

Manual & Solenoid Process Valves



Fine Quality

Precision Engineered



Advanced Design

Excellent Prices



Contents

| | |
|--|-----------|
| Coil Numbering System..... | C2 |
| Manual Valves Numbering System..... | C2 |
| Process Valves Numbering System..... | C3 - C4 |
| Process Valves List Price..... | C5 - C7 |
| Coils & Digital Timers List Price..... | C8 |
| Process Valves Specifications..... | C8 - C9 |
| Process Valves Internal Components..... | C9 |
| Process Valves Dimensions..... | C10 - C12 |
| Manual Valves List Price..... | C13 |
| Manual Valves Dimensions & Specifications..... | C13 - C14 |

Coil Numbering System

Ordering Part No. =
(e.g., **2W200C-1-D-13**)



| Coils | Model | Voltage | Wattage (W) |
|---|----------------|---------------------------|-------------|
| Coil for 2P025 & 2V Series Valves | 200C | 1 = 12 VDC | 3, 4.8, 6.5 |
| Coil for 2S/2W025-250, 3S/2W020-035 Series Valves | 2W200C | 2 = 24 VDC 2A = 24 VAC | 14, 20 |
| Coil for 2LS120-200, 2MS/2MSO120-500, 2P/2PO160-250, 2S/2W350-500, 2WO/2SO160-250 Series Valves | 2WO250C | 3 = 110 VAC | 20-30 |
| Coil for 2L170-300, 2LS250-500, 2WO/2SO350-500 Series Valves | 2W350C | 4 = 220 VAC (50-60 Hz) | 25-35 |

Manual Valve Numbering System

Ordering Part No. =
(e.g., **V1-1/4**)



| Manual Ball Valves | |
|--|---------------|
| Reduced Port 316 SS Ball Valve (1 Piece) | V1 |
| Full Port 316 SS Ball Valve (2 Piece) | V2 |
| Full Port 316 SS Ball Valve (3 Piece) | V3 |
| Full Port 316 SS Ball Valve (3 Piece, Tri-Clamp) | V3C |
| Reduced Port Chrome Plated Brass Ball Valve (FXF Port) | T400 |
| Reduced Port Chrome Plated Brass Ball Valve (FXM Port) | T400FM |
| 316 SS Needle Valve | VNO1 |

| Port Size (NPT) |
|-----------------|
| 1/4 |
| 3/8 |
| 1/2 |
| 3/4 |
| 1 |
| 1 1/4 |
| 1 1/2 |
| 2 |

| Options | |
|-----------------|----------|
| Lockable Handle | L |
| Panel Mount | P |

Process Valves Numbering System

Ordering Part No. =
(e.g., 2W025-1/4-1-D-V)



| Action | Normally Closed / Normally Open | Body Material | Model Series | Orifice Size 10X (mm) | Port Size (NPT) | Material / Type (for standard materials, leave blank) | Voltage Option | Electrical Connection | Seal Options | | | |
|---|---------------------------------------|-----------------|-----------------|-----------------------|--------------------------------------|---|--|--|--|---|---|---|
| 2 Way Direct Acting Zero Differential | NC | Stainless Steel | 2H | 012 | 1/8 | Standard: Stainless Steel Body (leave blank) | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: PTFE (leave blank) Option: V = Viton | | | |
| | | Plastic | 2P | 025 | 1/8 1/4 | S = Plastic Solenoid Valve w/ SS Actuator A = Acetal Plastic Solenoid Valve w/ SS Actuator | | G = Grommet D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton, P = PTFE (Teflon) | | | |
| | | PTFE (Teflon) | 2T | 060 | 1/4 3/8 1/2 | Standard: Teflon Body (leave blank) | | D = DIN | Standard: Viton (leave blank) Option: E = EPDM | | | |
| | | Stainless Steel | 2S | 025 | 1/8 | H = 304 Stainless Steel Hex Shape Body | | Standard: 304 Stainless Steel Body (leave blank) H = 304 Stainless Steel Hex Shape Body | G = Grommet D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | | |
| | | | | 025 | 1/4 | | | | | | | |
| | | | | 035 | 1/4 | | | | | | | |
| | 040 | | | 3/8 | | | | | | | | |
| | Brass | 2W | 050 | 1/4 | | | | G = Grommet D = DIN | Standard: NBR (leave blank) Option: V = Viton | | | |
| | | | 050 | 3/8 | | | | | | | | |
| | NO | Stainless Steel | 2SO | 040 | 3/8 | Standard: 304 Stainless Steel Body (leave blank) | | D = DIN | Standard: NBR (leave blank) Option: V = Viton | | | |
| | | Brass | 2WO | 040 | 3/8 | Standard: Brass Body (leave blank) | | D = DIN | Standard: NBR (leave blank) Option: V = Viton | | | |
| | 3 Way Direct Acting Zero Differential | NC | Plastic | 3P | 010 | 1/8 1/4 | | A = Acetal Delrin Plastic | D = DIN | Standard: NBR (leave blank) | | |
| NC or NO | | Stainless Steel | 3S | 020 | 1/4 | Standard: 304 Stainless Steel Body (leave blank) | D = DIN | Standard: NBR (leave blank) Option: V = Viton | | | | |
| 2 Way Direct Lift Diaphragm Zero Differential | NC | Stainless Steel | 2S | 160 | 3/8 | Standard: 304 Stainless Steel Body (leave blank) | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | | | |
| | | | | 160 | 1/2 | | | | | | | |
| | | | | 200 | 3/4 | | | | | | | |
| | | | | 250 | 1 | | | | | | | |
| | | | | 350 | 1 1/4 | | | | | | | |
| | | | | 400 | 1 1/2 | | | | | | | |
| | | 500 | 2 | | | | | | | | | |
| | | Brass | 2W | 160 | 3/8 | | | Standard: Brass Body (leave blank) | | D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | |
| | | | | 160 | 1/2 | | | | | | | |
| | | | | 200 | 3/4 | | | | | | | |
| | | | | 250 | 1 | | | | | | | |
| | | | | 350 | 1 1/4 | | | | | | | |
| | 400 | | | 1 1/2 | | | | | | | | |
| | 500 | 2 | | | | | | | | | | |
| | Plastic | 2P | 160 | 1/2 | Standard: Plastic Body (leave blank) | D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | | | | | |
| | | | 200 | 3/4 | | | | | | | | |
| | | | 250 | 1 | | | | | | | | |
| | | | Stainless Steel | 2SO | | | | 160 | 3/8 | Standard: 304 Stainless Steel Body (leave blank) | D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton |
| | | | | | | | | 160 | 1/2 | | | |
| | | | | | | | | 200 | 3/4 | | | |
| | 250 | 1 | | | | | | | | | | |
| | 350 | 1 1/4 | | | | | | | | | | |
| | 400 | 1 1/2 | | | | | | | | | | |
| | 500 | 2 | | | | | | | | | | |
| NO | Brass | 2WO | 160 | 3/8 | Standard: Brass Body (leave blank) | D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | | | | | |
| | | | 160 | 1/2 | | | | | | | | |
| | | | 200 | 3/4 | | | | | | | | |
| | | | 250 | 1 | | | | | | | | |
| | | | 350 | 1 1/4 | | | | | | | | |
| | | | 400 | 1 1/2 | | | | | | | | |
| | 500 | 2 | | | | | | | | | | |
| | Plastic | 2PO | 160 | 1/2 | | | | Standard: Plastic Body (leave blank) | D = DIN | Standard: NBR (leave blank) Option: V = Viton | | |
| | | | 200 | 3/4 | | | | | | | | |
| | | | 250 | 1 | | | | | | | | |



Process Valves Numbering System

Ordering Part No. =
(e.g., 2MS150-1/2-3-D)



| Action | Normally Closed / Normally Open | Body Material | Model Series | Orifice Size 10X (mm) | Port Size (NPT) | Material / Type (for standard materials, leave blank) | Voltage Option | Electrical Connection | Seal Options | |
|--|---------------------------------|-----------------|--------------|-----------------------|-----------------|---|--|--|-----------------------------------|---|
| 2 Way Pilot Piston | NC | Brass | 2L | 170 | 1/2 | Standard: Brass Body (leave blank) | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard Seal: PTFE (leave blank) | |
| | | | | 170 | 3/4 | | | | | |
| | | | | 200 | 1 | | | | | |
| | | | | 300 | 1 1/2 | | | | | |
| 2 Way Direct Lift Piston Zero Differential | NC | Stainless Steel | 2LS | 120 | 3/8 | Standard: 304 Stainless Steel (leave blank) | | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard Seal: PTFE (leave blank) |
| | | | | 150 | 1/2 | | | | | |
| | | | | 200 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| | | | | 320 | 1 1/4 | | | | | |
| | | | | 400 | 1 1/2 | | | | | |
| 2 Way Pilot Diaphragm | NC | Brass | 2V | 130 | 3/8 | Standard: Brass Body (leave blank) | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC (50/60Hz) E = Explosion Proof Coil | | D = DIN | Standard Seal: NBR (leave blank) Option: V = Viton |
| | | | | 130 | 1/2 | | | | | |
| | | | | 250 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| 2 Way Pilot Piston 7PSI Differential | NC | Stainless Steel | 2MS | 120 | 3/8 | Standard: 304 Stainless Steel (leave blank) | | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard Seal: PTFE (leave blank) Standard Pressure: 6 to 230PSI (leave blank) Pressure Options: M = Medium, Pressure 6 to 580PSI (DC), H = High, Pressure 87 to 1160 PSI |
| | | | | 150 | 1/2 | | | | | |
| | | | | 200 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| | NO | Stainless Steel | 2MSO | 120 | 3/8 | | | | | |
| | | | | 150 | 1/2 | | | | | |
| | | | | 200 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| 2 Way, Slow Closing Pilot Diaphragm | NC (Option: NO) | Brass | 2D | 120 | 3/8 | Standard: Brass (leave blank) | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC (50/60Hz) E = Explosion Proof Coil | | D = DIN | Standard: NBR - Buna N (leave blank) Option: V = Viton, E = EPDM |
| | | | | 150 | 1/2 | | | | | |
| | | | | 200 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| | NC (Option: NO) | Stainless Steel | 2DS | 120 | 3/8 | | | | | |
| | | | | 150 | 1/2 | | | | | |
| | | | | 200 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| 2 Way, Pilot Piston | NC | Stainless Steel | 2DS | 500 | 2F | Standard: 304 Stainless Steel (leave blank) | | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: NBR - Buna N (leave blank) |
| | | | | 650 | 2 1/2F | | | | | |
| | | | | 800 | 3F | | | | | |
| | | | | 1000 | 4F | | | | | |
| | NO | Stainless Steel | 2DSO | 500 | 2F | | | | | |
| | | | | 650 | 2 1/2F | | | | | |
| | | | | 800 | 3F | | | | | |
| | | | | 1000 | 4F | | | | | |
| 2 Way Pilot Diaphragm | NC | Brass | 2R | 130 | 3/8 | Standard: Brass (leave blank) | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC (50/60Hz) E = Explosion Proof Coil | | D = DIN | Standard: NBR - Buna N (leave blank) Option: V = Viton, E = EPDM |
| | | | | 150 | 1/2 | | | | | |
| | | | | 200 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| | | | | 320 | 1 1/4 | | | | | |
| | NC (Option: NO) | Stainless Steel | 2RS | 150 | 3/8 | | | | | |
| | | | | 150 | 1/2 | | | | | |
| | | | | 200 | 3/4 | | | | | |
| | | | | 250 | 1 | | | | | |
| | | | | 320 | 1 1/4 | | | | | |
| NO | Stainless Steel | 2RS | 400 | 1 1/2 | | | | | | |
| | | | 500 | 2 | | | | | | |
| | | | 500 | 2 | | | | | | |

Process Valves List Price













| | Valve Type | Part No. | List Price | Voltage Options | Electrical Connection | Seal (Options) | Coil Power (W) | Cv | Orifice (mm) | Services | Features |
|--|---|-------------|------------|--|------------------------|--|----------------|---------|--------------|-------------------------|--|
| | 2 Way, NC Direct Acting Plastic Body | 2P025-1/8 | \$21.23 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | G = Grommet D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton, P = PTFE (Teflon) | 3-6.5 | 0.23 | 2.5 | Air | Operating Temp: -5 to 80°C Operating Pressure: Vacuum to 115PSI Coil: F Class, IP65, 100% ED |
| | | 2P025-1/4 | \$23.43 | | | | | 0.23 | 2.5 | Air, Water, Liquid | |
| | | 2P025-1/8 S | | | | | | 0.15 | 2 | Air, Water, Liquid | |
| | | 2P025-1/4 S | | | | | | | | 2P025-1/8 A | |
| | 3 Way, NC Direct Acting Plastic Body | 3P010-1/8A | \$25.62 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) | 3-6.5 | 0.05 | 1 | Air, Water, Liquid | Operating Temp: 32 to 50°F Operating Pressure: Vacuum to 60PSI Coil: B Class, IP65, 100% ED |
| | | 3P010-1/4A | \$25.62 | | | | | 0.05 | 1 | Air, Water, Liquid | |
| | 2 Way, NC Direct Acting Stainless Steel Body | 2S012-1/8A | \$32.70 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | G = Grommet D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | 3-6.5 | 0.05 | 1.2 | Air, Liquid, Oil, Water | Temp: -10 to 80°C Operating Pressure: 0 to 200PSI |
| | | 2S012-1/4A | \$32.70 | | | | | 0.05 | 1.2 | | |
| | | 2S020-1/8A | \$32.70 | | | | | 0.23 | 2.5 | | |
| | | 2S020-1/4A | \$32.70 | | | | | 0.23 | 2.5 | | |
| | 3 Way, Universal Direct Acting Stainless Steel Body | 3S012-1/8A | \$35.99 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | G = Grommet D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | 3-6.5 | 0.05 | 1.2 | Air, Liquid, Oil, Water | Temp: -10 to 80°C Pressure: Normally Closed: Vacuum to 60PSI Normally Open: Vacuum to 150PSI Diverter Valve 1 input to 2 outputs: Vacuum to 150PSI |
| | | 3S012-1/4A | \$35.99 | | | | | 0.05 | 1.2 | | |
| | 2 Way, NC Direct Acting Stainless Steel Body | 2S025-1/8H | \$32.70 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | G = Grommet | Standard: NBR (leave blank) | 10-14 | 0.23 | 2.5 | Air, Liquid, Oil, Water | Operating Temp: -10 to 80°C Operating Pressure: Vacuum to 150PSI Coil: H Class, IP65, 100% ED |
| | | 2S025-1/4H | | | | | | \$31.68 | 0.23 | 2.5 | |
| | 2 Way, NC Direct Acting Stainless Steel Body | 2S025-1/4 | \$35.35 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | G = Grommet D = DIN | Standard: NBR (leave blank) Options: E = EPDM, V = Viton | 14-20 | 0.23 | 2.5 | Air, Liquid, Oil, Water | Operating Temp: -10 to 80°C Operating Pressure: 2S025: Vacuum to 200PSI, 2S035: Vacuum to 170PSI 2S040: Vacuum to 150PSI 2S050: Vacuum to 80PSI Coil: H Class, IP65, 100% ED |
| | | 2S035-1/4 | \$38.64 | | | | | 0.5 | 3.5 | | |
| | | 2S040-3/8 | \$49.05 | | | | | 0.6 | 4 | | |
| | | 2S050-1/4 | \$49.05 | | | | | 1.0 | 5 | | |
| | | 2S050-3/8 | \$49.05 | | | | | 1.0 | 5 | | |
| | 2 Way, NC Direct Acting Brass Body | 2W025-1/4 | \$31.68 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) Option: V = Viton | 10-14 | 0.23 | 2.5 | Air, Liquid, Oil, Water | Operating Temperature (with NBR seal): -10 to 80°C Operating Temperature (with Viton seal): -15 to 120°C Operating Pressure: Vacuum to 150PSI Coil: H Class, IP65, 100% ED |
| | | 2W035-1/4 | \$36.07 | | | | | 0.5 | 3.5 | Air, Liquid, Oil, Water | |
| | | 2W040-3/8 | \$39.35 | | | | | 0.6 | 4 | Air, Liquid, Oil, Water | |
| | 2 Way, NC Direct Acting Stainless Steel | 2H012-1/8 | \$64.80 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: PTFE/Teflon (leave blank) Option: V = Viton | 14-20 | 0.05 | 1.2 | Air, Water, Liquid | Operating Temp: 0 to 85°C Operating Pressure: 2H012—Vacuum to 1000PSI, 2H016—Vacuum to 500PSI Coil: H Class, IP65, 100% ED |
| | 2 Way, NO Direct Acting Stainless Steel | 2S0030-1/4 | \$65.62 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) Option: V = Viton | 30 | | 3 | Air, Gas, Liquid | Operating Temp: -5 to 80°C Operating Pressure: Vacuum to 90PSI Coil: H Class, IP65, 100% ED |
| | | 2S0040-3/8 | \$73.51 | | | | | 0.6 | 4 | | |
| | 2 Way, NO Direct Acting Brass | 2W0040-3/8 | \$65.44 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) Option: V = Viton | 30 | 0.6 | 4 | Air, Liquid, Oil, Water | Operating Temp: -10 to 80°C (with NBR Seal); -15 to 120°C (with Viton Seal) Operating Pressure: Vacuum to 90PSI Coil: H Class, IP65, 100% ED |
| | 2 Way, NC Pilot Diaphragm Brass | 2V130-3/8 | \$67.75 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: NBR (leave blank) Option: E = EPDM, V = Viton | 3-6.5 | 4.8 | 13 | Air, Liquid, Oil, Water | Operating Temp: -5 to 80°C (NBR Seal), -15 to 120°C (Viton Seal) Operating Pressure: 5 to 115PSI (NBR Seal), 5 to 150PSI (Viton Seal) Coil: F Class, IP65, 100% ED |
| | | 2V130-1/2 | \$67.75 | | | | | 4.8 | 13 | | |
| | | 2V250-3/4 | \$130.65 | | | | | 12 | 25 | | |
| | | 2V250-1 | \$130.65 | | | | | 12 | 25 | | |

Process Valves List Price

| | Valve Type | Part No. | List Price | Voltage Options | Electrical Connection | Seal (Options) | Coil Power (W) | Cv | Orifice (mm) | Services | Features |
|---|---|--------------|------------|--|-----------------------|---|----------------|------|--------------|--|--|
|  | 3 Way, NC/NO Direct Acting Stainless Steel | 3S020-1/4 | \$67.98 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | V = Viton | 13-20 | 0.23 | 2 | Air, Liquid, Oil, Water | Operating Temp: -15 to 120°C Operating Pressure: Vacuum to 100PSI (2mm orifice), Vacuum to 60PSI (3.5mm orifice) Coil: H Class, IP65, 100% ED |
| | | 3S035-1/4 | \$67.98 | | | | | 0.5 | 3.5 | | |
|  | 2 Way, NC Direct Lift Diaphragm Stainless Steel Zero Differential | 2S160-3/8 | \$119.19 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: NBR (leave blank) Options: E = EPDM V = Viton | 14-20 | 4.8 | 16 | Air, Liquid, Oil, Water | Operating Temp: -5 to 80°C (with NBR Seal), -5 to 120°C (with Viton Seal) Operating Pressure: Vacuum to 150PSI (AC Coil), Vacuum to 100PSI (DC Coil) Coil: H Class, IP65, 100% ED |
| | | 2S160-1/2 | \$119.19 | | | | | 4.8 | 16 | | |
| | | 2S200-3/4 | \$135.17 | | | | | 7.6 | 20 | | |
| | | 2S250-1 | \$151.92 | | | | | 12 | 25 | | |
| | | 2S350-1 1/4 | \$276.19 | | | | | 24 | 35 | | |
| | | 2S400-1 1/2 | \$294.66 | | | | | 29 | 40 | | |
| | | 2S500-2 | \$460.34 | | | | | 48 | 50 | | |
|  | 2 Way, NC Direct Lift Diaphragm Brass Zero Differential | 2W160-3/8 | \$68.91 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: NBR (leave blank) Options: E = EPDM V = Viton | 14-20 | 4.8 | 16 | Air, Liquid, Oil, Water | Operating Temp: -5 to 80°C (with NBR Seal), -5 to 120°C (with Viton Seal) Operating Pressure: Vacuum to 150PSI (AC Coil), Vacuum to 100PSI (DC Coil) Coil: H Class, IP65, 100% ED |
| | | 2W160-1/2 | \$73.85 | | | | | 4.8 | 16 | | |
| | | 2W200-3/4 | \$79.88 | | | | | 7.6 | 20 | | |
| | | 2W250-1 | \$101.64 | | | | | 12 | 25 | | |
| | | 2W350-1 1/4 | \$195.04 | | | | | 24 | 35 | | |
| | | 2W400-1 1/2 | \$224.45 | | | | | 29 | 40 | | |
| | | 2W500-2 | \$314.81 | | | | | 48 | 50 | | |
|  | 2 Way, NC Direct Lift Diaphragm Plastic Zero Differential | 2P160-1/2 | \$51.21 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) Options: E = EPDM V = Viton | 30 | 4.8 | 16 | Air, Liquid, Oil, Water | Operating Temp: 0 to 50°C Operating Pressure: Vacuum to 90PSI Coil: H Class, IP65, 100% ED |
| | | 2P200-3/4 | \$60.91 | | | | | 7.6 | 20 | | |
| | | 2P250-1 | \$83.54 | | | | | 12 | 25 | | |
|  | 2 Way, NC Pilot Piston Plastic | 2PO160-1/2 | \$74.25 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) Option: V = Viton | 30-35 | 4.8 | 16 | Air, Liquid, Oil, Water Vacuum Reverse Flow Direction | Operating Temp: 0 to 50°C Operating Pressure: Vacuum to 90PSI Coil: H Class, IP65, 100% ED |
| | | 2PO200-3/4 | \$83.96 | | | | | 7.6 | 20 | | |
| | | 2PO250-1 | \$106.58 | | | | | 12 | 25 | | |
|  | 2 Way, NO Direct Lift Diaphragm Stainless Steel Zero Differential | 2SO160-3/8 | \$137.10 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) Options: E = EPDM V = Viton | 30-38 | 4.8 | 16 | Air, Liquid, Oil, Water | Operating Temp: 5 to 80°C (with NBR Seal), -5 to 120°C (with Viton Seal) Operating Pressure: Vacuum to 90PSI Coil: H Class, IP65, 100% ED |
| | | 2SO160-1/2 | \$149.59 | | | | | 4.8 | 16 | | |
| | | 2SO200-3/4 | \$174.56 | | | | | 7.6 | 20 | | |
| | | 2SO250-1 | \$274.21 | | | | | 12 | 25 | | |
| | | 2SO350-1 1/4 | \$326.98 | | | | | 24 | 35 | | |
| | | 2SO400-1 1/2 | \$380.20 | | | | | 29 | 40 | | |
|  | 2 Way, NO Direct Lift Diaphragm Brass Zero Differential | 2WO160-3/8 | \$105.51 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (leave blank) Options: E = EPDM V = Viton | 30-38 | 4.8 | 16 | Air, Liquid, Oil, Water | Operating Temp: -10 to 80°C (with NBR Seal), -15 to 120°C (with Viton Seal) Operating Pressure: Vacuum to 90PSI (with NBR Seal), Vacuum to 150PSI (with Viton Seal) Coil: H Class, IP65, 100% ED |
| | | 2WO160-1/2 | \$105.51 | | | | | 4.8 | 16 | | |
| | | 2WO200-3/4 | \$115.06 | | | | | 7.6 | 20 | | |
| | | 2WO250-1 | \$134.28 | | | | | 12 | 25 | | |
| | | 2WO350-1 1/4 | \$236.18 | | | | | 24 | 35 | | |
| | | 2WO400-1 1/2 | \$282.63 | | | | | 29 | 40 | | |
|  | 2 Way, NC Pilot Piston Brass | 2L170-1/2 | \$149.62 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: PTFE | 30-35 | 4.8 | 17 | Air, Liquid, Steam | Operating Temp: -5 to 180°C Operating Pressure: 7 to 232PSI Coil: F Class, IP65, 100% ED Installation: Vertical Coil Position, Horizontal Flow |
| | | 2L170-3/4 | \$157.94 | | | | | 4.8 | 17 | | |
| | | 2L200-1 | \$184.06 | | | | | 12 | 20 | | |
| | | 2L300-1 1/2 | \$327.50 | | | | | 20 | 30 | | |
|  | 2 Way, NC Direct Lift Piston Stainless Steel Zero Differential | 2LS150-1/2 | \$174.56 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: PTFE | 15 | 4.5 | 15 | Steam, Air, Inert Gases, Water, Liquid | Fluid Temp: -20 to 180°C Operating Pressure: 0 to 120PSI (AC Coil), 0 to 80PSI (DC Coil) Coil: H Class, IP65, 100% ED |
| | | 2LS200-3/4 | \$215.50 | | | | | 8.5 | 20 | | |
| | | 2LS250-1 | \$269.32 | | | | | 12 | 25 | | |
| | | 2LS320-1 1/4 | \$353.50 | | | | | 24 | 35 | | |
| | | 2LS400-1 1/2 | \$391.37 | | | | | 29 | 40 | | |
| | | 2LS500-2 | \$565.25 | | | | | 48 | 50 | | |

Process Valves List Price



| Valve Type | Part No. | List Price | Voltage Options | Electrical Connection | Seal (Options) | Coil Power (W) | Cv | Orifice (mm) | Services | Features | |
|---|---|---------------|--|--|--|-------------------------|-------|--------------|---------------------------------|--|--|
|  | 2MS120-3/8 | \$159.59 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: PTFE (Teflon) | 13-20 | 4.5 | 12 | Air, Liquid, Steam | Operating Temp: -20 to 180°C Operating Pressure, Standard: 6 to 230PSI Options: Medium: 6 to 580PSI (DC) Medium: 6 to 725PSI (AC) High: 87 to 1160PSI Coil: H Class, IP65, 20W, CE | |
| | 2MS150-1/2 | \$159.59 | | | | | | 15 | | | |
| | 2MS200-3/4 | \$191.18 | | | | | | 20 | | | |
| | 2MS250-1 | \$244.39 | | | | | | 25 | | | |
| | 2MS320-1 1/4 | \$345.80 | | | | | | 32 | | | |
| | 2MS400-1 1/2 | \$363.25 | | | | | | 40 | | | |
| | 2MS500-2 | \$563.59 | 50 | | | | | | | | |
| |  | 2MSO120-3/8 | \$195.34 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: PTFE (Teflon) | 13-20 | 4.5 | 12 | Steam, Air, Inert Gases, Water, Liquid | Fluid Temp: -20 to 180°C Ambient Temp: -20 to 55°C Operating Pressure: 6 to 145PSI Coil: H Class, IP65, 20W, CE |
| | | 2MSO150-1/2 | \$195.34 | | | | | | 15 | | |
| | | 2MSO200-3/4 | \$226.93 | | | | | | 20 | | |
| | | 2MSO250-1 | \$280.13 | | | | | | 25 | | |
| | | 2MSO320-1 1/4 | \$381.55 | | | | | | 32 | | |
| 2MSO400-1 1/2 | | \$399.00 | 40 | | | | | | | | |
| 2MSO500-2 | \$599.33 | 50 | | | | | | | | | |
|  | 2E100-3/8 | \$443.56 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) E = Explosion Proof Coil | D = DIN | Standard: PTFE (Teflon) | 13-28 | 4 | 10 | Air, Liquid, Steam | Operating Pressure: 87 to 1450PSI (Option: 87 to 2300PSI) Fluid Temperature: -40 to 180°C Coil: H Class, IP65, 20-25W, CE | |
| | 2E150-1/2 | \$553.01 | | | | | | 15 | | | |
| | 2E200-3/4 | \$664.77 | | | | | | 20 | | | |
| | 2E250-1 | \$735.05 | | | | | | 25 | | | |
|  | 2T060-1/4 | \$294.94 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: Viton Option: EPDM | 20-30 | 2.8 | 6 | Air, Inert Gases, Water, Liquid | Fluid Temperature: 0 to 80°C Operating Pressure: 0 to 22PSI | |
| | 2T060-3/8 | \$294.94 | | | | | | | | | |
| | 2T060-1/2 | \$294.94 | | | | | | | | | |
|  | 2D150-1/2 | \$82.38 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (Buna N) Option: Viton, EPDM | 12-20 | 3.7 | 15 | Air, Liquid, Oil, Water | Media Temp: 14 to 176°F (14 to 266°F for Viton) Ambient Temp: 23 to 110°F Pressure: 4 to 175PSI Coil: H Class, IP65 | |
| | 2D200-3/4 | \$102.27 | | | | | | 20 | | | |
| | 2D250-1 | \$130.36 | | | | | | 25 | | | |
| | 2D320-1 1/4 | \$207.45 | | | | | | 32 | | | |
| | 2D400-1 1/2 | \$269.16 | | | | | | 40 | | | |
| | 2D500-2 | \$346.91 | | | | | | 50 | | | |
|  | 2DS150-1/2 | \$94.59 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | Standard: NBR (Buna N) Options: EPDM, Viton | 12-20 | 3.7 | 15 | Water, Air, Oil, Gas | Body: 304 Stainless Steel (Option: 316SS) Media Temp: 14 to 176°F (14 to 266°F Viton) Ambient Temp: 23 to 110°F Pressure: 4 to 175PSI Coil: H Class, IP65 | |
| | 2DS200-3/4 | \$114.95 | | | | | | 20 | | | |
| | 2DS250-1 | \$163.93 | | | | | | 25 | | | |
| | 2DS320-1 1/4 | \$244.40 | | | | | | 32 | | | |
| | 2DS400-1 1/2 | \$300.48 | | | | | | 40 | | | |
| | 2DS500-2 | \$392.30 | | | | | | 50 | | | |
|  | 2DS500-2F | \$679.20 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | D = DIN | NBR (Buna N) | 13-20 | 30 | 50 | Air, Liquid | Body: 304 Stainless Steel Operating Temp: -5 to 80°C Pressure: 6 to 175PSI Maximum Pressure: 175PSI at 72°F Coil: H Class, IP65, 20W, CE | |
| | 2DS650-2 1/2F | \$1436.88 | | | | | | 65 | | | |
| | 2DS800-3F | \$1654.59 | | | | | | 80 | | | |
| | 2DS1000-4F | \$2473.17 | | | | | | 100 | | | |
| | 2DS1500-6F | | | | | | | 150 | | | |
|  | 2DSO500-2F | \$699.20 | 2 = 24VDC 3 = 110VAC | D = DIN | Standard: NBR (Buna N) Options: Viton, EPDM | 20-30 | 48 | 50 | Air, Inert Gases, Water, Liquid | Body: 304 Stainless Steel Fluid Temp: -5 to 80°C Operating Pressure: 6 to 120PSI Maximum Pressure: 120PSI at 72°F Coil: H Class, IP65, 30W, CE | |
| | 2DSO650-2 1/2F | \$1,471.70 | | | | | | 65 | | | |
| | 2DSO800-3F | \$1689.41 | | | | | | 100 | | | |
| | 2DSO1000-4F | \$2,473.17 | | | | | | 100 | | | |
| | 2DSO1500-6F | \$4,880.00 | | | | | | 150 | | | |
|  | 2R130-3/8 | \$71.93 | 3 = 110VAC Option: Explosion Proof | D = DIN | Standard: NBR (Buna N) Options: Viton, EPDM | 12-20 | 4.5 | 13 | Air, Gas, Liquid, Oil, Water | Body: Brass Media Temp: 14 to 176°F Ambient Temp: 23 to 110°F Pressure: 7 to 188PSI Coil: H Class, IP65 | |
| | 2R150-1/2 | \$82.38 | | | | | | 15 | | | |
| | 2R200-3/4 | \$102.27 | | | | | | 20 | | | |
| | 2R250-1 | \$130.36 | | | | | | 25 | | | |
| | 2R320-1 1/4 | \$207.45 | | | | | | 32 | | | |
| | 2R400-1 1/2 | \$269.16 | | | | | | 40 | | | |
| | 2R500-2 | \$346.91 | | | | | | 50 | | | |
|  | 2RS150-3/8 | \$101.07 | 2 = 24VDC 3 = 110VAC | D = DIN | Standard: NBR (Buna N) Option: Viton, EPDM | 12-20 | 4.5 | 13 | Air, Gas, Liquid, Oil, Water | Body: 304 Stainless Steel (Option: 316SS) Media Temp: 14 to 176°F (14 to 266°F Viton) Ambient Temp: 23 to 110°F Pressure: 7 to 188PSI Coil: H Class, IP65 | |
| | 2RS150-1/2 | \$101.07 | | | | | | 15 | | | |
| | 2RS200-3/4 | \$114.95 | | | | | | 20 | | | |
| | 2RS250-1 | \$163.93 | | | | | | 25 | | | |
| | 2RS320-1 1/4 | \$244.40 | | | | | | 32 | | | |
| | 2RS400-1 1/2 | \$300.48 | | | | | | 40 | | | |
| 2RS500-2 | \$392.30 | 50 | | | | | | | | | |

Process Valves, Coils & Digital Timers

List Price | Process Valve Specifications

| | Part No. | List Price | Options | Electrical Connection | Power | Applications |
|---|-----------------|------------|---|---|-----------|--|
|  | 200C | \$9.13 | | D = DIN (with LED indicator) G = Grommet (12" Lead Wire) F Class Insulation, IP65 | 3 to 6.5W | For 2P025-35, 2V, 2V1, and 3V1 Series Valves |
|  | 2W200C | \$26.62 | 1 = 12VDC 2 = 24VDC 2A = 24VAC 3 = 110VAC 4 = 220VAC (50/60Hz) | H Class Insulation, IP 65 Duty Cycle: 100% ED | 12 to 20W | For 2S/2W025-250 Series Valves |
|  | 2WO250C | \$41.19 | | | 20 to 30W | For 2WO/2SO160-250 Series Valves |
|  | 2W350C | \$41.19 | | | 25 to 35W | For 2WO/2SO350-500 Series Valves |
|  | 2W250C-DIN-1/2M | \$6.34 | 20' Long Cable | Molded Cable with DIN 43650 Form A Plug | | |
|  | 2W250C-DIN-1M | \$7.49 | 40' Long Cable | | | |
|  | 200C | \$98.85 | 1E = 12VDC 2E = 24VDC 2AE = 24VAC 3E = 110VAC 4E = 220VAC (50/60Hz) | Explosion Proof Coil Option: All voltages with 1/2" NPT conduit connection FM Approved. CL. I; ZONE 1, CL.I; DIV.1; GR. A, B, C, D CL. II; GR. E, F, G CL. III T4 Ta = -20°C...+60°C | | Insulation: F Class IP65 Duty Cycle: 100% ED FM Certification |
|  | 2W200C-T | \$28.80 | 24-240VDC or AC 50/60HZ, 1A | ON/OFF Timer Switch ON/OFF Adjustment Duration: On: 0.5 seconds to 10 seconds, Off: 0.5 seconds to 45 minutes. 24-240V DC or AC 50/60HZ, 1A, DIN43650A Connection for 2W200C, 2W350C, 2WO coils | | |
|  | 2W200C-T-D | \$47.23 | 24-240V DC or AC 50/60HZ, 1A | DIGITAL ON/OFF Timer Switch ON/OFF Adjustment Duration: On: 0.5 seconds to 10 seconds, Off: 0.5 seconds to 45 minutes. Size: 88 X 48 X 21 (mm) 24-240V DC or AC 50/60HZ, 1A Termination: DIN43650A Protection: IP65, EN60529 for 2W200C, 2W350C, 2WO coils | | |
|  | 2W200C-T-DH | \$59.29 | 110-220VAC 50/60HZ, 1A | PROGRAMMABLE DIGITAL ON/OFF Timer Switch On/OFF Single or Multi Cycles Adjustment Duration: On: 1 seconds to 99 hours, Off: 1 seconds to 99 hours. Size: 88 X 48 X 21 (mm) Termination: DIN43650A Protection: IP65, EN60529 for 2W200C, 2W350C, 2WO coils | | |
|  | 2W200C-T-DL | | 7-36V DC or AC, 3A | | | |
|  | 2W200C-PS-H | \$11.41 | 110-280 VAC 50/60HZ, 1A | POWER SAVE DEVICE High Power Start Up Time: 0.3—2.5 seconds Energy Save Rate: 15 to 85% Power Up Grade: 20 to 300% (AC only) Size: 88 X 48 X 21 (mm) Termination: DIN43650A Protection: IP65, EN60529 for 2W200C, 2W350C, 2WO coils | | |
|  | 2W200C-PS-L | | 12-36V DC or AC, 2A | | | |

| Valve Model | 2H012 to 2H016 | 2L | 2LS | 2MS | 2MSO | 2P025 | 3P010 | 2S025 to 2S050 | 2S160 to 2S500 |
|----------------------------------|--------------------|--------------------|-----------------|---------------------------------------|-----------------|--------------------|--------------------|-------------------------|-----------------------|
| Valve Type | 2 Way | 2 Way | 2 Way | 2 Way | 2 Way | 2 Way | 3 Way | 2 Way | 2 Way |
| Normally Closed (NC) | NC | NC | NC | NC | NO | NC | NC | NC | NC |
| Normally Open (NO) | Direct | Pilot | Direct Lift | Pilot | Pilot | Direct | Direct | Direct Acting | Direct Lift Diaphragm |
| Operating Pressure (PSI) | 0 to 1000 | 7 to 232 | 0 to 120 | 6 to 230 | 6 to 230 | 0 to 115 | 0 to 60 | 0 to 200 | 0 to 150 |
| Operating Temperature (°C) | -20 to 85 | -5 to 180 | -20 to 180 | -20 to 180 | -20 to 180 | -5 to 80 | -5 to 80 | -10 to 80 | -5 to 80 |
| Ambient Temperature (°C) | -20 to 55 | -5 to 50 | -5 to 50 | -20 to 55 | -20 to 55 | | | | -5 to 45 |
| Port Size (NPT) | 1/8 | 1/2 to 1 1/2 | 3/8 to 2 | 3/8 to 2 | 3/8 to 2 | 1/8 to 1/4 | 1/8 to 1/4 | 1/4 to 3/8 | 3/8 to 2 |
| Body Materials | Stainless Steel | Brass | Stainless Steel | Stainless Steel | Stainless Steel | Engineered Plastic | Engineered Plastic | Stainless Steel | Stainless Steel |
| Seal Materials | PTFE/Teflon | PTFE/Teflon | PTFE/Teflon | PTFE/Teflon | PTFE/Teflon | NBR | NBR | NBR | NBR |
| Coil Protection Insulation Class | H Class IP65 | H Class, IP65 | H Class, IP65 | H Class, IP65 | H Class, IP65 | F Class IP65 | B Class, IP65 | H Class, IP65 | H Class, IP65 |
| Coil Duty | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED |
| Coil Power | 14W | 30-40W | 30W | 13-20W | 20W | 6.5W | 6.5W | 14-20W | 14-35W |
| Electrical Connections | DIN | DIN | DIN | DIN | DIN | DIN | DIN | DIN | DIN |
| Services | Air, Water, Liquid | Air, Liquid, Steam | | Air, Inert Gas, Liquid, Steam, Vacuum | | Air, Water, Liquid | | Air, Liquid, Oil, Water | |

Process Valve Specifications & Internal Components



| Valve Model | 2SO160 to 2SO500 | 3S020 to 3S035 | 2T | 2V025 | 2V130 to 2V250 | 2W025 to 2W040 | 2W160 to 2W500 | 2WO160 to 2WO500 |
|----------------------------------|-------------------------|-----------------|---------------------------------|---------------|-------------------------|-------------------------|-----------------------|-----------------------|
| Valve Type | 2 Way | 3 Way | 2 Way | 2 Way | 2 Way | 2 Way | 2 Way | 2 Way |
| Normally Closed (NC) | NO | NC/NO | NC | NC | NC | NC | NC | NO |
| Normally Open (NO) | Direct Lift Diaphragm | Direct Acting | Direct Lift Diaphragm | Direct Acting | Pilot Diaphragm | Direct Acting | Direct Lift Diaphragm | Direct Lift Diaphragm |
| Operating Pressure (PSI) | 0 to 90 | 0 to 100 | 0 to 22 | 0 to 115 | 5 to 115 | 0 to 150 | 0 to 150 | 0 to 90 |
| Operating Temperature (°C) | -5 to 80 | -15 to 120 | -20 to 180 | -5 to 80 | -5 to 80 | -10 to 80 | -10 to 80 | -10 to 80 |
| Ambient Temperature (°C) | -5 to 45 | | -20 to 55 | | | | | |
| Port Size (NPT) | 3/8 to 2 | 1/4 | 1/4 to 1/2 | 1/8 to 1/4 | 3/8 to 1 | 1/4 to 3/8 | 3/8 to 2 | 3/8 to 2 |
| Body Materials | Stainless Steel | Stainless Steel | Teflon | Aluminum | Brass | Brass | Brass | Brass |
| Seal Materials | NBR | NBR | Viton | NBR | NBR | NBR | NBR | NBR |
| Coil Protection Insulation Class | H Class, IP65 | H Class, IP65 | H Class, IP65 | F Class, IP65 | F Class, IP65 | H Class, IP65 | H Class, IP65 | H Class, IP65 |
| Coil Duty | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED | 100% ED |
| Coil Power | 30-38W | 13 to 20W | 20W | 6.5W | 3 to 6.5W | 12 to 20W | 14 to 35W | 30 to 38W |
| Electrical Connections | DIN | DIN | DIN | DIN | DIN | DIN | DIN | DIN |
| Services | Air, Liquid, Oil, Water | | Air, Inert Gases, Water, Liquid | Air, Vacuum | Air, Liquid, Oil, Water | Air, Liquid, Oil, Water | | |

Process Valves Internal Components

| | | | | | |
|--|--|---|--|--|--|
| 2L: Brass 2 Way NC Direct Lift Piston | | 2LS: Stainless Steel 2 Way NC Direct Lift Piston | | 2H: Stainless Steel 2P: Plastic 2V: Aluminum 2S/25-050: SS 2W/25-040: Brass 2 Way NC Direct Acting | |
| 2MS: Stainless Steel 2 Way NC Pilot Piston | | 2MSO: Stainless Steel 2 Way NO Pilot Piston | | 2T: Teflon 2 Way NC Direct Lift Diaphragm | |
| 2V130: Brass 2 Way NC Pilot Diaphragm | | 2W/2WO160-500: Brass 2S/2SO160-500: SS 2 Way NC Direct Lift Diaphragm | | 3W: Brass 3 Way NC Direct Acting | |

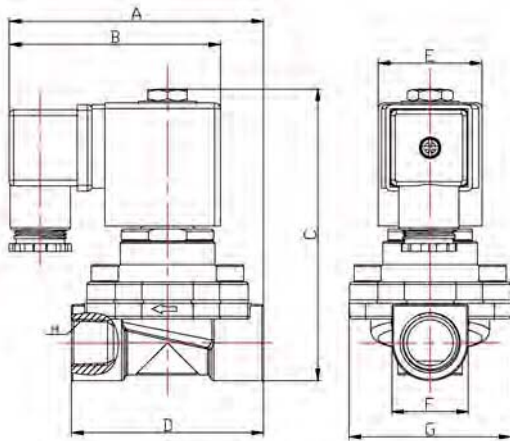
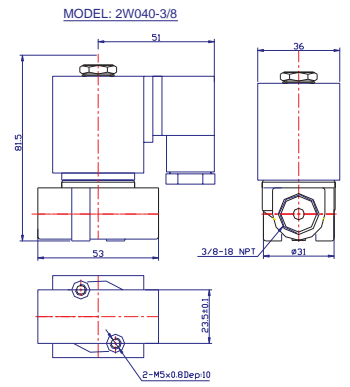
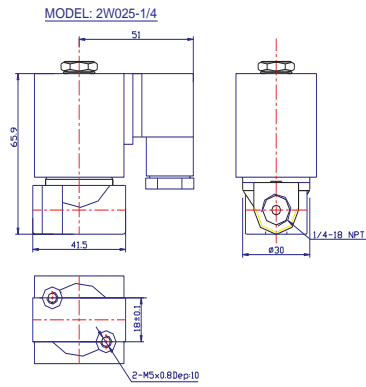
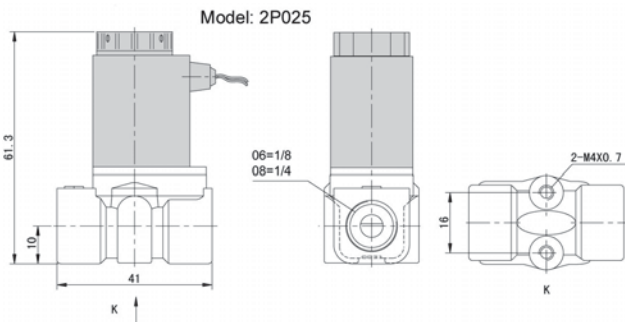
| Valve Components | Materials | Seal Options | Temperature Range/Compatibility |
|------------------|--|--------------|---|
| Body | Options: Aluminum, Brass, Plastic, Stainless Steel, Teflon | NBR | -10 ~ 90°C, Oil-resistant and petroleum-resistant, not good for oxygen |
| Armature Tube | Stainless Steel 304 | EPDM | -30 ~ 130°C, Withstand ozone, resistant to corrosive chemical materials, not suitable for oil |
| Plunger | Stainless Steel 430F | PTFE | -20 ~ 200°C, Resistant to most chemicals, except compound with oxygen |
| Head | Stainless Steel 430F | VITON | -10 ~ 150°C, Resistant to most chemicals |
| Springs | Stainless Steel 304 | | |
| Shading Rings | Brass (Option: Silver, Nickel Plated) | | |

Process Valves Dimensions



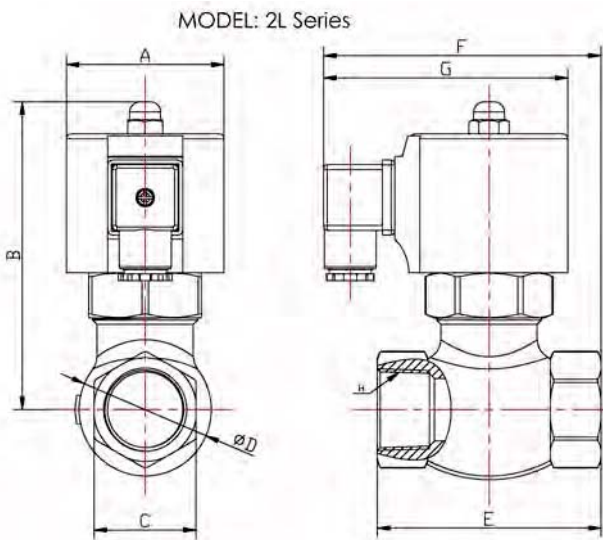
| High Pressure Stainless Steel Solenoid Valve Specifications & Dimensions (mm) | | | | | | | | | | |
|---|------|---------------|------|----|------|----|------|----|------------|-------------|
| MODEL | PORT | Cv (Orifice) | A | B | C | D | E | F | Pressure | Temperature |
| 2H012 | 1/8" | 0.05 (1.2MM) | 65.5 | 30 | 1/8" | 17 | 15.5 | M4 | 0-1000 PSI | 0-85°C |
| 2H016 | 1/8" | 0.085 (1.6MM) | 65.5 | 30 | 1/8" | 17 | 15.5 | M4 | 0-500 PSI | 0-85°C |

A=6/325
B=25
C=1/8"NPT
D=43.5
E=M5



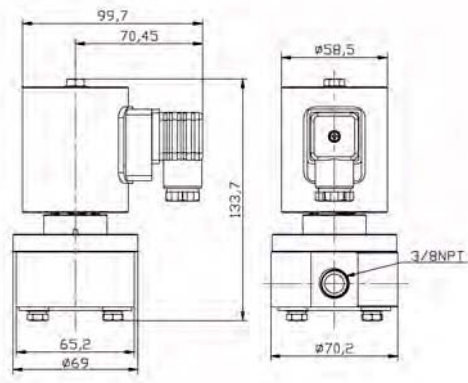
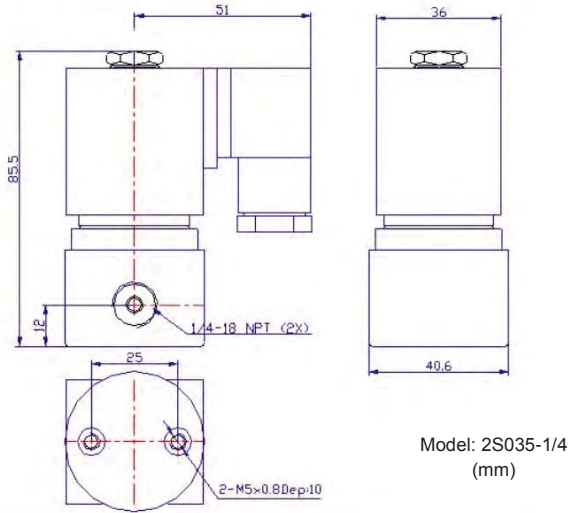
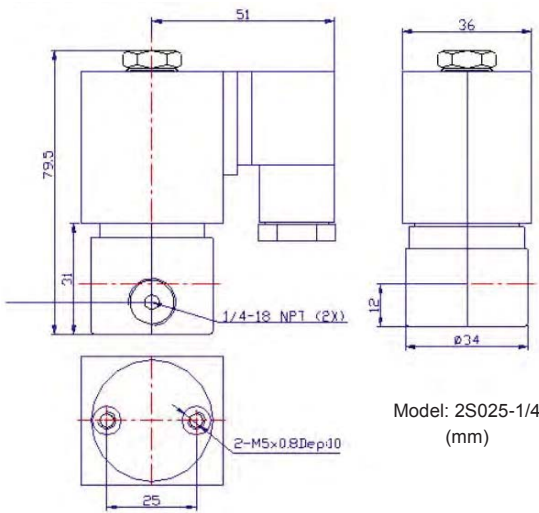
| Model: 2S & 2W Series (mm) | | | | | | | |
|----------------------------|-------|-----|-----|-----|------|----|---|
| Model | A | B | C | D | E | F | G |
| 2S160-3/8 2W160-3/8 | 101.5 | 57 | 117 | 69 | 50 | 36 | |
| 2S160-1/2 2W160-1/2 | 101.5 | 57 | 117 | 69 | 50 | 36 | |
| 2S200-3/4 2W200-3/4 | 107.0 | 57 | 124 | 73 | 50 | 36 | |
| 2S250-1 2W250-1 | 111.5 | 74 | 135 | 99 | 50 | 36 | |
| 2S350-1 1/4 2W350-1 1/4 | 142.0 | 95 | 172 | 123 | 70.5 | 56 | |
| 2S400-1 1/2 2W400-1 1/2 | 142.0 | 95 | 172 | 123 | 70.5 | 56 | |
| 2S500-2 2W500-2 | 172.0 | 123 | 209 | 168 | 70.5 | 56 | |

MODEL: 2W & 2S 160-500 SERIES VALVES UNIT IN MM (NOT TO SCALE)



| Model: 2L Series Dimensions (mm) | | | | | | | |
|----------------------------------|-------------------|----|-----|---------|-----|-----|----|
| Model | Port Size H (NPT) | A | B | C (hex) | E | F | G |
| 2L170-3/8 | 3/8 | 63 | 125 | 25.4 | 82 | 109 | 99 |
| 2L170-1/2 | 1/2 | 63 | 125 | 29.5 | 82 | 109 | 99 |
| 2L170-3/4 | 3/4 | 63 | 125 | 35 | 82 | 109 | 99 |
| 2L200-1 | 1 | 63 | 125 | 41 | 91 | 113 | 99 |
| 2L300-1 1/2 | 1 1/2 | 63 | 145 | 55 | 112 | 124 | 99 |
| 2L500-2 | 2 | 63 | 183 | 72 | 165 | 150 | 99 |

Process Valves Dimensions



2T060



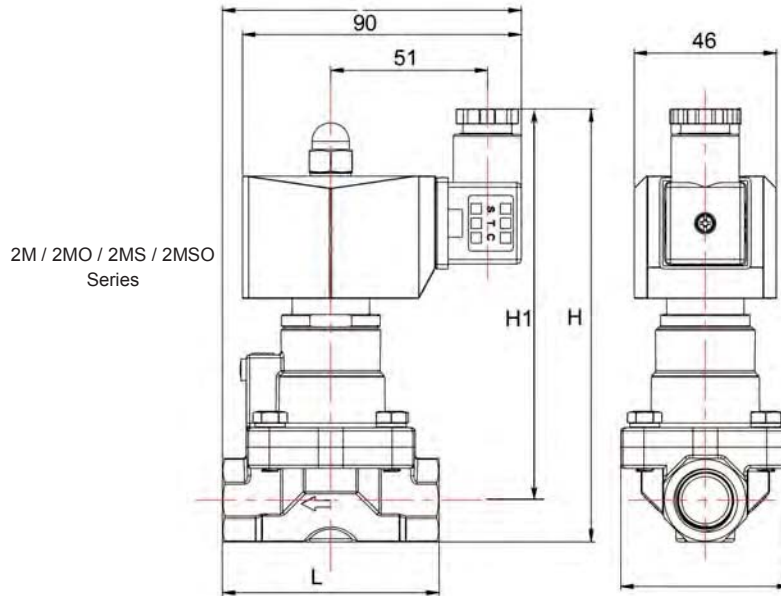
| Models: 2D & 2DS Series Dimensions (mm) | | | | | | | |
|---|-----------------|-----------------|--------------|---------|--------|--------|---------|
| Brass | Stainless Steel | Port Size (NPT) | Orifice (mm) | Cv (mm) | L (mm) | H (mm) | H1 (mm) |
| 2D150-1/2 | 2DS150-1/2 | 1/2 | 15 | 3.73 | 80 | 105 | 93 |
| 2D200-3/4 | 2DS200-3/4 | 3/4 | 20 | 7 | 87 | 114 | 98 |
| 2D250-1 | 2DS250-1 | 1 | 25 | 11 | 108 | 122 | 100 |
| 2D320-1 1/4 | 2DS320-1 1/4 | 1 1/4 | 32 | 14 | 130 | 131 | 107 |
| 2D400-1 1/2 | 2DS400-1 1/2 | 1 1/2 | 40 | 24.5 | 145 | 142 | 116 |
| 2D500-2 | 2DS500-2 | 2 | 50 | 35 | 177 | 155 | 123 |

2D & 2DS — 2 Way Slow Closing Pilot Diaphragm

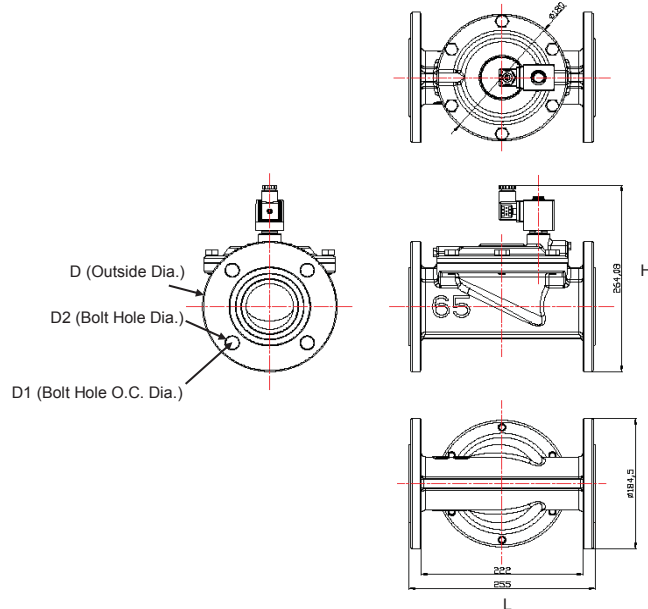
| Models: 2R & 2RS Series Dimensions (mm) | | | | | | | |
|---|-----------------|-----------------|--------------|---------|--------|--------|---------|
| Brass | Stainless Steel | Port Size (NPT) | Orifice (mm) | Cv (mm) | L (mm) | H (mm) | H1 (mm) |
| 2R150-3/8 | 2RS150-3/8 | 3/8 | 13 | 4.5 | 66.5 | 112.5 | 96.5 |
| 2R150-1/2 | 2RS150-1/2 | 1/2 | 15 | 4.5 | 66.5 | 112.5 | 96.5 |
| 2R200-3/4 | 2RS200-3/4 | 3/4 | 20 | 7.6 | 75 | 118 | 98 |
| 2R250-1 | 2RS250-1 | 1 | 25 | 12 | 96 | 124.5 | 104.5 |
| 2R320-1 1/4 | 2RS320-1 1/4 | 1 1/4 | 35 | 22 | 131 | 137 | 112 |
| 2R400-1 1/2 | 2RS400-1 1/2 | 1 1/2 | 40 | 30 | 131 | 150 | 130 |
| 2R500-2 | 2RS500-2 | 2 | 50 | 48 | 165 | 167 | 130 |



Process Valves Dimensions



| Model: 2M Series Dimensions (MM) | | | | | | | | | | | | | | |
|----------------------------------|-----------------|--------------------|-----------------|----------------------|---------|-----|-----|-----|-----|----------------|----------|--------------------|---------------------|-------------------|
| Normally Closed (NC) | | Normally Open (NO) | | Port Size H (NPT) | Orifice | Cv | L | H1 | H | Pressure (psi) | | Medium Temperature | Ambient Temperature | Power Consumption |
| Brass | Stainless Steel | Brass | Stainless Steel | | | | | | | NC | NO | | | |
| 2M150-1/2 | 2MS150-1/2 | 2MO150-1/2 | 2MSO150-1/2 | 1/2 | 15 | 4.5 | 75 | 117 | 140 | 6 to 230 | 6 to 145 | -4 to 356°F | -4 to 122°F | 20-30W |
| 2M200-3/4 | 2MS200-3/4 | 2MO200-3/4 | 2MSO200-3/4 | 3/4 | 20 | 7.6 | 75 | 122 | 147 | 6 to 230 | 6 to 145 | -4 to 356°F | -4 to 122°F | 20-30W |
| 2M250-1 | 2MS250-1 | 2MO250-1 | 2MSO250-1 | 1 | 25 | 12 | 92 | 143 | 155 | 6 to 230 | 6 to 145 | -4 to 356°F | -4 to 122°F | 20-30W |
| 2M320-1 1/4 | 2MS320-1 1/4 | 2MO320-1 1/4 | 2MSO320-1 1/4 | 1 1/4 | 32 | 22 | 110 | 143 | 155 | 6 to 230 | 6 to 145 | -4 to 356°F | -4 to 122°F | 20-30W |
| 2M400-1 1/2 | 2MS400-1 1/2 | 2MO400-1 1/2 | 2MSO400-1 1/2 | 1 1/2 | 40 | 30 | 122 | 145 | 160 | 6 to 230 | 6 to 145 | -4 to 356°F | -4 to 122°F | 20-30W |
| 2M500-2 | 2MS500-2 | 2MO500-2 | 2MSO500-2 | 2 | 50 | 48 | 161 | 157 | 179 | 6 to 230 | 6 to 145 | -4 to 356°F | -4 to 122°F | 20-30W |



| Model: 2DS Series Valves Dimensions (MM) | | | | | | | | | | |
|--|----------------|-----------|---------|-------|--------|---------|----------------------|-----|-----|-----|
| Normally Closed | Normally Open | Port Size | Orifice | Cv | D (OD) | D1 (OC) | D2 (Thread Hole Dia) | L | H | H1 |
| 2DS400F-1 1/2 | 2DSO400F-1 1/2 | 1 1/2 | 40 | 21 | 150 | 110 | 18 (4x) | 182 | 196 | 125 |
| 2DS500F-2 | 2DSO500F-2 | 2 | 50 | 30 | 165 | 125 | 18 (4x) | 215 | 200 | 120 |
| 2DS650F-2 1/2 | 2DSO650F-2 1/2 | 2 1/2 | 65 | 52.5 | 185 | 145 | 18 (4x) | 256 | 280 | 185 |
| 2DS800F-3 | 2DSO800F-3 | 3 | 800 | 81.7 | 200 | 160 | 18 (8x) | 277 | 287 | 190 |
| 2DS1000F-4 | 2DSO1000F-4 | 4 | 100 | 128.4 | 220 | 180 | 18 (8x) | 350 | 330 | 230 |
| 2DS1250F-4 | 2DSO1250F-4 | 5 | 125 | 221.7 | 250 | 210 | 18 (8x) | 425 | 437 | 310 |
| 2DS1500F-4 | 2DSO1500F-4 | 6 | 150 | 291.7 | 285 | 240 | 22 (8x) | 450 | 460 | 318 |
| 2DS2000F-4 | 2DSO2000F-4 | 8 | 200 | 513.5 | 340 | 295 | 22 (12x) | 560 | 547 | 380 |

Manual Valves Price, Dimensions & Specifications

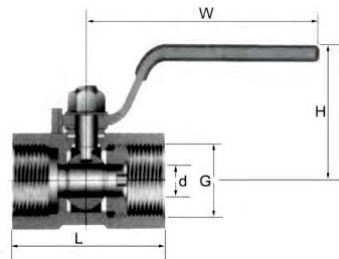


| Model | Reduced Port Ball Valves | | Full Port Ball Valves | | Full Port Ball Valves | | Full Port Ball Valves | |
|----------|--------------------------|------------|-----------------------|------------|-----------------------|------------|-----------------------|------------|
| Material | 316SS | | 316SS | | 316SS | | 316SS | |
| Port | FNPT | | FNPT | | FNPT | | Clamp | |
| Size | Part No. | List Price | Part No. | List Price | Part No. | List Price | Part No. | List Price |
| 1/4" | V1-1/4 | \$10.98 | V2-1/4 | \$21.16 | V3-1/4 | \$25.61 | | |
| 3/8" | V1-3/8 | \$10.98 | V2-3/8 | \$21.16 | V3-3/8 | \$25.61 | | |
| 1/2" | V1-1/2 | \$12.13 | V2-1/2 | \$27.02 | V3-1/2 | \$30.34 | | |
| 3/4" | V1-3/4 | \$17.65 | V2-3/4 | \$31.58 | V3-3/4 | \$38.63 | | |
| 1" | V1-1 | \$22.78 | V2-1 | \$47.31 | V3-1 | \$52.16 | V3C-1 | \$94.80 |
| 1 1/4" | V1-1 1/4 | \$33.49 | V2-1 1/4 | \$69.90 | V3-1 1/4 | \$79.16 | | |
| 1 1/2" | V1-1 1/2 | \$45.74 | V2-1 1/2 | \$99.86 | V3-1 1/2 | \$109.45 | V3C-1 1/2 | \$186.92 |
| 2" | V1-2 | \$65.65 | V2-2 | \$121.59 | V3-2 | \$147.63 | V3C-2 | \$232.89 |
| 3" | | | | | V3-3 | \$639.44 | V3C-3 | \$702.68 |
| 4" | | | | | V3-4 | \$847.08 | V3C-4 | \$1,161.50 |

| Model | Miniature Ball Valves | | Miniature Ball Valves | | Needle Valves | |
|----------|-----------------------|------------|-----------------------|------------|---------------|------------|
| Material | Chrome-Plated Brass | | Chrome-Plated Brass | | 316SS | |
| Port | FNPT | | F x M NPT | | FNPT | |
| Size | Part No. | List Price | Part No. | List Price | Part No. | List Price |
| 1/4" | T400-1/4 | \$4.15 | T400FM-1/4 | \$4.15 | VNO1-1/4 | \$40.82 |
| 3/8" | T400-3/8 | \$4.26 | T400FM-3/8 | \$4.26 | VNO1-3/8 | \$40.82 |
| 1/2" | T400-1/2 | \$5.33 | T400FM-1/2 | \$5.33 | VNO1-1/2 | \$46.52 |
| 3/4" | | | | | VNO1-3/4 | \$65.68 |
| 1" | | | | | VNO1-1 | \$89.00 |



| V1 Valve Specifications |
|---|
| One Piece Reduced Port 316 Stainless Steel Ball Valve |
| Maximum Operating Pressure: 1000 PSIG @ 100°F WOG* |
| Operating Temperature Range: -60 to 450°F |
| End Connections: NPT Threaded with Padlocking Device |

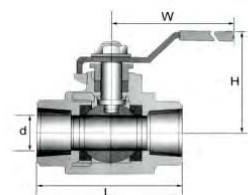


| Dimensions (mm) | | | | | | |
|-----------------|------|------|------|-----|---------|--|
| Size | d | L | H | W | Wt (kg) | |
| 1/4" | 5 | 39 | 35 | 64 | 0.07 | |
| 3/8" | 7 | 44 | 37 | 70 | 0.1 | |
| 1/2" | 9.2 | 56.5 | 43.5 | 90 | 0.16 | |
| 3/4" | 12.5 | 58 | 47 | 90 | 0.25 | |
| 1" | 15 | 70 | 50 | 103 | 0.43 | |
| 1 1/4" | 20 | 78 | 57 | 103 | 0.7 | |
| 1 1/2" | 24.5 | 83 | 69 | 127 | 0.83 | |
| 2" | 32 | 100 | 74.5 | 127 | 1.5 | |

| Main Parts and Materials | | | |
|--------------------------|---------------|------------|-----|
| No | Part Name | Material | Qty |
| 1 | Seat | PTFE | 2 |
| 2 | Ball | SS316 | 1 |
| 3 | Joint Gasket | PTFE | 1 |
| 4 | Cap | SS316 | 1 |
| 5 | Body | SS316/CF8M | 1 |
| 6 | Stem | SS316 | 1 |
| 7 | Thrust Washer | PTFE | 1 |
| 8 | Stem Packing | PTFE | 1 |
| 9 | Gland Nut | SS304 | 1 |
| 10 | Stem Washer | SS304 | 1 |
| 11 | Stem Nut | SS304 | 1 |
| 12 | Handle Cover | PLASTIC | 1 |
| 13 | Handle | SS304 | 1 |



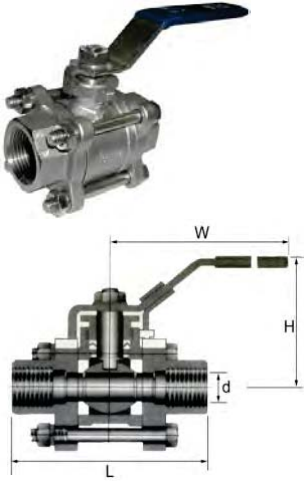
| V2 Valve Specifications |
|--|
| Two Piece Full Port 316 Stainless Steel Ball Valve |
| Maximum Operating Pressure: 1/4" to 2" 1000 PSIG @ 100°F WOG* |
| 2 1/2" to 3" 800 PSIG @ 100°F WOG* |
| Temperature Range: -60 to 450°F |
| End Connections: NPT Threaded with Padlocking & Panel Mount Device |



| Dimensions (mm) | | | | | | | | | | |
|-----------------|------|------|------|------|------|--------|--------|------|--------|-----|
| Size | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" |
| d | 11.6 | 12.7 | 15 | 20 | 25.4 | 32 | 38 | 50.8 | 65 | 76 |
| L | 55 | 55 | 63.5 | 75 | 88 | 103 | 110 | 124 | 167 | 192 |
| H | 48 | 48 | 50 | 57 | 69 | 73 | 83 | 92 | 136 | 149 |
| W | 103 | 103 | 103 | 125 | 145 | 145 | 190 | 190 | 250 | 250 |

| Main Parts and Materials | | | |
|--------------------------|---------------|------------|-----|
| No | Part Name | Material | Qty |
| 1 | Seat | PTFE | 2 |
| 2 | Ball | SS316 | 1 |
| 3 | Joint Gasket | PTFE | 1 |
| 4 | Cap | SS316 | 1 |
| 5 | Body | SS316/CF8M | 1 |
| 6 | Stem | SS316 | 1 |
| 7 | Thrust Washer | PTFE | 1 |
| 8 | Stem Packing | PTFE | 1 |
| 9 | Gland Nut | SS304 | 1 |
| 10 | Stem Washer | SS304 | 1 |
| 11 | Stem Nut | SS304 | 1 |
| 12 | Handle Cover | PLASTIC | 1 |
| 13 | Handle | SS304 | 1 |

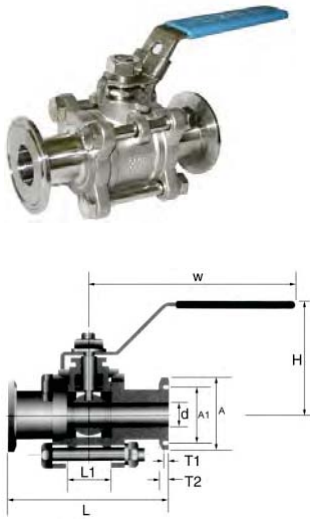
Manual Valves Dimensions & Specifications



| V3 Valve Specifications | |
|---|--|
| Maximum Operating Pressure: 1/2" to 2" 1000 PSI @ 100°F WOG* 2 1/2" to 3" 800 PSI @ 100°F WOG* | |
| Temperature Range: -60 to 450°F | |
| Full Port | |
| End Connections: FNPT | |
| Mounting Options: Padlocking Device and Actuator Mounting Bracket | |

| | | Dimensions (mm) | | | | | | | | | | | |
|------|----|-----------------|------|------|------|------|--------|--------|------|--------|------|-------|--|
| SIZE | | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" | |
| d | mm | 12.5 | 12.5 | 15 | 20 | 25 | 30 | 38 | 50 | 64 | 80 | 98 | |
| | in | 0.49 | 0.49 | 0.59 | 0.79 | 0.98 | 1.18 | 1.5 | 1.97 | 2.52 | 3.15 | 3.86 | |
| H | mm | 57 | 57 | 68 | 70 | 80 | 84 | 93 | 100 | 142 | 155 | 172 | |
| | in | 2.24 | 2.24 | 2.68 | 2.76 | 3.15 | 3.31 | 3.66 | 3.94 | 5.59 | 6.1 | 6.77 | |
| W | mm | 96 | 96 | 124 | 124 | 142 | 142 | 202 | 202 | 250 | 250 | 300 | |
| | in | 3.78 | 3.78 | 4.88 | 4.88 | 5.99 | 5.99 | 7.95 | 7.95 | 9.84 | 9.84 | 11.81 | |
| L | mm | 68 | 68 | 72 | 83 | 90 | 112 | 120 | 147 | 174 | 193 | 216 | |
| | in | 2.56 | 2.56 | 2.84 | 3.35 | 3.62 | 4.33 | 4.48 | 5.59 | 6.85 | 7.6 | 8.5 | |

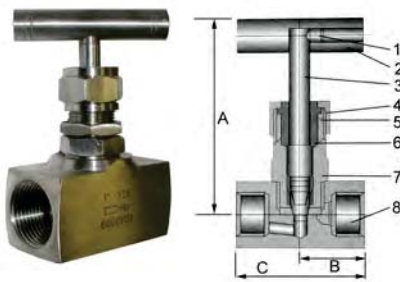
| Main Parts and Materials | | | |
|--------------------------|-----------------------------|------------|------|
| No | Part Name | Material | Qty |
| 1 | Seat | PTFE | 2 |
| 2 | Ball | SS316 | 1 |
| 3 | Joint Gasket | PTFE | 1 |
| 4 | Cap | SS316 | 1 |
| 5 | Body, Body Connector | SS316/CF8M | 1, 2 |
| 6 | Stem | SS316 | 1 |
| 7 | Thrust Washer | PTFE | 1 |
| 8 | Stem Packing | PTFE | 1 |
| 9 | Gland Nut | SS304 | 1 |
| 10 | Stem Washer | SS304 | 1 |
| 11 | Stem Nut | SS304 | 1 |
| 12 | Handle Cover | PLASTIC | 1 |
| 13 | Handle | SS304 | 1 |
| 14 | Body Connector Bolt | SS304 | 4 |
| 15 | Body Connector Nut & Washer | SS304 | 4 |



| V3C Valve Specifications | |
|--|--|
| Sanitary Stainless Steel Ball Valve: These valves are made with precision machined Teflon seats for use in sanitary applications. They are three piece designs and have four bolts that permit quick and easy access to service the valve without disrupting the pipeline connections. | |
| Maximum Operating Pressure: 1/2" to 2" 1000 PSI @ 100°F WOG* 2 1/2" to 4" 800 PSI @ 100°F WOG* | |
| Temperature Range: -60 to 450°F | |
| Full Port | |
| End Connections: Clamp End | |
| Mounting Options: Padlocking device and actuator mounting bracket. | |

| | | Dimensions (mm) | | | | | | | |
|--------|----------|-----------------|-------|-------|-----|------|------|-----|--|
| Size | Port (d) | L | A | A1 | H | T1 | T2 | W | |
| 1/2" | 9.6 | 75 | 25 | 20.24 | 64 | -- | 3.63 | 125 | |
| 3/4" | 15.9 | 90 | 25 | 20.24 | 67 | -- | 3.63 | 125 | |
| 1" | 22.2 | 100 | 50.4 | 43.6 | 83 | 2.85 | 4.75 | 140 | |
| 1 1/4" | 28.5 | 110 | 50.4 | 43.6 | 89 | 2.85 | 4.75 | 140 | |
| 1 1/2" | 34.9 | 125 | 50.4 | 43.6 | 100 | 2.85 | -- | 200 | |
| 2" | 47.5 | 150 | 63.9 | 56.3 | 108 | 2.85 | -- | 200 | |
| 2 1/2" | 60.2 | 190 | 77.4 | 70.6 | 150 | 2.85 | -- | 250 | |
| 3" | 72.9 | 220 | 90 | 83.3 | 161 | 2.85 | -- | 250 | |
| 4" | 97.4 | 270 | 118.9 | 110.3 | 180 | 2.85 | -- | 250 | |

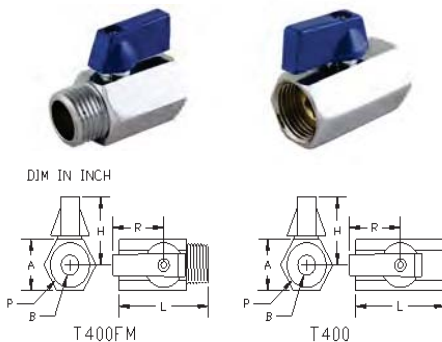
| Main Parts and Materials | | | |
|--------------------------|------------------------|------------|------|
| No | Part Name | Material | Qty |
| 1 | Seat | PTFE | 2 |
| 2 | Ball | SS316 | 1 |
| 3 | Joint Gasket | PTFE | 1 |
| 4 | Cap | SS316 | 1 |
| 5 | Body, Body Connector | SS316/CF8M | 1, 2 |
| 6 | Stem | SS316 | 1 |
| 7 | Thrust Washer | PTFE | 1 |
| 8 | Stem Packing | PTFE | 1 |
| 9 | Gland Nut | SS304 | 1 |
| 10 | Stem Washer | SS304 | 1 |
| 11 | Stem Nut | SS304 | 1 |
| 12 | Handle Cover | Plastic | 1 |
| 13 | Handle | SS304 | 1 |
| 14 | Connector Bolt | SS304 | 4 |
| 15 | Connector Nut & Washer | SS304 | 4 |



| VN01 Valve Specifications | |
|--|--|
| End Connections: NPT threaded ASME b1.20.1 | |
| DIN 2999 & BS21; ISO 228/1 & ISO 7/1 | |
| Max. Operating Pressure: 6000 PSIG @ 100°F | |
| Operating Temperature Range: -60 to 450°F | |
| Panel Mount & Fire Safe Design | |
| Non-Rotating, hardened needle design for leak-tight shutoff and long service life. | |

| | | Dimensions (mm) | | | | |
|------------|------|-----------------|------|------|------|----|
| Size | | 1/4" | 3/8" | 1/2" | 3/4" | 1" |
| A | 75 | 75 | 87 | 90 | 103 | |
| B | 25 | 25 | 30 | 32.5 | 40 | |
| C | 50 | 50 | 60 | 65 | 80 | |
| Cv | 0.43 | 0.74 | 1.36 | 2.64 | 3.6 | |
| Panel Hole | 20 | 20 | | 22 | 24 | |

| Main Parts and Materials | | |
|--------------------------|-----------|------------|
| No | Part Name | Material |
| 1 | Set Screw | SS304 |
| 2 | Handle | SS410 |
| 3 | Stem | SS316 |
| 4 | Gland Nut | SS304 |
| 5 | Gland | SS304 |
| 6 | Packing | TEFLON |
| 7 | Bonnet | SS316/CF8M |
| 8 | Body | SS316/CF8M |



| T400 & T400FM Valve Specifications | | |
|------------------------------------|-------------------------------|--------|
| Valve Type | T400 | T400FM |
| Operating Pressure | 0-450 PSI @ 75 °F | |
| Operating Temperature | 0 TO 200 Deg. F | |
| Ball | Chrome Plated Brass | |
| Body Materials | Chrome or Nickel Plated Brass | |
| Seal Materials | PTFE | |
| Handle | Metal or Plastic | |
| Service | Air, Liquid | |

| | A | B (BORE) | H | L | P (NPT) | R |
|------------|------|----------|------|------|---------|------|
| T400 1/4 | 0.80 | 0.31 | 1.00 | 1.58 | 1/4 | 0.93 |
| T400 3/8 | 0.80 | 0.31 | 1.00 | 1.58 | 3/8 | 0.93 |
| T400 1/2 | 0.96 | 0.39 | 1.10 | 1.78 | 1/2 | 0.93 |
| T400FM 1/4 | 0.80 | 0.31 | 1.00 | 1.58 | 1/4 | 0.93 |
| T400FM 3/8 | 0.80 | 0.31 | 1.00 | 1.58 | 3/8 | 0.93 |
| T400FM 1/2 | 0.96 | 0.39 | 1.10 | 1.78 | 1/2 | 0.93 |