

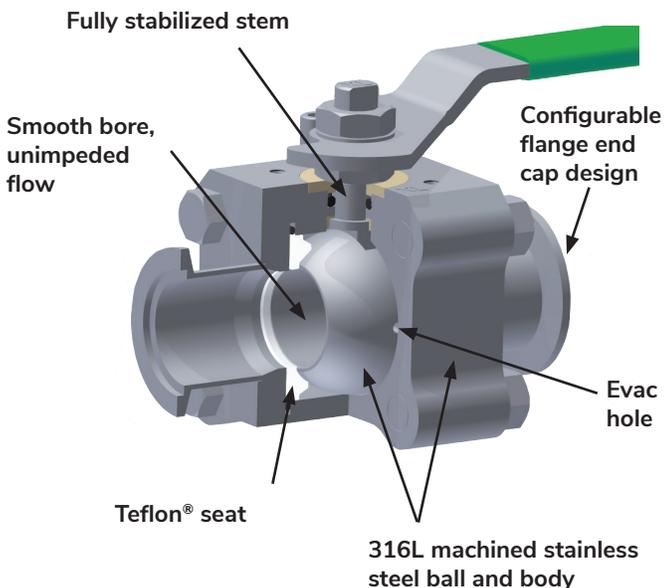
EXTENDED LIFE (XL) HIGH VACUUM BALL VALVE

Description

ANCORP'S ball valves consist of a body, stem, ball, and two end caps machined from corrosive resistant 316L stainless steel. Fluoroelastomers are used to seal the stem and end caps from atmosphere while the PTFE Teflon® seats cold flow around the ball to isolate the process when closed. The valve is opened and closed manually or pneumatically by ¼ turn, quick actuation. During actuation, the PTFE Teflon® seats wipe across the ball. This feature reduces particulate build-up, making this valve robust in particle-rich effluent streams.

Applications

The corrosive resistant design of ANCORP'S vacuum ball valves make them ideal for isolating reactors, traps, and scrubbers on vacuum coating tools used for MOCVD, PVD, and other thin-film coating processes.



The XL Difference

ANCORP'S XL ball valve is the latest generation of a long line of ANCORP vacuum ball valves. The XL improvements are centered on the stem design of the valve.

When leading OEM's came to ANCORP looking for a more durable valve for today's harsh coating processes, ANCORP engineers went to work testing new stem designs – the XL design was born. This patented design extends the stem seal life by 100X, has fewer wetted components, and features a fully stabilized stem along with all the other features of ANCORP ball valves. In short, the XL ball valve reduces valve maintenance, reduces tool downtime, and increases throughput. It's the reason ANCORP remains the leading innovator in vacuum ball valves.

- Poppetless design
- ¼ turn actuation
- Straight-through unimpeded flow
- Machined from corrosive resistant 316L stainless steel
- Rugged construction with few wetted components
- Leak tight in static and dynamic operation
- Ball and seat design reduces particulate buildup

PATENTED XL DESIGN

- 10X longer cycle life
- Fully stabilized stem
- Reduced wetted components

D, E, F SERIES XL BALL VALVE



Specifications

Vacuum and temperature ratings

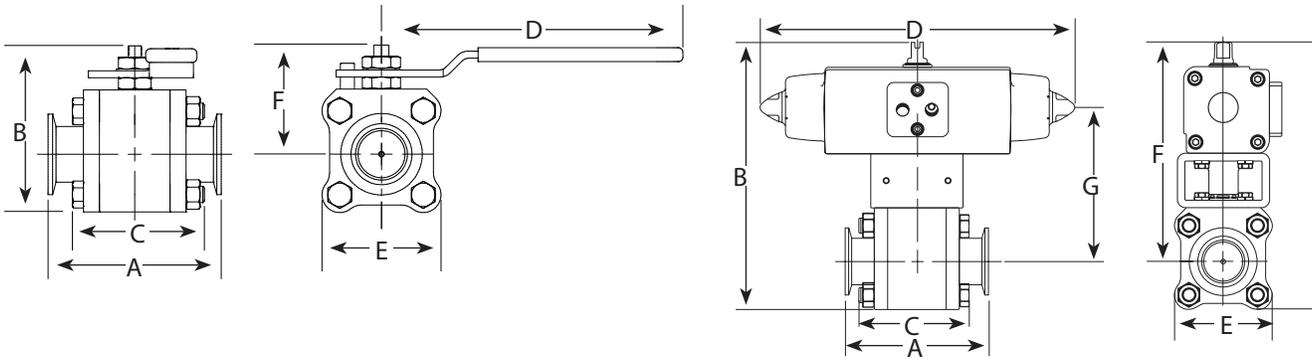
- Vacuum rated to 1×10^{-8} Torr
- Helium leak rated less than 1×10^{-9} std. cc/sec
- Standard fluoroelastomer seal:
-26°C to 150°C (-15°F to 302°F)

Materials

- Valve body, ball, stem, and end caps: machined from solid 316L stainless steel
- Standard seal: fluoroelastomer
- Seats: PTFE Teflon®
- Lubricant: Dow Corning® High Vacuum Grease

Pneumatic

- Actuator operating pressure: 80 - 120 psig
- Actuator temperature range:
- Moist air: 0°C to 150°C (32°F to 302°F)
- Dry air: -20°C to 150°C (-4°F to 302°F)
- Both Air-to-Open, Spring-to-Close (AS) single acting actuators and Air-to-Open, Air-to-Close (AA) double acting actuators are available
- "Fail-safe open" or "fail-safe closed" configuration available for ball valves with AS actuators
- 1/8 NPT air line hook-up
- Visual and mechanical position indicators available
- Solenoids available for 120VAC, 240VAC or 24VDC versions



Manual

| Part Number | Reference Number | Ball Port | End Cap Type | End Cap Tube Size | Conduct. (L/SEC) | A | B | C | D | E | F |
|-------------|------------------|-----------|--------------|-------------------|------------------|------|-----|-----|-----|-----|-----|
| 3000032 | D4150-QF40 | 1.25" | QF40 | 1 1/2" O.D. | 35 | 4.65 | 4.5 | 3.5 | 8.0 | 3.2 | 2.9 |
| 3000035 | E4200-QF50 | 1.50" | QF50 | 2" O.D. | 57 | 4.97 | 4.9 | 3.9 | 8.0 | 3.5 | 3.1 |
| 3002035 | F4200-QF50 | 1.87" | QF50 | 2" O.D. | 87 | 6.31 | 5.4 | 4.3 | 8.0 | 4.1 | 3.5 |

Pneumatic

| Part Number | Reference Number | Ball Port | End Cap Type | End Cap Tube Size | Conduct. (L/SEC) | A | B | C | D | E | F | G |
|-------------|------------------|-----------|--------------|-------------------|------------------|------|------|-----|------|-----|-----|-----|
| 3009135 | D4150-QF40-AS | 1.25" | QF40 | 1 1/2" O.D. | 35 | 4.65 | 8.6 | 3.5 | 10.2 | 3.2 | 7.0 | 5.0 |
| 3008135 | D4150-QF40-AA | 1.25" | QF40 | 1 1/2" O.D. | 35 | 4.65 | 8.6 | 3.5 | 7.8 | 3.2 | 7.0 | 5.0 |
| 3009150 | E4200-QF50-AS | 1.50" | QF50 | 2" O.D. | 57 | 4.97 | 9.0 | 3.9 | 10.2 | 3.5 | 7.2 | 5.2 |
| 3008150 | E4200-QF50-AA | 1.50" | QF50 | 2" O.D. | 57 | 4.97 | 9.0 | 3.9 | 7.8 | 3.5 | 7.2 | 5.2 |
| 3009165 | F4200-QF50-AS | 1.87" | QF50 | 2" O.D. | 87 | 6.31 | 10.0 | 4.3 | 12.0 | 4.1 | 8.0 | 5.7 |
| 3008165 | F4200-QF50-AA | 1.87" | QF50 | 2" O.D. | 87 | 6.31 | 10.0 | 4.3 | 9.3 | 4.1 | 8.0 | 5.7 |