



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 1×10^{-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

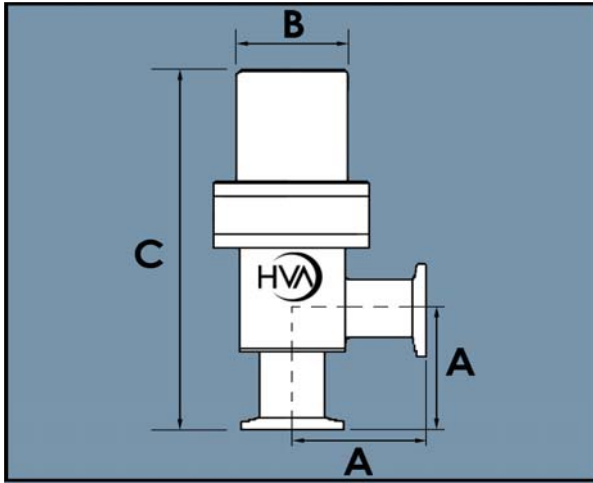
Solenoid
Position indicator
Alternate valve and o-ring materials
Custom sizes
Special flanges
UHV versions available



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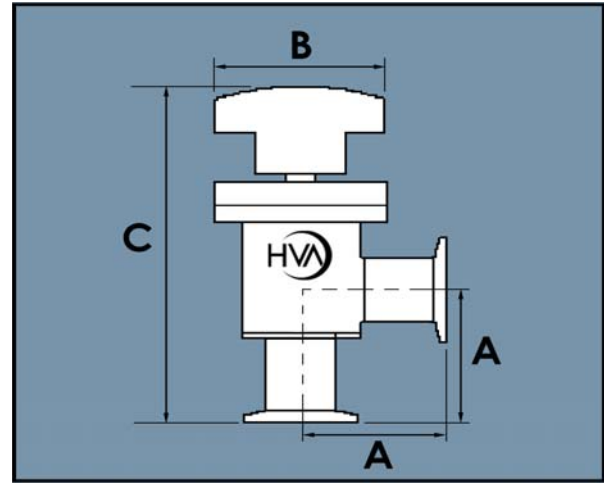
Air-to-Open / Spring-to-Close , KF16 - 50 (.625" - 2.0")



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

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

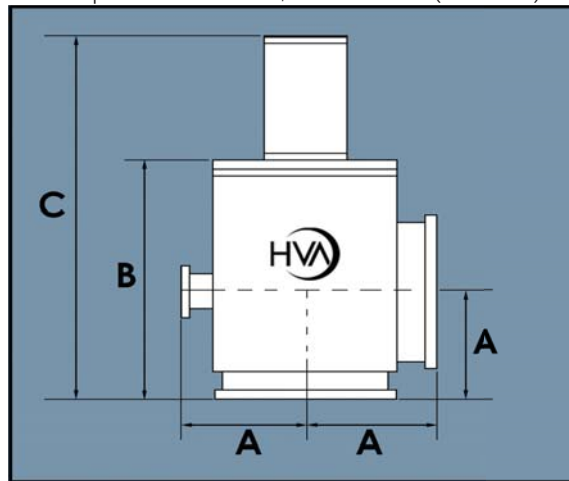
Manual, KF16 - 50 (.625" - 2.0")



Manual valve dimensions

DN	mm	16	25	40	50
	inch	0.625	1.00	1.50	2.00
A	mm	54.60	52.07	62.74	76.20
	inch	2.15	2.05	2.47	3.00
B	mm	60.00	60.00	60.00	60.00
	inch	2.36	2.36	2.36	2.36
C	mm	137.75	132.07	163.71	198.21
	inch	5.42	5.20	6.45	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	63	80	100	160	200	250	320	400	500	630
	inch	2.50	3.00	4.00	6.00	8.00	10.00	12.00	16.00	20.00	25.00
A	mm	83.00	89.00	114.00	159.00	210.00	264.00	250.00	330.00	360.00	450.00
	inch	3.27	3.50	4.49	6.26	8.27	10.39	9.84	12.99	14.17	17.72
B	mm	146.00	165.00	207.00	282.00	370.00	469.00	494.00	624.00	740.00	860.00
	inch	5.75	6.50	8.15	11.10	14.57	18.46	19.45	24.57	29.13	33.86
C	mm	161.00	283.00	344.00	490.00	592.00	724.00	838.00	1040.00	1004.00	1330.00
	inch	6.34	11.14	13.54	19.29	23.31	28.50	32.99	40.94	39.53	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	110.00	125.00	145.00	200.00	260.00	310.00	395.00	480.00	580.00	720.00
	inch	4.33	4.92	5.71	7.87	10.24	12.20	15.55	18.90	22.83	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