



Mokveld Valves bv

Data Sheet

Client : Lurgi Oel Gas Chemie
P.O. no. : 688 F 38 PO 1543 02 00 3030
End user :
P.O. no. :

Document no. : 38292-002
Rev. : 0
Dated : 20/06/05

Prepared : CGUN
Checked : EQUA
Approved : HDJO

<u>Mokveld serial no.</u>	<u>Location</u>
38292-001	MUG-20-02-001

Rue 23. Juni 2005

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LURGI		Piping Engineering Special Item Non-slam Check Valve Data Sheet		69690-10-GEM 2 nd ZAGROS MegaMethanol Iran	
01	Ident. No.	20SPV001	Special Item No.		
02	Designation	Non-slam Check Valve			

Conditions of service:

Mode of operation	Normal	Rated	Reduction
Operating pressure P_A (bar _{abs})	76.6	82.6	6
Operating temperature t_A (°C)	147	157	180
Flow rate m^3/h standard conditions ¹⁾	576164	604000	60000
Density at operating conditions (kg/m ³)	14.51	25.68	4.7
Molar mass M Kg/Kmol	11.40	11.40	28
Compressibility	1.038	1.041	1.000
¹⁾ stand. Conditions	15°C	1.01325 bar	

The valve must be designed to handle all three operating cases at full opening and a stable position

Details of Design:

- The valve disc shall be manufactured in one piece of material AISI 316
- The shaft surface of the valve disc shall be fine finished/polished in axial direction
- A short shaft in combination with SS/SS for shaft end bushing must be avoided
- The manufacturer must confirm in writing, that no hammering occurs in all operating cases, in particular during minimum operation
- The manufacturer shall present a graph showing the pressure differential as function of the mass flow

Remarks

- Valve is installed under an angle of 45°, flow direction upwards

!

Designation Unit 200 (Methanol Synthesis)		Basis document	DG	DL-Nr.	DCC
LURGI Project Name 2nd ZAGROS MegaMethanol Plant Iran		Project-No. 1.69690-10	Document-No. 1696901031286	Sheet of 5 / 5	Revision 0

EDV-Ident.-Nr.

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Form GFA 0296E

Issue: Rev. 01, 14.08.1999 Sheet 1 of 1

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LURGI		Piping Engineering Special Item Non-slam Check Valve Data Sheet				69690-10-GEM 2 nd ZAGROS MegaMethanol Iran	
D1	Ident. No. ¹⁾		20SPV001		Special Item No.		
D2	Designation				Non-slam Check Valve		
D3	Component key No./Ver.		26600000-0002		Ident. No. Customer ¹⁾		
D4	Piping Engineering (by LURGI)				Completed: PHJ		Date: 16.12.02
D5	Location		MUG-20-02-001		P&I-diagram		202
D6	Regulations		☐ AD-Merkblatt ☒ API ☐		Unit No.		200
D7	Additional regulations				Allowable working pressure		88 bar
D8	Direction of flow		☐ horizontal ☒ diagonal-upwards ☐ vertical-downwards		Allowable working temperature		200 °C
D9	Installation		☐ Suction piping ☒ Discharge piping		Connection criterion		DN ☐ PN ☐ NPS ☐ Class ☐
D10	Dimensions of piping		Outside diameter mm Wall thickness mm		Standard		☐ DIN ☒ ASME B 16.5 ☐
D11					Proposed material (body)		A 182 GR.F321-3.1B
Process Data							
D12	Fluid		Make Up Gas		Operating pressure P_A		2) bar
D13					Operating temperature t_A		2) °C
D14	Condition and properties of the fluid		☐ liquid ☒ gas ☐ vapour		Max. total back pressure		3) bar
D15					Discharge flow		☒ constant ☐ pulsating
D16	Corrosive matter		CO ₂ + H ₂ O		Flow rate		2) kg/h
D17	Piping		Open port area m ² Velocity m/s		Density at operating conditions		2) kg/m ³
D18	Special corrosion protection				Molar mass M		2) kg/kmol
D19	Completed:		Date:		Modified on Rev.:		Date:
D20	Approved:		Date:		Approved:		Date:
Construction features							
D21	Manufacturer		Mokveld Valves B. V.		Body		ASTM A351 Gr CF8C
D22	Manufacturer's type		TKZ-Y-0		Jolt		n. a.
D23	Type test approval by				Bolt, nuts		n. a.
D24	Connect		DN PN NPS 16" Class 900		Valve Disc		ASTM A182 UNS S31803
D25	Facing		DIN RF ASME B 16.5		Seat Ring		ASTM A182 UNS S31803
D26	Open port area		m ²		Special constructive features		2)
D27	Total spring force		N		Face to face dimension		acc. to Mokveld Std. 558 mm
D28	Opening pressure		bar		acc. to		mm
D29	Inherent pressure drop		bar		acc. to ASME B16.10		mm
D30	Dimensions		L 558 mm b 85.3 mm D 704.8 mm		Weight		885 kg/piece
D31					No. required		In service 1 Piece Spares 0 Piece
D32					Total quantity		1 Piece
↑ The marked rows are to be completed by the manufacturer, when not specified by Lurgi Remarks ¹⁾ Marking durable on flange and on name-plate All pressure data indicated are gauge pressures ☐ Mark if applicable 2) conditions of service and design see attached sheet 3) operat. Press. - press. Loss : max. allowed pressure drop across valve = 0.2 bar							
D	4	GRIM	05.04.04	HENS	SCHMY	05.04.04	AFC
Rev.	Sheet	Name	Date	Name	Name	Date	Status
		Prepared, revised	Checked	Approved			
Designation				Basis document		DG	DL-Nr.
Unit 200 (Methanol Synthesis)							DOC
LURGI		Project Name		Project-No.		Document-No.	Sheet/Revision
		2nd ZAGROS MegaMethanol Plant Iran		1.69690-10		1696660131288	4 / 5 0

EDV-Identi-Nr.

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