

SELF CONTROL VALVE

(PRESSURE REDUCING TYPE)

Features

- Even when the primary side pressure fluctuates, the valve maintains secondary side pressure constant.
- It works using the fluid pressure only, without using any auxiliary power.
- Against the fluid power pressing up the piston, the valve uses the force of compression spring to press down the piston so as to keep balance.
- For appropriate flow range, see P.5.



Basic specifications

- Valve Type : Self Control Valve (Pressure Reducing Type)
- Size : 15mm (1/2") - 50mm (2")
- Body Material : U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)
- Seal Material : EPDM
- Connection / Flanged : JIS B2220, DIN/EN1092-1, ANSI B16.5
- / Socket : JIS B2220, DIN/EN1092-1, ANSI B16.5
- / Threaded : Rc, Rp, NPT

Body Material	FLUID TEMPERATURE °C {°F}	Maximum working pressure (Normal temperature) MPa {psi}
U-PVC	0 ~ 50 { 30 ~120 }	1.0 { 150 }

Note: The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.

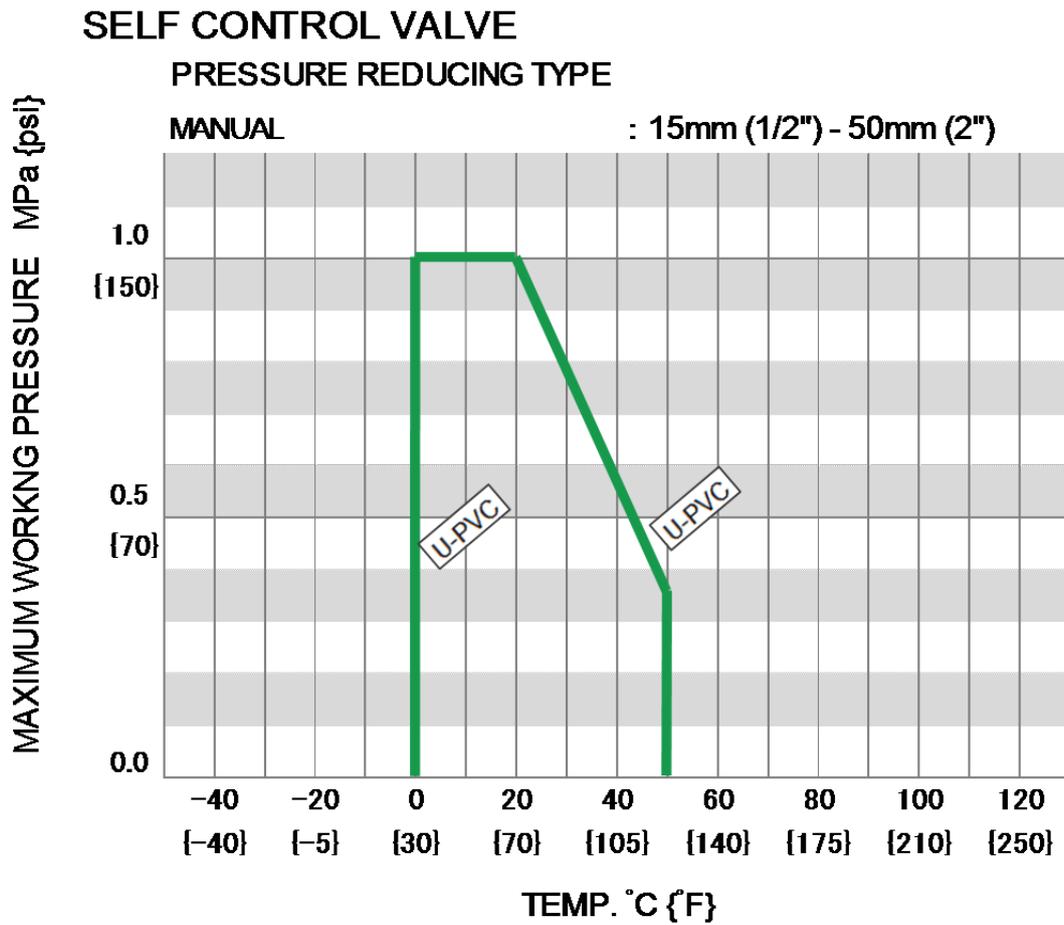
* Concerning the allowable pressure for each temperature and material, see the technical documents at the next page of this sheet.

Certificate / Approval / Directive

PED, ABS, NSF/ANSI61

“For details of applicable products, please consult us.”

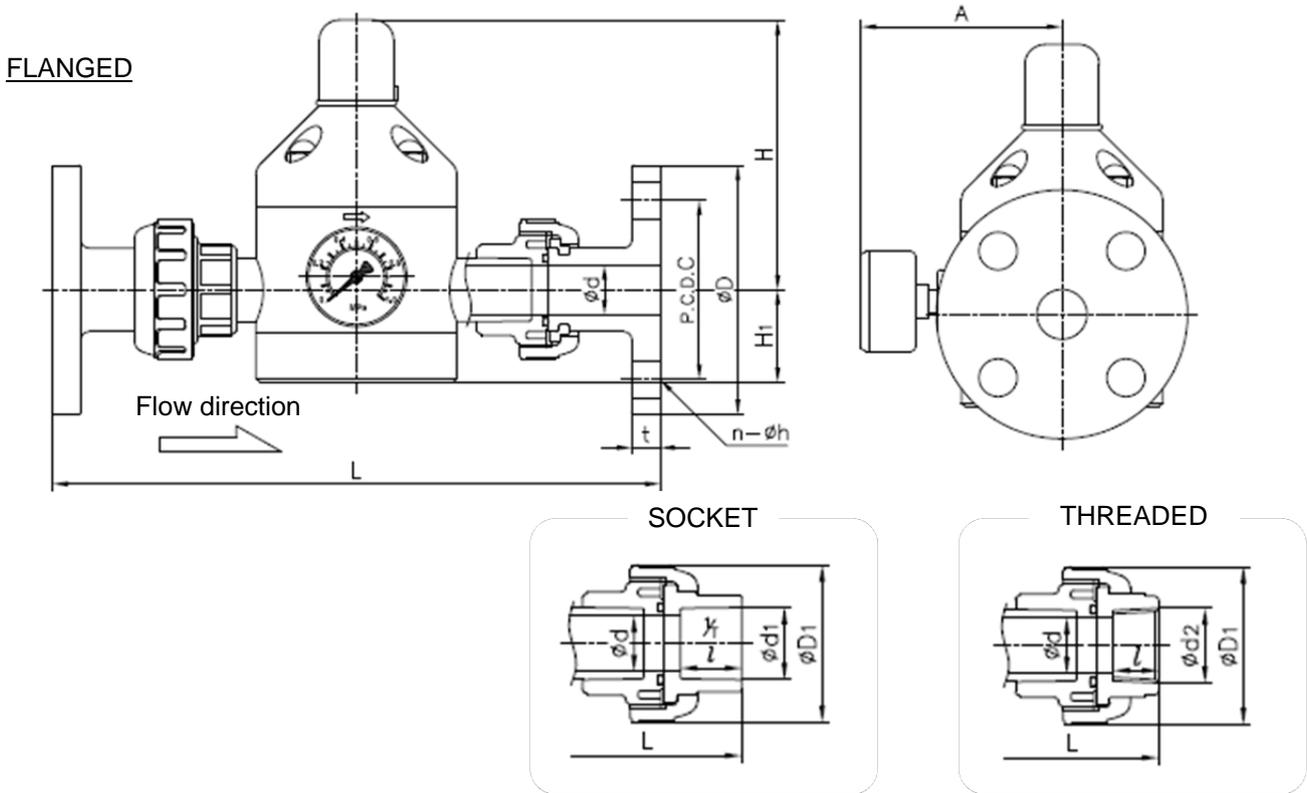
Working pressure vs. Temperature



Note:

Make sure that the temperature and pressure are within the working range during operation.
 (If the tolerance range is exceeded during use, the valve may be damaged.)

Product dimension



■ JIS, DIN (Unit: mm)

							JIS												
							FLANGED			SOCKET			THREADED						
mm	inch	d	D ₁	H	H ₁	A	D	C	n	h	L	t	d ₁	l	1/T	L	d ₂	l	L
15	1/2	15	48	111	35	90	95	70	4	15	221	12	22.11	20	1/34	186	Rc 1/2	15	180
20	3/4	20	60	137	46	100	100	75	4	15	292	14	26.13	24	1/34	248	Rc 3/4	17	240
25	1	25	70	137	46	100	125	90	4	19	302	14	32.16	27	1/34	260	Rc 1	20	246
32	1 1/4	31	82	168	65	115	135	100	4	19	346	16	38.19	30	1/34	318	Rc 1 1/4	22	306
40	1 1/2	40	100	168	65	115	140	105	4	19	379	16	48.21	37	1/37	356	Rc 1 1/2	25	330
50	2	51	106	207	69	125	155	120	4	19	395	16	60.25	42	1/37	380	Rc 2	28	358

		DIN											
		FLANGED DIN PN10/PN16					SOCKET			THREADED			
mm	inch	D	C	n	h	L	t	d ₁	l	L	d ₂	l	L
15	1/2	95	65	4	14	208	12	20	16	180	Rp 1/2	15	180
20	3/4	105	75	4	14	270	14	25	19	239	Rp 3/4	17	240
25	1	115	85	4	14	275	14	32	22	246	Rp 1	20	246
32	1 1/4	140	100	4	18	336	16	40	26	306	Rp 1 1/4	22	306
40	1 1/2	150	110	4	18	367	16	50	31	331	Rp 1 1/2	25	330
50	2	165	125	4	18	395	16	63	38	371	Rp 2	28	358

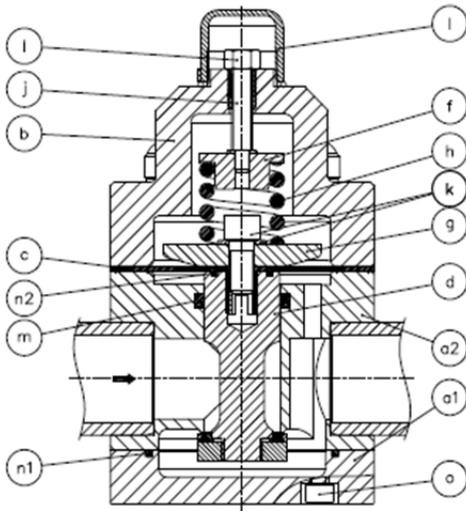
■ ANSI (Unit: inch)

							ANSI												
							FLANGED ANSI CLASS 150					SOCKET			THREADED				
inch	mm	d	D ₁	H	H ₁	A	D	C	n	h	L	t	d ₁	d ₁ '	l	L	d ₂	l	L
1/2	15	0.59	1.89	4.37	1.38	3.54	3.50	2.38	4	0.62	8.70	0.47	0.848	0.836	0.875	7.52	1/2 - 14 NPT	0.59	7.09
3/4	20	0.79	2.36	5.39	1.81	3.94	3.88	2.75	4	0.62	11.50	0.55	1.058	1.046	1.000	9.80	3/4 - 14 NPT	0.67	9.45
1	25	0.98	2.76	5.39	1.81	3.94	4.25	3.12	4	0.62	11.89	0.55	1.325	1.310	1.125	10.24	1 - 11 1/2 NPT	0.79	9.69
1 1/4	32	1.22	3.23	6.61	2.56	4.53	4.62	3.5	4	0.62	13.62	0.63	1.670	1.655	1.250	12.60	1 1/4 - 11 1/2 NPT	0.87	12.05
1 1/2	40	1.57	3.94	6.61	2.56	4.53	5.00	3.88	4	0.62	14.92	0.63	1.912	1.894	1.375	13.82	1 1/2 - 11 1/2 NPT	0.98	12.99
2	50	2.01	4.17	8.15	2.72	4.92	6.00	4.75	4	0.75	15.55	0.63	2.387	2.369	1.500	14.57	2 - 11 1/2 NPT	1.10	14.09

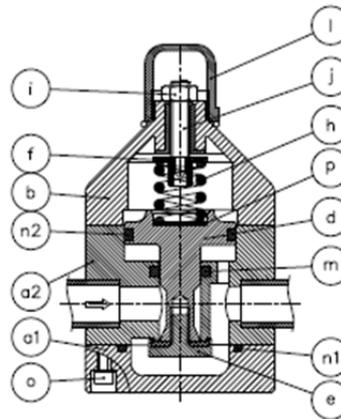
The shape and appearance of assembly differ a little with nominal size and material compared to this drawing

Parts list

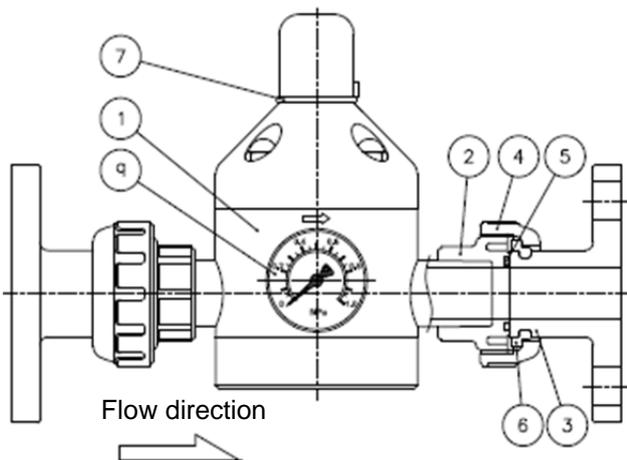
50mm
V82 INSIDE STRUCTURE



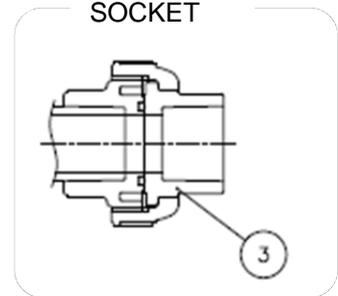
15mm (1/2") – 40mm (1 1/2")
V182 INSIDE STRUCTURE



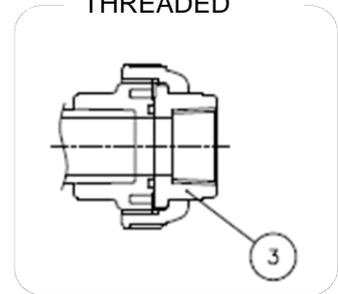
FLANGED



SOCKET



THREADED



PART NO./NAME	QTY	MATERIAL
a1 BODY (LOWER)	1	U-PVC
a2 BODY (UPPER)	1	U-PVC
b HOUSING	1	U-PVC
c DIAPHRAGM	1	EPDM Used for V82.
d PISTON	1	U-PVC
e PISTON BASE	1	U-PVC Used for V182.
f SPRING PLATE	1	Aluminum
g COMPRESSOR	1	U-PVC Used for V82.

PART NO./NAME	QTY	MATERIAL
h COMPRESSION SPRING	1	Spring steel
i LOCK NUT	1	Polyamide
j ADJUSTING SCREW	1	-
k BOLT, WASHER	1	- Used for V82.
l CAP	1	Polystyrene
m RING SEAL	1	EPDM
n1 O-RING (A)	1	EPDM
n2 O-RING (B)	1	EPDM
o BOLT, NUT, WASHER	4	-
p SPRING SUPPORT PLATE	1	- Used for V182.

PART NO./NAME	QTY	MATERIAL
q PRESSURE GAUGE	1	ABS
2 PJ-BODY	2	U-PVC Self control valve dedicated for true union.
3 END CONNECTOR	2	U-PVC
4 UNION NUT	2	U-PVC
5 O-RING (C)	2	EPDM
6 STOP RING	2	PVDF Used for flanged type.
7 O-RING (D)	1	EPDM

PROPER FLOW RANGE

SELF CONTROL VALVE

Pressure setting: 0.05 - 0.9 MPa

	mm	inch	MAXIMUM FLOW RATE [L/h]	APPROPRIATE FLOW RANGE [L/h] (30-70% of MAXIMUM FLOWRATE)		APPROPRIATE FLOW RANGE [L/m] (30-70% of MAXIMUM FLOWRATE)	
	PRESSURE REDUCING TYPE	15	1/2	1,200	360	—	840
20		3/4	2,400	720	—	1,680	12.0 — 28.0
25		1	3,500	1,050	—	2,450	17.5 — 40.8
32		1 1/4	6,000	1,800	—	4,200	30.0 — 70.0
40		1 1/2	8,000	2,400	—	5,600	40.0 — 93.3
50		2	15,000	4,500	—	10,500	75.0 — 175.0

Product weight

SELF CONTROL VALVE (U-PVC)

Unit: kg

mm	inch	PRESSURE REDUCING TYPE		
		FLANGED	SOCKET	THREADED
15	1/2	1.0	0.8	0.8
20	3/4	1.8	1.5	1.5
25	1	2.4	1.9	1.9
32	1 1/4	4.0	3.4	3.4
40	1 1/2	4.4	3.7	3.7
50	2	6.8	6.1	6.1

Product model code list

SELF CONTROL VALVE (Pressure Reducing Type)

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE
A	PR	2T	U	E	*	*	***
A : AUTOMATIC VALVE	PR : SELF CONTROL VALVE	2T : PRESSURE REDUCING TYPE	U : U-PVC	E : EPDM	S SOCKET N THREADED F FLANGED	J JIS 1 10K D DIN A ANSI	015 15mm 2 050 50mm

Installation, Operation and Maintenance Manual

"For details of Installation, Operation and Maintenance, please refer IOM at below link"

http://www.asahi-yukizai.co.jp/product/mt_pdf/syudoben-manual29.pdf