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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 and Lower Seat Flange made of Stainless Steel.
- Gland Packing made of 4 pieces V-packing that preventing 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_2), Air, Vacuum			
Size (mm)		15A~80A	8A~50A	15A~50A	8A~50A
Operation		Normal Close		Normal Open	
End Connection		Flanged	Threaded	Flanged	Threaded
Material		Body, Lower Seat Flange, Stem : Stainless Steel			
Air Supply		2.5 ~ 3.5 kg/㎠ (36~50psi)			
Temperature		Max.230℃(446˚F)			
Pressure		Max.32kg/㎠ (455psi)			
Body Hydraulic Test		Max.48kg/㎠ (682psi)			

a) JIS, DIN, ANSI are available.

b) (S) means SUS Flange.

c) To prevent the cavitations of flange, the user should use SUS Flange.

d) 2-Way : 3rd port blocked with plug or flat low seat flange is available.

e) No welding flange and body is available.

f) One-stem type is available.

g) Available for High Pressure (JIS 30K, JIS 63K).

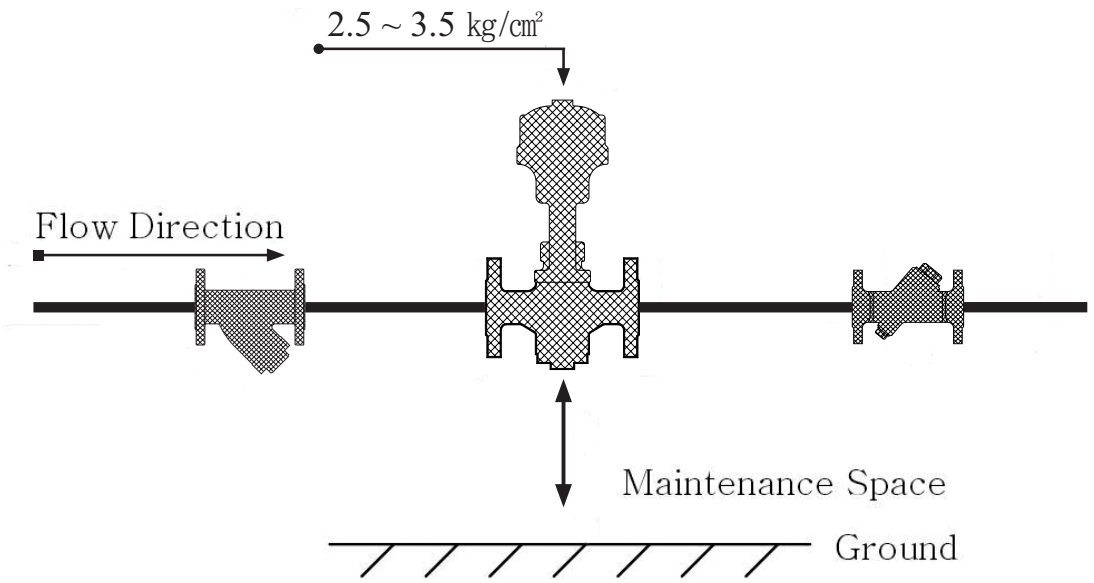
h) 3rd port flange is available.

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



a) Pipe line should be cleaned out by means such as water flushing before installing the valve.

b) Strainer should be installed for good performance and long life of the valve without trouble.
It filters the foreign material in the line.

c) Check valve is installed to prevent the reverse flow.

d) The line should have an enough room to maintenance the 3rd port on the emergency.

CONTROL VALVE

■ FEATURES

- The valve controls pressure and temperature.
- Multi Spring for more precise proportional control.
- Body seat and plug having “Stellite Welding”.
- Lapping satisfying ANSI CLASS V LEVEL (Control Valve Seat Leakage).
- Spring with Shot peening process that improves the life time.
- Body and Plug are Stainless Steel.
- Single Seat and Globe Control Valve.

■ 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_2), Air			
Size (mm)		15A~40A(VCM-1100F : 15A~80A)			
Operation		Normal Close		Normal Open	
End Connection		Flanged	Threaded	Flanged	Threaded
Material		Body : Stainless Steel, Plug and Seat : Stellited(Welding)			
Flow Characteristic		Linear / Equal %			
Spring Range : △P		0.2 ~ 1.0kg/㎠ (2.9~14.0psi) : △P Max.7 kg/㎠ 0.4~1.2kg/㎠ (5.7~17.1psi) : △P Max.16 kg/㎠ 0.8~2.4kg/㎠ (11~34.0psi) : △P Max.24 kg/㎠			
Temperature		Linear : Max.220℃ (428˚F) / Equal : Max.250℃ (482˚F)			
Pressure		Max.32kg/㎠ (455psi)			
Seat Type		Single Seated			
Body Hydraulic Test		Max.48kg/㎠ (682psi)			

a) JIS, DIN, ANSI are available.

b) (S) means SUS Flange.

c) E/P positioner is available.

d) △P means Differential Pressure. △P=P1-P2.

e) △P of 65A, 80A is Max. 4kg/㎠(spring rang 0.2~1.0kg/㎠) or Max. 18kg/㎠(spring rang 0.8~2.4kg/㎠).

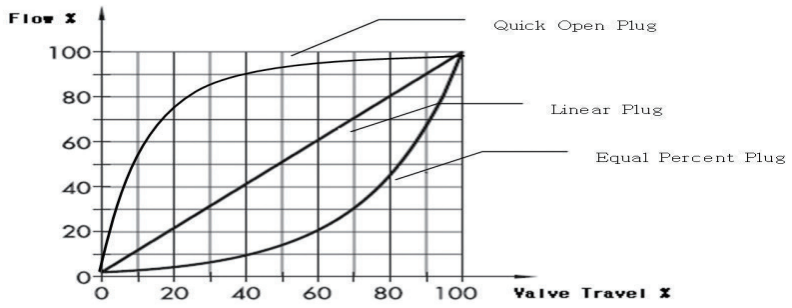
■ Cv VALUE

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	71.00

CONTROL VALVE

■ FLOW CHARACTERISTIC

- Inherent Flow Characteristic

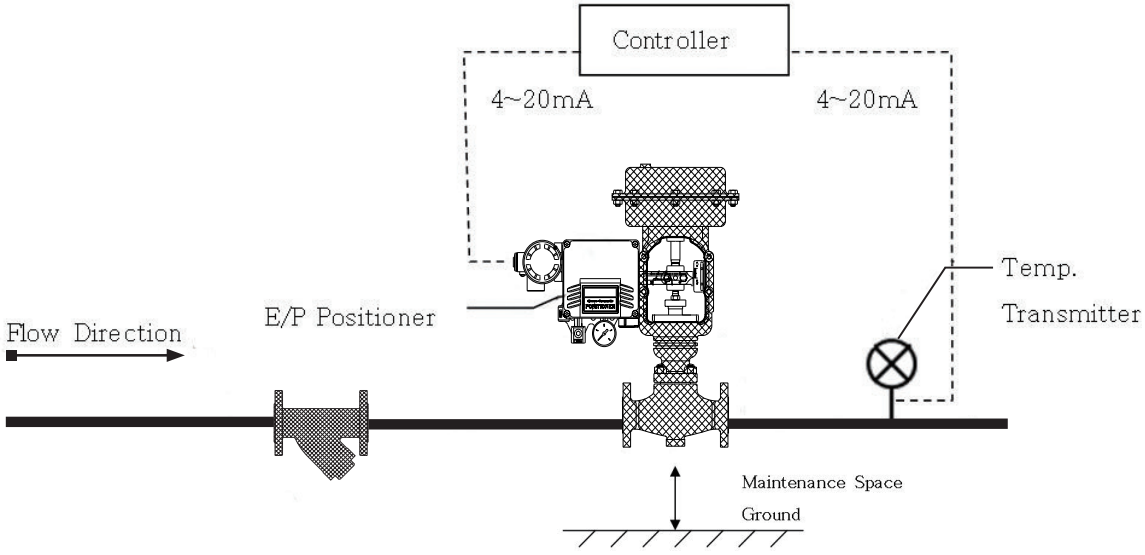


a) Plug Shape.

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.

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 materials.
- Diaphragm is used longer than metal plate or bellows and is economical.
- Easy installment and maintenance.
- Perfect sealing with the disc made of Carbon Graphite PTFE.
- The valve can be used not only the steam line but also gas line.

■ SPECIFICATION

Model Name	SRV-1100S	SRV-1100F	SRV-1100FS
Fluids	Steam, Industrial Water, Gas(N_2)		
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	1:1(15A,20A), 1:0.8(25A,40A,50A)		
Temperature	Max.230℃ (446˚F)		
Operating Pressure	Max.15㎏/㎠ (213 psi)		
Body Hydraulic Test	Max.48㎏/㎠ (683psi)		

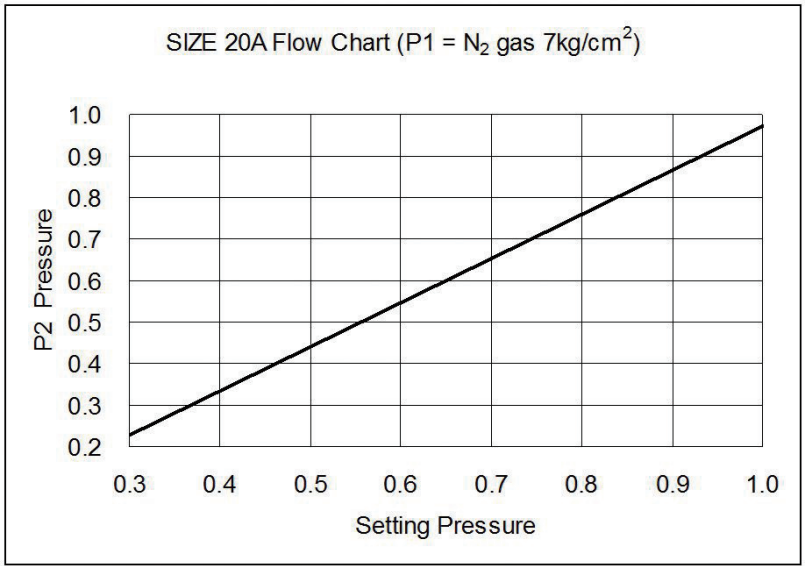
a) JIS, DIN, ANSI are available.

b) Size 32A is not available.

c) Reducing Rate can be changed at the actual line.

PRESSURE REGULATOR VALVE

■ PRESSURE REGULATOR VALVE FLOW

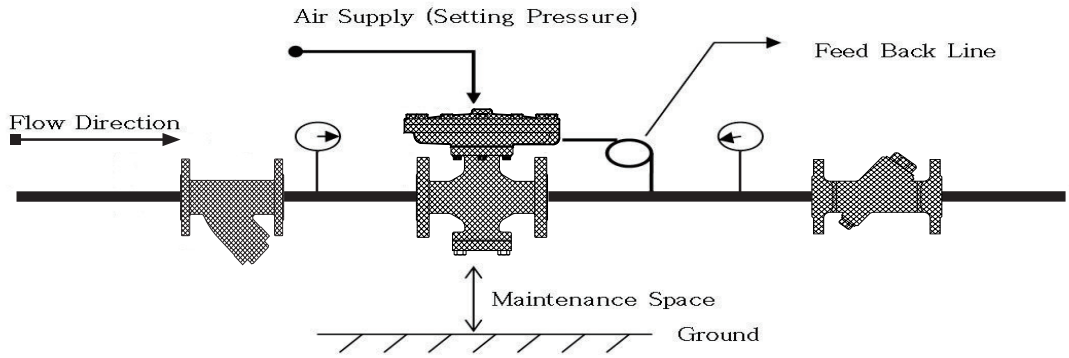


a) The inlet pressure is 7㎏/㎠.

b) Size 20A (Ratio 1 : 1), Size 25A (Ratio 1 : 0.8)

c) At the actual line, the data can be changed.

■ INSTALLATION



a) The pilot air supply is the setting pressure.

b) Setting Pressure is supplied from I/P Converter or Air Regulator.

c) 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.

d) The gauge is installed to check the reduced pressure at the 2nd port.

e) Flushing of the pipe lines thoroughly is required before the installment of the valve.

f) Pressure Regulator Valve should be vertical to horizontal piping.

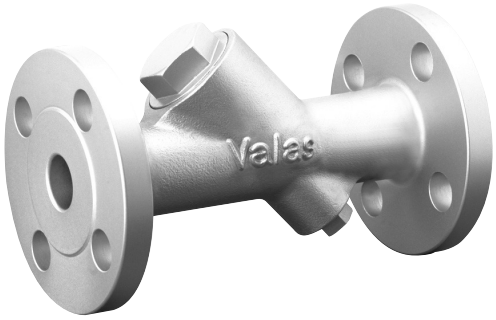
g) Lift Check Valve is installed to prevents the reverse flow.

h) To protect the valve, the strainer should be installed prior to the valve.

i) Feed back line should be spiral.

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_2), Air, Vacuum		
Size(mm)	15A~50A	15A~80A	
End Connection	Threaded	Flanged (A105)	Flanged (SCS13)
Material	Flanged (SCS13)		
Opening Pressure	Min. 0.1 ㎏/㎠ (1.4psi)		
Mounting	Horizontal		
TemperaturePressure	Max.230℃ (446˚F)		
Pressure	Max.32 ㎏/㎠ (455psi)		
Body Hydraulic Test	Max.48 ㎏/㎠ (682psi)		

a) JIS, ANSI, DIN are available.

b) Min Opening Pressure (Spring Tension) can be arranged according to the clients request.

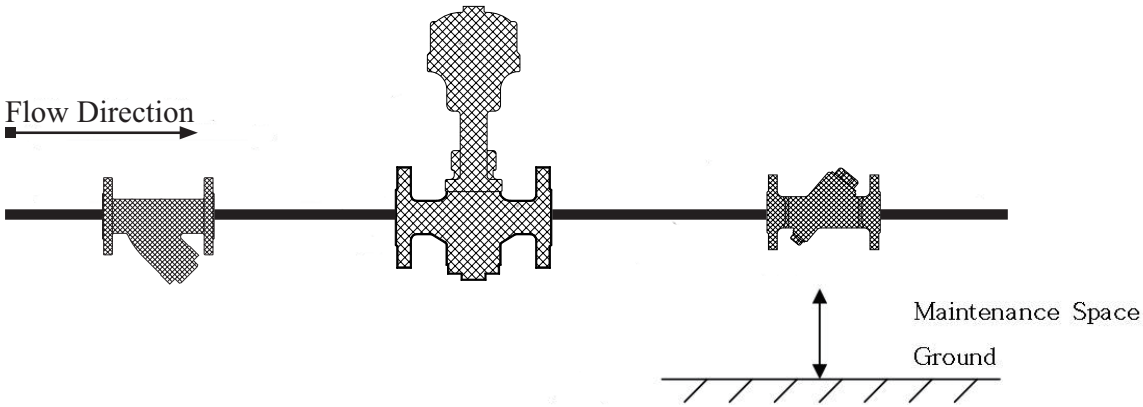
c) Available for High Pressure (JIS 30K).

LIFT CHECK VALVE

■ Opening Pressure

Size mm(inch)	Opening Pressures (kg/㎠)		
	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

■ INSTALLATION



a) The arrow direction of the Lift Check Valve should be same as the flow direction.

b) The valve should be vertical to horizontal piping.

c) Disc Seat is made of PTFE. Lift Check Valve is beneficial and advantageous at high pressure.

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 the high pressure.
- Super seal ring made of Carbon Graphite PTFE allows high sealing to increase the life time.

■ SPECIFICATION

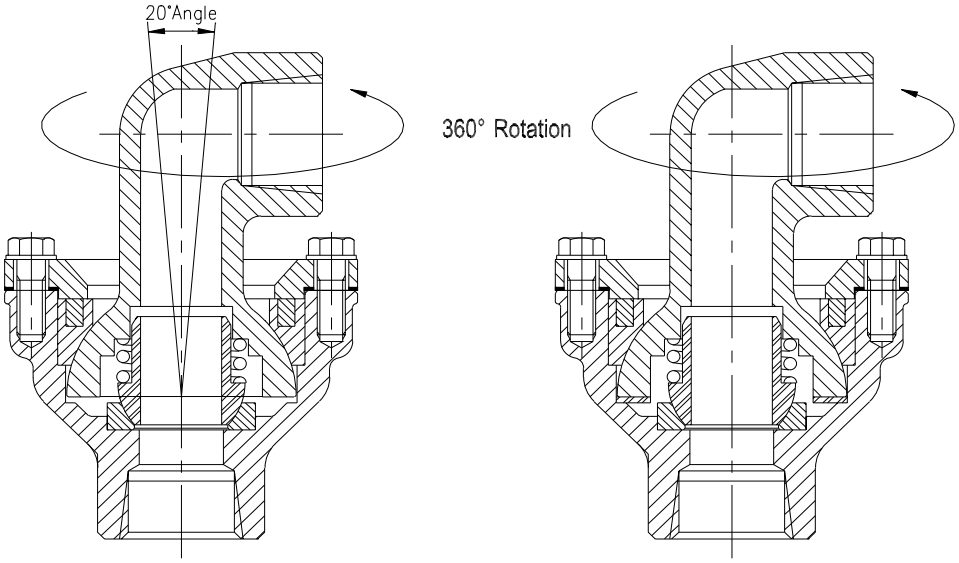
Model Name	Max 20° Angle	VNJ-1	VNJ-2	VNJ-3	VNJ-4
	Fixed	VNJ-1S	VNJ-2S	VNJ-3S	VNJ-4S
Fluids		Steam, Industrial Water, Gas(N_2), Air			
Size (mm)		15A ~ 40A			
End Connection		Threaded			
Material		Stainless Steel			
Temperature		Max.230℃ (446℉)			
Max Pressure		32kg/㎠(455psi)			
Body Hydraulic Test		48kg/㎠(682psi)			

a) PT, NPT, BSPT are available.

b) FCD 450 is available.

KNUCKLE JOINT

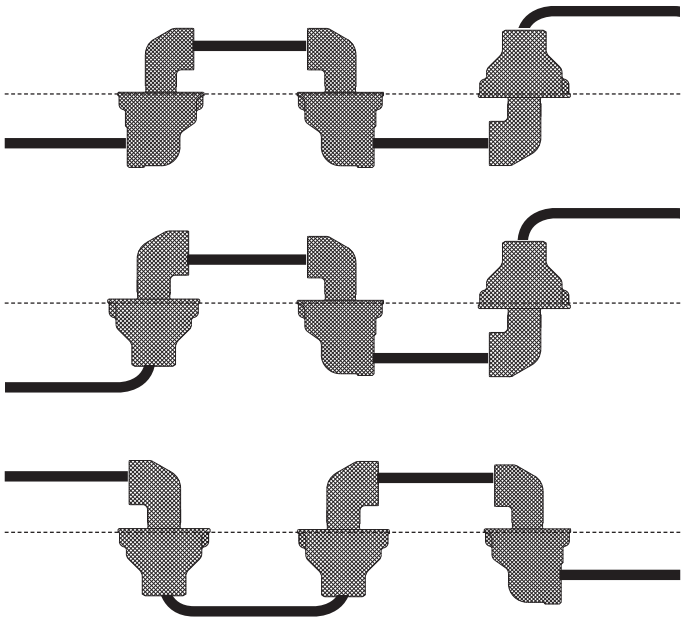
■ MAX 20°ANGLE AND FIXED



Angle Type
(Without Spacer Ring)

Fixed Type
(With Spacer Ring)

■ 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.

4-WAY PISTON VALVE

■ FEATURES

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

■ SPECIFICATION

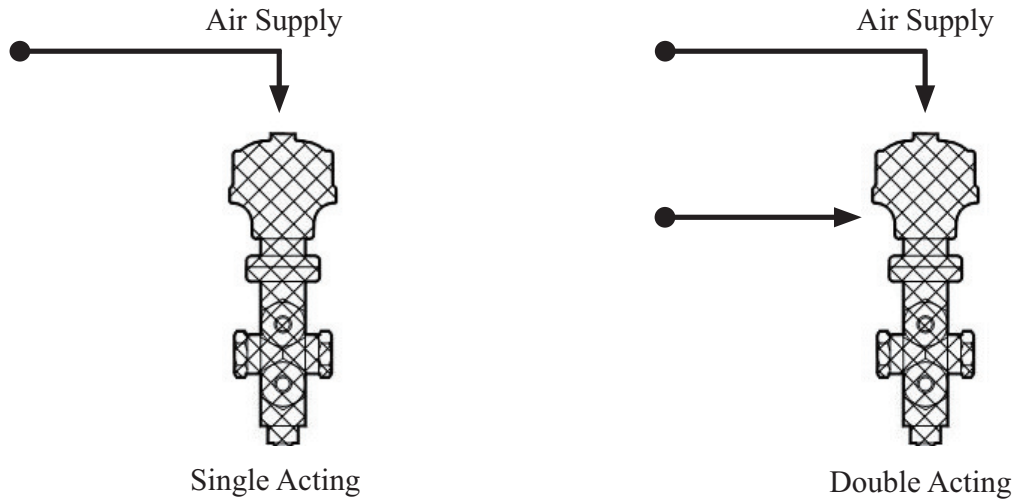
Model Name	V4010S-S	V4010S-D	V4020S-S	V4020S-D
Fluids	Industrial Water			
Size(mm)	8A, 10A		15A, 20A	
Operation	Single Acting	Double Acting	Single Acting	Double Acting
End Connection	Threaded			
Material	Body : Stainless Steel			
Air Supply	2.5 ~ 3.5㎏/㎠ (36~50psi)			
Temperature	Max.70℃ (158˚F)			
Max Pressure	32 ㎏/㎠ (455psi)			
Body Hydraulic Test	48 ㎏/㎠ (682psi)			

a) PT, NPT, BSPT are available.

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

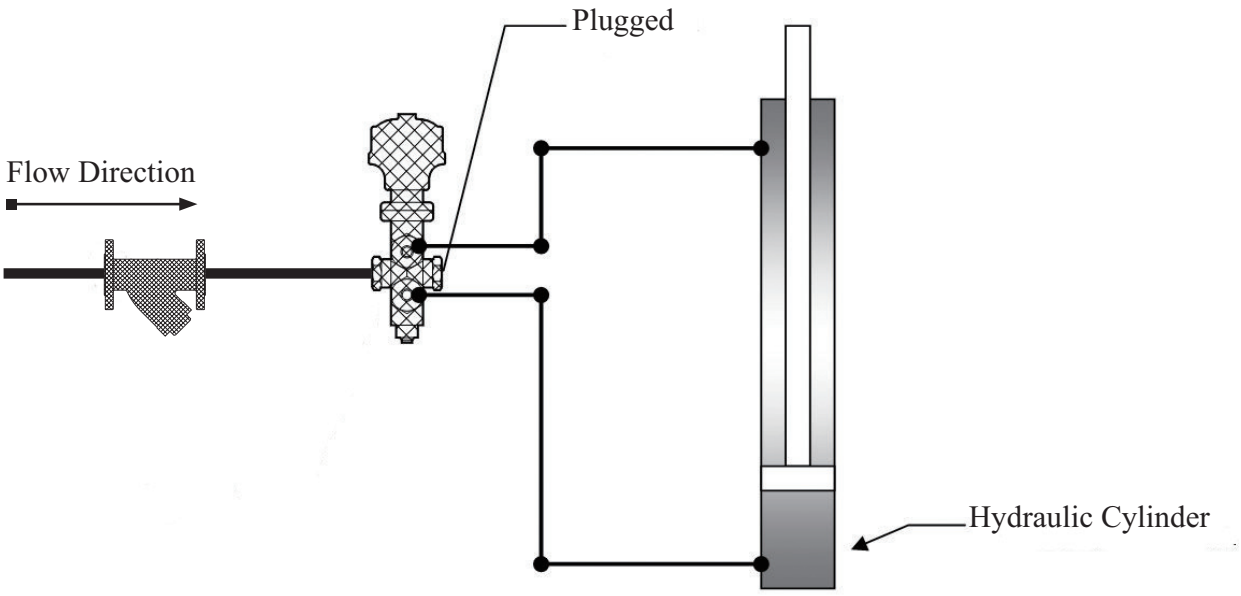
4-WAY PISTON VALVE

■ 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 damage. The strainer should be installed before the valve.

c) The speed of the hydraulic cylinder can be changed according to the water pressure.

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_2), Air		
Size	15A~50A	15A~80A	
End Connection	Threaded	Flanged (A105)	Flanged (SCS13)
Material	Body, Screen : Stainless Steel		
Screen	ø3.0 x 5.0 P		
Mounting	Horizontal		
Temperature	Max.230℃ (446˚F)		
Pressure	Max.32㎏/㎠ (455psi)		
Body Hydraulic Test	Max.48 ㎏/㎠ (682psi)		

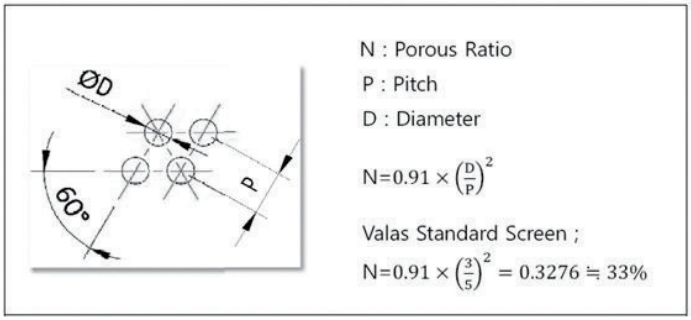
a) JIS, ANSI, DIN are available.

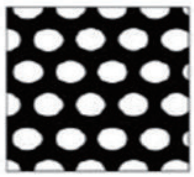
b) Various perforated hole rate is available.

c) Mesh is available.

d) Available for High Pressure (JIS 30K).

■ STANDARD PERFORATED SCREEN





Ø3.0 x 5.0 P

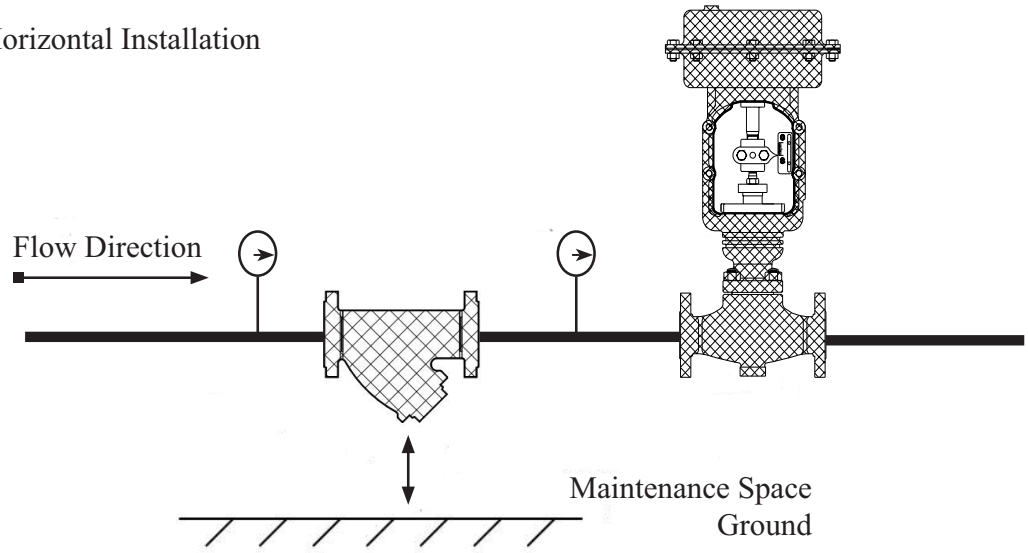
33% Opening

a) Various perforated hole rate is available.

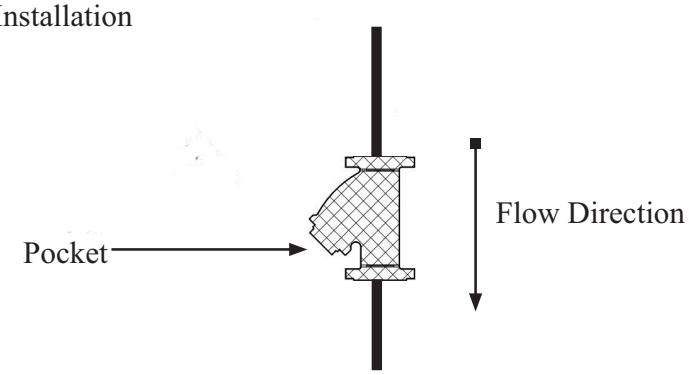
STRAINER

■ INSTALLATION

● Horizontal Installation



● Vertical Installation



a) It should be installed prior to the important valve.

b) In the steam line, the ball valve at the pocket can be connected to drain the condensation to prevent water hammer and foreign material.

c) The arrow direction of the strainer should be same as the flow direction.

d) The line should have an enough room to clean the strainer.

e) If the difference of both sides pressure increases, the user should remove the foreign material inside of the strainer.

f) It should be installed vertically to horizontal piping and also it is available to vertical piping.

g) Especially in the steam line, the pocket of strainer should be placed horizontally not to make the condensation in the pocket.

h) The strainer in vertical piping should be placed with the pocket in the downward.

LIQUID EJECTOR

■ FEATURES

- Ejector obtains suction pressures by making vacuum in chamber of 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.

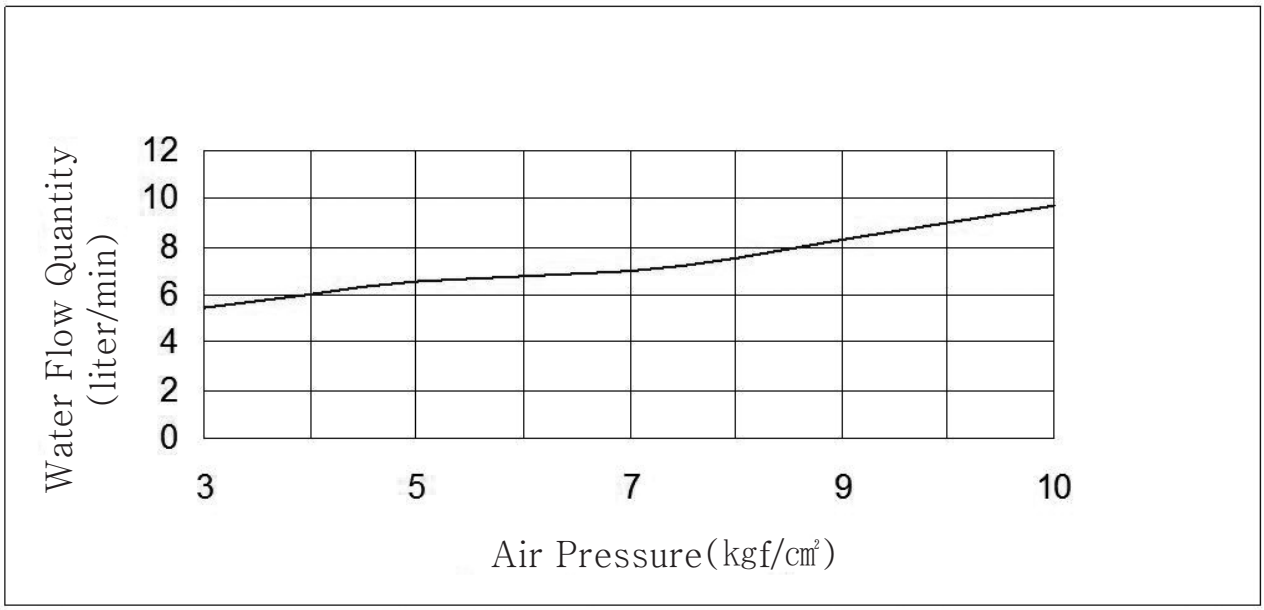
■ SPECIFICATION

Model Name	VLE-2540S	VLE-4050S
Fluids	Industrial Water, Gas(N_2), Air	
Size(mm)	25A x 40A	40A x 50A
Material	Body : Stainless Steel	
Mounting	Horizontal	
Temperature	Max.230℃(446˚F)	
Max Pressure	32 ㎏/㎠ (455psi)	
Body Hydraulic Test	48 ㎏/㎠ (682psi)	

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

LIQUID EJECTOR

■ SUCTION AMOUNT

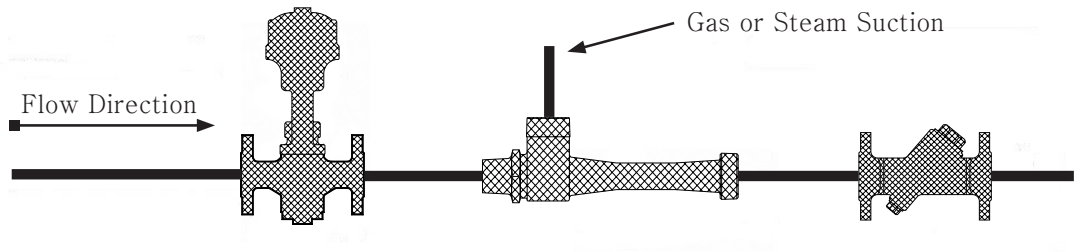


a) Motive Fluid: Air.

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.

PAN CHECK VALVE

■ FEATURES

- Pan 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 pan 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_2), Air
Size(mm)	15A~40A
Material	Body, Disc : Stainless Steel
Opening Pressure	Min. 0.05 ㎏/㎠(0.7psi)
Mounting	Horizontal, Vertical
Temperature	Max.230℃(446˚F)
Max Pressure	Max.32 ㎏/㎠(455psi)
Body Hydraulic Test	Max.48 ㎏/㎠(682psi)

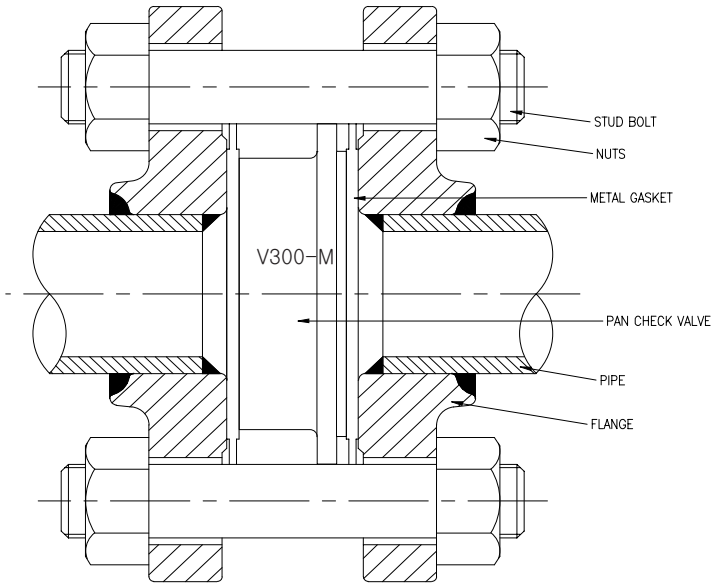
a) Min Opening Pressure can be arranged according to the clients request.

■ OPENING PRESSURE

Size mm(inch)	Opening Pressures (㎏/㎠)		
	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

PAN CHECK VALVE

■ INSTALLATION



a) Bolt (JIS 20K RF)

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

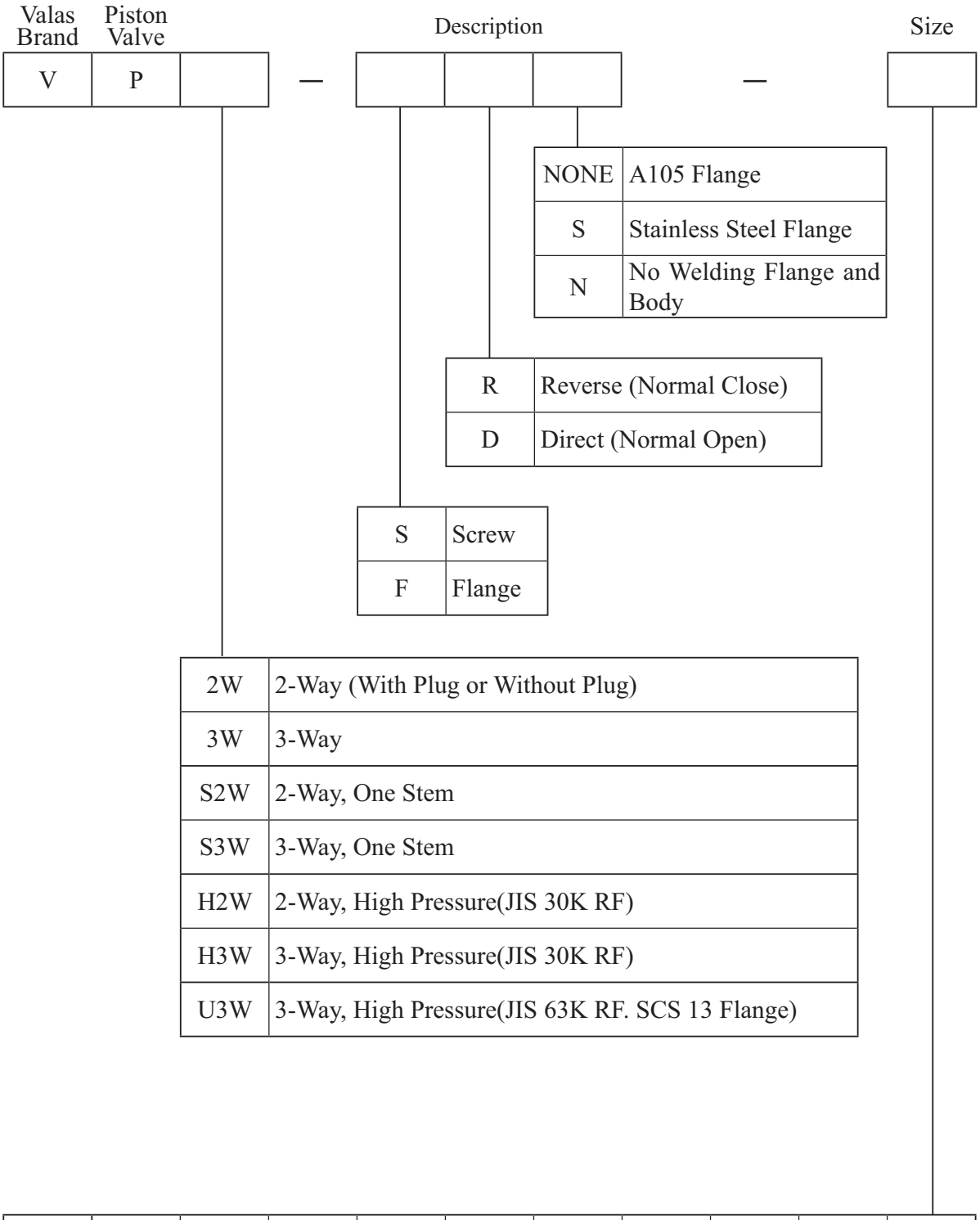
b) Pan Check Valve should not be used on applications where there is heavily pulsating flow.

c) Disc Seat is made of Stainless Steel.

d) B7 Stud bolt and nuts are suitable.

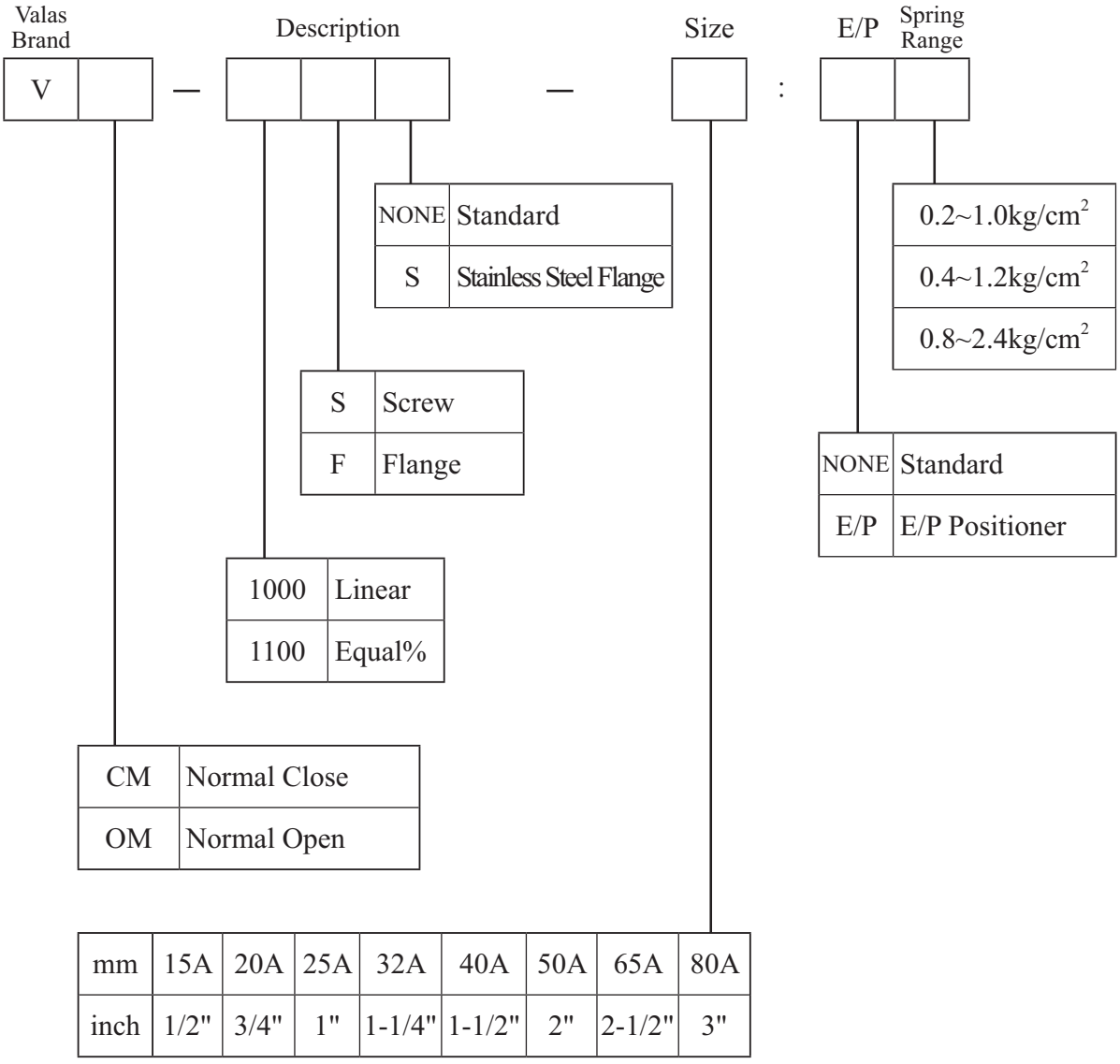
Ordering Information

3-Way & 2-Way Piston Valve	41
Control Valve	42
Pressure Regulator Valve	43
Knuckle Joint	44
Check Valve	45
Strainer	46
4-Way Piston Valve	47
Liquid Ejector	48



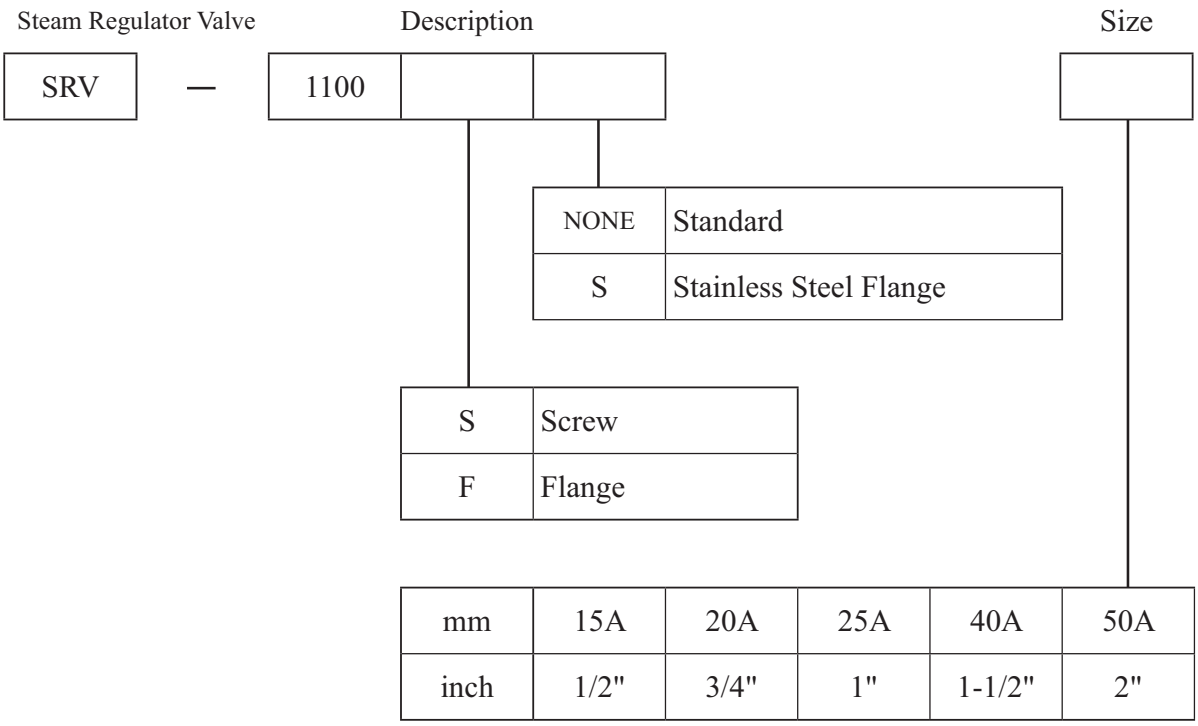
mm	8A	10A	15A	20A	25A	32A	40A	50A	65A	80A
inch	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"

* Screw : PT, BSPT, BSP, NPT, NPTF
* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)



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, BSP, NPT, NPTF
* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)



* Screw : PT, BSPT, BSP, NPT, NPTF
* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)

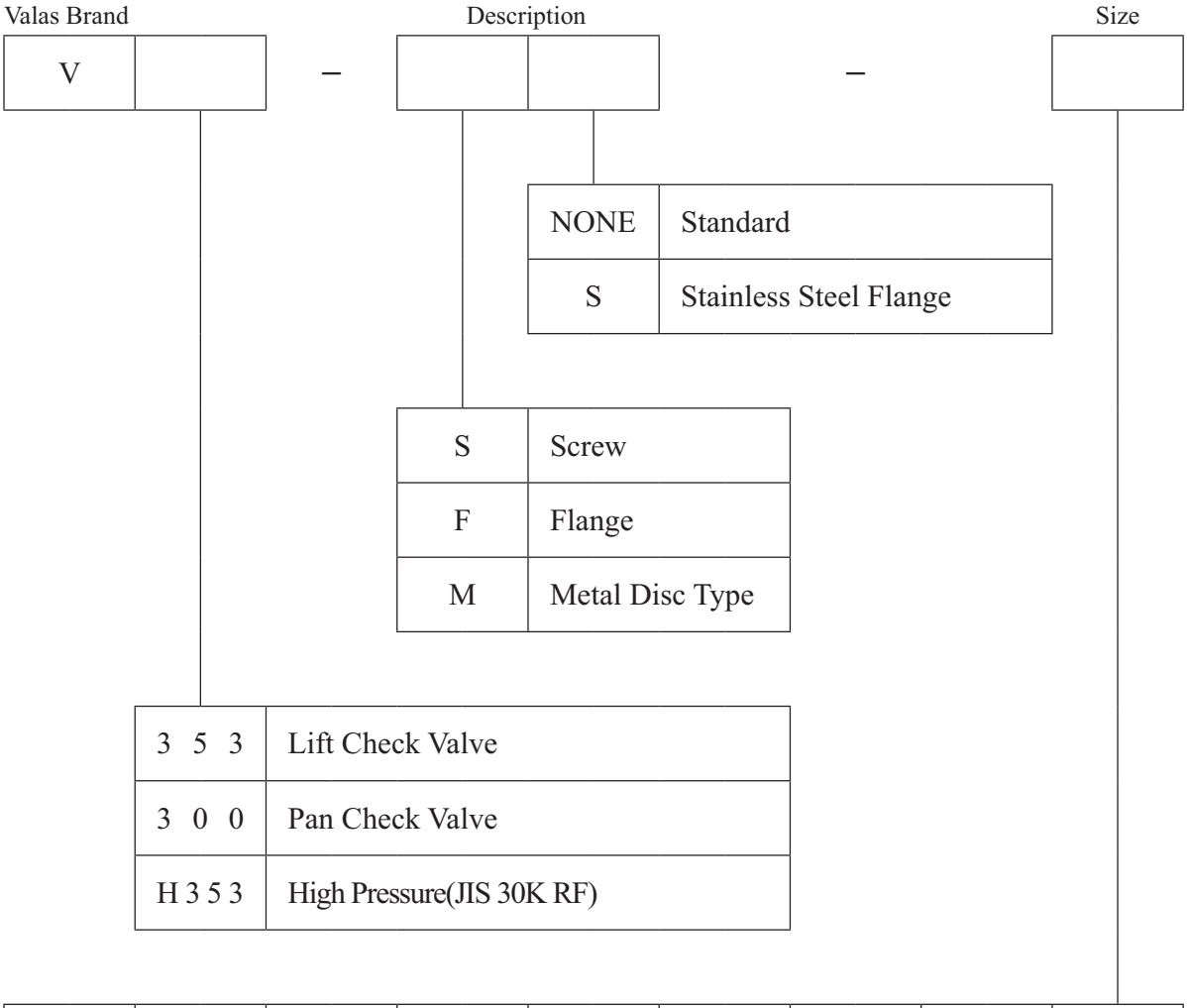
Valas Brand	Kunckle Joint		Description			Size
V	NJ	—			—	

NONE	20˚ Angle
S	No Angle(Fixed)

1	90˚	Refer To Drawing
2	90˚	
3	180˚	
4	0˚	

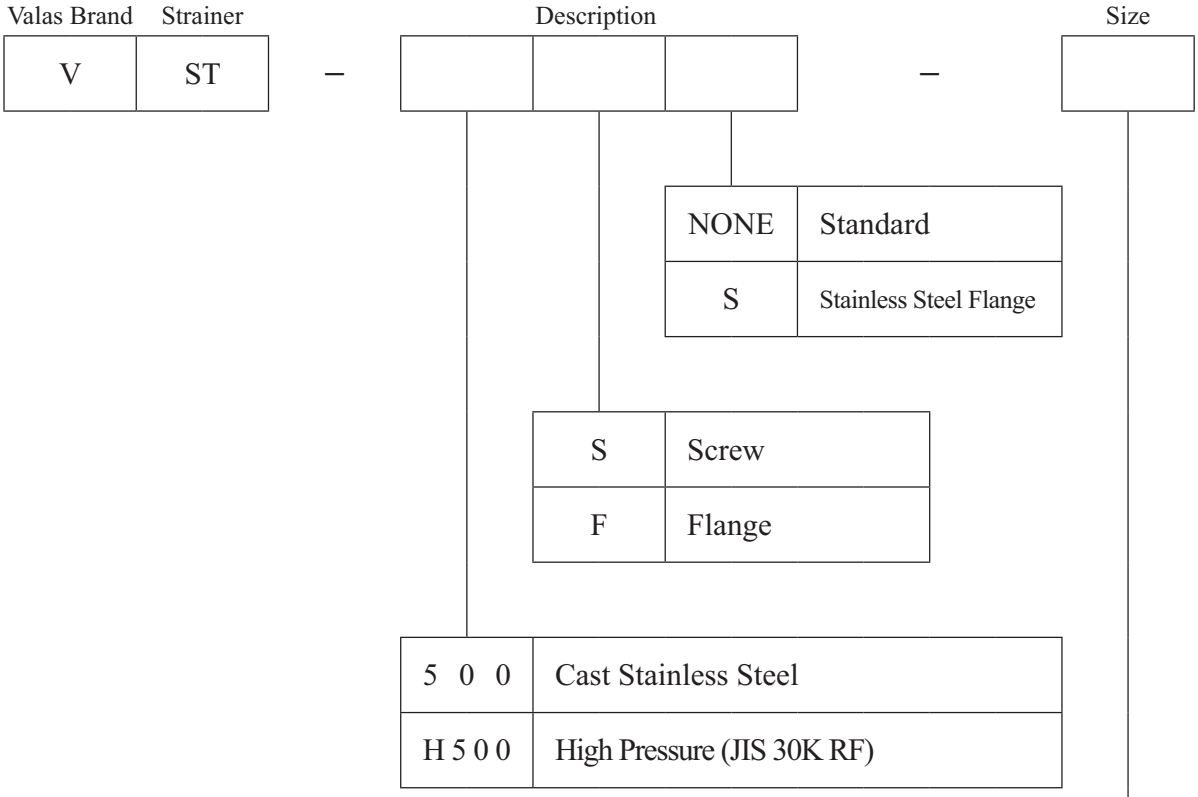
mm	15A	20A	25A	32A	40A
inch	1/2"	3/4"	1"	1-1/4"	1-1/2"

* Screw : PT, BSPT, BSP, NPT, NPTF



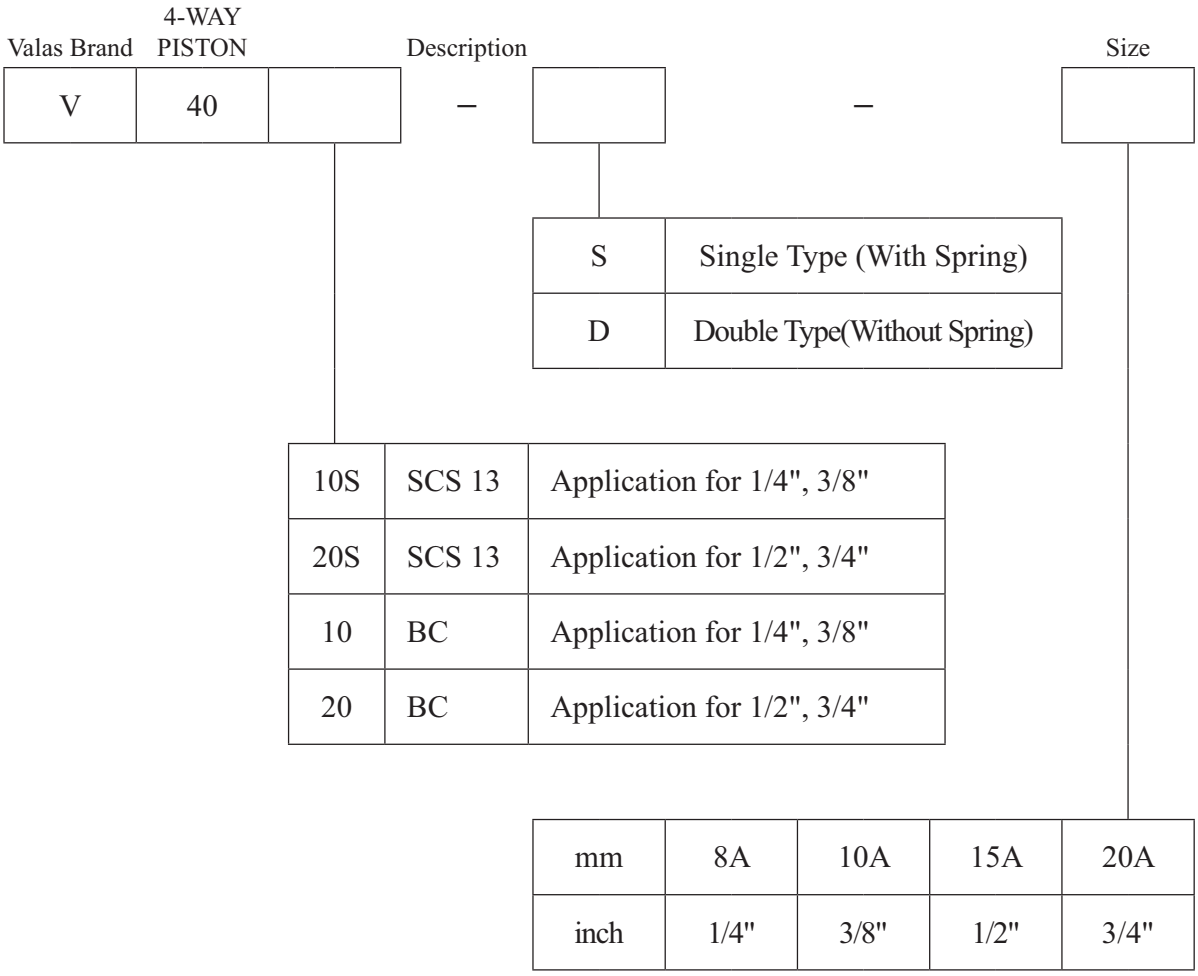
mm	15A	20A	25A	32A	40A	50A	65A	80A
inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"

* Screw : PT, BSPT, BSP, NPT, NPTF
* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)



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, BSP, NPT, NPTF
* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)



* Screw : PT, BSPT, BSP, NPT, NPTF

Valas Brand	Liguid Ejector	Description
V	LE	

CODE	BODY	INCH	END CONN'
2540S	SCS 13	1" × 1-1/2"	Screw
2540SF	SCS 13	1" × 1-1/2"	Flange
4050S	SCS 13	1-1/2" × 2"	Screw
4050SF	SCS 13	1-1/2" × 2"	Flange
2540	BC	1" × 1-1/2"	Screw
2540FN	BC	1" × 1-1/2"	Flange

* Screw : PT, BSPT, BSP, NPT, NPTF
* Flange : JIS, DIN, ANSI(10K, 20K, 30K Flange)