



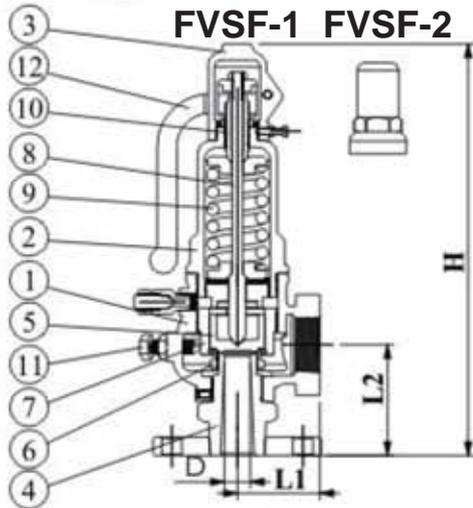
A name with a promise.



DIE ERSTE **Safety Valve Series**

*Automatically control and limit pressure,
protect your pipeline system*

Technical Data and Product Information



Fluid: Steam, Air, Gas, Liquid
 Temperature: -5°C to 300°C
 Connection: Flanged end ANSI 150, 300, JIS 10K
 Pressure:

CAST IRON: 0.3 ~ 10 kg/cm²
 WCB: 0.3 ~ 40 kg/cm²
 SS: 0.3 ~ 40 kg/cm²

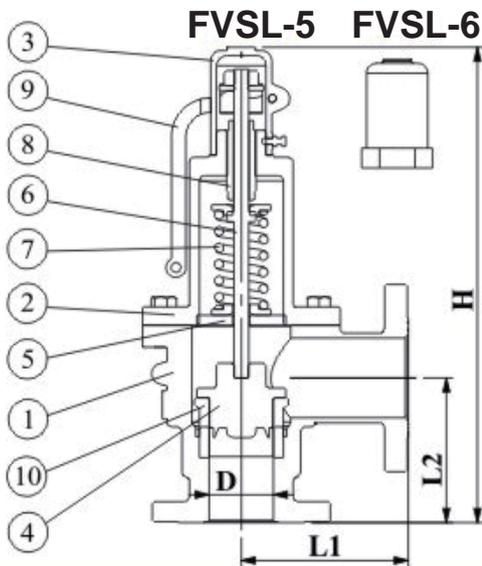


Unit: mm

No.	Name	MATERIAL		
		CAST IRON	SS 304	WCB
1	BODY	CAST IRON	SS 304	WCB
2	BONNET	CAST IRON	SS 304	WCB
3	CAP	CAST IRON	SS 304	WCB
4	BODY SEAT	SS 304	SS 304	SS 304
5	VALVE DISC	SS 304	SS 304	SS 304
6	LOWER RING	BsBm	SS 304	SS 304
7	UPPER RING	BsBm	SS 304	SS 304
8	STEM	SS 304	SS 304	SS 304
9	SPRING	SUP 6	SS 304	SS 304
10	ADJUSTING SCREW	BsBm	SS 304	SS 304
11	ROOT SCREW	SS 310	SS 304	SS 304
12	LEVER	BsBm	SS 304	SS 304

SIZE	ORIFICE	AREA (mm ²)	LIFT	INLET & OUTLET CENTER		HEIGHT
				L1	L2	
inlet x outlet	D	n	I	L1	L2	H
20 x 25	15	176.6	3.8	50	77	273
20 x 32	19	283.3	5	64	87	322
40 x 50	30	706.5	7.5	71	113	405
50 x 65	38	1133.5	9.5	85	125	450

LOW LIFT SAFETY VALVE



Fluid: Steam, Air, Gas, Liquid
 Temperature: -5°C to 300°C
 Connection: Flanged end ANSI 150, 300, JIS 10K
 Pressure:

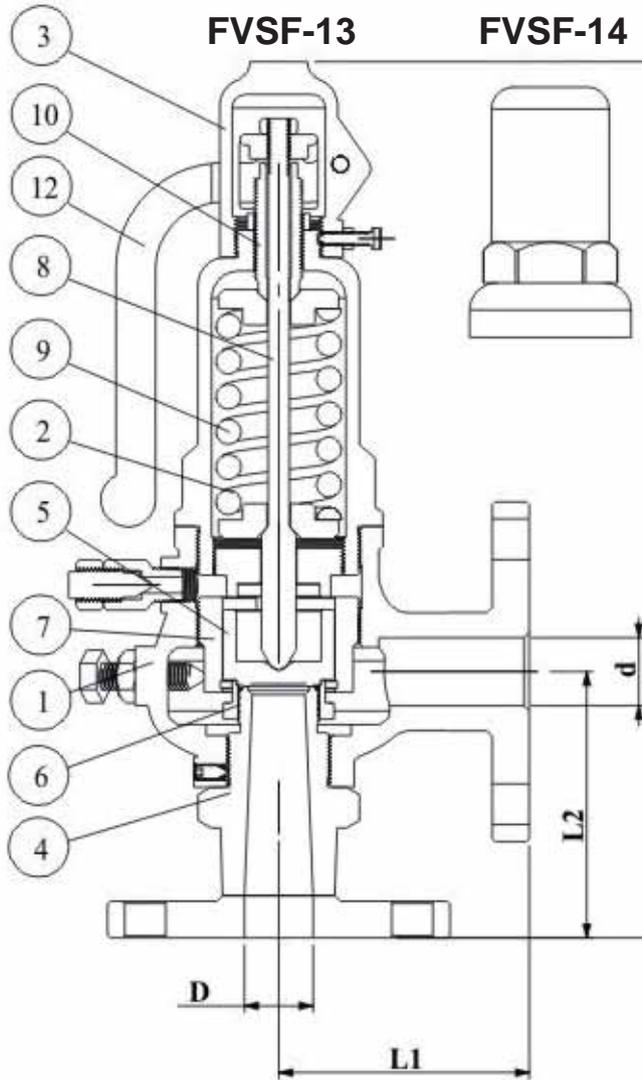
CAST IRON: 0.3 ~ 10 kg/cm²
 WCB: 0.3 ~ 20 kg/cm²
 SS: 0.3 ~ 20 kg/cm²



Unit: mm

No.	Name	MATERIAL		
		CAST IRON	SS 304	WCB
1	BODY	CAST IRON	SS 304	WCB
2	BONNET	CAST IRON	SS 304	WCB
3	CAP	CAST IRON	SS 304	WCB
4	DISC	SS 304	SS 304	SS 304
5	STEM GUIDE	CAST IRON	SS 304	SS 304
6	STEM	SS 410	SS 304	SWPA
7	SPRING	SWPA	SS 304	WCB
8	ADJUSTING SCREW	BSBF	BSBF	BSBF
9	HANDLE	BSBM	SS 304	BC
10	SEAT	SS 304	SS 304	SS 304

SIZE	AREA (mm ²)	LIFT	INLET & OUTLET CENTER		HEIGHT
			L1	L2	
inlet x outlet	n	I	L1	L2	H
25 25	490.6	0.7	89	74	300
40 40	1256	1.0	106	106	365
50 50	1962.5	1.3	110	110	399
65 65	3316.6	1.7	117	116	460
75 75	4415.6	1.9	147	146	517
90 90	6358.5	2.3	188	170	678
100 100	7850	2.5	189	180	624
120 120	11304	3.0	200	190	710
125 125	12265	3.2	190	183	720
150 150	17662	3.8	210	210	800



Fluid: Steam, Air, Gas, Liquid
 Temperature: -5°C to 300°C
 Connection: Flanged end ANSI 150, 300, JIS 10K
 Pressure:

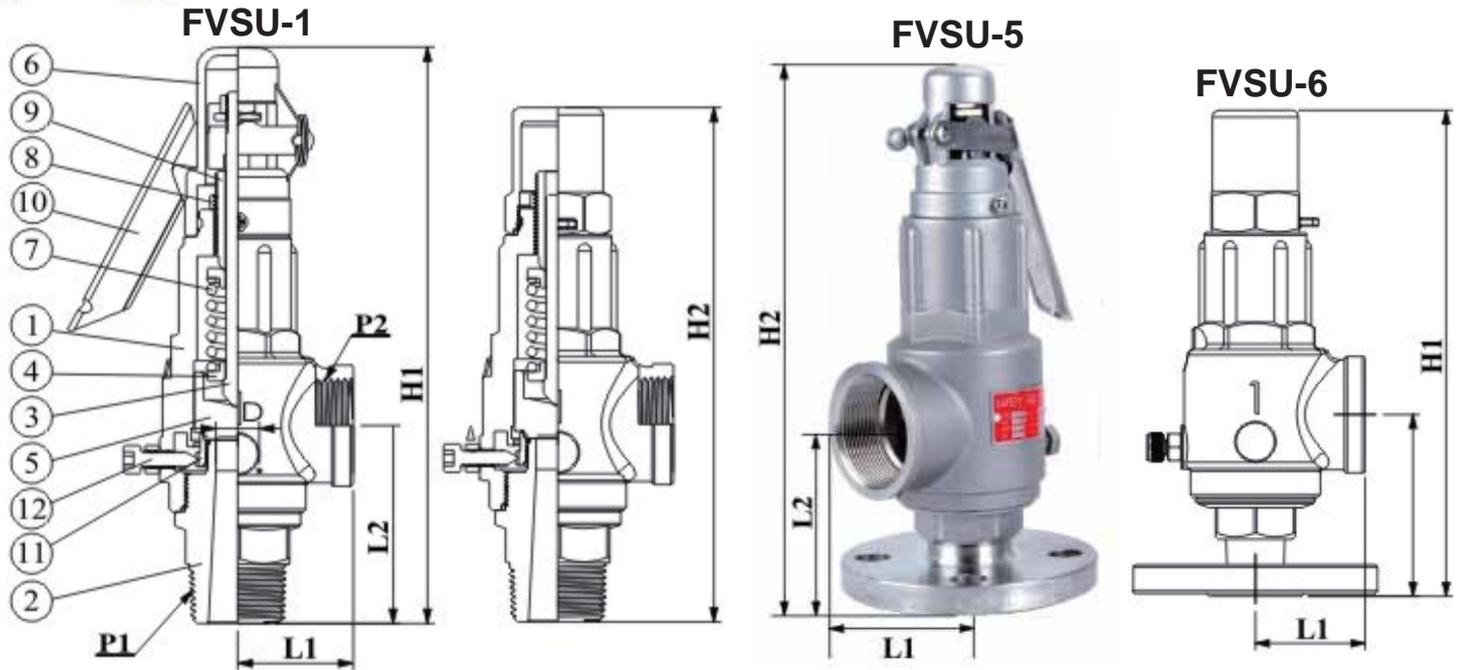
CAST IRON: 0.3 ~ 10 kg/cm²
 WCB: 0.3 ~ 40 kg/cm²
 SS: 0.3 ~ 40 kg/cm²



Material List				
No.	NAME	MATERIAL		
		CAST IRON	SS 304	WCB
1	BODY	CAST IRON	SS 304	WCB
2	BONNET	CAST IRON	SS 304	WCB
3	CAP	CAST IRON	SS 304	WCB
4	BODY SEAT	SS 304	SS 304	SS 304
5	VALVE DISC	SS 304	SS 304	SS 304
6	LOWER RING	BsBm	SS 304	SS 304
7	UPPER RING	BsBm	SS 304	SS 304
8	STEM	SS 304	SS 304	SS 304
9	SPRING	SUP 6	SS 304	SS 304
10	ADJUSTING SCREW	BsBm	SS 304	SS 304
11	ROOT SCREW	SS 310	SS 304	SS 304
12	LEVER	BsBm	SS 304	SS 304

Unit: mm

Dimension (SF-13 / SF 14)						
SIZE	ORIFICE	AREA	Lift	Inlet & Outlet Center		Height
inlet x outlet	D	n (mm ²)	I	L1	L2	H
25 x 40	19	283.3	5	105	95	225
40 x 65	30	706.5	7.5	125	120	290
50 x 80	38	1133.5	9.5	135	125	340
65 x 100	49	1884.7	12.5	155	140	395
80 x 125	61	2920.9	15.5	175	160	480
100 x 150	76	4534.1	19	205	180	555
125 x 200	95	7084.6	24	225	210	685
150 x 200	115	10381.6	29	255	220	815



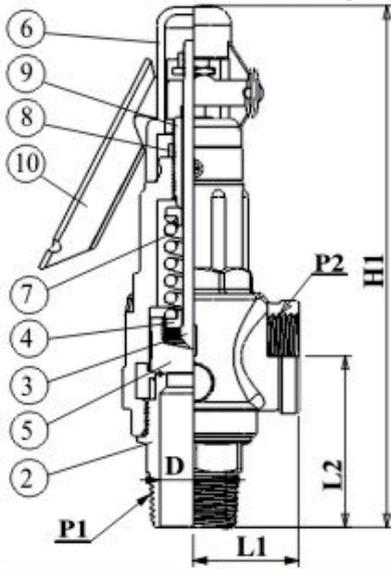
Material List					
No.	Name	FVSU-1 with lever inlet: thread / outlet: thread Metal-to-metal sealing	FVSU-2 without lever inlet: thread / outlet: thread Metal-to-metal sealing	FVSU-5 with lever inlet: thread / outlet: flange Metal-to-metal sealing	FVSU-6 without lever inlet: thread / outlet: flange Metal-to-metal sealing
1	VALVE BODY	SS 304	SS 304	SS 304	SS 304 + FLANGE
2	VALVE SEAT	SS 316	SS 316	SS 316 + FLANGE	SS 316 + FLANGE
3	SPINDLE	STEEL	STEEL	STEEL	STEEL
4	SPRING SEAT	STEEL	STEEL	STEEL	STEEL
5	DISC	SS 316	SS 316	SS 316	SS 316
6	CAP	SS 304	SS 304	SS 304	SS 304
7	SPRING	SS 304	SS 304	SS 304	SS 304
8	NUT	SS 304	SS 304	SS 304	SS 304
9	ADJUST SCREW	SS 304	SS 304	SS 304	SS 304
10	HANDLE	SS 304	-	SS 304	-
11	LOWER RING	SS 304	SS 304	SS 304	SS 304
12	HEX SCREW	SS 304	SS 304	SS 304	SS 304
Working Pressure (kg/cm ²)		0.1 ~ 25		0.1 ~ 25	
Working Temperature (°C)		-196°C ~ 350°C		-196°C ~ 350°C	

Unit: mm

Dimension												
FVSU-1 & FVSU-2							FVSU-5 & FVSU-6					
SIZE	ORIFICE	LIFT	FVSU-1	FVSU-2	FVSU-1	FVSU-2	SIZE	ORIFICE	FVSU-5	FVSU-6	FVSU-5	FVSU-6
P1 x P2	D		L1	L2	H1	H2	P1 x P2	D	L1	L2	H1	H2
½ x 1	15	3.75	40	61.8	195.8	173.8	½ x 1	13	40	66	206	185
¾ x 1	15	3.75	40	65.4	199.4	177.4	¾ x 1	19	40	66	206	185
1 x 1	15	3.75	40	70	204	182	1 x 1	25	40	66	210	189
1 x 1¼	19	4.75	52	72	217.2	195.2	1 x 1¼	25	52	76	221	202
1½ x 2	30	7.5	66	92	282.9	259.4	1½ x 2	38	66	102	291	269
2 x 2½	50	9.5	76.5	105	302.4	278.9	1½ x 3	38	-	98	-	266
2½ x 2½	65	10.8	76.5	107	303	280	2 x 2½	50	76.5	105	292	273
							1½ x 2½	40	76.5	110	306	291
							2 x 3	50	-	110	-	285

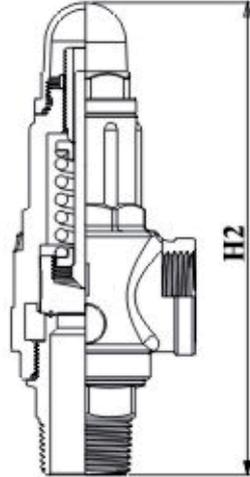
FVSN-1

Safety valve with lever,
metal-to-metal sealing



FVSN-2

Safety valve with
metal-to-metal sealing



Unit: mm

FVSN-2



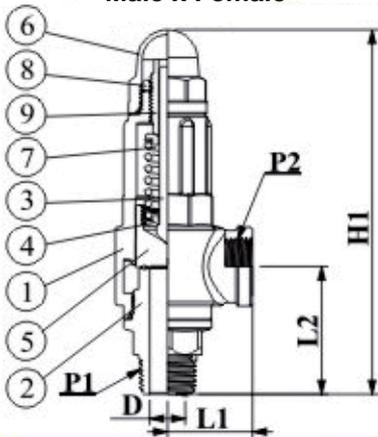
Dimension						
FVSN-1 & FVSN-2						
SIZE	ORIFICE	LIFT	FVSN-1		FVSN-2	
P1 x P2	D		L1	L2	H1	H2
½ x 1	15	3	40	60.5	194.5	168.5
¾ x 1	20	3	40	60	194	168
1 x 1	25	3	40	65.5	199.5	173.5
1¼ x 2	32	6	66	92	282.9	256.4
1½ x 2	40	6	66	92.5	283.4	256.9
2 x 2	50	6	66	92.5	286.4	259.9

Material List

No.	Name	FVSN-1 with lever	FVSN-2 without lever
1	VALVE BODY	SS 304	SS 304
2	VALVE SEAT	SS 316	SS 316
3	SPINDLE	SS 304	SS 304
4	SPRING SEAT	SS 304	SS 304
5	DISC	SS 316	SS 316
6	CAP	SS 304	SS 304
7	SPRING	SS 304	SS 304
8	NUT	SS 304	SS 304
9	ADJUST SCREW	SS 304	SS 304
10	HANDLE	SS 304	-
Working Pressure		0.1 ~ 25 (kg/cm ²)	
Working Temperature		-196°C ~ 350°C	

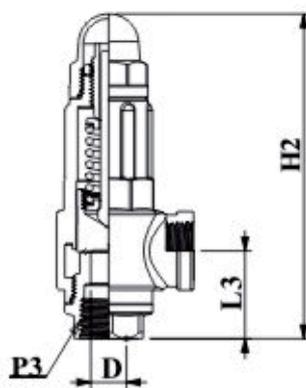
FVSM-4

Male x Female



FVSM-4F

Female x Female



Unit: mm

Dimension								
FVSM-4 & FVSM-4F								
SIZE	ORIFICE	LIFT	FVSM-4			FVSM-4F		
P1 x P2	D		L1	L2	H1	H2	L3	
½ x ½	13	3	31	46.96	134.1	119.4	32.26	

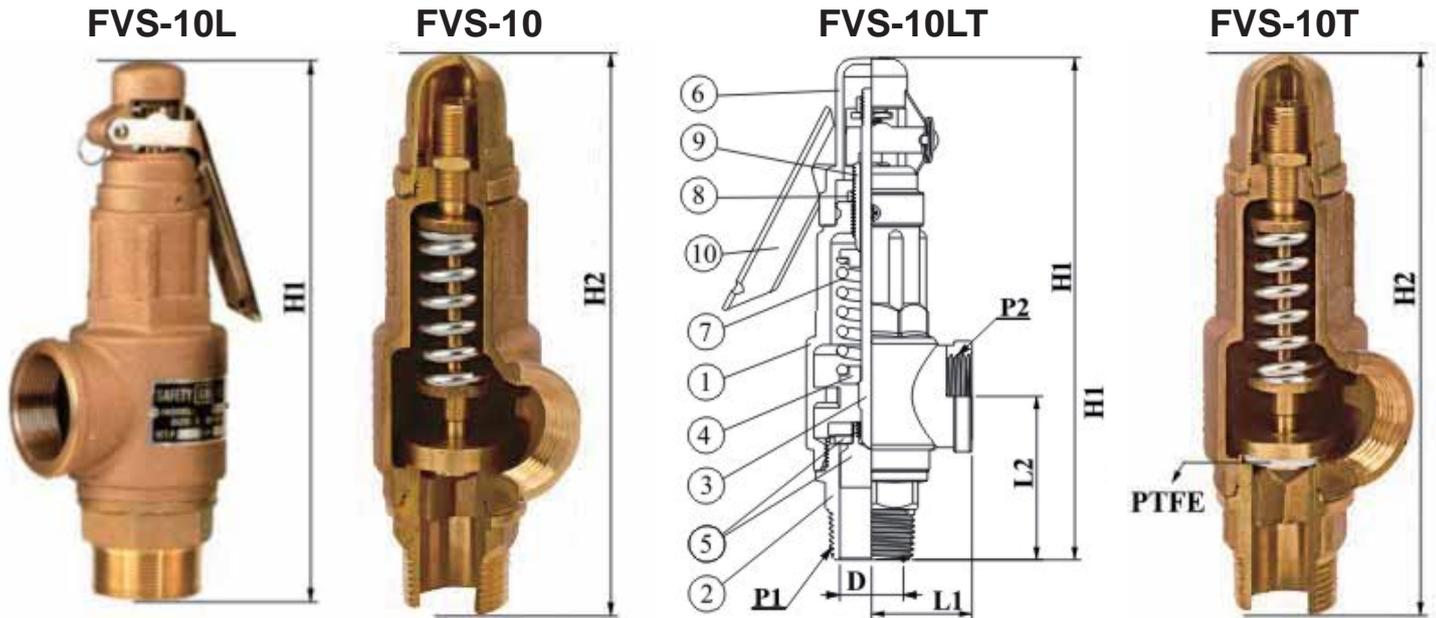
FVSM-4

Safety valve with
metal-to-metal
sealing



Material List

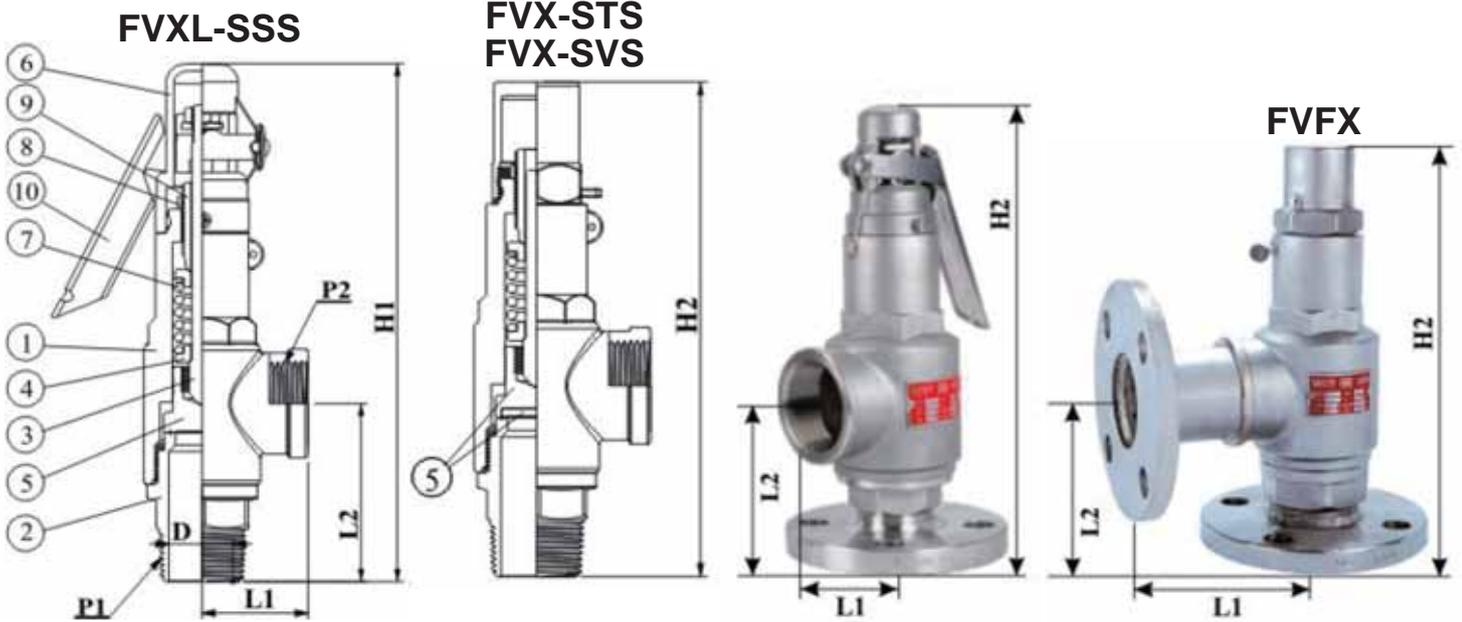
No.	Name	FVSM-4 male x female	FVSM-4F female x female
1	VALVE BODY	SS 304	SS 304
2	VALVE SEAT	SS 316	SS 316
3	SPINDLE	SS 304	SS 304
4	SPRING SEAT	SS 304	SS 304
5	DISC	SS 316	SS 316
6	CAP	SS 304	SS 304
7	SPRING	SS 304	SS 304
8	NUT	SS 304	SS 304
9	ADJUST SCREW	SS 304	SS 304
Working Pressure		0.1 ~ 20 (kg/cm ²)	
Working Temperature		-196°C ~ 350°C	



Material List					
No.	Name	FVS-10L with lever	FVS-10 without lever	FVS-10LT with lever	FVS-10T without lever
1	VALVE BODY	BRONZE	BRONZE	BRONZE	BRONZE
2	VALVE SEAT	BRASS	BRASS	BRASS	BRASS
3	SPINDLE	BRASS	BRASS	BRASS	BRASS
4	SPRING SEAT	BRASS	BRASS	BRASS	BRASS
5	DISC	BRASS	BRASS	BRASS + PTFE	BRASS + PTFE
6	CAP	BRONZE	BRASS	BRONZE	BRASS
7	SPRING	STEEL	STEEL	STEEL	STEEL
8	NUT	BRASS	BRASS	BRASS	BRASS
9	ADJUST SCREW	BRASS	BRASS	BRASS	BRASS
10	HANDLE	STEEL	-	STEEL	-
Working Pressure		0.3 ~ 25 (kg/cm ²)			
Working Temperature		-45°C ~ 185°C			

Unit: mm

Dimension						
SIZE P1 x P2	ORIFICE	LIFT	L1	L2	H1	H2
¾ x ¾	19	0.76	36	55	169	145
1 x 1	25	1	40	65	199	175
1¼ x 1¼	32	1.28	52	75	223	198
1½ x 1½	38	1.52	58	86	243	225
2 x 2	50	2	65	100	284	256



Material List							
No.	Name	FVXL-SSS with lever, metal-to-metal sealing	FVX-SSS metal-to-metal sealing	FVXL-SVS with lever, disc insert VITON	FVX-SVS disc insert VITON	FVXL-ST/S with lever, disc insert PTFE	FVX-ST/S disc insert PTFE
1	VALVE BODY	SS 304/ SS316	SS 304/ SS316	SS 304/ SS316	SS 304/ SS316	SS 304/ SS316	SS 304/ SS316
2	VALVE SEAT	SS 316	SS 316	SS 316	SS 316	SS 316	SS 316
3	SPINDLE	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
4	SPRING SEAT	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
5	DISC	SS 316	SS 316	SS 316 +VITON	SS 316 +VITON	SS 316 +PTFE	SS 316 +PTFE
6	CAP	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
7	SPRING	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
8	NUT	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
9	ADJUST SCREW	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
10	HANDLE	SS 304	-	SS 304	-	SS 304	-
Working Pressure		0.1 ~ 110 (kg/cm ²)		0.1 ~ 50 (kg/cm ²)		0.1 ~ 50 (kg/cm ²)	
Working Temperature (°C)		-196°C ~ 350°C		-40°C ~ 200°C		-40°C ~ 200°C	

Material List			
FVHXL with lever inlet flange outlet thread	FVFXH inlet flange outlet thread	FVFFXL with lever inlet flange outlet flange	FVFX inlet flange outlet flange
SS 304/ SS316	SS 304/ SS316	SS 304/ SS316	SS 304/ SS316
SS 304/ SS316	SS 304/ SS316	SS 304/ SS316	SS 304/ SS316
SS 304	SS 304	SS 304	SS 304
SS 304	SS 304	SS 304	SS 304
SS 316	SS 316	SS 316	SS 316
SS 304	SS 304	SS 304	SS 304
SS 304	SS 304	SS 304	SS 304
SS 304	SS 304	SS 304	SS 304
SS 304	SS 304	SS 304	SS 304
SS 304	-	SS 304	-
0.1 ~ 110 (kg/cm ²)		0.1 ~ 110 (kg/cm ²)	
-196°C ~ 350°C		-196°C ~ 350°C	

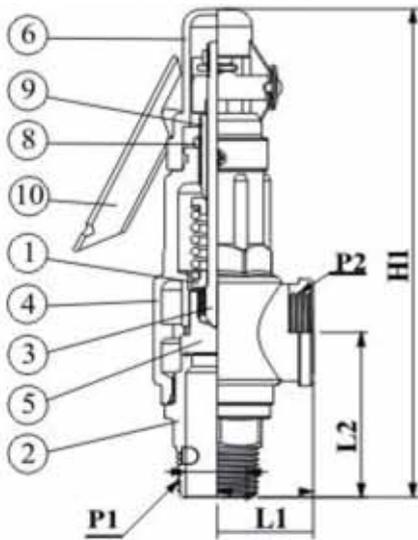
Unit: mm

Dimension FVXL-SSS ~ FVX-ST/S						
SIZE	ORIFICE	LIFT	L1	L2	H1	H2
P1 x P2	D					
½ x 1	15	1	41	66	200	179
¾ x 1	20	1.5	41	65	200	177
1 x 1	21	2	41	71	205	183
1¼ x 2	33	2.5	65	101	285	261
1½ x 2	39	3	65	101	285	261
2 x 2	39	4	65	104	288	265

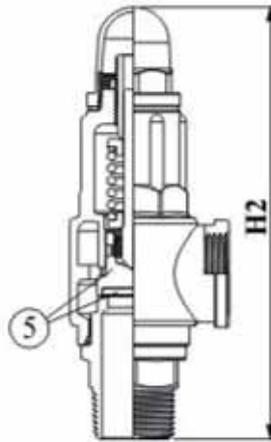
Unit: mm

Dimension FVHXL ~ FVFX										
SIZE	ORIFICE	LIFT	FVHXL & FVFXH				FVFFXL & FVFX			
P1 x P2	D		L1	L2	H1	H2	L1	L2	H1	H2
½ x ½	15	1	41	66	200	179	84.5	72	203	182
¾ x ¾	20	1.5	41	72	-	183	-	72	203	-
¾ x 1	20	1.5	41	72	200	-	84.5	-	-	182
1 x 1	21	2	41	77	205	183	99	77	210	187
1¼ x 1¼	33	2.5	65	101	285	261	128	106	289	265
1½ x 1½	39	3	65	101	285	261	135	107	290	266
2 x 2	39	4	65	104	288	265	129	293	293	268

**FVXL-BSS
FVXL-BBB**



**FVGX-BVS FVGX-BVB
FVGX-BTS FVGX-BTB**



FVXL-BSS



Material List

No.	Name	FVXL-BSS with lever	FVX-BSS without lever	FVGXL-BVS with lever	FVGX-BVS without lever	FVGXL-BTS with lever	FVGX-BTS without lever
1	VALVE BODY	BRONZE	BRONZE	BRONZE	BRONZE	BRONZE	BRONZE
2	VALVE SEAT	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
3	SPINDLE	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
4	SPRING SEAT	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
5	DISC	SS 304	SS 304	SS304 + VITON	SS304 + VITON	SS304 + PTFE	SS304 + PTFE
6	CAP	BRONZE	BRASS	BRONZE	BRASS	BRONZE	BRASS
7	SPRING	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL
8	NUT	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
9	ADJUST SCREW	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
10	HANDLE	STEEL	-	STEEL	-	STEEL	-
Working Pressure		0.1 ~ 40 (kg/cm ²)		0.1 ~ 40 (kg/cm ²)		0.1 ~ 40 (kg/cm ²)	
Working Temperature		-196°C ~ 225°C		-40°C ~ 200°C		-40°C ~ 200°C	

Unit: mm

Dimension						
SIZE	ORIFICE	LIFT	L1	L2	H1	H2
P1 x P2	D					
½ x ¾	15	1.04	35	53.5	169	144.6
½ x 1	15	1.52	39	63	196.5	172.6
¾ x 1	19	1.52	39	62.5	196	172
1 x 1	21	1.52	39	68	210.5	178
1 x 1¼	26	2	52	74.5	215.5	197
1¼ x 1½	33	2.56	58.5	88.5	245.5	227
1½ x 2	39	3.04	64.5	100.5	284.5	258
2 x 2	39	3.04	64.5	103.5	287.5	261
2 x 2½	50	4	72	110	303	277

General Note
FVXL-BSS FVX-BSS (with metal-to-metal sealing)
FVGXL-BVS FVGX-BVS (with disc insert VITON)
FVGXL-BTS FVGX-BTS (with disc insert PTFE)

Material List							
No.	Name	FVXL-BBB with lever	FVX-BBB without lever	FVGXL-BVB with lever	FVGX-BVB without lever	FVGXL-BTB with lever	FVGX-BTB without lever
1	VALVE BODY	BRONZE	BRONZE	BRONZE	BRONZE	BRONZE	BRONZE
2	VALVE SEAT	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
3	SPINDLE	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
4	SPRING SEAT	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
5	DISC	BRASS	BRASS	BRASS + VITON	BRASS + VITON	BRASS + PTFE	BRASS + PTFE
6	CAP	BRONZE	BRASS	BRONZE	BRASS	BRONZE	BRASS
7	SPRING	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL
8	NUT	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
9	ADJUST SCREW	BRASS	BRASS	BRASS	BRASS	BRASS	BRASS
10	HANDLE	STEEL	-	STEEL	-	STEEL	-
Working Pressure		0.1 ~ 20 (kg/cm ²)		0.1 ~ 50 (kg/cm ²)		0.1 ~ 50 (kg/cm ²)	
Working Temperature		-196°C ~ 225°C		-40°C ~ 200°C		-40°C ~ 200°C	

Unit: mm

Dimension						
SIZE	ORIFICE	LIFT	L1	L2	H1	H2
P1 x P2	D					
½ x ¾	15	1.04	35	52.5	168	143.6
¾ x 1	20	1.52	39	65	198	174
1 x 1¼	25	2	52	72.5	213.5	195
1¼ x 1½	32	2.56	58.5	88.5	245.5	227
1½ x 2	40	3.04	64.5	100.5	284.5	258
2 x 2½	50	4	72	107	300	273.6
2½ x 2½	65	4.56	72	107	300	-

General Note
FVXL-BBB FVX-BBB (with metal-to-metal sealing)
FVGXL-BVB FVGX-BVB (with disc insert VITON)
FVGXL-BTB FVGX-BTB (with disc insert PTFE)

Our Policy

Due to continuous development of DIE ERSTE Safety Valve, we reserved the right to change the details and dimension of the product in the catalogue without notice. For specific performance data and proper material selection, please consult with your DIE ERSTE sales representatives.