

# Rotary Valves



## COMPONENTS



BULK



MINORS



LIQUIDS



CONTROLS



SITE SERVICES



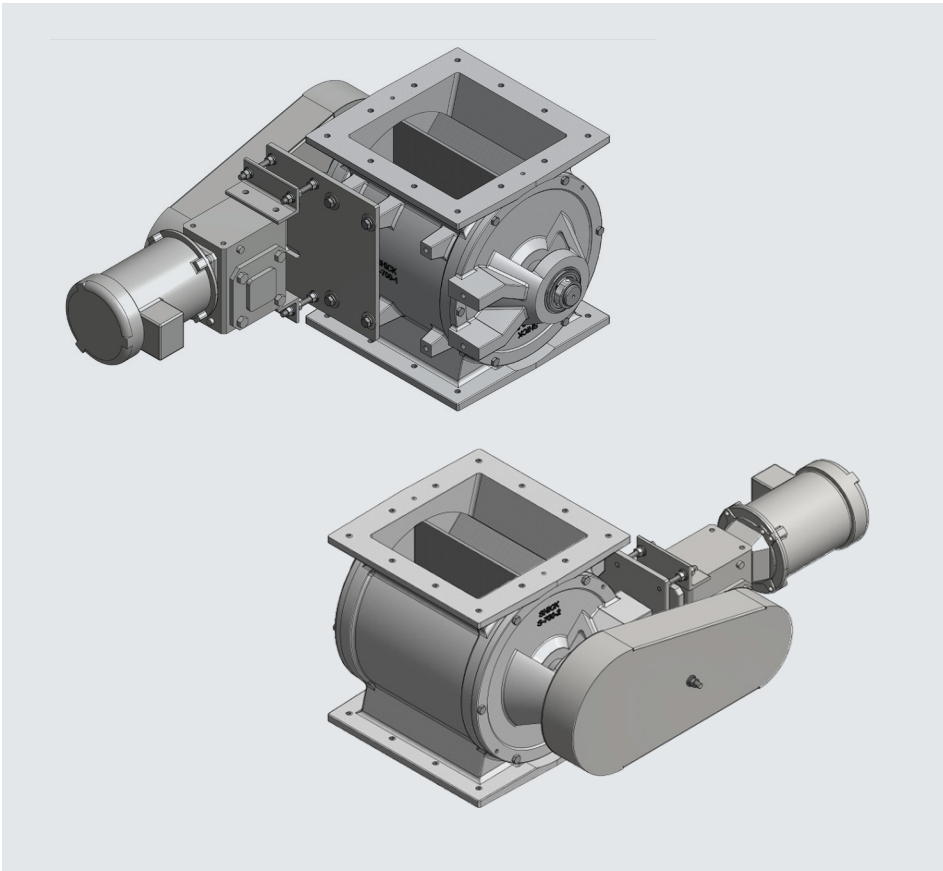
SHICK  
ESTEVE™  
LINXIS GROUP

# Rotary Valves

## INFORMATION

Shick Esteve's durable rotary valves are designed to meter a wide variety of dry, powdered, granulated or similar material into vacuum or pressurized pneumatic convey lines, as well as gravity applications. Shick Esteve's rotary valves are typically used at the discharge of bulk storage silos, bins, hand dumps, dust collectors or scaling hoppers. They are available in two configurations: airlocks (drop through) and feeders (blow through).

Each product line comes in various materials of construction and is designed for a wide variety of applications. The airlocks and feeders are designed to handle a maximum pressure of 14.7 psig and maximum vacuum of 29 Hg. Close tolerances exceed NFPA standards for use as an isolation valve.



## STANDARD FEATURES

**Housing:** Cast iron or stainless steel valve bodies

**Rotors:** Custom machined to fit a housing with 8-vane standard or beveled tip (options available)

**Motor/Drive Assembly:** Variable speed drives\* Explosion-proof motors available; Gear motor unit that is right-angle mounted to the valve body with sprockets and chain drive, protected by a completely enclosed OSHA chain guard

**Seals:** Internal lip seals, external Teflon packing with air purge or Q3 seals with air purge available

**Flange:** Round and square inlet and discharge available, depending on the application and valve size

## OPTIONS

**Abrasion-Resistant Design and Construction:** Inclusive of hard chrome plating, air purge and external abrasive duty seals options

**Rotors:** Replaceable tips, reinforcement rods and pocket fillers available

**Floor Stand:** Provides support for airlock or feeder

**Blow-Thru Adapter:** Connects airlock directly to customer-specified tube or pipe conveying line

**Cast Pellet Inlet:** Minimizes material shear points at the inlet of an airlock

**External Finish:** White enamel or bead blast; other paint finishes may be available

**Internal Finish:** Machined cast iron, hard chrome plated cast iron, 304 S/S or 316 S/S

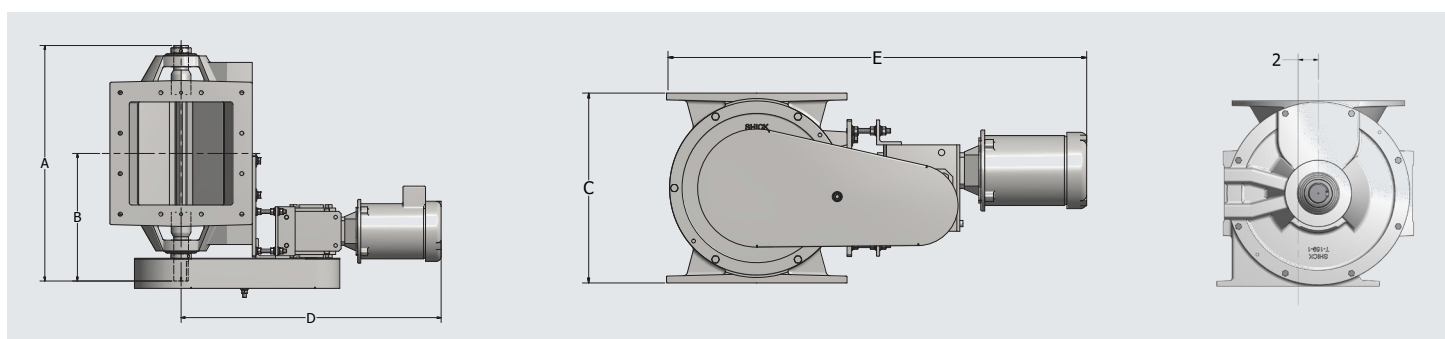
\*Euro-drive or other custom drives available

**Dimensions - Airlock / Feeder**

Housing Style	075A	175A	420A	700A	1250A	2000A	420F	685F	700F	1250F	2000F
Cu. Ft. per Rev.	0.075	0.163	0.42	0.737	1.1628	1.7441	0.42	0.6777	0.737	1.2929	1.747
Vanes	8	8	8	8	8	8	8	8	8	8	8
Air Leakage PSI	2.6	3.33	4.57	5.53	6.32	7.56	4.57	5.21	5.53	6.32	7.56
Shaft Diameter	1.1875/30	1.1875/30	1.25/32	1.5/38	2/51	2/51	1.25/32	1.25/32	1.5/38	1.5/38	2/51
**Weight CI/304 S/S	75/95	109/129	160/180	280/300	490/510	530/550	160/180	210/230	280/300	490/510	530/550
A (inch/mm)	16.375/416	17.125/435	20.625/524	24/610	27.5/699	32.625/829	20.625/524	28.75/730	24/610	35/889	34.5/876
B (inch/mm)	8.1875/208	9.5/241	11.25/288	13/330	15.125/384	17.5/445	11.3125/287	15.375/391	13/330	17.5/445	17.25/438
C (inch/mm)	10/254	10.125/257	13.25/337	15.25/387	20/508	18.25/464	12.375/314	10.75/273	14.625/371	14.25/362	18.25/464
D (inch/mm)	27/686	27.125/669	29.625/752	33.5/851	35/889	35.75/908	29.625/752	28.625/727	33.5/851	32/813	35.75/908
E (inch/mm)	31.5/800	31.625/803	35.75/908	40.75/1035	44/1118	44.5/1130	35.75/908	36.125/918	40.75/1035	39/991	44.5/1130
F (inch/mm)	-	-	-	-	-	-	3.75/95	3.375/86	4.25/108	4.25/108	6/152

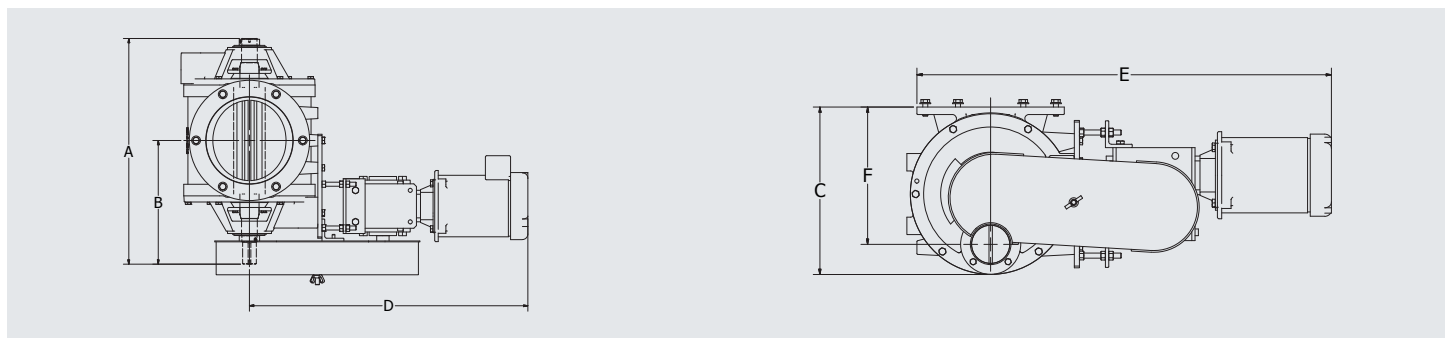
\*All dimensions shown in inches/millimeters. \*\*Weight does not include the drive.

**Schematics: Airlock**

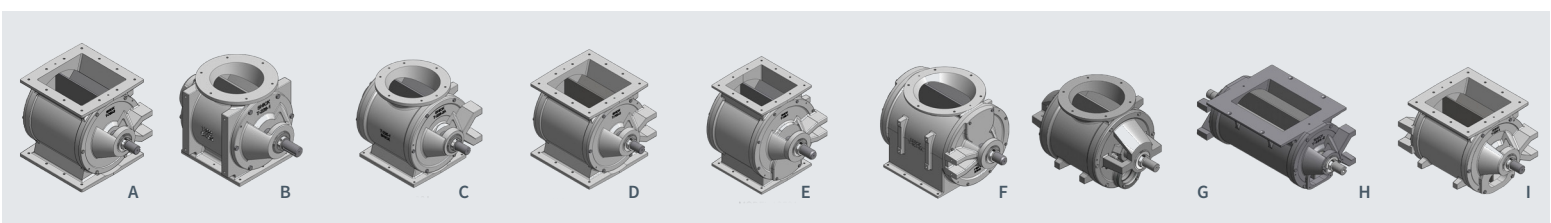


Inlet/Outlet Offset on 2000A Only

**Schematics: Feeder**



**Dimensions: Airlock/Feeder**



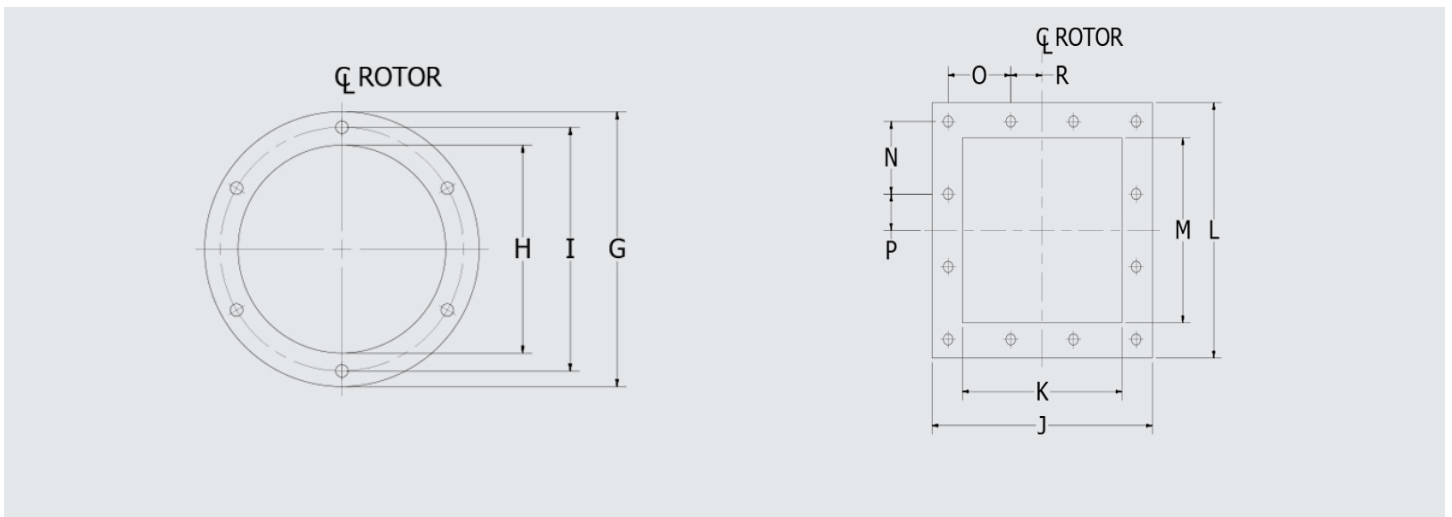
- A: Model 075A
- B: Model 175A
- C: Model 420A
- D: Model 700A
- E: Model 1250A
- F: Model 2000A
- G: Model 420F
- H: Model 685F
- I: Model 700F

Shown as standard arrangement, special assemblies not shown  
 Valves with round/square flange shapes inverted upon request with the exception of cast pellet inlet valves

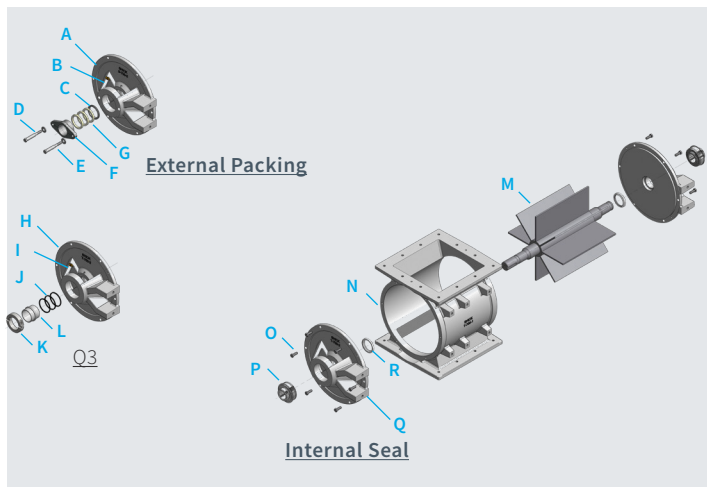
Housing Style	075A	175A	420A	700A	1250A	2000A	420F	685F	700F	1250F	2000F
Mount Holes (Top Flange/Bottom Flange)	8/8	6/8	6/8	12/12	12/12	6/12	6	18	12	14	6
Size of Holes/Tap	5/16-18	5/16-18	3/8-16	1/2-13	1/2-13	1/2-13	3/8-16	3/8-16	1/2-13	1/2-13	1/2-13
G (OD Round: inch/mm)	-	9/229	11/279	-	-	17/432	11/279	-	-	-	17/432
H (ID Round: inch/mm)	-	6/152	8/202	-	-	13/330	8/203	-	-	-	13/330
I bolt circle (inch/mm)	-	8/203	9.75/248	-	-	15.5/394	9.75/248	-	-	-	15.5/394
J (inch/mm)	8/203	8.125/206	10.75/273	14.5/368	14.5/368	16/406	-	15/381	14.5/368	14/356	-
K (inch/mm)	5/127	5.125/130	7.75/197	10.5/267	10.5/267	12/305	-	9/229	10.5/267	9/229	-
L (inch/mm)	7/178	9/229	11.125/283	14.5/368	14.5/368	16/406	-	17/432	14.5/368	21/533	-
M (inch/mm)	4/102	6/225	8.125/206	10.5/267	10.5/267	12/305	-	12/305	10.5/267	16/406	-
N (inch/mm)	3/76	4/102	5.1875/132	4.125/105	4.125/105	4.875/124	-	2.5/64	4.125/105	4.75/121	-
O (inch/mm)	3.5/89	3.5/89	4.875/124	4.125/105	4.125/105	4.875/124	-	3/76	4.125/105	3/76	-
P (inch/mm)	0	0	0	2.0625	2.0625	2.4375	-	0	2.0625	1.5	-
R (inch/mm)	0	0	0	2.0625	2.0625	2.4375	-	3	2.0625	2.375	-

\*The value of zero in the P and/or R dimensions indicates that the holes are on centerline.

### Flanges: Airlock/Feeder

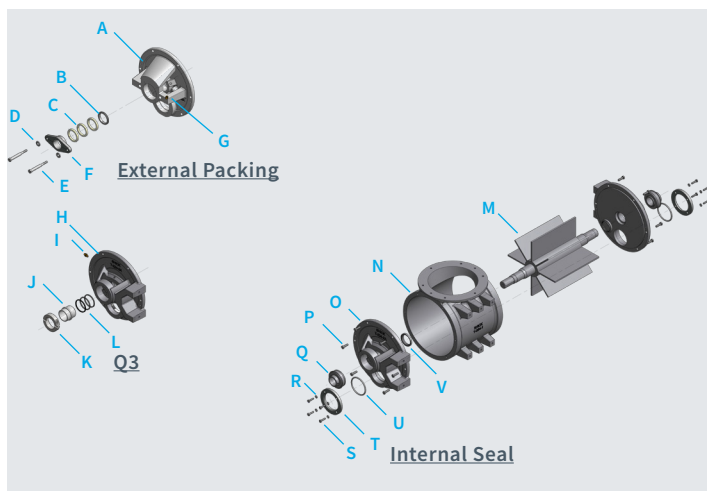


### Exploded View: Airlock



- |                             |                             |                         |
|-----------------------------|-----------------------------|-------------------------|
| <b>A:</b> Endplate          | <b>I:</b> Air purge fitting | <b>Q:</b> Endplate bolt |
| <b>B:</b> Air purge fitting | <b>J:</b> Quad rings        | <b>R:</b> Lip seal      |
| <b>C:</b> Air purge ring    | <b>K:</b> Clamp collar      |                         |
| <b>D:</b> Flat washer       | <b>L:</b> Teflon sleeve     |                         |
| <b>E:</b> Shoulder bolt     | <b>M:</b> Rotor             |                         |
| <b>F:</b> Packing retainer  | <b>N:</b> Housing           |                         |
| <b>G:</b> White Ion packing | <b>O:</b> Endplate bolt     |                         |
| <b>H:</b> Endplate          | <b>P:</b> Bearing           |                         |

### Exploded View: Feeder



- |                             |                             |  |
|-----------------------------|-----------------------------|--|
| <b>A:</b> Endplate          | <b>I:</b> Air purge fitting | <b>Q:</b> Bearing  |
| <b>B:</b> Air purge ring    | <b>J:</b> Teflon seal       | <b>R:</b> Lock washer                                    |
| <b>C:</b> White Ion packing | <b>K:</b> Clamp collar      | <b>S:</b> Port flange bolt                               |
| <b>D:</b> Flat washer       | <b>L:</b> Quad ring         | <b>T:</b> Port Flange                                    |
| <b>E:</b> Shoulder bolt     | <b>M:</b> Rotor             | <b>U:</b> O-ring   |
| <b>F:</b> Packing retainer  | <b>N:</b> Housing           | <b>V:</b> Lip seal                                       |
| <b>G:</b> Air purge fitting | <b>O:</b> Endplate          |  |
| <b>H:</b> Endplate          | <b>P:</b> Endplate bolt     | <b>Note:</b> All parts shown not necessarily replaceable |

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