

DATA SHEET SHV

Safety Shut-Off Valve, Type SHV

FEATURES

- For Protection Against Excess Pressure In The Gas Train
- Purge Pipeline Not Required
- Valve Having Large Flow Capacity & Minimum Pressure Loss

OPERATING PRINCIPLE

Safety- Shut- Off Valve (SHV) measures the pressure at the downstream of a gas regulator with help of an impulse line. In case, a high-pressure surge is developed in the gas line installation, this Safety Shut- Off Valve immediately closes with the force of a spring. The closing spring is adjustable for different pressure ranges and can be set according to the operating pressure conditions in the gas line installation. Unless the manual lever is pulled up, the SHV cannot be brought back in the operation. SHV operates only in one way. Suitable for pressure up to 4 bar for size 25 mm to 100 mm. Response pressure upto 500 millibar.

CONSTRUCTION

- Valve Body : Aluminium Silicon alloy Casting
- Valve Disc : Stainless Steel
- Valve Seat : Aluminium
- Valve Spindle : Stainless Steel
- Diaphragm : Perbunan/ Buna Nitrile
- Valve Seal : Perbunan/ Buna Nitrile
- End Connection : ANSI B 16.5, Class 150 RF or Flanged to DIN PN 16
- Working Temperature : (-)15° C to +60° C
- Inlet Pressure : 4 bar maximum
- Fluids : Natural Gas, LPG in gaseous form, Town Gas, Bio-gas and other non-corrosive gases.

APPLICATION

For protection against high pressure surge at outlet of Regulator. The gas supply shuts off incase of undesirable operating conditions. Recommended for all gas pressure regulating systems having inlet pressure of more than 100 millibar in accordance with DVGW code of practice G490 & G491. Suitable for all industrial fuel gases in accordance with DVGW code of practice G260/1.

SPECIFICATION TABLE

| Model | Size mm | End Conne- ctions | Max Inlet Pres. Bar | Dimensions | | | | Flange Details | | | | Approx Weight Kgs. |
|-------|------------|-------------------------|------------------------------|------------|---------|----------|----------|----------------|---------|----------|-----------------|--------------------------|
| | | | | L mm | D mm | H1 mm | H2 mm | D2 mm | K mm | d2 mm | No. of Holes | |

SHV WITH BSP SCREWED DIMENSIONS

| | | | | | | | | | | | | |
|--------|----|----------|---|-----|-----|-----|----|---|---|---|---|-----|
| SHV25R | 25 | Rp 1 | 4 | 90 | 165 | 223 | 33 | - | - | - | - | 2.5 |
| SHV40R | 40 | Rp 1 1/2 | 4 | 150 | 165 | 205 | 51 | - | - | - | - | 3.1 |
| SHV50R | 50 | Rp 2 | 4 | 180 | 165 | 225 | 70 | - | - | - | - | 8.0 |

SHV WITH ANSI TYPE FLANGE DIMENSIONS

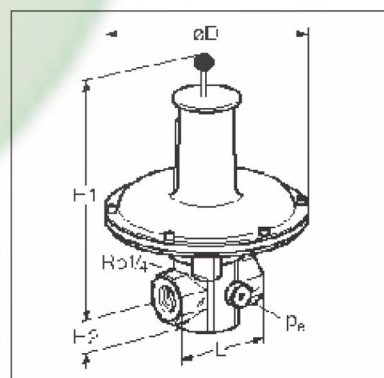
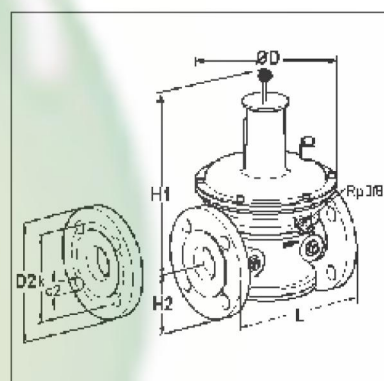
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|---------|-----|-----|---|-----|-----|-----|-----|-----|-----|----|---|------|
| SHV40A | 40 | 40 | 4 | 200 | 165 | 205 | 75 | 127 | 98 | 16 | 4 | 4.5 |
| SHV50A | 50 | 50 | 4 | 230 | 165 | 225 | 85 | 152 | 121 | 19 | 4 | 12.0 |
| SHV80A | 80 | 80 | 4 | 310 | 165 | 250 | 100 | 191 | 152 | 19 | 4 | 16.0 |
| SHV100A | 100 | 100 | 4 | 350 | 165 | 280 | 115 | 229 | 191 | 19 | 8 | 22.0 |

SHV WITH DIN TYPE FLANGE DIMENSIONS

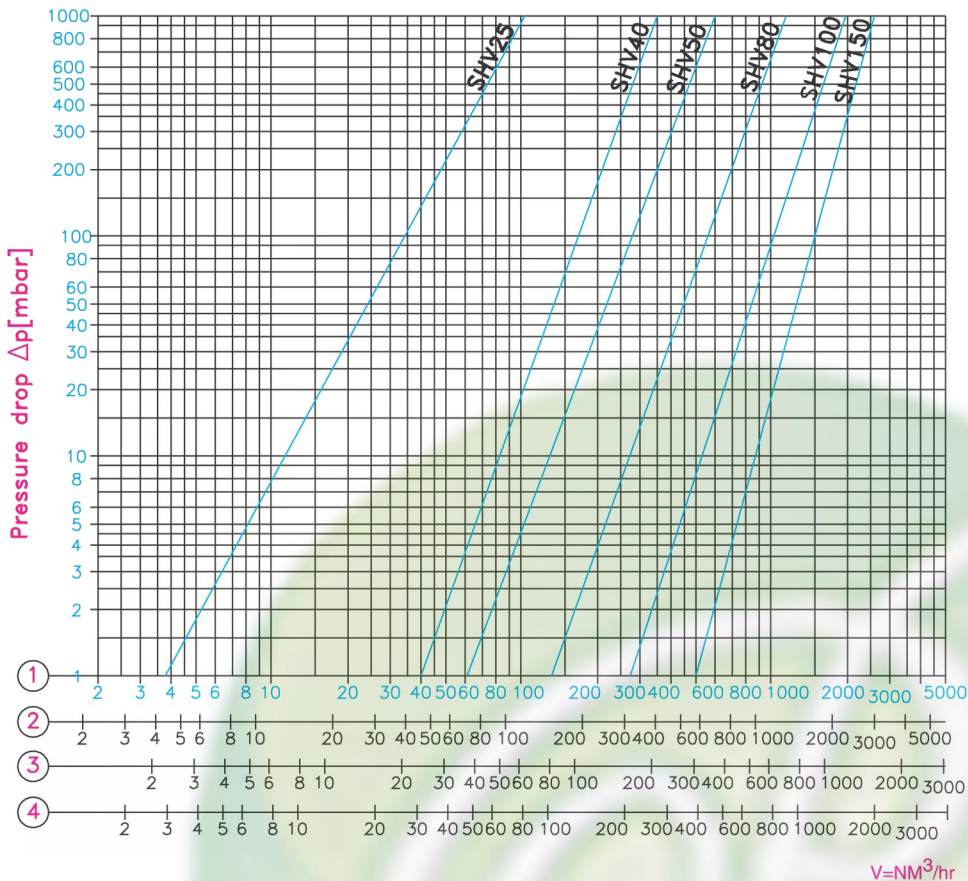
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|---------|-----|-----|---|-----|-----|-----|-----|-----|-----|----|---|------|
| SHV40F | 40 | 40 | 4 | 200 | 165 | 205 | 75 | 150 | 110 | 18 | 4 | 4.5 |
| SHV50F | 50 | 50 | 4 | 230 | 165 | 225 | 85 | 165 | 125 | 18 | 4 | 12.0 |
| SHV80F | 80 | 80 | 4 | 310 | 165 | 250 | 100 | 200 | 160 | 18 | 8 | 16.0 |
| SHV100F | 100 | 100 | 4 | 350 | 165 | 280 | 115 | 220 | 180 | 18 | 8 | 22.0 |

SPRING TABLE

| SPRING COLOUR | NONE | RED | BLUE | BLACK | WHITE |
|-----------------|-------|---------------|----------------|----------------|----------------|
| SHV (DN 25-50) | ----- | 60 - 120 mbar | 115 - 175 mbar | 170 - 300 mbar | 290 - 500 mbar |
| SHV (DN 80-100) | ----- | 60 - 120 mbar | 115 - 175mbar | 165 - 300mbar | 290 - 500 mbar |

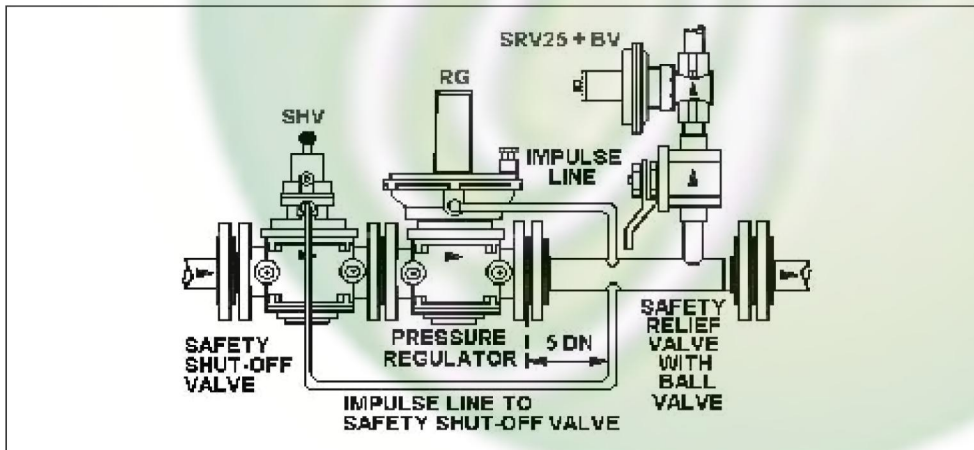


VOLUMETRIC FLOW DIAGRAM



SPECIFIC GRAVITY :

- ① Natural Gas = 0.62
- ② Town Gas = 0.45
- ③ LP Gas = 1.56
- ④ Air = 1.00



Safety Shut-Off valve should be always installed in the upstream of the pressure regulator. Installation in direction of the gas flow (see marking on the valve body). Safety Shut-Off valve in sizes 25 mm to 100 mm are always to be connected in horizontal pipeline, keeping the operating mechanism "upright" and vertical. It is recommended to install SHV in accordance with DVGW code of practices G490. According to the DVGW code of practices G490, gas pressure regulating plant with inlet pressure of more than 100 millibar have to be fitted with Safety Shut-Off valve. This valve is to be fitted at the upstream of gas regulator and safety relief valve (SRV). Additionally in the installation, Avcon recommends to use manual ball valve BV2090F, into pipe before Safety Relief Valve (SRV) in order to make it possible to remove (SRV) during the annual maintenance or operational tests.

Note:

Technical specifications and dimensions are subject to change without prior notice.
Dimensions in the table are approximate subject to final confirmation by AVCON.