

FEATURES

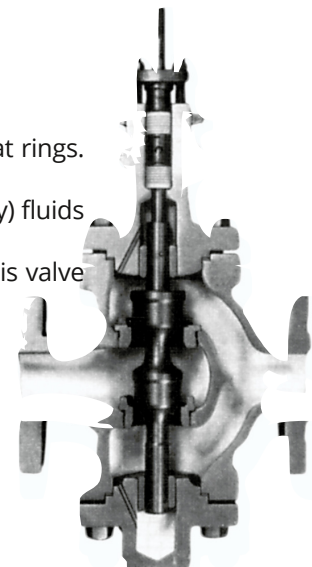
- *Heavy top- and bottom-guiding assures stable accurate control.*
- *Reversible body structure allows "push down to close" or "push down to open" assembly using the same parts.*
- *Contoured trim reduces the effects of hydraulic side loads on the valve trim.*
- *"Semi-balanced" design requires smaller actuator packages than single-seated valves.*
- *Full flow design provides approximately 40% more Cv than comparable single-seated valves.*
- *Body gaskets are fully captured and protected from the process medium.*
- *Optional live-loaded packing.*

Series V800/V801 Top And Bottom Guided Double Seated Globe Valve 1" - 12" (DN25 - 300) ANSI Class 150-1500

The V800/V801 Series is a double-seated, top and bottom guided globe-style valve with screwed-in seat rings.

This style of valve is extremely useful in erosive (dirty) fluids and systems where high flow rates are required. This valve

style may be ordered as "push stem down to close" (V800) or "push down to open" (V801).



Specifications

Body Style: Double-seated globe

Body Size: 1" through 12" (DN 25 through 300)

Body Rating: ANSI Class 150, 300, 600, 900, 1500

Body Materials: Carbon steel, Stainless steel and Chrome-moly steel. Other castable alloys are available upon request.

End Connections: NPT threaded or socket weld (1" through 2"); ANSI flanged (1" through 12"); ANSI butt weld (2" through 12"). Others available upon request.

Bonnets: Plain, extension and bellows seal

Trim Style: Double-seated semi-balanced contoured trim.

Flow Direction: Up through upper seat ring, and down through lower seat ring

Trim Characteristic: Linear or equal percentage.

Flow Coefficient: Cv from 8 through 1550 (see table 2)

Leakage Class: II

Actuators: Standard bonnet mount will accept spring-diaphragm, piston and other actuators. For actuator selection, refer to KOSO Hammel Dahl actuator selection guide.

Material Selection

These charts should be used to select the pressure class and trim material combination. The curves sloping downward to the right are the pressure rating curves for each ANSI pressure class as listed in ANSI B16.34. In each case, the curve designates the maximum pressure and temperature for the class listed directly below the curve. The bold boundaries mark the recommended pressure and temperature limits for trim material combinations listed in the tables below. All recommendations are generalized and may be subject to adjustment based upon hydraulic considerations determined during the valve sizing process.

Figure 1. Trim Chart for Stainless Steel Body
(ASTM A351, CF8M)

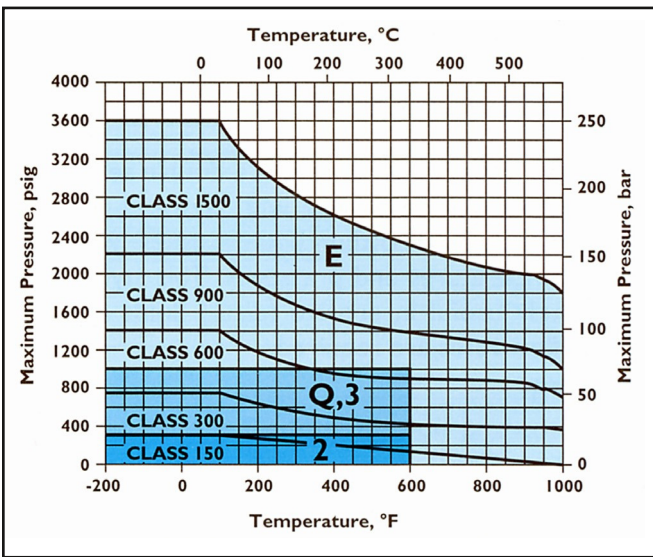


Figure 2. Trim Chart for Carbon Steel Body
(ASTM A216, WCB)

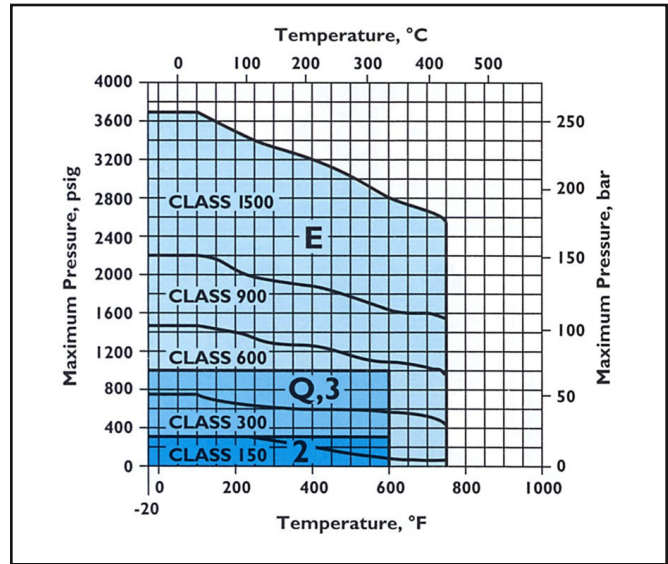


Figure 3. Trim Chart for Chrome-Moly Body
(ASTM A217, C5)

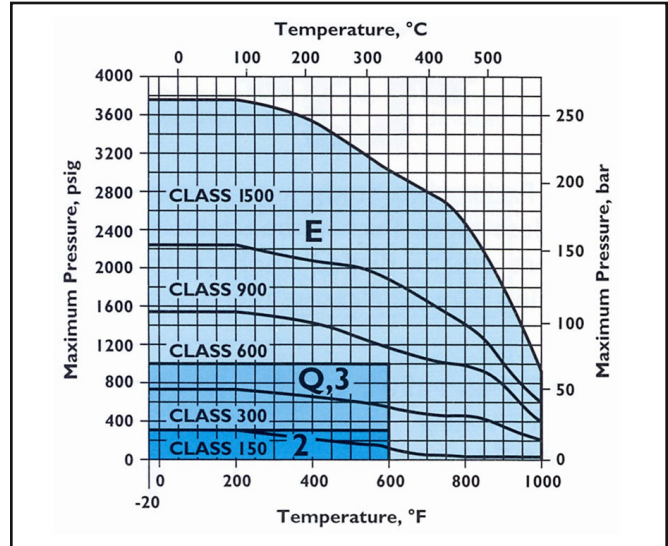


Table 1. Standard Trim Materials

| Trim Code | Plug | Seat Ring | Stem | Guide Bushings |
|-----------|-------------|-----------|--------|----------------|
| 2 | 316SS | 316SS | 316SS | 17-4PH |
| 3 | 316SS/HFS | 316SS/HFS | 316SS | 17-4PH |
| E | 316SS/HFS+P | 316SS/HFS | 316SS | Alloy 12 |
| Q | 17-4PH | 17-4PH | 17-4PH | 17-4PH |

NOTES TO TABLE AND TRIM CHARTS

- a) Above +600°F (316°C) extension bonnet is required
- b) For service temperature above 1000°F (538°C) contact your local representative.
- c) Unless otherwise specified, the hard-facing is Alloy 6.
- d) Guiding surfaces are treated to prevent galling.
- e) KOSO HAMMEL DAHL reserves the right to substitute materials when appropriate based upon the service or availability.

Figure 4. Bellows Seal Rating Chart

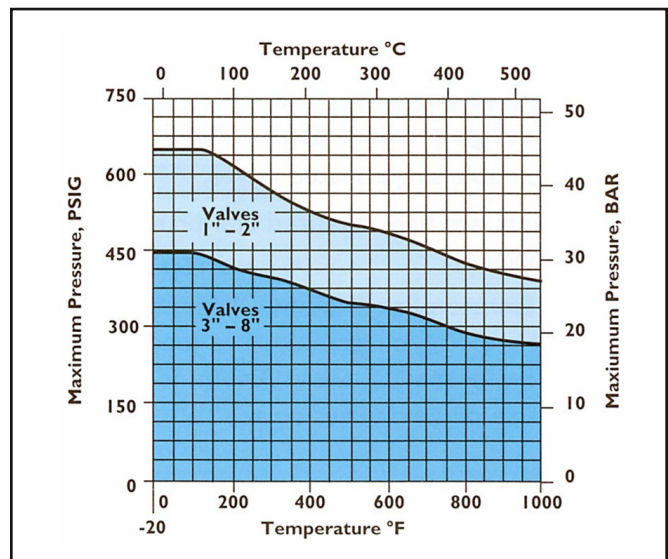


Table 2. Flow Coefficient (Cv) at Maximum Travel

| Flow Characteristic | Trim Size | Size Code | Valve Size - Inches | | | | | | | | |
|---------------------|-------------|-----------|---------------------|------|------|-----|-----|-----|------|------|------|
| | | | 1 | 1.5 | 2 | 3 | 4 | 6 | 8 | 10 | 12 |
| Equal Percentage | Full | A | 15.2 | 31 | 62 | 160 | 225 | 540 | 780 | 1250 | 1550 |
| | 1 Reduction | B | 8 | 25 | 40 | 104 | 147 | 255 | 520 | 830 | - |
| | 2 Reduction | C | - | 13.5 | 25 | 60 | 100 | 140 | 260 | 520 | - |
| Linear | Full | A | 17 | 41 | 70 | 150 | 265 | 580 | 1070 | - | - |
| | 1 Reduction | B | 10 | 25 | 37 | 100 | 163 | - | - | - | - |
| | 2 Reduction | C | - | 20 | 28.5 | 65 | 100 | - | - | - | - |

Table 3. V800 Valve Body Dimensional Data - in (mm) ANSI Classes 150 - 600

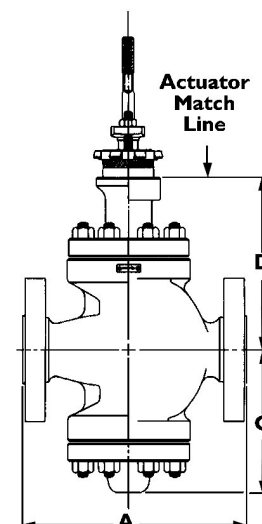
| Body Size | Travel | A | | | | | C | D | | | Approx. Weight lb/kg* |
|---------------|--------------|-------------------|---------------------|----------------|----------------|----------------|----------------|------------------|----------------|----------------|-----------------------|
| | | Screwed or Socket | Raised Face Flanged | | | Plain Bonnet | | Extension Bonnet | Bellows Bonnet | | |
| | | | Weld Class | 150 Class | 300 Class | | | | | 600 Class | |
| 1 (25) | 0.75 (19) | 7.00 (178) | 7.25 (184) | 7.75 (197) | 8.25 (210) | - | 5.13 (130) | 6.50 (165) | 10.75 (273) | 14.00 (356) | 40 (18) |
| 1-1/2 (40) | 1.13 (29) | 8.00 (203) | 8.75 (222) | 9.25 (235) | 9.88 (251) | - | 6.13 (156) | 7.38 (187) | 12.25 (311) | 15.50 (394) | 70 (32) |
| 2 (50) | 1.13 (29) | 9.25 (235) | 10.00 (254) | 10.50 (267) | 11.25 (286) | 11.25 (286) | 6.63 (168) | 7.63 (194) | 12.88 (327) | 16.13 (410) | 100 (45) |
| 3 (80) | 1.5 (38) | - | 11.75 (298) | 12.50 (318) | 13.25 (337) | 12.50 (318) | 8.25 (210) | 9.25 (235) | 13.88 (353) | 20.25 (514) | 170 (77) |
| 4 (100) | 1.5 (38) | - | 13.88 (353) | 14.50 (368) | 15.50 (394) | 14.50 (368) | 8.75 (222) | 9.75 (248) | 15.75 (400) | 20.75 (527) | 300 (136) |
| 6 (150) | 2.25 (57) | - | 17.75 (451) | 18.63 (473) | 20.00 (508) | 18.63 (473) | 12.75 (324) | 13.88 (353) | 18.25 (464) | 28.75 (730) | 500 (227) |
| 8 (200) | 2.25 (57) | - | 21.38 (543) | 22.38 (568) | 24.00 (610) | 22.38 (568) | 13.88 (353) | 15.00 (381) | 20.88 (530) | 29.88 (759) | 700 (318) |
| 10 (250) | 3.5 (89) | - | 26.88 (683) | 28.25 (718) | 30.00 (762) | 28.25 (718) | 17.00 (432) | 18.25 (464) | 27.75 (705) | - | 1300 (590) |
| 12 (300) | 3.5 (89) | - | 29.00 (737) | 30.50 (775) | - | 30.50 (775) | 18.25 (464) | 19.75 (502) | 31.13 (791) | - | 2000 (907) |

* Weights are for ANSI Class 600 flanged valves with plain bonnet.

Table 4. Dimensional Data - in (mm) ANSI Classes 900 - 1500

| Body Size | Travel | A | | | | C | D | | Approx. Weight lb/kg* |
|---------------|--------------|------------------------|---------------------|----------------|----------------|----------------|------------------|----------------|-----------------------|
| | | Screwed or Socket Weld | Raised Face Flanged | | Plain Bonnet | | Extension Bonnet | | |
| | | | Class 900 | Class 1500 | | | | Butt Weld | |
| 1-1/2 (40) | 1.13 (29) | 12.00 (305) | 12.00 (305) | 12.00 (305) | 6.75 (171) | 7.38 (187) | 12.25 (311) | 145 (66) | |
| 2 (50) | 1.13 (29) | - | 13.25 (337) | 13.25 (337) | 6.50 (165) | 7.63 (194) | 12.88 (327) | 195 (88) | |
| 3 (80) | 1.5 (38) | - | 15.50 (394) | 16.25 (413) | 16.25 (413) | 8.38 (213) | 9.25 (235) | 13.88 (353) | 250 (113) |
| 4 (100) | 1.5 (38) | - | 18.50 (470) | 19.25 (489) | 19.25 (489) | 9.00 (229) | 9.75 (248) | 15.75 (400) | 500 (227) |
| 6 (150) | 2.25 (57) | - | 24.38 (619) | 26.50 (673) | 26.50 (673) | 13.00 (330) | 13.88 (353) | 18.25 (464) | 900 (408) |

* Weights are for ANSI Class 1500 flanged valves with plain bonnet.



How to Order

To completely specify a control valve, make a selection from each category in the Valve Model Coding System below. The assembled codes create a complete valve model number. The Valve Model Coding System displays the standard product offering for this product line. An extensive number of options and variations exist, which are not listed. For options not shown or to enter an order, contact your local sales representative.

| 1 | Model |
|------|-------------------------|
| V800 | Push stem down to close |
| V801 | Push stem down to open |

| 7 | Trim Characteristics |
|---|--------------------------|
| C | Linear, Contoured |
| E | Equal Percent, Contoured |

| 2 | Body Size |
|-----|-----------|
| F | 1 (25) |
| H | 1.5 (40) |
| J L | 2 (50) |
| N | 3 (80) |
| Q | 4 (100) |
| S | 6 (150) |
| T | 8 (200) |
| U | 10 (250) |
| | 12 (300) |

| 8 | Trim Size |
|---|-------------|
| A | Full Size |
| B | 1 Reduction |
| C | 2 Reduction |

| 3 | Body Rating |
|---|-------------------------------|
| G | ANSI Class 150 |
| H | ANSI Class 300 |
| F | ANSI Class 600 |
| M | ANSI Class 900 (1-1/2" - 6") |
| N | ANSI Class 1500 (1-1/2" - 6") |

| 9 | Standard Trim Materials | | | |
|-----------|-------------------------|-----------|--------|----------------|
| Trim Code | Plug | Seat Ring | Stem | Guide Bushings |
| 2 | 316SS 316SS | | 316SS | 17-4PH |
| 3 | 316SS/HFS 316SS/HFS | | 316SS | 17-4PH |
| E | 316SS/HFS+P 316SS/HFS | | 316SS | Alloy 12 |
| Q | 17-4PH17-4PH | | 17-4PH | 17-4PH |

| 4 | Body Material |
|---|-----------------------------------|
| C | Carbon Steel (ASTM A216, WCB) |
| E | Stainless Steel (ASTM A351, CF8M) |
| K | Chrome-Moly Steel (ASTM A217, C5) |

| 10 | Packing |
|----|--------------------------------|
| G | TFE V-ring with Packing Spacer |
| Y | Double PTFE V-Ring/Spacer |
| U | PTFE impregnated PTFE Braid |
| W | Lubricated Aramid Braid |
| 9 | Laminated Graphite |
| B | Live-loaded PTFE V-Ring* |

*Not available in ANSI Class 900 or 1500

NOTE: Graphite packings are generally required in services above 450°F

| 5 | End Connections |
|---|--------------------|
| 3 | Raised Face Flange |
| 4 | NPT Threaded |
| 6 | Socket Weld |
| 8 | Butt Weld Sch. 40 |
| 9 | Butt Weld Sch. 80 |
| A | Butt Weld Sch. 160 |

| 11 | Variations* |
|----|---|
| - | None |
| 8 | Stainless Steel Body Studs and Nuts |
| 9 | Stainless Lubricator and Isolating Valve |
| F | Tack Weld Guide Bushings, recommended above |
| G | 750°F Tack Weld Seat Rings, recommended above |
| H | 750°F Seal Weld Seat Rings, recommended above |
| N | 750°F NACE Standard MR-01-75 Compliance |

*For multiple variations, specify all variation codes required.

| 6 | Bonnet Type |
|---|-------------------|
| 2 | Plain |
| 3 | Extension |
| 5 | Bellows (1" - 8") |

KOSO HAMMEL DAHL
253 Pleasant Street
W.Bridgewater, MA 02379

Telephone: 774.517.5300
www.hammeldahl.com