

Tube Selector Valves



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SHICK
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Tube Selector Valves

INFORMATION

Shick Esteve's Tube Selector Valves are constructed for use in both vacuum and pressure pneumatic conveying applications. The TSV uses an exclusive diverting position design for effective convergence or divergence of material. The piston is raised or lowered into position, without rotation, by selectively injecting compressed air into each end of the valve housing.

This movement allows the horizontal passages, located on two separate planes within the piston, to align with the housing ports to achieve a straight-through or divert position. Shick Esteve's TSVs can handle a maximum line pressure of 50 PSI with an air supply of 80 to 100 PSI of clean, dry air without lubrication.



STANDARD FEATURES

Valve position indication: Dual limit switch confirms proof-positive valve position and eliminates possibilities of flow direction error

Innovative piston operation: Constructed of solid stock with ports bored to precise specifications eliminates possibility of cross-contamination of conveyed materials

Machined close tolerances: Machined to precision tolerances for trouble-free operation

Positive line connection: Removable port flange and O-ring seals with a secure tube to valve connection for simple installation without leakage

Installation: Mounted in the vertical position, with mounting holes supplied in the endplates for floor mounting or suspending the valve from a structure

Outdoor installation: Available for outdoor installation when appropriate

Electrical supply: NEMA 4 120 or 24V solenoid and switches (other voltages and NEMA ratings available upon request)

Port seals: Standard Buna-N O-rings

Piston seals: Standard Buna-N O-rings

NFPA standards: Close tolerances exceed NFPA standards for use as an isolation valve

Dimensions/Units - TSV (inch/mm)

Weights	A	B	C	D	E	F	G
120 lbs.	3/76.2	6.5/165.10	13/330.20	18.5/470	9.56/242.82	9.31/236.47	4.69/119.13
155 lbs.	4/101.6	9.13/231.9	18.25/463.55	25.88/657.35	13.75/349.25	15/381	7.5/190.5
195 lbs.	5/127	10.63/270	21.25/539.75	28.88/733.55	15.25/387.35	17.5/444.5	8.75/222.25

Weights	H	J	K	L	M	N	CFM Usage Per Strike
120 lbs.	2.38/60.45	.75/19.05	35 DEG	.56/14.22	8.38/212.85	7/178	.1 scfm per cycle
155 lbs.	3.72/94.49	1/25.4	30 DEG	.56/14.22	12.5/317.50	8.38/212.85	.3 scfm per cycle
195 lbs.	4.44/112.78	1.19/30.23	30 DEG	.56/14.22	14/355.6	9.1/231	.6 scfm per cycle

* All dimensions are nominal.

** Valves are not designed to be actuated while product is in conveying stream.

*** Horizontal mounting is not allowed.

Dimensions/Units - TSV for dense phase pipe applications (inch/mm)

Weights	A	B	C	D	E	F	G
155 lbs.	3.5/88.9	9.13/231.9	18.25/463.55	25.88/657.35	13.75/349.25	15/381	7.5/190.5
195 lbs.	4.5/114.3	10.63/270	21.25/539.75	28.88/733.55	15.25/387.35	17.5/444.5	8.75/222.25

Weights	H	J	K	L	M	N
155 lbs.	3.72/94.49	1/25.4	30 DEG	.56/14.22	12.5/317.50	8.38/212.85
195 lbs.	4.44/112.78	1.19/30.23	30 DEG	.56/14.22	14/355.6	9.1/231

* All dimensions are nominal.

** Valves are not designed to be actuated while product is in conveying stream.

*** Horizontal mounting is not allowed.

**** Dense phase units require specialty flange stub kits.

OPTIONS

Valve position indication: Dual limit switch confirms proof-positive of valve position and eliminates possibilities of flow direction error. Optional proximity switches are available.

Weather shields: Available to protect the electrical components

Diverting direction: Left hand or right hand divert available upon request

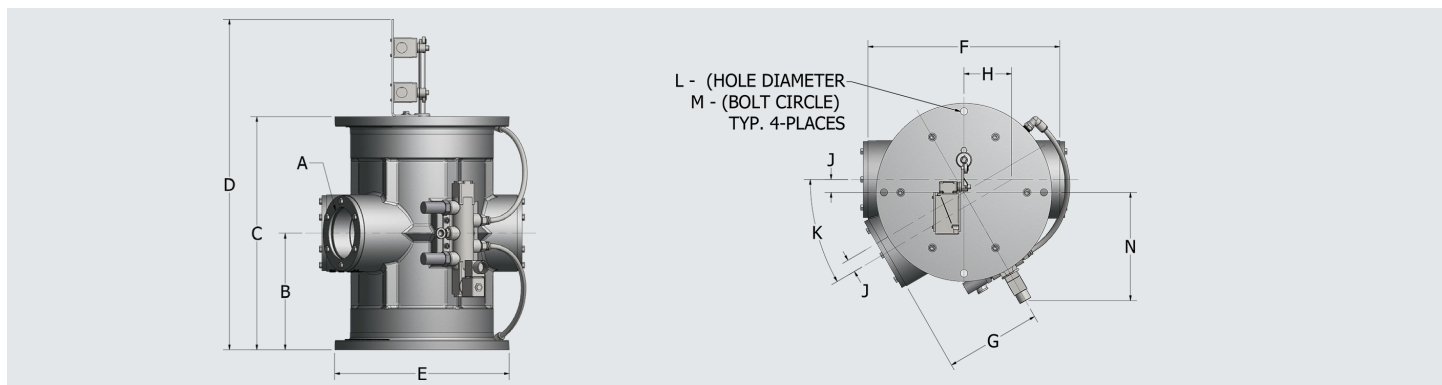
Abrasion-resistant design

No ledge design: Reduces material degradation

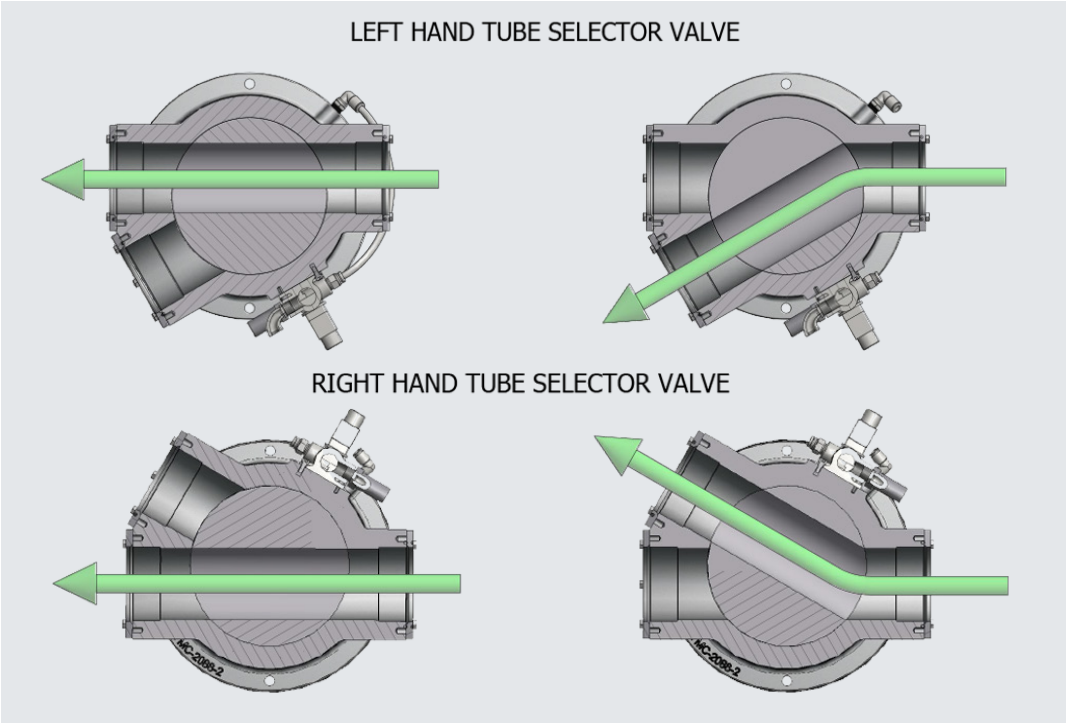
Tube and pipe transitions

Filter regulator kits

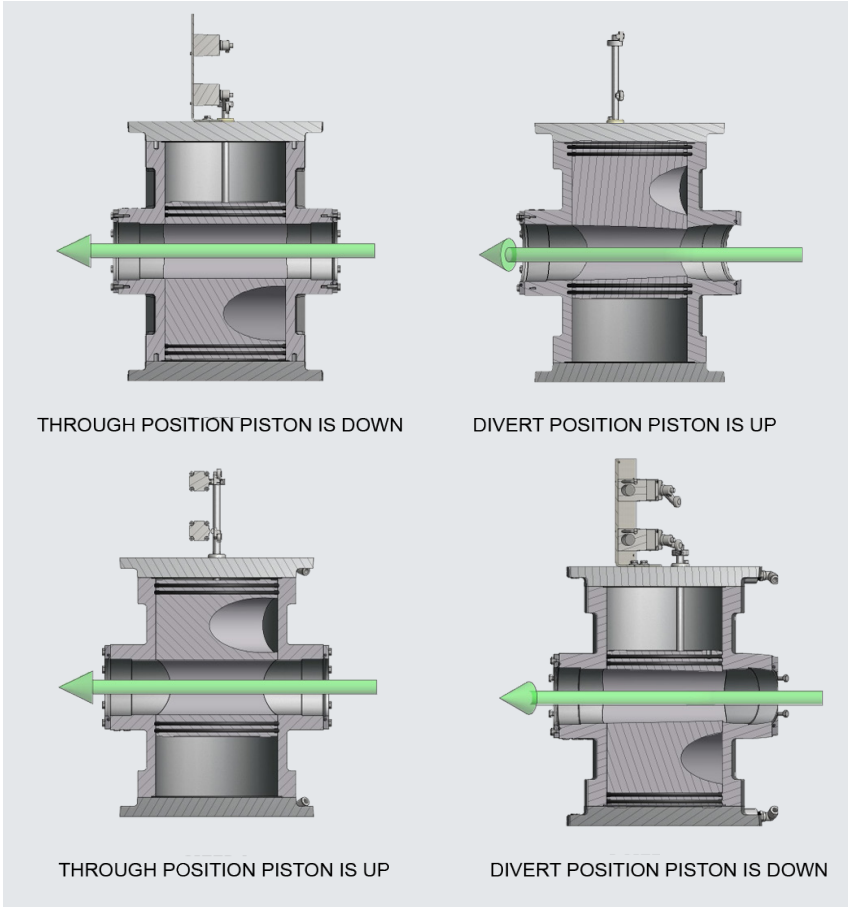
Schematics: TSV



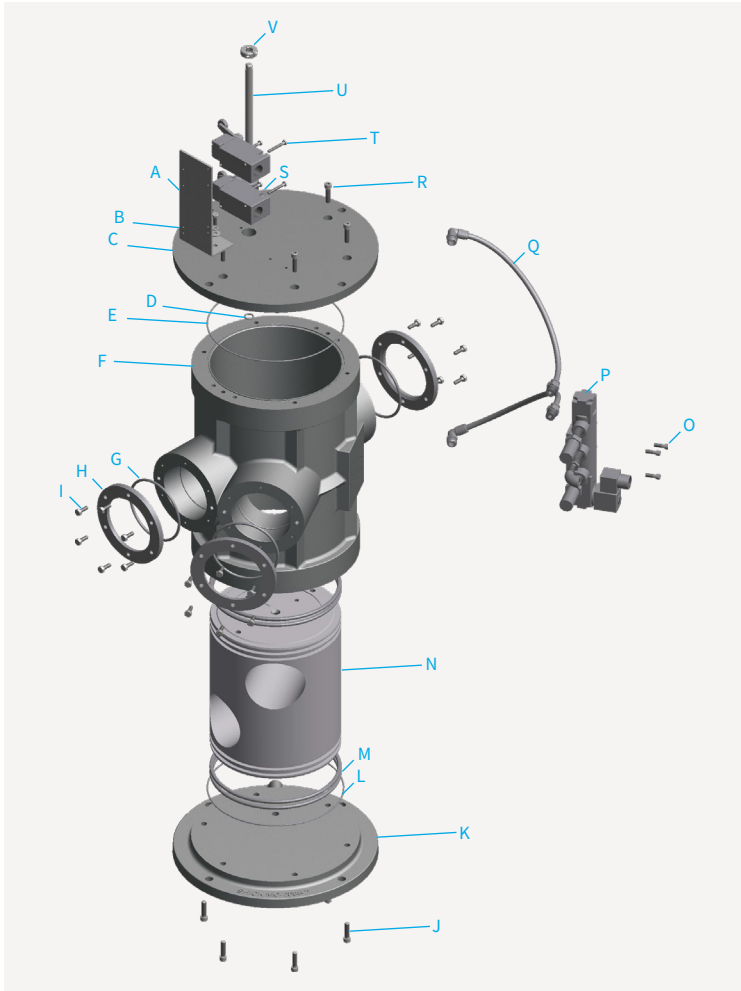
TSV Piston Positioning



**Identification of right hand/left hand valve: To identify, the valve must be viewed while sitting on the floor from the single port side.*



Exploded View: TSV



- | | |
|--------------------------------|-------------------------------|
| A: Limit switch bracket | L: Bottom plate O-ring |
| B: Bracket bolt | M: Piston O-ring |
| C: Top plate | N: Piston |
| D: Guide pin O-ring | O: Air valve bolts |
| E: Top plate O-ring | P: Air valve assembly |
| F: Housing | Q: Air fittings |
| G: Port O-ring | R: Top plate bolts |
| H: Port flange | S: Limit switch |
| I: Port flange bolts | T: Limit switch bolts |
| J: Bottom plate bolts | U: Guide pin |
| K: Bottom plate | V: Set collar |

Note: All parts shown not necessarily replaceable

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