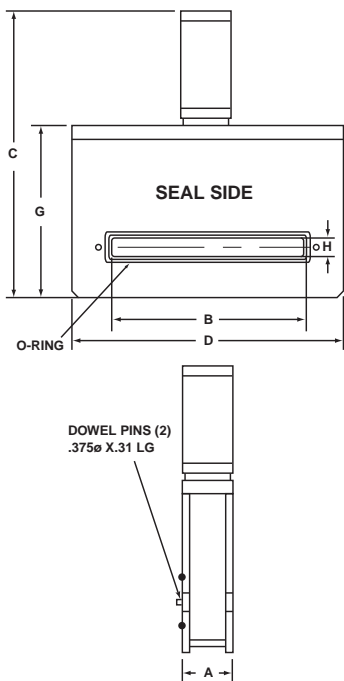


- Less Outgassing Than Stainless, See Page 39
- Choose Full Throttle Control or Open/Close
- Motorized Soft Open and Close Available
- Closing Speeds as Fast as 75 mSec. Available
- Aluminum, Steel or Stainless Steel
- Standard Quad Ring Shaft Seal or Bellows
- Leak Tested to Better Than  $5 \times 10^{-10}$  scc/sec
- All Valves (RoHS) 2002/95/EC Compliant
- Port Sizes to Fit Any Wafer or Solar Substrate
- Bolt Pattern to Match Your Tool or Chamber
- Select Automatic Close or Open on Power Fail
- Available with Viton®, Buna-N or Kalrez® Seals
- NW Style Gauge & Roughing Ports on Any Side



**Electronic Position Indicators:** Two reed switches activated by a magnet inside the pneumatic actuator provide contact closure for open and closed position. See page 40 for specifications. . . . . \$156. /pair

**Gauge and Roughing Ports:** See page 42 for specifications and ordering information.

Model Number Bellows Seal - REB Quad Ring Seal - REQ	Port Size	Body Thickness	Overall Height	Body Width	Body Height	Price with Bellows (REB)	Price with Shaft Seal (REQ)
	H X B	A	C	D	G		
REB-1 X 6.3 REQ-1 X 6.3	1 X 6.30 in. (25 X 160 mm)	2.75 in. (70 mm)	16.375 in. (416 mm)	10.75 in. (273 mm)	9.5 in. (241 mm)	\$4117.	\$3584.
REB-1 X 8.3 REQ-1 X 8.3	1 X 8.30 in. (25 X 211 mm)	2.75 in. (70 mm)	16.375 in. (416 mm)	12.75 in. (324 mm)	9.5 in. (241 mm)	\$4575.	\$4004.
REB-1 X 10.4 REQ-1 X 10.4	1 X 10.40 in. (25 X 264 mm)	2.75 in. (70 mm)	16.375 in. (416 mm)	15 in. (381 mm)	9.5 in. (241 mm)	\$4871.	\$4575.
REB-1.25 X 8.75 REQ-1.25 X 8.75	1.25 X 8.75 in. (32 X 222 mm)	2.75 in. (70 mm)	16.375 in. (416 mm)	14 in. (356 mm)	9.5 in. (241 mm)	\$5102.	\$4431.
REB-1.81 X 9.3 REQ-1.81 X 9.3	1.81 X 9.30 in. (46 X 236 mm)	3.375 in. (86 mm)	16.53 in. (420 mm)	14.375 in. (406 mm)	9.53 in. (242 mm)	\$5255.	\$4575.
REB-1.8 X 13.2 REQ-1.8 X 13.2	1.81 X 13.20 in. (46 X 335 mm)	3.375 in. (86 mm)	16.53 in. (420 mm)	16 in. (406 mm)	9.53 in. (242 mm)	\$9340.	\$8724.
REB-2 X 16 REQ-2 X 16	2 X 16 in. (50 X 406 mm)	4.625 in. (117 mm)	22.06 in. (560 mm)	21 in. (533 mm)	11.56 in. (294 mm)	Contact Factory	Contact Factory
REB-2 X 27 REQ-2 X 27	2 X 27 in. (51 X 686 mm)	7 in. (178 mm)	36 in. (914 mm)	32 in. (813 mm)	245 in. (610 mm)	Contact Factory	Contact Factory
REB-3 X 16 REQ-3 X 16	3 X 16 in. (76 X 406 mm)	6.5 in. (165 mm)	37 in. (940 mm)	20 in. (508 mm)	25 in. (635 mm)	Contact Factory	Contact Factory
REB-3 X 30 REQ-3 X 30	3 X 30 in. (75 X 762 mm)	5.5 in. (139.7 mm)	35.13 in. (892 mm)	36 in. (914 mm)	21.75 in. (552 mm)	Contact Factory	Contact Factory
REB-3 X 43 REQ-3 X 43	3 X 43 in. (75 X 1100 mm)	5.56 in. (141 mm)	33.25 in. (845 mm)	51 in. (1297 mm)	20 in. (508 mm)	Contact Factory	Contact Factory
REB-4 X 20 REQ-4 X 20	4 X 20 in. (100 X 508 mm)	5.5 in. (139.7 mm)	35.13 in. (892 mm)	26 in. (660 mm)	21.75 in. (552 mm)	Contact Factory	Contact Factory
REB-4 X 24 REQ-4 X 24	4 X 24 in. (100 X 609 mm)	5.5 in. (139.7 mm)	37.0 in. (940 mm)	30 in. (762 mm)	21.75 in. (552 mm)	Contact Factory	Contact Factory
REB-4 X 27 REQ-4 X 27	4 X 27 in. (100 X 686 mm)	7 in. (178 mm)	39 in. (990 mm)	32 in. (813 mm)	27 in. (686 mm)	Contact Factory	Contact Factory
REB-5 X 27 REQ-5 X 27	5 X 27 in. (127 X 686 mm)	7 in. (178 mm)	39 in. (990 mm)	32 in. (813 mm)	27 in. (686 mm)	Contact Factory	Contact Factory
REB-15 X 27 REQ-15 X 27	15 X 27 in. (381 X 686 mm)	7 in. (178 mm)	67.8 in. (1722 mm)	32 in. (813 mm)	44 in. (1118 mm)	Contact Factory	Contact Factory
REB-15 X 33.5 REQ-15 X 33.5	15 X 33.5 in. (380 X 850 mm)	5.56 in. (141 mm)	49 in. (1245 mm)	40.75 in. (1035 mm)	N/A	Contact Factory	Contact Factory
REB-22 X 24 REQ-22 X 24	22 X 24 in. (560 X 610 mm)	7.7 in. (195 mm)	92 in. (2337 mm)	31 in. (787 mm)	61.25 in. (1556 mm)	Contact Factory	Contact Factory
REB-24 X 35 REQ-24 X 35	4 X 55 in. (100 X 1400 mm)	9.06 in. (230 mm)	101 in. (2565 mm)	42.5 in. (1080 mm)	66.125 in. (1680 mm)	Contact Factory	Contact Factory



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

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

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

### Flange Bolt Pattern

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

### Flange O-Rings

<b>2O</b>	O-Rings both flanges
<b>NO</b>	No flange O-Rings
<b>1O</b>	O-Ring Open Side
<b>1S</b>	O-Ring Seal Side

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

### Port Flange Neck Style

<b>N1</b>	Tapped Holes Both Sides
<b>N5</b>	Neck Flange on Both Sides
<b>N6</b>	Neck Flange on Seal Side
<b>N8</b>	Neck Flange on Open Side
<b>TAP</b>	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

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

### Nominal Valve Port Size

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

### O-Ring Material

<b>B</b>	Buna-N
<b>V</b>	Viton®
<b>S</b>	Silicone
<b>K</b>	Kalrez®
<b>C</b>	Chemraz®

### Solenoid Voltage Only Used With EP Operator

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