

304 Series Three-Way, Two Position Low Pressure Valve

Application 2"- 4" Valve

- Used for diverting or metering applications
- Designed for LACT units and other metering skids, low pressure well test manifolds and other applications requiring a diverting flow
- Flow passes through one common upper port to either the other upper side port or to the lower divert port
- Choice of actuation:
 - Pneumatic operated topworks
 - spring on top with air supply required to divert flow or
 - spring under with air supply required for straight through, side to side flow
 - Hydraulic electric actuator
- NACE material packages available

Features and Benefits of the 304 Series Valve

- In-line serviceability of internal components
- Packing gland and seals material options
- Variety of trim plug and seat materials
- Heavy duty sealed visual indicator available
- Rebuild Kits available for all Pathway valves

Benefits of ALL Pathway Control Products

- Personalized service and support expertise
- Responsive, on-time delivery
- Time-tested & proven design providing dependable, long-term service
- Valves and castings Made in USA



304 Series

Three-Way, Two Position Low Pressure Valve

Specifications

| Working Pressure: | 2" | 3" | 4" | 4H" High Flow |
|--------------------|----------|----------|----------|---------------|
| Threaded & Grooved | 600 psig | 300 psig | 300 psig | - |
| 150# RF Flange | 275 psig | 275 psig | 275 psig | 275 psig |
| 300# RF Flange | 600 psig | 300 psig | 300 psig | - |

Temperature: -20° F to +180° F; Available to +240° F maximum temperature

| Topworks: | |
|--------------------|--|
| Pneumatic Actuated | Pressed steel diaphragm housing; Nitrile diaphragm (nylon reinforced) 50 psig maximum |
| Electric Actuated | Adaptor for Hydraulic Electric Actuator |

| Topworks Diameter: | 13 ³ / ₁₆ " | 13 ³ / ₁₆ " | 13 ³ / ₁₆ " | 18" |
|--------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|
| Effective Area: | 62 in ² | 62 in ² | 62 in ² | 123 in ² |

| Cv Factor: | | | | |
|-----------------------|----|-----|-----|-----|
| Common to Upper Port | 48 | 105 | 115 | 162 |
| Common to Divert Port | 64 | 150 | 160 | 224 |

Material Selections

Body: Ductile ASTM A395; nickel plating available for added corrosion resistance

Stem: 303 SST; Nitronic 50 stem available

Seals & Packing: Nitrile/molythane/brass packing gland, nitrile seals standard;
Available in:
 Fluorocarbon/brass packing gland, fluorocarbon seals
 Nitrile/molythane/316 SST packing gland, nitrile seals, Nitronic 50 stem
 Fluorocarbon/316 SST packing gland, fluorocarbon seals, Nitronic 50 stem
 PTFE V-Pak/brass packing gland, nitrile seals
 PTFE V-Pak/brass packing gland, fluorocarbon seals
 PTFE V-Pak/316 SST packing gland, fluorocarbon seals, Nitronic 50 stem

Trim Seat: Removable 303 SST standard
Removable 316 SST, Hastelloy, 17-4 PH SST available

Trim Plug: Trim plug inserts available in Acetal, Polyurethane or Glass Filled PTFE
Hard trim available in 303 SST, 316 SST, Hastelloy, 17-4PH SST
Throttling-assist attachment available

NACE Package: NACE materials including 316 SST internal wetted components, Nitronic 50 stem, fluorocarbon/316 SST packing gland, fluorocarbon seals, Glass filled PTFE trim plug inserts; 316 SST or Hastelloy hard trim available

Maintenance

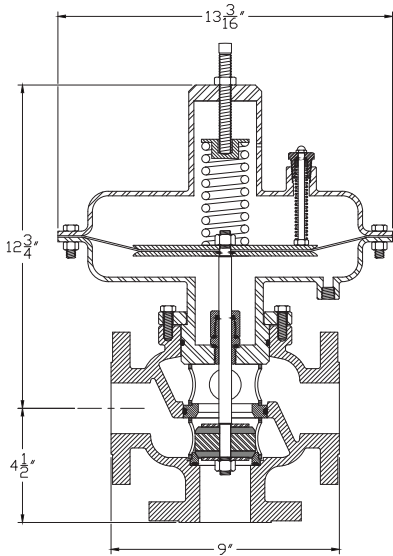
Rebuild Kits: Rebuild Kits available which include: valve packing gland, seals, trim plugs, valve stem, lock nuts and diaphragm (if applicable)

304 Series

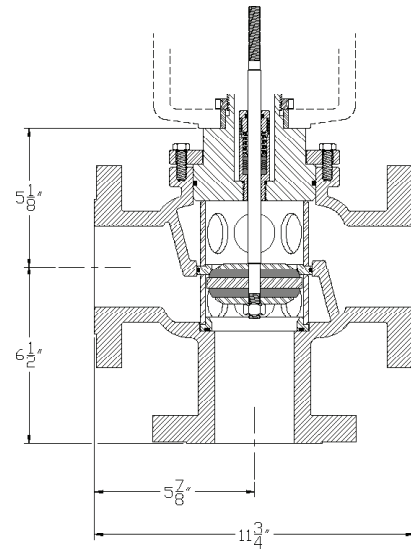
Three-Way, Two Position Low Pressure Valve

Sample Models

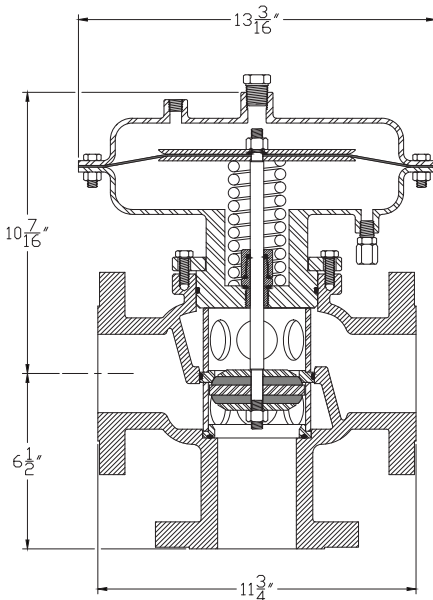
304-231-12A2



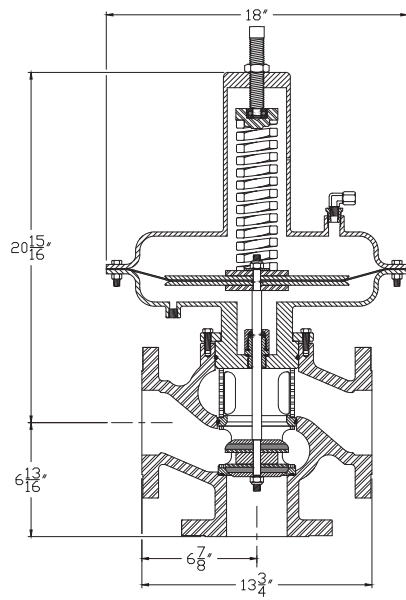
304-337-12E1



304-332-12A1



304-4H31-12A1



| Flanged Valve Dimensions | | |
|--------------------------|--------------|------------|
| | Face to Face | CL to Face |
| 2" 150# RF | 9" | 4 1/2" |
| 3" 150# RF | 11 3/4" | 6 1/2" |
| 4" 150# RF | 11" | 6 1/8" |
| 4H" 150# RF | 13 3/4" | 6 13/16" |
| 2" 300# RF | 9 1/4" | 4 5/8" |
| 3" 300# RF | 12" | 6 3/4" |
| 4" 300# RF | 14 3/4" | 7 1/2" |

| Threaded & Grooved Valve Dimensions | | |
|-------------------------------------|--------------|------------|
| | Face to Face | CL to Face |
| 2" | 9" | 4 1/2" |
| 3" | 10 3/4" | 5 3/8" |
| 4" | 11" | 6 1/8" |
| Other Dimensions | | |

The Centerline to topworks dimensions vary by the topworks selected and by valve size. Please Contact Pathway for dimensions of your particular valve model.

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Ordering Chart Example:

304 - 3 3 1 - 1 2 A 2

(#) Option #, see Special Materials & Features below

| VALVE SIZE | |
|------------|---|
| 2 | 2" (Topworks 1,2,3,6 or 7) |
| 3 | 3" (Topworks 1,2,3,6 or 7) |
| 4 | 4" (Topworks 1,2,3,6 or 7) |
| 4H | 4" Higher flow body (Topworks 4,7,8 or 9) |

| CONNECTION | |
|------------|---|
| 1 | Threaded (not available on 4H) |
| 2 | Grooved (not available on 4H) |
| 3 | Flanged - 150# RF |
| 4 | Flanged - 300# RF welded on 3" and 4" (not available on 4H) |

| TOPWORKS | |
|---|--|
| Diaphragm Operated | |
| 1 | Spring on top (62 in ²) - fail common port to upper |
| 2 | Spring under (62 in ²) - fail common port to lower |
| 3 | Pressure balanced (62 in ²) |
| 4 | Spring on top (123 in ²) - fail common port to upper |
| 8 | Spring under (123 in ²) - fail common port to lower |
| 9 | Pressure Balanced (123 in ²) |
| Adaptor for Hydraulic Electric Actuator | |
| 6 | Adaptor, actuator H10/11-B2 |
| 7 | Adaptor, actuator H30/31-B10/21; H10/11-B8 |

| TRIM SEATS | |
|------------|------------------|
| 1 | 303 SST standard |
| 2 | 316 SST |
| H | Hastelloy |
| P | 17-4 PH SST |

| TRIM PLUGS | |
|------------|---|
| 2 | Acetal |
| 3 | Polyurethane |
| 4 | PTFE glass-filled |
| 8 | 303 SST hard trim |
| 9 | 316 SST hard trim |
| H | Hastelloy hard trim |
| P | 17-4 PH SST hard trim |
| T | Throttling-assist attachment (added to above) |

| Added Selections (add as needed) | |
|------------------------------------|--|
| 1 | No visual indicator |
| 2 | Heavy duty sealed visual indicator |
| N | NACE material - also choose: Trim Seat 2 or H Trim Plug 2, 3, 4, 9 or H Seals & Packing C, D or F |
| P | Nickel-plated non-stainless wetted parts |
| S | Stress relief for welded flanges |

| SEALS & PACKING | |
|-----------------|--|
| A | Nitrile/molythane/brass packing gland, nitrile seals |
| B | Fluorocarbon/brass packing gland, fluorocarbon seals |
| C | Nitrile/molythane/316 SST packing gland, nitrile seals, Nitronic 50 stem |
| D | Fluorocarbon/316 SST packing gland, fluorocarbon seals, Nitronic 50 stem |
| E | PTFE V-Pak/brass packing gland, nitrile seals |
| F | PTFE V-Pak/316 SST packing gland, fluorocarbon seals, Nitronic 50 stem |
| G | TFE V-Pak/brass packing gland, fluorocarbon seals |

| SPECIAL MATERIAL & FEATURES | |
|-----------------------------|--|
| 5 | Used by Pathway to indicate custom material and/or feature. Placed in model number in the position it relates to (eg. trim plug, trim seat, etc.). When used, an option number will be assigned by Pathway (see below) |
| (#) | Option # (in parentheses at end of model number) Pathway will assign option number unique to custom material and/or features |