

Lined Process Valves and Automation



Butterfly Valves
Ball Valves
Cylindrical Plug Valves
Diaphragm Valves
Pneumatic Actuators
Check Valves
Sight Glasses
Customized Products

SWISS **fluid**

Ball Valves SBV

DN15 – DN200 / ½" – 8" full port
DN125 – DN250 / 5" - 10" reduced port

Fully lined Ball Valves for shut-off and flow-control of corrosive, permeating liquids or gaseous media.

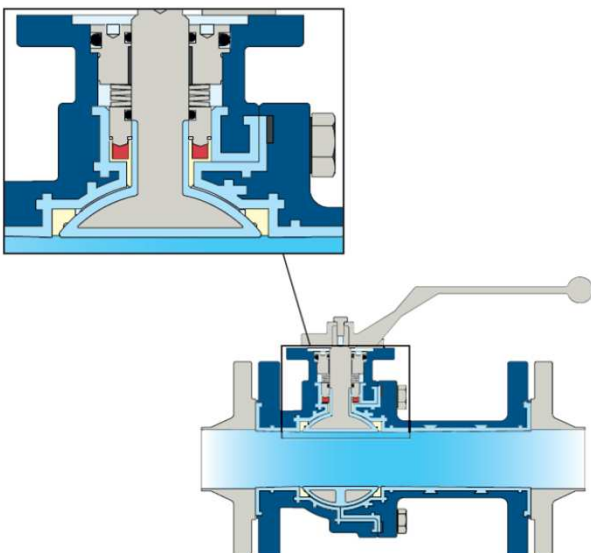
Main features

- Two-piece body made of cast steel or stainless steel, metal-to-metal joint
- Anchored lining with positive locking to body
- Live loaded, maintenance free stem seal acc. to TA-Luft VDI 2440, ISO 15848-1
- One-piece ball/shaft, blow out proof
- Rated breaking point outside of valve
- Live loaded, maintenance free shaft seal
- Ball options such as V-port, C-port, with pressure relief hole or ceramic ball
- ISO mounting flange for direct automation with pneum. quarter turn actuators

Technical data

- Flanges according to DIN PN10/16/25/40 resp. ASME class 150lbs
- Face to face length according to EN 558-1 series 1 resp. ASME B16.10
- Body: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M) with integrated ISO mounting flange
- Lining: PFA, PFA-AS (conductive), ETFE, PVDF
- Ball encapsulated: PFA, PFA-AS (conductive), ETFE, PVDF
- Ball solid: SS316L, Titanium Gr.2/Gr.7, C-276, Ceramic
- Ball seat: PTFE, PTFE-AS (conductive)
- Higher pressure ratings possible

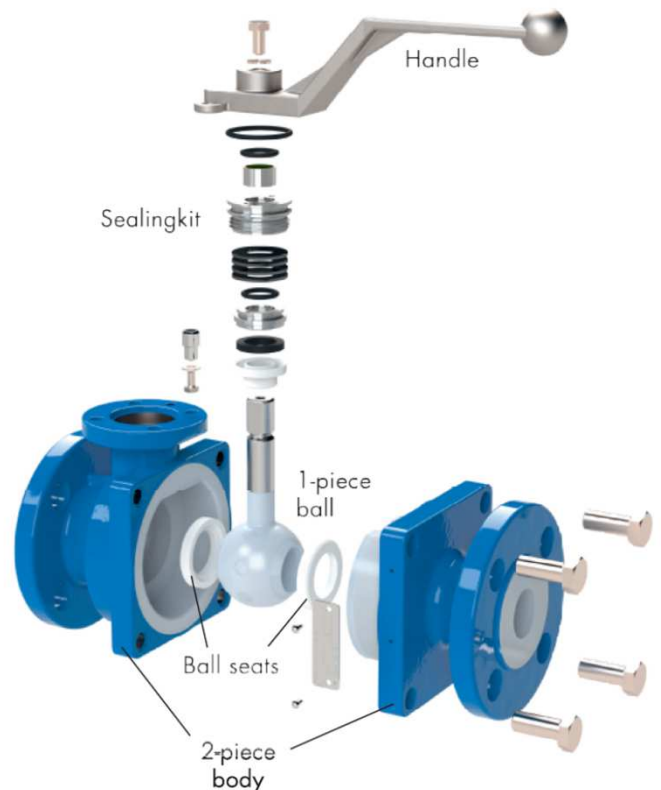
Live loaded, maintenance free stem seal TA Luft VDI 2440, ISO 15848-1



Operating conditions (depending on material selection)

- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
- Temperature: -40°C (40°F) up to +200°C (+392°F)

Construction of the valve



Ball options

Ball encapsulated Standard



Cs
Ball with cut out (C-cross-section), prevents pressure build-up and media deposits within the ball cavity



Ball solid Duplex, SS316L Titanium Gr. 2/Gr. 7 C-276



Vp
V-port-ball for more linear process regulation, available with various trims ranging from 15° to 60°



Ball ceramic



Vh
Ball with pressure relief hole



Ball Valves SBV class 300 lbs

1" – 3" full port

Technical data

- Flanges according to ASME B16.5 class 300lbs
- Face to face according to ASME B16.10
- Body: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M)
- Lining: PFA, PFA-AS (conductive), ETFE, PVDF
- Ball encapsulated: PFA, PFA-AS (conductive), ETFE, PVDF
- Ball solid: SS316L, Titanium Gr.2/Gr.7, C-276, ceramic
- Ball seat: PTFE, PTFE-T, PTFE-AS (conductive)



Operating conditions (depending on material selection)

- Pressure: 1 mbar (0.014 psi) up to 50 bar (752 psi)
- Temperature: -40°C (40°F) up to +200°C (+392°F)

Plastic Lined Butterfly Valve SBP

DN25 – DN1000/1" – 42"

Plastic lined Butterfly Valves for on/off, throttling or control applications for liquid, powdery media or gaseous service.

Main features

- large selection of different materials and trims
- Live loaded, maintenance free stem seal according to TA-Luft VDI 2440, ISO 15848-1
- flow-optimized disc for high cv values
- mechanically locked-in disc encapsulation
- blow-out proof one-piece disc/stem
- Disc features a rated breaking-point outside the atmospheric seal
- hysteresis free throttling characteristic
- wide, chambered flange face
- ISO mounting flange for direct automation

Technical data

- Flanges according to DIN PN10/16 resp. ASME class 150lbs
- Face-to-face according to EN 558-1 series 20 resp. ASME B16.10
- Body: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M), 1.4404 (A276 316L), with integrated ISO flange
- Liner: PTFE, PTFE-AS (conductive), UHMWPE, PVDF
- Disc encapsulated: PFA, PFA-AS (conductive), PVDF, ETFE, PP
- Disc solid (polished): SS Duplex, Titanium Gr. 2/Gr. 7, C-276, C-2000
- Elastomer Energizer: VMQ, FPM, EPDM
- Higher pressure ratings possible



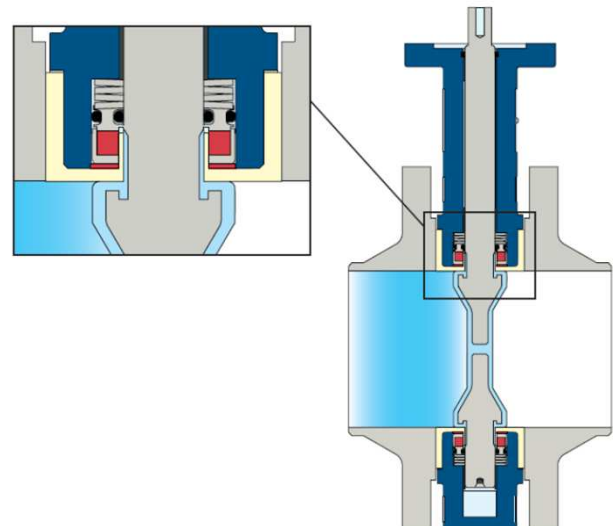
Operating conditions (depending on material selection)

- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
- Temperature: -40°C (-40°F) up to +230°C (+446°F)

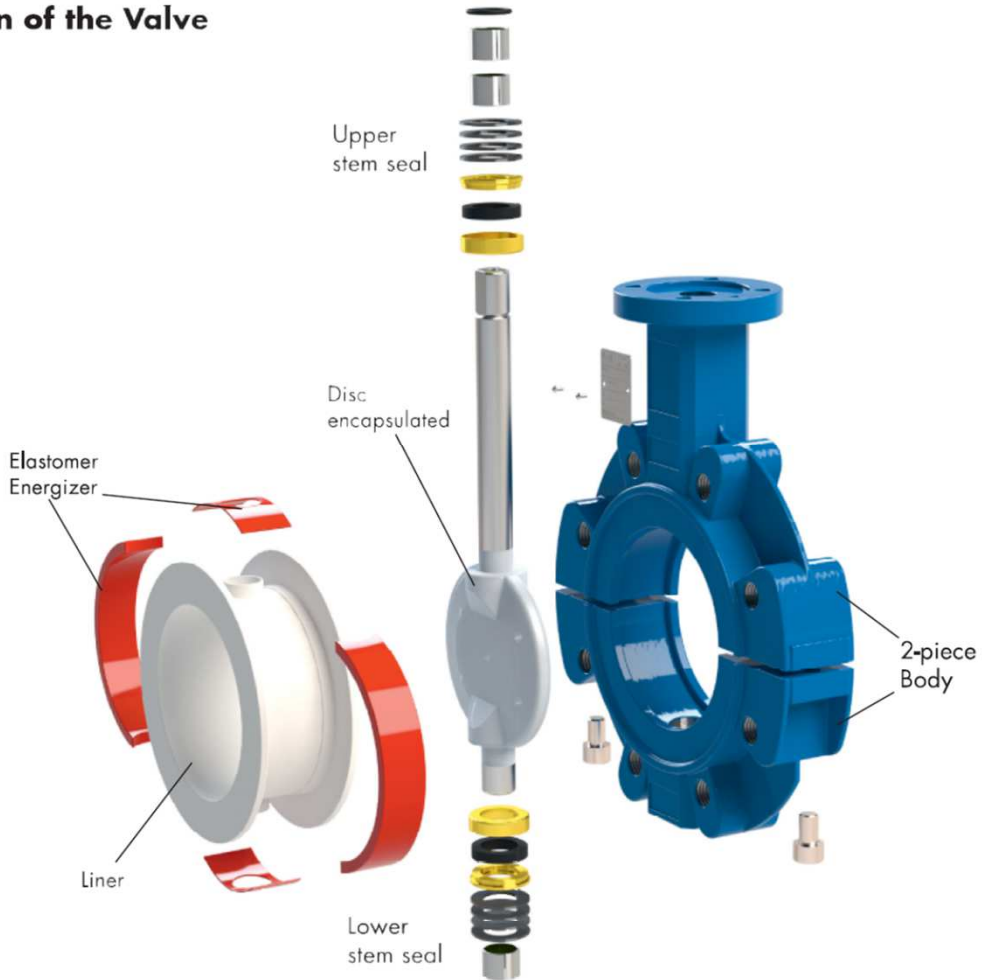


**Pharmaceutical trim
Butterfly Valve**

Live loaded, maintenance free stem seal TA Luft VDI 2440, ISO 15848-1



Construction of the Valve



Body versions



Discs



Elastomer seated butterfly valve SBE

DN40 – DN800/1½" – 32"

Elastomer seated Butterfly Valves SBE for on/off, throttling or control applications for dilute acids and brine, powdery media or gaseous service.

Main features

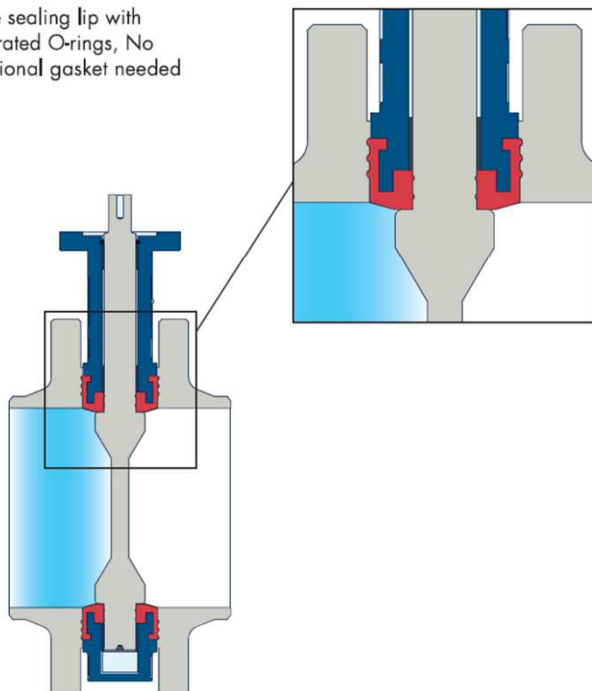
- large selection of different materials and trims
- blow-out proof one-piece disc/stem assembly
- flow-optimized disc for high cv values
- Disc features a rated breaking-point outside the atmospheric seal
- hysteresis free throttling characteristic
- Easy installation and maintenance due to split body design
- ISO mounting flange for direct automation

Technical data

- Flanges according to DIN PN10/16 resp. ASME class 150lbs
- Face-to-face according to EN 558-1 series 20 resp. ASME B16.10
- Body: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 FC-8M), with integrated ISO flange
- Liner: EPDM, EPDM-HT, FPM, NBR, SBR, VMQ, CXN
- Disc encapsulated: PFA, PFA-AS (conductive), PVDF, ETFE, PP
- Disc solid (polished): SS Duplex, Titanium Gr. 2/Gr. 7, C-276, C-2000

Safe flange connection

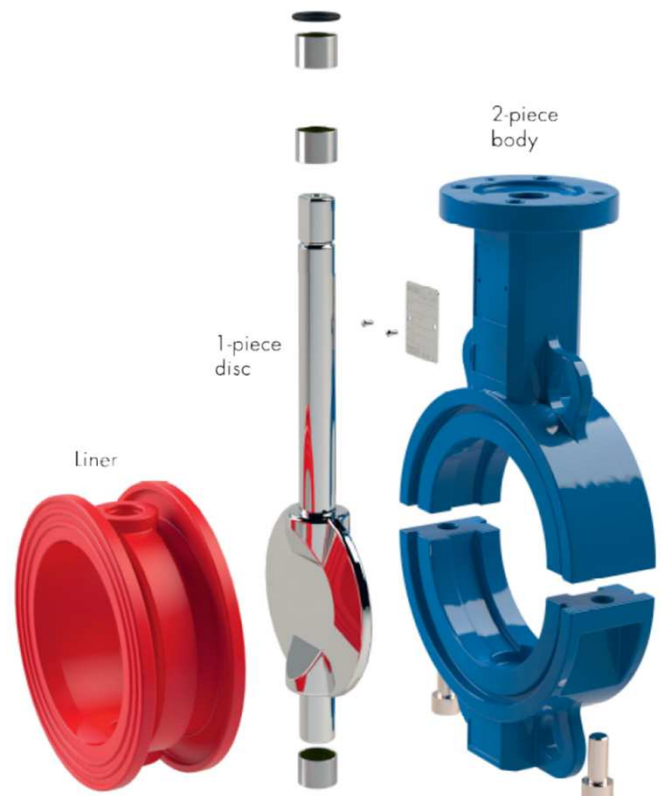
Wide sealing lip with integrated O-rings, No additional gasket needed



Operating conditions (depending on material selection)

- Pressure: up to 16 bar (232 psi)
- Temperature: -40°C (-40°F) up to +200°C (+392°F)

Construction of the Valve



Cylindrical Plug Valves SCP

DN15 – DN100/½" – 2" full port
3" – 6" reduced port

Fully lined Cylindrical Plug Valves with full or reduced bore for shut-off or throttling applications of corrosive, abrasive liquid or gaseous media.

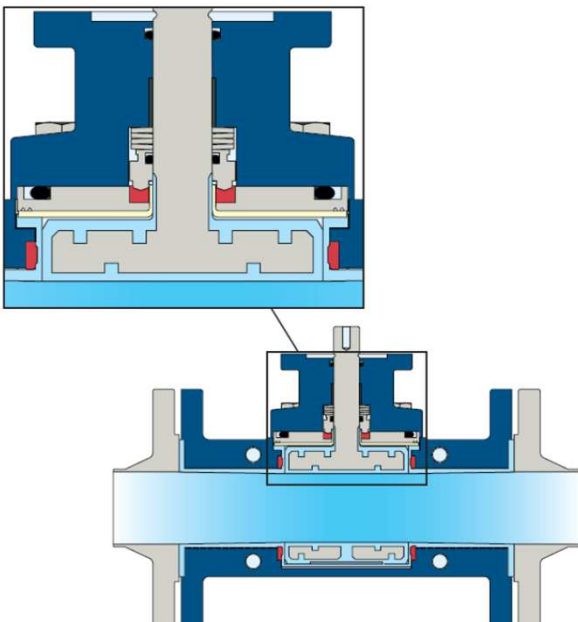
Main features

- Two-piece split body made of cast steel, top entry
- Live loaded, maintenance free stem seal according to TA-Luft VDI 2440, ISO 15848-1
- Cavity-free design, constant low torque, full and reduced port
- One-piece cylinder/shaft, blow out proof, core made of SS Duplex
- Rated breaking point outside of valve
- Cylinder options such as V-port (for flow control applications) or with pressure relief hole
- Easy on-site maintenance
- ISO mounting flange for direct automation with pneum. quarter turn actuators

Technical data

- Flanges according to DIN PN16 resp. ASME class 150lb
- Face to face according to EN 558-1 series 1 resp. ASME B16.10
- Body/Bonnet: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M), with integrated ISO flange
- Lining: PFA, PFA-AS (conductive)
- Cylinder encapsulated: PFA, PFA-AS (conductive), PVDF, ETFE
- Cylinder solid: SS316L, Duplex, Titanium Gr. 2/Gr. 7, C-276, C-2000
- Elastomer Energizer: VMQ, FPM

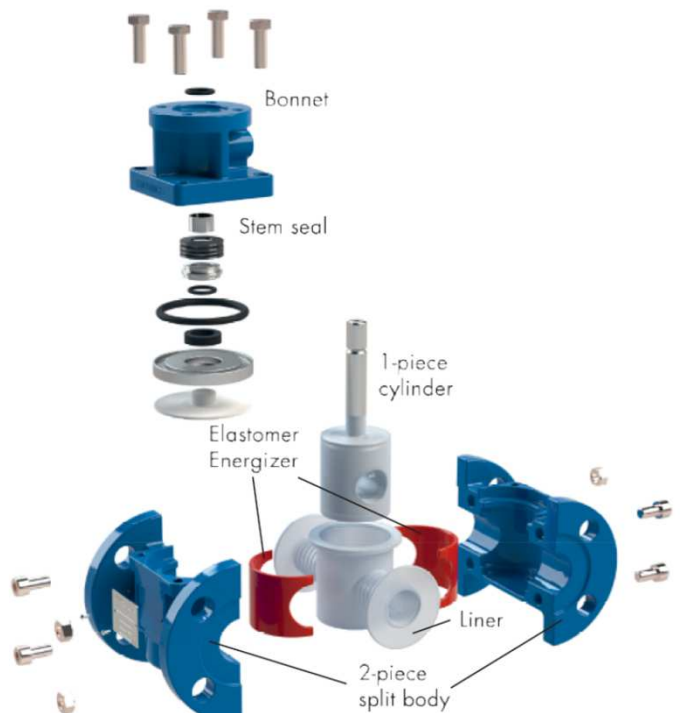
Live loaded, maintenance free stem seal TA Luft VDI 2440, ISO 15848-1



Operating conditions (depending on material selection)

- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
- Temperature: -40°C (-40°F) up to +200°C (+392°F)

Construction of the Valve



Pneumatic Quarter Turn Actuator SPA-R

Double acting DA or single acting FC/FO

Pneumatic quarter turn actuators SPA-R are ideal for trouble-free, modular automation of process valves such as butterfly, ball and plug valves or as a control unit on reactor sampling systems.

Main features

- Robust Rack & Pinion construction
- for dry or lubricated, filtered compressed air
- plant-side lubricated for 1'000'000 cycles
- hard anodized aluminum body and epoxy coated covers provide excellent corrosion protection according to ASTM B117-73
- multiple bolt circles according to ISO 5211 / DIN 3337 for direct automation
- top drillings according to NAMUR VDI / VDE-3845 for accessory mounting
- visual position indicator
- Pre-compressed spring cartridges for safe dismantling

Technical Data

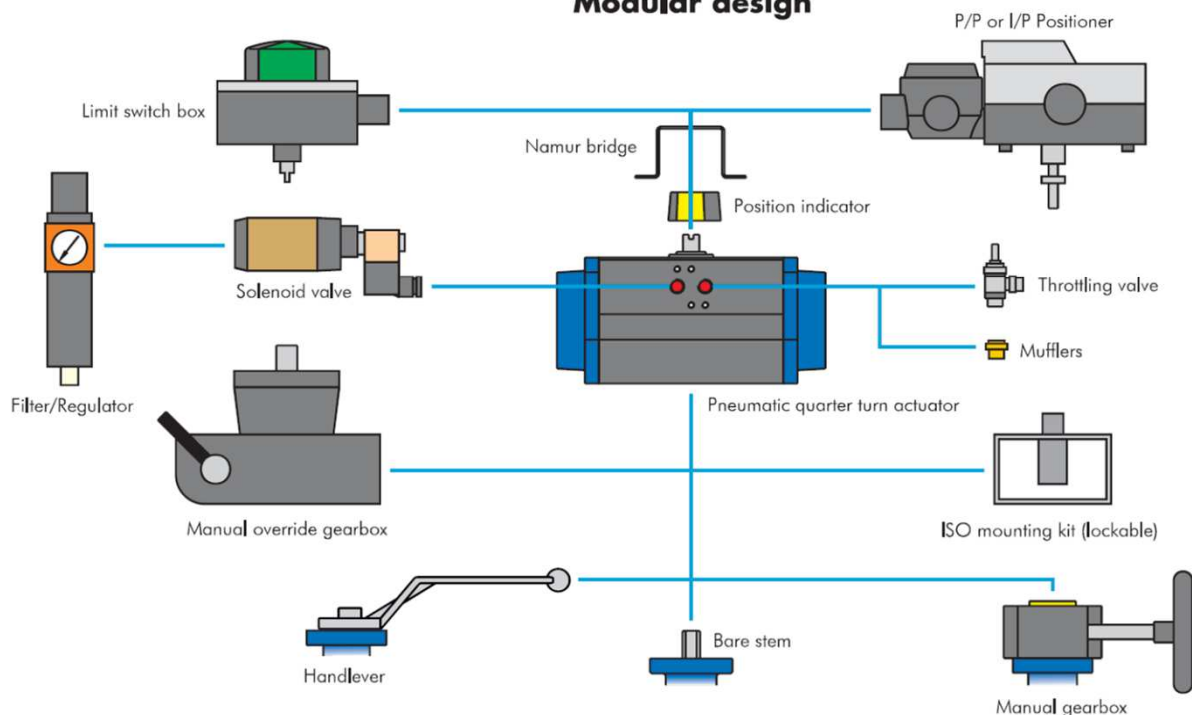
- Size: TR 50 - TR 420
- Air supply: Dry or lubricated, filtered air
- Rotation angle: 90°
- Travel stop: ±5°
- Top connection: NAMUR drillings VDI/VDE-3845
- Bottom: ISO-5211 / DIN 3337
- Accessories: TR270 – TR420 with mounting plate
- Body options: PTFE coated, electroless nickel plated or stainless steel SS316 (polished)



Operating conditions (depending on material selection)

- Air supply pressure: min. 1 bar (14.5 psi) up to 8 bar (116 psi)
- Temperature: -20°C (-4°F) up to +80°C(+176°F)
- Torque: 10'025 Nm (88'720 in-lbs) @ 6 bar (87 psi)

Modular design



Options

We can adapt various options to meet the customer's exact requirements. When combined with solenoid valves, limit switch boxes with proximity or electro-mechanical switches, electro-pneumatic positioners, silencers, throttling devices, manual overrides, air filter regulators etc the flexibility is near-limitless.

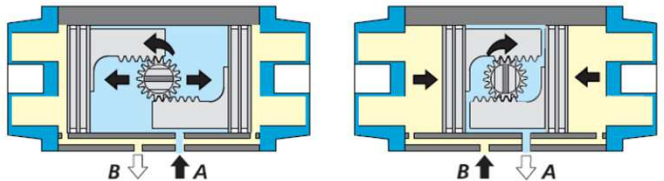
Examination

100% functionality testing guaranteed.

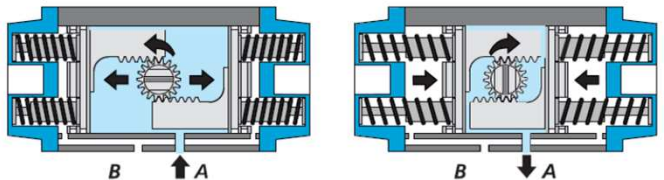
Mode of operation

The actuators can be used for single-acting fail-closed or fail-open (FC, FO) as well as double-acting applications (DA). They come properly set up from the factory with the appropriate valve and can be adjusted in the field if necessary.

Single acting actuators use compressed air in one direction, and heavy-duty springs control the movement in the opposite direction. In the event of a sudden lack of air pressure the actuators automatically default to the fail position, which can be fully closed or fully open depending on the requirements.



Double acting (DA)



Single acting (FC/FO)

Typical applications



Ball Valve SBV



Cylindrical Plug Valve SCP



Butterfly Valve SBP

Diaphragm Valves SDV

DN15 – DN200/½" – 8"

Fully lined weir type Diaphragm Valves for shut-off or throttling of corrosive liquids or gaseous media. Due to its cavity free design it is also well suited for high-purity applications.

Main features

- Proven weir-type valve body made of cast steel
- Cavity-free design
- Installation in any orientation (self-draining)
- TA-Luft certified
- Integrated travel stop protecting the diaphragm
- Built in position indicator
- Easy maintenance (even in place)

Technical data

- Flanges according to DIN PN10/16 resp. ASME class 150lbs
- Face to face according to EN 558-1 series 1 resp. MSS SP-88
- Body/Bonnet: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M)
- Lining: PFA, PFA-AS (conductive) PVDF, PP
- Diaphragm: PTFE/EPDM, PTFE-AS (conductive)/EPDM, PTFE/FPM, PTFE-AS (conductive)/FPM, EPDM, PTFE-T/FEP/EPDM

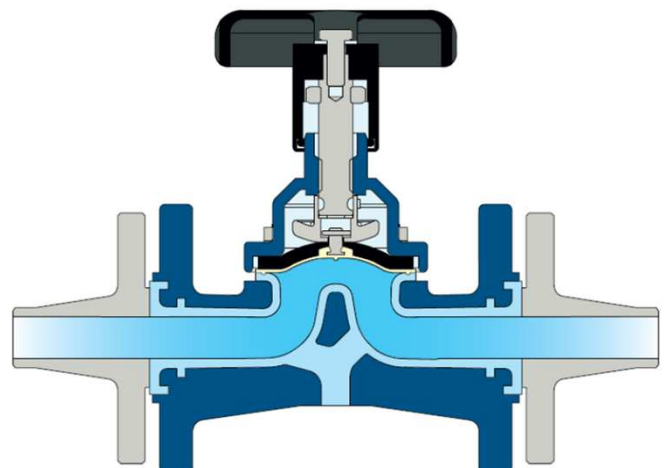
Construction of the valve



Operating conditions (depending on material selection)

- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
- Temperature: -30°C (-22°F) up to +150°C (+302°F)

Live loaded, maintenance free stem seal TA Luft VDI 2440, ISO 15848-1



Pneumatic Linear Stroke Actuator SPA-L

Compact pneumatic Linear Stroke Actuators for safe, reliable automation of Diaphragm and Inline Sampling Valves. Suitable for installation in most demanding surroundings thanks to a corrosion resistant plastic housing.

Main Features

- Rugged glass-fiber reinforced PP housing
- Highly corrosion resistant
- for dry or lubricated, filtered compressed air
- compact design, directly mounted onto Swissfluid Diaphragm and Inline Sampling Valves
- Monitoring connection on stainless steel bracket
- Easy mounting of control devices (Namus)
- Visual position indicator
- Pre-compressed spring cartridges for safe disassembly

Technical Data

- Operation: double acting DA or single acting FC/FO
- Air supply: Dry or lubricated, filtered air
- Solenoid connection: NAMUR VDI/VDE 3845, partly with adapter plate

Accessories

Solenoid valves, limit switch boxes, pneumatic and electro-pneumatic positioners, min./max. stroke limiter, manual emergency override, mufflers, throttling valves



Operating conditions

- (depending on material selection)
- Air supply pressure: 4 bar up to 5 bar (73 psi) for DA/FO execution
 - Air supply pressure: 4 bar (58 psi) up to 7 bar (101 psi) for FC execution
 - Temperature: -10°C (+14°F) up to +80°C (+176°F)
 - Closing force up to 27'570 N (6'198 lbf)



Bonnet Type

Steel body, two-component epoxy coated

Accessories

Solenoid valves, limit switch boxes, pneumatic and electro-pneumatic positioners, min./max. stroke limiter, manual emergency override, mufflers, throttling valves

Operating conditions

- Air supply pressure: up to 7 bar (102 psi) for FC
- Closing force: up to 79'000 N (17'760 lbf)

Swing Check Valves SSC

DN40 – DN600/1 1/2" – 24"

Fully lined Swing Check Valves for safe non-return flow control of corrosive process media.

Main features

- Wafer-style body, two- and three-piece, DIN/ANSI combined
- Centering lugs for safe installation
- Tilted disc (to compensate for slightly inclined pipelines)
- Self-retaining disc, no counter flanges needed to hold the disc in place
- Horizontal or vertical installation
- Integrated sealing lip (to seal at low differential pressures)

Technical data

- Flanges according to DIN PN10/16 resp. ASME class 150lbs
- Face-to-face according to EN 558-1 series 20 resp. ASME B16.10
- Body: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M)
- Lining: PFA, PFA-AS (conductive)
- Disc encapsulated: PFA, PFA-AS (conductive)
- Disc solid (polished): SS316L, Titanium Gr. 2/Gr. 7, C-276
- Higher pressure ratings possible

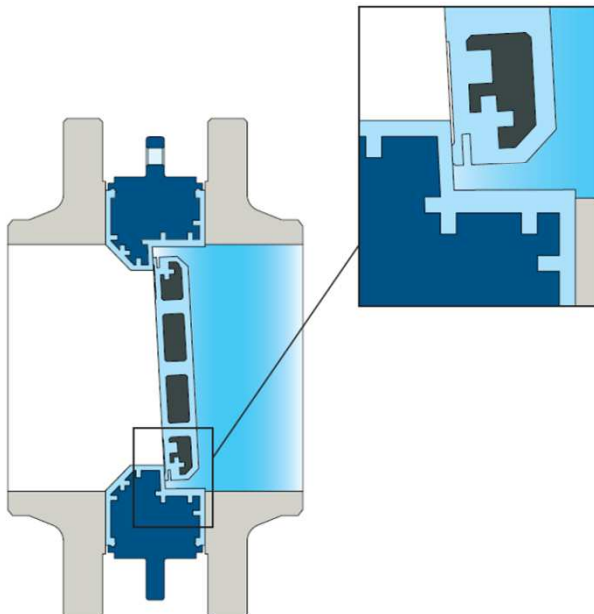


Operating conditions (depending on material selection)

- Pressure: up to 16 bar (232 psi)
- Temperature: -40°C (-40°F) up to +200°C (+392°F)

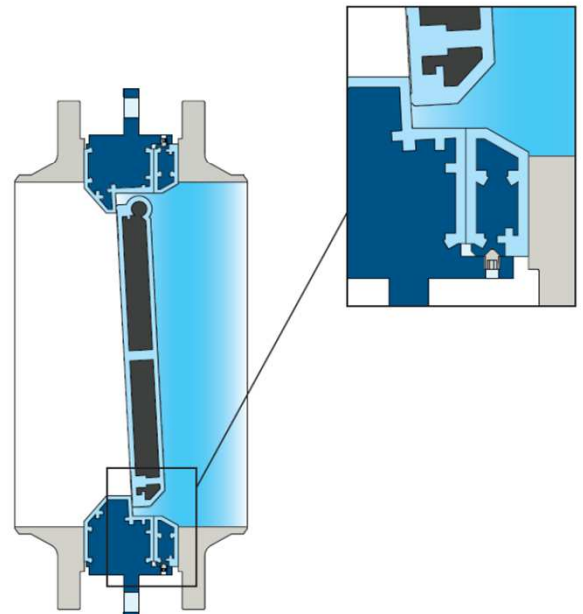
2-piece body

DN40 – DN300



3-piece body

DN350 – DN600



Ball Check Valves SBC

DN15 – DN150/½" – 6"

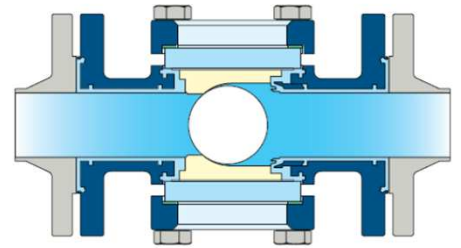
Fully lined Ball Check Valves for safe non-return flow control of corrosive process media. Typical installations are in front of pumps, as overflow protection for liquids and in venting applications.

Main features

- Horizontal or vertical installation
- Large safety glass plates
- Solid or hollow balls
- Quad ball guide
- For liquids, gases and steam
- Bubble tight even at low differential pressure

Technical data

- Flanges according to DIN PN16 resp. ASME class 150lbs
- Face to face according to EN 558-1 series 1 resp. ASME B16.10
- Body/cover: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M)
- Solid ball: PTFE, PTFE-AS (conductive), PTFE-T, PP, UHMWPE
- Hollow ball: PTFE, Titan Gr. 2
- Lining: PFA, PFA-AS (conductive)
- Glass plates: Borosilicate according to DIN 7080
- Higher pressure ratings possible



Operating conditions (depending on material selection)

- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
- Temperature: -40°C (-40°F) up to +200°C (392°F)

Sight Glasses SSP

DN15 – DN150/½" – 6"

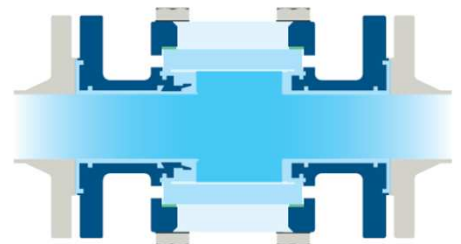
Fully lined Sight Glasses are reliable flow indicators for virtually all existing process media in either liquid or gaseous state.

Main features

- Rugged maintenance-free design
- Horizontal or vertical installation
- For liquids, gases and steam
- Large observation window
- Standard drip lip indicating even lowest flow

Technische Daten

- Flanges according to DIN PN16 resp. ASME class 150lbs
- Face to face according to EN 558-1 series 1 resp. ASME B16.10
- Body/cover: Cast steel 1.0619 (A216 WCB) or stainless steel 1.4408 (A351 CF-8M)
- Lining: PFA, PFA-AS (conductive)
- Glass plates: Borosilicate according to DIN 7080
- Higher pressure ratings possible



Operating conditions (depending on material selection)

- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
- Temperature: -40°C (-40°F) up to +200°C (+392°F)

Tubular Sight Glasses SSP-T/SST-T

DN15 – DN150/½" – 6"

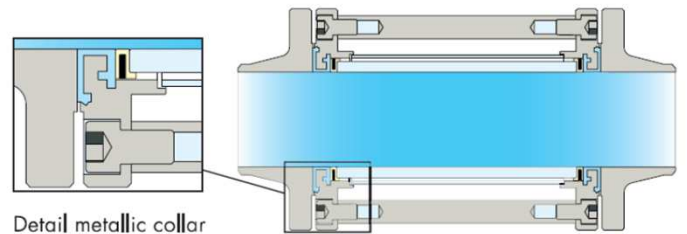
Fully lined Tubular Sight Glasses SSP-T and unlined Tubular Sight Glasses SST-T are reliable flow indicator for process media in either liquid or gaseous state.

Main features

- Full 360° visibility over the entire length
- Cavity-free design
- PMMA protection tube adds another layer of safety
- Maintenance-free, easily cleaned in place
- Metallic collar for safe installation

Technical data

- Flanges according to DIN PN16 resp. ASME class 150lbs
- Face-to-face according to EN 558-1 series 1 resp. ASME B16.10
- SST-T Flanges: 1.4408 (SS316L) or other (exotic) alloys
- SSP-T Flanges: 1.4404 (SS316L) lined with PFA, PFA-AS (conductive)
- Tie bars: Stainless steel 1.4404 (SS316L)
- Glass cylinder: Borosilicate 3.3
- Safety shield: PMMA-XT (Acrylic glass)
- Gaskets: PTFE/FPM-insert



Operating conditions

- (depending on material selection)
- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
 - Temperature: -40°C (-40°F) up to +160°C (+320°F)

Sight Glasses SST

DN15 – DN150/½" – 6"

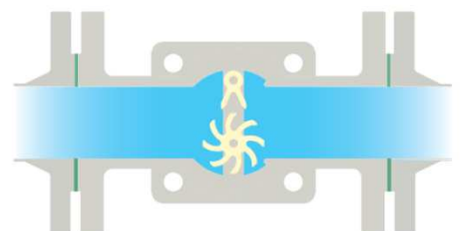
Sight Glasses fully made of stainless steel are reliable flow indicators for process media in either liquid or gaseous state. Bodies available in flanged version or with buttweld ends according to DIN EN 12982.

Main features

- Rugged, maintenance-free design
- Horizontal or vertical installation
- For liquids, gases and steam
- Large observation window
- Standard drip lip indicating even lowest flow

Technical data

- Flange according to DIN PN16 resp. ASME class 150lbs
- Face-to-face flange according to EN 558-1 series 1 resp. ASME B16.10
- Face-to-face buttweld according to EN 12982 series 1
- Body: Stainless steel 1.4408 (A351 CF-8M), 1.4409 (A351 CF-3M)
- Cover: Stainless steel 1.4408 (A351 CF-8M)
- Glass plates: Borosilicate according to DIN 7080
- Gasket: PTFE-T
- Higher pressure ratings and temperatures possible



Option:

Visual indicator flow/direction

Operating conditions

- (depending on material selection)
- Pressure: 1 mbar (0.014 psi) up to 16 bar (232 psi)
 - Temperature: -40°C (-40°F) up to +200°C (+392°F)

Customized Linings and Moulded Parts

for pumps, piping components, vessels, valves etc.

We are using virginal fluoropolymer material **only** (no reprocessed material), in order to achieve and ensure an equally high quality standard at any time. Solid parts as well as encapsulations and linings are made of corrosion resistant metal-fluoropolymer combinations such as PTFE, PTFE-T (modified), PTFE-AS (conductive), PFA, PFA-AS (conductive), PFA-HP (high purity), PVDF, PP, ETFE



Special cleaning and testing methods

As a manufacturer of high quality process valves we meet the demands of the market and develop cleaning procedures designed for chlorine, high purity and oxygen service as well as "oil and lubrication free" applications. After the successful pressure tests with Inertgas, the valves are cleaned, dried, individually packed and marked for the intended service. Each process is designed to achieve the highest standard for our product.



Quality

For our customers, Quality, Safety and Environmental sustainability are the primary concerns. International standards, regulations and internal examination guarantee the compliance to these specifications. The certified management system according to ISO 9001:2015 with the integrated, European pressure equipment directive 2014/68/EU (PED) support us in our co-operation with partners and customers around the world. A comprehensive modular assortment of Swiss-made quality products is at your disposal for solving problems efficiently in applications for various industries such as chemicals, petrochemicals, pharmaceutical products, biochemistry, semiconductors, pulp and paper, power generation, mining, etc. Throughout all manufacturing and testing stages, Swissfluid maintains the highest levels of quality of its parts and finished products.



ISO 9001:2015



PED 2014/68/EU



TA-Luft VDI 2440
ISO 15848-1

Further certificates:

ATEX

SIL Declaration of compliance

EAC TP 010/032

CRN (Canadian Registration Number)