

# Globe Valves

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



**SchuF** 



## Globe Valves Contents

	Page
<b>Overview</b>	<b>3</b>
Y-Pattern Globe Valves, Bolted Bonnet, ASME 150-600	4
Y-Pattern Globe Valves, Bolted Bonnet, ASME 900-2500	6
Y-Pattern Globe Valves, Pressure Seal, ASME 900-2500	8
Y-Globe Valves, Straightway	10
Y-Globe Valves, Piggable P-type	12
<b>Stop-Check Valves, Y-Type</b>	<b>14</b>
<b>Stop-Check Valves, Angle-Type</b>	<b>16</b>
Blow-Down Valves, Continuous Angle-Type	18
Blow-Down Valves, Continuous Y-Type	20
Blow-Down Valves, Discontinuous/Intermittent Angle-Type	22
Blow-Down Valves, Discontinuous/Intermittent Y-Type	24
Blow-Down Valves, Discontinuous Quick-Action Blow-Off Valve	26
<b>Tandem Blow-off Valve</b>	<b>27</b>
3-Way Globe Valve	28
<b>High Temperature Applications, Bellows Seal</b>	<b>29</b>
<b>Customer Enquiry Sheet</b>	<b>30</b>
Product Portfolio Overview	31



# 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

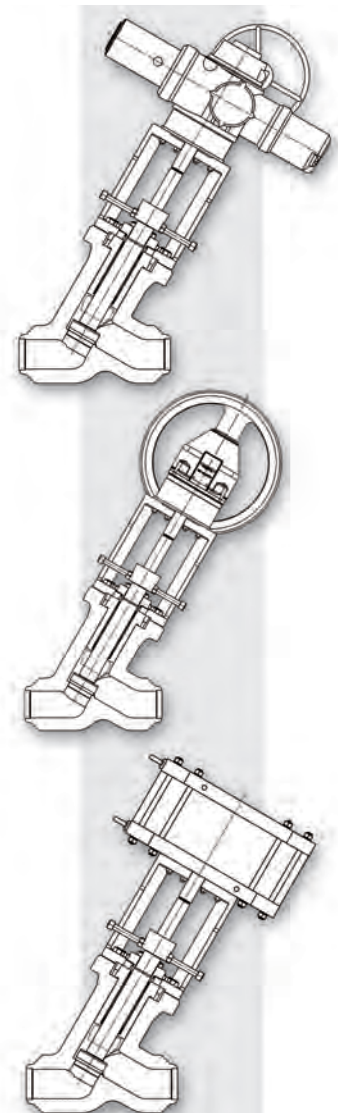
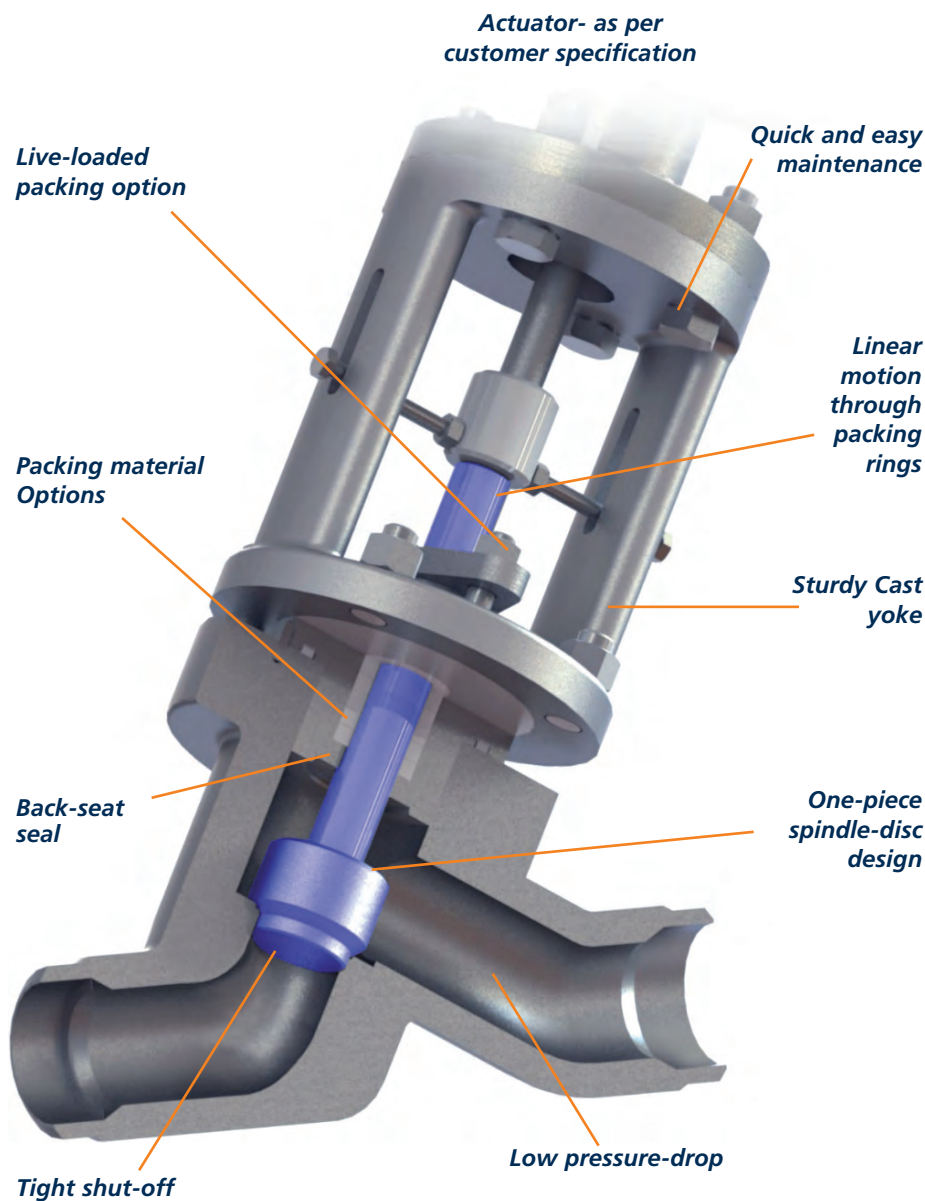
## Bolted Bonnet, ASME 150-600

## 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

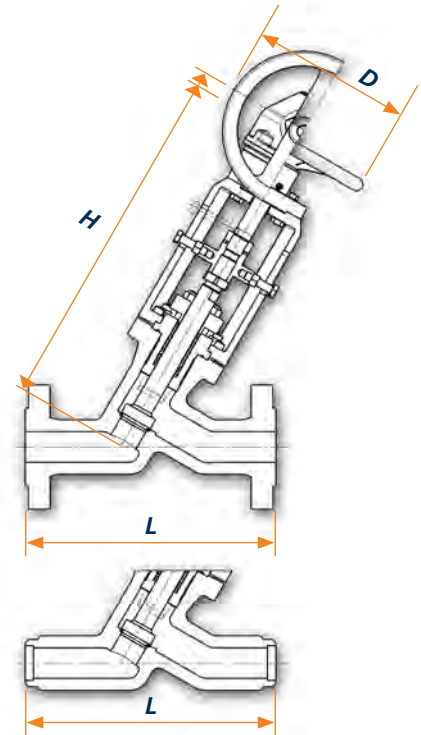
## Bolted Bonnet, ASME 150-600

### 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

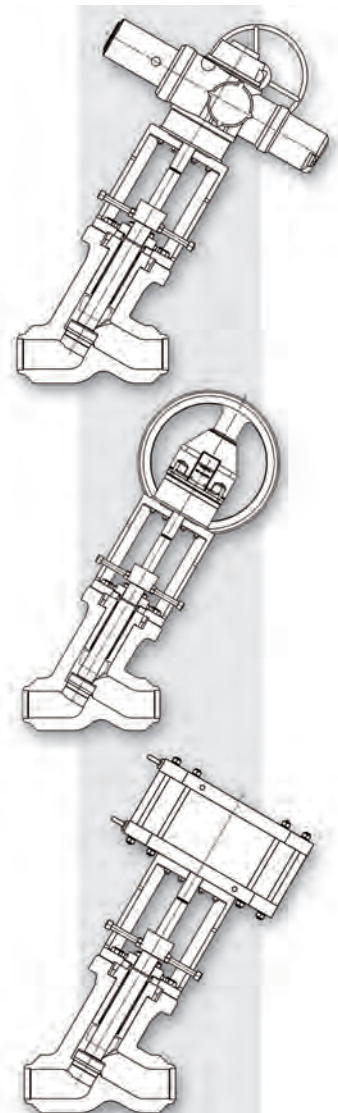
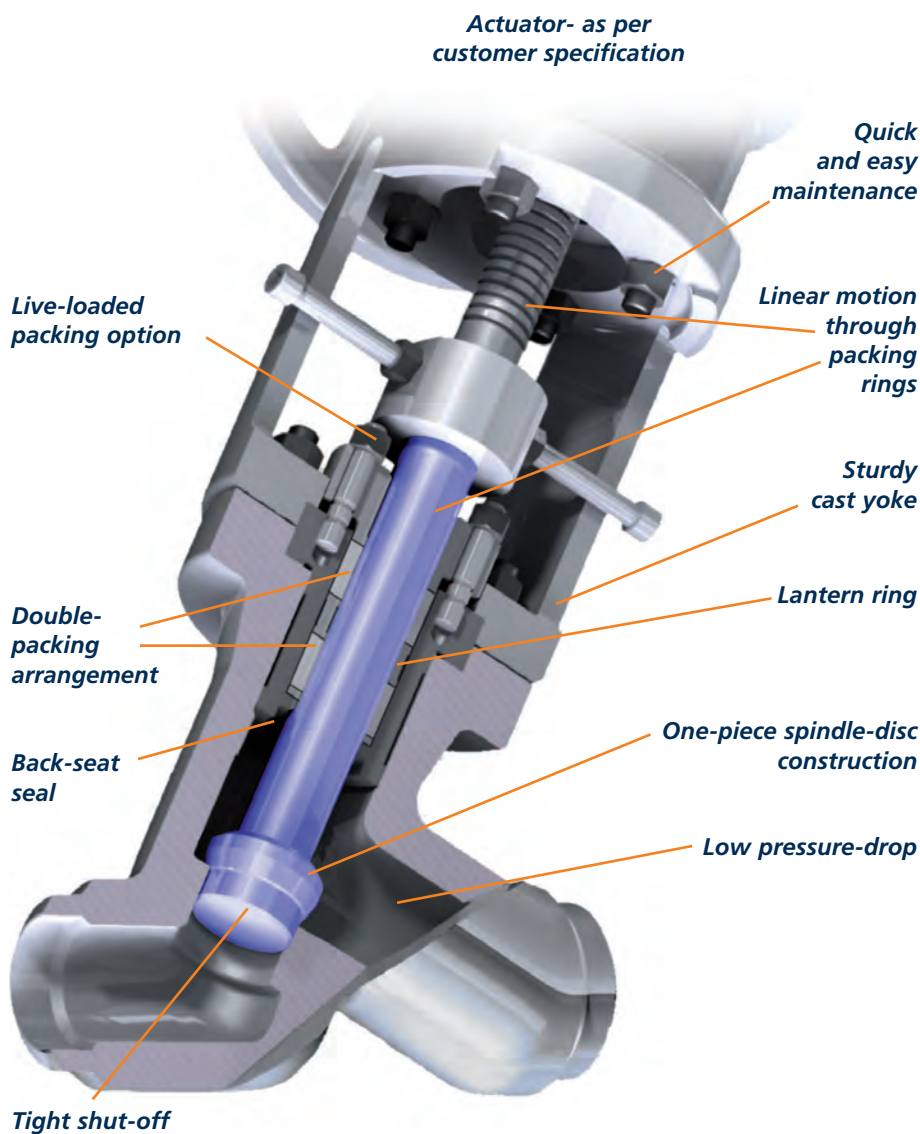
## Bolted Bonnet, ASME 900-2500

## 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

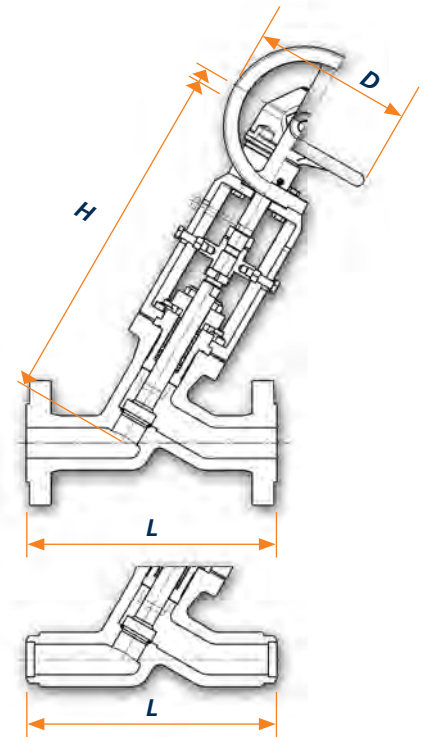
## Bolted Bonnet, ASME 900-2500

### 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

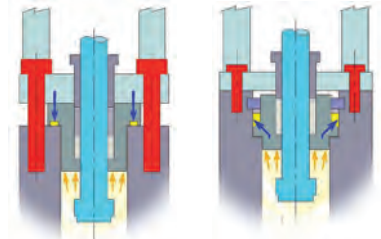
## PRESSURE SEAL, ASME 900-2500

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:

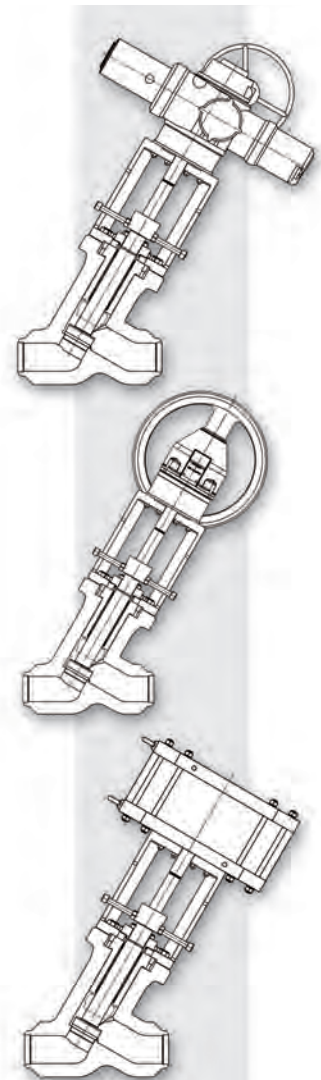
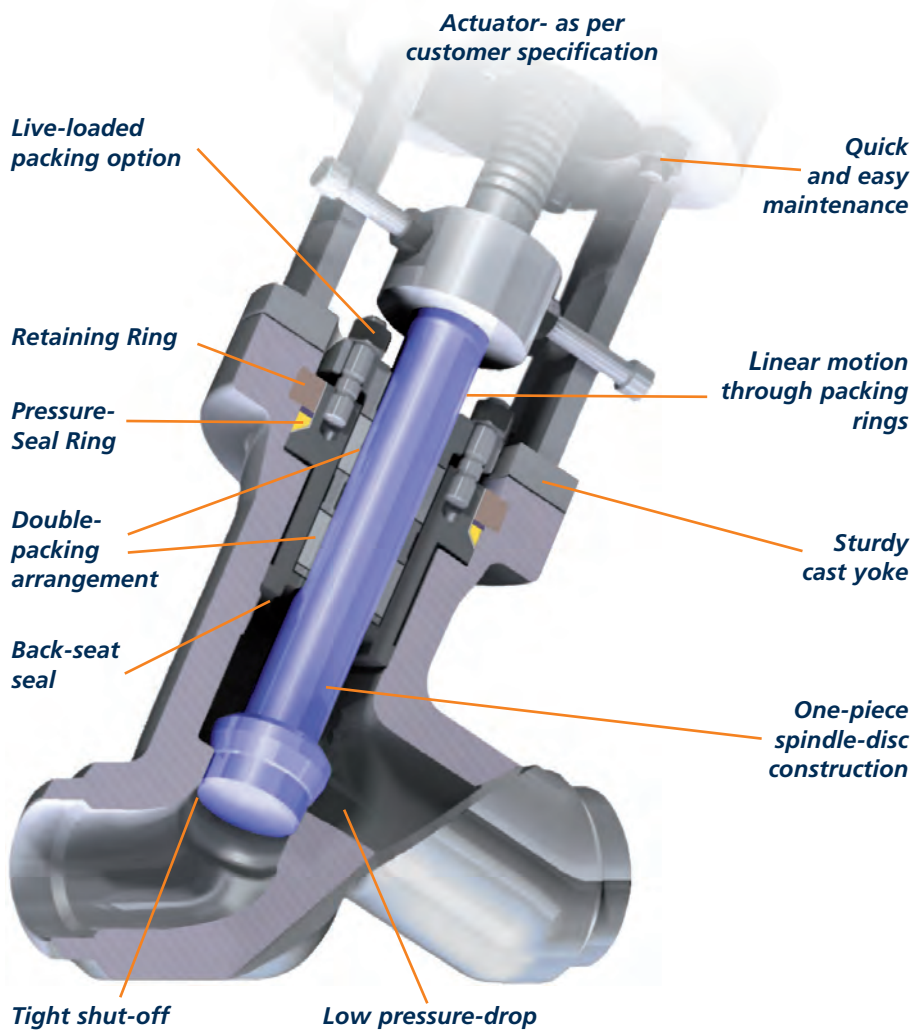
- **Low fugitive emissions with double packing arrangement**
- Rugged single-piece spindle and disc, as opposed to disc pinned to spindle
- The ability to stroke easily in dirty media, with no sticking or coking in dead spaces
- Flexible body/trim material combinations
- Seat leakage to Class VI if required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

## Type 50PS



*Bonnet Seal; Bolting force must oppose both the pressure force and maximum actuator forces*

*Pressure Seal; Bolting must primarily oppose maximum actuator forces only, as pressure seal works independently*



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



# Y-Pattern Globe Valves

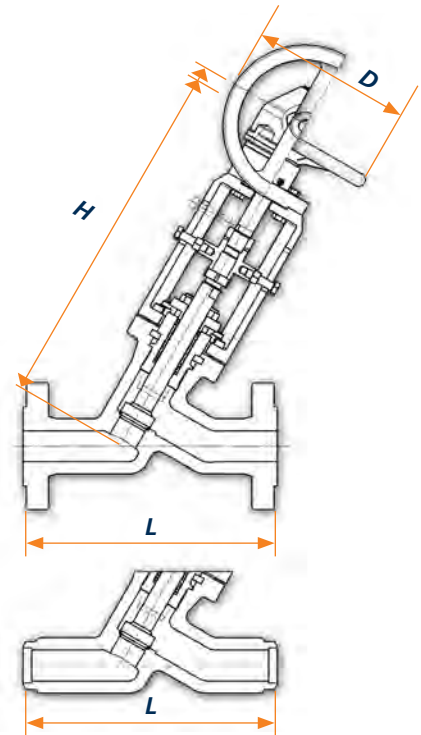
## PRESSURE SEAL, ASME 900-2500

### Type 50PS

#### Dimensions mm/Size

Rating → Size ↓	900#			1500#			2500#		
	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

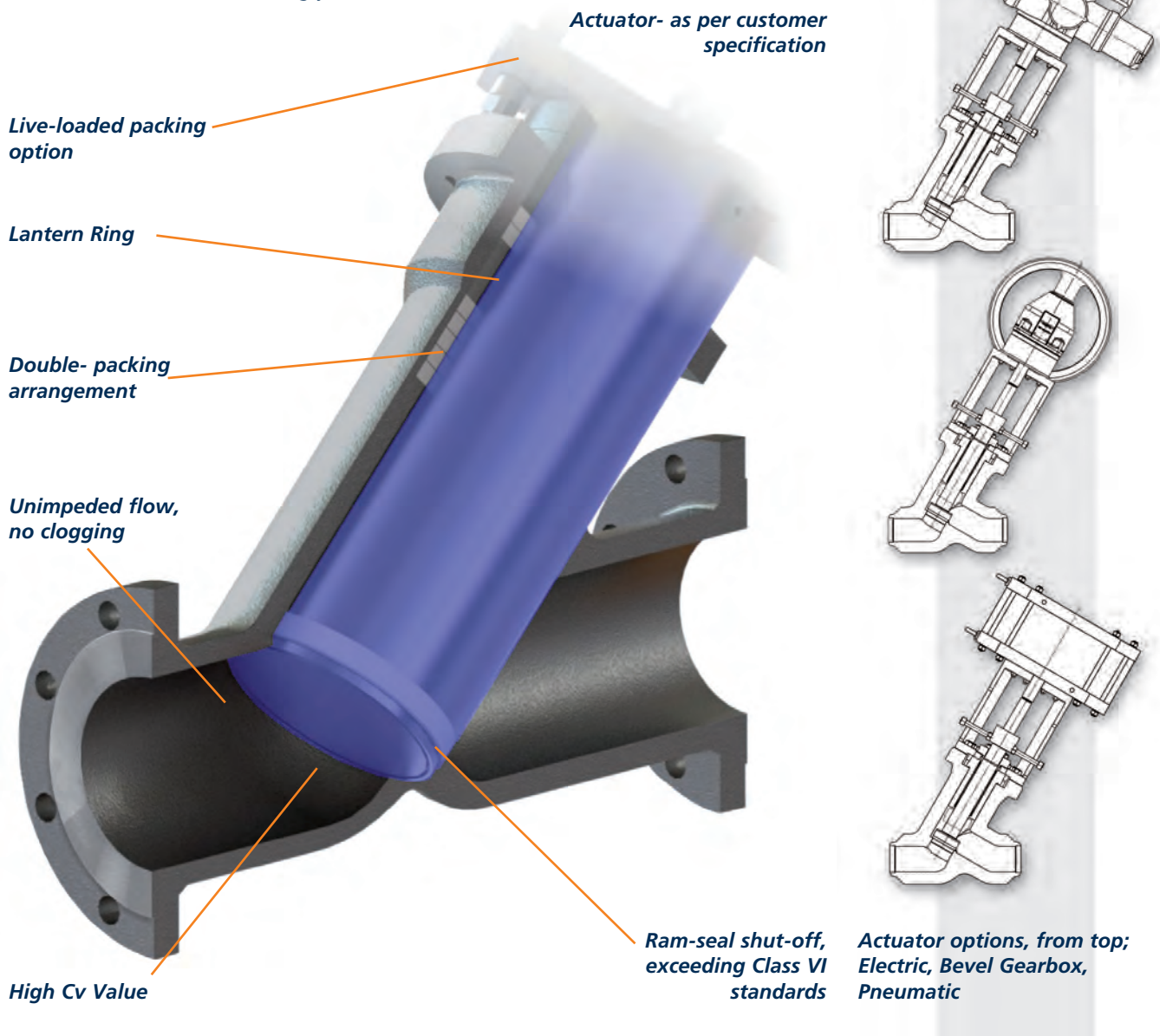
## ASME 150-2500

## 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

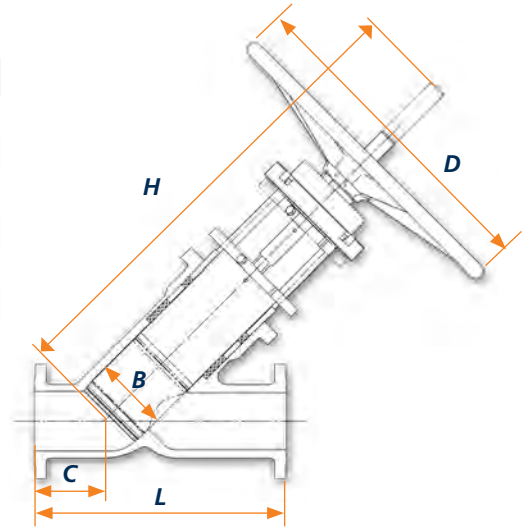
## ASME 150-2500

## 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

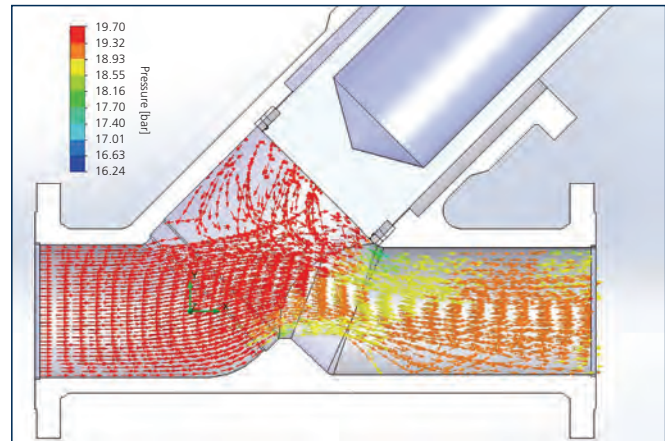
Additional Dimensions for larger sizes and higher pressure ratings available on request



### Cv Values/Flow Rates

SIZE Inches/mm	Cv Value	FLOW	Pressure Drop
		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

*Live-loaded packing seal to atmosphere option*

*Lantern Ring*

*Double- packing arrangement*

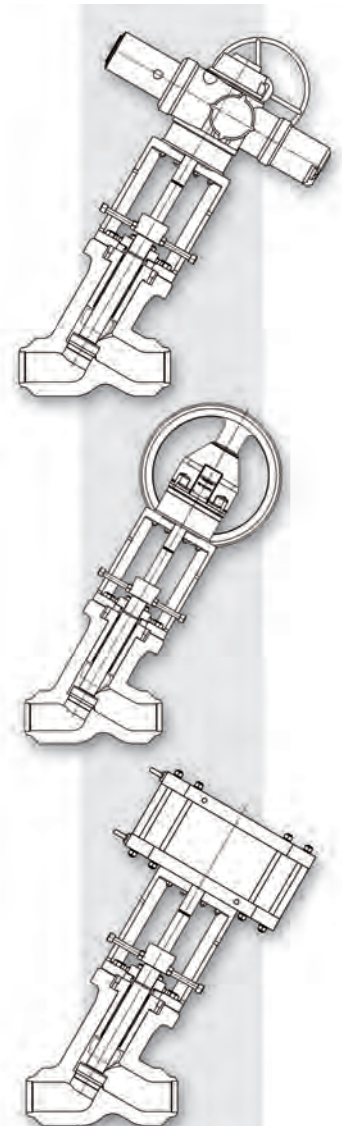
*Full-bore unimpeded flow*

*Highest Globe Valve Cv Value available*

*Actuator- as per customer specification*

*Lowest Delta P values available*

*M-Seal design provides drop-tight Class VI positive shut-off*



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

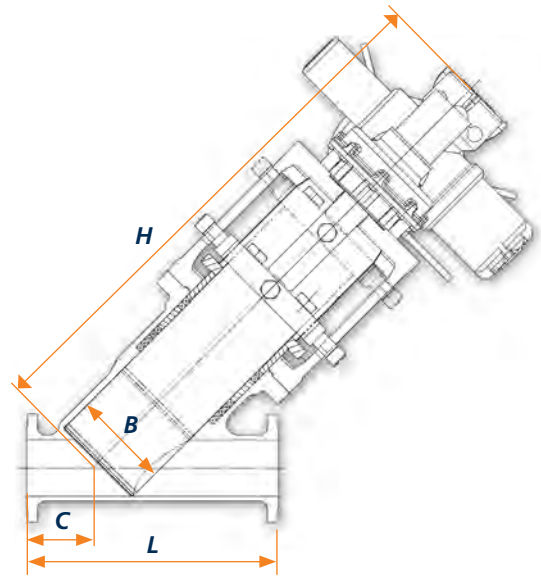
# Y-Pattern Piggable 'P-Type'

## 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

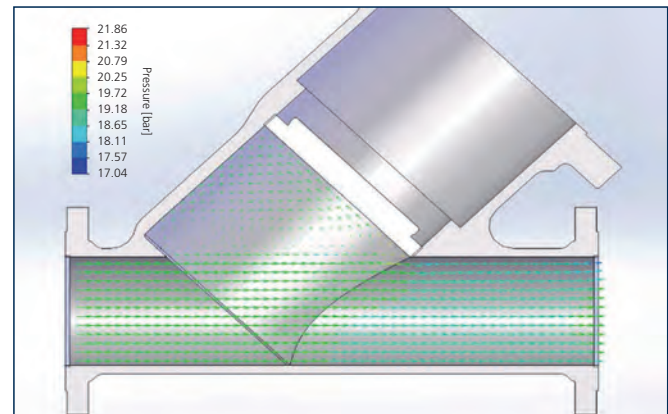
## Type 54



### Cv Values/Flow Rates

SIZE Inches/mm	Cv Value	FLOW	Pressure Drop
		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 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
Actuation:	Manual	Bevel-Gear, Electric, Pneumatic

# Stop-Check Valves Y-Type

ASME 150-1500

Type 55SC

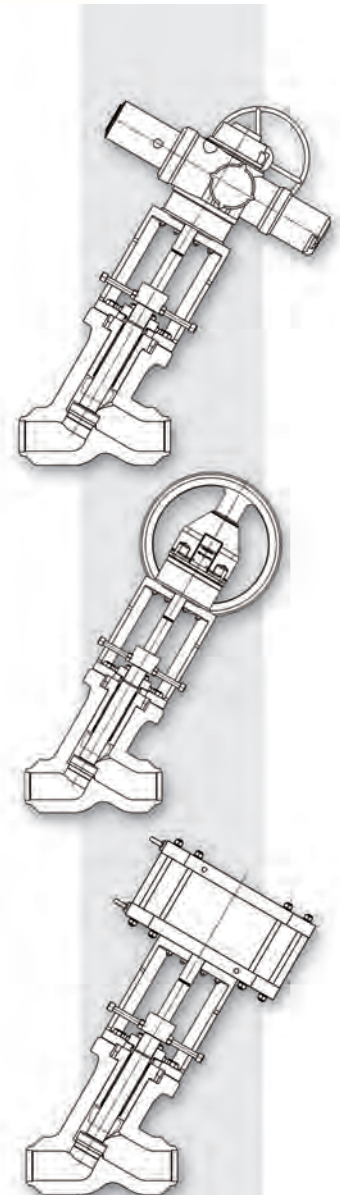
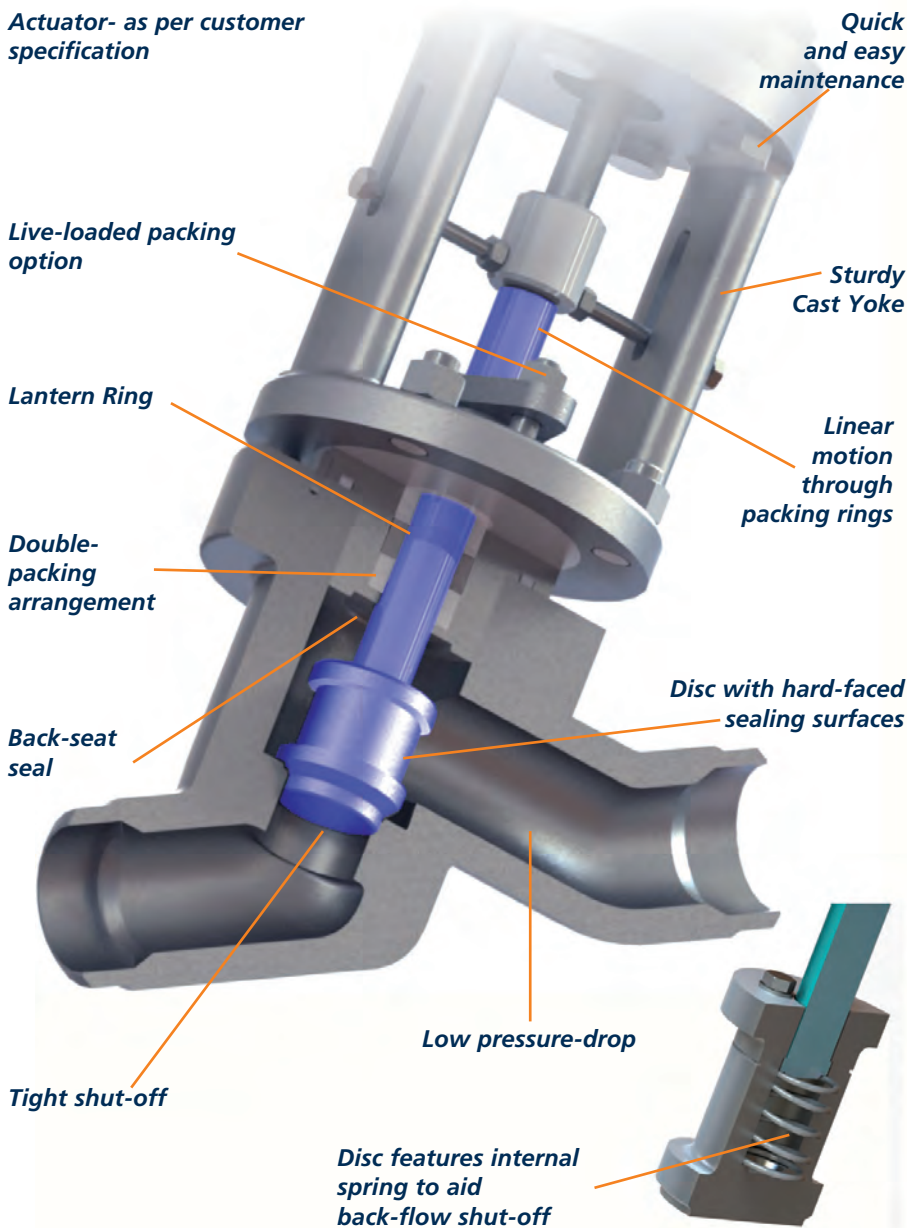
Stop Valves are used as isolation valves in medium and high-pressure systems, combined with the function of check-valve, preventing back-flow. A spring assists the disc to close in case of back-flow, and also functions as a damper preventing vibration. The amount of flow is regulated by the opening which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

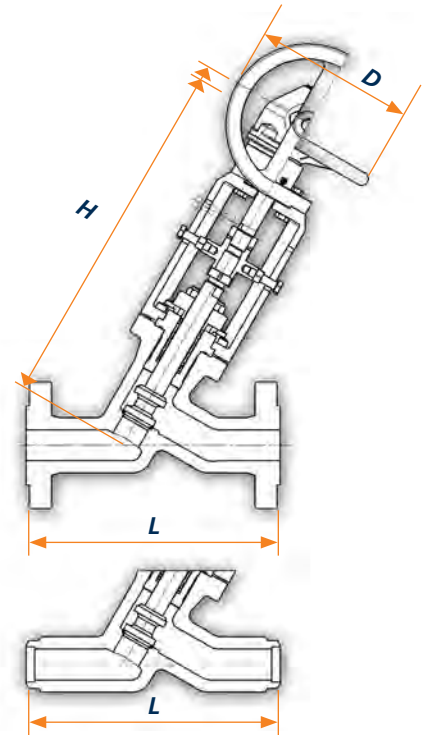
## ASME 150-1500

### Type 55SC

#### 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

# Stop-Check Valves Angle-Type

ASME 150-1500

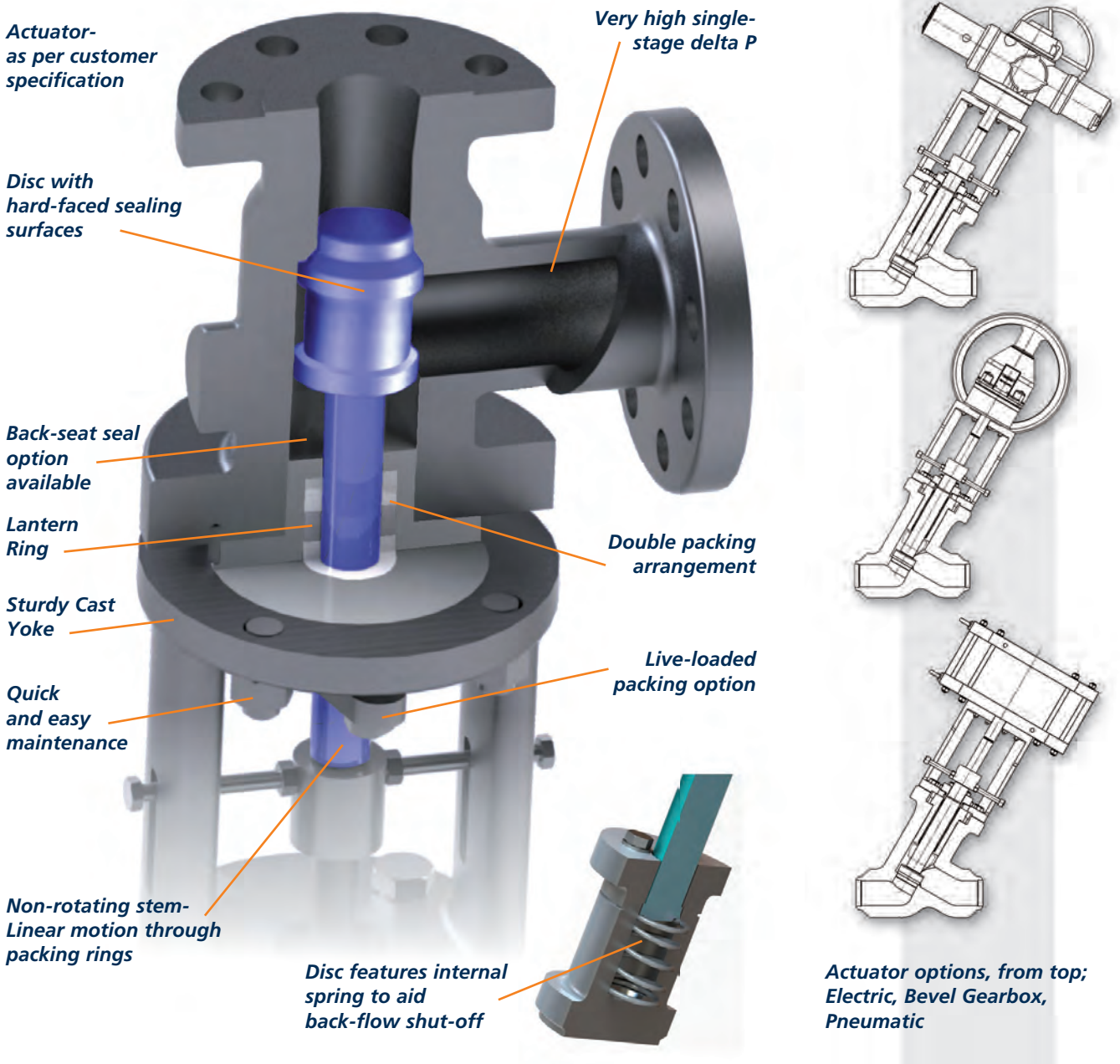
Type 55SA

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.



# Stop-Check Valves Angle-Type

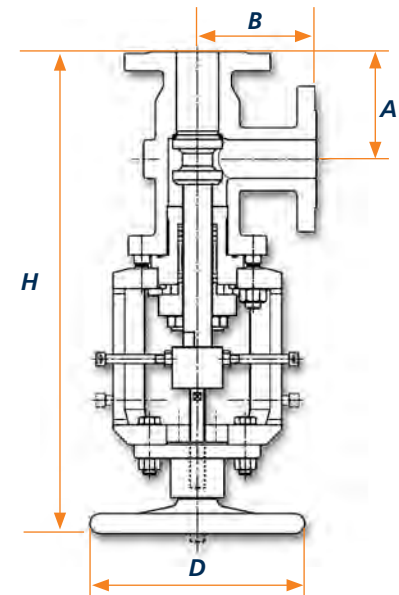
## ASME 150-1500

## Type 55SA

### Dimensions mm/Size

Rating→ Size ↓	150#				300#			
	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 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 Continuous, Angle-Type

ASME 150-1500

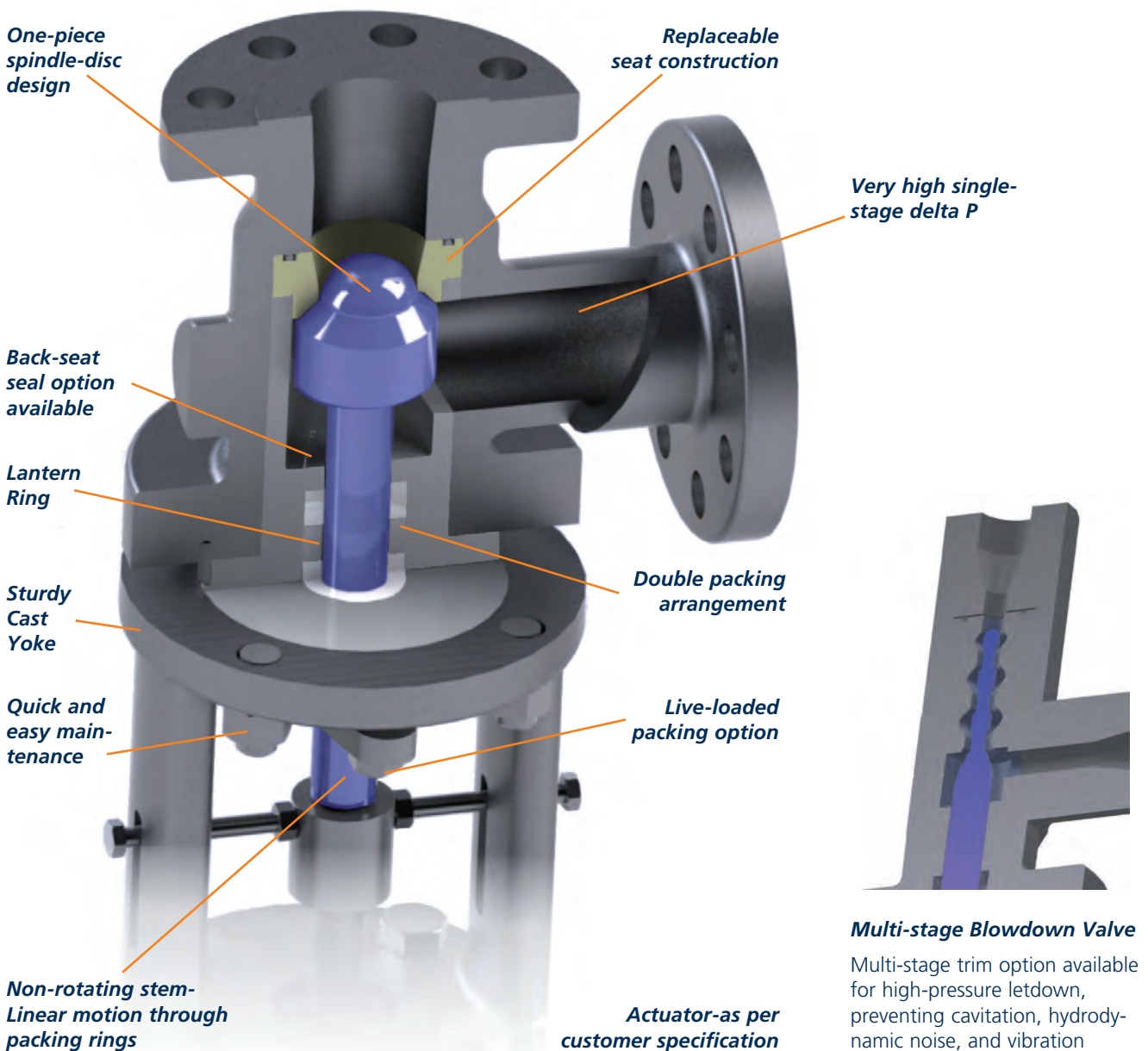
Type 71

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

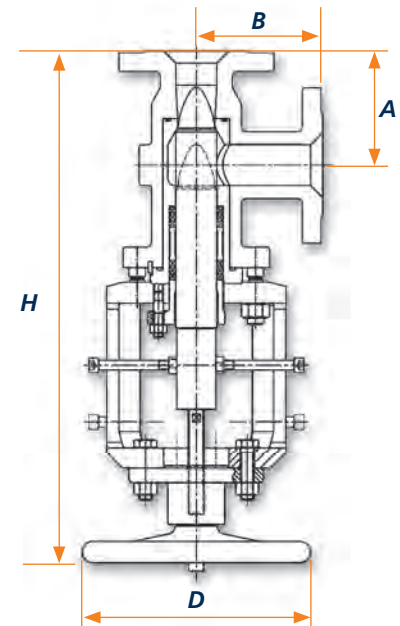
## ASME 150-1500

## Type 71

### Dimensions mm/Size

Rating → Size ↓	150#				300#			
	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.**

*Quick and easy maintenance*

*Non-rotating stem-Linear motion through packing rings*

*Live-loaded packing option*

*Double packing arrangement*

*One-piece spindle-disc design*

*Replaceable seat construction*

*Actuator-as per customer specification*

*Sturdy Cast Yoke*

*Lantern Ring*

*Back-seat seal option available*

*Very high single-stage delta P*



# Blow-down Valves Continuous, Y-Type

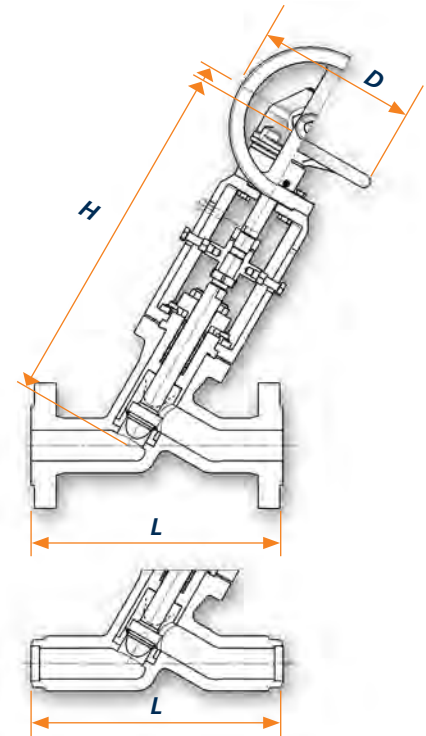
## ASME 150-1500

## 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

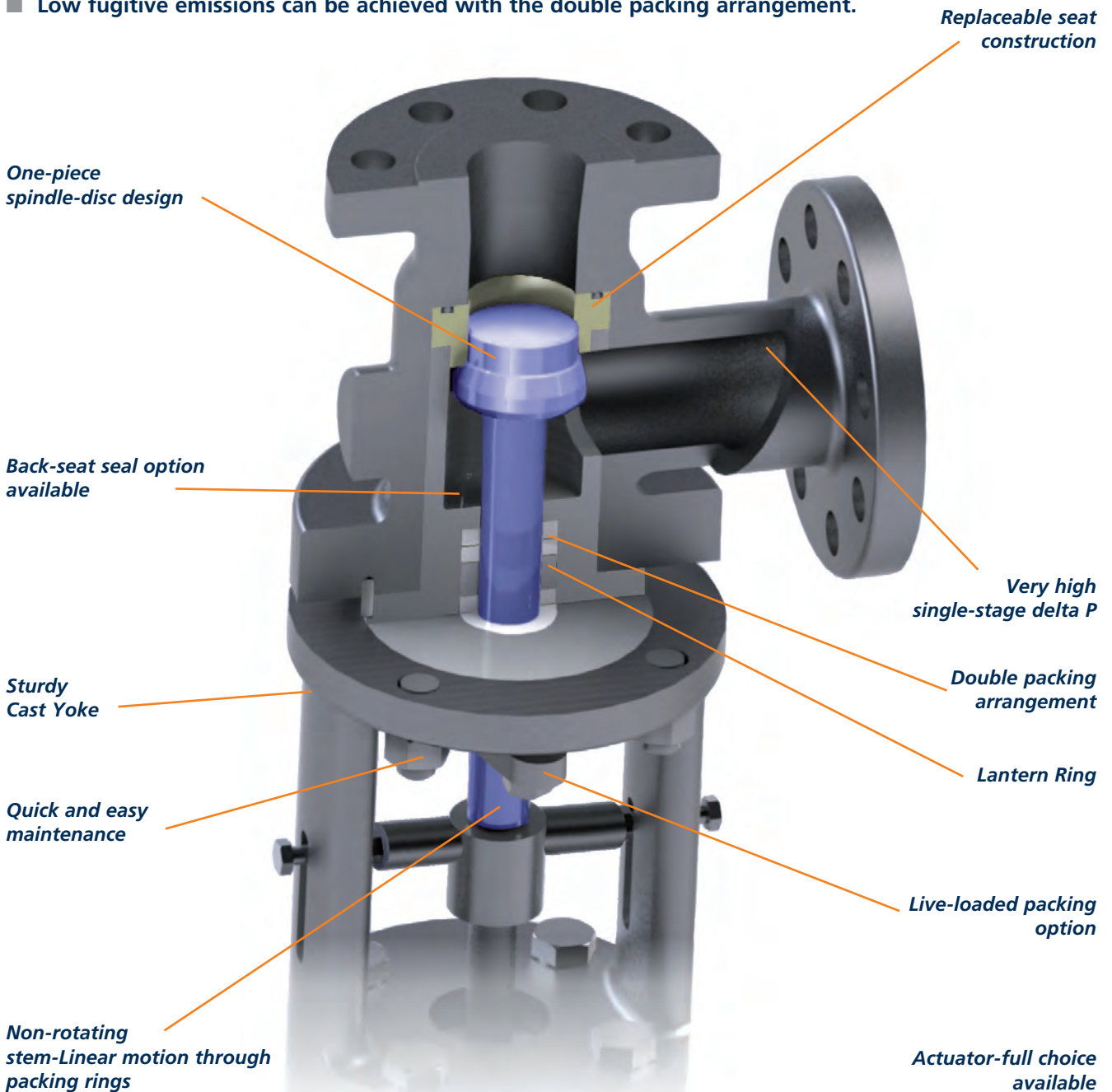
Type 71

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

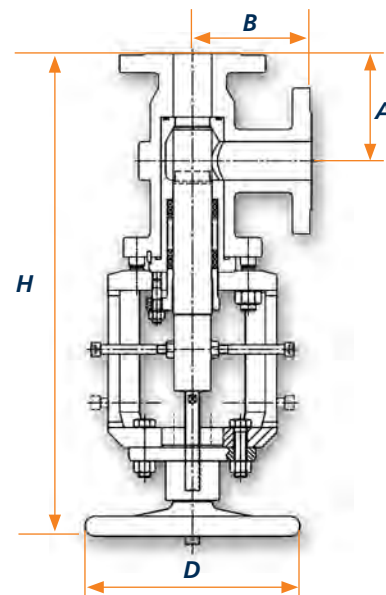
## ASME 150-1500

## Type 71

### Dimensions mm/Size

Rating → Size ↓	150#				300#			
	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 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, 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.**

*Quick and easy maintenance*

*Actuator-as per customer specification*

*Non-rotating stem-Linear motion through packing rings*

*Sturdy Cast Yoke*

*Live-loaded packing option*

*Double packing arrangement*

*Back-seat seal option available*

*Lantern Ring*

*One-piece spindle-disc design*

*Replaceable seat construction*



# Blow-down Valves Discontinuous/Intermittent, Y-Type

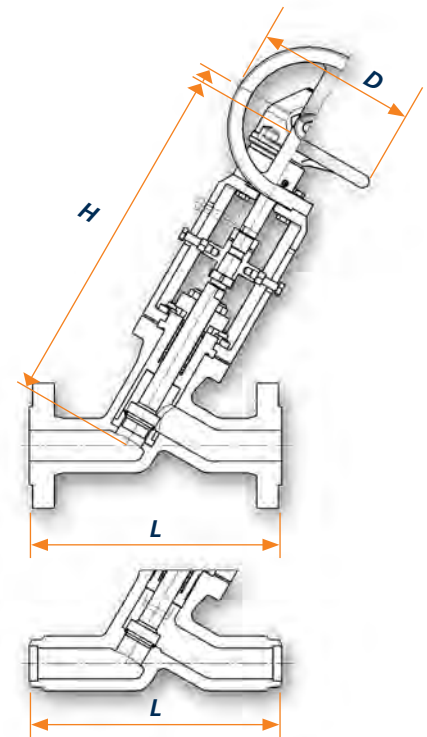
## ASME 150-1500

## 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

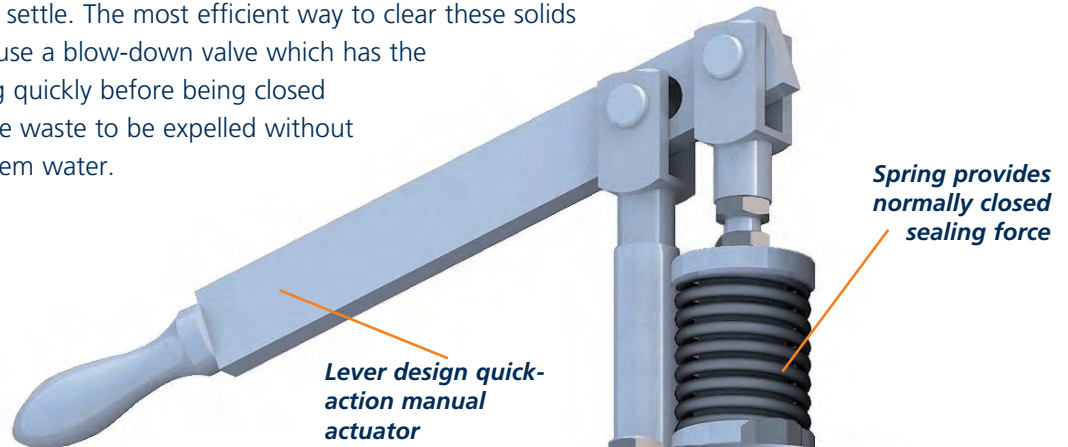
Description:	Standard:	Optional:
Size:	DN 25 (1") to DN 150 (6")	Larger on request
Pressure Class:	ASME 150 to ASME 1500	Higher on request
Body Material:	A216 WCB, A217 WC6, A351	316 SS, Super-Duplex, Incoloy, Hastelloy, others on Request
Trim:	Stainless Steel, A182 F6	As above, plus fully stellite
Sealing:	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 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*

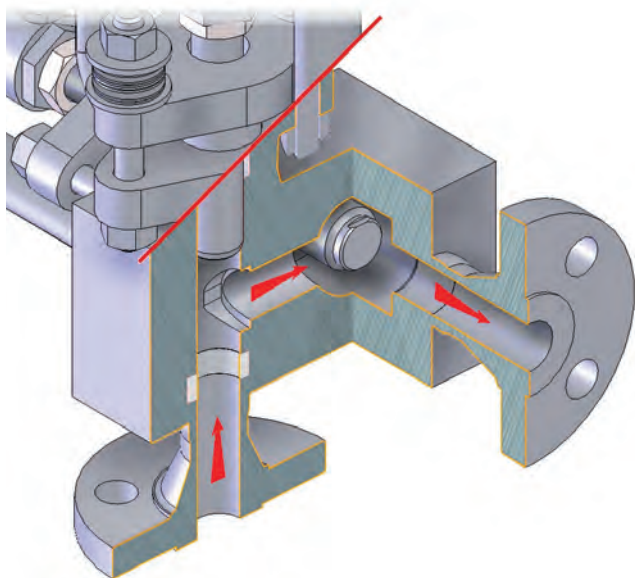
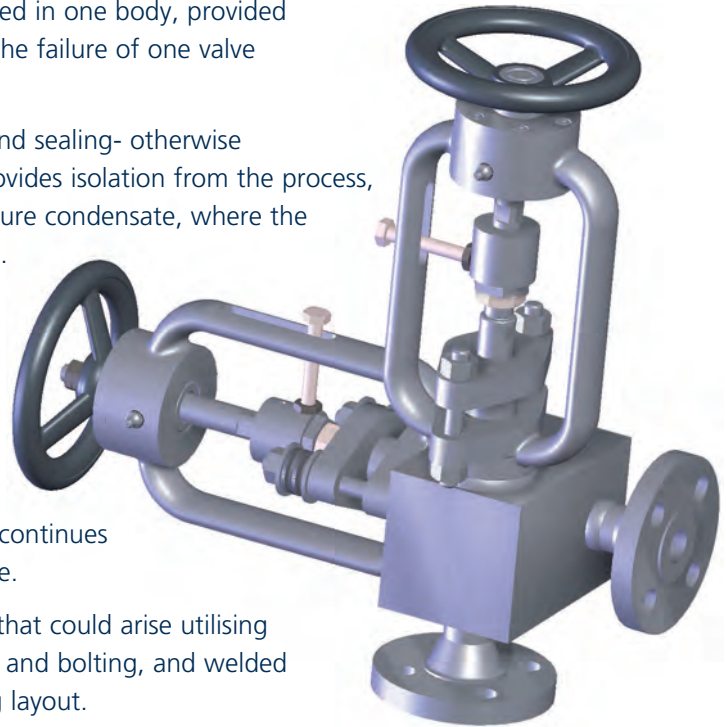
- These Blow-Down valves can also be supplied with powered actuation, such as this pneumatically operated version.

# 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.



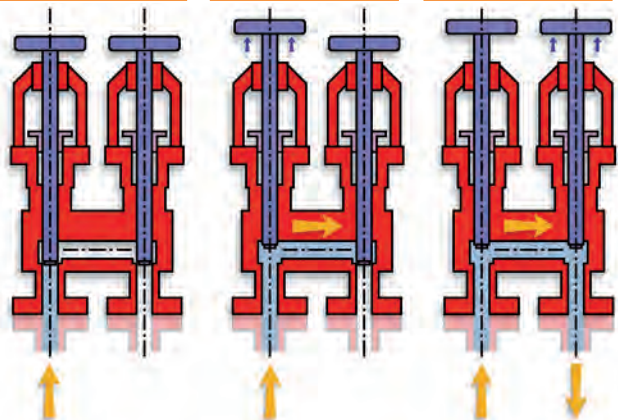
3D Cutaway View

### 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

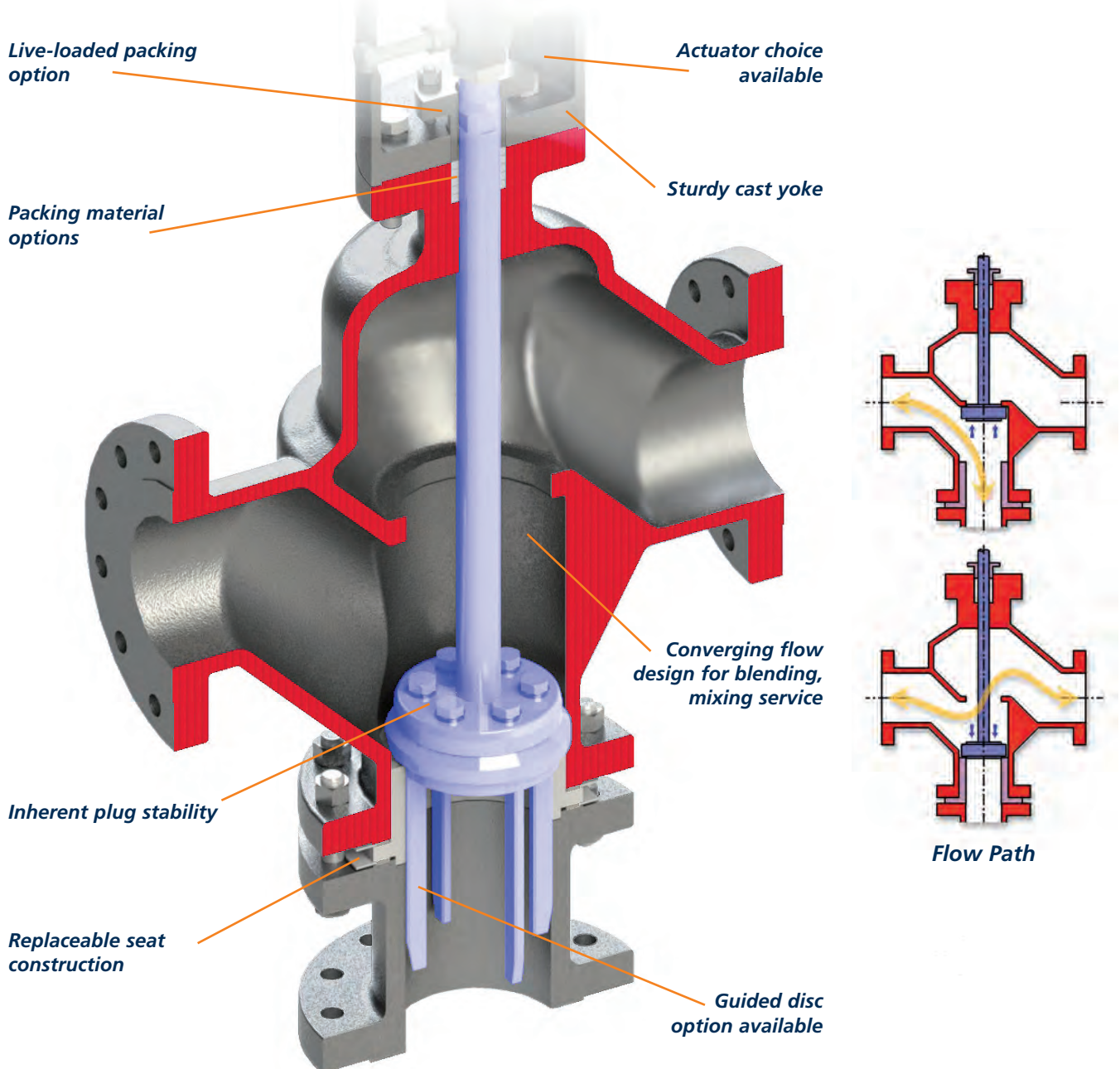
## Type 63

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

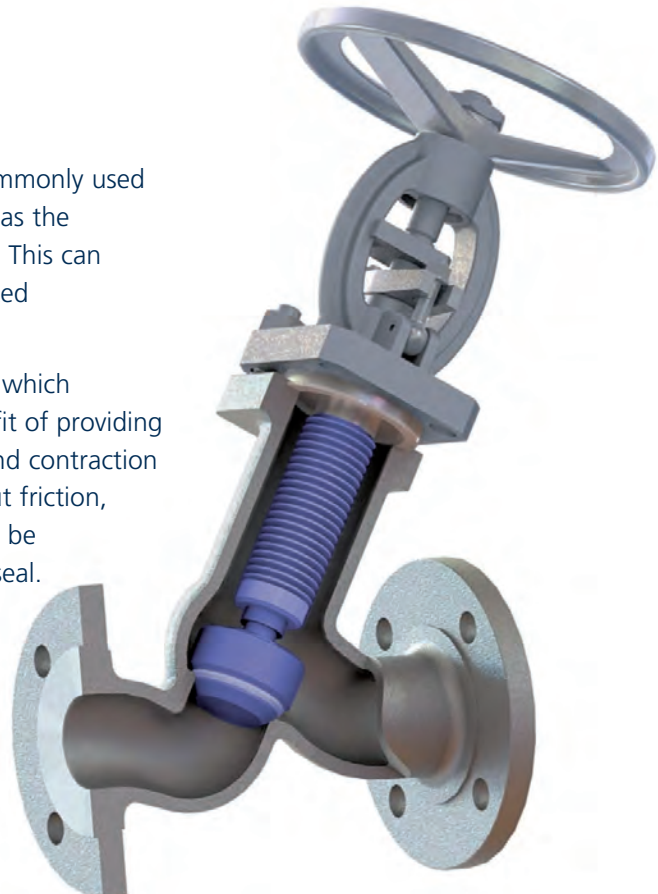
## High Temperature Service

- 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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

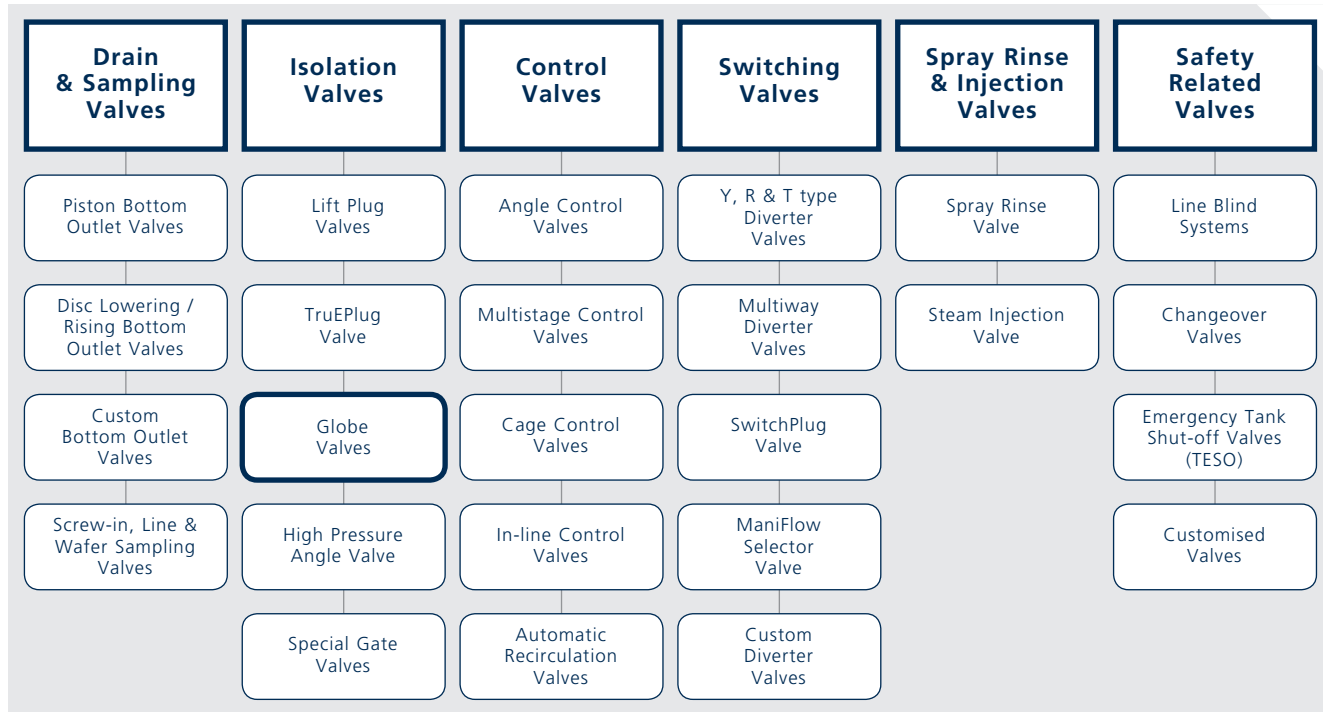
# Product Portfolio Overview

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:



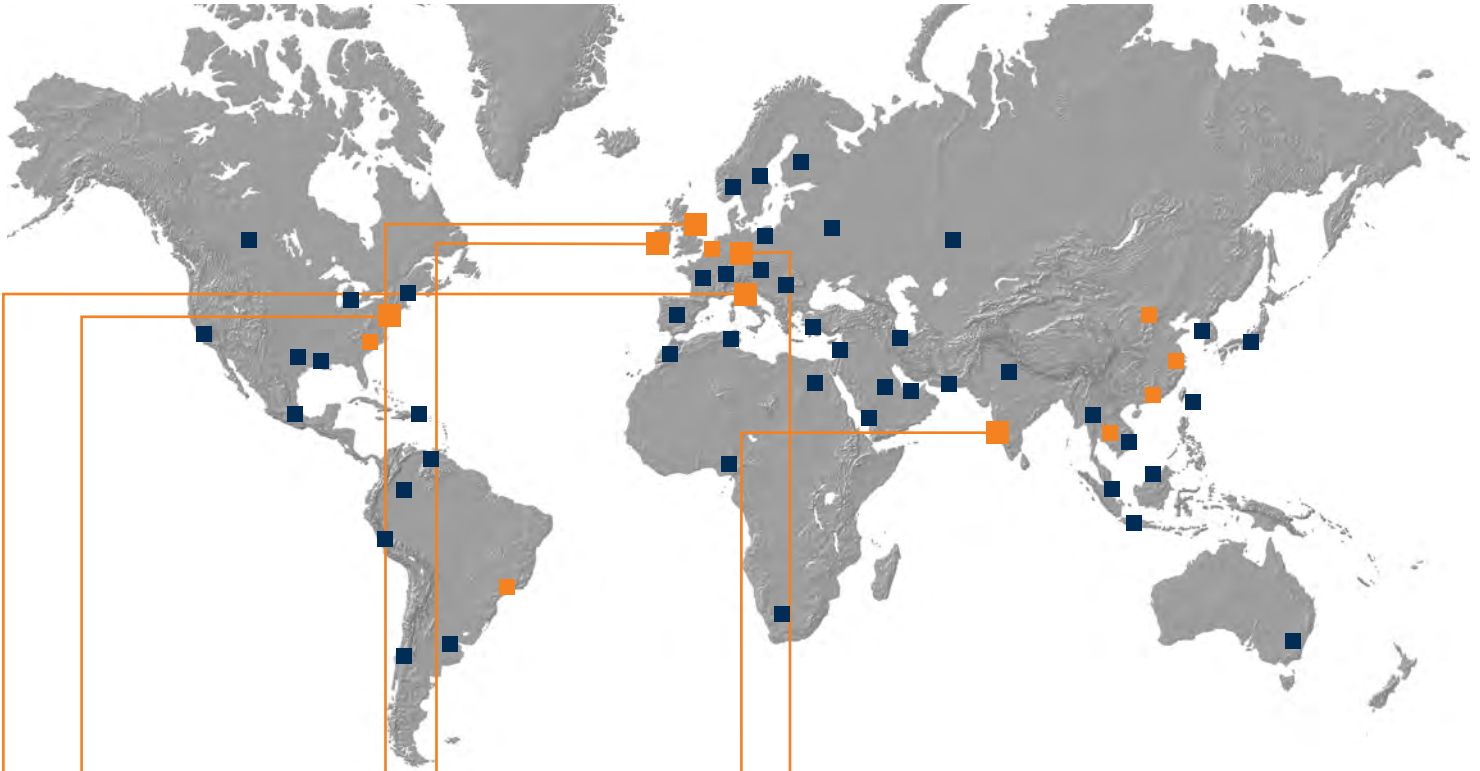
## Y-Globe Valve Client List:

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



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

# SchuF Worldwide



[www.schuf.com](http://www.schuf.com)

[www.schuf.de](http://www.schuf.de)

## USA



**Fetterolf Corporation**  
phone: +1 610 584-1500  
[info@fetterolfvalves.com](mailto:info@fetterolfvalves.com)

**SchuF (USA) Inc.**  
phone: +1 843 8813345  
[sales@schuf.us](mailto:sales@schuf.us)

## IRELAND



**SchuF Valve Technology GmbH**  
phone: +353 (0)21 4837000  
[sales@schuf.ie](mailto:sales@schuf.ie)

## GERMANY



**SchuF Chemieventile  
Vertriebs GmbH & Co.KG**  
phone: +49 (0)6198 571100  
[verkauf@schuf.de](mailto:verkauf@schuf.de)

## Your Sales Channel:

**SchuF Benelux B.V.**  
phone +31 25 12 34 448  
[lieke@schuf.nl](mailto:lieke@schuf.nl)

**Emartins Armaturen – ME**  
phone: +55 19 98013503  
[emartins@schuf.com](mailto:emartins@schuf.com)

**SchuF South East Asia Pte. Ltd.**  
phone +31 62062 6664  
[marius@schuf.nl](mailto:marius@schuf.nl)

**SchuF Valves China Ltd.**  
phone +85 22 86 50 86 1  
[see@vol.net](mailto:see@vol.net)

## ITALY



**La Tecnovalvo S.r.l.**  
phone: +39 023503508  
[info@latecnovalvo.com](mailto:info@latecnovalvo.com)

## UNITED KINGDOM



**SchuF (UK) Ltd.**  
phone: +44 203 355 2012  
[sales@schuf.co.uk](mailto:sales@schuf.co.uk)

## INDIA



**SchuF Speciality Valves  
India Pvt. Ltd.**  
phone: +91 421 2264600  
[sales@schuf-india.com](mailto:sales@schuf-india.com)

## Your Local Agent: