

401 Series Two Way, No-Freeze 1" Angle Valve

Application

- Used for snap acting on-off control of higher pressure liquids or gas
- Oil and gas separators, gas scrubbers and liquid accumulators are typical applications
- Valve trim placement is inside the vessel in direct contact with process fluid to prevent freezing
- Pneumatic operated topworks
- NACE material packages available

Features and Benefits of the 401 Series Valve

- 1" carbon steel body standard
- 316L Stainless steel body and wetted parts available
- Topworks available in 45 in², 23 in² and 9 in² sizes
- Fail closed for safety
- Variety of trim plug and seat materials
- Packing gland and seals material options
- 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 Made in USA



401 Series

Two Way, No-Freeze 1" Angle Valve

Specifications

Connection Size & Type: 1" MNPT vessel connection, 1" FNPT outlet

Working Pressure: 1500 psig

Maximum Differential Pressure:

| MAXIMUM DIFFERENTIAL PRESSURE (psig) | | | |
|--------------------------------------|------------------|-------------------|-------------------|
| Supply Pressure | 9 sq.in Actuator | 23 sq.in Actuator | 45 sq.in Actuator |
| 15 | 300 | 1025 | 1500 |
| 20 | 475 | 1450 | 1500 |
| 25 | 625 | 1500 | 1500 |
| 30 | 800 | 1500 | 1500 |

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

Topworks:

Pneumatic Actuated

Pressed steel 23 in² diaphragm housing (standard) or 45 in² housing; nitrile diaphragm (nylon-reinforced); available Cast iron 9 in² housing 50 psig maximum supply pressure

| Effective Area | Diameter |
|--------------------|----------|
| 23 in ² | 9" |
| 45 in ² | 10.5" |
| 9 in ² | 5.5" |

Trim Size:

½" (¾" equivalent)

CV Factor:

3.5

Material Selections

Body:

401

Carbon steel

401SS

316L stainless steel

Trim Set:

Snap acting, 303 SST trim plug, 303 SST trim seat standard;

Available in:

Snap acting, 316 SST trim plug, 316 SST trim seat

Snap acting, 17-4 PH SST plug, 17-4 PH SST seat

Seals & Packing:

Molythane/brass packing gland, nitrile seals standard;

Available in:

Fluorocarbon/brass packing gland, fluorocarbon seals

Molythane/316 SST packing gland, nitrile seals, K500 Monel stem

Fluorocarbon/316 SST packing gland, fluorocarbon seals, K500 Monel stem

Stem:

303 SST standard; K500 Monel available

NACE Package:

NACE materials include 316L SST body and wetted internal components, fluorocarbon/316SST packing gland, fluorocarbon seals, K500 Monel stem, 316 SST trim set

Maintenance

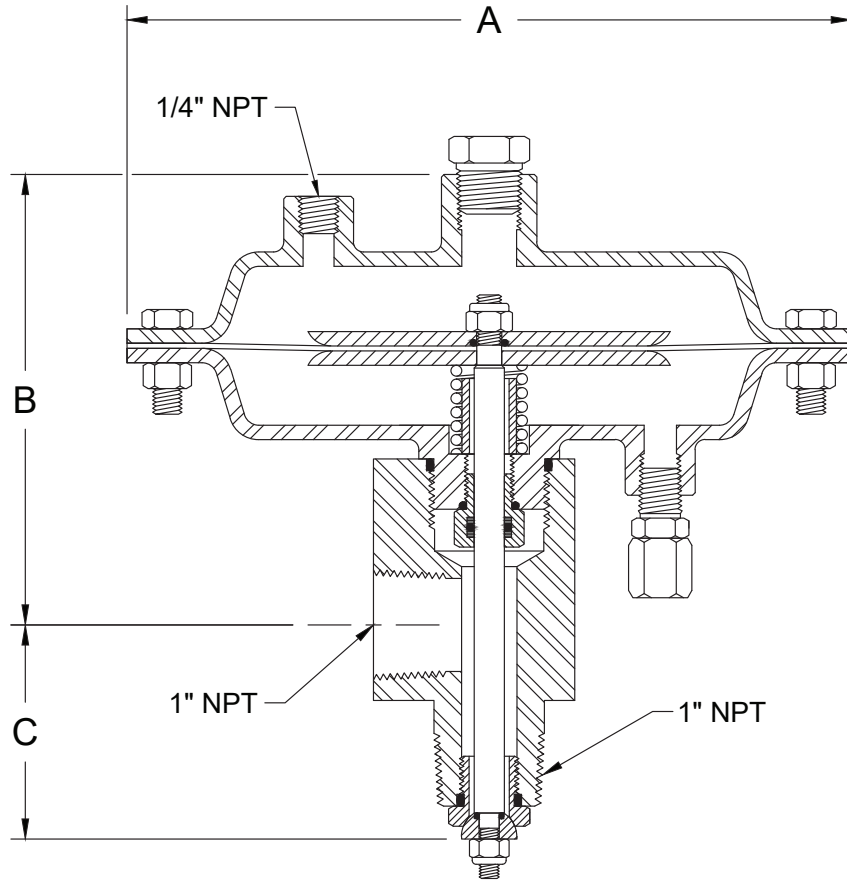
Rebuild Kits:

Rebuild Kits available which include: valve packing gland, seals, trim set, valve stem, lock nuts and diaphragm

401 Series
Two Way, No-Freeze 1" Angle Valve

Sample Model

MODEL 401-232-13A1



Dimensions for Standard Models

| | <u>401-231</u> | <u>401-232</u> | <u>401-233</u> |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| A | 5½" | 9" | 10½" |
| B | 4 ⁶ / ₁₆ " | 5 ⁵ / ₈ " | 6" |
| C | 2 ¹¹ / ₁₆ " | 2 ¹¹ / ₁₆ " | 2 ¹¹ / ₁₆ " |

401 Series

Two-Way No-Freeze 1" Angle Valve

Ordering Chart Example:

401- 2 3 2 - 1 3 A 1

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

Select 401 or 401SS

| 401 VALVE SIZE | |
|----------------|----------------------|
| 401 | |
| 2 | 1" Carbon steel body |

or

| 401SS VALVE SIZE | |
|------------------|------------------------------|
| 401SS | |
| 2 | 1" 316L Stainless steel body |

| CONNECTION | |
|------------|---|
| 3 | 1" MNPT vessel connection, 1" FNPT outlet |

| DIAPHRAGM OPERATED TOPWORKS | |
|-----------------------------|---|
| 1 | Spring under (9 in ² - fail closed) |
| 2 | Spring under (23 in ² - fail closed) |
| 3 | Spring under (45 in ² - fail closed) |

| TRIM TYPE | |
|-----------|---|
| 1 | Snap acting, 303 SST Plug, 303 SST Seat |
| 2 | Snap acting, 316 SST Plug, 316 SST Seat |
| 3 | Snap acting, 17-4 PH SST Plug, 17-4 PH SST Seat |

| TRIM SIZE | |
|-----------|------------------------|
| 3 | 1/2" (3/8" equivalent) |

| Other (as needed, add to end of model number) | |
|---|---|
| 1 | No visual indicator |
| 2 | Heavy duty sealed visual indicator (on topworks 2 & 3) |
| N | NACE material - also choose: Trim Type 2 or 3 (with 17-4 PH SST exception) Seals & Packing C or D |

| SEALS & PACKING | |
|-----------------|---|
| A | Nitrile/brass packing gland, nitrile seals |
| B | Fluorocarbon/brass packing gland, fluorocarbon seals |
| C | Nitrile/316 SST packing gland, nitrile seals, K500 Monel stem |
| D | Fluorocarbon/316 SST packing gland, fluorocarbon seals, K500 Monel stem |

| 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 |