

GENERAL		PSV-RU0001A-03		PSV-RU0001B-03		Please add Equipment Tag No. and Equipment description as below: Equipment Tag No.: RU0001A-E-02, RU0001B-E-02 Equipment description: Chiller				
TECHNICAL Ref. / Item		24-2385 R1 / 1		Cust						
Project		PR 200								
VALVE ID										
1	Tag Number	PSV-RU0001A-04		PSV-RU0001B-04						
2	Valve Code	3A0-E23-2Z		47	Quantity	2				
VALVE DESCRIPTION					SIZING DATA					
3	Valve Type	CONVENTIONAL			48	Sizing Code	API Std 520			
4	Lift Type / Value	Nozzle Type	FULL LIFT / 3,1 mm	Full	49	Basis	FIRE WETTED			
5	Bonnet Type		Closed		50	Fire Case	Yes	Governing Case	Yes	
6	Inlet	Outlet	1" ANSI 300 RF	2" ANSI 150 RF	51	Rupture Disc	No			
7	Orifice Designation/Area		E - 1,389 cm <sup>2</sup>		MEDIUM PROPERTIES					
8	Seat Type		METAL-TO-METAL		52	Medium	PROPANE			
9	NACE Compliance	Valve Stamp	NONE	UV stamp	53	Phase	Gas			
10	Seat Tightness Test Code		Acc. To API 527		54	Ratio of Specific Heats	k	1,110	-	
11	Valve Model	Overall Dimensions	30000	Acc. to API 526	55	Molecular Weight	M	44,10	kg/kmol	
12	Cap Type		Screwed		56	Compressibility Factor	Z	0,800	-	
MATERIALS					57	Density	ρ	53,30	kg/m <sup>3</sup>	
13	Body	A352 LCB			58	Specific Volume	v	0,019	m <sup>3</sup> /kg	
14	Bonnet	A352 LCB			59	Specific Gravity	G	0,05	-	
15	Cap	A216 WCB			60	Dynamic Viscosity	μ	0,01	cP	
16	Nozzle	A351 CF3M / A479 316L			REQUIRED CAPACITY					
17	Disc	A479 316L / A182 F316L			61	Required Flow Rate	W	3197	kg/h	
18	Guide	SS 316L			PRESSURES					
19	Stem	SS 316L			62	Design Pressure	Pd	22	bar g	
20	Blowdown Ring	SS 316L			63	Operating Pressure	Pop	3,7	bar g	
21	Please consider Name Plate in your scope of supply	SS 316L			64	Ambient Pressure	Patm	1,013	bar a	
22		Alloy Steel			65	Set Pressure	Ps	22	bar g	
23	Spring Washer	CARBON STEEL			66	CDTP		22	bar g	
24	Gaskets	ARMED GRAPHITE + SS 316L			67	Overpressure		21	%	
25	Bolting / Nut	A193 B8M / A194 8M			68	Relieving Pressure	P0	27,63	bar a	
ACCESSORIES					69					
26	Bellows	N/A			70	Superimposed Bkp	Constant	Pbvs	0,00	bar g
27	Balanced Piston	N/A			71		Variable	Pbcs	0,00	bar g
28	Lifting Lever	N/A			72	Total	Pbcs	0,00	bar g	
29	Test Gag	YES			73	Built-up Backpressure	Pbb	0,00	bar g	
30	Jacket	N/A			74	Total BackPressure	Pb	0,00	bar g	
31	Flushing Nozzle	N/A			74	Blowdown			7-10%	
					TEMPERATURES					
32	Bug Screen	N/A			75	Design Temp.		-45/+120	°C	
33	Body Spacer	N/A			76	Operating Temp.		-0,07	°C	
34	Trevi Test (coupling)	N/A			77	Relieving Temperature		70,1	°C	
35	Valve Painting	PICT SPEC			78	Ambient Temp.		-	°C	
SIZING RESULTS					SIZING CRITICAL FLOW - GAS&VAPOURS - API 520					
36	Calculated Area	A	1,3552	cm <sup>2</sup>	79	Critical / Subcritical Flow	CRITICAL			
37	Selected Orifice/Area	E - 1,389 cm <sup>2</sup>			80	C Factor	C	2,489	-	
38	Area Gain	-	2,00	%	81	Discharge Coefficient	KD	0,951	-	
39	Maximum Flow Rate	WT	3276,79	kg/h	82	Backpressure Corr. Factor	KBP	1,00	-	
40	Reaction force (Flow)	FF	264,00	N	83	Subcritical Corr. Factor	Kb	-	-	
41	Reaction force (Static Bkp)	FB	0,00	N	84	Rupture Disk Corr. Factor	KC	1,0	-	
42	Total Reaction Force	FT	264,00	N	85	Subcritical Corr. Factor	Kb	-	-	
43	Noise Level @ 30m	L30	103,84	dB	86	Viscosity Corr. Factor	KV	-	-	
44	Distance d	d	1,00	m	87	Reynolds Number	Re	-	-	
45	Outlet Tube Diameter	da	0,05	m	<p>DIM. (mm) &amp; WT (kg): 105 (A); 115 (B); 365 (C); 15 (WT)</p>					
46	Noise Level @ distance d	Ld	133,77	dB						
Process data are under customer responsibility.										
1	28/08/2024	FIRST ISSUE			TCH	B. CAVALIERI				
REV	DATE	DESCRIPTION			PREP.	CHECK.	APPROV.			