



AR&N CORPORATION

***vacuum valves***





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## Vacuum Valves



### Comparing Valve Types

	HIGH VACUUM BALL VALVE	HIGH VACUUM POPPET VALVE	HIGH VACUUM GATE VALVE
Maximum conductance	Yes	No	Yes
Minimum line length	No	No	Yes
Low to moderate particulates	Yes	Yes	No
Moderate to high particulate	Yes	No	No
Bakeable to 100°C	Yes	Yes	Yes
Bakeable over 100°C	Yes <sup>1</sup>	Yes <sup>1</sup>	No
Large, full bore pass-through capability	Yes <sup>2</sup>	No	Yes
Positive pressure holding capability	Yes <sup>3</sup>	No	No
Pressure range ATM to 10 <sup>-7</sup> torr.	Yes	Yes <sup>4</sup>	Yes
Corrosion resistance	Yes <sup>5</sup>	No	No
Pneumatic actuation	Yes	Yes <sup>6</sup>	Yes
Electric actuation	Yes	Yes	No
Seats wiped clean during cycling	Yes	No	No
In-line rebuildability	Yes	No	No
Ease of rebuild	Yes	Yes	No
Catastrophic fail safe closed or open	Yes <sup>7</sup>	Yes	No
Adjustable cycle time with actuation	Yes	No	No

Yes = recommended

No = not recommended

1 = Vitor® begins to outgas and set at 150°C.

Other seals can be substituted for higher temperature (200°C).

#### Metal seal poppet valves go up to 400°C

2 = Large bore pass-through capability of up to 5.8" available with tube bore high vacuum ball valves.

3 = Up to 6 ATM (100 psi)

4 = Metal seal poppet valves to 10<sup>-10</sup> torr.

5 = High vacuum ball valves manufactured from 316 L.

#### Poppet and gate 304

6 = Exception – metal-sealed valves

7 = With pneumatic fail safe actuator

### Overview:

A&N Corporation offers three main types of vacuum shut-off valves for your application. Each type regulates gas flow through your system with simple open or close commands. These valves are designed to perform fully opened or closed. The standard design is not meant for flow control, but is a simple off/on control mechanism for your vacuum system.

**Poppet Valves** are made of a body, actuator and internal poppet. The actuator transports the poppet linearly. When the poppet is moved toward the top of the valve the internal body cavity is open to the system and flow is unimpeded. Once the actuator moves the poppet to the bottom of the valve an elastomer sealing ring is compressed onto a sealing surface on the lower body of the valve. This creates a vacuum tight seal and stops flow. Poppet valves are available in three body styles; 90° Angle, In-Line and Angle In-Line.

**Gate Valves** provide straight through, unimpeded flow with the smallest valve body profile. Gate valves are ideal for space-constrained applications that require maximum conductance. A central carriage or gate is raised and lowered by the actuator within the body. In the open position the gate retracts completely from the tube aperture allowing unrestricted flow. In the closed position an elastomer sealing ring is compressed against a sealing surface on the inside of one of the body ports.

**Ball Valves** offer straight, unimpeded flow with minimal impact on system space needed to accommodate the valve body. Ball valves are robust valves that are less sensitive to particulate contamination than the other valve types and are especially useful in dirty vacuum applications. Ball valves are made of a body, stem, ball and end caps. The ball is compressed within the body by end caps creating a vacuum tight central cavity. The valve is opened and closed by turning the stem 90° back and forth. The hole in the ball provides unobstructed flow in the open position and the sealing seat for the ball wipes the ball clean as it is opened and closed providing a consistent seal.



## Specifications - 3/8" to 4" Port O.D.'s

### Temperature Range

- High Vacuum elastomer sealed bonnets
  - bakeable to 150°C (200°C intermittent)
- UHV copper sealed bonnets
  - bakeable to 200°C open, 150°C (200°C intermittent) closed

### Vacuum Rating

- Elastomer Bonnet Seal =  $1 \times 10^{-8}$  torr
- Copper Bonnet Seal =  $1 \times 10^{-10}$  torr

### Materials

- Valve Body and Flanges: 304 Stainless Steel
- Welded Bellows: AM-350 Stainless Steel
- Seals:
  - Bonnet: Viton® or copper
  - Poppet: Viton®
- Pneumatic cylinder is aluminum or manual handle is plastic

## Features

### General

- Poppet retracts fully when in open position
- Service valve without removal from the system

### Manual Valves

- Self-lubricating bronze nut
- Acme Threads, maximize shaft travel per turn

### Pneumatically Actuated Valves

- "Fail Safe" air-to-open, spring-to-close standard for sizes up to 2"
  - Air-to-open, air-to-close also available for these sizes (see options)
- Air-to-open, air-to-close standard for sizes 2 1/2" and above
- 60-80 psig operating air pressure

## Options



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-PVS3A	120 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3B	240 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3C	24 VDC air control solenoid valve <sup>1</sup>	\$ 61.00
-MI	Magnetic position indicator	\$ 165.00
-AA	Air-to-open, air-to-close pneumatic actuator	\$ N/C
-AAS	Air-to-open, air-to-close with spring fail safe <sup>2</sup>	\$ 28.00
-PVS4A	4-way 120 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4B	4-way 240 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4C	4-way 24 VDC air control solenoid valve <sup>3</sup>	\$ 61.00
-KP	Kalrez® high temperature poppet seal	call for quote
	Custom port fittings	call for quote

<sup>1</sup> For use with pneumatically actuated valves: air-to-open, spring-to-close

<sup>2</sup> Available for valves up to 2"

<sup>3</sup> For use with pneumatically actuated valves: air-to-open, air-to-close

**When ordering options,  
please add the option number(s)  
to the end of the reference number  
for the valve you are ordering.**

### A&N Corporation

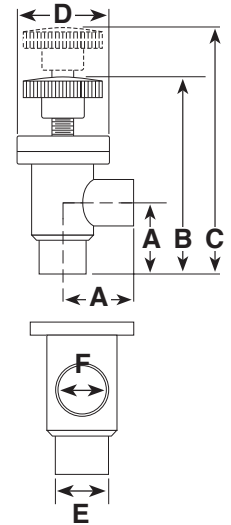
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## Manually Operated Angle Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C

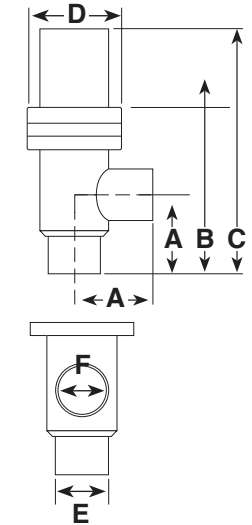
REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
				A	B	C	D	E	F	
AV038-TE-E-M	VITON®	0.38	N/A	1.50	4.40	5.40	2.48	0.38	0.25	\$ 250.00
AV038-TE-C-M	COPPER	0.38	N/A	1.50	4.40	5.40	2.48	0.38	0.25	\$ 300.00
AV050-TE-E-M	VITON®	0.50	N/A	1.50	4.40	5.40	2.48	0.50	0.38	\$ 250.00
AV050-TE-C-M	COPPER	0.50	N/A	1.50	4.40	5.40	2.48	0.50	0.38	\$ 300.00
AV075-TE-E-M	VITON®	0.75	N/A	2.00	5.20	6.05	2.48	0.75	0.63	\$ 255.00
AV075-TE-C-M	COPPER	0.75	N/A	2.00	5.20	6.05	2.48	0.75	0.63	\$ 300.00
AV100-TE-E-M	VITON®	1.00	N/A	1.88	5.53	6.38	2.48	1.00	0.88	\$ 275.00
AV100-TE-C-M	COPPER	1.00	N/A	1.88	5.53	6.38	2.48	1.00	0.88	\$ 330.00
AV150-TE-E-M	VITON®	1.50	N/A	2.25	6.30	7.85	2.97	1.50	1.38	\$ 295.00
AV150-TE-C-M	COPPER	1.50	N/A	2.25	6.30	7.85	2.97	1.50	1.38	\$ 355.00
AV200-TE-E-M	VITON®	2.00	N/A	3.25	7.85	9.85	3.5	2.00	1.88	\$ 495.00
AV200-TE-C-M	COPPER	2.00	N/A	3.25	7.85	9.85	4.05	2.00	1.88	\$ 565.00
AV250-TE-E-M	VITON®	2.50	N/A	3.00	8.27	10.77	4.00	2.50	2.38	\$ 660.00
AV250-TE-C-M	COPPER	2.50	N/A	3.00	8.27	10.77	4.61	2.50	2.38	\$ 730.00
AV300-TE-E-M	VITON®	3.00	N/A	3.25	8.68	11.68	4.50	3.00	2.88	\$ 860.00
AV300-TE-C-M	COPPER	3.00	N/A	3.25	8.68	11.68	5.62	3.00	2.88	\$ 960.00



## Pneumatically Actuated Angle Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C

REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
				A	B	C	D	E	F	
AV038-TE-E-AS	VITON®	0.38	N/A	1.50	3.85	5.85	2.48	0.38	0.25	\$ 290.00
AV038-TE-C-AS	COPPER	0.38	N/A	1.50	3.85	5.85	2.48	0.38	0.25	\$ 330.00
AV050-TE-E-AS	VITON®	0.50	N/A	1.50	3.81	5.81	2.48	0.50	0.38	\$ 325.00
AV050-TE-C-AS	COPPER	0.50	N/A	1.50	3.81	5.81	2.48	0.50	0.38	\$ 330.00
AV075-TE-E-AS	VITON®	0.75	N/A	2.00	4.27	6.27	2.48	0.75	0.63	\$ 275.00
AV075-TE-C-AS	COPPER	0.75	N/A	2.00	4.27	6.27	2.48	0.75	0.63	\$ 325.00
AV100-TE-E-AS	VITON®	1.00	N/A	1.88	4.37	6.37	2.48	1.00	0.88	\$ 310.00
AV100-TE-C-AS	COPPER	1.00	N/A	1.88	4.37	6.37	2.48	1.00	0.88	\$ 385.00
AV150-TE-E-AS	VITON®	1.50	N/A	2.25	5.06	7.56	2.97	1.50	1.38	\$ 345.00
AV150-TE-C-AS	COPPER	1.50	N/A	2.25	5.06	7.56	2.97	1.50	1.38	\$ 405.00
AV200-TE-E-AS	VITON®	2.00	N/A	3.25	6.74	10.13	3.50	2.00	1.88	\$ 565.00
AV200-TE-C-AS	COPPER	2.00	N/A	3.25	6.62	10.13	4.05	2.00	1.88	\$ 630.00
AV250-TE-E-AA	VITON®	2.50	N/A	3.00	7.18	10.10	4.00	2.50	2.38	\$ 795.00
AV250-TE-C-AA	COPPER	2.50	N/A	3.00	7.18	10.10	4.61	2.50	2.38	\$ 795.00
AV300-TE-E-AA	VITON®	3.00	N/A	3.25	7.62	11.00	4.50	3.00	2.88	\$ 990.00
AV300-TE-C-AA	COPPER	3.00	N/A	3.25	7.62	11.00	5.62	3.00	2.88	\$ 1,025.00
AV400-TE-E-AA	VITON®	4.00	N/A	4.22	9.55	14.99	6.50	4.00	3.88	\$ 1,520.00
AV400-TE-C-AA	COPPER	4.00	N/A	4.22	9.55	14.99	6.73	4.00	3.88	\$ 1,585.00



## Replacement Parts

### Poppet and Bonnet Seals - Viton®

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-VSK-075	.38-1.00	\$ 11.00
PV-VSK-150	1.50	\$ 16.50
PV-VSK-200	2.00	\$ 22.00
PV-VSK-250	2.50	\$ 28.00
PV-VSK-300	3.00	\$ 28.00
PV-VSK-400	4.00	\$ 33.00

### Poppet and Bonnet Seals - Viton®, Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-CSK-075	.38-1.00	\$ 19.00
PV-CSK-150	1.50	\$ 25.00
PV-CSK-200	2.00	\$ 28.00
PV-CSK-250	2.50	\$ 33.00
PV-CSK-300	3.00	\$ 33.00
PV-CSK-400	4.00	\$ 36.00



Additional replacement parts (pictured above) are available. Call for assistance.



## Specifications - 3/8" to 4" Port O.D.'s

### Temperature Range

- High Vacuum elastomer sealed bonnets
  - bakeable to 150°C (200°C intermittent)

### Vacuum Rating

- Elastomer Bonnet Seal =  $1 \times 10^{-8}$  torr

### Materials

- Valve Body and Flanges: 304 Stainless Steel
- Welded Bellows: AM-350 Stainless Steel
- Seals:
  - Bonnet: Viton®
  - Poppet: Viton®
- Pneumatic cylinder is aluminum or manual handle is plastic

## Features

### General

- Poppet retracts fully when in open position
- Service valve without removal from the system

### Manual Valves

- Self-lubricating bronze nut
- Acme Threads, maximize shaft travel per turn

### Pneumatically Actuated Valves

- "Fail Safe" air-to-open, spring-to-close standard for sizes up to 2"
  - Air-to-open, air-to-close also available for these sizes (see options)
- Air-to-open, air-to-close standard for sizes 2 1/2" and above
- 60-80 psig operating air pressure

## Options



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-PVS3A	120 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3B	240 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3C	24 VDC air control solenoid valve <sup>1</sup>	\$ 61.00
-MI	Magnetic position indicator	\$ 165.00
-AA	Air-to-open, air-to-close pneumatic actuator	\$ N/C
-AAS	Air-to-open, air-to-close with spring fail safe <sup>2</sup>	\$ 28.00
-PVS4A	4-way 120 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4B	4-way 240 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4C	4-way 24 VDC air control solenoid valve <sup>3</sup>	\$ 61.00
-KP	Kalrez® high temperature poppet seal	call for quote
	Custom port fittings	call for quote

<sup>1</sup> For use with pneumatically actuated valves: air-to-open, spring-to-close

<sup>2</sup> Available for valves up to 2"

<sup>3</sup> For use with pneumatically actuated valves: air-to-open, air-to-close

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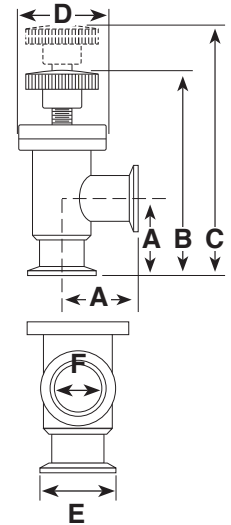
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## Manually Operated Angle Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)

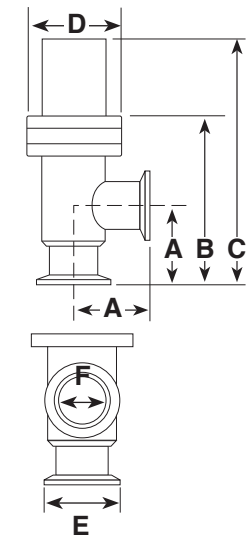
REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
				A	B	C	D	E	F	
AV038-QF-E-M	VITON®	0.38	QF10	1.65	4.55	5.55	2.48	1.18	0.25	\$ 290.00
AV050-QF-E-M	VITON®	0.50	QF10	1.65	4.55	5.55	2.48	1.18	0.38	\$ 290.00
AV075-QF-E-M	VITON®	0.75	QF16	2.15	5.35	6.20	2.48	1.18	0.63	\$ 290.00
AV100-QF-E-M	VITON®	1.00	QF25	2.03	5.68	6.53	2.48	1.57	0.88	\$ 300.00
AV150-QF-E-M	VITON®	1.50	QF40	2.40	6.45	8.00	2.97	2.16	1.38	\$ 320.00
AV200-QF-E-M	VITON®	2.00	QF50	3.40	8.00	10.00	3.50	2.95	1.88	\$ 545.00
AV250-LF-E-M	VITON®	2.50	LF63	3.25	8.52	11.02	4.00	3.74	2.38	\$ 795.00
AV300-LF-E-M	VITON®	3.00	LF80	3.50	8.93	11.93	4.50	4.33	2.88	\$ 990.00



## Pneumatically Actuated Angle Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)

REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
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AV038-QF-E-AS	VITON®	0.38	QF10	1.65	4.00	6.00	2.48	1.18	0.25	\$ 325.00
AV050-QF-E-AS	VITON®	0.50	QF10	1.65	3.96	5.96	2.48	1.18	0.38	\$ 325.00
AV075-QF-E-AS	VITON®	0.75	QF16	2.15	4.42	6.42	2.48	1.18	0.63	\$ 305.00
AV100-QF-E-AS	VITON®	1.00	QF25	2.03	4.52	6.52	2.48	1.57	0.88	\$ 330.00
AV150-QF-E-AS	VITON®	1.50	QF40	2.40	5.21	7.71	2.97	2.16	1.38	\$ 370.00
AV200-QF-E-AS	VITON®	2.00	QF50	3.40	6.89	10.28	3.50	2.95	1.88	\$ 615.00
AV250-LF-E-AA	VITON®	2.50	LF63	3.25	7.43	10.35	4.00	3.74	2.38	\$ 860.00
AV300-LF-E-AA	VITON®	3.00	LF80	3.50	7.87	11.25	4.50	4.33	2.88	\$1,125.00
AV400-LF-E-AA	VITON®	4.00	LF100	4.47	9.80	15.24	6.50	5.12	3.88	\$1,695.00



## Accessories



### QF/LF Flange Hardware

- Clamps
- Centering rings
- O-Rings

For prices and information see QF/LF Catalog section:  
QF Clamps and Seals or LF Fasteners and Seals.

## Replacement Parts

### Poppet and Bonnet Seals - Viton®

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-VSK-075	.38-1.00	\$ 11.00
PV-VSK-150	1.50	\$ 16.50
PV-VSK-200	2.00	\$ 22.00
PV-VSK-250	2.50	\$ 28.00
PV-VSK-300	3.00	\$ 28.00
PV-VSK-400	4.00	\$ 33.00

### Poppet and Bonnet Seals - Viton®, Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-CSK-075	.38-1.00	\$19.00
PV-CSK-150	1.50	\$25.00
PV-CSK-200	2.00	\$28.00
PV-CSK-250	2.50	\$33.00
PV-CSK-300	3.00	\$33.00
PV-CSK-400	4.00	\$36.00



Additional replacement parts (pictured above) are available. Call for assistance.



## Specifications - 3/8" to 4" Port O.D.'s

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- Welded Bellows: AM-350 Stainless Steel
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  - Poppet: Viton®
- Pneumatic cylinder is aluminum or manual handle is plastic

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### General

- Poppet retracts fully when in open position
- Service valve without removal from the system

### Manual Valves

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### Pneumatically Actuated Valves

- "Fail Safe" air-to-open, spring-to-close standard for sizes up to 2"
  - Air-to-open, air-to-close also available for these sizes (see options)
- Air-to-open, air-to-close standard for sizes 2 1/2" and above
- 60-80 psig operating air pressure

## Options



Model shown with optional Solenoid (-S4A)



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-PVS3A	120 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3B	240 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3C	24 VDC air control solenoid valve <sup>1</sup>	\$ 61.00
-MI	Magnetic position indicator	\$ 165.00
-AA	Air-to-open, air-to-close pneumatic actuator	\$ N/C
-AAS	Air-to-open, air-to-close with spring fail safe <sup>2</sup>	\$ 28.00
-PVS4A	4-way 120 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4B	4-way 240 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4C	4-way 24 VDC air control solenoid valve <sup>3</sup>	\$ 61.00
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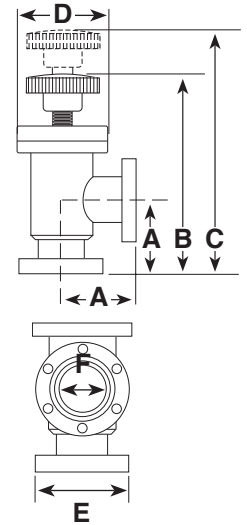




## Manually Operated Angle Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C
- Both CF Flanges Rotatable

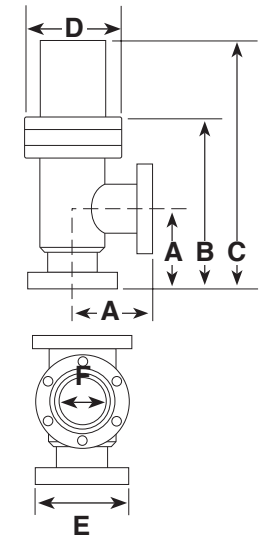
REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
				A	B	C	D	E	F	
AV038-CF-E-M	VITON®	0.38	CF133	1.60	4.50	5.50	2.48	1.33	0.25	\$ 295.00
AV038-CF-C-M	COPPER	0.38	CF133	1.60	4.50	5.50	2.48	1.33	0.25	\$ 320.00
AV050-CF-E-M	VITON®	0.50	CF133	1.60	4.50	5.50	2.48	1.33	0.38	\$ 295.00
AV050-CF-C-M	COPPER	0.50	CF133	1.60	4.50	5.50	2.48	1.33	0.38	\$ 320.00
AV075-CF-E-M	VITON®	0.75	CF133	2.50	5.70	6.55	2.48	1.33	0.63	\$ 285.00
AV075-CF-C-M	COPPER	0.75	CF133	2.50	5.70	6.55	2.48	1.33	0.63	\$ 325.00
AV100-CF-E-M	VITON®	1.00	CF212	2.05	5.70	6.55	2.48	2.12	0.88	\$ 310.00
AV100-CF-C-M	COPPER	1.00	CF212	2.05	5.70	6.55	2.48	2.12	0.88	\$ 360.00
AV150-CF-E-M	VITON®	1.50	CF275	2.45	6.50	8.05	2.97	2.72	1.38	\$ 320.00
AV150-CF-C-M	COPPER	1.50	CF275	2.45	6.50	8.05	2.97	2.72	1.38	\$ 385.00
AV200-CF-E-M	VITON®	2.00	CF338	3.48	8.08	10.08	3.50	3.37	1.88	\$ 595.00
AV200-CF-C-M	COPPER	2.00	CF338	3.48	8.08	10.08	4.05	3.37	1.88	\$ 660.00
AV250-CF-E-M	VITON®	2.50	CF450	3.38	8.65	11.15	4.00	4.47	2.38	\$ 795.00
AV250-CF-C-M	COPPER	2.50	CF450	3.38	8.65	11.15	4.61	4.47	2.38	\$ 860.00
AV300-CF-E-M	VITON®	3.00	CF462	3.53	8.96	11.96	4.50	4.62	2.88	\$ 990.00
AV300-CF-C-M	COPPER	3.00	CF462	3.53	8.96	11.96	5.62	4.62	2.88	\$1,090.00



## Pneumatically Actuated Angle Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C
- Both CF Flanges Rotatable

REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
				A	B	C	D	E	F	
AV038-CF-E-AS	VITON®	0.38	CF133	1.60	3.95	5.95	2.48	1.33	0.25	\$ 330.00
AV038-CF-C-AS	COPPER	0.38	CF133	1.60	3.95	5.95	2.48	1.33	0.25	\$ 360.00
AV050-CF-E-AS	VITON®	0.50	CF133	1.60	3.91	5.91	2.48	1.33	0.38	\$ 330.00
AV050-CF-C-AS	COPPER	0.50	CF133	1.60	3.91	5.91	2.48	1.33	0.38	\$ 360.00
AV075-CF-E-AS	VITON®	0.75	CF133	2.50	4.77	6.77	2.48	1.33	0.63	\$ 305.00
AV075-CF-C-AS	COPPER	0.75	CF133	2.50	4.77	6.77	2.48	1.33	0.63	\$ 355.00
AV100-CF-E-AS	VITON®	1.00	CF212	2.05	4.54	6.54	2.48	2.12	0.88	\$ 340.00
AV100-CF-C-AS	COPPER	1.00	CF212	2.05	4.54	6.54	2.48	2.12	0.88	\$ 415.00
AV150-CF-E-AS	VITON®	1.50	CF275	2.45	5.26	7.76	2.97	2.72	1.38	\$ 370.00
AV150-CF-C-AS	COPPER	1.50	CF275	2.45	5.26	7.76	2.97	2.72	1.38	\$ 435.00
AV200-CF-E-AS	VITON®	2.00	CF338	3.48	6.97	10.35	3.50	3.37	1.88	\$ 660.00
AV200-CF-C-AS	COPPER	2.00	CF338	3.48	6.84	10.35	4.05	3.37	1.88	\$ 730.00
AV250-CF-E-AA	VITON®	2.50	CF450	3.38	7.56	10.48	4.00	4.47	2.38	\$ 860.00
AV250-CF-C-AA	COPPER	2.50	CF450	3.38	7.56	10.48	4.61	4.47	2.38	\$ 925.00
AV300-CF-E-AA	VITON®	3.00	CF462	3.53	7.90	11.28	4.50	4.62	2.88	\$1,125.00
AV300-CF-C-AA	COPPER	3.00	CF462	3.53	7.90	11.28	5.62	4.62	2.88	\$1,155.00
AV400-CF-E-AA	VITON®	4.00	CF600	4.66	9.99	15.43	6.50	5.97	3.88	\$1,735.00
AV400-CF-C-AA	COPPER	4.00	CF600	4.66	9.99	15.43	6.73	5.97	3.88	\$1,800.00



### Accessories



### CF Flange Hardware

- Gaskets
- Bolts, nut, washer kits
- Plate nut kits

For prices and information see CF Catalog section: Listed in the index as Hardware.

### Replacement Parts

#### Poppet and Bonnet Seals - Viton®

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-VSK-075	.38-1.00	\$ 11.00
PV-VSK-150	1.50	\$ 16.50
PV-VSK-200	2.00	\$ 22.00
PV-VSK-250	2.50	\$ 28.00
PV-VSK-300	3.00	\$ 28.00
PV-VSK-400	4.00	\$ 33.00

#### Poppet and Bonnet Seals - Viton®, Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-CSK-075	.38-1.00	\$ 19.00
PV-CSK-150	1.50	\$ 25.00
PV-CSK-200	2.00	\$ 28.00
PV-CSK-250	2.50	\$ 33.00
PV-CSK-300	3.00	\$ 33.00
PV-CSK-400	4.00	\$ 36.00



Additional replacement parts (pictured above) are available. Call for assistance.



## Specifications - 3/8" to 4" Port O.D.'s

### Temperature Range

- High Vacuum elastomer sealed bonnets
  - bakeable to 150°C (200°C intermittent)
- UHV copper sealed bonnets
  - bakeable to 200°C open, 150°C (200°C intermittent) closed

### Vacuum Rating

- Elastomer Bonnet Seal =  $1 \times 10^{-8}$  torr
- Copper Bonnet Seal =  $1 \times 10^{-10}$  torr

### Materials

- Valve Body and Flanges: 304 Stainless Steel
- Welded Bellows: AM-350 Stainless Steel
- Seals:
  - Bonnet: Viton® or copper
  - Poppet: Viton®
- Pneumatic cylinder is aluminum or manual handle is plastic

## Features

### General

- Poppet retracts fully when in open position
- Service valve without removal from the system

### Manual Valves

- Self-lubricating bronze nut
- Acme Threads, maximize shaft travel per turn

### Pneumatically Actuated Valves

- "Fail Safe" air-to-open, spring-to-close standard for sizes up to 2"
  - Air-to-open, air-to-close also available for these sizes (see options)
- Air-to-open, air-to-close standard for sizes 2 1/2" and above
- 60-80 psig operating air pressure

## Options



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-PVS3A	120 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3B	240 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3C	24 VDC air control solenoid valve <sup>1</sup>	\$ 61.00
-MI	Magnetic position indicator	\$ 165.00
-AA	Air-to-open, air-to-close pneumatic actuator	\$ N/C
-AAS	Air-to-open, air-to-close with spring fail safe <sup>2</sup>	\$ 28.00
-PVS4A	4-way 120 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4B	4-way 240 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4C	4-way 24 VDC air control solenoid valve <sup>3</sup>	\$ 61.00
-KP	Kalrez® high temperature poppet seal	call for quote
	Custom port fittings	call for quote

<sup>1</sup> For use with pneumatically actuated valves: air-to-open, spring-to-close

<sup>2</sup> Available for valves up to 2"

<sup>3</sup> For use with pneumatically actuated valves: air-to-open, air-to-close

**When ordering options,  
please add the option number(s)  
to the end of the reference number  
for the valve you are ordering.**

### A&N Corporation

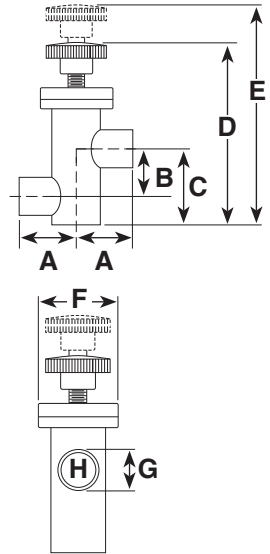
707 Southwest 19th Avenue  
Williston, Florida 32696  
(352) 528-4100  
1(800) FLANGE1  
FAX (352) 528-3441  
www.ancorp.com



## Manually Operated In-Line Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C

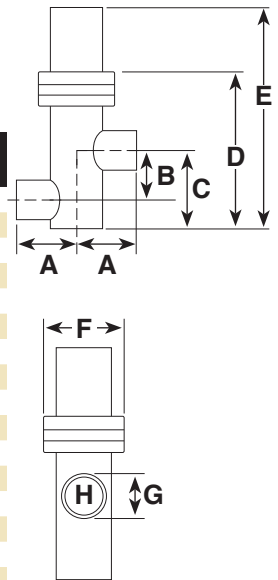
REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	A	B	C	VALVE DIMENSIONS					UNIT PRICE
							D	E	F	G	H	
IV038-TE-E-M	VITON®	0.38	N/A	1.50	0.94	1.50	4.06	5.06	2.48	0.38	0.25	\$ 315.00
IV038-TE-C-M	COPPER	0.38	N/A	1.50	0.94	1.50	4.06	5.06	2.48	0.38	0.25	\$ 365.00
IV050-TE-E-M	VITON®	0.50	N/A	1.50	1.00	1.62	4.19	5.19	2.48	0.50	0.38	\$ 315.00
IV050-TE-C-M	COPPER	0.50	N/A	1.50	1.00	1.62	4.19	5.19	2.48	0.50	0.38	\$ 365.00
IV075-TE-E-M	VITON®	0.75	N/A	2.00	1.12	1.87	4.44	5.44	2.48	0.75	0.63	\$ 315.00
IV075-TE-C-M	COPPER	0.75	N/A	2.00	1.12	1.87	4.44	5.44	2.48	0.75	0.63	\$ 365.00
IV100-TE-E-M	VITON®	1.00	N/A	1.88	1.37	2.25	4.69	5.80	2.48	1.00	0.88	\$ 365.00
IV100-TE-C-M	COPPER	1.00	N/A	1.88	1.37	2.25	4.69	5.80	2.48	1.00	0.88	\$ 410.00
IV150-TE-E-M	VITON®	1.50	N/A	2.25	1.88	3.12	6.52	8.020	2.97	1.50	1.38	\$ 385.00
IV150-TE-C-M	COPPER	1.50	N/A	2.25	1.88	3.12	6.52	8.020	2.97	1.50	1.38	\$ 480.00
IV200-TE-E-M	VITON®	2.00	N/A	3.25	2.62	4.12	8.73	10.73	3.50	2.00	1.88	\$ 715.00
IV200-TE-C-M	COPPER	2.00	N/A	3.25	2.62	4.12	8.73	10.73	4.05	2.00	1.88	\$ 770.00
IV250-TE-E-M	VITON®	2.50	N/A	3.00	3.12	4.93	10.20	12.70	4.00	2.50	2.38	\$ 770.00
IV250-TE-C-M	COPPER	2.50	N/A	3.00	3.12	4.93	10.20	12.70	4.61	2.50	2.38	\$ 825.00
IV300-TE-E-M	VITON®	3.00	N/A	3.25	3.68	5.62	11.04	14.04	4.50	3.00	2.88	\$1,100.00
IV300-TE-C-M	COPPER	3.00	N/A	3.25	3.68	5.55	11.04	14.04	5.62	3.00	2.88	\$1,155.00



## Pneumatically Actuated In-Line Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C

REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	A	B	C	VALVE DIMENSIONS					UNIT PRICE
							D	E	F	G	H	
IV038-TE-E-AS	VITON®	0.38	N/A	1.50	0.94	1.50	3.62	5.62	2.48	0.38	0.25	\$ 330.00
IV038-TE-C-AS	COPPER	0.38	N/A	1.50	0.94	1.50	3.62	5.62	2.48	0.38	0.25	\$ 395.00
IV050-TE-E-AS	VITON®	0.50	N/A	1.50	1.00	1.62	3.72	5.72	2.48	0.50	0.38	\$ 330.00
IV050-TE-C-AS	COPPER	0.50	N/A	1.50	1.00	1.62	3.72	5.72	2.48	0.50	0.38	\$ 395.00
IV075-TE-E-AS	VITON®	0.75	N/A	2.00	1.12	1.87	4.00	6.00	2.48	0.75	0.63	\$ 330.00
IV075-TE-C-AS	COPPER	0.75	N/A	2.00	1.12	1.87	4.00	6.00	2.48	0.75	0.63	\$ 395.00
IV100-TE-E-AS	VITON®	1.00	N/A	1.88	1.37	2.25	4.80	6.80	2.48	1.00	0.88	\$ 415.00
IV100-TE-C-AS	COPPER	1.00	N/A	1.88	1.37	2.25	4.80	6.80	2.48	1.00	0.88	\$ 480.00
IV150-TE-E-AS	VITON®	1.50	N/A	2.25	1.88	3.12	5.875	8.375	2.97	1.50	1.38	\$ 455.00
IV150-TE-C-AS	COPPER	1.50	N/A	2.25	1.88	3.12	5.875	8.375	2.97	1.50	1.38	\$ 520.00
IV200-TE-E-AS	VITON®	2.00	N/A	3.25	2.62	4.12	7.62	11.01	3.50	2.00	1.88	\$ 770.00
IV200-TE-C-AS	COPPER	2.00	N/A	3.25	2.62	4.12	7.50	11.01	4.05	2.00	1.88	\$ 825.00
IV250-TE-E-AA	VITON®	2.50	N/A	3.00	3.12	4.93	9.11	12.03	4.00	2.50	2.38	\$ 825.00
IV250-TE-C-AA	COPPER	2.50	N/A	3.00	3.12	4.93	9.11	12.03	4.61	2.50	2.38	\$ 880.00
IV300-TE-E-AA	VITON®	3.00	N/A	3.25	3.68	5.62	9.98	13.38	4.50	3.00	2.88	\$1,155.00
IV300-TE-C-AA	COPPER	3.00	N/A	3.25	3.68	5.55	9.98	13.38	5.62	3.00	2.88	\$1,210.00
IV400-TE-E-AA	VITON®	4.00	N/A	4.22	4.88	7.38	12.83	18.27	6.50	4.00	3.88	\$1,685.00
IV400-TE-C-AA	COPPER	4.00	N/A	4.22	4.88	7.38	12.83	18.27	6.73	4.00	3.88	\$1,775.00



## Replacement Parts

### Poppet and Bonnet Seals - Viton®

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-VSK-075	.38-1.00	\$ 11.00
PV-VSK-150	1.50	\$ 16.50
PV-VSK-200	2.00	\$ 22.00
PV-VSK-250	2.50	\$ 28.00
PV-VSK-300	3.00	\$ 28.00
PV-VSK-400	4.00	\$ 33.00

### Poppet and Bonnet Seals - Viton®, Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-CSK-075	.38-1.00	\$ 19.00
PV-CSK-150	1.50	\$ 25.00
PV-CSK-200	2.00	\$ 28.00
PV-CSK-250	2.50	\$ 33.00
PV-CSK-300	3.00	\$ 33.00
PV-CSK-400	4.00	\$ 36.00



Additional replacement parts (pictured above) are available. Call for assistance.



## Specifications - 3/8" to 4" Port O.D.'s

### Temperature Range

- High Vacuum elastomer sealed bonnets
  - bakeable to 150°C (200°C intermittent)

### Vacuum Rating

- Elastomer Bonnet Seal =  $1 \times 10^{-8}$  torr

### Materials

- Valve Body and Flanges: 304 Stainless Steel
- Welded Bellows: AM-350 Stainless Steel
- Seals:
  - Bonnet: Viton®
  - Poppet: Viton®
- Pneumatic cylinder is aluminum or manual handle is plastic

## Features

### General

- Poppet retracts fully when in open position
- Service valve without removal from the system

### Manual Valves

- Self-lubricating bronze nut
- Acme Threads, maximize shaft travel per turn

### Pneumatically Actuated Valves

- "Fail Safe" air-to-open, spring-to-close standard for sizes up to 2"
- Air-to-open, air-to-close also available for these sizes (see options)
- Air-to-open, air-to-close standard for sizes 2 1/2" and above
- 60-80 psig operating air pressure

## Options



Model shown with optional Solenoid (-S4A)



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-PVS3A	120 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3B	240 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3C	24 VDC air control solenoid valve <sup>1</sup>	\$ 61.00
-MI	Magnetic position indicator	\$ 165.00
-AA	Air-to-open, air-to-close pneumatic actuator	\$ N/C
-AAS	Air-to-open, air-to-close with spring fail safe <sup>2</sup>	\$ 28.00
-PVS4A	4-way 120 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4B	4-way 240 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4C	4-way 24 VDC air control solenoid valve <sup>3</sup>	\$ 61.00
-KP	Kalrez® high temperature poppet seal	call for quote
	Custom port fittings	call for quote

<sup>1</sup> For use with pneumatically actuated valves: air-to-open, spring-to-close

<sup>2</sup> Available for valves up to 2"

<sup>3</sup> For use with pneumatically actuated valves: air-to-open, air-to-close

### A&N Corporation

707 Southwest 19th Avenue  
Williston, Florida 32696  
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1(800) FLANGE1  
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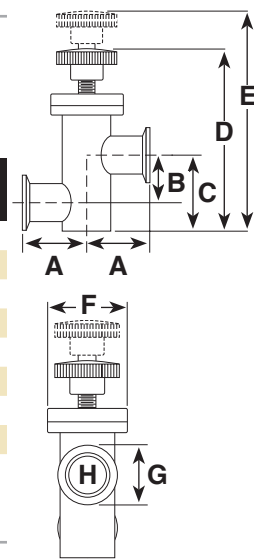
**When ordering options,  
please add the option number(s)  
to the end of the reference number  
for the valve you are ordering.**



## Manually Operated In-Line Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)

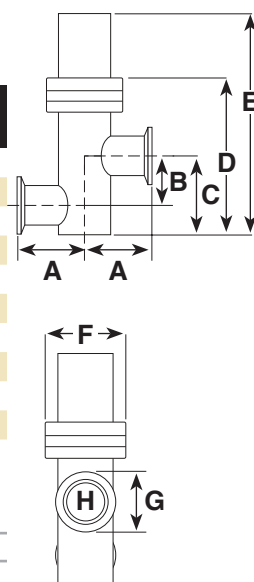
REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS								UNIT PRICE
				A	B	C	D	E	F	G	H	
IV038-QF-E-M	VITON®	0.38	QF10	1.65	0.94	1.50	4.06	5.06	2.48	1.18	0.25	\$ 345.00
IV050-QF-E-M	VITON®	0.50	QF10	1.65	1.00	1.62	4.19	5.19	2.48	1.18	0.38	\$ 345.00
IV075-QF-E-M	VITON®	0.75	QF16	2.15	1.12	1.87	4.44	5.44	2.48	1.18	0.63	\$ 345.00
IV100-QF-E-M	VITON®	1.00	QF25	2.03	1.37	2.25	4.69	5.80	2.48	1.57	0.88	\$ 395.00
IV150-QF-E-M	VITON®	1.50	QF40	2.40	1.88	3.12	6.52	8.02	2.97	2.16	1.38	\$ 425.00
IV200-QF-E-M	VITON®	2	QF50	3.40	2.62	4.12	8.73	10.73	3.50	2.95	1.88	\$ 755.00
IV250-LF-E-M	VITON®	2.5	LF63	3.25	3.12	4.93	10.20	12.70	4.00	3.74	2.38	\$ 880.00
IV300LF-E-M	VITON®	3	LF80	3.50	3.68	5.62	11.04	14.04	4.50	4.33	2.88	\$1,210.00



## Pneumatically Actuated In-Line Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)

REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS								UNIT PRICE
				A	B	C	D	E	F	G	H	
IV038-QF-E-AS	VITON®	0.38	QF10	1.65	0.94	1.50	3.62	5.62	2.48	1.18	0.25	\$ 360.00
IV050-QF-E-AS	VITON®	0.50	QF10	1.65	1.00	1.62	3.75	5.72	2.48	1.18	0.38	\$ 360.00
IV075-QF-E-AS	VITON®	0.75	QF16	2.15	1.12	1.87	4.00	6.00	2.48	1.18	0.63	\$ 360.00
IV100-QF-E-AS	VITON®	1.00	QF25	2.03	1.37	2.25	4.80	6.80	2.48	1.57	0.88	\$ 440.00
IV150-QF-E-AS	VITON®	1.50	QF40	2.40	1.88	3.12	5.875	8.375	2.97	2.16	1.38	\$ 485.00
IV200-QF-E-AS	VITON®	2	QF50	3.40	2.62	4.12	7.62	11.01	3.50	2.95	1.88	\$ 810.00
IV250-LF-E-AA	VITON®	2.5	LF63	3.25	3.12	4.93	9.11	12.03	4.00	3.74	2.38	\$ 935.00
IV300-LF-E-AA	VITON®	3	LF80	3.50	3.68	5.62	9.98	13.38	4.50	4.33	2.88	\$ 1,265.00
IV400-LF-E-AA	VITON®	4	LF100	4.47	4.88	7.38	12.83	18.27	6.50	5.12	3.88	\$ 1,840.00



## Accessories



### QF/LF Flange Hardware

- Clamps
- Centering rings
- O-rings

For prices and information see QF/LF Catalog section: QF Clamps and Seals or LF Fasteners and Seals.

## Replacement Parts

### Poppet and Bonnet Seals - Viton®

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-VSK-075	.38-1.00	\$ 11.00
PV-VSK-150	1.50	\$ 16.50
PV-VSK-200	2.00	\$ 22.00
PV-VSK-250	2.50	\$ 28.00
PV-VSK-300	3.00	\$ 28.00
PV-VSK-400	4.00	\$ 33.00

### Poppet and Bonnet Seals - Viton®, Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-CSK-075	.38-1.00	\$19.00
PV-CSK-150	1.50	\$25.00
PV-CSK-200	2.00	\$28.00
PV-CSK-250	2.50	\$33.00
PV-CSK-300	3.00	\$33.00
PV-CSK-400	4.00	\$36.00



Additional replacement parts (pictured above) are available. Call for assistance.



## Specifications - 3/8" to 4" Port O.D.'s

### Temperature Range

- High Vacuum elastomer sealed bonnets
  - bakeable to 150°C (200°C intermittent)
- UHV copper sealed bonnets
  - bakeable to 200°C open, 150°C (200°C intermittent) closed

### Vacuum Rating

- Elastomer Bonnet Seal =  $1 \times 10^{-8}$  torr
- Copper Bonnet Seal =  $1 \times 10^{-10}$  torr

### Materials

- Valve Body and Flanges: 304 Stainless Steel
- Welded Bellows: AM-350 Stainless Steel
- Seals:
  - Bonnet: Viton® or copper
  - Poppet: Viton®
- Pneumatic cylinder is aluminum or manual handle is plastic

## Features

### General

- Poppet retracts fully when in open position
- Service valve without removal from the system

### Manual Valves

- Self-lubricating bronze nut
- Acme Threads, maximize shaft travel per turn

### Pneumatically Actuated Valves

- "Fail Safe" air-to-open, spring-to-close standard for sizes up to 2"
  - Air-to-open, air-to-close also available for these sizes (see options)
- Air-to-open, air-to-close standard for sizes 2 1/2" and above
- 60-80 psig operating air pressure

## Options



Model shown with optional Solenoid (-S4A)



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-PVS3A	120 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3B	240 VAC air control solenoid valve <sup>1</sup>	\$ 61.00
-PVS3C	24 VDC air control solenoid valve <sup>1</sup>	\$ 61.00
-MI	Magnetic position indicator	\$ 165.00
-AA	Air-to-open, air-to-close pneumatic actuator	\$ N/C
-AAS	Air-to-open, air-to-close with spring fail safe <sup>2</sup>	\$ 28.00
-PVS4A	4-way 120 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4B	4-way 240 VAC air control solenoid valve <sup>3</sup>	\$ 61.00
-PVS4C	4-way 24 VDC air control solenoid valve <sup>3</sup>	\$ 61.00
-KP	Kalrez® high temperature poppet seal	call for quote
	Custom port fittings	call for quote

<sup>1</sup> For use with pneumatically actuated valves: air-to-open, spring-to-close

<sup>2</sup> Available for valves up to 2"

<sup>3</sup> For use with pneumatically actuated valves: air-to-open, air-to-close

**When ordering options,  
please add the option number(s)  
to the end of the reference number  
for the valve you are ordering.**

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## Manually Operated In-Line Valves

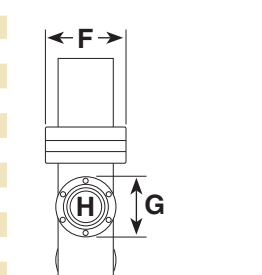
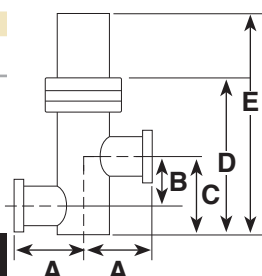
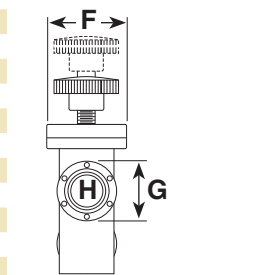
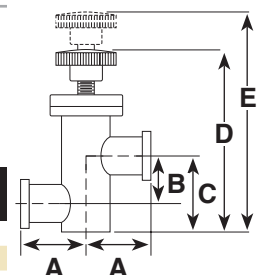
- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C
- Both CF Flanges Rotatable

REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	A	B	C	VALVE DIMENSIONS					UNIT PRICE
							D	E	F	G	H	
IV038-CF-E-M	VITON®	0.38	CF 133	1.60	0.94	1.50	4.06	5.06	2.48	1.33	0.25	\$ 345.00
IV038-CF-C-M	COPPER	0.38	CF 133	1.60	0.94	1.50	4.06	5.06	2.48	1.33	0.25	\$ 385.00
IV050-CF-E-M	VITON®	0.50	CF 133	1.60	1.00	1.62	4.19	5.19	2.48	1.33	0.38	\$ 345.00
IV050-CF-C-M	COPPER	0.50	CF 133	1.60	1.00	1.62	4.19	5.19	2.48	1.33	0.38	\$ 385.00
IV075-CF-E-M	VITON®	0.75	CF 133	2.50	1.12	1.87	4.44	5.44	2.48	1.33	0.63	\$ 345.00
IV075-CF-C-M	COPPER	0.75	CF 133	2.50	1.12	1.87	4.44	5.44	2.48	1.33	0.63	\$ 385.00
IV100-CF-E-M	VITON®	1.00	CF 212	2.05	1.37	2.25	4.69	5.80	2.48	2.12	0.88	\$ 410.00
IV100-CF-C-M	COPPER	1.00	CF 212	2.05	1.37	2.25	4.69	5.80	2.48	2.12	0.88	\$ 475.00
IV150-CF-E-M	VITON®	1.50	CF 275	2.45	1.88	3.12	6.52	8.02	2.97	2.72	1.38	\$ 430.00
IV150-CF-C-M	COPPER	1.50	CF 275	2.45	1.88	3.12	6.52	8.02	2.97	2.72	1.38	\$ 520.00
IV200-CF-E-M	VITON®	2.00	CF 338	3.48	2.62	4.12	8.73	10.73	3.50	3.37	1.88	\$ 800.00
IV200-CF-C-M	COPPER	2.00	CF 338	3.48	2.62	4.12	8.73	10.73	4.05	3.37	1.88	\$ 855.00
IV250-CF-E-M	VITON®	2.50	CF 450	3.38	3.12	4.93	10.20	12.70	4.00	4.47	2.38	\$ 880.00
IV250-CF-C-M	COPPER	2.50	CF 450	3.38	3.12	4.93	10.20	12.70	4.61	4.47	2.38	\$ 935.00
IV300-CF-E-M	VITON®	3.00	CF 462	3.53	3.68	5.62	11.04	14.04	4.50	4.62	2.88	\$ 1,210.00
IV300-CF-C-M	COPPER	3.00	CF 462	3.53	3.62	5.55	11.04	14.04	5.62	4.62	2.88	\$ 1,265.00

## Pneumatically Actuated In-Line Valves

- High Vacuum elastometer sealed bonnets  
- bakeable to 150°C (200°C intermittent)
- Ultrahigh Vacuum Copper sealed bonnets  
- bakeable to 204°C
- Both CF Flanges Rotatable

REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	A	B	C	VALVE DIMENSIONS					UNIT PRICE
							D	E	F	G	H	
IV038-CF-E-AS	VITON®	0.38	CF 133	1.60	0.94	1.50	3.62	5.62	2.48	1.33	0.25	\$ 360.00
IV038-CF-C-AS	COPPER	0.38	CF 133	1.60	0.94	1.50	3.62	5.62	2.48	1.33	0.25	\$ 415.00
IV050-CF-E-AS	VITON®	0.50	CF 133	1.60	1.00	1.62	3.72	5.72	2.48	1.33	0.38	\$ 360.00
IV050-CF-C-AS	COPPER	0.50	CF 133	1.60	1.00	1.62	3.72	5.72	2.48	1.33	0.38	\$ 415.00
IV075-CF-E-AS	VITON®	0.75	CF 133	2.50	1.12	1.87	4.00	6.00	2.48	1.33	0.63	\$ 360.00
IV075-CF-C-AS	COPPER	0.75	CF 133	2.50	1.12	1.87	4.00	6.00	2.48	1.33	0.63	\$ 415.00
IV100-CF-E-AS	VITON®	1.00	CF 212	2.05	1.37	2.25	4.80	6.80	2.48	2.12	0.88	\$ 455.00
IV100-CF-C-AS	COPPER	1.00	CF 212	2.05	1.37	2.25	4.80	6.80	2.48	2.12	0.88	\$ 520.00
IV150-CF-E-AS	VITON®	1.50	CF 275	2.45	1.88	3.12	5.875	8.375	2.97	2.72	1.38	\$ 490.00
IV150-CF-C-AS	COPPER	1.50	CF 275	2.45	1.88	3.12	5.875	8.375	2.97	2.72	1.38	\$ 560.00
IV200-CF-E-AS	VITON®	2.00	CF 338	3.48	2.62	4.12	7.62	11.01	3.50	3.37	1.88	\$ 855.00
IV200-CF-C-AS	COPPER	2.00	CF 338	3.48	2.62	4.12	7.50	11.01	4.05	3.37	1.88	\$ 910.00
IV250-CF-E-AA	VITON®	2.50	CF 450	3.38	3.12	4.93	9.11	12.03	4.00	4.47	2.38	\$ 935.00
IV250-CF-C-AA	COPPER	2.50	CF 450	3.38	3.12	4.93	9.11	12.03	4.61	4.47	2.38	\$ 990.00
IV300-CF-E-AA	VITON®	3.00	CF 462	3.53	3.68	5.62	9.98	13.38	4.50	4.62	2.88	\$ 1,265.00
IV300-CF-C-AA	COPPER	3.00	CF 462	3.53	3.62	5.55	9.98	13.38	5.62	4.62	2.88	\$ 1,320.00
IV400-CF-E-AA	VITON®	4.00	CF 600	4.66	4.88	7.38	12.83	18.27	6.50	5.97	3.88	\$ 1,880.00
IV400-CF-C-AA	COPPER	4.00	CF 600	4.66	4.88	7.38	12.83	18.27	6.73	5.97	3.88	\$ 1,965.00



## CF Flange Hardware

- Gaskets
- Bolts, nut, washer kits
- Plate nut kits

For prices and information see CF Catalog section: Listed in the index as Hardware.

## Poppet and Bonnet Seals - Viton®

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-VSK-075	.38-1.00	\$ 11.00
PV-VSK-150	1.50	\$ 16.50
PV-VSK-200	2.00	\$ 22.00
PV-VSK-250	2.50	\$ 28.00
PV-VSK-300	3.00	\$ 28.00
PV-VSK-400	4.00	\$ 33.00

## Poppet and Bonnet Seals - Viton®, Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-CSK-075	.38-1.00	\$ 19.00
PV-CSK-150	1.50	\$ 25.00
PV-CSK-200	2.00	\$ 28.00
PV-CSK-250	2.50	\$ 33.00
PV-CSK-300	3.00	\$ 33.00
PV-CSK-400	4.00	\$ 36.00

## Replacement Parts



Additional replacement parts (pictured above) are available. Call for assistance.



## Specifications - 3/8" to 2" Port O.D.'s

### Temperature Range

- High Vacuum elastomer sealed bonnets – bakeable to 150°C (200°C intermittent)
- UHV copper sealed bonnets – bakeable to 200°C open, 150°C (200°C intermittent) closed

### Vacuum Rating

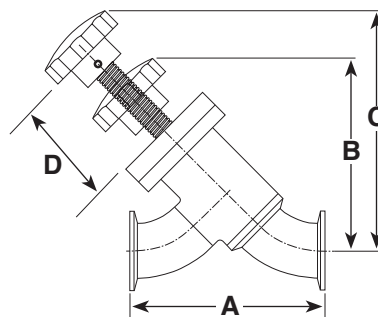
- Elastomer Bonnet Seal =  $1 \times 10^{-8}$  torr
- Copper Bonnet Seal =  $1 \times 10^{-10}$  torr

### Materials

- Valve Body and Flanges: 304 Stainless Steel
- Welded Bellows: AM-350 Stainless Steel
- Seals:
  - Bonnet: Viton® or copper
  - Poppet: Viton®
  - Pneumatic cylinder is aluminum or manual handle is plastic

## Manual Valves

- ACME threads maximize shaft travel/turn
- Service valve without removal from the system
- Poppet retracts fully for unobstructed conductance



### \*ORDERING NOTE Viton® Bonnet Seal - HV

Angle, In-Line Valves have 3 standard port connections:

TE=Weldable Tube End  
QF=ISO-QF Flange  
CF=CF ConFlat® Style Flange

Review product specifications for the specific port connection size.

REFERENCE NUMBER	SIZE	PORT FLANGES	A	B	C	D	UNIT PRICE
AIV075-TE-E-M	0.75	N/A	3.70	4.70	5.45	1.76	\$ 375.00
AIV075-QF-E-M	0.75	QF16	4.00	4.70	5.45	1.76	\$ 410.00
AIV075-CF-E-M	0.75	CF133	4.70	4.70	5.45	1.76	\$ 400.00
AIV100-TE-E-M	1.00	N/A	3.90	4.55	5.30	1.76	\$ 440.00
AIV100-QF-E-M	1.00	QF25	4.20	4.55	5.30	1.76	\$ 480.00
AIV100-CF-E-M	1.00	CF212	4.24	4.55	5.30	1.76	\$ 455.00
AIV150-TE-E-M	1.50	N/A	5.08	5.19	6.30	2.58	\$ 455.00
AIV150-QF-E-M	1.50	QF40	5.38	5.19	6.30	2.58	\$ 495.00
AIV150-CF-E-M	1.50	CF275	5.50	5.19	6.30	2.58	\$ 480.00
AIV200-TE-E-M	2.00	N/A	6.42	6.02	7.33	2.85	\$ 820.00
AIV200-QF-E-M	2.00	QF50	6.72	6.02	7.33	2.85	\$ 915.00
AIV200-CF-E-M	2.00	CF338	6.87	6.02	7.33	2.85	\$ 840.00

### Copper Bonnet Seal - UHV

REFERENCE NUMBER	SIZE	PORT FLANGES	A	B	C	D	UNIT PRICE
AIV075-TE-C-M	0.75	N/A	3.70	4.70	5.45	1.76	\$ 425.00
AIV075-CF-C-M	0.75	CF133	4.70	4.70	5.45	1.76	\$ 455.00
AIV100-TE-C-M	1.00	N/A	3.90	4.55	5.30	1.76	\$ 510.00
AIV100-CF-C-M	1.00	CF212	4.24	4.55	5.30	1.76	\$ 545.00
AIV150-TE-C-M	1.50	N/A	5.08	5.19	6.30	2.58	\$ 545.00
AIV150-CF-C-M	1.50	CF275	5.50	5.19	6.30	2.58	\$ 585.00
AIV200-TE-C-M	2.00	N/A	6.42	6.02	7.33	2.85	\$ 875.00
AIV200-CF-C-M	2.00	CF338	6.87	6.02	7.33	2.85	\$ 970.00

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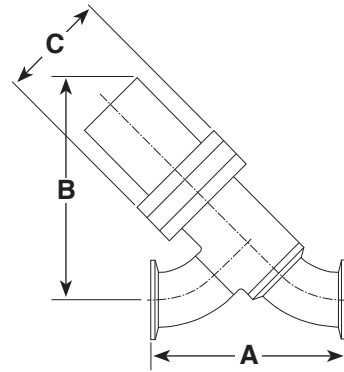


High Vacuum Components Since 1965

A&N CORPORATION

### Pneumatically Actuated Valves

- “Fail Safe” air-to-open, spring-to-close standard for sizes up to 2”
- Service valve without removal from the system
- 60-80 psig operating air pressure
- Poppet retracts fully for unobstructed conductance



#### Viton® Bonnet Seal - HV

REFERENCE NUMBER	SIZE	PORT FLANGES	A	B	C	UNIT PRICE
AIV075-TE-E-AS	0.75	N/A	3.70	5.32	2.48	\$ 395.00
AIV075-QF-E-AS	0.75	QF16	4.00	5.32	2.48	\$ 425.00
AIV075-CF-E-AS	0.75	CF133	4.70	5.32	2.48	\$ 415.00
AIV100-TE-E-AS	1.00	N/A	3.90	5.18	2.48	\$ 495.00
AIV100-QF-E-AS	1.00	QF25	4.20	5.18	2.48	\$ 530.00
AIV100-CF-E-AS	1.00	CF212	4.24	5.18	2.48	\$ 510.00
AIV150-TE-E-AS	1.50	N/A	5.08	6.04	2.97	\$ 530.00
AIV150-QF-E-AS	1.50	QF40	5.38	6.04	2.97	\$ 565.00
AIV150-CF-E-AS	1.50	CF275	5.50	6.04	2.97	\$ 545.00
AIV200-TE-E-AS	2.00	N/A	6.42	7.83	3.48	\$ 900.00
AIV200-QF-E-AS	2.00	QF50	6.72	7.83	3.48	\$ 970.00
AIV200-CF-E-AS	2.00	CF338	6.87	7.83	3.48	\$ 930.00

#### \*ORDERING NOTE

Angle, In-Line Valves have 3 standard port connections:

TE=Weldable Tube End

QF=ISO-QF Flange

CF=CF ConFlat® Style Flange

Review product specifications for the specific port connection size.

#### Copper Bonnet Seal - UHV

REFERENCE NUMBER	SIZE	PORT FLANGES	A	B	C	UNIT PRICE
AIV075-TE-C-AS	0.75	N/A	3.70	5.32	2.48	\$ 455.00
AIV075-CF-C-AS	0.75	CF133	4.70	5.32	2.48	\$ 470.00
AIV100-TE-C-AS	1.00	N/A	3.90	5.18	2.48	\$ 565.00
AIV100-CF-C-AS	1.00	CF212	4.24	5.18	2.48	\$ 595.00
AIV150-TE-C-AS	1.50	N/A	5.08	6.04	2.97	\$ 595.00
AIV150-CF-C-AS	1.50	CF275	5.50	6.04	2.97	\$ 635.00
AIV200-TE-C-AS	2.00	N/A	6.42	7.83	3.48	\$ 955.00
AIV200-CF-C-AS	2.00	CF338	6.87	7.83	3.48	\$1,035.00

### Replacement Parts

#### Poppet and Bonnet Seals - Viton®

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-VSK-075	.38-1.00	\$ 11.00
PV-VSK-150	1.50	\$ 16.50
PV-VSK-200	2.00	\$ 22.00
PV-VSK-250	2.50	\$ 28.00
PV-VSK-300	3.00	\$ 28.00
PV-VSK-400	4.00	\$ 33.00

#### Poppet and Bonnet Seals - Viton®, Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
PV-CSK-075	.38-1.00	\$ 19.00
PV-CSK-150	1.50	\$ 25.00
PV-CSK-200	2.00	\$ 28.00
PV-CSK-250	2.50	\$ 33.00
PV-CSK-300	3.00	\$ 33.00
PV-CSK-400	4.00	\$ 36.00



Additional replacement parts (pictured above) are available. Call for assistance.



Right Angle All-Metal Valve

In-Line All-Metal Valve

## Specifications

- 3/4" and 1 1/2" port
- Acme threads
- Vacuum rated below  $10^{-10}$  Torr.
- Leak rated to less than  $2 \times 10^{-10}$  std. cc./sec.
- Constructed of all 300 Series S.S.
- Manual actuation
- Temperature range  $-250^{\circ}\text{C}$  to  $400^{\circ}\text{C}$ .

## Features

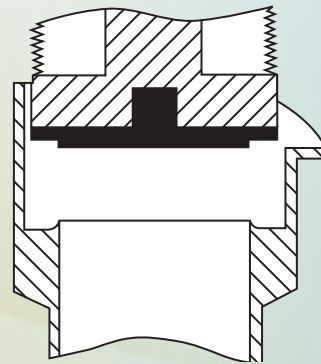
### Specifications

- High conductance design
  - Pulled bodies
  - Poppet retracts fully in open position
- Electropolish finish
- Gasket wear/torque indicator
- Approved for cryogenic and beam line use
- All sizes are serviceable without removal from the system
- Hundreds of cycles per gasket

***A&N all-metal sealed valves are designed for use in Ultrahigh vacuum applications in which the valve will be subjected to temperature extremes which preclude the use of elastomer seals.***

### Sealing Mechanism

The vacuum seal is established by compressing the OFC copper poppet gasket onto a stainless steel knife-edge seat. (See illustration) When operated at median temperatures this gasket provides hundreds of seals. Operation at temperature maximums reduces gasket life to approximately 50 cycles. A radially graduated indicator is included on the top of the valve body as a visual cue for gasket replacement and proper torque for closure.



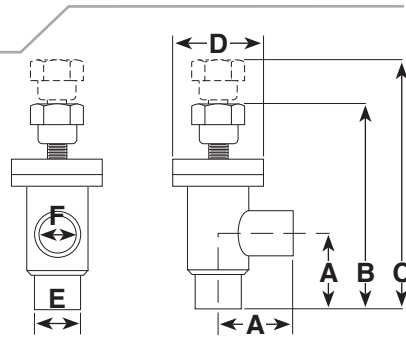
### A&N Corporation

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Williston, Florida 32696  
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1(800) FLANGE1  
FAX (352) 528-3441  
www.ancorp.com



### All-Metal Angle Valves with Tube Ends

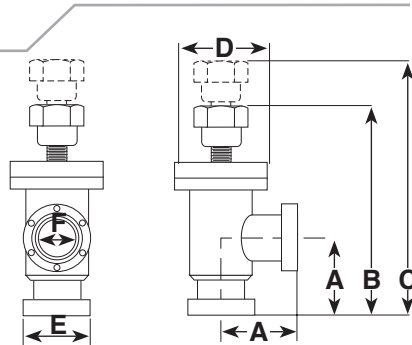
- Bakeable to 400°C open; 300°C closed



REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
				A	B	C	D	E	F	
AVB075-TE-C-M	COPPER	0.75	N/A	2.00	5.05	6.05	2.48	0.63	0.75	\$ Call For Quote
AVB150-TE-C-M	COPPER	1.50	N/A	2.25	5.78	7.10	2.97	1.38	1.50	\$ Call For Quote

### All-Metal Angle Valves with CF Flanges

- Bakeable to 400°C open; 300°C closed
- Both CF Flanges Rotatable



REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS						UNIT PRICE
				A	B	C	D	E	F	
AVB075-CF-C-M	COPPER	0.75	CF133	2.50	5.28	6.28	2.48	0.63	1.33	\$ 810.00
AVB150-CF-C-M	COPPER	1.50	CF275	2.45	5.90	7.23	2.97	1.38	2.75	\$ 850.00

### Accessories



#### CF Flange Hardware

- Gaskets
- Bolts, nut, washer kits
- Plate nut kits

For prices and information see CF Catalog section: Listed in the index as Hardware.

### Replacement Parts

#### Poppet and Bonnet Seals - Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
MV-CSK-075	0.75	\$ 39.00
MV-CSK-150	1.50	\$ 50.00

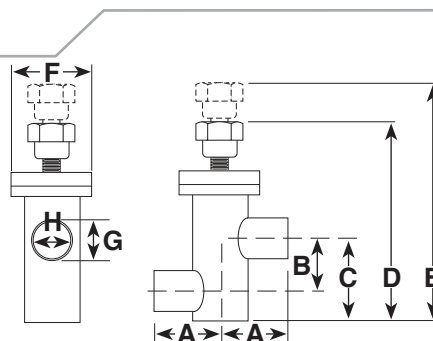
Additional replacement parts (pictured right) are available. Call for assistance.





## All-Metal In-Line Valves with Tube Ends

- Bakeable to 400°C open; 300°C closed

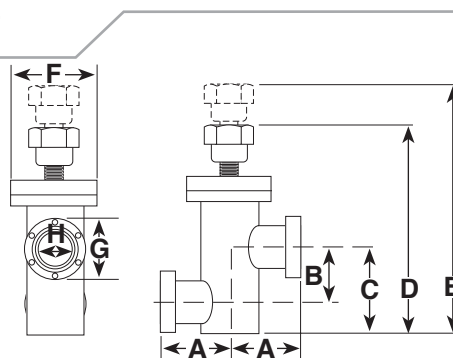


REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS								PRICE	UNIT
				A	B	C	D	E	F	G	H		

IVB075-TE-C-M	COPPER	0.75	N/A	2.00	1.12	1.87	3.84	4.84	2.48	0.75	0.63	\$	Call For Quote
IVB150-TE-C-M	COPPER	1.50	N/A	2.25	1.88	3.12	5.92	7.42	2.97	1.50	1.38	\$	Call For Quote

## All-Metal In-Line Valves with CF Flanges

- Bakeable to 400°C open; 300°C closed



REFERENCE NUMBER	BONNET SEAL	SIZE	PORT FLANGES	VALVE DIMENSIONS								UNIT PRICE
				A	B	C	D	E	F	G	H	

IVB075-CF-C-M	COPPER	0.75	CF133	2.50	1.12	1.87	3.84	4.84	2.48	1.33	0.63	\$	Call For Quote
IVB150-CF-C-M	COPPER	1.50	CF275	2.45	1.88	3.12	5.92	7.42	2.97	2.72	1.38	\$	Call For Quote

## Accessories



### CF Flange Hardware

- Gaskets
- Bolts, nut, washer kits
- Plate nut kits

For prices and information see CF Catalog section: Listed in the index as Hardware.

## Replacement Parts

### Poppet and Bonnet Seals - Copper

REFERENCE NUMBER	VALVE SIZE	UNIT PRICE
------------------	------------	------------

MV-CSK-075	0.75	\$ 39.00
MV-CSK-150	1.50	\$ 50.00

Additional replacement parts (pictured right) are available. Call for assistance.



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## Specifications

- 1.5" to 12" ports
- 100,000 cycles before service\*
- Acme threads
- Viton® Bonnet Seal:  $1 \times 10^{-9}$  torr vacuum rating
- Copper Bonnet Seal:  $1 \times 10^{-10}$  torr vacuum rating
- Helium Leak Rate  $2 \times 10^{-10}$  std. cc./sec.
- 304 Stainless Steel Vacuum brazed body
- AM-350 Welded Bellows
- Electropolished inside and out
- Manual and electropneumatic operation
- Valve closes in the event of power failure
- Minimal vibrations during cycling

## Bakeability

- Viton® Bonnet Seal: 150°C
- Copper Bonnet Seal: 200°C
- Pneumatically actuated valves: Actuator 60°C
- Copper Bonnet Valves with Kalrez® optional gate O-Ring: 250°C
- Heater Jackets for bakeouts up to 200°C are available for valves - call your A&N sales representative.

*\*Expected cycle life is application dependent.*

### Overview:

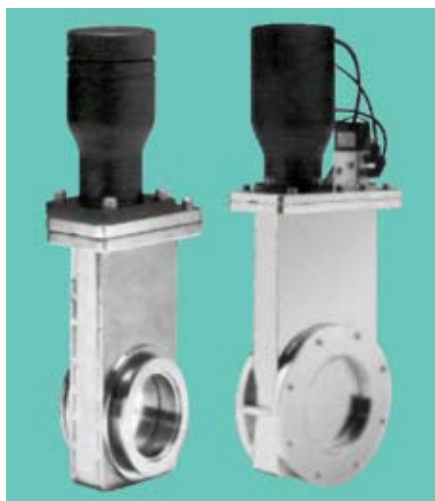
The A&N line of gate valves combines innovative design, superior grade materials, generous standard equipment and a large offering of options to give this valve unparalleled flexibility to meet your requirements.

The body of the valve is made of 304 stainless steel and is vacuum brazed to 1100°C at  $10^{-6}$  torr. This insures joint integrity and eliminates the possibility of "virtual leaks." It is then electropolished inside and out. The compact design provides a thin profile greatly reducing both the space needed for the valve and the valve's volume. Reduction of volume decreases outgassing and pumpdown time.

Design of the valve provides service for 100,000 cycles before maintenance for most applications. During maintenance the carriage is easily removable along with the solenoid without removing the valve from the system.

Pneumatically actuated valves close in the event of a power failure. Linear actuation allows the use of an AM-350 welded bellows to seal the actuator. This eliminates the use of rotary seals and the short stroke increases cycle life. Unique air cylinder design reduces vibrations during cycling. This is particularly important for semiconductor and other sensitive processes.

A&N Gate Valves are available with QF (NW, KF®), LF (ISO) claw clamp style, LF (ISO) bolted style, ASA and CF flanges, manual or pneumatic actuation and Viton® or copper sealed bonnet. Valve sizes range from 1.5" to 12" nominal I.D. Larger sizes available per quote.



## Specifications

- 1.5" to 12" Nom I.D.
- Acme threads
- Viton® Bonnet Seal
- 10<sup>-9</sup> Torr vacuum rating

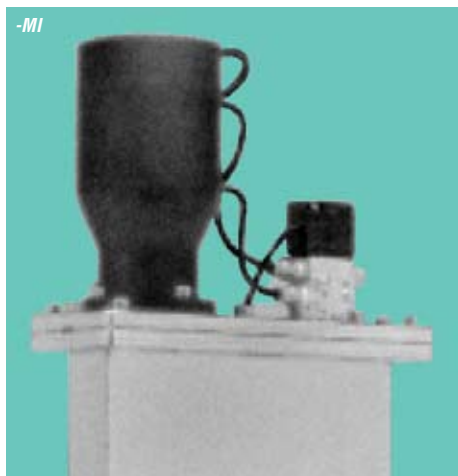
## Pneumatically Actuated Valves

- 80 psig operating air pressure
- Reed switch position indicator standard
- 120 VAC; 50/60Hz air solenoid standard
- Air-to-open, air-to-close

## Options



-MI



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-GVS4A	4-way 120 VAC air control solenoid valve	\$ 50.00
-GVS4B	4-way 240 VAC air control solenoid valve	\$ 50.00
-GVS4C	4-way 24 VDC air control solenoid valve	\$ N/C
-GVS4D	4-way 220 VAC air control solenoid valve	\$ 50.00
-GVS4E	4-way 24 VAC air control solenoid valve	\$ 50.00
-GMI	Micro-switch position indicator	\$ 430.00

**When ordering options,  
please add the option number(s)  
to the end of the reference number  
for the valve you are ordering.**

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## Manually Operated Gate Valves

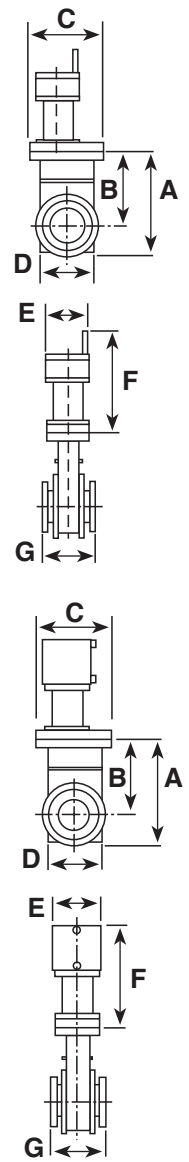
- High Vacuum elastomer sealed bonnets - bakeable to 150°C
- Viton® Seal intermittently - bakeable to 200°C

REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV150-QF-E-M	VITON®	1.5	QF40	88	4.76	3.39	3.31	2.46	1.99	3.34	2.00	\$ 920.00
GV200-QF-E-M	VITON®	2	QF50	317	5.60	4.12	3.81	2.96	1.99	3.34	2.00	\$ 1,245.00
GV250-LF-E-M	VITON®	2.5	LF63	363	7.36	4.80	4.37	3.52	1.99	3.34	3.46	\$ 2,175.00
GV300-LF-E-M	VITON®	3	LF80	546	8.62	5.76	4.94	4.28	1.99	3.34	3.84	\$ 2,410.00
GV400-LF-E-M	VITON®	4	LF100	1199	11.38	8.12	7.00	5.67	2.99	9.33	4.25	\$ 2,600.00
GV600-LF-E-M	VITON®	6	LF160	3967	15.07	10.63	8.75	7.55	3.00	9.33	4.25	\$ 3,105.00
GV800-LF-E-M	VITON®	8	LF200	9449	19.48	13.91	11.25	10.02	3.00	8.59	4.25	\$ 4,085.00
GV1000-LF-E-M	VITON®	10	LF250	17537	24.81	18.21	13.44	11.99	3.49	11.00	5.51	\$ 6,585.00
GV1200-LF-E-M	VITON®	12	LF320	24500	30.40	22.03	15.88	14.28	3.49	11.00	5.51	\$ 7,045.00

## Pneumatically Actuated Gate Valves

- High Vacuum elastomer sealed bonnets - bakeable to 150°C
- Viton® Seal intermittently - bakeable to 200°C
- 120 VAC air solenoid standard
- Reed Switch Position Indicator Standard

REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV150-QF-E-P	VITON®	1.5	QF40	88	4.76	3.39	3.31	2.46	1.99	5.12	2.00	\$ 1,015.00
GV200-QF-E-P	VITON®	2	QF50	317	5.60	4.12	3.81	2.98	1.99	5.12	2.00	\$ 1,335.00
GV250-LF-E-P	VITON®	2.5	LF63	363	7.36	4.80	4.37	3.52	1.99	5.29	3.46	\$ 2,265.00
GV300-LF-E-P	VITON®	3	LF80	546	8.62	5.76	4.94	4.28	1.99	5.29	3.84	\$ 2,505.00
GV400-LF-E-P	VITON®	4	LF100	1199	11.38	8.12	7.00	5.67	2.99	7.33	4.25	\$ 2,700.00
GV600-LF-E-P	VITON®	6	LF160	3967	15.07	10.63	8.75	7.55	3.00	7.33	4.25	\$ 3,240.00
GV800-LF-E-P	VITON®	8	LF200	9449	19.48	13.91	11.25	10.02	3.00	6.59	4.25	\$ 4,245.00
GV1000-LF-E-P	VITON®	10	LF250	17537	24.81	18.21	13.44	11.99	3.49	9.28	5.51	\$ 6,585.00
GV1200-LF-E-P	VITON®	12	LF320	24500	30.40	22.03	15.87	14.28	3.49	9.28	5.51	\$ 7,045.00



## Accessories



### QF/LF Flange Hardware

- Clamps
- Centering rings
- O-rings

For prices and information see QF/LF Catalog section: QF Clamps and Seals or LF Fasteners and Seals.

## Replacement Parts

### Gate Valve Seal Replacement Kits

REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE	REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE
GV-SK150	1.5	\$ Call For Quote	GV-SK600	6.0	\$ Call For Quote
GV-SK200	2.0	\$ Call For Quote	GV-SK800	8.0	\$ Call For Quote
GV-SK250	2.5	\$ Call For Quote	GV-SK1000	10.0	\$ Call For Quote
GV-SK300	3.0	\$ Call For Quote	GV-SK1200	12.0	\$ Call For Quote
GV-SK400	4.0	\$ Call For Quote			





## Specifications

- 1.5" to 12" Nom I.D.
- Acme threads
- Viton® Bonnet Seal
- 10<sup>-9</sup> Torr vacuum rating

## Pneumatically Actuated Valves

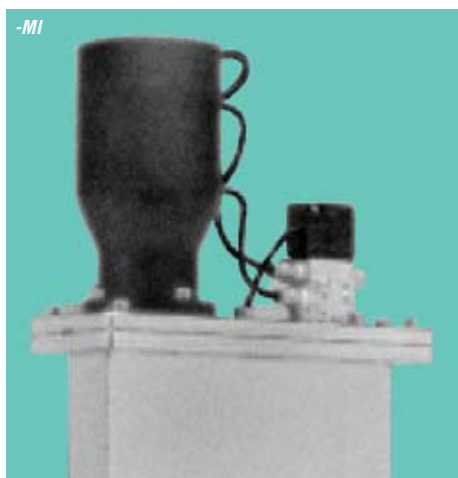
- 80 psig operating air pressure
- Reed switch position indicator standard
- 120 VAC; 50/60Hz air solenoid standard
- Air-to-open, air-to-close

## Options



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-GVS4A	4-way 120 VAC air control solenoid valve	\$ 50.00
-GVS4B	4-way 240 VAC air control solenoid valve	\$ 50.00
-GVS4C	4-way 24 VDC air control solenoid valve	\$ N/C
-GVS4D	4-way 220 VAC air control solenoid valve	\$ 50.00
-GVS4E	4-way 24 VAC air control solenoid valve	\$ 50.00
-GMI	Micro-switch position indicator	\$ 430.00

**When ordering options,  
please add the option number(s)  
to the end of the reference number  
for the valve you are ordering.**



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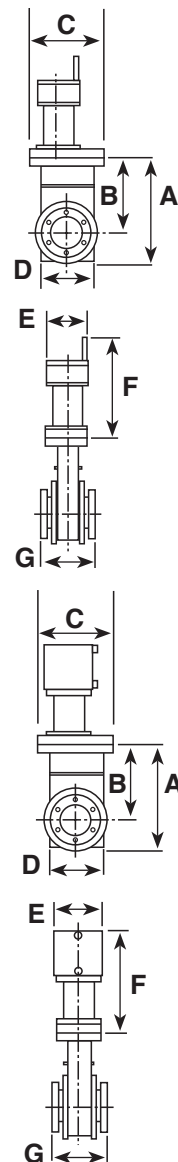
High Vacuum Components Since 1965

A&N CORPORATION

### Manually Operated Gate Valves

- High Vacuum elastomer sealed bonnets  
- bakeable to 150°C
- Threaded bolt holes are standard
- Viton® Seal intermittently - bakeable to 200°C

REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV250-LFB-E-M	VITON®	2.5	LFB63	615	7.36	4.80	4.37	3.52	1.99	3.34	2.03	\$ 1,510.00
GV300-LFB-E-M	VITON®	3	LFB80	1071	8.50	5.76	4.94	4.28	1.99	3.34	1.97	\$ 1,750.00
GV400-LFB-E-M	VITON®	4	LFB100	2122	11.50	8.12	7.00	5.67	2.99	9.33	2.41	\$ 1,955.00
GV600-LFB-E-M	VITON®	6	LFB160	7140	15.13	10.63	8.75	7.55	3.00	9.33	2.36	\$ 2,470.00
GV800-LFB-E-M	VITON®	8	LFB200	11597	19.41	13.91	11.25	10.02	3.00	8.59	2.66	\$ 3,445.00
GV1000-LFB-E-M	VITON®	10	LFB250	24999	24.71	18.21	13.44	11.99	3.49	11.00	3.15	\$ 5,950.00
GV1200-LFB-E-M	VITON®	12	LFB320	43268	29.31	22.03	15.88	14.28	3.49	11.00	3.15	\$ 6,410.00



### Pneumatically Actuated Gate Valves

- High Vacuum elastomer sealed bonnets  
- bakeable to 150°C
- 120 VAC air solenoid standard
- Reed Switch Position Indicator Standard
- Viton® Seal intermittently - bakeable to 200°C

REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV250-LFB-E-P	VITON®	2.5	LFB63	615	7.36	4.80	4.37	3.52	1.99	5.29	2.03	\$ 1,605.00
GV300-LFB-E-P	VITON®	3	LFB80	1071	8.50	5.76	4.94	4.28	1.99	5.29	1.97	\$ 1,840.00
GV400-LFB-E-P	VITON®	4	LFB100	2122	11.50	8.12	7.00	5.67	2.99	7.33	2.41	\$ 2,060.00
GV600-LFB-E-P	VITON®	6	LFB160	7140	15.13	10.63	8.75	7.55	3.00	7.33	2.36	\$ 2,605.00
GV800-LFB-E-P	VITON®	8	LFB200	11597	19.41	13.91	11.25	10.02	3.00	6.59	2.66	\$ 3,610.00
GV1000-LFB-E-P	VITON®	10	LFB250	24999	24.71	18.21	13.44	11.99	3.49	9.28	3.15	\$ 5,950.00
GV1200-LFB-E-P	VITON®	12	LFB320	43268	29.31	22.03	15.87	14.28	3.49	9.28	3.15	\$ 6,410.00

### Accessories



### QF/LF Flange Hardware

- Clamps
- Centering rings
- O-rings

For prices and information see QF/LF Catalog section: QF Clamps and Seals or LF Fasteners and Seals.

### Replacement Parts

#### Gate Valve Seal Replacement Kits

REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE	REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE
GV-SK150	1.5	\$ Call For Quote	GV-SK600	6.0	\$ Call For Quote
GV-SK200	2.0	\$ Call For Quote	GV-SK800	8.0	\$ Call For Quote
GV-SK250	2.5	\$ Call For Quote	GV-SK1000	10.0	\$ Call For Quote
GV-SK300	3.0	\$ Call For Quote	GV-SK1200	12.0	\$ Call For Quote
GV-SK400	4.0	\$ Call For Quote			





## Specifications

- 1.5" to 12" Nom I.D.
- Acme threads
- Viton® Bonnet Seal
- 10<sup>-9</sup> Torr vacuum rating

## Pneumatically Actuated Valves

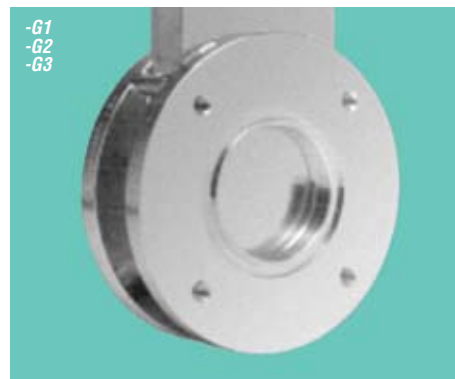
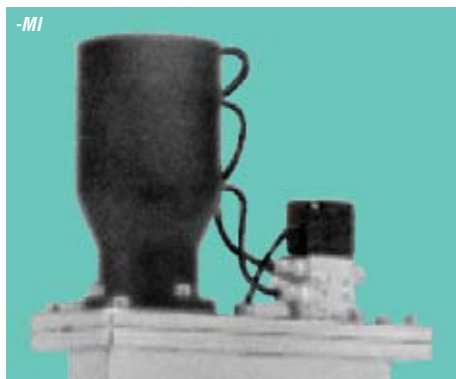
- 80 psig operating air pressure
- Reed switch position indicator standard
- 120 VAC; 50/60Hz air solenoid standard
- Air-to-open, air-to-close

## Options



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-GVS4A	4-way 120 VAC air control solenoid valve	\$ 50.00
-GVS4B	4-way 240 VAC air control solenoid valve	\$ 50.00
-GVS4C	4-way 24 VDC air control solenoid valve	\$ N/C
-GVS4D	4-way 220 VAC air control solenoid valve	\$ 50.00
-GVS4E	4-way 24 VAC air control solenoid valve	\$ 50.00
-GMI	Micro-switch position indicator	\$ 430.00
-G1	O-ring groove on flange; gate side only <sup>1</sup>	\$ N/C
-G2	O-ring groove on flange; carriage side only <sup>1</sup>	\$ N/C
-G3	O-ring groove on flange; both sides of valve <sup>1</sup>	\$ N/C

<sup>1</sup>O-ring groove I.D. on gate valves is .250" larger than the valve I.D.



**When ordering options, please add the option number(s) to the end of the reference number for the valve you are ordering.**

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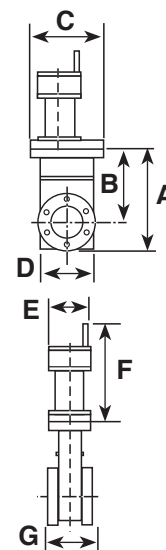
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## Manually Operated Gate Valves

- High Vacuum elastomer sealed bonnets  
- bakeable to 150°C
- Threaded bolt holes are standard
- Viton® Seal intermittently - bakeable to 200°C

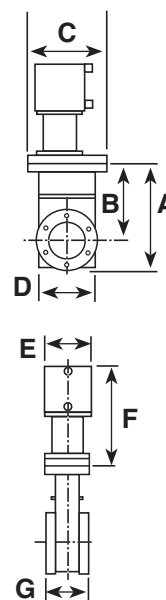
REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV250-ASA-E-M	VITON®	2.5	ASA200	615	7.80	4.80	4.37	3.52	1.99	3.34	2.03	\$ 1,510.00
GV300-ASA-E-M	VITON®	3	ASA300	1029	9.50	5.76	4.94	4.28	1.99	3.34	2.03	\$ 1,750.00
GV400-ASA-E-M	VITON®	4	ASA400	2122	12.58	8.12	7.00	5.67	2.99	7.50	2.41	\$ 1,955.00
GV600-ASA-E-M	VITON®	6	ASA600	7023	16.15	10.63	8.75	7.55	2.99	7.50	2.41	\$ 2,470.00
GV800-ASA-E-M	VITON®	8	ASA600	14374	19.41	13.91	11.25	10.02	2.99	7.50	2.76	\$ 3,445.00
GV1000-ASA-E-M	VITON®	10	ASA1000	24990	26.13	18.13	13.56	11.99	3.50	11.00	3.15	\$ 5,950.00
GV1200-ASA-E-M	VITON®	12	ASA1000	43268	30.07	22.03	15.88	14.28	3.50	11.00	3.15	\$ 6,410.00



## Pneumatically Actuated Gate Valves

- High Vacuum elastomer sealed bonnets  
- bakeable to 150°C
- 120 VAC air solenoid standard
- Reed Switch Position Indicator Standard
- Viton® Seal intermittently - bakeable to 200°C

REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV250-ASA-E-P	VITON®	2.5	ASA200	615	7.80	4.80	4.37	3.52	1.99	5.12	2.03	\$ 1,605.00
GV300-ASA-E-P	VITON®	3	ASA300	1029	9.50	5.76	4.94	4.28	1.99	5.12	2.03	\$ 1,840.00
GV400-ASA-E-P	VITON®	4	ASA400	2122	12.58	8.12	7.00	5.67	2.99	6.69	2.41	\$ 2,060.00
GV600-ASA-E-P	VITON®	6	ASA600	7023	16.15	10.63	8.75	7.55	2.99	6.69	2.41	\$ 2,605.00
GV800-ASA-E-P	VITON®	8	ASA600	14374	19.41	13.91	11.25	10.02	2.99	6.69	2.76	\$ 3,610.00
GV1000-ASA-E-P	VITON®	10	ASA1000	24990	26.13	18.13	13.56	11.99	3.50	9.24	3.15	\$ 5,950.00
GV1200-ASA-E-P	VITON®	12	ASA1000	43268	30.07	22.07	15.88	14.28	3.50	9.24	3.15	\$ 6,410.00



## Accessories



### ASA Flange Hardware

- Stainless steel nuts, bolts & washers

For prices and information see ASA Catalog section: ASA Flange Hardware.

## Replacement Parts

### Gate Valve Seal Replacement Kits

REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE	REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE
GV-SK150	1.5	\$ Call For Quote	GV-SK600	6.0	\$ Call For Quote
GV-SK200	2.0	\$ Call For Quote	GV-SK800	8.0	\$ Call For Quote
GV-SK250	2.5	\$ Call For Quote	GV-SK1000	10.0	\$ Call For Quote
GV-SK300	3.0	\$ Call For Quote	GV-SK1200	12.0	\$ Call For Quote
GV-SK400	4.0	\$ Call For Quote			





## Specifications

- 1.5" to 12" Nom I.D.
- Acme threads
- Viton® Bonnet Seal
- 10<sup>-9</sup> Torr vacuum rating

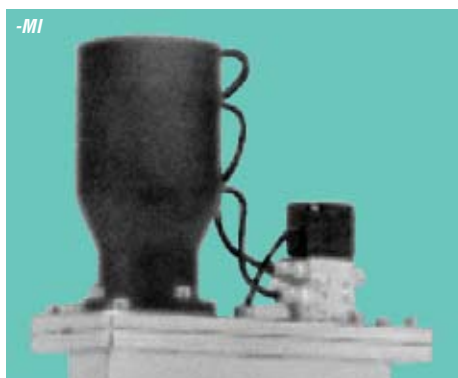
## Pneumatically Actuated Valves

- 80 psig operating air pressure
- Reed switch position indicator standard
- 120 VAC; 50/60Hz air solenoid standard
- Air-to-open, air-to-close

## Options



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-GVKP	Kalrez® high temperature gate seal	Call for quote
-GVS4A	4-way 120 VAC air control solenoid valve	\$ 50.00
-GVS4B	4-way 240 VAC air control solenoid valve	\$ 50.00
-GVS4C	4-way 24 VDC air control solenoid valve	\$ N/C
-GVS4D	4-way 220 VAC air control solenoid valve	\$ 50.00
-GVS4E	4-way 24 VAC air control solenoid valve	\$ 50.00
-GMI	Micro-switch position indicator	\$ 430.00



**When ordering options, please add the option number(s) to the end of the reference number for the valve you are ordering.**

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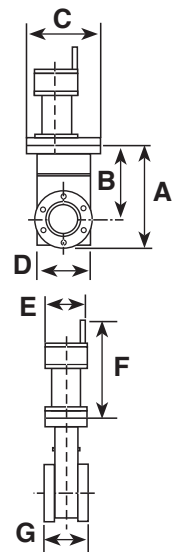
High Vacuum Components Since 1965

A&N CORPORATION

### Manually Operated Gate Valves

- High Vacuum elastomer sealed bonnets - bakeable to 150°C
- Viton® Seal intermittently - bakeable to 200°C
- Threaded Bolt holes are Standard

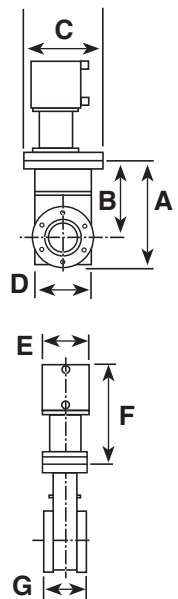
REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV150-CF-E-M	VITON®	1.5	CF275	128	4.76	3.39	3.31	2.46	1.99	3.34	2.03	\$ 920.00
GV200-CF-E-M	VITON®	2	CF338	279	5.81	4.12	3.81	2.98	1.99	3.34	2.28	\$ 1,245.00
GV250-CF-E-M	VITON®	2.5	CF450	524	7.05	4.80	4.37	3.52	1.99	3.34	2.40	\$ 1,510.00
GV300-CF-E-M	VITON®	3	CF462	823	8.06	5.76	4.94	4.28	1.99	3.34	2.53	\$ 1,750.00
GV400-CF-E-M	VITON®	4	CF600	1726	11.12	8.12	7.00	5.67	2.99	7.50	2.97	\$ 1,955.00
GV600-CF-E-M	VITON®	6	CF800	5289	14.65	10.63	8.75	7.55	2.99	7.50	3.17	\$ 2,470.00
GV800-CF-E-M	VITON®	8	CF1000	12006	18.91	13.91	11.25	10.02	2.99	7.50	3.35	\$ 3,445.00
GV1000-CF-E-M	VITON®	10	CF1325	25073	24.28	18.13	13.56	11.99	3.50	11.00	3.65	\$ 5,950.00
GV1200-CF-E-M	VITON®	12	CF1400	34964	29.07	22.03	15.88	14.28	3.50	11.00	3.89	\$ 6,530.00



### Pneumatically Actuated Gate Valves

- High Vacuum elastomer sealed bonnets - bakeable to 150°C
- 120 VAC air solenoid standard
- Reed Switch Position Indicator Standard
- Viton® Seal intermittently - bakeable to 200°C
- Threaded Bolt holes are Standard

REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV150-CF-E-P	VITON®	1.5	CF275	128	4.76	3.39	3.31	2.46	1.99	3.34	2.03	\$ 1,015.00
GV200-CF-E-P	VITON®	2	CF338	279	5.81	4.12	3.81	2.98	1.99	3.34	2.28	\$ 1,335.00
GV250-CF-E-P	VITON®	2.5	CF450	524	7.05	4.80	4.37	3.52	1.99	3.34	2.40	\$ 1,605.00
GV300-CF-E-P	VITON®	3	CF462	823	8.06	5.76	4.94	4.28	1.99	3.34	2.53	\$ 1,840.00
GV400-CF-E-P	VITON®	4	CF600	1726	11.12	8.12	7.00	5.67	2.99	7.50	2.97	\$ 2,060.00
GV600-CF-E-P	VITON®	6	CF800	5289	14.65	10.63	8.75	7.55	2.99	7.50	3.17	\$ 2,605.00
GV800-CF-E-P	VITON®	8	CF1000	12006	18.91	13.91	11.25	10.02	2.99	7.50	3.35	\$ 3,610.00
GV1000-CF-E-P	VITON®	10	CF1325	25073	24.28	18.13	13.56	11.99	3.50	11.00	3.65	\$ 5,950.00
GV1200-CF-E-P	VITON®	12	CF1400	34964	29.07	22.03	15.88	14.28	3.50	11.00	3.89	\$ 6,530.00



### Accessories



#### CF Flange Hardware

- Gaskets
- Bolts, nut, washer kits
- Plate nut kits

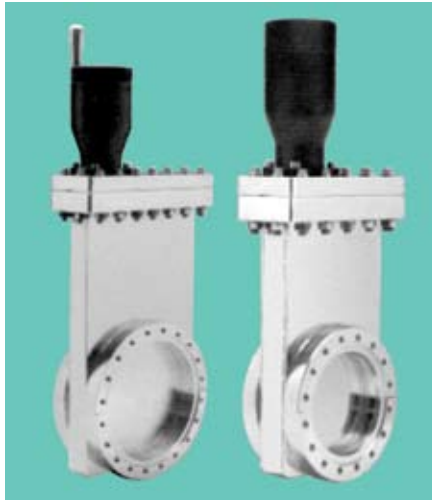
For prices and information see CF Catalog section: Listed in the index as Hardware.

### Replacement Parts

#### Gate Valve Seal Replacement Kits

REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE	REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE
GV-SK150	1.5	\$ Call For Quote	GV-SK600	6.0	\$ Call For Quote
GV-SK200	2.0	\$ Call For Quote	GV-SK800	8.0	\$ Call For Quote
GV-SK250	2.5	\$ Call For Quote	GV-SK1000	10.0	\$ Call For Quote
GV-SK300	3.0	\$ Call For Quote	GV-SK1200	12.0	\$ Call For Quote
GV-SK400	4.0	\$ Call For Quote			





## Specifications

- 1.5" to 12" Nom I.D.
- Acme threads
- Viton® Bonnet Seal
- 10<sup>-9</sup> Torr vacuum rating

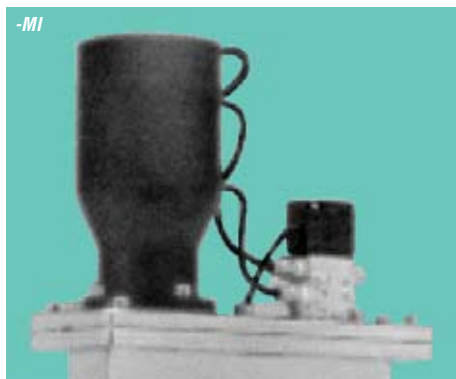
## Pneumatically Actuated Valves

- 80 psig operating air pressure
- Reed switch position indicator standard
- 120 VAC; 50/60Hz air solenoid standard
- Air-to-open, air-to-close

## Options



OPTION NUMBER	DESCRIPTION	UNIT PRICE
-GVKP	Kalrez® high temperature gate seal	Call for quote
-GVS4A	4-way 120 VAC air control solenoid valve	\$ 50.00
-GVS4B	4-way 240 VAC air control solenoid valve	\$ 50.00
-GVS4C	4-way 24 VDC air control solenoid valve	\$ N/C
-GVS4D	4-way 220 VAC air control solenoid valve	\$ 50.00
-GVS4E	4-way 24 VAC air control solenoid valve	\$ 50.00
-GMI	Micro-switch position indicator	\$ 430.00



**When ordering options, please add the option number(s) to the end of the reference number for the valve you are ordering.**

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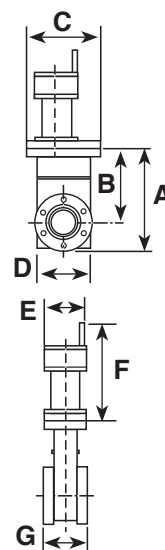
High Vacuum Components Since 1965

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### Manually Operated Gate Valves

- High Vacuum elastomer sealed bonnets - bakeable to 150°C
- Viton® Seal intermittently - bakeable to 200°C
- Threaded Bolt holes are Standard

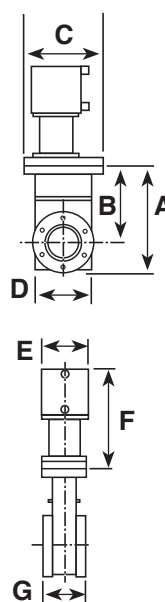
REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV150-CF-C-M	COPPER	1.5	CF275	128	4.76	3.39	3.31	2.46	1.99	3.34	2.03	\$ 1,120.00
GV200-CF-C-M	COPPER	2	CF338	279	5.81	4.12	3.81	2.98	1.99	3.34	2.28	\$ 1,475.00
GV250-CF-C-M	COPPER	2.5	CF450	524	7.05	4.80	4.37	3.52	1.99	3.34	2.40	\$ 1,760.00
GV300-CF-C-M	COPPER	3	CF462	823	8.06	5.76	4.94	4.28	1.99	3.34	2.53	\$ 2,130.00
GV400-CF-C-M	COPPER	4	CF600	1726	11.12	8.12	7.00	5.67	2.99	7.50	2.97	\$ 2,270.00
GV600-CF-C-M	COPPER	6	CF800	5289	14.63	10.65	8.75	7.55	2.99	7.50	3.17	\$ 3,000.00
GV800-CF-C-M	COPPER	8	CF1000	12006	18.91	13.91	11.25	10.02	2.99	7.50	3.35	\$ 3,935.00
GV1000-CF-C-M	COPPER	10	CF1325	25073	24.28	18.13	13.56	11.99	3.50	11.00	3.65	\$ 6,590.00
GV1200-CF-C-M	COPPER	12	CF1400	34964	29.07	22.03	15.88	14.28	3.50	11.00	3.89	\$ 7,380.00



### Pneumatically Actuated Gate Valves

- High Vacuum elastomer sealed bonnets - bakeable to 150°C
- Viton® Seal intermittently - bakeable to 200°C
- 120 VAC air solenoid standard
- Reed Switch Position Indicator Standard
- Threaded Bolt holes are Standard

REFERENCE NUMBER	BONNET SEAL	PORT SIZE	FLANGES	CONDUCTANCE (LITER/SEC.)	VALVE DIMENSIONS							UNIT PRICE
					A	B	C	D	E	F	G	
GV150-CF-C-P	COPPER	1.5	CF275	128	4.76	3.39	3.31	2.46	1.99	5.12	2.03	\$ 1,215.00
GV200-CF-C-P	COPPER	2	CF338	279	5.81	4.12	3.81	2.98	1.99	5.12	2.28	\$ 1,570.00
GV250-CF-C-P	COPPER	2.5	CF450	524	7.05	4.81	4.37	3.52	1.99	5.12	2.40	\$ 1,940.00
GV300-CF-C-P	COPPER	3	CF462	823	8.06	5.76	4.94	4.28	1.99	5.12	2.53	\$ 2,230.00
GV400-CF-C-P	COPPER	4	CF600	1726	11.12	8.12	7.00	5.67	2.99	6.69	2.97	\$ 2,410.00
GV600-CF-C-P	COPPER	6	CF800	5289	14.63	10.65	8.75	7.55	2.99	6.69	3.17	\$ 3,385.00
GV800-CF-C-P	COPPER	8	CF1000	12006	18.91	13.91	11.25	10.02	2.99	6.69	3.35	\$ 4,045.00
GV1000-CF-C-P	COPPER	10	CF1325	25073	24.28	18.13	13.56	12.00	3.50	9.24	3.65	\$ 6,590.00
GV1200-CF-C-P	COPPER	12	CF1400	34964	29.07	22.03	15.88	14.28	3.50	9.24	3.89	\$ 7,380.00



### Accessories



#### CF Flange Hardware

- Gaskets
- Bolts, nut, washer kits
- Plate nut kits

For prices and information see CF Catalog section: Listed in the index as Hardware.

### Replacement Parts

#### Gate Valve Seal Replacement Kits

REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE	REFERENCE NUMBER	NOMINAL VALVE I.D.	UNIT PRICE
GV-SK150	1.5	\$ Call For Quote	GV-SK600	6.0	\$ Call For Quote
GV-SK200	2.0	\$ Call For Quote	GV-SK800	8.0	\$ Call For Quote
GV-SK250	2.5	\$ Call For Quote	GV-SK1000	10.0	\$ Call For Quote
GV-SK300	3.0	\$ Call For Quote	GV-SK1200	12.0	\$ Call For Quote
GV-SK400	4.0	\$ Call For Quote			





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The A&N ball valve is specifically intended for high vacuum service. Valves are stocked in brass and 316L stainless steel in 1/8" to 6" tube O.D.; pipe thread or QF and LF end connections. Teflon® seats and Viton® seals are standard, however, other combinations are available on request.

Ball valves offer straight-through flow providing maximum conductance, interchangeable end connections, unobstructed ports and low initial installation and maintenance costs.

Gas entrapment has been eliminated by drilling an evacuation hole in the shut-off side of the ball exposing the body cavity to either upstream or downstream pressure depending on installation. A further advantage is the rigid stem assembly which does away with lateral movement during actuation that has plagued users of other valves in the past.

Stem seals are easily replaced and only three bolts need be disassembled to service the seats and body seals.

- Provisions are made to evacuate the area between the seat and the body up to the body seal.
- Each valve is (mass spectrometer) helium leak checked and certified. Guaranteed leakage rate is less than  $1 \times 10^{-9}$  std. cc/sec.
- Unlike other ball valves A&N Ball Valves are machined from solid round 316L grade stainless steel bar. Our experience has shown us that for vacuum applications cast ball valves are subject to voids, microscopic leak paths, porosity and inclusion in the material. This leads to virtual leaks, outgassing, permeation and longer pump down times. In addition to faster pump down times the machined A&N Ball valve achieves lower absolute vacuum pressure.

- **Guaranteed leakage rate**
- **Complete range of sizes**
- **High conductance**
- **Simple & easy to service**
- **Straight through flow**
- **Machined from solid bar stock**

### Pneumatic Actuators

Integrally-mounted valve operators using pressurized air source are available in either a double-action or fail-safe design. A solenoid valve is normally mounted on the actuator to control the air supply. Compact microswitch assemblies are available where remote indication of valve position is desired.



### Locking Kit

Secure the position of your manual ball valve with a locking kit. To order add "-LK" to the end of the valve reference number and add \$60.00 to the price of your valve.





## Specifications - 1/2" to 6" Port Connections

### Temperature Range:

- Standard Viton® seals bakeable to 150°C (200°C intermittent)
- Vacuum Rating =  $1 \times 10^{-8}$  torr
- Helium Leak Rated less than  $1 \times 10^{-9}$  std. cc/sec.

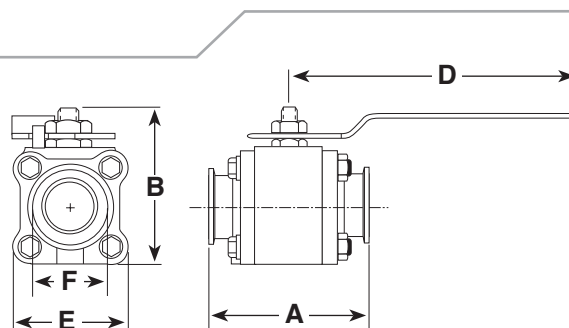
### Materials:

- Valve Body, Ball, Stem and Flanges: 316L Stainless Steel (for Brass See pg. 2.36 & 2.37)
- Seals: Viton®
- Seats: Teflon®

## Features

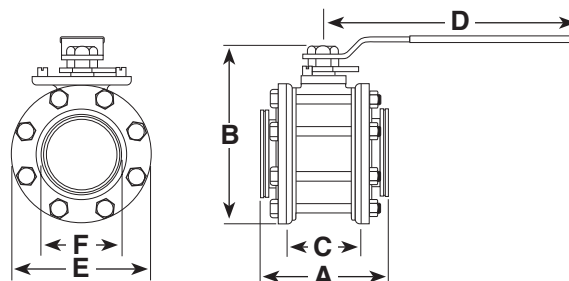
- High conductance; straight through flow
- Service valve without removal from the system
- Evacuation hole on side of ball eliminates "virtual leak"
- "Particulate resistant" ball/seat design lengthens time between maintenance cycles

## Manual Valves



### Sizes 1/8" to 2 1/8" tubing – Body Series B,C,D,E

REFERENCE NUMBER	END CAP	BALL PORT SIZE	A	B	C	D	E	F	UNIT PRICE
B4050-QF10	QF10	0.57	3.48	2.66	2.50	4.50	2.02	1.18	\$ 275.00
B4075-QF16	QF16	0.57	3.48	2.66	2.50	4.50	2.02	1.18	\$ 275.00
B4075-QF25	QF25	0.57	3.48	2.66	2.50	4.50	2.02	1.575	\$ 275.00
C4100-QF25	QF25	0.81	3.75	3.10	3.25	5.50	2.25	1.575	\$ 395.00
C4100-QF40	QF40	0.81	3.75	3.10	3.25	5.50	2.25	2.165	\$ 395.00
D4150-QF40	QF40	1.25	4.65	4.42	-	8.13	3.20	2.165	\$ 685.00
E4200-QF50	QF50	1.50	4.97	4.88	-	8.13	3.53	2.953	\$ 800.00



### Sizes 2 1/2" to 6" tubing – Body Series F,G,H,I

REFERENCE NUMBER	END CAP	BALL PORT SIZE	A	B	C	D	E	F	UNIT PRICE
F4250-LF63	LF63	2.00	6.35	8.07	2.875	11.00	5.82	3.47	\$ 2,285.00
G4300-LF80	LF80	2.50	6.50	8.70	3.275	13.00	6.45	4.33	\$ 3,205.00
H4400-LF100	LF100	3.25	7.625	10.38	4.375	15.00	8.125	5.12	\$ 4,275.00
I4600-LF160	LF160	4.38	10.25	14.375	5.76	20.00	11.00	7.09	\$ 8,135.00

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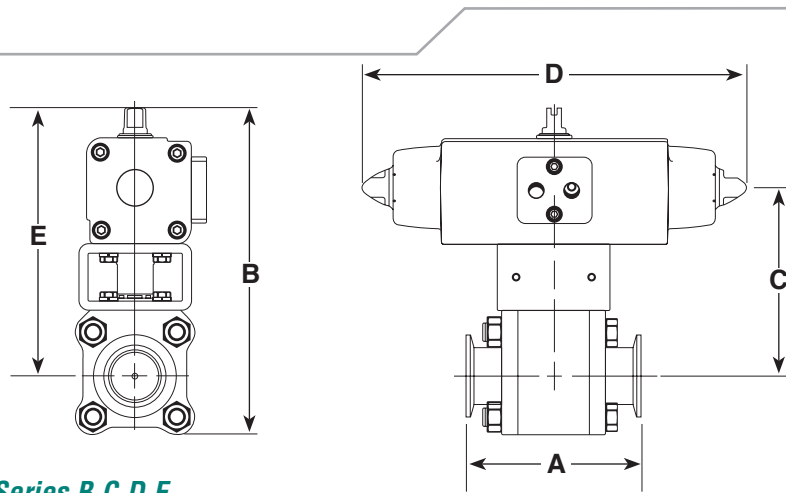


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### Pneumatic Valves

- “Fail Safe” air-to-open, spring-to-close standard
  - “Fail Safe” can be mounted to fail open or closed
- Air-to-open, air-to-close by request for no additional charge
- 80-120 psig operating air pressure



#### Sizes 1/8" to 2" tubing – Body Series B,C,D,E

REFERENCE NUMBER	END CAP	BALL PORT SIZE	A	B	C	D	E	UNIT PRICE
B4075-QF16-AS	QF16	0.57	3.47	7.13	4.25	9.18	6.13	\$ 1,000.00
B4075-QF25-AS	QF25	0.57	3.47	7.13	4.25	9.18	6.13	\$ 1,000.00
C4100-QF25-AS	QF25	0.81	3.92	7.47	4.42	9.18	6.29	\$ 1,120.00
C4100-QF40-AS	QF40	0.81	3.92	7.47	4.42	9.18	6.29	\$ 1,120.00
D4150-QF40-AS	QF40	1.25	4.65	8.59	4.96	10.19	7.04	\$ 1,450.00
E4200-QF50-AS	QF50	1.5	4.97	8.99	5.15	10.19	7.23	\$ 1,680.00

#### \*ORDERING NOTE

When ordering repair kits have the valve's serial number available to ensure proper replacement parts are ordered.



### Ball Valve Repair Kits

REFERENCE NUMBER	BODY SERIES	UNIT PRICE
BV-RK-B	B	\$ 30.00
BV-RK-C	C	\$ 45.00
BV-RK-D	D	\$ 76.00
BV-RK-E	E	\$ 86.00
BV-RK-F	F	\$ 110.00
BV-RK-G	G	\$ 125.00
BV-RK-H	H	\$ 145.00
BV-RK-I	I	\$ 170.00

Repair Kits include all parts of the valve that may wear with use.  
Stem seals and bushings, body seals and Teflon® seats



### Specifications - 1/2" to 2" Port Connections

#### Temperature Range:

- Standard Viton® seals bakeable to 150°C (200°C intermittent)
- Vacuum Rating =  $1 \times 10^{-8}$  torr
- Helium Leak Rated less than  $1 \times 10^{-9}$  std. cc/sec.

#### Materials:

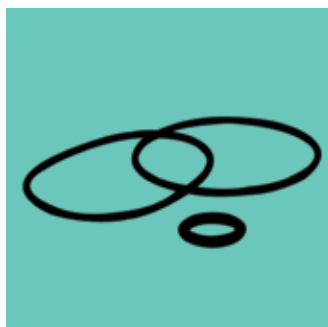
- Valve Body, Stem and Flanges: Brass
- Ball: 316L Stainless Steel
- Seals: Viton®
- Seats: Teflon®

### Features

- High conductance; straight through flow
- Service valve without removal from the system
- Evacuation hole on side of ball eliminates "virtual leak"
- "Particulate resistant" ball/seat design lengthens maintenance cycles

#### \* ORDERING NOTE

When ordering repair kits have the valve's serial number available to ensure proper replacement parts are ordered.



### Ball Valve Repair Kits - Brass

REFERENCE NUMBER	BODY SERIES	UNIT PRICE
BV-RK-B	B	\$ 30.00
BV-RK-C	C	\$ 45.00
BV-RK-D	D	\$ 76.00
BV-RK-E	E	\$ 86.00

*Repair Kits include all parts of the valve that may wear with use.  
Stem seals and bushings, body seals and Teflon® seats*

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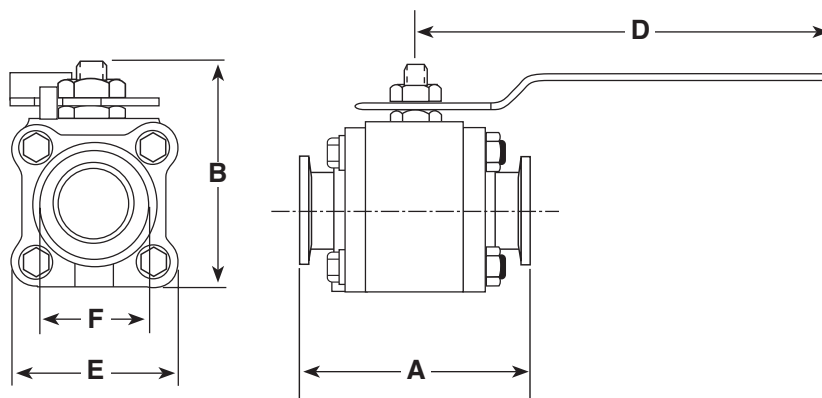


High Vacuum Components Since 1965

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### Sizes QF10 to QF50 - Body Series B, C, D, E

- Body made of machined 360 Brass



REFERENCE NUMBER	END CAP	BALL PORT SIZE	VALVE DIMENSIONS					UNIT PRICE
			A	B	D	E	F	
B1075-QF16	QF16	0.57	3.48	2.45	4.50	1.75	1.18	\$ 135.00
B1075-QF25	QF25	0.57	3.48	2.45	4.50	1.75	1.575	\$ 135.00
C1100-QF25	QF25	0.81	3.75	3.10	5.50	2.25	1.575	\$ 185.00
C1100-QF40	QF40	0.81	3.75	3.10	5.50	2.25	2.165	\$ 185.00
D1150-QF40	QF40	1.25	4.65	4.42	8.13	3.20	2.165	\$ 305.00
E1200-QF50	QF50	1.50	4.97	4.88	8.13	3.58	2.953	\$ 350.00



## Specifications - 1/8" to 2 1/8" Port Connections

### Temperature Range:

- Standard Viton® seals bakeable to 150°C (200°C intermittent)
- Vacuum Rating =  $1 \times 10^{-8}$  torr
- Helium Leak Rated less than  $1 \times 10^{-9}$  std. cc/sec.

### Materials:

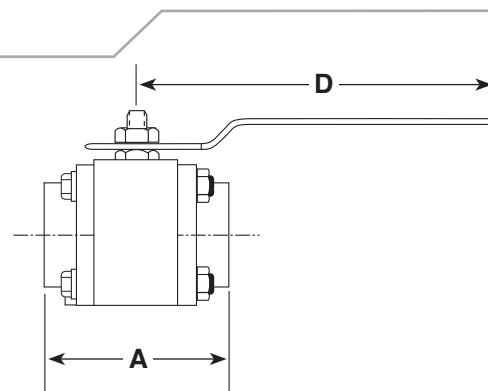
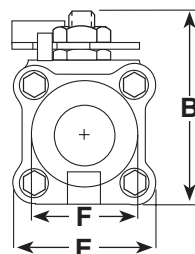
- Valve Body, Ball, Stem and Flanges:  
316L Stainless Steel or Brass
- Seals: Viton®
- Seats: Teflon®

## Features

- High conductance; straight through flow
- Service valve without removal from the system
- Evacuation hole on side of ball eliminates "virtual leak"
- "Particulate resistant" ball/seat design lengthens maintenance cycles

## Brass Valves

- Body made of machined 360 Brass



### Sizes 1/8" to 2 1/8" - Body Series B, C, D, E

REFERENCE NUMBER	END CAP	BALL PORT SIZE	A	B	D	E	F	UNIT PRICE
B1012-TE	1/8" I.D.	0.57	2.975	2.45	4.50	1.75	0.75	\$ 110.00
B1025-TE	1/4" I.D.	0.57	2.975	2.45	4.50	1.75	0.75	\$ 110.00
B1038-TE	3/8" I.D.	0.57	2.975	2.45	4.50	1.75	0.75	\$ 110.00
B1050-TE	1/2" I.D.	0.57	2.975	2.45	4.50	1.75	0.75	\$ 110.00
B1062-TE	5/8" I.D.	0.57	2.975	2.45	4.50	1.75	1.25	\$ 110.00
B1075-TE	3/4" I.D.	0.57	2.975	2.45	4.50	1.75	1.25	\$ 110.00
B1087-TE	7/8" I.D.	0.57	2.975	2.45	4.50	1.75	1.25	\$ 110.00
C1100-TE	1" I.D.	0.81	3.675	3.10	5.50	2.25	1.625	\$ 155.00
C1112-TE	1 1/8" I.D.	0.81	3.675	3.10	5.50	2.25	1.625	\$ 155.00
D1150-TE	1 1/2" I.D.	1.25	4.45	4.42	8.13	3.20	2.40	\$ 255.00
D1162-TE	1 5/8" I.D.	1.25	4.45	4.42	8.13	3.20	2.40	\$ 255.00
E1200-TE	2" I.D.	1.50	5.00	4.88	8.13	3.58	2.93	\$ 320.00
E1212-TE	2 1/8" I.D.	1.50	5.00	4.88	8.13	3.58	2.93	\$ 320.00

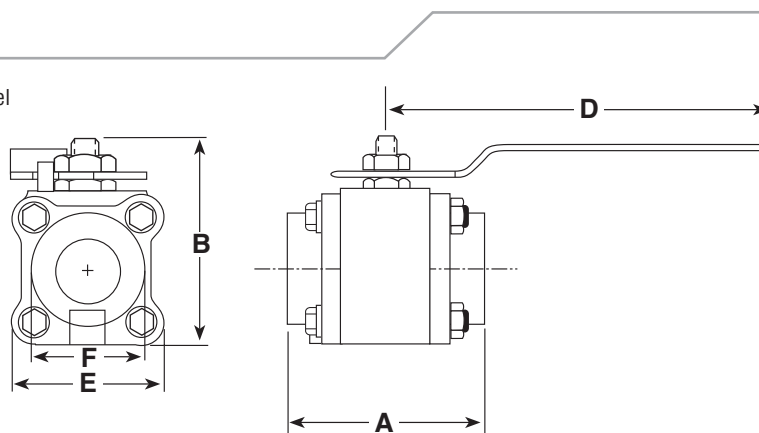
### A&N Corporation

707 Southwest 19th Avenue  
Williston, Florida 32696  
(352) 528-4100  
1(800) FLANGE1  
FAX (352) 528-3441  
www.ancorp.com



## Stainless Steel Valves

- Body made of machined 316L Stainless Steel



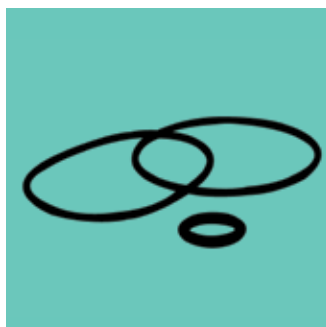
### Sizes 1/8" to 2 1/8" - Body Series B, C, D, E

REFERENCE NUMBER	END CAP	BALL PORT SIZE	A	B	D	E	F	UNIT PRICE
B4012-TE	1/8" O.D.	0.57	2.975	2.50	4.50	1.75	0.75	\$ 240.00
B4025-TE	1/4" O.D.	0.57	2.975	2.50	4.50	1.75	0.75	\$ 240.00
B4038-TE	3/8" O.D.	0.57	2.975	2.50	4.50	1.75	0.75	\$ 240.00
B4050-TE	1/2" O.D.	0.57	2.975	2.50	4.50	1.75	0.75	\$ 240.00
B4062-TE	5/8" O.D.	0.57	2.975	2.50	4.50	1.75	1.25	\$ 240.00
B4075-TE	3/4" O.D.	0.57	2.975	2.50	4.50	1.75	1.25	\$ 240.00
B4087-TE	7/8" O.D.	0.57	2.975	2.50	4.50	1.75	1.25	\$ 240.00
C4100-TE	1" O.D.	0.81	3.675	3.25	5.50	2.25	1.625	\$ 360.00
C4112-TE	1 1/8" O.D.	0.81	3.675	3.25	5.50	2.25	1.625	\$ 360.00
D4150-TE	1 1/2" O.D.	1.25	4.45	4.42	8.13	3.2	2.4	\$ 600.00
D4162-TE	1 5/8" O.D.	1.25	4.45	4.42	8.13	3.2	2.4	\$ 600.00
E4200-TE	2" O.D.	1.50	5.00	4.88	8.13	3.58	2.93	\$ 745.00
E4212-TE	2 1/8" O.D.	1.50	5.00	4.88	8.13	3.58	2.93	\$ 745.00

### \*ORDERING NOTE

When ordering repair kits have the valve's serial number available to ensure proper replacement parts are ordered.

## Ball Valve Repair Kits



REFERENCE NUMBER	BODY SERIES	UNIT PRICE
BV-RK-B	B	\$ 30.00
BV-RK-C	C	\$ 45.00
BV-RK-D	D	\$ 76.00
BV-RK-E	E	\$ 86.00

Repair Kits include all parts of the valve that may wear with use. Stem seals and bushings, body seals and Teflon® seats



## Specifications - 1/8" to 2" Port Connections

### Temperature Range:

- Standard Viton® seals bakable to 150°C (200°C intermittent)
- Vacuum Rating =  $1 \times 10^{-8}$  torr
- Helium Leak Rated less than  $1 \times 10^{-9}$  std. cc/sec.

### Materials:

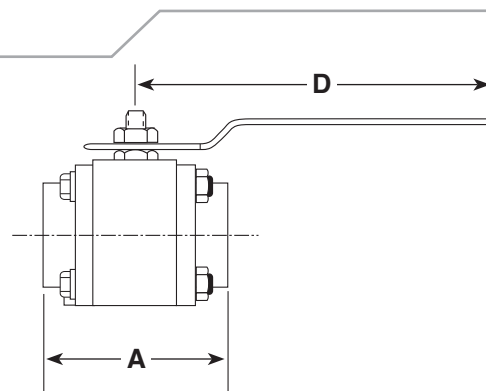
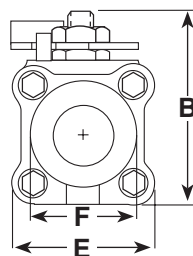
- Valve Body, Ball, Stem and Flanges:  
316L Stainless Steel or Brass
- Seals: Viton®
- Seats: Teflon®

## Features

- High conductance; straight through flow
- Service valve without removal from the system
- Evacuation hole on side of ball eliminates "virtual leak"
- "Particulate resistant" ball/seat design lengthens maintenance cycles

## Brass Valves

- Body made of machined 360 Brass



### Sizes 1/8" to 2" - Body Series B, C, D, E

REFERENCE NUMBER	END CAP	BALL PORT SIZE	A	B	D	E	F	UNIT PRICE
B1012-SE	1/8" NPT	0.35	2.125	1.70	2.88	1.25	0.75	\$ 99.00
B1025-SE	1/4" NPT	0.35	2.125	1.70	2.88	1.25	0.75	\$ 99.00
B1038-SE	3/8" NPT	0.35	2.125	1.70	2.88	1.25	1.25	\$ 99.00
B1050-SE	1/2" NPT	0.57	2.975	2.45	4.50	1.75	1.25	\$ 110.00
B1075-SE	3/4" NPT	0.57	2.975	2.45	4.50	1.75	1.25	\$ 110.00
C1100-SE	1" NPT	0.81	3.675	3.10	5.50	2.25	1.625	\$ 155.00
D1150-SE	1 1/2" NPT	1.25	4.45	4.42	8.13	3.20	2.40	\$ 240.00
E1200-SE	2" NPT	1.50	5.00	4.88	8.13	3.58	2.93	\$ 320.00

### A&N Corporation

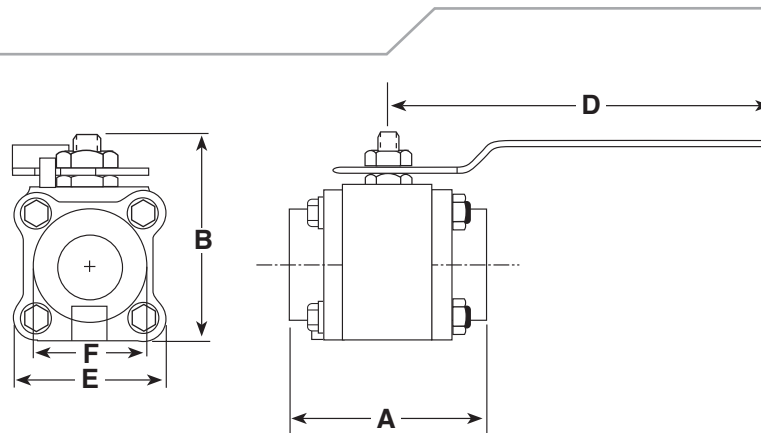
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www.ancorp.com





### Stainless Steel Valves

- Body made of machined 316 Stainless Steel



#### Sizes 1/8" to 2" - Body Series B, C, D, E

REFERENCE NUMBER	END CAP	BALL PORT SIZE	A	B	D	E	F	UNIT PRICE
B4012-SE	1/8" NPT	0.57	2.975	2.45	4.50	1.75	0.75	\$ 240.00
B4025-SE	1/4" NPT	0.57	2.975	2.45	4.50	1.75	0.75	\$ 240.00
B4038-SE	3/8" NPT	0.57	2.975	2.45	4.50	1.75	1.25	\$ 240.00
B4050-SE	1/2" NPT	0.57	2.975	2.45	4.50	1.75	1.25	\$ 240.00
B4075-SE	3/4" NPT	0.57	2.975	2.45	4.50	1.75	1.25	\$ 240.00
C4100-SE	1" NPT	0.81	3.675	3.10	5.50	2.25	1.625	\$ 360.00
D4150-SE	1 1/2" NPT	1.25	4.45	4.42	8.13	3.20	2.40	\$ 600.00
E4200-SE	2" NPT	1.50	5.00	4.88	8.13	3.58	2.93	\$ 745.00

#### \*ORDERING NOTE

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### Ball Valve Repair Kits

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BV-RK-E	E	\$ 86.00

*Repair Kits include all parts of the valve that may wear with use.  
Stem seals and bushings, body seals and Teflon® seats*

