

# TABLE OF CONTENTS

01. 3-Way & 2-Way Piston Valve
02. 3-Way Ultra High Pressure Piston Valve
03. Control Valve
04. Pressure Regulator Valve
05. Lift Check Valve
06. Knuckle Joint
07. 4-Way Piston Valve
08. Strainer
09. Liquid Ejector
10. Pan Check Valve
11. Pilot Type Relief Valve
12. Ordering Information



## **WARNING**

**The products, product features, specifications, designs, availability described in this catalog without limitation are subject to be changed without notice.**

# 3 & 2-WAY PISTON VALVE

## ■ FEATURES

- On/Off valve.
- Perfect sealing with the disc ring made of PTFE.
- Two stem structure absorbing the impact in the seat.
- Body made of Stainless Steel.
- Gland Packing made of 4 pieces V-packing that prevents the leak around the stem.
- Spring with Shot peening process that improves the life time.



## ■ SPECIFICATION

Model Name	3-Way	VP3W-FR(S)	VP3W-SR	VP3W-FD(S)	VP3W-SD
	2-Way	VP2W-FR(S)	VP2W-SR	VP2W-FD(S)	VP2W-SD
Fluids	Steam, Industrial Water, Gas(N <sub>2</sub> ), Air, Vacuum				
Size (mm)	15A~80A	08A~50A	15A~80A	08A~50A	
Operation	Normal Close		Normal Open		
End Connection	Flanged	Threaded	Flanged	Threaded	
Material	Body, Stem : Stainless Steel				
Air Supply	2.5 ~ 3.5 kg/cm <sup>2</sup> (36~50psi)				
Max Temperature	205°C(401°F)				
Max Pressure	15A~50A : 28 kg/cm <sup>2</sup> (398psi) / Max 32 kg/cm <sup>2</sup> (455psi)				
	65A~80A : 20 kg/cm <sup>2</sup> (284psi) / Max 23 kg/cm <sup>2</sup> (327psi)				

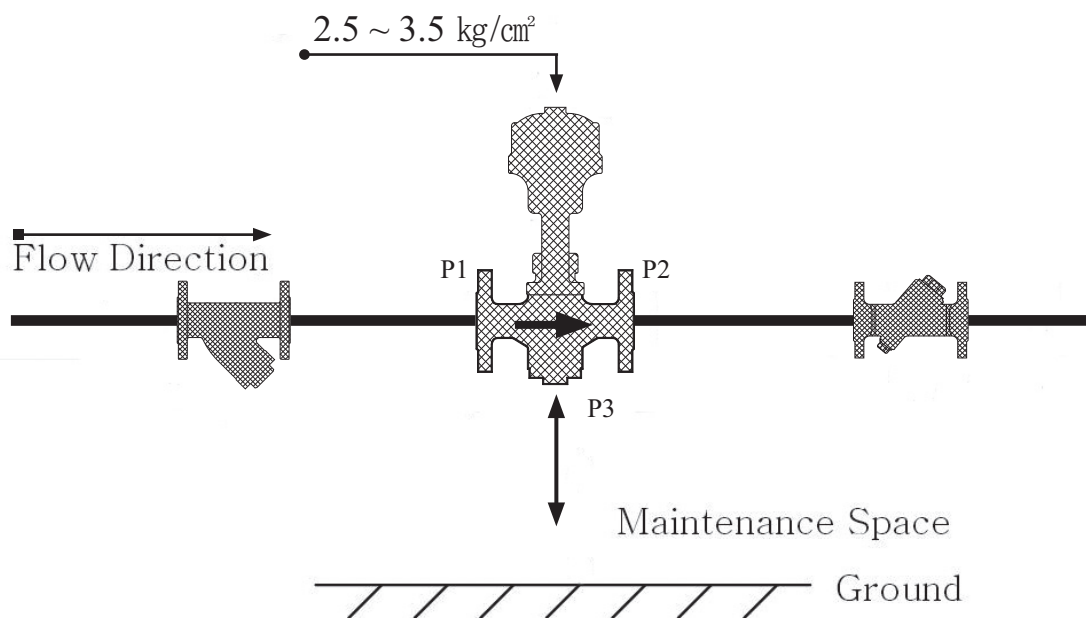
- JIS, DIN, ANSI are available.
- (S) means SUS Flange.
- To prevent the cavitations of flange, the user should use SUS Flange.
- 2-Way : 3rd port blocked with plug or flat low seat flange is available.
- No welding flange and body is available.
- Available for High Pressure ( JIS 30K ).
- 3rd port flange is available.

# 3 & 2-WAY PISTON VALVE

## ■ Cv VALUE

Size mm(inch)		15A (1/2")	20A (3/4")	25A (1")	32A (1-1/4")	40A (1-1/2")	50A (2")	65A (2-1/2")	80A (3")
Cv	P1→P2	3.98	6.05	10.49	17.36	21.29	28.80	44.70	67.50
	P2→P3	3.94	8.35	12.23	19.69	24.32	32.42	50.60	77.40

## ■ INSTALLATION



- Pipe line should be cleaned out by means such as water flushing before installing the valve.
- Strainer should be installed for good performance and long life of the valve without trouble.  
It filters the foreign material in the line.
- Check valve is installed to prevent the reverse flow.
- The line should have an enough room to maintenance the 3rd port on the emergency.

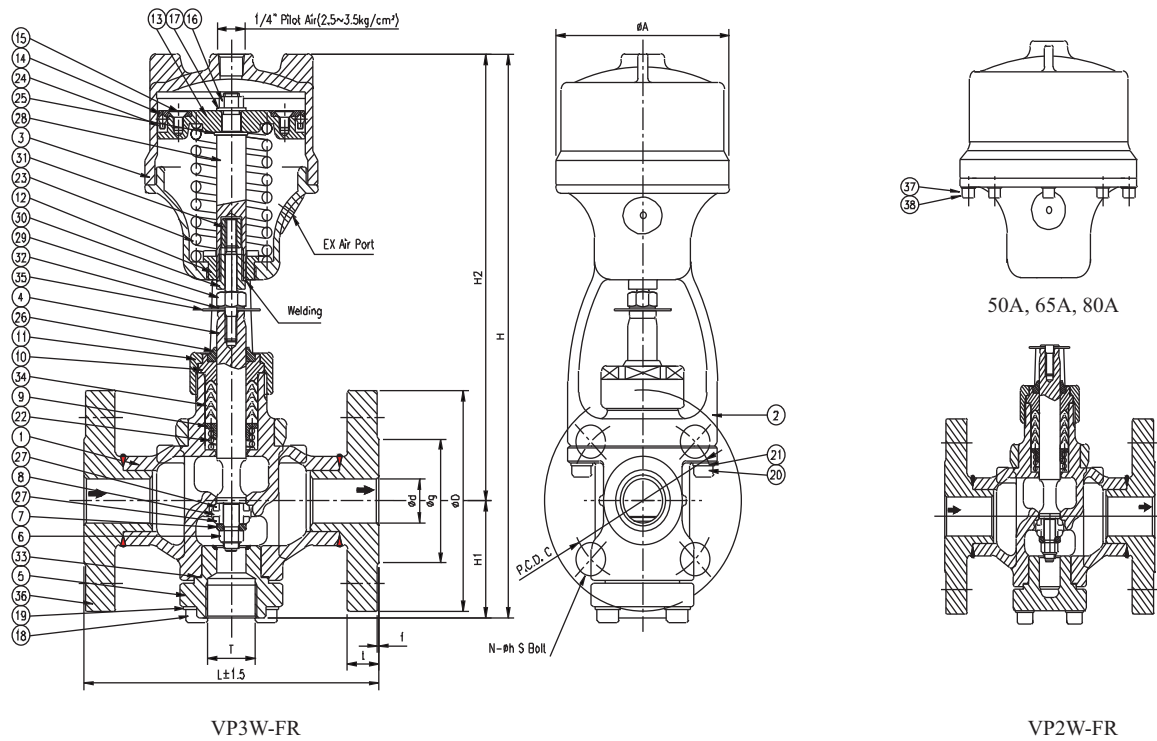
# 3 & 2-WAY PISTON VALVE

## ■ VP3W-FR

- 3-WAY, NORMAL CLOSE

## ■ VP2W-FR

- 2-WAY, NORMAL CLOSE



## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	port d	F to F		Flange Size(JIS 20K RF)							H1	H2	H	A
		L	D	C	G	t	f	N	h	S				
□ 15A(1/2")	15	146	95	70	51	14	1	4	15	M12	50	177	227	83
□ 20A(3/4")	20	146	100	75	56	16	1	4	15	M12	54	202	256	91
□ 25A(1")	25	167	125	90	67	16	1	4	19	M16	67	254	321	111
□ 32A(1-1/4")	32	190	135	100	76	18	2	4	19	M16	71	281	352	133
□ 40A(1-1/2")	40	190	140	105	81	18	2	4	19	M16	91	318	409	168
□ 50A(2")	50	216	155	120	96	18	2	8	19	M16	102	388	490	208
□ 65A(2-1/2")	65	290	175	140	116	20	2	8	19	M16	104	396	500	278
□ 80A(3")	80	310	200	160	132	22	2	8	23	M20	120	430	550	278

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	BODY	11	GLAND NUT	21	SPRING WASHER	31	SETTING NUT
2	YOKE STAND	12	GUIDE BUSH	22	PACKING SPRING	32	SPRING WASHER
3	CYLINDER	13	PISTON	23	SPRING	33	LOWER SEAT GASKET
4	STEM	14	SET RING PLATE	24	PISTON RING	34	GLAND PACKING
5	LOWER SEAT FLANGE	15	BOLTS	25	PISTON ROD GASKET	35	LIFT RING
6	U-NUT	16	ROD/NUT	26	DUST SEAL	36	FLANGE
7	GUIDE WASHER	17	SPRING WASHER	27	DISC RING	37	SPRING WASHER
8	DISC ADAPTER	18	SOCKET SCREW BOLT	28	PISTON ROD	38	SOCKET SCREW BOLT
9	RING WASHER	19	SPRING WASHER	29	TENSION BOLT		
10	GLAND	20	SOCKET SCREW BOLT	30	COMPRESS NUT		

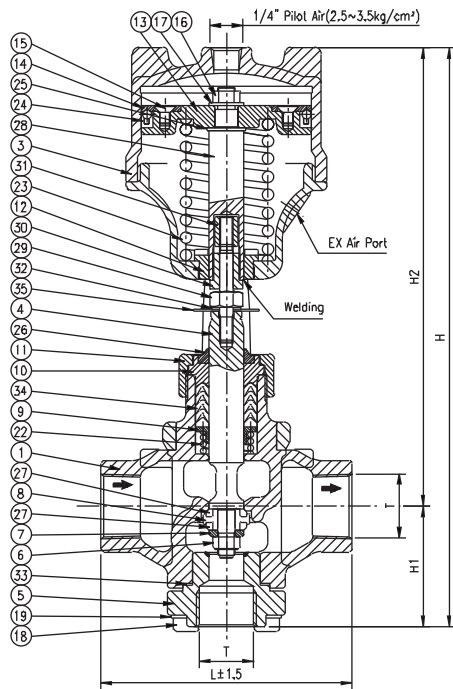
# 3 & 2-WAY PISTON VALVE

## ■ VP3W-SR

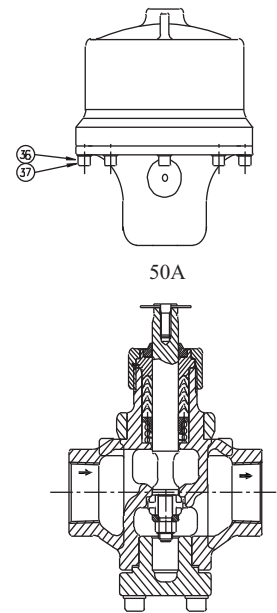
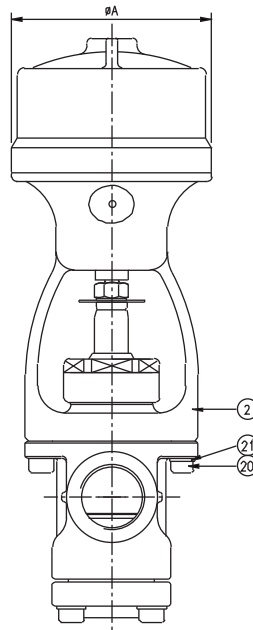
- 3-WAY, NORMAL CLOSE

## ■ VP2W-SR

- 2-WAY, NORMAL CLOSE



VP3W-SR



VP2W-SR

## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	L	H1	H2	H	A
□ 8A(1/4")	1/4"	85	50	177	227	83
□ 10A(3/8")	3/8"	85	50	177	227	83
□ 15A(1/2")	1/2"	85	50	177	227	83
□ 20A(3/4")	3/4"	110	54	202	256	91
□ 25A(1")	1"	120	67	254	321	111
□ 32A(1-1/4")	1-1/4"	145	71	281	352	133
□ 40A(1-1/2")	1-1/2"	150	91	318	409	168
□ 50A(2")	2"	174	102	388	490	208

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	BODY	11	GLAND NUT	21	SPRING WASHER	31	SETTING NUT
2	YOKE STAND	12	GUIDE BUSH	22	PACKING SPRING	32	SPRING WASHER
3	CYLINDER	13	PISTON	23	SPRING	33	LOWER SEAT GASKET
4	STEM	14	SET RING PLATE	24	PISTON RING	34	GLAND PACKING
5	LOWER SEAT FLANGE	15	BOLTS	25	PISTON ROD GASKET	35	LIFT RING
6	U-NUT	16	ROD/NUT	26	DUST SEAL	36	SPRING WASHER
7	GUIDE WASHER	17	SPRING WASHER	27	DISC RING	37	SOCKET SCREW BOLT
8	DISC ADAPTER	18	SOCKET SCREW BOLT	28	PISTON ROD		
9	RING WASHER	19	SPRING WASHER	29	TENSION BOLT		
10	GLAND	20	SOCKET SCREW BOLT	30	COMPRESS NUT		

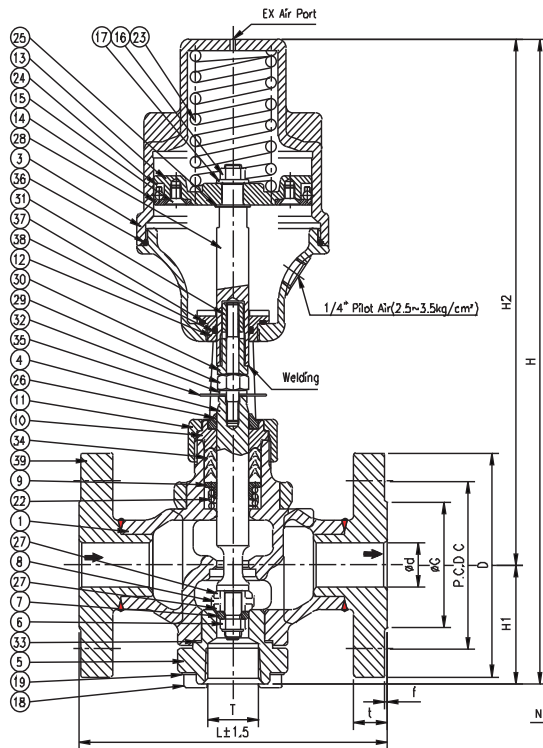
# 3 & 2-WAY PISTON VALVE

## ■ VP3W-FD

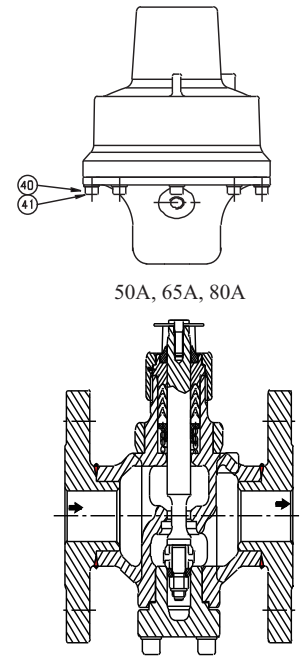
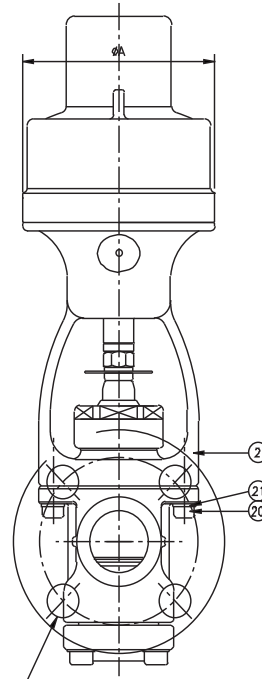
- 3-WAY, NORMAL OPEN

## ■ VP2W-FD

- 2-WAY, NORMAL OPEN



VP3W-FD



50A, 65A, 80A

VP2W-FD

## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	port d	F to F L	Flange Size(JIS 20K RF)								H1	H2	H	A
			D	C	G	t	f	N	h	S				
□ 15A(1/2")	15	146	95	70	51	14	1	4	15	M12	50	232	282	91
□ 20A(3/4")	20	146	100	75	56	16	1	4	15	M12	54	297	351	111
□ 25A(1")	25	167	125	90	67	16	1	4	19	M16	67	330	397	133
□ 32A(1-1/4")	32	190	135	100	76	18	2	4	19	M16	71	340	411	155
□ 40A(1-1/2")	40	190	140	105	81	18	2	4	19	M16	91	390	481	185
□ 50A(2")	50	216	155	120	96	18	2	8	19	M16	102	453	555	212
□ 65A(2-1/2")	65	260	175	140	116	20	2	8	19	M16	104	480	584	278
□ 80A(3")	80	310	200	160	132	22	2	8	23	M20	120	511	611	278

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	BODY	11	GLAND NUT	21	SPRING WASHER	31	SETTING NUT
2	YOKE STAND	12	GUIDE BUSH	22	PACKING SPRING	32	SPRING WASHER
3	CYLINDER	13	PISTON	23	SPRING	33	LOWER SEAT GASKET
4	STEM	14	SET RING PLATE	24	PISTON RING	34	GLAND PACKING
5	LOWER SEAT FLANGE	15	BOLTS	25	PISTON ROD GASKET	35	LIFT RING
6	U-NUT	16	ROD/NUT	26	DUST SEAL	36	O-RING
7	GUIDE WASHER	17	SPRING WASHER	27	DISC RING	37	O-RING
8	DISC ADAPTER	18	SOCKET SCREW BOLT	28	PISTON ROD	38	O-RING
9	RING WASHER	19	SPRING WASHER	29	TENSION BOLT	39	FLANGE
10	GLAND	20	SOCKET SCREW BOLT	30	COMPRESS NUT	40	SPRING WASHER
						41	SOCKET SCREW BOLT

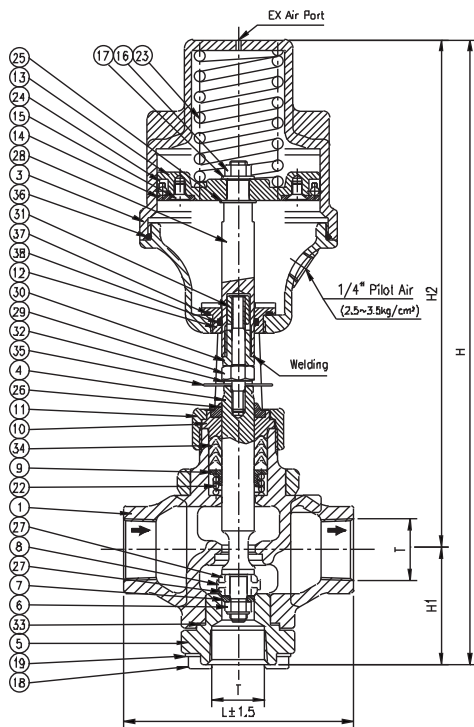
# 3 & 2-WAY PISTON VALVE

## ■ VP3W-SD

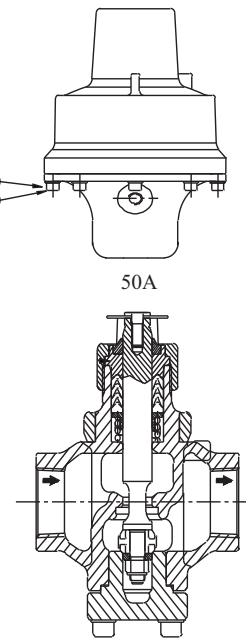
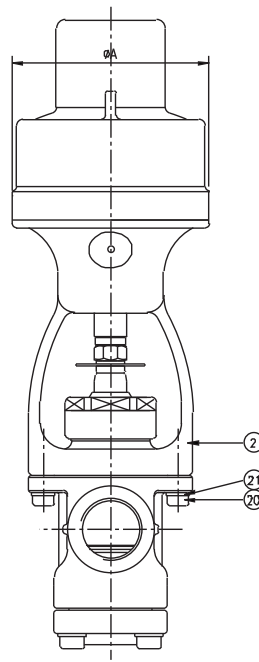
- 3-WAY, NORMAL OPEN

## ■ VP2W-SD

- 2-WAY, NORMAL OPEN



VP3W-SD



VP2W-SD

## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	L	H1	H2	H	A
□ 8A(1/4")	1/4"	85	50	195	245	83
□ 10A(3/8")	3/8"	85	50	195	245	83
□ 15A(1/2")	1/2"	85	50	232	282	91
□ 20A(3/4")	3/4"	110	54	297	351	111
□ 25A(1")	1"	120	67	330	397	133
□ 32A(1-1/4")	1-1/4"	145	71	340	411	155
□ 40A(1-1/2")	1-1/2"	150	91	390	481	185
□ 50A(2")	2"	174	102	453	555	212

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	BODY	11	GLAND NUT	21	SPRING WASHER	31	SETTING NUT
2	YOKE STAND	12	GUIDE BUSH	22	PACKING SPRING	32	SPRING WASHER
3	CYLINDER	13	PISTON	23	SPRING	33	LOWER SEAT GASKET
4	STEM	14	SET RING PLATE	24	PISTON RING	34	GLAND PACKING
5	LOWER SEAT FLANGE	15	BOLTS	25	PISTON ROD GASKET	35	LIFT RING
6	U-NUT	16	ROD/NUT	26	DUST SEAL	36	O-RING
7	GUIDE WASHER	17	SPRING WASHER	27	DISC RING	37	O-RING
8	DISC ADAPTER	18	SOCKET SCREW BOLT	28	PISTON ROD	38	O-RING
9	RING WASHER	19	SPRING WASHER	29	TENSION BOLT	39	SPRING WASHER
10	GLAND	20	SOCKET SCREW BOLT	30	COMPRESS NUT	40	SOCKET SCREW BOLT

# 3-WAY PISTON VALVE FOR ULTRA HIGH PRESSURE

## ■ FEATURES

- On/Off valve
- Designed for high pressure use.
- Metal seat is applied for semipermanent use.
- Body made of Stainless Steel is manufactured in the forging method for high pressure.
- Gland Packing made of 5 pieces V-packing that prevents the leak around the stem.
- Spring with Shot peening process that improves the life time.



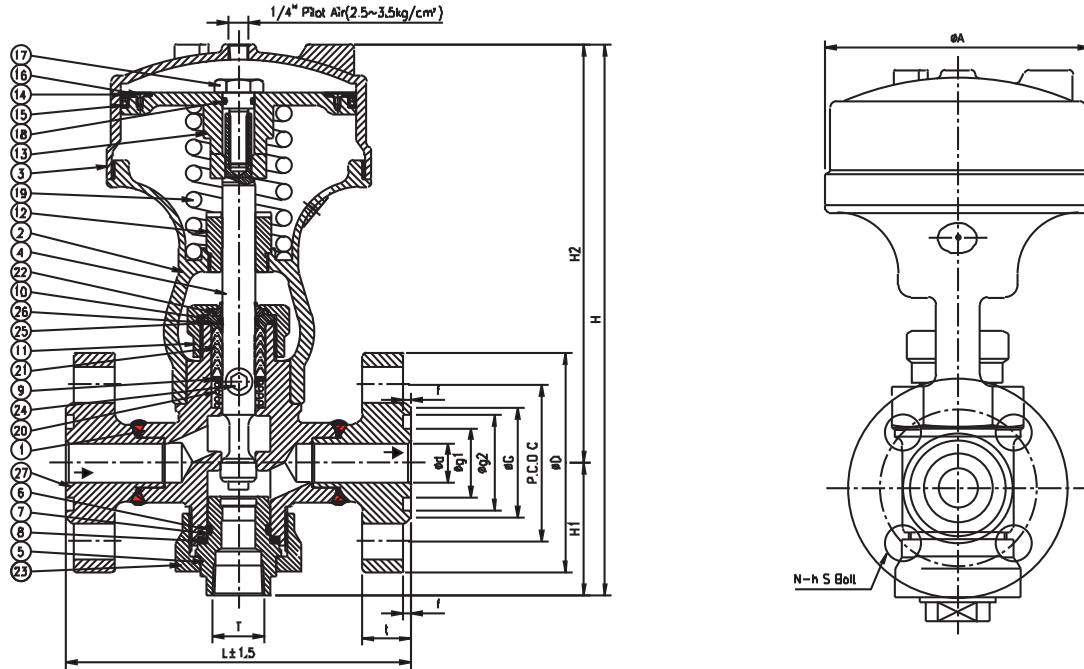
## ■ SPECIFICATION

Model Name	VPU3W-FR(S)
Fluids	Industrial Water
Size (mm)	15A ~ 25A
Operation	Normal Close
End connection	Flanged
Material	Body, Stem : Stainless Steel with Stellite Welding
Air Supply	3.0kg/cm <sup>2</sup> (40psi) ~ 3.5kg/cm <sup>2</sup> (50psi)
Max Temperature	100°C(212°F)
Max Pressure	150kg/cm <sup>2</sup> (2133psi)



# 3-WAY PISTON VALVE FOR ULTRA HIGH PRESSURE

## ■ VPU3W-FR



VPU3W-FR

## ■ DIMENSIONS

Valve Size mm(inch)	port d	F to F		Flange Size(JIS 63K RF)										H1	H2	H	A
		L	D	C	G	g1	g2	t	f	N	h	S					
□ 15A(1/2")	15	212	120	85	55	31	43	27	5	4	19	M16	85	267	352	169	
□ 20A(3/4")	20	216	135	95	60	37	51	29	5	4	23	M20	85	267	352	169	
□ 25A(1")	25	220	140	100	70	44	61	31	5	4	23	M20	85	267	352	169	

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	BODY	11	GLAND NUT	21	GLAND PACKING
2	YOKE STAND	12	GUIDE BUSH	22	DUST SEAL
3	CYLINDER	13	PISTON	23	UNION NUT
4	STEM	14	SET RING PLATE	24	SET SCREW
5	LOWER SEAT	15	PISTON RING	25	O-RING
6	O-RING	16	BOLTS	26	O-RING
7	BACK -UP RING	17	PISTON BOLTS	27	FLANGE
8	LOWER SEAT METAL GASKET	18	O-RING		
9	RING WASHER	19	SPRING		
10	GLAND	20	PACKING SPRING		

# CONTROL VALVE

## ■ FEATURES

- The valve controls pressure and temperature.
- Multi Spring for more precise proportional control.
- Lapping satisfying ANSI CLASS V LEVEL (Control Valve Seat Leakage).
- Spring with Shot peening process that improves the life time.
- Body and Stem made of Stainless Steel.
- Single Seat and Globe Control Valve.



VCM-1000F

VCM-1100F

## ■ SPECIFICATION

Model Name	Linear	VCM-1000F(S)	VCM-1000S	VOM-1000F(S)	VOM-1000S
	Equal Percent	VCM-1100F(S)	VCM-1100S	VOM-1100F(S)	VOM-1100S
Fluids	Steam, Industrial Water, Gas(N <sub>2</sub> ), Air				
Size (mm)	15A~40A(VCM-1100F : 15A~80A)				
Operation	Normal Close			Normal Open	
End Connection	Flanged	Threaded	Flanged	Threaded	
Material	Body, Trim : Stainless Steel				
Flow Characteristic	Linear / Equal %				
Spring Range : ΔP	0.2 ~ 1.0kg/cm <sup>2</sup> (3~14psi) : ΔP Max.7 kg/cm <sup>2</sup> 0.4~1.6kg/cm <sup>2</sup> (6~23psi) : ΔP Max.16 kg/cm <sup>2</sup> 0.8~2.4kg/cm <sup>2</sup> (11.5~34psi) : ΔP Max.24 kg/cm <sup>2</sup>				
Temperature	Linear : Max.205°C (401°F) / Equal : Max.230°C (455°F)				
Allowable Pressure(VCM-1000)	Max 20kg/cm <sup>2</sup> (284psi)				
Allowable Pressure(VCM-1100)	Max 25kg/cm <sup>2</sup> (355psi)				
Seat Type	Single Seated				

- JIS, DIN, ANSI are available.
- (S) means SUS Flange.
- E/P positioner is available.
- ΔP means Differential Pressure. ΔP=P1-P2.
- ΔP of 65A, 80A is Max. 4kg/cm<sup>2</sup>(spring range 0.2~1.0kg/cm<sup>2</sup>) or Max. 18kg/cm<sup>2</sup>(spring range 0.8~2.4kg/cm<sup>2</sup>).

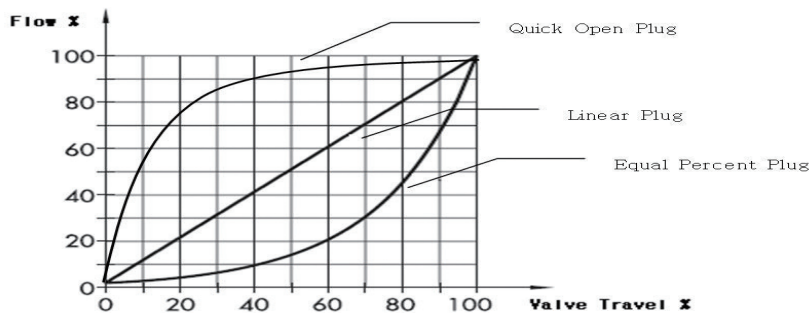
## ■ Cv value

Size mm(inch)	15A (1/2")	20A (3/4")	25A (1")	32A (1-1/4")	40A (1-1/2")	50A (2")	65A (2-1/2")	80A (3")
Cv	VCM-1000S/F	5.35	5.35	7.98	21.38	21.38	-	-
	VCM-1100S/F	4.81	5.35	8.02	21.29	21.29	32.13	51.00

# CONTROL VALVE

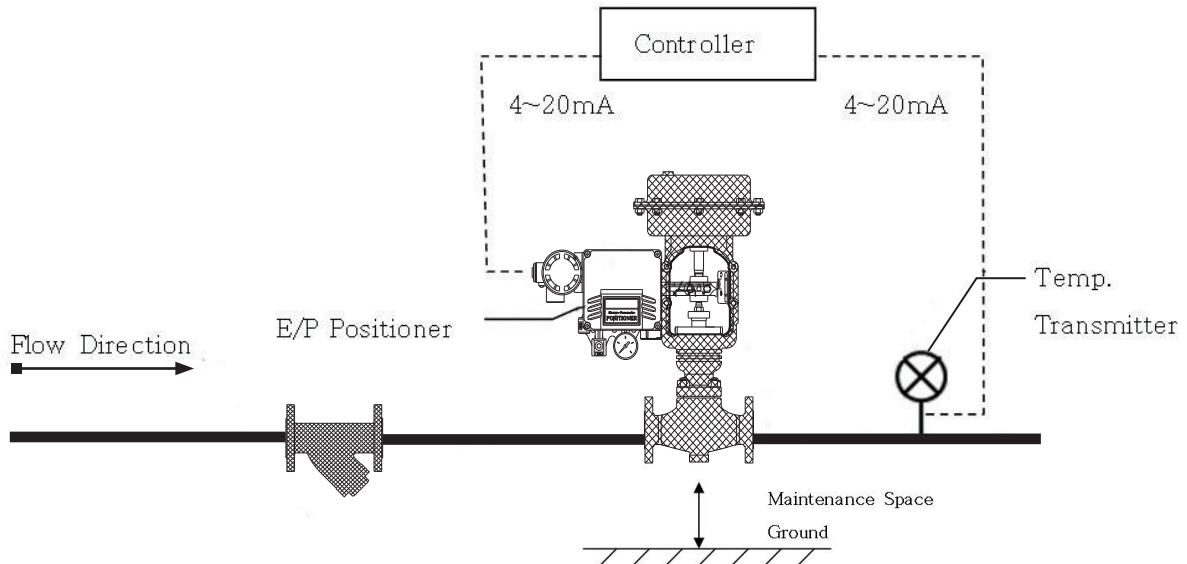
## ■ FLOW CHARACTERISTIC

### ● Inherent Flow Characteristic



- a) Plug Shape.
- b) The chart does not include actual system variables.
- c) In the actual installed flow characteristic, the Equal Percent becomes more Linear and the Linear becomes more Quick Open.

## ■ INSTALLATION



- a) The control valve should be connected with E/P positioner or I/P converter.
- b) In case of purchasing the valve with E/P positioner, it is supplied after Zero and Span is fixed. But when the user uses I/P converter, the user should arrange Zero and Span of I/P.
- c) To protect the valve, the strainer should be installed prior to the valve.

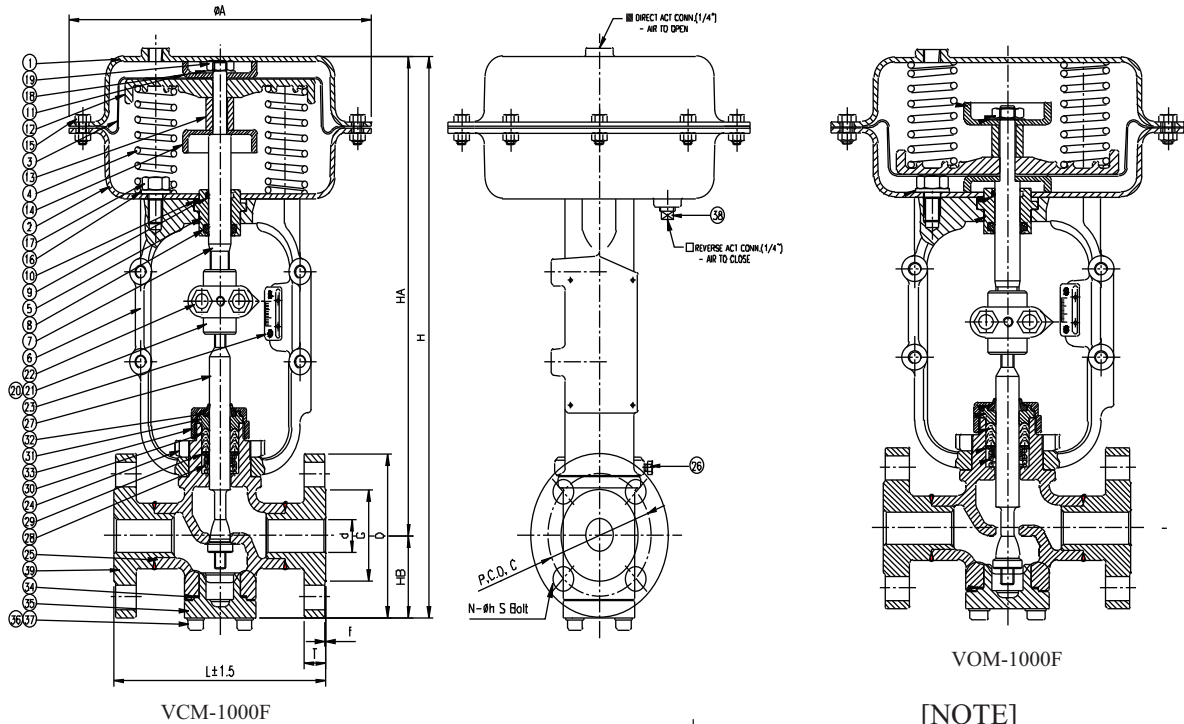
# CONTROL VALVE

## ■ VCM-1000F(S)

- NORMAL CLOSE, LINEAR

## ■ VOM-1000F(S)

- NORMAL OPEN, LINEAR



### [NOTE]

	Air Signal	Spring Q'ty
<input type="checkbox"/>	0.2~1.0 kg/cm <sup>2</sup>	4
<input type="checkbox"/>	0.4~1.6 kg/cm <sup>2</sup>	6
<input type="checkbox"/>	0.8~2.4 kg/cm <sup>2</sup>	8

## ■ DIMENSIONS

Valve Size mm(inch)	L (F to F)	$\phi A$	HB	HA	H	Port d	Flange Size(JIS 20K RF)							
							D	C	G	T	f	N	h	S
<input type="checkbox"/> 15A(1/2")	154	220	54	296	350	15	95	70	51	14	1	4	15	M12
<input type="checkbox"/> 20A(3/4")	154	220	54	296	350	20	100	75	56	16	1	4	15	M12
<input type="checkbox"/> 25A(1")	164	270	62	317	379	25	125	90	67	16	1	4	19	M16
<input type="checkbox"/> 32A(1-1/4")	203	320	77	372	449	32	135	100	76	18	2	4	19	M16
<input type="checkbox"/> 40A(1-1/2")	203	320	77	372	449	40	140	105	81	18	2	4	19	M16

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	UPPER DIAPHRAGM CASE	11	DIAPHRAGM RETAINER	21	STEM CONNECTION	31	GLAND
2	LOWER DIAPHRAGM CASE	12	DIAPHRAGM PLATE	22	BOLTS/NUTS	32	DUST SEAL
3	DIAPHRAGM	13	STOPPER COLLAR	23	SCALE PLATE	33	GLAND NUT
4	COIL SPRING	14	STOPPER RING	24	LOCK NUT	34	COVER GASKET
5	GUIDE SEAL BOX	15	BOLTS/NUTS	25	BODY	35	COVER
6	YOKE	16	GASKET	26	SET BOLT	36	SOCKET SCREW BOLT
7	ACTUATOR STEM	17	BOLTS	27	VALVE STEM	37	SPRING WASHER
8	WIPER	18	SPRING WASHER	28	PACKING SPRING	38	PLUG
9	O-RING	19	NUT	29	RING WASHER	39	FLANGE
10	O-RING	20	STEM CONNECTION	30	GLAND PACKING		

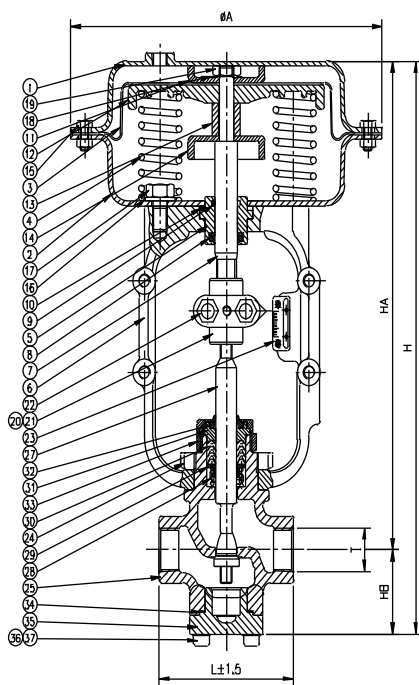
# CONTROL VALVE

## ■ VCM-1000S

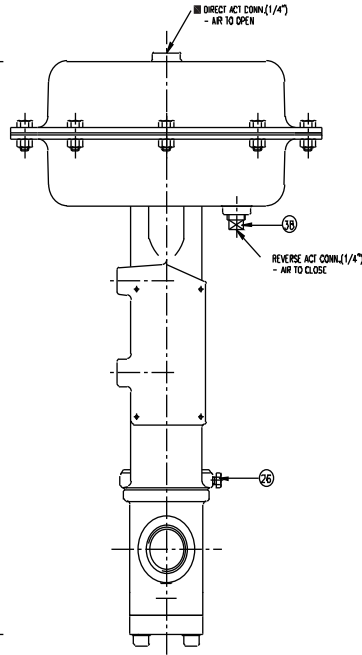
- NORMAL CLOSE, LINEAR

## ■ VOM-1000S

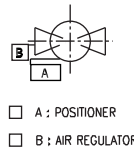
- NORMAL OPEN, LINEAR



VCM-1000S



VOM-1000S



### [NOTE]

	Air Signal	Spring Q'ty
<input type="checkbox"/>	0.2~1.0kg/cm <sup>2</sup>	4
<input type="checkbox"/>	0.4~1.6kg/cm <sup>2</sup>	6
<input type="checkbox"/>	0.8~2.4kg/cm <sup>2</sup>	8

## ■ DIMENSIONS

(Unit : mm)

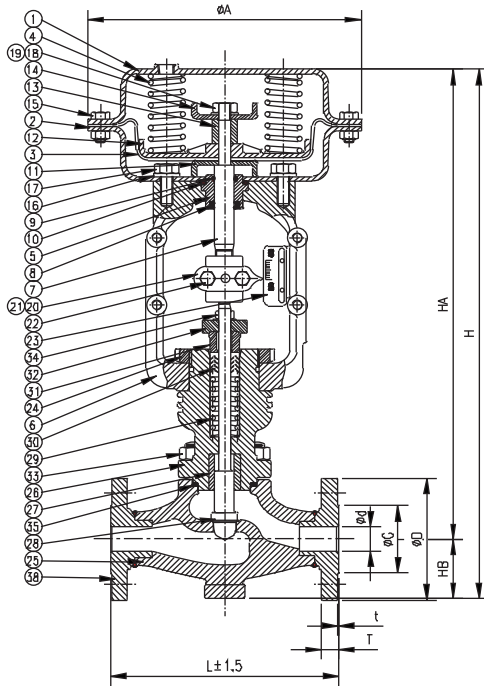
	Valve Size mm(inch)	Thread T	L(Face to Face)	øA	HB	HA	H
<input type="checkbox"/>	15A(1/2")	1/2"	95	220	54	296	350
<input type="checkbox"/>	20A(3/4")	3/4"	95	220	54	296	350
<input type="checkbox"/>	25A(1")	1"	100	270	62	317	379
<input type="checkbox"/>	32A(1-1/4")	1-1/4"	130	320	77	372	449
<input type="checkbox"/>	40A(1-1/2")	1-1/2"	130	320	77	372	449

## ■ PART NAME

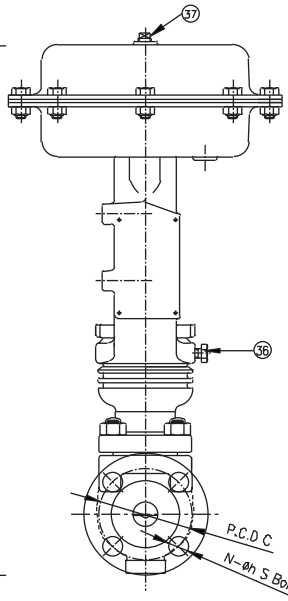
NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	UPPER DIAPHRAGM CASE	11	DIAPHRAGM RETAINER	21	STEM CONNECTION	31	GLAND
2	LOWER DIAPHRAGM CASE	12	DIAPHRAGM PLATE	22	BOLTS/NUTS	32	DUST SEAL
3	DIAPHRAGM	13	STOPPER COLLAR	23	SCALE PLATE	33	GLAND NUT
4	COIL SPRING	14	STOPPER RING	24	LOCK NUT	34	COVER GASKET
5	GUIDE SEAL BOX	15	BOLTS/NUTS	25	BODY	35	COVER
6	YOKE	16	GASKET	26	SET BOLT	36	SOKET SCREW BOLT
7	ACTUATOR STEM	17	BOLTS	27	VALVE STEM	37	SPRING WASHER
8	WIPER	18	SPRING WASHER	28	PACKING SPRING	38	PLUG
9	O-RING	19	NUT	29	RING WASHER		
10	O-RING	20	STEM CONNECTION	30	GLAND PACKING		

# CONTROL VALVE

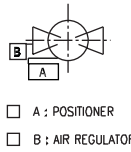
- VCM-1100F (S)
  - NORMAL CLOSE, EQUAL PERCENT
- VOM-1100F (S)
  - NORMAL OPEN, EQUAL PERCENT



VCM-1100F



VOM-1100F



[NOTE]

Air Signal	Spring Q'ty
□ 0.2~1.0kg/cm <sup>2</sup>	4
□ 0.4~1.6kg/cm <sup>2</sup>	6
□ 0.8~2.4kg/cm <sup>2</sup>	8

■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	L (F to F)	øA	HB	HA	H	Port d	Flange Size(JIS 20K RF)							
							D	C	G	T	f	N	h	S
□ 15A(1/2")	190	220	54	383	437	15	95	70	51	14	1	4	15	M12
□ 20A(3/4")	194	220	54	383	437	20	100	75	56	16	1	4	15	M12
□ 25A(1")	197	270	54	387	441	25	125	90	67	16	1	4	19	M16
□ 32A(1-1/4")	235	320	83	466	549	32	135	100	76	18	2	4	19	M16
□ 40A(1-1/2")	235	320	83	466	549	40	140	105	81	18	2	4	19	M16
□ 50A(2")	267	320	83	466	549	50	155	120	96	18	2	8	19	M16
□ 65A(2-1/2")	292	320	102	492	594	65	175	140	116	20	2	8	19	M16
□ 80A(3")	318	320	102	492	594	80	200	160	132	22	2	8	23	M20

■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	UPPER DIAPHRAGM CASE	11	DIAPHRAGM RETAINER	21	STEM CONNECTION	31	PACKING SUPPORTER
2	LOWER DIAPHRAGM CASE	12	DIAPHRAGM PLATE	22	BOLTS/NUTS	32	SUPPORTER FLANGE
3	DIAPHRAGM	13	STOPPER COLLAR	23	SCALE PLATE	33	STUD BOLTS/NUTS
4	COIL SPRING	14	STOPPER RING	24	LOCK NUT	34	STUD BOLTS/NUTS
5	GUIDE SEAL BOX	15	BOLTS/NUTS	25	BODY	35	GASKET
6	YOKE	16	GASKET	26	BONNET	36	SET BOLT
7	ACTUATOR STEM	17	BOLTS	27	GUIDE BUSH	37	PLUG
8	WIPER	18	SPRING WASHER	28	VALVE STEM	38	FLANGE
9	O-RING	19	NUT	29	PACKING SPRING		
10	O-RING	20	STEM CONNECTION	30	PACKING		

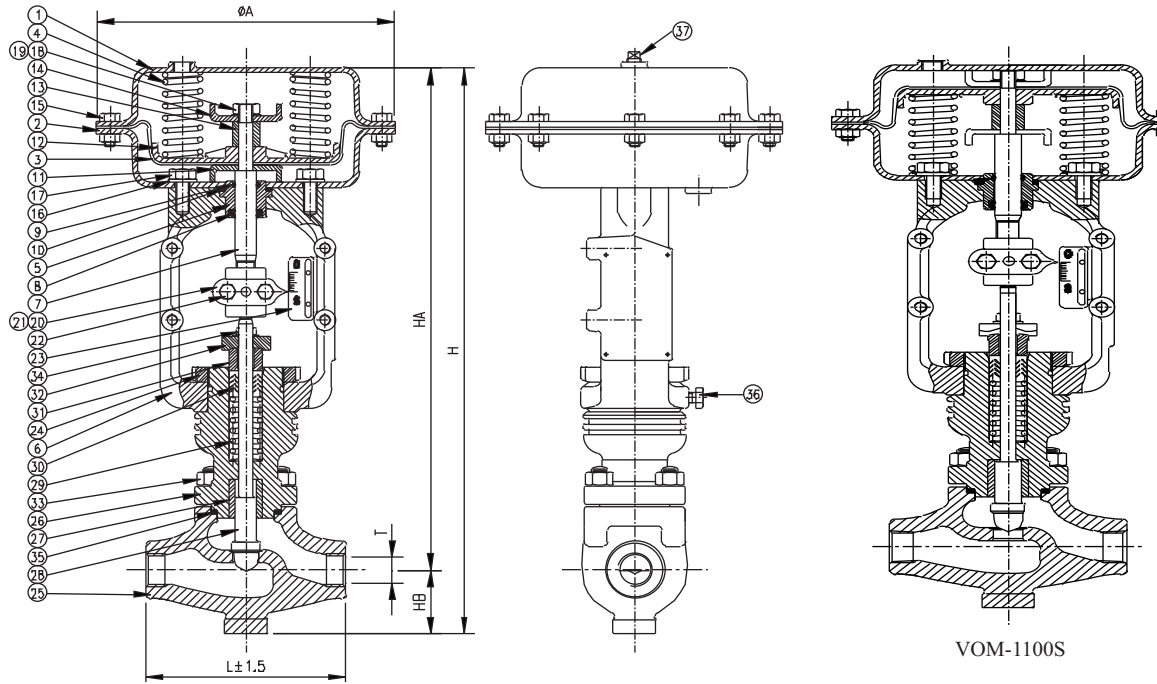
# CONTROL VALVE

## ■ VCM-1100S

- NORMAL CLOSE, EQUAL PERCENT

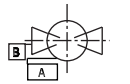
## ■ VOM-1100S

- NORMAL OPEN, EQUAL PERCENT



VCM-1100S

VOM-1100S



- A : POSITIONER
- B : AIR REGULATOR

### [NOTE]

	Air Signal	Spring Q'ty
<input type="checkbox"/>	0.2~1.0kg/cm <sup>2</sup>	4
<input type="checkbox"/>	0.4~1.6kg/cm <sup>2</sup>	6
<input type="checkbox"/>	0.8~2.4kg/cm <sup>2</sup>	8

## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	L(F toF)	øA	HB	HA	H
□ 15A(1/2")	1/2"	154	220	54	383	437
□ 20A(3/4")	3/4"	154	220	54	383	437
□ 25A(1")	1"	154	270	54	387	441
□ 32A(1-1/4")	1-1/4"	187	320	83	466	549
□ 40A(1-1/2")	1-1/2"	187	320	83	466	549

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	UPPER DIAPHRAGM CASE	11	DIAPHRAGM RETAINER	21	STEM CONNECTION	31	PACKING SUPPORTER
2	LOWER DIAPHRAGM CASE	12	DIAPHRAGM PLATE	22	BOLTS/NUTS	32	SUPPORTER FLANGE
3	DIAPHRAGM	13	STOPPER COLLAR	23	SCALE PLATE	33	STUD BOLTS/NUTS
4	COIL SPRING	14	STOPPER RING	24	LOCK NUT	34	STUD BOLTS/NUTS
5	GUIDE SEAL BOX	15	BOLTS/NUTS	25	BODY	35	GASKET
6	YOKE	16	GASKET	26	BONNET	36	SET BOLT
7	ACTUATOR STEM	17	BOLTS	27	GUIDE BUSH	37	PLUG
8	WIPER	18	SPRING WASHER	28	VALVE STEM		
9	O-RING	19	NUT	29	PACKING SPRING		
10	O-RING	20	STEM CONNECTION	30	PACKING		

# PRESSURE REGULATOR VALVE

## ■ FEATURES

- The valve reduces the pressure.
- Diaphragm that can response rapidly to the pilot air supply and strong to endure the foreign material.
- Diaphragm is used longer than metal plate
- Easy installment and maintenance.
- Perfect sealing with the disc made of Carbon Graphite PTFE.
- The valve can be used not only for the steam line but also gas line.



## ■ SPECIFICATION

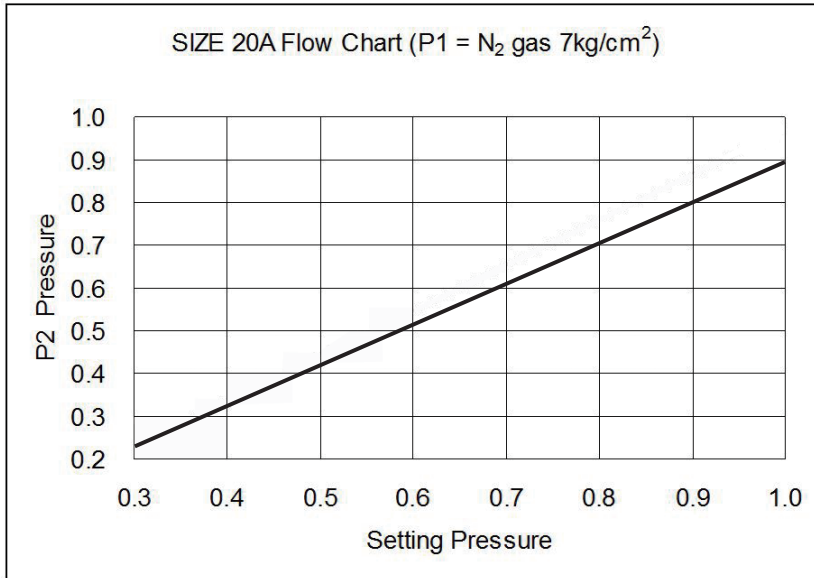
Model Name	SRV-1100S	SRV-1100F	SRV-1100FS
Fluids	Steam, Industrial Water, Gas(N <sub>2</sub> )		
Size(mm)	15A,20A,25A,40A,50A		
End Connection	Threaded	Flanged (A105)	Flanged (SCS13)
Material	Body : Stainless Steel / Diaphragm : PTFE / Disc : Carbon Graphite PTFE.		
Reducing Rate	1:0.9(15A,20A) / 1:0.8(25A) / 1:0.75(40A,50A)		
Temperature	205°C (401°F)		
Operating Pressure	Max.8kg/cm <sup>2</sup> (113 psi)		

- JIS, DIN, ANSI are available.
- Size 32A is not available.
- Reducing Rate can be changed at the actual line.



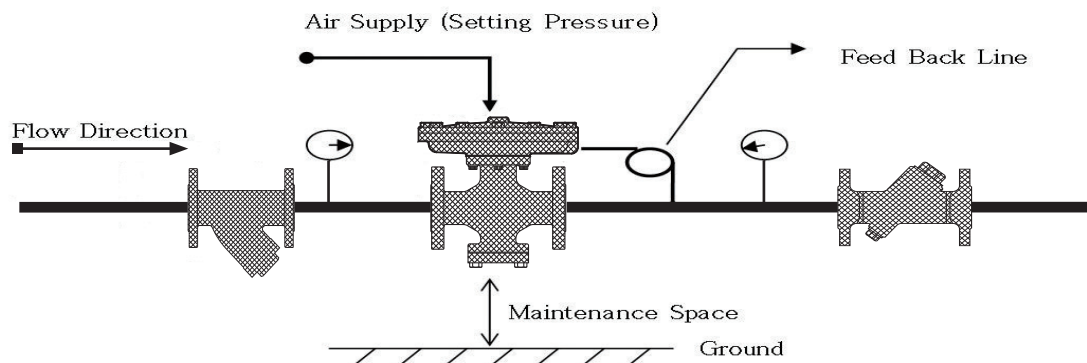
# PRESSURE REGULATOR VALVE

## ■ PRESSURE REGULATOR VALVE FLOW



- The inlet pressure is 7kg/cm<sup>2</sup>.
- Size 20A (Ratio 1 : 0.9), Size 25A (Ratio 1 : 0.8), Size 40A, 50A (Ratio 1 : 0.75)
- At the actual line, the data can be changed.

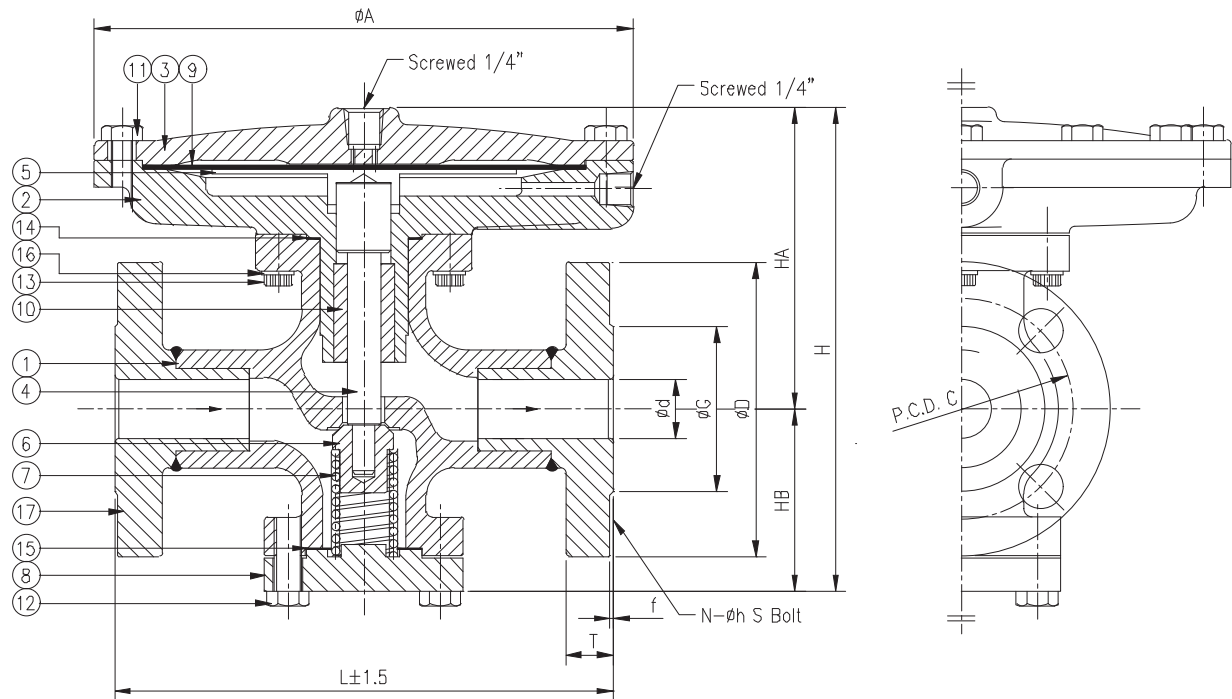
## ■ INSTALLATION



- The pilot air supply is the setting pressure.
- Setting Pressure is supplied from I/P Converter or Air Regulator.
- Because the reducing Rate is changed at the actual line, I/P converter or Air regulator needs to be calibrated to get the required 2nd port pressure.
- The gauge is installed to check the reduced pressure at the 2nd port.
- Flushing of the pipe lines thoroughly is required before the installment of the valve.
- Pressure Regulator Valve should be vertical to horizontal piping.
- Lift Check Valve is installed to prevents the reverse flow.
- To protect the valve, the strainer should be installed prior to the valve.
- Feed back line should be spiral.

# PRESSURE REGULATOR VALVE

## ■ SRV-1100F



## ■ DIMENSIONS

(Unit : mm)

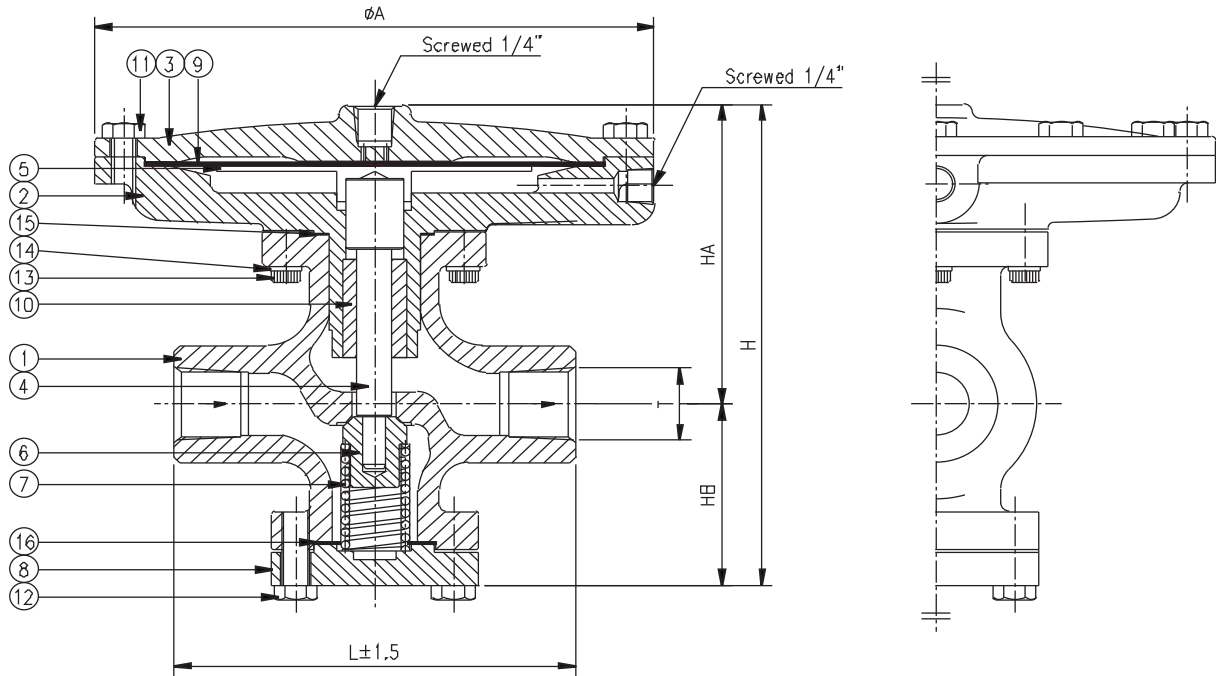
Valve Size mm(inch)	port d	L	A	Flange Size(JIS 20K RF)								HB	HA	H
				D	C	G	T	f	N	h	S			
□ 15A(1/2")	15	180	195	95	70	51	14	1	4	15	M12	67	113	180
□ 20A(3/4")	20	180	195	100	75	56	16	1	4	15	M12	67	113	180
□ 25A(1")	25	212	235	125	90	67	16	1	4	19	M16	74	119	193
□ 40A(1-1/2")	40	222	195	140	105	81	18	2	4	19	M16	84	134	218
□ 50A(2")	50	222	195	155	120	96	18	2	8	19	M16	84	134	218

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME
1	BODY	11	HEXA HEAD BOLT
2	CYLINDER COVER	12	HEXA HEAD BOLT
3	COVER	13	SOCKET SCREW BOLT
4	DIAPHRAGM ROD	14	CYLINDER COVER GASKET
5	DIAPHRAGM PLATE	15	BOTTOM COVER GASKET
6	DISC	16	SPRING WASHER
7	SPRING	17	FLANGE
8	BOTTOM COVER		
9	DIAPHRAGM		
10	BUSH		

# PRESSURE REGULATOR VALVE

## ■ SRV-1100S



## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	L	A	HB	HA	H
□ 15A(1/2")	1/2"	140	195	67	113	180
□ 20A(3/4")	3/4"	140	195	67	113	180
□ 25A(1")	1"	165	235	74	119	193
□ 40A(1-1/2")	1-1/2"	180	235	84	134	218
□ 50A(2")	2"	180	235	84	134	218

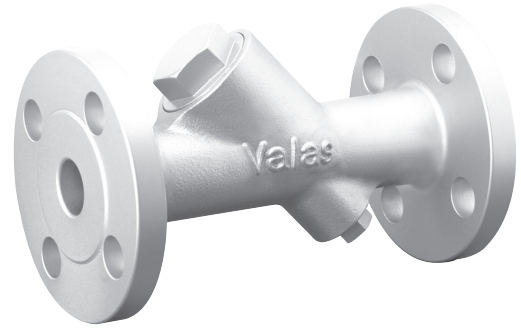
## ■ PART NAME

NO.	PART NAME	NO.	PART NAME
1	BODY	11	HEXA HEAD BOLT
2	CYLINDER COVER	12	HEXA HEAD BOLT
3	COVER	13	SOCKET SCREW BOLT
4	DIAPHRAGM ROD	14	CYLINDER COVER GASKET
5	DIAPHRAGM PLATE	15	BOTTOM COVER GASKET
6	DISC	16	SPRING WASHER
7	SPRING		
8	BOTTOM COVER		
9	DIAPHRAGM		
10	BUSH		

# LIFT CHECK VALVE

## ■ FEATURES

- The valve prevents the back flow on system shutdown.
- Prevention of flooding.
- Y-type suitable to high pressure.
- Perfect sealing with the disc seat made of Carbon Graphite PTFE.
- Protection of any item of equipment that can be affected by reverse flow, such as strainers and control valves.
- To check the pressure surges associated with hydraulic forces, for example, water hammer. These hydraulic forces can cause a wave of pressure to run up and down pipe work until the energy is dissipated.
- It is designed only for installation in horizontal pipelines.
- The valve is robust and requires little maintenance.



## ■ SPECIFICATION

Model Name	V353-S	V353-F	V353-FS
Fluids	Steam, Industrial Water, Gas(N <sub>2</sub> ), Air, Vacuum		
Size(mm)	15A~50A	15A~80A	
End Connection	Threaded	Flanged (A105)	Flanged (SCS13)
Material	Body/Seat : SCS13 / G-PTFE		
Opening Pressure	Min. 0.1 kg/cm <sup>2</sup> (1.4psi)		
Mounting	Horizontal		
Max TemperaturePressure	205°C (401 °F)		
Max Pressure	32 kg/cm <sup>2</sup> (455psi)		

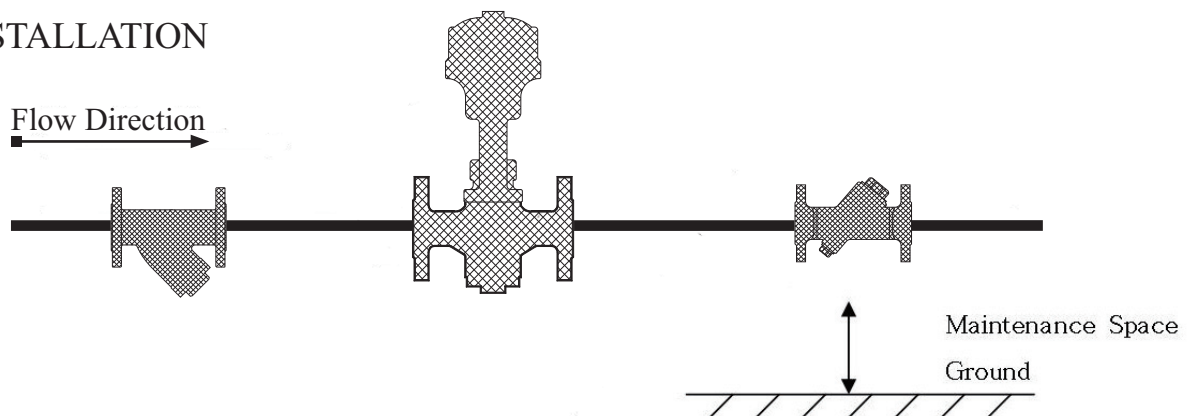
- JIS, ANSI, DIN are available.
- Min Opening Pressure (Spring Tension) can be arranged according to the clients request.
- Available for High Pressure (JIS 30K ).

# LIFT CHECK VALVE

## ■ Opening Pressure

Size mm(inch)	Opening Pressures (kg/cm <sup>2</sup> )		
	Direction of flow with spring		
	↑	→	↓
15A(1/2")	0.102	0.100	0.090
20A(3/4")	0.103	0.100	0.098
25A(1")	0.102	0.100	0.093
32A(1-1/4")	0.101	0.100	0.097
40A(1-1/2")	0.102	0.100	0.098
50A(2")	0.103	0.100	0.098
65A(2-1/2")	0.102	0.100	0.098
80A(3")	0.102	0.100	0.099

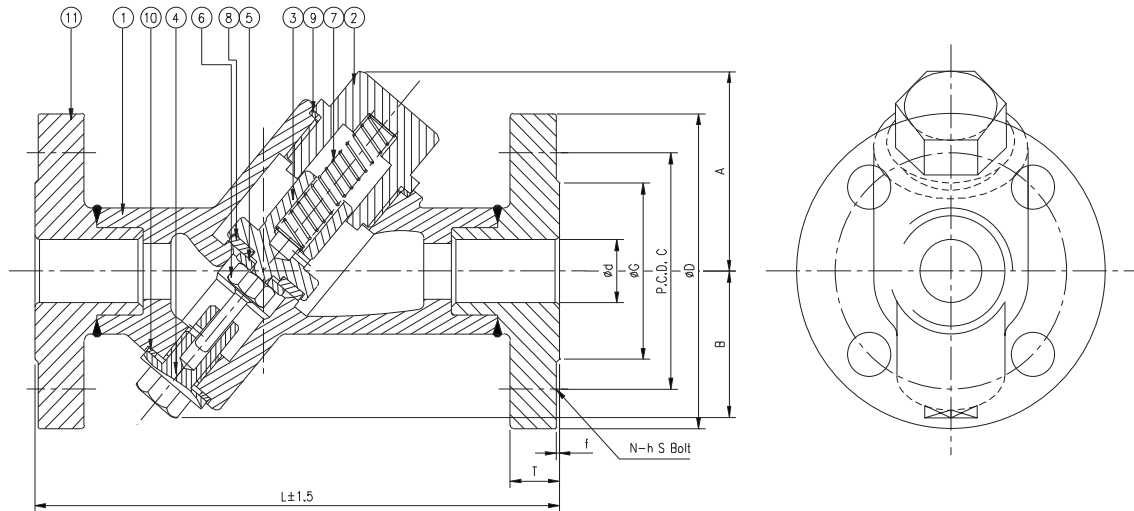
## ■ INSTALLATION



- The arrow direction of the Lift Check Valve should be same as the flow direction.
- The valve should be vertical to horizontal piping.
- Disc Seat is made of PTFE. Lift Check Valve is beneficial and advantageous at high pressure.

# LIFT CHECK VALVE

## ■ V353-F



## ■ DIMENSIONS

(Unit : mm)

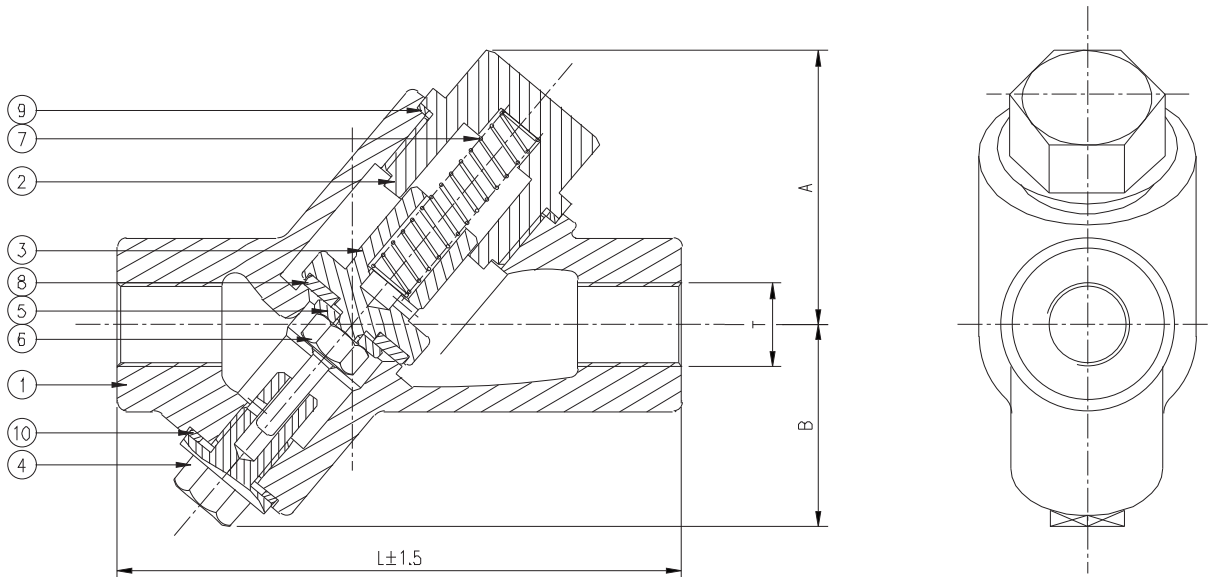
Valve Size mm(inch)	port d	L	A	B	Flange Size(JIS 20K RF)							
					D	C	G	T	f	N	h	S
□ 15A(1/2")	15	152	51	38	95	70	51	14	1	4	15	M12
□ 20A(3/4")	20	178	56	45	100	75	56	16	1	4	15	M12
□ 25A(1")	25	203	66	48	125	90	67	16	1	4	19	M16
□ 32A(1-1/4")	32	220	80	52	135	100	76	18	2	4	19	M16
□ 40A(1-1/2")	40	225	85	58	140	105	81	18	2	4	19	M16
□ 50A(2")	50	257	103	70	155	120	96	18	2	8	19	M16
□ 65A(2-1/2")	65	315	130	79	175	140	116	20	2	8	19	M16
□ 80A(3")	80	335	130	79	200	160	132	22	2	8	23	M20

## ■ PART NAME

NO.	PART NAME
1	BODY
2	COVER
3	DISC
4	PLUG GUIDE
5	DISC SEAT WASHER
6	DISC SET NUT
7	SPRING
8	DISC SEAT
9	COVER GASKET
10	PLUG GASKET
11	FLANGE

# LIFT CHECK VALVE

## ■ V353-S



## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	A	B	L
□ 15A(1/2")	1/2"	51	38	92
□ 20A(3/4")	3/4"	56	45	110
□ 25A(1")	1"	66	48	132
□ 32A(1-1/4")	1-1/4"	80	52	145
□ 40A(1-1/2")	1-1/2"	85	58	177
□ 50A(2")	2"	103	70	215

## ■ PART NAME

NO.	PART NAME
1	BODY
2	COVER
3	DISC
4	PLUG GUIDE
5	DISC SEAT WASHER
6	DISC SET NUT
7	SPRING
8	DISC SEAT
9	COVER GASKET
10	PLUG GASKET

# KNUCKLE JOINT

## ■ FEATURES

- Knuckle Joint connected with the pipe allows shifting of axial direction, bending of pipeline.
- It rotates 360° and can provide Max 20° Angular movement.
- It is much safer and used longer than flexible hose.
- It is suitable for high pressure.
- Super seal ring made of Carbon Graphite PTFE allows high sealing to increase the life time.



## ■ SPECIFICATION

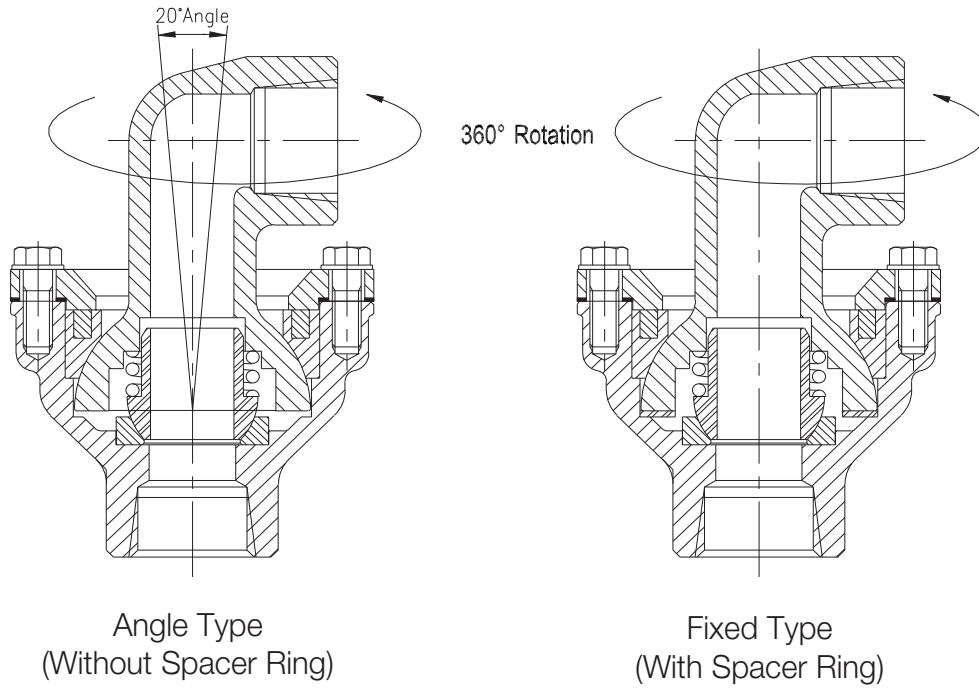
Model Name	Max 20° Angle	VNJD-1 VNJS-1	VNJD-2 VNJS-2	VNJD-3 VNJS-3	VNJD-4 VNJS-4
	Fixed	VNJD-1S VNJS-1S	VNJD-2S VNJS-2S	VNJD-3S VNJS-3S	VNJD-4S VNJS-4S
Fluids	Steam, Industrial Water, Gas(N <sub>2</sub> ), Air				
Size (mm)	15 ~ 50A(VNJS) / 15 ~ 40A(VNJD)				
End Connection	Threaded				
Material	VNJD : Ductile / VNJS : Stainless steel				
Max Temperature	205°C (401°F)				
Available Pressure	28kg/cm <sup>2</sup> (398psi), Max. 32kg/cm <sup>2</sup> (455psi)				

a) PT, NPT, BSPT are available.

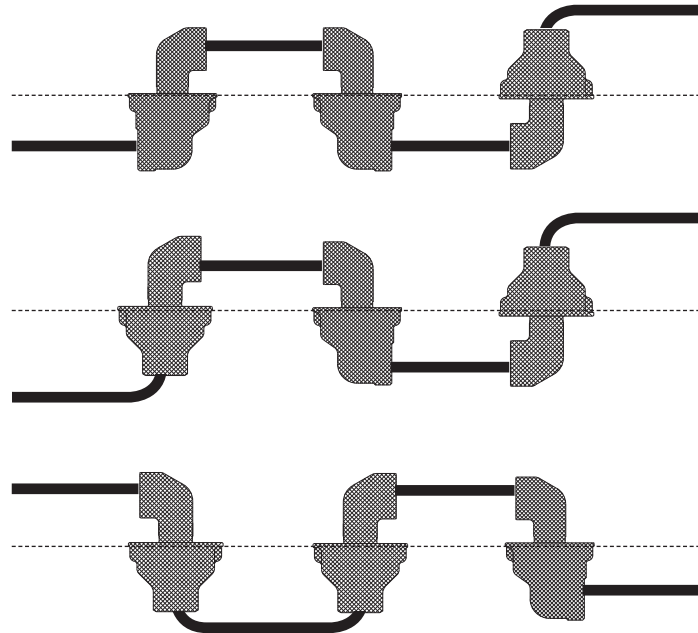


# KNUCKLE JOINT

## ■ MAX 20° ANGLE AND FIXED



## ■ INSTALLATION



a) Knuckle Joint should be in alignment to the center line.

Normally, VNJ-3 and VNJ-2 are used together.

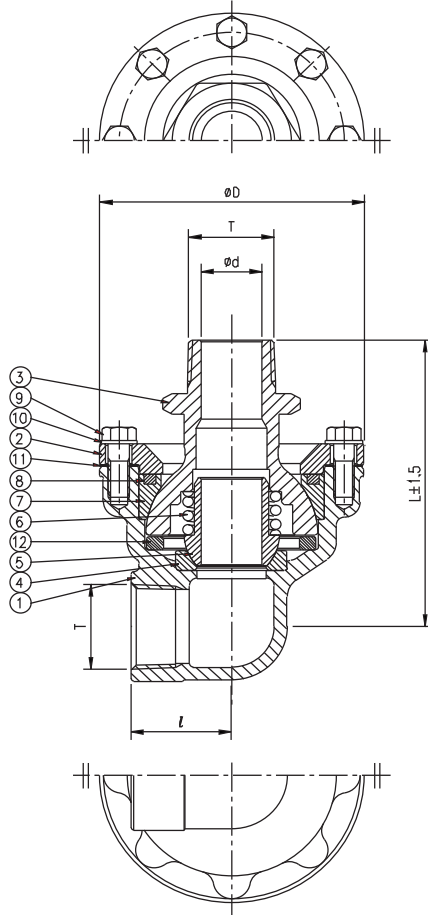
b) It is possible to connect with the pipe variously.

c) To fix the one side, it needs VNJ-1S, VNJ-2S, VNJ-3S, or VNJ-4S.

# KNUCKLE JOINT

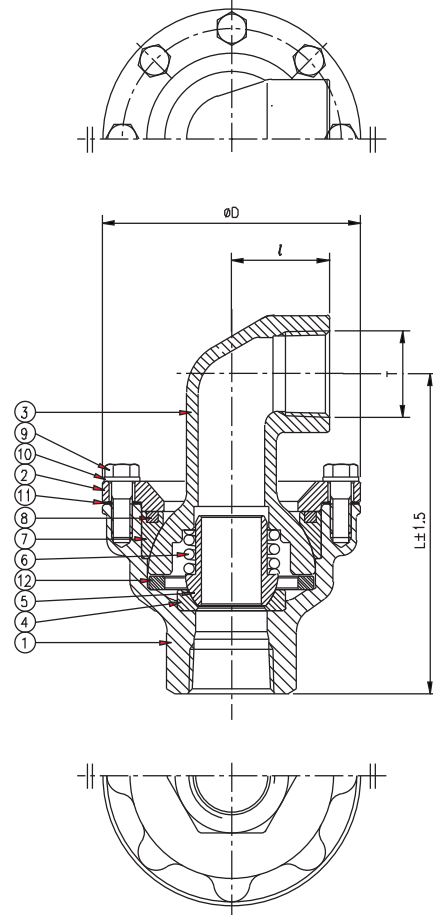
## ■ VNJ-1(S)

- VNJ-1 WITHOUT SPACER RING
- VNJ-1S WITH SPACER RING



## ■ VNJ-2(S)

- VNJ-2 WITHOUT SPACER RING
- VNJ-2S WITH SPACER RING



## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	d	D	L	t
□ 15A(1/2")	1/2"	14	70	84	30
□ 20A(3/4")	3/4"	19	85	103	30
□ 25A(1")	1"	23	100	110	38
□ 32A(1-1/4")	1-1/4"	30	114	131	45
□ 40A(1-1/2")	1-1/2"	36	126	140	55
□ 50A(2")	2"	46	154	165	65

(Unit : mm)

Valve Size mm(inch)	Thread T	D	L	t
□ 15A(1/2")	1/2"	70	83	30
□ 20A(3/4")	3/4"	85	101	30
□ 25A(1")	1"	100	122	38
□ 32A(1-1/4")	1-1/4"	114	145	45
□ 40A(1-1/2")	1-1/2"	126	151	55
□ 50A(2")	2"	154	170	65

## ■ PART NAME

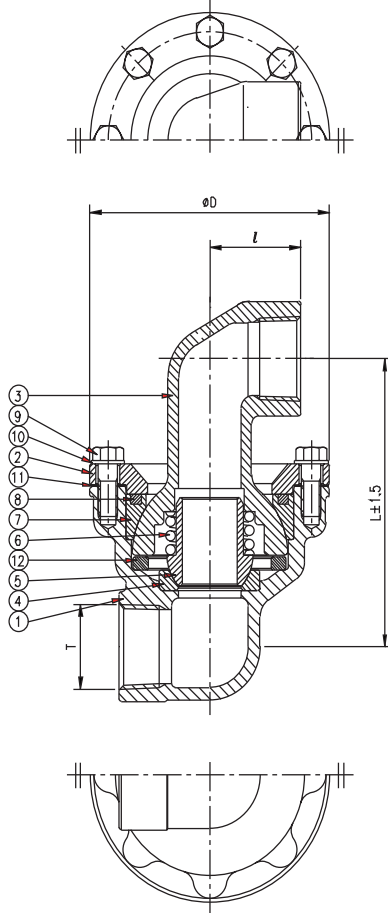
NO.	PART NAME
1	BODY
2	COVER
3	BALL JOINT
4	BALL WASHER
5	INNER BALL
6	SPRING
7	SEAL RING
8	RING
9	BOLT
10	SPRING WASHER
11	GASKET
12	SPACER RING

NO.	PART NAME
1	BODY
2	COVER
3	BALL JOINT
4	BALL WASHER
5	INNER BALL
6	SPRING
7	SEAL RING
8	RING
9	BOLT
10	SPRING WASHER
11	GASKET
12	SPACER RING

# KNUCKLE JOINT

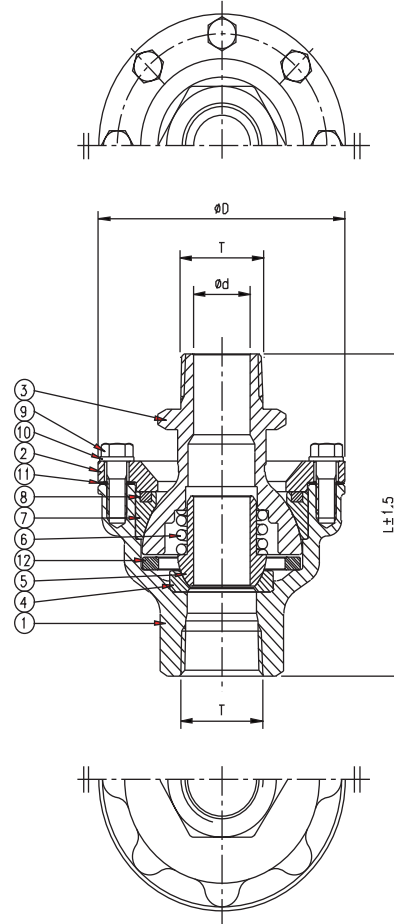
## ■ VNJ-3(S)

- VNJ-3 WITHOUT SPACER RING
- VNJ-3S WITH SPACER RING



## ■ VNJ-4(S)

- VNJ-4 WITHOUT SPACER RING
- VNJ-4S WITH SPACER RING



## ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	D	L	ι
□ 15A(1/2")	1/2"	70	76	30
□ 20A(3/4")	3/4"	85	98	30
□ 25A(1")	1"	100	112	38
□ 32A(1-1/4")	1-1/4"	114	140	45
□ 40A(1-1/2")	1-1/2"	126	141	55
□ 50A(2")	2"	154	165	65

(Unit : mm)

Valve Size mm(inch)	Thread T	d1	D	L	ι
□ 15A(1/2")	1/2"	14	70	91	30
□ 20A(3/4")	3/4"	19	85	106	30
□ 25A(1")	1"	23	100	120	38
□ 32A(1-1/4")	1-1/4"	30	114	136	45
□ 40A(1-1/2")	1-1/2"	36	126	148	55
□ 50A(2")	2"	46	154	170	

## ■ PART NAME

NO.	PART NAME
1	BODY
2	COVER
3	BALL JOINT
4	BALL WASHER
5	INNER BALL
6	SPRING
7	SEAL RING
8	RING
9	BOLT
10	SPRING WASHER
11	GASKET
12	SPACER RING

NO.	PART NAME
1	BODY
2	COVER
3	BALL JOINT
4	BALL WASHER
5	INNER BALL
6	SPRING
7	SEAL RING
8	RING
9	BOLT
10	SPRING WASHER
11	GASKET
12	SPACER RING

# 4-WAY PISTON VALVE

## ■ FEATURES

- The valve is connected with water hydraulic cylinder and operates.
- Internal design to increase the life time of o-ring.
- The valve can save other valve use.



## ■ SPECIFICATION

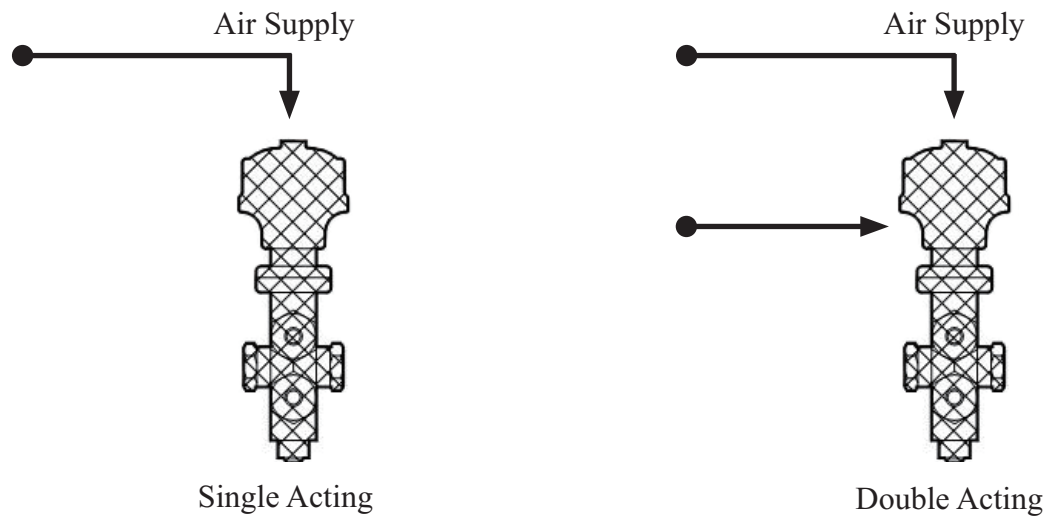
Model Name	V4010S-S	V4010S-D	V4020S-S	V4020S-D
Fluids	Industrial Water			
Size(mm)	8A, 10A		15A, 20A	
Operation	Single Acting	Double Acting	Single Acting	Double Acting
End Connection	Threaded			
Material	Body : Stainless Steel			
Air Supply	2.5 ~ 3.5kg/cm <sup>2</sup> (36~50psi)			
Max Temperature	70°C (158°F)			
Max Pressure	30kg/cm <sup>2</sup> (426psi)			

a) PT, NPT, BSPT are available.

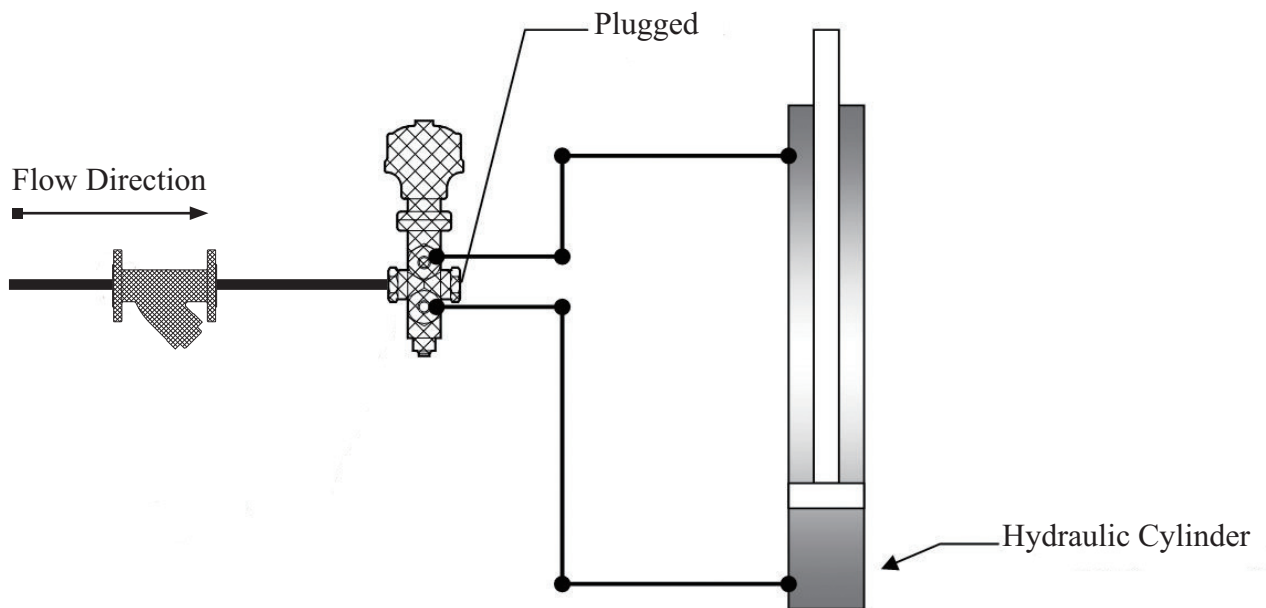
b) Bronze is available but the temperature and pressure should be changed.

# 4-WAY PISTON VALVE

## ■ INSTALLATION



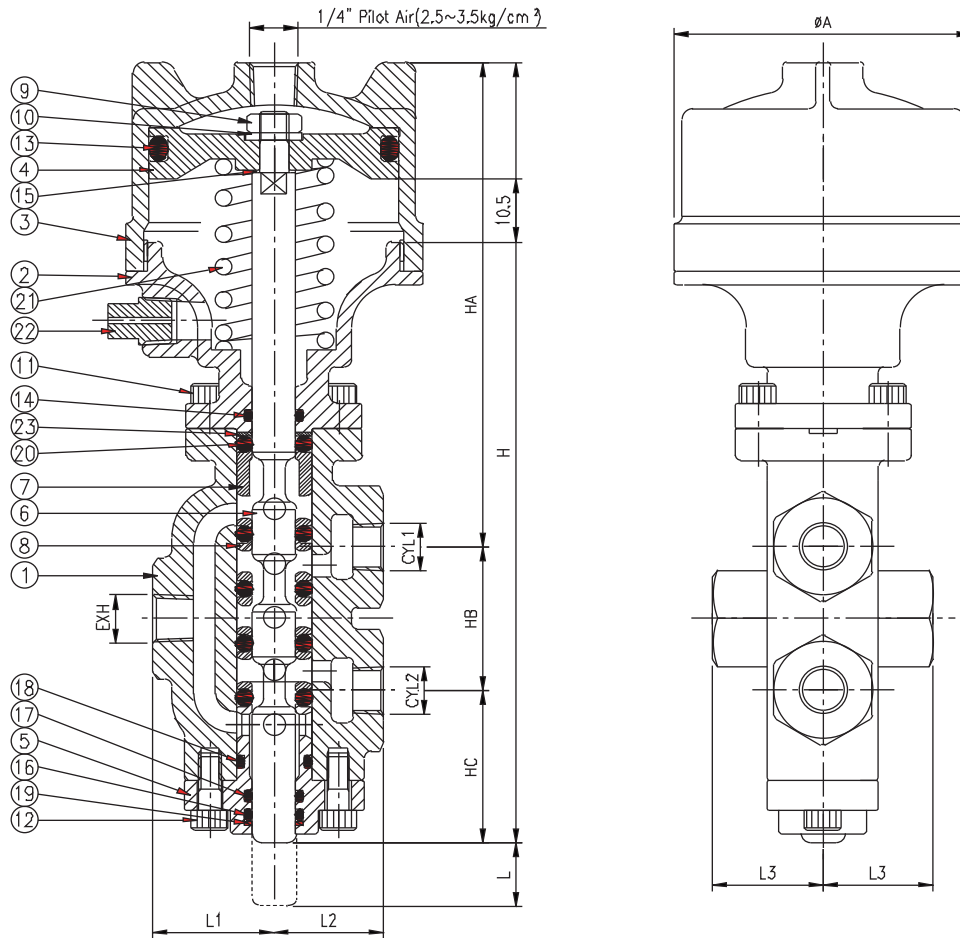
- a) Single Acting has one spring.
- b) Double Acting has no spring therefore, it needs the 2 air supply lines.



- a) The fluid is water.
- b) The O-ring is easy to get damaged. The strainer should be installed before the valve.
- c) The speed of the hydraulic cylinder can be changed according to the water pressure.

# 4-WAY PISTON VALVE

- V4010S-S
- V4020S-S



## ■ DIMENSIONS

### ■ V4010S-S

(Unit : mm)

Valve Size mm(inch)	L1	L2	L3	A	HA	HB	HC	H	L(lift)
□ 8A(1/4")	33	30	30	81	135	40	43	218	17.5
□ 10A(3/8")	33	30	30	81	135	40	43	218	17.5

### ■ V4020S-S

(Unit : mm)

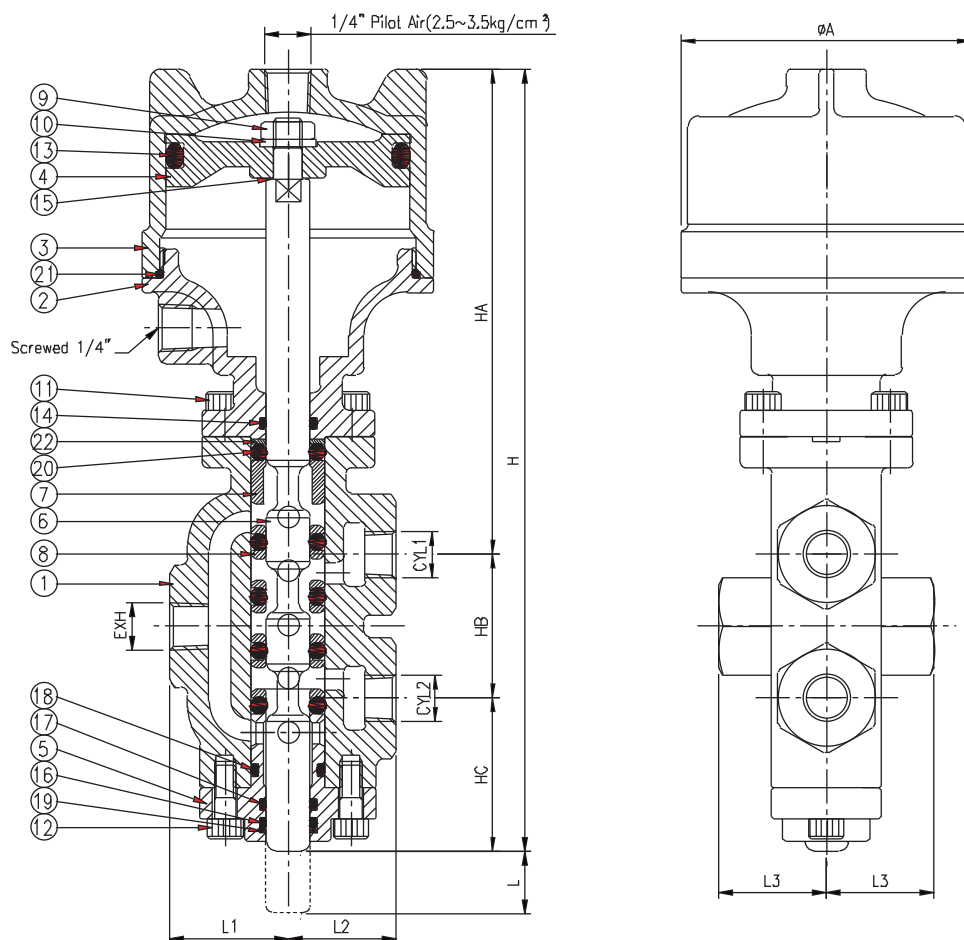
Valve Size mm(inch)	L1	L2	L3	A	HA	HB	HC	H	L(lift)
□ 15A(1/2")	43	43	35	88	171	56	57	284	22
□ 20A(3/4")	43	43	35	88	171	56	57	284	22

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	BODY	11	SOCKET SCREW BOLT	21	SPRING
2	CYLINDER COVER	12	SOCKET SCREW BOLT	22	PLUG
3	CYLINDER	13	O-RING	23	RING WASHER
4	PISTON	14	O-RING	※V4010 type doesn't have No.22	
5	HEAD COVER	15	PISTON ROD GASKET		
6	PISTON ROD	16	O-RING		
7	LONG LANTERN RING	17	O-RING		
8	LANTERN RING	18	O-RING		
9	PISTON ROD NUT	19	BACK-UP RING		
10	SPRING WASHER	20	O-RING		

# 4-WAY PISTON VALVE

- V4010S-D
- V4020S-D



## ■ DIMENSIONS

### ■ V4010S-D

(Unit : mm)

Valve Size mm(inch)	L1	L2	L3	A	HA	HB	HC	H	L(lift)
□ 8A(1/4")	33	30	30	81	135	40	43	218	17.5
□ 10A(3/8")	33	30	30	81	135	40	43	218	17.5

### ■ V4020S-D

(Unit : mm)

Valve Size mm(inch)	L1	L2	L3	A	HA	HB	HC	H	L(lift)
□ 15A(1/2")	43	43	35	88	171	56	57	284	22
□ 20A(3/4")	43	43	35	88	171	56	57	284	22

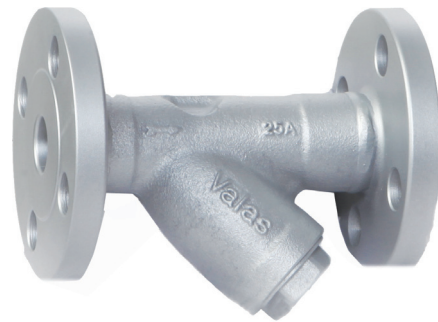
## ■ PART NAME

NO.	PART NAME	NO.	PART NAME	NO.	PART NAME
1	BODY	11	SOCKET SCREW BOLT	21	O-RING
2	CYLINDER COVER	12	SOCKET SCREW BOLT	22	RING WASHER
3	CYLINDER	13	O-RING	※ V4010 type doesn't have No.22	
4	PISTON	14	O-RING		
5	HEAD COVER	15	PISTON ROD GASKET		
6	PISTON ROD	16	O-RING		
7	LONG LANTERN RING	17	O-RING		
8	LANTERN RING	18	O-RING		
9	PISTON ROD NUT	19	BACK-UP RING		
10	SPRING WASHER	20	O-RING		

# STRAINER

## ■ FEATURES

- The strainer filters foreign material in the pipe line.
- The Y-type design to minimize the pressure loss.
- All parts are stainless steel suitable for high temperature and high pressure.

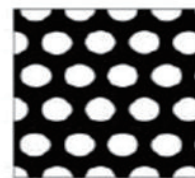
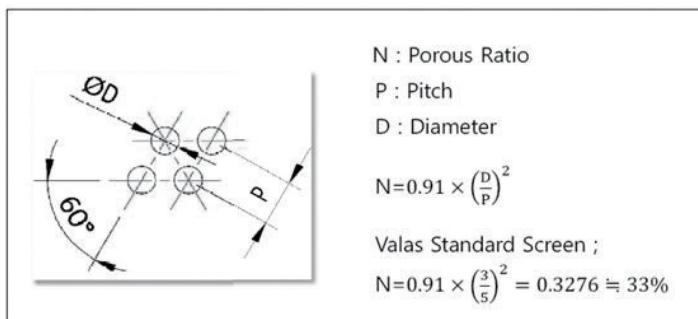


## ■ SPECIFICATION

Model Name	VST-500S	VST-500F	VST-500FS
Fluids	Steam, Industrial Water, Gas(N <sub>2</sub> ), Air		
Size	15A~50A	15A~80A	
End Connection	Threaded	Flanged (A105)	Flanged (SCS13)
Material	Body : SCS13. Screen : Stainless Steel		
Screen	ø3.0 x 5.0 P		
Mounting	Horizontal		
Max Temperature	205°C (401°F)		
Max Pressure	32kg/cm <sup>2</sup> (455psi)		

- JIS, ANSI, DIN are available.
- Various perforated hole rate is available.
- Mesh is available.
- Available for High Pressure ( JIS 30K ).

## ■ STANDARD PERFORATED SCREEN



**Ø3.0 x 5.0 P**  
**33% Opening**

- Various perforated hole rate is available.

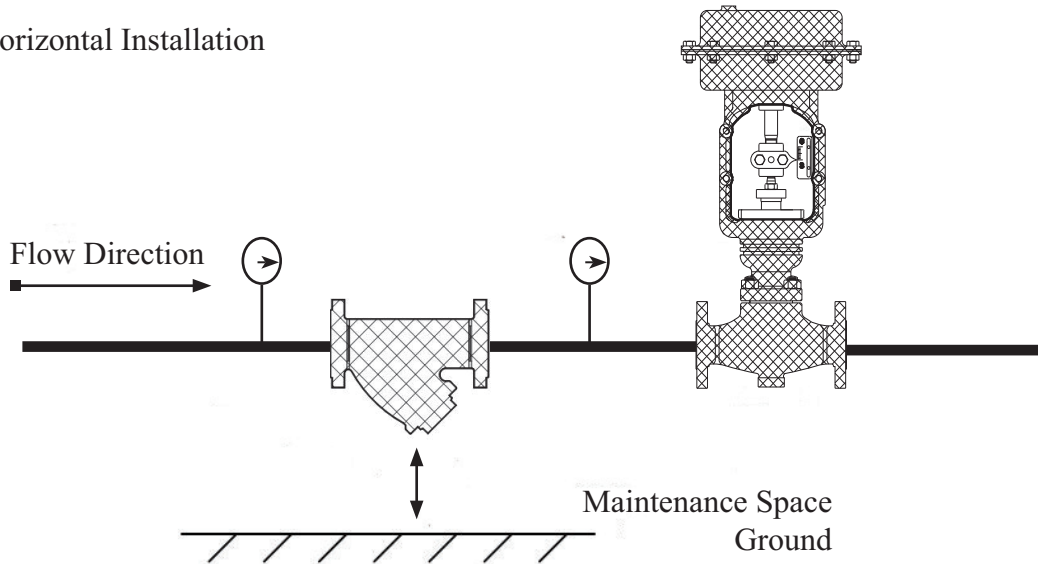


# STRAINER

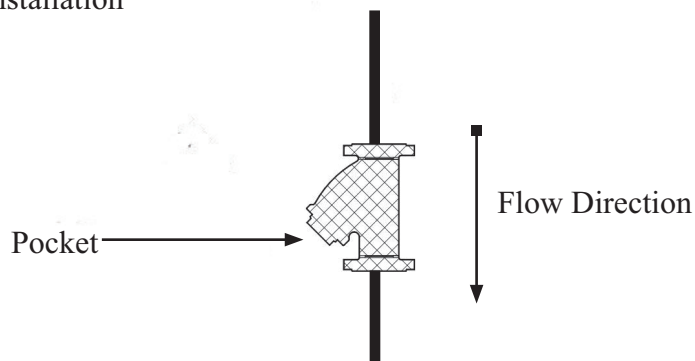
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## ■ INSTALLATION

### ● Horizontal Installation



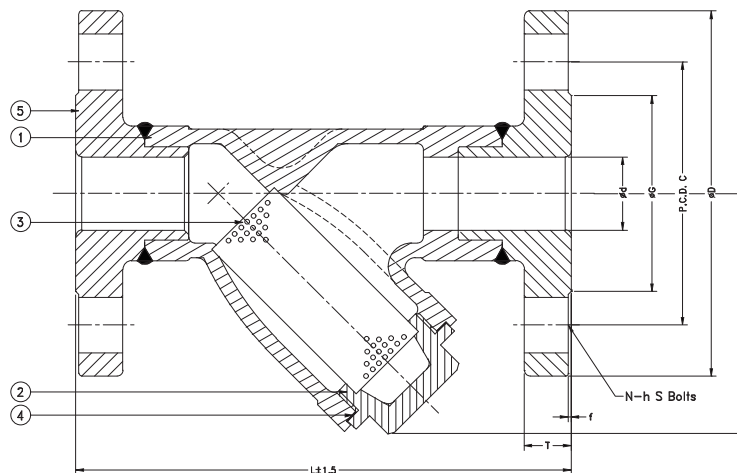
### ● Vertical Installation



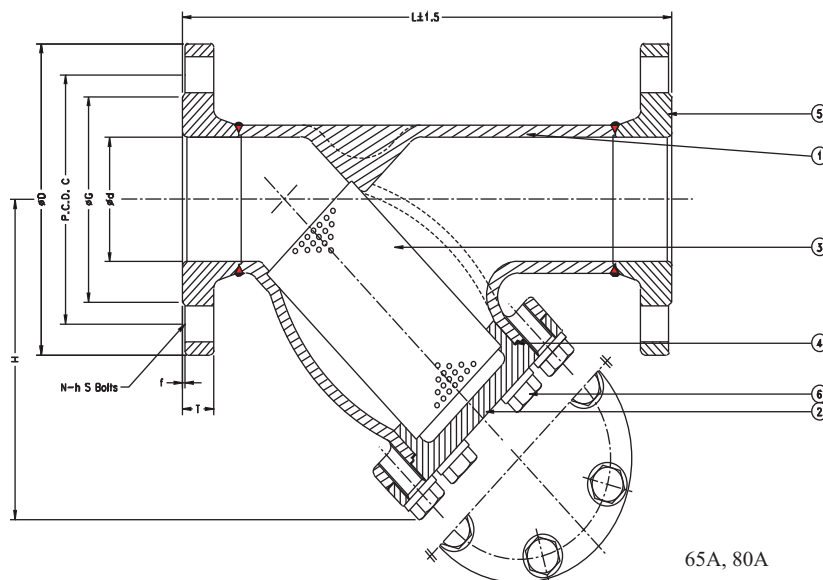
- It should be installed prior to the important valve.
- In the steam line, the ball valve at the pocket can be connected to drain the condensation to prevent water hammer and foreign material.
- The arrow direction of the strainer should be same as the flow direction.
- The line should have an enough room to clean the strainer.
- If the difference of both sides pressure increases, the user should remove the foreign material inside of the strainer.
- It should be installed vertically to horizontal piping and also it is available to vertical piping.
- Especially in the steam line, the pocket of strainer should be placed horizontally not to make the condensation in the pocket.
- The strainer in vertical piping should be placed with the pocket in the downward.

# STRAINER

## ■ VST-500F



15A, 20A, 25A, 32A, 40A, 50A



65A, 80A

## ■ DIMENSIONS

(Unit : mm)

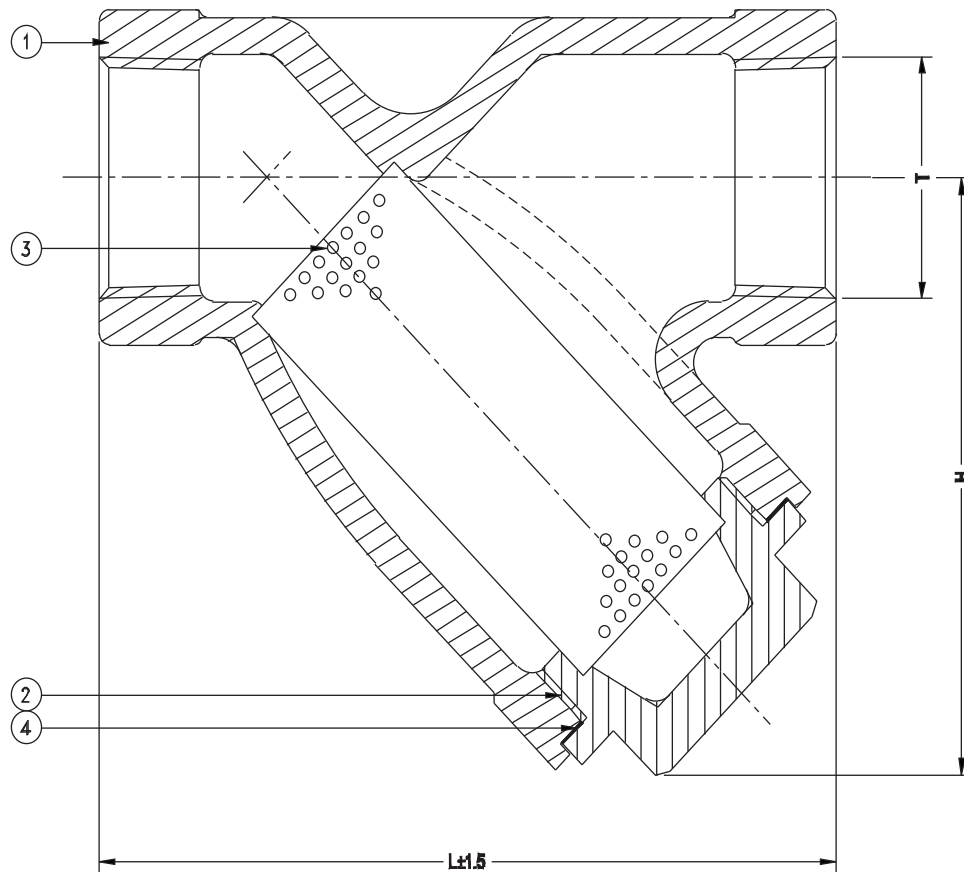
Valve Size mm(inch)	d	H	L	Flange Size(JIS 20K RF)							
				D	C	G	T	f	N	h	S
□ 15A(1/2")	15	55.5	141	95	70	51	14	1	4	15	M12
□ 20A(3/4")	20	70.5	150	100	75	56	16	1	4	15	M12
□ 25A(1")	25	82.0	172	125	90	67	16	1	4	19	M16
□ 32A(1-1/4")	32	99.0	198	135	100	76	18	2	4	19	M16
□ 40A(1-1/2")	40	122.5	220	140	105	81	18	2	4	19	M16
□ 50A(2")	50	140.0	242	155	120	96	18	2	8	19	M16
□ 65A(2-1/2")	65	206.0	327	175	140	116	20	2	8	19	M16
□ 80A(3")	80	206.0	347	200	160	132	22	2	8	23	M20

## ■ PART NAME

NO.	PART NAME
1	BODY
2	PLUG
3	SCREEN
4	GASKET
5	FLANGE
6	BOLTS & NUTS

# STRAINER

## ■ VST-500S



### ■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	Thread T	L	H
□ 15A(1/2")	1/2"	80	55.5
□ 20A(3/4")	3/4"	95	70.5
□ 25A(1")	1"	110	82.0
□ 32A(1-1/4")	1-1/4"	135	99.0
□ 40A(1-1/2")	1-1/2"	160	122.5
□ 50A(2")	2"	177	140.0

### ■ PART NAME

NO.	PART NAME
1	BODY
2	PLUG
3	SCREEN
4	GASKET

# LIQUID EJECTOR

## ■ FEATURES

- Ejector obtains suction pressure by making vacuum in chamber of its body.
- Simple construction different with other kinds of pumps.
- Capability of handling enormous volumes of fluids in relatively small sizes of equipment.
- Less and easy maintenance requirement.
- Simple Operation.



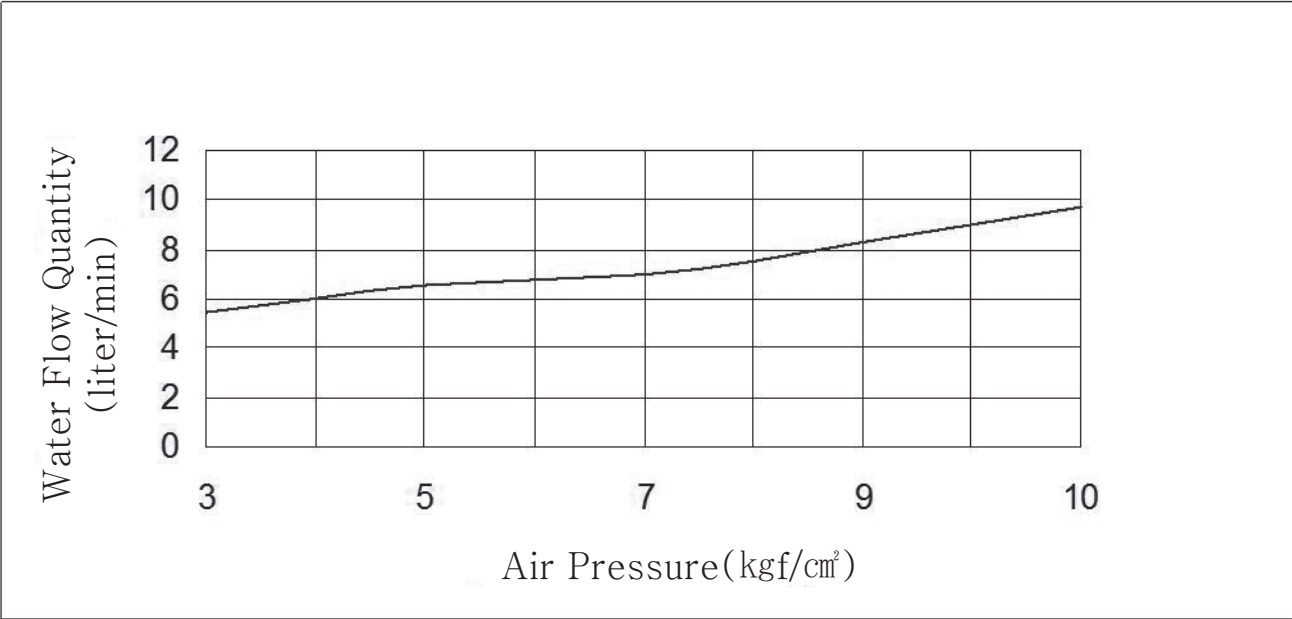
## ■ SPECIFICATION

Model Name	VLE-2540S	VLE-2540F(S)	VLE-4050S	VLE-4050F(S)
Fluids	Industrial Water, Gas(N <sub>2</sub> ), Air			
Size(mm)	25A x 40A		40A x 50A	
End Connection	Threaded	Flanged	Threaded	Flanged
Material	Body : Stainless Steel			
Mounting	Horizontal			
Max Temperature	100°C(212°F)			
Max Pressure	32 kg/cm <sup>2</sup> (455psi)			

a) Bronze body is available but the temperature and pressure should be changed.

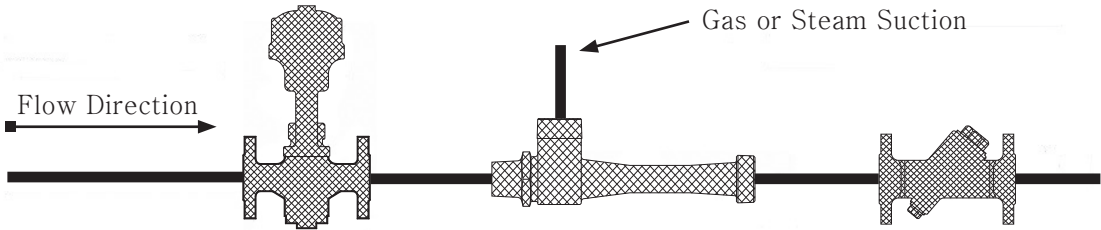
# LIQUID EJECTOR

## ■ SUCTION AMOUNT



- a) Motive Fluid: Air.
- b) Suction : Water.
- c) The data can be changed at the actual line.

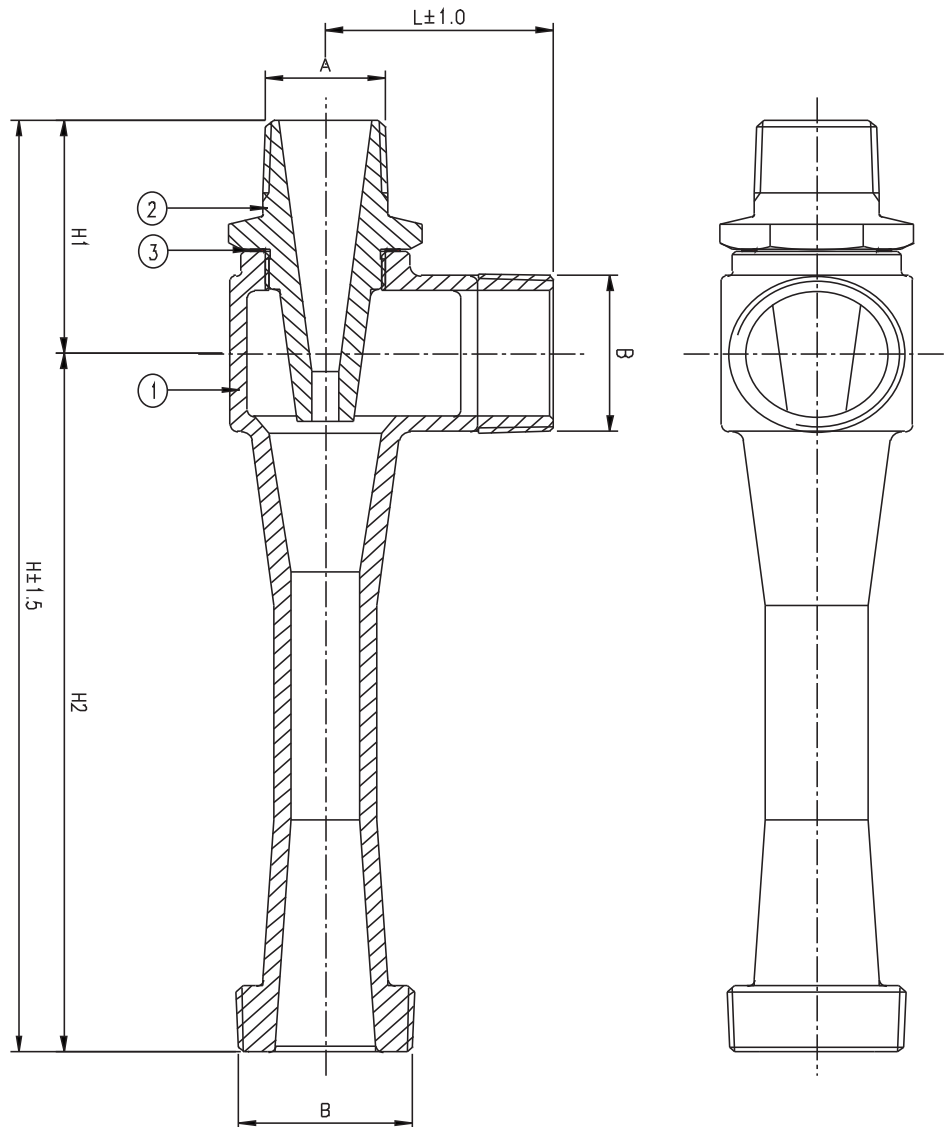
## ■ INSTALLATION



- a) Nozzle is connected with Motive Fluid.
- b) Lift check valve is installed to prevent the reverse flow.

# LIQUID EJECTOR

- VLE-2540S
- VLE-4050S



## ■ DIMENSIONS

### ■ VLE-2540S

(Unit : mm)

Valve Size	A	B	L	H1	H2	H
1"*1-1/2"	1"	1-1/2"	66	72	218	290

### ■ VLE-4050S

(Unit : mm)

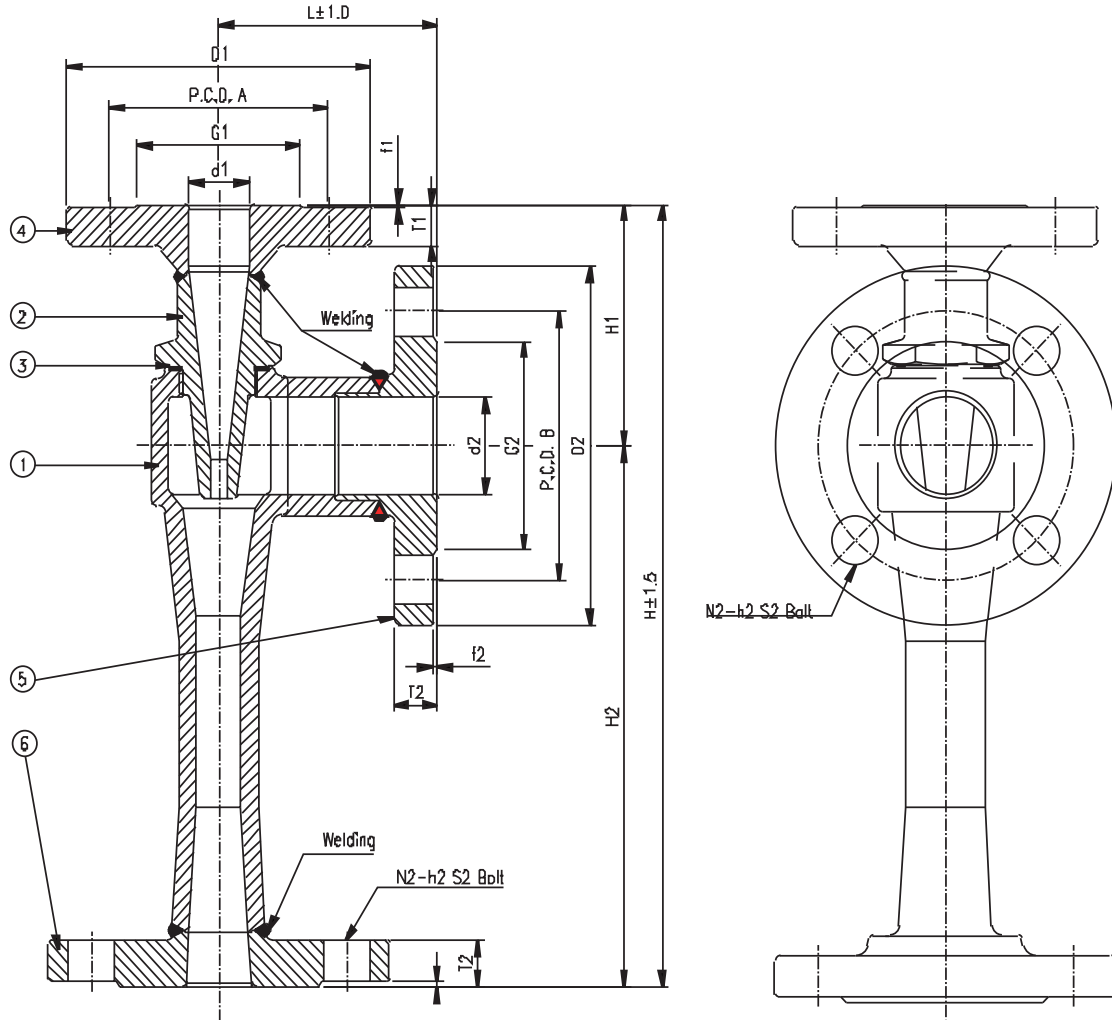
Valve Size	A	B	L	H1	H2	H
1-1/2"*2"	1-1/2"	2"	66	72	218	290

## ■ PART NAME

NO.	PART NAME
1	BODY
2	NOZZLE
3	GASKET

# LIQUID EJECTOR

- VLE-2540F(S)
- VLE-4050F(S)



## ■ DIMENSIONS

### ■ VLE-2540F(S)

(Unit : mm)

Valve Size	L	H1	H2	H	d1	d2	d3	Flange Size(JIS20K RF)															
								D1	C1	G1	t1	f1	N1	h1	S1	D2	C2	G2	t2	f2	H2	h2	S2
1"×1-1/2"	90	94	218	312	25	40	27	125	90	67	16	1	4	19	M16	140	105	81	18	2	4	19	M16

### ■ VLE-4050F(S)

(Unit : mm)

Valve Size	L	H1	H2	H	d1	d2	d3	Flange Size(JIS20K RF)															
								D1	C1	G1	t1	f1	N1	h1	S1	D2	C2	G2	t2	f2	H2	h2	S2
1-1/2"×2"	105	97	218	315	40	48	35	140	105	81	18	2	4	19	M16	155	120	96	18	2	8	19	M16

## ■ PART NAME

NO.	PART NAME	NO.	PART NAME
1	BODY	4	NOZZLE FLANGE
2	NOZZLE	5	FLANGE
3	GASKET	6	FLANGE

# PAN CHECK VALVE

## ■ FEATURES

- Disc check valves are smaller, lighter and cost less.
- If the differential pressure across the valve falls below the required opening pressure, the spring helps the valve slam shut automatically.
- The design of disc check valve allows them to be installed in any position, including vertical pipelines where the fluid flows downwards.



## ■ SPECIFICATION

Model Name	V300-M
Fluids	Steam, Industrial Water, Gas(N <sub>2</sub> ), Air
Size(mm)	15A~50A
Material	Body, Disc : SCS13
Opening Pressure	Min. 0.05 kg/cm <sup>2</sup> (0.7psi)
Mounting	Horizontal, Vertical
Max Temperature	205°C(401°F)
Max Pressure	28kg/cm <sup>2</sup> (398psi) / 32kg/cm <sup>2</sup> (455psi)

a) Min Opening Pressure can be arranged according to the clients request.

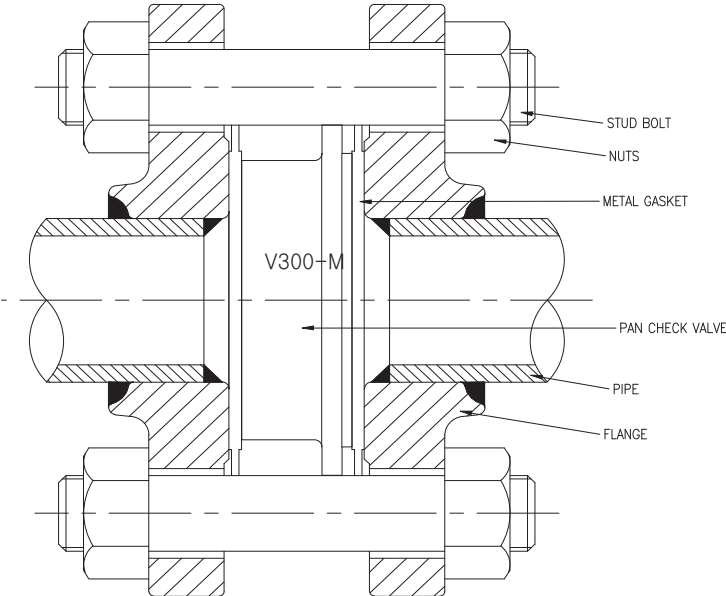
## ■ OPENING PRESSURE

Size mm(inch)	Opening Pressures (kg/cm <sup>2</sup> )		
	Direction of flow with spring		
	↑	→	↓
15A(1/2")	0.053	0.050	0.050
20A(3/4")	0.053	0.050	0.045
25A(1")	0.054	0.050	0.044
32A(1-1/4")	0.053	0.050	0.045
40A(1-1/2")	0.054	0.050	0.044
50A(2")	0.055	0.050	0.042



# PAN CHECK VALVE

■ INSTALLATION



a) Bolt ( JIS 20KF RF )

Size mm(inch)	15A (1/2")	20A (3/4")	25A (1")	32A (1-1/4")	40A (1-1/2")	50A (2")
Bolt	M12 x 96mm	M12 x 109mm	M16 x 117mm	M16 x 128mm	M16 x 147mm	M16 x 154mm
Quantity	4	4	4	4	4	8

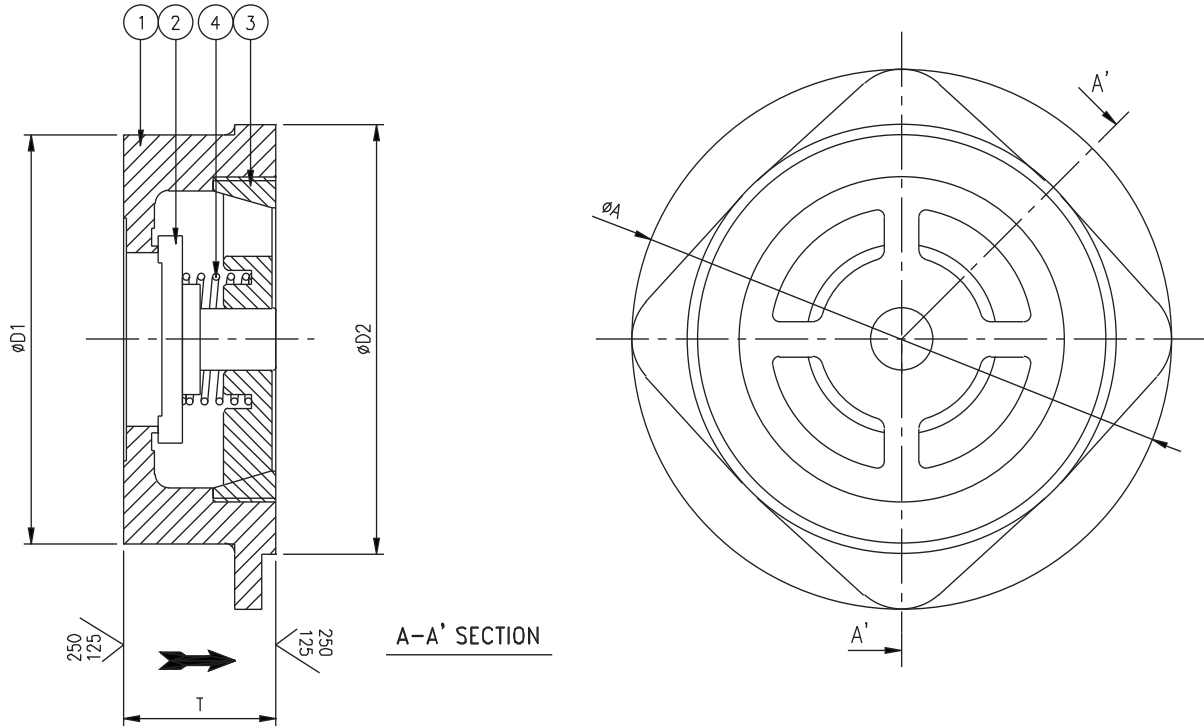
b) Pan Check Valve should not be used on applications where there is heavily pulsating flow.

c) Disc Seat is made of Stainless Steel.

d) B7 Stud bolt and nuts are suitable.

# PAN CHECK VALVE

■ V300-M



■ DIMENSIONS

(Unit : mm)

Valve Size mm(inch)	A	T	D1	D2
□ 15A(1/2")	62	16	45	48
□ 20A(3/4")	70	19	50	54
□ 25A(1")	78	22	59	62
□ 32A(1-1/4")	88	28	68	72
□ 40A(1-1/2")	102	32	80	84
□ 50A(2")	120	40	95	100

■ PART NAME

NO.	PART NAME
1	BODY
2	DISC
3	SPRING PLATE
4	SPRING

# PILOT TYPE RELIEF VALVE

## ■ FEATURES

- In case higher pressure than setting pressure flows into a valve, RELIEF VALVE opens to prevent excessive pressure.
- Small force flowing into pilot can be applied to open and shut the main valve. Hence, its size can be reduced compared to the equivalent size of Orifice
- O-Ring for perfect sealing.
- Body and plug made of stainless steel.



## ■ SPECIFICATION

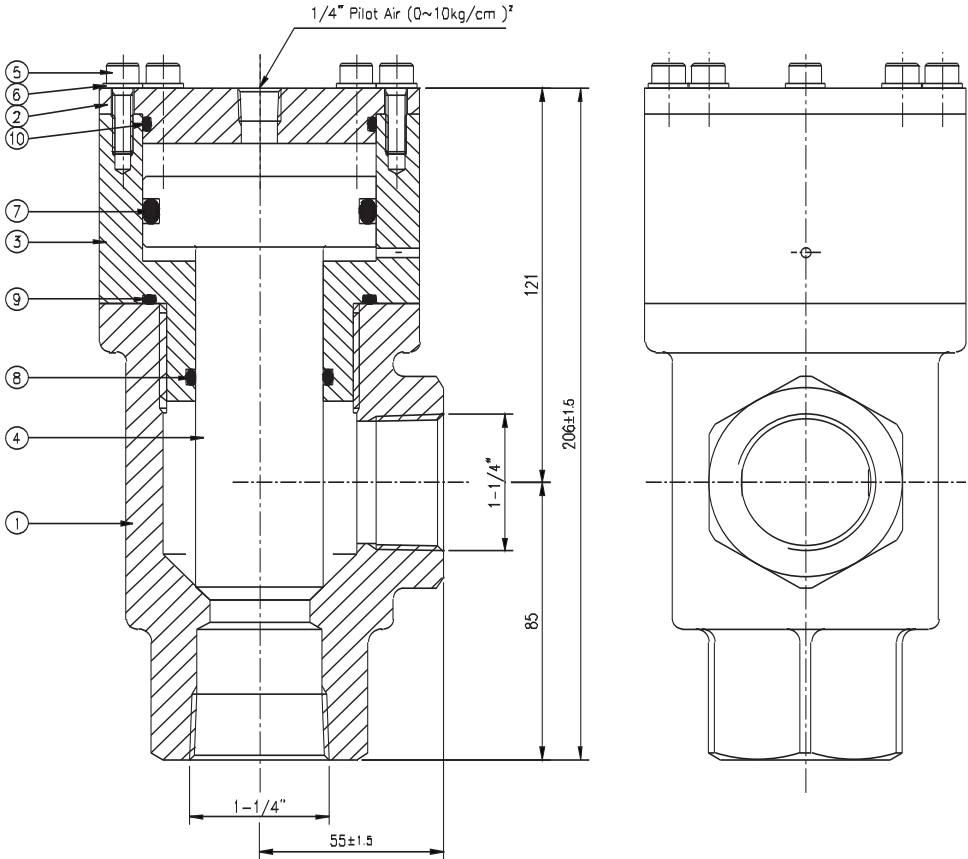
Model Name	VRV-30S
Fluids	Industrial Water
Size(mm)	32A
End Connection	Threaded
Material	Body : Stainless Steel
Pilot Pressure	Min 0 ~ Max 10 kg/cm <sup>2</sup> (142psi)
Max Pressure	30 kg/cm <sup>2</sup> (426psi)
Max Temperature	70°C(158°F)

a) PT, NPT, BSPT are available

b) Pilot type relief valve should be used pilot pressure 1kg/cm<sup>2</sup> against fluids pressure 4kg/cm<sup>2</sup>

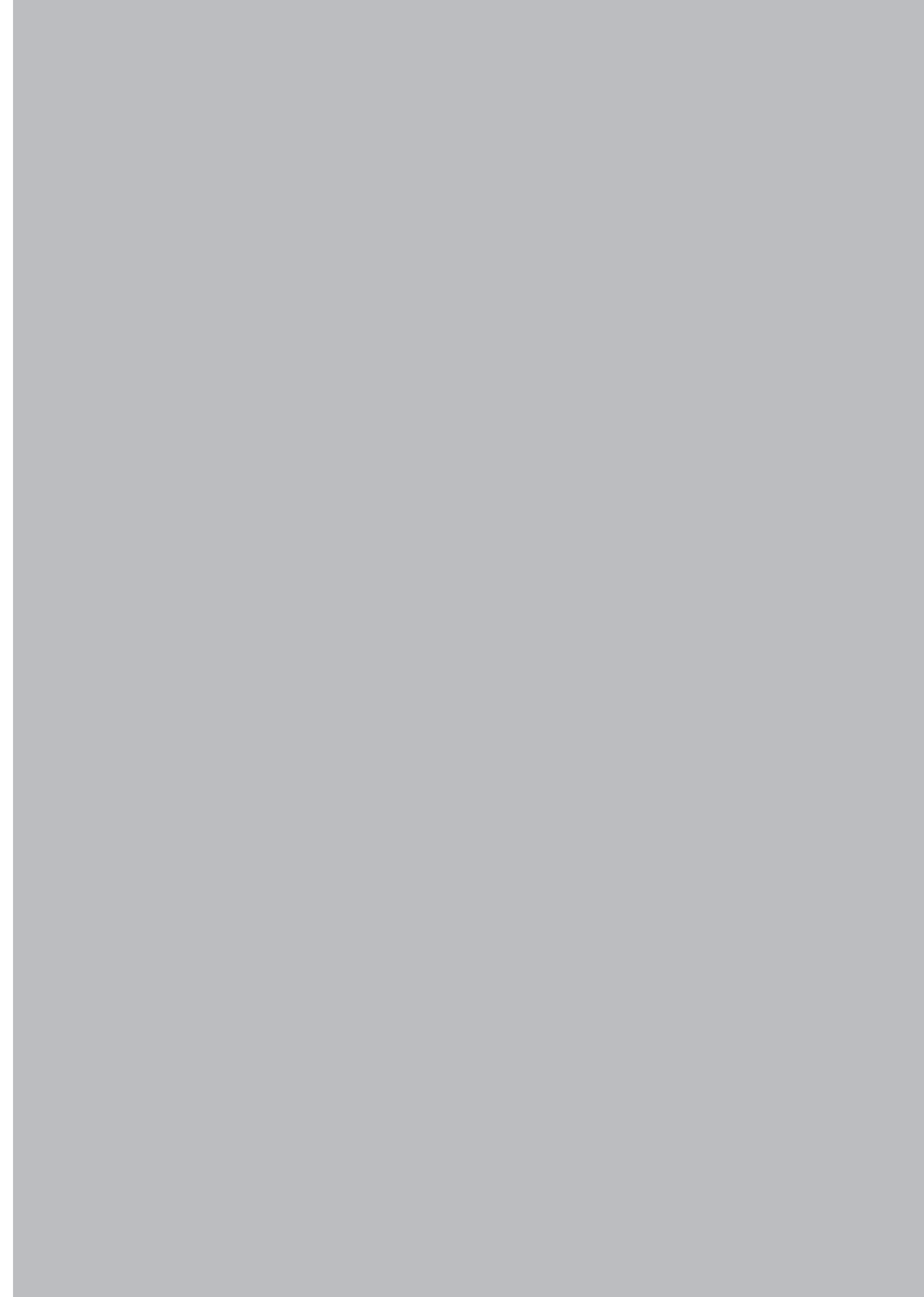
# PILOT TYPE RELIEF VALVE

■ VRV-30S



■ PART NAME

NO.	PART NAME
1	BODY
2	COVER
3	CYLINDER
4	PISTON
5	SOCKET SCREW BOLT
6	SPRING WASHER
7	O-RING
8	O-RING
9	O-RING
10	O-RING



# Ordering Information

3-Way & 2-Way Piston Valve

3-Way Ultra High Pressure Piston Valve

Control Valve

Pressure Regulator Valve

Knuckle Joint

Check Valve

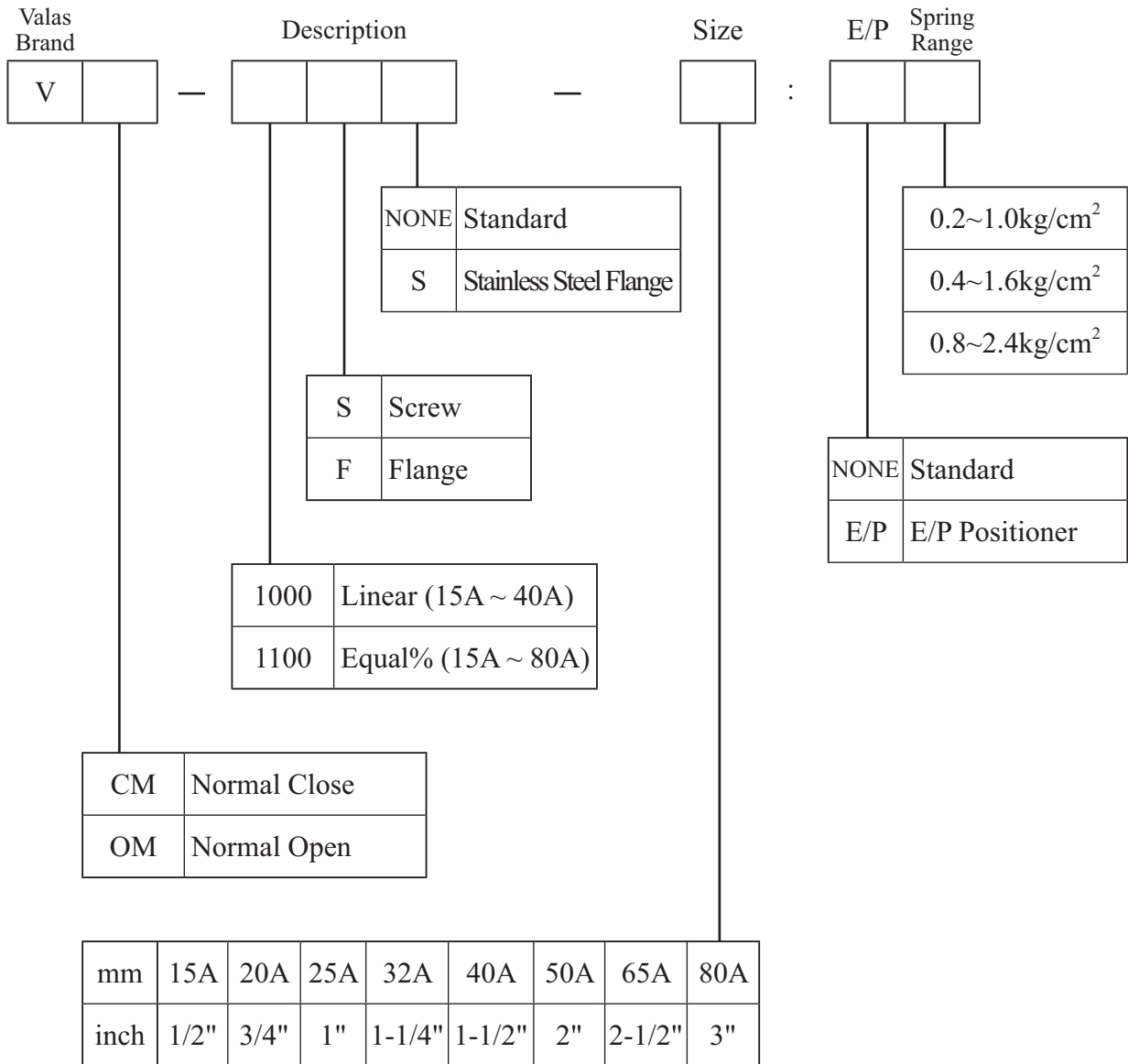
Strainer

4-Way Piston Valve

Liquid Ejector

Relief Valve





\* Screw : PT, BSPT, NPT

\* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)



# PRESSURE REGULATOR VALVE

Ordering Information

Steam Regulator Valve		Description				Size	
SRV	—	1100					
			NONE	Standard			
			S	Stainless Steel Flange			
		S	Screw				
		F	Flange				
		mm	15A	20A	25A	40A	50A
		inch	1/2"	3/4"	1"	1-1/2"	2"

\* Screw : PT, BSPT, NPT

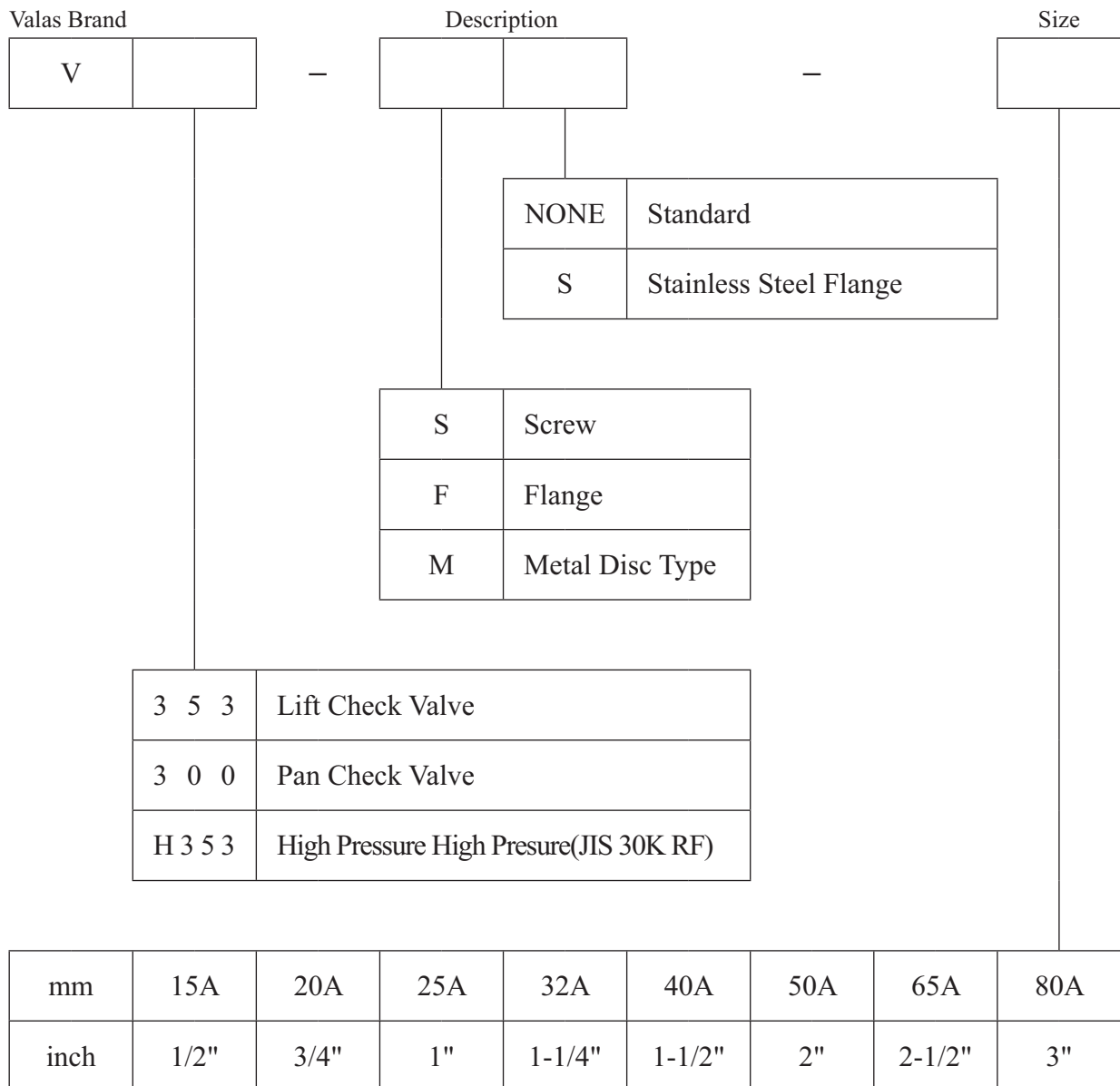
\* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)

Valas Brand		Kunckle Joint		Description		Size	
V	NJ						
D	Ductile (FCD450)			NONE	20° Angle		
S	Stainless steel(SCS 13)			S	No Angle(Fixed)		
			1	90°	Refer To Drawing		
			2	90°			
			3	180°			
			4	0°			
mm	15A	20A	25A	32A	40A	50A	
inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	

\* Screw : PT, BSPT, NPT

# CHECK VALVE

## Ordering Information



\* Screw : PT, BSPT, NPT

\* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)

# STRAINER

## Ordering Information

Valas Brand		Strainer		Description					Size			
V	ST											
						<table border="1"> <tr> <td>NONE</td> <td>Standard</td> </tr> <tr> <td>S</td> <td>Stainless Steel Flange</td> </tr> </table>		NONE	Standard	S	Stainless Steel Flange	
NONE	Standard											
S	Stainless Steel Flange											
				<table border="1"> <tr> <td>S</td> <td>Screw</td> </tr> <tr> <td>F</td> <td>Flange</td> </tr> </table>		S	Screw	F	Flange			
S	Screw											
F	Flange											
				<table border="1"> <tr> <td>5 0 0</td> <td>Cast Stainless Steel</td> </tr> <tr> <td>H 5 0 0</td> <td>High Pressure (JIS 30K RF)</td> </tr> </table>		5 0 0	Cast Stainless Steel	H 5 0 0	High Pressure (JIS 30K RF)			
5 0 0	Cast Stainless Steel											
H 5 0 0	High Pressure (JIS 30K RF)											
mm	15A	20A	25A	32A	40A	50A	65A	80A				
inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"				

\* Screw : PT, BSPT, NPT

\* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)

# 4 WAY PISTON VALVE

## Ordering Information

4-WAY		Description		Size											
Valas Brand	PISTON														
V	40	-		-											
		<table border="1"> <tr> <td>S</td> <td>Single Type (With Spring)</td> </tr> <tr> <td>D</td> <td>Double Type (Without Spring)</td> </tr> </table>		S	Single Type (With Spring)	D	Double Type (Without Spring)								
S	Single Type (With Spring)														
D	Double Type (Without Spring)														
		<table border="1"> <tr> <td>10S</td> <td>SCS13 (Application for 1/4", 3/8")</td> </tr> <tr> <td>20S</td> <td>SCS13 (Application for 1/2", 3/4")</td> </tr> </table>		10S	SCS13 (Application for 1/4", 3/8")	20S	SCS13 (Application for 1/2", 3/4")								
10S	SCS13 (Application for 1/4", 3/8")														
20S	SCS13 (Application for 1/2", 3/4")														
				<table border="1"> <tr> <td>mm</td> <td>8A</td> <td>10A</td> <td>15A</td> <td>20A</td> </tr> <tr> <td>inch</td> <td>1/4"</td> <td>3/8"</td> <td>1/2"</td> <td>3/4"</td> </tr> </table>		mm	8A	10A	15A	20A	inch	1/4"	3/8"	1/2"	3/4"
mm	8A	10A	15A	20A											
inch	1/4"	3/8"	1/2"	3/4"											

\* Screw : PT, BSPT, NPT

# LIQUID EJECTOR

Ordering Information

Valas Brand	Liquid Ejector	Description
V	LE	

CODE	INCH	END CONN'
2540S	1" × 1-1/2"	Screw
2540F	1" × 1-1/2"	Flange(A105)
2540FS	1" × 1-1/2"	Flange(SCS13)
4050S	1-1/2" × 2"	Screw
4050F	1-1/2" × 2"	Flange(A105)
4050FS	1-1/2" × 2"	Flange(SCS13)

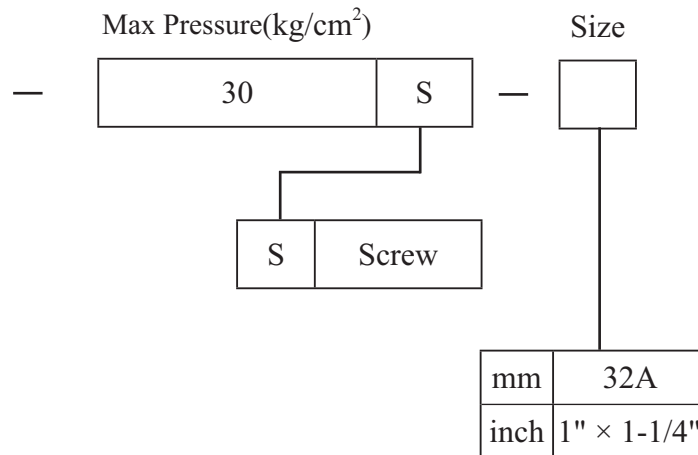
\* Screw : PT, BSPT, NPT

\* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)

# PILOT TYPE RELIEF VALVE

Ordering Information

Valas Brand	Relief Valve
V	RV



\* Screw : PT, BSPT, NPT