

- 250,000 Cycle Rotary Shaft Seal
- Million Cycle Valves Also Available
- All Welded 6061 Aluminum Body
- All Valves (RoHS) 2002/95/EC Compliant
- Low Temperature Bake Out, 200 °C
- Uses Standard ISO Centering Rings
- He Leak Less Than 5 X 10⁻¹⁰ scc/sec
- Operate Manually If Air or Power Fail
- Fail Safe Design, Close On Power Loss

The old Vacuum Research "T" Valves were in production from approximately 1955 to 1980, and many are still in service. These valves were available with "T1" and "T2" flanges, and various combinations of "T1" and "T2" with necks on either or both sides.

- T1 flanges are 150 lb. ANSI with standard ports; not "large ports." That is, the 2" flange had a 2" port diameter. The 6" flange had a 6" port diameter, etc.
- T2 flanges also had standard port sizes, i.e. 2" port in 2" flange, but the T2 flanges had a smaller outside diameter, smaller bolts, smaller bolt circle, and smaller diameter flange O-rings. T2 flanges were offered in sizes from 1 inch to 6 inch.

Although out of production for 20 years and no longer supported with spare parts, we can, however, provide direct replacement valves with identical bolt circle, O-ring and flange 'A' dimension.

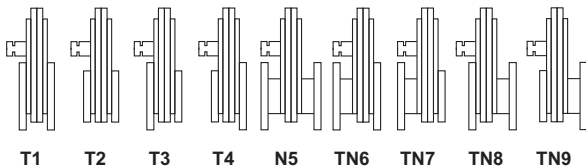
Other dimensions such as overall height and actuator size may be different, so please review the drawing carefully to make sure there are no interferences.

Some T1 and T2 valves were built with plain and special flanges, so you must be certain of which flanges need O-rings, the bolt size and bolt circle. For electro-pneumatic valves, be sure to verify the solenoid voltage. Since these replacement valves will be custom made to your order, they may not be returned for credit for any reason. Of course, they have our usual warranty and will be repaired for no charge if defective in any way.



Original Cast Aluminum "T" Style Valve with manual Actuator

Ordering Information



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

Roughing And Gauge Ports

NW-16 to NW-50 ports can be added to the valve body in a variety of locations to provide easy connections for gauge tubes or roughing lines. Refer to the Roughing and Gauge ports page in the Accessories and Parts section of this catalog for details and prices.

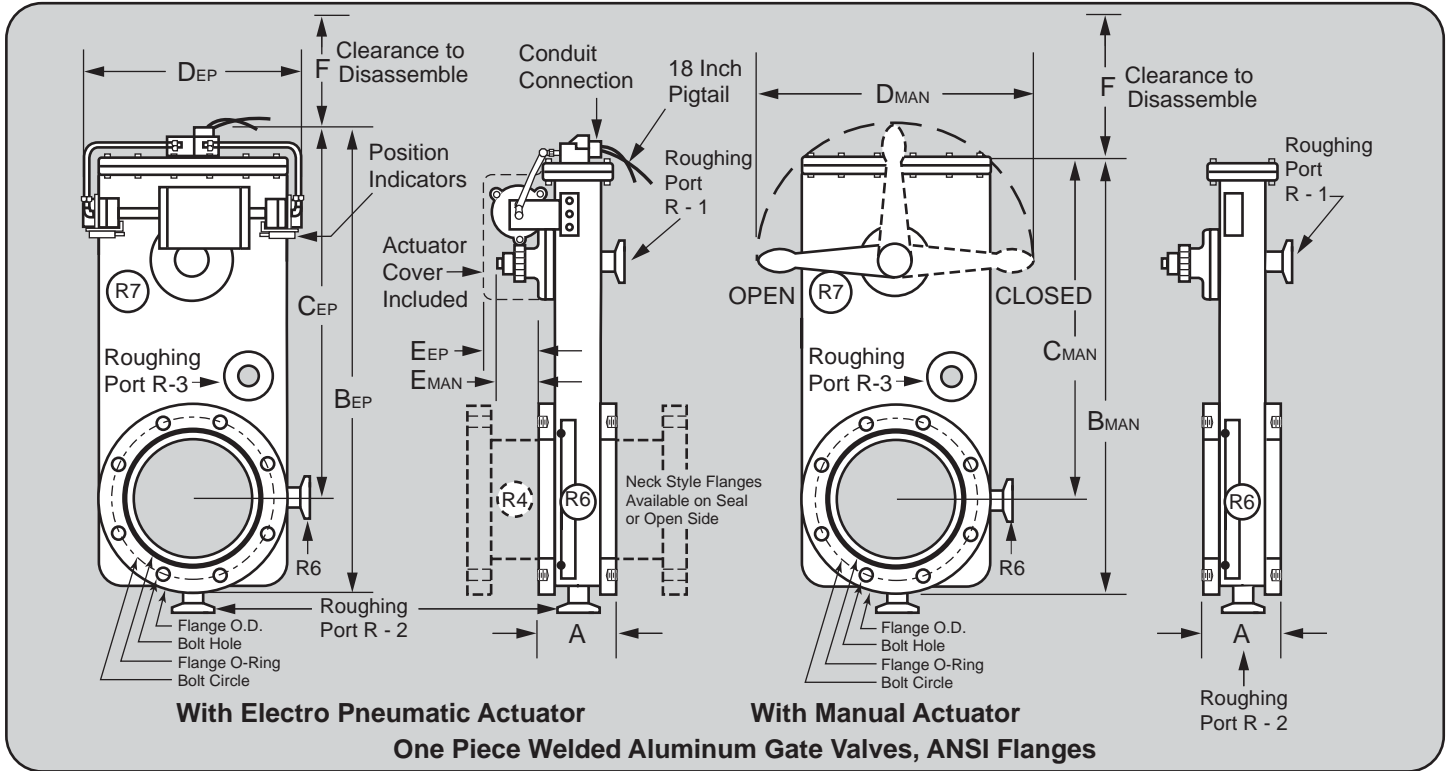
Position Indicators

Remote indication of valve position is provided by these SPST and SPDT limit switches. Refer to the Optional Features pages in the Accessories and Parts section of this catalog for details and prices.

Port Flange O-Rings and Bolt Circle

The standard configuration for replacement 'T' Style valves is O-Rings on both flanges and the bolt circle straddling the vertical centerline. No charge for other configurations.

With Electro-Pneumatic Operator "EP" Suffix			With Manual Operator "M" Suffix	
Port Diam.	Model No.	Price	Model No.	Price
2 Inch	OP-2-N1-T1-EP	\$1464.	OP-2-N1-T1-M	\$1302.
	OP-2-N1-T2-EP	\$1627.	OP-2-N1-T2-M	\$1302.
	OP-2-N5-T1-EP	\$1552.	OP-2-N5-T1-M	\$1462.
3 Inch	OP-3-N1-T1-EP	\$1651.	OP-3-N1-T1-M	\$1487.
	OP-3-N1-T2-EP	\$1812.	OP-3-N1-T2-M	\$1487.
	OP-3-N5-T1-EP	\$1738.	OP-3-N5-T1-M	\$1646.
4 Inch	OP-4-N1-T1-EP	\$1822.	OP-4-N1-T1-M	\$1646.
	OP-4-N1-T2-EP	\$1977.	OP-4-N1-T2-M	\$1646.
	OP-4-N5-T1-EP	\$1895.	OP-4-N5-T1-M	\$1803.
6 Inch	OP-6-N1-T1-EP	\$2435.	OP-6-N1-T1-M	\$2219.
	OP-6-N1-T2-EP	\$2628.	OP-6-N1-T2-M	\$2219.
	OP-6-N5-T1-EP	\$2547.	OP-6-N5-T1-M	\$2411.
8 Inch	OP-8-N1-T1-EP	\$3161.	OP-8-N1-T1-M	\$2938.
	OP-8-N5-T2-EP	\$3257.	OP-8-N5-T2-M	\$3020.
10 Inch	OP-10-N1-T1-EP	\$4011.	OP-10-N1-T1-M	\$3725.
	OP-10-N5-T2-EP	\$4011.	OP-10-N5-T2-M	\$3931.
12 Inch	OP-12-N1-T1-EP	\$4953.	OP-12-N1-T1-M	\$5088.
	OP-12-N5-T2-EP	\$4953.	OP-12-N5-T2-M	\$5248.



Note: All dimensions in inches. Roughing ports and position indicator limit switches optional. Bolt holes straddle vertical centerline. O-Rings on both flanges is standard. Flanges also available without O-Rings.

These dimensions are identical to the original 'T' Style Valves								These dimensions may be different than 'T' Style									
Nominal ANSI Size	Model No. ANSI Flange	Port Diameter	Flange O.D.	Flange O-Rings Inside Diameter	Bolt Circle	(no. of bolts) x bolt size	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 (lbs)	
																Net	Ship
2 inch	OP 2 N1-T1	2	6	2 3/4	4 3/4	(4) 5/8-11	3 1/4	12 5/8	14 5/8	11 5/8	10	7 3/8	3 15/16	4 3/8	7 1/2	13	20
2 inch	OP 2 N1-T2	2	4 3/4	2 1/4	3 5/16	(6) 1/4-20	3 1/4	12 5/8	14 5/8	11 5/8	10	7 3/8	3 15/16	4 3/8	7 1/2	13	20
2 inch	OP 2 N5-T1	2	6	2 3/4	4 3/4	(4) Slotted	5 1/2	12 5/8	14 5/8	11 5/8	10	7 3/8	3 15/16	4 3/8	7 1/2	13	20
3 inch	OP 3 N1-T1	3	7 1/2	4	6	(4) 5/8-11	3 5/16	13 3/8	15 3/8	11 5/8	10	7 3/8	3 15/16	4 3/8	7 1/2	15	22
3 inch	OP 3 N1-T2	3	6	3 1/2	4 3/4	(6) 3/8-16	3 5/16	13 3/8	15 3/8	11 5/8	10	7 3/8	3 15/16	4 3/8	7 1/2	15	22
3 inch	OP 3 N5-T1	3	7 1/2	4	6	(4) Slotted	5 7/8	13 3/8	15 3/8	11 5/8	10	7 3/8	3 15/16	4 3/8	7 1/2	15	22
4 inch	OP 4 N1-T1	4	9	5 1/4	7 1/2	(8) 5/8-11	3 3/4	14 1/2	16 1/2	12 1/2	16	7 3/8	4 5/16	5 9/16	11 1/2	31	45
4 inch	OP 4 N1-T2	4	7 1/4	4 1/4	5 1/4	(6) 3/8-16	3 3/4	14 1/2	16 1/2	12 1/2	16	7 3/8	4 5/16	5 9/16	11 1/2	31	45
4 inch	OP 4 N5-T1	4	9	5 1/4	7 1/2	(8) Slotted	7 3/4	14 1/2	16 1/2	12 1/2	16	7 3/8	4 5/16	5 9/16	11 1/2	31	45
6 inch	OP 6 N1-T1	6	11	7 1/4	9 1/2	(8) 3/4-10	4	20 5/16	23	14 5/8	16	10 1/2	4 7/16	5 11/16	13 1/2	49	60
6 inch	OP 6 N1-T2	6	9 1/4	6 1/2	8	(8) 3/4-16	4	20 5/16	23	14 5/8	16	10 1/2	4 7/16	5 11/16	13 1/2	49	60
6 inch	OP 6 N5-T1	6	11	7 1/4	9 1/2	(8) Slotted	7 3/4	20 5/16	23	14 5/8	16	10 1/2	4 7/16	5 11/16	13 1/2	49	60
8 inch	OP 8 N1-T1	8	13 1/2	9	11 3/4	(8) 3/4-10	6 5/8	25 9/16	28 1/4	21 1/2	16	12 3/8	4 7/16	6 5/16	13 1/2	55	66
8 inch	OP 8 N5-T1	8	13 1/2	9	11 3/4	(8) Slotted	7 7/8	25 9/16	28 1/4	21 1/2	16	12 3/8	4 7/16	6 5/16	13 1/2	55	66
10 inch	OP 10 N1-T1	10	16	11	14 1/4	(12) 7/8-9	6 5/8	30 1/8	33	25	21	16 1/2	5 15/16	3 3/8	15 1/2	109	130
10 inch	OP 10 N5-T1	10	16	11	14 1/4	(12) Slotted	8 5/8	30 1/8	33	25	21	16 1/2	5 15/16	3 3/8	15 1/2	109	130
12 inch	OP 12 N1-T1	12	19	13	17	(12) 7/8-9	6 7/8	31 5/8	34 1/2	25	21	16 1/2	5 15/16	3 3/8	15 1/2	129	150
12 inch	OP 12 N5-T1	12	19	13	17	(12) Slotted	8 5/8	31 5/8	34 1/2	25	21	16 1/2	5 15/16	3 3/8	15 1/2	129	150