



JOKWANG I.L.I CO.,LTD.

DATA SHEETS
FOR
QUOTATION

PRESSURE SAFETY & RELIEF VALVE SPECIFICATIONS

Doc.No. : 160708-017

PROJECT NAME:

PROJECT NO. :
(HULL NO)

CLIENT :

SITE :

Head Office & Plant

#37, Sanmakgongdanbuk 10-gil, Yangsan-si, Gyeongsangnam-do, Korea

Tel : (055) 360 - 0200 Fax : (055) 360 - 0260

<http://www.jokwang.co.kr>

0	2016. 07. 08.	Quotation	S.W JUNG	J.B.SO	S.C.KIM		
REV.	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D	APP'D	DATE
						CLIENT	



Pressure Safety & Relief Valve Specifications

Sheet No.	1 of 1	Rev.No.	0
Project Name			
Project No.			
Date	2016. 07. 08.	By	S.W JUNG
Checked	J.B.SO	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	Conventional
	A. Conventional or Bellows		High Lift Type
	B. Full Bore, Low or High Lift		
Bonnet Type. Open or Close	7	Close	
CONNECTION	Size. Inlet / Outlet	8	025X025
	Inlet. Rating / Facing	9	JIS PT
	Outlet. Rating / Facing	10	JIS PT
MATERIALS	Body	11	SCS 13(STELLITED)
	Bonnet	12	CAC 406
	Seat	13	SCS 13(STELLITED)
	Disc	14	A 276 304(STELLITED)
	Guide	15	-
	Gasket	16	PTFE
	Spring	17	SWOSC
	Bellows	18	
ACCESSORY	Cap. Type	19	Screwed
	Lever. Plain or Packed	20	None Lever
	Test Gag	21	No
	Paint Color	22	None
BASIC	Code	23	API RP 520
	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	4.5 Kgf/cm ² g
	Operating / Blowout Temp	31	/ 20 °C
	Constant Back Pressure	32	Kgf/cm ² g
	Variable Back Pressure	33	Kgf/cm ² g
	Built-up Back Pressure	34	Kgf/cm ² g
	Total Back Pressure	35	0 Kgf/cm ² g
	Closing Pressure	36	Min. 3.83 Kgf/cm ² g
	Hydrostatic Test	37	6.75 Kgf/cm ² g
	Allowable Overpressure	38	10 %
	Compressibility Factor	39	1
Ratio of Specific Heat	40	1.4	
ORIFICE	Calculated Area	41	0.00 mm ²
	Selected Area	42	71.628 mm ²
	Orifice Dia.(mm)	43	19
	Valve Capacity	44	348 kg/h
	Model No.	45	JSV-HT41
Cert.	Approved by	46	/

CALCULATION

* Calculation of Area

$$A1 = 13160 * W1 * (\sqrt{ZT/M}) / (C * Kd * (P * 1.1 + 101.325) * Kb * Kc)$$

$$= 13160 * 0 * (\sqrt{1 * 293 / 28.96}) / (356.06 * 0.975 * (441 * 1.1 + 101.325) * 1 * 1)$$

$$= \underline{0.00} \text{ mm}^2$$

* Calculation of Capacity

$$W = A * C * Kd * (P * 1.1 + 101.325) * Kb * Kc / (13160 * \sqrt{ZT/M})$$

$$= 71.628 * 356.06 * 0.975 * (441 * 1.1 + 101.325) * 1 * 1 / (13160 * \sqrt{1 * 293 / 28.96})$$

$$= \underline{348} \text{ kg/h}$$

W = Valve Capacity	348.00 kg/h
W1 = Required Capacity	0.00 kg/h
P = Set Pressure	441 Kpag
A1 = Calculated Area	0.00 mm ²
A = Selected Area	71.628 mm ²
Kd = Coefficient of Discharge	0.975
C = Coefficient base on Ratio of Specific Heat	356.060
T = Kelvin Temperature.....	293
M = Molecular Weight.....	28.96
Z = Compressibility Factor.....	1
Kb = Correction Factor Due to Back Pressure..	1
Kc = Correction Factor for a rupture disk.....	1

Remark

*CDTP : 4.5 Kgf/cm²g