



This precision 3 position system is available on Gate, Poppet and Rectangular Port Valves

- **Less Outgassing Than S.S., See Page 39**
- **Eliminates All Conductance Controllers**
- **For Any Sputter or Plasma Etch System**
- **Available on Gate and Poppet Style Valves**
- **All Sizes From 2 to 24 Inch, ISO 63 to 600**
- **Electropneumatic, Uses Standard Shop Air**
- **Specify Any Voltage, 115 or 230 VAC, 24 VDC**
- **Repeats Position to $\pm .015$ Inch, 0.4 mm**
- **Adjust Throttle At Vacuum or Atmosphere**

The Vacuum Research 3 Position Valve System was developed for use on sputter, plasma etch and other vacuum systems where it is desirable to reduce pumping speed to conserve gas and simplify pressure control. By utilizing the high vacuum valve for throttling the cost and maintenance of mechanical conductance controllers is completely eliminated. Even in the full open position all conductance controllers restrict pumping speed and this restriction can now be eliminated.

This precision 3 position system can be provided on Vacuum Research Poppet Valves, Rectangular Port Valves and Gate Valves with end-operated linear actuators. It is suitable for valves with port sizes from 2 inch to 24 inch, ISO-63 to ISO-600. The system can be provided on either aluminum or stainless steel valves.

The "3 POS" system consists of position indicators for full open and full closed plus a third position indicator for the throttle position. This throttle position indicator may be adjusted with a screw driver without any valve disassembly and with the valve either open or closed.

Ordering Information

To order this feature on a Vacuum Research Valve, add the suffix "3 POS" to the valve model number, and specify solenoid voltage of 115 V, 50/60 Hz; 230 V, 50 Hz or 24 VDC. Air pressure required is 70 PSI (5 kg/cm²)

Add to Valve Price\$423.

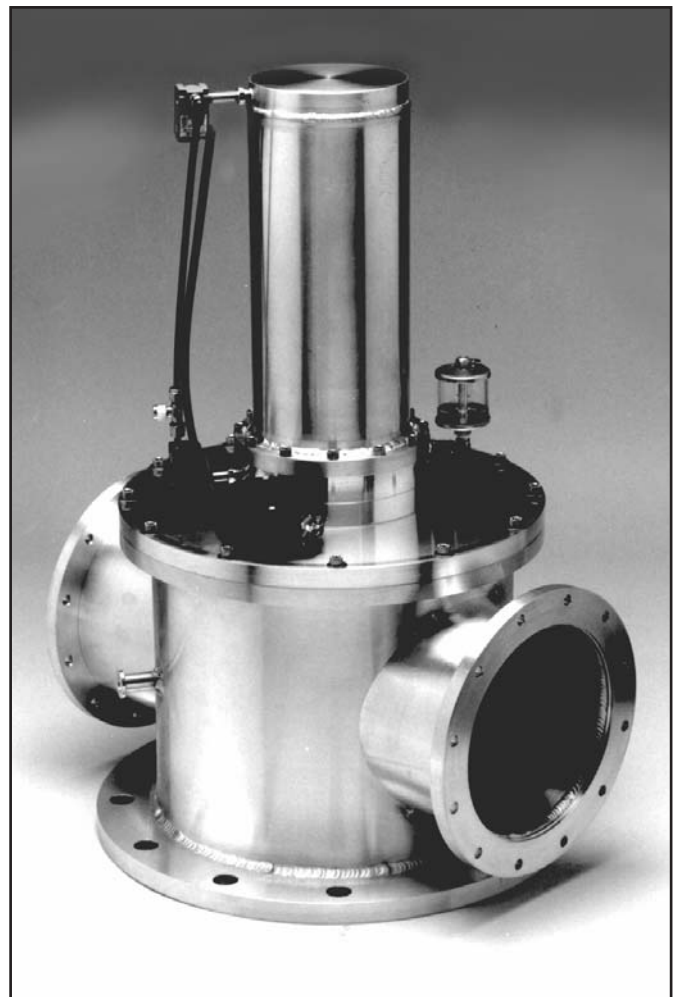


Photo shows a typical installation of the Vacuum Research "3 POS" Throttle System on a large poppet valve. Output signals to the vacuum system PLC or controller are available on a terminal strip in the black junction box. (Optional shaft seal oiler also shown.)



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

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

LPWA - 12 - ASA - N8 - 20 - 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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