

Pressure Safety & Relief Valve Specification and Calculation Sheet

Sheet No.	1 of 1	Rev . No	0
Project Name			
Project No.			
Date	2023-04-05	By	jisu.gim
Checked	NONE	Approved	NONE

GENERAL				Calculation			
GENERAL	P&ID No.	1	-				
	Tag No.	2	-				
	Service Line	3	-				
	Model No.	4	JSV-FF21				
	Quantity	5	35				
TYPE	Nozzle Type	6	Full Nozzle	Calculation of Area			
	Design Type	7	Conventional				
	Bonnet Type	8	Close				
	Lever Type	9	Plain Lever				
	Cap Type	10	Plain				
CONN	Size. Inlet / Outlet	11	025X050				
	Inlet. Rating / Facing	12	JIS B 2220 20K RF				
	Outlet. Rating / Facing	13	JIS B 2220 10K FF				
MATERIALS	Body (Base)	14	A216 WCB or SC480				
	Bonnet	15	A216 WCB or SC480				
	Seat	16	304 SS-st.				
	Disc	17	304 SS-st.				
	Guide	18	304 SS				
	Gasket (Bonnet)	19	N/A				
	Spring	20	Chrome Alloy(SWOSC-B)				
	Bellows	21	-				
BASIS	Approved by	22	-				
	Comply with NACE	23	-				
	EN 10204	24	No				
	Code	25	API RP 520				
	Fire	26	No				
	Sizing Basis	27	NA				
	Rupture Disk	28	No	W	Valve Capacity	1584 kg/h	
SERVICE CONDITION	Fluid / State	29	Steam / STEAM	W1	Required Capacity	0 kg/h	
	Mol. Weight / Specific Gravity	30	18	P	Set Pressure	900 KPag	
	Compressibility Factor	31	1	A1	Calculated Area	0.0 mm ²	
	Ratio of Specific Heat	32	1.4	A	Selected Area	283.529 mm ²	
	Viscosity	33	-	Kd	Coefficient of Discharge	0.975	
	Operating / Relieving Temp.	34	/ 181.2 °C	Ksh	Steam Correction Factor	1	
	Design Min. / Design Max. Temp.	35	- °C	Kb	Correction Factor Due to Back Pressure	1	
	Operating / Set Pressure	36	/ 9 barg	Kc	Correction Factor for a rupture disk	1	
	Design Pressure / C.D.T.P	37	- / 9 barg	Kn	Correction Factor for Napier equation	1	
	Back Pressure	Superimposed - Constant	38	- barg			
		Superimposed - Variable	39	- barg			
		Built-up	40	- barg			
		Total	41	0 barg			
	Allowable Overpressure	42	10 %	Remarks			
Closing Pressure / Blowdown(%)	43	Min. 8.1 barg / 10%					
SIZING & SELECTION	Required Capacity	44	0 kg/h				
	Valve Actual Capacity	45	1584 kg/h				
	Calculated Orifice Area	46	0.0 mm ²				
	Selected Orifice Area	47	283.529 mm ²				
	Orifice Dia.(mm)	48	F(19)				
ETC	Paint System & Color	49	Heat Resistant Silver QT603				
	Test Gag	50	No				
	Bug screen	51	No				

