ENGINEERING
TOMORROW

Data sheet

Automatic balancing valve ASV-I (DN 15-50)

Description

ASV-I is a partner valve to be used together with the automatic balancing valves ASV-PV/P to control differential pressure in the risers where the radiator valves have no presetting facilities. It is a combined adjustment and shut-off valve designed for installation in the flow pipe. It incorporates flow limitation so that it can be set for required maximum flow in the riser.
ASV-I is supplied with rectus measuring nipples so that flow in the pipe can be measured.
The valve (DN 15-40) is packaged in styropore (EPS) which can be used for insulation at temperatures up to 80 °C. An insulation cap is available as an accessory for insulation at higher temperatures (up to 120 °C).

Ordering

NOTE: *for whole range of ASV partner valves, spare parts and accessories please refer to ASV datasheet.*

ASV-I adjustment valve, inclusive two measuring nipples

Type	DN	k_{vs} (m^3/h)	Internal thread (ISO 7/1)	Code No.	Type	External thread (ISO 228/1)	Code No.
	15	1,6	R_p ½	**003L7641**		G ¾ A	**003L7646**
	20	2,5	R_p ¾	**003L7642**		G 1 A	**003L7647**
	25	4,0	R_p 1	**003L7643**		G 1¼ A	**003L7648**
	32	6,3	R_p 1¼	**003L7644**		G 1½ A	**003L7649**
	40	10	R_p 1½	**003L7645**		G 1¾ A	**003L7650**
	50	16				G 2¼ A	**003L7652**

Accessories and spare parts

Type	Description	Comments/connection	Code No.
	Shut-off knob for ASV-I (black)	DN 15	**003L8155**
		DN 20	**003L8156**
		DN 25	**003L8157**
		DN 32 / DN 40 / DN 50	**003L8158**
	Two test plugs and one locking plate	For ASV-I and ASV-M, rectus type (DN 15-40)	**003L8145**
	Plug for impulse tube connection ASV-I/M	Set of 10 pieces / G 1/16 A	**003L8174**

Technical data

Nominal diameter	DN	15-50
Max. pressure	bar	16 (PN 16)
Test pressure		25
Differential pressure over the valve	kPa	10-150 [1]
Temperature	°C	–20 … 120
Material of parts in contact with water		
Valve body		Brass
Membrane / O-rings		EPDM
Spring		Stainless steel

[1] *Please note that the maximum admissible differential pressure across the valve 150 kPa should also not be exceeded at partial load.*

Application

ASV-I has to be used as partner valve inside control loop (Fig. 1). ASV-I and ASV-P(V) is connected via an impulse tube, and there by giving a constant differential pressure across the riser and ASV-I.

This configuration offers flow limitation on the riser however part of the controlled pressure range is used by pressure drop on partner valve (Δp_i). It is recommended when flow limitation on each terminal units is not possible.

This way it is possible to control the maximum flow for each riser, and ensuring distribution between them.

- partner valve inside control loop (Fig. 1). Offers flow limitation on the riser however part of the controlled pressure range is used by pressure drop on partner valve (Δp_i). It is recommended when flow limitation on each terminal units is not possible.

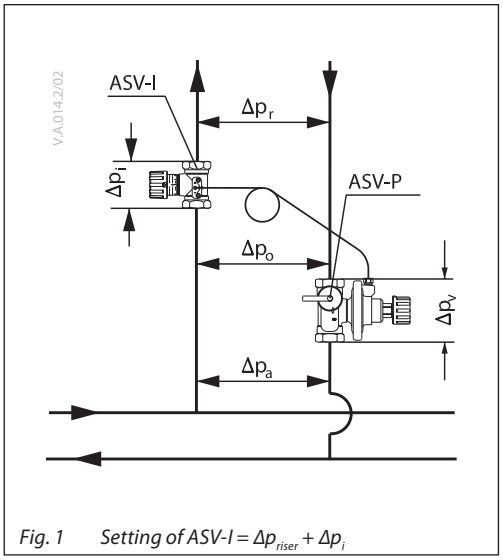
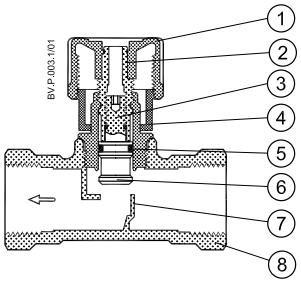
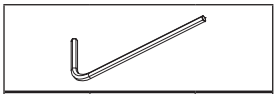


Fig. 1 Setting of ASV-I = $\Delta p_{riser} + \Delta p_i$

Design

1. Shut-off knob
2. Shut-off spindle
3. Setting spindle
4. Scale disc
5. O-rings
6. Valve cone
7. Seat
8. Valve body





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

ASV-I incorporates a double cone able to give maximum stroke limitation, thus achieving flow limitation. It also incorporates shut off function. ASV-I is equipped with the nipples for the flow measurement and a connection for the ASV-I/ ASV-PV impulse tube.

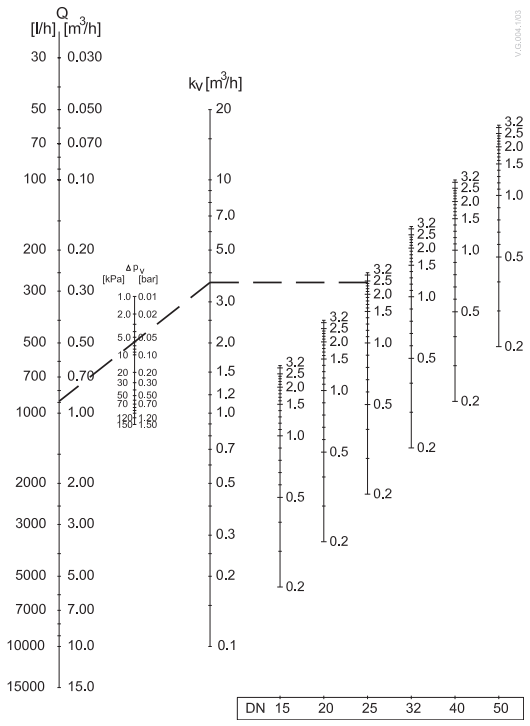
Use the following procedure to limit the flow: turn the valve knob fully counter clockwise to open the valve. The mark on the knob will now be opposite »0« on the scale. Turn the valve knob clockwise to the required setting (e.g. for setting 2.2 the knob must be rotated two full turns and then forward to »2« on the scale. Hold the knob to keep the setting (e.g. 2.2) and using a hexagon socket key turn the spindle fully counter clockwise (until a stop can be felt). Turn the valve knob fully counter clockwise so that the mark on the knob is opposite »0« on the scale.

The valve is now open as many turns from the closed position (2.2) as indicated by the conversion from required flow. To annul the setting, turn the hexagon socket key fully clockwise (until a stop can be felt).

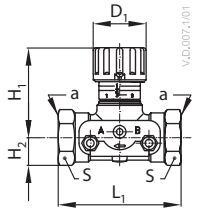
Remember, at the same time the knob must be held on its »0« setting.

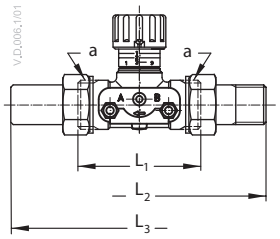
To read presetting valve has to be closed.

Sizing

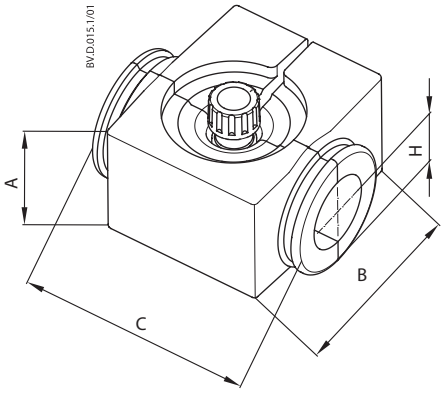


Dimensions





DN	L_1	L_2	L_3	H_1	H_2	D_1	S	a ISO 7/1	b ISO 228/1
	mm								
15	65	120	139	48	15	28	27	Rp ½	G ¾ A
20	75	136	159	60	18	35	32	Rp ¾	G 1 A
25	85	155	169	75	23	45	41	Rp 1	G 1¼ A
32	95	172	179	95	29	55	50	Rp 1¼	G 1½ A
40	100	206	184	100	31	55	55	Rp 1½	G 1¾ A
50	130	246	214	106	38	55	67	-	G 2¼ A



Insulation [1)]

DN	A	B	C	H
	mm			
15	61	110	111	30
20	76	120	136	38
25	100	135	155	50
32	118	148	160	60
40	118	148	180	60

1) Insulation available for sizes DN 15-40

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