

SchuF's model 50 is a versatile, rugged Y-globe valve for severe service in the chemical, refinery and petrochemical industry to handle special flow conditions or large flow rates. Its body shape is flow optimised and thus handles flow better than conventional globe valves.

It combines the flow characteristic of a V ball valve with the reliability of a positive metal to metal tight shut off valve, with lower actuation forces.

Different trim design is available for meeting the most demanding liquid, gas/vapour, slurry or three phase flow conditions.

Plugs are available as standard disc and spindle or solid piston to avoid dead space.



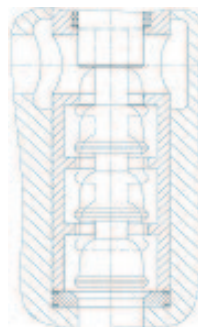
50SR 1 Stage

a common choice of valve design when smooth flow path, relatively small actuators and long term tight shut-off is desired.

Standard Trim

50TR Multi-Plug Trim

1, 2, 3 or 4 Stage - the self-cleaning rising disc plug & cage can be provided with a variety of contours to achieve equal %, linear or special flow characteristics.



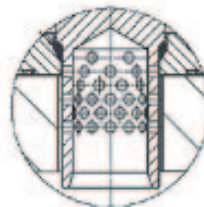
50SN Quick opening (on/off trim)

The valves can be delivered as classical on/off angle valves for automated shut off or impulse control.



50SK Piston Trim

used especially when elimination of dead space is a key requirement - such as in polymer applications.



50KS Cage Trim

1, 2 or 3 Stage - the plug & cage can be provided with a variety of hole drilling design to achieve required flow characteristic and noise attenuation.



SchuF Y-Globe Control Valve Type 50

Features:

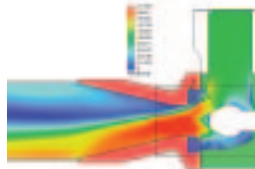
Class V Shutoff - use of metal seat to provide tight shutoff to minimise seat erosion. Leakage rate of ANSI Class VI or API 598 is available as option, which is important when handling light gas such as hydrogen in emergency venting service.

High Pressure Drops - perfectly balanced trim is standard in multistage trim, avoiding the use of large actuators to cover a wide range of pressure drops.

Sour Service Capability - materials are available for applications handling sour fluids, including 321 or 347 stainless steel compatible with NACE MR0175-2002.

CFD Simulation

Extensive experience exists allowing detailed modelling to optimise body design.



Flushing

SchuF provides optional integrated body and stem with the possibility of automation for optimised slurry line flushing.

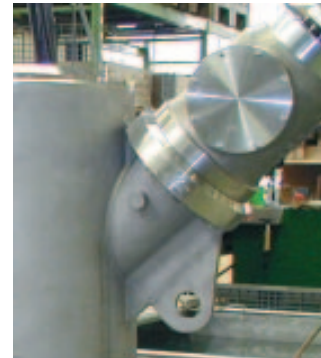
Integral Heating Jacket

A steel or stainless steel jacket can be welded on with inlet & outlet connections to meet specific heating requirement.



Choice of Stem Seal

single or double packing, bellow seal or purged design are available with „TA Luft“ certification. Extremely high vacuum version with completely enclosed yoke with Helium leakage under 1×10^{-8} mbar.litre/sec.



Materials

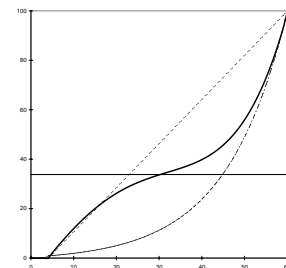
Tungsten Carbides, Ceramics, Titanium 5, Duplex, Incoloy or martensitic st.st. are available as options to enhance erosion resistance.

Cv Sizing Program

over the years, SchuF has perfected its own 3 phase Cv calculation programme to accurately predict required valve size in flashing slurry applications.

SchuF x^3 Bell Curve

linear, equal % control characteristics are available as well as SchuF's patented x^3 or bell curve which gives much better controllability at operating levels.



SchuF Y-Globe Control Valve Type 50

Y-globe valves - specials

SchuF's technical design engineers provide you with unique valve design to meet the unusual demand of process. The following list an example of special designs, in service world-wide, showing continuous satisfactory performance.

- feed flow control valve in Nylon, PET and PC pipelines
- heat exchanger temperature control in refinery applications
- combined control and bypass flow to a polymer filter
- combined pulsed control and start-up ditch flow



- high precision multi-port flow control of highly viscous, non linear, non-Newtonian polymer fluid
- short body wafer control valve, fully jacketed in Nylon and PC production
- polymer catch pot / buggy isolation valve

Actuator Types

SchuF manufactures pneumatic diaphragm and piston actuators. Both can work with air pressure from 3 to 7 barg.

Actuator Selection available:

- PM reversible, multi-spring diaphragm actuator in st.st, C.St. or Al casing; stroke 25-50mm, F to 30kN
- PD double acting cylinder actuator in steel casing; stroke 35-500mm
- PE single acting cylinder actuator in steel casing; stroke 35-300mm
- EM electric actuator
- HY hydraulic actuator
- EH electro-hydraulic
- KU bevel gear
- LM pneumatic motor

Positioner Selection

As per customer specification, alternatively Siemens PS2 Smart positioner
SMC i/p positioner

Cast yoke - a rugged yoke bracket in cast stainless or Carbon steel is used to prevent structural deformation when valve is mounted in non-vertical positions.

Anti-Rotation Device - the yoke includes a device to stop the valve stem from turning which is often found when the valve plug is subjected to lateral fluid flow with high velocity or high pressure drops.

Optional Valve Body

Popular choices include bodies with integral flushing and drain systems.



SchuF Y-Globe Control Valve Type 50

Specifications:

Available valves

Rating

Class 150 to 2500 ASME, DIN or JIS
Larger or smaller on request

End connections

Butt weld ends
Flanged ends in RF, RTJ, LR or LM/LF style
Hub and clamps from Grayloc or Securamax

Inlet Temperature and Pressures

Consistent with applicable rating according to ASME B16.34

Flow Direction

Flow up or down (flow to open or close)

Flow Characteristic

Linear, Equal percentage, SchuF x³ bell

Table of Cvs available

Standard Range

Valve Size Inches/DN	Seat Ø	Cv
1" DN 25	4.5	0.10
		0.16
		0.25
		0.40
		0.63
	7 8 10 12 16 20	1.00
		1.60
		2.50
		4.00
		6.30
1 1/2" DN 40	20	10
	25	16
	32	25
2" DN 50	10	20
	16	25
	25	32
	40	40
3" DN 80	40	40
	63	50
	100	63
4" DN 100	63	50
	100	63
	160	80
6" DN 150	160	80
	250	100
	400	125

Valve sizes

1" 1 1/2" 2" 2 1/2" 3" 4" 5" 6" 8" 10" 12"

Flow Coefficients

single stage 1 to 5000
multi stage 1 to 350
cage 1 to 300

Materials

Body
WCB, WC6, WC9, CR-Mo Steel
CF3, CF3M, CF8, CF8C, CF8M, CG8M
Duplex, Incoloy, Inconel, Hastelloy & Titanium

Trim

420, 316, 316L, 321 st.st.
SAF 2205, Inconel, Titanium
Stellited, Tungsten Carbide, Ceramics

Lining / Sleeves

Glass, PTFE
Colmonoy, Stellite, Chroming
Tungsten Carbide, TiN, Canadizing

Special Range

Valve Size	Seat Ø	Cvs min	Cvs max
1/2"- 1 1/2" DN 10-40	3-5	0.1	1
	6-10	1	6
	10-15	6	10
	15-20	10	20
2" DN 50	20-40	20	50
3" DN 80	50-75	60	240
4" DN 100	70-90	140	300
6" DN 150	80-135	180	500
8" DN 200	100-175	250	1000
10" DN 250	150-200	500	1250
12" DN 300			
14" DN 350	200-300	750	3500
16" DN 400			
16" DN 400			
18" DN 450			
10" DN 500	300-400	2700	5000
24" DN 600			
30" DN 750			
36" DN 900	300-600	2700	7500

If you are interested in above or other valve products, please contact us or your nearest sales location.

