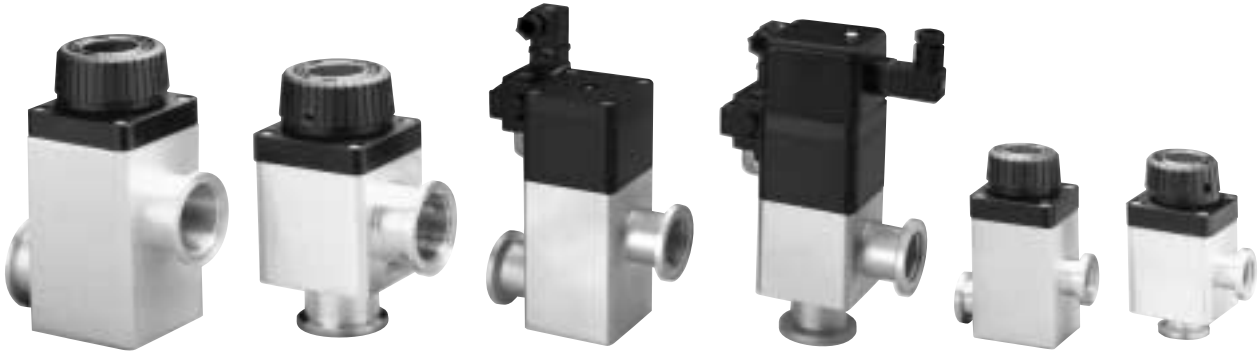


## Aluminum Block Valves

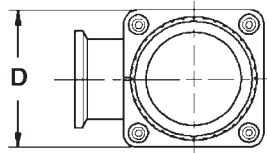


Varian's aluminum block valves are the valves of choice for medium- and high-vacuum requirements. These low-cost, compact, and reliable valves are used for applications in semiconductor manufacturing, R&D, and industrial vacuum systems. Varian's block valves will reliably achieve 300,000 cycles or more in most applications. Now available in

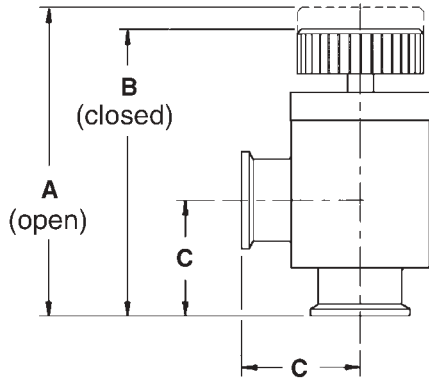
right-angle (NW16-80) or offset in-line (NW16 – 40), these valves may be ordered in either hand- or air-operated versions. Our nickel-plated version offers lower outgassing and higher resistance to corrosive gases. Air-operated valves may be ordered with a solenoid valve and/or a remote position indicator.

Features	Benefits
• Convenient NW/ISO flange dimensions	• Easy installation and service
• Low-profile, lightweight construction	
• Reliable design	• Service-free performance
• 2 million cycles	• Cost effective
• Auto-close on loss of air or power	• Fail-safe operation
• Low cost	• Economical to use
• Visual position indicator	• Minimizes operator error
• Optional remote position indicator	
• High conductance	• Maximizes pumping efficiency
• Nickel-plated option	• Low outgassing
	• Higher resistance to corrosive gasses

Right-Angle H/O Block Valve



Dimensions are seal face-to-face,  
protective lip not included.



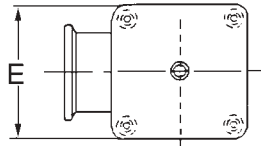
Models	A	B	C	D
NW16	4.45 (113)	4.09 (104)	1.58 (40)	2.05 (52)
NW25	4.85 (123)	4.49 (114)	1.98 (50)	2.05 (52)
NW40	6.45 (164)	6.00 (152)	2.57 (65)	3.05 (77)
NW50	7.19 (183)	6.79 (172)	2.80 (71)	3.89 (99)
NW63	7.71 (196)	7.31 (186)	3.32 (84)	3.89 (99)
NW80	8.25 (210)	7.69 (195)	3.72 (94)	4.40 (112)

NW/KF

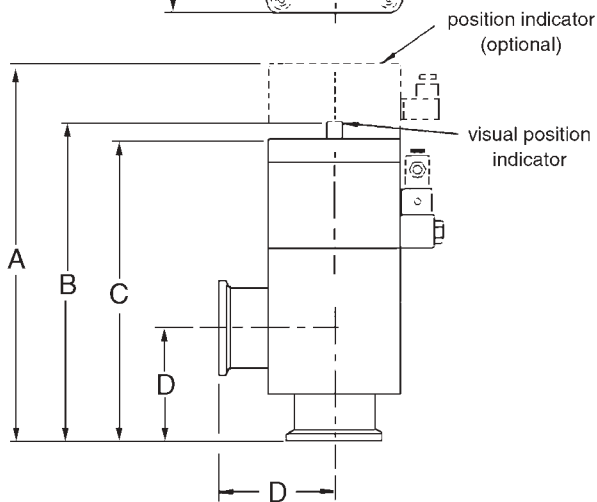
ISO-K

Dimensions: inches (millimeters)

Right-Angle A/O Block Valve



Dimensions are seal face-to-face,  
protective lip not included.



Models	A	B	C	D	E
NW16	6.01 (153)	4.83 (123)	4.49 (114)	1.58 (40)	2.05 (52)
NW25	6.41 (163)	5.23 (133)	4.89 (124)	1.98 (50)	2.05 (52)
NW40	7.56 (192)	6.38 (162)	6.04 (153)	2.57 (65)	3.05 (77)
NW50	7.59 (193)	7.47 (190)	7.07 (180)	2.80 (71)	3.89 (99)
NW63	8.11 (206)	7.99 (203)	7.59 (193)	3.32 (84)	3.89 (99)
NW80	8.51 (216)	8.39 (213)	7.99 (203)	3.72 (94)	4.40 (112)

NW/KF

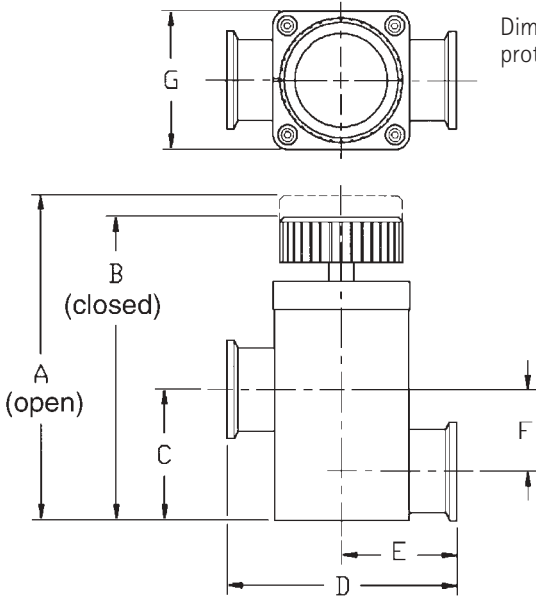
ISO-K

Dimensions: inches (millimeters)



# Aluminum Block Valves

## In-Line H/O Block Valve

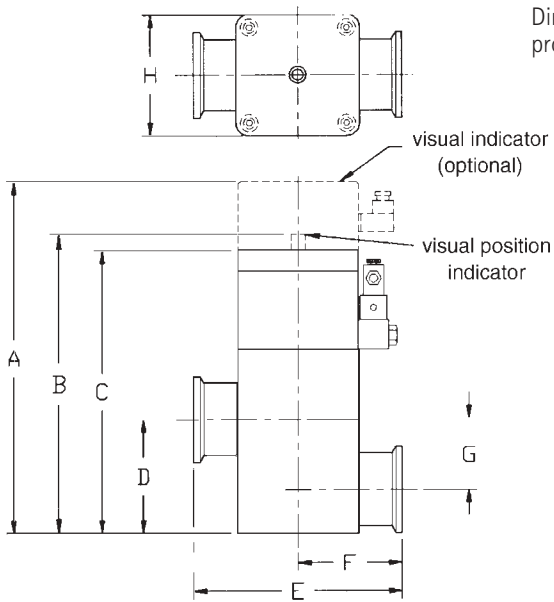


Dimensions are seal face-to-face, protective lip not included.

Models	A	B	C	D	E	F	G
NW16	4.71 (120)	4.35 (111)	1.47 (37)	3.16 (80)	1.58 (40)	0.88 (22)	2.05 (52)
NW25	5.11 (130)	4.75 (121)	2.04 (52)	3.96 (100)	1.98 (50)	1.25 (32)	2.05 (52)
NW40	7.06 (179)	6.61 (168)	2.85 (72)	5.14 (130)	2.57 (65)	1.77 (45)	3.05 (77)

Dimensions: inches (millimeters)

## In-Line A/O Block Valve



Dimensions are seal face-to-face, protective lip not included.

Models	A	B	C	D	E	F	G	H
NW16	6.27 (160)	5.09 (129)	4.75 (121)	1.47 (37)	3.16 (80)	1.58 (40)	0.88 (22)	2.05 (52)
NW25	6.67 (170)	5.49 (139)	5.15 (131)	2.04 (52)	3.96 (100)	1.98 (50)	1.25 (32)	2.05 (52)
NW40	8.17 (208)	6.99 (178)	6.65 (169)	2.85 (72)	5.14 (130)	2.57 (65)	1.77 (45)	3.05 (77)

Dimensions: inches (millimeters)

Technical Specifications

<b>Pressure Range</b>	Atmosphere to 10 <sup>-9</sup> torr (mbar)					
<b>Main Seal Leak Rate</b>	< 1 x 10 <sup>-9</sup> std cc/sec He					
<b>Body Leak Rate</b>	< 1 x 10 <sup>-10</sup> std cc/sec He					
<b>Rated Cycle Life</b>	300,000					
<b>Conductance (molecular flow)</b>	NW16	NW25	NW40	NW50	NW63	NW80
<b>Right Angle</b>	4 l/s	12 l/s	35 l/s	60 l/s	95 l/s	155 l/s
<b>Offset In-Line</b>	4 l/s	12 l/s	35 l/s	-	-	-
<b>Materials</b>	<ul style="list-style-type: none"> <li>• Valve Body – Aluminum 6061 T6</li> <li>• Bellows – Stainless Steel T321</li> <li>• O-rings, vacuum – Viton V747-75</li> </ul>					

<b>Bakeable To –</b>	Hand-operated Valve 150° C	
	Air-operated Valve	150° C without solenoid, 60° C with solenoid
	Position Indicator	60° C
<b>Air Connection</b>	1/8 in. NPT	
<b>Actuation</b>	Spring closed, air open	
	Air Pressure, 80 psig (min)	100 psig (maximum)
<b>Time to Close/Open</b>	< 300 mseconds	
<b>Power Loss</b>	Valve closes	
<b>Optional Remote Position Indicator</b>	Actuator – Microswitch	
	Electrical Rating –	125/250 VAC, 5 amp maximum
	Signal Hookup –	NO or NC

Ordering Information – NW16, NW25, NW40

Size	Voltage Option	Part Number		Shipping Weight lbs. (kg)
Right-Angle Block Valves		Aluminum	Nickel-Plated Aluminum	
Hand-operated				
NW16		L6280301	L6280601	0.8 (0.4)
NW25		L6280302	L6280602	0.8 (0.4)
NW40		L6280303	L6280603	1.7 (0.8)
Air-operated				
NW16	without solenoid	L6281301	L6281601	1.5 (0.7)
	110/115 VAC; 50/60 Hz	L6281311	L6281611	1.7 (0.8)
	220/240 VAC; 50/60 Hz	L6281321	L6281621	1.7 (0.8)
	24 VDC	L6281331	L6281631	1.7 (0.8)
NW25	without solenoid	L6281302	L6281602	1.6 (0.7)
	110/115 VAC; 50/60 Hz	L6281312	L6281612	1.8 (0.8)
	220/240 VAC; 50/60 Hz	L6281322	L6281622	1.8 (0.8)
	24 VDC	L6281332	L6281632	1.8 (0.8)
NW40	without solenoid	L6281303	L6281603	3.3 (1.5)
	110/115 VAC; 50/60 Hz	L6281313	L6281613	3.7 (1.7)
	220/240 VAC; 50/60 Hz	L6281323	L6281623	3.7 (1.7)
	24 VDC	L6281333	L6281633	3.7 (1.7)
Right-Angle Block Valves (with remote position indicator)		Aluminum	Nickel-Plated Aluminum	
Air-operated				
NW16	without solenoid	L6282301	L6282601	1.8 (0.8)
	110/115 VAC; 50/60 Hz	L6282311	L6282611	2.0 (0.9)
	220/240 VAC; 50/60 Hz	L6282321	L6282621	2.0 (0.9)
	24 VDC	L6282331	L6282631	2.0 (0.9)
NW25	without solenoid	L6282302	L6282602	1.9 (0.8)
	110/115 VAC; 50/60 Hz	L6282312	L6282612	2.1 (0.9)
	220/240 VAC; 50/60 Hz	L6282322	L6282622	2.1 (0.9)
	24 VDC	L6282332	L6282632	2.1 (0.9)
NW40	without solenoid	L6282303	L6282603	3.6 (1.6)
	110/115 VAC; 50/60 Hz	L6282313	L6282613	3.8 (1.7)
	220/240 VAC; 50/60 Hz	L6282323	L6282623	3.8 (1.7)
	24 VDC	L6282333	L6282633	3.8 (1.7)



# Aluminum Block Valves

## Ordering Information – NW16, NW25, NW40

Size	Voltage Option	Part Number		Shipping Weight lbs. (kg)
<b>Offset In-line Block Valves</b>		<b>Aluminum</b>	<b>Nickel-Plated Aluminum</b>	
Hand-operated				
NW16		L9180301	L9180601	1.2 (0.5)
NW25		L9180302	L9180602	1.3 (0.6)
NW40		L9180303	L9180603	3.6 (1.6)
Air-operated				
NW16	without solenoid	L9181301	L9181601	1.6 (0.7)
	110/115 VAC; 50/60 Hz	L9181311	L9181611	1.8 (0.8)
	220/240 VAC; 50/60 Hz	L9181321	L9181621	1.8 (0.8)
	24 VDC	L9181331	L9181631	1.8 (0.8)
NW25	without solenoid	L9181302	L9181602	1.8 (0.8)
	110/115 VAC; 50/60 Hz	L9181312	L9181612	2.0 (0.9)
	220/240 VAC; 50/60 Hz	L9181322	L9181622	2.0 (0.9)
	24 VDC	L9181332	L9181632	2.0 (0.9)
NW40	without solenoid	L9181303	L9181603	4.6 (2.0)
	110/115 VAC; 50/60 Hz	L9181313	L9181613	4.8 (2.1)
	220/240 VAC; 50/60 Hz	L9181323	L9181623	4.8 (2.1)
	24 VDC	L9181333	L9181633	4.8 (2.1)
<b>Offset In-Line Block Valves (with remote position indicator)</b>		<b>Aluminum</b>	<b>Nickel-Plated Aluminum</b>	
Air-operated				
NW16	without solenoid	L9182301	L9182601	1.7 (0.8)
	110/115 VAC; 50/60 Hz	L9182311	L9182611	1.9 (0.8)
	220/240 VAC; 50/60 Hz	L9182321	L9182621	1.9 (0.8)
	24 VDC	L9182331	L9182631	1.9 (0.8)
NW25	without solenoid	L9182302	L9182602	2.1 (0.9)
	110/115 VAC; 50/60 Hz	L9182312	L9182612	2.3 (1.0)
	220/240 VAC; 50/60 Hz	L9182322	L9182622	2.3 (1.0)
	24 VDC	L9182332	L9182632	2.3 (1.0)
NW40	without solenoid	L9182303	L9182603	4.9 (2.2)
	110/115 VAC; 50/60 Hz	L9182313	L9182613	5.1 (2.3)
	220/240 VAC; 50/60 Hz	L9182323	L9182623	5.1 (2.3)
	24 VDC	L9182333	L9182633	5.1 (2.3)

## Ordering Information – NW16, NW25, NW40

Description	Part Number	Shipping Weight lbs. (kg)
<b>Spare Parts</b>		
Replacement solenoids (fit all air-operated valves)		
110/115 VAC; 50/60 Hz	626771150	0.5 (0.2)
220/240 VAC; 50/60 Hz	626771151	0.5 (0.2)
24 VDC	626771152	0.5 (0.2)
Hand-operated spare parts kits (includes bellows and o-rings)		
NW16 or 25	L6125301	0.5 (0.2)
NW40	L6126301	0.5 (0.2)
Air-operated spare parts kits (includes bellows, quad ring, and o-rings)		
NW16 or 25	L6127301	0.5 (0.2)
NW40	L6128301	0.5 (0.2)
Optional remote position indicator (fits all Aluminum Block Valves)		
Single microswitch	L6597302	0.5 (0.2)
Dual microswitch	L6597301	0.5 (0.2)
Manual	699912040	0.5 (0.2)