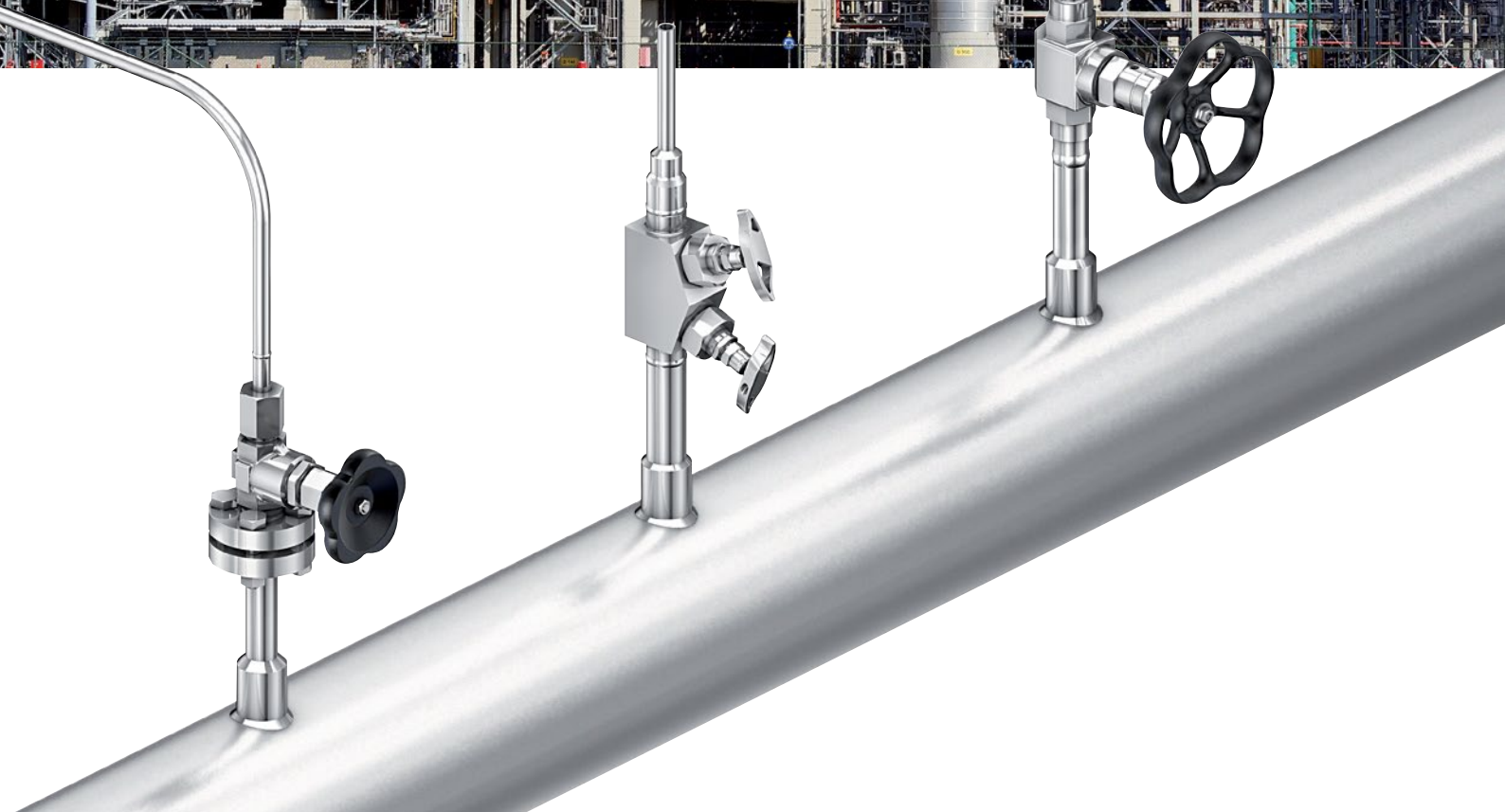


# Instrumentation Products

Needle Type Globe Valves and Accessories



# Introduction

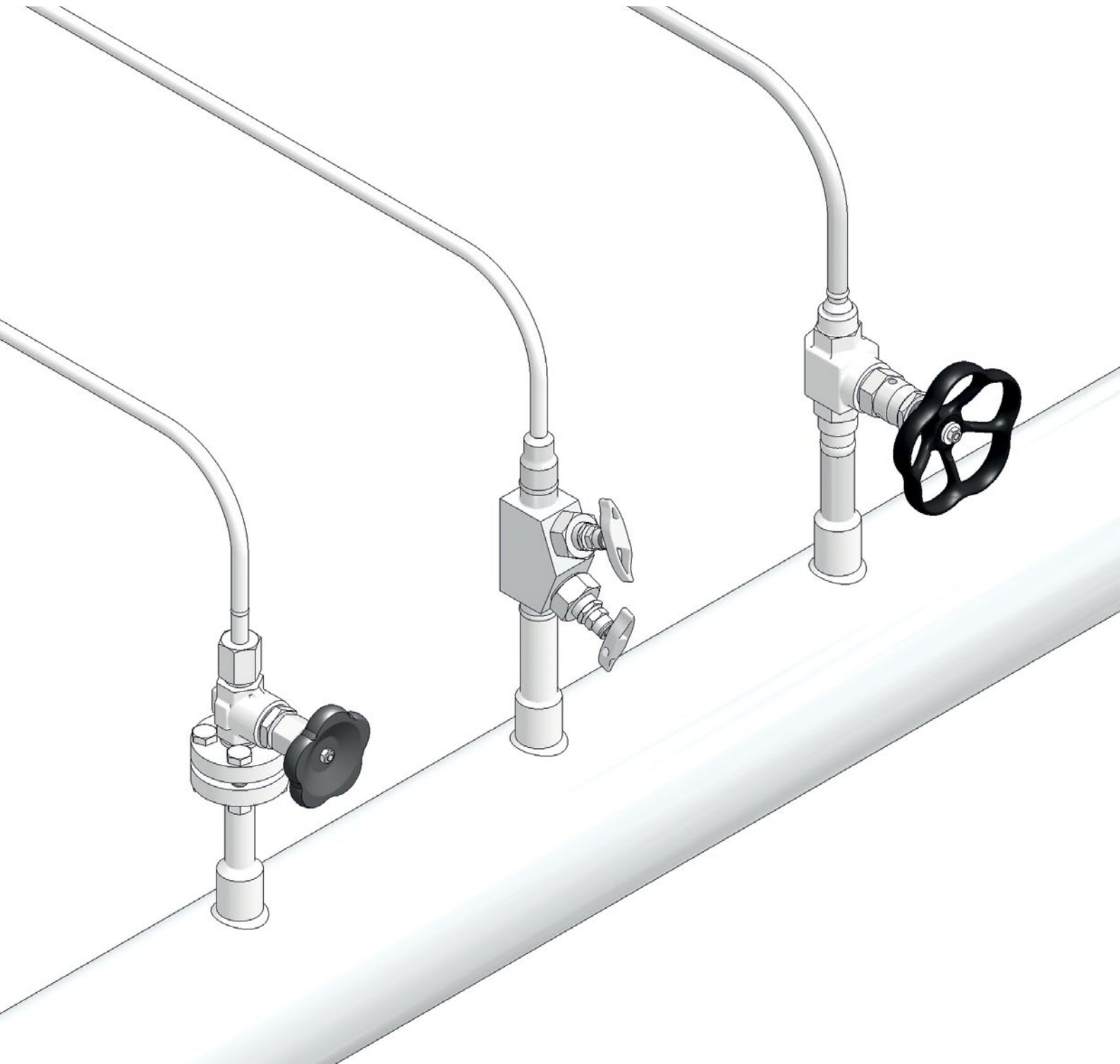
## Introduction

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 Needle Type Globe Valves for General and Severe Service applications for liquids, gases and steam but also 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. If you need the dimensions for your individual type please contact the factory.

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.



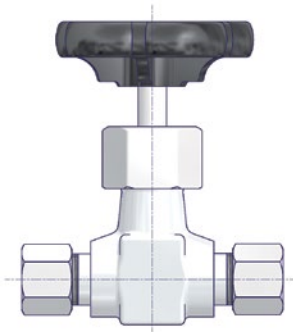
|   |            |
|---|------------|
| <b>Introduction</b>   | page 2     |
| <b>Contents</b>   | page 3     |
| <b>Needle Type Globe Valves Overview</b>                          | page 4-5   |
| <b>General Features and Connections</b>                           | page 6-8   |
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| <b>Screwed Bonnet Needle Valves Type N334</b>                     | page 11    |
| <b>Screwed Bonnet Needle Valves Type S350, S351</b>               | page 12-14 |
| <b>Angle Needle Valves Type S360</b>                              | page 15    |
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| <b>Ordering Information for Needle Valves Type A1, B1, A2, A4</b> | page 23    |
| <b>Condensate Pots, Weld Fittings and Threaded Pipe Ends</b>      | page 24-27 |

# Needle Type Globe Valves Overview

## Type S338

### Integral Bonnet Needle Valves DN 6 / Bore Size 6 mm

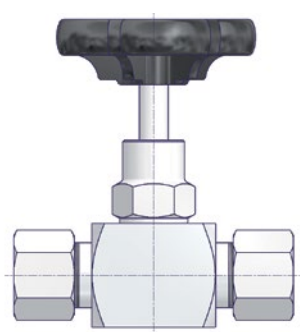
- Forged Body
- Integral Bonnet
- Integral Valve Seat
- Internal Stem Thread



## Type N334

### Needle Valves DN 5 / Bore Size 5 mm

- Barstock Body
- Screwed Bonnet
- Integral Valve Seat
- Internal Stem Thread
- O-Ring Stem Seal  
→ DVGW approved

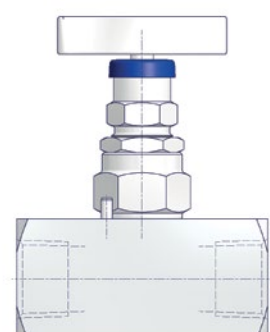


## Type H

### E Series Needle Valves DN 5 / Bore Size 5 mm

- Barstock Body
- Screwed Bonnet
- Integral Valve Seat
- External Stem Thread

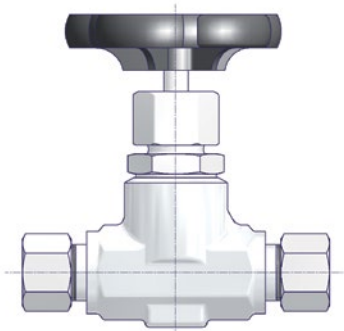
*Detailed information see Catalogue AS-2601 – E Series Valves and Manifolds - Hand Valves.*



## Type S350 / S351

### Needle Valves DN 8 / Bore Size 8 mm

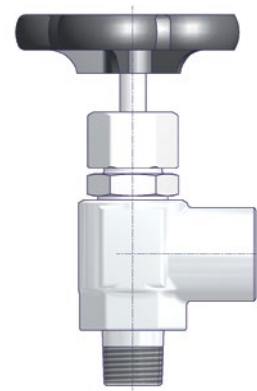
- Forged Body
- Screwed Bonnet
- Replaceable Valve Seat
- Stem Thread
  - S350 with Internal Stem Thread
  - S351 with External Stem Thread
  - F350 Bellows Sealed Option



## Type S360

### Angle Needle Valves DN 8 / Bore Size 8 mm

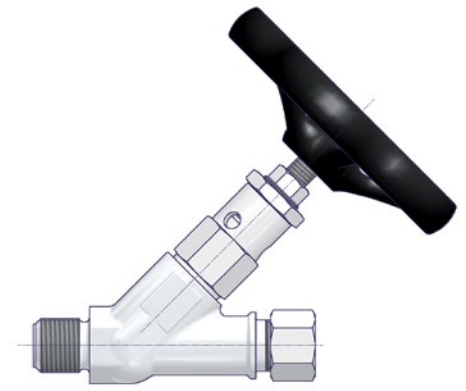
- Forged Body
- Screwed Bonnet
- Integral Valve Seat
- Internal Stem Thread



## Type S371

### Y-Pattern Needle Valves DN 8 / Bore Size 8 mm

- Forged Body
- Screwed Bonnet
- Integral Valve Seat
- External Stem Thread



**Straight Pattern**

**Angle Pattern**

**Y-Pattern (Oblique Pattern)**

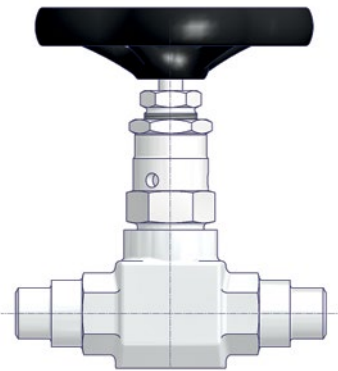
## Valve Patterns

# Needle Type Globe Valves Overview

## Type S340 / S381

### Primary Isolation Valves DN 8 / Bore Size 8 mm

- Forged Body
- Screwed Bonnet
- Replaceable Valve Seat
- External Stem Thread

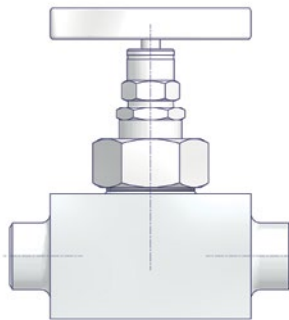


## Type A1 / B1

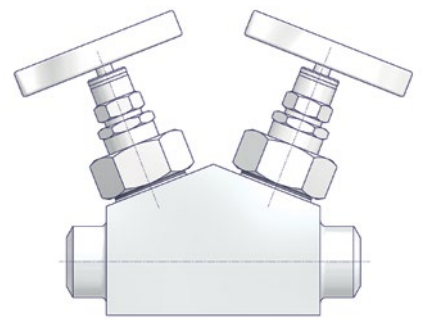
### Union Bonnet Needle Valves

Type A1: DN 11 / Bore Size = 11 mm  
Type B1: DN 8 / Bore Size = 8 mm

- Barstock Body
- Union Bonnet Design
- Integral Valve Seat
- External Stem Thread



Type A1

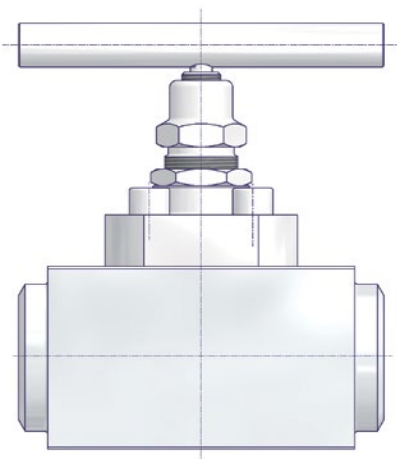


Type B1

## Type A2

### Bolted Bonnet Needle Valves DN 20 / Bore Size 20 mm

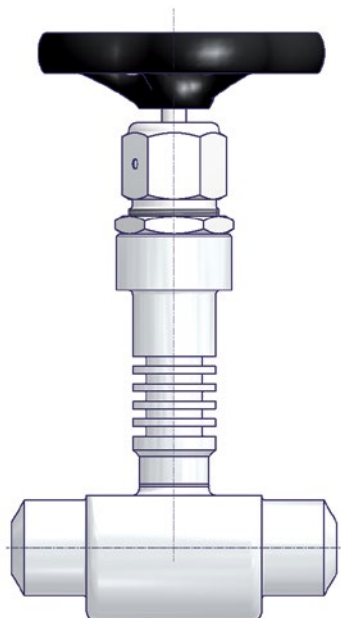
- Barstock Body
- Bolted Bonnet Design
- Integral Valve Seat
- External Stem Thread



## Type A4

### Primary Isolation Valves DN 10 / Bore Size 10 mm

- Barstock Body
- Welded Bonnet (extended)
- Integral Valve Seat





# General Features

## Body Material Options

| Material Group                      | AS Material Designation   | Material No. | Short Name         | Equivalent UNS-No. | Material Grade acc. to ASTM | S338 | N334 | H*4 | S350 / S351 | S340 / S381 | A1 | B1 | A2 | A4 |
|-------------------------------------|---------------------------|--------------|--------------------|--------------------|-----------------------------|------|------|-----|-------------|-------------|----|----|----|----|
| Heat Resistant Unalloyed Steel      | Carbon Steel              | 1.0460       | P250GH             |                    |                             | S    |      |     |             |             |    |    |    |    |
|                                     | LF2                       |              |                    |                    | LF 2                        |      | S    | S   |             |             |    |    |    |    |
|                                     | 1.0460 / A105N*1          |              |                    |                    |                             | O    |      |     | S           | S           |    |    |    |    |
| Austenitic Stainless Steel          |                           | 1.4571       | X6CrNiMoTi17-12-2  | S 31635            | 316Ti                       | S    |      | O   | S           | S           |    |    |    |    |
|                                     | 316 Quadruple Certified*2 | 1.4401       | X5CrNiMo17-12-2    | S 31600            | 316                         |      |      | O   | S           |             |    | S  | S  |    |
|                                     |                           | 1.4404       | X2CrNiMo17-12-2    | S 31603            | 316L                        |      |      |     |             |             |    |    |    |    |
|                                     |                           | 1.4919       | X6CrNiMo17-12-2    | S 31609            | 316H                        |      |      |     |             |             | S  |    |    |    |
| Austenitic-Ferritic Stainless Steel | 6 Mo                      | 1.4547       | X1CrNiMoCuN20-18-7 | S 31254            |                             |      |      | S   |             |             |    |    |    |    |
|                                     | Duplex                    | 1.4462       | X2CrNiMoN22-5-3    | S 31803            | F51                         |      |      | S   |             |             |    | O  |    |    |
|                                     |                           | Superduplex  | 1.4410             | X2CrNiMoN25-7-4    | S 32750                     | F53  |      |     | S           |             |    |    | O  |    |
|                                     | 1.4501                    |              | X2CrNiMoCuWN25-7-4 | S 32760            | F55                         |      |      | S   |             |             |    | O  |    |    |
| Heat Resistant Steel                |                           | 1.5415       | 16Mo3              |                    |                             |      |      |     |             | S           |    | S  | O  |    |
|                                     |                           | 1.7335       | 13CrMo 4-5         |                    | F12                         |      |      |     |             | S*3         |    | S  |    |    |
|                                     |                           | 1.7383       | 10CrMo 9-10        |                    | F22                         |      |      |     |             | S*3         |    | S  | O  |    |
|                                     |                           | 1.4901       | X10 CrWMoVNb 9-2   |                    | F92                         |      |      |     |             | O           |    |    |    | S  |
|                                     |                           | 1.4903       | X10 CrMoVNb 9-1    |                    | F91                         |      |      |     |             | O           | S  | S  | S  | O  |
|                                     |                           | 1.4981       | X8 CrNiMoNb 16 16  |                    |                             |      |      |     |             |             |    |    |    |    |
| Nickel Based Alloys                 | Alloy 400                 | 2.4360       | NiCu30Fe           | N 04400            |                             |      |      | S   |             |             |    | O  |    |    |
|                                     | Alloy C-276               | 2.4819       | NiMo 16 Cr 15 W    | N 10276            |                             |      |      | S   |             |             |    | O  |    |    |
|                                     | Alloy 625                 | 2.4856       | NiCr22Mo9Nb        | N 06625            |                             |      |      | S   |             |             |    | O  |    |    |
| Titanium                            | Titanium Grade 2          | 3.7035       | Ti-II              | R 50400            |                             |      |      | S   |             |             |    |    |    |    |

\*1 Dual Certified

\*2 Quadruple Certified means 316 / 316L / 1.4401 / 1.4404

\*3 Dual Certified EN/ASTM

\*4 See Catalogue AS-2601 - E Series Valves and Manifolds - Hand Valves

S = Standard | O = Optional

## Standard Features

### Packing:

PTFE and Graphite Packings are available for all valve types except the N334 Needle Valve which has an O-Ring stem seal.

### Surface Treatment:

Carbon Steel Valves are phosphatized by default.

### Pressure Test:

A shell test and a seat test are performed at 1.5 times the maximum working pressure acc. to EN 12266-1 - P10, P11 and P12 respectively MSS-SP61 at every standard AS-Schneider Needle Type Globe Valve.

### Certification:

Inspection certificate 3.1 acc. to EN 10 204 for valve body material and pressure test available on request. The heat resisting materials (see table on Page 6) are available by default with inspection certificate 3.2!



**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.**

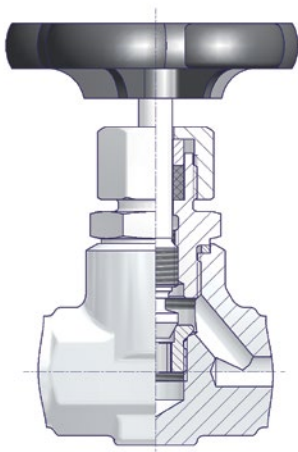


**When delivered ex factory, the safety packing of the bellows sealed valve is not fully tightened. In the event of a bellows failure the safety packing must be tightened in order to avoid fluid leakage.**

## Valve Head Unit Options

### Internal Stem Thread

Internal Stem Thread means Threads are in contact with process media.



### Stem Features

- Stem with cold rolled threads
- Back seat (except Integral Bonnet Needle Valve)
- Non-rotating needle tip or alternatively non-rotating needle

### Valve Seat (Metal to Metal)

- Integral Valve Seat or Replaceable Valve Seat

## Optional Features

### Fugitive Emission Applications:

For Fugitive Emission Applications AS-Schneider is providing bellows sealed valves with safety packing. Choice of Pressure class PN 100 or PN 250 - Suffix P5 or P6.

The bellows are submitted to a 100% Helium leak test. Leak rate:  $10^{-8}$  mbar l/s.

Optional available are TA-Luft and ISO 15848 solutions. For more details please contact the factory.

### AS-Schneider offers a BAM tested option cleaned and lubricated for Oxygen Service:

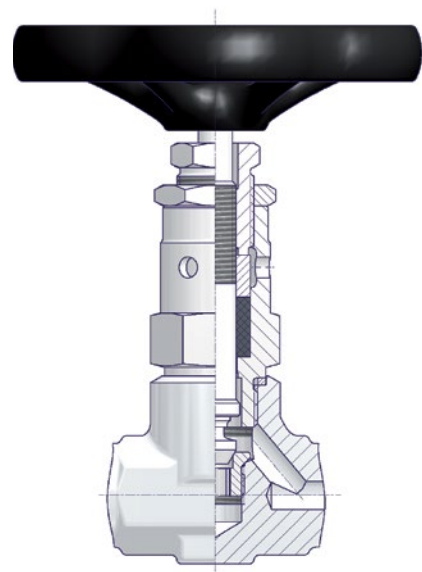
PTFE Packing – Max. PN 420 (6,000 psi) - Suffix F5  
 Pressure-Temperature Rating: Max. 420 bar @ 60°C  
 Max. 200°C @ 90 bar

Not every Valve type is available for Oxygen Service.

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

### External Stem Thread

External Stem Thread means Packing below Stem Threads. Stem Threads are protected from process media (non-wetted), helps to prevent stems from galling.

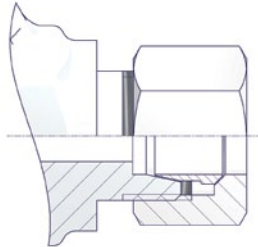


## Connections

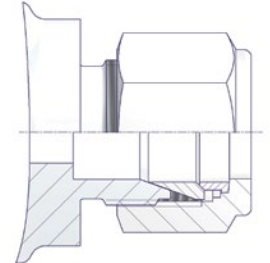
AS-Schneider is manufacturing a lot of different connections and connection combinations. In this catalogue we are showing the most popular types. On this page you will find the standard connections in detail.

### Tube Fittings

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

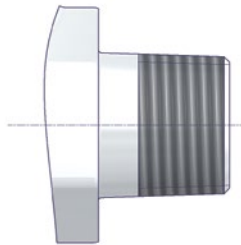


Twin Ferrule Tube Fittings



### Tapered Pipe Threads

NPT Male Threads  
acc. to ASME B 1.20.1

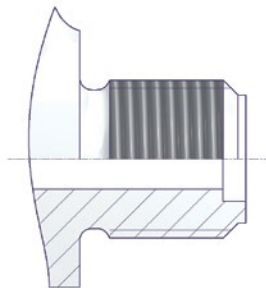


NPT Female Threads  
acc. to ASME B 1.20.1

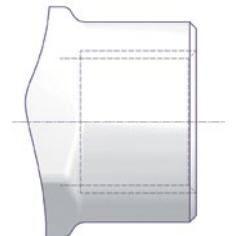


### Parallel Pipe Threads

BSP Parallel Male Threads  
acc. to DIN 19207 (G1/2)  
acc. to DIN 3852

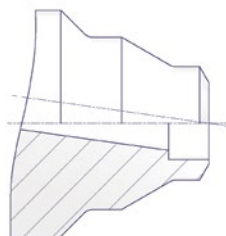


BSP Parallel Female Threads  
acc. to ISO 228 (e.g. G 1/2)  
acc. to DIN 3852-2 Form Z

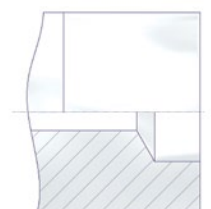


### Weld Ends

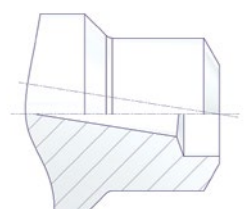
Butt Weld Ends  
for Pipes and Tubes  
acc. to ASME B16.9 and  
EN 12627



Socket Weld Ends  
for Pipes and Tubes  
acc. to ASME B16.11 and  
EN 12760



Combination of Pipe Butt  
Weld End x Tube Socket  
Weld End

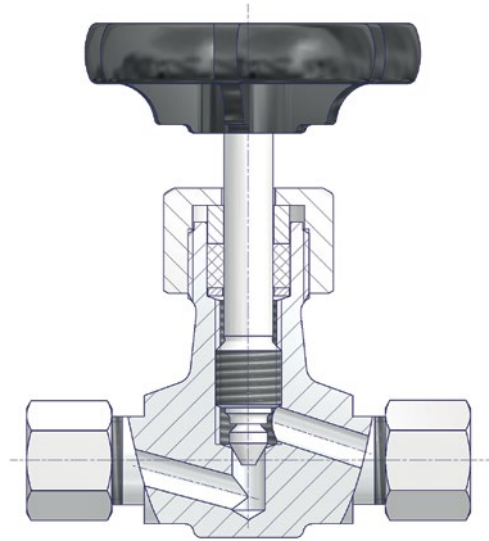




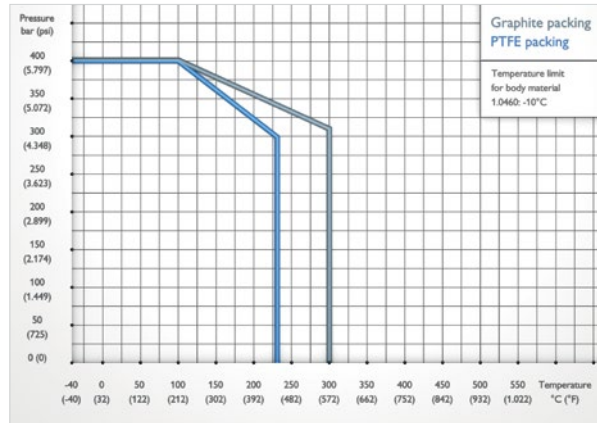
# Integral Bonnet Needle Valves

## Features

- Forged Body - DN 6 / Bore Size 6 mm
- Integral Bonnet
- Integral Valve Seat
- Internal Stem Thread
- Stem with cold rolled surface and non-rotating needle tip
- Standard-Packing PTFE (max. 232°C)
- Optional Graphite Packing (max. 300°C)

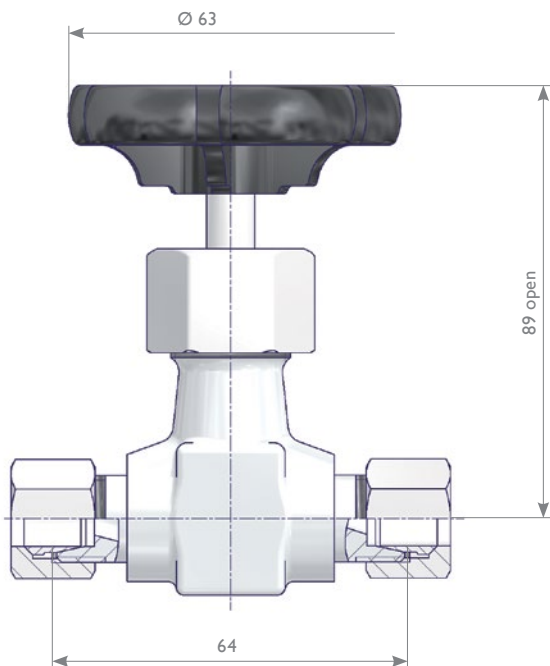


| Components   | Carbon Steel             | Stainless Steel |
|--------------|--------------------------|-----------------|
|              | Material / Material No.  |                 |
| Body         | 1.0460                   | 1.4571          |
| Valve Stem   | 1.4104                   |                 |
| Needle Tip   | 1.4122                   |                 |
| Packing      | PTFE (Optional Graphite) |                 |
| Union Nut    | Unalloyed Steel          | 1.4571          |
| Tube Fitting |                          |                 |
| Handwheel    | Plastic                  |                 |



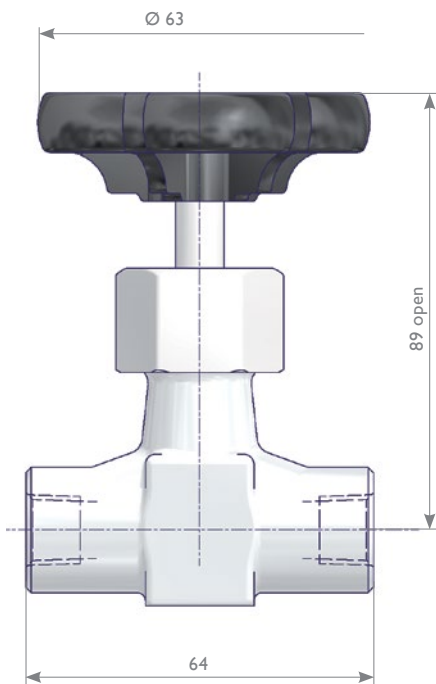
# Needle Valves Type S338

## Tube Fitting Connections Size S



| Inlet | Outlet | Part Number     |                 |
|-------|--------|-----------------|-----------------|
|       |        | Material 1.0460 | Material 1.4571 |
| 6S    |        | S338.03.130     | S338.03.230     |
| 8S    |        | S338.03.120     | S338.03.220     |
| 10S   |        | S338.03.110     | S338.03.210     |
| 12S   |        | S338.03.100     | S338.03.200     |

## Female Threads



| Inlet          | Outlet | Part Number     |                 |
|----------------|--------|-----------------|-----------------|
|                |        | Material 1.0460 | Material 1.4571 |
| 1/4 NPT Female |        | S338.08.110     | S338.08.210     |
| G 1/4 Female   |        | S338.08.115     | S338.08.215     |
| G 3/8 Female   |        | S338.08.116     | S338.08.216     |

# Screwed Bonnet Needle Valves for Gas Service Type N334

## Features

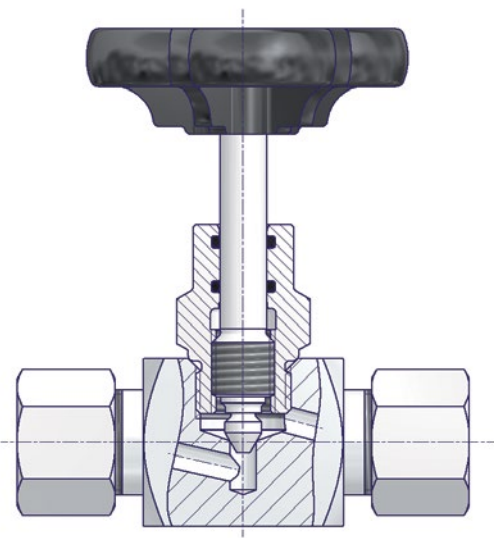
- Barstock Body - DN 5 / Bore Size 5 mm
- Screwed Bonnet
- Integral Valve Seat
- Internal Stem Thread
- Stem with cold rolled surface, back seat and non-rotating needle tip
- O-Ring Stem Seal in FPM

### DVGW approved Valves:

- Basis of type examination: DVGW VP 308
- For all gases acc. to DVGW G260
- DVGW Registration-No.: DG-4315BP0209

### Pressure-Temperature Rating:

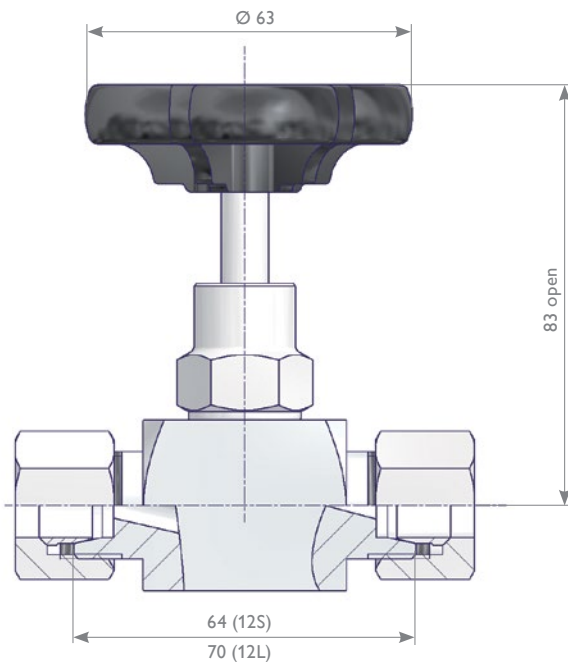
- Max. 100 bar @ -20°C up to +60°C



| Components     | Carbon Steel            |
|----------------|-------------------------|
|                | Material / Material No. |
| Body           | LF2                     |
| Bonnet         | Brass                   |
| Valve Stem     | 1.4104                  |
| Needle Tip     |                         |
| Stem Seal      | FPM                     |
| Union Nut      | Unalloyed Steel         |
| Single ferrule |                         |
| Handwheel      | Plastic                 |

## Needle Valve Type N334

DVGW tested and approved



| Connections        | Material                    | Part Number      |
|--------------------|-----------------------------|------------------|
| Tube Fitting Sizes |                             |                  |
| 12L                | Carbon Steel,<br>galvanized | N334.01.104.0083 |
| 12S                |                             | N334.01.114.0083 |

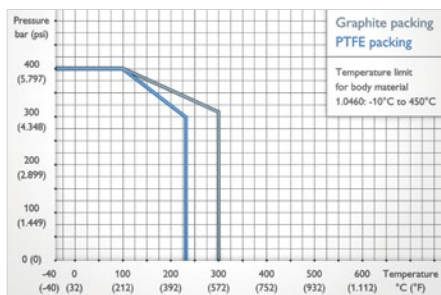
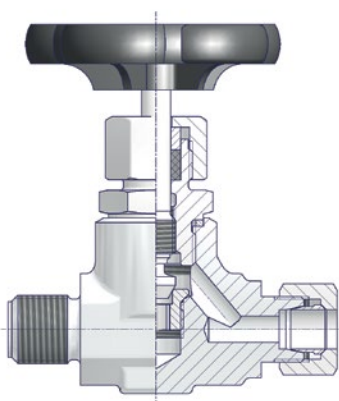
Needle Valves with threaded connections or weld ends are also available on request. Please contact the factory.

# Screwed Bonnet Needle Valves Type S350 / S351

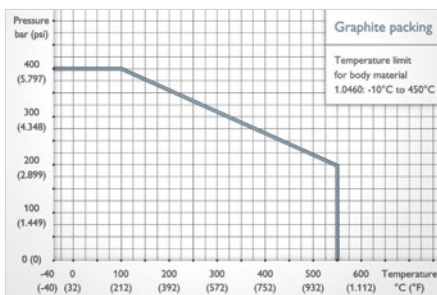
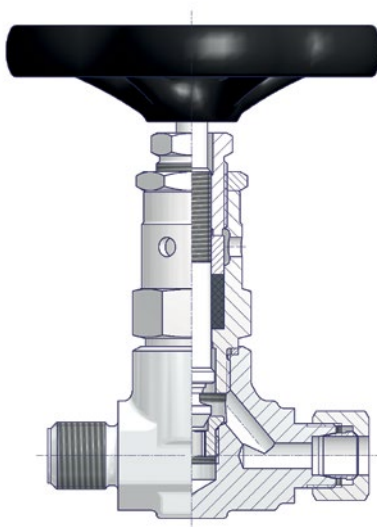
## Features

- Forged Body - DN 8 / Bore Size 8 mm
- Screwed Bonnet
- Replaceable Valve Seat
- Stem with cold rolled surface, back seat and non-rotating needle tip

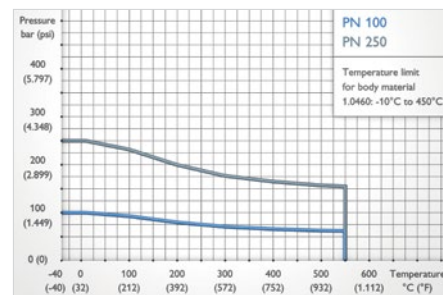
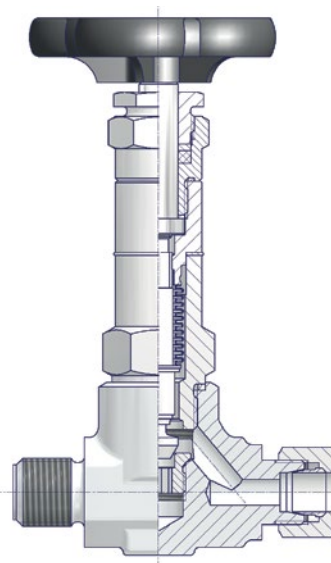
### S350 with Internal Stem Thread



### S351 with External Stem Thread\*



### F350 Bellows sealed option\*



| Components    | Carbon Steel                | Stainless Steel |
|---------------|-----------------------------|-----------------|
|               | Material / Material No.     |                 |
| Body          | 1.0460                      | 1.4571          |
| Bonnet        | 1.0501                      |                 |
| Valve Seat    | 1.4571                      |                 |
| Valve Stem    | 1.4104                      |                 |
| Needle Tip    | 1.4122                      |                 |
| Packing       | PTFE<br>(optional Graphite) |                 |
| Union Nut     | Unalloyed Steel             | 1.4571          |
| Tube Fittings |                             |                 |
| Handwheel     | Plastic                     |                 |

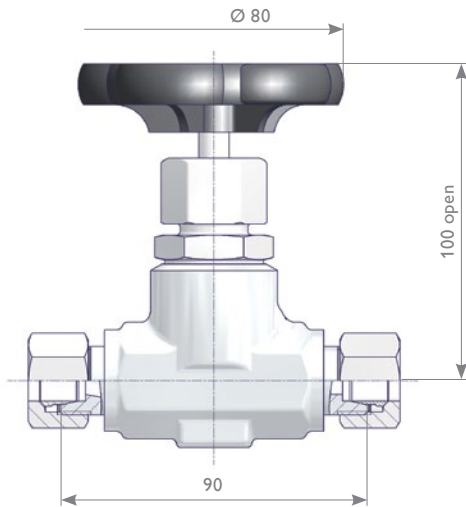
| Components     | Carbon Steel            | Stainless Steel |
|----------------|-------------------------|-----------------|
|                | Material / Material No. |                 |
| Body           | 1.0460                  | 1.4571          |
| Bonnet         | 1.7709                  |                 |
| Valve Seat     | 1.4571                  |                 |
| Valve Stem     | 1.4021                  |                 |
| Needle Tip     | 1.4122                  |                 |
| Packing        | Graphite                |                 |
| Stem Nut       | Brass                   | 1.4301          |
| Union Nut      | 1.0501                  | 1.4571          |
| Single Ferrule | 1.4571                  |                 |
| Handwheel      | Unalloyed Steel         |                 |

| Components     | Carbon Steel            | Stainless Steel |
|----------------|-------------------------|-----------------|
|                | Material / Material No. |                 |
| Body           | 1.0460                  | 1.4571          |
| Bonnet         | 1.4571                  |                 |
| Bellow         |                         |                 |
| Valve Seat     |                         |                 |
| Valve Stem     | 1.4571                  |                 |
| Needle Tip     |                         |                 |
| Packing        | Graphite                |                 |
| Stem Nut       | 1.4122                  |                 |
| Union Nut      | 1.0501                  | 1.4571          |
| Single Ferrule | 1.4571                  |                 |
| Handwheel      | Plastic                 |                 |

\* Temperature limit for Carbon Steel -10°C to 450°C.  
Temperature limit for Single Ferrule Tube Fitting max. 400°C.

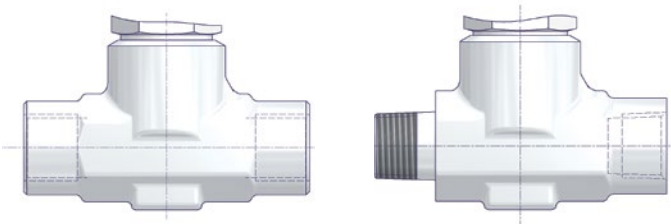
# Needle Valves Type S350

## Tube Fitting Connections Size S



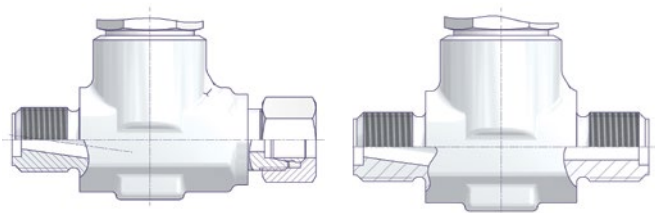
| Inlet              | Outlet | Material | Part Number |
|--------------------|--------|----------|-------------|
| Tube Fitting Sizes |        |          |             |
| 12S                |        | 1.0460   | S350.01.114 |
|                    |        | 1.4571   | S350.01.214 |
| 14S                |        | 1.0460   | S350.01.115 |
|                    |        | 1.4571   | S350.01.215 |

## Threaded Connections



| Inlet          | Outlet         | Material | Part Number |
|----------------|----------------|----------|-------------|
| G 1/2 Female   |                | 1.0460   | S350.03.104 |
|                |                | 1.4571   | S350.03.204 |
| 1/2 NPT Female |                | 1.0460   | S350.03.124 |
|                |                | 1.4571   | S350.03.224 |
| 1/2 NPT Male   | 1/2 NPT Female | 1.0460   | S350.07.124 |
|                |                | 1.4571   | S350.07.224 |

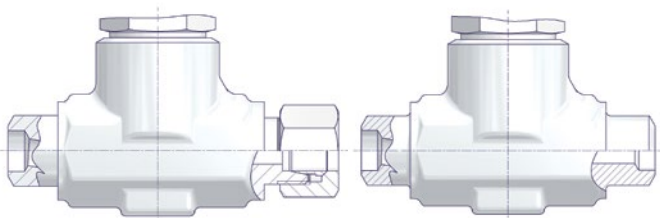
## Male Threads DIN 19207 / Tube Fitting Connection\*



| Inlet                               | Outlet                   | Material | Part Number    |
|-------------------------------------|--------------------------|----------|----------------|
| G 1/2 Male<br>DIN 19207 –<br>Type R | Tube Fitting<br>Size 12S | 1.0460   | S350.07.114.06 |
|                                     |                          | 1.4571   | S350.07.214.06 |
| G 1/2 Male DIN 19207 – Type R       |                          | 1.0460   | S350.09.100.02 |
|                                     |                          | 1.4571   | S350.09.200.02 |

\* Max. operating pressure PN 160.

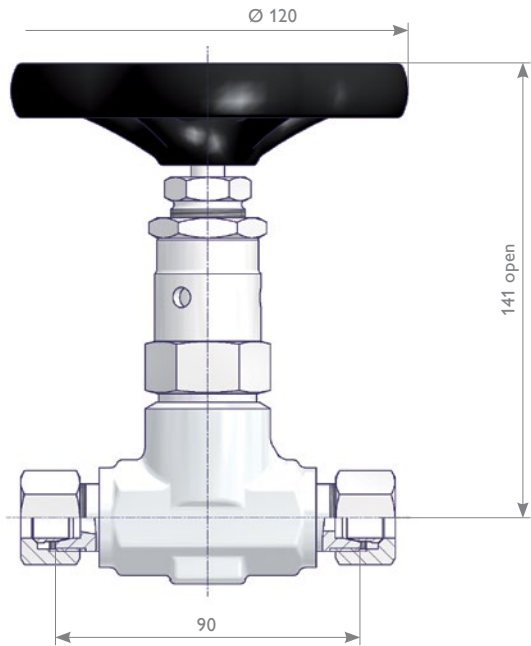
## Weld Ends / Tube Fitting Connection



| Inlet                       | Outlet                   | Material | Part Number |
|-----------------------------|--------------------------|----------|-------------|
| Weld End<br>Ø 21.3 x Ø 12.2 | Tube Fitting<br>Size 12S | 1.0460   | S350.05.130 |
|                             |                          | 1.4571   | S350.05.230 |
| Weld End Ø 21.3 x Ø 12.2    |                          | 1.0460   | S350.05.100 |
|                             |                          | 1.4571   | S350.05.200 |

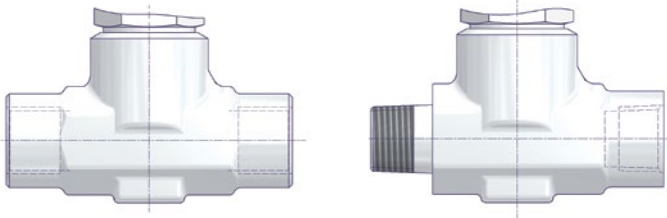
# Needle Valves Type S351

## Tube Fitting Connections Size S



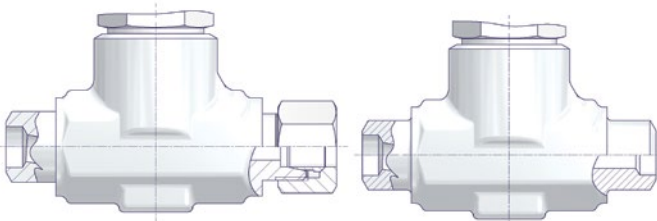
| Inlet             | Outlet | Material | Part Number |
|-------------------|--------|----------|-------------|
| Tube Fitting Size |        |          |             |
| 12S               |        | 1.0460   | S351.01.114 |
|                   |        | 1.4571   | S351.01.214 |
| 14S               |        | 1.0460   | S351.01.115 |
|                   |        | 1.4571   | S351.01.215 |

## Threaded Connections



| Inlet          | Outlet         | Material | Part Number |
|----------------|----------------|----------|-------------|
| G 1/2 Female   |                | 1.0460   | S351.03.104 |
|                |                | 1.4571   | S351.03.204 |
| 1/2 NPT Female |                | 1.0460   | S351.03.124 |
|                |                | 1.4571   | S351.03.224 |
| 1/2 NPT Male   | 1/2 NPT Female | 1.0460   | S351.07.124 |
|                |                | 1.4571   | S351.07.224 |

## Weld Ends / Tube Fitting Connection



| Inlet                       | Outlet                   | Material | Part Number |
|-----------------------------|--------------------------|----------|-------------|
| Weld End<br>Ø 21.3 x Ø 12.2 | Tube Fitting<br>Size 12S | 1.0460   | S351.05.130 |
|                             |                          | 1.4571   | S351.05.230 |
| Weld End Ø 21.3 x Ø 12.2    |                          | 1.0460   | S351.05.100 |
|                             |                          | 1.4571   | S351.05.200 |

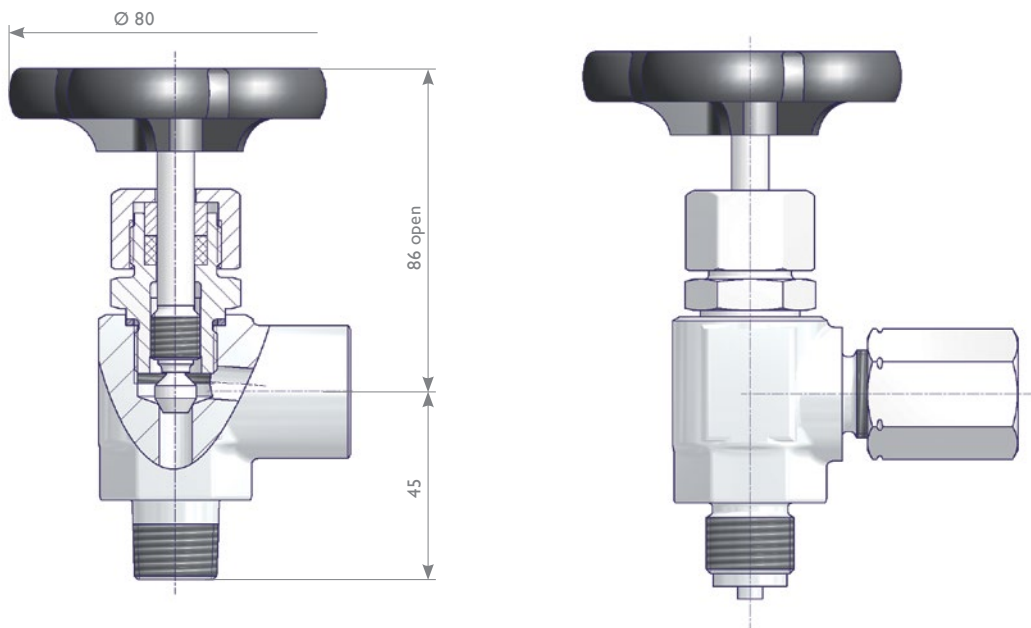


# Angle Needle Valves Type S360

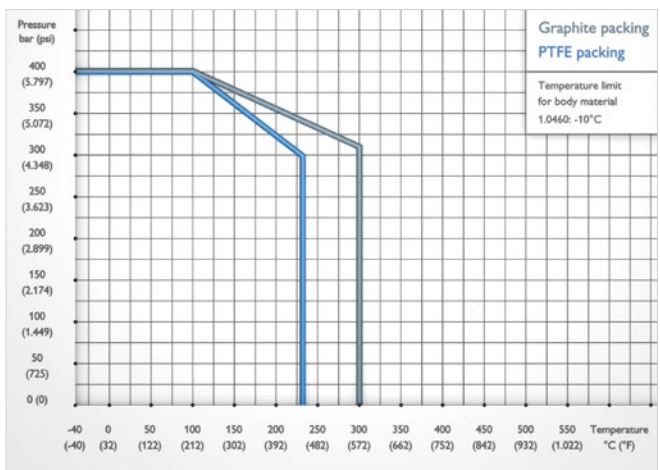
## Features

- Forged Body - DN 8 / Bore Size 8 mm
- Screwed Bonnet
- Integral Valve Seat
- Stem with cold rolled surface, back seat and non-rotating needle tip

Please contact the factory for Your Angle Pattern Needle Valve.



| Components   | Carbon Steel             | Stainless Steel |
|--------------|--------------------------|-----------------|
|              | Material / Material No.  |                 |
| Body         | 1.0460                   | 1.4571          |
| Bonnet       | 1.0501                   |                 |
| Valve Stem   | 1.4104                   |                 |
| Needle Tip   | 1.4122                   |                 |
| Packing      | PTFE (Optional Graphite) |                 |
| Union Nut    | Unalloyed Steel          | 1.4571          |
| Tube Fitting |                          |                 |
| Handwheel    | Plastic                  |                 |

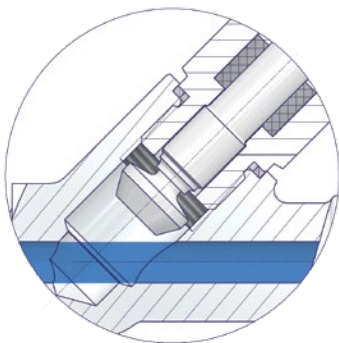


# Y-Pattern Needle Valves Type S371

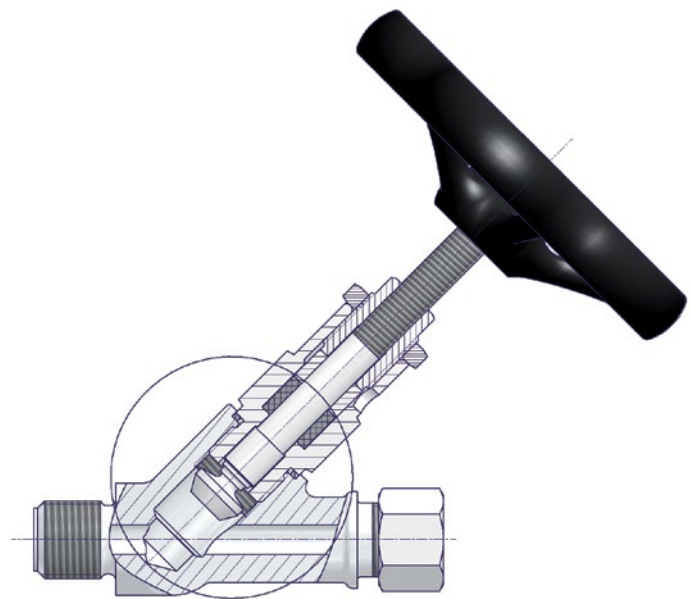
## Features

- Forged Body - DN 8 / Bore Size 8 mm
- Screwed Bonnet
- Integral Valve Seat
- External Stem Thread
- Stem with cold rolled surface, back seat and non-rotating needle tip

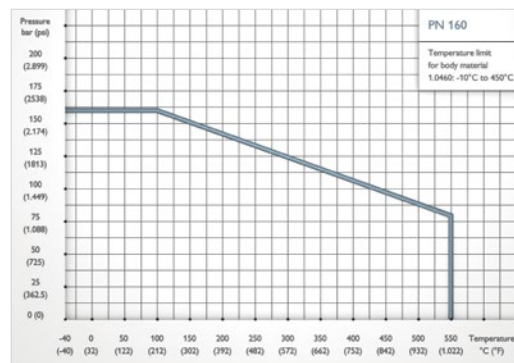
Please contact the factory for Your Y-Pattern Needle Valve.



**Straight-Through Design**  
→ Valve is fully roddable



| Components | Material / Material No. |
|------------|-------------------------|
| Body       | 1.4571                  |
| Bonnet     |                         |
| Valve Stem |                         |
| Needle Tip |                         |
| Packing    | Graphite                |
| Stem Nut   | 1.4301                  |
| Handwheel  | Unalloyed Steel         |



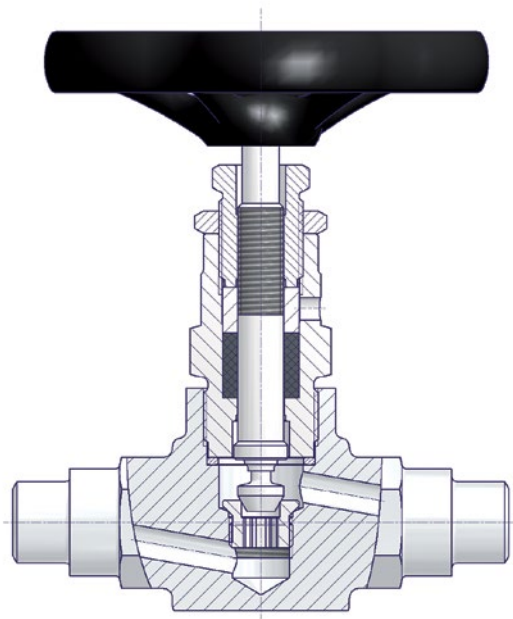
For working pressures exceeding 160 bar please contact the factory.

# Screwed Bonnet Needle Valves Type S340 / S381

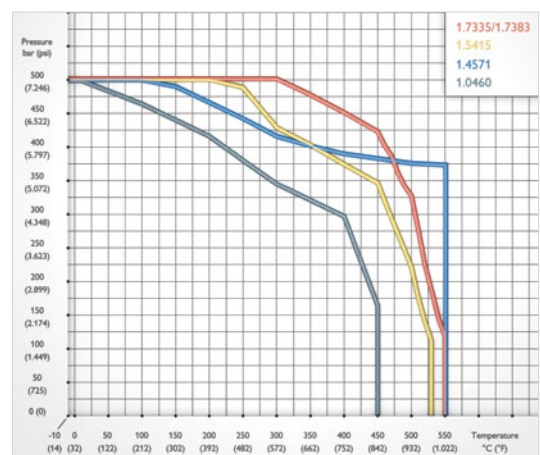
## Features

- Forged Body - DN 8 / Bore Size 8 mm
- Screwed Bonnet
- Replaceable Valve Seat
- Stem with cold rolled surface, back seat and non-rotating needle tip

Needle Valve mainly used as Primary Isolation Valve.



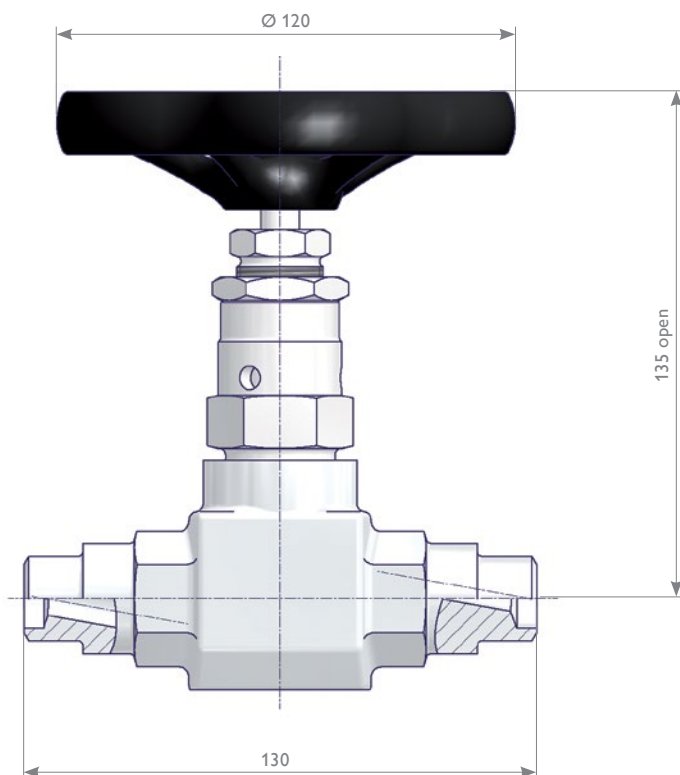
| Components | Carbon Steel            | Heat Resistant Steel |          | Stainless Steel |
|------------|-------------------------|----------------------|----------|-----------------|
|            | Material / Material No. |                      |          |                 |
| Body       | 1.0460                  | 1.7335 / 1.5415      | 1.7383   | 1.4571          |
| Bonnet     | 1.7709                  |                      |          |                 |
| Valve Seat | 1.4571                  |                      | 1.4981   |                 |
| Valve Stem | 1.4021                  |                      | 1.4571   |                 |
| Needle Tip | 1.4122                  |                      | Stellite |                 |
| Packing    | Graphite                |                      |          |                 |
| Stem Nut   | Brass                   |                      | 1.4301   |                 |
| Handwheel  | Unalloyed Steel         |                      |          |                 |



The respective maximum allowable pressure depends on the tube / pipe connection used. For further information please contact the factory.

# Screwed Bonnet Needle Valves

## Weld Ends



| Weld End Connections               |                                  | Part Number    |                |                |                |                |
|------------------------------------|----------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                    |                                  | Material       |                |                |                |                |
| Inlet                              | Outlet                           | 1.0460         | 1.7335         | 1.5415         | 1.7383         | 1.4571         |
| Tube Butt Weld End Ø 14 x 2.5      |                                  | S340.11.112.04 | S340.11.114.04 | S340.11.600.11 | S340.16.112.04 | S340.11.212.04 |
| Pipe Butt Weld End Ø 21.3 x 3.2    |                                  | S340.11.135.31 | S340.11.136.31 | S340.11.636.31 | S340.16.136.31 | S340.11.236.31 |
| Pipe Butt Weld End Ø 21.3 x 2.9    |                                  | S340.11.135.32 | S340.11.136.32 | S340.11.636.32 | S340.16.136.32 | S340.11.236.32 |
| Pipe Butt Weld End<br>Ø 21.3 x 3.2 | Tube Butt Weld End<br>Ø 14 x 2.5 | S340.11.135.33 | S340.11.136.33 | S340.11.636.33 | S340.16.136.33 | S340.11.236.33 |
| Pipe Butt Weld End<br>Ø 21.3 x 2.9 | Tube Butt Weld End<br>Ø 14 x 2.5 | S340.11.135.34 | S340.11.136.34 | S340.11.636.34 | S340.16.136.34 | S340.11.236.34 |
| Pipe Butt Weld End<br>Ø 21.3 x 6.3 | Tube Butt Weld End<br>Ø 14 x 2.5 | S340.11.135.37 | S340.11.136.37 | S340.11.636.37 | S340.16.136.37 | S340.11.236.37 |
| Pipe Butt Weld End<br>Ø 24 x 7.1   | Tube Butt Weld End<br>Ø 14 x 2.5 | S340.11.135.40 | S340.11.136.40 | S340.11.636.40 | S340.16.136.40 | S340.11.236.40 |
| Pipe Socket Weld End 1/2"          |                                  | S381.40.114.01 | S381.40.614.01 | S381.40.714.01 | S381.40.514.01 | S381.40.214.01 |

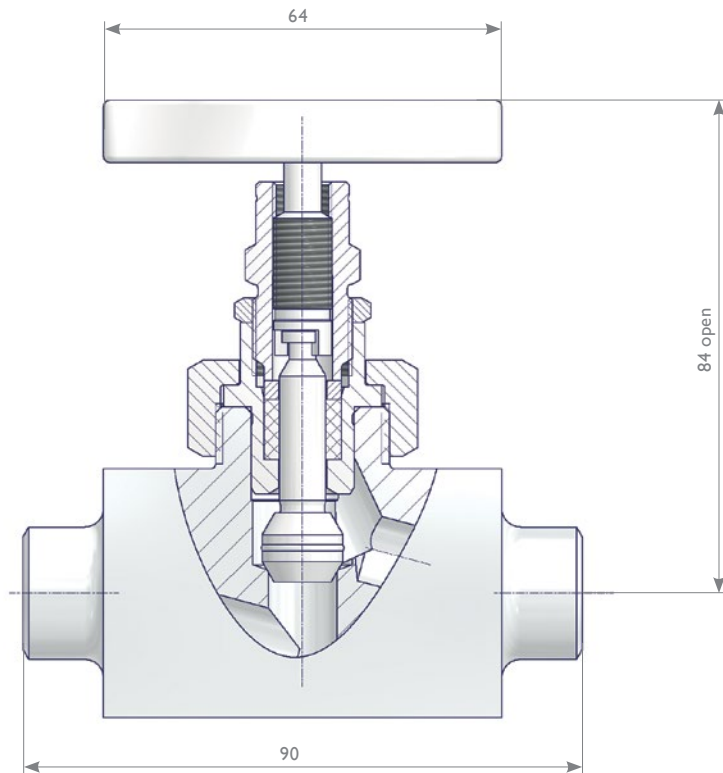
# Union Bonnet Needle Valves Type A1

## Features

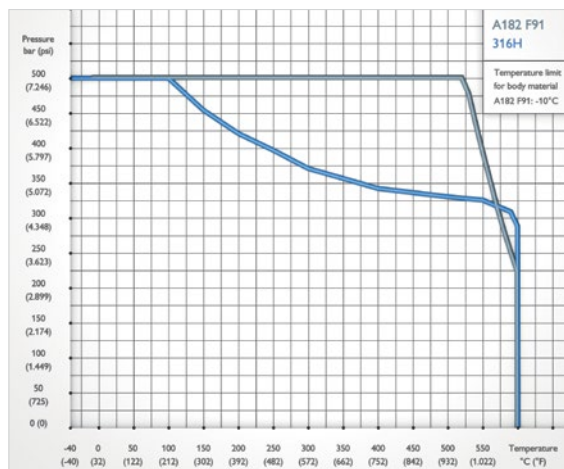
- Barstock Body - DN 11 / Bore Size 11 mm
- Union Bonnet
- Integral Valve Seat
- External Stem Thread
- Valve Stem with cold rolled threads
- Non-rotating Needle and back seat design

Options see Ordering Information on Page 23.

**Union Bonnet Needle Valves are designed for Severe Service.**



| Components   | Heat Resistant Steel             | Stainless Steel |
|--------------|----------------------------------|-----------------|
|              | Material / Material No.          |                 |
| Body         | 1.4903 / F91*                    | 316H            |
| Bonnet       | 1.4903 / F91                     | 316 / 316L      |
| Valve Stem   | 1.4404 / 316L                    |                 |
| Needle       | 1.4923 - Tip Stellite            | 316 / 316L      |
| Union Nut    | 1.7709                           | 316 / 316L      |
| Packing      | PTFE or Graphite                 |                 |
| Stem Nut     | 316                              |                 |
| T Bar Handle | Options see Ordering Information |                 |



PTFE Packing is limited to 232°C (450°F).

The respective maximum allowable pressure depends on the tube / pipe connection used. For further information please contact the factory.

\* Welded connections in material 1.4903 / F91 / 1.7335 / 1.7380 require post weld heat treatment (PWHT) at around 700 - 750°C. The valve head unit must be removed prior to the heat treatment to avoid damages. See the installation, operation and maintenance manual for instructions. We recommend to order these valves with 100 mm pipe extensions (Option V - Box 15) to avoid the removal of the valve head units.

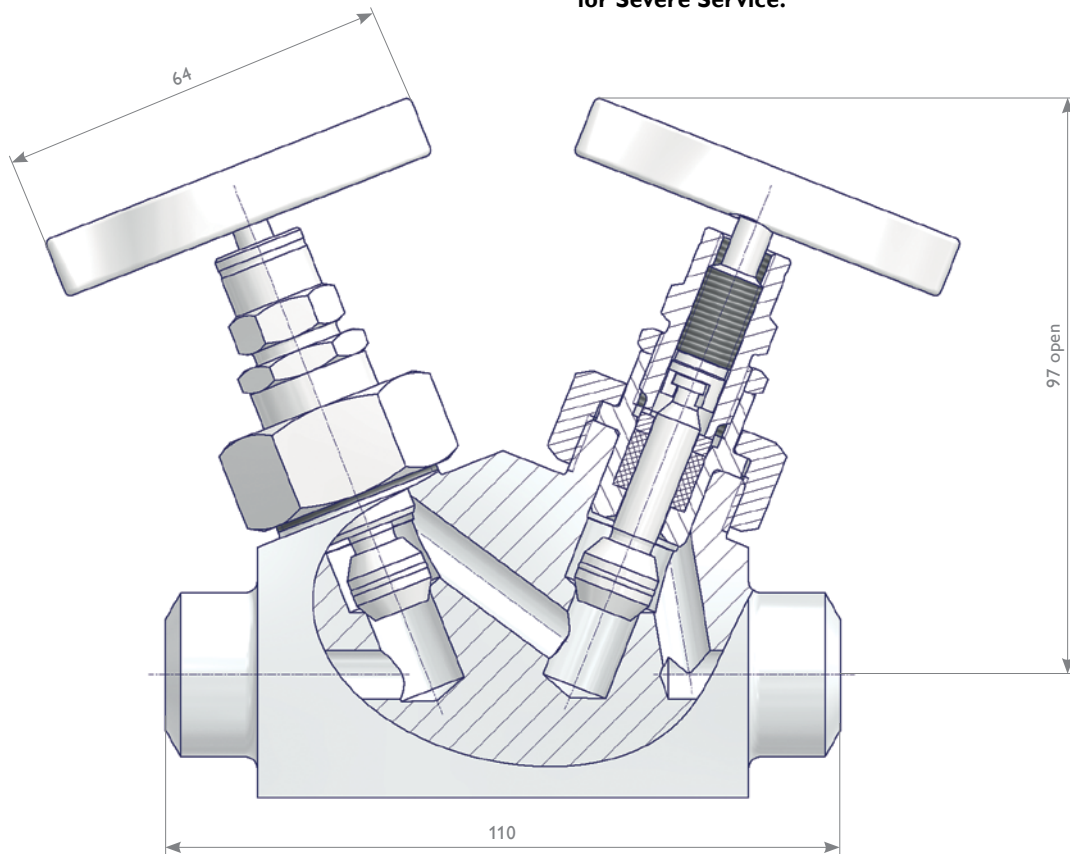
# Union Bonnet Tandem Valves Type B1

## Features

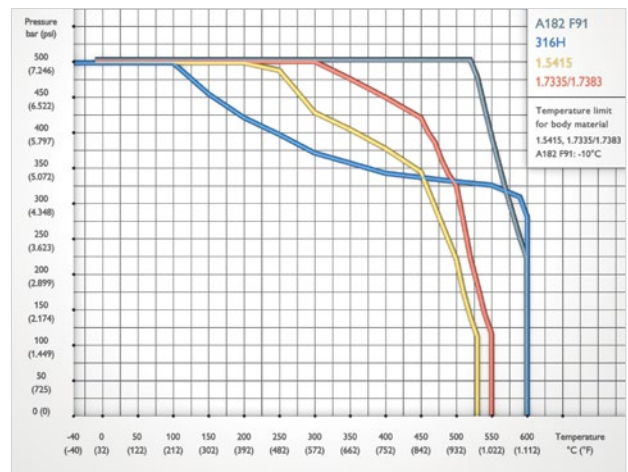
- Barstock Body DN 8 / Bore Size = 8 mm
- Union Bonnet
- Integral Valve Seat
- External Stem Thread
- Valve Stem with cold rolled threads
- Non-rotating Needle and back seat design

Options see Ordering Information on Page 23.

**Union Bonnet Tandem Valves are designed for Severe Service.**



| Components   | Heat Resistant Steel             |        |         |         | Stainless Steel |
|--------------|----------------------------------|--------|---------|---------|-----------------|
|              | Material / Material No.          |        |         |         |                 |
| Body         | 1.4903 / F91*                    | 1.5415 | 1.7335* | 1.7380* | 316 / 316L      |
| Bonnet       | 1.4903 / F91                     |        |         |         | 316 / 316L      |
| Valve Stem   | 1.4404 / 316L                    |        |         |         |                 |
| Needle       | 1.4923 - Tip Stellite            |        |         |         | 316 / 316L      |
| Union Nut    | 1.7709                           |        |         |         | 316 / 316L      |
| Packing      | PTFE or Graphite                 |        |         |         |                 |
| Stem Nut     | 316                              |        |         |         |                 |
| T Bar Handle | Options see Ordering Information |        |         |         |                 |



PTFE Packing is limited to 232°C (450°F).

The respective maximum allowable pressure depends on the tube / pipe connection used. For further information please contact the factory.

\* Welded connections in material 1.4903 / F91 / 1.7335 / 1.7380 require post weld heat treatment (PWHT) at around 700 - 750°C. The valve head unit must be removed prior to the heat treatment to avoid damages. See the installation, operation and maintenance manual for instructions. We recommend to order these valves with 100 mm pipe extensions (Option V - Box 15) to avoid the removal of the valve head units.

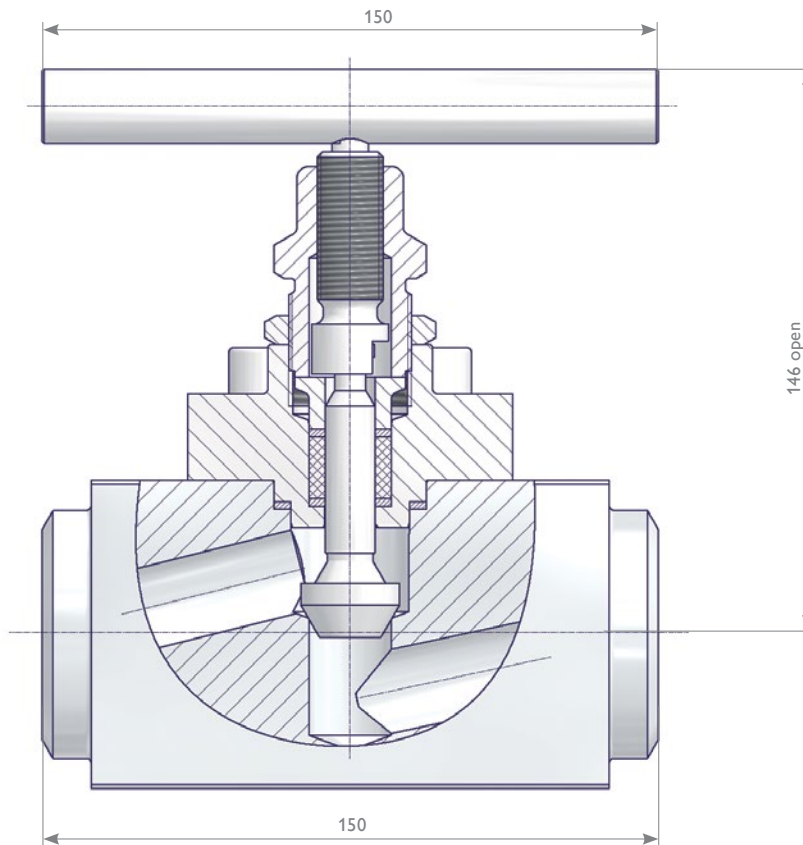


# Bolted Bonnet Needle Valves Type A2

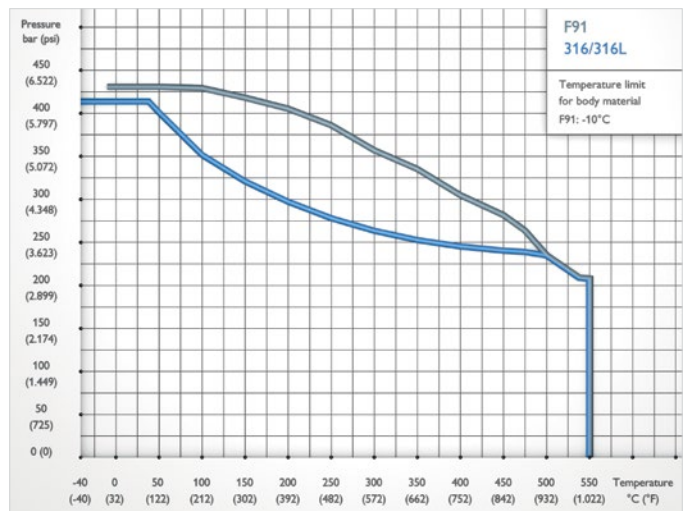
## Features

- Barstock Body - DN 20 / Bore Size 20 mm
- Bolted Bonnet
- Integral Valve Seat
- External Stem Thread
- Valve Stem with cold rolled threads
- Non-rotating Needle and back seat design

Options see Ordering Information on Page 23.



| Components       | Heat Resistant Steel             | Stainless Steel |
|------------------|----------------------------------|-----------------|
|                  | Material / Material No.          |                 |
| Body             | 1.4903 / F91                     | 316 / 316L      |
| Bonnet           | 1.4903 / F91                     | 316 / 316L      |
| Body-Bonnet Seal | Graphite                         |                 |
| Valve Stem       | S17400                           |                 |
| Needle           | 1.4923 - Tip Stellite            | 316 / 316L      |
| Bonnet bolting   | 1.4980 / A453 Gr.660 Cl.B        |                 |
| Packing          | PTFE or Graphite                 |                 |
| Stem Nut         | 1.4301 / 304                     |                 |
| T Bar Handle     | Options see Ordering Information |                 |



PTFE Packing is limited to 232°C (450°F).

The respective maximum allowable pressure depends on the tube / pipe connection used. For further information please contact the factory.

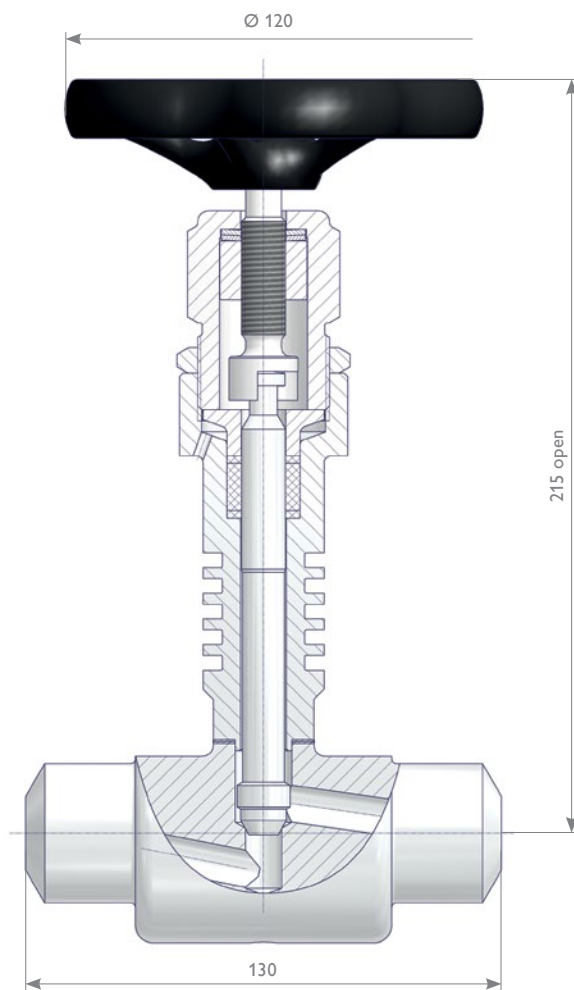
# Welded Bonnet Needle Valves Type A4

## Features

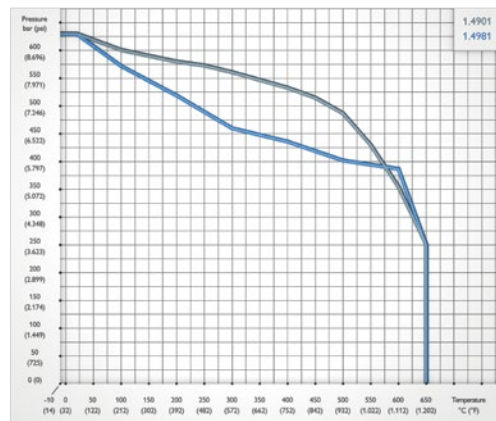
- Barstock Body - DN 10 / Bore Size 10 mm
- Electron Beam Welded Bonnet
- Extended Bonnet to dissipate heat and to lower heat at the packing and the stem threads
- Integral Valve Seat
- External Stem Thread
- Valve Stem with cold rolled threads
- Non-rotating Needle and back seat design

Options see Ordering Information on Page 23.

## Needle Valve for High Temperature Service.



| Components   | Heat Resistant Steel             | Stainless Steel |
|--------------|----------------------------------|-----------------|
|              | Material / Material No.          |                 |
| Body         | 1.4901                           | 1.4981          |
| Bonnet       | 1.4901                           | 1.4981          |
| Valve Stem   | 1.4923                           |                 |
| Needle       | Alloy 80A                        |                 |
| Packing      | Graphite                         |                 |
| Stem Nut     | 1.4571                           |                 |
| T Bar Handle | Options see Ordering Information |                 |



Graphite Packing only.

# Ordering Information I A1, B1, A2 and A4 Needle Valves

## Ordering Information

|  | 1   | 2         | 3                  | 4             | 5    | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--|---|-----------|--------------------|---------------|------|---|---|---|---|----|----|----|----|----|----|
|  | B   | 1         | B                  | -             | A    | 4 | P | A | 4 | P  | -  | S  | A  | K  |    |
| <b>Valve Type</b>  |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A1   | Union Bonnet Needle Valve DN 11 / Bore Size 11 mm                           |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| B1   | Union Bonnet Tandem Valve DN 8 / Bore Size 8 mm                             |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A2   | Bolted Bonnet Needle Valve DN 20 / Bore Size 20 mm                          |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A4   | Welded Bonnet Needle Valve DN 10 / Bore Size 10 mm (Graphite Packing only.) |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Packing</b>   |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A  | PTFE  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| B  | Graphite  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| W  | Carbon-Filled PTFE – TA-Luft  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Inlet Connection</b>  |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A  | Butt Weld End   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| D  | Socket Weld End   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| H  | Twin Ferrule Tube Fitting   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| L  | Female Thread   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Pipe / Tube</b>   |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
|  | <b>Tube Fitting</b>   |           |                    | <b>Thread</b> |      |   |   |   |   |    |    |    |    |    |    |
| 4  | 1/2" pipe   | R         | Rotarex            | N             | NPT  |   |   |   |   |    |    |    |    |    |    |
| 6  | 3/4" pipe*1   | S         | Swagelok           |               |      |   |   |   |   |    |    |    |    |    |    |
| 8  | 1" pipe*1   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| C  | 10 mm   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| D  | 12 mm   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| E  | 14 mm   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| F  | 16 mm   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| G  | 18 mm   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| K  | 25 mm*1   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| T  | 1" tube*1   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| V  | 1 1/4" tube*1   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| X  | 1 1/2" tube*1+2   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Wall Thickness Pipes / Tubes</b>  |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
|  | <b>Tube O.D.</b>  |           | <b>Thread Size</b> |               |      |   |   |   |   |    |    |    |    |    |    |
| 2  | 2.0 mm  | 4         | 12                 | 4             | 1/2" |   |   |   |   |    |    |    |    |    |    |
| 3  | 3.2 mm  | 5         | 14                 |               |      |   |   |   |   |    |    |    |    |    |    |
| 4  | 4.0 mm  | 6         | 16                 |               |      |   |   |   |   |    |    |    |    |    |    |
| 8  | 2.6 mm  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A  | 3.6 mm  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| D  | 5.0 mm  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| E  | 5.5 mm  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| G  | 7.0 mm  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| N  | Schedule 40   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| P  | Schedule 80   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| Q  | Schedule 160  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A  | Socket Weld   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Outlet Connection → see Inlet Connection Ordering Information Specifics</b> |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Body Material</b>   |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
|  | <b>A1</b>   | <b>B1</b> | <b>A2</b>          | <b>A4</b>     |      |   |   |   |   |    |    |    |    |    |    |
| R  | -   | 1.7335    | -                  | -             |      |   |   |   |   |    |    |    |    |    |    |
| S  | 316H  | 316/316L  | 316/316L           | -             |      |   |   |   |   |    |    |    |    |    |    |
| U  | -   | 1.7380    | -                  | -             |      |   |   |   |   |    |    |    |    |    |    |
| W  | F91   | F91       | F91                | -             |      |   |   |   |   |    |    |    |    |    |    |
| Q  | -   | 1.5415    | -                  | -             |      |   |   |   |   |    |    |    |    |    |    |
| X  | -   | -         | -                  | 1.4981        |      |   |   |   |   |    |    |    |    |    |    |
| Y  | -   | -         | -                  | 1.4901        |      |   |   |   |   |    |    |    |    |    |    |
| <b>Vent Connection</b>   |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| A  | Without   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Operation Options</b>   |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| B  | Handwheel Unalloyed Steel   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| K  | T Bar Handle  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| <b>Additional Options</b>  |   |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |
| V  | Pipe Extension  |           |                    |               |      |   |   |   |   |    |    |    |    |    |    |

\*1 Socket Weld End for A2 Needle Valve only.

\*2 Butt Weld End not available for A1 Needle Valve.

Armaturenfabrik Franz Schneider GmbH + Co.KG reserves the right to change materials, specifications or designs without notice.

# Condensate Pots

## Product Description

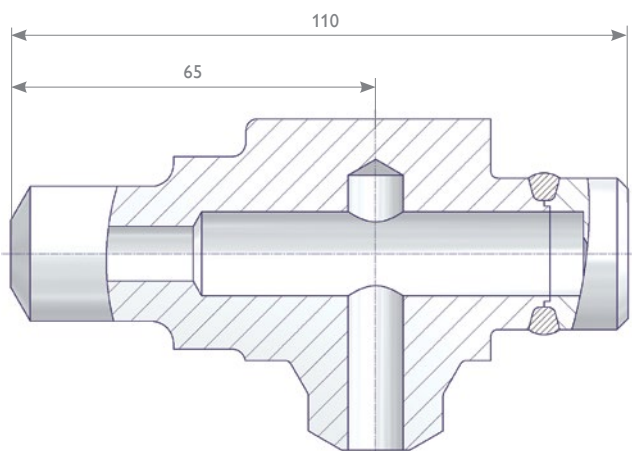
Condensate Pots (also called Seal Pots) are used in the measurement of steam or other vapors for two reasons: One reason is that a level of condensed water is accumulated inside of the pot and maintains a fluid volume for displacement equal to or greater than the volume displacement of the transmitter (protecting the transmitter from heat).

The second reason for maintaining a liquid inside of the pot is to prevent flashing of the liquid in the impulse line if a sudden temperature change of the steam is made. A dam inside of the pot prevents this flashing effect.

Pots with more outlet ports for applications where foreign material should be trapped and drained preventing damage of the manifolds and transmitters are also available.

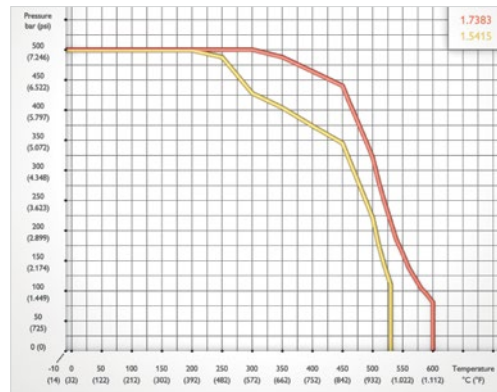
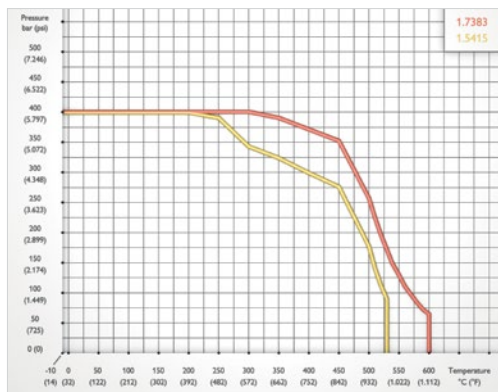
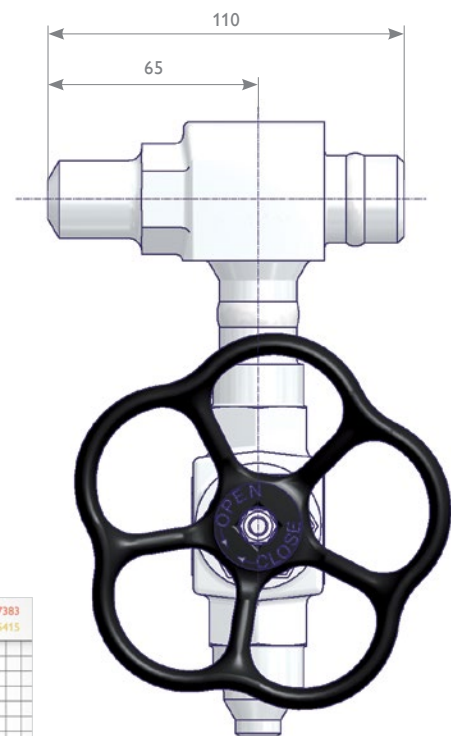
For more details please contact the factory. For details see also DIN 19211.

## Condensate Pots for Small Volume Displacements



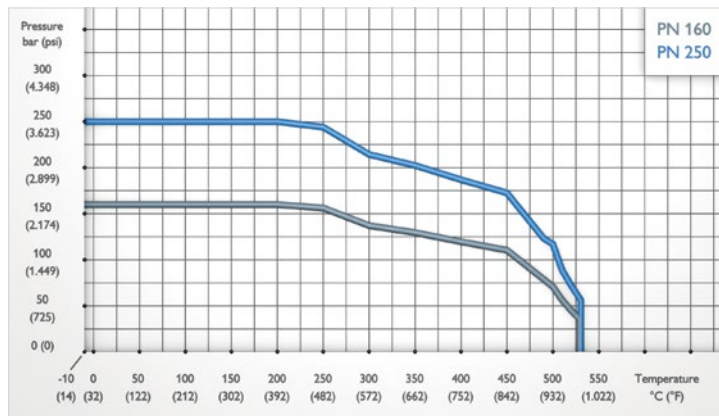
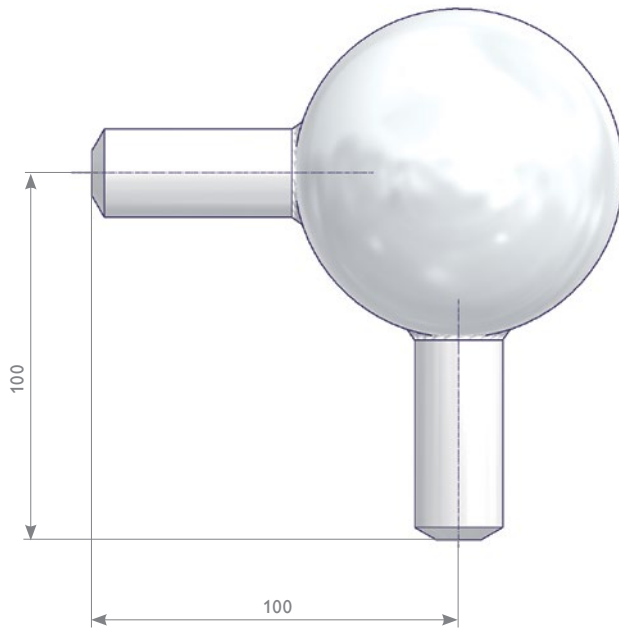
### Optional

Condensate Pot / Primary Isolation Valve Assembly - Factory Welded



| Weld End Connections            |        | Part Number |                    |                    |
|---------------------------------|--------|-------------|--------------------|--------------------|
|                                 |        | Material    |                    |                    |
| Inlet                           | Outlet | 1.5415      | 1.7383             |                    |
|                                 |        | PN          | Volume (approx.)   |                    |
|                                 |        |             | 20 cm <sup>3</sup> | 20 cm <sup>3</sup> |
| Pipe Butt Weld End Ø 21.3 x 3.2 |        | 400         | S007.51.603.42     |                    |
| Pipe Butt Weld End Ø 21.3 x 6.3 |        | 500         | S007.51.600.45     |                    |
| Pipe Butt Weld End Ø 24 x 7.1   |        | 500         | S007.51.600.26     | S007.51.500.26     |

## Condensate Pots for Larger Volume Displacements



| Weld End Connections            |                               | Part Number        |                     |                     |
|---------------------------------|-------------------------------|--------------------|---------------------|---------------------|
|                                 |                               | Material<br>1.5415 |                     |                     |
| Inlet                           | Outlet                        | PN                 | Volume              |                     |
|                                 |                               |                    | 250 cm <sup>3</sup> | 700 cm <sup>3</sup> |
| Pipe Butt Weld End Ø 21.3 x 6.3 |                               | 250                | S007.51.653.05      |                     |
| Pipe Butt Weld End Ø 33.7 x 4.5 | Pipe Butt Weld End Ø 24 x 7.1 | 250                |                     | S007.51.653.06      |
| G 1/2 Male DIN 19207 Type R     | G 1/2 Male DIN 19207 Type V   | 160                | S007.51.653.04      |                     |

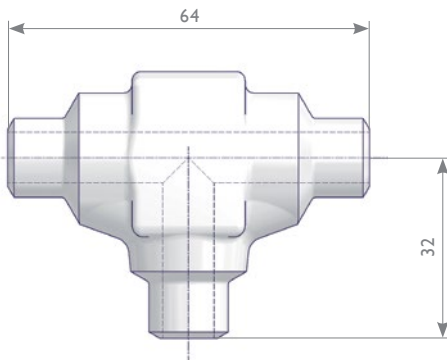
# Weld Fittings | Tees, Reducers, Connectors

## Product Description

AS-Schneider is providing a large range of Weld Fittings – different concerning shape (Tees, Elbows, etc.) and connections (for pipes and tubes) and different in terms of available materials. On this page we are just showing the most used types.

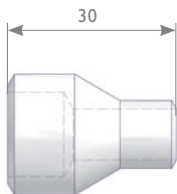
If you don't find your option please contact the factory.

## Tees



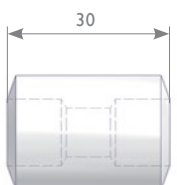
| Weld End Connections               | Part Number    |             |                |
|------------------------------------|----------------|-------------|----------------|
|                                    | Material       |             |                |
|                                    | 1.5415         | 1.7335      | 1.4571         |
| Pipe Butt Weld End<br>Ø 21.3 x 3.2 | S006.40.610.43 |             | S006.40.210.43 |
| Tube Butt Weld<br>End Ø 14 x 2.5   | S006.40.600    | S006.40.101 | S006.40.200    |
| Tube Socket Weld End<br>Ø 14       |                |             | S006.40.210    |

## Reducers (Pipe Butt Weld x Tube Butt Weld)



| Weld End Connections               |                                  | Part Number    |                |
|------------------------------------|----------------------------------|----------------|----------------|
|                                    |                                  | Material       |                |
|                                    |                                  | 1.5415         | 1.4571         |
| Pipe Butt Weld End<br>Ø 21.3 x 3.2 | Tube Butt Weld End<br>Ø 12 x 1.5 |                | S006.40.230.20 |
| Pipe Butt Weld End<br>Ø 21.3 x 3.2 | Tube Butt Weld End<br>Ø 14 x 2.5 | S006.40.630.14 | S006.40.230.14 |
| Pipe Butt Weld End<br>Ø 33.7 x 4.5 | Tube Butt Weld End<br>Ø 14 x 2.5 | S006.40.632.84 | S006.40.232.84 |

## Connectors (Pipes and Tubes)



| Weld End Connections         | Part Number    |                |
|------------------------------|----------------|----------------|
|                              | Material       |                |
|                              | 1.5415         | 1.4571         |
| Weld End<br>Ø 21.3 x Ø 12.2  |                | S006.40.220    |
| Weld End<br>Ø 21.3 x Ø 14.25 | S006.40.120.04 | S006.40.220.04 |



# Threaded Pipe Ends acc. to DIN 19207

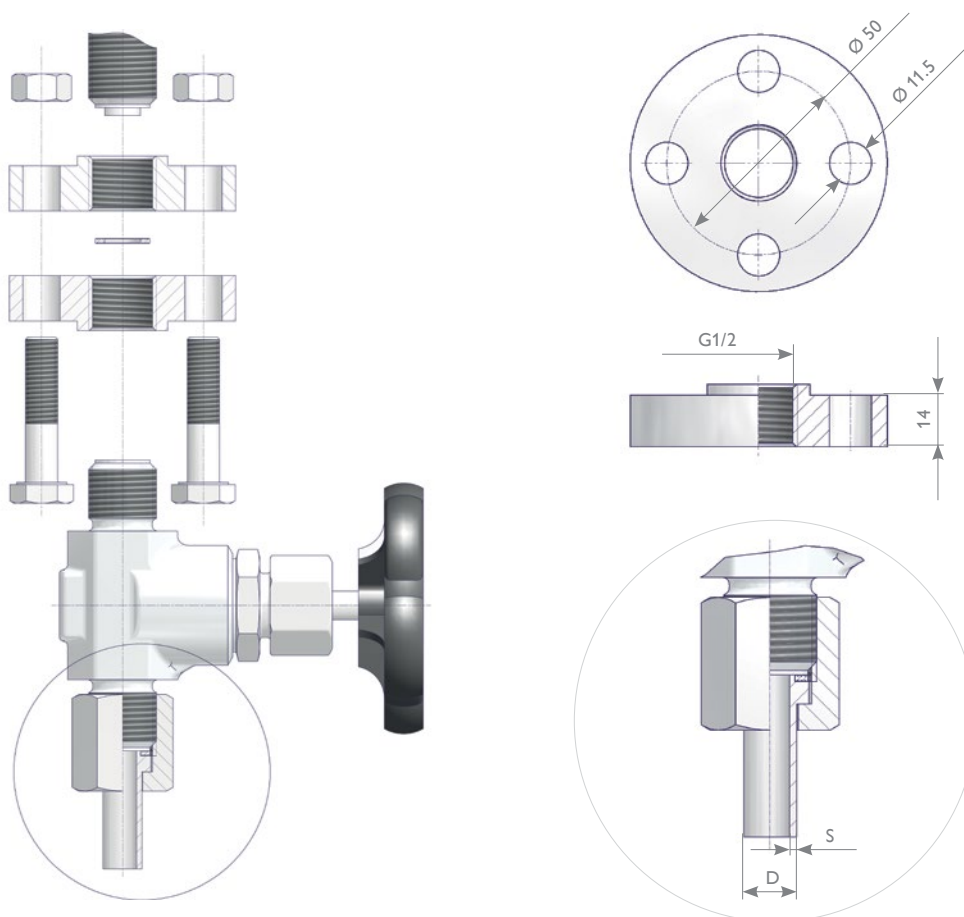
## Product Description

DIN 19207 is defining 2 different Threaded Connections (Type V and Type R) to be used either for a Flanged Connection with Threaded Flanges or a Nipple Connection. For more details see DIN 19207. The max. operating pressure for this connection is defined at 160 bar.

Valves with DIN 19207 connections see Page 13, condensate pots see Page 25.

## Flange Connection I Accessory Kit

| Mounting Kit contains                       | Material  | Part Number    |
|---|---|----------------|
| 4 Hexagon Nuts DIN EN ISO 4032 - M10        | Carbon Steel<br>Nuts and Screws 1.1181, Gasket 1.4571, Flange 1.0460      | S006.39.100.02 |
| 4 Hex Cap Screws DIN EN ISO 4014 - M10 x 45 |   |                |
| 1 Grooved Gasket DIN 19207 - B 1/2          | Stainless Steel<br>Nuts A4-70, Screws A2-70, Gasket 1.4571, Flange 1.4571 | S006.39.200.02 |
| 2 Threaded Flanges DIN 19207 - G 1/2        |   |                |



## Nipple Connection I Accessory Kit

| Union Nut |          | Nipple |      | Grooved Gasket | Accessory Kit  |
|-----------|----------|--------|------|----------------|----------------|
| Thread    | Material | D      | s    | Material       | Part Number    |
| G 1/2     | 1.1181   | 12     | 1.65 | 1.5415         | S007.45.103.10 |
|           | 1.4571   |        |      | 1.4571         | S007.45.203.10 |
|           | 1.1181   | 14     | 2.5  | 1.5415         | S007.45.103.11 |
|           | 1.4571   |        |      | 1.4571         | S007.45.203.11 |



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