

### DESCRIPTION

The SCV-89 Research Control® Valves are compact control valves designed to meet the manufacturing standards established by the 3A Symbol Council. The standard investment cast body provides a unit that is lightweight and economical.

### APPLICATIONS

Valves of the SCV-89 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 OF CONSTRUCTION

<b>Size</b>	1 in. (25.4 mm) and 1-1/2 in. (38.1 mm)	
<b>Body - Bonnet</b>	Body	316/316L Stainless Steel Cast
	Bonnet	316 Stainless Steel Barstock
<b>Innervalve</b>	316 Stainless Steel Barstock Trims	
<b>Clamps</b>	304 or 316 Stainless Steel	
<b>Gaskets</b>	Standard	Viton (FKM)
	Optional	Silicone, EPDM or Kalrez
<b>O-Rings</b>	Standard	Viton (FKM)
	Optional	Silicone, EPDM or Kalrez
<b>Actuator Housing</b>	Standard	Epoxy Coated Aluminum
	Optional	316/316L Stainless Steel

### STANDARD FEATURES

- Manufactured to 3A Symbol standards
- Self-draining design
- Quick disassembly with clamps
- Choice of ends: Tri-Clamp®
- Designed for steam-in-place and clean-in-place
- Internal Finish: 16 Ra

### OTHER AVAILABLE VALVES

Research Control Valves manufactures many different 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.



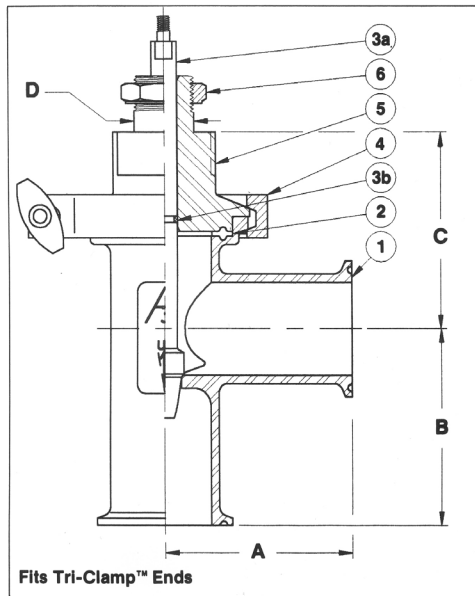
### ACTUATOR CHOICES

<b>Standard</b>	Air-to-open, fail close Air-to-close, fail open
<b>Optional</b>	Stainless Steel Actuator
	ATO or ATC with integral top mounted positioner
	ATO or ATC with side mounted positioner
<b>Signal Ranges</b>	3-15#, 3-27#, 6-30# (3-9#, 9-15# with positioner)
<b>Electronic Actuator</b>	We offer a wide choice of electric actuators up to 200 pounds of thrust.

### SPECIFICATIONS

<b>Pressure/Temperature Rating</b>	300 psi at 75° F	
	150 psi at 300° F	
<b>Finishes</b>	Internal	16 Ra
	External	As cast (electropolished)
Consult the factory for maximum allowable flowing and shutoff pressures		

## PARTS AND DIMENSIONS



### Item Description

1	Body
2	Body-Bonnet gasket
3a	Innervalve/stem (1 piece)
3b	O-ring
4	Body-Bonnet clamp
5	Bonnet
6	Yoke locknut

### Dimensions

PS	1 in. (25.4 mm)	1-1/2 in. (38.1 mm)
A	2.75 in. (69.9 mm)	2.75 in. (69.9 mm)
B	2.63 in. (66.8 mm)	2.87 in. (72.9 mm)
C	3.10 in. (78.7 mm)	2.86 in. (72.6 mm)
D	0.875 in. (22.2 mm)	0.875 in. (22.2 mm)
Stroke Length	0.562 in. (14.3 mm)	

Size	Type No.	Dwg. No.
1 in. (25.4 mm)	940	CD-950940
1-1/2 in. (38.1 mm)	935	CD-950935

## INNERVALVE CHART

Valve Size	Trim Designation	CV	KV	Nom. Rangeability		Orifice Port Diameter	Port Area (in. <sup>2</sup> )
		Coefficient		Linear	(= %)		
1-1/2 in. (38.1 mm)	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. (25.4 mm), 1-1/2 in. (38.1 mm)	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
	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
	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	

## AVAILABLE OPTIONS

- |   |   |  |   |
|---|---|--|---|
| <input type="checkbox"/> MANUAL HANDWHEEL | <input type="checkbox"/> POSITIONERS    | <input type="checkbox"/> ELECTRIC ACTUATOR | <input type="checkbox"/> LIMIT SWITCHES |
| <input type="checkbox"/> FILTERS          | <input type="checkbox"/> CERTIFICATIONS | <input type="checkbox"/> I/P TRANSDUCERS   | <input type="checkbox"/> REGULATORS     |

Custom bracketing is available with each option.

## 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. © 2015 Badger Meter, Inc. All rights reserved.

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

The Americas | Badger Meter | 4545 West Brown Deer Rd | PO Box 245036 | Milwaukee, WI 53224-9536 | 800-876-3837 | 414-355-0400  
 México | Badger Meter de las Americas, S.A. de C.V. | Pedro Luis Ogazón N°32 | Esq. Angelina N°24 | Colonia Guadalupe Inn | CP 01050 | México, DF | México | +52-55-5662-0882  
 Europe, Middle East and Africa | Badger Meter Europa GmbH | Nurtinger Str 76 | 72639 Neuffen | Germany | +49-7025-9208-0  
 Europe, Middle East Branch Office | Badger Meter Europe | PO Box 341442 | Dubai Silicon Oasis, Head Quarter Building, Wing C, Office #C209 | Dubai / UAE | +971-4-371 2503  
 Czech Republic | Badger Meter Czech Republic s.r.o. | Mařikova 2082/26 | 621 00 Brno, Czech Republic | +420-5-41420411  
 Slovakia | Badger Meter Slovakia s.r.o. | Racianska 109/B | 831 02 Bratislava, Slovakia | +421-2-44 63 83 01  
 Asia Pacific | Badger Meter | 80 Marine Parade Rd | 21-06 Parkway Parade | Singapore 449269 | +65-63464836  
 China | Badger Meter | 7-1202 | 99 Hangzhong Road | Minhang District | Shanghai | China 201101 | +86-21-5763 5412