



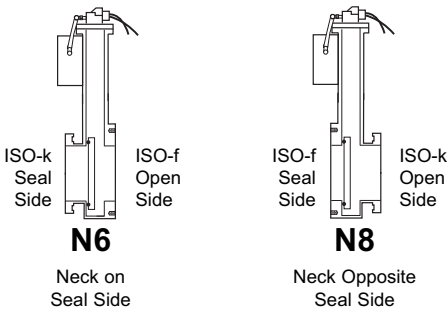
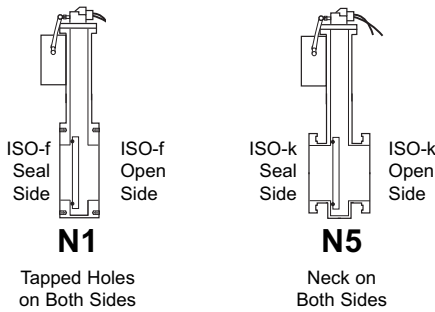
- Less Outgassing Than Stainless, See Page 43
- 250,000 Cycle Rotary Shaft Seal
- Million Cycle Valves Also Available
- All Welded 6061 Aluminum Body
- Low Temperature Bake Out, 200 °C
- Uses Standard ISO Centering Rings
- Helium Leak Less Than 5 X 10<sup>-10</sup> scc/sec
- All Valves (RoHS) 2002/95/EC Compliant
- Fail Safe Design, Close On Power Loss
- Vacuum & Pressure; Optional Seal to 3 ATM.
- Optional Operation to 10 Bar, 147 PSIG

**ORDERING INFORMATION**

**Model Number:** Refer to page 2 for instructions on how to specify the features you need.  
**Electric Motor Actuators:** Any Vacuum Research valve can be supplied with a high torque electric motor actuator. Refer to "Electric Motor Actuator" Page in the Accessories and Parts section.  
**Special Features:** Refer to pages 44 - 46 for specifications for roughing and gauge ports, position indicators & other special features.  
**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 or 80 mm valves . . . \$53.	160 mm valves . . . . \$100.	250 mm valves . . . . \$208.
100 mm valves . . . . \$81.	200 mm valves . . . . \$159.	320 mm valves . . . . \$267.

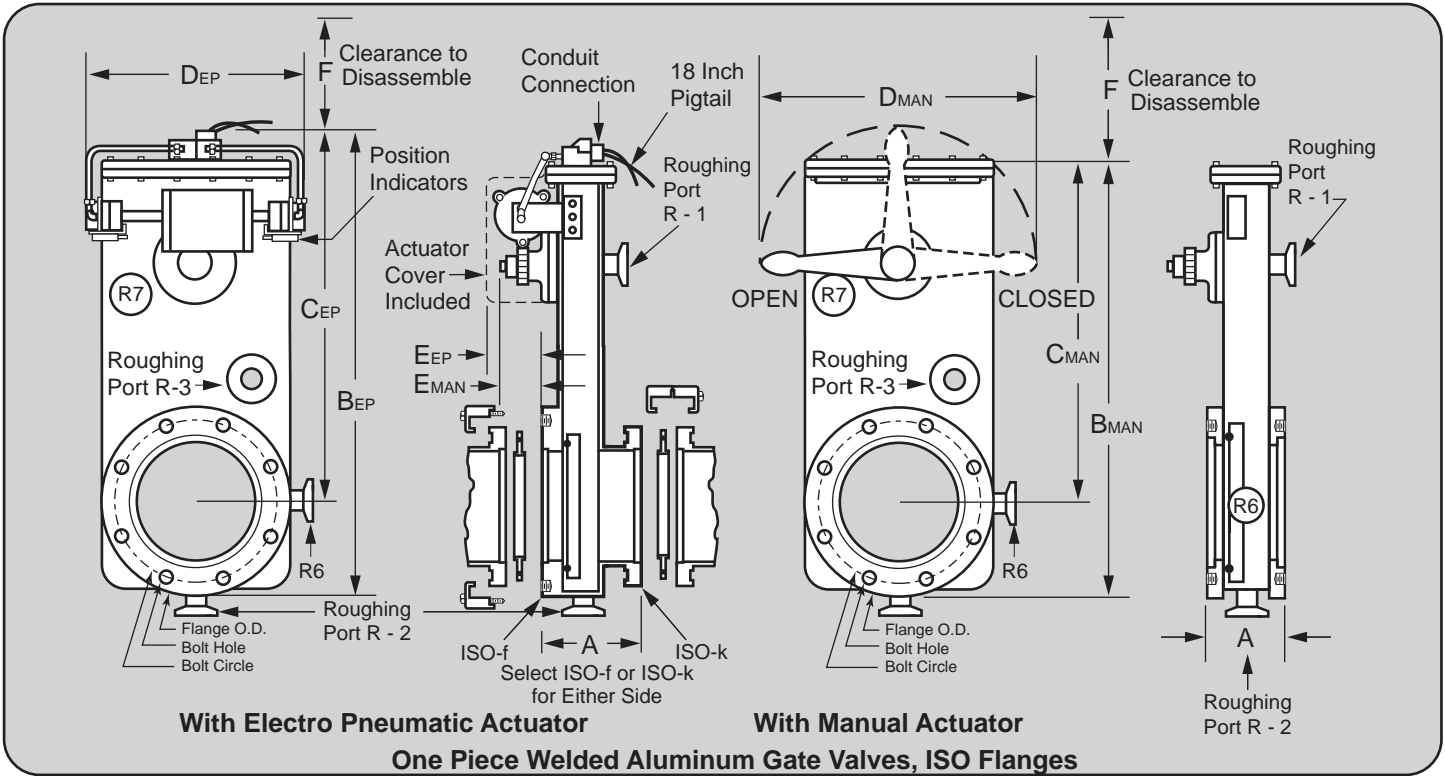
Aluminum has less outgassing than stainless steel. Up to 2 orders of magnitude less, see page 43.



The gate seal O-ring is on the actuator side (to left) in aluminum valve sizes through 200 mm. The gate seal is on the side opposite the actuator on 250 & 320 mm aluminum valves.

Nominal ISO Port Size	With Electro-Pneumatic Operator "EP" Suffix		With Manual Operator "M" Suffix	
	Model & Neck Style	Price	Model & Neck Style	Price
<b>63 mm</b>	OP-63-ISO-N1-EP	\$1455.	OP-63-ISO-N1-M	\$1284.
	OP-63-ISO-N5-EP	\$1632.	OP-63-ISO-N5-M	\$1462.
	OP-63-ISO-N6-EP	\$1525.	OP-63-ISO-N6-M	\$1333.
	OP-63-ISO-N8-EP	\$1525.	OP-63-ISO-N8-M	\$1333.
<b>80 mm</b>	OP-80-ISO-N1-EP	\$1671.	OP-80-ISO-N1-M	\$1499.
	OP-80-ISO-N5-EP	\$1776.	OP-80-ISO-N5-M	\$1656.
	OP-80-ISO-N6-EP	\$1737.	OP-80-ISO-N6-M	\$1565.
	OP-80-ISO-N8-EP	\$1737.	OP-80-ISO-N8-M	\$1565.
<b>100 mm</b>	OP-100-ISO-N1-EP	\$1784.	OP-100-ISO-N1-M	\$1596.
	OP-100-ISO-N5-EP	\$2031.	OP-100-ISO-N5-M	\$1846.
	OP-100-ISO-N6-EP	\$1932.	OP-100-ISO-N6-M	\$1747.
	OP-100-ISO-N8-EP	\$1932.	OP-100-ISO-N8-M	\$1747.
<b>160 mm</b>	OP-160-ISO-N1-EP	\$2057.	OP-160-ISO-N1-M	\$1815.
	OP-160-ISO-N5-EP	\$2361.	OP-160-ISO-N5-M	\$2114.
	OP-160-ISO-N6-EP	\$2183.	OP-160-ISO-N6-M	\$1940.
	OP-160-ISO-N8-EP	\$2183.	OP-160-ISO-N8-M	\$1940.
<b>200 mm</b>	OP-200-ISO-N1-EP	\$3354.	OP-200-ISO-N1-M	\$3090.
	OP-200-ISO-N5-EP	\$3616.	OP-200-ISO-N5-M	\$3354.
	OP-200-ISO-N6-EP	\$3484.	OP-200-ISO-N6-M	\$3222.
	OP-200-ISO-N8-EP	\$3484.	OP-200-ISO-N8-M	\$3222.
<b>250 mm</b>	OP-250-ISO-N1-EP	\$4124.	OP-250-ISO-N1-M	\$3822.
	OP-250-ISO-N5-EP	\$4451.	OP-250-ISO-N5-M	\$4148.
	OP-250-ISO-N6-EP	\$4286.	OP-250-ISO-N6-M	\$3984.
	OP-250-ISO-N8-EP	\$4286.	OP-250-ISO-N8-M	\$3984.
<b>320 mm</b>	OP-320-ISO-N1-EP	\$5122.	OP-320-ISO-N1-M	\$4854.
	OP-320-ISO-N5-EP	\$5437.	OP-320-ISO-N5-M	\$5179.
	OP-320-ISO-N6-EP	\$5267.	OP-320-ISO-N6-M	\$5009.
	OP-320-ISO-N8-EP	\$5267.	OP-320-ISO-N8-M	\$5009.

# One Piece Aluminum Gate Valves; ISO Flanges

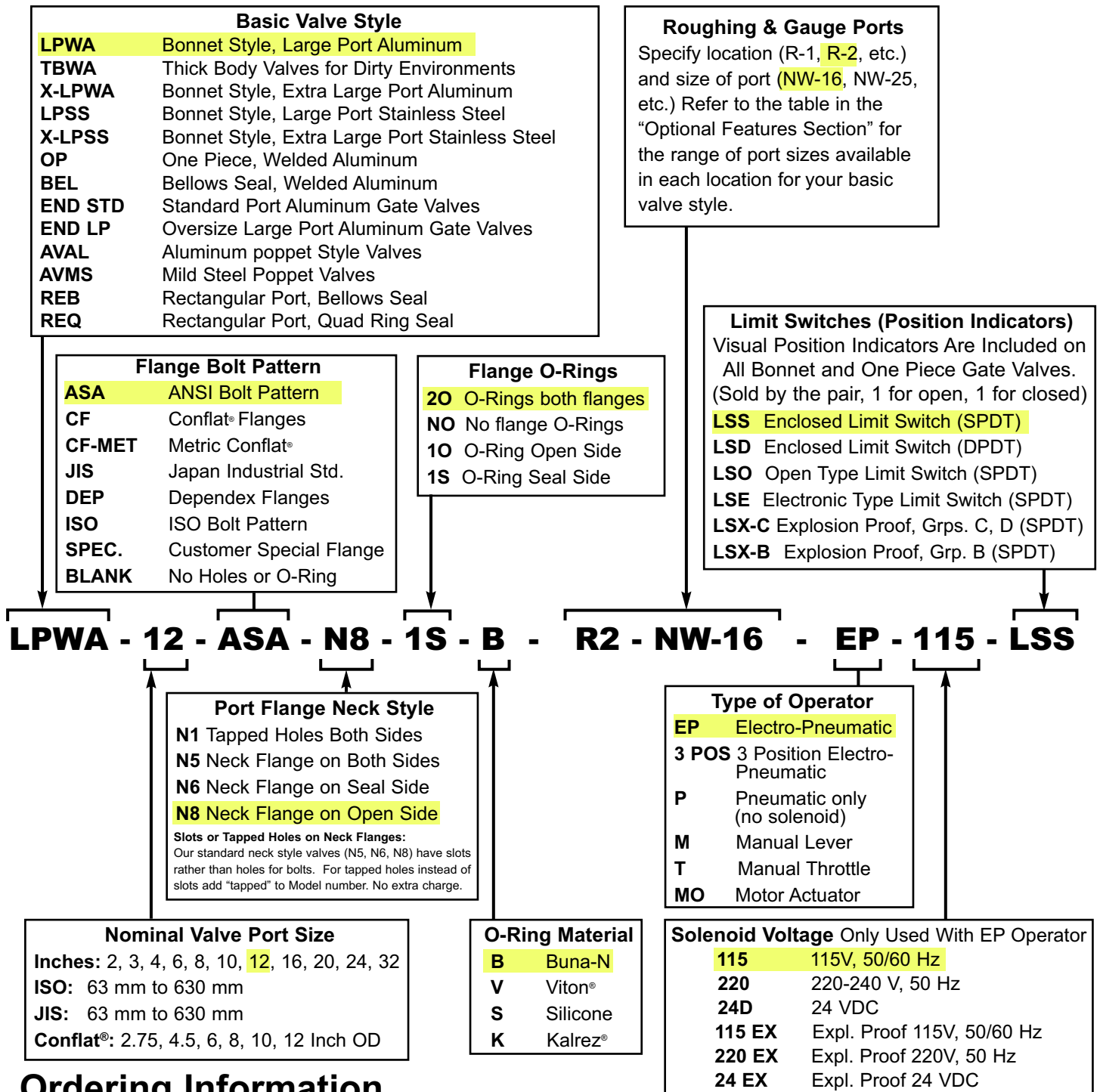


Note: All dimensions in millimeters. Roughing ports and position indicator limit switches optional. Centering rings not included.  
 The gate seal O-ring is on the actuator side (to left) in aluminum valve sizes through 200 mm. The gate seal is on the side opposite the actuator on 250 & 320 mm aluminum and stainless steel valves.

ISO Port Size	Model No. ISO Flange	Port Dia.	Flange O.D.	Bolt Circle	(number of bolts) size - pitch	A Flange to Flange	BMAN Manual Overall Height	BEP EP Overall Height	CEP Port CL to Top of Valve	DMAN Manual Overall Width	DEP EP Overall Width	EMAN Manual	EEP EP	F Disassy. Clearance	Weight kgs.	
															Net	Ship
63 mm	OP 63 N1, both sides ISO-f	70	130	110	(4) M 8 - 1.25	70	238	270	205	100	175	45	60	67	8	13
	OP 63 N5, both sides ISO-k	70	95	110	no bolts, ISO-k	105	238	270	205	100	175	45	60	67	8	13
	OP 63 N6 & N8, ISO-f & ISO-k	70	130/95	110	(4) M 8 - 1.25	90	238	270	205	100	175	45	60	67	8	13
80 mm	OP 80 N1, both sides ISO-f	83	145	125	(8) M 8 - 1.25	95	353	385	312	254	228	52	60	67	10	15
	OP 80 N5, both sides ISO-k	83	110	125	no bolts, ISO-k	105	353	385	312	254	228	52	60	67	10	15
	OP 80 N6 & N8, ISO-f & ISO-k	83	145/110	125	(8) M 8 - 1.25	100	353	385	312	254	228	52	60	67	10	15
100 mm	OP 100 N1, both sides ISO-f	102	165	145	(8) M 8 - 1.25	95	362	394	312	254	228	52	60	100	10	15
	OP 100 N5, both sides ISO-k	102	130	145	no bolts, ISO-k	105	362	394	312	254	228	52	60	100	10	15
	OP 100 N6 & N8, ISO-f & ISO-k	102	165/130	145	(8) M 8 - 1.25	100	362	394	312	254	228	52	60	100	10	15
160 mm	OP 160 N1, both sides ISO-f	153	225	200	(8) M 10 - 1.5	105	513	544	432	406	257	57	89	114	14	21
	OP 160 N5, both sides ISO-k	153	180	200	no bolts, ISO-k	143	513	544	432	406	257	57	89	114	14	21
	OP 160 N6 & N8, ISO-f & ISO-k	153	225/180	200	(8) M 10 - 1.5	127	513	544	432	406	257	57	89	114	14	21
200 mm	OP 200 N1, both sides ISO-f	213	285	260	(12) M 10 - 1.5	111	629	660	518	406	318	67	86	140	25	30
	OP 200 N5, both sides ISO-k	213	240	260	no bolts, ISO-k	155	629	660	518	406	318	67	86	140	25	30
	OP 200 N6 & N8, ISO-f & ISO-k	213	285/240	260	(12) M 10 - 1.5	127	629	660	518	406	318	67	86	140	25	30
250 mm	OP 250 N1, both sides ISO-f	261	335	310	(12) M 10 - 1.5	117	738	770	602	533	458	50	79	121	50	59
	OP 250 N5, both sides ISO-k	261	290	310	no bolts, ISO-k	219	738	770	602	533	458	50	79	121	50	59
	OP 250 N6 & N8, ISO-f & ISO-k	261	335/290	310	(12) M 10 - 1.5	168	738	770	602	533	458	50	79	121	50	59
320 mm	OP 320 N1, both sides ISO-f	318	425	395	(12) M 12 - 1.75	117	783	815	602	533	458	50	79	121	58	68
	OP 320 N5, both sides ISO-k	318	370	395	no bolts, ISO-k	219	783	815	602	533	458	50	79	121	58	68
	OP 320 N6 & N8, ISO-f & ISO-k	318	425/370	395	(12) M 12 - 1.75	168	783	815	602	533	458	50	79	121	58	68



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 (RoHS) 2002/95/EC Compliant.



## 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, 2419 Smallman Street, Pittsburgh, PA 15222 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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