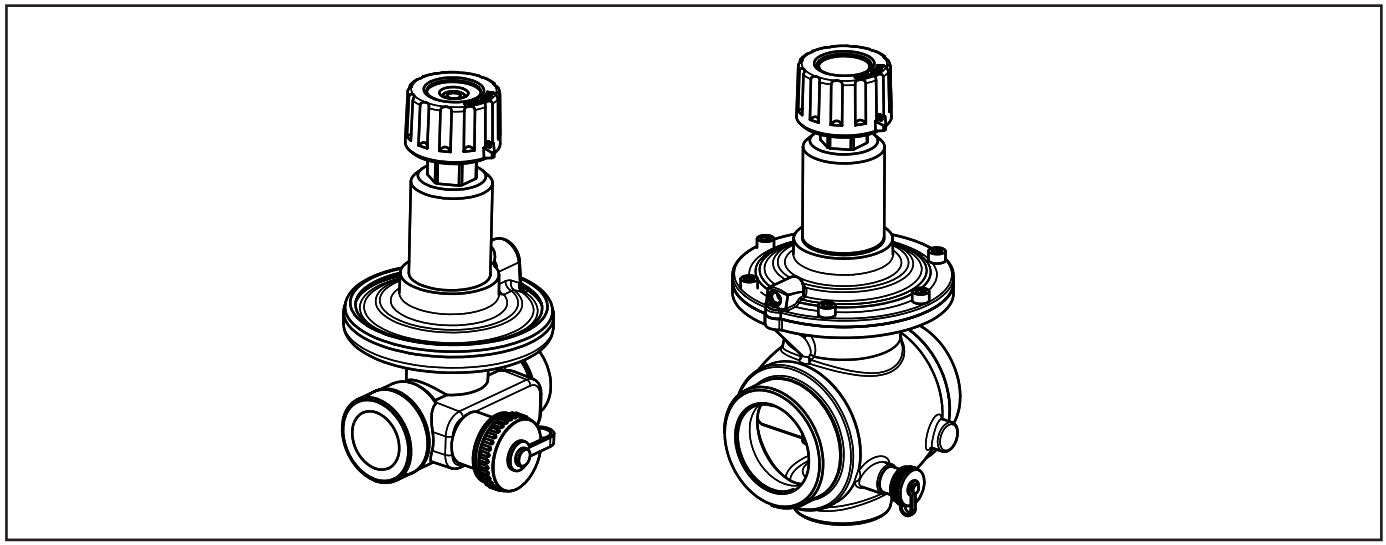
Instructions
ASV-PV (DN 15-50)



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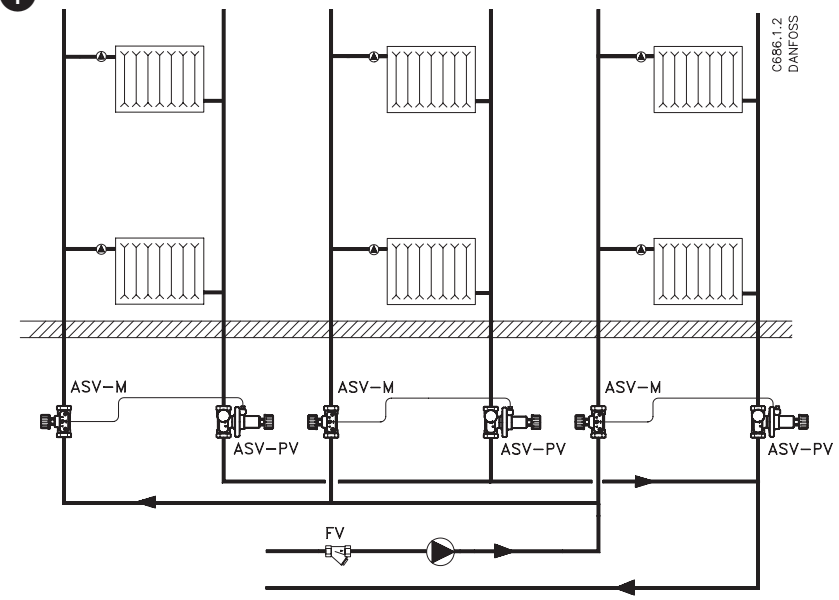

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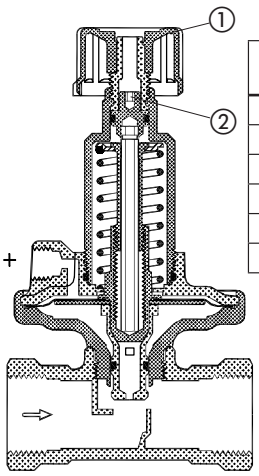
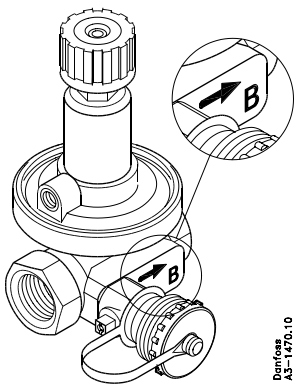


DN	
15	2.5
20	3
25	4
32	5
40	5
50	5

3



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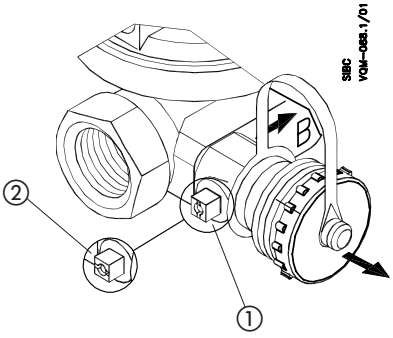

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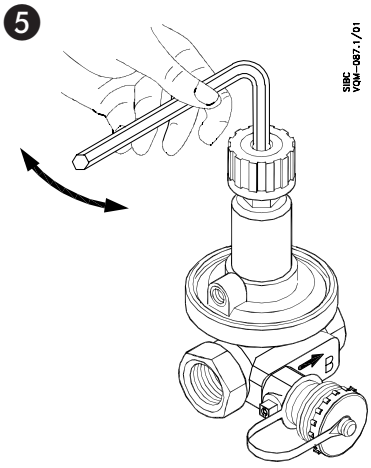

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n	ASV-PV DN 15 - 40		
	5 - 25 (kPa)	**20 - 40** (kPa)	**35 - 75** (kPa)
0	25	40	75
1	24	39	73
2	23	38	71
3	22	37	69
4	21	36	67
5	20	35	65
6	19	34	63
7	18	33	61
8	17	32	59
9	16	31	57
10	15	30	55
11	14	29	53
12	13	28	51
13	12	27	49
14	11	26	47
15	10	25	45
16	9	24	43
17	8	23	41
18	7	22	39
19	6	21	37
20	5	20	35

Factory presetting

Δp setting range (kPa)	**kPa**
5 - 25	10
20 - 40	30
35 - 75	60

n	ASV-PV DN 50			
	5 - 25 (kPa)	**20 - 40** (kPa)	**35 - 75** (kPa)	**60 - 1.00** (kPa)
0	25	40	75	1.00
1	24	39	73	98
2	23	38	71	96
3	22	37	69	94
4	21	36	67	92
5	20	35	65	90
6	19	34	63	88
7	18	33	61	86
8	17	32	59	84
9	16	31	57	82
10	15	30	55	80
11	14	29	53	78
12	13	28	51	76
13	12	27	49	74
14	11	26	47	72
15	10	25	45	70
16	9	24	43	68
17	8	23	41	66
18	7	22	39	64
19	6	21	37	62
20	5	20	35	60

Factory presetting

Δp setting range (bar)	**bar**
0.05 - 0.25	0.10
0.20 - 0.40	0.30
0.35 - 0.75	0.60
0.60 - 1.00	0.80

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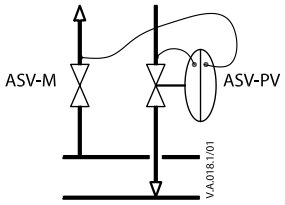

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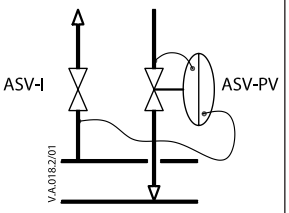

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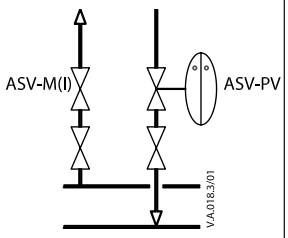

Automatic balancing valves ASV-PV is used together with shut-off and measuring valve ASV-M to control the differential pressure in risers where the radiator valves have presetting facilities. ASV-PV is also used together with adjustment valve ASV-I to control the differential pressure and flow in risers where the radiator valves have no presetting facilities (P/Q control), fig. ❶.

ASV-PV maintains constant differential pressure across the riser.

Max. working pressure .....16 bar

Differential pressure across valve:
DN 15 - 40 .....10-150 kPa
DN 50 ..... 10-250 kPa
Max. flow temperature.....120 °C

Valve size	Internal thread	External thread
DN 15	Rp ½	G ¾ A
DN 20	Rp ¾	G 1 A
DN 25	Rp 1	G 1¼ A
DN 32	Rp 1¼	G 1½ A
DN 40	Rp 1½	G 1¾ A
DN 50	-	G 2½

Impulse line: G 1/16

Installation

ASV-PV must be installed in the return pipe. The flow must be in the direction of the arrow on the valve body fig. ❸.

It is recommended that an FV filter be installed in the system supply pipe. The impulse tube must be fitted on the flow pipe, e.g. via an ASV-I or an ASV-M valve.

The tube must be flushed through before being fitted on the + connection of the ASV-PV automatic balancing valves fig. ❷.

ASV-PV must in addition be installed as determined by installation conditions. When the system has been in use for some time, the connections with external threads should be tightened once again to minimize the risk for leakage.

Shut-off

Turning the ASV-PV knob fully clockwise will shut-off the riser fig. ❷ ①.

Pressure testing

Max. test pressure ..... 25 bar

Notes:

When pressure testing you must secure that both sides of the membrane have the same static pressure. That means the impulse tube must be connected and any needle valves must be open. If ASV-PV is installed in combination with ASV-M both valves can be open or closed (both valves must be in the same position!). If ASV-PV is installed in combination with ASV-I both valves must be open. During this operation (closing or opening the valves) please make sure that there is never lower pressure on upper side of the membrane.

If ASV- PV is installed in combination with ASV-I do not drain main pipes while leaving risers under pressure / filled with water. Doing so ASV-PV membrane would have lower pressure on upper side which might damage the membrane.

If this instructions are ignored, the membrane of the automatic balancing valve might be damaged.

Setting/adjustment

The ASV-PV valves are sold in four different Δp setting ranges. The valves are factory–set to a defined value as described on Factory presseting table on fig. ❻. Use the following procedure to set the desired differential presure: the setting on ASV-PV can be changed by turning the setting spindle fig. ❷②.

Turning the spindle clockwise increases the setting; turning it counter clockwise reduces the setting.

If the setting is not known, turn the spindle fully clockwise. With this the setting on ASV-PV is at maximum value within setting range. Now turn the spindle a number of times (n) as described in fig. ❻ until the required differential pressure setting is obtained.

Note:
Do not turn the spindle more than 20 turns as it will become disengaged.
The cock (closed, fig. ❹–① - open, fig. ❹–②) can be used for water tapping and filling.

Starting

You can fill the system with the drain-cock on ASV-PV. The system shall be ventilated at the highest point. During system start – opening the shut-off on ASV-PV and partner valve - please secure that there is the same static pressure on both sides or higher pressure on upper side of the membrane (+ connection, Fig.❷). If filling is done by opening ASV-PV and partner valve, please make sure there is a pressure on the upper side of the membrane by opening partner valve first before ASV-PV is opened.

Notes!

a) ASV-PV used with ASV-M (Fig. ❼): if this procedure is not followed, the membrane of ASV-PV might be damaged.

b) ASV-PV used with ASV/I (Fig. ❽): If this procedure is not followed, ASV-PV may become locked in closed position even if the valve is fully opened.

c) Both ASV-PV and ASV-M/I should be always fully opened if used together with dedicated shut-off valves (Fig. ❾).

Fault location

Check the following if the riser valve does not function correctly:

1. Is the flow direction through the valve correct?
2. Is the impulse tube fitted correctly and are any needle valves open?
3. Is the valve shut-off open?

Insulation (DN 15 - 40)

The styropor packaging in which the valve is supplied can be used as an insulation jacket for temperatures up to 80 °C.