JOKWANG ILI	Pressure Safety & Relief Valve Specification and Calculation Sheet			
	Sheet No.	1 of 1	Rev . No	0
	Project Name			
	Project No.			
	Date	2026-04-08	By	S.Y.YOON
	Checked	NONE	Approved	NONE

GENERAL	P&ID No.	1	-
	Tag No.	2	-
	Service Line	3	-
	Model No.	4	JSV-LT12
	Quantity	5	2
TYPE	Nozzle Type	6	Full Nozzle
	Design Type	7	Conventional
	Bonnet Type	8	Close
	Lever Type	9	Plain Lever
	Cap Type	10	Plain
CONN	Size. Inlet / Outlet	11	040X040
	Inlet. Rating / Facing	12	JIS PT
	Outlet. Rating / Facing	13	JIS PT
MATERIALS	Body (Base)	14	B124 C37700 or C3771
	Bonnet	15	B62 C83600 or BC6(CAC406)
	Seat	16	B124 C37700 or C3771
	Disc	17	Brass
	Guide	18	-
	Gasket (Bonnet)	19	-
	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	-
	Rupture Disk	28	No
SERVICE CONDITION	Fluid / State	29	Steam / STEAM
	Mol. Weight / Specific Gravity	30	18
	Compressibility Factor	31	1
	Ratio of Specific Heat	32	1.4
	Viscosity	33	-
	Operating / Relieving Temp.	34	/ 20 ℃
	Design Min. / Design Max. Temp.	35	- ℃
	Operating / Set Pressure	36	/ 3.5 Kgf/㎠g
	Design Pressure / C.D.T.P	37	- / 3.5 Kgf/㎠g
	Back Pressure: Superimposed - Constant	38	- Kgf/㎠g
	Back Pressure: Superimposed - Variable	39	- Kgf/㎠g
	Back Pressure: Built-up	40	- Kgf/㎠g
	Back Pressure: Total	41	0 Kgf/㎠g
	Allowable Overpressure	42	10 %
	Closing Pressure / Blowdown	43	Min. 3.15 Kgf/㎠g / -%
SIZING & SELECTION	Required Capacity	44	0 kg/h
	Valve Actual Capacity	45	717 kg/h
	Calculated Orifice Area	46	0.0 ㎟
	Selected Orifice Area	47	292.639 ㎟
	Orifice Dia.(mm)	48	E(40)
			-
			-
			-
ETC	Paint System & Color	49	None
	Test Gag	50	None
	Bug screen	51	No

Calculation

Calculation of Area

A1 = 190.4*W1/((P*1.1+101.325)*Kd*Kb*Kc*Kn*Ksh)

=190.4*0/((343*1.1+101.325)*0.975*1*1*1*1)

= **0** ㎟

Calculation of Capacity

W = A*(P*1.1+101.325)*Kd*Kb*Kc*Kn*Ksh/190.4

= 292.639*(343*1.1+101.325)*0.975*1*1*1*1/190.4

= **717** kg/h

W	Valve Capacity	717 kg/h
W1	Required Capacity	0 kg/h
P	Set Pressure	343 Kpag
A1	Calculated Area	0.0 ㎟
A	Selected Area	292.639 ㎟
Kd	Coefficient of Discharge	0.975
Ksh	Steam Correction Factor	1
Kb	Correction Factor Due to Back Pressure	1
Kc	Correction Factor for a rupture disk	1
Kn	Correction Factor for Napier equation	1
ATM	Standard Atmosphere	101.325 Kpag

Remarks