The Meyer Heavy-Duty Series airlock valves provide maximum versatility in the most severe applications. Each model offers an engineered cost effective solution to the customers' needs. These units all have outboard bearing construction with an inboard packing design for maximum life and reduced maintenance. All rotor and shaft designs are oversized to eliminate shaft deflection and fatigue. The HD Series provides the right valve for any application.
The HDX Heavy-Duty Drop-Thru Extra Tough, HDAR Heavy-Duty Abrasion Resistant and HDXP Heavy-Duty Explosion Proof rotary airlock valves are designed to withstand high temperatures and pressure differentials up to 15 psi. This legendary design sets the standard by which all others in the industry are measured. It offers the heaviest gauge rotor vane stock of any competing product, extra thick endplates, flanges and housing walls, along with outboard mounted oversized bearings that are prelubricated and permanently sealed to ensure low maintenance and prolonged life.

The HDBT Heavy-Duty Blow-Thru model rotary airlock valves provide a specialized solution to your unique needs. These models provide a cost effective valve for your pneumatic conveying, or low profile application requirements.

The HDPV Heavy-Duty Pellet Valve and the HDSE Heavy-Duty Side-Entry model rotary airlock valve lines are specially designed with offset inlet and discharge openings to reduce product shearing while maintaining an efficient product flow in conveying or metering applications.
The HDX Heavy-Duty Extra-Tough Drop-Thru rotary airlock valves are designed to withstand high temperatures and pressure differentials up to 22 psi. This legendary design sets the standard by which all others in the industry are measured. It offers the heaviest gauge rotor vane stock of any competing product, extra thick endplates, flanges and housing walls, along with outboard mounted oversized bearings that are pre-lubricated and permanently sealed to ensure low maintenance and prolonged life.

The HDX is available with 6-vane or 8-vane rotor design. Square or round flange housing with cast iron, 304/316 stainless steel or Ni-hard construction.

**COMMON SERVICE CONDITIONS:**
- **Pressure Rating:** 22 PSI
- **Maximum Operating Temperature:** 1,000°F
- **Materials:** Dry Free-Flowing Including: Corrosive, Hygroscopic, Abrasive

**TYPICAL APPLICATIONS:**
- Pneumatic Conveying
- Dust Collection
- Pollution Control
- Mixing
- Blending
- Drying
- Weighing
- Feeding
- Cement
- Power
- Mining
- Paint
- Petrochem

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Available in twelve sizes from 6x6 through 36x36
- Round or square flange assures system compatibility
- Larger diameter shafts for less deflection and optimum torque delivery
- Full flow throat design permits maximum flow to rotor pocket
- Permanently sealed bearings ensure protection from contamination
- Special rotor designs including coatings, polishing, shallow pockets and closed end to specifically match your application
- Housing coating options include hard chrome, nickel, teflon, tungsten carbide, chrome carbide and plasma
- Cast iron and stainless steel housings are standard providing maximum structural stability with optional cast materials available including; inconel, hastelloy, cast steel or aluminum

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The HDAR Heavy-Duty Abrasion Resistant Drop-Thru rotary airlock valves are designed for severe applications where highly abrasive conditions exist. Offered in a choice of ceramic lined or DuraKast™, both can significantly improve the wear factor on the valve and reduce the pre-mature equipment failure often associated with such applications.

The ceramic version starts with any of our Heavy-Duty rotary airlock valves. We bond ceramic tiles to the inside of the cast iron housing and on the rotor tips. The DuraKast units are completely cast out of a hard chrome material suitable for applications with higher pressure differentials. The DuraKast units also have Stellite™ on the rotor tips for extended abrasion resistance. Both styles offer extended life over that of a standard cast iron rotary valve by as much as 6 times.

**UNMATCHED COMPETITIVE ADVANTAGES:**

**CERAMIC**
- Precision-Cut ceramic tiles bonded in place minimizing gap exposure
- Closed-End rotor designs with ceramic tiled end disc perimeter and tungsten carbide tips for prolonged wear resistance
- HVOF spray on packing area for extended shaft life
- Ceramic can be re-ground for additional life

**DURA KAST**
- 650 Bhn high chrome wear resistant casting for maximum life
- Oversized square flange housing thickness designed to be re-ground for many years of service (round not available)
- Pre-Cast flange holes allow for easy field installation on new or replacement units
- Closed-End rotor with welded hard faced stellite tips for maximum wear resistance
- End plates are hard chrome lined with optional purging feature
- Higher pressure differentials for highly abrasive applications

### COMMON SERVICE CONDITIONS:
- Pressure Rating: 22 PSI
- Maximum Operating Temperature: 250°F (Ceramic), 750°F (DuraKast)
- Materials: Dry Free-Flowing Extremely Abrasive Particles

### TYPICAL APPLICATIONS:
- Pneumatic Conveying
- Blending
- Dust Collection
- Drying
- Grinding
- Weighing
- Mixing
- Feeding

### RELEVANT INDUSTRIES:
- Mining – Sand, Alumina, Copper
- Power - Fly Ash, Coal
- Cement – Kiln Dust, Raw and Finished
- Asphalt – Limestone, Granite
- Steel – Oxides, Grinding Dust, Sinter
The Meyer HDXP Heavy-Duty, NFPA design valves are custom applied units to your specific application. Meyer engineers review the application and evaluate the design based on $K_{st}$ values for the material, temperature, pressure and ambient conditions. Units can be built in cast iron, stainless and cast steel to match the specific NFPA requirements. Special XP switches, controls and motors are also added as needed to match the installation environment. Each valve is uniquely built and documented. The Meyer HDXP is ideally suited for all your NFPA installations.

**COMMON SERVICE CONDITIONS:**
- Pressure Rating: 15 PSI
- Maximum Operating Temperature: 500°F
- Materials: Dry Free-Flowing Semi-Abrasive

**TYPICAL APPLICATIONS:**
- Pneumatic Conveying
- Pollution Control
- Blending
- Weighing
- Dust Collection
- Mixing
- Drying
- Feeding

**RELEVANT INDUSTRIES:**
- Coal
- Grain
- Food
- Textile
- Paper
- Power
- Petrochemical
- Mining

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Available in nine sizes from 6x6 through 22x22
- Round or square flange assures system compatibility
- Larger diameter shafts for less deflection and optimum torque delivery
- Full flow throat design permits maximum flow to rotor pocket
- Permanently sealed bearings ensure protection from contamination
- Housing coating options include hard chrome, nickel, teflon, tungsten carbide, chrome carbide and plasma
- Cast iron and stainless steel housings are standard providing maximum structural stability with optional cast materials available including; inconel, hastelloy or cast steel

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The HDBT Heavy-Duty Blow-Thru rotary airlock valves are ideal for the Pneumatic Conveying of free-flowing material in food, grain, chemical, milling, baking, plastics and pharmaceutical applications. These units are uniquely designed to handle non-abrasive powders and where the product requires an assist in clearing the rotor vane pockets. The HDBT design is especially suited for low headroom installations and retrofit applications.

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Round or square flange assures system compatibility
- Rugged cast iron or stainless steel construction provides maximum structural stability
- Outboard sealed bearings never need lubrication
- 8-Vane open end beveled rotor standard
- Full taper inlet throat opening for maximum material flow to rotor pockets
- Integral mounting feet for easy installation

**COMMON SERVICE CONDITIONS:**
- Pressure Rating: 20 PSI
- Maximum Operating Temperature: 400°F
- Materials: Dry Fine Free-Flowing Non-Abrasive

**TYPICAL APPLICATIONS:**
- Pneumatic Conveying

**RELEVANT INDUSTRIES:**
- Grain
- Pharmaceutical
- Food
- Chemical
- Plastics
- Paint
- Baking
- Milling

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The HDPV Heavy-Duty Pellet rotary airlock valves are specially designed with offset inlet and discharge openings to reduce product shearing while permitting an even flow of pellets and chip materials into each rotor pocket. The design uses a slide gate to control the flow of pellets through the side inlet and into the rotor.

The HDPV eliminates serious jamming problems experienced with standard rotary airlocks by having the material enter the pocket from the side through a “V” type inlet and exiting through the bottom. This design is especially beneficial in handling pellets, chips, flakes and cubes resulting in reduced pocket degradation.

**COMMON SERVICE CONDITIONS:**
- Pressure Rating: 15 PSI
- Maximum Operating Temperature: 750°F
- Materials: Pellets, Chips, Flakes, Cubes

**TYPICAL APPLICATIONS:**
- Railcar Unloading
- Pneumatic Conveying
- Vacuum Loaders

**RELEVANT INDUSTRIES:**
- Plastics
- Wood
- Food
- Pharmaceutical
- Rubber
- Chemical

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Offset side inlet and discharge provides optimal material product flow
- Round flange
- Optional adjustable slide gate for optimal material feed rate control
- “V” Type inlet throat minimizes product shearing and degradation
- Housing vent connection improves valve efficiency
- Rugged corrosion resistant cast stainless steel construction provides maximum structural stability
- Outboard sealed bearings never need lubrication
- 8-Vane open end rotor standard for optimal air seal and product feed

**ROUND CBD**
- 12X12: 0.61
- 14X14: 1.08
- 16X16: 1.55
The HDSE Heavy-Duty Side-Entry Drop-Thru rotary airlock valves are designed for applications involving relatively large particles that cannot be reduced by the shearing action between the rotor blades and the housing at the inlet. They are also suitable for applications where small fines produced by the shearing action could cause damage to the system or create hazards. The built-in “V” shaped product inlet reduces the shearing to a single point virtually eliminating product degradation.

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Offset V-type inlet design to eliminate shearing
- Cast iron or stainless steel construction for maximum stability
- Permanently sealed outboard bearings for reduced maintenance
- Oversize rotor and shafts for severe service duty
- Special rotor designs including coatings, polishing, shallow pockets and closed end to specifically match your application
- Housing coating options include hard chrome, nickel, teflon, tungsten carbide, chrome carbide and plasma

**COMMON SERVICE CONDITIONS:**
- Pressure Rating: 15 PSI
- Maximum Operating Temperature: 750°F
- Materials: Pellets, Chips, Flakes, Cubes

**TYPICAL APPLICATIONS:**
- Railcar Unloading
- Pneumatic Conveying
- Vacuum Loaders

**RELEVANT INDUSTRIES:**
- Plastics
- Mining
- Food
- Pharmaceutical
- Rubber
- Chemical

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