

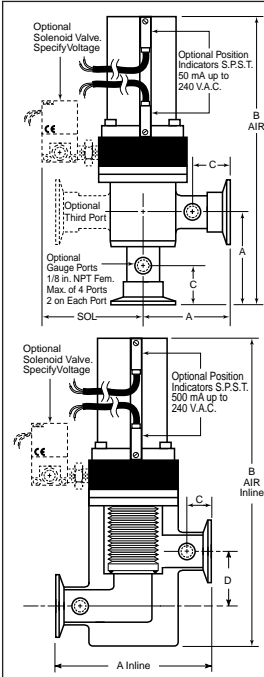


Aluminum and Stainless Steel Pneumatic or Manual Actuators, Angle or Inline Style with Port Sizes from NW-16 To NW-50

- Less Outgassing Than Stainless, See Pg. 43
- Aluminum or 304 Stainless Steel Bodies
- Leak Tested to Better Than  $5 \times 10^{-10}$  scc/s
- Select Welded Bellows or O-Ring Stem Seals
- Viton® Seat And Bonnet Seal Are Standard
- Kalrez® Seat & Bonnet Seals Also Available
- Gauge Fittings Available On Either Port
- Failsafe; Choose Spring Close Or Air Close
- All Valves (RoHS) 2002/95/EC Compliant

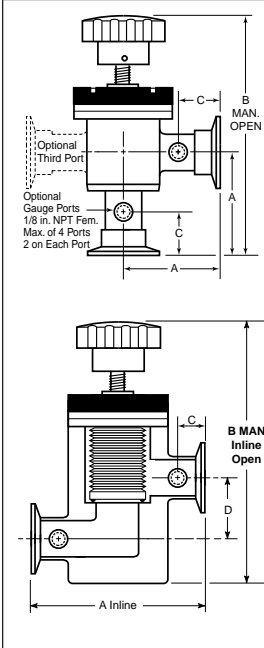
### Air To Open/Spring To Close

(See "Optional Features" on next page for Air Open/Air Close or Spring to Open)



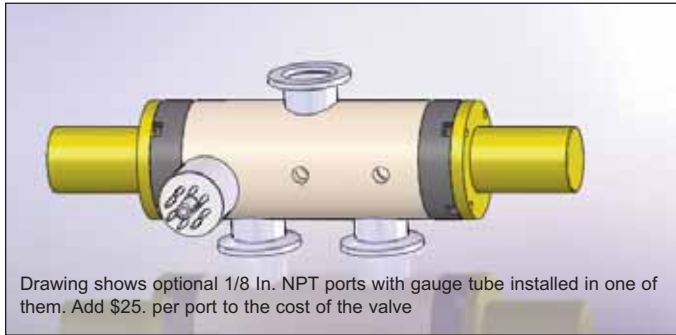
| Part Number                               | Description           | Angle Style |     |       | Inline Style |        |     |       |     |
|---|-----------------------|-------------|-----|-------|--------------|--------|-----|-------|-----|
|   |                       | Price       | A   | B Air | C            | Price  | A   | B Air | D   |
| For Inline Style replace "ANG" with "INL" |                       |             |     |       |              |        |     |       |     |
| SS-BEL-ANG-75-AIR                         | No Flanges, 0.75 O.D. | \$278.      | 2.1 | 6.2   | .85          | \$283. | 4.2 | 5.9   | 1.1 |
| SS-BEL-ANG-133-AIR                        | 1.33 CF on Both Ports | \$307.      | 2.1 | 6.2   | .85          | \$314. | 4.2 | 5.9   | 1.1 |
| SS-BEL-ANG-16-AIR                         | NW-16 on Both Ports   | \$307.      | 2.1 | 6.2   | .85          | \$314. | 4.2 | 5.9   | 1.1 |
| ALUM-BEL-ANG-16-AIR                       | Aluminum Body, NW-16  | \$260.      | 2.1 | 6.2   | .85          | \$284. | 4.2 | 5.9   | 1.1 |
| <b>Bellows Stem Seal</b>                  |                       |             |     |       |              |        |     |       |     |
| SS-BEL-ANG-1.0-AIR                        | No Flanges, 1.00 O.D. | \$329.      | 2.0 | 5.9   | .82          | \$340. | 4.0 | 6.1   | 1.4 |
| SS-BEL-ANG-212-AIR                        | 2.12 CF on Both Ports | \$345.      | 2.0 | 5.9   | .82          | \$350. | 4.0 | 6.1   | 1.4 |
| SS-BEL-ANG-25-AIR                         | NW-25 on Both Ports   | \$345.      | 2.0 | 5.9   | .82          | \$350. | 4.0 | 6.1   | 1.4 |
| ALUM-BEL-ANG-25-AIR                       | Aluminum Body, NW-25  | \$296.      | 2.0 | 5.9   | .82          | \$294. | 4.0 | 6.1   | 1.4 |
| <b>1,000,000 Cycles</b>                   |                       |             |     |       |              |        |     |       |     |
| SS-BEL-ANG-1.5-AIR                        | No Flanges, 1.50 O.D. | \$370.      | 2.4 | 7.8   | .90          | \$391. | 4.8 | 8.4   | 1.9 |
| SS-BEL-ANG-275-AIR                        | 2.75 CF on Both Ports | \$380.      | 2.4 | 7.8   | .90          | \$396. | 4.8 | 8.4   | 1.9 |
| SS-BEL-ANG-40-AIR                         | NW-40 on Both Ports   | \$380.      | 2.4 | 7.8   | .90          | \$396. | 4.8 | 8.4   | 1.9 |
| ALUM-BEL-ANG-40-AIR                       | Aluminum Body, NW-40  | \$349.      | 2.4 | 7.8   | .90          | \$387. | 4.8 | 8.4   | 1.9 |
| SS-BEL-ANG-2.0-AIR                        | No Flanges, 2.00 O.D. | \$473.      | 3.4 | 10.3  | 1.14         | \$499. | 6.8 | 11.0  | 2.6 |
| SS-BEL-ANG-338-AIR                        | 3.38 CF on Both Ports | \$478.      | 3.4 | 10.3  | 1.14         | \$504. | 6.8 | 11.0  | 2.6 |
| SS-BEL-ANG-50-AIR                         | NW-50 on Both Ports   | \$478.      | 3.4 | 10.3  | 1.14         | \$504. | 6.8 | 11.0  | 2.6 |
| ALUM-BEL-ANG-50-AIR                       | Aluminum Body, NW-50  | \$464.      | 2.8 | 10.3  | 1.14         | \$469. | 6.8 | 11.0  | 2.6 |
| <b>O-Ring Stem Seal</b>                   |                       |             |     |       |              |        |     |       |     |
| ALUM-O-ANG-16-AIR                         | Aluminum NW-16        | \$249.      | 1.6 | 5.6   | .85          | \$249. | 4.2 | 5.9   | 1.1 |
| ALUM-O-ANG-25-AIR                         | Body with NW-25       | \$261.      | 2.0 | 5.9   | .82          | \$268. | 4.0 | 6.1   | 1.4 |
| ALUM-O-ANG-40-AIR                         | O-Ring NW-40          | \$339.      | 2.6 | 7.8   | .90          | \$349. | 4.8 | 8.4   | 1.9 |
| ALUM-O-ANG-50-AIR                         | Shaft Seal NW-50      | \$415.      | 2.8 | 9.7   | 1.14         | \$425. | 6.8 | 11.0  | 2.6 |

### Manual Valves



| Part Number                               | Description           | Angle Style |     |       | Inline Style |        |     |       |     |
|---|-----------------------|-------------|-----|-------|--------------|--------|-----|-------|-----|
|   |                       | Price       | A   | B Man | C            | Price  | A   | B Man | D   |
| For Inline Style replace "ANG" with "INL" |                       |             |     |       |              |        |     |       |     |
| SS-BEL-ANG-75-MAN                         | No Flanges, 0.75 O.D. | \$260.      | 2.1 | 6.2   | .85          | \$293. | 4.2 | 5.9   | 1.1 |
| SS-BEL-ANG-133-MAN                        | 1.33 CF on Both Ports | \$273.      | 2.1 | 6.2   | .85          | \$294. | 4.2 | 5.9   | 1.1 |
| SS-BEL-ANG-16-MAN                         | NW-16 on Both Ports   | \$273.      | 2.1 | 6.2   | .85          | \$294. | 4.2 | 5.9   | 1.1 |
| ALUM-BEL-ANG-16-MAN                       | Aluminum Body, NW-16  | \$249.      | 2.1 | 6.2   | .85          | \$271. | 4.2 | 5.9   | 1.1 |
| <b>Bellows Stem Seal</b>                  |                       |             |     |       |              |        |     |       |     |
| SS-BEL-ANG-1.0-MAN                        | No Flanges, 1.00 O.D. | \$260.      | 2.0 | 5.9   | .82          | \$300. | 4.0 | 6.0   | 1.3 |
| SS-BEL-ANG-212-MAN                        | 2.12 CF on Both Ports | \$285.      | 2.0 | 5.9   | .82          | \$306. | 4.0 | 6.0   | 1.3 |
| SS-BEL-ANG-25-MAN                         | NW-25 on Both Ports   | \$285.      | 2.0 | 5.9   | .82          | \$306. | 4.0 | 6.0   | 1.3 |
| ALUM-BEL-ANG-25-MAN                       | Aluminum Body, NW-25  | \$268.      | 2.0 | 5.9   | .82          | \$300. | 4.0 | 6.0   | 1.3 |
| <b>1,000,000 Cycles</b>                   |                       |             |     |       |              |        |     |       |     |
| SS-BEL-ANG-1.5-MAN                        | No Flanges, 1.50 O.D. | \$387.      | 2.4 | 7.8   | .90          | \$387. | 4.8 | 8.4   | 1.9 |
| SS-BEL-ANG-275-MAN                        | 2.75 CF on Both Ports | \$393.      | 2.4 | 7.8   | .90          | \$393. | 4.8 | 8.4   | 1.9 |
| SS-BEL-ANG-40-MAN                         | NW-40 on Both Ports   | \$393.      | 2.4 | 7.8   | .90          | \$393. | 4.8 | 8.4   | 1.9 |
| ALUM-BEL-ANG-40-MAN                       | Aluminum Body, NW-40  | \$387.      | 2.4 | 7.8   | .90          | \$387. | 4.8 | 8.4   | 1.9 |
| SS-BEL-ANG-2.0-MAN                        | No Flanges, 2.00 O.D. | \$425.      | 3.4 | 9.9   | 1.14         | \$425. | 6.8 | 10.6  | 2.6 |
| SS-BEL-ANG-338-MAN                        | 3.38 CF on Both Ports | \$474.      | 3.4 | 9.9   | 1.14         | \$441. | 6.8 | 10.6  | 2.6 |
| SS-BEL-ANG-50-MAN                         | NW-50 on Both Ports   | \$465.      | 3.4 | 9.9   | 1.14         | \$441. | 6.8 | 10.6  | 2.6 |
| ALUM-BEL-ANG-50-MAN                       | Aluminum Body, NW-50  | \$425.      | 2.8 | 9.9   | 1.14         | \$403. | 6.8 | 10.6  | 2.6 |
| <b>O-Ring Stem Seal</b>                   |                       |             |     |       |              |        |     |       |     |
| ALUM-O-ANG-16-MAN                         | Aluminum NW-16        | \$232.      | 1.6 | 5.6   | .85          | \$251. | 4.2 | 5.9   | 1.1 |
| ALUM-O-ANG-25-MAN                         | Body with NW-25       | \$255.      | 2.0 | 5.8   | .82          | \$273. | 4.0 | 6.0   | 1.3 |
| ALUM-O-ANG-40-MAN                         | O-Ring NW-40          | \$339.      | 2.6 | 7.8   | .90          | \$349. | 4.8 | 8.4   | 1.9 |
| ALUM-O-ANG-50-MAN                         | Shaft Seal NW-50      | \$392.      | 2.8 | 9.3   | 1.14         | \$370. | 6.8 | 10.6  | 2.6 |

## 3 Way Valves, Manual or Air Operated



Drawing shows optional 1/8 In. NPT ports with gauge tube installed in one of them. Add \$25. per port to the cost of the valve

Aluminum bodies with bellows shaft seal. The standard pneumatic actuator is air to open, spring to close. Other options such as gauge ports and position indicators are available. Two 3-way solenoids required. See below for cost of solenoids.

- NW-16, P/N: 3W-ALUM-BEL-16AIR. . . . . \$551.
- NW-25, P/N: 3W-ALUM-BEL-25AIR. . . . . \$571.
- NW-40, P/N: 3W-ALUM-BEL-40AIR. . . . . \$628.
- NW-50, P/N: 3W-ALUM-BEL-50AIR. . . . . \$710.
- NW-16, P/N: 3W-ALUM-BEL-16MAN . . . . . \$520.
- NW-25, P/N: 3W-ALUM-BEL-25MAN . . . . . \$535.
- NW-40, P/N: 3W-ALUM-BEL-40MAN . . . . . \$592.
- NW-50, P/N: 3W-ALUM-BEL-50MAN . . . . . \$659.
- 1/8 In. NPT GAUGE PORTS Specify Location. . . . . \$26. Each

### VCR or 1/8 Inch NPT Ports For Gauge Tubes

VCR-4 or 1/8 inch NPT female ports can be provided on the end or side valve ports. Any number of these ports in any combination can be specified by adding the appropriate suffix to the part number. For example 1/8 RS would specify a 1/8 inch NPT port on the right of the side port.

1/8 NPT Port Add, Alum. valves \$26. SS valves \$77.  
VCR-4 Port Add, Stainless Steel only. . . . . \$108.

|  | Position Reference |                   | P/N for 1/8 NPT Port | P/N for VCR Port |
|--|--------------------|-------------------|----------------------|------------------|
|  | RS                 | Right Side Port   | H700020              | H700033          |
|  | LS                 | Left Side Port    | H700021              | H700034          |
|  | RB                 | Right Bottom Port | H700022              | H700035          |
|  | LB                 | Left Bottom Port  | H700023              | H700036          |

## Position Indicators

Pneumatically activated valves can be equipped with a pair of SPST switches to indicate valve open and closed. These unpowered switches have contacts rated for up to 500 mA at up to 240 VAC, non-inductive.

Add the suffix 'PI'. (Open & Closed). . . Add \$101./pair

## Optional Third Port for Angle or Inline Valves



Standard angle valves have two ports: one bottom and one side. To add an additional side port for vacuum gauge tube installation, specify the optional third port by simply adding the suffix "3-Port" to any valve part number and add the cost shown below:

- NW-16. . .add \$101.    NW-40. . .add \$140.
- NW-25. . .add \$122.    NW-50. . .add \$179.

## Spring to Open/Air to Close

For this option, add "SO" to the P/N & add cost below:

- NW-16 . . . . .add \$46.            NW-25 . . . . .add \$46.
- NW-40 . . . . .add \$87.            NW-50 . . . . .add \$93.

## Air to Open/Air To Close

Standard valves use air to open and spring to close but as an option the valves can be built for air to open and close. Add the suffix 'AC' to the part number. Note that with this option a 4 way solenoid is required.

Air To Close and Open P/N: H700024 . . . . . Add \$57.

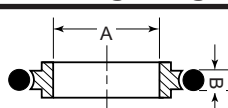
1/8 NPT/ISO Adapter Fitting for Air P/N: H700032. N/C

## Solenoids For Pneumatic Valves

Because many customers use central air manifolds to activate valves we offer these solenoids as an optional rather than standard feature. Solenoids are specified by adding a suffix to Valve part number below.

| 3 Way for Standard, Spring to Close Valves . . . . . \$62. |              | 4 Way for Air Open/Air Close Valves. . . . . \$90. |              |
|--|--------------|--|--------------|
| add Suffix to P/N  | Solenoid P/N | add Suffix to P/N                                  | Solenoid P/N |
| SOL-120 VAC  | X134003      | SOL-120 VAC  | X703005      |
| SOL-230 VAC  | X134013      | SOL-230 VAC  | X134010      |
| SOL-24 VDC   | X134032      | SOL-24 VDC   | X703041      |

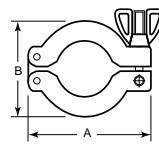
## Centering Rings



304 Stainless Steel With Viton O-Rings

| Flange Size | A          | B          | Part Number | Price  |
|-------------|------------|------------|-------------|--------|
| NW-16       | 0.63 (16)  | 0.21 (5.3) | CTR-RING 16 | \$4.00 |
| NW-25       | 0.984 (25) | 0.21 (5.3) | CTR-RING 25 | \$5.00 |
| NW-40       | 1.575 (40) | 0.21 (5.3) | CTR-RING 40 | \$7.00 |
| NW-50       | 1.969 (50) | 0.21 (5.3) | CTR-RING 50 | \$9.00 |

## Clamps



Aluminum Clamps With Wing Nut & Screw Fastener

| Flange Size | A          | B         | Thickness | Part Number | Price  |
|-------------|------------|-----------|-----------|-------------|--------|
| NW-16       | 2.24 (57)  | 1.69 (43) | 0.63 (16) | AL-Clamp 16 | \$4.00 |
| NW-25       | 2.76 (70)  | 2.17 (55) | 0.63 (16) | AL-Clamp 25 | \$5.00 |
| NW-40       | 3.39 (88)  | 2.76 (70) | 0.63 (16) | AL-Clamp 40 | \$6.00 |
| NW-50       | 4.33 (110) | 3.70 (94) | 0.79 (20) | AL-Clamp 50 | \$8.00 |