

# Angle Valves

## Stainless Steel Angle Valves 14000 Series

Introduction	Page 182
Specifications	Page 183
12-mm      .500-inch	Page 184
16-mm      .625-inch	Page 185
19-mm      .750-inch	Page 186
25-mm      1.0-inch	Page 187
40-mm      1.5-inch	Page 188
50-mm      2.0-inch	Page 189
63-mm      2.5-inch	Page 190
75-mm      3.0-inch	Page 191
100-mm     4.0-inch	Page 192
150-mm     6.0-inch	Page 193
200-mm     8.0-inch	Page 194
250-mm     10.0-inch	Page 195
300-mm     12.0-inch	Page 196
ANSI, JIS & Custom	Page 197





## Product Features

- Manual & electropneumatic actuation
- Stainless steel welded bellows
- Three standard or custom flange options
- Solenoid valve control with manual override
- Vacuum brazed body joints eliminate outgassing
- Interior and exterior electropolished 304 SST



## Description

The HVA Stainless Steel 14000 Series Angle Valves have been designed to offer maximum conductance with minimum size. These valves are ideally suited for systems where reliability and vacuum integrity are a major concern. The valve body is vacuum furnace brazed at 1100°C ensuring maximum joint quality and eliminating the possibility of virtual leaks or entrapment areas. Vacuum brazing also produces a fully outgassed valve body which is ideal for systems requiring a relatively clean and contaminant free valve. For maintenance purposes, the bellows assembly can be removed without disassembling the body from the system.

Angle valves with CF-F Port Flanges and Metal Seal Bonnets (MSB) are designed for ultrahigh vacuum applications. These valves are used in UHV applications where minimal outgassing and reduced permeability are a must to achieve the highest levels of vacuum.

## Applications

KF, ISO and optional ANSI Port Models are designed for high vacuum applications where vacuum pressures approximate  $1 \times 10^{-9}$  Torr and bakeout temperatures do not exceed 200°C. The standard international KF/ISO configurations are used in areas requiring an easily mountable and demountable flange type seal.

CF-F Port Models are designed for ultrahigh vacuum applications where the vacuum pressure approximates  $1 \times 10^{-10}$  Torr and bakeout temperatures do not exceed 250°C. These valves are used in applications requiring an OFHC copper gasket for ports and bonnet rather than the conventional elastomer O-ring because of higher bake-out temperatures, lower vacuum pressures, minimal outgassing and reduced permeability. They are also commonly used in applications requiring a more permanent seal.

## Installation Caution

Angle valves larger than 2.5-inches [63-mm] must be installed with the poppet seal bottom port towards the vacuum chamber. In this orientation, atmosphere assists in making the poppet seal.

Additionally, angle valves larger than 8.0-inches [200-mm] should not be installed with the poppet seal bottom port horizontal.

If any angle valve is to be pumped on the side port, contact the factory for a quotation for a custom application.

## Standard Specifications

### Materials

Valve body and mechanism	304 stainless steel
Welded bellows shaft seal	AM-350
Bonnet / poppet seals	
HV	Viton® elastomer
UHV	OFHC copper / Viton® elastomer

### Vacuum

Pressure range	
Elastomer sealed bonnet	1 x 10 <sup>-9</sup> Torr
Metal sealed bonnet	1 x 10 <sup>-10</sup> Torr
Leak rate	2 x 10 <sup>-10</sup> mbar l/sec
Differential pressure on plate	1 atmosphere
Maximum pressure before opening	≤ 1.2 Bar (912 Torr)

### Bakeout Temperature

	without solenoid
Elastomer sealed bonnet	150°C
Metal sealed bonnet	
Valve open	200°C
Valve closed	150°C

Actuator	
Manual	60°C
Pneumatic	60°C

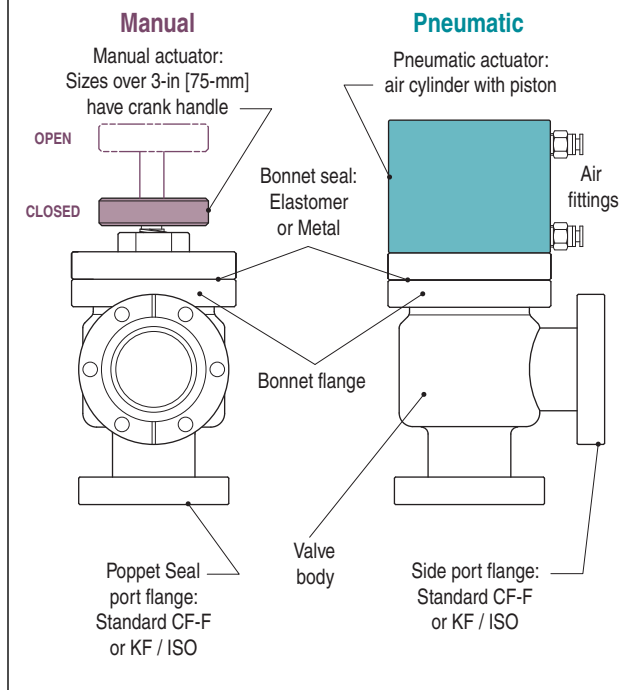
### Mechanism

Air service	80 psig
Solenoid	4.0 Watts
supplied voltage	120 VAC 50/60 Hz
optional voltages	24, 200, 240 VAC 50/60 Hz or 12, 24 VDC
Position indicator, max.	115 VAC or 28 VDC, 20 mA
Spring loaded	Valves up through 2.5-inch [63-mm] available with spring loaded actuator: air-to-open, spring-to-close

### Cycles until service

.500-inch [12-mm] to 2.0-inch [50-mm]	250,000
2.5-inch [63-mm] to 6.0-inch [150-mm]	100,000
8.0-inch [200-mm] and larger	Application dependent

## Angle Valve Parts



### Notes

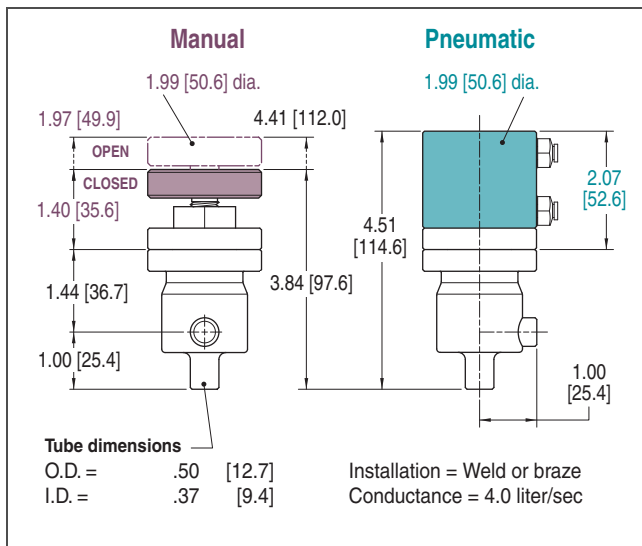
- Dimensions given in U.S. System and [metric]
- Conductance ratings based on air, given in liters per second
- Due to ongoing product development, prices, dimensions and specifications subject to change without notice

### Options

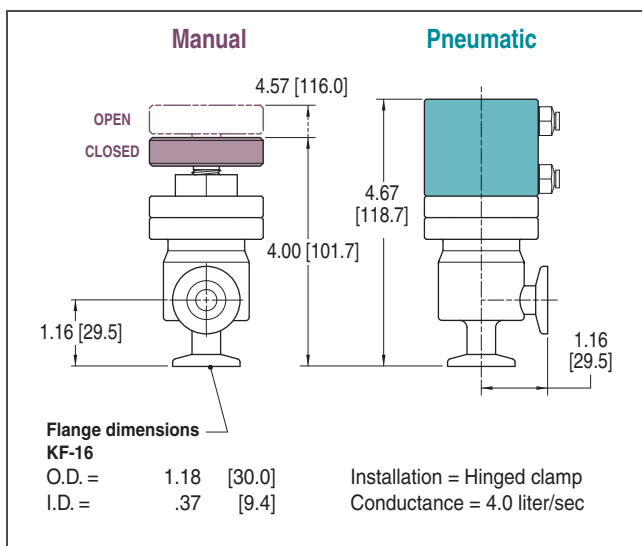
All 14000 Series Valves may be equipped with alternative options to fit your particular requirements. Please consult with the factory to discuss your needs.

- Alternate voltage controls
- Position indicators
- Gauge ports
- Roughing ports
- ANSI or custom port flanges
- Motor operators
- Metal sealed bonnet
- Spring-loaded-to-open, Air-to-close

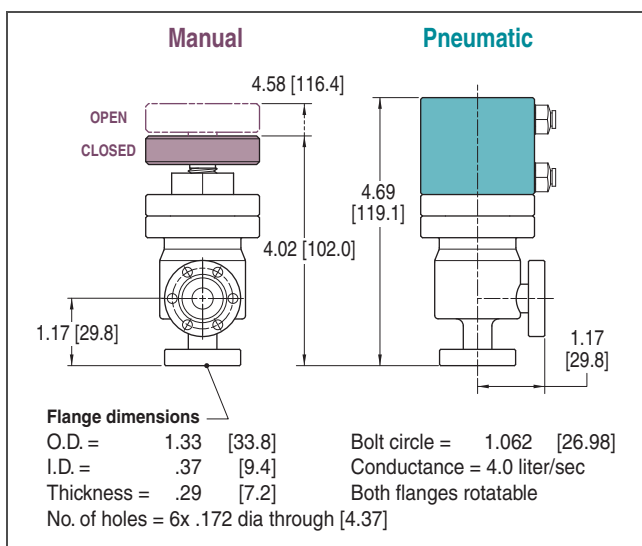
# Angle Valves 12-mm .500-inch



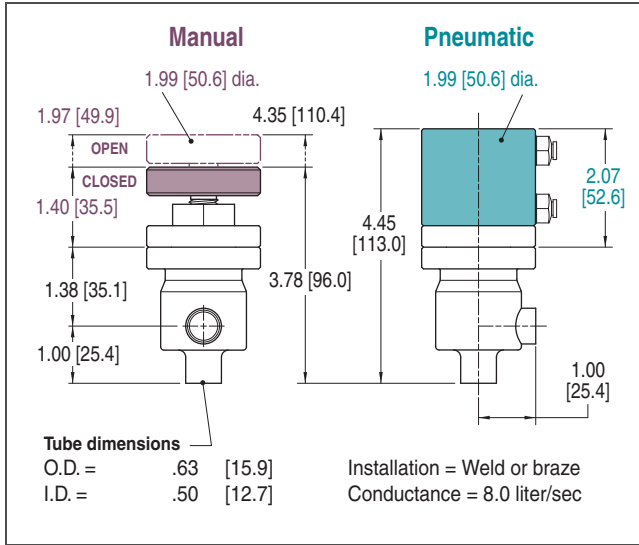
No Flanges		12-mm .500-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	2 [1]	14110-005X	
Copper-Viton	3 [1]	14120-005X	
<b>Pneumatic</b>			
Viton-Viton	3 [1]	14212-005X	
Copper-Viton	3 [1]	14222-005X	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	3 [1]	14512-005X	
Copper-Viton	3 [1]	14522-005X	



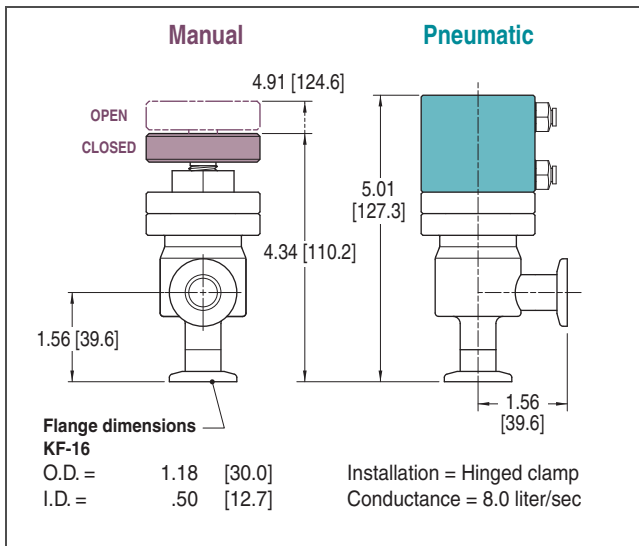
KF-16 Flanges		12-mm .500-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	4 [2]	14110-0053	
<b>Pneumatic</b>			
Viton-Viton	4 [2]	14212-0053	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	4 [2]	14512-0053	



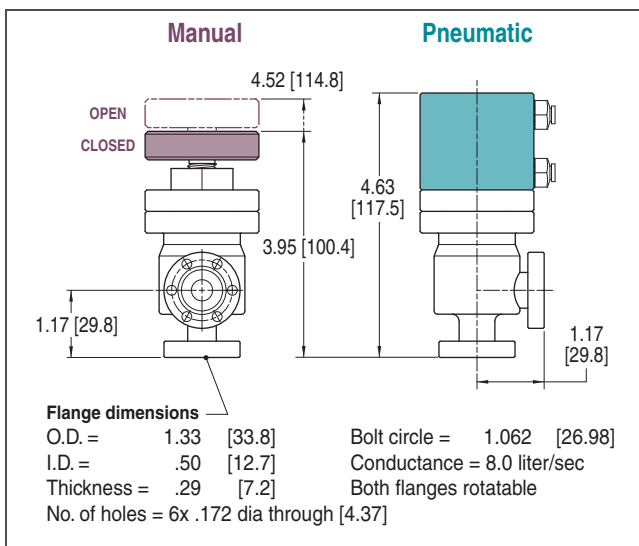
CF-F 1.33 Flanges		12-mm .500-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	4 [2]	14110-0050	
Copper-Viton	4.5 [2]	14120-0050	
<b>Pneumatic</b>			
Viton-Viton	4 [2]	14212-0050	
Copper-Viton	4.5 [2]	14222-0050	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	4 [2]	14512-0050	
Copper-Viton	4.5 [2]	14522-0050	



No Flanges		16-mm .625-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	2 [1]	14110-006X	
Copper-Viton	3 [1]	14120-006X	
<b>Pneumatic</b>			
Viton-Viton	3 [1]	14212-006X	
Copper-Viton	3 [1]	14222-006X	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	3 [1]	14512-006X	
Copper-Viton	3 [1]	14522-006X	

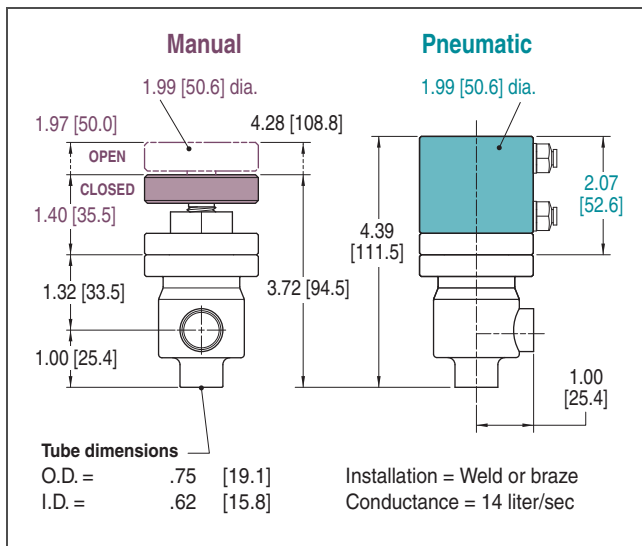


KF-16 Flanges		16-mm .625-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	4 [2]	14110-0063	
<b>Pneumatic</b>			
Viton-Viton	4 [2]	14212-0063	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	4 [2]	14512-0063	

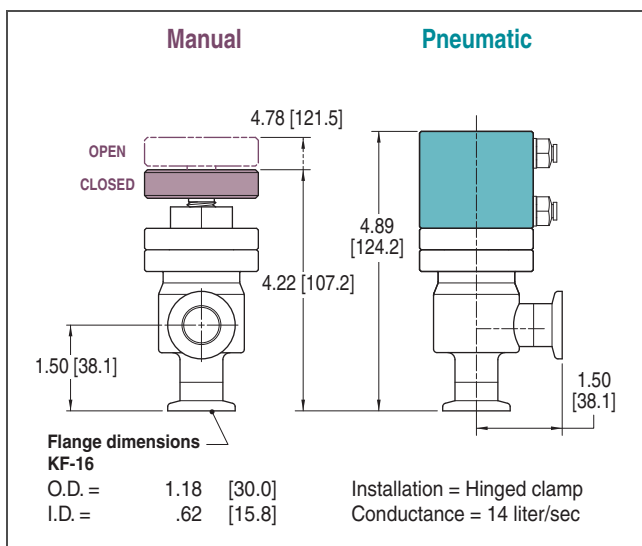


CF-F 1.33 Flanges		16-mm .625-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	4 [2]	14110-0060	
Copper-Viton	4.5 [2]	14120-0060	
<b>Pneumatic</b>			
Viton-Viton	4 [2]	14212-0060	
Copper-Viton	4.5 [2]	14222-0060	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	4 [2]	14512-0060	
Copper-Viton	4.5 [2]	14522-0060	

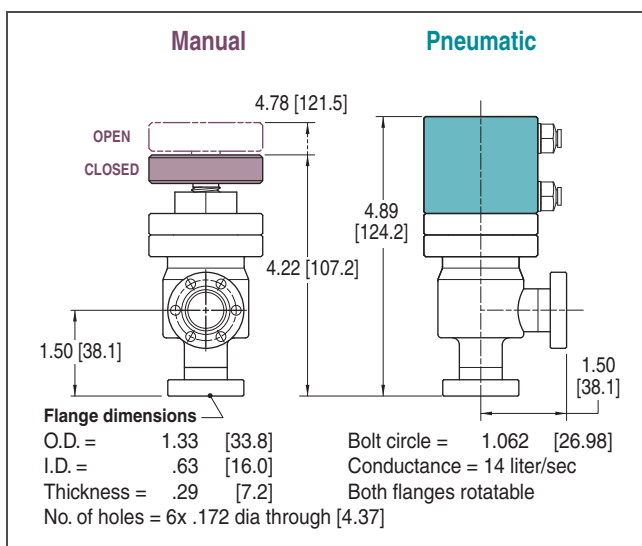
# Angle Valves 19-mm .750-inch



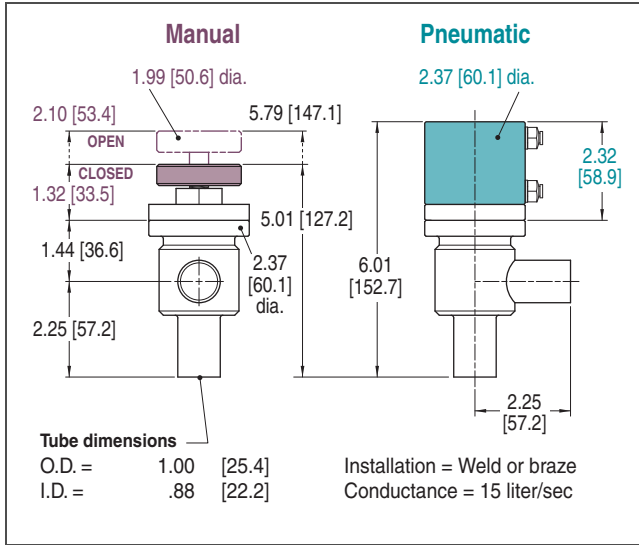
No Flanges		19-mm .750-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	2 [1]	14110-007X	
Copper-Viton	3 [1]	14120-007X	
<b>Pneumatic</b>			
Viton-Viton	3 [1]	14212-007X	
Copper-Viton	3 [1]	14222-007X	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	3 [1]	14512-007X	
Copper-Viton	3 [1]	14522-007X	



KF-16 Flanges		19-mm .750-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	4 [2]	14110-0073	
<b>Pneumatic</b>			
Viton-Viton	4 [2]	14212-0073	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	4 [2]	14512-0073	



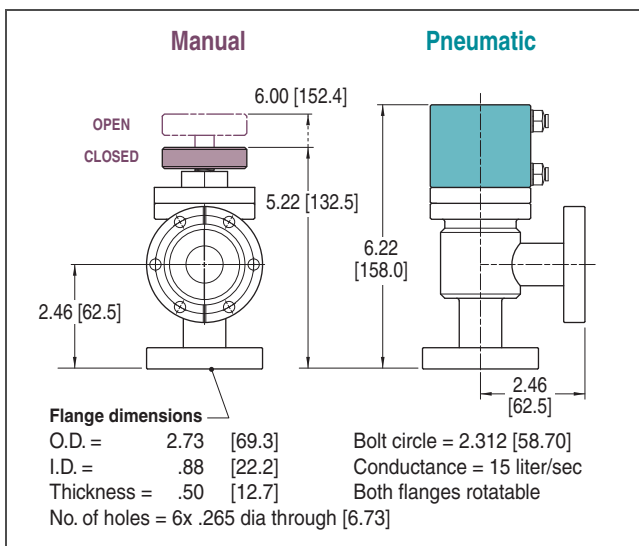
CF-F 1.33 Flanges		19-mm .750-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	4 [2]	14110-0070	
Copper-Viton	4.5 [2]	14120-0070	
<b>Pneumatic</b>			
Viton-Viton	4 [2]	14212-0070	
Copper-Viton	4.5 [2]	14222-0070	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	4 [2]	14512-0070	
Copper-Viton	4.5 [2]	14522-0070	



25-mm 1.0-inch			
No Flanges	Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>			
	Viton-Viton	4 [2]	14110-010X
	Copper-Viton	4 [2]	14120-010X
<b>Pneumatic</b>			
	Viton-Viton	4 [2]	14212-010X
	Copper-Viton	4 [2]	14222-010X
<b>Pneumatic, spring loaded</b>			
	Viton-Viton	4 [2]	14512-010X
	Copper-Viton	4 [2]	14522-010X

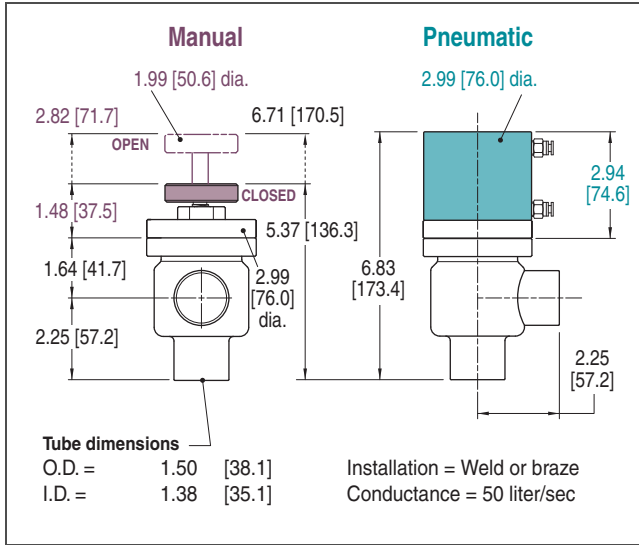


25-mm 1.0-inch			
KF-25 Flanges	Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>			
	Viton-Viton	5 [2]	14110-0103
<b>Pneumatic</b>			
	Viton-Viton	5 [2]	14212-0103
<b>Pneumatic, spring loaded</b>			
	Viton-Viton	5 [2]	14512-0103

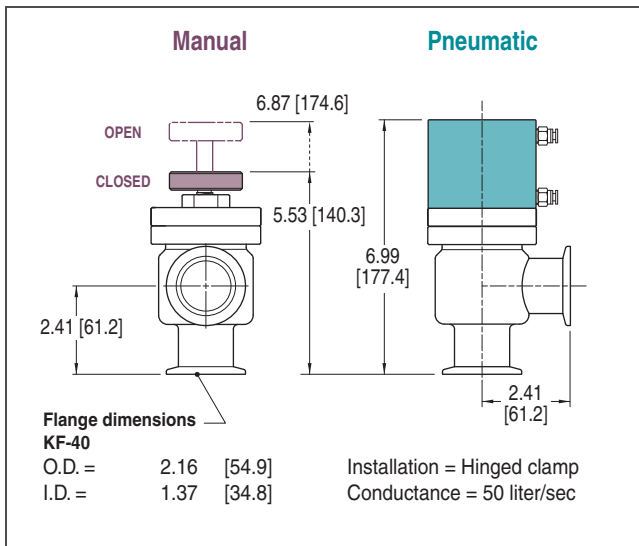


25-mm 1.0-inch			
CF-F 2.75 Flanges	Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>			
	Viton-Viton	5 [2]	14110-0100
	Copper-Viton	5 [2]	14120-0100
<b>Pneumatic</b>			
	Viton-Viton	5 [2]	14212-0100
	Copper-Viton	5 [2]	14222-0100
<b>Pneumatic, spring loaded</b>			
	Viton-Viton	5 [2]	14512-0100
	Copper-Viton	5 [2]	14522-0100

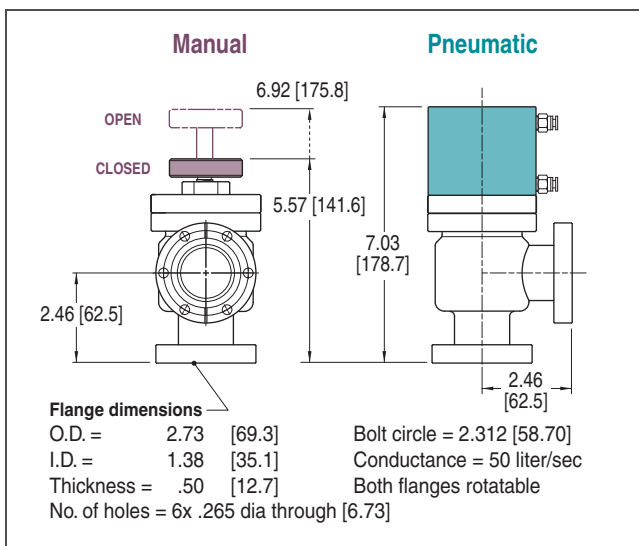
# Angle Valves 40-mm 1.5-inch



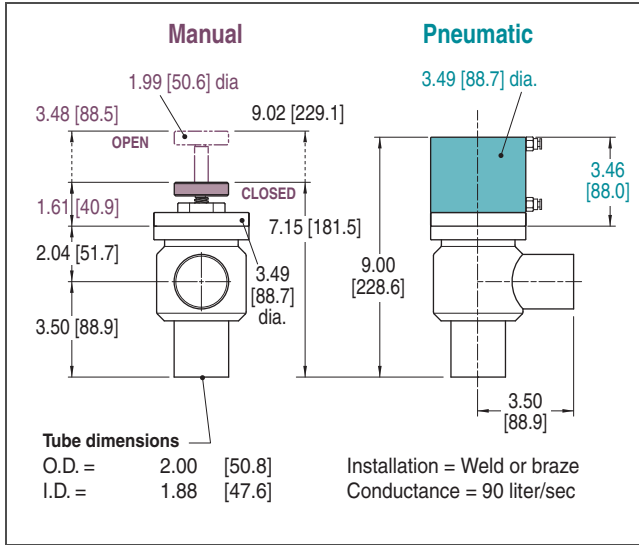
No Flanges		40-mm 1.5-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	4 [2]	14110-015X	
Copper-Viton	4 [2]	14120-015X	
<b>Pneumatic</b>			
Viton-Viton	4 [2]	14212-015X	
Copper-Viton	4 [2]	14222-015X	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	4 [2]	14512-015X	
Copper-Viton	4 [2]	14522-015X	



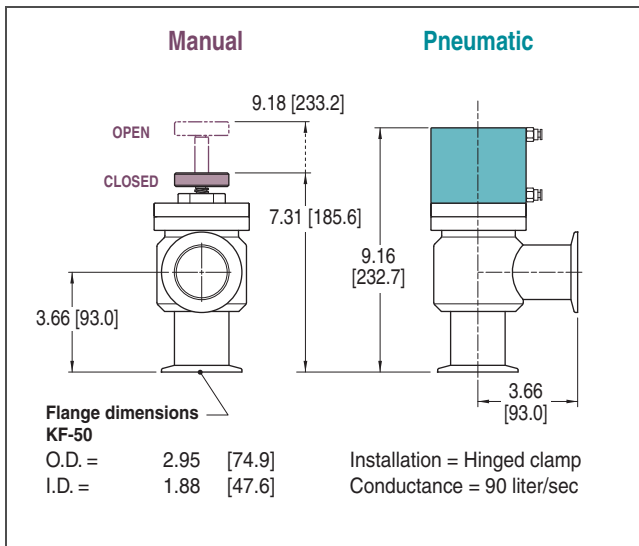
KF-40 Flanges		40-mm 1.5-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	6 [3]	14110-0153	
<b>Pneumatic</b>			
Viton-Viton	6 [3]	14212-0153	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	6 [3]	14512-0153	



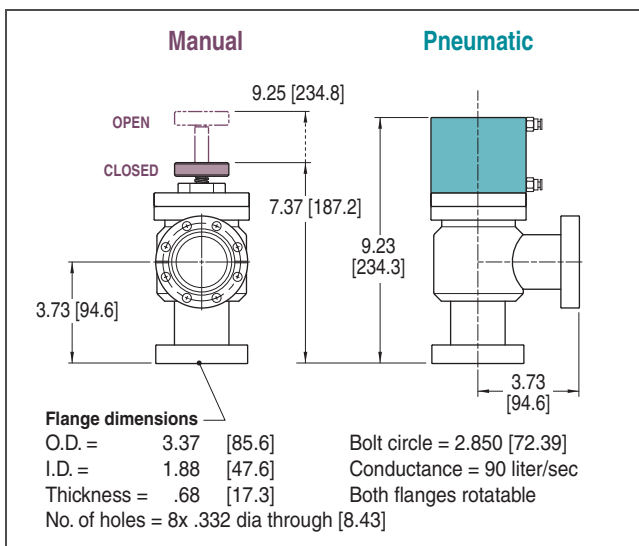
CF-F 2.75 Flanges		40-mm 1.5-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	6 [3]	14110-0150	
Copper-Viton	6 [3]	14120-0150	
<b>Pneumatic</b>			
Viton-Viton	6 [3]	14212-0150	
Copper-Viton	6 [3]	14222-0150	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	6 [3]	14512-0150	
Copper-Viton	6 [3]	14522-0150	



No Flanges		50-mm 2.0-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	10 [5]	14110-020X	
Copper-Viton	10 [5]	14120-020X	
<b>Pneumatic</b>			
Viton-Viton	10 [5]	14212-020X	
Copper-Viton	10 [5]	14222-020X	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	10 [5]	14512-020X	
Copper-Viton	10 [5]	14522-020X	

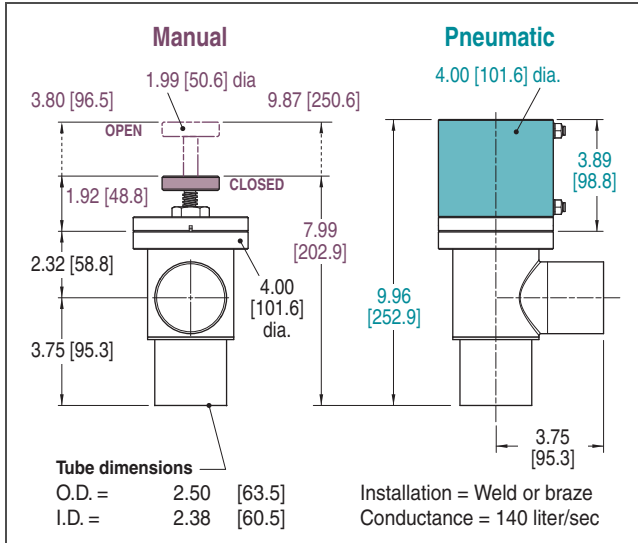


KF-50 Flanges		50-mm 2.0-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	14 [6]	14110-0203	
<b>Pneumatic</b>			
Viton-Viton	18 [8]	14212-0203	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	18 [8]	14512-0203	

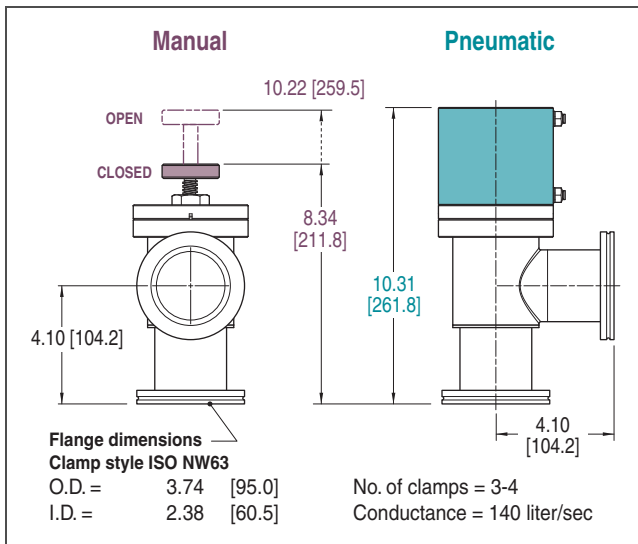


CF-F 3.37 Flanges		50-mm 2.0-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	14 [6]	14110-0200	
Copper-Viton	14 [6]	14120-0200	
<b>Pneumatic</b>			
Viton-Viton	18 [8]	14212-0200	
Copper-Viton	18 [8]	14222-0200	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	18 [8]	14512-0200	
Copper-Viton	18 [8]	14522-0200	

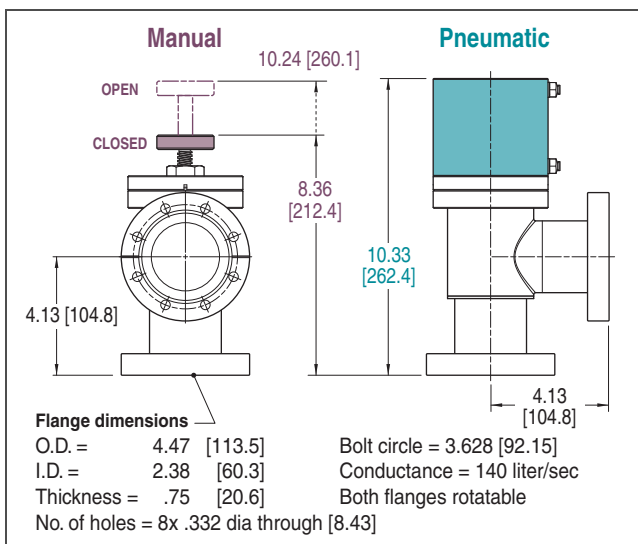
# Angle Valves 63-mm 2.5-inch



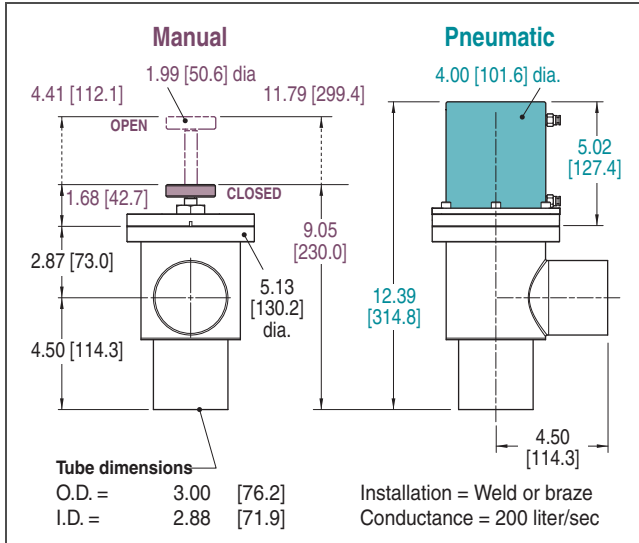
No Flanges		63-mm 2.5-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	10 [5]	14110-025X	
Copper-Viton	10 [5]	14120-025X	
<b>Pneumatic</b>			
Viton-Viton	10 [5]	14212-025X	
Copper-Viton	10 [5]	14222-025X	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	10 [5]	14512-025X	
Copper-Viton	10 [5]	14522-025X	



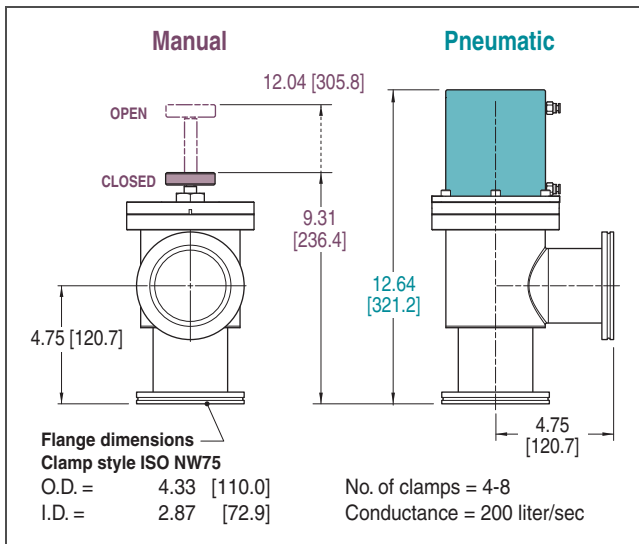
ISO 63 Flanges		63-mm 2.5-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	18 [8]	14110-0256	
<b>Pneumatic</b>			
Viton-Viton	19 [9]	14212-0256	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	19 [9]	14512-0256	



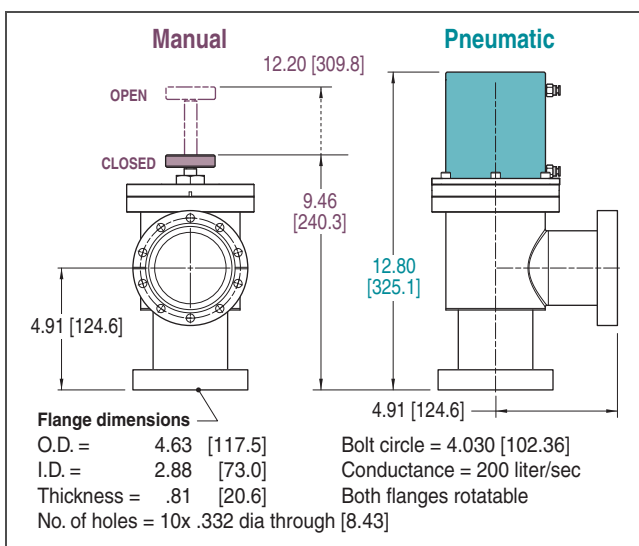
CF-F 4.50 Flanges		63-mm 2.5-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	18 [8]	14110-0250	
Copper-Viton	18 [8]	14120-0250	
<b>Pneumatic</b>			
Viton-Viton	19 [9]	14212-0250	
Copper-Viton	18 [8]	14222-0250	
<b>Pneumatic, spring loaded</b>			
Viton-Viton	19 [9]	14512-0250	
Copper-Viton	18 [8]	14522-0250	



No Flanges		75-mm 3.0-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	12 [6]	14110-030X	
Copper-Viton	25 [11]	14120-030X	
<b>Pneumatic</b>			
Viton-Viton	16 [7]	14212-030X	
Copper-Viton	25 [11]	14222-030X	

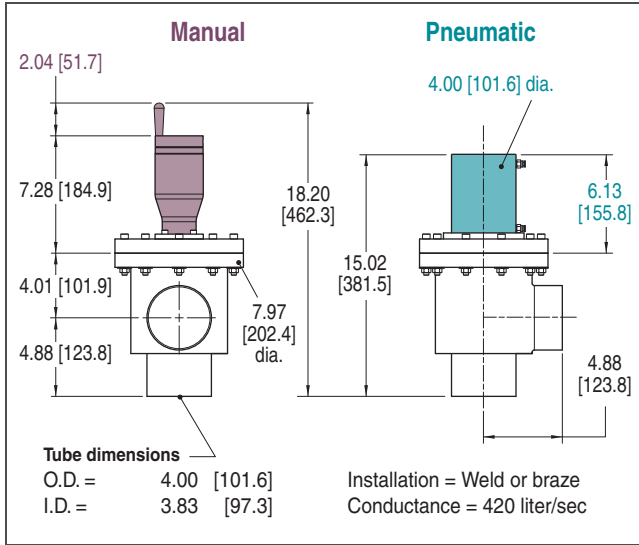


ISO 75 Flanges		75-mm 3.0-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	21 [10]	14110-0306	
<b>Pneumatic</b>			
Viton-Viton	21 [10]	14212-0306	

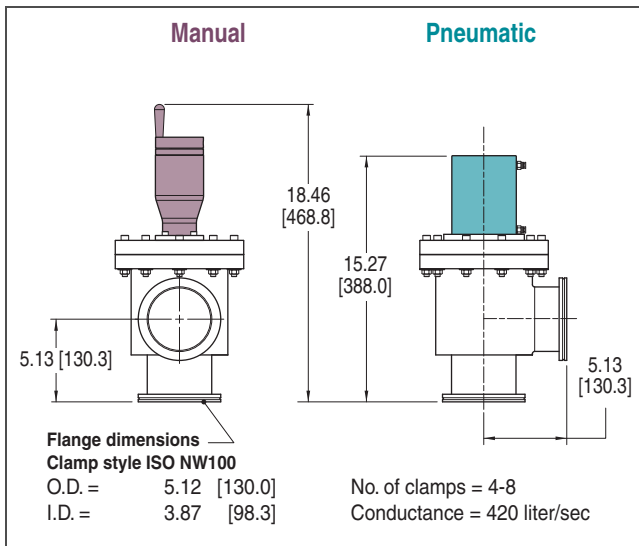


CF-F 4.62 Flanges		75-mm 3.0-inch	
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number	
<b>Manual</b>			
Viton-Viton	21 [10]	14110-0300	
Copper-Viton	30 [14]	14120-0300	
<b>Pneumatic</b>			
Viton-Viton	21 [10]	14212-0300	
Copper-Viton	30 [14]	14222-0300	

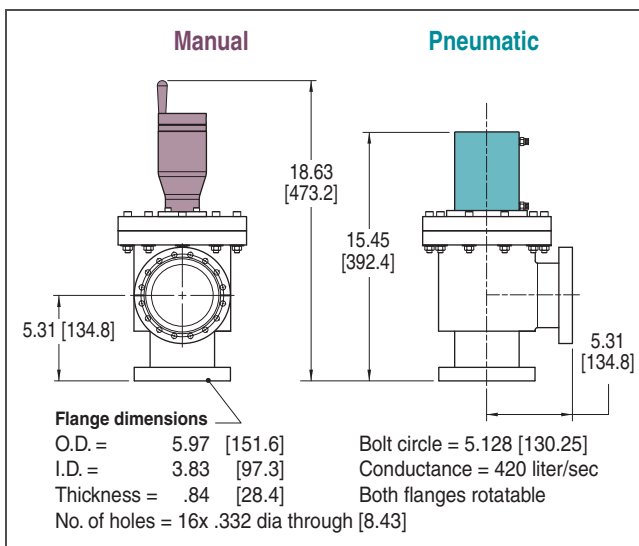
# Angle Valves 100-mm 4.0-inch



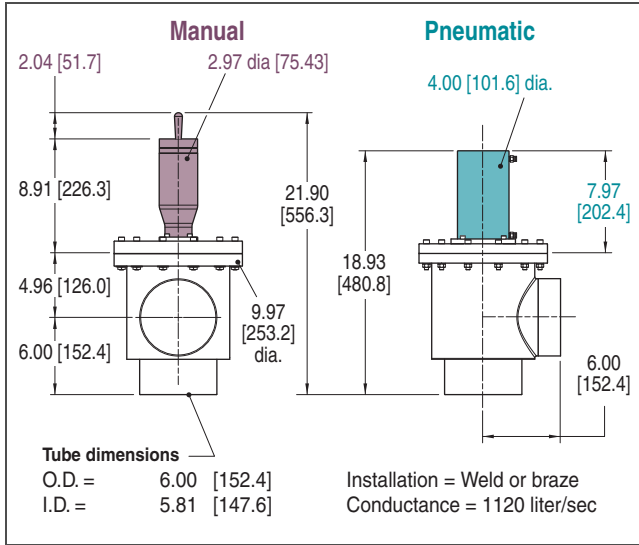
No Flanges		100-mm 4.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>		
Viton-Viton	25 [11]	14110-040X
Copper-Viton	28 [13]	14120-040X
<b>Pneumatic</b>		
Viton-Viton	28 [13]	14212-040X
Copper-Viton	28 [13]	14222-040X



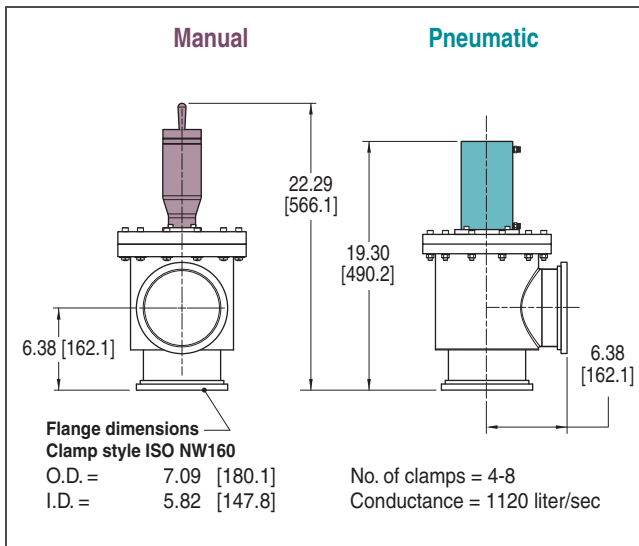
ISO 100 Flanges		100-mm 4.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>		
Viton-Viton	32 [15]	14110-0406
<b>Pneumatic</b>		
Viton-Viton	36 [16]	14212-0406



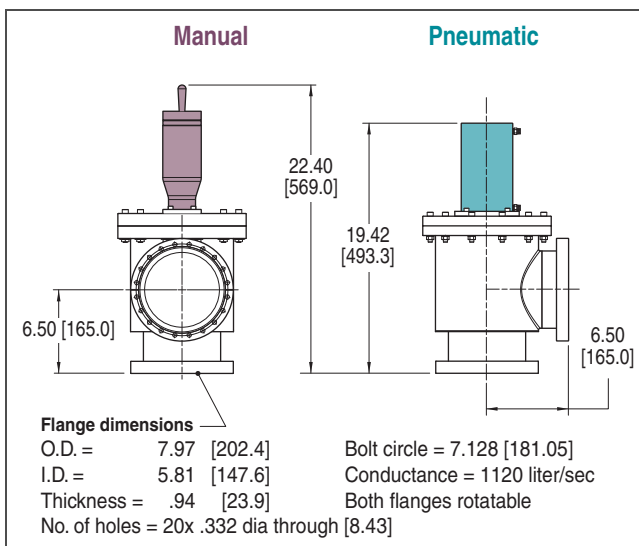
CF-F 6.00 Flanges		100-mm 4.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>		
Viton-Viton	32 [15]	14110-0400
Copper-Viton	32 [15]	14120-0400
<b>Pneumatic</b>		
Viton-Viton	36 [16]	14212-0400
Copper-Viton	32 [15]	14222-0400



No Flanges		150-mm 6.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>		
Viton-Viton	32 [15]	14110-060X
Copper-Viton <sup>1</sup>	32 [15]	14120-060X
<b>Pneumatic</b>		
Viton-Viton	32 [15]	14212-060X
Copper-Viton <sup>1</sup>	32 [15]	14222-060X



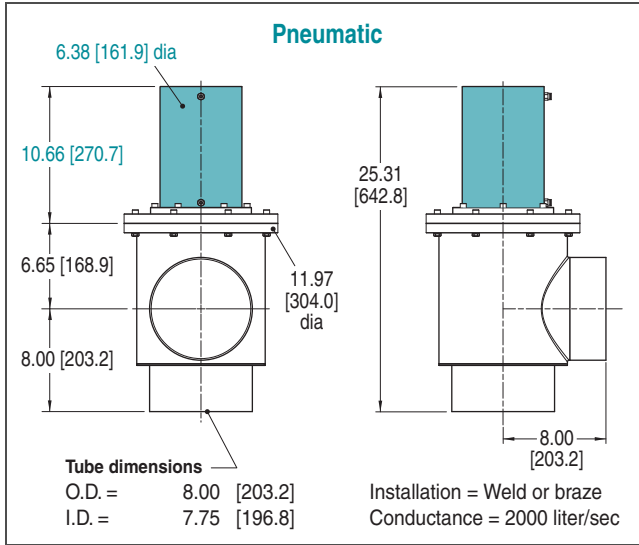
ISO 160 Flanges		150-mm 6.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>		
Viton-Viton	40 [18]	14110-0606
<b>Pneumatic</b>		
Viton-Viton	45 [21]	14212-0606



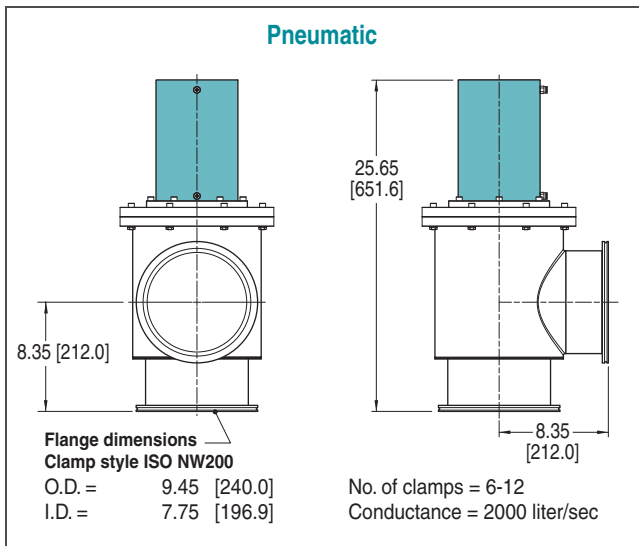
CF-F 8.00 Flanges		150-mm 6.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Manual</b>		
Viton-Viton	40 [18]	14110-0600
Copper-Viton <sup>1</sup>	40 [18]	14120-0600
<b>Pneumatic</b>		
Viton-Viton	45 [21]	14212-0600
Copper-Viton <sup>1</sup>	40 [18]	14222-0600

<sup>1</sup> Metal Seal Bonnet flanges on this Model are thicker than the elastomer seal bonnet flanges. Overall height dimensions increase less than 0.1%.

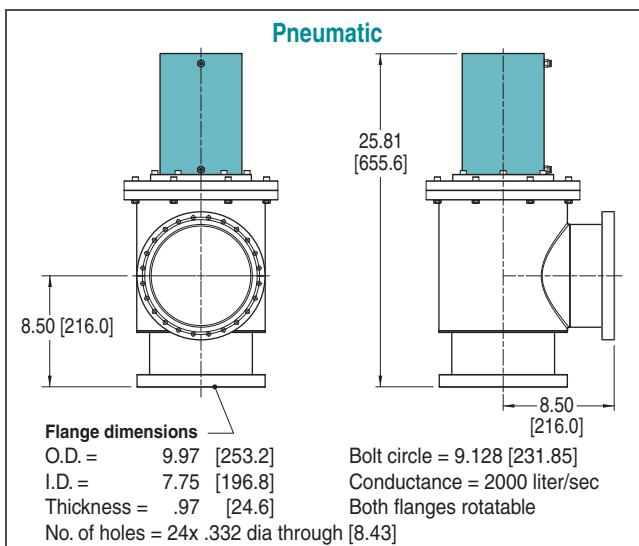
# Angle Valves 200-mm 8.0-inch



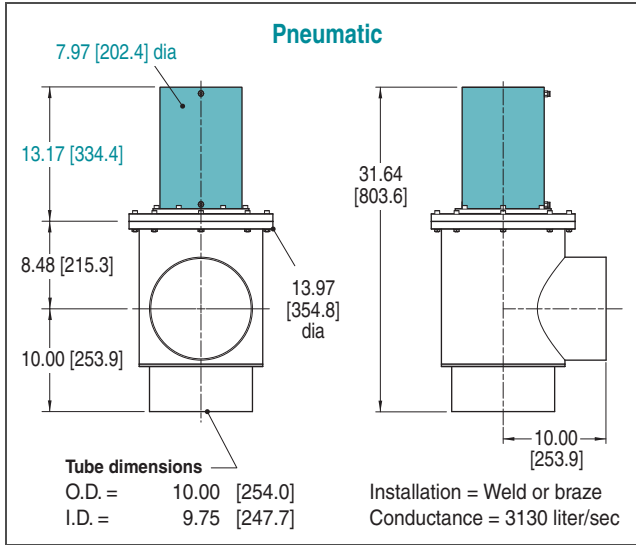
No Flanges		200-mm 8.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	40 [18]	14212-080X
Copper-Viton	40 [18]	14222-080X



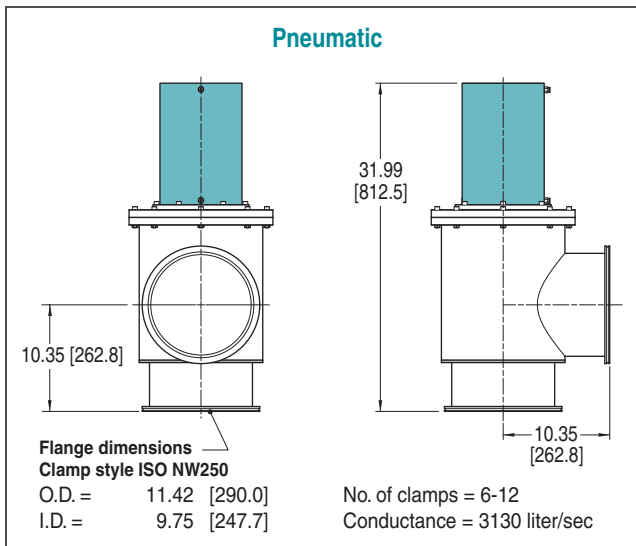
ISO 200 Flanges		200-mm 8.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	50 [23]	14212-0806



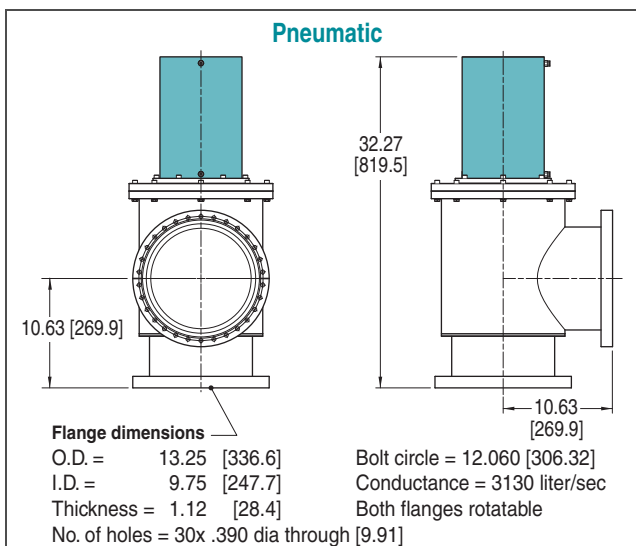
CF-F 10.00 Flanges		200-mm 8.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	50 [23]	14212-0800
Copper-Viton	50 [23]	14222-0800



No Flanges		250-mm 10.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	150 [68]	14212-100X
Copper-Viton	150 [68]	14222-100X

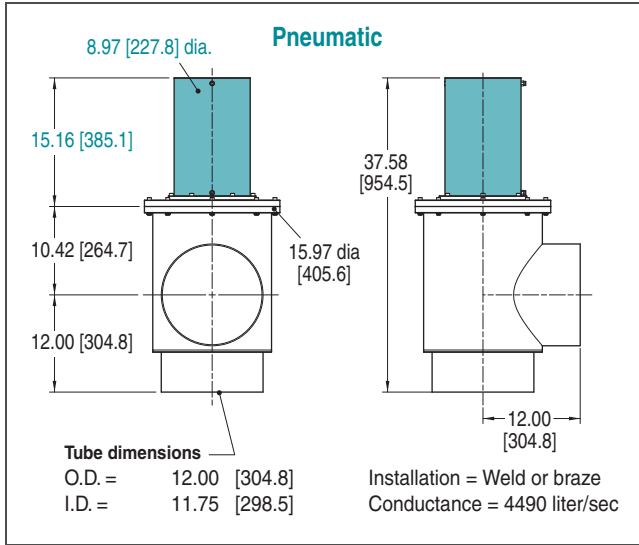


ISO 250 Flanges		250-mm 10.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	150 [68]	14212-1006

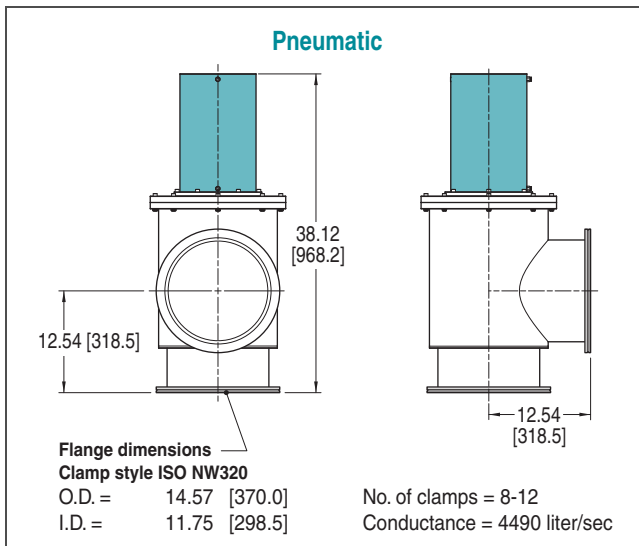


CF-F 13.25 Flanges		250-mm 10.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	150 [68]	14212-1000
Copper-Viton	150 [68]	14222-1000

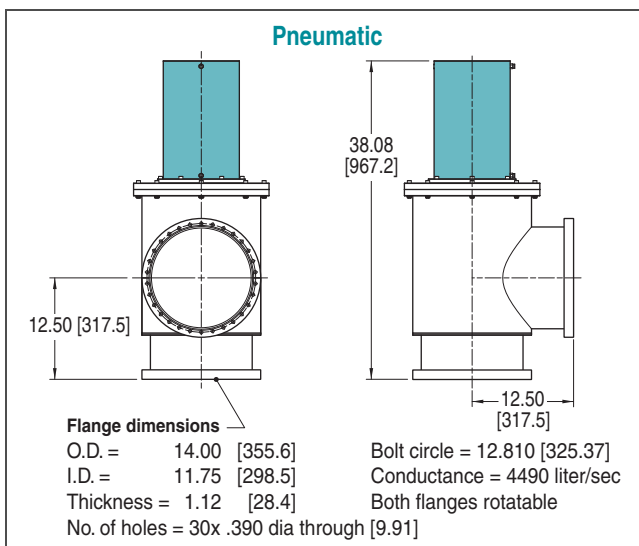
# Angle Valves 300-mm 12.0-inch



No Flanges		300-mm 12.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	250 [114]	14212-120X
Copper-Viton	250 [114]	14222-120X



ISO 300 Flanges		300-mm 12.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	250 [114]	14212-1206



CF-F 14.00 Flanges		300-mm 12.0-inch
Bonnet-Poppet	Shipping Wt lbs [kg]	Model Number
<b>Pneumatic</b>		
Viton-Viton	250 [114]	14212-1200
Copper-Viton	250 [114]	14222-1200



## ANSI Flange Models

Optional ANSI Flange Models are designed for high vacuum applications, specifically when pressure ranges approximate  $1 \times 10^{-9}$  Torr and bakeout temperatures do not exceed 200°C. Contact HVA Technical Services to discuss your requirements.

The bonnet comes standard with a Viton® elastomer O-ring. These valves provide valving for cryopumps, turbomolecular pumps, ion pumps and other applications requiring clean, low outgassing valves.

Pneumatic valves are supplied with a 120 VAC solenoid and a Reed switch position indicator.

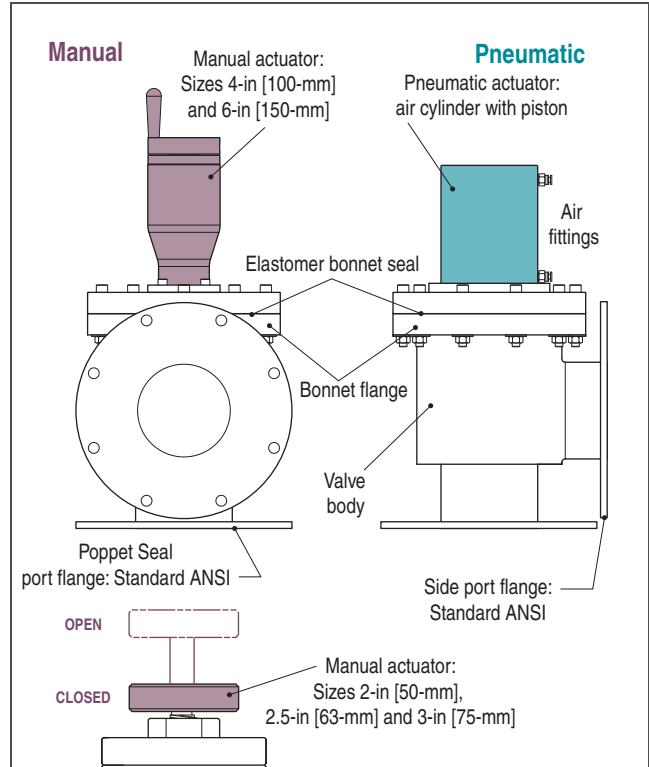
Standard flanges are smooth faced, non-rotatable and threaded. When O-ring grooves are required on flanges, please specify one of the following options:

- O-ring groove on poppet port only
- O-ring groove on side port only
- O-ring grooves on both poppet port and side port

O-ring groove I.D. is 0.250-inch larger than the valve I.D. Flange O-rings are not included with the valve, and may be purchased separately.

## JIS and Custom Flange Models

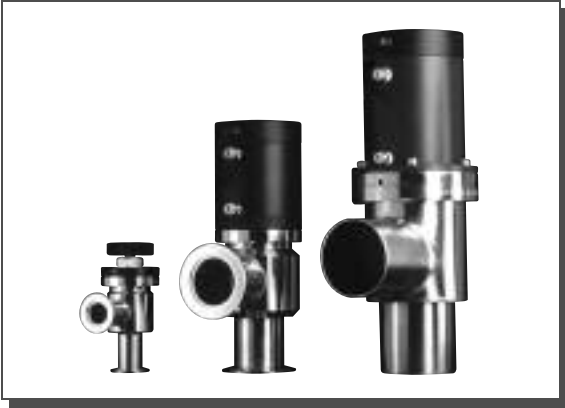
Valves requiring JIS flanges may be obtained through HVA. Additionally, other specialty flanges for non-standard installations may be custom ordered through HVA. Contact HVA Technical Services to discuss your requirements.



## ANSI Flange Dimensions

MM	Inch	Flange Size	Conductance liter/sec air	No. Holes	Hole Dia. inch	B.C. mm	B.C. inch	O.D. mm	O.D. inch	I.D. mm	I.D. inch
50	2.0	2.0 ANSI	90	4	.406	121	4.75	152	6.00	51	2.00
63	2.5	2.0 ANSI	140	4	.406	121	4.75	152	6.00	64	2.50
75	3.0	2.0 ANSI	200	4	.406	121	4.75	152	6.00	76	3.00
75	3.0	3.0 ANSI	200	4	.406	152	6.00	190	7.50	76	3.00
100	4.0	4.0 ANSI	420	8	.406	190	7.50	229	9.00	102	4.00
150	6.0	6.0 ANSI	1,120	8	.812	241	9.50	279	11.00	152	6.00
200	8.0	6.0 ANSI	2,000	8	.812	241	9.50	279	11.00	203	8.00
200	8.0	8.0 ANSI	2,000	8	.812	298	11.75	343	13.50	203	8.00
250	10.0	10.0 ANSI	3,103	12	.812	362	14.25	406	16.00	254	10.00
300	12.0	10.0 ANSI	4,490	12	.812	362	14.25	406	16.00	305	12.00
300	12.0	12.0 ANSI	4,490	12	.812	432	17.00	483	19.00	305	12.00

# Angle Valves



Stainless Steel Angle Valves  
**14000 Series**

**End of Section**

