VM-3 and VM-5 valve manifolds
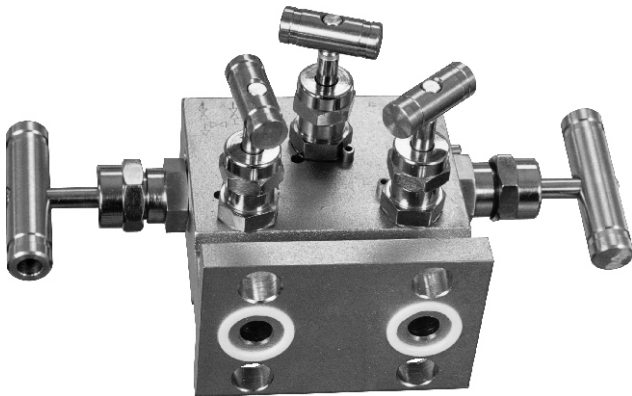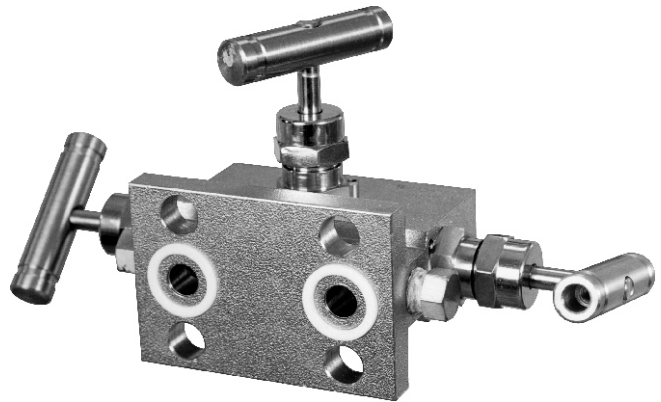
✓ **Body material – stainless steel (316ss)**
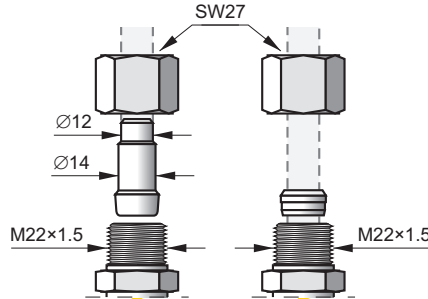

VM-5 valve

VM-3 valve

Features

3-valve and 5-valve manifolds are used where relative pressure transmitters are installed. They enable essential operations to be performed on the transmitters, such as starting up a transmitter or setting the zero position in conditions of static or atmospheric pressure. The five-valve manifold also enables a calibrator to be connected for metrological testing of the transmitter. The VM-3 and VM-5 have a modern lightweight construction. The high precision of manufacture enables individual valves to be opened and closed easily.
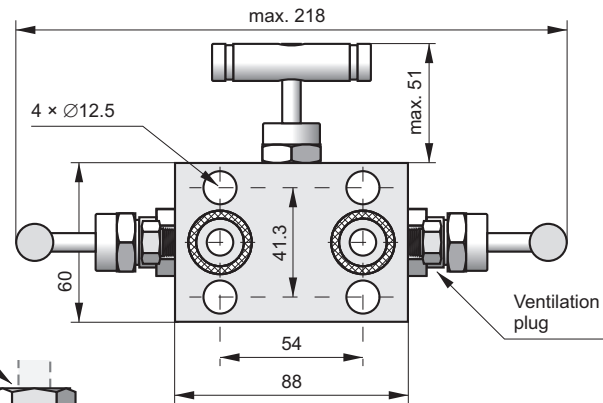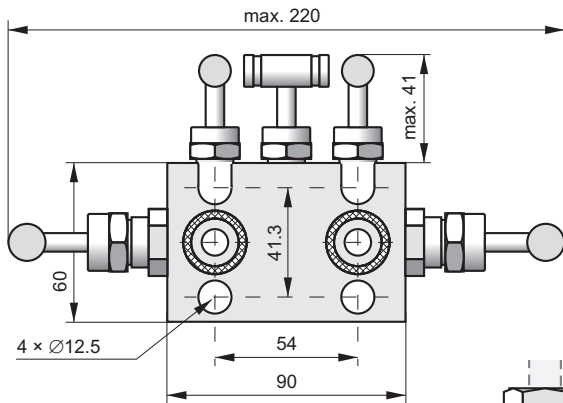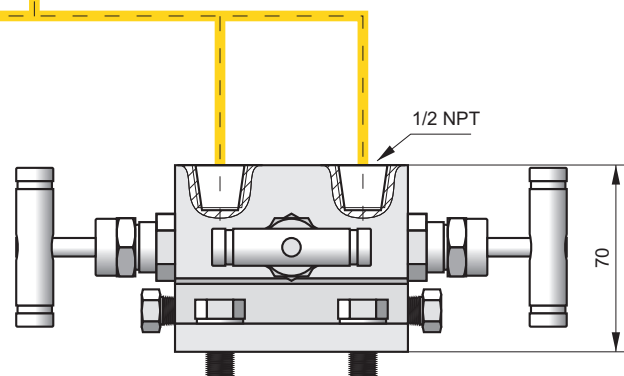

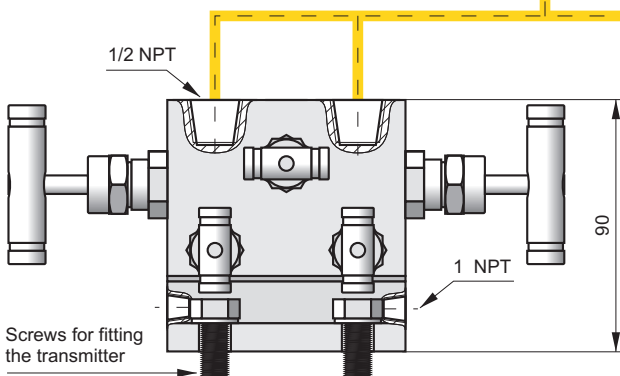Weldable connector for impulse line made from:
stainless steel 316Lss **/1/**
K11562 steel **/2/**

Connector for impulse line, made from 316ss stainless steel with a clamping ring:
∅12 **/3/**
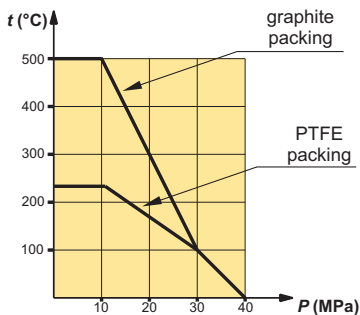∅14 **/4/**

SW27

∅12
∅14

M22×1.5

M22×1.5

1/2 NPT

1/2 NPT

1 NPT

Screws for fitting the transmitter

max. 220
max. 41
41.3
60
4 × ∅12.5
54
90

max. 218
4 × ∅12.5
max. 51
41.3
60
Ventilation plug
54
88

90
70

Technical parameters

Maximum pressure	420 bar
	(according to the graph)
Pin packing	PTFE
	or graphite
Body material	316ss
Weight: VM-3	1.8 kg
VM-5	2.54 kg

Connectors:
to the installation – ½ NPT sockets
to the transmitter – 54 mm spacing

Connection diagrams

VM-5 valve

VM-3 valve
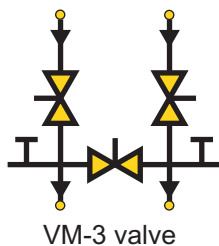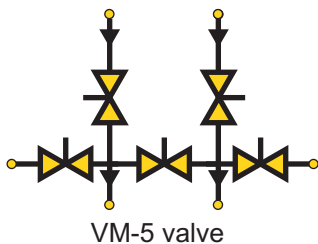
Operating pressure range as a function of temperature

t (°C)

graphite packing

PTFE packing

500
400
300
200
100

10 20 30 40 P (MPa)

Example of installation of the VM-3 with fitting accessories

Set of screws for fitting the transmitter

18

59

59

4 × ⌀9

/**U**/ – Handle made from 3 mm metal sheet, for mounting the valve manifold
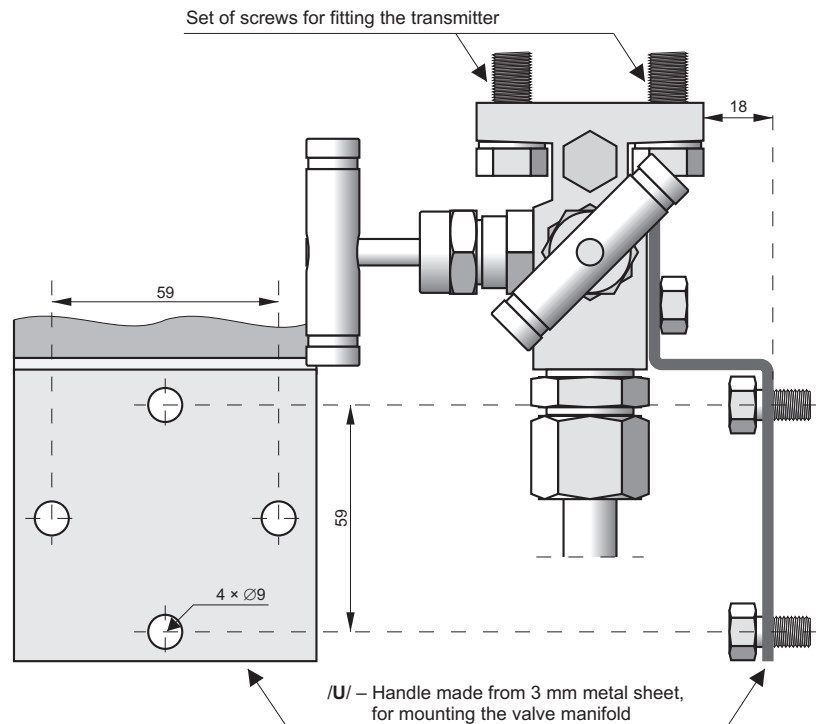
Special versions

Versions R
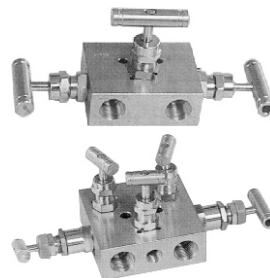
Versions H

Recommendations concerning selection of valves

The standard versions of the valves have Teflon pin packing; a special version is available with graphite packing. The special version should be used only when the valves operate at temperatures in excess of 200°C.

The valve manifold is supplied with seals for the collar-type output points. To order, it can be supplied additionally with a set of M10 or $^7/_{16}$″ screws for fitting the transmitter, connectors for impulse lines and a sheet-metal handle used to mount the valve on the construction.

Ordering procedure

Valve manifolds:

3-valve – **VM-3 /___/___**

5-valve – **VM-5 /___/___**

Special versions:
H – constructional versions (only VM-3)
R – constructional versions
Graphite – graphite pin packing
Tlen – valve adapted to contact with oxygen
NACE - NACE MR-01-75 comply

Additional equipment – description:

Code	Product
A	Set of M10 screws for fitting the transmitter (up to 250 bar)
B	Set of 7/16″ × 1″ screws for fitting the transmitter (up to 413 bar)
C	Set of 7/16″ × 2 ¼″ screws for fitting the transmitter with covers type COPLANAR
D	Set of M10 screws for fitting the transmitter (up to 320 bar)
1	Set of weldable stainless steel connectors (316ss)
2	Set of weldable steel connectors (K11562)
3	Set of connectors with ⌀12 clamping ring
4	Set of connectors with ⌀14 clamping ring
U	Handle for mounting the valve

Fitting accessories - Valves

Needle valve VM-1
Material 316ss
Medium temperature, working pressure – according to the graph on page III/ 7
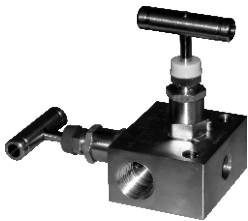Ordering code:
Valve VM-1/M (input M20×1.5 M, output M20×1.5 F, Teflon packing)
Valve VM-1/G (input G1/2″ M, output G1/2″ F, Teflon packing)
Valve VM-1/graphite (input M20×1.5 M, output M20×1.5 F, Graphite packing)
Valve VM-1 oxygen (valve designed for contact with oxygen; input M20×1.5 M, output M20×1.5 F, Teflon packing)

Needle valve VM-1-R/R
Material 316ss
Medium temperature, working pressure – according to the graph on page IV/ 3
Input 1/2NPT F, output 1/2NPT F, Graphite packing, no vent port
Ordering code:
Valve VM-1-R/R/__
    1 – Set of weldable stainless steel connectors (316ss)
    2 – Set of weldable steel connectors (K11562)
    3 – Set of connectors with ∅12 clamping ring
   **4** – Set of connectors with ∅14 clamping ring

2-Valve Manifold VM-2
Material 316ss
Medium temperature, working pressure – according to the graph on page IV/ 3
Input 1/2NPT F, output 1/2NPT F, Teflon packing, vent port ¼ NPT F
Ordering code:
Valve VM-2-R/R/_

Valve VM-1-R/R/__
    1 – Set of weldable stainless steel connectors (316ss)
    2 – Set of weldable steel connectors (K11562)
    3 – Set of connectors with ∅12 clamping ring
    4 – Set of connectors with ∅14 clamping ring
Option
.../NACE - NACE compliance

2-Valve Manifold VM-2-RM
Material 316ss
Medium temperature, working pressure – according to the graph on page IV/ 3
Input 1/2NPT F, output 1/2NPT F, Teflon packing, vent port ¼ NPT F
Ordering code:
Valve VM-2-RM/M (input M20x1.5 M, output M20x1.5 F, Teflon packing, vent port ¼ NPT F)
Valve VM-2-RM/G (input G1/2" M, output G1/2" F, Teflon packing, vent port ¼ NPT F)
Valve VM-2-RM/1/2NPT (input 1/2"NPT M, output 1/2"NPT F, Teflon packing, vent port ¼ NPT F)
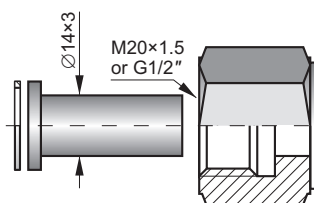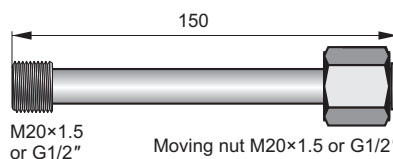
Option:.
.../NACE - NACE compliance
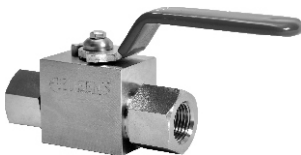
Ball valve
Material – H17N14M2 (**316 ss**)
Medium temperature - 80°C
Max pressure - 100 bar
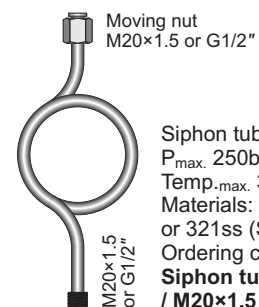Input, output process connection: 1/2NPT F
Ordering code:
Valve VM-1/B

Transmission tubes

∅14×3
M20×1.5 or G1/2″

Connector to weld
Materials: 15HM – (SO) or 316Lss (S)
Ordering code
RedSpaw – S or **SO / M20×1.5** or **G1/2″**

150
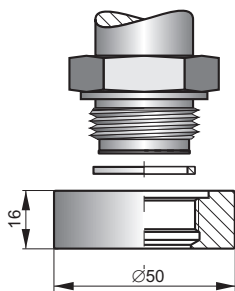M20×1.5 or G1/2″   Moving nut M20×1.5 or G1/2″

Impulse line
P$_{max.}$ 100bar
Materials: R35 – (SO) or 321ss (S)
Ordering code
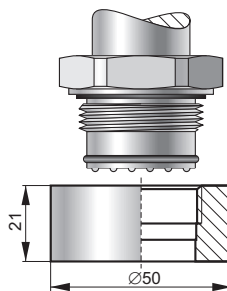**Impulse line – S** or **SO / M20×1.5** or **G1/2″**

Moving nut M20×1.5 or G1/2″

M20×1.5 or G1/2″

Siphon tube
P$_{max.}$ 250bar
Temp.$_{max.}$ 300°C
Materials: R35 – (SO) or 321ss (S)
Ordering code
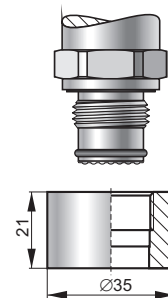**Siphon tube – S** or **SO / M20×1.5** or **G1/2″**

Fitting sockets

Socket with M30×2 thread for fitting transmitters with a CM30×2 process connection
Material – 316Lss
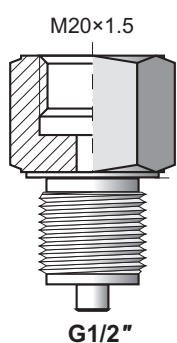Sealing – teflon
Ordering code **Socket CM30×2**

Socket with G1″ thread for fitting transmitters with a CG1 process connection
Material – 316Lss
Sealing – teflon
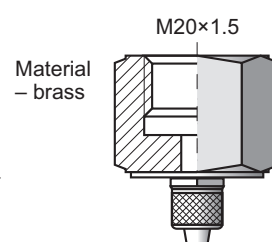Ordering code **Socket CG1**

Socket with G1/2″ thread for fitting transmitters with a CG1/2 process connection
Material – 316Lss
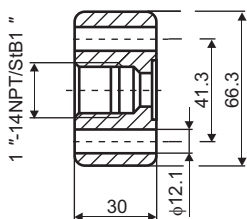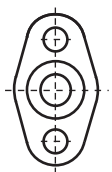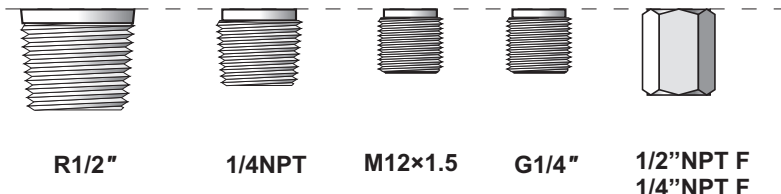Sealing – teflon
Ordering code **Socket CG1/2**

Adapters

M20×1.5

Material – 316Lss (S)
Ordering code: **Red___**
↑
Dimension of male thread

G1/2″   **R1/2″**   **1/4NPT**   **M12×1.5**   **G1/4″**   **1/2″NPT F** / **1/4″NPT F**
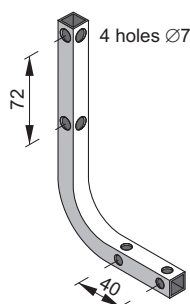
M20×1.5
Material – brass
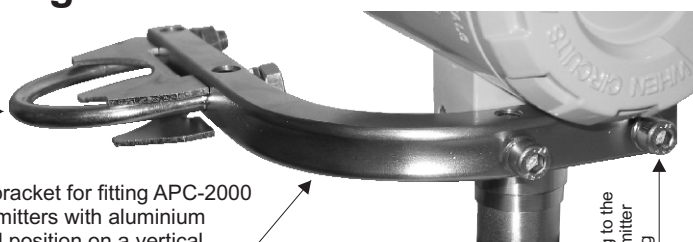
∅**6×1 elastic tube**
Ordering code: **Red∅6 – M**

Adapter for differential pressure transmitters with C type process connection
Material – 316Lss
Ordering code: **Red-dP/1/2″ NPT**
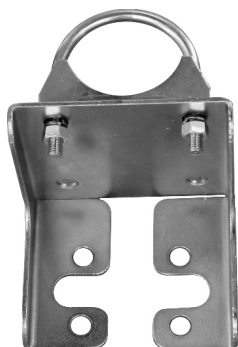
Mounting brackets

4 holes ∅7

Clasp for fitting on a pipe

Universal mounting bracket for fitting APC-2000 and APR-2000 transmitters with aluminium casing in any desired position on a vertical or horizontal pipe (∅30…∅50)

Ordering code:
AL:material zinced steel
AL(SS):material stainless steel

Fitting to the transmitter casing

Mounting bracket for fitting differential pressure transmitters with C type process connections on a 2″ pipe or on a wall
Ordering code:
C-2″: material zinced steel
C-2″(SS): material stainless steel
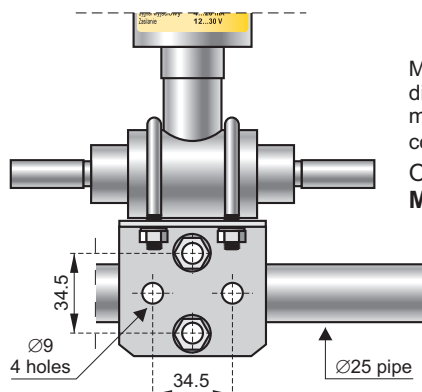
Mounting bracket for fitting differential pressure transmitters with P type process connections on a ∅25 pipe.
Ordering code:
Mounting bracket FI 25

∅9 4 holes

∅25 pipe

Notes