

Sanitary Control Valves

U.S. Type SCV-85 (Includes SC510)

DESCRIPTION

The U.S. SCV-85 Research Control® Valves are compact control valves.

APPLICATIONS

Valves of the SCV-85 type are well suited to automated control systems found in biotechnology, pharmaceutical and food processes.

- Pressure
- Temperature
- Product injection
- Flow control in fermentation reactors
- Control of gas blankets in closed vessels
- Catalyst, defoamer and additive initiation

MATERIALS

Body and Bonnet	316/316L stainless steel barstock	
Innervalue	316/316L stainless steel barstock trims Characteristics: equal percentage, linear or special	
Clamps	304 or 316 stainless steel	
Gaskets	Standard Optional	Viton® (FKM) Silicone, EPDM or Kalrez®
O-Rings	Standard Optional	Viton (FKM) Silicone, EPDM or Kalrez
Actuator Housing	Standard Optional	Epoxy-coated aluminum 316/316L stainless steel

ACTUATOR CHOICES

Standard	Air-to-open, fail close (ATO) Air-to-close, fail open (ATC)
Optional	316 stainless steel actuator
Optional	ATO or ATC with integral top mounted positioner
Optional	ATO or ATC with side mounted positioner
Signal Ranges	3-15#, 3-27#, 6-30# (3-9#, 9-15# with positioner)
Electronic Actuator	Electric actuators up to 200 pounds of thrust



Shown with optional stainless steel actuator

STANDARD FEATURES

- Sizes: 1/2 in. (12.7 mm), 3/4 in. (19 mm), 1 in. (25.4 mm) and 1-1/2 in. (38.1 mm)
- Pressure vs temperature rating:
300 psi @ 75° F (21 bar @ 24° C),
150 psi @ 300° F (10 bar @ 149° C)
- Self-draining design
- Quick disassembly with clamps
- Choice of ends: butt-weld, Tri-Clamp®
- Designed for STEAM-IN-PLACE and CLEAN-IN-PLACE
- Internal finish: 16 Ra

OPTIONS

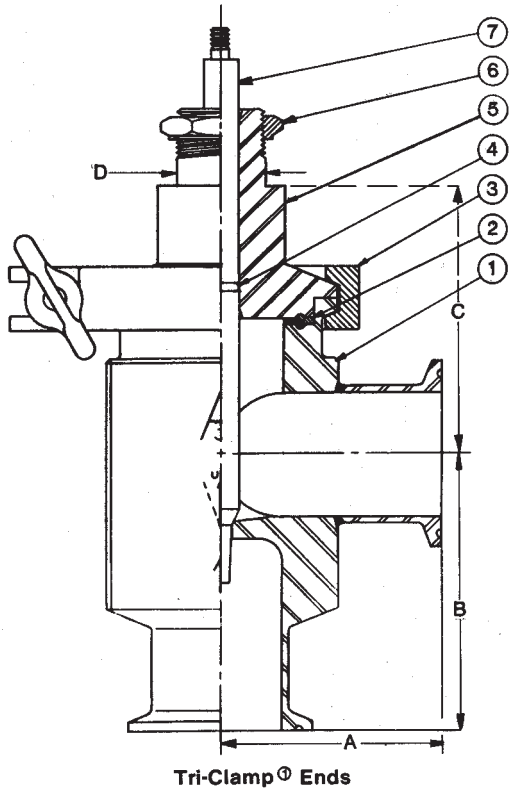
- | | |
|---|--|
| <input type="checkbox"/> Manual Handwheel | <input type="checkbox"/> Certifications |
| <input type="checkbox"/> Filters | <input type="checkbox"/> Electric Actuator |
| <input type="checkbox"/> Positioners | <input type="checkbox"/> Limit Switches |
| <input type="checkbox"/> I/P Transducers | <input type="checkbox"/> Regulators |

Custom bracketing available with each option.

OTHER VALVES

Badger Meter manufactures many models of both standard and specialty control valves, conventional as well as sanitary designs. If your needs for small control valves can be served with a custom designed valve, please contact your area representative for assistance.

DIMENSIONS



Item Description

Item	Description
1	Body
2	Body – bonnet gasket
3	Body – bonnet clamp
4	O-ring
5	Bonnet
6	Yoke locknut
7	Inner valve

Dimensions

Size	A	B	C	D	Stroke
1/2 in. (13 mm)	1.56 in. (40 mm)	1.56 in. (40 mm)	2.75 in. (70 mm)	0.875 in. (22 mm)	0.562 in. (14 mm)
3/4 in. (19 mm)		1.69 in. (43 mm)	2.62 in. (67 mm)		
1 in. (25 mm)	2.75 in. (70 mm)	2.62 in. (67 mm)	3.12 in. (79 mm)		
1-1/2 in. (38 mm)		2.87 in. (73 mm)	2.87 in. (73 mm)		

Valve Numbers

Size	Valve No.
1/2 in. (13 mm)	904
3/4 in. (19 mm)	908
1 in. (25 mm)	912
1-1/2 in. (38 mm)	896

INNERVALVE CHART

Valve Size	Trim Designation	CV	KV	Nom. Rangeability		Orifice Port Diameter	Port Area (in. ²)
		Coefficient		Linear	(=%)		
1-1/2 in.	20	20.00	17.24	40:1	60:1	1.00 in. (25.4 mm)	0.7854
	15	15.00	12.93	40:1	60:1	1.00 in. (25.4 mm)	0.7854
1 in. and 1-1/2 in.	10	10.00	8.62	40:1	60:1	0.75 in. (19.1 mm)	0.4420
	8	8.00	6.90	40:1	60:1	0.75 in. (19.1 mm)	0.4420
3/4 in., 1 in., and 1-1/2 in.	6	6.00	5.17	40:1	60:1	0.75 in. (19.1 mm)	0.4420
	5	5.00	4.31	40:1	60:1	0.50 in. (12.7 mm)	0.1964
1/2 in., 3/4 in., 1 in., and 1-1/2 in.	4	4.00	3.45	40:1	60:1	0.50 in. (12.7 mm)	0.1964
	A	3.00	2.59	40:1	60:1	0.50 in. (12.7 mm)	0.1964
	B	2.00	1.72	40:1	60:1	0.375 in. (9.5 mm)	0.1105
	C	1.25	1.08	40:1	60:1	0.375 in. (9.5 mm)	0.1105
	D	0.80	0.69	40:1	60:1	0.375 in. (9.5 mm)	0.1105
	E	0.50	0.43	40:1	60:1	0.375 in. (9.5 mm)	0.1105
	F	0.32	0.28	30:1	40:1	0.156 in. (4.0 mm)	0.0192
	G	0.20	0.17	30:1	40:1	0.156 in. (4.0 mm)	0.0192
	H	0.13	0.11	30:1	40:1	0.156 in. (4.0 mm)	0.0192
	I	0.08	0.07	30:1	40:1	0.156 in. (4.0 mm)	0.0192
J	0.05	0.04	30:1	40:1	0.156 in. (4.0 mm)	0.0192	

Control. Manage. Optimize.

Research Control is a registered trademark of Badger Meter, Inc. Other trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2022 Badger Meter, Inc. All rights reserved.