

## 400 Series Two Way, No-Freeze 2" 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 400 Series Valve

- Carbon steel body with 2" vessel connection standard
- 316L Stainless steel body and wetted parts available
- Topworks available in 23 in<sup>2</sup> or 45 in<sup>2</sup> sizes
- Fail closed for safety
- Variety of trim plug and seat sizes and 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



## 400 Series Two Way, No-Freeze 2" Angle Valve

### Specifications

**Connection Size & Type:** 2" MNPT vessel connection, 1" FNPT outlet

**Working Pressure:** 4000 psig max

**Maximun Differential Pressure:**

Supply Pressure	MAXIMUM DIFFERENTIAL PRESSURE (psig)			
	23 sq.in Actuator 400-222		45 sq.in Actuator 400-223	
	3/8" Orifice	1/2" Orifice	3/8" Orifice	1/2" Orifice
15	850	500	2150	1500
20	1600	1000	3450	2400
25	2100	1450	4000	3600
30	2100	1450	4000	4000

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

### Topworks:

Pneumatic Actuated

Pressed steel diaphragm housing; nitrile diaphragm (nylon reinforced)  
50 psig maximum supply pressure

Effective Area	Diameter
23 in <sup>2</sup>	9"
45 in <sup>2</sup>	10.5"

### Trim Size:

1/4"  
3/8"  
1/2"

### CV Factor:

2.0  
4.4  
5.5

### Material Selections

#### Body:

400 Carbon steel  
400SS 316L stainless steel

### Trim Set:

Snap acting, 316 SST trim plug, 303 SST trim seat standard;  
Available in:  
Snap acting, 316 SST trim plug, 316 SST trim seat  
Snap acting carbide trim plug, 17-4 PH SST trim 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, Nitronic 50 stem  
Fluorocarbon/316 SST packing gland, fluorocarbon seals, Nitronic 50 stem

### Stem:

303 SST standard; Nitronic 50 available

### NACE Package:

NACE materials include 316L SST body and wetted internal components, fluorocarbon/316 SST packing gland, fluorocarbon seals, Nitronic 50 stem, 316 SST trim set

### Maintenance

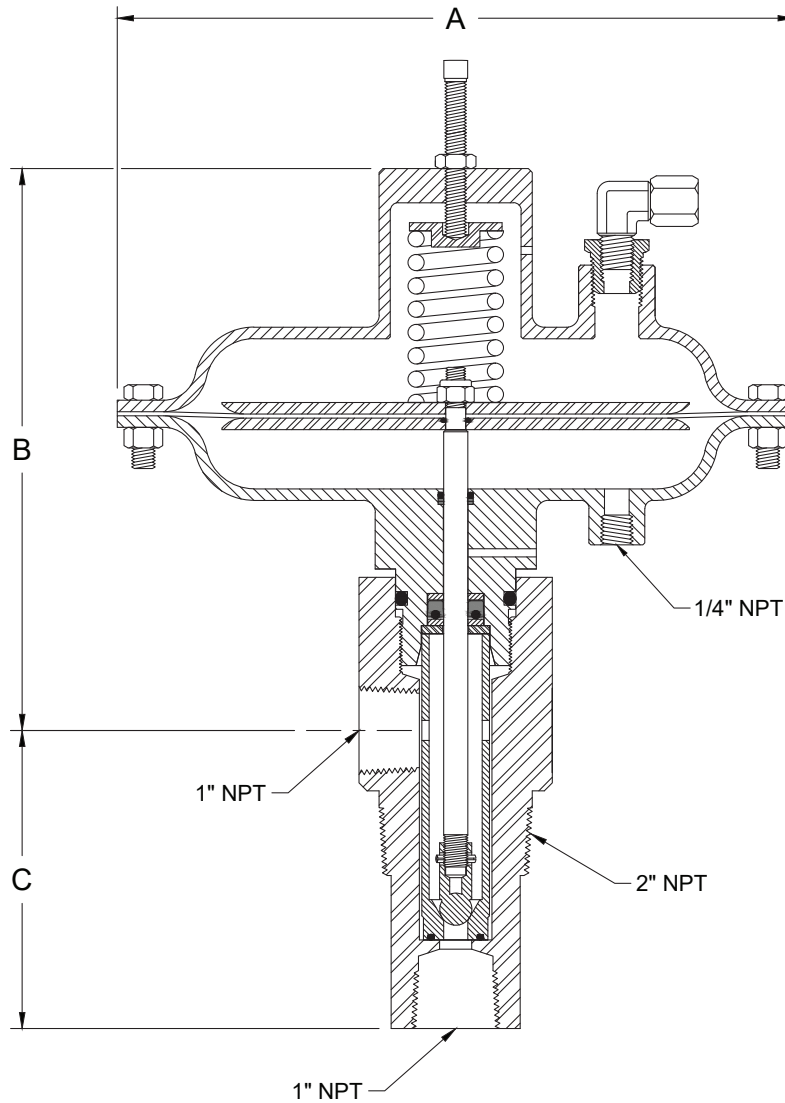
#### Rebuild Kits:

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

**400 Series**  
Two Way, No-Freeze 2" Angle Valve

**SAMPLE MODEL**

**MODEL 400-223-12A1**



**Dimensions for Standard Models**

	<u>400-222</u>	<u>400-223</u>
A	9"	10½"
B	8¼"	8⅝"
C	4⅝"	4⅜"

**CAUTION:**

Remove spring tension by backing off adjustment screw OR apply air pressure under diaphragm BEFORE removing topworks to prevent damage to trim.

## 400 Series

### Two Way, No-Freeze 2" Angle Valve

**Ordering Chart Example:** 400 - 2 2 3 - 1 2 A 2

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

Select 400 or 400SS

400 VALVE SIZE	
400	
2	2" Carbon steel body

or

400SS VALVE SIZE	
400SS	
2	2" 316L Stainless steel body

CONNECTION	
2	2" MNPT vessel connection, 1" FNPT outlet

DIAPHRAGM OPERATED TOPWORKS	
2	Spring on top (23 in <sup>2</sup> - fail closed)
3	Spring on top (45 in <sup>2</sup> - fail closed)

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

TRIM SIZE	
1	¼"
2	⅜"
3	½"

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

SEALS & PACKING	
A	Molythane/brass packing gland, nitrile seals
B	Fluorocarbon/brass packing gland, fluorocarbon seals
C	Molythane/316 SST packing gland, nitrile seals, Nitronic 50 stem
D	Fluorocarbon/316 SST packing gland, fluorocarbon seals, Nitronic 50 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