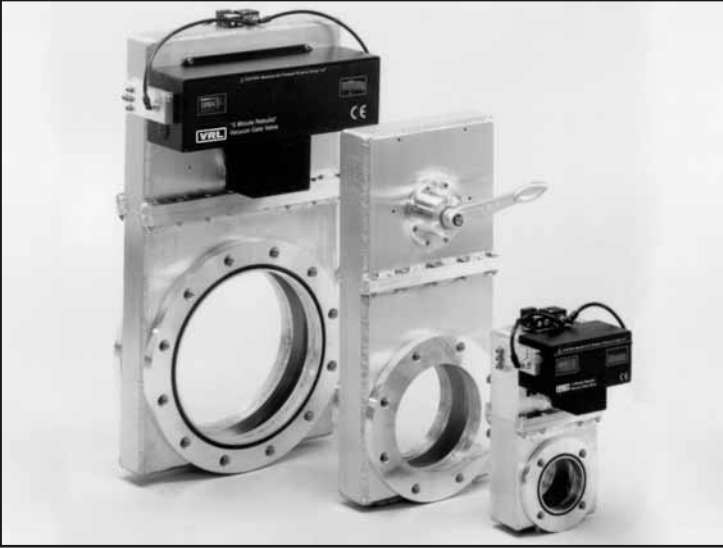


**VACUUM
RESEARCH**™

Stainless and Aluminum Gate Valves



Aluminum valves with (left to right): Electro Pneumatic, Manual, and Motor Actuators. Stainless Steel valves also available.

ANSI, ISO, JIS, or Special Flanges

These Vacuum Research 5 minute rebuild valves are available with virtually any flange or combination of flanges at no extra charge. Combinations of ISO on one flange and ANSI on the other are easily accommodated. Even different sizes such as 4 inch on one flange and 6 inch on the other.

Insertable "Flangeless" Valves

It is sometimes helpful to keep the flange to flange dimension ("A" dimension on the dimensions pages) as short as possible. In such cases your valves can be provided with no port flanges at all and with either O-Ring grooves machined into the valve body or with a precision machined surface on the body to seal against the O-rings on your pump or chamber. Contact the factory for prices.

Aluminum or Stainless Steel

Vacuum Research Bonnet Style valves are available in stainless steel or 6061 aluminum. Smooth surface finish gives low outgassing and fast pump down.

High Conductance

In addition to the oversize ports used in the LPWA Series for the last 40 years, we now offer the X-LPWA Series where a 4 inch valve has a 6 inch port, an 8 inch valve has a 10 inch port, etc. Conductance values are shown on page 43.

Fail Safe

All Vacuum Research Valves can be installed for fast close on power failure and air operated valves can be manually positioned without air or electricity.

Long Life

More than 250,000 cycles for aluminum valves. That's one cycle every 2 minutes, 24 hours/day for a year. An optional million cycle design is available.

Satisfaction Guaranteed

Vacuum Research has been building high vacuum valves for almost 50 years and has earned a reputation for world class product quality and customer service. If you are not satisfied with our valve just send it back.

Fast Repair

In under 5 minutes you can replace every moving part in a Vacuum Research Bonnet Style valve with no special tools or training. The valve port stays in your system to support the pump and vacuum lines.

Vacuum & Pressure

Vacuum Research Valves stay sealed against positive pressure in either direction.

No Leaks

All Vacuum Research valves have total leak rates of less than 5×10^{-10} std cc/sec. By total leak we mean that each completed valve is tested in a He filled bag.

RoHS Compliant

All Valves (RoHS) 2002/95/EC Compliant.

Electric Motor, Air or Manual Actuators

All Vacuum Research gate valves are available with 3 types of actuators. Manual actuators are the least expensive. Electro-pneumatic actuators use 70 psi (4.9 kg/cm) compressed air and include the solenoid (specify the solenoid voltage that is most convenient for you). Electric motor actuators use high torque servo motors and operate from 115V or 230V, 1Ø 50 or 60 Hz. CE Mark included.

Roughing and Gauge Ports

There are six locations for optional gauge and roughing ports described on page 44.

Position Indicators, Limit Switches

Visual position indication of valve position is included on all valves. Limit switches for remote indication are described on the Optional Features pages in the Accessories & Parts section.

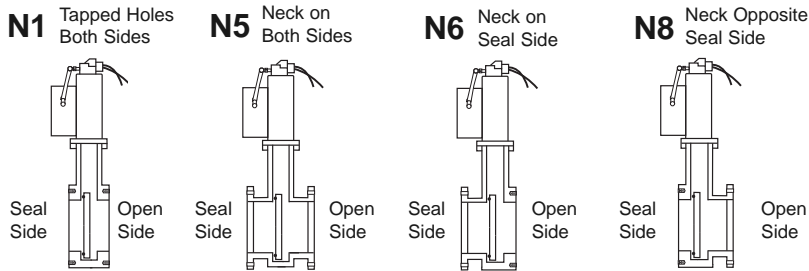
Complete Rebuild

in 5 Minutes!

With no special tools or training you can replace every moving part in your Vacuum Research Bonnet Style Valve in 5 minutes. (Our best guys can do it in less time, but they practice.)



Aluminum or Stainless Steel, ANSI Flanges, Bonnet Style



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 & 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.)

2 or 3 in. valves	\$50.	8 inch valves	\$150.
4 inch valves	\$76.	10 inch valves	\$196.
6 inch valves	\$94.	12 inch valves	\$252.

On **stainless steel valves** the gate seal is on the side opposite the actuator for 2, 10, and 12 inch valves. On **aluminum valves** the gate seal O-ring is on the actuator side (to left) in sizes through 8 inch and the gate seal is on the side opposite the actuator on 10, 12, & 16 inch valves.
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.
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 the "Optional Features and Accessories" page in this catalog for pricing information

ANSI Gate Valves

Nominal Size	Electro-Pneumatic Operator "EP" Suffix				Manual Operator "M" Suffix			
	Aluminum Model & Neck Style		Stainless Steel Model & Neck Style		Aluminum Model & Neck Style		Stainless Steel Model & Neck Style	
		Price		Price		Price		Price
2 inch ANSI (ASA) (3.375" Port)	LPWA-2-ANSI-N1-EP	\$1399.	LPSS-2-ANSI-N1-EP	\$2405.	LPWA-2-ANSI-N1-M	\$1235.	LPSS-2-ANSI-N1-M	\$2014.
	LPWA-2-ANSI-N5-EP	\$1569.	LPSS-2-ANSI-N5-EP	\$2687.	LPWA-2-ANSI-N5-M	\$1406.	LPSS-2-ANSI-N5-M	\$2297.
	LPWA-2-ANSI-N6-EP	\$1446.	LPSS-2-ANSI-N6-EP	\$2565.	LPWA-2-ANSI-N6-M	\$1282.	LPSS-2-ANSI-N6-M	\$2175.
	LPWA-2-ANSI-N8-EP	\$1446.	LPSS-2-ANSI-N8-EP	\$2565.	LPWA-2-ANSI-N8-M	\$1282.	LPSS-2-ANSI-N8-M	\$2175.
(4" Port)	X-LPWA same price as LPWA		X-LPSS same price as LPSS		X-LPWA same price as LPWA		X-LPSS same price as LPSS	
3 inch ANSI (ASA) (3.375" Port)	LPWA-3-ANSI-N1-EP	\$1576.	LPSS-3-ANSI-N1-EP	\$3049.	LPWA-3-ANSI-N1-M	\$1413	LPSS-3-ANSI-N1-M	\$2579.
	LPWA-3-ANSI-N5-EP	\$1675.	LPSS-3-ANSI-N5-EP	\$3379.	LPWA-3-ANSI-N5-M	\$1561.	LPSS-3-ANSI-N5-M	\$2906.
	LPWA-3-ANSI-N6-EP	\$1637.	LPSS-3-ANSI-N6-EP	\$3210.	LPWA-3-ANSI-N6-M	\$1476.	LPSS-3-ANSI-N6-M	\$2739.
	LPWA-3-ANSI-N8-EP	\$1637.	LPSS-3-ANSI-N8-EP	\$3210.	LPWA-3-ANSI-N8-M	\$1476.	LPSS-3-ANSI-N8-M	\$3142.
(4" Port)	X-LPWA same price as LPWA		X-LPSS same price as LPSS		X-LPWA same price as LPWA		X-LPSS same price as LPSS	
4 inch ANSI (ASA) (5 3/8" Port)	LPWA-4-ANSI-N1-EP	\$1679.	LPSS-4-ANSI-N1-EP	\$3546.	LPWA-4-ANSI-N1-M	\$1505.	LPSS-4-ANSI-N1-M	\$3142.
	LPWA-4-ANSI-N5-EP	\$1915.	LPSS-4-ANSI-N5-EP	\$3869.	LPWA-4-ANSI-N5-M	\$1741.	LPSS-4-ANSI-N5-M	\$3454.
	LPWA-4-ANSI-N6-EP	\$1822.	LPSS-4-ANSI-N6-EP	\$3787.	LPWA-4-ANSI-N6-M	\$1648.	LPSS-4-ANSI-N6-M	\$3384.
	LPWA-4-ANSI-N8-EP	\$1822.	LPSS-4-ANSI-N8-EP	\$3787.	LPWA-4-ANSI-N8-M	\$1648.	LPSS-4-ANSI-N8-M	\$3384.
(6" Port)	X-LPWA same price as LPWA		X-LPSS same price as LPSS		X-LPWA same price as LPWA		X-LPSS same price as LPSS	
6 inch ANSI (ASA) (7.125" Port)	LPWA-6-ANSI-N1-EP	\$1939.	LPSS-6-ANSI-N1-EP	\$4295.	LPWA-6-ANSI-N1-M	\$1710.	LPSS-6-ANSI-N1-M	\$3948.
	LPWA-6-ANSI-N5-EP	\$2225.	LPSS-6-ANSI-N5-EP	\$4714.	LPWA-6-ANSI-N5-M	\$1994.	LPSS-6-ANSI-N5-M	\$4271.
	LPWA-6-ANSI-N6-EP	\$2058.	LPSS-6-ANSI-N6-EP	\$4616.	LPWA-6-ANSI-N6-M	\$1828.	LPSS-6-ANSI-N6-M	\$4190.
	LPWA-6-ANSI-N8-EP	\$2058.	LPSS-6-ANSI-N8-EP	\$4616.	LPWA-6-ANSI-N8-M	\$1828.	LPSS-6-ANSI-N8-M	\$4190.
(8" Port)	X-LPWA same price as LPWA		X-LPSS same price as LPSS		X-LPWA same price as LPWA		X-LPSS same price as LPSS	
8 inch ANSI (ASA) (8" Port)	LPWA-8-ANSI-N1-EP	\$3161.	LPSS-8-ANSI-N1-EP	\$4714.	LPWA-8-ANSI-N1-M	\$2913.	LPSS-8-ANSI-N1-M	\$4196.
	LPWA-8-ANSI-N5-EP	\$3409.	LPSS-8-ANSI-N5-EP	\$5036.	LPWA-8-ANSI-N5-M	\$3161.	LPSS-8-ANSI-N5-M	\$4513.
	LPWA-8-ANSI-N6-EP	\$3285.	LPSS-8-ANSI-N6-EP	\$4956.	LPWA-8-ANSI-N6-M	\$3037.	LPSS-8-ANSI-N6-M	\$4432.
	LPWA-8-ANSI-N8-EP	\$3285.	LPSS-8-ANSI-N8-EP	\$4956.	LPWA-8-ANSI-N8-M	\$3037.	LPSS-8-ANSI-N8-M	\$4432.
(10" Port)	X-LPWA same price as LPWA		X-LPSS same price as LPSS		X-LPWA same price as LPWA		X-LPSS same price as LPSS	
10 inch ANSI (ASA) (11.625" Port)	LPWA-10-ANSI-N1-EP	\$3887.	LPSS-10-ANSI-N1-EP	\$6970.	LPWA-10-ANSI-N1-M	\$3602.	LPSS-10-ANSI-N1-M	\$6101.
	LPWA-10-ANSI-N5-EP	\$4196.	LPSS-10-ANSI-N5-EP	\$7565.	LPWA-10-ANSI-N5-M	\$3910.	LPSS-10-ANSI-N5-M	\$6696.
	LPWA-10-ANSI-N6-EP	\$4041.	LPSS-10-ANSI-N6-EP	\$7343.	LPWA-10-ANSI-N6-M	\$3756.	LPSS-10-ANSI-N6-M	\$6472.
	LPWA-10-ANSI-N8-EP	\$4041.	LPSS-10-ANSI-N8-EP	\$7343.	LPWA-10-ANSI-N8-M	\$3756.	LPSS-10-ANSI-N8-M	\$6472.
(12" Port)	X-LPWA same price as LPWA		X-LPSS same price as LPSS		X-LPWA same price as LPWA		X-LPSS same price as LPSS	
12 inch ANSI (ASA) (12" Port)	LPWA-12-ANSI-N1-EP	\$4829.	LPSS-12-ANSI-N1-EP	\$9202.	LPWA-12-ANSI-N1-M	\$4544.	LPSS-12-ANSI-N1-M	\$8332.
	LPWA-12-ANSI-N5-EP	\$5126.	LPSS-12-ANSI-N5-EP	\$9755.	LPWA-12-ANSI-N5-M	\$4840.	LPSS-12-ANSI-N5-M	\$9077.
	LPWA-12-ANSI-N6-EP	\$4965.	LPSS-12-ANSI-N6-EP	\$9648.	LPWA-12-ANSI-N6-M	\$4680.	LPSS-12-ANSI-N6-M	\$8928.
	LPWA-12-ANSI-N8-EP	\$4965.	LPSS-12-ANSI-N8-EP	\$9648.	LPWA-12-ANSI-N8-M	\$4680.	LPSS-12-ANSI-N8-M	\$8928.
16 inch ANSI (ASA) (16" Port)	LPWA-16-ANSI-N1-EP	\$9237.	LPSS-16-ANSI-N1-EP	\$16979.	LPWA-16-ANSI-N1-M	\$8618.	LPSS-16-ANSI-N1-M	\$16979.
	Contact factory for prices of 16 inch valves with N5, N6, and N8 neck styles							

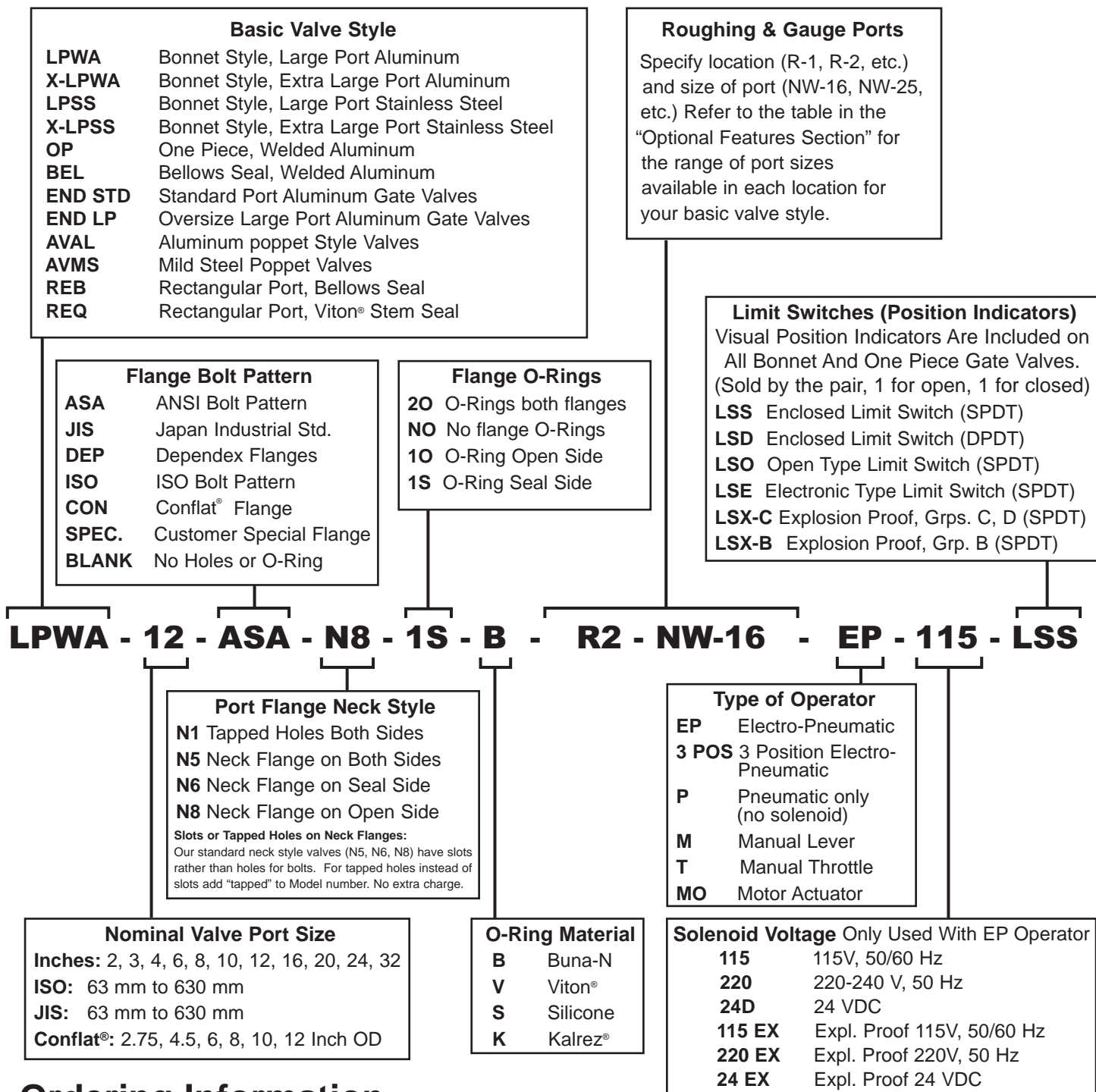


Model Numbering System

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 (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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