

Customer Name:	DELTA GMBH	Project Name:	BOC	LCV-RU0001A-01, LCV-RU0001B-01	JOB #:	800303	
Quote no.:	800302	End User:	DELTA		Customer RFQ:		
Rev. no. / Date:	0 / 29-08-2024	Service:	CHILLER EXPANSION LINE		Customer PO.:	2024-PO-200	
Line Item #:	1	Tag:	LCV-RU0001A-B	Quantity:	2	PID no.:	
Fluid:	100% PROPYLENE LIQUID	Critical Pressure:	42,50 bar a		Doc no.:	800302-IDS-001	
Design Press. in/out:	22 / 22 bar g	Design Temp. in/out/min:	120 / 120 / -45 deg C		Area Class.	Zone 2, IIB, T3	

1	Parameters	Units	Minimum	Normal	Maximum	Cond 4	Cond 5
2	Liquid Flow	kg/h	1139,00	2847,00	3273,00	1139,00	3273,00
3	Gas Flow	kg/h
4	Inlet-P1	bar g	18,78	18,78	22,00	22,00	18,78
5	Outlet-P2	bar g	3,840	3,840	3,840	3,840	3,840
6	Pressure Drop	bar	14,94	14,94	18,16	18,16	14,94
7	Temperature	deg C	56,00	56,00	56,00	56,00	57,00
8	Vapor Pressure	bar g	18,68				18,68
9	Density	At 1 meter	437,00	437,00	437,00	437,00	437,00
10	Viscosity	Centipoise	0,06900	0,06900	0,06900	0,06900	0,06900
11	Required Cv		0,971	2,46	2,16	0,743	2,85
12	Open	% Open	2"	56	50	19	65
13	Valve Noise (IEC)	dBa	< 85	< 85	< 85	< 85	< 85
14	Valve Velocity	m/s	Flash	Flash	Flash	Flash	Flash
15	Pipe Velocity	m/s	Flash	Flash	Flash	Flash	Flash

LINE	VALVE	TRIM	ACTUATOR	POSITIONER	AIRSET	SOV	(BOX) SWITCH	Booster	Lock-up	QC	NOTES
16	Pipe Size: In/Out	1,5 / 1,5 inch	55	Positioner Mfr. / Model	Rotork / YT3300						
17	Pipe Sch.: In/Out	80 / 40	56	Protocol / Elec. Connection	4-20 mA + HART / M20 X 1.5						
18	Pipe Insulation	No	57	Cert. / Enclosure Rating	Ex-ia / IP 65						
19	Mfr. / Body Style / Model	VSI / Globe / G-Stream	58	Housing / Diagnostics	Aluminum / Standard						
20	Size / Rating Std. / Press. Rating in/out	1" / ANSI / CL 300	ISA 75.03 or ASME B 16.10	Gauges / Options	Yes						
21	Leakage Class	IV	60	Airset Mfr. * / Code	Sitecna						
22	End C Face	Extended, Insulation min 50mm will be applied	61	Air Conn. / Enclosure Matl.	1/4" NPT / Aluminum						
23	Face	ANSI/ISA 75.08.01	62	Drain / Relieving	Manual / Yes						
24	Body Material in/out	A352 LCB / LCC	63	Gauge Mfr. / Code	VSI						
25	Bonnet Type / Bellows	Standard / NA	64	SOV Mfr. *							
26	Bonnet Matl.	Same as body	65	SOV Code							
27	Body Bolting Material	L7M / 7M	66	Valve Action							
28	Gaskets Material	316L SS + graphite	67	Body matl. / Enclosure Matl.							
29	Packing Style / Options	Single / NA	68	Air Connection / Elec. Conn.							
30	Packing Material	PTFE V-Ring	69	Voltage / Rating							
31	Trim Design / Balancing	Unbal.-Contoured / N/A	70	Elec. Cert. / Enclosure Rating							
32	Trim Size [mm] / Rated Cv [Stages]	11/4,52 [NA]	71	(Box) Switch Mfr. * / Code							
33	Stroke [mm]	19,1	72	Switch Code							
34	Flow / Flow Characteristics	Under / Linear	73	Switch no. / Type							
35	Plug Material / Plug Facing	A479 316-316L / Stellite 6	74	Switch Rating							
36	Stem Material	A479 316-316L	75	Elec. Cert. / Enclosure Rating							
37	Seat Type	Metal	76	Enclosure Matl. / Elec. Conn.							
38	Seat Ring Material / Facing	A479 316-316L / Stellite 6	77	Booster Mfr. * / Code							
39	Soft Seat Material	NA	78	Air Connection / Encl. Matl.							
40	Cage / Seat Retainer Material	N/A / A351 CF8M	79	Lock-up Valve Mfr. * / Code							
41	Mfr. / Type / Model	VSI / Pneumatic Piston / L-Act	80	Air Connection / Encl. Matl.							
42	Size / Spring Type / Act. Function	25 / Standard / Throttling	81	Marking / NACE / Dual Use	No						
43	Fail Action / Air To	Close / Open	82	Hydro / St. Leakage / Functional	ASME B16.34 / EC60534.4 / IEC60534.4						
44	Shut-Off Press. / Air Supply Press.	22 bar g / 4,5 bar g	83	* or equivalent							
45	Power Supply		84								
46	Actuator Material / O-Rings	Aluminum / Buna-N	85								
47	Handwheel / Travel Stop	None / None	86								
48	Volume Tank	No	87								
49	Pneum. tubing O.D. / Matl.	5/16" / A269 Tp316	88								
50	Fitting Mfr. / Matl.	VSI Standard / 316SS double ferrule	89								
51	Sunshade	Not Provided	90								

*Factory review required. Completed by

-Cv calculation according to IEC 60534-2-1 / ANSI/ISA-75.01.01

-noise calculation for liquid according to IEC 60534-8-4(ed3.0)

-noise calculation for gases according to IEC 60534-8-3(ed3.0)

Submitted By: M.Castiglioni

Company:

Contact Information: