MEYER ENGINEERS AND PRODUCES DOUBLE-FLAPGATE AIRLOCK VALVES TO WITHSTAND YOUR TOUGHEST APPLICATIONS

Wm. W. Meyer & Sons is the world's leader for the design, engineering, manufacturing and support of airlock feeder technologies for the bulk processing industry. With over 70 years of experience to draw on, we can provide the system solutions your company needs to help maximize production and minimize downtime.

Our products are used in a wide variety of industries, including:

- Food
- Power
- Cement
- Foundries
- Steel
- Paper
- Reclamation
- Asphalt
- Plastics
- Mining
- Petrochem
- Textiles
- Pharmaceutical
- Agriculture
- Wastewater
- Dairy

Call Toll-Free 800-963-4458
Model LPTF-A
Pneumatic Actuated Valves for Low-Pressure Dust Collection Applications

Model MPSA
Pneumatic Actuated Valves for Medium-Pressure Dust Collection or Conveying Applications

Model LPTF-G
Counterweight Actuated Valves for Low-Pressure Dust Collection Applications

Model MPFTA
Pneumatic Actuated Valves for Medium Pressure/Temperature Applications

Model HPSC
Rotary Actuated Valves for High Pressure/Temperature Applications

Model HPTC
Rotary Actuated Valves for High Pressure/Temperature Applications
PRINCIPLE OF OPERATION

The Double-Flapgate Airlock Valve is specifically designed to control the rate of material flow through a system, while at the same time preventing air leakage by isolating the processing system's pressures.

**TYPICAL APPLICATIONS INCLUDE:**

- Batch Feeding
- Mixing
- Drying
- Pneumatic Conveying
- Material Recovery
- Dust Collection

Unlike a rotary valve that inevitably has some air leakage because of the clearance required between the blades and the housing, the Double-Flapgate Airlock Valve is designed to seal completely and isn’t subject to the kind of wear that rotary valves would endure under extreme application conditions.

As shown in the diagram below, the Double-Flapgate Airlock Valve uses two pivoting gates that open and close in sequence to fill and empty the chamber between the gates. Because one of the gates is always closed, the air seal is maintained throughout the fill and dump sequence.

By opening and closing the gates in sequence, the Double-Flapgate Airlock Valve is able to move material through the valve while maintaining a constant pressure drop from inlet to outlet.
AIRLOCK VALVES PROVIDE RELIABILITY UNDER SEVERE CONDITIONS

PROVEN HISTORY OF SUCCESS

MEYER HIGH-QUALITY DOUBLE-FLAPGATE AIRLOCK VALVES ARE BUILT FOR HEAVY-DUTY SERVICE IN APPLICATIONS INVOLVING:

- Elevated Temperatures
- Highly Abrasive Products
- Wide Pressure Differentials
- Irregularly Shaped Products
- Oversized Materials

It is no coincidence that customers the world over have placed their confidence in products from Wm. W. Meyer & Sons. Since 1933, we have been supplying customers with the service, technology and quality workmanship that have provided thousands of successful process solutions.
The C-Series Double-Flapgate Airlock Valves are designed for high-pressure applications up to 20 psi and temperature extremes up to 1,650°F or higher depending upon the application. Meyer is the only manufacturer to offer a double-flapgate product that can operate reliably in pneumatic conveying systems at these pressures. The C-Series is available in both the "short", low-profile HPSC model and the "tall", high-profile HPTC model. Both models are offered with a choice of pneumatic, electro-mechanical or gravity/counterweight actuation. A triple flapgate configuration is also available if better suited to your particular application.

**TYPICAL APPLICATIONS:**
- Pneumatic Conveying
- Extreme Temperature Environments

**RELEVANT INDUSTRIES:**
- Cement
- Chemical
- Pulp and Paper
- Bulk Powders
- Recycling
- Iron Ore
- Steel Mills
- Fly Ash
- Mining and Minerals
- Power Generation and Incineration

**COMMON SERVICE CONDITIONS:**
- High Pressure With Up To 20 psi Differentials
- Extreme Temperatures To 1,650°F or Higher
- Exceptionally Abrasive Materials
- Highly Corrosive Materials

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Increased Safety - robust, hybrid construction with no external pinch points
- Up to 60% Larger Diameter Shafts and Support Bearings - means less downtime due to premature shaft failure
- Larger Adjustable Packing Gland Shaft Seals - minimizes system leakage to exterior and allows for air purging
- Seats and Gates Can Be Re-ground - extends working life for years
- Front and Rear Access Panels - simplifies interior inspection and maintenance
- Dual Lever Arms - assures more uniform gate-to-seat contact and enhances the gate’s ability to close against higher-pressure differentials

Electro-mechanical Double-Flapgate Airlock Valve
AIRLOCK VALVES FOR H-TEMPERATURE APPLICATIONS

HPTC (STANDARD SIZES)

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*Values based on 6 cycles/min. @ 100% fill (80-100 psi air)

HPSC (STANDARD SIZES)

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* Values based on 6 cycles/min. @ 100% fill (80-100 psi air)

C-SERIES

Double-Flapgate Airlock Valves

FEATURES (Standard Construction)
- Pneumatic Rotary Actuators
- High-Chrome White Iron Seats and Gates
- Dual Lever Arms
- Heavy-Duty Outboard Bearings
- Shaft Seal Packing Area
- Front and Rear Access Panels
- One-Piece Housing Construction
- Hybrid Designs

BENEFITS
- Grit and dust free for longer service life
- Higher percentage chrome for greater wear resistance
- Assures uniform gate-to-seat contact
- Means less contamination for extended bearing life
- Better seal arrangement to minimize leakage
- Permits easy interior inspection and maintenance
- Allows for larger custom capacities
- Ensures greater flexibility in the materials of construction offered
The A-Series-Cast Double Flapgate Airlock Valves are designed for medium-pressure applications and standard temperatures to 650°F. These units are an excellent, economical alternative to rotary valves. All models match the standard industry flange pattern and height. The low-profile design of the MPSA model enables it to fit in restricted space without costly structural changes.

All models are offered with the following choice of pneumatic, electro-mechanical or gravity/counter-weight actuation.

**TYPICAL APPLICATIONS:**
- Dust Collector
- Precipitator
- Cyclones

**RELEVANT INDUSTRIES:**
- Cement
- Iron Ore
- Steel Mills
- Pulp and Paper
- Fly Ash
- Chemical
- Mining and Minerals
- Recycling

**COMMON SERVICE CONDITIONS:**
- MPSA/MPFTA up to 7 psi
- MPFTA with Dual Actuators up to 15 psi
- Abrasive Materials

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Seats and Gates Can Be Re-ground - extends working life for years
- Uses Industry Standard Actuators - ensures lower replacement costs
- Heavy-Duty Outboard Bearings - means extended bearing life
**ATE AIRLOCK VALVES**

**PRESSURE APPLICATIONS**

**MPFB (STANDARD SIZES)**

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*Values based on 6 cycles/min. @ 100% fill (80-100 psi air)*

**MPSA (STANDARD SIZES)**

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*Values based on 6 cycles/min. @ 100% fill (80-100 psi air)*

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**A-SERIES Double-Flapgate Airlock Valves**

**FEATURES** (Standard Construction)
- Cast-Iron Housings
- High Chrome Seats and Gates or FG-200 Seats and Gates
- Pneumatic Double Acting Cylinder Actuators
- Access Covers with Lift Handles
- Heavy-Duty Outboard Bearings
- Stainless Steel Shafts
- Extended Shafts
- Shaft Seal Packing Area

**BENEFITS**
- Rugged Reliability
- Outstanding abrasion resistance
- Provides long trouble-free service
- Permits easy interior inspection and repair
- Means less contamination for extended bearing life
- Ensures longer service life
- Actuators can be mounted on either side of valve
- Minimizes leakage and allows for quick replacement
The F-Series Double-Flapgate Airlock Valves are designed for low-pressure applications when keeping costs to a minimum is critical. Operating temperatures are typically in the 250°F range. The F-Series is an excellent choice as a low maintenance and dependable alternative to slide gate valves and rotary airlock valves. Offered in a choice of pneumatic or gravity/counterweight actuation.

**TYPICAL APPLICATIONS:**
- Dust Collection

**RELEVANT INDUSTRIES:**
- Cement
- Limestone
- Minerals
- Foundry

**COMMON SERVICE CONDITIONS:**
- Low-Pressure Applications with 30" H₂O Pressure Differentials
- Temperatures to 250°F
- Free Flowing Abrasive Materials

**UNMATCHED COMPETITIVE ADVANTAGES:**
- Cost Effective Solution - minimizes investment
- Complete Pre-Assembled Air Operated Unit - including timer, solenoid valve, filter regulator and lubricator for fast and easy installation
- Low-Temperature Inspection Door - provides for visual inspection of Dutchman spool piece

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**F-SERIES Double-Flapgate Airlock Valves**

**FEATURES (Standard Construction)**
- Counterweight Operation (LPTF-G)
- Pneumatic Operation (LPTF-A)
- Abrasion Resistant Steel Gates
- Carbon Steel Housing Construction
- Dutchman Spool Piece
- Single or Double Configuration

**BENEFITS**
- Adjustable weights for easy setup
- Maintains consistent cycling
- Means longer wear resistance
- Provides long life and easy maintenance
- Allows for larger capacities
- Accommodates a variety of applications

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6" Stainless Steel Electro mechanical Double-Flapgate Airlock Valve
GATE AIRLOCK VALVES

PRESSURE APPLICATIONS

LPTF-A (STANDARD SIZES)

WITH PNEUMATIC ACTUATOR

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* Values based on 6 cycles/min. max.

LPTF-G (STANDARD SIZES)

WITH GRAVITY ACTUATOR

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Meyer offers a full range of services and repair capabilities when you need them. Not only do we maintain and repair our own Double-Flapgate Airlock Valves, but we also provide expert repair services on other manufacturers’ products as well.

**WE OFFER REPAIR SERVICES ON THESE AND OTHER SYSTEM COMPONENTS:**
- Double-Flapgates
- Rotary Airlocks
- Diverters
- Compressors
- Slide Gates
- Pumps
- Grinders
- Blowers

Our field service technicians are available for on-site inspection whenever you have a problem or want to talk about setting up a schedule of routine maintenance. When it is impractical to repair a unit on site, it can be shipped to our repair facility for immediate service. There it will be torn down, carefully inspected and a complete repair estimate provided prior to starting any actual repair work. Our factory-trained technicians will completely rebuild your unit to original equipment specifications.

**COMPREHENSIVE EVALUATION ON EVERY UNIT:**
- Complete disassembly
- Genuine OEM Parts
- Inspection of each component
- Re-assembly
- Comparison to original manufacturers’ specs and tolerances
- Final testing
- Repair or replacement of worn or damaged component parts
- Service Warranty

If your unit is beyond repair, or it is not economical to repair it, Meyer will give you the option of choosing between a new or re-manufactured unit from available stock.
SERVICE SUPPORTED BY
REPLACEMENT PARTS

Shafts and Levers
Thicker shafts (up to 2" diameter) offer robust strength for high-pressure applications. Heavy-duty levers assure that the gate rests squarely against the seat, eliminating air leakage.

Rotary Actuators
These modern actuators provide durable torque to operate flawlessly under severe conditions. Because they are totally enclosed, grit and dust can not degrade their performance.

Air Cylinders
Industry standard air cylinders for use in A-Series Double-Flapgate Airlock Valves only.

Seat and Gate
Durable Hi-Chrome White Iron seats and gates offer greater wear resistance than other manufacturers' designs.

Bearings and Seals
Located away from the housing, these extra heavy-duty bearings assure strength and reliability to perform under rigorous conditions. A heat shield can be provided when needed.

Air Set and Filter Regulator
Air line filter assembly, including filter, lubricator, regulator and pressure gauge.

Solenoid Valve and Speed Control
One solenoid valve, with speed controls pre-mounted; NEMA 4, 7 and 9; 110/220 volt.

Timer
NEMA 4 enclosure with red light and switch in cover. Optional proximity switches for fail-safe electrical lock-out.

Pressure Differential Regulator
Package includes sintered steel port (filter), valve and tubing to control and moderate pressure.

Adapters
All basic units available, including round, square, inlet discharge and safety guards.
In addition to Double-Flapgate Airlock Valves, Meyer designs, engineers and manufactures a wide variety of other products suitable for your bulk processing needs. All of our products receive the same high attention to detail and are made durable for long service life. The next time you are in the market to repair, replace or upgrade your process system components, give us a call. We manufacture all the key components for pneumatic conveying, process metering and dust control. We provide a properly engineered solution suited to your application.

<table>
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<tr>
<th>SYSTEM COMPONENTS</th>
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<tbody>
<tr>
<td>Rotary Airlock Feeders</td>
<td>Slide Gates</td>
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<tr>
<td>Gravity Flow Diverter Valves</td>
<td>Line Diverter Valves</td>
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<td>Tunnel Diverters</td>
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<td>Screwveyor Pumps</td>
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