

# SELF CONTROL VALVE

## (PRESSURE RELIEF TYPE)

### Features

- This valve is used for piping lines and equipment where excessive pressure needs to be prevented.
- The T-shaped pipe structure allows the fluid to flow in 3 directions. In addition to the intake and discharge ports located sideways in a straight line (horizontal direction), there is also a discharge port on the lateral side (vertical direction), so that the fluid is discharged from the vertically located discharge port.
- The pressure dispersion and closure operation allow the valve to maintain the horizontal pressure constant and reduce the peak pressure.
- For appropriate flow range, see P.5.



### Basic specifications

- Valve Type : Self Control Valve (Pressure Relief Type)
- Size : 15mm (1/2") - 50mm (2")
- Body Material : U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)
- Seal Material : EPDM, etc.
- 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.

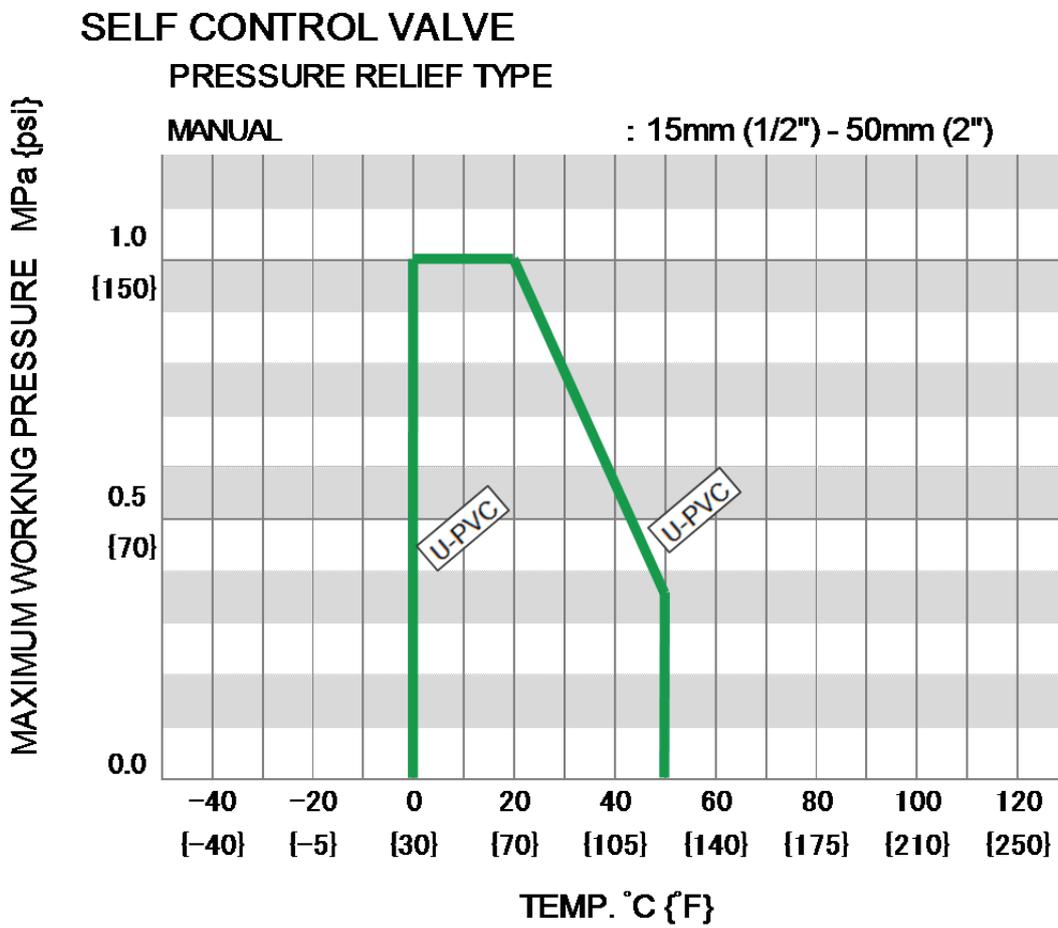
\* Concerning the allowable pressure for each temperature and material, see the technical documents at the next page of this sheet.

**Certificate / Approval / Directive**

**PED, ABS, NSF/ANSI61**

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

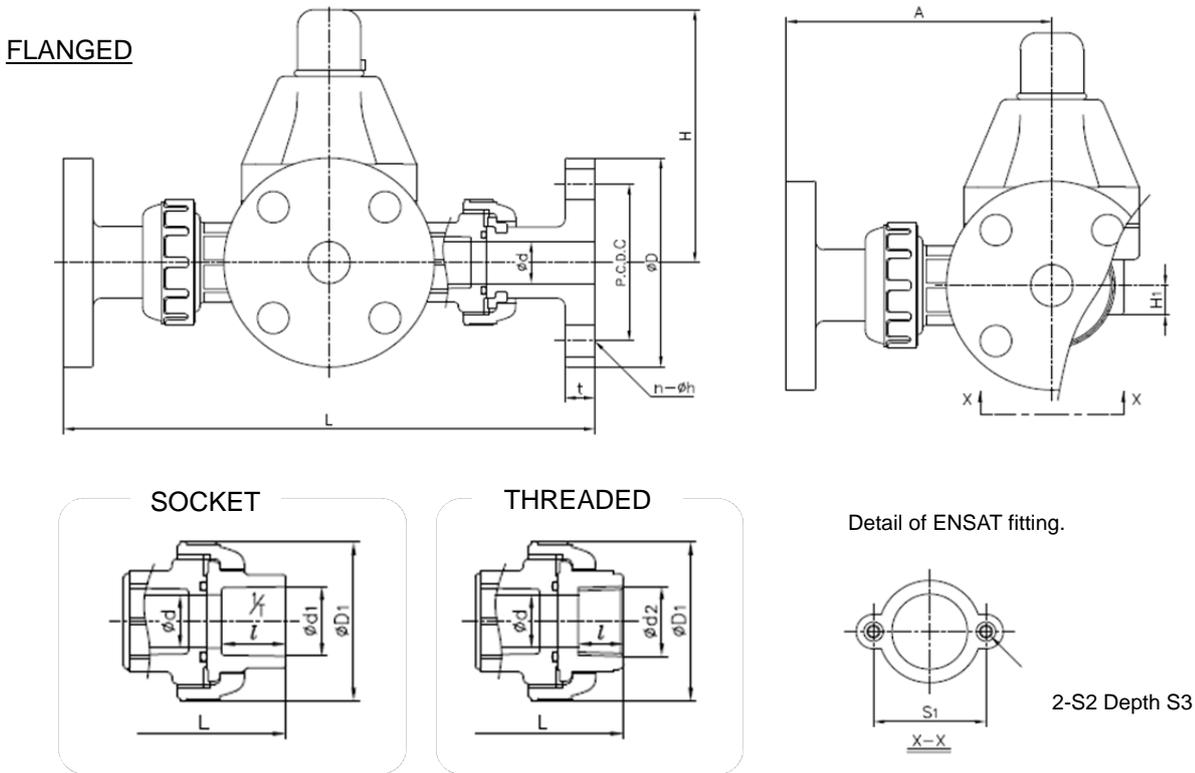
**Working pressure vs. Temperature**



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																						
mm	inch	d	D <sub>1</sub>	H	H <sub>1</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	FLANGED					SOCKET					THREADED					
									D	C	n	h	L	t	A	d <sub>1</sub>	l	1/T	L	A	d <sub>2</sub>	l	L	A
15	1/2	15	48	120	20	90	M6	9	95	70	4	15	221	12	110.5	22.11	20	1/34	186	93	Rc 1/2	15	180	90
20	3/4	20	60	120	20	100	M6	9	100	75	4	15	252	14	126.0	26.13	24	1/34	208	104	Rc 3/4	17	200	100
25	1	25	70	175	27	100	M6	9	125	90	4	19	302	14	151.0	32.16	27	1/34	260	130	Rc 1	20	246	123
32	1 1/4	31	82	175	27	115	M6	9	135	100	4	19	296	16	148.0	38.19	30	1/34	268	134	Rc 1 1/4	22	256	128
40	1 1/2	40	100	250	43	115	-	-	140	105	4	19	379	16	189.5	48.21	37	1/37	356	178	Rc 1 1/2	25	330	165
50	2	51	106	250	43	125	-	-	155	120	4	19	395	16	197.5	60.25	42	1/37	380	190	Rc 2	28	358	179

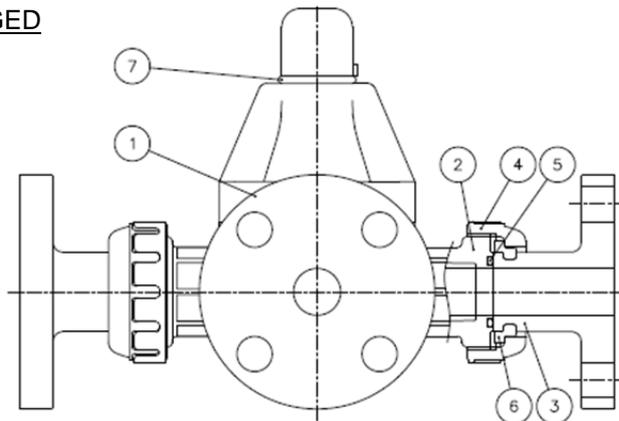
		DIN											
mm	inch	FLANGED DIN PN10/PN16					SOCKET			THREADED			
		D	C	n	h	L	t	d <sub>1</sub>	l	L	d <sub>2</sub>	l	L
15	1/2	95	65	4	14	208	12	20	16	180	Rp 1/2	15	180
20	3/4	105	75	4	14	230	14	25	19	199	Rp 3/4	17	200
25	1	115	85	4	14	275	14	32	22	246	Rp 1	20	246
32	1 1/4	140	100	4	18	286	16	40	26	256	Rp 1 1/4	22	256
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)

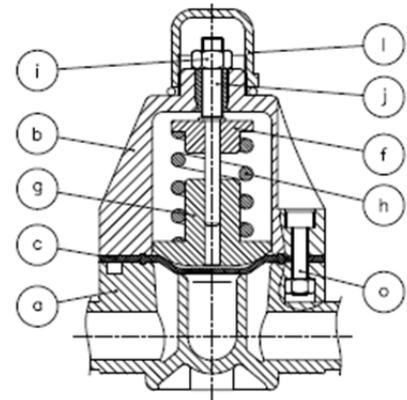
		ANSI																			
inch	mm	d	D <sub>1</sub>	H	H <sub>1</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	FLANGED ANSI CLASS 150					SOCKET			THREADED				
									D	C	n	h	L	t	d <sub>1</sub>	d <sub>1</sub> '	l	L	d <sub>2</sub>	l	L
1/2	15	0.59	1.89	4.72	0.79	3.54	M6	0.35	3.50	2.38	4	0.62	8.70	0.47	0.848	0.836	0.875	7.52	1/2 - 14 NPT	0.59	7.09
3/4	20	0.79	2.36	4.72	0.79	3.94	M6	0.35	3.88	2.75	4	0.62	9.92	0.55	1.058	1.046	1.000	8.23	3/4 - 14 NPT	0.67	7.87
1	25	0.98	2.76	6.89	1.06	3.94	M6	0.35	4.25	3.12	4	0.62	11.89	0.55	0.325	1.310	1.125	10.24	1 - 11 1/2 NPT	0.79	9.69
1 1/4	32	1.22	3.23	6.89	1.06	4.53	M6	0.35	4.62	3.5	4	0.62	11.65	0.63	1.670	0.655	1.250	10.63	1 1/4 - 11 1/2 NPT	0.87	10.08
1 1/2	40	1.57	3.94	9.84	1.69	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	9.84	1.69	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

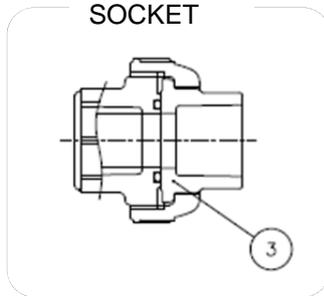
## Parts list

FLANGED

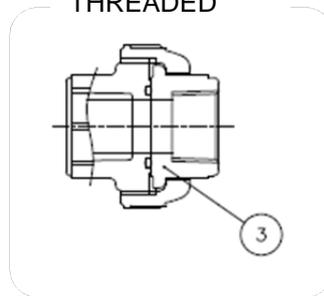
## INSIDE STRUCTURE



## SOCKET



## THREADED



PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL
a BODY	1	U-PVC	o BOLT, WASHER, NUT	4	-
b HOUSING	1	U-PVC	2 PJ-BODY	2	U-PVC Self control valve dedicated for true union.
c DIAPHRAGM	1	EPDM, FKM-PTFE COATING	3 END CONNECTOR	2	U-PVC
f SPRING PLATE	1	Aluminum	4 UNION NUT	2	U-PVC
g COMPRESSOR	1	PP	5 O-RING ( C )	2	EPDM (FKM *)
h COMPRESSION SPRING	1	Spring steel	6 STOP RING	2	PVDF Used for flanged type.
i LOCK NUT	1	Polyamide	7 O-RING ( D )	1	EPDM
j ADJUSTING SCREW	1	-			
l CAP	1	Polystyrene			

\* When the diaphragm is FKM with PTFE coating.

## 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 RELIEF TYPE	15	1/2	1,300	390	—	910	6.5	—
20		3/4	2,200	660	—	1,540	11.0	—	25.7
25		1	3,500	1,050	—	2,450	17.5	—	40.8
32		1 1/4	5,700	1,710	—	3,990	28.5	—	66.5
40		1 1/2	9,000	2,700	—	6,300	45.0	—	105.0
50		2	14,000	4,200	—	9,800	70.0	—	163.3

## Product weight

SELF CONTROL VALVE (U-PVC)

Unit: kg

mm	inch	PRESSURE RELIEF TYPE		
		FLANGED	SOCKET	THREADED
15	1/2	1.0	0.6	0.7
20	3/4	1.2	0.8	0.8
25	1	2.5	1.7	1.7
32	1 1/4	2.9	1.9	2.0
40	1 1/2	8.6	7.6	7.6
50	2	9.1	7.9	8.0

## Product model code list

### SELF CONTROL VALVE (Pressure Relief Type)

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE
<b>A</b>	<b>PR</b>	<b>5T</b>	<b>U</b>	<b>*</b>	<b>*</b>	<b>*</b>	<b>***</b>
: A AUTOMATIC VALVE	: PR SELF CONTROL VALVE	: 5T PRESSURE RELIEF TYPE	: U U-PVC	: E EPDM Z FKM (PTFE coating)	: 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](http://www.asahi-yukizai.co.jp/product/mt_pdf/syudoben-manual29.pdf)