

410 Series

Three-Way, Two Position, Balanced Piston Higher Pressure Valve

Application

- Used for diverting, blending, or metering of water, oil and gas where large differential pressures are involved.
- Use on high pressure well test manifolds and salt water disposal systems is ideal.
- Also available in a 316L stainless steel body.

Features and Benefits of the 410 Series Valve

- High pressure differential may be operated with 30psig supply.
- All internal parts can be removed without taking the valve body from the line.
- Stainless steel seats and stem provide long product life.
- Available in 316L stainless steel body to CF8M specification.
- Soft trim for bubble tight shut off.

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

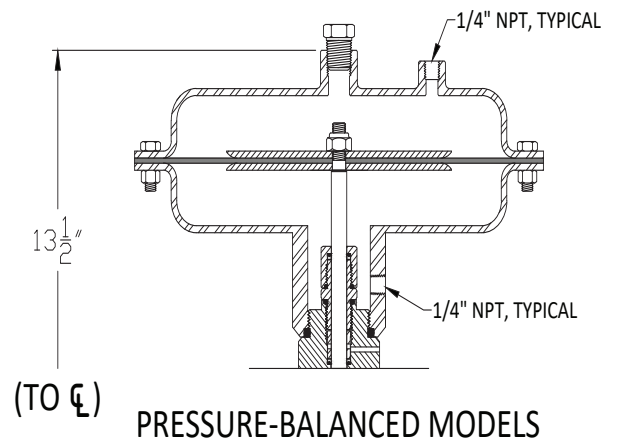
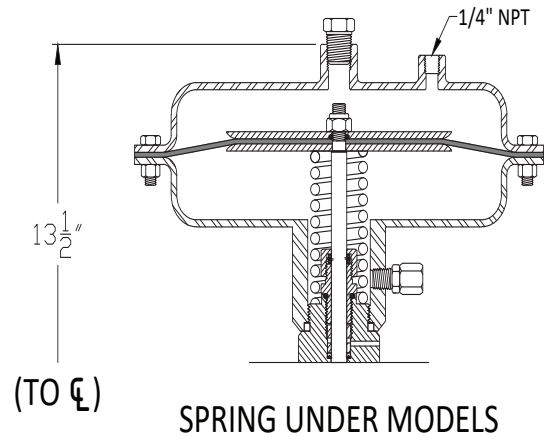
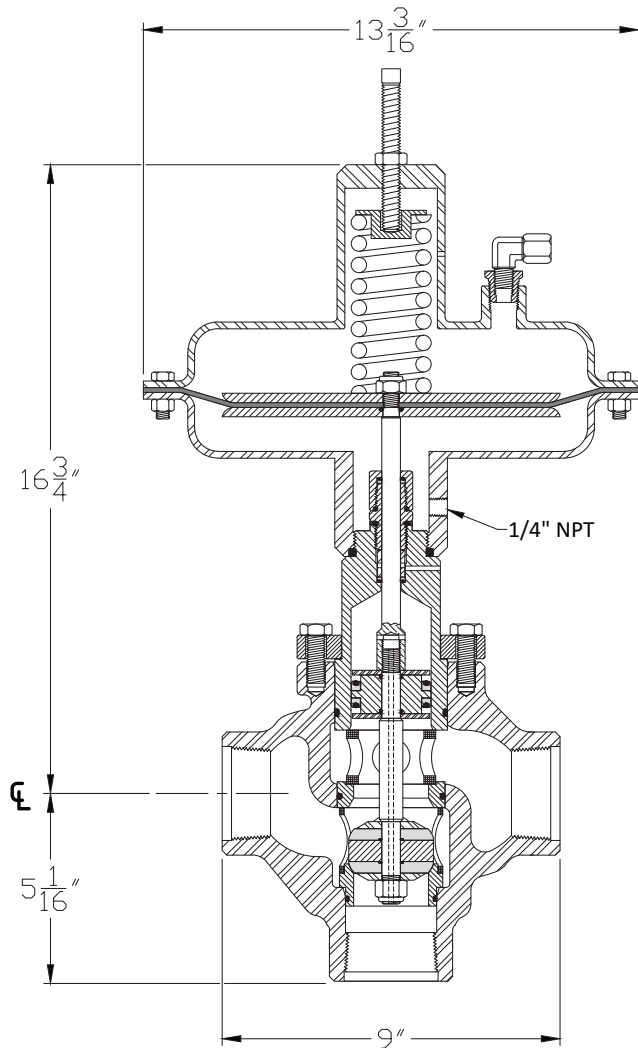


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Sample Models

410-211-12A1



Body Chart

Part #	Part #	Description
40119	40119	NPT Threaded
40062	40062	Beveled for weld
40463	40463	Flanged, 150# RF
40114	40114	Flanged, 300# RF
40115	40115	Flanged, 600# RF
40117	40117	Flanged, 600# RTJ
40116	40116	Flanged, 1500# RF
40118	40118	Flanged, 1500# RTJ

Other Flange Options Available, Contact Pathway

Flanged Models

Flange	Face to Face	CL to Face	W.P. @100°F
2" 150# RF or RTJ	9 5/8"	5 5/8"	275 psig
2" 300# RF or RTJ	10 1/4"	5 5/8"	720 psig
2" 600# RF or RTJ	10 3/8"	5 1/2"	1440 psig
2" 900# RF or RTJ	12"	6 3/4"	2160 psig
2" 1500# RF or RTJ	12"	6 3/4"	3000 psig

Special Face to Face available on flanged and beveled for weld connections.

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Specifications

Size: 2"

Working Pressure: 1500 psig standard, available to 3000 psig

Temperature: -20°F to +180°F; available to +240°F

Maximum 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

Topworks: Pressed steel with nylon reinforced nitrile diaphragm; 50 psig maximum supply pressure.

Effective Area: 62 sq. in.

Cv Factor:

C to U 48
C to L 70

Material

Body: Cast steel standard, available in 316L stainless steel

Stem: Stainless steel

Packing: Poly Pak

Packing Block: TFE V

Trim Seat: Stainless steel, removable.

Trim Plug: Fabricated acetal, polyurethane or TFE inserts.

NACE Package: NACE materials include 316 SST body and wetted internal components, fluorocarbon/316 SST 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 nut and diaphragm

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Ordering Chart Example: 410- 2 3 C 1 - 1 4 B 2 (#) Option #, see Special Materials & Features below

410 VALVE SIZE	
2	2" Carbon steel - 1500 psig body
3	2" Carbon steel - 3000 psig body
410SS VALVE SIZE	
2	2" 316L Stainless steel - 1500 psig body
3	2" 316L Stainless steel - 3000 psig body

CONNECTION	
1	Threaded
3	Flanged - add letter from Flange Chart
4	Beveled for weld

FLANGE CLASS/TYPE CHART	
Add when using connection 3	
A	150# RF
B	300# RF
C	600# RF
D	900# RF
E	1500# RF
F	150# RTJ
G	300# RTJ
H	600# RTJ
J	900# RTJ
K	1500# RTJ

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)
Adaptor for Hydraulic Electric Actuator	
6	Adaptor, actuator - H10/11-B2
7	Adaptor, actuator - H30/31-B10/21;H10/11-B8

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 Seat 2 or H Trim Plug 2,3,4,9 or H Seals & Packing C or D
P	Nickel-plated non-stainless wetted parts
S	Stress relief for welded flanges

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

TRIM PLUGS	
2	Acetal
3	Polyurethane
4	TFE glass-filled
8	303 SST hard trim
9	316 SST hard trim
H	Hastelloy hard trim
P	17-4 PH SST hard trim

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

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