

INNOVATION IN AUTOMATION

Bottom Diverter Valves

CUT SHEET

COMPONENTS



BULK



MINORS



LIQUIDS



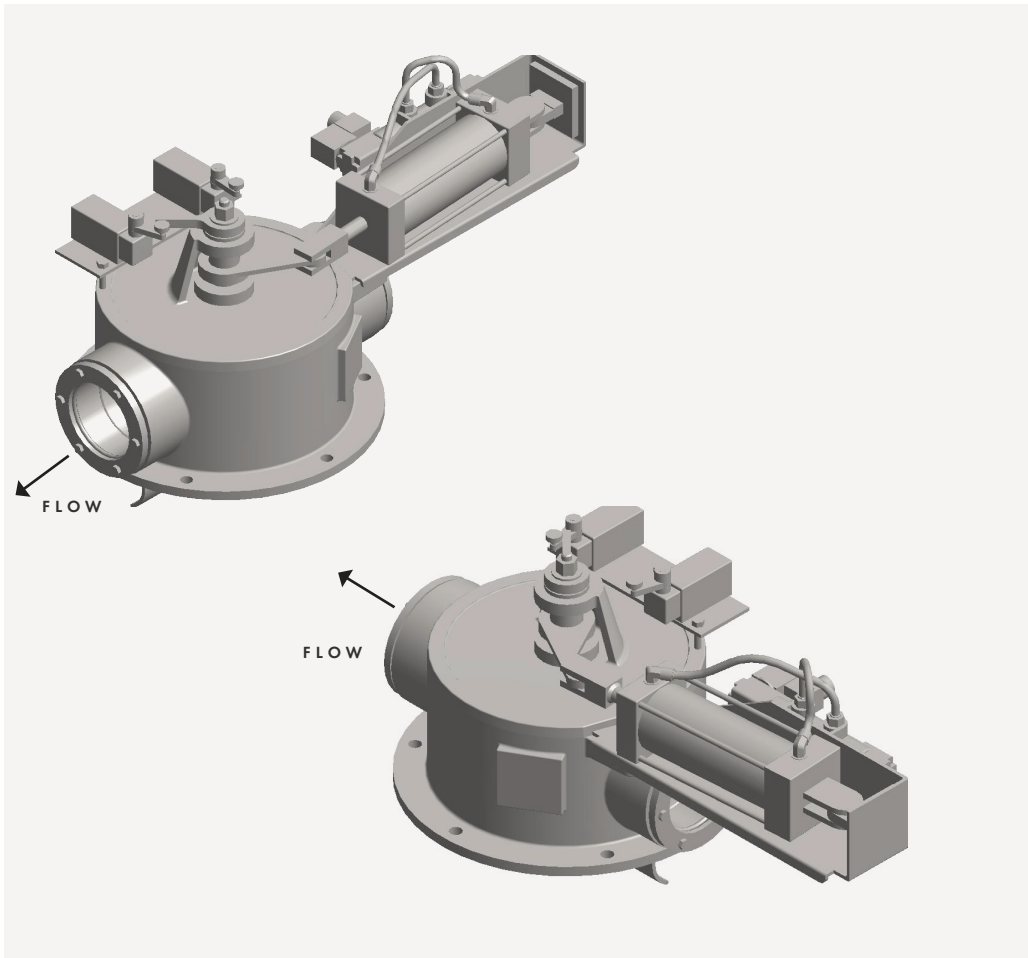
CONTROLS



SITE SERVICES



Bottom Diverter Valves



INFORMATION

Shick's bottom diverter valves direct product into a vessel from a pneumatic convey line. Compressed air actuates the valve into the divert or through position. In the divert position, conveying air and product are directed into the vessel, where product is separated from the air stream as the air leaves through the exit port. In the through position,

product and conveying air bypass the vessel. These valves come in cast iron, electroless nickel plated, 304 S/S or 316 S/S constructions and handle a maximum of 20 PSI in line pressure with an air supply of 80 to 100 PSI without lubrication.

STANDARD FEATURES

VALVE ASSEMBLY: A cast iron or S/S machined housing and piston; precision-machined for metal-to-metal clearances that eliminate frequent part replacement

POSITIONING: Proof-positive valve position eliminates possibilities of flow diversion errors

SELF-VENTING: Local venting or dust collection not required at the deposit point on standard units

POSITIVE LINE CONNECTION: Removable port flange and O-ring seals with a secure pipe/tube to valve connection for quick installation without leakage

ENHANCED SCALING ACCURACY: Designed for instantaneous cut off at the scaling point

LOW PROFILE DESIGN: Designed for filtering of conveying air from a remote location

ELECTRICAL SUPPLY: NEMA 4 120V/single phase/60Hz solenoid and switches (other voltages and NEMA ratings available upon request)

WEATHER RESISTANT: Valves sealed to resist moisture and machined to withstand a variety of temperatures

ACTUATION: Air cylinder actuation with multiple sizes available

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

GASKET: FDA-approved gasket material, white natural sponge rubber gasket is standard with others available upon request

OPTIONS

VALVE ASSEMBLY: Electroless nickel housing available

SELF-CLEANING: Internal scraper that cleans each time the piston rotates to minimize material buildup and valve binding for abrasive duty valves

WEATHER SHIELDS: Available for outdoor applications

EXIT PORT BLOCK: Optional port block confines conveying air to the receiving vessel to avoid cross contamination. Requires the vessel to have venting or dust collection.

TUBE & PIPE TRANSITIONS

SCALE ISOLATION KITS

FILTER REGULATOR KITS

ABRASION-RESISTANT DESIGN & CONSTRUCTION

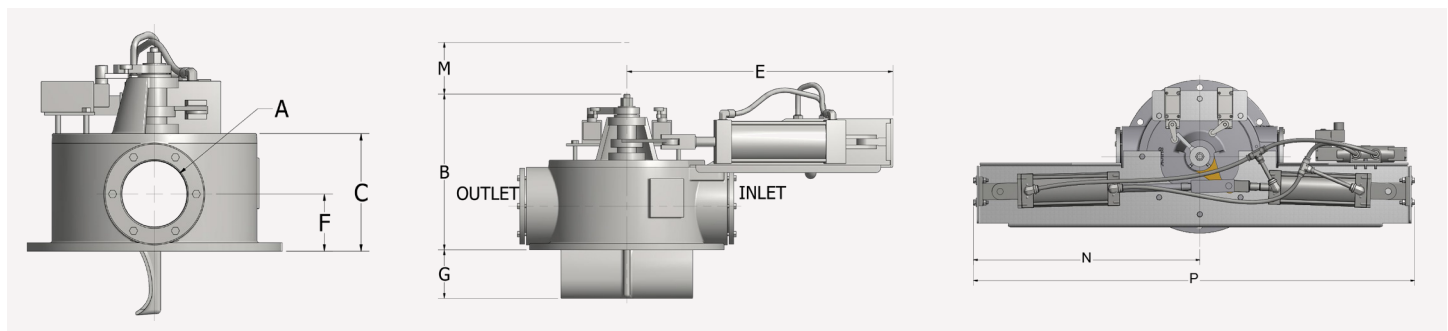
DIMENSIONS/UNITS - BDV (INCH/MM)

A	WEIGHTS	B	C	D	E	F	G	H	J	K	L	M	N	P
3"/76.2 mm tube	120 lbs.	11/280	6.25/159	11.625/295	20/508	3.25/83	3/76	.56/14	10.25/260	8/203	12/305	3.5/89	22.063/561	42.88/1090
4"/101.6 mm tube	150 lbs.	12/305	6.75/171	15.5/394	20.5/521	3.375/86	4/102	.625/16	13.75/349	11/279	15.25/387	4.5/115	22.63/575	44/1118
5"/127mm tube	180 lbs.	13/331	7.75/197	15.75/401	20.5/521	3.625/92	3/76	.625/16	13.75/349	11/279	15.25/387	3.5/89	22.5/572	44/1118
6"/152 mm tube	210 lbs.	15.5/394	9.125/232	18.5/470	20.5/521	4.25/108	4/102	.625/16	16.5/419	13.5/343	18/457	4.5/115	22.94/583	44/1118

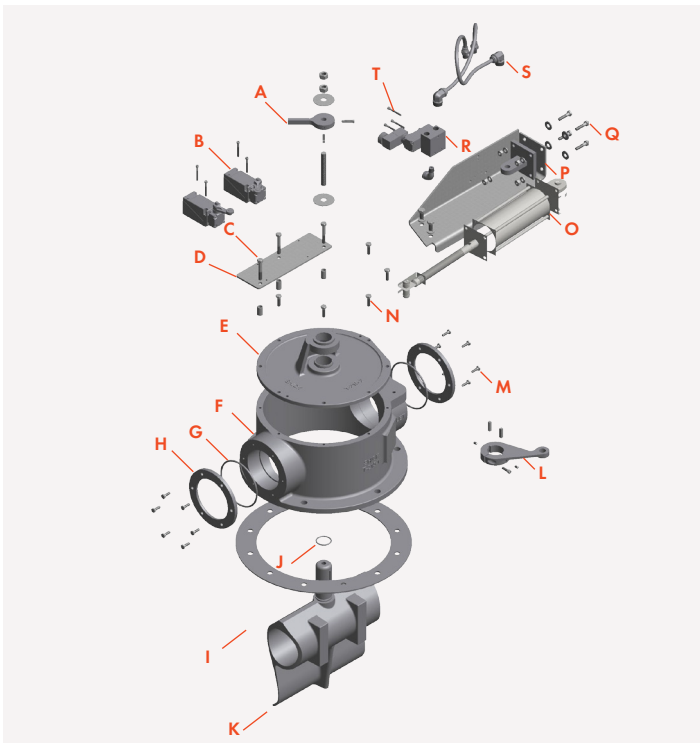
* All dimensions are nominal.

** Add 1" (25.4 mm) to dimension "K" for vessel opening.

SCHEMATICS: BDV

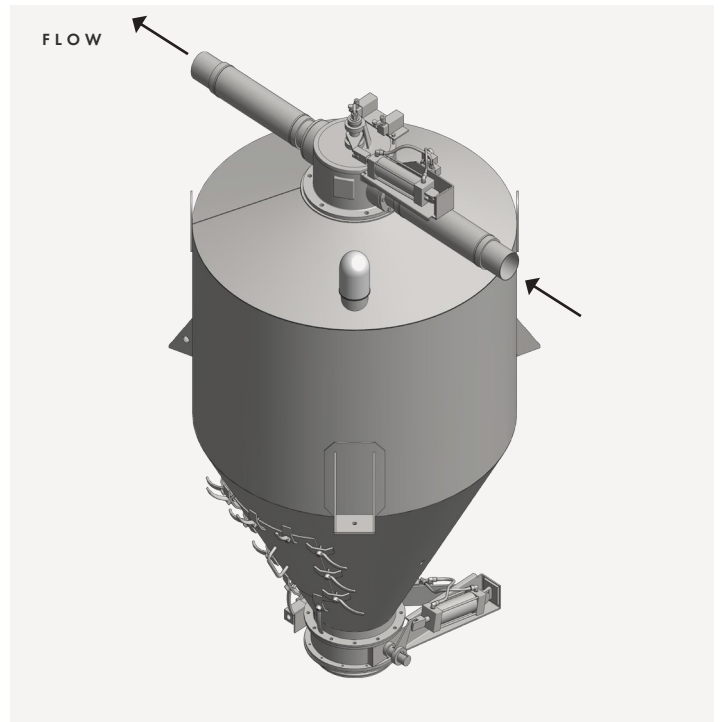
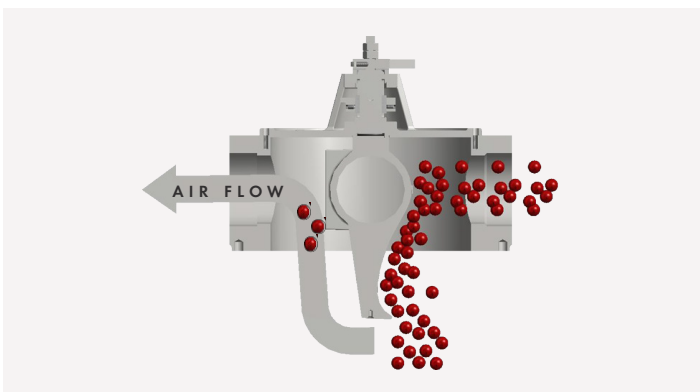


Dual cylinder available for use with cohesive ingredients.

EXPLODED VIEW: BDV

- | | | |
|-------------------------------|-------------------------|----------------------|
| A: Limit switch actuation arm | I: Gasket | R: Solenoid |
| B: Limit switch | J: Piston O-ring | S: Air fittings |
| C: Bracket bolts | K: Piston | T: Limit switch bolt |
| D: Limit switch bracket | L: Actuator arm | |
| E: Top plate | M: Port flange bolts | |
| F: Housing | N: Top plate bolts | |
| G: Port O-ring | O: Air cylinder | |
| H: Port flange | P: Air cylinder bracket | |
| | Q: Cylinder bolts | |

Note: All parts shown not necessarily replaceable

BDV GENERAL ASSEMBLYDIVERT POSITIONBYPASS POSITION