



- Less Outgassing Than S.S., See Page 39
- 6061 Aluminum or Mild Steel
- All Valves (RoHS) 2002/95/EC Compliant
- Electroless Nickel Optional on Steel Valves
- Optional Operation to 10 Bar, 147 PSIG
- ISO-k Flanges Standard, f Style Optional
- Flanges to Match Diffusion & Cryo Pumps
- Extremely Low Outgassing Rate
- Leak Tested To 5×10^{-10} Std. cc/sec
- Automatic Closure on Power Failure
- Optional Open/Closed Position Indicators
- High Conductance Full Opening Port

ORDERING INFORMATION

Model Number: Refer to page 2 for instructions on how to specify the features you need.
Electronic Position Indicators: Two reed switches activated by a magnet inside the pneumatic actuator provide contact closure for open and closed positions. Add 'LSE' to Model No., refer to page 40 for specifications. \$150. /pair
Roughing Ports or Gauge Ports: Standard location is 180° from side port as shown in drawing. Other locations and more than one port are available.

Available on Any Size Valve	Available on 6 Inch or Larger Valves
NW-16 \$146.	ISO k 63 \$263.
NW-25 \$159.	ISO k 80 \$343.
NW-40 \$183.	ISO k 100 \$374.
NW-50 (Not On 63, 100) . . . \$196.	

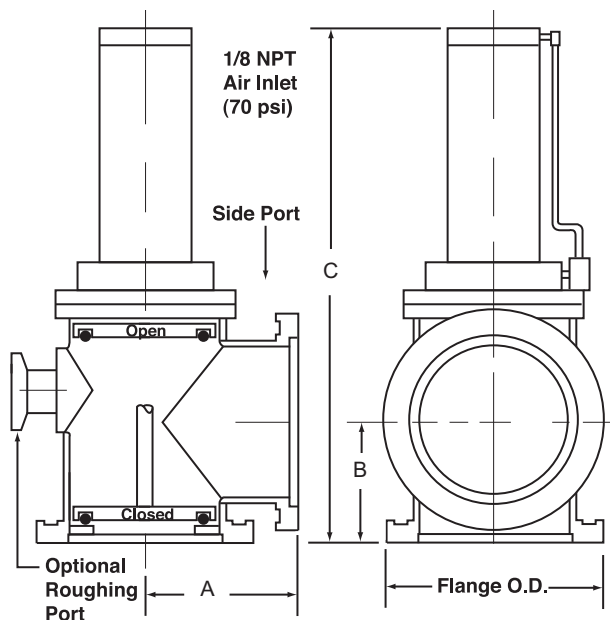
ISO-f flanges available for side or bottom ports at same price.

Special Features: See pages 40 to 43 for information on special features and accessories.

Viton® or Kalrez® or Silicone O-Rings: Our standard Poppet Valves use Buna-N O-Rings. You may specify Viton® (or other materials) throughout the valve with a "V", "S", or "K" in the model number. For Viton® add the following to the price. (For Silicone or Kalrez® contact the factory for prices.)

ISO-63 \$55.	ISO-250 \$214.
ISO-100 \$83.	ISO-320 \$275.
ISO-160 \$103.	ISO-400 contact factory
ISO-200 \$164.	ISO-500 contact factory

Poppet valves from ISO 250 to ISO 500 are designed to seal with vacuum on the bottom port and atmosphere on the side port. If you need to seal the valve with atmosphere on the bottom port (Pushing the valve open) specify this on your inquiry and a larger cylinder will be provided.



Nominal Size	Molecular Conductance	For Mild Steel Use "AVMS" Basic Valve Style in Model No.	Port Flanges Outside Diameter	Flange to Flange "A" Dimension	Overall Height "B" Dimension	Roughing Port Sizes Available	Aluminum Weight, lbs (kg)		Aluminum Price	Mild Steel Weight, lbs (kg)		Mild Steel Price
							Net	Ship		Net	Ship	
ISO 63	160	AV-63 ISO-k	95 mm	88 mm	373 mm	NW-16 to NW-40	13 (5.9)	18 (8.2)	\$1305.	25 (11)	40 (18)	\$1221.
ISO 100	440	AV-100 ISO-k	130 mm	108 mm	394 mm	NW-16 to NW-40	15 (6.8)	24 (11)	\$1678.	40 (18)	49 (22)	\$1575.
ISO 160	1,000	AV-160 ISO-k	180 mm	138 mm	424 mm	NW-16 to ISO-100	28 (13)	42 (19)	\$1779.	50 (27)	74 (34)	\$1706.
ISO 200	1,920	AV-200 ISO-k	240 mm	184 mm	800 mm	NW-16 to ISO-100	55 (25)	75 (34)	\$2601.	95 (43)	115 (52)	\$2441.
ISO 250	3,000	AV-250 ISO-k	290 mm	235 mm	850 mm	NW-16 to ISO-100	70 (32)	95 (43)	\$3851.	125 (57)	150 (68)	\$3622.
ISO 320	5,060	AV-320 ISO-k	370 mm	276 mm	869 mm	NW-16 to ISO-200	95 (43)	130 (59)	\$4620.	150 (68)	185 (84)	\$4433.
ISO 400	8,550	AV-400 ISO-k	450 mm	337 mm	1067 mm	NW-16 to ISO-320	125 (49)	180 (71)	\$9580.	520 (236)	755 (343)	\$8715.
ISO 500	21,840	AV-500 ISO-k	550 mm	387 mm	1372 mm	NW-16 to ISO-320	280 (130)	335 (152)	\$14,356.	800 (363)	1200 (545)	\$13,350.

Standard Exterior of Mild Steel Valves Painted Turbine Blue.



Model Numbering System

VRC Valves are
Manufactured in
the USA.



Vacuum Research valves are available with dozens of options to allow you to select exactly the features you need for your vacuum system. The model number system illustrated below will accurately describe most valves, but if you have any questions about the best way to specify what you need, just call or fax our customer service department and we will be happy to help you. All Valves are (RoHS) 2002/95/EC Compliant.

Basic Valve Style

LPWA	Bonnet Style, Large Port Aluminum
TBWA	Thick Body Valves for Dirty Environments
X-LPWA	Bonnet Style, Extra Large Port Aluminum
LPSS	Bonnet Style, Large Port Stainless Steel
X-LPSS	Bonnet Style, Extra Large Port Stainless Steel
BEL	Bellows Seal, Welded Aluminum
END STD	Standard Port Aluminum Gate Valves
END LP	Oversize Large Port Aluminum Gate Valves
AVAL	Aluminum Poppet Style Valves
AVMS	Mild Steel Poppet Valves
REB	Rectangular Port, Bellows Seal
REQ	Rectangular Port, Quad Ring Seal

Roughing & Gauge Ports

Specify location (R-1, R-2, etc.) and size of port (NW-16, NW-25, etc.) Refer to page 42 in this catalog: Roughing and Gauge Ports, for the range of port sizes available in each location for your basic valve style.

Limit Switches (Position Indicators)

Visual Position Indicators are included on All Bonnet Gate Valves. Limit switches are described in the "Optional Features and Accessories" section on page 44. (Sold by the pair, 1 for open, 1 for closed)

LSS	Enclosed Limit Switch (SPDT)
LSD	Enclosed Limit Switch (DPDT)
LSO	Open Type Limit Switch (SPDT)
LSE	Electronic Type Limit Switch (SPDT)
LSX-C	Explosion Proof, Grps. C, D (SPDT)
LSX-B	Explosion Proof, Grp. B (SPDT)

Flange Bolt Pattern

ASA	ANSI Bolt Pattern
CF	Conflat® Flanges
CF-MET	Metric Conflat®
JIS	Japan Industrial Std.
DEP	Dependex Flanges
ISO	ISO Bolt Pattern
SPEC	Customer Special Flange
BLANK	No Holes or O-Ring

Flange O-Rings

2O	O-Rings both flanges
NO	No flange O-Rings
1O	O-Ring Open Side
1S	O-Ring Seal Side

Port Flange Neck Style

N1	Tapped Holes Both Sides
N5	Neck Flange on Both Sides
N6	Neck Flange on Seal Side
N8	Neck Flange on Open Side

Slots or Tapped Holes on Neck Flanges:
Our standard neck style valves (N5, N6, N8) have slots rather than holes for bolts. For tapped holes instead of slots add "tapped" to Model number. No extra charge.

Nominal Valve Port Size

Inches: 2, 3, 4, 6, 8, 10, 12, 16, 20, 24, 32
ISO: 63 mm to 630 mm
JIS: 63 mm to 630 mm
Conflat®: 2.75, 4.5, 6, 8, 10, 12 Inch OD

O-Ring Material

B	Buna-N
V	Viton®
S	Silicone
K	Kalrez®

Type of Operator

EP	Electro-Pneumatic
3 POS	3 Position Electro-Pneumatic
P	Pneumatic only (no solenoid)
M	Manual Lever
T	Manual Throttle
MO	Motor Actuator

Solenoid Voltage Only Used With EP Operator

115	115V, 50/60 Hz
220	220-240 V, 50 Hz
24D	24 VDC
115 EX	Expl. Proof 115V, 50/60 Hz
220 EX	Expl. Proof 220V, 50 Hz
24 EX	Expl. Proof 24 VDC

LPWA - 12 - ASA - N8 - 2O - B - R2 - NW-16 - EP - 115 - LSS

Ordering Information



Call our toll free number (800) 426-9340, or (412) 261-7630 to place orders, or for customer service.



Our FAX number is (412) 261-7220. Address orders by mail to Vacuum Research Corporation, 100 Chapel Harbor Drive, #4, Pittsburgh, PA 15238 USA. Prices in this catalog are FOB factory. CIF or C&F prices available. Contact factory for pro forma invoice or price quotation. Terms are Net 30 Days.



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