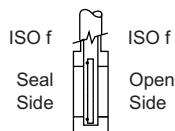
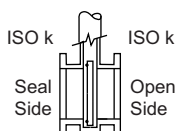




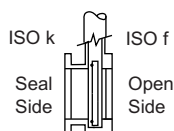
- Less Outgassing Than Stainless, See Page 39
- Simple End Operated Air Cylinder
- Over 100,000 Cycles Without Maintenance
- Helium Tested to 5×10^{-10} scc/s
- All Valves (RoHS) 2015/863/EU Compliant
- Flanges to Match Diffusion & Cryo Pumps
- Closing Speeds as Fast as 75 mSec. Available
- Optional Operation to 10 Bar, 147 PSIG; \$260.
- Optional Remote Position Indicators
- NW & Compression Gauge & Roughing Ports
- Automatic Closure on Power Failure



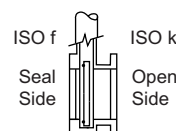
N1 Tapped Holes
on Both Sides



N5 Neck on Both Sides



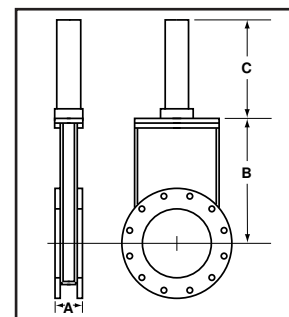
N6 Neck on Seal Side



N8 Neck Opposite
Seal Side

Stainless Steel Gates in Aluminum Valves: To specify a stainless steel gate in an aluminum valve add a suffix to the model number "SS Gate". Refer to "Optional Features and Accessories" pages in this catalog for pricing information.

ISO Port Size	Model No. ISO Flange	Dimensions in mm	Port Dia.	Flange O.D.	Bolt Circle	(number of bolts) size - pitch	A Flange to Flange	B mm	C mm	List Price
NW-50	END ISO NW-40		50	Not Applicable. STD. NW-40			95	159	187	\$1,093.
NW-50	END ISO NW-50		50	Not Applicable. STD. NW-50			95	159	187	\$1,131.
63 mm	END ISO 63, N1, both sides ISO-f		70	130	110	(4) M 8 - 1.25	80	159	187	\$1,182.
	END ISO 63, N5, both sides ISO-k		70	95	110	no bolts, ISO-k	105	159	187	\$1,429.
	END ISO 63, N6 & N8, ISO-f & ISO-k		70	130/95	110	(4) M 8 - 1.25	90	159	187	\$1,297.
100 mm	END ISO 100, N1, both sides ISO-f		102	165	145	(8) M 8 - 1.25	105	213	239	\$1,887.
	END ISO 100, N5, both sides ISO-k		102	130	145	no bolts, ISO-k	127	213	239	\$2,085.
	END ISO 100, N6 & N8, ISO-f & ISO-k		102	165/130	145	(8) M 8 - 1.25	111	213	239	\$2,009.
160 mm	END ISO 160, N1, both sides ISO-f		153	225	200	(8) M 10 - 1.5	105	289	296	\$2,046.
	END ISO 160, N5, both sides ISO-k		153	180	200	no bolts, ISO-k	143	289	296	\$2,299.
	END ISO 160, N6 & N8, ISO-f & ISO-k		153	225/18	200	(8) M 10 - 1.50	127	289	296	\$2,204.
200 mm	END ISO 200, N1, both sides ISO-f		213	285	260	(12) M 10 - 1.5	111	364	348	\$3,115.
	END ISO 200, N5, both sides ISO-k		213	240	260	no bolts, ISO-k	155	364	348	\$3,591.
	END ISO 200, N6 & N8, ISO-f & ISO-k		213	285/240	260	(12) M 10 - 1.5	127	364	348	\$3,431.
250 mm	END ISO 250, N1, both sides ISO-f		261	335	310	(12) M 10 - 1.5	117	484	406	\$4,232.
	END ISO 250, N5, both sides ISO-k		261	290	310	no bolts, ISO-k	219	484	406	\$4,589.
	END ISO 250, N6 & N8, ISO-f & ISO-k		261	335/290	310	(12) M 10 - 1.5	168	484	406	\$4,385.
320 mm	END ISO 320, N1, both sides ISO-f		318	425	395	(12) M 12 - 1.75	117	533	457	\$5,833.
	END ISO 320, N5, both sides ISO-k		318	370	395	no bolts, ISO-k	219	533	457	\$6,005.
	END ISO 320, N6 & N8, ISO-f & ISO-k		318	425/370	395	(12) M 12 - 1.75	168	533	457	\$5,916.
400 mm	END ISO 400, N1, ISO-f both sides		400	510	480	(16) M 12 - 1.75	165	702	560	\$11,173.
500 mm	END ISO 500, N1, ISO-f both sides		500	610	580	(16) M 12 - 1.75	203	908	730	\$17,533.
630 mm	END ISO 630, N1, ISO-f both sides f		630*	780	720	(20) M 12 - 1.75	216	978	851	\$25,228.



ORDERING INFORMATION

Model Number: Refer to page 2 for instructions to specify features you need.

Position Indicators: Two reed switches activated by a magnet inside the pneumatic actuator provide closure for open and closed position. SPST contacts rated 0.5A @ 110 or 220 VAC non-inductive. Add LSE to Model Number \$159.00 /pair

Gauge and Roughing Ports: See page 42 for sizes and prices.

200 PSI Shaft Seal \$270.

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

Viton® or Kalrez® or Silicone O-Rings: Our standard Valves use a Viton® O-Ring for the gate seal and Buna-N O-Rings for all other locations. 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.)

63 mm valves \$59.
100 mm valves \$89.
160 mm valves \$110.
200 mm valves \$176.
250 mm valves \$229.
320 mm valves \$295.



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) 2015/863/EU 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 41. (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

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

LPWA - 12 - ASA - N8 - 20 - B - R2 - NW-16 - EP - 115 - LSS

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
TAP	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 "TAP" to Model number. No extra charge.	

Type of Operator

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

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®
C	Chemraz®

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

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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