



Features

- Uni-directional control valve
- Zero leakage shutoff, soft seated
- Upstream Cv plate control element
- Field replaceable Cv control element
- Customizable flow configurations
- Seat or Cv insert to ball lapping is not required
- Same additional features as 3000 Series valve

Note: Refer to 3000 Series for dimensional data.

CV3000F-xxx Series Full Port Valve

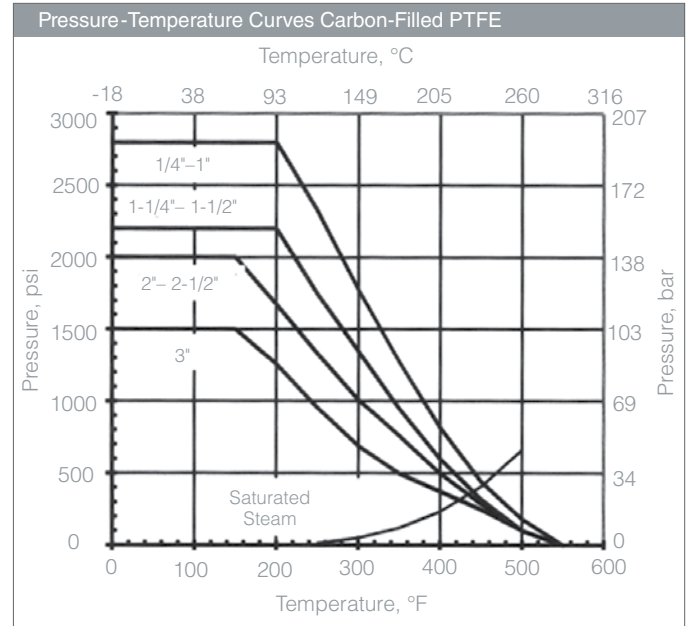
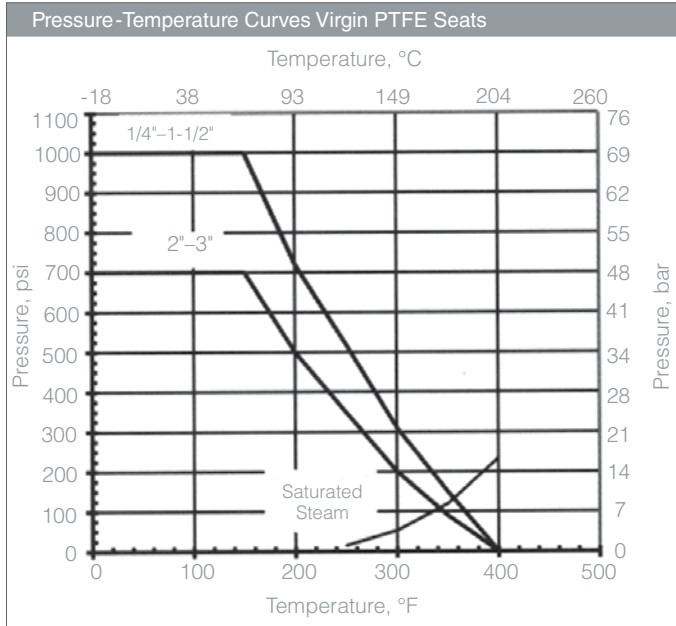
CV3000R-xxx Series Reduced Port Valve

| Quick Spec | |
|--------------------------------------|---|
| Product Scope | |
| Size Range | 1/2" – 4" Reduced Port 1/4" – 3" Full Port |
| Body Type | 3-pc, non Swing-out design, Optional Ends |
| Cv Plate Sizes | 30°V, 60°V, 90°V, Linear, Round Other - Consult Factory |
| Pressure Rating | up to 4000 psi WOG (275 bar) and ASME Class 1500 |
| Temperature Range / WSP | -20°F up to 550°F / up to 450 psi steam -29°C up to 288°C / up to 31 bar steam |
| Body, Ball, Stem Material | Standard and Special Alloys, Most Barstocks |
| Ball Seats | PTFE, UHMWPE, CRPTFE or others |
| Stem Seal & Thrust Washer | Viton / CRPTFE or others |
| Stem Packing | Adjustable, live loaded PTFE or Graphite |
| Body Seals | PTFE, RPTFE, Graphite or others |
| Operator / Mounting Pad | Manual Lever with Optional Lock / non-ISO Mtg |
| Design Standards | |
| Face to Face | ASME B16.34 |
| Flange / Thread / Weld Ends | ASME B16.5 / ASME B1.20.1 / ASME B16.11 |
| Testing Standards | |
| Pressure Testing | API 598 |
| Approvals | |
| ISO 9001:2008 Certified Manufacturer | |
| NQA-1 Compliant Quality System | |
| Canadian Registration Number | |

| Materials of Construction | | |
|---------------------------|--------------|-----------------|
| Part | Carbon Steel | Stainless Steel |
| Body | WCB | CF8M |
| End Cap | WCB | CF8M |
| Seat | CRPTFE | CRPTFE |
| Ball | 316 SS | 316 SS |
| Stem | S31600 | S31600 |
| Seal, Body | CRPTFE | CRPTFE |
| Secondary Seal, Body | Non-Asbestos | Non-Asbestos |
| Lock Washer | SS | SS |
| Anti-Static Spring | 316 SS | 316SS |
| Bolt, Body | A193 B8 CI 1 | A193 B7 |
| Thrust Washer | CRPTFE | CRPTFE |
| Packing | PTFE | PTFE |
| Gland Bushing | 316 SS | 316 SS |
| Belleville Washer | 17-7PH SS | 17-7PH SS |
| Nut, Stem | 316 SS | 316 SS |
| O-Ring, Stem | Viton | Viton |
| Characterized Insert | S31600 | S31600 |
| Index Pin | S31600 | S31600 |

Pressure / Temperature Limits (Maximum flowing pressure drop limits: 300 psi steam; 500 psi liquid)

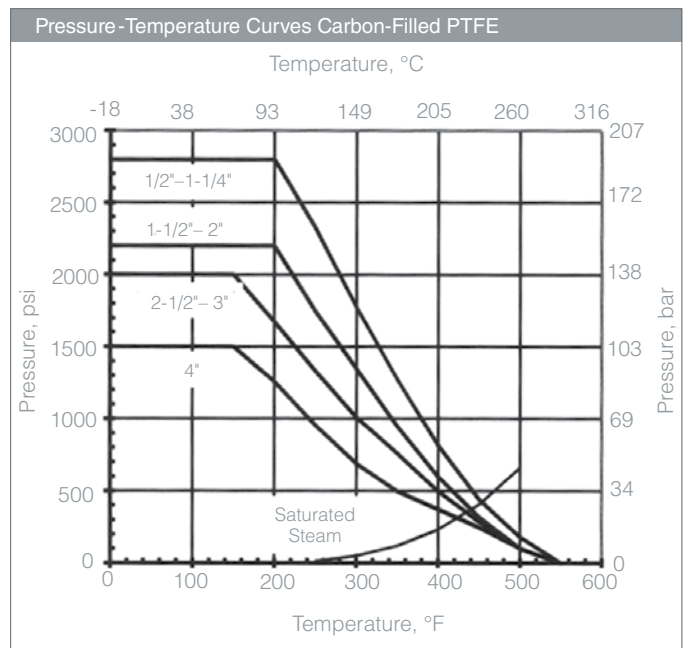
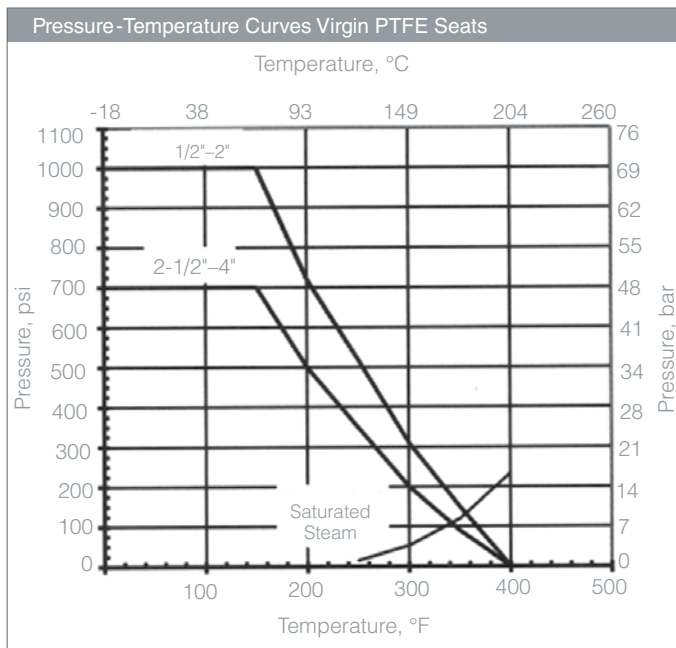
CV3000F Series



PTFE: PolyTetraFluoroEthylene – Virgin Teflon is a dense Fluorocarbon based polymer that has excellent chemical resistance, good thermal stability, and low coefficient of friction. (White, -50°F to +450°F)

CRPTFE: 25% Carbon Filled Teflon – Carbon reinforced PTFE has improved mechanical strength, stability and wear resistance compared to glass reinforced PTFE. (Black, -50°F to +475°F)

CV3000R Series



PTFE: PolyTetraFluoroEthylene – Virgin Teflon is a dense Fluorocarbon based polymer that has excellent chemical resistance, good thermal stability, and low coefficient of friction. (White, -50°F to +450°F)

CRPTFE: 25% Carbon Filled Teflon – Carbon reinforced PTFE has improved mechanical strength, stability and wear resistance compared to glass reinforced PTFE. (Black, -50°F to +475°F)

| Cv vs. Travel (Full Port Valve) | | | | | | | | | | | | |
|---------------------------------|------------|----------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Size | Type | Characterized Insert | 0-10% (0-9°) | 20% (18°) | 30% (27°) | 40% (36°) | 50% (45°) | 60% (54°) | 70% (63°) | 80% (72°) | 90% (81°) | 100% (90°) |
| 1/4"F | 1/32 | SA | 0.00 | 0.033 | 0.074 | 0.12 | 0.16 | 0.20 | 0.24 | 0.28 | 0.32 | 0.40 |
| | 1/16" Slot | S1 | 0.00 | 0.07 | 0.20 | 0.33 | 0.46 | 0.60 | 0.73 | 0.86 | 0.99 | 1.10 |
| | 30°V | A1 | 0.00 | 0.10 | 0.20 | 0.34 | 0.55 | 0.83 | 1.11 | 1.59 | 2.08 | 2.50 |
| | 60°V | A2 | 0.00 | 0.12 | 0.33 | 0.49 | 0.84 | 1.35 | 1.95 | 3.10 | 4.37 | 5.92 |
| | Round Port | R1 | 0.00 | 0.29 | 0.46 | 0.70 | 1.09 | 1.76 | 2.60 | 2.24 | 6.40 | 8.00 |
| 3/8"F | 1/32 | SA | 0.00 | 0.033 | 0.074 | 0.12 | 0.16 | 0.20 | 0.24 | 0.28 | 0.32 | 0.40 |
| | 1/16" Slot | S1 | 0.00 | 0.07 | 0.20 | 0.33 | 0.46 | 0.60 | 0.73 | 0.86 | 0.99 | 1.10 |
| | 30°V | A1 | 0.00 | 0.10 | 0.20 | 0.34 | 0.55 | 0.83 | 1.11 | 1.59 | 2.08 | 2.50 |
| | 60°V | A2 | 0.00 | 0.12 | 0.33 | 0.49 | 0.84 | 1.35 | 1.95 | 3.10 | 4.37 | 5.92 |
| | Round Port | R1 | 0.00 | 0.29 | 0.46 | 0.70 | 1.09 | 1.76 | 2.60 | 2.24 | 6.40 | 8.00 |
| 1/2"F | 1/16" Slot | S1 | 0.00 | 0.06 | 0.24 | 0.40 | 0.56 | 0.73 | 0.90 | 1.00 | 1.20 | 1.30 |
| | 1/8" Slot | S3 | 0.00 | 0.14 | 0.39 | 0.65 | 0.90 | 1.20 | 1.40 | 1.70 | 1.90 | 2.90 |
| | 30°V | A1 | 0.00 | 0.11 | 0.24 | 0.41 | 0.67 | 1.00 | 1.40 | 1.90 | 2.60 | 3.00 |
| | 60°V | A2 | 0.00 | 0.13 | 0.36 | 0.55 | 1.00 | 1.50 | 2.30 | 3.60 | 5.00 | 6.70 |
| | Round Port | R1 | 0.00 | 0.43 | 0.70 | 1.10 | 1.60 | 2.60 | 4.00 | 6.40 | 9.60 | 12.00 |
| 3/4"F | 1/16" Slot | S1 | 0.00 | 0.10 | 0.40 | 0.67 | 0.94 | 1.20 | 1.50 | 1.70 | 1.90 | 2.10 |
| | 3/16" Slot | S4 | 0.00 | 0.22 | 0.82 | 1.40 | 1.90 | 2.50 | 3.10 | 3.50 | 4.00 | 4.30 |
| | 30°V | A1 | 0.00 | 0.21 | 0.56 | 1.00 | 1.60 | 2.40 | 3.40 | 4.60 | 6.20 | 7.30 |
| | 60°V | A2 | 0.00 | 0.30 | 0.78 | 1.20 | 2.30 | 3.60 | 5.30 | 8.30 | 11.60 | 15.50 |
| | 90° V | A4 | 0.00 | 0.48 | 1.20 | 2.30 | 3.50 | 5.40 | 7.70 | 10.80 | 12.10 | 19.70 |
| Round Port | R1 | 0.00 | 1.20 | 1.90 | 2.80 | 4.30 | 7.00 | 10.50 | 17.00 | 26.00 | 32.00 | |
| 1"F | 3/16" Slot | S4 | 0.00 | 0.38 | 1.40 | 2.40 | 3.40 | 4.40 | 5.40 | 6.20 | 6.90 | 7.50 |
| | 30°V | A1 | 0.00 | 0.39 | 1.00 | 1.80 | 2.90 | 4.40 | 6.40 | 8.60 | 11.40 | 13.50 |
| | 60°V | A2 | 0.00 | 0.48 | 1.30 | 2.00 | 3.70 | 5.80 | 8.50 | 13.40 | 18.70 | 25.00 |
| | 90° V | A3 | 0.00 | 0.78 | 2.00 | 3.70 | 5.70 | 8.80 | 12.50 | 17.50 | 19.70 | 32.00 |
| | Round Port | R1 | 0.00 | 1.80 | 3.00 | 4.40 | 6.70 | 10.90 | 16.40 | 26.60 | 40.60 | 50.00 |
| 1-1/4"F | 3/16" Slot | S4 | 0.00 | 0.47 | 1.80 | 3.00 | 4.20 | 5.40 | 6.80 | 7.70 | 8.60 | 9.40 |
| | 30°V | A1 | 0.00 | 0.41 | 1.20 | 2.10 | 3.50 | 5.20 | 7.60 | 10.30 | 13.70 | 16.30 |
| | 60°V | A2 | 0.00 | 0.57 | 1.70 | 3.00 | 5.60 | 9.10 | 13.20 | 19.80 | 28.40 | 37.50 |
| | 90° V | A3 | 0.00 | 1.00 | 2.80 | 4.50 | 8.10 | 13.40 | 19.70 | 30.90 | 47.10 | 71.70 |
| | Round Port | R1 | 0.00 | 3.00 | 4.8 | 7.20 | 11.00 | 18.00 | 27.00 | 44.00 | 65.50 | 82.00 |
| 1-1/2"F | 1/4" Slot | S5 | 0.00 | 0.75 | 2.90 | 4.80 | 6.80 | 8.70 | 10.80 | 12.30 | 13.80 | 15.00 |
| | 30°V | A1 | 0.00 | 0.55 | 1.70 | 3.40 | 5.70 | 8.30 | 12.10 | 16.60 | 22.20 | 26.50 |
| | 60°V | A2 | 0.00 | 0.70 | 2.60 | 4.90 | 9.30 | 15.50 | 22.20 | 32.10 | 47.20 | 61.60 |
| | 90° V | A3 | 0.00 | 0.88 | 3.30 | 6.10 | 11.70 | 19.40 | 27.50 | 40.10 | 59.00 | 77.00 |
| | Round Port | R1 | 0.00 | 4.30 | 7.00 | 10.50 | 16.20 | 26.40 | 39.60 | 64.00 | 96.00 | 120.00 |
| 2"F | 3/8" Slot | S6 | 0.00 | 1.00 | 3.80 | 6.40 | 9.00 | 11.60 | 14.40 | 16.40 | 18.40 | 20.00 |
| | 30°V | A1 | 0.00 | 1.00 | 3.20 | 6.40 | 10.60 | 15.40 | 22.60 | 31.00 | 41.50 | 49.50 |
| | 60°V | A2 | 0.00 | 1.00 | 3.80 | 7.10 | 13.50 | 22.50 | 32.20 | 46.60 | 68.50 | 89.40 |
| | 90° V | A3 | 0.00 | 1.90 | 7.10 | 13.10 | 25.00 | 41.60 | 58.90 | 85.90 | 126.40 | 165.00 |
| | Round Port | R1 | 0.00 | 9.40 | 15.10 | 22.80 | 35.10 | 57.20 | 85.80 | 138.70 | 208.00 | 260.00 |
| 2-1/2"F | 7/16" Slot | S7 | 0.00 | 1.20 | 4.60 | 7.80 | 11.00 | 14.20 | 17.60 | 20.00 | 22.40 | 24.40 |
| | 30°V | A1 | 0.00 | 0.75 | 2.70 | 6.00 | 10.20 | 16.90 | 24.50 | 33.90 | 44.80 | 54.20 |
| | 60°V | A2 | 0.00 | 1.00 | 4.30 | 10.10 | 18.60 | 29.40 | 46.30 | 67.20 | 94.40 | 124.60 |
| | 90° V | A3 | 0.00 | 1.20 | 8.00 | 14.00 | 26.00 | 44.00 | 67.00 | 102.00 | 151.00 | 230.00 |
| | Round Port | R1 | 0.00 | 12.60 | 20.20 | 31.10 | 47.40 | 77.80 | 115.00 | 187.00 | 280.00 | 350.00 |
| 3"F | 1/2" Slot | S8 | 0.00 | 2.50 | 9.30 | 15.70 | 22.10 | 28.40 | 35.3 | 40.20 | 45.10 | 49.00 |
| | 30°V | A1 | 0.00 | 0.90 | 3.60 | 8.50 | 16.10 | 26.80 | 40.20 | 56.60 | 72.50 | 90.00 |
| | 60°V | A2 | 0.00 | 1.20 | 5.70 | 15.40 | 28.80 | 48.60 | 73.40 | 107.00 | 150.70 | 200.00 |
| | 90° V | A3 | 0.00 | 2.00 | 9.00 | 23.00 | 42.00 | 72.00 | 110.00 | 167.00 | 250.00 | 380.00 |
| | Round Port | R1 | 0.00 | 26.00 | 42.10 | 63.10 | 97.20 | 159.00 | 238.00 | 385.00 | 575.00 | 720.00 |

Cv is defined as flow of liquid in gallons per minute through a valve with a pressure drop of 1 psi across the valve at 60°F. Recommended usage is between 25% and 85% travel. Maximum flowing pressure drop limits: 300 psi steam; 500 psi liquid.

| Cv vs .Travel (Reduced Port Valve) | | | | | | | | | | | | |
|------------------------------------|------------|----------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Size | Type | Characterized Insert | 0-10% (0-9°) | 20% (18°) | 30% (27°) | 40% (36°) | 50% (45°) | 60% (54°) | 70% (63°) | 80% (72°) | 90% (81°) | 100% (90°) |
| 1/2"R | 1/64" Slot | SB | 0.00 | 0.01 | 0.03 | 0.40 | 0.06 | 0.08 | 0.09 | 0.11 | 0.12 | 0.14 |
| | 1/32" Slot | SA | 0.00 | 0.03 | 0.07 | 0.12 | 0.16 | 0.20 | 0.24 | 0.28 | 0.32 | 0.36 |
| | 1/16" Slot | S1 | 0.00 | 0.07 | 0.20 | 0.33 | 0.46 | 0.60 | 0.73 | 0.86 | 1.00 | 1.10 |
| | 30°V | A1 | 0.00 | 0.11 | 0.24 | 0.36 | 0.56 | 0.84 | 1.10 | 1.60 | 2.10 | 2.60 |
| | 60°V | A2 | 0.00 | 0.12 | 0.33 | 0.60 | 0.84 | 1.40 | 2.00 | 3.10 | 4.40 | 5.90 |
| | Round Port | R1 | 0.00 | 0.29 | 0.46 | 0.70 | 1.10 | 1.80 | 2.60 | 4.30 | 6.40 | 8.00 |
| 3/4"R | 1/16" Slot | S1 | 0.00 | 0.06 | 0.24 | 0.40 | 0.56 | 0.73 | 0.90 | 1.00 | 1.20 | 1.30 |
| | 1/8" Slot | S3 | 0.00 | 0.14 | 0.39 | 0.65 | 0.90 | 1.20 | 1.40 | 1.70 | 1.90 | 2.90 |
| | 30°V | A1 | 0.00 | 0.11 | 0.24 | 0.41 | 0.67 | 1.00 | 1.40 | 1.90 | 2.60 | 3.00 |
| | 60°V | A2 | 0.00 | 0.13 | 0.36 | 0.55 | 1.00 | 1.50 | 2.30 | 3.60 | 5.00 | 6.70 |
| | | Round Port | R1 | 0.00 | 0.43 | 0.70 | 1.10 | 1.60 | 2.60 | 4.00 | 6.40 | 9.60 |
| 1"R | 1/16" Slot | S1 | 0.00 | 0.10 | 0.40 | 0.67 | 0.94 | 1.20 | 1.50 | 1.70 | 1.90 | 2.10 |
| | 3/16" Slot | S4 | 0.00 | 0.22 | 0.82 | 1.40 | 1.90 | 2.50 | 3.10 | 3.50 | 4.00 | 4.30 |
| | 30°V | A1 | 0.00 | 0.21 | 0.56 | 1.00 | 1.60 | 2.40 | 3.40 | 4.60 | 6.20 | 7.30 |
| | 60°V | A2 | 0.00 | 0.30 | 0.78 | 1.20 | 2.30 | 3.60 | 5.30 | 8.30 | 11.60 | 15.50 |
| | 90° V | A3 | 0.00 | 0.48 | 1.20 | 2.30 | 3.50 | 5.40 | 7.70 | 10.80 | 12.10 | 19.70 |
| | | Round Port | R1 | 0.00 | 1.20 | 1.90 | 2.80 | 4.30 | 7.00 | 10.50 | 17.00 | 26.00 |
| 1-1/4"R | 3/16" Slot | S4 | 0.00 | 0.38 | 1.40 | 2.40 | 3.40 | 4.40 | 5.40 | 6.20 | 6.90 | 7.50 |
| | 30°V | A1 | 0.00 | 0.39 | 1.00 | 1.80 | 2.90 | 4.40 | 6.40 | 8.60 | 11.40 | 13.50 |
| | 60°V | A2 | 0.00 | 0.48 | 1.30 | 2.00 | 3.70 | 5.80 | 8.50 | 13.40 | 18.70 | 25.00 |
| | 90° V | A3 | 0.00 | 0.78 | 2.00 | 3.70 | 5.70 | 8.80 | 12.50 | 17.50 | 19.70 | 32.00 |
| | | Round Port | R1 | 0.00 | 1.80 | 3.00 | 4.40 | 6.70 | 10.90 | 16.40 | 26.60 | 40.60 |
| 1-1/2"R | 3/16" Slot | S4 | 0.00 | 0.47 | 1.80 | 3.00 | 4.20 | 5.40 | 6.80 | 7.70 | 8.60 | 9.40 |
| | 30°V | A1 | 0.00 | 0.41 | 1.20 | 2.10 | 3.50 | 5.20 | 7.60 | 10.30 | 13.70 | 16.30 |
| | 60°V | A2 | 0.00 | 0.57 | 1.70 | 3.00 | 5.60 | 9.10 | 13.20 | 19.80 | 28.40 | 37.50 |
| | 90° V | A3 | 0.00 | 1.00 | 2.80 | 4.50 | 8.10 | 13.40 | 19.70 | 30.90 | 47.10 | 71.70 |
| | | Round Port | R1 | 0.00 | 3.00 | 4.80 | 7.20 | 11.00 | 18.00 | 27.00 | 44.00 | 65.50 |
| 2"R | 1/4" Slot | S5 | 0.00 | 0.75 | 2.90 | 4.80 | 6.80 | 8.70 | 10.80 | 12.30 | 13.80 | 15.00 |
| | 30°V | A1 | 0.00 | 0.55 | 1.70 | 3.40 | 5.70 | 8.30 | 12.10 | 16.60 | 22.20 | 26.50 |
| | 60°V | A2 | 0.00 | 0.70 | 2.60 | 4.90 | 9.30 | 15.50 | 22.20 | 32.10 | 47.20 | 61.60 |
| | 90° V | A3 | 0.00 | 0.88 | 3.30 | 6.10 | 11.70 | 19.40 | 27.50 | 40.10 | 59.00 | 77.00 |
| | | Round Port | R1 | 0.00 | 4.30 | 7.00 | 10.50 | 16.20 | 26.40 | 39.60 | 64.00 | 96.00 |
| 2-1/2"R | 3/8" Slot | S6 | 0.00 | 1.00 | 3.80 | 6.40 | 9.00 | 11.60 | 14.40 | 16.40 | 18.40 | 20.00 |
| | 30°V | A1 | 0.00 | 1.00 | 3.20 | 6.40 | 10.60 | 15.40 | 22.60 | 31.00 | 41.50 | 49.50 |
| | 60°V | A2 | 0.00 | 1.00 | 3.80 | 7.10 | 13.50 | 22.50 | 32.20 | 46.60 | 68.50 | 89.40 |
| | 90° V | A3 | 0.00 | 1.90 | 7.10 | 13.10 | 25.00 | 41.60 | 58.90 | 85.90 | 126.40 | 165.00 |
| | | Round Port | R1 | 0.00 | 9.40 | 15.10 | 22.80 | 35.10 | 57.20 | 85.80 | 138.70 | 208.00 |
| 3"R | 7/16" Slot | S7 | 0.00 | 1.20 | 4.60 | 7.80 | 11.00 | 14.20 | 17.60 | 20.00 | 22.40 | 24.40 |
| | 30°V | A1 | 0.00 | 0.75 | 2.70 | 6.00 | 10.20 | 16.90 | 24.50 | 33.90 | 44.80 | 54.20 |
| | 60°V | A2 | 0.00 | 1.00 | 4.30 | 10.10 | 18.60 | 29.40 | 46.30 | 67.20 | 94.40 | 124.60 |
| | 90° V | A3 | 0.00 | 1.20 | 8.00 | 14.00 | 26.00 | 44.00 | 67.00 | 102.00 | 151.00 | 230.00 |
| | | Round Port | R1 | 0.00 | 12.60 | 20.20 | 31.10 | 47.40 | 77.80 | 115.00 | 187.00 | 280.00 |
| 4"R | 1/2" Slot | S8 | 0.00 | 2.50 | 9.30 | 15.70 | 22.10 | 28.40 | 35.30 | 40.20 | 45.10 | 49.00 |
| | 30°V | A1 | 0.00 | 0.90 | 3.60 | 8.50 | 16.10 | 26.80 | 40.20 | 56.60 | 72.50 | 90.00 |
| | 60°V | A2 | 0.00 | 1.20 | 5.70 | 15.40 | 28.80 | 48.60 | 73.40 | 107.00 | 150.70 | 200.00 |
| | 90°V | A3 | 0.00 | 2.00 | 9.00 | 23.00 | 42.00 | 72.00 | 110.00 | 167.00 | 250.00 | 380.00 |
| | | Round Port | R1 | 0.00 | 26.00 | 42.10 | 63.10 | 97.20 | 159.00 | 238.00 | 385.00 | 575.00 |

Cv is defined as flow of liquid in gallons per minute through a valve with a pressure drop of 1 psi across the valve at 60°F. Recommended usage is between 25% and 85% travel. Maximum flowing pressure drop limits: 300 psi steam; 500 psi liquid.

| Prefix | Model | Size | Body Mat'l | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--------|-------|------|------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| | | | | | | | | | | | | | | | | | | | | |

| Prefix | |
|--------|---------------|
| CV | Control Valve |

| Model Number | |
|--------------|--------------|
| 3000F | Full Port |
| 3000R | Reduced Port |

| Size | |
|------|------------------------|
| 050 | 1/2" |
| 075 | 3/4" |
| 100 | 1" |
| 125 | 1-1/4" |
| 150 | 1-1/2" |
| 200 | 2" |
| 300 | 3" |
| 400 | 4" (Reduced Port Only) |

| Body Material | |
|---------------|----------------------|
| CS | Carbon Steel WCB |
| S6 | Stainless Steel CF8M |
| ZZ | Other Special Alloy |

| 1 & 2 | End Connections |
|-------|----------------------|
| PT | FNPT |
| SW | FSW |
| SE | FSW Extended |
| F1 | 150# FE |
| F3 | 300# FE |
| F6 | 600# FE |
| E4 | XBWE Extended Sch 40 |
| E8 | XBWE Extended Sch 80 |
| F9 | 900# FE |
| F5 | 1500# FE |
| ZZ | Non-Standard |

| 3 & 4 | Character Insert / Trim Material |
|-------|----------------------------------|
| A1 | 30° / 316SS |
| A2 | 60° / 316SS |
| A3 | 90° / 316SS |
| S3 | 1/8" slot / 316SS |
| S1 | 1/16" slot / 316SS |
| R1 | Round slot / 3165SS |

| 5 & 6 | Seat / Body Seals / Thrust Washer |
|-------|-----------------------------------|
| TF | PTFE/PTFE/Viton |
| RT | RPTFE/RPTFE/RPTFE |
| PA | PFA/PFA/PFA |
| SF | C-RPTFE/RPTFE/C-RPTFE |
| DL | Delrin/Viton/RPTFE |
| CP | C-PEEK/Graphite/PEEK |
| KF | Kel-F/PTFE/PTFE |
| UM | UHMWPE/Viton/UHMWPE |
| ZZ | Non-Standard |

| 7 & 8 | Packing / Stem O-Ring |
|-------|-----------------------|
| TV | PTFE/Viton |
| TE | PTFE/EPDM |
| GV | Frafoil/Viton |
| GE | Grafoil/EPDM |
| UV | UHMWPE/Viton |
| UE | UHMWPE/EPDM |
| TK | PTFE/Kalrez |
| ZZ | Non-Standard |

| 9 & 10 | Handle & Gear Operator |
|--------|----------------------------------|
| NN | None |
| HL | Handle Lever |
| HD | Handle Lever with Locking Device |
| ZZ | Non-Standard |

| 11 & 12 | Operation | | |
|---------|---------------|----|---------------|
| 00 | None | | |
| P1 | UT-0A-DA STD | S1 | UT-0-SR STD |
| P2 | UT-0-DA STD | S2 | UT-1-SR STD |
| P3 | UT-1-DA STD | S3 | UT-2-SR STD |
| P4 | UT-2-DA STD | S4 | UT-2.5-SR STD |
| P5 | UT-2.5-DA STD | S5 | UT-3-SR-STD |
| P6 | UT-3-DA STD | S6 | UT-3.5-SR STD |
| P7 | UT-3.5-DA STD | S7 | UT-4-SR STD |
| P8 | UT-4-DA STD | SF | UT-4.5-SR STD |
| PF | UT-4.5-DA STD | S8 | UT-5-SR STD |
| P9 | UT-5-DA STD | S9 | UT-6-SR STD |
| PA | UT-6-DA STD | SA | UT-7-SR STD |
| PB | UT-7-DA STD | SJ | UT-7.5-SR STD |

| 11 & 12 | Operation |
|---------|--------------------|
| M1 | ER-1-2.5-4 110 VAC |
| M2 | ER-2-5-4 110 VAC |
| M3 | ER-3-5-4 110 VAC |
| M8 | ER-4-10-4 110 VAC |
| M4 | ER-6-15-4 110 VAC |
| M5 | ER-10-15-4 110 VAC |
| M9 | ER-15-30-4 110 VAC |
| MA | ER-20-12-4 110 VAC |
| M7 | ER-38-14-4 110 VAC |
| MC | ER-50-68-4 110 VAC |
| MD | ER-70-68-4 110 VAC |
| ZZ | Non-Standard |

| 13 & 14 | Positioner |
|---------|---------------------------------------|
| 00 | None |
| P1 | Siemens 760P (3-15 psi), for UT-0/3 |
| P2 | Siemens 760P (3-15 psi), for UT-3.5/7 |
| P3 | Siemens 760E (4-20mA), for UT-0/3 |
| P4 | Siemens 760E (4-20mA) for UT-3.5/7 |
| A1 | Siemens 2-IQ (4-20mA) for UT-0/3DA |
| A2 | Siemens 2-IQ (4-20mA) for UT-3.5/7DA |
| A5 | Siemens 2-IQ (4-20mA) for UT-0/3SR |
| A6 | Siemens 2-IQ (4-20mA) for UT-3.5/7SR |
| ZZ | Non-Standard |

| 15,16,17 | Fail Position |
|----------|-----------------------------|
| 000 | None / No Spring Actuator |
| 001 | Fail Open - 80 psi supply |
| 002 | Fail Closed - 80 psi supply |
| 003 | Fail Open - 60 psi supply |
| 004 | Fail Closed - 60psi supply |