

Pressure Gauge Overrange Protector, adjustable

Application

The pressure gauge overrange protector serves as fuse against occurring overpressures that exceed the pressure range of the pressure gauges.

It allows for a cascading activation of several pressure gauges with varying pressure ranges so that with a large pressure range the low pressure values can be measured and read precisely. The overrange protectors are adjusted to the maximum allowed pressure value of the different pressure gauges and then automatically shut the gauges off.

In order to ensure a permanent and unimpaired operation, a solid-free medium is required. Contamination through particles in the medium spoil the O-ring sealing whereby at overpressure a closure no longer takes place.

Construction and Principle of Operation

The pressure gauge overrange protector is a piston valve. A helical spring retains the position of the valve until the pressure acting on the valve exceeds the counterpressure of the spring and thus closes the valve.

After the pressure drops about approx. 25% below the preset closing pressure, the valve reopens. Due to the elastic force acting on the valve, it returns to its position of rest.

Adjustment Ex Works

See table on back of page

Change of Adjustment

Turning of adjusting screw clockwise raises closing pressure,
Turning of adjustment screw anti-clockwise reduces closing pressure.

The overrange protector is not suited for regulation tasks!

Setting Points at Mounting Ex Works

At mounting of the overrange protector to the pressure gauge at our factory, the permissible overpressure is adjusted to the 1.1-fold of the full scale value.

Standard Versions

Connection thread

Version 1: both ends G ½
Version 2: both ends ½" NPT

Valve Body

Brass (clamping sleeve made of steel) or stainless steel 1.4571 (clamping sleeve stainless steel 1.4571)

Stainless steel 1.4571 according to the NACE MR0175 resp. ISO 15156-3 requirements

Sealing

Viton

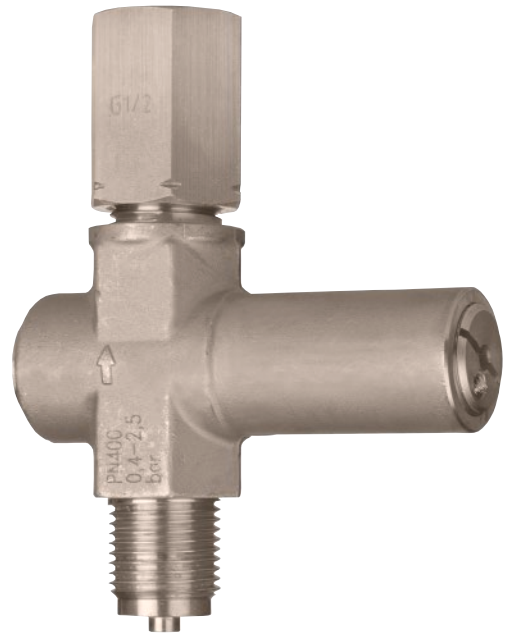


Figure:
Pressure gauge overrange protector,
version 1

Standard Versions (Continuation)

Overrange Protection

Brass: 600 bar
Stainless steel: 1000 bar

Use Under Vacuum

up to -1 bar, not adjustable

Permissible Temperatures

-10 °C to +80 °C (14 °F to 176 °F)

Options

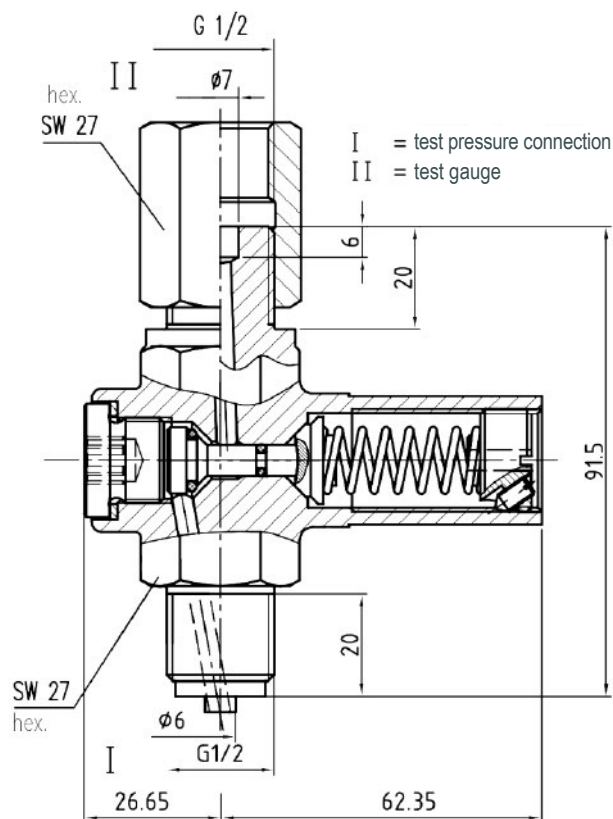
- Version 1:
connection thread M 20x1.5, G ¼" or G ⅜"
- Version for oxygen, free of grease and oil
(max. 400 bar, max. 60 °C (140 °F))
- DVGW-version (only for G ½ and feasible up to 400 bar;
permissible temperatures at adjustment range 0.4 – 2.5 bar,
max. +60 °C (140 °F))
- Certificate for version according to NACE
- Customised adjustment of the permissible overpressure
of the closing pressure

Dimensional Data, Nominal Pressure, Adjustment Range, Adjustment Ex Works, Order Codes, Materials

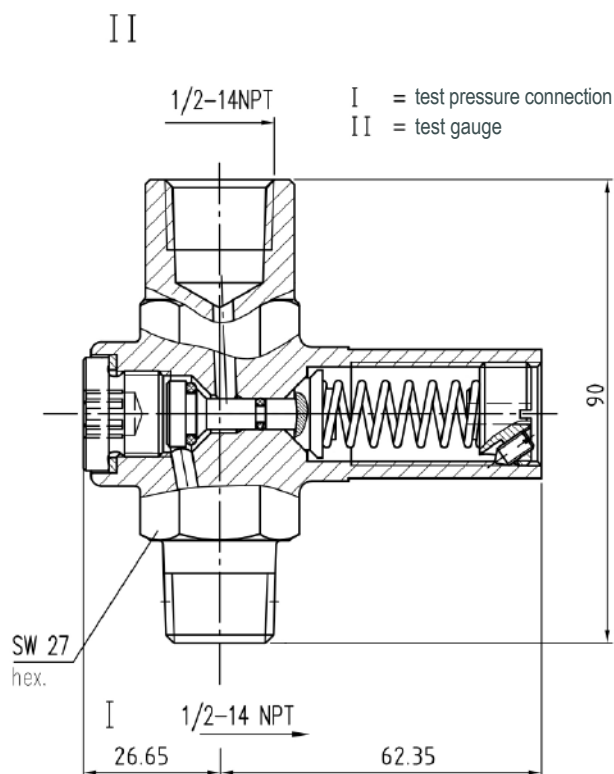
Selectable Standard Versions

Dimensions in mm

Version 1
(clamping sleeve / male)



Version 2
(bushing / male)



Nominal Pressure, Adjustment Range (bar), Adjustment Ex Works (bar), Order Codes, Materials

| Nominal pressure in bar | | | PN 400 | | | | | | PN 600 |
|----------------------------|------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Adjustment ranges in bar | | | 0.4 – 2.5 | 2 – 6 | 5 – 25 | 20 – 60 | 50 – 250 | 240 – 400 | 400 – 600 |
| Adjustment ex works in bar | | | 1.45 | 4 | 15 | 40 | 150 | 320 | 500 |
| Version | Connection | Material | Order code | | | | | | |
| 1 | G 1/2 | brass ¹⁾ | 100 004 10 01 | 100 004 10 02 | 100 004 10 03 | 100 004 10 04 | 100 004 10 05 | 100 004 10 06 | 100 004 10 07 |
| | | 1.4571 ¹⁾ | 100 004 30 01 | 100 004 30 02 | 100 004 30 03 | 100 004 30 04 | 100 004 30 05 | 100 004 30 06 | 100 004 30 07 |
| 2 | 1/2" NPT | brass | 100 004 10 11 | 100 004 10 12 | 100 004 10 13 | 100 004 10 14 | 100 004 10 15 | – | – |
| | | 1.4571 | 100 004 30 11 | 100 004 30 12 | 100 004 30 13 | 100 004 30 14 | 100 004 30 15 | 100 004 30 16 | – |

¹⁾ in DVGW-version, diaphragm made of NBR, bushing made of brass instead of steel, add .DV to item number