

# **Instrumentation Products**

E Series Valves and Manifolds



### Introduction

#### Introduction

The AS-Schneider Group with its headquarters in Germany is one of the World's Leading Manufacturers of Instrumentation Valves and Manifolds. AS-Schneider offers a large variety of E Series Valves and Manifolds as well as numerous accessories needed for the instrumentation installations globally.

Selection can be made from a comprehensive range of bodies with a variety of connections and material options, optimising installation and access opportunities. Many of the valves shown in this catalogue are available from stock or within a short period of time. The dimensions shown in this catalogue apply to standard types – very often 1/2 NPT treaded. If you need the dimensions for your individual type please contact the factory.

Note: Not every configuration which can be created in the ordering information is feasible / available.

Continuous product development may from time to time necessitate changes in the details contained in this catalogue. AS-Schneider reserves the right to make such changes at their discretion and without prior notice.

All dimensions shown in this catalogue are approximate and subject to change.



## **C**ontents

| Introduction   | page 2           |
|--|------------------|
| Contents   | page 3           |
| General Features                                     | page 4           |
| Valve Head Unit Options                              | page 5-11        |
| Connections  | page 12-13       |
| Hand Valves  | page 14-15       |
| Gauge Valves   | page 16-17       |
| Multiport Gauge Valves                               | page 18-19       |
| Block & Bleed and Double Block & Bleed Manifolds     | page 20-21       |
| L, Y & W-Shaped Manifolds                            | page 22-24       |
| Remote Mounted Manifolds                             | page 25-27       |
| Direct Mount Manifolds                               |                  |
| Wafer Style  | page 28-33       |
| Traditional Style                                    | page 34-37       |
| Integral Style                                       | page 38-40       |
| 5 Valve Manifolds with Natural Gas Metering Pattern  | page 41-42       |
| Enclosure Manifolds EDM Series                       | page 43-45       |
| Differential Pressure Gauge Manifolds                | page 46-47       |
| Accessories  | page 48-53       |
| Check Valves   | <b> </b> page 54 |
| Complementary Products                               | page 55          |
| Technical Service Portal - Digital Valve Plate (DVP) | page 56          |

### **General Features**

#### **Body Material Options**

| Material Group                | AS Material<br>Designation | Material<br>No. | Short Name          | Equivalent<br>UNS-No. | Material Grade acc. to ASTM | E Series<br>Needle Valves<br>and Manifolds |
|-------------------------------|----------------------------|-----------------|---------------------|-----------------------|-----------------------------|--|
| Carbon Steel                  | A105                       |                 |                     |                       | A105                        | Optional                                   |
|                               | 316 quadruple              | 1.4401          | X5CrNiMo17-12-2     | S31600                | 316                         | Standard                                   |
| Austenitic Stainless<br>Steel | certified*                 | 1.4404          | X2CrNiMo17-12-2     | S31603                | 316L                        | Standard                                   |
| -                             | 6Mo                        | 1.4547          | X 1CrNiMoCuN20-18-7 | S31254                |                             | Standard                                   |
| Austenitic-Ferritic           | Duplex                     | 1.4462          | X2CrNiMoN22-5-3     | S31803                | F51                         | Standard                                   |
| Stainless Steel               | Superduplex                | 1.4410          | X2CrNiMoN25.7.4     | S32750                | F53                         | Standard                                   |
|                               | Alloy 400                  | 2.4360          | NiCu30Fe            | N04400                |                             | Standard                                   |
| Nickel Based                  | Alloy C-276                | 2.4819          | NiMo 16 Cr 15 W     | N10276                |                             | Standard                                   |
| Alloys                        | Alloy 625                  | 2.4856          | NiCr22Mo9Nb         | N06625                |                             | Standard                                   |
|                               | Alloy 825                  | 2.4858          | NiCr21Mo            | N08825                |                             | Optional                                   |
| Titanium                      | Titanium Grade 2           | 3.7035          | Ti-II               | R50400                |                             | Optional                                   |

<sup>\*</sup> Quadruple Certified means 316 / 316L / 1.4401 / 1.4404

#### **Standard Features**

- Bore Size 5 mm
- Manifolds are not supplied with plugs unless specified.
- Anti-Tamper Head Unit Options see Page 11.

#### Needle Seal:

PTFE and Graphite Packings are available for all valve types. Alternatively O-Ring stem seal and Bellows Sealed Head Units - see Page 6-10.

#### Sour Gas Service:

Wetted Parts according to a.m. material list are supplied as standard according to NACE MR0175/MR0103 and ISO 15156 (latest issue) – Standard Material only (see last column), except Titanium Grade 2.

#### Pressure Test:

A shell test and a seat leakage test are performed at 1.5 times the max. allowable (working) pressure acc. to EN 12266-1 – P10, P11 and P12 respectively MSS-SP61 at every standard AS-Schneider E Series Needle Valve / Manifold  $\rightarrow$  100% Pressure Tested!

#### Certification:

Inspection Certificate 3.1 acc. to EN 10 204 for valve body material and pressure test available on request.

The manifolds can be provided by default with a

- CRN Certificate
- EAC Certificate Manifolds are marked with EAC

Valves with Graphite Packings are Fire Safe Tested and Certified according to ISO 10497 and API 607.

#### **Optional Features**

- Soft Seated Needle Valves: Bore Size 6.35 mm (1/4")
- Bore Size 10 mm

#### Fugitive Emission Application:

For Fugitive Emission Applications AS-Schneider is providing bellows sealed valves with safety packing. Choice of Pressure class PN 100 or PN 250. The bellows are submitted to a 100% Helium leak test. The leak rate is  $10^{-8}$  mbar l/s. Optional available are TA-Luft and ISO 15848 solutions. For more details see Pages 9 and 10.

#### Oxygen Service:

AS-Schneider offers an option with Reinforced PTFE Packing cleaned and lubricated for Oxygen Service:

Pressure-Temperature Rating:

Max. 420 bar (6,092 psi) @ 60°C (140°F) Max. 200°C (392°F) @ 90 bar (1,305 psi)

Not every Valve Type is available for Oxygen Service!

If you don't find your options in this catalogue, please contact the factory.

#### **Standard Bonnet Design**

#### T Handle

Ergonomic Handle Design.

Operating options are Anti-Tamper features or a Stainless Steel Handwheel.

#### Valve Stem

Stem with cold rolled threads for high strength and smooth operation.

#### Needle Seal

Standard: PTFE or Graphite Packing Options: O-Ring or Bellows Sealed

#### Needle

Non-rotating Needle for smooth operation and minimum wear of sealing elements.

#### **Back Seat**

Metal to Metal secondary needle seal and therefore the needle is anti-blowout / non-removable – For your safety.

#### **Needle Tip**

Choices of Needle Tip Materials such as Stellite, and Soft Tips like PCTFE and POM.

#### Valve Seat

Metal seated (integral type) and Soft seated → See Page 7 and Catalogue AS-4302.



#### Color Coded Dust Cap

For operating thread protection:

Isolate BLUE
Vent/Test RED
Equalize GREEN

#### **Color Coded Options**

Following options are also color coded below dust cap:

Oxygen Service Graphite Packing FKM O-ring Stem Seal with PCTFE Soft Tip TA-Luft Option



#### Lock Pin

Eliminates unauthorized removal of the bonnet assembly.

#### **Bonnet**

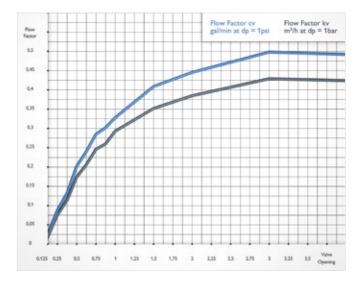
Metal to Metal Seal to Valve Body.

#### Traceability of Materials

All AS-Schneider E Series Valves and Manifolds have material traceability. A unique code is stamped on all valve bodies linking them with their material and chemical analysis certificates.

#### Flow Data

Needle Valves Standard Head Unit - Bore Size 5 mm



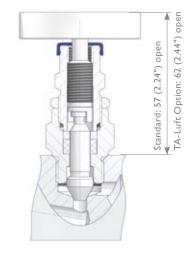
#### **Standard Needle Valves**

#### Screwed Bonnet - Stem Seal: Packing

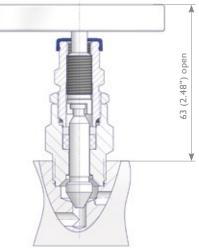
#### **Features**

- Integral Valve Seat Metal to Metal Seated
- Soft Tip PCTFE or POM optional
- Non-rotating Needle
- External Stem Thread Packing below stem threads.
   Stem Threads are protected from process media (non-wetted), helps to prevent stems from galling.
- Stem with cold rolled threads
- Blow-out proof Needle
- Back Seat Metal to metal secondary needle seal
- Lock Pin Eliminates unauthorized removal of the bonnet
- Color Coded Dust Cap for operating thread protection
- Standard Packing in PTFE and Graphite available
- Carbon filled PTFE Packing TA-Luft option
- Max. allowable (Working) Pressure (PS): 420 bar (6,092 psi)
- 689 bar (10,000 psi) optional
- Panel Mount Option available
- Anti-Tamper Valve Head Options available
- All non-wetted parts in 316 stainless steel

#### Standard Design 420 bar (6,092 psi)



#### High Pressure Design 689 bar (10,000 psi) and 500 bar (7,252 psi)



Body-to-Bonnet Seal is below the threads eliminating process fluid corrosion.

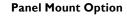
#### **Color Coded Options**

#### Graphite Packing

Oxygen Service









| 思        |  |
|----------|--|
|          |  |
|          |  |
| Stainles |  |

| Components | Stainless Steel         |           |             |         | Exotic Alloys |           |     |                |  |  |  |  |  |  |
|------------|-------------------------|-----------|-------------|---------|---------------|-----------|-----|----------------|--|--|--|--|--|--|
| Components | Material / Material No. |           |             |         |               |           |     |                |  |  |  |  |  |  |
| Body       |                         |           |             |         |               |           |     |                |  |  |  |  |  |  |
| Bonnet     | 244 / 2441              | A.II. 400 | AU C 27/    | 5 .     | LINIC 022750  | A.U. (25  | 414 | <b>T</b> :     |  |  |  |  |  |  |
| Needle     | 316 / 316L              | Alloy 400 | Alloy C-276 | Duplex  | UNS S32750    | Alloy 625 | 6Mo | Titanium Gr. 2 |  |  |  |  |  |  |
| Pipe Plug  |                         |           |             |         |               |           |     |                |  |  |  |  |  |  |
| Valve Stem |                         |           |             | 316 /   | 316L          |           |     |                |  |  |  |  |  |  |
| Gland      |                         |           |             | 3.      | 16            |           |     |                |  |  |  |  |  |  |
| Packing    |                         |           |             | PTFE or | Graphite      |           |     |                |  |  |  |  |  |  |
| Stem Nut   |                         |           |             | 3       | 316           |           |     |                |  |  |  |  |  |  |
| Lock Nut   |                         |           |             | 3       | 16            |           |     |                |  |  |  |  |  |  |
| Set Screw  |                         |           |             | 3.      | 16            |           |     |                |  |  |  |  |  |  |
| T Handle   |                         |           |             | 3.      | 16            |           |     |                |  |  |  |  |  |  |
| Lock Pin   |                         |           |             | A4 (    | 316)          |           |     |                |  |  |  |  |  |  |

Wetted components listed in **bold**.

#### Needle Valves according ASME B31.1 (Power Piping)

Screwed Bonnet - Stem Seal: Graphite Packing Meet the requirements of ASME B31.1 (Power Piping). A Locking Plate eliminates an unauthorized removal of the bonnet.

#### **Features**

- Integral Valve Seat Metal to Metal Seated
- Non-rotating Needle
- External Stem Thread Packing below stem threads. Stem Threads are protected from process media (non wetted), helps to prevent stems from galling.
- Stem with cold rolled threads
- Blow-out proof Needle
- Back Seat Metal to metal secondary needle seal
- Locking Plate Eliminates unauthorized removal of the bonnet
- Color Coded Dust Cap for operating thred protection
- Max. allowable (Working) Pressure (PS): 414 bar (6,000 psi)
- Anti-Tamper Valve Head Options available
- · All non-wetted parts in 316 stainless steel

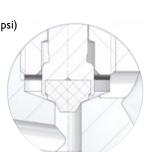


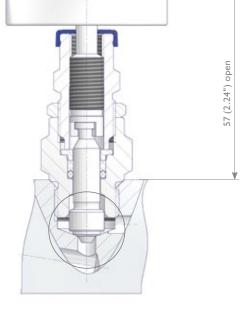
#### **Needle Valves with O-Ring Stem Seal**

Screwed Bonnet - O-Ring Stem Seal

#### **Features**

- Integral Valve Seat
- Non-rotating Needle
- External Stem Thread Packing below stem threads. Stem Threads are protected from process media (non-wetted), helps to prevent stems from galling.
- Stem with cold rolled threads
- Blow-out proof Needle
- Back Seat Metal to metal secondary needle seal
- Lock Pin Eliminates unauthorized removal of the bonnet
- Color Coded Dust Cap for operating thread protection
- O-Ring FKM, optional EPDM
- Soft Tip PCTFE or POM
- Max. allowable (Working) Pressure (PS): 420 bar (6,092 psi)
- Panel Mount Option not available
- Anti-Tamper Valve Head Options available
- All non-wetted parts in 316 stainless steel







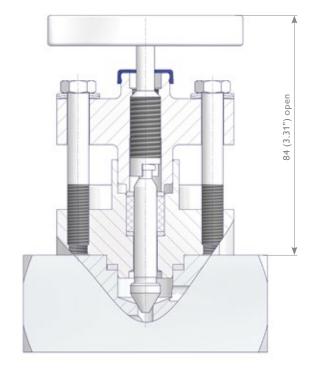
**Color Coded Option** FKM O-Ring Stem Seal with PCTFE Soft Tip

#### **Needle Valves with OS&Y Bolted Bonnet**

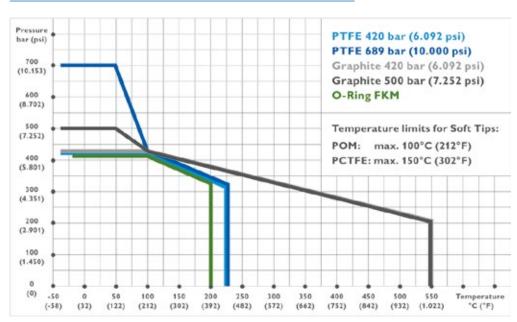
#### OS&Y Bolted Bonnet - Standard Packing

#### **Features**

- Integral Valve Seat Metal to Metal Seated
- Non-rotating Needle
- External Stem Thread Packing below stem threads.
   Stem Threads are protected from process media (non-wetted), helps to prevent stems from galling.
- · Stem with cold rolled threads
- Blow-out proof Needle
- Spring Washers for compensation of thermal expansion
- Back Seat Metal to metal secondary needle seal
- Color Coded Dust Cap for operating thread protection
- Max. allowable (Working) Pressure (PS): 420 bar (6,092 psi)
- Anti-Tamper Valve Head Options available
- PTFE or Graphite Packing
- Bonnet Seal Ring: Graphite
- · All non-wetted parts in 316 stainless steel



## Pressure-Temperature Rating for Standard Valve Head Units acc. to Page 6 – 8



Above-mentioned Pressure-Temperature Rating is based on the standard material 316 stainless steel. Other materials as shown on page 4 and 6 might have different Pressure-Temperature Ratings.

#### Low-temperature Limits:

- Standard Valves with PTFE and Graphite Packing: -40°C (-40°F)
- Valves with PTFE Packing and Arctic Operations Option, Code K: -55°C (-67°F)
- Valves with FKM O-Ring Needle Seal: -20°C (-4°F)
- Carbon Steel ASTM A105: -29°C (20.2°F)



Packing adjustment may be required during the service life of the valves.



Valves that have not been cycled for a period of time may have a higher initial actuation torque.

### **Valve Head Units for Fugitive Emission Applications**

#### Needle Valves acc. to ISO 15848

Screwed Bonnet - Type 1 O-Ring Stem Seal + Graphite Packing
Type 3 PTFE Packing

#### **Features**

- Integral Valve Seat Metal to Metal Seated
- · Non-rotating Needle
- External Stem Thread Packing below stem threads. Stem Threads are protected from process media (non-wetted), helps to prevent stems from galling.
- · Stem with cold rolled threads
- Back Seat Metal to metal secondary needle seal
- Color Coded Dust Cap for operating thread protection
- Max. allowable (Working) Pressure (PS): 420 bar (6,092 psi)
- Anti-Tamper Valve Head Options available
- FKM O-Ring Needle Seal RGD (Rapid Gas Decompression) resistant
- PTFE or Graphite Packing
- All non-wetted parts in 316 stainless steel
- Types also comply with the requirements of TA-Luft 2002

#### ISO FE Performance Data

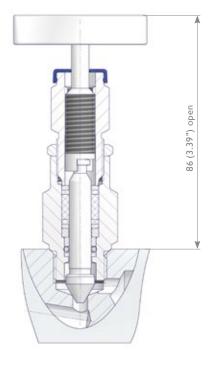
ISO FE Type 1:

Class A 1,500 cycles / -29°C to 40°C (-20°F to 104°F) Class A 500 cycles / -29°C to 200°C (-20°F to 392°F) Class B 1,500 cycles / -29°C to 200°C

(-20°F to 392°F)

ISO FE Type 3:

Class B 1,500 cycles / -29°C to 200°C (-20°F to 392°F)



#### **OS&Y** Needle Valves acc. to ISO 15848

OS&Y Bolted Bonnet - Type 1 O-Ring Stem Seal + Graphite Packing
Type 3 PTFE Packing

#### **Features**

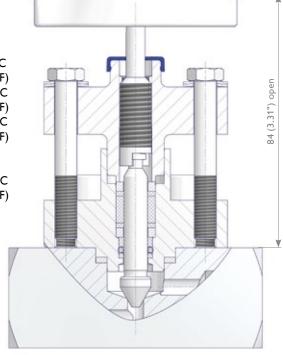
- Integral Valve Seat Metal to Metal Seated
- Non-rotating Needle
- External Stem Thread Packing below stem threads. Stem Threads are protected from process media (non-wetted), helps to prevent stems from galling.
- · Stem with cold rolled threads
- Blow-out proof Needle
- Spring Washers for compensation of thermal expansion
- Back Seat Metal to metal secondary stem seal
- Color Coded Dust Cap for operating thread protection
- Max. allowable (Working) Pressure (PS): 420 bar (6,092 psi)
- Anti-Tamper Valve Head Options available
- FKM O-Ring Stem Seal RGD (Rapid Gas Decompression) resistant
- PTFE or Graphite Packing
- Bonnet Seal Ring: Graphite
- All non-wetted parts in 316 stainless steel
- Types also comply with the requirements of TA-Luft 2002

#### ISO FE Performance Data

Class A 2,500 cycles / -29°C to 40°C (-20°F to 104°F) Class A 500 cycles / -29°C to 200°C (-20°F to 392°F) Class B 2,500 cycles / -29°C to 200°C (-20°F to 392°F)

ISO FE Type 3:

Class B 2,500 cycles / -29°C to 200°C (-20°F to 392°F)



### Valve Head Units for Fugitive Emission Applications

#### **Bellows Sealed Head Units**

Screwed Bonnet - PN 100 and Graphite Safety Packing PN 250 and Graphite Safety Packing

#### **Features**

- Integral Valve Seat Metal to Metal Seated
- Non-rotating Stem
- Bellows sealed PN 100 and PN 250 incl. Graphite Safety Packing
- · Stem with cold rolled threads
- · Stellite Needle Tip as standard
- Bellows are submitted to a 100% Helium leak test
- Leak rate: 10-8 mbar I/s
- Valves for Oxygen Service on request

Bellows Sealed Head Units are mainly used for applications requiring the highest tightness class - such as toxic or vacuum service.



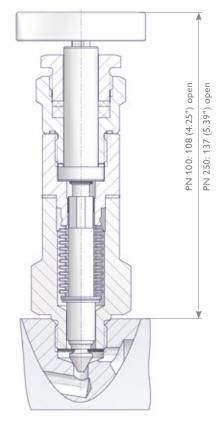
Packing adjustment may be required during the service life of the valves.



Valves that have not been cycled for a period of time may have a higher initial actuation torque.

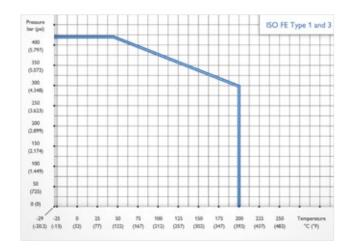


When delivered ex factory, the safety packing of the belllows sealed valve is not fully tightened. In the event of a bellows failure the safety packing must be tightened in order to avoid fluid leakage.



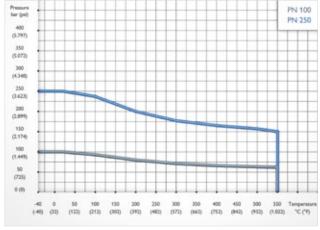
#### **Pressure-Temperature Rating**

FKM O-Ring and Graphite Packing ISO FE Type 1 ISO FE Type 3 PTFE Packing



#### **Pressure-Temperature Rating**

Bellows PN 100 Safety Packing Graphite Bellows PN 250 Safety Packing Graphite



Above-mentioned Pressure-Temperature Rating is based on the standard material 316 stainless steel.

Other materials as shown on page 4 and 6 might have different Pressure-Temperature Ratings.

### **Valve Head Unit Options**

#### **Anti-Tamper Valve Head Unit Options**

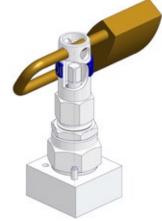
AS-Schneider is providing 2 Anti-Tamper Valve Head Units, both types are lockable with a padlock.

#### Standard Anti-Tamper Head Unit

The valves are operated with a special Anti-Tamper Key (AT-Key), which fits exactly in the key guide. The valve can therefore only be operated with the AT-Key. In addition to this safety function, installing a padlock prevents the AT-Key being inserted into the key guide. Operating the valve is therefore no longer possible which protects your equipment against unauthorized opening and closing of the valve head units. The valve can be locked reliably in every position required.







Option Code T or R

Part Number ATK-ES

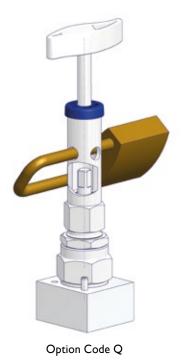
Incl. Padlock; Option Code U

#### 'AT-Key Lock' Anti-Tamper Head Unit (Option Code Q)

'AT-Key Lock' valves are operated by a AT-Key which is an integral component of the valve. This Key can be extracted a little from the valve head unit which loosens the connection between the valve stem and the Key. In this extended position a padlock can now be hooked diagonally in the valve head unit which prevents the Key being inserted again. Operating the valve is therefore no longer possible which protects your equipment against unauthorised opening and closing of the valve. The valve can be locked reliably in every position required. This design offers you optimal security against unintentional and unauthorized operation of the valve. A color coded dust cap protects stem threads against ingress of dirt unauthorized opening and closing of the valve head units. The valve can be locked reliably in every position.

#### Stainless Steel Handwheel and 'Locking Plate' Design

The valves can be ordered optional with Stainless Steel Handwheel (Option Code W) and also with an additional fitted locking plate (Option Code J). For ordering the 'Locking Plate' Design incl. padlock you need to state J and U. This design allows minimum handle movements and is ideal as protection against unauthorised closing of the valve.



www.as-schneider.com





Service Portal // Digital Valve Plate

### **Connections**

#### **Connections**

AS-Schneider is manufacturing a lot of different connections and connection combinations. In this catalogue we are showing the most popular types. On the next 2 pages you will find the standard connections in detail. If you don't find your option please contact us.

Designations used in the tables: Inlet = Process Connection | Outlet = Instrument / Transmitter Connection

#### **Tube Fittings**

Single Ferrule Tube Fittings acc. to EN ISO 8434-1 Size S



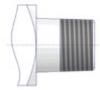
Twin Ferrule Tube Fittings



#### **Tapered Pipe Threads**

NPT Male Threads acc. to ASME B 1.20.1

BSP Tapered Thread acc. to ISO 7/1 (e.g. R 1/2)



NPT Female Threads acc. to ASME B 1.20.1

BSP Tapered Thread acc. to ISO 7/1 (e.g. Rc 1/2)



#### **Parallel Pipe Threads**

BSP Parallel Male Thread acc. to ISO 228 (e.g. G1/2) acc. to DIN 3852 acc. to EN 837-1



BSP Parallel Female Threads acc. to ISO 228 (e.g. G 1/2) acc. to DIN 3852-2 Form Z acc. to ISO 7/1 (e.g.) R 1/2

acc. to EN 837-1



#### Weld Ends

Butt Weld Ends for Pipes and Tubes acc. to EN12627 / ASME B16.9

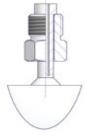


Socket Weld Ends for Pipes and Tubes acc. to EN12760 / ASME B16.11

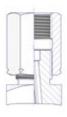


#### Pressure Gauge Connections -For Parallel Pipe Threads only

Swivel Male Connection



Adjusting Nut acc. to DIN 16283



Swivel Nut (Wire Design)



Swivel Nut (Welded Nipple Design) acc. to DIN 16284

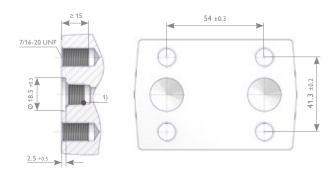


### Connections | DIN EN 61518 / IEC 61518

#### Flange Connections

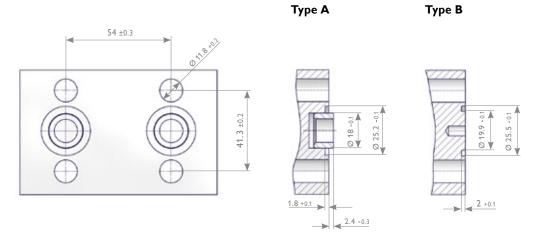
According to DIN EN 61518 the manifold-transmitter interface is applicable for a max. allowable (Working) Pressure (PS) of 413 bar\*3 (6,000 psi) and a max. allowable Temperature (TS) of 120°C (248°F) for liquids, gas or vapors. The max. allowable Temperature (TS) of 120°C (248°F) is considering the requirement that manifolds and transmitters need to be protected against heating by hot media. This can be achieved by using adequate hook-ups or by instrument impulse lines with sufficient length. However the AS-Schneider E Series Manifolds can be used for temperatures up to 550°C (1,022°F), PTFE up to 232°C (450°F), Graphite up to 550°C (1,022°F).

#### Flange Connections – Inlet Manifold respectively Transmitter Connection DIN EN 61518 / IEC 61518



<sup>1)</sup> Threaded option for transmitters - plug / vent valve

#### Flange Connections - Manifold to Transmitter DIN EN 61518 / IEC 61518 Type A and Type B



|   | Connection at the manifold acc. to IEC 61518 / DIN EN 61518*11*3 |   |  |  |  |  |  |  |  |  |  |  |
|---|--|---|--|--|--|--|--|--|--|--|--|--|
|   |  | Type A with spigo   | ot   | Type B without spigot                      |  |  |  |  |  |  |  |  |
| Max. allowable (Working) Pressure (PS) in bar (psi) |  | 413 (6,000)*3   |  | 413 (                                      | 6,000)*3   |  |  |  |  |  |  |  |
| Temperature Range in °C (°F)                        | -10 to +80<br>(14 to 176)  | -15 to +120<br>(5 to 248)   | -40 to +120<br>(-40 to 248)                        | -10 to +80<br>(14 to 176)                  | -40 to +120<br>(-40 to 248)                      |  |  |  |  |  |  |  |
| Seal Ring*2   | Flat Ring<br>24×17.7×2.7<br>Material: PTFE                       | O-Ring ISO 3601-1<br>20 x 2.65<br>S-FPM90<br>Material: FPM<br>(FKM by ASTM) | Flat Ring<br>25.1 x 18 x 2.9<br>Material: Graphite | Flat Ring<br>25.4×20×2.7<br>Material: PTFE | Flat Ring<br>25.4×19.9×2.9<br>Material: Graphite |  |  |  |  |  |  |  |
| Min. Thread Engagement in mm                        |  | 9   |  |  | 9  |  |  |  |  |  |  |  |

<sup>\*1</sup> DIN EN 61518 / IEC 61518 I Mating dimensions between pressure measuring instruments and flanged-on shut-off devices up to 413 bar (6,000 psi).

<sup>\*2</sup> Materials and temperature limits for the flat rings and the O-Rings are for reference only. It is the responsibility of the user to ensure compatibility between the selected gasket ring material and the process requirements, such as pressure, temperature, and chemical compatibility.

 $<sup>^{*3}</sup>$  IEC 61518 is stating 413 bar (6,000 psi), AS-Schneider however confirms 420 bar (6,092 psi).

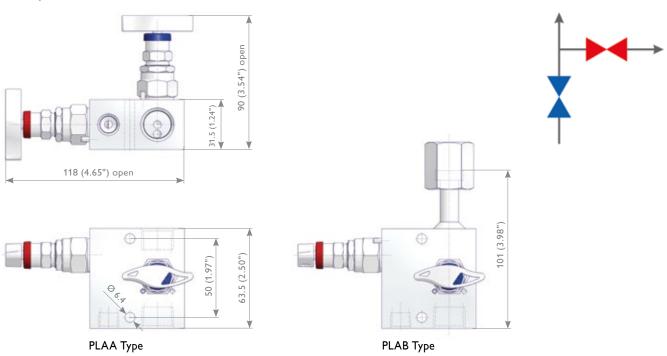
## L, Y & W-Shaped Manifolds

#### L, Y & W-Shaped Manifolds

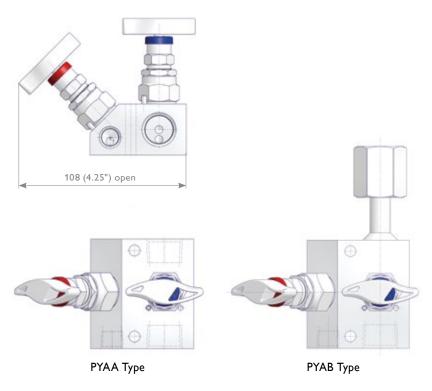
AS-Schneider L, Y & W-Shaped Manifolds are designed for mounting to Pressure Gauges, Pressure Transmitters and Pressure Switches. The standard vent connection is 1/4 NPT female. Pipe plugs are not installed as standard. For plugged vent ports (factory installed) – see also options Page 24 – Ordering Information L, Y & W-Shaped Manifolds. Accessories like Swivel Gauge Adaptors, Vent Valves etc. see Pages 48-53.

The dimensions shown apply only to the illustrated valves (1/2 NPT Threaded) – if you need the dimensions for your individual type or should you still not find your options at all please contact the factory.

#### L-Shaped Manifolds



#### Y-Shaped Manifolds

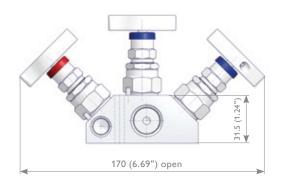


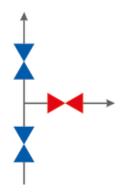


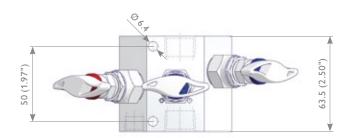
# L, Y & W-Shaped Manifolds

W-Shaped Manifolds

PWAA Type









# L, Y & W-Shaped Manifolds

#### **Ordering Information**

|          |   |         |  |       | 1        | 2     | 3   | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|----------|---|---------|--|-------|----------|-------|-----|---|---|---|---|---|---|----|----|----|----|----|----|----|
|          |   |         |  |       | Р        | L     | Α   | В | S | Α | - | N | 4 | G  | 4  | -  | Α  | М  | S  |    |
|          |   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Р        | L,Y & W-Shaped Manifolds  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Manifold Type   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| L<br>Y   | L-Shaped Bonnet Orientation<br>Y-Shaped Bonnet Orientation            |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| w        | W-Shaped Bonnet Orientation → I                                       | Double  | Block & Bleed Type   |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Vent Connection   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Α        | 1/4 NPT Female  | F       | 1/4 NPT with Tube Fitting 6 mm                               |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| В        | 1/2 NPT Female – Only Type PL<br>G 1/4 Female                         | G<br>H  | 1/4 NPT with Tube Fitting 12 mm G 1/4 with Tube Fitting 6 mm | n     |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| D        | G 1/2 Female – Only Type PL   | J       | G 1/4 with Tube Fitting 12 mm                                |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          |   |         | Tube Fitting Brand see inlet/outle                           | let   |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Inlet x Outlet Configuration  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Α        | Female x Female   | E       | G 1/2 with Tube Fitting x Female                             |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| B<br>C   | Female x Swivel Nut 1/2 NPT with Tube Fitting x                       | F       | G 1/2 with Tube Fitting x Swivel                             | Nut   |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Female  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| D        | 1/2 NPT with Tube Fitting x<br>Swivel Nut                             |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Material  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| S        | 1.4401 / 1.4404 / 316 / 316L  | F       | Duplex UNS \$31803 E   |       | 6Mo UN   |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| M<br>H   | Alloy 400 UNS N04400<br>Alloy C-276 UNS N10276                        | D<br>V  | Super Duplex UNS S32750 T<br>Alloy 625 UNS N06625            | '     | Titanium | Gradi | e z |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Bonnet  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Α        | PTFE  | K       | O-Ring FKM (FPM by ISO)                                      |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| B<br>D   | Graphite ISO FE Series Type 1   | W<br>2  | Carbon filled PTFE – TA-Luft<br>Bellows sealed PN 100        |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| E        | ISO FE Series Type 3  | 4       | Bellows sealed PN 250  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Inlet   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| N        | Thread Type<br>NPT  | С       | Fitting Type Single Ferrule Tube Fitting                     |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Н        | BSP Parallel (G) – DIN 3852   | К       | Twin Ferrule Tube Fitting                                    |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Thread Size   |         | Tube Fitting Sizes   |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 2<br>4   | 1/4<br>1/2  | 4       | 12 resp. 12S<br>1/2"   |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Outlet  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Thread Type   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| N4<br>G4 | 1/2 NPT Female<br>G 1/2 Swivel Nut                                    |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| M4       | M 20 x 1.5 Swivel Nut   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Options - Specify in alphabetic                                       | al or   | der (digits first, then letters)                             |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| В        | Cleaned and Lubricated for Oxyge                                      | n Serv  | ice – For PTFE Packing only                                  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| F<br>G   | PCTFE Soft Tip POM Soft Tip   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| S        | Stellite Valve Tip  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| A<br>H   | Vent Ports Plugged<br>10,000 psi (689 bar) for PTFE Pack              | ing I 7 | .252 psi (500 bar) for Graphite Pag                          | cking |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Р        | Power Piping ASME B31.1 – For G                                       | raphite | Packing only   |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| K<br>M   | Arctic Operations (-55°C (-67°F)) Wetted Parts with 3.1 certificate   | – For I | PTFE Packing only  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Operation Options   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| J        | Stainless Steel Handwheel with L                                      |         | =  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| T<br>R   | Anti-Tamper Bonnet (Key to be or<br>Anti-Tamper Bonnet (1 Key supplie |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Q        | AT-Key Lock Bonnet Design   |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| W        | Padlock for Anti-Tamper Bonnet / A<br>Stainless Steel Handwheel       | AT-Key  | Lock Bonnet Design   |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
|          | Accessory Kits  |         |  |       |          |       |     |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 8        | SST Mounting Bracket AKM-R Type                                       |         |  |       |          |       |     | - |   |   |   |   |   |    |    |    |    |    |    |    |

Wetted Parts according to above mentioned material list are supplied according to NACE MR0175/MR0103 and ISO 15156 (latest issue) - except Titanium Grade 2. Note: Not every configuration which can be created in the ordering information is feasible / available.

## **Accessories - Mounting Bracket Kits**

#### **Mounting Bracket Kits for Vertical Impulse Piping Installations**

#### **AKM-S Type**

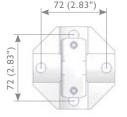
For Valves and Manifolds with 1 1/4" Square Valve Body (Type H, G, M and S)



#### **AKM-R Type**

For Manifolds with 1 1/4" Flat Body (Type P and R)



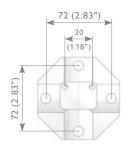


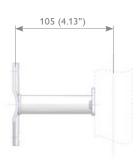


#### **AKM-G** Type

For Double Block & Bleed Manifolds (Type C)





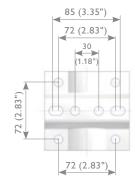


### AKM-D Type and AKM-C Type

For Manifolds Type D, W and 5



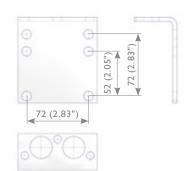




#### **AKM-B** Type

For Wafer Style Manifolds with Bottom Inlet Design





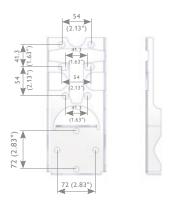
## **Accessories – Mounting Bracket Kits**

#### **Mounting Bracket Kits for Horizontal Impulse Piping Installations**

#### **AKM-T Type**

For Integral Manifolds - Traditional Style



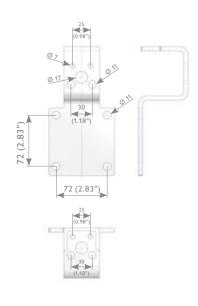


#### **Mounting Bracket Kits for Horizontal and Vertical Impulse Piping Installations**

#### **AKM-U Type**

For Manifolds Type H, W and T





#### **Ordering Information**

| AKM Mounting Bracket Kits  Mounting Bracket incl. screws for mounting the bracket to the manifold (if applicable)  S Valves and Manifolds with 1 1/4" Square Valve Body (Type H, G, M and S) R Manifolds with 1 1/4" Flat Body (Type P and R) G Manifolds Type C D Manifolds Type D, W and 5 Wafer Style Manifolds with Bottom Inlet Design U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters) Manifolds Type W (except Bottom Inlet Design) Manifolds Type W (except Bottom Inlet Design) Manifolds Type T (Integral Manifolds - Coplanar™ Style  Mounting Method P 2" Pipe Mounting – incl. "U" Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  H Mandatory for Manifolds Type H and U-Type Bracket (incl. Spacer) |     |   |          |         |         |          |     |   |   |   |   |  |  |  |  |
|---|-----|---|----------|---------|---------|----------|-----|---|---|---|---|--|--|--|--|
| Mounting Bracket Kits  Mounting Bracket incl. screws for mounting the bracket to the manifold (if applicable)  S Valves and Manifolds with 1 1/4" Square Valve Body (Type H, G, M and S)  R Manifolds with 1 1/4" Flat Body (Type P and R)  G Manifolds Type C  D Manifolds Type D, W and 5  B Wafer Style Manifolds with Bottom Inlet Design  U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters)  Manifolds Type W (except Bottom Inlet Design)  Manifolds Type T  C Integral Manifolds - Coplanar™ Style  T Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting — incl. "U' Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel  |     |   | 1        | 2       | 3       | 4        | 5   | 6 | 7 | 8 | 9 |  |  |  |  |
| Mounting Bracket incl. screws for mounting the bracket to the manifold (if applicable)  S Valves and Manifolds with 1 1/4" Square Valve Body (Type H, G, M and S)  R Manifolds with 1 1/4" Flat Body (Type P and R)  Manifolds Type C  D Manifolds Type D, W and 5  B Wafer Style Manifolds with Bottom Inlet Design  U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters)  Manifolds Type W (except Bottom Inlet Design)  Manifolds Type T  C Integral Manifolds - Coplanar™ Style  T Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel   |     |   | Α        | K       | М       | -        | S   | Р | S | - |   |  |  |  |  |
| Mounting Bracket incl. screws for mounting the bracket to the manifold (if applicable)  S Valves and Manifolds with 1 1/4" Square Valve Body (Type H, G, M and S)  R Manifolds with 1 1/4" Flat Body (Type P and R)  Manifolds Type C  D Manifolds Type D, W and 5  B Wafer Style Manifolds with Bottom Inlet Design  U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters)  Manifolds Type W (except Bottom Inlet Design)  Manifolds Type T  C Integral Manifolds - Coplanar™ Style  T Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel   |     |   |          |         |         |          |     |   |   |   |   |  |  |  |  |
| Mounting Bracket incl. screws for mounting the bracket to the manifold (if applicable)  S Valves and Manifolds with 1 1/4" Square Valve Body (Type H, G, M and S)  R Manifolds with 1 1/4" Flat Body (Type P and R)  Manifolds Type C  D Manifolds Type D, W and 5  B Wafer Style Manifolds with Bottom Inlet Design  U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters)  Manifolds Type W (except Bottom Inlet Design)  Manifolds Type T  C Integral Manifolds - Coplanar™ Style  T Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel   |     |   |          |         |         |          |     |   |   |   |   |  |  |  |  |
| (if applicable)  S Valves and Manifolds with 1 1/4" Square Valve Body (Type H, G, M and S)  Manifolds With 1 1/4" Flat Body (Type P and R)  G Manifolds Type C  D Manifolds Type D, W and 5  B Wafer Style Manifolds with Bottom Inlet Design  U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters)  Manifolds Type W (except Bottom Inlet Design)  Manifolds Type T  C Integral Manifolds - Coplanar™ Style  T Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting — incl. "U" Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel  | AKM | Mounting Bracket Kits                                     |          |         |         |          |     |   |   |   |   |  |  |  |  |
| R Manifolds with 1 1/4" Flat Body (Type P and R) G Manifolds Type C D Manifolds Type D, W and 5 Wafer Style Manifolds with Bottom Inlet Design U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters) Manifolds Type W (except Bottom Inlet Design) Manifolds Type W (except Bottom Inlet Design) Manifolds Type T C Integral Manifolds - Coplanar™ Style T Integral Manifolds - Traditional Style  Mounting Method P 2" Pipe Mounting − incl. "U" Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  |     |   | acket    | to the  | mani    | fold     |     |   |   |   |   |  |  |  |  |
| G Manifolds Type C D Manifolds Type D, W and 5 B Wafer Style Manifolds with Bottom Inlet Design Wafer Style Manifolds Wafer Style Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters) Manifolds Type W (except Bottom Inlet Design) Manifolds Type T C Integral Manifolds - Coplanar™ Style T Integral Manifolds - Traditional Style  Mounting Method P 2" Pipe Mounting − incl. "U" Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  | S   | Valves and Manifolds with 1 1/4" Square Valve Body (Type  | H, G, №  | 1 and S | )       |          |     |   |   |   |   |  |  |  |  |
| D Manifolds Type D, W and 5  Wafer Style Manifolds with Bottom Inlet Design  Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters)  Manifolds Type W (except Bottom Inlet Design)  Manifolds Type T  C Integral Manifolds - Coplanar™ Style  T Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting − incl. "U" Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel  | R   | Manifolds with 1 1/4" Flat Body (Type P and R)            |          |         |         |          |     |   |   |   |   |  |  |  |  |
| B Wafer Style Manifolds with Bottom Inlet Design  Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters)  Manifolds Type W (except Bottom Inlet Design)  Manifolds Type T  C Integral Manifolds - Coplanar™ Style  T Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting − incl. "U" Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel   | G   | Manifolds Type C  |          |         |         |          |     |   |   |   |   |  |  |  |  |
| U Manifolds Type H (not for Integral Manifolds for Rosemount 2051/3051 Coplanar™ Pressure Transmitters) Manifolds Type W (except Bottom Inlet Design) Manifolds Type T C Integral Manifolds - Coplanar™ Style T Integral Manifolds - Traditional Style  Mounting Method P 2" Pipe Mounting – incl. "U" Bolt, Nuts and Washers  Material C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  | D   | •                   |          |         |         |          |     |   |   |   |   |  |  |  |  |
| Transmitters) Manifolds Type W (except Bottom Inlet Design) Manifolds Type T C Integral Manifolds - Coplanar™ Style T Integral Manifolds - Traditional Style  Mounting Method P 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers  Material C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  | В   | Wafer Style Manifolds with Bottom Inlet Design            |          |         |         |          |     |   |   |   |   |  |  |  |  |
| Manifolds Type W (except Bottom Inlet Design) Manifolds Type T C Integral Manifolds - Coplanar™ Style T Integral Manifolds - Traditional Style  Mounting Method P 2" Pipe Mounting – incl. "U" Bolt, Nuts and Washers  Material C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  | U   |   | nt 2051/ | 3051 C  | oplanar | ™ Pressu | ıre |   |   |   |   |  |  |  |  |
| Manifolds Type T Integral Manifolds - Coplanar™ Style Integral Manifolds - Traditional Style  Mounting Method  P 2" Pipe Mounting – incl. "U' Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel   |     |   |          |         |         |          |     |   |   |   |   |  |  |  |  |
| C Integral Manifolds - Coplanar™ Style T Integral Manifolds - Traditional Style  Mounting Method P 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers  Material C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel   |     |   |          |         |         |          |     |   |   |   |   |  |  |  |  |
| T Integral Manifolds - Traditional Style  Mounting Method P 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers  Material C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  | С   | 71  |          |         |         |          |     |   |   |   |   |  |  |  |  |
| P 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers  Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel  | Т   | Integral Manifolds - Traditional Style                    |          |         |         |          |     |   |   |   |   |  |  |  |  |
| Material  C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C)  S 316 Stainless Steel   |     | Mounting Method   |          |         |         |          |     |   |   |   |   |  |  |  |  |
| C Carbon Steel zinc plated (only available Mounting Bracket Kit AKM-D and AKM-C) S 316 Stainless Steel  | Р   | 2" Pipe Mounting – incl. 'U' Bolt, Nuts and Washers       |          |         |         |          |     |   |   |   |   |  |  |  |  |
| S 316 Stainless Steel   |     | Material  |          |         |         |          |     |   |   |   |   |  |  |  |  |
|   | С   | Carbon Steel zinc plated (only available Mounting Bracket | Kit AK   | M-D a   | nd AK   | 1-C)     |     |   |   |   |   |  |  |  |  |
| H Mandatory for Manifolds Type H and U-Type Bracket (incl. Spacer)  | S   | 316 Stainless Steel                                       |          |         |         |          |     |   |   |   |   |  |  |  |  |
|   | Н   | Mandatory for Manifolds Type H and U-Type Bracket (incl   | . Spacei | -)      |         |          |     |   |   |   |   |  |  |  |  |

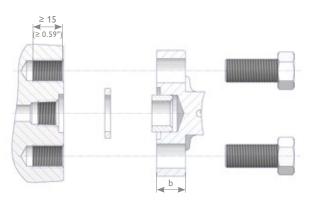
#### **Mounting Bracket Kit**

#### Mounting Bracket Kits on Page 48 and 49 are containing:

- Mounting Bracket
- 'U' Bolts\*
- Washers 8.4\*
- Hexagon Nuts M8\*
- Screws and Washers for Mounting the Manifold to the Bracket - if applicable
- \* Amount depending on bracket type. See illustrations.

### Accessories - Manifold to Transmitter Mounting acc. to DIN EN 61518

## Accessory Kits for Manifold to Transmitter Mounting according to DIN EN 61518 / IEC 61518



b = Depending on manifold thickness

#### **Ordering Information**

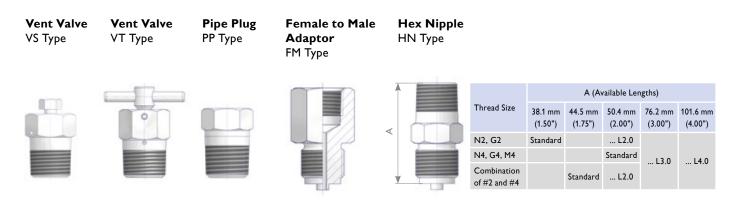




\* IEC 61518 calls for the mentioned mechanical properties (for example B8 Class 2) because the flange connection is designed for high pressure service (up to 6,000 psi) and high temperature service. The usage of screws without the defined mechanical properties is critical and may lead to a sudden component failure which could cause a fatal accident!

## Accessories - Pipe Plugs, Vent Valves, Adaptors

#### Vent Valves, Pipe Plugs and Pipe Fittings



#### **Ordering Information - Pipe Plugs and Vent Valves**

|                |  |             |  |        |                                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------|--|-------------|--|--------|------------------------------------|---|---|---|---|---|---|---|---|---|----|
|                |  |             |  |        |                                    | ٧ | S | М | S | - | Ν | 4 | - | М |    |
| PP<br>VS       | Pipe Plug Vent Valve with Bleed Sci  | rew         |  |        |                                    |   |   |   |   |   |   |   |   |   |    |
| VT             | Vent Valve with T Handle   | •           |  |        |                                    |   |   |   |   |   |   |   |   |   |    |
|                | Connection   |             |  |        |                                    |   |   |   |   |   |   |   |   |   |    |
| М              | Male   |             |  |        |                                    |   |   |   |   |   |   |   |   |   |    |
|                | Material   |             |  |        |                                    |   |   |   |   |   |   |   |   |   |    |
| S<br>M<br>H    | 1.4401 / 1.4404 / 316 / 316L<br>Alloy 400 UNS N04400<br>Alloy C-276 UNS N10276 | F<br>D<br>V | Duplex UNS S31803<br>Super Duplex UNS S32750<br>Alloy 625 UNS N06625 | B<br>T | 6Mo UNS S31254<br>Titanium Grade 2 |   |   |   |   |   |   |   |   |   |    |
|                | Threaded Connection  |             |  |        |                                    |   |   |   |   |   |   |   |   |   |    |
| N2<br>N3<br>N4 | 1/4 NPT<br>3/8 NPT<br>1/2 NPT  |             |  |        |                                    |   |   |   |   |   |   |   |   |   |    |
|                | Options - Specify in alphab  | etical      | order (digits first, then letters)                                   | )      |                                    |   |   |   |   |   |   |   |   |   |    |
| B<br>M         | Cleaned for Oxygen Service<br>Wetted Parts with 3.1 certification              | ate – No    | ot applicable for Pipe Plug Type PP                                  |        |                                    |   |   |   |   |   |   |   |   |   |    |

Wetted Parts according to a.m. material list are supplied according to NACE MR0175/MR0103 and ISO 15156 (latest issue) - except Titanium Grade 2

#### **Ordering Information - Pipe Fittings**

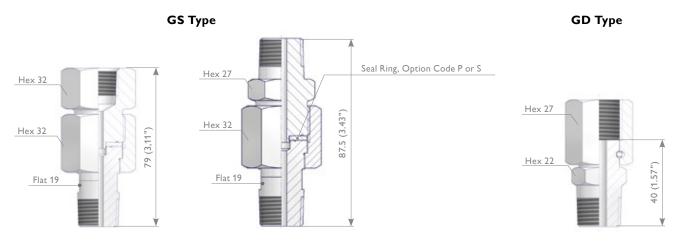
|      |                                 |          |                                      |         |                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 - 16 |
|------|---------------------------------|----------|--------------------------------------|---------|------------------|---|---|---|---|---|---|---|---|---|----|---------|
|      |                                 |          |                                      |         |                  | F | М | S | - | М | 4 | Ν | 4 | - | В  |         |
|      |                                 |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
| FM   | Female to Male Adaptor          |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
| HN   | •                               | be spe   | cified in alphabetical resp. ascendi | ng orde | er.              |   |   |   |   |   |   |   |   |   |    |         |
|      |                                 |          | N4 (and not HNS-N4G4) resp. HN       |         |                  |   |   |   |   |   |   |   |   |   |    |         |
|      | Material                        |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
| S    | 1.4401 / 1.4404 / 316 / 316L    | F        | Duplex UNS S31803                    | В       | 6Mo UNS S31254   |   |   |   |   |   |   |   |   |   |    |         |
| М    | Alloy 400 UNS N04400            | D        | Super Duplex UNS S32750              | Т       | Titanium Grade 2 |   |   |   |   |   |   |   |   |   |    |         |
| Н    | Alloy C-276 UNS N10276          | ٧        | Alloy 625 UNS N06625                 |         |                  |   |   |   |   |   |   |   |   |   |    |         |
|      | Inlet - FM Type Female Thre     | ead      |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
|      | Thread Type                     |          | Inch Size                            |         | Metric Size      |   |   |   |   |   |   |   |   |   |    |         |
| Ν    | NPT                             | 2        | 1/4                                  | 4       | M 20 x 1.5       |   |   |   |   |   |   |   |   |   |    |         |
| G    | BSP Parallel (G) – EN 837-1     | 4        | 1/2                                  |         |                  |   |   |   |   |   |   |   |   |   |    |         |
| М    | Metric similar to EN 837-1      |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
|      | Outlet                          |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
|      | Thread Type                     |          | Inch Size                            |         | Metric Size      |   |   |   |   |   |   |   |   |   |    |         |
| Ν    | NPT                             | 2        | 1/4                                  | 4       | M20×1.5          |   |   |   |   |   |   |   |   |   |    |         |
| G    | BSP Parallel (G) – EN 837-1     | 4        | 1/2                                  |         |                  |   |   |   |   |   |   |   |   |   |    |         |
| М    | Metric similar to EN 837-1      |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
|      | Options - Specify in alphabe    | etical ( | order (digits first, then letters    | )       |                  |   |   |   |   |   |   |   |   |   |    |         |
| В    | Cleaned for Oxygen Service      |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |
| L#.0 | # → Available Lengths see table | above    | - For Hex Nipples only               |         |                  |   |   |   |   |   |   |   |   |   |    |         |
|      |                                 |          |                                      |         |                  |   |   |   |   |   |   |   |   |   |    |         |

 $Part\ according\ to\ a.m.\ material\ list\ is\ supplied\ according\ to\ NACE\ MR0175/MR0103\ and\ ISO\ 15156\ (latest\ issue)\ -\ except\ Titanium\ Grade\ 2.$ 

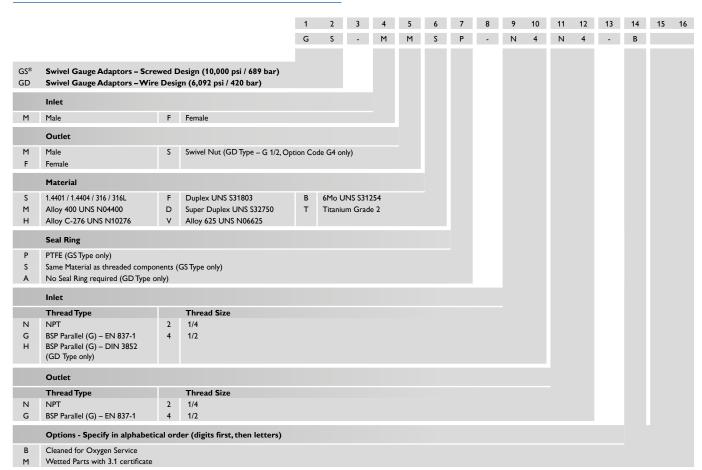
# **Accessories - Swivel Gauge Adaptors**

#### **Swivel Gauge Adaptors**

The Swivel Gauge Adaptors enable the easy positioning of the pressure instrument in any direction through 360°. The dimensions shown apply only to the illustrated components – if you need the dimensions for your individual type please contact the factory.



#### **Ordering Information - Swivel Gauge Adaptors**

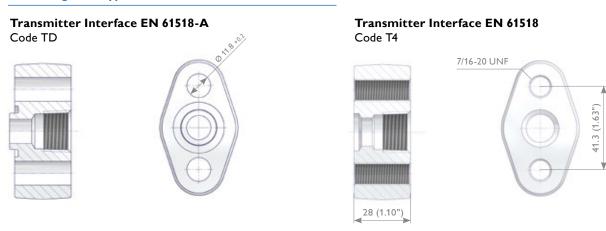


 $<sup>\</sup>ensuremath{^{*}}$  GS Type only: NPT Threaded Options as standard.

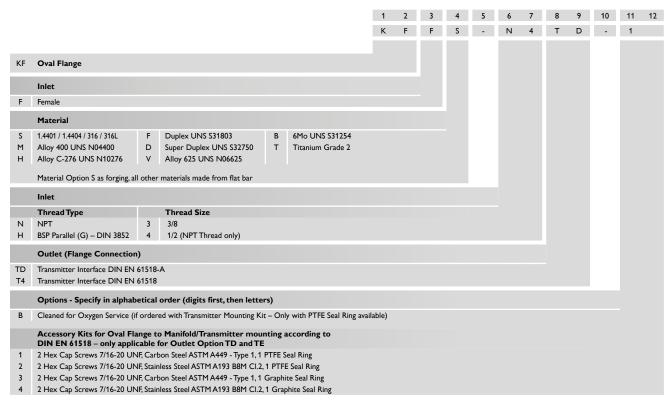
Wetted Parts according to a.m. material list are supplied according to NACE MR0175/MR0103 and ISO 15156 (latest issue) - except Titanium Grade 2.

## **Accessories - Oval Flanges, Anti-Tamper Key**

#### **Oval Flanges KF Type**



#### Ordering Information - Oval Flange (Kidney Flange, Futbol)



Wetted Parts according to a.m. material list are supplied according to NACE MR0175/MR0103 and ISO 15156 (latest issue) - except Titanium Grade 2.

#### **Anti-Tamper Key ATK Type**

#### **ATK-ES Type**



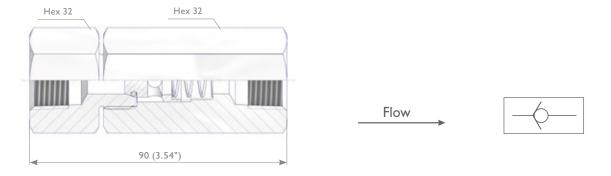
### **Check Valves**

#### **Check Valves CV Type**

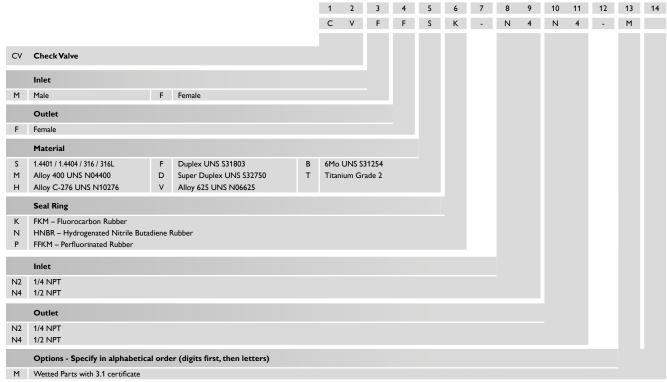
AS-Schneider Check Valves (Non-Return Valves) are designed for a cold (Working) Pressure rating of 10,000 psi (689 bar). The Check Valve allows flow in one direction only, closing when flow reverses. Should you still not find your option please contact the factory.

#### **Features**

- Soft Seated O-Rings use-d are RGD (Rapid Gas Decompression) resistant
- Cracking Pressure: < 11 psi (0.75 bar)
- Re-Seal Pressure: < 20 psi (1.38 bar)
- Temperature Rating: -50°C up to +200°C (-58°F up to +392°F), depending on seal materials used
- 100% Pressure Tested hydrostatically at 1.5 times the max. allowable (Working) Pressure (PS)
- Cv-Value: 0.3



#### **Ordering Information - Check Valves**



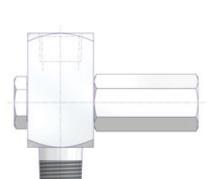
Wetted Parts according to a.m. material list are supplied according to NACE MR0175/MR0103 and ISO 15156 (latest issue) - except Titanium Grade 2. Note: Check Valves which are not actuated for a period of time may initially crack at a higher pressure than above stated.

# **Complementary Products**

#### **Complementary Products**

In this catalogue the following products are not described in detail because they are covered in catalogue AS-0201:

#### **Gauge Protectors**



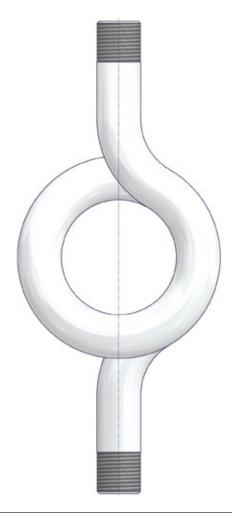
**Gauge Snubbers** 



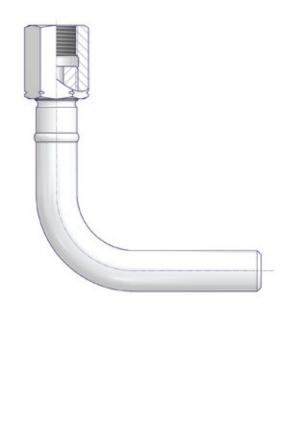
**Compact Syphons** 



Coil Type Syphons / Pigtail Syphons



**Elbows** 



## **Technical Service Portal - Digital Valve Plate**

### Digital Valve Plate for Valves and Manifolds

The E Series Valves and Manifolds manufactured by the AS-Schneider Group are now marked with an unique QR-code. That QR-code provides easy access to static product information like material properties, certificates and physical dimensions via CAD drawings. It also includes operating and installation instructions or spare parts or replacement information.

**Product Details** 

#### **Operating Instructions**

#### **Individual Drawings**

#### **Spare Part Service**

#### **Technical Support**











#### How it works

If you have an AS-Schneider valve or manifold with QR-code in your hand or installed in your plant, you can now access the product information very easy. The access is straightforward:



#### **Maintenance Benefits**

All technically relevant information on the product can always be retrieved directly.

#### Clear planning

More straightforward planning and installation via the mechanical properties of the product.

#### **Error-free assembly**

Automated error free equipment identification at the incoming good inspection and during the field installation.

#### Easy and fast maintenance

Easier and faster maintenance and repair cycles. This is possible due to direct access to spare parts or replacement units.

#### Link to asset management tool

Operators link this information into their respective asset and operation management system.

#### **Environmental friendly**

The environmentally responsible disassembly and disposal.

## Check the DVP of your valves and manifolds: www.qr4v.de



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