

Mounting arrangements Combination of fittings with pressure gauges for the process industry

WIKA data sheet IN 00.34

In many applications within the process industries, measuring instruments are exposed to critical operating conditions. To be able to resist, for example, strong pressure surges or extreme temperatures, depending on the application, WIKA fits mechanical accessories, such as overpressure protection devices, shut-off valves or syphons, to pressure gauges.

Added value through accessories

The combination of pressure gauges with matched additional fittings enables the protection and the extension of the function of the entire measuring unit. WIKA offers the qualified assembly of all elements with the pressure gauge into a mounting arrangement - known as a "hook-up". The diverse portfolio of accessories results from the variation in the applications and customer requirements.



Valves and protective devices

Model 910.11 shut-off valve

Shut-off and throttle valve

Data sheet AC 09.02



Model 910.13 overpressure protector

Adjustable protection against overpressure

Data sheet AC 09.04



Model 910.15 syphon

Protection from pressure pulses and overheating through the medium

Data sheet AC 09.06



Model 910.80 monoflange

Combination of block and bleed valve

Data sheet AC 09.17



Example of a mounting arrangement

Model 910.12 snubber

Protection from pressure surges and pressure pulses of the medium

Data sheet AC 09.03



Model 910.14 adapter

Adapter for the mounting of valves and protective devices

Data sheet AC 09.05



Models IV30, IV31, IV50, IV51 valve manifold

Shut-off, pressure compensating, purge and vent valves for differential pressure measuring instruments

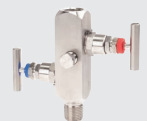
Data sheet AC 09.23



Models IV10, IV11, IV20, IV21 shut-off valve

Needle valve and multiport valve
Block-and-bleed valve

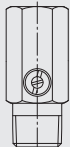
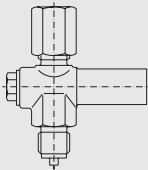
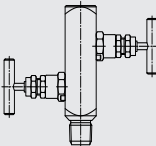
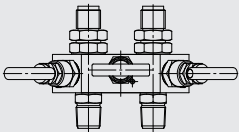
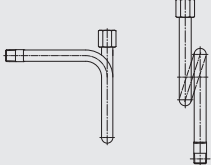
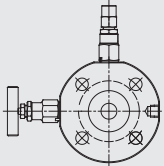
Data sheets AC 09.19 and AC 09.21



Mounting instructions

WIKA mounts the desired fittings to process industry pressure gauges. For the mounting, WIKA standards with respect to sealing and leak testing apply. If there are no alternative customer specifications, the assembly will be as described in the following table.

Order of attachment of fittings

Order of attachment starting from the pressure gauge	Standard alignment and options
Snubber	 <p>Adjustment screw will be aligned to the front, in the direction of the dial.</p>
Overpressure protector	 <p>Adjustment screw (longer side) will be aligned to the right, as shown in the drawing. The set value, as standard, depends on the pressure element:</p> <p>Bourdon tube: 1.1 x full scale value Diaphragm or capsule element: Between full scale value and max. permissible overpressure</p>
Shut-off valve (Square or flat version)	 <p>Vent connections (if available) point to the rear. All T-bar handles, for safety reasons, will be supplied in fully closed position.</p>
Valve manifold (only for differential pressure gauges)	 <p>Orientation is determined by the threaded connections of both process connections on differential pressure gauges.</p>
Syphon	 <ul style="list-style-type: none"> ■ U-shaped syphon: process connection points to the rear ■ Circular syphon: upper half of the pipe loop runs forward.
Flange (Connecting or monoflange)	 <p>Flanges (if available) are the first accessory component on the process side. A flange-mounting of the complete mounting arrangement to the application is thus enabled.</p>

Mounting instructions

The assembly of all components is made in compliance with the specified torques and positions. Each mounting point is sealed expertly. Depending on the connection threads and the temperature and pressure ranges, PTFE tape, stainless steel sealings and other sealing rings are used (for details, see WIKA model 910.17).

For "hook-ups" of oxygen applications, only tested sealing and lubrication materials can be used.

Leak test

In line with EN 12266-1:2003, each sealing point will be 100 % tested with leak detection spray under standard test pressure.

At leaking points, after the application of the leak detection spray, bubbles become visible. The bubble detection method can detect leak rates of approx. $1 \cdot 10^{-3}$ mbar l/s.

For critical applications, further tests are carried out, depending on the complexity of the "hook-up".

Besides the bubble detection method with leak detection spray, WIKA also uses the pressure drop method or leak rate determination with helium. In accordance with the EN 1779 (test gas method B4 and B6) leak testing standard, leak rates of better than $1 \cdot 10^{-6}$ mbar · l/s can be detected with helium.

Further information

Further information on the selection, installation and operation of pressure gauges with elastic pressure elements are described in Technical Information IN 00.05.

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