

Control Valve Specification

Prepared By :

Flowserve Corporation

Flowserve Villach

Customer : 2454_LINDE AG

PO # :

Serial # : .001-1

Rev/By : 1.0/rdijak

Application :

Project : AVI1202398

Proj Num :

Quote ID : coman_SVR_FLS_VIL_1266

Alternate :

Valve Tag # : 1-YICZ-3924.5

Page # : 1

P&ID :

Line :

Date / Ver : 2012-05-14 /10.6280.1

Process Data For Control Valve Selection	1	Pipe Size, Up/Down	10.000 / 10.000				Actuator	51	Act. Type/Matl	VL Cylinder / Aluminum		
	2	Pipe Sch, Up/Down	40 / 40					52	Act. Size/Fab	300 / STD		
	3	Allow Noise/Add Attn/Type	90 / 0 /					53	Stroke/Spring	3.00 / Standard		
	4	Process Fluid	Oxygen					54	Fail/Air-To	Close / Open		
	5	Design Press./Temp.	0.00 / 3.60 MPa (g) / 60.00 / -16.20 °C					55	Volume Tank	30 Gal		
	6		Cond1	Cond 2	Cond 3	Cond 4		56	Tubing Size/Mtl	1/2" / 316 SS		
	7	Temperature (°C)	41.880	39.450	38.140			57	Fitting Mfg/Mtl	Swagelok / 316 SS		
	8	Inlet Press (bar (a))	31.500	31.500	31.500			58	Handwheel			
	9	Outlet Press (bar (a))	31.000	30.800	30.500			59	Actuator O-Rings	Buna-N		
	10	Liq Flow Rate (m³/h)	0	0	0			60				
	11	Gas Flow Rate (Nm³/h)	20000.000	30000.000	40000.000			61				
	12	Viscosity (cSt)	0.000	0.000	0.000		Positioner	62	Positioner Model	Other Positioner		
	13	Vapor Press (bar (a))	0.000	0.000	0.000			63	Positioner Model #			
	14	SG-MW	31.900	31.900	31.900			64	Positioner Product	SIPART 6RD5120-0NM01-0AA0		
	15	Max Shutoff / Shutoff Class	36.000 bar / Class IV					65	Positioner Housing	plastics		
	16	Available Air Supply	4.500 bar (g)					66	Positioner Type	Digital		
	17	Valve Function	Throttling					67	Signal	4 - 20 mA		
Calculated Data	18		Cond1	Cond 2	Cond 3	Cond 4		68	Positioner Tag			
	19	Flow Coeff. (Cv)	242.282	309.735	348.490			69				
	20	Est Stroke (Percent)	39.000	54.000	64.000			70				
	21	Pressure Drop (bar)	0.500	0.700	1.000			71				
	22	Choke Drop (bar)	23.625	23.625	23.625			72	Transducer	/		
	23	Noise [IEC] (dBA)	<70	<70	<70			Pos Ind Sw	73	Model		
	24	Valve Vel (mach#)	0.033	0.050	0.067				74			
	25	Pipe Vel (mach#)	0.024						75			
Valve Body Assembly	26	Valve Model / Body Type	Mark One / Globe / Standard				76					
	27	Size/Pressure Class/Body Form	6.00 / CL 300 / Cast				77					
	28	Trim # - Cv / Characteristic	5.00 Cv:433 / Linear				78					
	29		/ / /				79					
	30	Flow Direction	Flow Under				80					
	31	Body Matl / Bonnet Matl	316 SS / 316 SS				81					
	32	End Conn/Sch/Face to Face	Integral Flange / / ISA S75.08.01				Solenoid		82	Model/Qty	Herion 2401191.4260 / 1 /	
	33	Flange Finish	125 - 250 Ra					83	Cv-Kv/De-en	/ Close		
	34	Bonnet Type	Standard /					84	Volt/Watt	/		
	35	Trim Type / P/B Seal Matl.	Unbalanced /					85	Body/Housing Mtl	/		
	36	Plug Matl / Facing / Protection	Monel K-500 / /					86	Body/Elect Conn	/		
	37	Stem Facing	/					87	Port Size/Mtg	/		
	38	Seat Ring Matl / Facing	Monel K-500 /					88	Tag/Reset-Override	/		
	39	Soft Seat Material	/					Others	89	Air Filter/Mnting	/	
	40	Retainer Matl	316 SS				90		Filter-Reg/Mnting	FRS923-2SK / Nipple Mtd		
	41	PB Design/Sleeve Mtl	Unbalanced/				91		Flow Booster	/		
	42	Guides Upper/Lower	316 SS & GL PTFE/316 SS & GL PTFE				92		Booster Config	/		
	43	Packing Matl / Style / Vac / Fire	Lattyflon 3260 LM / Single / /				93		Quick Exhaust	/		
	44	Packing - Live-Loaded	Live Loaded				94		SupTube/Jctn Box	/		
	45	Bonnet Port / Body Drain	/				95		Lockup			
	46	Bellows Type / Material	/				96		Plate ID			
	47	Body Bolting/Bonnet Flange Matl	B8-8 (304 SS) / 316 SS				97		Plate Type			
	48	Gaskets	Spiral Graphite				98		Packaging	Non-Export		
	49	Gland Flange Material	Stainless Steel				99		Pwr. Sup.			
	50	Gland Flange Bolting	Stainless Steel				00		Wiring Conn. Type			
Customer Spec	01	Certification / Approval Type	ATEX / Intr Safe /				Special Req	01	Rad. Exm			
	02	Class or Gas Group	IIB					02	Drawings			
	03	Division or Zone	Zone 0					03	Assem Hydro	ISA-S75.19		
	04	Group						04	Seat Leak Test			
	05	Ingress / Temperature	IP 66 / T4					05	PMI Test			
	06	NACE	NA					06	Cert of Conf.	DIN 3.1B Seat-Leak & Results		
	07	SIL Vlv-Act / Pos	NA / NA					07	Clean/Bld/Doc	Oxygen Cleaned / /		
	08	Nuclear	NA					08	CMTR	Pressure Containing Parts SPP 2037		
PED	09	Cat / Module / Marking	CAT III / H / CE 0035					09	Special Paint/Test	/		
	10	Max P (BarG)	See TCF					10	Diag Test/FM	Stroking Time Test /		
	11	Min / Max Temp (C)	See TCF / See TCF					11	Cust. Insp/Witn.	No / No		
	12	Fld Grp / Man Site	Group 1					12	Material Req			

Line #: Remarks

E	32	Linde Id. No.: [please indicate] stamped in inlet flange
C	64	+ failure safe block
C		Material certificate acc. to DIN EN 10204 3.1 and Linde LS 031-6X7 and LS 141-74 Class S1
CE		actuator and yoke painted according procedure V53
C		max. stroking times: closed <20 sec.



Detail Information
Prepared By :
Flowserve Corporation
Flowserve Villach

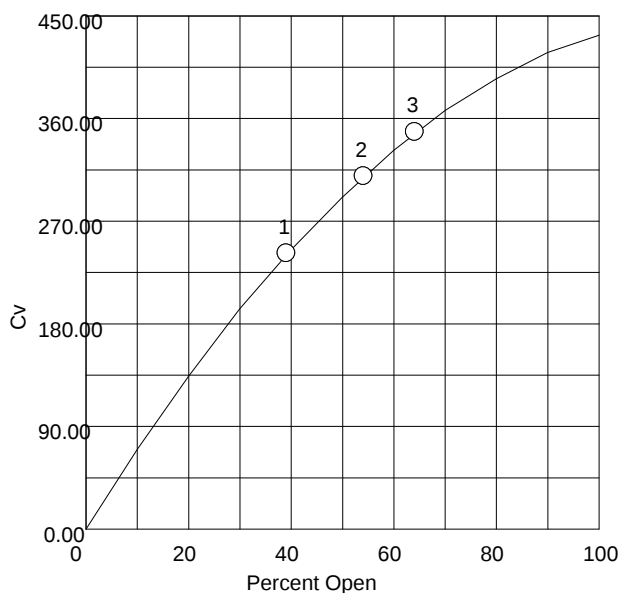
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6.00 in (Trim : 5.00 Cv:433) CL300 Mark One Standard Globe

		Cond1	Cond 2	Cond 3							
Process Data											
Temp	(°C)	41.880	39.450	38.140	---	---	---	---	---	---	---
P1	(bar (a))	31.500	31.500	31.500	---	---	---	---	---	---	---
P2	(bar (a))	31.000	30.800	30.500	---	---	---	---	---	---	---
Liq Flow	(m³/h)	----	----	----	---	---	---	---	---	---	---
Gas Flow	(Nm³/h)	20000.000	30000.000	40000.000	---	---	---	---	---	---	---
Visc	(cSt)	0.000	0.000	0.000	---	---	---	---	---	---	---
VP	(bar (a))	0.000	0.000	0.000	---	---	---	---	---	---	---
DP	(bar (a))	0.500	0.700	1.000	---	---	---	---	---	---	---
DpC	(bar (a))	23.625	23.625	23.625	---	---	---	---	---	---	---
Vel	(mach#)	0.033	0.050	0.067	---	---	---	---	---	---	---
Noise	(dBA)	< 70.0	< 70.0	< 70.0	---	---	---	---	---	---	---
Flow Cap	(Cv)	242.282	309.735	348.490	---	---	---	---	---	---	---
Stroke	(Percent)	39	54	64	---	---	---	---	---	---	---
Info					---	---	---	---	---	---	---
Detailed Miscellaneous Information											
FP		0.985	0.975	0.969	---	---	---	---	---	---	---
FL		0.917	0.910	0.905	---	---	---	---	---	---	---
FR		1.000	1.000	1.000	---	---	---	---	---	---	---
Sg		1.140	1.140	1.140	---	---	---	---	---	---	---
K		1.400	1.400	1.400	---	---	---	---	---	---	---
Xt		0.750	0.750	0.750	---	---	---	---	---	---	---
Z		0.992	0.991	0.991	---	---	---	---	---	---	---
FD		0.298	0.356	0.392	---	---	---	---	---	---	---
MWT		31.900	31.900	31.900	---	---	---	---	---	---	---
Detailed Cavitation (Sigma) Information											
Sigma		---	---	---	---	---	---	---	---	---	---
Sigma MR		---	---	---	---	---	---	---	---	---	---
PSE		---	---	---	---	---	---	---	---	---	---
SSE		---	---	---	---	---	---	---	---	---	---
Sigma V		---	---	---	---	---	---	---	---	---	---
Sigma P		---	---	---	---	---	---	---	---	---	---



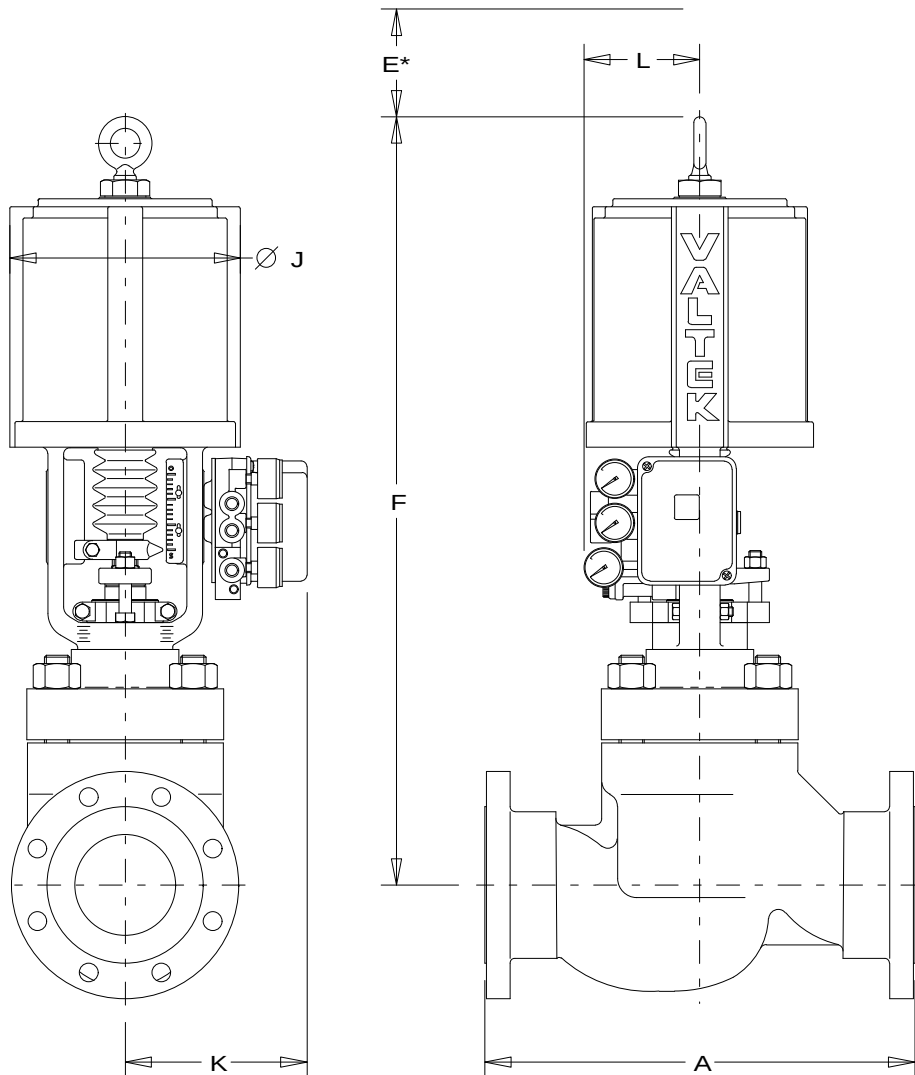
Fluid: Oxygen
Type: : Full
Owner: Perform
Vp Equation : Antoine

State: : Gas
Fluid List : STANDARD

Critical Pressure (PSIA) : 730.800000
Critical Temperature (°R) : 278.200000
Reference Specific Gravity : 1.140000
Molecular Weight : 31.900000
Specific Heat Ratio : 1.400000
Reference Temperature (°R) : 162.000000
Vp-A : 11.400000 Vp-B : 1322.100000
Vp-C : -11.600000
Minimum Temperature (°R) : 97.200000
Maximum Temperature (°R) : 279.000000
Bulk Modulus (lbf/in²) : 279.000000

Flow Direction : Flow Under
Trim Characteristic : Linear
Trim Type : Unbalanced
Retainer : Standard

DB rev - 1242 : 2012-05-09



	WT
INCH	
mm	

MODEL Mark One	ACTUATOR 300 SQ IN	DIMENSIONAL DRAWING		
SIZE 6 INCH	AIR TO OPEN	FLOWSERVE RUIJAK	CUSTOMER 2454 LINDE AG	ITEM
RATING / F/F STD 300 / S75.08.01	FAIL CLOSE	DATE 2012-05-14	VALVE TAG 1-YICZ-3924.5	SHEET 1
END CONNECTION INT FLG	SPRING STANDARD	THIRD ANGLE PROJECTION	P.O. NUMBER	REVISION 1.0
TRIM TYPE STD	TRIM / CV 5.00 Cv:433		PROJECT AV11202398	SERIAL NUMBER .001-1

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