



High Vacuum Valves  
Leader in Quality and Value

# 4000 Series

## Stainless Steel Angle Valves



### Standard Technical Specifications

#### Materials

Valve body and poppet	304L stainless steel
Welded bellows seal	AM-350
Poppet / Bonnet Seals	Viton®

#### Vacuum

Pressure range	$1 \times 10^{-9}$ mbar
Helium leak rate	$< 1 \times 10^{-9}$ mbar l/s
Differential pressure	1 bar

#### Temperature

Bake	120°C
Operating	

#### Mechanism

Manual	hand crank
Pneumatic air service	60 - 95 psi
DN16 - 50 air-to-open / spring-to-close	
DN63 - 630 air-to-open / air-to-close	

#### Cycles

DN16 - 40	1,500,000 cycles
DN50 - 250	1,000,000 cycles
DN320 - 630	100,000 cycles

### Ordering Guides

Pneumatic - Viton Seals without Solenoid and Position Indicator

DN mm inch	Model number KF/ISO-F	Model number CF-F
16 .625	04510-0073	04510-0070
25 1.0	04510-0103	04510-0100
40 1.5	04510-0153	04510-0150
50 2.0	04510-0203	04510-0200
63 2.5	04210-0253	04210-0250
80 3.0	04210-0303	04210-0300
100 4.0	04210-0403	04210-0400
160 6.0	04210-0603	04210-0600
200 8.0	04210-0803	-
250 10.0	04210-1003	-
320 12.0	04210-1203	-
400 16.0	04210-1603	-
500 20.0	04210-2003	-
630 25.0	04210-2503	-

For 24V DC solenoid: 04211-  
For 120V AC solenoid: 04212-

For Metric change last '0' to '4'

Manual - Viton Seals without Position Indicator

DN mm inch	Model number KF	Model number CF-F
16 .625	04110-0073	04110-0070
25 1.0	04110-0103	04110-0100
40 1.5	04110-0153	04110-0150
50 2.0	04110-0203	04110-0200
63 2.5	-	04110-0250

For Metric change last '0' to '4'

#### Options

Solenoid  
Position indicator  
Alternate valve and o-ring materials  
Custom sizes  
Special flanges  
UHV versions available

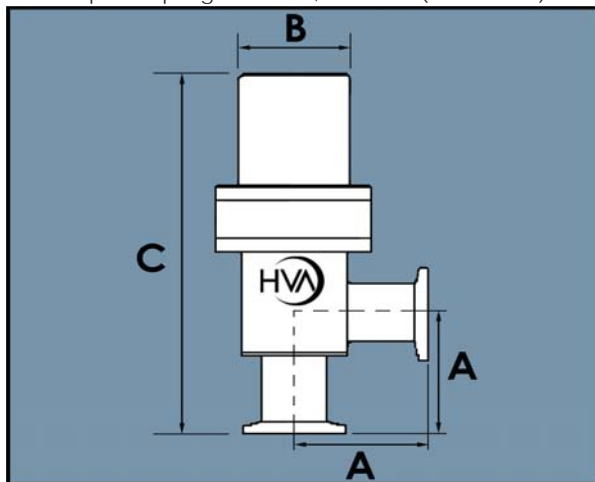


High Vacuum Valves  
Leader in Quality and Value

# 4000 Series

## Stainless Steel Angle Valves

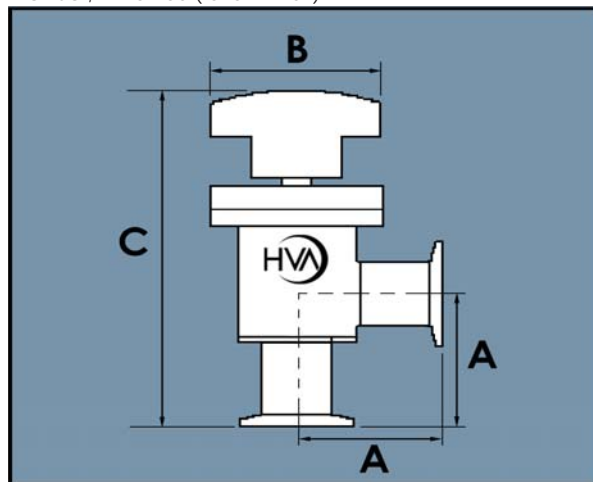
Air-to-Open / Spring-to-Close , KF16 - 50 (.625" - 2.0")



Air-to-Open / Spring-to-Close valve dimensions

DN	mm inch	16 0.625	25 1.00	40 1.50	50 2.00
A	mm inch	54.60 2.15	52.07 2.05	62.74 2.47	76.20 3.00
B	mm inch	60.64 2.39	60.64 2.39	76.50 3.01	84.55 3.33
C	mm inch	161.38 6.35	155.70 6.13	176.36 6.94	237.84 9.36

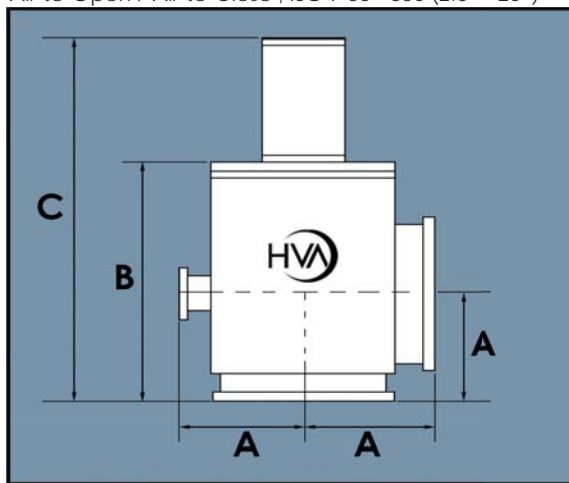
Manual, KF16 - 50 (.625" - 2.0")



Manual valve dimensions

DN	mm inch	16 0.625	25 1.00	40 1.50	50 2.00
A	mm inch	54.60 2.15	52.07 2.05	62.74 2.47	76.20 3.00
B	mm inch	60.00 2.36	60.00 2.36	60.00 2.36	60.00 2.36
C	mm inch	137.75 5.42	132.07 5.20	163.71 6.45	198.21 7.80

Air-to-Open / Air-to-Close , ISO-F 63 - 630 (2.5" - 25")



Air-to-Open / Air-to-Close valve dimensions

DN	mm inch	63 2.50	80 3.00	100 4.00	160 6.00	200 8.00	250 10.00	320 12.00	400 16.00	500 20.00	630 25.00
A	mm inch	83.00 3.27	89.00 3.50	114.00 4.49	159.00 6.26	210.00 8.27	264.00 10.39	250.00 9.84	330.00 12.99	360.00 14.17	450.00 17.72
B	mm inch	146.00 5.75	165.00 6.50	207.00 8.15	282.00 11.10	370.00 14.57	469.00 18.46	494.00 19.45	624.00 24.57	740.00 29.13	860.00 33.86
C	mm inch	161.00 6.34	283.00 11.14	344.00 13.54	490.00 19.29	592.00 23.31	724.00 28.50	838.00 32.99	1040.00 40.94	1004.00 39.53	1330.00 52.36
Bolt Hole		4x-9	8x-9	8x-9	8x-11	12x-11	12x-11	12x-14	12x-14	16x-14	20x-14
B.C.	mm inch	110.00 4.33	125.00 4.92	145.00 5.71	200.00 7.87	260.00 10.24	310.00 12.20	395.00 15.55	480.00 18.90	580.00 22.83	720.00 28.35
Side Port		-	-	-	-	DN50	DN63	DN80	DN100	DN125	DN160
Flange		non-rotatable	non-rotatable	non-rotatable	non-rotatable	rotatable	rotatable	rotatable	rotatable	rotatable	rotatable