

### DESCRIPTION

The Type 1499 valve globe control valve is designed to fit directly into pipelines of the same flange size and rating. Its compact size and light weight make it especially suited to modulating control of medium to low flow rates within the pressure range of the flanges. Its welded construction makes it readily available in a variety of materials and in other types of flanges. Special face-to-face dimensions, as well as mixing of flange size and body size, are also available on request.

### APPLICATIONS

Type 1499 valves are widely used in industrial applications where flanged-type ends are desired to facilitate removal of the unit from the line or to comply with specific piping standards. In low flow applications, the unit occupies much less space than its larger counterparts.

### MATERIALS

<b>Body and Bonnet</b>	
Standard	316 SST, carbon steel
Optional	Monel®, Alloy 20, Hastelloy® C and B or ASTM equivalent
<b>Innervalue</b>	
Standard	316 SST
Optional	Stellite®, Monel, Alloy 20, Hastelloy C and B or ASTM equivalent
<b>Packing</b>	
Standard	TFE CV rings, Graphite
Standard	TFE chevron rings
Optional	Graphite
<b>Actuator (uses 1/2" size)</b>	
Standard	Die cast aluminum
Optional	316L SST on standard models

### ACTUATOR CHOICES

<b>Standard</b>	Air to open, fail close Air to close, fail open
<b>Optional</b>	With integral top-mounted positioner
<b>Standard Signals</b>	3-15#, 3-27#, 6-30#
<b>Optional Signals</b>	With positioner, 3-9#, 9-15#
<b>Accessories</b>	Filter regulator, gauges, I/P converter, limit switches, handwheel, solenoids

**NOTE:** The EVA-1 electric actuator can also be used for low pressure application, if air is not available.



*Shown with Type 766 Actuator*

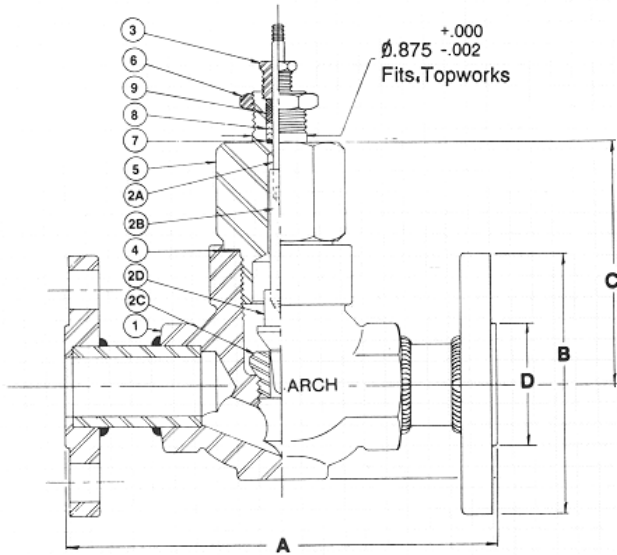
### STANDARD FEATURES

- 3/4 in. (19.1 mm) and 1 in. (25.4 mm) models
- Interchangeable trim sets
- Class 150 or Class 300 raised face flanges
- Trim characteristics: Linear, equal percent, quick open or double taper
- TFE chevron packing
- ANSI Class IV shutoff (size J trim and larger)
- Threaded bonnet for quick disassembly

### OPTIONAL FEATURES

- Special face-to-face dimensions
- Oversized flanges
- Ring type joint, tongue and groove, flat face or raised face smooth flanges
- Bellows packing solutions
- Reduced Emissions Kalrez® (REK), graphite, spring-loaded chevron and others
- Bonnet extensions for temperature extremes
- Angle pattern body
- Exotic alloys for complete valves or trims
- Stellite trims & soft seats (PTFE & Kel-F)
- TiN coating of innervalue stem and seat

**DIMENSIONS**



1. Valve body
2. Innerset (trim) set
  - a. Stem: 3/16 in. (4.7 mm) diameter
  - b. Intermediate/guide stem: 3/18 in. (4.2 mm) diameter
  - c. Seat: 3/4 in. (19.1 mm) hex, 1-5/16" hex
3. Packing gland: 1/2 in. (12.7 mm) hex (Some exotic material bonnets are round with wrench flats.)
4. Body-bonnet gasket (not supplied on exotic materials)
5. Bonnet: 3/4 in. (19.1 mm) valve: 1-1/2 in. (38.1 mm) hex.  
1 in. (25.4 mm) valve: 1-3/4 in. (44.5 mm) hex.
6. Yoke lock nut: 1-1/8 in. (28.6 mm) hex
7. Packing adapter
8. Packing
9. Packing follower

PS	Class	A	B	C	D	Stroke
0.75 in. (19.1 mm)	150#	7.25 in. (184 mm)	3.88 in. (98 mm)	3.90 in. (99 mm)	1.63 in. (41 mm)	0.562 in. (14 mm)
	300#	7.625 in. (194 mm)	4.63 in. (118 mm)			
1 in. (25.4 mm)	150#	7.25 in. (184 mm)	4.25 in. (108 mm)	3.95 in. (100 mm)	2.00 in. (51 mm)	
	300#	7.25 in. (184 mm)	4.88 in. (124 mm)			

**PRESSURE VS TEMPERATURE RATING**

Temp ° F (° C)	3/4 in. (19.1 mm) Valve			
	316 SS		Carbon Steel	
	Class 150	Class 300	Class 150	Class 300
100 (38)	275	720	285	740
200 (93)	240	620	260	675
300 (149)	215	560	230	655
400 (204)	195	515	200	635
500 (260)	170	480	170	600
600 (316)	140	450	140	550
700 (371)	110	430	110	535
800 (427)	80	415	Do not use in this area.	

Rec. Bonnet Torque = 290 ft-lb

Temp ° F (° C)	1 in. (25.4 mm) Valve			
	316 SS		Carbon Steel	
	Class 150	Class 300	Class 150	Class 300
100 (38)	275	720	285	740
200 (93)	240	620	260	675
300 (149)	215	560	230	655
400 (204)	195	515	200	635
500 (260)	170	480	170	600
600 (316)	140	450	140	550
700 (371)	110	430	110	535
800 (427)	Do not use in this area.			

Rec. Bonnet Torque = 345 ft-lb

**NOTE:** TFE chevron ring packing temperature limit is 400° F (204° C). Consult the factory for higher temperatures. The charts are a combination of ANSI B16.34 and Badger Meter ratings for the valve superstructure.

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**INNERVALVE CHART**

Valve Size	Trim Size	Max. Cv	Orifice Dia. in. (mm)	Orifice Area in. <sup>2</sup> (mm <sup>2</sup> )	Nominal Rangeability	
					Linear	Equal %
1 in. (25.4 mm)	6.0	6.0	0.625 (15.9)	0.307 (197.9)	50:1	60:1
	5.0	5.0	0.625 (15.9)	0.307 (197.9)	50:1	60:1
	4.5	4.5	0.500 (12.7)	0.197 (127.0)	50:1	60:1
3/4 in. (19.1 mm) and 1 in. (25.4 mm)	4.0	4.0	0.500 (12.7)	0.197 (127.0)	50:1	60:1
	3.5	3.5	0.500 (12.7)	0.197 (127.0)	50:1	60:1
	A	2.5	0.3750 (9.5)	0.1105 (71.3)	40:1	50:1
	B	2.0	0.3750 (9.5)	0.1105 (71.3)	40:1	50:1
	C	1.25	0.2810 (7.1)	0.0621 (40.0)	40:1	50:1
	D	0.80	0.2500 (6.4)	0.0491 (31.7)	40:1	50:1
	E	0.50	0.2500 (6.4)	0.0491 (31.7)	40:1	50:1
	F	0.32	0.1560 (3.9)	0.0191 (12.3)	30:1	40:1
	G	0.20	0.1560 (3.9)	0.0191 (12.3)	30:1	40:1
	H	0.13	0.1560 (3.9)	0.0191 (12.3)	30:1	40:1
	I	0.08	0.1560 (3.9)	0.0191 (12.3)	30:1	40:1
	J	0.05	0.1560 (3.9)	0.0191 (12.3)	30:1	40:1
	K	0.03	0.0860 (2.2)	0.0058 (3.7)	25:1	—
	L	0.02	0.0860 (2.2)	0.0058 (3.7)	25:1	—
	M	0.01	0.0860 (2.2)	0.0058 (3.7)	25:1	—
N	0.006	0.0860 (2.2)	0.0058 (3.7)	25:1	—	
O	0.003	0.0860 (2.2)	0.0058 (3.7)	25:1	—	

**NOTE:** K...O trims and the P-series trims are considered reduced trims.