

## TYPE A PRESSURE SUSTAINING/SURPLUS VALVE

The **Type A pressure sustaining/surplus valve** is designed to sustain and control the upstream pressure and pass surplus mediums into a zone where they can perform useful work or be recovered and conserved.

Valves are supplied in sizes ½" to 2" and can be manufactured in Stainless Steel or SG Iron with ends screwed female BSP or NPT on request.

The standard set pressure range of the type A is 0.70 BARg to 8.00 BARg.

### Specification

The type A is constructed in such a way as to allow the diaphragm to form a seal on the valve seat when the valve has been set and fitted into the pipeline. All valves are supplied with a nitrile diaphragm for air, gases, oils, etc. as standard, but other materials are available on request.

### Description of Action

Pressure is admitted at the inlet and acts upon the large area of the diaphragm backed by the piston and a compression spring.

To regulate the valve the spring is compressed an amount equal to the load acting against it, thus keeping the Dia-

phragm on its seat.

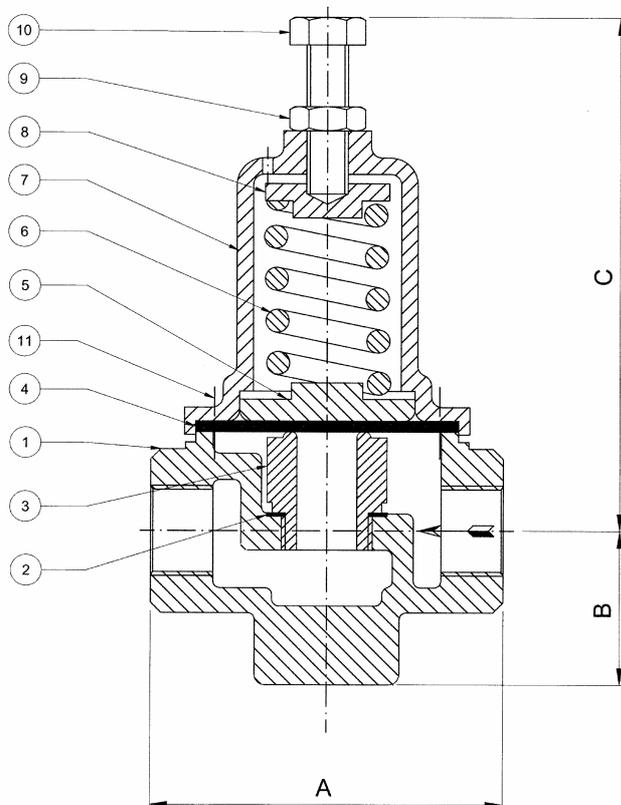
As the pressure tends to increase above the setting, the extra load acting on the diaphragm compresses the spring further and this allows the diaphragm to leave its seat and the excess pressure discharges through the outlet.

Similarly when the pressure is decreased the Spring overcomes the lighter load imposed on the Piston and thus the valve closes.

**Compressing** the spring **increases** the set pressure, **relaxing** the spring **decreases** the set pressure.

### Installation

Surplus valves are not usually fitted in the main pipeline as in the case of reducing valves. They should be fitted in a branch line from the main, in a horizontal position with the spring uppermost and the flow indicated by the arrow cast on the body. It is most important that the pipeline is clean and free from dirt, scale, etc. It is also advisable to fit a stop valve on the high-pressure side of the line for isolation purposes.

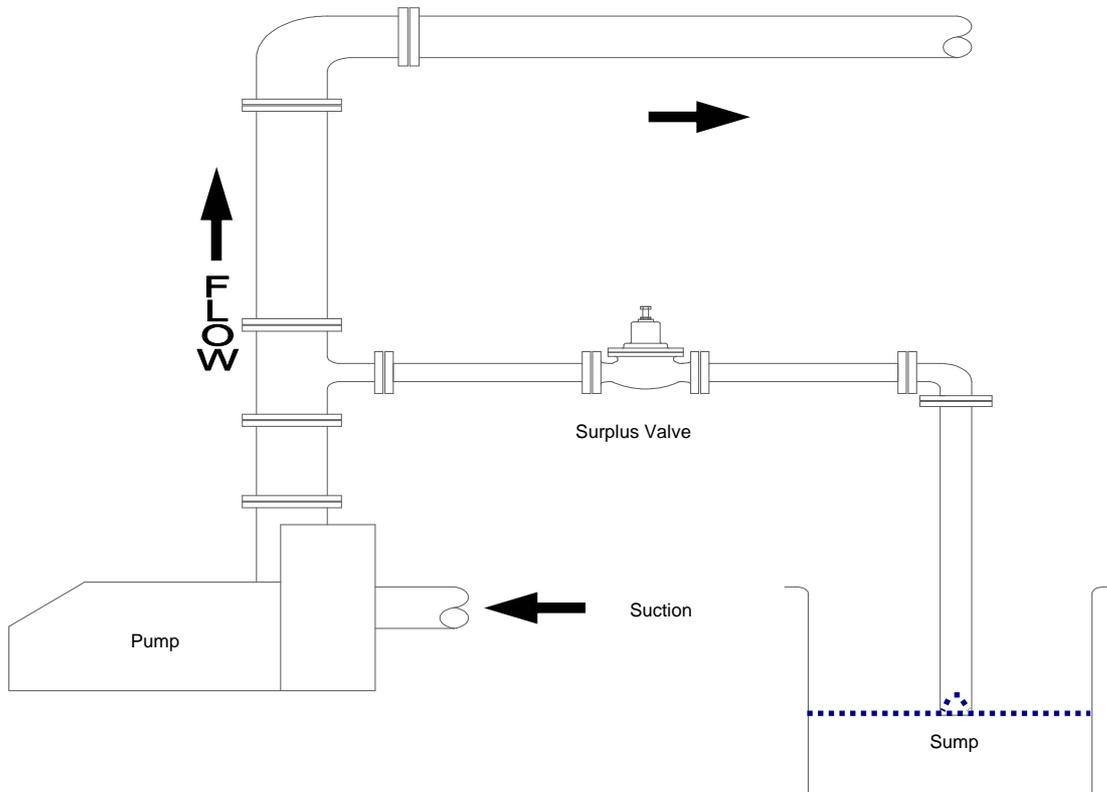


Item No.	Description	Quantity
1	Body	1
2	Joint, Seat	1
3	Seat	1
4	Diaphragm	1
5	Piston	1
6	Spring	1
7	Dome	1
8	Spring Carrier	1
9	Locknut	1
10	Adjusting Screw	1
11	Setscrew	6

Bore	A	B	C (Max)
½", ¾" & 1"	102	48	140
1½" & 2"	146	65	205

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Typical Installation



## Water Capacities in l/min

Size of Valve	Set pressure in BARg										
	0.7	1.4	2.1	2.8	3.4	4.1	4.8	5.5	6.2	6.9	8.3
½"	5	8	10	11	12	14	15	15	16	17	19
¾" & 1"	12	16	20	25	27	30	33	34	35	38	42
1½" & 2"	34	48	57	68	74	82	87	95	100	107	118

## Air Capacities in Nm<sup>3</sup>/hr

Size of Valve	Set pressure in BARg										
	0.7	1.4	2.1	2.8	3.4	4.1	4.8	5.5	6.2	6.9	8.3
½"	12	18	21	27	32	39	43	47	53	58	69
¾" & 1"	27	39	51	63	72	85	96	108	117	129	153
1½" & 2"	79	111	142	174	206	236	267	301	333	365	429

### Disclaimer

The information, specifications and technical data contained in this catalogue are subject to change without notice. The user should verify all technical data and specifications prior to use. Broady Valves does not warrant that the material and information contained herein is current or correct and assumes no responsibility for the use or misuse of any such material and information by the user.

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