



DRY BULK MATERIAL HANDLING



ROTARY AIRLOCK FEEDERS



CONCEPT TO COMPLETION

STANDARD MODELS

The selection of the correct rotary airlock and options is critical to maintain an efficient and reliable plant operation. With over 50 years of experience and success in pneumatic conveying systems and components, Smoot can assist you in determining which type rotary airlock will best fulfill your needs at the lowest cost to install, operate and maintain.

The rotary airlock line includes seven types, all built with the legendary Smoot design and precision. Each airlock type has been specifically designed for specific industries and applications with multiple options and accessories to ensure it will exceed your expectations.

> TYPE 1

OUR BASIC AIRLOCK

The Smoot Type 1 is a basic, yet versatile airlock. With a wide range of options and accessories, and multiple sizes in stock, the Type 1 uses an open end rotor and will operate efficiently in your system.



Model	Inlet Square	Capacity Per Rev
FT7	6"	0.12 ft ³
FT9	8"	0.27 ft ³
FT11	9"	0.47 ft ³
FT12	10"	0.75 ft ³
FT14	12"	1.10 ft ³
FT16	13"	1.60 ft ³
FT18	15"	2.60 ft ³
FT22	16"	4.00 ft ³

Model	Round Inlet	Capacity Per Rev
FTP9	8"	0.27 ft ³
FTP12	10"	0.75 ft ³



> TYPE 2

DESIGNED FOR MORE ABRASIVE PRODUCTS

The Smoot Type 2 airlock is designed to handle moderately abrasive materials. The Type 2 is constructed with a closed end rotor with Abrasion Resistant Tips and a cast iron housing with hard chrome cylinder bore to supply a long lasting, yet economical airlock.



Model	Inlet Square	Capacity Per Rev
FT9	8"	0.21 ft ³
FT11	9"	0.41 ft ³
FT12	10"	0.64 ft ³
FT14	12"	0.96 ft ³
FT16	13"	1.40 ft ³
FT18	15"	2.30 ft ³
FT22	16"	3.6 ft ³
FT30	23"	9.20 ft ³

Model	Round Inlet	Capacity Per Rev
FTP9	8"	0.21 ft ³
FTP12	10"	0.64 ft ³



> TYPE 3

CORROSION RESISTANT DESIGN

The Smoot Type 3 airlock is built to handle your sticky or cakey materials and is ideal for semi-food grade applications. The Type 3 is constructed with an epoxy coating of the interior throat for maximum protection, a hard chrome plating on interior machined surfaces, as well as 304 stainless steel open end rotor to provide a durable and cost-effective alternative to complete stainless steel airlocks.



Model	Inlet Square	Capacity Per Rev
FT7	6"	0.21 ft ³
FT9	8"	0.41 ft ³
FT11	9"	0.64 ft ³
FT12	10"	0.96 ft ³
FT14	12"	1.40 ft ³
FT16	13"	2.30 ft ³
FT18	15"	3.6 ft ³
FT22	16"	9.20 ft ³

Model	Round Inlet	Capacity Per Rev
FTP9	8"	0.27 ft ³
FTP12	10"	0.75 ft ³



> TYPE 4

304 STAINLESS STEEL

The Smoot Type 4 takes stainless steel to the next level with complete stainless steel construction. The housing and end plates are constructed with 316 stainless steel and the open end rotor is 304 stainless steel. The Type 4 will handle mildly corrosive materials while maintaining the legendary Smoot toughness.



Model	Inlet Square	Capacity Per Rev
FT9	8"	0.27 ft ³
FT12	10"	0.75 ft ³

> TYPE 5

316 STAINLESS STEEL

The Smoot Type 5 is constructed with 316 stainless steel, uses an open end rotor and is designed to handle extremely corrosive materials with ease.



Model	Inlet Square	Capacity Per Rev
FT9	8"	0.27 ft ³
FT12	10"	0.75 ft ³

> TYPE 6

DESIGNED FOR THE MOST ABRASIVE PRODUCTS

The Smoot Type 6 airlock is constructed to withstand the most abrasive of materials. Built with rugged NiHard steel, a closed end rotor constructed of carbon steel, and Stellite on wear surfaces the Type 6 will outlast your toughest materials.



Model	Inlet Square	Capacity Per Rev
FT12	10"	0.70 ft ³
FT16	13"	1.60 ft ³
FT22	16"	3.95 ft ⁴

> TYPE 8

SEVERE APPLICATIONS

The Smoot Type 8 airlock starts with a HD cast airlock casting. Ceramic tiles are bonded to the internal surfaces. A closed end rotor with tungsten carbide tips and shroud insures the valve will provide superior wear resistance.



Model	Inlet Square	Capacity Per Rev
FT9	8"	0.21 ft ³
FT11	9"	0.41 ft ³
FT12	10"	0.64 ft ³
FT14	12"	0.96 ft ³
FT16	13"	1.40 ft ³
FT18	15"	2.30 ft ³
FT22	16"	3.6 ft ³
FT30	23"	9.20 ft ³



ROTORS

The key to any rotary airlock valve application is selecting the proper rotor for the intended service. This will make a significant difference in the overall life and performance of the valve. Improper selection could result in accelerated wear

and premature failure, additional downtime, reduced efficiency, increased maintenance, product degradation and possible loss of production.



OPEN END ROTORS

Open end rotors can be used in all applications not requiring abrasion-resistant construction. In addition to the cost savings they have slightly more capacity than a closed end rotor. Standard on Type 1, 3, 4 and 5 style airlocks.



CLOSED END ROTORS

Closed end rotors are best used in applications requiring abrasion resistant construction. Standard on Type 2, 6 and 8 style airlocks.



REDUCED CAPACITY ROTORS

The flow properties of some products require large openings and wide rotor pockets. When low feed rates are required in conjunction with this type of product, it may be necessary to reduce the rotor capacity. This can be done on open or closed end rotors.



FLEX TIP ROTORS

The rotary valve flex tip design allows for any material trapped between the rotor tips and housing will not jam the valve. The standard flexible tips are made of thermoset polyurethane and replaceable. Optional tips available are food grade white neoprene, black neoprene and heavy duty conveyor belting.





AIR PURGE



SHAFT

SHAFT AIR PURGE (SAP)

SAP uses high pressure plant air to prevent the conveyed material from coming in contact with the shaft seals, therefore extending the life of the seals.



Air line to shaft seals.



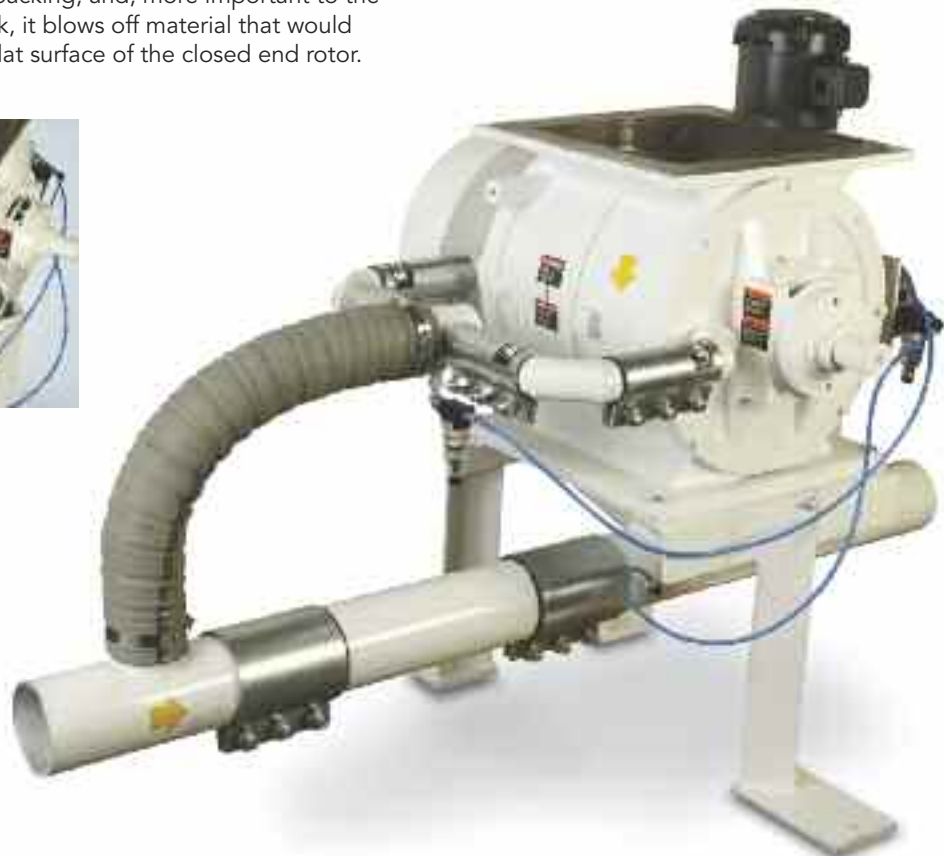
CAVITY

CAVITY AIR PURGE (CAP)

Smoot offers the cavity air purge process on its entire line of closed end rotary valves to reduce abrasion on the rotor, cylinder, and endplates. This patented design uses low-pressure air from the convey blower and purges the material from the cavity between the rotor shroud and the housing end plates. This air serves two purposes: to prevent the product dust from reaching the shaft packing, and, more important to the life of the overall rotary airlock, it blows off material that would attempt to settle on the top flat surface of the closed end rotor.



Air piping to endplates.





OPTIONS

- OPEN AND CLOSED END ROTORS
- RELIEVED ROTOR TIPS
- REDUCE CAPACITY ROTORS
- TEFLON COATED AND NICKEL PLATED ROTORS
- ROUND AND SQUARE FLANGE
- DIRECT-DRIVE AND CUSTOM DRIVE PACKAGES
- HIGH TEMPERATURE MODIFICATIONS
- SPECIAL PAINT
- FLEX TIPS
- ABRASION RESISTANT TIPS
- CHROME PLATED HOUSINGS
- CAVITY AND SHAFT AIR PURGE



ACCESSORY EQUIPMENT

> INLET HOPPERS



> MAINTENANCE GATE



> VENTED INLET ADAPTERS



> DISCHARGE ADAPTERS

- Effectively directs material away from rotor pocket



> PELLET VALVE

- Non-adjustable
- Most sizes in stock
- Prevents product shear



> FINGER GUARD



PNEUMATIC CONVEYING COMPONENTS & SPARE PARTS

SERVICE CENTER



3-Position Slide Diverter
• Up to 15 psi



Valves



2-Position Slide Diverter
• Up to 100 psi



Piping, Coupling & Elbows



Filters & Cages



**Airlift Railcar
Discharge Adaptor**



**Pressure/Vacuum
Blower Packages**



Bin Vents/Filter Receivers

> CONCEPT TO COMPLETION

Every pneumatic process is unique, so Smoot customizes every solution to meet your needs.

Pneumatic conveying systems and components are what we know, no matter how large or small your line. Tell us what you intend to accomplish and we'll make sure the pieces fit.

Dependable, versatile systems. Solutions that fit. It's the foundation of our business.



LEARN
MORE



Established 1960
MADE IN THE USA



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