

SchuF Globe Valves

Y-Globe, Stop-Check, Blow-Down
& Special Types



SchuF 



Globe Valves Contents

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Globe Valves

Overview

SchuF Globe Valves are isolation valves designed to withstand medium-to-severe service applications, ranging from low-pressure steam to high-pressure hydrogen. The construction materials of the valves range from standard carbon steel to **EXOTIC ALLOYS** and from Class ASME 150# to Class 2500# ratings. Refining, petrochemical, power and chemical industries rely on SchuF Globe Valves for absolute tight shut-off. Should higher pressures or material grades be required, SchuF engineering has the know-how to custom-build valves to meet those demands.

Applications include:

- Maintenance Isolation
- Draining/Filling
- Emergency Shut-Off
- Start-up/Shut-Down Throttling

Processes include:

- Hydroprocessing
- Power Generation
- Hydrotreating
- Hydrocracking
- Ethylene
- Styrene

Materials include:

- Incoloy
- Super-Duplex
- Hastalloy
- Titanium
- 316 SS
- Monel

SchuF Globe Valve Types:

- **SchuF Y-Pattern Globe Valves** are widely used to isolate lines where the pressure drop across the valves needs to be minimised without sacrificing sealing performance. SchuF Y-globe Valves stroke easily in dirty media, with no sticking or coking in dead spaces around the ball of equivalent ball valves, which can create torque problems. SchuF Y-Globe Valves are available as **bolted bonnet** and **pressure-seal designs**.
- **SchuF Y-Pattern Stop-Check Valves** provide the same function as a Y-Globe valve, but also provide check-valve protection in the event of backflow. The stem is not connected to the disc. When the valve is in the open position the disc is free to respond to the flow.
- **SchuF Blow-down Valves** are used to remove impurities from boilers or their associated pipelines in order to maintain boiler integrity and efficiency. SchuF provides both intermittent and continuous blow-down valves in both angle and Y-Globe designs.
- **Special Globe Valve Designs** such as **High-Pressure Angle Valves** provide low-pressure drops and eliminate elbows and are used in several industries including urea, power generation, polymer, oil and gas.
- **Straightway and P-Globe Valves** are designed to deliver a high Cv and very low pressure drop. This is achieved by streamlined bodies and an unobstructed flow path- which also enables the valves to be roddable or piggable.

Standards

SchuF design, manufacture and test valves to the following standards and specifications, amongst others;

- **ASME B16.34**
- **API 598**
- **API 623**
- **EN 12266- 97/23/EC (PED)**



SchuF Globe Valve being fire-tested [Fire-safe Certification available, e.g. API 607]

Y-Pattern Globe Valves

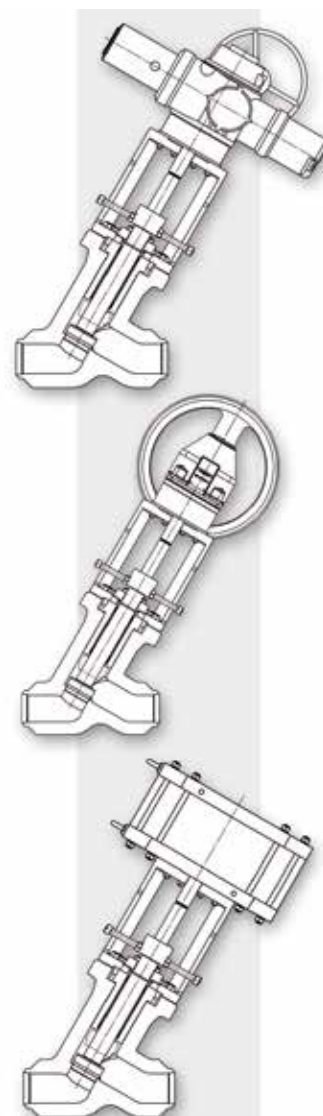
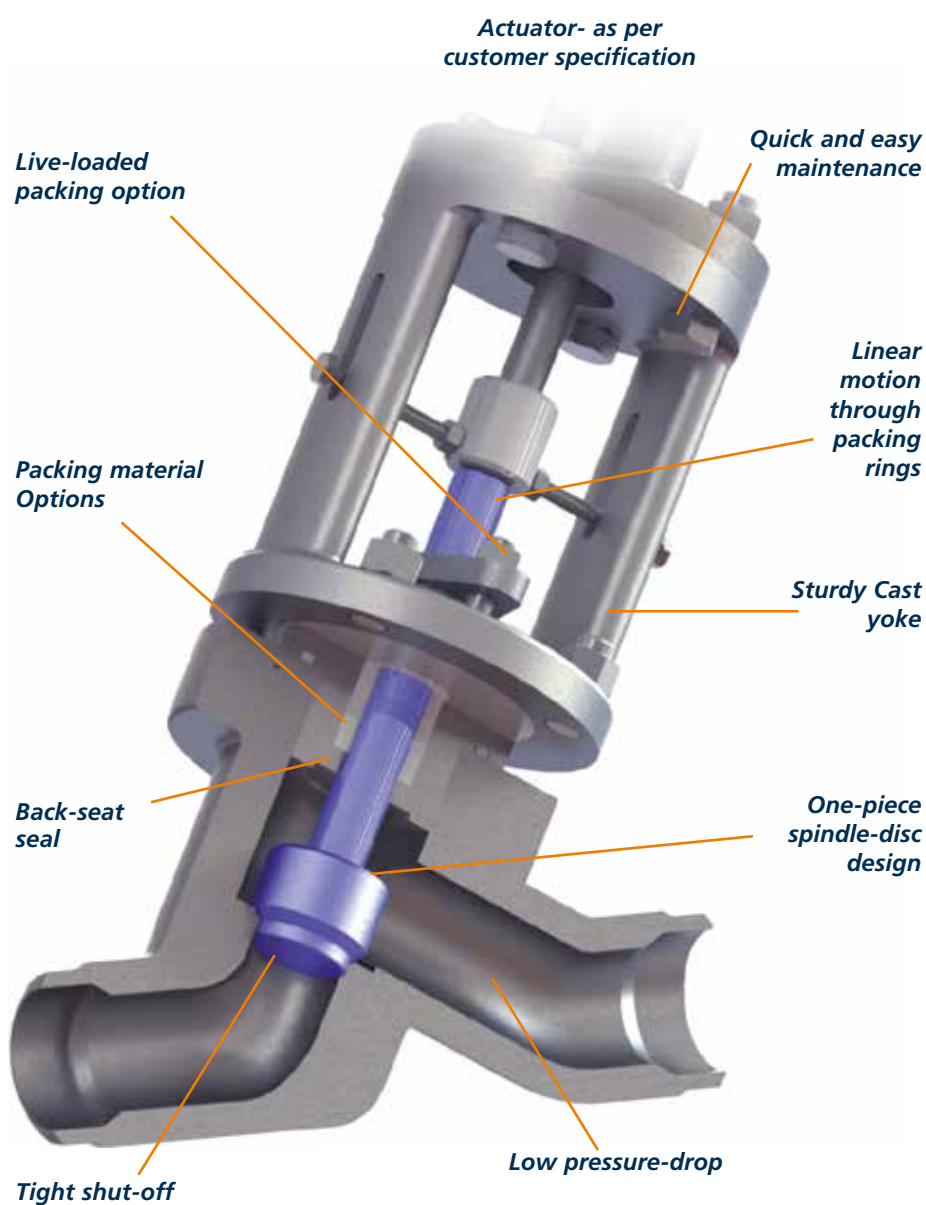
Bolted Bonnet, ASME 150-600

Type 50

Y-Pattern Globe Valves are widely used to isolate lines where pressure drops need to be minimised without sacrificing sealing performance.

Specific advantages include:

- Rugged single-piece spindle and disc, as opposed to disc pinned to spindle
- The ability to stroke easily in dirty media, with no sticking or coking in dead spaces.
- Flexible body/trim material combinations
- Seat leakage to Class VI if required
- SchuF disc does not block flow in the open position
- Replaceable seats and back-seat sealing options available



Actuator options, from top;
Electric, Bevel Gearbox,
Pneumatic

Y-Pattern Globe Valves

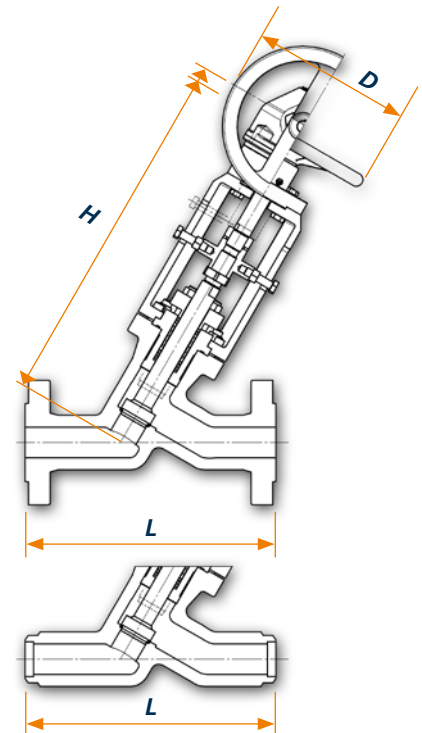
Bolted Bonnet, ASME 150-600

Type 50

Dimensions mm/Size

| Rating → | 150# | | | 300# | | | 600# | | |
|-----------|------|------|------|------|------|------|------|------|------|
| Size ↓ | L | H | D | L | H | D | L | H | D |
| 1" DN025 | 160 | 360 | Ø160 | 203 | 360 | Ø160 | 133 | 360 | Ø160 |
| 1½" DN040 | 203 | 440 | Ø225 | 229 | 440 | Ø225 | 152 | 440 | Ø280 |
| 2" DN050 | 229 | 530 | Ø280 | 267 | 530 | Ø280 | 178 | 580 | Ø360 |
| 4" DN100 | 368 | 850 | Ø315 | 356 | 850 | Ø315 | 305 | 900 | Ø400 |
| 6" DN150 | 470 | 1015 | Ø315 | 444 | 1135 | Ø400 | 457 | 1420 | Ø630 |
| 8" DN200 | 597 | 1137 | Ø400 | 559 | 1280 | Ø500 | 584 | 1535 | Ø800 |
| 10" DN250 | 673 | 1187 | Ø400 | 622 | 1480 | Ø630 | 711 | 1655 | Ø800 |
| 12" DN300 | 775 | 1570 | Ø500 | 711 | 1800 | Ø800 | 813 | 1878 | Ø800 |

Additional Dimensions for larger sizes and higher pressure ratings available on request



CV Values/Size

| Size | Cv (600#) |
|-----------|-----------|
| 1" DN025 | 25 |
| 2" DN050 | 70 |
| 2½" DN065 | 95 |
| 3" DN080 | 110 |
| 4" DN100 | 190 |
| 6" DN150 | 390 |
| 8" DN200 | 605 |
| 10" DN250 | 1400 |
| 12" DN300 | 1450 |

| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 150 to ASME 600 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully Stellite |
| Sealing: | Metal-to-metal | Stellite, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft / Low Emissions |
| Connections: | Flanges, Butt-weld | Other on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Y-Pattern Globe Valves

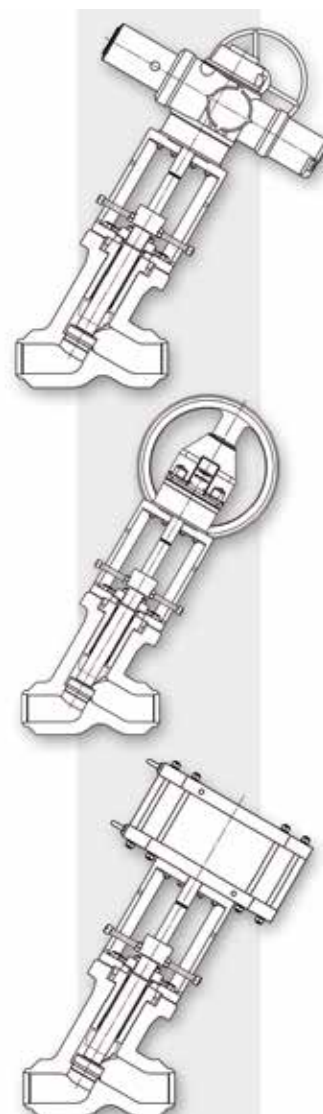
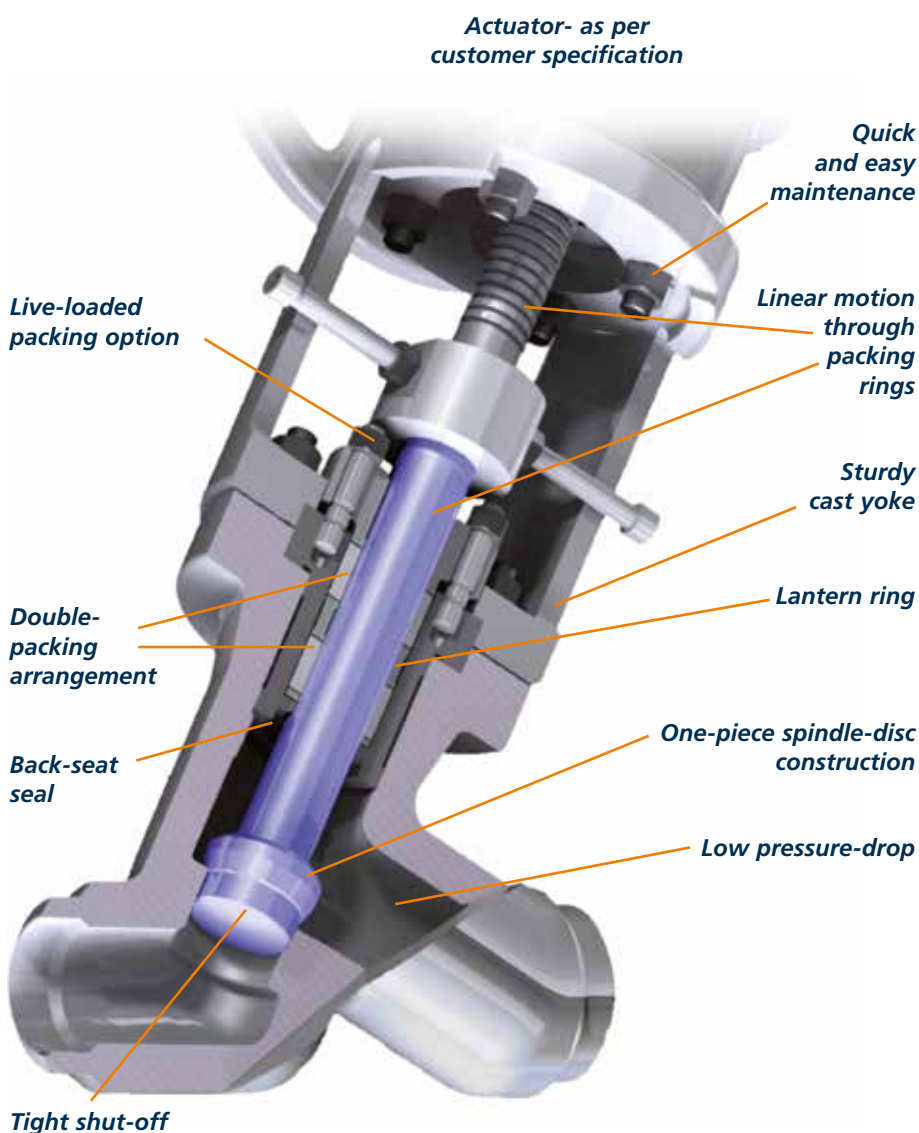
Bolted Bonnet, ASME 900-2500

Type 50

Y-Pattern Globe Valves are widely used to isolate lines where pressure drops need to be minimised without sacrificing sealing performance.

Specific advantages include:

- **Low fugitive emissions with double packing arrangement**
- Rugged single-piece spindle and disc, as opposed to disc pinned to spindle
- The ability to stroke easily in dirty media, with no sticking or coking in dead spaces
- Flexible body/trim material combinations
- Seat leakage to Class VI
- SchuF disc does not block flow in the open position
- Replaceable seats and back-seat options available
- Sniffer Port option available



Actuator options, from top;
Electric, Bevel Gearbox,
Pneumatic

Y-Pattern Globe Valves

Bolted Bonnet, ASME 900-2500

Type 50

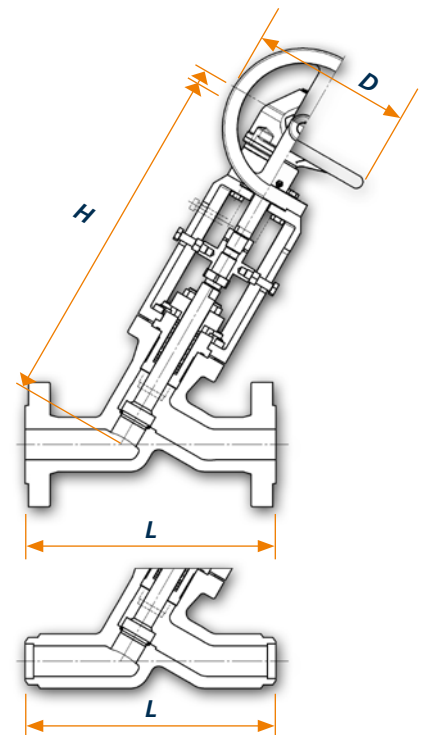
Dimensions mm/Size

| Rating → | 900# | | | 1500# | | | 2500# | | |
|-----------|------|------|------|-------|------|------|---------|------|------|
| Size ↓ | L | H | D | L | H | D | L | H | D |
| 1" DN025 | 200 | 500 | Ø200 | 220 | 520 | Ø315 | 220 | 520 | Ø315 |
| 1½" DN040 | 220 | 517 | Ø200 | 220 | 530 | Ø315 | 220 | 530 | Ø315 |
| 2" DN050 | 216 | 610 | Ø315 | 216 | 655 | Ø315 | 279 | 805 | Ø400 |
| 4" DN100 | 406 | 1200 | Ø400 | 406 | 1290 | Ø400 | 457 | 1440 | Ø800 |
| 6" DN150 | 559 | 1630 | Ø630 | 559 | 1600 | Ø800 | 610 | 1790 | Ø800 |
| 8" DN200 | 711 | 1745 | Ø800 | 711 | 1990 | Ø800 | 762 | 2155 | Ø800 |
| 10" DN250 | 864 | 1953 | Ø800 | 864 | 2175 | Ø800 | Enquire | | |
| 12" DN300 | 911 | 2010 | Ø800 | 911 | 2213 | Ø800 | Enquire | | |

Additional Dimensions for larger sizes and higher pressure ratings available on request

CV Values/Size

| Size | Cv (2500#) |
|-----------|------------|
| 1" DN025 | 20 |
| 2" DN050 | 65 |
| 2½" DN065 | 90 |
| 3" DN080 | 100 |
| 4" DN100 | 170 |
| 6" DN150 | 395 |
| 8" DN200 | 705 |
| 10" DN250 | 1100 |
| 12" DN300 | 1350 |



| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 900 to ASME 2500 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully Stellite |
| Sealing: | Metal-to-metal | Stellite, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft / Low Emissions |
| Connections: | Flanges, Butt-weld | Other on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

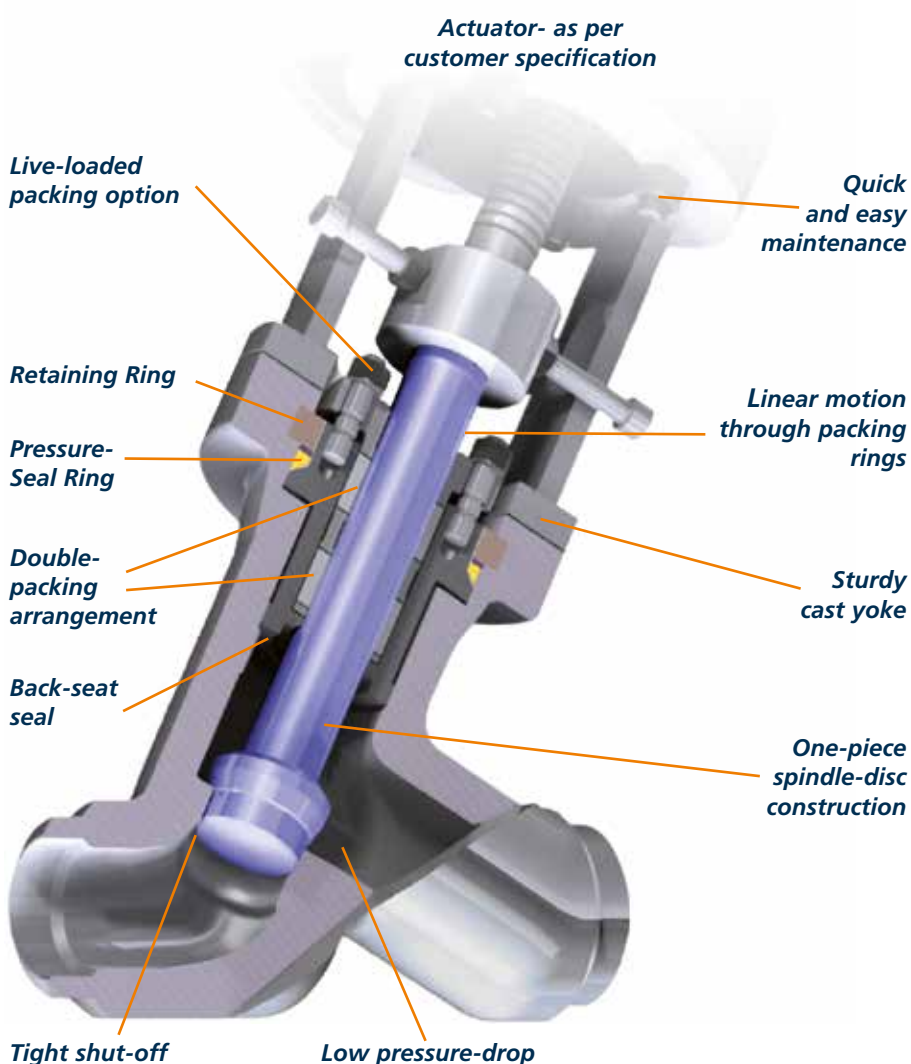
Y-Pattern Globe Valves

PRESSURE SEAL, ASME 900-2500

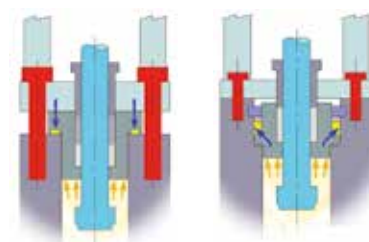
Y-Pattern Globe Valves with Pressure Seal have similar features and benefits to bolted bonnet designs, but are lighter in weight in higher pressure classes. They are widely used to isolate lines where pressure drops need to be minimised without sacrificing sealing performance.

Specific advantages include:

- **Low fugitive emissions with double packing arrangement**
- Rugged single-piece spindle and disc, as opposed to disc pinned to spindle
- The ability to stroke easily in dirty media, with no sticking or coking in dead spaces
- Flexible body/trim material combinations
- Seat leakage to Class VI if required
- SchuF disc does not block flow in the open position
- Replaceable and back-seat options available
- Sniffer port option available



Type 50PS



Actuator options, from top;
Electric, Bevel Gearbox,
Pneumatic

Y-Pattern Globe Valves

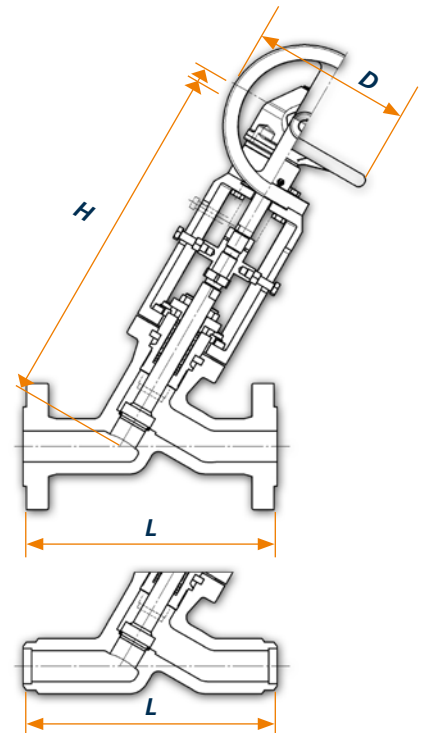
PRESSURE SEAL, ASME 900-2500

Type 50PS

Dimensions mm/Size

| Rating → | 900# | | | 1500# | | | 2500# | | |
|-----------|------|------|------|-------|------|------|-------|------|------|
| Size ↓ | L | H | D | L | H | D | L | H | D |
| 1" DN025 | 200 | 530 | Ø200 | 220 | 555 | Ø315 | 220 | 560 | Ø315 |
| 1½" DN040 | 220 | 547 | Ø200 | 220 | 565 | Ø315 | 220 | 570 | Ø315 |
| 2" DN050 | 216 | 640 | Ø315 | 216 | 690 | Ø315 | 279 | 845 | Ø400 |
| 4" DN100 | 406 | 1240 | Ø400 | 406 | 1335 | Ø400 | 457 | 1505 | Ø800 |
| 6" DN150 | 559 | 1670 | Ø630 | 559 | 1645 | Ø800 | 610 | 1870 | Ø800 |
| 8" DN200 | 711 | 1805 | Ø800 | 711 | 2045 | Ø800 | 762 | 2235 | Ø800 |
| 10" DN250 | 864 | 2010 | Ø800 | 864 | 2230 | Ø800 | 914 | 2440 | Ø900 |
| 12" DN300 | 911 | 2060 | Ø800 | 911 | 2268 | Ø800 | 1041 | 2498 | Ø900 |

Additional Dimensions for larger sizes and higher pressure ratings available on request



CV Values/Size

| Size | Cv (2500#) |
|-----------|------------|
| 1" DN025 | 20 |
| 2" DN050 | 65 |
| 2½" DN065 | 90 |
| 3" DN080 | 100 |
| 4" DN100 | 170 |
| 6" DN150 | 395 |
| 8" DN200 | 705 |
| 10" DN250 | 1100 |
| 12" DN300 | 1350 |

| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 900 to ASME 2500 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully Stellite |
| Sealing: | Metal-to-metal | Stellite, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft / Low Emissions |
| Connections: | Flanges, Butt-weld | Other on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Y-Pattern Straightway

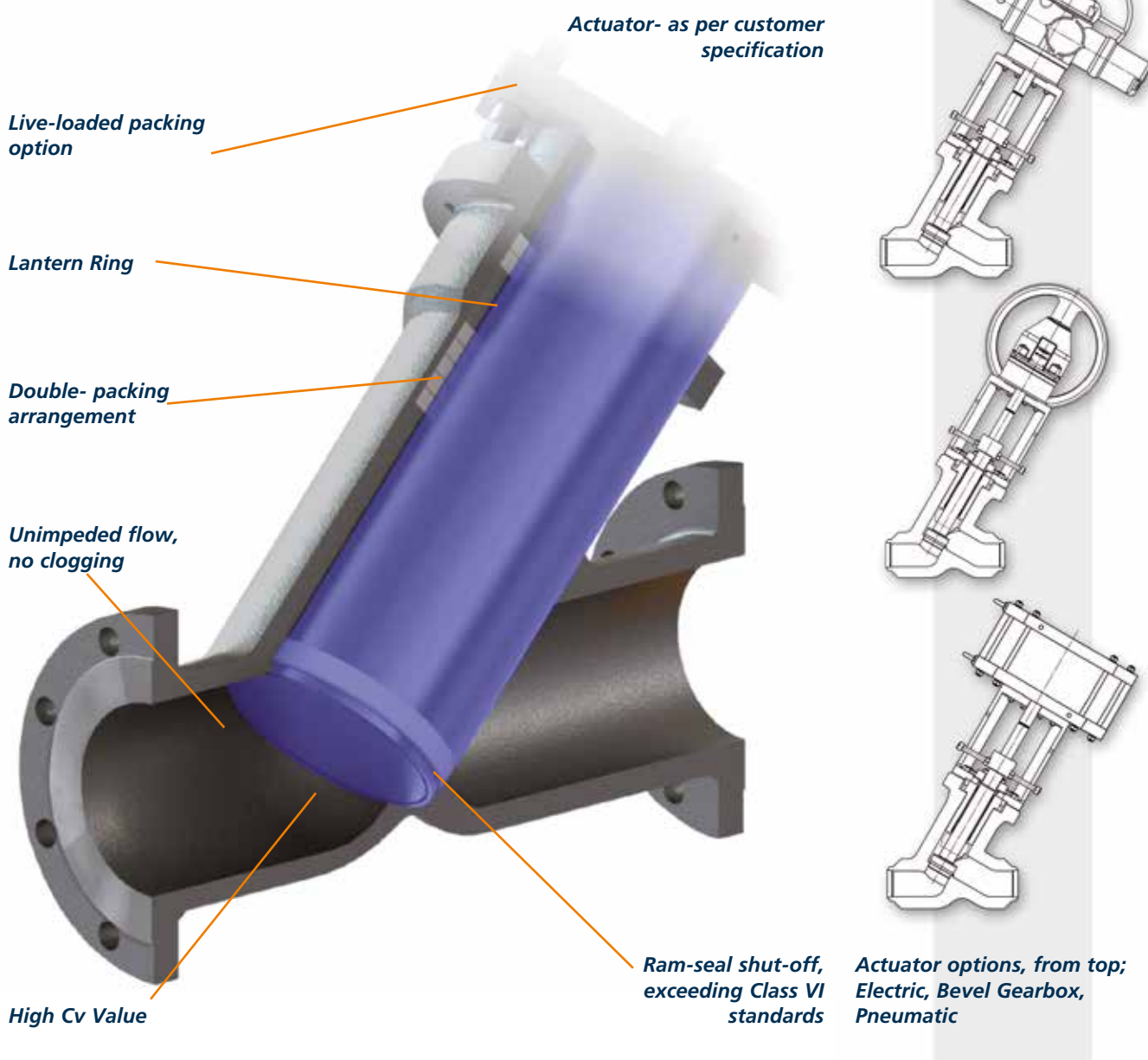
ASME 150-2500

Type 53

Y-Pattern Globe Valves with Pressure Seal have similar features and benefits to bolted bonnet designs, but are lighter in weight in higher pressure classes. They are widely used to isolate lines where pressure drops need to be minimised without sacrificing sealing performance.

Specific advantages include:

- **Low fugitive emissions with double packing arrangement**
- The unique Ram-Seal sealing mechanism is standard on Straightway valves, ensuring absolute positive shut-off.
- Materials include all stainless grades, titanium, hastelloy, Alloy 20, carbon steel etc.
- Sizes: 1" to 24", up to ASME 2500#
- Sniffer Port Option
- Full range of actuator options available, together with accessories such as heating jackets.



Y-Pattern Straightway

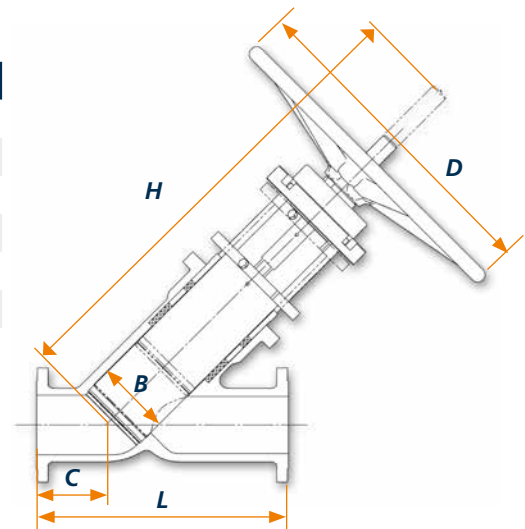
ASME 150-2500

Type 53

Dimensions mm/Size

| Size | ØB | C | H | ØD | L |
|-----------|-----|-----|------|-----|------|
| 2" DN050 | 80 | 95 | 625 | 560 | 330 |
| 4" DN100 | 120 | 100 | 700 | 560 | 400 |
| 6" DN150 | 180 | 170 | 1160 | 800 | 615 |
| 8" DN200 | 250 | 195 | 1440 | ~ | 745 |
| 10" DN250 | 300 | 215 | 1540 | ~ | 815 |
| 14" DN380 | 380 | 275 | 1760 | ~ | 1050 |
| 16" DN400 | 450 | 300 | 2200 | ~ | 1125 |

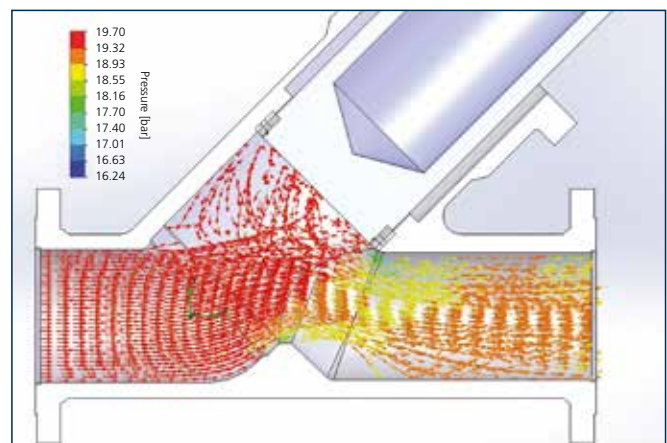
Additional Dimensions for larger sizes and higher pressure ratings available on request



Cv Values/Flow Rates

| SIZE | Cv | FLOW | Pressure Drop |
|-----------|-------|---------|---------------|
| Inches/mm | Value | Gal/Min | p.s.i. |
| 1" DN025 | 41 | 59 | 2 |
| 2" DN050 | 191 | 317 | 3 |
| 4" DN100 | 439 | 983 | 5 |
| 6" DN150 | 1247 | 3300 | 7 |
| 8" DN200 | 2651 | 6935 | 7 |
| 10" DN250 | 4667 | 13200 | 8 |
| 12" DN300 | 6532 | 19813 | 9 |
| 14" DN350 | 7236 | 23775 | 11 |
| 16" DN400 | 10562 | 35663 | 12 |

Pressure/Flow Diagram



| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 400 (16") | Larger on request |
| Pressure Class: | ASME 150 to ASME 2500 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellite |
| Sealing: | Ram Seal® | Stellite, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft |
| Connections: | Flanges, Butt-weld | Other on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Y-Pattern Piggable 'P-Type'

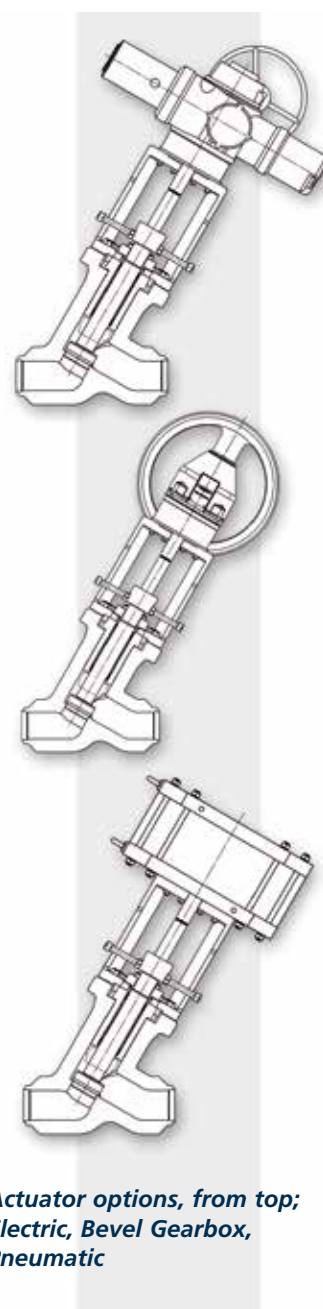
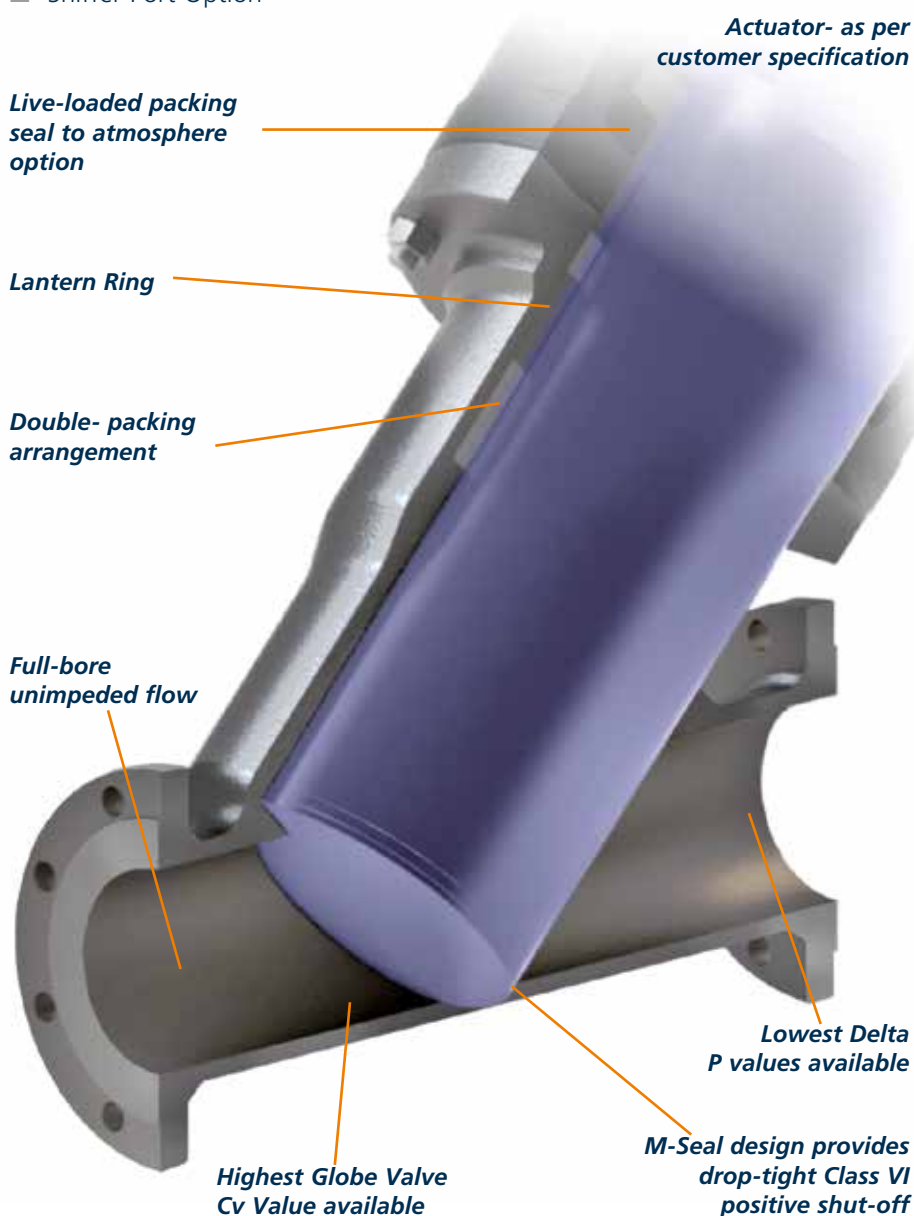
ASME 150-1500

Type 54

The P-Globe valve is a unique y-pattern globe valve design that is fully piggable. Because of its full-bore unimpeded flow, it delivers the highest Cv and lowest Delta P possible in any globe valve available to industry today when used in standard non-piggable applications.

Specific advantages include:

- **Low fugitive emissions with double packing arrangement**
- The incorporated M-Seal design delivers drop-tight Class VI positive shut-off.
- Materials include all stainless grades, titanium, hastelloy, Alloy 20, carbon stell etc.
- Sizes: 1" to 16", ASME ratings up to 1500#
- Full range of actuator options available, together with accessories such as heating jackets.
- Sniffer Port Option



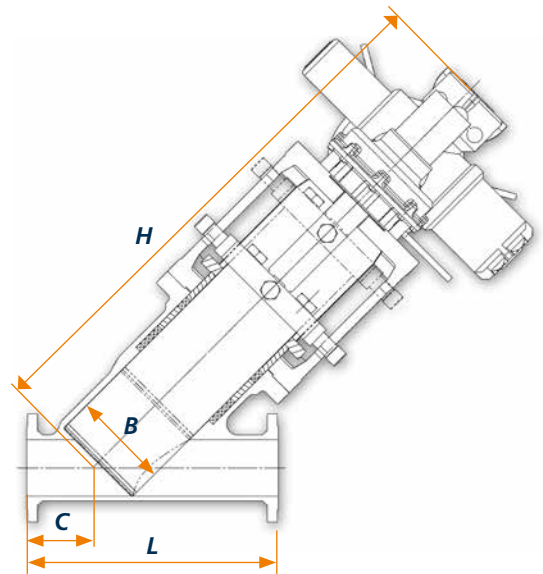
Y-Pattern Piggable 'P-Type'

ASME 150-1500

| Size | ØB | C | H | ØD | L | W |
|-----------|-----|-----|------|-----|-----|-----|
| 1" DN025 | 50 | 55 | 480 | 225 | 225 | 140 |
| 2" DN050 | 80 | 75 | 590 | 500 | 315 | 250 |
| 4" DN100 | 165 | 125 | 990 | 545 | 500 | 630 |
| 6" DN150 | 250 | 170 | 1385 | 545 | 650 | 630 |
| 8" DN200 | 300 | 195 | 1415 | 545 | 750 | 630 |
| 10" DN250 | 380 | 240 | 1710 | 545 | 875 | 630 |

Additional Dimensions for larger sizes and higher pressure ratings available on request

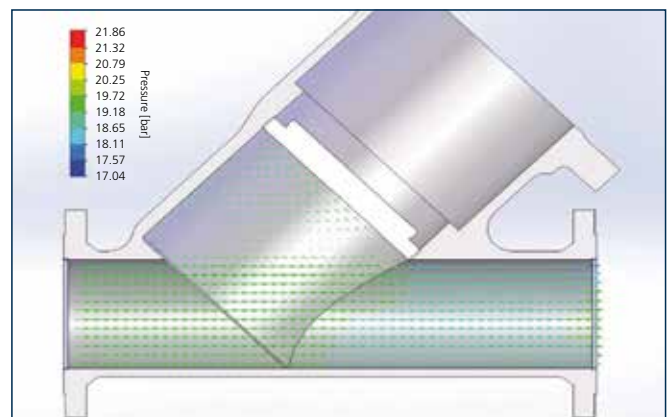
Type 54



Cv Values/Flow Rates

| SIZE | Cv | FLOW | Pressure Drop |
|-----------|-------|---------|---------------|
| Inches/mm | Value | Gal/Min | p.s.i. |
| 1" DN025 | 53 | 53 | 1 |
| 2" DN050 | 220 | 220 | 1 |
| 4" DN100 | 884 | 2200 | 6 |
| 6" DN150 | 2277 | 6600 | 7 |
| 8" DN200 | 4105 | 11000 | 8 |
| 10" DN250 | 9959 | 27273 | 8 |

Pressure/Flow Diagram



| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 400 (16") | Larger on request |
| Pressure Class: | ASME 150 to ASME 2500 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellited |
| Sealing: | Ram Seal® | Stelliting, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft |
| Connections: | Flanges, Butt-weld | Other on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175 |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Stop-Check Valves Y-Type

ASME 150-1500

Type 55SC

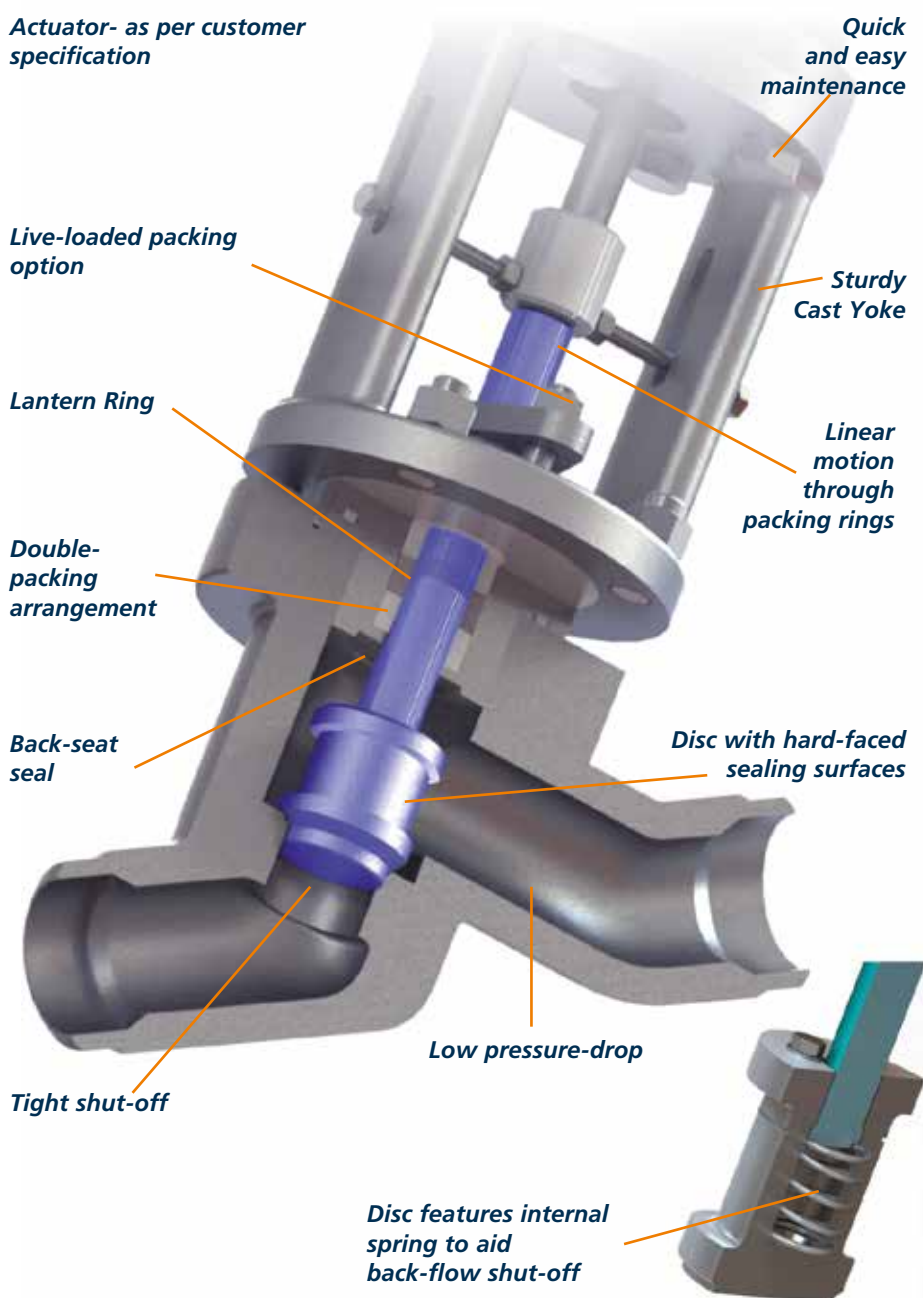
Stop Valves are used as isolation valves in medium and high-pressure systems, combined with the function of check-valve, preventing back-flow. A spring assists the disc to close in case of back-flow, and also functions as a damper preventing vibration. The amount of flow is regulated by the opening which can be adjusted by the valve stem. Sealing surfaces are hard-faced.

Specific advantages include:

- **Low fugitive emissions can be achieved with the double packing arrangement.**

The SchuF Stop-Check valve is a multifunction valve combining tight shut-off, flow control and non-return in a single compact unit.

Actuator- as per customer specification



Actuator options, from top; Electric, Bevel Gearbox, Pneumatic

Stop-Check Valves Y-Type

ASME 150-1500

Dimensions mm/Size

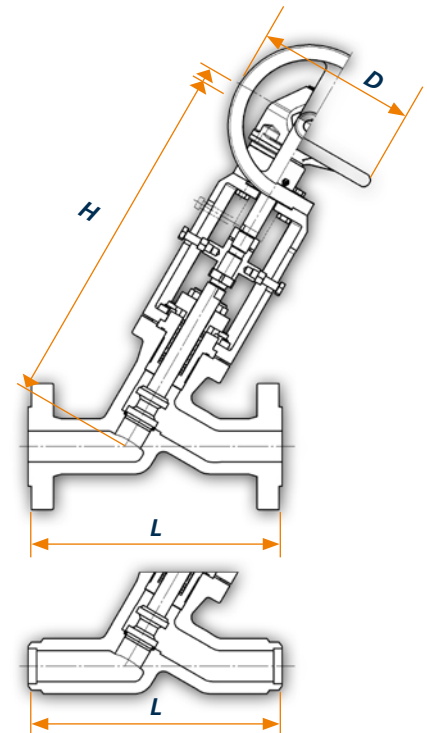
| Rating → | 150# | | | 300# | | | 600# | | |
|-----------|------|------|------|------|------|------|------|------|------|
| Size ↓ | L | H | D | L | H | D | L | H | D |
| 1" DN025 | 160 | 360 | Ø160 | 203 | 360 | Ø160 | 133 | 360 | Ø160 |
| 1½" DN040 | 203 | 440 | Ø225 | 229 | 440 | Ø225 | 152 | 440 | Ø280 |
| 2" DN050 | 229 | 530 | Ø280 | 267 | 530 | Ø280 | 178 | 580 | Ø360 |
| 4" DN100 | 368 | 850 | Ø315 | 356 | 850 | Ø315 | 305 | 900 | Ø400 |
| 6" DN150 | 470 | 1015 | Ø315 | 444 | 1135 | Ø400 | 457 | 1420 | Ø630 |
| 8" DN200 | 597 | 1137 | Ø400 | 559 | 1280 | Ø500 | 584 | 1535 | Ø800 |
| 10" DN250 | 673 | 1187 | Ø400 | 622 | 1480 | Ø630 | 711 | 1655 | Ø800 |
| 12" DN300 | 775 | 1570 | Ø500 | 711 | 1800 | Ø800 | 813 | 1878 | Ø800 |

Additional Dimensions for larger sizes and higher pressure ratings available on request

CV Values/Size

| Size | Cv (600#) |
|-----------|-----------|
| 1" DN025 | 25 |
| 2" DN050 | 70 |
| 2½" DN065 | 95 |
| 3" DN080 | 110 |
| 4" DN100 | 190 |
| 6" DN150 | 390 |
| 8" DN200 | 605 |
| 10" DN250 | 1400 |
| 12" DN300 | 1450 |

Type 55SC



| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 150 to ASME 600 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellited |
| Sealing: | Metal-to-metal | Stelliting, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft, Low Emissions |
| Connections: | Flanges, Butt-weld | Other on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Stop-Check Valves Angle-Type

ASME 150-1500

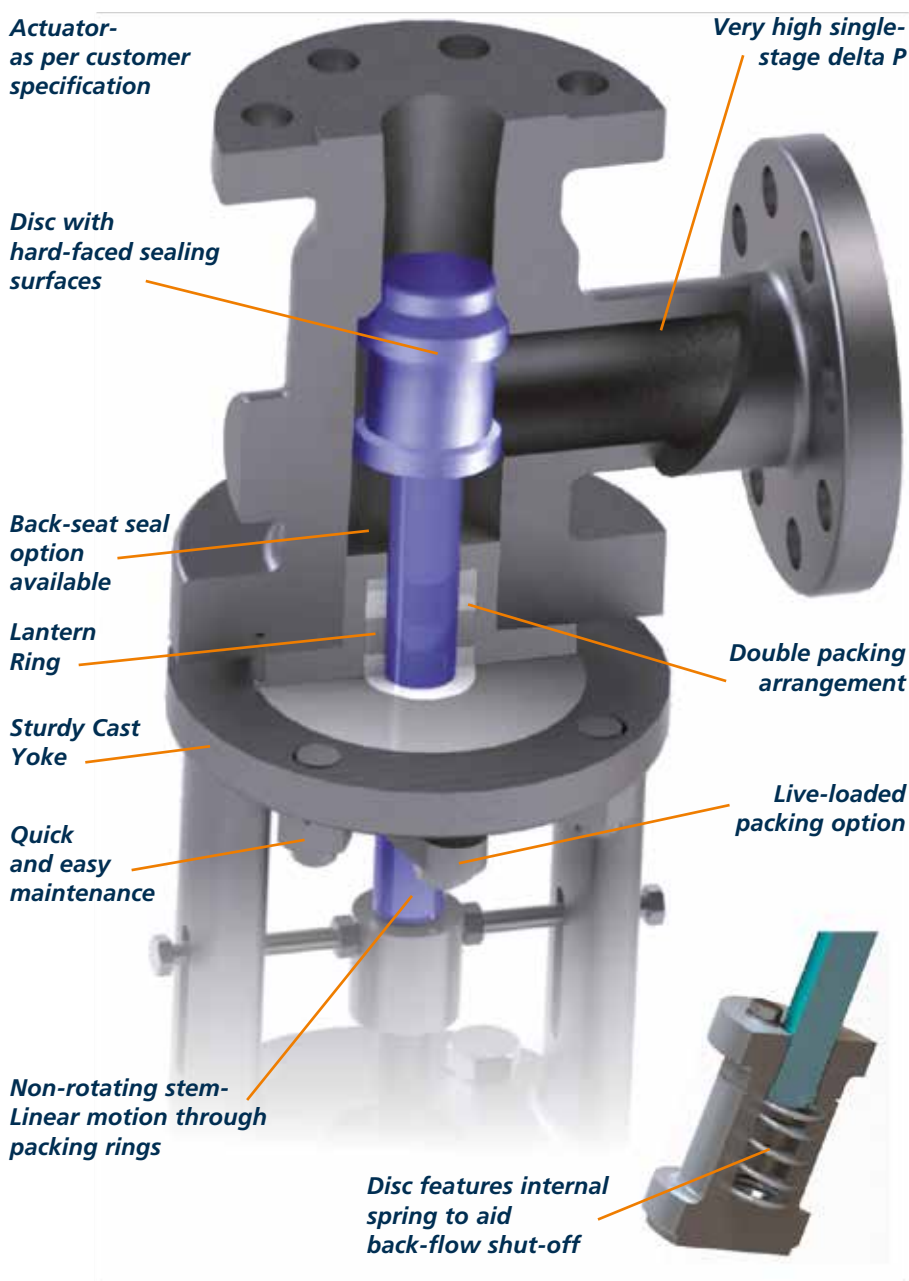
Type 55SA

Stop Valves are used as isolation valves in medium and high-pressure systems, combined with the function of check-valve, preventing back-flow. A spring assists the disc to close in case of back-flow, and also functions as a damper preventing vibration. The amount of flow is regulated by the opening which can be adjusted by the valve stem. Sealing surfaces are hard-faced.

Specific advantages include:

- **Low fugitive emissions can be achieved with the double packing arrangement.**

The SchuF Stop-Check valve is a multifunction valve combining tight shut-off, flow control and non-return in a single compact unit.



Actuator options, from top;
Electric, Bevel Gearbox,
Pneumatic

Stop-Check Valves Angle-Type

ASME 150-1500

Type 55SA

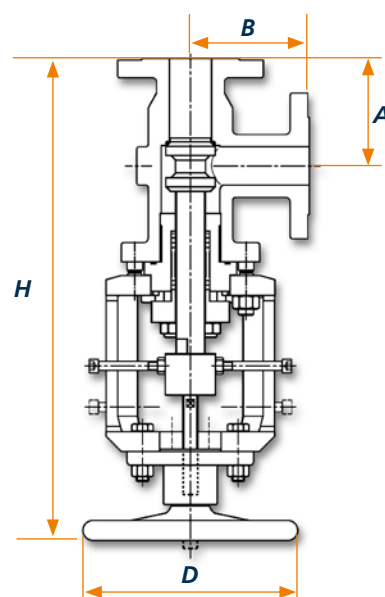
Dimensions mm/Size

| Rating→ | 150# | | | | 300# | | | |
|-----------|------|-----|------|------|------|-----|------|------|
| Size ↓ | A | B | H | D | A | B | H | D |
| 1" DN025 | 70 | 70 | 435 | Ø160 | 102 | 102 | 435 | Ø160 |
| 1½" DN040 | 83 | 83 | 500 | Ø225 | 114 | 114 | 500 | Ø225 |
| 2" DN050 | 102 | 102 | 565 | Ø280 | 133 | 133 | 565 | Ø280 |
| 3" DN080 | 121 | 121 | 825 | Ø315 | 159 | 159 | 825 | Ø315 |
| 4" DN100 | 146 | 146 | 920 | Ø315 | 178 | 178 | 920 | Ø315 |
| 6" DN150 | 203 | 203 | 1225 | Ø400 | 222 | 222 | 1225 | Ø400 |

Additional Dimensions for larger sizes and higher pressure ratings available on request

CV Values/Size

| Size | Cv (300#) |
|-----------|-----------|
| 1" DN025 | 19 |
| 1½" DN032 | 44 |
| 2" DN050 | 67 |
| 2½" DN065 | 102 |
| 3" DN080 | 169 |
| 4" DN100 | 268 |
| 6" DN150 | 563 |



| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 150 to ASME 600 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellited |
| Sealing: | Metal-to-metal | Stelliting, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft, Low Emissions |
| Connections: | Flanges, Butt-weld | Others on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Blow-down Valves Continuous, Angle-Type

ASME 150-1500

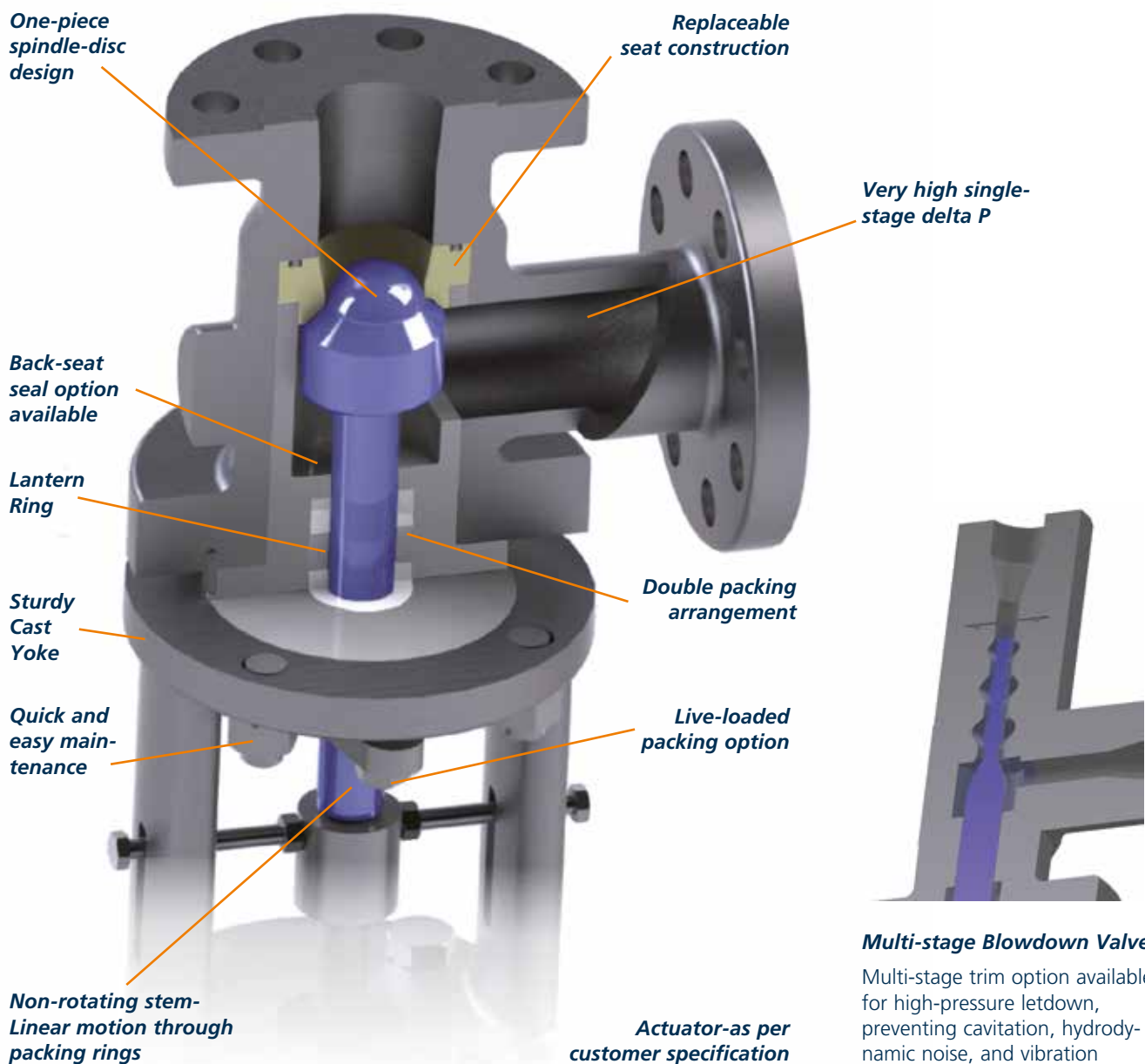
Type 71

The primary purpose of blow down valves is the removal of dirt, scale and sediment from boilers or associated pipelines in order to maintain boiler integrity and efficiency. Steam boiler systems in principal utilise a continuous blow-down valve to control the removal of dissolved elements (salt and other chemicals) at the top of the boiler water, and also a discontinuous blow-down valve to remove solids and accumulated sediments from the pipelines.

Code requires that residue cannot accumulate in these valves, and SchuF manufactures continuous blow-down valves that minimise such accumulations and remove dissolved solids and particulate in a continuous process so that the minimum quantity of water is discharged from the boiler.

Specific advantages include:

- Low fugitive emissions can be achieved with the double packing arrangement.



Blow-down Valves Continuous, Angle-Type

ASME 150-1500

Type 71

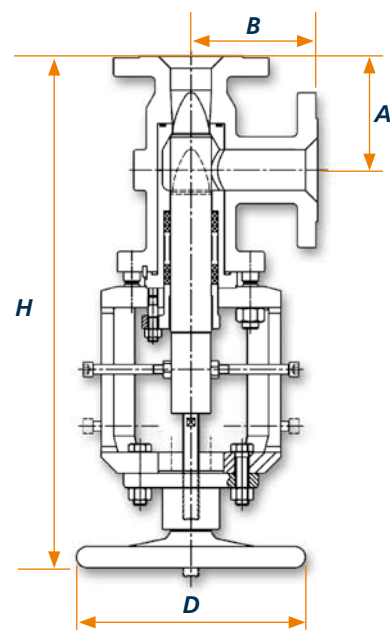
Dimensions mm/Size

| Rating → | 150# | | | | 300# | | | |
|-----------|------|-----|------|------|------|-----|------|------|
| Size ↓ | A | B | H | D | A | B | H | D |
| 1" DN025 | 100 | 110 | 435 | Ø160 | 103 | 113 | 435 | Ø160 |
| 1½" DN040 | 118 | 128 | 500 | Ø160 | 122 | 132 | 500 | Ø160 |
| 2" DN050 | 125 | 150 | 565 | Ø225 | 128 | 153 | 565 | Ø160 |
| 3" DN080 | 170 | 225 | 800 | Ø280 | 174 | 229 | 800 | Ø225 |
| 4" DN100 | 205 | 285 | 915 | Ø315 | 213 | 293 | 910 | Ø280 |
| 6" DN150 | 296 | 416 | 1210 | Ø360 | 307 | 427 | 1210 | Ø315 |

Additional Dimensions for larger sizes and higher pressure ratings available on request

CV Values/Size

| Size | Cv (300#) |
|-----------|-----------|
| 1" DN025 | 18 |
| 1½" DN032 | 42 |
| 2" DN050 | 65 |
| 2½" DN065 | 102 |
| 3" DN080 | 160 |
| 4" DN100 | 270 |
| 6" DN150 | 565 |



| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 150 to ASME 600 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellited |
| Sealing: | Metal-to-metal | Stelliting, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft, Low Emissions |
| Connections: | Flanges, Butt-weld | Others on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Blow-down Valves Continuous, Y-Type

ASME 150-1500

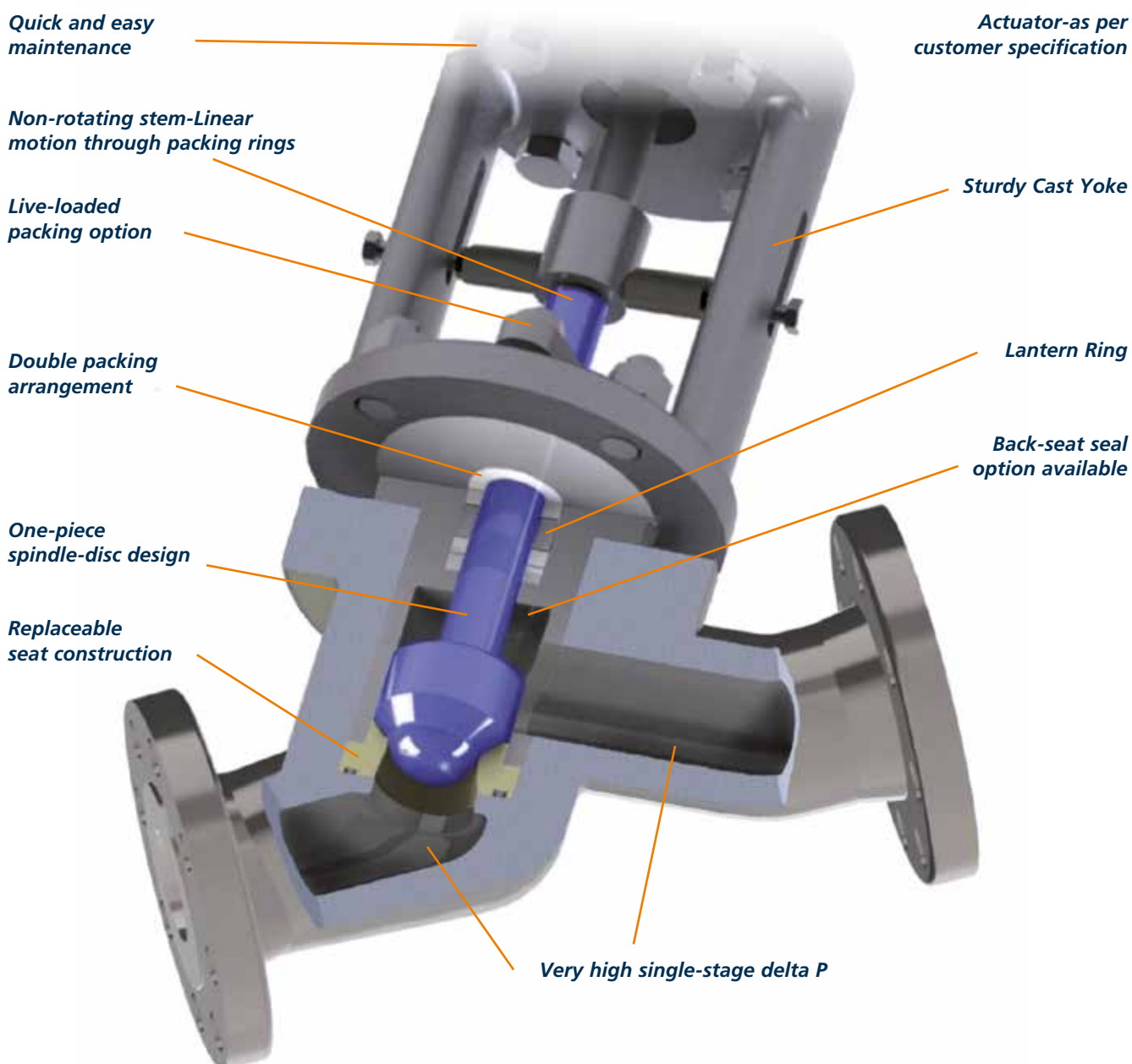
Type 50SR

The primary purpose of blow down valves is the removal of dirt, scale and sediment from boilers or associated pipelines in order to maintain boiler integrity and efficiency. Steam boiler systems in principal utilise a continuous blow-down valve to control the removal of dissolved elements (salt and other chemicals) at the top of the boiler water, and also a discontinuous blow-down valve to remove solids and accumulated sediments from the pipelines.

Code requires that residue cannot accumulate in these valves, and SchuF manufactures continuous blow-down valves that minimise such accumulations and remove dissolved solids and particulate in a continuous process so that the minimum quantity of water is discharged from the boiler.

Specific advantages include:

- Low fugitive emissions can be achieved with the double packing arrangement.



Blow-down Valves Continuous, Y-Type

ASME 150-1500

Type 50SR

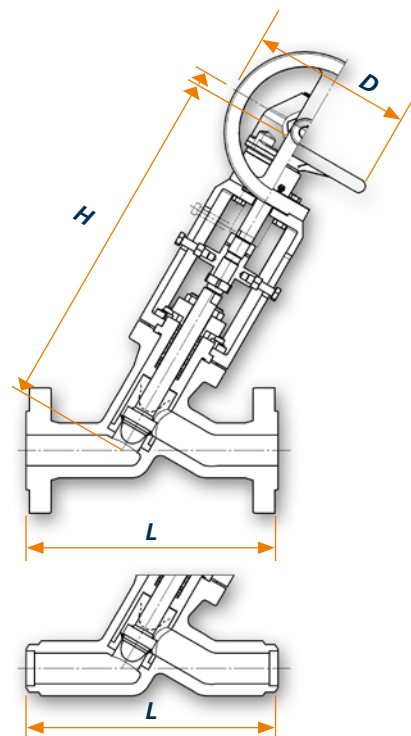
Dimensions mm/Size

| Size ↓ | A | B | H | D | A | B | H | D |
|-----------|-----|-----|------|------|-----|-----|------|------|
| 1" DN025 | 190 | 130 | 360 | Ø160 | 196 | 133 | 360 | Ø160 |
| 1½" DN040 | 286 | 198 | 440 | Ø160 | 294 | 202 | 440 | Ø160 |
| 2" DN050 | 350 | 245 | 530 | Ø225 | 356 | 248 | 530 | Ø160 |
| 3" DN080 | 530 | 370 | 745 | Ø280 | 538 | 374 | 745 | Ø225 |
| 4" DN100 | 630 | 445 | 845 | Ø360 | 646 | 453 | 840 | Ø280 |
| 6" DN150 | 902 | 636 | 1110 | Ø360 | 924 | 647 | 1110 | Ø315 |

Additional Dimensions for larger sizes and higher pressure ratings available on request

CV Values/Size

| Size | Cv (600#) |
|-----------|-----------|
| 1" DN025 | 25 |
| 2" DN050 | 70 |
| 2½" DN065 | 95 |
| 3" DN080 | 110 |
| 4" DN100 | 190 |
| 6" DN150 | 390 |



| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 150 to ASME 600 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellite |
| Sealing: | Metal-to-metal | Stellite, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft, Low Emissions |
| Connections: | Flanges, Butt-weld | Others on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Blow-down Valves Discontinuous/Intermittent, Angle Type

ASME 150-1500

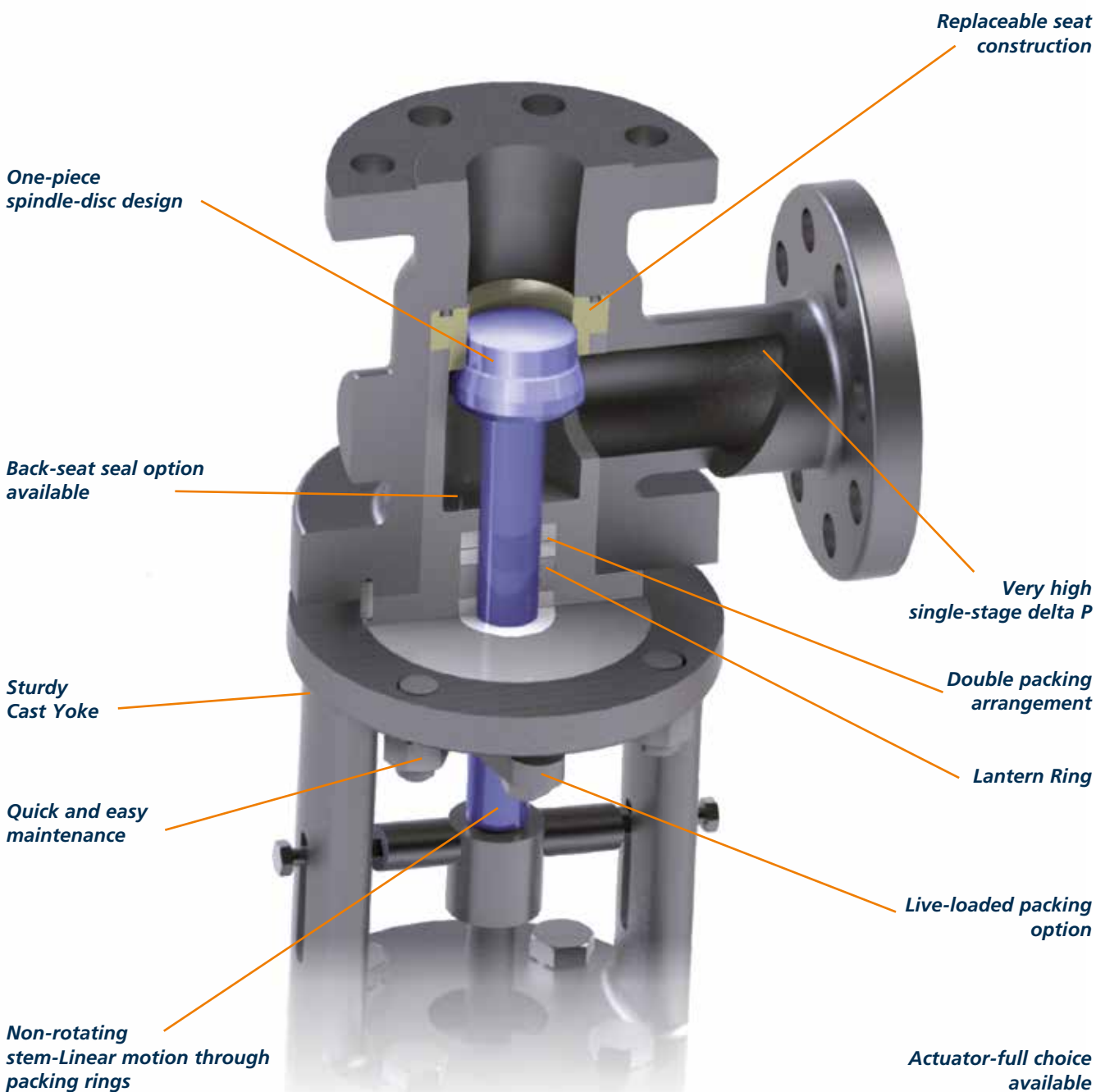
Type 71

The primary purpose of discontinuous/intermittent blow-down valves is the removal of dirt, scale and sediment from boilers in order to maintain boiler integrity and efficiency. Code requires that residue cannot accumulate in these valves.

SchuF manufactures discontinuous blow-down valves that minimise such internal accumulations so that the minimum quantity of water is discharged from the boiler.

Specific advantages include:

- Low fugitive emissions can be achieved with the double packing arrangement.



Blow-down Valves Discontinuous/Intermittent, Angle Type

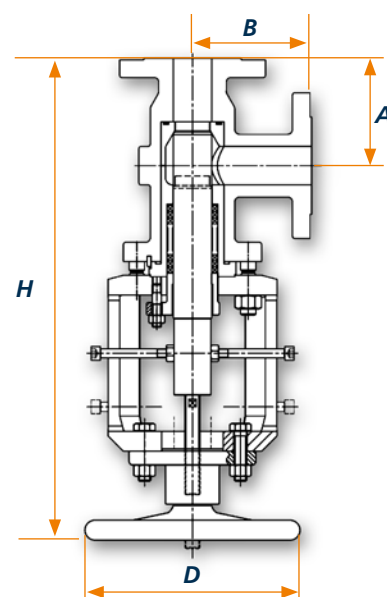
ASME 150-1500

Type 71

Dimensions mm/Size

| Rating → | 150# | | | | 300# | | | |
|-----------|------|-----|------|------|------|-----|------|------|
| Size ↓ | A | B | H | D | A | B | H | D |
| 1" DN025 | 100 | 110 | 435 | Ø160 | 103 | 113 | 435 | Ø160 |
| 1½" DN040 | 118 | 128 | 500 | Ø225 | 122 | 132 | 500 | Ø225 |
| 2" DN050 | 125 | 150 | 565 | Ø280 | 128 | 153 | 565 | Ø280 |
| 3" DN080 | 170 | 225 | 825 | Ø315 | 174 | 229 | 825 | Ø315 |
| 4" DN100 | 205 | 285 | 920 | Ø315 | 213 | 293 | 920 | Ø315 |
| 6" DN150 | 296 | 416 | 1225 | Ø400 | 307 | 427 | 1225 | Ø400 |

Additional Dimensions for larger sizes and higher pressure ratings available on request



CV Values/Size

| Size | Cv (300#) |
|-----------|-----------|
| 1" DN025 | 19 |
| 1½" DN032 | 44 |
| 2" DN050 | 67 |
| 2½" DN065 | 102 |
| 3" DN080 | 161 |
| 4" DN100 | 268 |
| 6" DN150 | 563 |

| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 600 (24") | Larger on request |
| Pressure Class: | ASME 150 to ASME 600 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellited |
| Sealing: | Metal-to-metal | Stelliting, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft, Low Emissions |
| Connections: | Flanges, Butt-weld | Others on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Blow-down Valves Discontinuous/Intermittent, Y-Type

ASME 150-1500

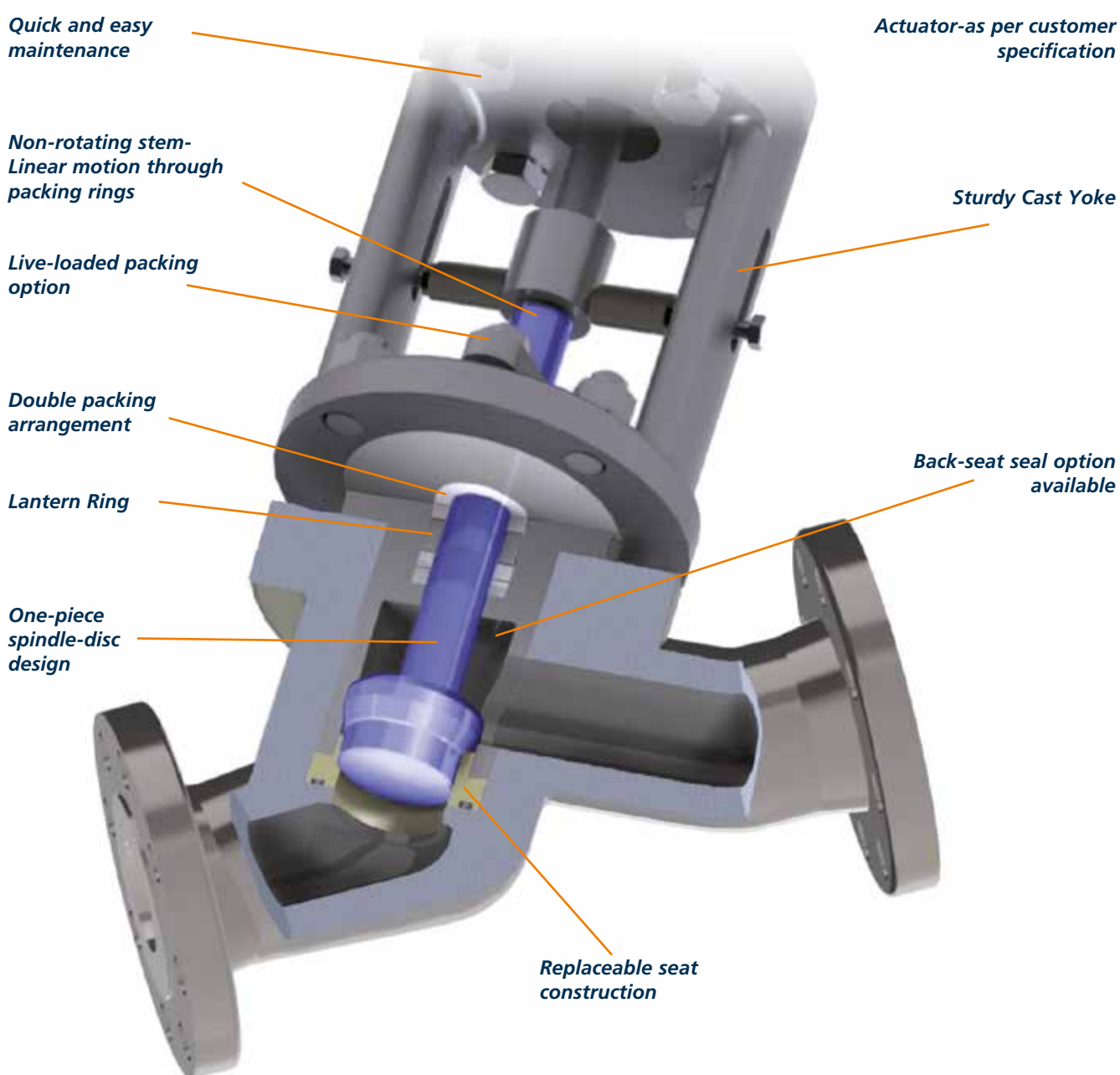
Type 50ST

The primary purpose of blow down valves is the removal of dirt, scale and sediment from boilers in order to maintain boiler integrity and efficiency. Code requires that residue cannot accumulate in these valves

SchuF manufactures discontinuous blow-down valves that minimise such internal accumulations so that the minimum quantity of water is discharged from the boiler.

Specific advantages include:

- Low fugitive emissions can be achieved with the double packing arrangement.



Blow-down Valves Discontinuous/Intermittent, Y-Type

ASME 150-1500

Type 50ST

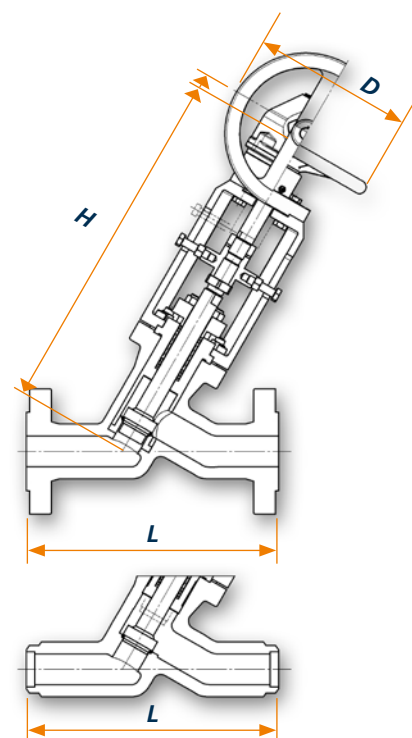
Dimensions mm/Size

| Size ↓ | A | B | H | D | A | B | H | D |
|-----------|-----|-----|------|------|-----|-----|------|------|
| 1" DN025 | 190 | 130 | 395 | Ø160 | 196 | 133 | 395 | Ø160 |
| 1½" DN040 | 286 | 198 | 480 | Ø225 | 294 | 202 | 480 | Ø225 |
| 2" DN050 | 350 | 245 | 530 | Ø280 | 356 | 248 | 530 | Ø280 |
| 3" DN080 | 530 | 370 | 770 | Ø315 | 538 | 374 | 770 | Ø315 |
| 4" DN100 | 630 | 445 | 850 | Ø315 | 646 | 453 | 850 | Ø315 |
| 6" DN150 | 902 | 636 | 1125 | Ø400 | 924 | 647 | 1125 | Ø400 |

Additional Dimensions for larger sizes and higher pressure ratings available on request

CV Values/Size

| Size | Cv (600#) |
|-----------|-----------|
| 1" DN025 | 25 |
| 2" DN050 | 70 |
| 2½" DN065 | 95 |
| 3" DN080 | 110 |
| 4" DN100 | 190 |
| 6" DN150 | 390 |



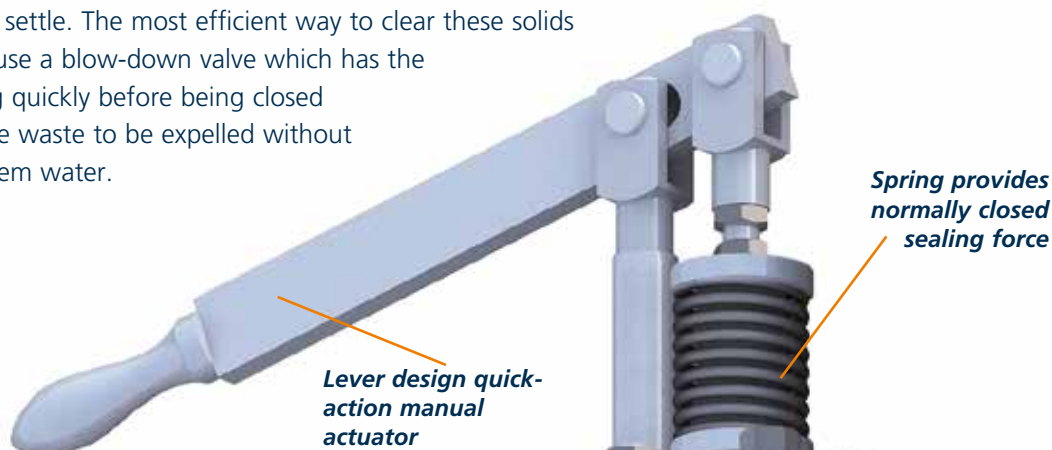
| Description: | Standard: | Optional: |
|---------------------|---|---|
| Size: | DN 25 (1") to DN 150 (6") | Larger on request |
| Pressure Class: | ASME 150 to ASME 1500 | Higher on request |
| Body Material: | A216 WCB, A217 WC6, A351 | 316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request |
| Trim: | Stainless Steel, A182 F6 | As above, plus fully stellited |
| Sealing: | Metal-to-metal | Stelliting, other Hard-facing |
| Seal to Atmosphere: | Graphite Packing | TA-Luft, Low Emissions |
| Connections: | Flanges, Butt-weld | Others on Request |
| Standards / Cert.: | ASME B16.34, API 598 & 623, EN 12266, Dir. PED 97/23/EC | NACE MR0175, others on request |
| Actuation: | Manual | Bevel-Gear, Electric, Pneumatic |

Blow-down Valves Quick-Action Type

Discontinuous Valve

Quick-Action Discontinuous Blow-Down Valve

- Steam boiler systems in principal utilise a discontinuous blow-down valve to remove solids and accumulated sediments from the lower levels of boiler vessels. This valve type is placed at the low point of the system where the solids will settle. The most efficient way to clear these solids and sediments is to use a blow-down valve which has the capability of opening quickly before being closed again. This allows the waste to be expelled without excessive loss of system water.



- This Discontinuous Blow-Down valve (right) utilises a Dead-Man's-Handle actuator, which can be opened and closed virtually instantaneously. The valve's sealing force is supplied by the actuator spring. The simple lever action allows an operator to perform the blow-down operation quickly and efficiently



Disc rising design

Hard-faced seating option

Access port

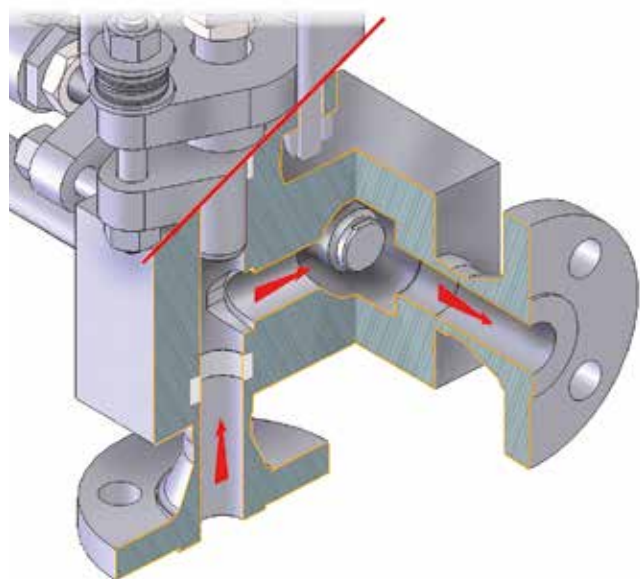
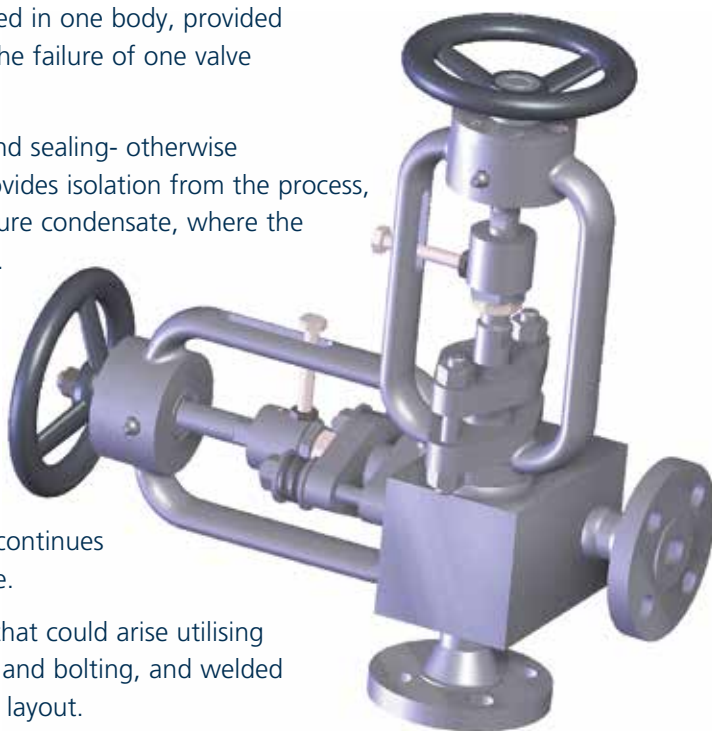
- These Blow-Down valves can also be supplied with powered actuation, such as this pneumatically operated version.

Blow-down Valves Combination Type

Tandem Blow-Down Valve

Tandem Blow-Down Valve

- ASME Code for Pressure Piping, B31.1, instructs that blow-down piping systems from boiler water spaces require two shutoff valves in series. In addition, one or both of these valves must be slow-opening (requiring at least five 360° turns of the operating mechanism to change from being fully-closed to fully-opened).
- Code states that these two valves may be combined in one body, provided that the two valves operate individually and that the failure of one valve does not affect the operation of the other.
- This valve combines the two functions- blowing and sealing- otherwise carried out by two individual valves. One valve provides isolation from the process, and the other valve is used to blow off high-pressure condensate, where the medium could contain dissolved solids and sludge.
- The isolation valve will not be exposed to the same corrosion as the blow-down valve, as no medium will flow through the system while the blow-down valve is still closed (step 2 below). The blow-down valve will experience strong abrasive flow immediately upon opening. Its performance can be monitored by how well it continues to seal following the opening of the isolation valve.
- This Tandem Valve construction eliminates issues that could arise utilising separate valves with flanged connections, gaskets and bolting, and welded piping connections- and does so in a space-saving layout.



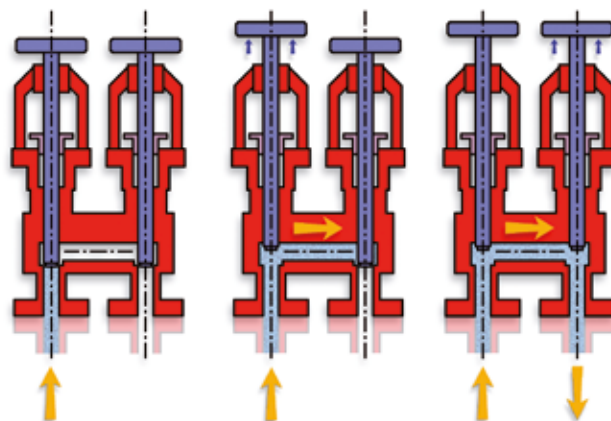
3D Cutaway View

Tandem Blow-Down Valve Operation/Schematic

1. System Closed

2. Isolation valve opened first; Blow-down valve now provides sealing

3. Blow-down valve opened, system draining begins



Note- Closure is the reverse of the steps outlined above, i.e. Blow-Down valve closed first.

Globe Valves 3-Way Globe Valve

Flow control options

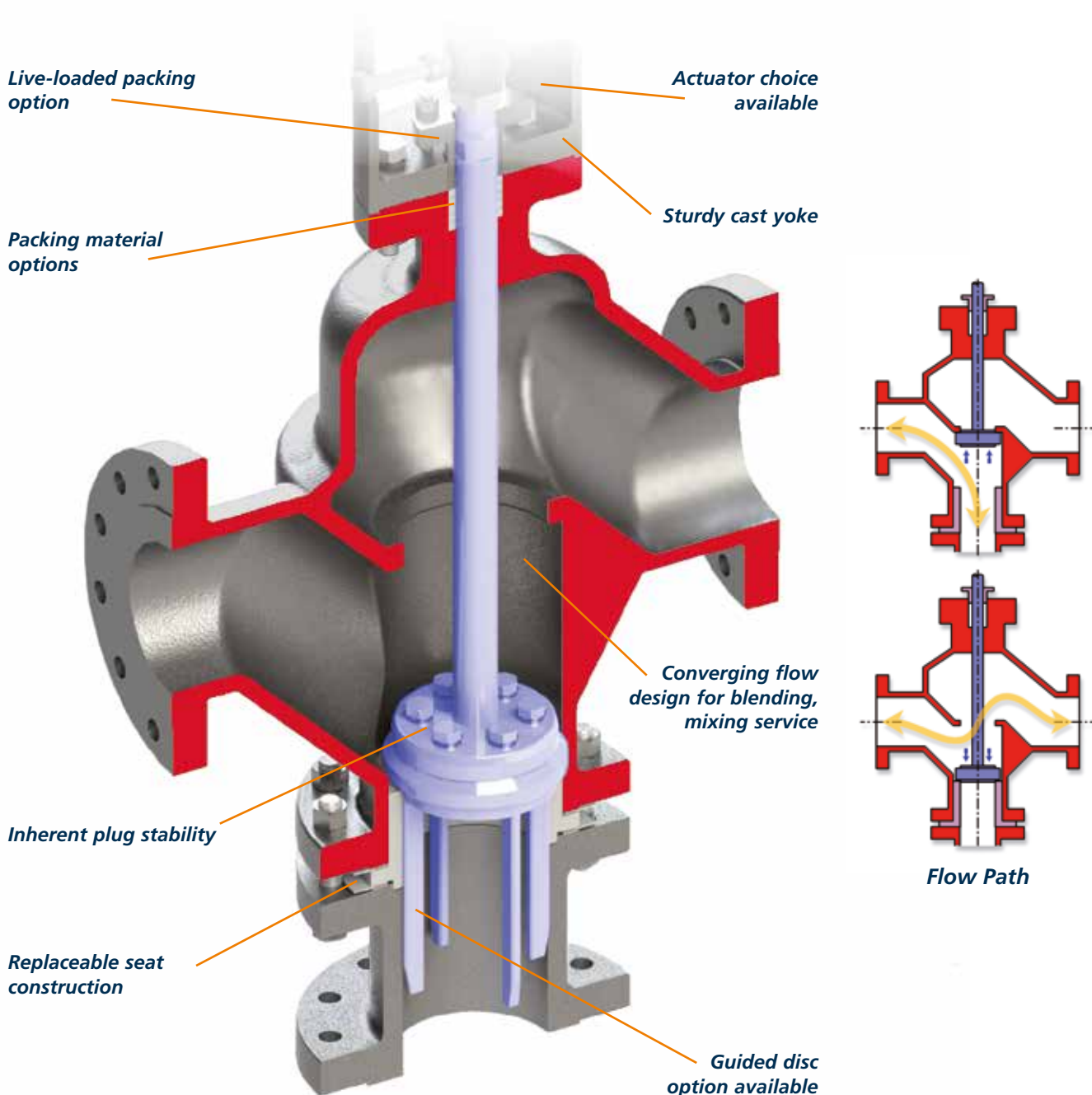
Type 63

A three-way Globe valve provides a combination of the functions of a flow blending valve and a flow-diverting valve used for isolating, control of gases and steam at moderate pressures and temperatures.

These valves are also useful in bypass, branch and cross-connection lines between piping systems.

Additional Features:

- Body Gaskets are fully captured and protected from the process medium
- The basic design creates a flow from under the plug and provides inherent plug stability.
- Converging flow design for blending or mixing Service
- Metal seats provide Class IV shut-off Standard.



Globe Valves High Temperature and Bellows-Seal applications

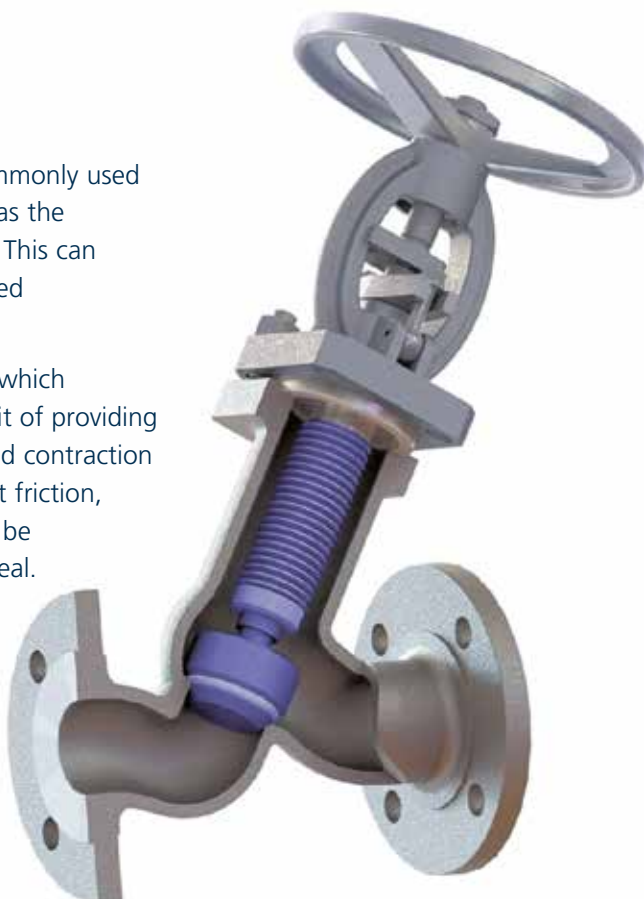
High Temperature Service

- SchuF manufactures special Y-globe valves that are built to withstand temperatures of 800 deg. C and higher. Materials of construction include Incoloy 800HT and high temperature stainless steels. The valve layout, together with the design of individual components, is optimised to ensure materials are utilised to their maximum capability. Special cooling fins minimize the transfer of heat to the actuator. SchuF Y-globe valves are fire-safe certified to ISO 10497 and API 607. Actuated valves can be delivered with special fire protection systems.



Bellows Seal

- The standard stuffing-box packing-arrangement, as commonly used for providing a seal to atmosphere on moving shafts, has the disadvantage of introducing friction forces to a system. This can result in leaks, if packing rings are not regularly inspected and maintained.
- SchuF bellows-sealed Y-globe valves provide an option which reduces these concerns, and offers the additional benefit of providing absolute fugitive emission protection. The expansion and contraction of the bellows allows ram or spindle movement without friction, while maintaining the seal to atmosphere, and this can be backed up with an additional emergency stuffing-box seal.



Customer Enquiry Sheet

Part 1 – Your Company Information

| | |
|----------|------------|
| Name: | Title: |
| Company: | Telephone: |
| E-mail: | Fax: |

Part 2 – Your Order Information

General:

| | |
|--------------|---------------|
| Quantity: | Application: |
| Tag No.: | Project Name: |
| Valve Model: | Project No.: |

Part 3 – Valve and Process Information

Valve Information:

| | |
|------------------------------|-------------------------------|
| Valve Inlet Size (DN/Inch): | Valve Pressure Rating: |
| Valve Outlet Size (DN/Inch): | Valve Delta P: |
| Inlet Flanged/Weld-End: | Outlet Flanged/Weld-End: |
| Operating Temp.: | Operating Pressure: |
| Design Temp.: | Design Pressure: |
| Body Material: | Trim Material: |
| Medium: | Fugitive Emissions/Clean Air: |
| Certificates Etc.: | Firesafe Rating: |
| Actuator Type: | Air Supply Pressure: |
| Air-Fail Position: | Manual Override: |

Part 4 – Further Notes/Topics/Info

| |
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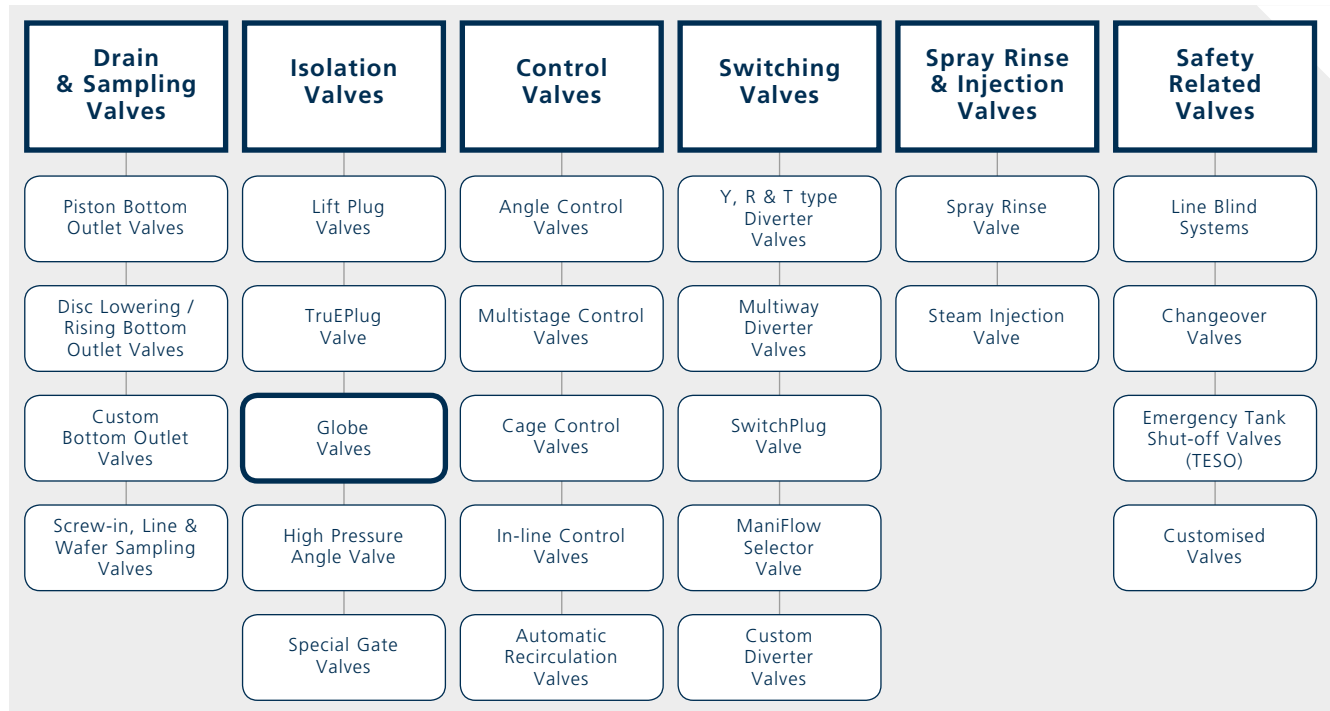
Product Portfolio Overview

SchuF Fetterolf has delivered over one million valves during its 100 year history to a wide variety of industries in over 50 countries worldwide.

Headquartered near Frankfurt in Germany, the company has additional design and manufacturing centres in Italy, India, Ireland, UK and the USA.

The SchuF group has sales and agent offices covering almost every country in the world.

We manufacture valve products that control, isolate, divert, and sample liquids, gases, powders, and slurries. Our product range of engineered, customised valves includes:



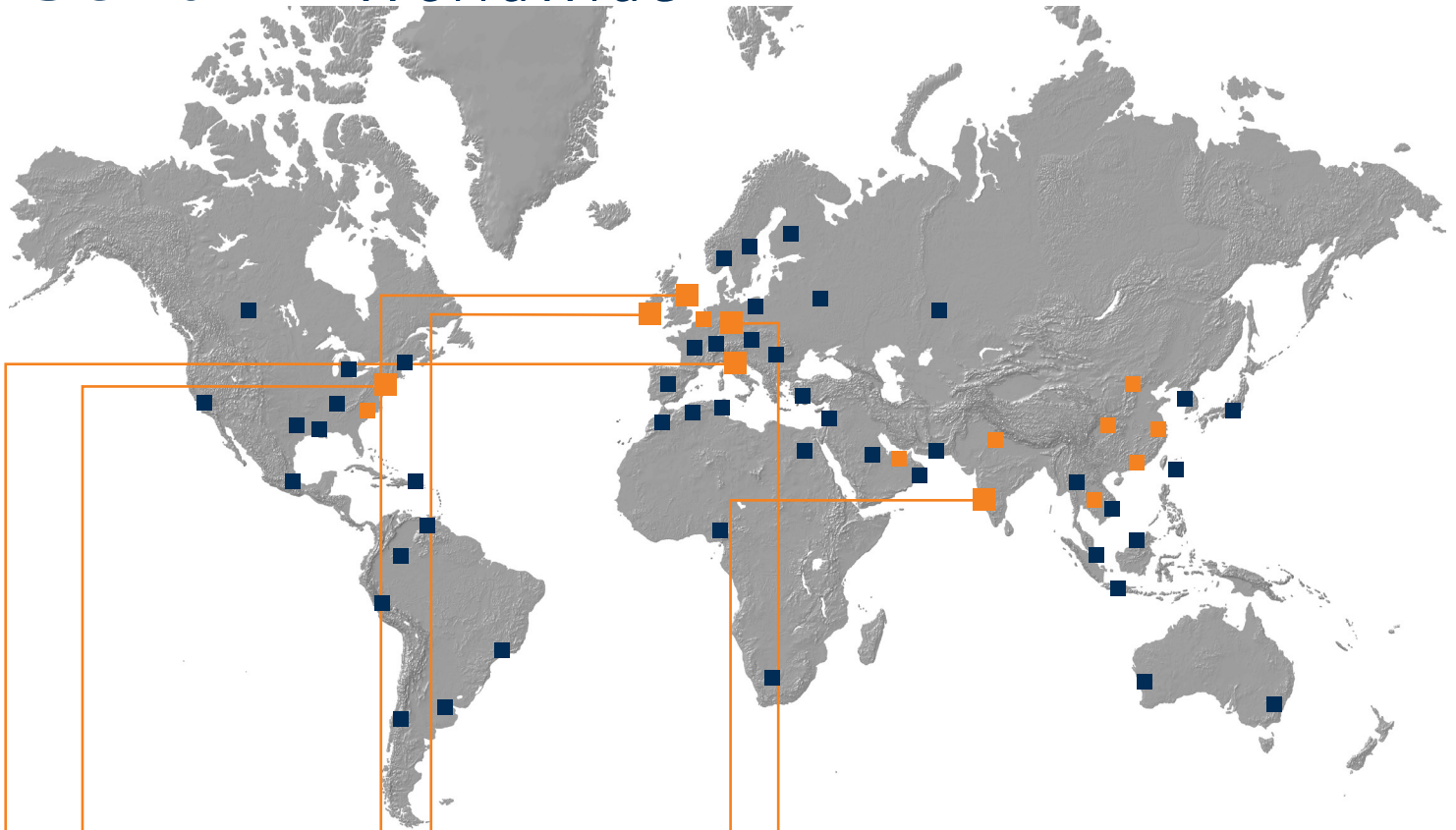
Y-Globe Valve Client List:

- | | |
|----------------------------|-----------------------------|
| ■ AirLiquide | ■ Indorama Synthetics |
| ■ Aluminium Oxid Stade | ■ Invista |
| ■ BASF | ■ Jindal Steel & Power |
| ■ BAYER | ■ Lanxess |
| ■ BP | ■ Li Peng Enterprise |
| ■ Chang Chun Petrochemical | ■ Monsanto |
| ■ Cheil | ■ Reliance |
| ■ Clariant | ■ SABIC |
| ■ DSM Hydrocarbons | ■ Samsung |
| ■ Du Pont | ■ Saudi Aramco |
| ■ Dow Chemical | ■ Shinkong Synthetic Fibers |
| ■ Eastman Chemical | ■ Tianjin Petrochemical |
| ■ Evonik | ■ Uhde Inventa-Fischer |
| ■ Far Eastern Industries | ■ Vinnolit |
| ■ Foster Wheeler | ■ Zhejiang Hengyi Polymer |



**SCHUF Y-GLOBE VALVES –
100 YEARS OF INNOVATION**

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