INNOVATION IN AUTOMATION

Tube Selector Valves

CUT SHEET

SHICK™ SOLUTIONS

COMPONENTS

BULK

MINORS

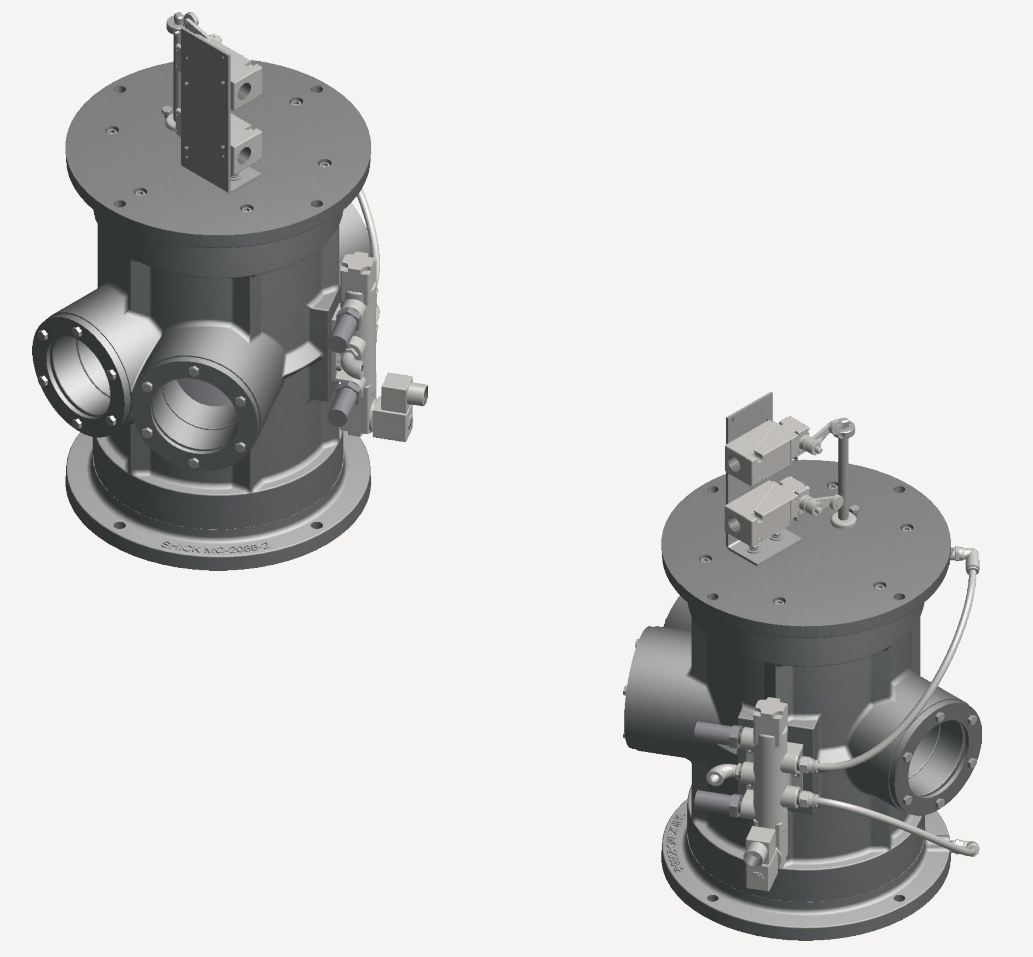
LIQUIDS

CONTROLS

SITE SERVICES

01

Tube Selector Valves



INFORMATION

Shick'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 cylinder. This movement allows the horizontal borings, located on two separate planes within the piston, to align with the housing ports to achieve a straight-through or divert position. Our 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 to eliminate possibilities 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 it 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

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OPTIONS

WEATHER SHIELDS: Available to protect the electrical components

LIMIT SWITCHES: Standard mechanical limit switch with proximity switches as an option

DIVERTING DIRECTION: Left hand or right hand divert available upon request

ABRASION-RESISTANT DESIGN

NO LEDGE DESIGN: Reduce material degradation

TUBE & PIPE TRANSITIONS

FILTER REGULATOR KITS

DIMENSIONS/UNITS - TSV (INCH/MM)

WEIGHTS	A	B	C	D	E	F	G	CFM USAGE PER STRIKE
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	.1 scfm per cycle
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	.3 scfm per cycle
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	.6 scfm per cycle

WEIGHTS	H	J	K	L	M	N
120 lbs.	2.38/60.45	.75/19.05	35 DEG	.56/14.22	8.38/212.85	7/178
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 recommended.

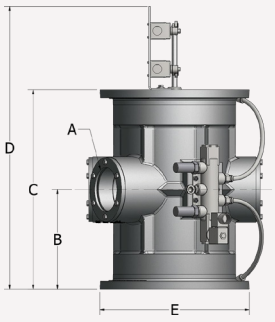
DIMENSIONS/UNITS - TSV FOR DENSE PHASE PIPE APPLICATIONS (INCH/MM)

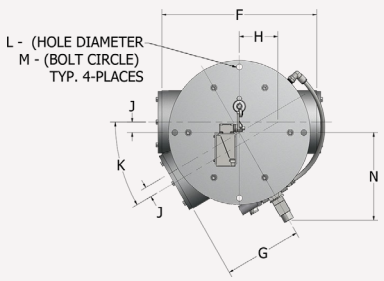
WEIGHTS	A	B	C	D	E	F	G
155 lbs.	3.5/88.9	9.13/231.9	18.25/463.55	25.88/657.35	13.75/349.25	15/381	7.5/190.5
195 lbs.	4.5/114.3	10.63/270	21.25/539.75	28.88/733.55	15.25/387.35	17.5/444.5	8.75/222.25

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

SCHEMATICS: TSV





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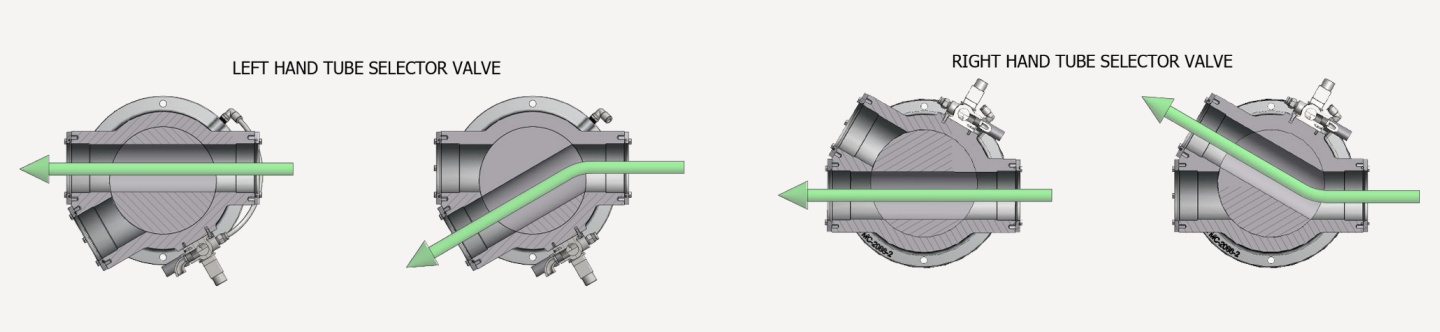
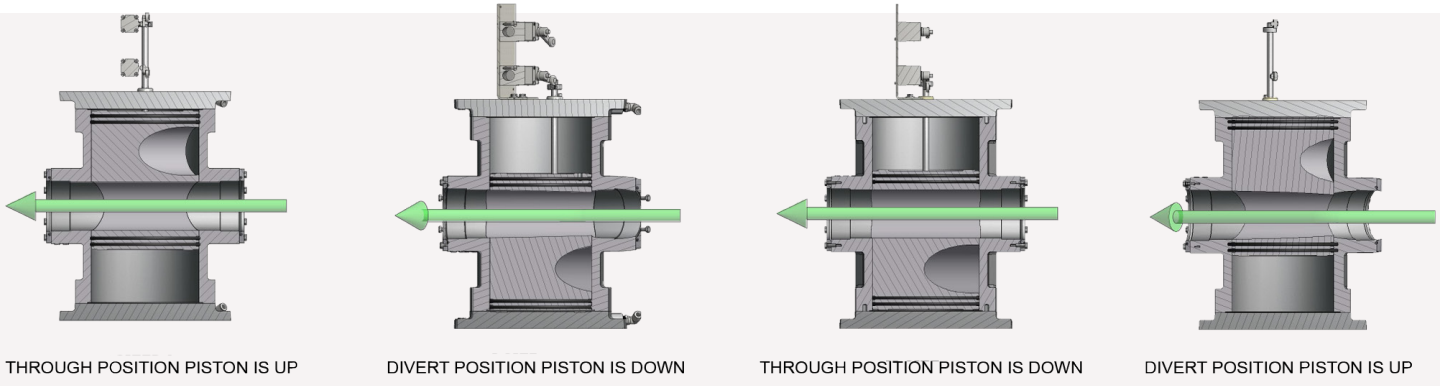
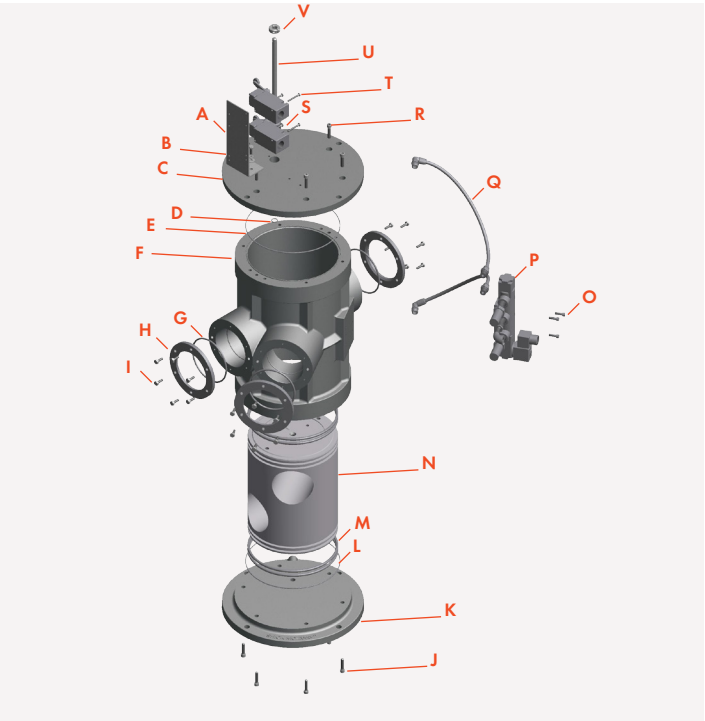
TSV PISTON POSITIONING



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

Note: All parts shown not necessarily replaceable