

EXTENDED LIFE (XL) HIGH VACUUM BALL VALVE

ANCORP'S PATENTED FULLY STABILIZED STEM DESIGN

Smooth bore,
unimpeded
flow

Configurable
flange end
cap design

Evac
hole

Teflon® seat

316L machined stainless
steel ball and body



Features:

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 10X, 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
- 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

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 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. The Teflon® sealing surface is protected from direct deposition, maintaining a clean dynamic seal to prevent failure due to contamination.

Applications

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

PATENTED FULLY STABILIZED STEM DESIGN

XL Stem Design minimizes wetted components

A&N CORPORATION US PATENTS:
US 8,496,227 B2, US 8,905,375 B2, US 8,936,231 B2

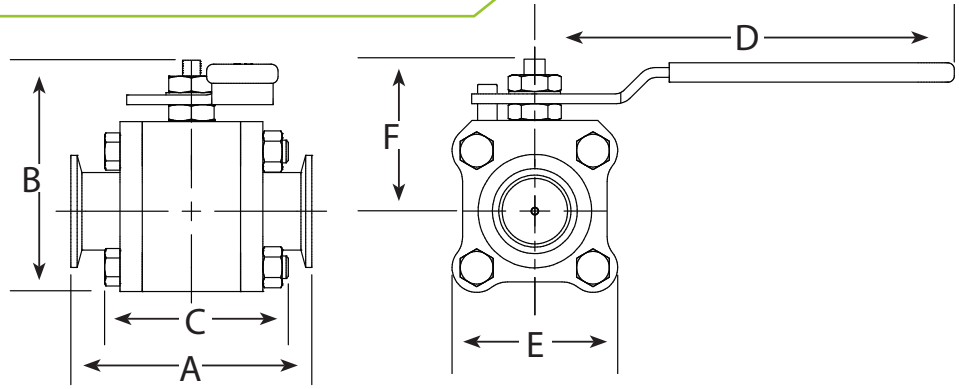
C, D, E, F SERIES XL BALL VALVE

Vacuum and temperature ratings

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

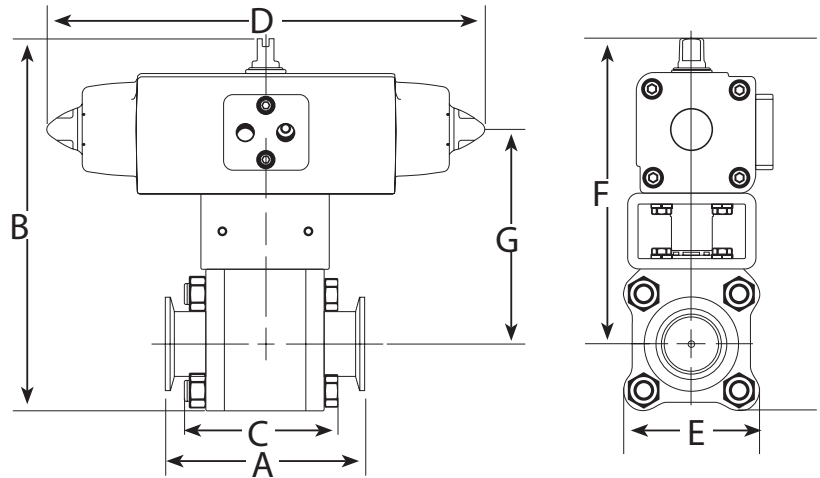
Materials

- Valve body, ball, stem, and end caps: machined from solid 316L stainless steel
- Standard seal: fluoroelastomer
- Seats: Teflon® PTFE
- 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 electrical position indicators available
- Solenoids available for 120VAC, 240VAC or 24VDC versions



NOTE: All dimensions are measured in inches unless otherwise specified.

Manual

Part ID	Reference Number	Ball Port	Flange Type	End Cap Tube O.D.	Conduct. (L/s)	A	B	C	D	E	F
3000030	C4100-QF25	0.81	QF25	1	13	3.92	3.7	2.5	5.8	2.4	2.5
3000032	D4150-QF40	1.25	QF40	1 1/2	35	4.65	4.5	3.5	7.9	3.2	2.9
3000035	E4200-QF50	1.50	QF50	2	57	4.97	4.9	3.9	7.9	3.5	3.1
3002035	F4200-QF50	1.87	QF50	2	87	6.31	5.4	4.3	7.9	4.1	3.4

Pneumatic

Part ID	Reference Number	Ball Port	Flange Type	End Cap Tube O.D.	Conduct. (L/s)	A	B	C	D	E	F	G
3008128	C4100-QF25-AA	0.81	QF25	1	13	3.92	7.5	2.5	6.3	2.4	6	4.3
3009128	C4100-QF25-AS	0.81	QF25	1	13	3.92	7.5	2.5	6.3	2.4	6	4.3
3008135	D4150-QF40-AA	1.25	QF40	1 1/2	35	4.65	8.5	3.5	7.8	3.2	7.0	5.0
3009135	D4150-QF40-AS	1.25	QF40	1 1/2	35	4.65	8.6	3.5	10.2	3.2	7.0	5.0
3008150	E4200-QF50-AA	1.50	QF50	2	57	4.97	8.9	3.9	7.8	3.5	7.2	5.2
3009150	E4200-QF50-AS	1.50	QF50	2	57	4.97	9.0	3.9	10.2	3.5	7.2	5.2
3008160	F4200-QF50-AA	1.87	QF50	2	87	6.31	10.0	4.3	9.3	4.1	7.9	5.7
3009160	F4200-QF50-AS	1.87	QF50	2	87	6.31	10.0	4.3	12.0	4.1	8.0	5.7

ANCORP's ball valves are routinely configured with non-standard seals and greases to meet system requirements for high temperature or highly corrosive applications. To have an ANCORP ball valve configured for your system, contact one of our Application Engineers at 800-352-6431.