SSV 8600

Safety Shut-off Valve

The SSV 8600 safety shut-off valve is designed for commercial and industrial use: gas supply networks, district stations, industries and heating plants where ease of adjustment and fast response are required.

KEY BENEFITS

- Accurate operation
- Low pressure loss
- Built-in bypass
- Easy reset
- Position indicator

Description

The SSV 8600 is a direct-acting slam-shut safety shut-off device.

It shuts off the gas flow automatically and completely when the monitored pressure exceeds the pre-set values (over-pressure and/or under-pressure).

The following accessories make the SSV 8600 easier to use:

- Manual shut-off button for emergency closing
- Easily accessible lever for relatching the valve
- Built-in bypass for balancing pressure before relatching the safety shut-off valve.
- Use the relatching lever to operate the bypass.

Technical Features

Inlet pressure	up to 25 bar
Over-pressure shut-off range	28 mbar to 20 bar
Under-pressure shut-off range	5 mbar to 5 bar
Accuracy class	AG 1 to AG 20
Operating temperature	-20°C to +60°C
Ambient temperature	-30°C to +60°C (body material)
Acceptable gases	Natural gas, propane, butane, air, nitrogen and all non-corrosive gases.
Options	Valve position indicator (inductive detector or Reed switch) Remote triggering by explosion-proof solenoid valve

Sizes & Connections

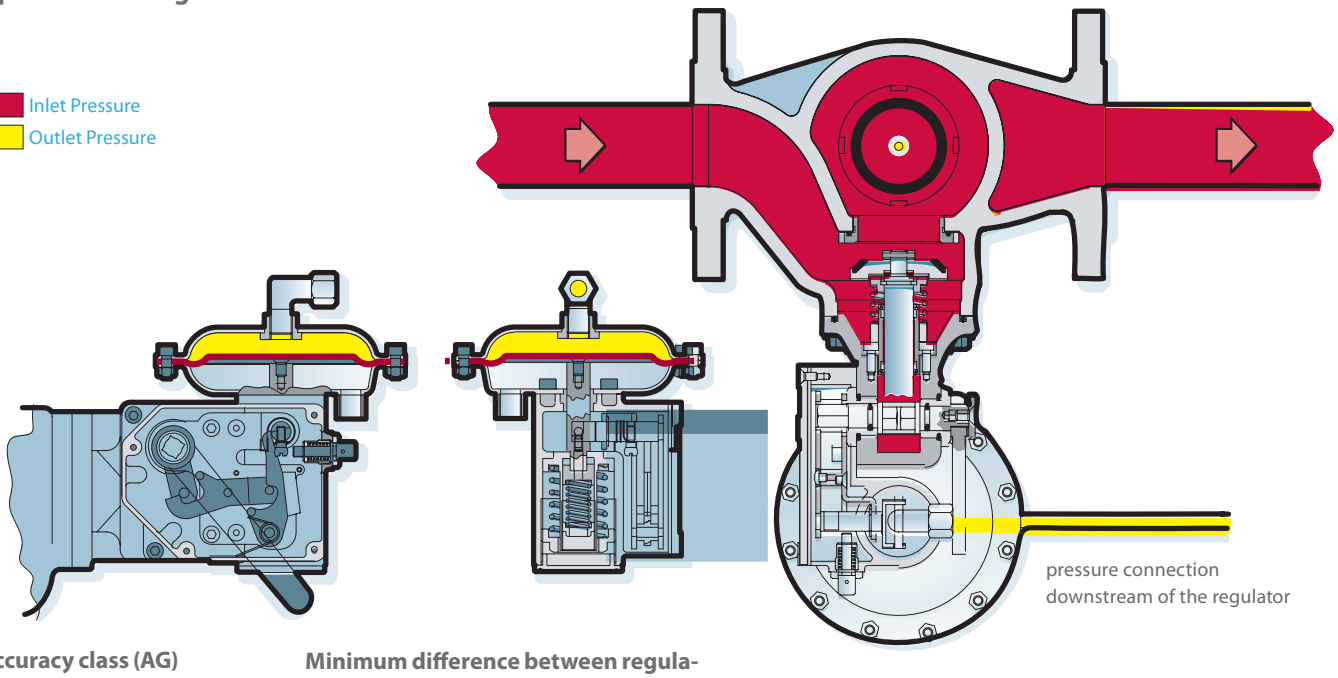
Sizes	DN 25, 40, 50, 80 and 100
Body lengths	EN 14382 face-to-face recommended dimensions
Flanges	Steel: DN 100 only: PN16, PN25, ANSI150, ANSI 300 Cast iron: PN16,PN25, ANSI 150

Materials

Body	Spheroidal graphite cast iron EN 1563 grade EN-GJS-400-18LT Steel N 10213-3 grade G 20 Mn 5
Head	Pressed steel /UNI EN10025
Internal parts	Stainless steel and brass
Seals	Nitrile rubber.

Operational Diagram

Inlet Pressure
Outlet Pressure



Accuracy class (AG)

» Low pressure: AG 10
» Medium pressure: AG 2.5
» High pressure: AG 5

Minimum difference between regulator and SSV settings (ΔPw):

» 15% with a minimum difference of 10 mbar for UPSO, 20 mbar for OPSO

Spring characteristics:

d: wire diameter
De: external diameter
Lo: height
Lt: no. of spires

Set Range

Over-Pressure Shut-Off Springs (OPSO)

	Spring Characteristic				Colour	Spring Range			
	d (mm)	De (mm)	Lo (mm)	Lt		8611/12 (Ø 150)	8621/22 (Ø 150/TR)	8631/8632 (Ø 90)	8641/8642 (Ø 90/TR)
20565233	2.2	35	60	7	Yellow	28 - 65 mbar	•	•	•
20565234	2.5	35	60	7	Red	45 - 100 mbar	•	•	•
20565330	2.7	35	60	7	White	80 - 140 mbar	•	•	•
20565331	3	35	60	7	Blue	100 - 240 mbar	•	0.60 - 0.90 bar	•
20565332	3.5	35	60	7	Orange	190 - 350 mbar	0.55 - 0.90 bar	0.90 - 1.40 bar	•
20565333	4	35	60	7	Brown	350 - 700 mbar	0.90 - 1.70 bar	1.40 - 2.40 bar	2.30 - 4.10 bar
20565334	4.2	35	60	7	Green	450 - 800 mbar	1.50 - 2.00 bar	2.00 - 3.10 bar	3.10 - 5.00 bar
20565430	4.5	35	60	7	Black	600 - 1000 mbar	1.70 - 2.30 bar	2.50 - 3.90 bar	3.80 - 6.00 bar
20565431	5	35	60	7	Grey	950 - 1300 mbar	2.30 - 3.00 bar	3.90 - 4.60 bar	5.70 - 7.50 bar
20565432	5.5	35	60	7	Yellow	•	•	4.60 - 6.30 bar	7.50 - 10.00 bar
20565134	6	35	60	7	Red	•	•	6.30 - 10.80 bar	10.00 - 20.00 bar

Under-Pressure Shut-Off Springs (UPSO)

Spring Code	Spring Characteristic				Colour	Spring Range			
	d (mm)	De (mm)	Lo (mm)	Lt		8611/12 (Ø 150)	8621/22 (Ø 150/TR)	8631/8632 (Ø 90)	8641/8642 (Ø 90/TR)
20561124	1.2	15	40	10	White	5 - 18 mbar	•	•	•
20561221	1.5	15	40	10	Blue	10 - 55 mbar	•	•	•
20561222	1.7	15	40	10	Orange	30 - 75 mbar	0.11 - 0.29 bar	0.23 - 0.37 bar	0.32 - 0.63 bar
20561223	2	15	40	10	Brown	60 - 150 mbar	0.16 - 0.49 bar	0.26 - 0.66 bar	0.42 - 1.10 bar
20561224	2.5	15	40	10	Green	100 - 250 mbar	0.21 - 0.74 bar	0.32 - 1.00 bar	0.60 - 2.20 bar
20561321	2.8	15	35	7	•	•	•	•	2.20 - 5.0 bar min Δp = 1 bar

FLOW COEFFICIENT

For a 0.6 specific gravity gas, the following equation relates the flow (Q) and the pressure loss (ΔP):

$$(\Delta P) = \left(\frac{Q}{C_v}\right)^2 \frac{1}{P_u}$$

where:

Q = volumetric flow rate in m^3/h at standard conditions

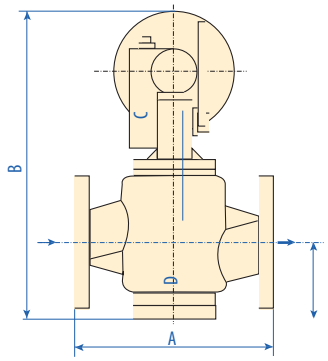
Pu = absolute inlet pressure in bar

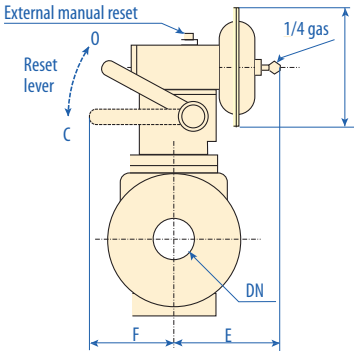
DN	25	40	50	80	100
C_v	620	1140	1900	4700	7100

Overall Dimensions

DN	A	B Actuator Ø 150	B Actuator Ø 90	C	E	F	Weight (kg)
25	184	338	308	62	120	100	14
40	222	373	343	87	120	100	21
50	254	393	363	98	120	100	23
80	298	468	438	122	120	100	43
100	352	452	422	132	120	100	67

D : actuator diameter Ø 150 or Ø 90





Vent and Sensing Lines

» SSV sensing line: Rp 1/4 with compression fitting DN 10

» SSV 8600 vent line: Rp 1/4

Type Designation and Options

SSV 86	X	X	Versions
	1		Ø 150
	2		Ø 150/TR
	3		Ø 90
	4		Ø 90/TR
		1	OPSO
		2	OPSO + UPSO

Information to be specified when ordering:

» Type designation

» Minimum and maximum inlet pressures

» Connection type

» Options
- OPSO setting*
- UPSO setting*

* (if requested)

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