

## Pressure Measurement

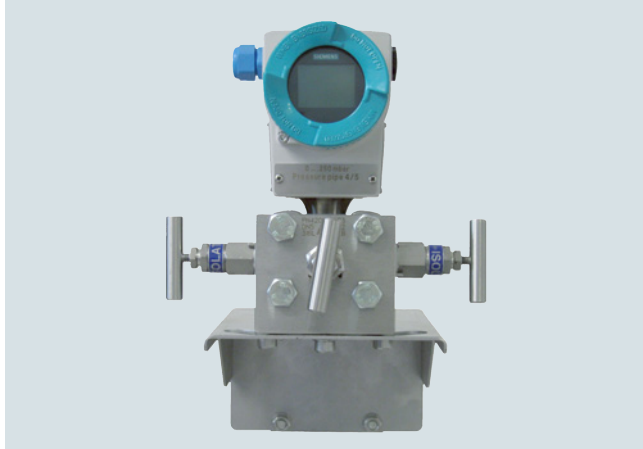
### Fittings

### Shut-off valves for differential pressure transmitters

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## 3- and 5-spindle valve manifolds for vertical angular differential pressure lines

### Overview



These 3-spindle and 5-spindle valve manifolds 7MF9413-1.. were developed specially for vertical differential pressure lines.

The valve manifolds are used to shut off the differential pressure lines and to check the pressure transmitter zero.

The 5-spindle valve manifold permits venting on the transmitter side and checking of the pressure transmitter characteristic.

### Benefits

- For vertical differential pressure lines
- Max. operating pressure 420 bar (6092 psi)
- Transmitters of the DS series can be operated and read from the front.

### Application

The 3-spindle and 5-spindle valve manifolds for vertical differential pressure lines are for liquids and gases. The valve manifolds are flanged on the pressure transmitter.

### Design

All versions of the spindle valve manifolds have a process connection 1/2-14 NPT.

The connection for the pressure transmitter is always designed as a flange connection to IEC 61518/DIN EN 61518, form B.

The 2-spindle and the 5-spindle valve manifold have in addition a vent and test connection 1/4-18 NPT.

Materials used:

Component	Material	Mat. No.
Housing	X 2 CrNiMo 17 13 2	1.4404/316L
Cones	X 6 CrNiMoTi 17 12 2	1.4571/316Ti
Spindles	X 2 CrNiMo 18 10	1.4404/316L
Head parts	X 5 CrNiMo 18 10	1.4401/316
Packings	PTFE	-

### Function

Functions of all valve manifolds:

- Shutting off the differential pressure lines
- Checking the pressure transmitter zero

Additional functions of the 2-spindle and 5-spindle valve manifolds through the vent and test connection:

- Venting on the transmitter side
- Checking the pressure transmitter characteristic

### Selection and Ordering data

Article No.

#### Valve manifolds for vertical differential pressure lines

7MF9413 - A

Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

for liquids and gases  
for flanging to pressure transmitters for absolute and differential pressure  
Material: stainless steel, mat. No: 1.4404/316L  
max. working pressure 420 bar (6092 psi)  
(order accessory set with Order code),  
without certificate

- 3-spindle valve manifold
- 5-spindle valve manifold

1 D  
1 E

#### Accessories

Factory test certificate EN 10204-2.2

7MF9000-8AB

Material acceptance test certificate EN 10204-3.1

7MF9000-8AD

### Selection and Ordering data

Order code

Article No.

#### Further designs<sup>1)</sup>

Please add "-Z" to Article No. and specify Order code.

#### Accessory set to EN

(connection between valve manifold and pressure transmitter)

4x screws 7/16-20 UNF x 1 3/4 inch to ASME B18.2.1; chromized steel  
2x flat gaskets made of PTFE, max. permissible 420 bar (6092 psi), 80 °C (176 °F)

K36

7MF9411-5DB

#### Accessory set to DIN<sup>2)</sup>

(connection between valve manifold and pressure transmitter)

4x screws M10x45 to DIN EN 24014; chromized steel  
4x washers Ø 10.5 mm to DIN 125;  
2x flat gaskets made of PTFE, max. permissible 420 bar (6092 psi), 80 °C (176 °F); Flange connection with M10 screws only permissible up to PN 160 (2321 psi).

K16

7MF9411-6BB

#### Mounting bracket

required for wall mounting or for securing to mounting rack, with bolts for mounting on valve manifold

- for valve manifold 7MF9413-1D.
- for valve manifold 7MF9413-1E.

M17

7MF9006-6NA

M18

7MF9006-6PA

required for mounting on 2" stand-pipe, with bolts for mounting on valve manifold

- for valve manifold 7MF9413-1D.

M19

7MF9006-6QA

#### Mounting clip

2 off, to secure mounting bracket to pipe

M16

7MF9006-6KA

#### valve manifold 100 bar (1450 psi)

suitable for oxygen

- for valve manifold 7MF9413-1D.
- for valve manifold 7MF9413-1E.

S13

S14

#### NACE MR-0175-certified

incl. acceptance test certificate 3.1 to EN 10204

D07

<sup>1)</sup> When ordering accessory set or mounting together with the multiway cock, please use Order code; otherwise use Article No.

<sup>2)</sup> Flange connections to DIN 19213 only permissible up to PN 160 (2321 psi)!

**Accessories****Accessory set (connection between valve manifold and transmitter)**

- K36: 4 screws  $7/16$ -20 UNF x  $1\frac{3}{4}$  inch to ASME B18.2.1, 2 flat gaskets
- K16: 4 screws M10x45 to DIN EN 24014, 4 washers, 2 flat gaskets

Washers  $\varnothing$  10.5 to DIN 125

Flat gaskets made of PTFE, max. 420 bar (6092 psi), 80 °C (176 °F)

**Note:** Flange connection with M10 screws only permissible up to PN 160 (2321 psi)!

**Mounting bracket for wall mounting or for securing to mounting rack**

With bolts for mounting on valve manifold

- M17: For 3-spindle valve manifold
- M18: For 5-spindle valve manifold

**Mounting bracket for mounting on 2" standpipe**

With bolts for mounting on valve manifold

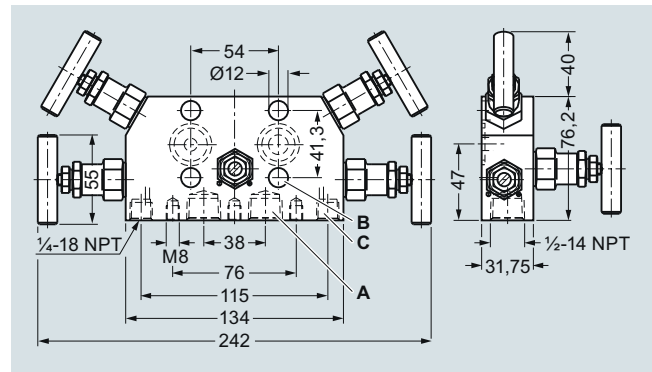
- M19: For 3-spindle valve manifold

**Mounting clips (2 off)**

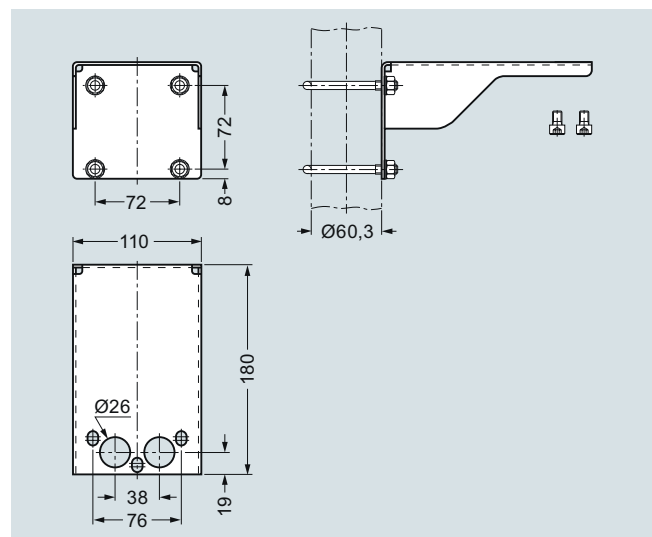
For securing the mounting brackets M17, M18 and M19 to pipe

**Valve manifold 100 bar, suitable for oxygen**

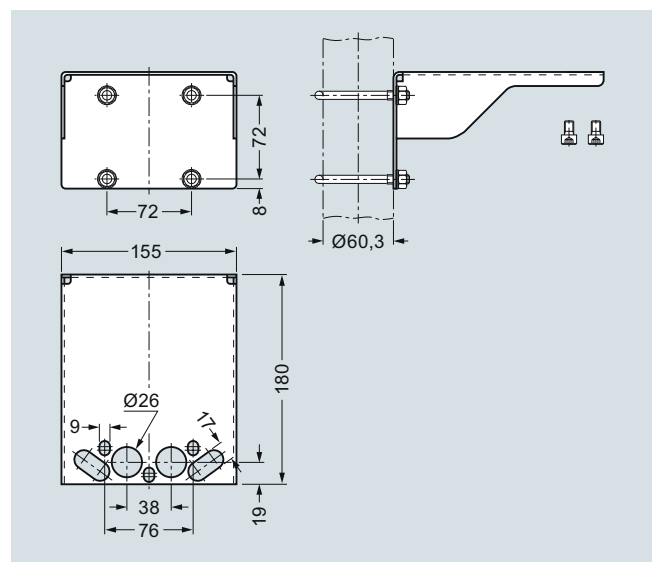
- For 3-spindle valve manifold
- For 5-spindle valve manifold



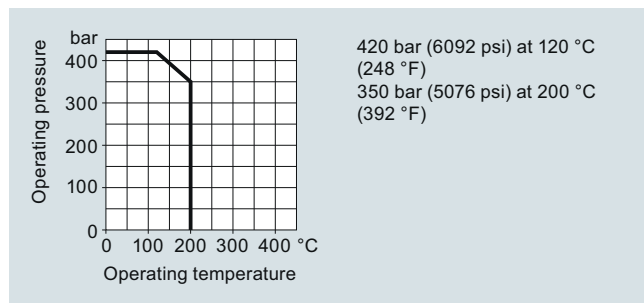
5-spindle valve manifold 7MF9413-1E, for vertical differential pressure lines, dimensions in mm



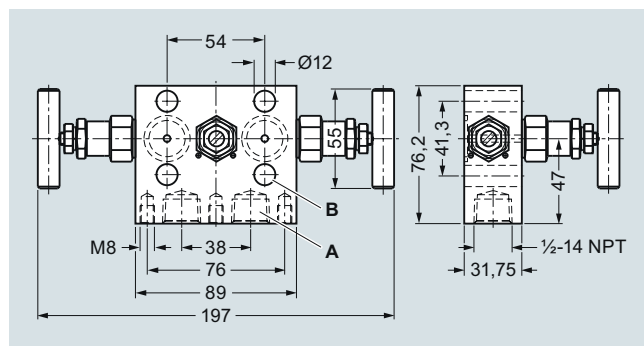
Mounting bracket (7MF9006-6NA)/(M17) for 3-spindle valve manifold, dimensions in mm



Mounting bracket (7MF9006-6PA)/(M18) for 5-spindle valve manifold, dimensions in mm

**Characteristic curves**

Permissible operating pressure as a function of the permissible operating temperature

**Dimensional drawings**

3-spindle valve manifold 7MF9413-1D, for vertical differential pressure lines, dimensions in mm

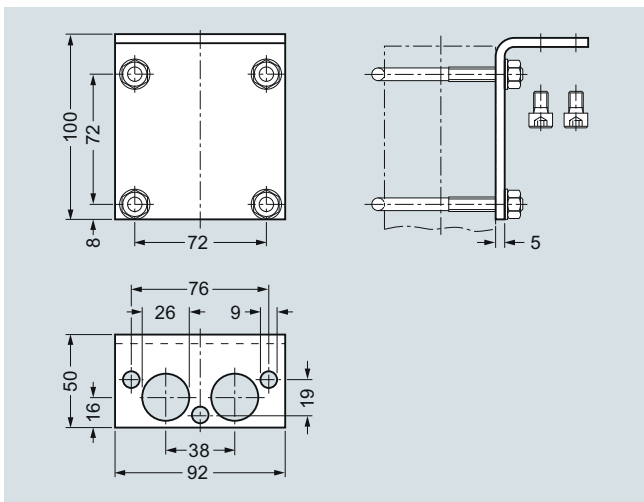
# Pressure Measurement

## Fittings

### Shut-off valves for differential pressure transmitters

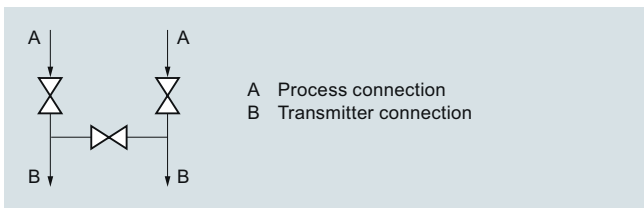
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#### 3- and 5-spindle valve manifolds for vertical angular differential pressure lines

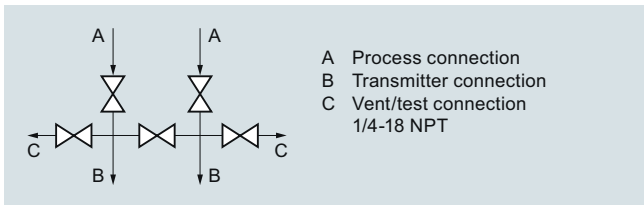


Mounting bracket (7MF9006-6QA)/(M19) for 3-spindle valve manifold, dimensions in mm

#### Schematics



3-spindle valve manifold for vertical differential pressure lines, connections



5-spindle valve manifold for vertical differential pressure lines, connections