Pressure Safety & Relief Valve Specifications

J • K Since 1968

Sheet No.	1 of 1	Rev.No.	0
Project Name			
Project No.			
Date	2016. 01. 25.	By	S.W JUNG
Checked	S.C.KIM	Approved	S.C.KIM

GENERAL	P&ID No.	1		
	Tag No.	2		
	Service Line	3		
	Number Required		4	1
	Nozzle Type, Full or Semi		5	Full Nozzle
	Design Type		6	
	A.Conventional or Bellows			Conventional
	B.Full Bore, Low or High Lift			Low Lift Type
	Bonnet Type. Open or Close		7	Close
CONNECTION	Size. Inlet / Outlet		8	015X020
	Inlet. Rating / Facing		9	JIS PT
	Outlet. Rating / Facing		10	JIS PT
MATERIALS	Body		11	C 3771
	Bonnet		12	BC 6
	Seat		13	C 3771
	Disc		14	C 3771
	Guide		15	-
	Gasket		16	N/A
	Spring		17	SWOSC
	Bellows		18	
BASIC ACCESSORY	Cap. Type		19	Plain
	Lever. Plain or Packed		20	Plain Lever
	Test Gag		21	No
	Paint Color		22	None
	Code		23	KS B 6216
	Fire		24	No
	Sizing Basis	25		
SERVICE	Fluid and State	26		Air
	Required Capacity		27	kg/h
	Mol. Weight or Specific Gravity		28	28.96
	Viscosity		29	
	Operating / Set Pressure		30	9.5 Kgf/㎠g
	Operating / Blowout Temp		31	/ 20 ℃
	Constant Back Pressure		32	Kgf/㎠g
	Variable Back Pressure		33	Kgf/㎠g
	Built-up Back Pressure		34	Kgf/㎠g
	Total Back Pressure		35	0 Kgf/㎠g
	Closing Pressure		36	Min. 8.55 Kgf/㎠g
	Hydrostatic Test		37	14.25 Kgf/㎠g
	Allowable Overpressure		38	10 %
	Compressibility Factor		39	1
	Ratio of Specific Heat		40	1.4
ORIFICE	Calculated Area		41	0.00 ㎟
	Selected Area		42	62.832 ㎟
	Orifice Dia.(mm)		43	D1
	Valve Capacity		44	518 kg/h
	Model No.		45	JSV-LT12
Cert.	Approved by		46	KOSHA /

CALCULATION

* Calculation of Area

A1 = W1/(C*Kd*(P*1.10+1)*√(M/ZT)*0.9)

= 0 / (2.65 *0.96 * (9.5 * 1.10 + 1) * √(28.96 /(1 *293) * 0.9)

= **0.00** ㎟

* Calculation of Capacity

W = C*Kd*A*(P*1.10+1)*√(M/ZT)*0.9

= 2.65 *0.96 *62.832 * (9.5 * 1.10 + 1) * √ (28.96 /(1 *293)) * 0.9

= **518** kg/h

W	= Valve Capacity	518.00 kg/h
W1	= Required Capacity	0.00 kg/h
P	= Set Pressure	9.5 Kgf/cm2g
A1	= Calculated Area	0.00 ㎟
A	= Selected Area	62.832 ㎟
Kd	= Coefficient of Discharge	0.96
C	= Coefficient base on Ratio of Specific Heat	2.650
T	= Kelvin Temperature	293
M	= Molecular Weight	28.96
Z	= Compressibility Factor	1

Remark

*CDTP : 9.5 Kgf/㎠g