

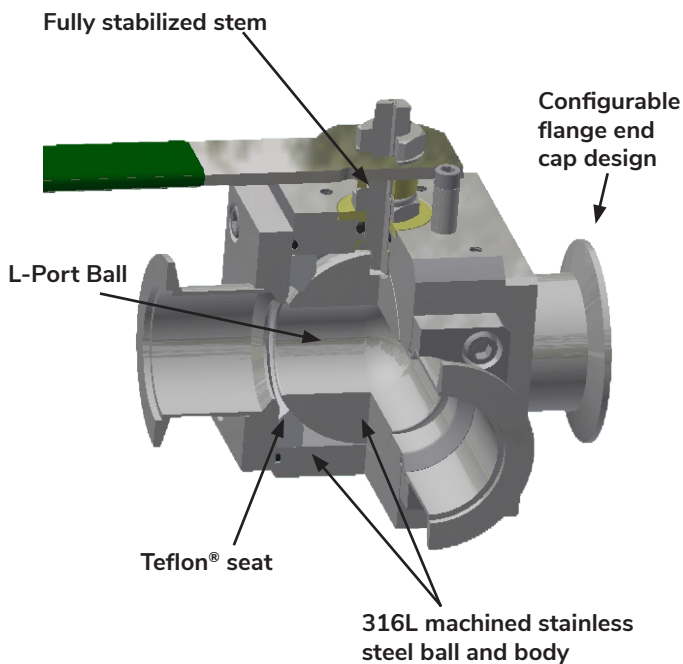
# 3-WAY HIGH VACUUM BALL VALVE

## Description

ANCORP's 3-way ball valve is designed to divert flow from a single source to either of two outlet ports. The 3-way ball valve consists of a body, stem, L-port ball, and three end caps. Components are machined from corrosive resistant 316L stainless steel. Fluoroelastomers are used to seal the stem and end caps from atmosphere while PTFE Teflon® seats cold flow around the ball to isolate one outlet port while diverting flow through the other. Flow through the valve is diverted manually or pneumatically by 1/4 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 3-way vacuum ball valves makes them ideal for diverting flow or isolating pumping lines, reactors, traps, and scrubbers on vacuum coating tools used for MOCVD, PVD, and other thin-film coating processes.



## 3-Way Difference

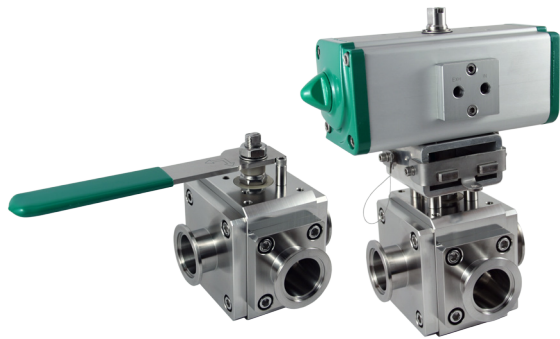
ANCORP's 3-way ball valve maximizes design efficiencies in high vacuum systems and coating tools when compared to multi-valve systems with equivalent functionality:

- Reduced bill of materials
- Reduced footprint
- Reduced overall weight
- Reduced design complexity
- Fewer actuated components
- Fewer leak paths
- Less total area to heat
- Reduced maintenance costs from MRO parts

## PATENTED EXTENDED LIFE (XL) DESIGN

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

# 3-WAY BALL VALVE



## Specifications

### Vacuum and temperature ratings

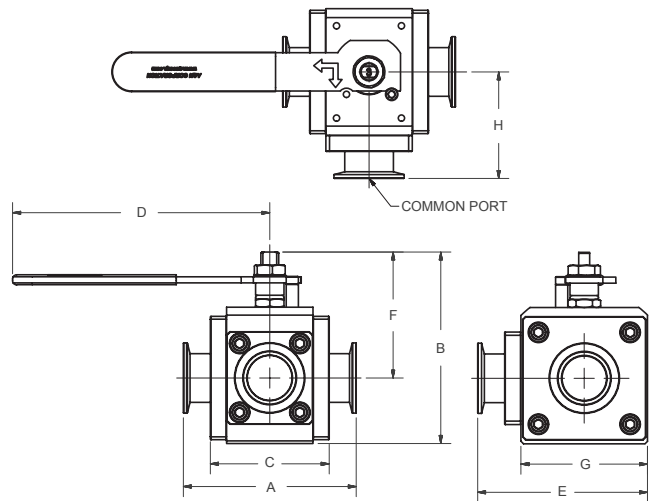
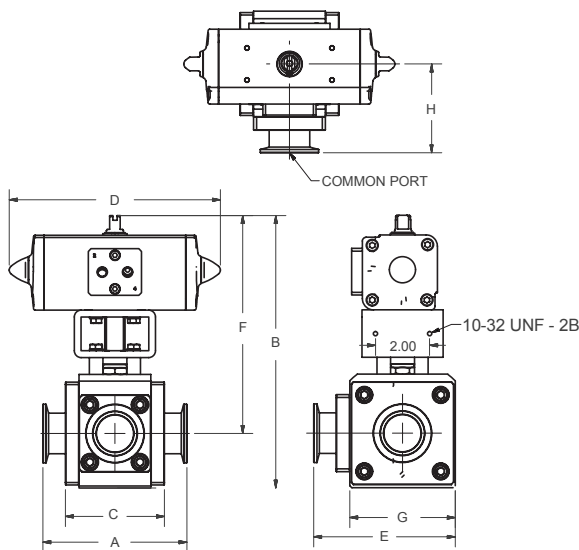
- Vacuum rated to  $1 \times 10^{-8}$  Torr
- Helium leak rated less than  $1 \times 10^{-9}$  std. cc/sec
- Standard fluoroelastomer seal:  
-26°C to 150°C (-15°F to 302°F)

### 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
- 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	G	H
3008305	TL4150-QF40-H075	1.375"	QF40	1 1/2" O.D.	29	5.33	5.9	3.7	7.9	5.2	3.9	3.9	3.28
3008306	TL4200-QF50-H075	1.375"	QF50	2" O.D.	34	6.31	5.9	3.7	7.9	5.7	3.9	4.4	3.78

## Pneumatic

Part Number	Reference Number	Ball Port	End Cap Type	End Cap Tube Size	Conduct. (L/SEC)	A	B	C	D	E	F	G	H
3008325	TL4150-QF40-AA-H062	1.375"	QF40	1 1/2" O.D.	29	5.33	10.1	3.7	7.8	5.2	8.1	3.9	3.28
3008326	TL4200-QF50-AA-H062	1.375"	QF50	2" O.D.	34	6.31	10.1	3.7	7.8	5.7	8.1	4.4	3.76

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 a 3-way ball valve configured for your system, contact one of our Application Engineers at **800-352-6431**.