHEMICAL COMPANY
MEG PLANT**

EPC CONTRACTOR:



Chagalesh-Enerechimi-Steam
Joint Venture
BUPC-MEG PLANT PROJECT

MC :



شرکت مست و نوبی توسعه ایرانلیان
(سهامی عامه)





**COMPRESSOR MOTOR DATA SHEET
FOR NITROGEN GAS BOOSTER**







Owner Document Number: 17811-10A	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
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**COMPRESSOR MOTOR DATA SHEET FOR NITROGEN
GAS BOOSTER**

Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
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						

OWNER: 		BUSHEHR PETROCHEMICAL COMPANY MEG PLANT						EPC CONTRACTOR: 		
MC: 		Motor Data Sheet (Item No: P-2007 A/B)						VENDOR: 		
		Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
Document Number:		BU	20	VD	303	EL	DSH	0051	Rev.: 01	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				Environmental 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. 5°C		Max. 52°C		
	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 :						
Basic Data	Particulars of Equipment		Unit	Purchaser's Requirements			Vendor's 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 °C			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			83			
	Efficiency (FL / 3/4 FL / 1/2FL)		PU	VTA			95,4 / 95,0 / 94,2			
	Power Factor (FL / 3/4 FL / 1/2FL)		PU	VTA			0,82 / 0,74 / 0,62			
	Full Load Torque		Nm	VTA			290			
	Break Down Torque		%	VTA			330			
	Pull Up Torque		%	VTA			245			
	Full Load Speed		rpm	VTA			1485			
	Slip at Full Load / 75% Load		%	VTA			1			
	Over Speed Capability			VTA			No overspeed capability			
	No Load Losses		watt	VTA			Information not available			
Starting Characteristics	Starting Method			Direct on Line			DOL			
	Starting Performance (IEC60034-12)			VTA			8,3			
	Maximum Allowable Stall Time (Hot / Cold)			VTA			3 / 2			
	Maximum No. of Successive Starts			VTA			3			
	Starting Current		PU	VTA			8,3			
	Starting Current		A	VTA			688			
	Locked Rotor Power Factor		PU	VTA			0,5			
	Locked Rotor Torque		%	VTA			290			
	Run-Up Time		Sec.	VTA			8			
	Allowable Run-Up Time from Cold State		Sec.	VTA			27			
	Allowable Run-Up Time from Hot State		Sec.	VTA			15			
	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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MC: 		Motor Data Sheet (Item No: P-2007 A/B)						VENDOR: 		
		Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
Document Number:		BU	20	VD	303	EL	DSH	0052	Rev.: 02	Page: 4 of 4
Mechanical Detail	Particulars of Equipment		Unit	Purchaser's Requirements			Vendor's Data			
	Mounting (IEC 60034-7)			*			B3T			
	Stator Frame Material			Ferromagnetic Material			cast iron			
	Enclosure 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 6002			
	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						
	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 carcass 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.