
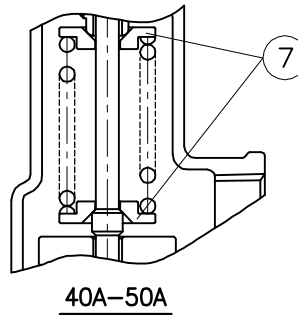
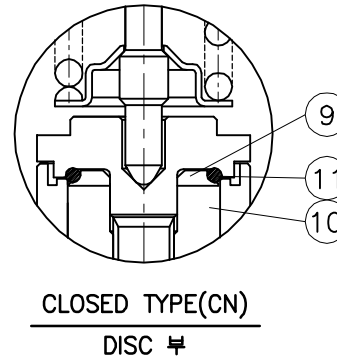
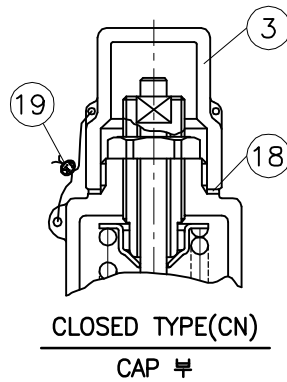
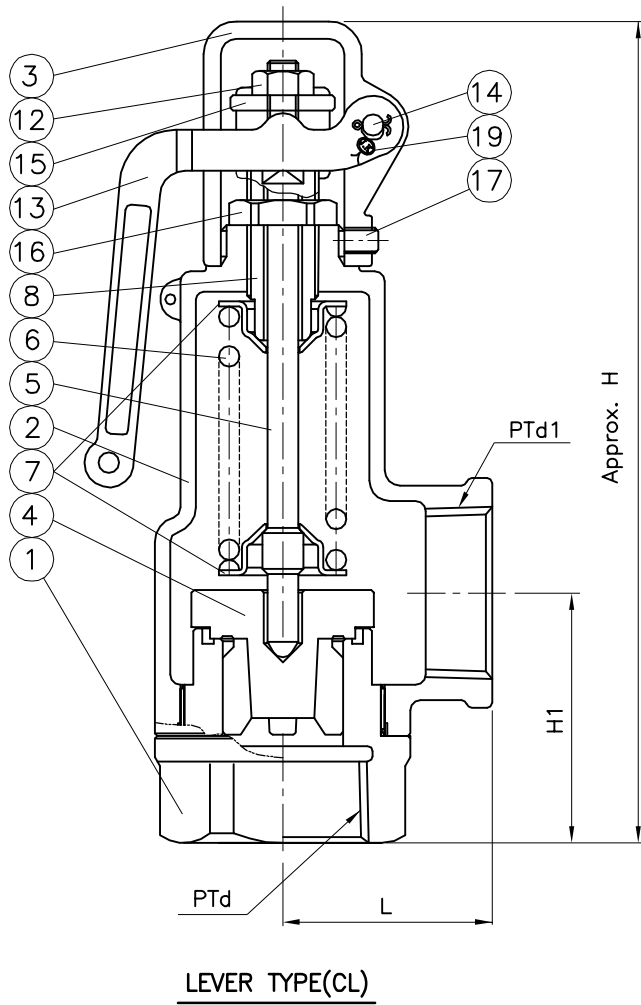


0	2019-09-11		JUNGBAE.CHO	S.C.KIM	S.C.KIM		
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D	APP'D	DATE
						CLIENT	

 JOKWANG I.L.I		Pressure Safety & Relief Valve Specification and Calculation Sheet					
		Sheet No.	1 of 1	Rev. No	0		
		Project Name					
		Project No.					
		Date	2019-09-11	By	JUNGBAE.CHO		
Checked	S.C.KIM	Approved	S.C.KIM				
GENERAL	P&ID No.	1					
	Tag No.	2					
	Service Line	3					
	Model No.	4	JSV-LT12				
	Quantity	5	1				
TYPE	Nozzle Type	6	Full Nozzle				
	Design Type	7	Conventional				
	Bonnet Type	8	Close				
	Lever Type	9	None				
	Cap Type	10	Screwed				
CONN.	Size. Inlet / Outlet	11	015X020				
	Inlet. Rating / Facing	12	JIS PT				
	Outlet. Rating / Facing	13	JIS PT				
MATERIALS	Body (Base)	14	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	No				
	EN 10204	24	Type 3.1				
	Code	25	API RP 520				
	Fire	26	No				
	Sizing Basis	27	-				
	Rupture Disk	28	No				
SERVICE CONDITION	Fluid / State	29	Water / WATER				
	Mol. Weight / Specific Gravity	30	1				
	Compressibility Factor	31	-				
	Ratio of Specific Heat	32	-				
	Viscosity	33	-				
	Operating / Relieving Temp.	34	/ 20 °C				
	Design Min. / Design Max. Temp.	35	- °C				
	Operating / Set Pressure	36	/ 10 Kgf/cm ² g				
	Design Pressure / C.D.T.P	37	- / 10 Kgf/cm ² g				
	Back Pressure	Superimposed - Constant	38	- Kgf/cm ² g			
		Superimposed - Variable	39	- Kgf/cm ² g			
		Built-up	40	- Kgf/cm ² g			
		Total	41	0 Kgf/cm ² g			
	Allowable Overpressure	42	10 %				
	Closing Pressure / Blowdown(%)	43	Min. 7.5 Kgf/cm ² g / 25%				
SIZING & SELECTION	Required Capacity	44	0 m ³ /h				
	Valve Actual Capacity	45	4.2 m ³ /h				
	Calculated Orifice Area	46	0 mm ²				
	Selected Orifice Area	47	62.832 mm ²				
	Orifice Dia.(mm)	48	D1(20)				
ETC	Paint System & Color	49	None				
	Test Gag	50	None				
	Bug screen	51	No				
Calculation							
Calculation of Area							
$A1 = 11.78 * W1 * \sqrt{(G / (1.25P - Pb)) / (Kd * Kb * Kc * Kv * Kp)}$ $= 11.78 * 0 * \sqrt{(1 / (1.25 * 980 - 0)) / (0.62 * 1 * 1 * 1 * 0.6)}$ $= 0 \text{ mm}^2$							
Calculation of Capacity							
$W = A * Kd * Kb * Kc * Kv * Kp / (11.78 * \sqrt{(G / (1.25P - Pb))})$ $= 62.832 * 0.62 * 1 * 1 * 1 * 0.6 / (11.78 * \sqrt{(1 / (1.25 * 980 - 0))})$ $= 69.40 \text{ } \ell / \text{min}$ $= 4.2 \text{ m}^3 / \text{h}$							
W	Valve Capacity	69.40 ℓ/min					
W1	Required Capacity	0.00 ℓ/min					
P	Set Pressure	980 Kpag					
A1	Calculated Area	0 mm ²					
A	Selected Area	62.832 mm ²					
Kd	Coefficient of Discharge	0.62					
G	Specific Gravity	1					
Pb	Back Pressure	0 Kpag					
Kb	Correction Factor Due to Back Pressure	1					
Kc	Correction Factor for a rupture disk	1					
Kv	Correction Factor due to Viscosity	1					
Kp	Correction Factor due to Overpressure	0.6					
Remarks							



- SPECIFICATION -

1. Design Pressure : 11 Kgf/cm²
2. Max Temperature
Lever Type: 220°C / Closed Type: 150°C
3. Applicable Fluid : Gases, Steam and Liquid

19	SEAL	Pb	1	
18	GASKET(CAP)	PTFE	1	CN TYPE
17	CAP BOLT(No head)	304 SS	1	CL TYPE
16	LOCK NUT(STEM)	Brass	1	
15	STEM WASHER	Carbon Steel	1	CL TYPE
14	PIN	Carbon Steel	1	CL TYPE
13	LEVER	Zinc Alloy	1	CL TYPE
12	NUT(STEM)	Carbon Steel	1	CL TYPE
11	O-RING	FPM	1	CN TYPE
10	GUIDE	Brass	1	CN TYPE
9	WASHER	Brass	1	CN TYPE
8	ADJUST SCREW	Brass	1	
7	SPRING SEAT	Carbon Steel	2	
6	SPRING	Chrome Alloy(SWOSC-B)	1	
5	STEM	304 SS	1	
4	DISC	Brass	1	
3	CAP	Zinc Alloy	1	CL TYPE
		Brass	1	CN TYPE
2	BONNET	BC6(CAC406)	1	
1	BODY	BC6(CAC406)	1	
		C3771		

NO	PART NAME	MATERIAL	Q'TY	REMARK
	DES	CHE	APP	DATE
	2019.04.04			2015.10.29
	I.H.YOON	C.U.LIM	E.R.CHO	SCALE
				N S
D.W.G NAME			MODEL NO	
LOW LIFT TYPE SAFETY VALVE			JSV-LT12	
D.W.G NO			REV	
JKS-C1192001			7	

DIMENSIONS

UNIT : mm

SIZE	PTd	PTd1	L	H1	H(CN)	H(CL)	W.T(kg)	Q'TY(EA)
15Ax20A	1/2"	3/4"	35	45	129	142	0.8	
20Ax20A	3/4"	3/4"	35	45	131	144	0.9	
25Ax25A	1"	1"	41	49	142	155	1.1	
32Ax32A	1-1/4"	1-1/4"	45	58	160	173	1.5	
40Ax40A	1-1/2"	1-1/2"	55	64	187	198	2.7	
50Ax50A	2"	2"	70	74	209	220	3.8	

