INOXRIVA®

schneider
Tailored to Your Business

Instrumentation Products

Monoflanges and VariAS-Blocks

Introduction

Introduction

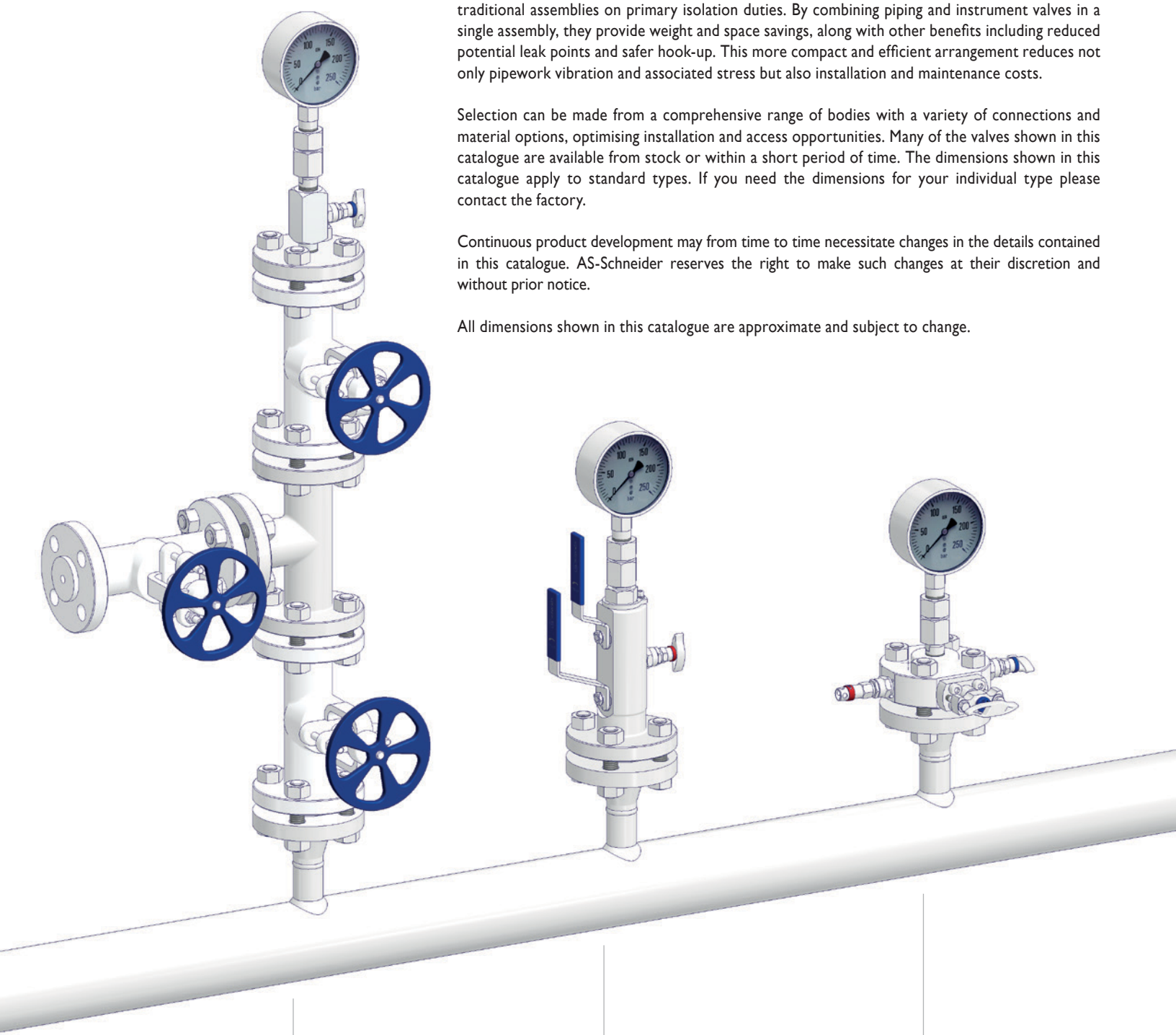
The AS-Schneider Group with its headquarters in Germany is one of the World's Leading Manufacturers of Instrumentation Valves and Manifolds. AS-Schneider offers a large variety of Monoflanges, VariAS-Blocks and Accessories needed for the instrumentation installations globally.

The AS-Schneider Monoflanges and VariAS-Blocks are designed to overcome the problems of traditional assemblies on primary isolation duties. By combining piping and instrument valves in a single assembly, they provide weight and space savings, along with other benefits including reduced potential leak points and safer hook-up. This more compact and efficient arrangement reduces not only pipework vibration and associated stress but also installation and maintenance costs.

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.



Conventional Solution

VariAS-Block

Monoflange

Contents

Monoflanges

Monoflanges

AS-Schneider Monoflanges are designed to replace conventional mutiple-valve installations currently in use for interface with pressure measuring systems. By combining customer specified valves into a single manifold, the number of leak paths is considerably reduced and the mass of the system is lowered reducing the stresses from loading and vibration. The AS-Schneider Monoflange Series are available as Process Monoflanges and Intrument Monoflanges.

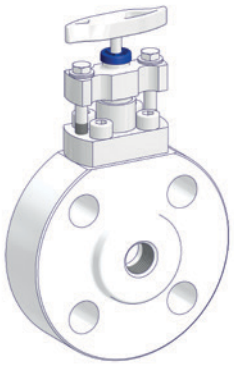
Process Monoflanges

Process Monoflanges are designed to replace the traditional primary isolation valve, the primary isolation valve (OS&Y bolted bonnet) incorporates a primary isolate piping valve combined with instrument double block & bleed functions.

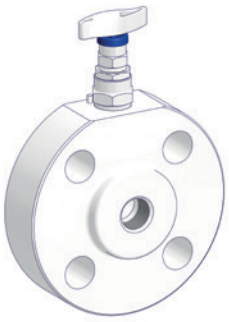
Instrument Monoflanges

Instrument Monoflanges work in conjunction with a pre-installed primary valve to provide a compact instrument block and bleed valve or are used when primary valves with an OS&Y bolted bonnet are not required.

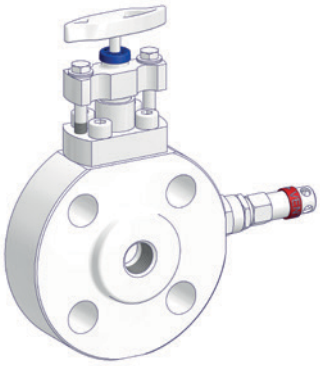
Block
1st Isolate: OS&Y



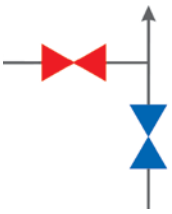
Block
1st Isolate: Needle



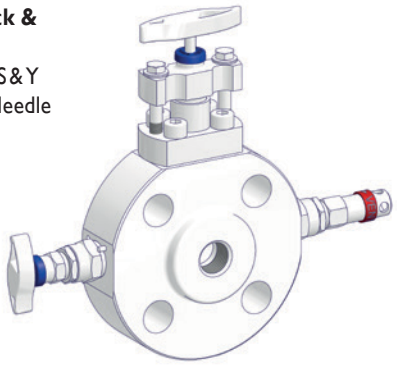
Block & Bleed
1st Isolate: OS&Y
Vent: Needle



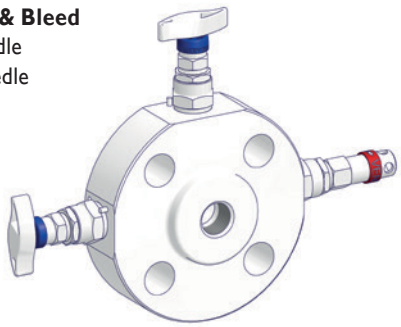
Block & Bleed
1st Isolate: Needle
Vent: Needle

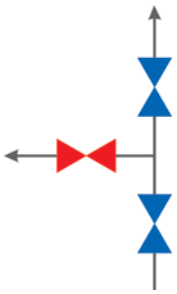


Double Block & Bleed
1st Isolate: OS&Y
2nd Isolate: Needle
Vent: Needle



Double Block & Bleed
1st Isolate: Needle
2nd Isolate: Needle
Vent: Needle





Body Material Options

Material Group	AS Material Designation	Material No.	Short Name	Equivalent UNS-No.	Material Grade acc. to ASTM	Monoflanges
Carbon Steel	A105				A105	Optional
	LF2				LF2	Optional
Austenitic Stainless Steel	316 quadruple certified*	1.4401	X5CrNiMo17-12-2	S 31600	316	Standard
		1.4404	X2CrNiMo17-12-2	S 31603	316L	Standard
	6Mo	1.4547	X 1CrNiMoCuN20-18-7	S 31254		Standard
Austenitic-Ferritic Stainless Steel	Duplex	1.4462	X2CrNiMoN22-5-3	S 31803	F51	Standard
	Superduplex	1.4410	X2CrNiMoN25.7.4	S 32750	F53	Standard
		1.4501	X2CrNiMoCuWN25.7.4	S 32760	F55	Optional
Nickel Based Alloys	Alloy 400	2.4360	NiCu30Fe	N 04400		Standard
	Alloy C-276	2.4819	NiMo 16 Cr 15 W	N 10276		Standard
	Alloy 625	2.4856	NiCr22Mo9Nb	N 06625		Standard
	Alloy 825	2.4858	NiCr21Mo	N 08825		Optional

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

Standard Features

- Bore Size 5 mm (0.197")
- ASME B16.5 Flange Connections
  Flange Size 1/2" to 3" (DN15 to DN80)
  Flange Class 150 to 2,500
- Outlet Connection 1/2 NPT Female
- Vent Connection 1/4 NPT Female
- Vent Valve with Anti-Tamper Head Unit incl. AT-Key.
  Anti-Tamper Head Unit Options see Page 9.
- Fire Safe Tested according to ISO 10497 / API 607 – OS&Y Bolted Bonnet and Graphite Packing, see also Page 7.

Needle Seal:
PTFE and Graphite Packings are available for all valve types.

Sour Gas Service:
Wetted parts according to a.m. material list are supplied as standard according to NACEMR0175/MR0103 and ISO 15156 (latest issue).

Pressure Test:
A shell test and a seat leakage test are performed at 1.5 times the maximum working pressure acc. to EN 12266-1 – P10, P11 and P12 respectively MSS-SP61 (and complies also with ASME B31.1 and B31.3) at every standard AS-Schneider Monoflange
→ 100% Pressure Tested!

Certification:
Certified Mill Test Report (CMRT) as inspection certificate 3.1 acc. to EN 10 204 for valve body material and pressure test available on request.

Optional Features

- API Flange Connections (up to 689 bar [10,000 psi])
- EN 1092-1 Flange Connections
- Needle Seal with FKM O-Ring and Bellows Sealed Head Units
- Choices of Needle Tip Materials such as Stellite and Soft Tips
- Swivel Gauge Connections – Integral Type and as Accessory, see also Page 26
- Pressure Tested according to API 598

Fugitive Emission Application:
For Fugitive Emission Applications AS-Schneider is providing TA-Luft and ISO 15848 solutions. For more details see Page 8.

Oxygen Service:
AS-Schneider offers an option with 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.

Note:
Starting from 1 1/2" Class 900 / 1,500 the Valve Head Units are 45° angled for convenient operation!

Standard Valve Head Units

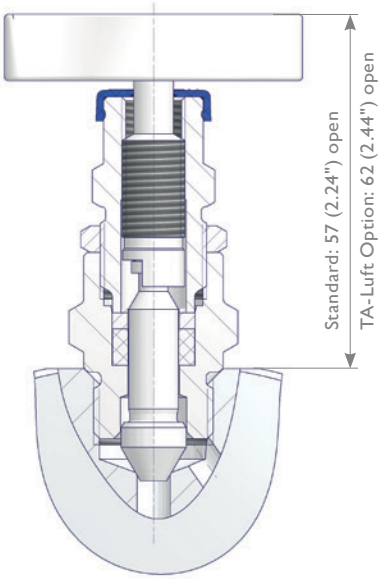
Standard Needle Valves

Screwed Bonnet – Needle Seal: Packing

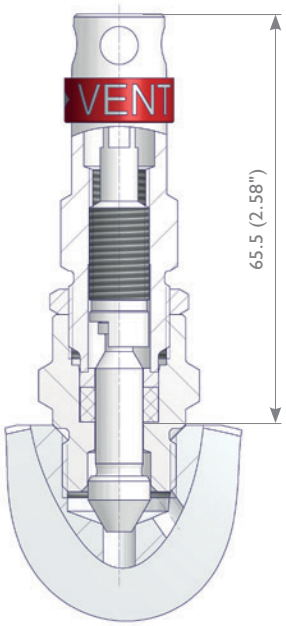
Features

- 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).
- 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
- Needle Seal:
  Standard Packing in PTFE and Graphite
  or Carbon filled PTFE – TA-Luft Option
- Max. Operating Pressure 420 bar (6,092 psi)
  – 689 bar (10,000 psi) optional
- Anti-Tamper Valve Head Options available
- All Non-wetted Parts in 316 Stainless Steel

Standard Isolate Valve



Standard Vent Valve



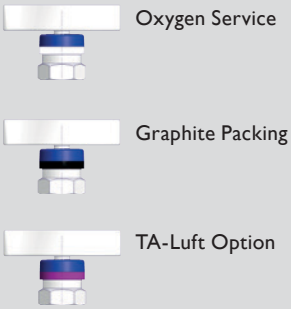
Color Coded Dust Cap
For stem thread protection:

- Isolate — BLUE
- Vent/Test — RED
- Equalize — GREEN

Color Coded Options
Following options are also color coded below dust cap:

- Oxygen Service — WHITE
- Graphite Packing — BLACK
- TA-Luft Option — MAGENTA

For example



Components	Carbon Steel	Stainless Steel	Exotic Alloys					
	Material / Material No.							
Body	A 105 resp. LF2	316 / 316L	Alloy 400	Alloy C-276	Duplex	UNS S32750	Alloy 625	6Mo
Bonnet	316 / 316L							
Needle								
Pipe Plug								
Valve Stem	316 / 316L							
Gland	316							
Packing	PTFE or Graphite							
Stem Nut/Yoke	316							
Lock Nut	316							
Set Screw	316							
T Handle	316							
Lock Pin	A4 (316)							

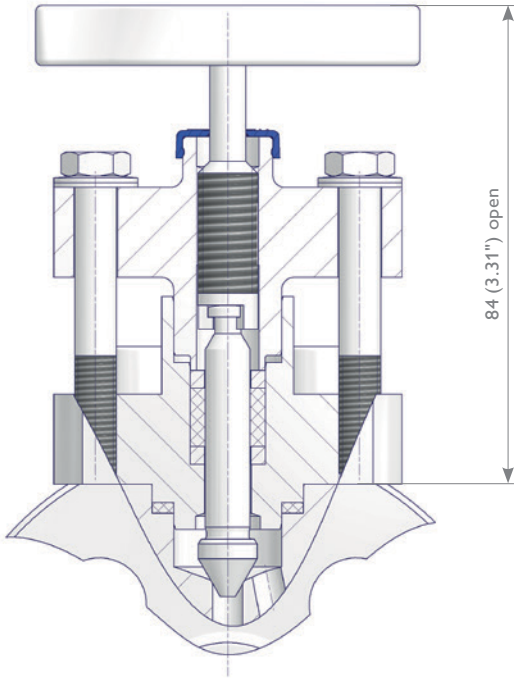
Wetted components listed in **bold**.

Needle Valves with OS&Y Bolted Bonnet

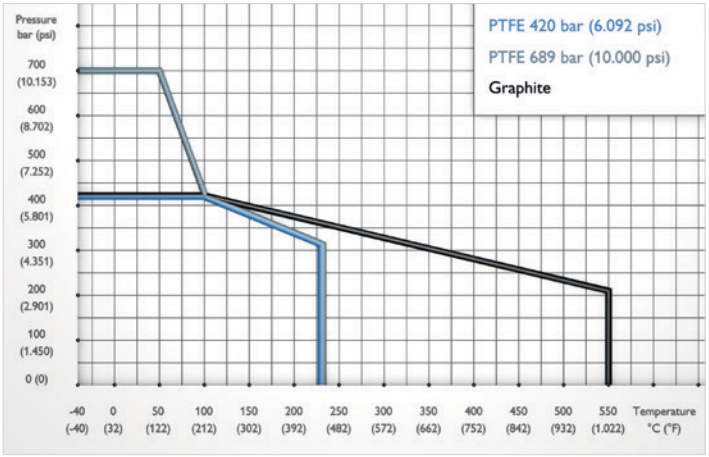
OS&Y Bolted Bonnet – Standard Packing

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).
- 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
- Needle Seal: Standard Packing in PTFE and Graphite or Carbon filled PTFE – TA-Luft Option
- Bonnet Seal Ring: Graphite
- Fire Safe approved acc. to ISO 10497 and API 607 – Graphite Packing only
- Max. Operating Pressure 420 bar (6,092 psi) – 689 bar (10,000 psi) optional
- Anti-Tamper Valve Head Options available
- All Non-wetted Parts in 316 Stainless Steel



Pressure-Temperature Rating



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.

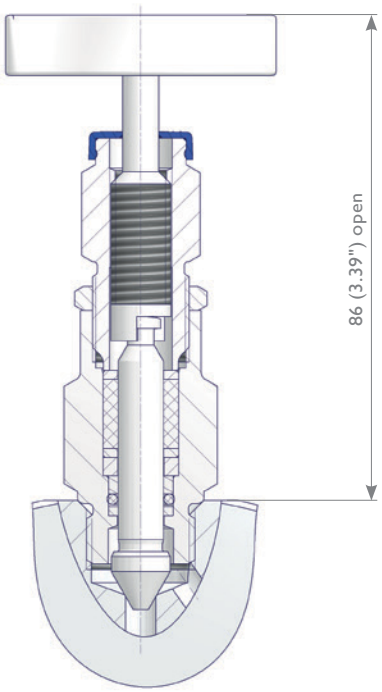
Manufactured according to the following Codes and Specifications

• ASME B31.1	Power Piping
• ASME B31.3	Process Piping Specification for Pipeline Valves
• ASME B16.34	Valves – Flanged, Threaded and Welding End
• ASME B16.5	Pipe Flanges and Flanged Fittings
• NACE MR0175/ ISO 15156	Petroleum and Natural Gas Industries – Materials for use in H2S-containing Environments in Oil and Gas Production
• API 598	Valve Inspection and Testing
• ISO 5208	Industrial Valves – Pressure Testing of Metallic Valves
• API 607/ ISO 10497	Fire Test for Soft-Seated Quarter Turn Valves Testing of Valves. Fire Type-testing Requirements
• MSS SP-25	Standard Marking System for Valves, Fittings, Flanges, and Unions
• MSS SP-61	Pressure Testing of Valves
• MSS SP-99	Instrument Valves

Valve Head Units for Fugitive Emission Applications

Needle Valves acc. to ISO 15848

Screwed Bonnet – Type 1 O-Ring Needle 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).
- 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
- Needle Seal:
  Standard Packing in PTFE or Graphite plus FKM O-Ring Needle Seal – RGD resistant (RGD = Rapid Gas Decompression)
- Max. Operating Pressure 420 bar (6,092 psi)
- Anti-Tamper Valve Head Options available
- All Non-wetted Parts in 316 Stainless Steel
- Types also comply with the requirements of TA-Luft 2002

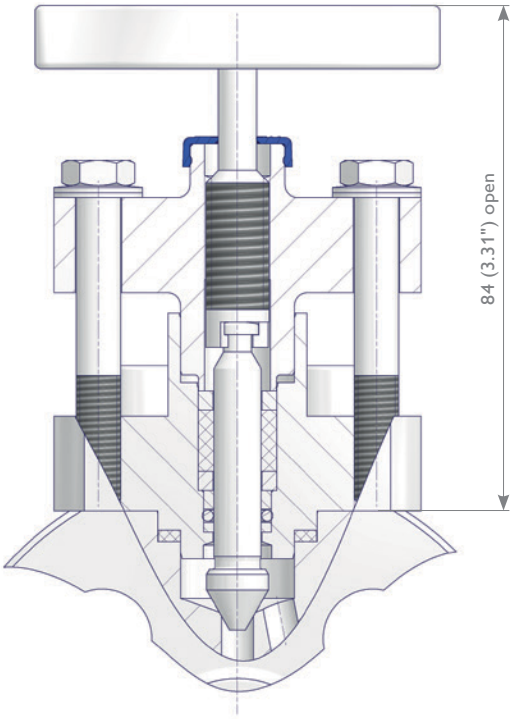
ISO FE Performance Data

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 Needle Seal + Graphite Packing
Type 3 PTFE Packing



Features

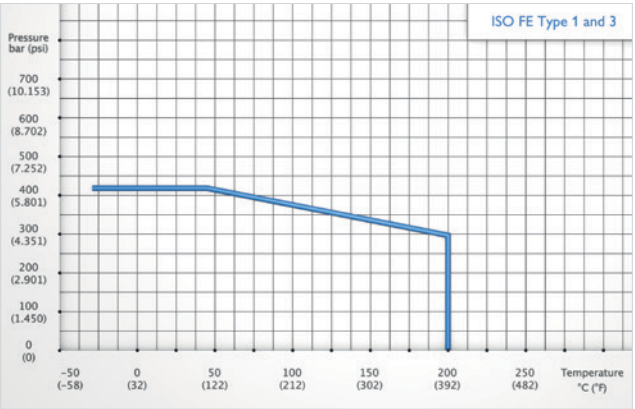
- Integral Valve Seat – Metal to metal seated
- Non-rotating Needle
- External Stem Thread – Packing below stem threads. Stem threads are protected from process media (non-wetted).
- Stem with Cold Rolled Threads
- Blow-out Proof Needle
- Spring Washers for compensation of thermal expansion
- Back Seat – Metal to metal secondary stem seal
- Colour Coded Dust Cap for operating thread protection
- Needle Seal:
  Standard Packing in PTFE or Graphite plus FKM O-Ring Needle Seal - RGD resistant
- Bonnet Seal Ring: Graphite
- Fire Safe approved acc. to ISO 10497 and API 607; Graphite Packing only
- Max. Operating Pressure 420 bar (6,092 psi)
- Anti-Tamper Valve Head Options available
- 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)

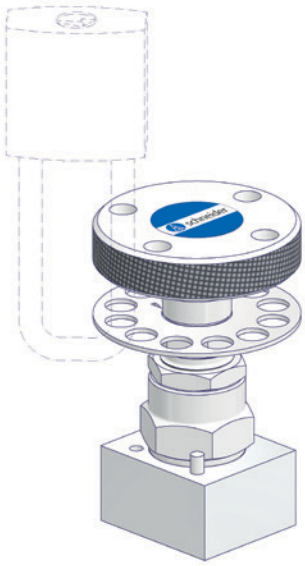
Pressure-Temperature Rating - Needle Valve for Fugitive Emission Applications



Stainless Steel Handwheel and 'Locking Plate' Design

The valves can be ordered with Stainless Steel Handwheel and Locking Plate Design, also including Padlock.

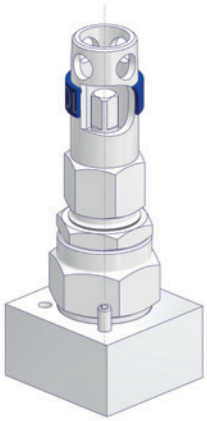
This design allows minimum handle movements and is ideal as protection against unauthorized closing of the valve.



Option Code Q
Option Code R incl. Padlock

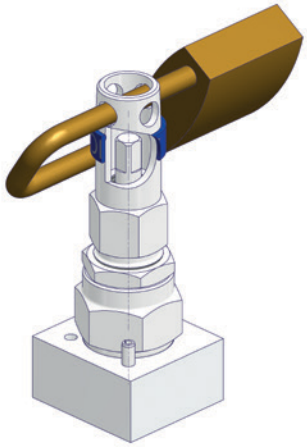
Anti-Tamper Head Unit

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.



All Valve Head Units Anti-Tamper:
Option Code V

Part Number ATK-ES



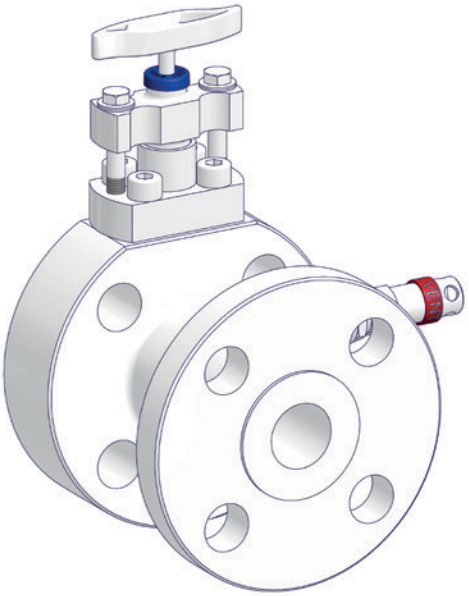
Incl. Padlock:
Option Code W or Y

Monoflanges I Options

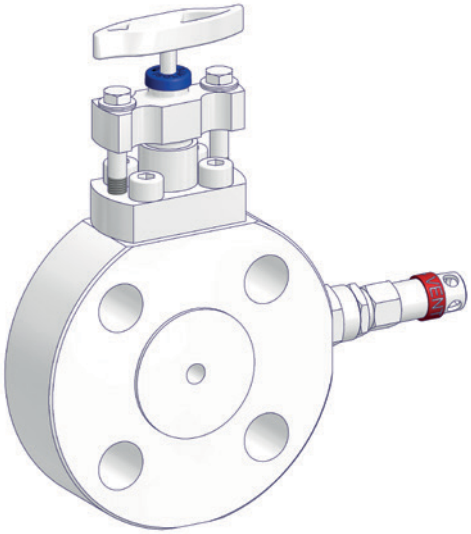
Flange x Flange Types

- Dual Flange Style
- Wafer Style
- RD1 Style
- RFB Style

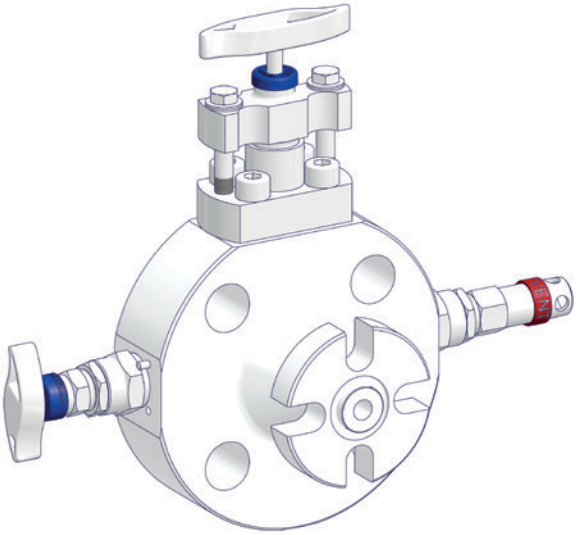
Dual Flange Style



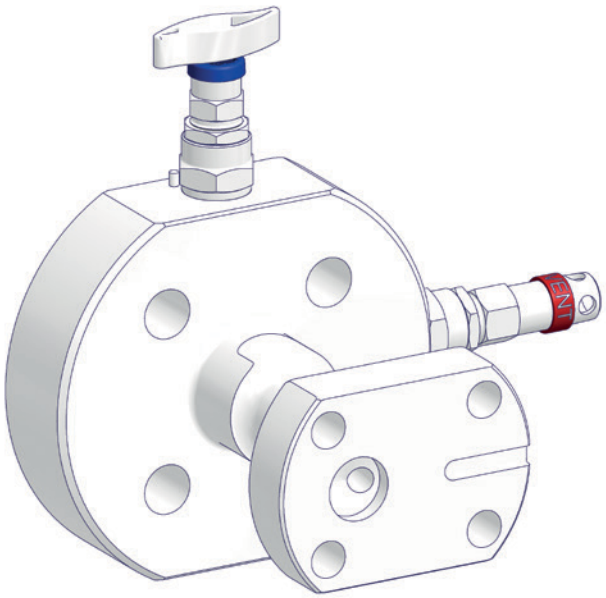
Wafer Style
Option S



RD1 Style
For Direct Mounting of Transmitters acc. to EN 61518

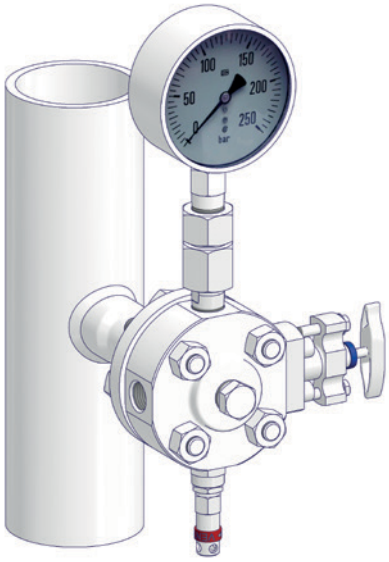


RFB Style
For Direct Mounting of Rosemount 2051/3051 Coplanar™ Pressure Transmitter

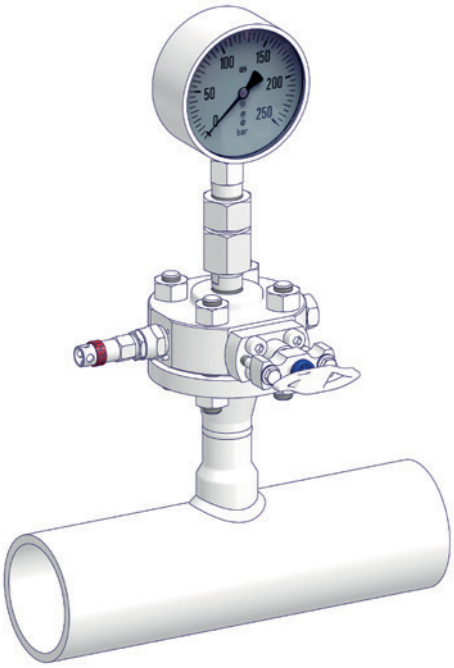


Dual Outlet Types for Direct Mounting to Horizontal or Vertical Pipelines

Vertical Pipeline, Radial Outlet
Process Monoflange (e.g. Block & Bleed) Swivel Gauge Adaptor installed on outlet.

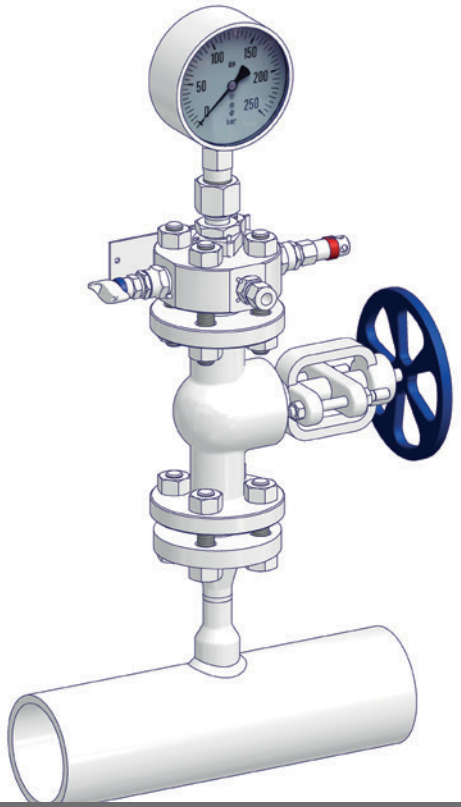


Horizontal Pipeline, Axial Outlet
Process Monoflange (e.g. Block & Bleed) Swivel Gauge Adaptor installed on outlet.



Vertical Pipeline, Radial Outlet
Instrument Monoflange (SM Type) with an Integral Swivel Gauge Adaptor. For more information see Catalogue 'AS-3601 I Modular Mounting System'.

Horizontal Pipeline, Axial Outlet
Instrument Monoflange (SM Type) with an Integral Swivel Gauge Adaptor. For more information see Catalogue 'AS-3601 I Modular Mounting System'.



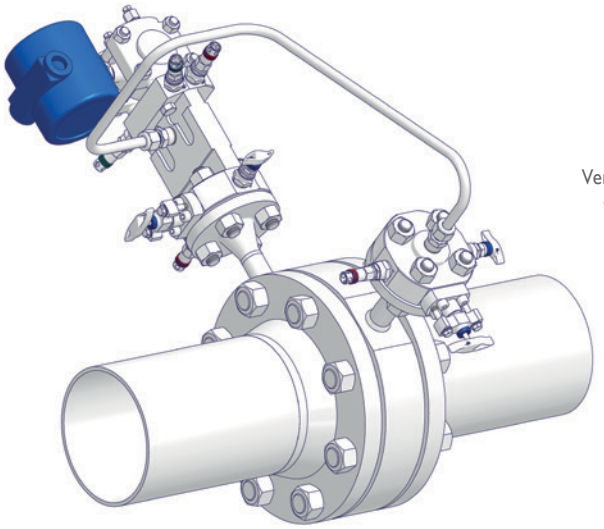
Monoflanges I Assemblies

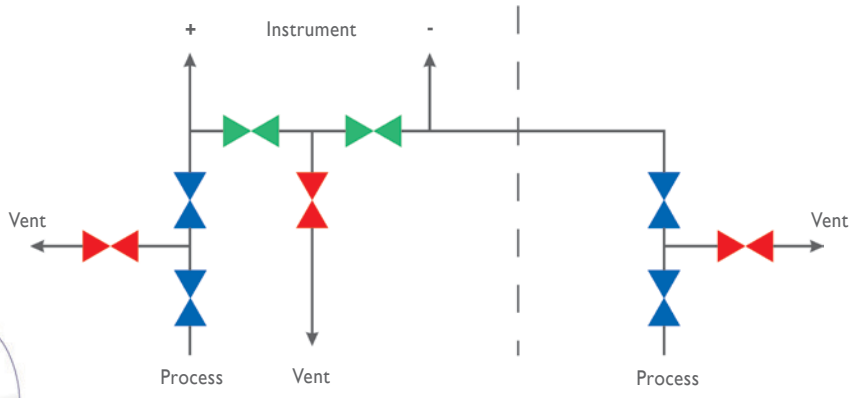
Assemblies

There are various possibilities in using the Monoflange concept not only for Pressure Applications. The following pictures are showing two examples for Differential Pressure Assemblies – Flow and Level.

Flow Assembly - Consisting of:

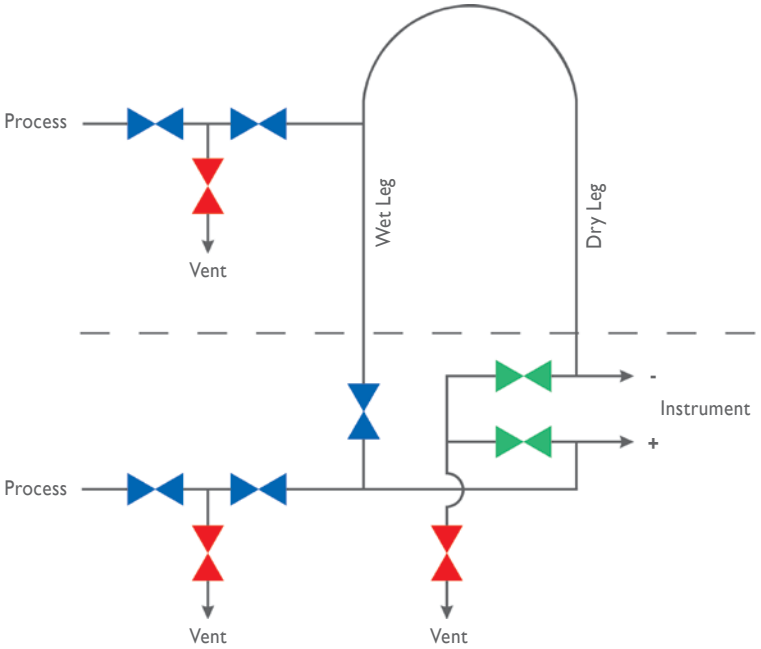
- 1 x Process Monoflange Type V, e.g. DB&B with an Integrated 3 Valve Manifold (High Pressure Side +)
- 1 x Process Monoflange, e.g. DB&B (Low Pressure Side -)



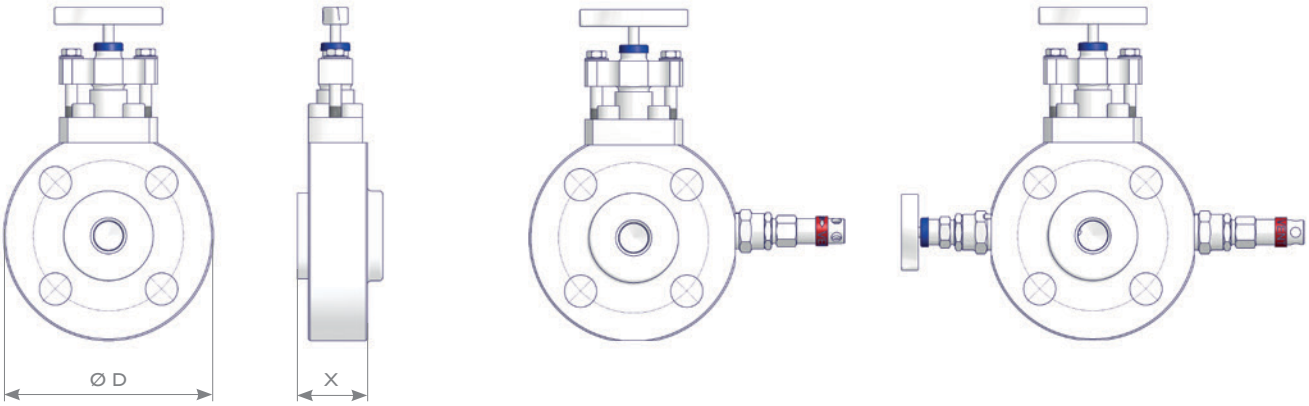


Level Assembly - Consisting of:
(Wet / Dry Leg Installation)

- 1 x Process Monoflange Type V, e.g. DB&B with an Integrated 4 Valve Manifold (High Pressure Side +)
- 1 x Process Monoflange, e.g. DB&B (Low Pressure Side -)



Process Monoflanges - Weights and Dimensions

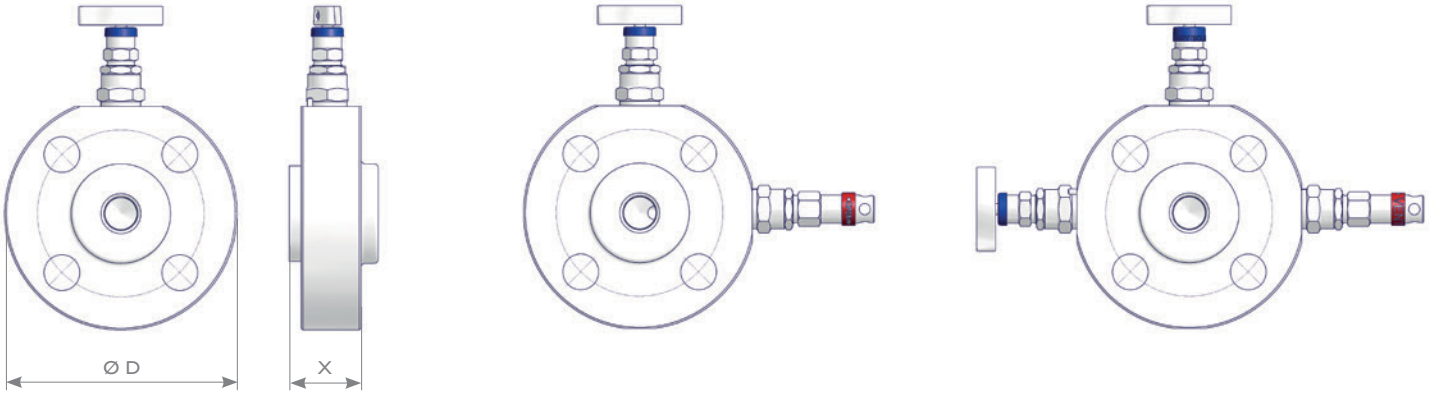


Flange x Thread

Flange Size (in)	Flange Class	ØD (mm)	Flange Face		Approx. Weight (kg)
			RF x mm	RTJ x mm	
1/2	150	98.6	36.6	-	2.5
1/2	300	98.6	36.6	40.6	2.6
1/2	600	98.6	41.4	40.6	2.6
1/2	900 / 1,500	120.7	41.4	41.4	3.5
1/2	2,500	133.4	41.4	41.4	4.3
3/4	150	98.6	36.6	-	2.6
3/4	300	117.3	36.6	41.4	3.5
3/4	600	117.3	41.4	41.4	3.5
3/4	900 / 1,500	130.0	41.4	41.4	4.1
3/4	2,500	139.7	41.4	41.4	4.8
1	150	108.0	36.6	41.4	3.0
1	300	124.0	36.6	41.4	3.9
1	600	124.0	41.4	41.4	3.9
1	900 / 1,500	149.3	41.4	41.4	5.1
1	2,500	158.8	42.4	42.4	6.1
1 1/2	150	127.0	36.6	41.4	4.1
1 1/2	300	155.4	36.6	41.4	6.0
1 1/2	600	155.4	41.4	41.4	6.0
1 1/2	900 / 1,500	177.8	41.4	41.4	7.4
1 1/2	2,500	203.2	51.4	52.9	11.4
2	150	152.4	36.6	41.4	5.4
2	300	165.1	36.6	42.9	6.4
2	600	165.1	41.4	42.9	6.9
2	900 / 1,500	215.9	45.4	46.9	12.0
2	2,500	235.0	58.4	59.9	17.5

Instrument Monoflanges I Weights and Dimensions

Instrument Monoflanges - Weights and Dimensions



Flange x Thread

Flange Size (in)	Flange Class	ØD (mm)	Flange Face		Approx. Weight (kg)
			RF x mm	RTJ x mm	
1/2	150	88.9	33.6	-	1.6
1/2	300	95.3	33.6	37.6	2.0
1/2	600	95.3	38.4	37.6	2.0
1/2	900 / 1,500	120.7	38.4	38.4	2.9
1/2	2,500	133.4	38.4	38.4	3.7
3/4	150	98.6	33.6	-	2.0
3/4	300	117.3	33.6	38.4	2.9
3/4	600	117.3	38.4	38.4	2.9
3/4	900 / 1,500	130.0	38.4	38.4	3.5
3/4	2,500	139.7	39.4	39.4	4.2
1	150	108.0	33.6	38.4	2.6
1	300	124.0	33.6	38.4	3.3
1	600	124.0	38.4	38.4	3.3
1	900 / 1,500	149.3	38.4	38.4	6.8
1	2,500	158.8	42.4	42.4	5.7
1 1/2	150	127.0	33.6	38.4	3.8
1 1/2	300	155.4	33.6	38.4	5.3
1 1/2	600	155.4	38.4	38.4	5.3
1 1/2	900 / 1,500	177.8	39.4	39.4	6.8
1 1/2	2,500	203.2	51.4	52.9	11.5
2	150	152.4	33.6	38.4	5.1
2	300	165.1	33.6	39.9	5.7
2	600	165.1	38.4	39.9	6.2
2	900 / 1,500	215.9	45.4	46.9	11.6
2	2,500	235.0	58.4	59.9	17.0

Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14
M	G	B	-	N	F	E	L	N	4	-	S	C	

Monoflanges

Outlet Conenction			Type
Axial	Radial	Dual	
MA	MB	MC	Block (OS & Y)
MD	ME	MF	Block & Bleed (OS & Y / Needle)
MG	MH	MJ	Double Block & Bleed (OS & Y / Needle / Needle)
MK	ML	MM	Block (Needle)
MN	MP	MQ	Block & Bleed (Needle / Needle)
MR	MS	MT	Double Block & Bleed (Needle / Needle / Needle)

Packing

A	PTFE	L	ISO FE Series Type 1
B	Graphite	N	ISO FE Series Type 3
W	Carbon filled PTFE - TA-Luft		

Process Connection

ASME Flange				EN Flange			
NA	1/2" RF	NM	1 1/2" RTJ	QA	DN15 B1	QW	DN50 B1
NC	1/2" RTJ	NN	2" RF	QD	DN15 C (tongue)	Q2	DN80 B1
ND	3/4" RF	NQ	2" RTJ	QF	DN20 B1		
NF	3/4" RTJ	NR	2 1/2" RF	QL	DN25 B1		
NG	1" RF	NT	2 1/2" RTJ	QN	DN25 B2		API Flanges
NJ	1" RTJ	NU	3" RF	QP	DN25 C (tongue)		on request!
NK	1 1/2" RF	NW	3" RTJ	QQ	DN25 D (groove)		

ASME Flange Class				EN Flange PN Designation	
A	150	E	900 / 1,500	D	PN 40
B	300	F	2,500	G	PN 160
C	600			H	PN 250

Outlet Connection

Thread Connection		Transmitter Interface	
LGQ	G 1/2 Female (Integral Swivel Gauge Adaptor)	RD1	EN 61518 Type A (for Axial Outlet available only)
LN4	1/2 NPT Female	RFB	For Rosemount 2051/3051 Coplanar™ Transmitter (for Axial Outlet available only)
JN4	1/2 NPT Male		

For ASME Flange Connections on Axial Outlet use Designator of Process Connection.
Dual Flange Style is Standard – Wafer Style see Options.

Body Material

C	A105	L	A350 LF2	V	Alloy 625 UNS N06625
F	Duplex UNS S31803	M	Alloy 400 UNS N04400	D	Super Duplex UNS S32750
H	Alloy C-276 UNS N10276	S	1.4401 / 1.4404 / 316 / 316L	B	6Mo UNS S31254

Vent Connection

A	Without (Block Type only)	E	1/2 NPT Female
C	1/4 NPT Female	F	1/2 NPT Female plugged
D	1/4 NPT Female plugged		

Options

B	Oxygen Service	R	Stainless Steel Handwheel and Locking Plate Design incl. Padlock
S	Wafer Style (Flange x Flange)	Q	Stainless Steel Handwheel and Locking Plate Design without Padlock
M	Wetted Parts with 3.1 Certificate	V	All Valve Head Units Anti-Tamper lockable without Padlock
		W	All Valve Head Units Anti-Tamper lockable incl. Padlock
		Y	Vent Valve Head Units Anti-Tamper lockable incl. Padlock

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

VariAS-Blocks - Double Block & Bleed Types

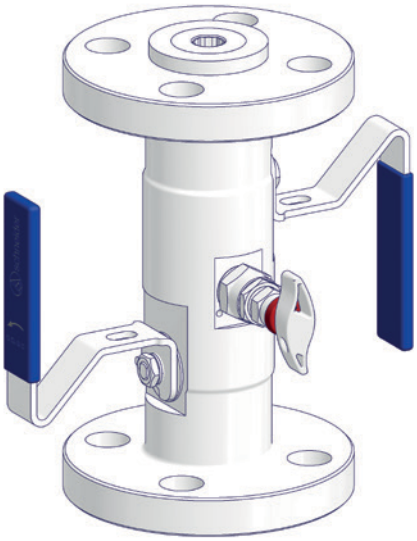
VariAS-Blocks - Double Block & Bleed Types

The VariAS-Blocks - Double Block & Bleed Types are designed to replace conventional, multiple-valve installations. The VariAS-Blocks are forged, one-piece double block and bleed assemblies for primary isolation of pressure take-offs, where the valve is directly mounted to the vessel or process pipe. Instruments may be directly mounted to the valve outlet or remote mounted with impulse pipe work.

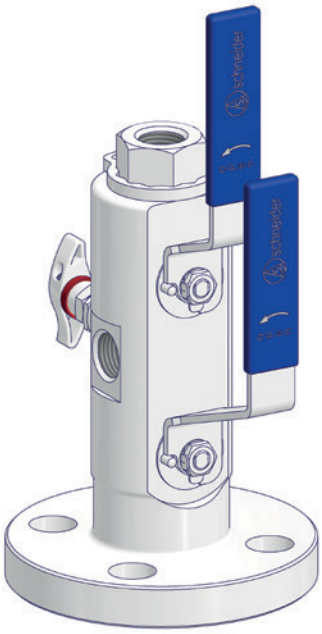
Features two independently operable ball valves for isolation with an intermediate needle valve alternatively ball valve for venting.

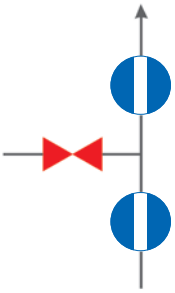
Flange x Flange

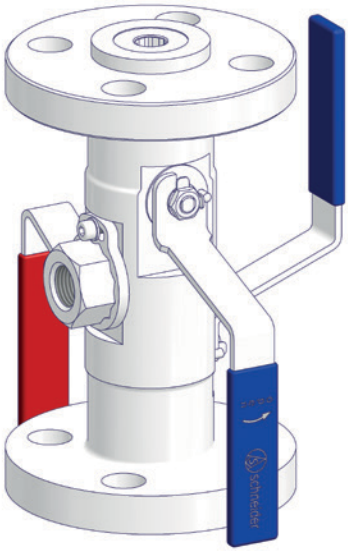
Flange x Thread



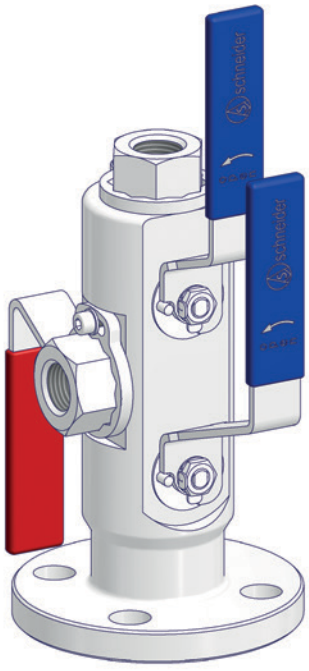
Double Isolate Ball Valve and Single Vent Needle Valve







Double Isolate Ball Valve and Single Vent Ball Valve



Body Material Options

Material Group	AS Material Designation	Material No.	Short Name	Equivalent UNS-No.	Material Grade acc. to ASTM	VariAS-Blocks
Carbon Steel	A105				A105	Optional
	LF2				LF2	Optional
Austenitic Stainless Steel	316 quadruple certified*	1.4401	X5CrNiMo17-12-2	S 31600	316	Standard
		1.4404	X2CrNiMo17-12-2	S 31603	316L	Standard
	6Mo	1.4547	X 1CrNiMoCuN20-18-7	S 31254		Standard
Austenitic-Ferritic Stainless Steel	Duplex	1.4462	X2CrNiMoN22-5-3	S 31803	F51	Standard
	Superduplex	1.4410	X2CrNiMoN25.7.4	S 32750	F53	Standard
		1.4501	X2CrNiMoCuWN25.7.4	S 32760	F55	Optional
Nickel Based Alloys	Alloy 400	2.4360	NiCu30Fe	N 04400		Standard
	Alloy C-276	2.4819	NiMo 16 Cr 15 W	N 10276		Standard
	Alloy 625	2.4856	NiCr22Mo9Nb	N 06625		Standard
	Alloy 825	2.4858	NiCr21Mo	N 08825		Optional

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

Standard Features

- Ball Bore Size 10 mm (0.39")
  Needle Valve Bore Size 5 mm (0.197")
- ASME B16.5 Flange Connections
  Flange Size 1/2" to 2" (DN15 to DN50)
  Flange Class 150 to 2,500
- Ball / Needle / Ball Design
- One-Piece Forged Body
- Outlet Connection 1/2 NPT Female or Flange Connection acc. to Process Connection
- Vent Connection 1/2 NPT Female
- Fire Safe Tested acc. to ISO 10497 / API 607 – With Graphite Seals only
- Anti-Static Design
- Anti-Blowout Stems

Sour Gas Service:
Wetted parts according to a.m. material list are supplied as standard according to NACEMR0175/MR0103 and ISO 15156 (latest issue).

Pressure Test:
A shell test and a seat leakage test are performed at 1.5 times the maximum working pressure acc. to EN 12266-1 - P10, P11 and P12 respectively MSS-SP61 (and complies also with ASME B31.1 and B31.3) at every standard AS-Schneider VariAS-Block → 100% Pressure Tested!

Certification:
Certified Mill Test Report (CMRT) as inspection certificate 3.1 acc. to EN 10 204 for valve body material and pressure test available on request.

Optional Features

- API Flange Connections (up to 689 bar [10,000 psi])
- EN 1092-1 Flange Connections
- Ball / Ball / Ball Design
- Ball / Needle Design
- Needle / Needle / Needle Design
- Ball Bore Size 20 mm (0.787")
- Anti-Tamper Head Units
- Swivel Gauge Connectors – See also Accessories on page 26
- Pressure Tested according to API 598
- Wake Frequency Calculation for injection or sampling applications

Fugitive Emission Application:
For Fugitive Emission Applications AS-Schneider is providing TA-Luft and ISO 15848 solutions. For more details please contact the factory.

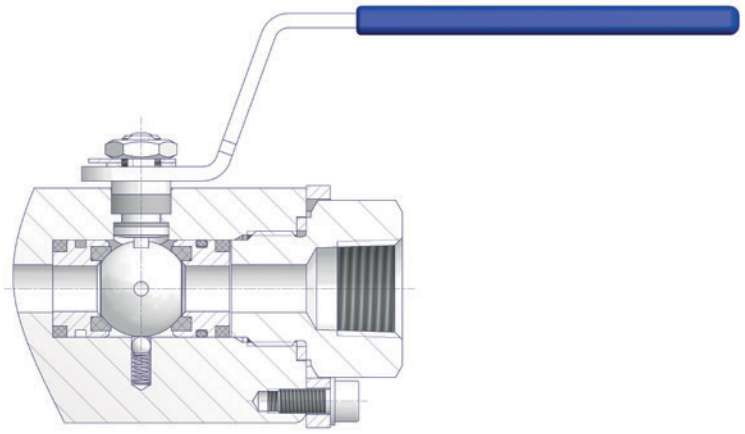
Oxygen Service:
On request.

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

Standard Valve Designs for VariAS-Blocks

Ball Valves

Standard Design – Stem Seal: Packing



Features

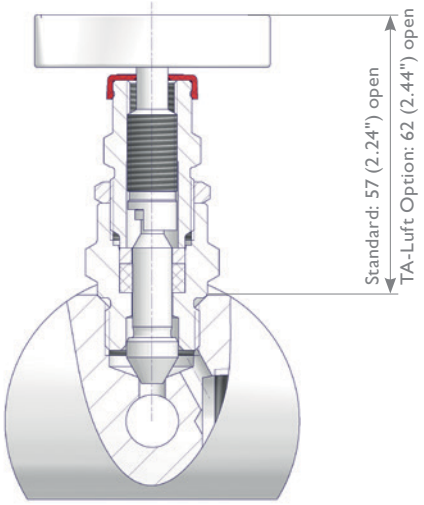
- Floating Ball Design
- Ball Valve Seat: Carbon filled PTFE I PEEK optional
- Ball Valve Seats are totally enclosed in seat housing
- Seat Housing Seals: FKM, RGD resistant and Graphite or PTFE
- Stem Seal: Standard Packing in PTFE and Graphite
- Max. Operating Pressure 420 bar (6,092 psi)
- Anti-Blowout Stem Design
- Anti-Static Design
- Fire Safe Tested acc. to ISO 10497 / API 607
  – With Graphite Seals only
- Positive Stop Pins
- All Non-wetted Parts in 316 Stainless Steel
- Lockable Handle with Color Coded Handle Grip
  – Isolate BLUE I Vent RED

Components	Carbon Steel	Stainless Steel	Exotic Alloys					
	Material / Material No.							
Body	A 105 resp. LF2	316 / 316L	Alloy 400	Alloy C-276	Duplex	UNS S32750	Alloy 625	6Mo
Body End Connector								
Ball	316 / 316L							
Stem								
Seat Housing								
Ball Seat	Reinforced PTFE or PEEK							
Seal Rings (Seat Housing)	FKM / Graphite or FKM / PTFE							
Primary Stem Seal	Reinforced PTFE							
Packing	PTFE or Graphite							
Gland	316							
Locking Plate	316							
Handle	316							
Handle Grip	Vinyl							
Stop Pin	A4							

Wetted components listed in **bold**.

Standard Needle Vavles

Screwed Bonnet – Needle Seal: Packing



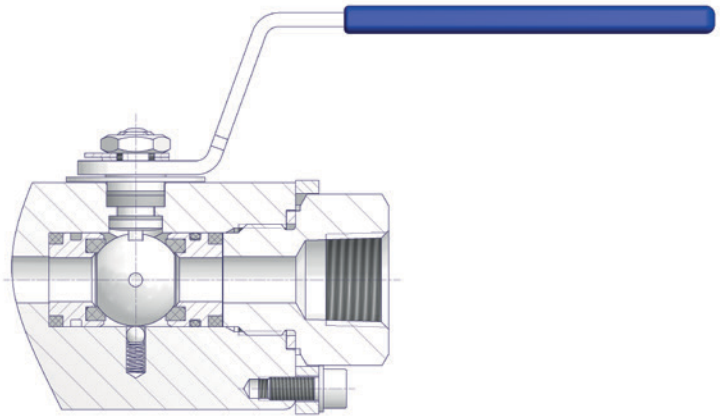
Features

- 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).
- 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 (see page 6)
- Needle Seal: Standard Packing in PTFE and Graphite
- Max. Operating Pressure 420 bar (6,092 psi)
- Anti-Tamper Valve Head Options and Stainless Steel Handwheel available (see Page 9)
- Bill of Material (see Page 6)
- All Non-wetted Parts in 316 Stainless Steel

Fugitive Emission Application Designs for VariAS-Blocks

Ball Valves acc. to ISO 15848

Standard Design – Stem Seal: Packing



Features

- Floating Ball Design
- Ball Valve Seat: Carbon filled PTFE I PEEK optional
- Ball Valve Seats are totally enclosed in seat housing
- Seat Housing Seals: FKM, RGD resistant and Graphite or PTFE
- Stem Seal: Standard Packing in PTFE and Graphite
- Max. Operating Pressure 420 bar (6,092 psi)
- Anti-Blowout Stem Design
- Anti-Static Design
- Fire Safe Tested acc. to ISO 10497 / API 607
  – With Graphite Seals only
- Special Treated Gland for long service life
- Glands adapted to packing
- Lockable Handle
- Positive Stop Pins
- All Non-wetted Parts in 316 Stainless Steel
- Also complies with the requirements of TA-Luft 2002

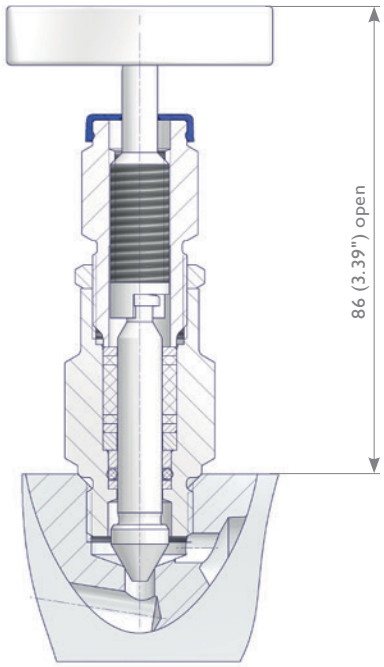
ISO FE Performance Data

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

Graphite Packing
Class A 500 cycles / –29°C to 40°C (–20°F to 104°F)
Class B 1,500 cycles / –29°C to 200°C (–20°F to 392°F)
Class A 2,500 cycles On request

Needle Valves acc. to ISO 15848

Screwed Bonnet – Type 1 O-Ring Needle 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).
- 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 (see page 6)
- Needle Seal:
  Standard Packing in PTFE or Graphite plus FKM O-Ring Needle Seal – RGD resistant (RGD = Rapid Gas Decompression)
- Max. Operating Pressure 420 bar (6,092 psi)
- Anti-Tamper Valve Head Options available on request
- All Non-wetted Parts in 316 Stainless Steel
- Types also comply with the requirements of TA-Luft 2002

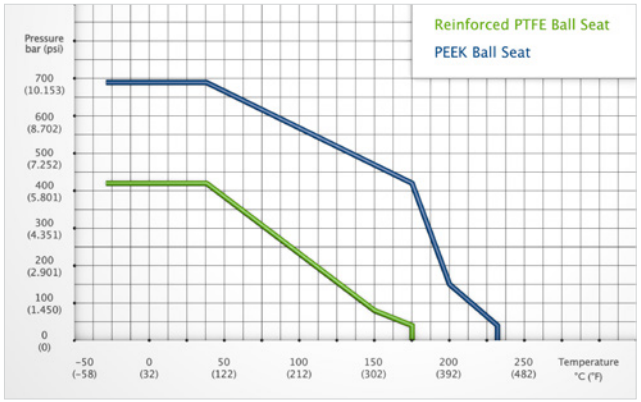
ISO FE Performance Data

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)

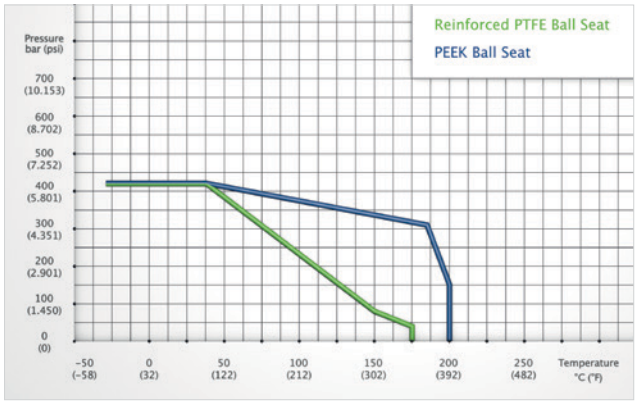
ISO FE Type 3:
Class B 1,500 cycles / –29°C to 200°C (–20°F to 392°F)

Pressure Ratings, Codes and Specifications for VariAS-Blocks

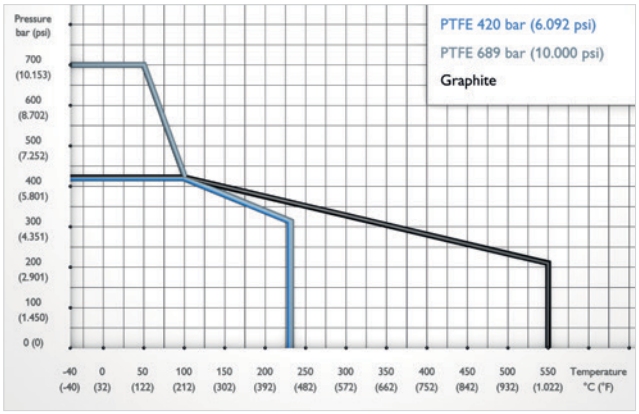
Pressure-Temperature Rating - Ball Valve



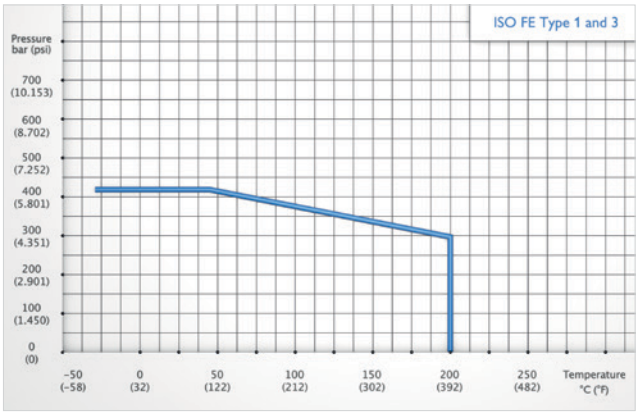
Pressure-Temperature Rating - Ball Valve for Fugitive Emission Applications



Pressure-Temperature Rating - Needle Valve



Pressure-Temperature Rating - Needle Valve for Fugitive Emission Applications



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.

Manufactured according to the following Codes and Specifications

• ASME B31.1	Power Piping
• ASME B31.3	Process Piping Specification for Pipeline Valves
• ASME B16.34	Valves – Flanged, Threaded and Welding End
• ASME B16.5	Pipe Flanges and Flanged Fittings
• NACE MR0175/ ISO 15156	Petroleum and Natural Gas Industries – Materials for use in H2S-containing Environments in Oil and Gas Production
• API 6D / ISO 14313	Specification for Pipeline Valves Petroleum and Natural Gas Industries – Pipeline Transportation Systems – Pipeline Valves
• API 598	Valve Inspection and Testing
• ISO 5208	Industrial Valves – Pressure Testing of Metallic Valves
• API 607/ ISO 10497	Fire Test for Soft-Seated Quarter Turn Valves Testing of Valves. Fire Type-testing Requirements
• MSS SP-25	Standard Marking System for Valves, Fittings, Flanges, and Unions
• MSS SP-61	Pressure Testing of Valves
• MSS SP-99	Instrument Valves

Block & Bleed Types

DE Series – Features one ball valve and a needle valve for venting.

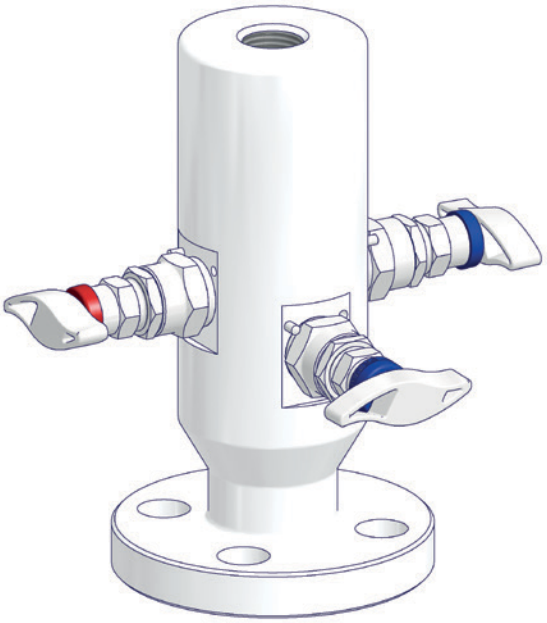
Flange x Thread

Thread x Thread

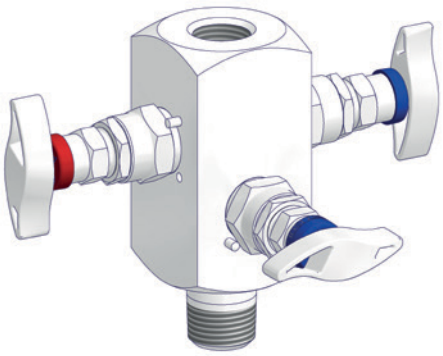
Double Block & Bleed Types

Features two independently operable needle valves for isolation and a needle valve for venting.

DC Series
Flange x Thread



Manifold Type C
(see Catalogue 'AS-2601 I E Series Valves and Manifolds')
Thread x Thread

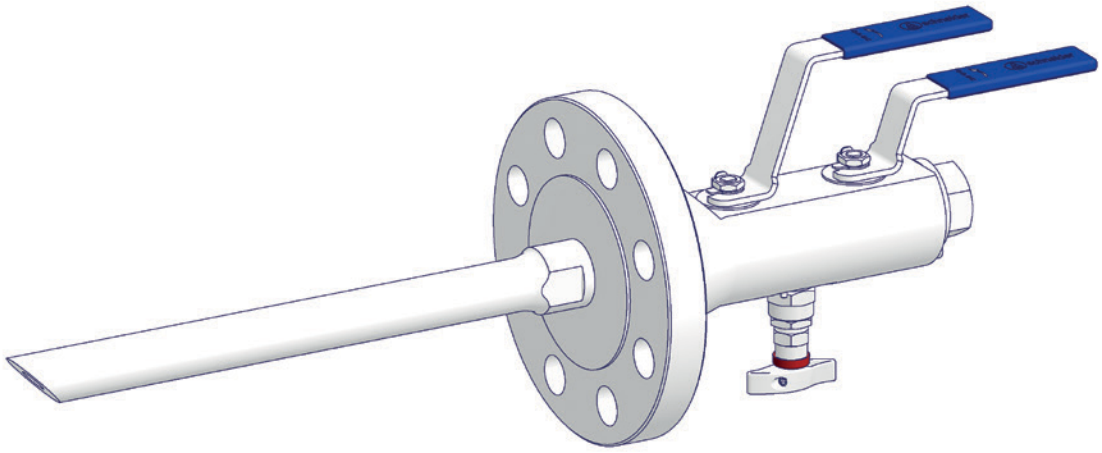


VariAS-Block for Injection and Sampling Applications

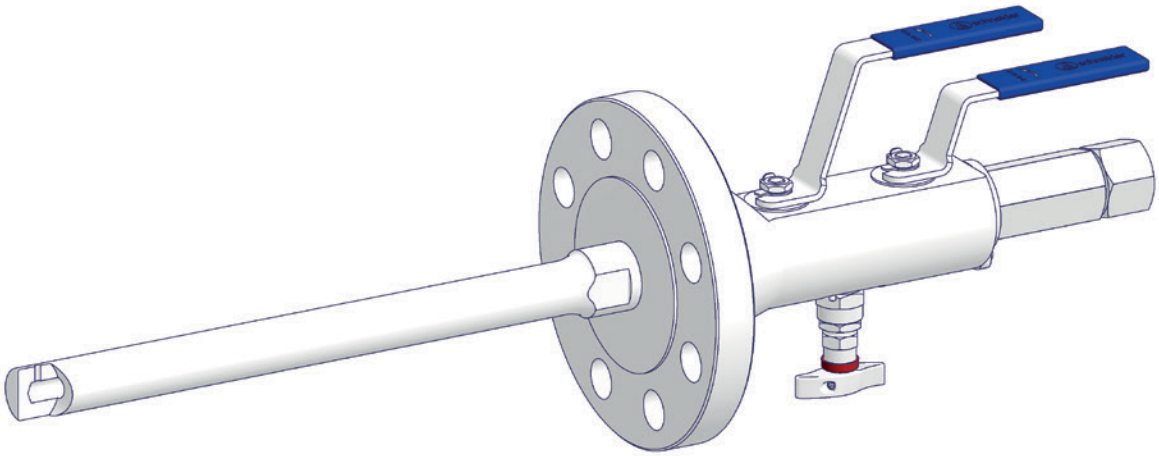
VariAS-Block for Injection and Sampling Applications

All options and configurations shown within the standard VariAS-Block range can be offered by the addition of a customized injection probe respectively sampling probe which extends from the pipe flange into the process stream. The probe is designed as a one piece solution with a fine-turned surface to optimize the wake frequency behavior and provide utmost stability. The probe lengths must be specified by the customer. The probe O.D. is 25 mm. Wake frequency calculation and support collar on request.

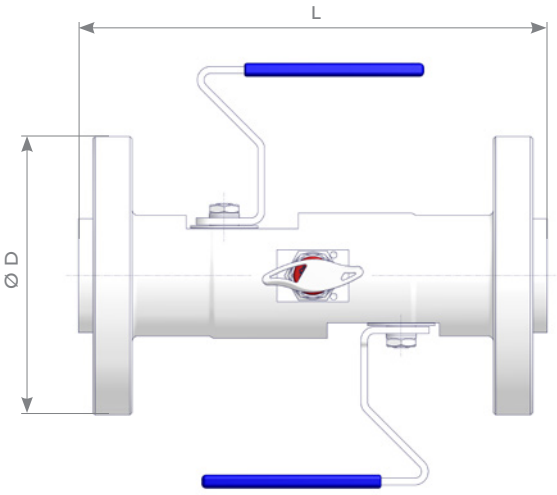
VariAS-Block for Sampling Applications (Option 1)
This design has been developed to remove a sample directly from the process stream at full system pressure.



VariAS-Block for Injection Applications (Option V)
This design has been developed to inject directly into the process stream at full system pressure. The integral check valve eliminates the risk of back flow out of the process stream during the injection. Available on both flanged and threaded connections.



VariAS-Blocks - Weights and Dimensions

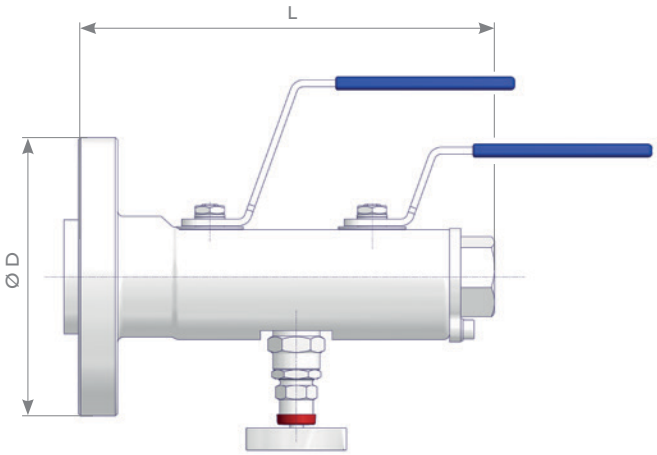


Flange x Flange

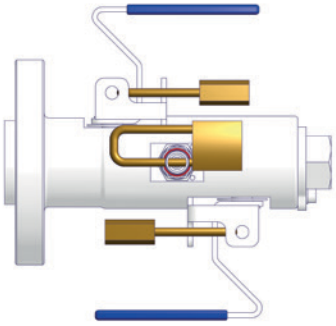
Flange Size (in)	Flange Class	ØD (mm)	Bore Size 9.5 mm (3/8")			Bore Size 20 mm		
			Flance Face		Approx. Weight (kg)	Flance Face		Approx. Weight (kg)
			RF L (mm)	RTJ L (mm)		RF L (mm)	RTJ L (mm)	
1/2	150	88.9	199.2	-	3	-	-	-
1/2	300	95.3	199.2	207.2	4	-	-	-
1/2	600	95.3	208.8	207.2	4	-	-	-
1/2	900 / 1,500	120.6	208.8	208.8	6	-	-	-
1/2	2,500	133.4	208.8	208.8	8	-	-	-
3/4	150	98.6	199.2	-	4	-	-	-
3/4	300	117.3	199.2	208.8	5	-	-	-
3/4	600	117.3	208.8	208.8	5	-	-	-
3/4	900 / 1,500	130.0	208.8	208.8	7	-	-	-
3/4	2,500	139.7	240.8	240.8	10	-	-	-
1	150	108.0	199.2	208.8	5	216.4	226.0	8
1	300	124.0	199.2	208.8	6	216.4	226.0	9
1	600	124.0	208.8	208.8	6	226.0	226.0	9
1	900 / 1,500	149.3	240.8	240.8	10	296.0	296.0	15
1	2,500	158.8	240.8	240.8	14	296.0	296.0	18
1 1/2	150	127.0	199.2	208.8	6	216.4	226.0	10
1 1/2	300	155.4	231.2	240.8	9	216.4	226.0	12
1 1/2	600	155.4	240.8	240.8	10	258.0	258.0	15
1 1/2	900 / 1,500	177.8	240.8	240.8	16	296.0	296.0	21
1 1/2	2,500	203.2	265.8	268.8	27	296.0	299.0	31
2	150	152.4	231.2	240.8	9	245.2	245.2	14
2	300	165.1	231.2	243.8	12	213.2	213.2	14
2	600	165.1	240.8	243.8	13	245.2	245.2	17
2	900 / 1,500	215.9	265.8	268.8	28	367.2	367.2	38
2	2,500	235.0	265.8	268.8	40	367.2	367.2	47

VariAS-Blocks I Weights and Dimensions

VariAS-Blocks - Weights and Dimensions



Lockable Valves
Option W



Flange x Thread

Flange Size (in)	Flange Class	ØD (mm)	Bore Size 9.5 mm (3/8")			Bore Size 20 mm		
			Flance Face		Approx. Weight (kg)	Flance Face		Approx. Weight (kg)
			RF L (mm)	RTJ L (mm)		RF L (mm)	RTJ L (mm)	
1/2	150	88.9	187.2	-	3	-	-	-
1/2	300	95.3	187.2	191.2	3	-	-	-
1/2	600	95.3	192.0	191.2	3	-	-	-
1/2	900 / 1,500	120.6	192.0	192.0	4	-	-	-
1/2	2,500	133.4	192.0	192.0	5	-	-	-
3/4	150	98.6	187.2	-	3	-	-	-
3/4	300	117.3	187.2	192.0	4	-	-	-
3/4	600	117.3	192.0	192.0	4	-	-	-
3/4	900 / 1,500	130.0	192.0	192.0	5	-	-	-
3/4	2,500	139.7	208.0	208.0	6	-	-	-
1	150	108.0	187.2	192.0	4	221.8	226.6	8
1	300	124.0	187.2	192.0	4	221.8	226.6	8
1	600	124.0	192.0	192.0	4	226.6	226.6	9
1	900 / 1,500	149.3	208.0	208.0	6	261.6	261.6	12
1	2,500	158.8	208.0	208.0	8	261.6	261.6	13
1 1/2	150	127.0	187.2	192.0	5	221.8	226.6	9
1 1/2	300	155.4	203.2	208.0	6	221.8	226.6	10
1 1/2	600	155.4	208.0	208.0	7	242.6	242.6	11
1 1/2	900 / 1,500	177.8	208.0	208.0	9	261.6	261.6	15
1 1/2	2,500	203.2	222.5	224.0	15	261.6	263.1	20
2	150	152.4	203.2	208.0	6	236.2	236.2	11
2	300	165.1	203.2	209.5	7	220.2	220.2	11
2	600	165.1	208.0	209.5	8	236.2	236.2	12
2	900 / 1,500	215.9	222.5	224.0	15	297.2	297.2	21
2	2,500	235.0	222.5	224.0	21	297.2	297.2	27

Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14
D	B	2	-	N	G	C	L	N	4	-	S	C	

VariAS-Blocks

Block & Bleed

DD	10 mm (0.39") Bore Ball Valve (Ball / Ball)
DE	10 mm (0.39") Ball Valve (Ball / Needle)

Double Block & Bleed

DA	10 mm (0.39") Bore Ball Valve (Ball / Ball / Ball)
DB	10 mm (0.39") Bore Ball Valve (Ball / Needle / Ball)
DC	Needle Valve (Needle / Needle / Needle) – Not for Threaded Process Connections →See Catalogue 'AS-2601 I E Series Valves and Manifolds'
DP	20 mm (0.787") Bore Ball Valve (Ball / Needle / Ball) ≥ Flange Size 1"

Seals – Standard Valve Design

	Packing / Body Seals	Ball Seat
1	PTFE	Carbon filled PTFE*3
2	Graphite	Carbon filled PTFE*3
3	PTFE	PEEK
4	Graphite	PEEK

Seals – Fugitive Emission Application Design

	Packing / Body Seals	Ball Seat
D	Graphite*2	Carbon filled PTFE
E	PTFE*1	Carbon filled PTFE
F	PTFE*1	PEEK
G	Graphite*2	PEEK

Process Connection

ASME Flange Size

NA	1/2" RF	NJ	1" RTJ
NC	1/2" RTJ	NK	1 1/2" RF
ND	3/4" RF	NM	1 1/2" RTJ
NF	3/4" RTJ	NN	2" RF
NG	1" RF	NQ	2" RTJ

Thread

JN	Male NPT
LN	Female NPT

Process Connection (continued)

ASME Flange Class

A	150	E	900 / 1,500
B	300	F	2,500
C	600		

Thread Size

4	1/2"
6	3/4"

Outlet Connection

ASME Flange Size

NA	1/2" RF	NJ	1" RTJ
NC	1/2" RTJ	NK	1 1/2" RF
ND	3/4" RF	NM	1 1/2" RTJ
NF	3/4" RTJ	NN	2" RF
NG	1" RF	NQ	2" RTJ

Thread

LG	Female G (EN837-1)
JN	Male NPT
LN	Female NPT

Outlet Connection (continued)

ASME Flange Class

A	150	E	900 / 1,500
B	300	F	2,500
C	600		

Thread Size

4	1/2"
6	3/4"
8	1"

Body Material

C	A105	L	A350 LF2	V	Alloy 625 UNS N06625
F	Duplex UNS S31803	M	Alloy 400 UNS N04400	D	Super Duplex UNS S32750
H	Alloy C-276 UNS N10276	S	1.4401 / 1.4404 / 316 / 316L	B	6Mo UNS S31254

Vent Connection

C	1/4 NPT Female	E	1/2 NPT Female
D	1/4 NPT Female plugged	F	1/2 NPT Female plugged

Options

1	Sampling Probe (starting from 1 1/2" Flange Size)
Q	Needle Valve: Stainless Steel Handwheel and Locking Plate Design
R	Needle Valve: Stainless Steel Handwheel and Locking Plate Design incl. Padlock
V	Injection Probe incl. Check Valve (starting from 1 1/2" Flange Size) – Only available for 3/8" Bore Ball Valve
W	All Valves lockable incl. Padlock Note: Flange x Thread Design – Position of Secondary Isolation Valve on opposite side of Primary Isolation Valve

*1 Needle Valves with ISO FE Type 3 Bonnet (see Page 19).
*2 Needle Valves with ISO FE Type 1 Bonnet (see Page 19).
*3 Carbon Filled PTFE Ball Seat – Ball Bore Size 20 mm (0.787") max. Class 1,500.

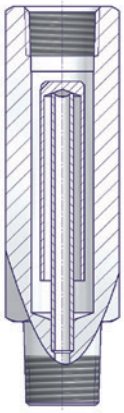
Wetted Parts according to above mentioned material list are supplied according to NACE MR0175/MR0103 and ISO 15156 (latest issue).
Note: Not every configuration which can be created in the ordering information is feasible / available.

Accessories for Monoflanges and VariAS-Blocks

Gauge Syphons

Designed to replace the pigtail syphon, this compact style provides a thermal barrier between hot vapors and the pressure instrument. This Gauge Syphon reduces also the amount of potential gauge whip on vibrating lines by bringing the gauge closer to the process connection.

Ordering Information see Catalogue 'AS-0201 I Gauge Valves and Pressure Gauge Accessories'.

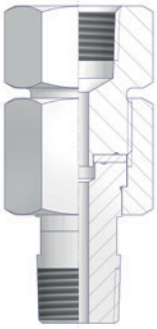


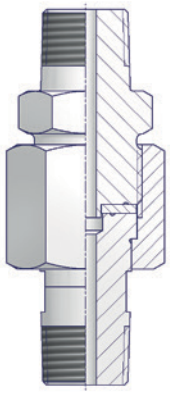
Swivel Gauge Adaptors

The Swivel Gauge Adaptors enable the easy positioning of the pressure instrument in any direction through 360°.

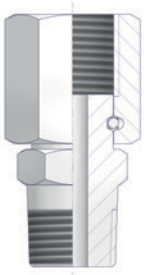
Ordering Information see Catalogue 'AS-2601 I E Series Valves and Manifolds'.

GS Type - For NPT Threads only





GD Type

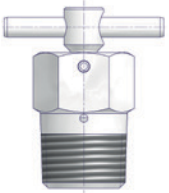


Vent Valves, Pipe Plugs and Pipe Fittings

Ordering Information see Catalogue 'AS-2601 I E Series Valves and Manifolds'.

Vent Valve
VS Type

Vent Valve
VT Type



Pipe Plug
PP Type

Hex Nipple
HN Type

Double Block & Bleed Pipeline Ball Valves - Taurus Series

Taurus Series

Taurus is the strong name of our Double Block & Bleed Pipeline Ball Valves product line. A suitable name, because it stands for process valves, to be used for example on Offshore Platforms, Metering Stations and Compressor Stations, Gas Pipelines, Refineries, etc.!

For more information see our Catalogue 'AS-4201 I Taurus Series'.

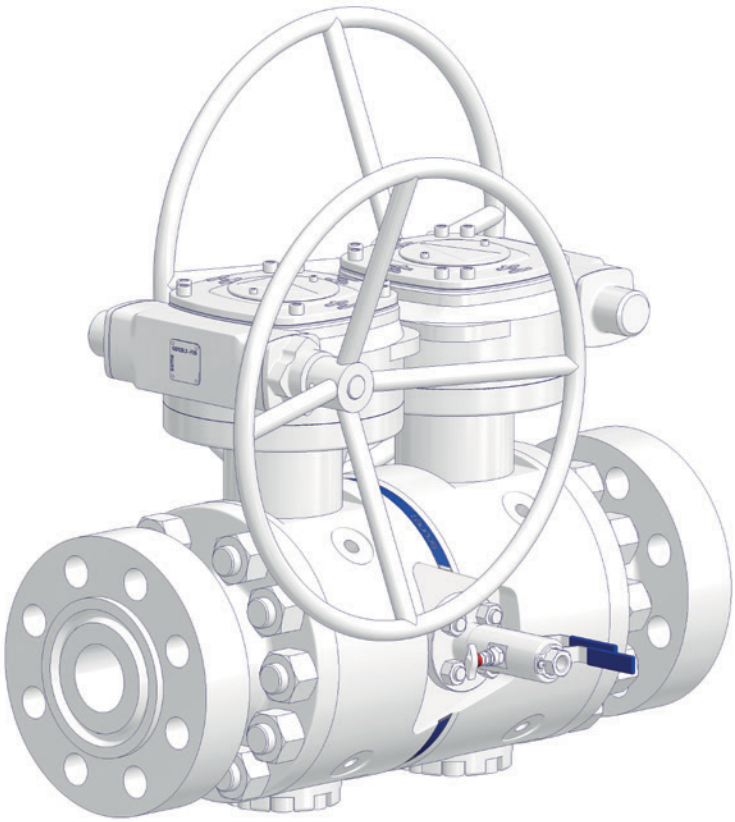
Basically we offer 2 different designs: 2 Piece Design and 3 Piece Design, Both Flanged Style and Side Entry.

Features

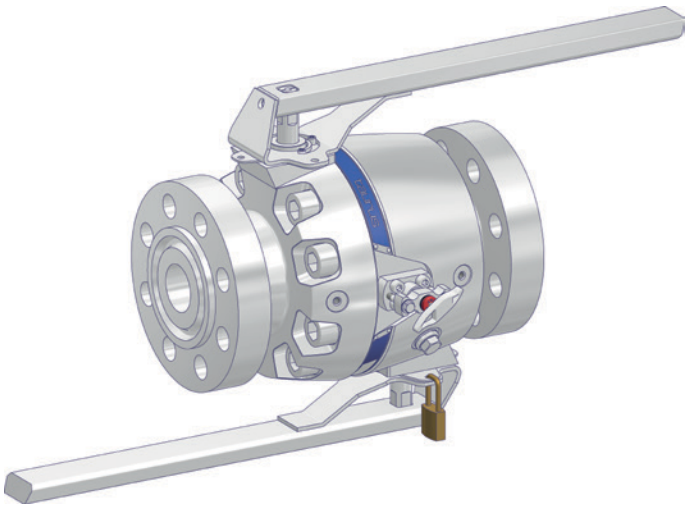
- Designed in accordance with Industry Standards i.e. ASME B16.34, ASME B31.3, ASME B16.5, API 6D / ISO 14313
- Full Bore or Reduced Bore
- Standard Materials of construction are forged Carbon Steel LF2, Stainless Steel 316 and Duplex
- Pressure Class 150 to 2,500
- Fire Safe in accordance to API 607 and ISO 10497
- Compliant to NACE MR0175 and ISO 15156
- Factory Tested in accordance with ASME B16.34, API 6D / ISO 14313, ISO 5208
- Manufactured in accordance with the Pressure Equipment Directive
- Ball Seat Material: PTFE, Devlon, PEEK or Metal Seated
- Stem Seal Material: FKM, HNBR - RGD resistant (RGD = Rapid Gas Decompression) or Graphite
- Anti-Blowout Stem Design and Anti-Static Design
- Weld Inlay: Seat pocket and seal area overlay on request
- Bi-Directional: The Taurus Series floating and trunnion ball valves are bi-directional as standard.
- Painting: The valves can be supplied with any kind of adequate coatings for environmental protection, according to customers specifications.
- Certification and Traceability: Material test certificates 3.1 according to EN 10204. A unique code is stamped on all relevant components linking them with their material and chemical analysis certificates.

YOUR BENEFITS:

- Compact Assembly
- Reduced Weight
- Reduced Leak Paths
- Reduced Installation and Maintenance Costs
- Significant Space Savings



3 Piece Design, Flanged Style



2 Piece Design, Flanged Style

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