

INDUSTRIAL VALVE
MANUFACTURER FOR
DRY MATERIAL HANDLING
APPLICATIONS



DOUBLE FLAP AIRLOCK VALVES



**INNOVATIVE ALTERNATIVE TO ROTARY AIRLOCKS & FEEDERS** 





# About Plattco

Plattco brings value to our customers by offering integrated solutions and programs that are fully-customizable to meet your exact specifications.

Unlike our competitors that offer a one-size fits most approach, forcing you to pay for features you don't need or sacrifice on features you do need, we partner with our customers to give you exactly what you need every time.

Today at Plattco Corporation we still specialize in industrial valve engineering for conveying, processing, and isolating dry materials in a wide variety of industrial applications. We incorporate more than sixty years of industrial valve expertise and over 120 years of metallurgical and manufacturing experience into each product line.

We design and manufacture only the highest quality Double Flap Airlock Valves, knife gates, and isolation slide gates that are used for feed and discharge of product or waste in over 100 industries worldwide.

Plattco is the standard by which valve performance is measured.

Plattco is an integrated manufacturer, with our own engineering, pattern shop, foundry and machine shop in Plattsburgh, New York. Plattco Corporation owns several U.S. and International patents and is the premier innovator in the solid materials handling valve business.

**OUR MISSION** today is that we are "Committed to adding value as a trusted partner, Plattco is a US based corporation manufacturing valves, supplying service and delivering technical expertise for customers with dry material processing applications."





#### **HOW DO I KNOW**

## If a Plattco Valve is the Right Solution for My Application

At Plattco, we value the time of our customers. We want to make the process as easy as possible for you to customize the exact solution for your application, ensuring so you don't have to pay for features you don't need or want!

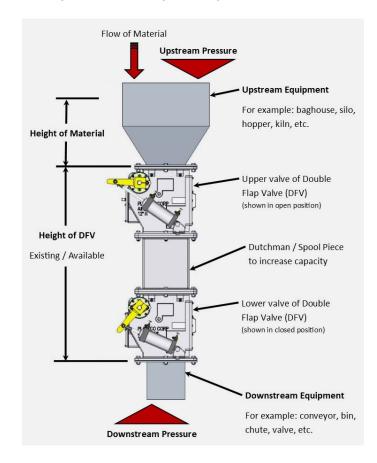
To properly specify which Double Flap Airlock Valve or Slide Gate your application requires, you can contact our sales department by phone, email or on the website. We try to quote all solutions within (24) hours of receipt. In order to properly specify your solution we typically need the following information:

- Material temperature
- Typical material particle size
- Equipment installed above the Plattco valve and any pressure above
- Equipment installed below the Plattco valve and any pressure below
- How many pounds per hour you are conveying
- Pounds per cubic foot of material being conveyed
- What type of actuation you are looking for (pneumatic, electric, hydraulic, gravity)





For any assistance with existing Plattco equipment or available upgrades, please contact our sales team at info@plattco.com, call 518.563.4640 ext 1 or visit us at www.plattco.com/request-a-quote-form.







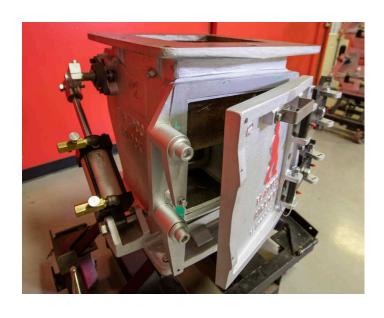
#### HISTORY OF PLATTCO

Plattco began as a gray iron foundry in 1897 – producing drainage castings, stock valves and other machined castings for the paper, mining and other regional industries. Always a leader, Plattco became the first licensee for "white irons" (Ni-Hard, Hi-Chrome, Ni-Resist) patented by International Nickel in the 1930's. These alloys are used today and support our key tenets - abrasion resistance, tight seal & sustainability.

#### **OUR PROCESS**

Plattco brings a diverse portfolio of professional engineering services to the table when designing your custom solutions. Our dedicated engineering staff works in tandem with our research and development team and our technology group to assess feedback from our customers, who are using our products every day, to optimize our designs and minimize risks.

The Plattco team wants to collaborate with our customers to allow the customer to get the most innovative, functional, and cost effective valve and gate solutions. We are committed to providing the consistent, responsive, and personal attention that each customer deserves.



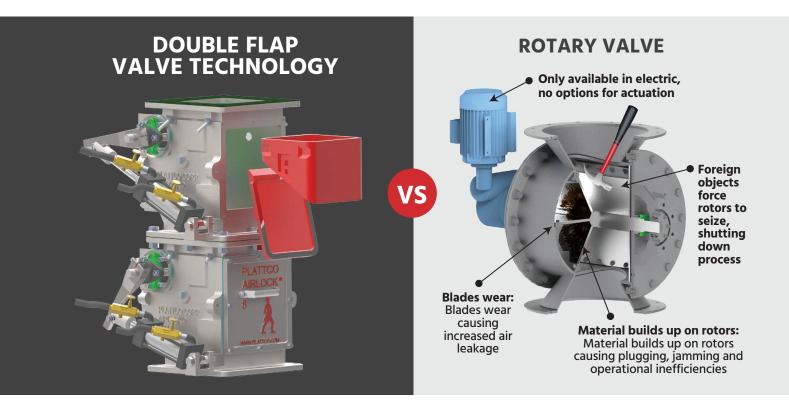
The Plattco team balances experience with fresh ideas and energy. We have a passion for inventive solutions, being the industry leader in solving dry material handling problems no one else can. Industrial valves, the Double Flap Airlock Valve, and Slide / Isolation Gates are the only things we do. Our organization concentrates on designing, engineering, manufacturing, and delivering the best valves in the world.

Plattco invites cooperative development and collaborative engineering with qualified engineering and design firms for custom designs/modifications to solve specific application problems.





# Rotary Valve Replacement



#### LOW MAINTENANCE, REPAIRABLE IN LINE, TIGHT SEAL

Plattco valves allow for safer and easier inline repair and maintenance while eliminating problems with:

- Air leakage
- Jamming
- Plugging & Bridging

We invented the Double Flap Airlock Valve in the 1960's and since that time a very significant portion of our business each year comes from replacing rotary valves in many industries world-wide. Not only can our valves perform in critical applications maintaining an airlock





under high pressures/temperatures in demanding applications, but we also have valves designed specifically for pollution control and nuisance dust.

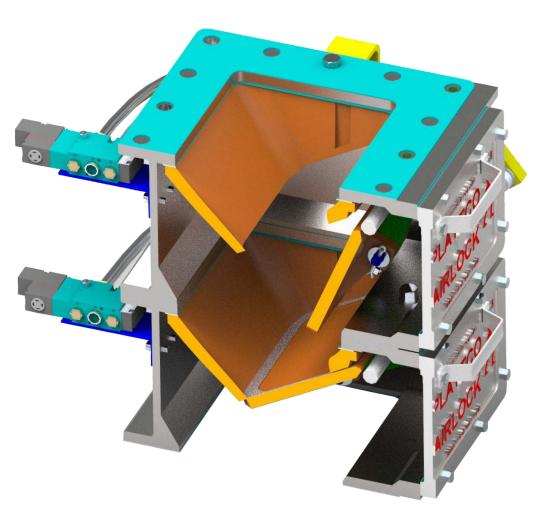
While rotary valves have their place in the market, Double Flap Airlock Valves are purchased in many applications in place of rotary valves by leaders who insist on a solution that offers less maintenance and improves plant efficiency. A Plattco Double Flap Airlock Valve seals tighter than a rotary valve as there are no clearances required in the design.

While the clearances in rotary valves increase at elevated temperatures (causing more leakage), a Plattco valve remains constant. Plattco provides a long-term solution to rotary airlock wear by eliminating the rotary action of the valves.

#### SYSTEM PERFORMANCE & EFFICIENCY THROUGH THE UTILIZATION OF PLATTCO'S DOUBLE FLAP AIRLOCK TECHNOLOGY

- One Flapper is always closed to maintain a pressure differential. Seats and Flappers (internal wear components) are heavy duty cast up to 650 Brinell and wet ground within .003" clearance when leaving the factory. Compare this to the minimum of .008 clearance between the housing and rotary vanes of a new rotary airlock valve. This translates to an estimated 66% reduction in air leakage (fugitive/tramp air) when using a Plattco Valve.
- Valves designed to handle temperatures up to 1800 F (980C) .

- Handle pressures up to 50 PSI (3.5 bar).
- Our Regrind Program allows internal mating surfaces to be resurfaced to Plattco Factory Standards at a fraction of the cost.
- Seal is not a part of the housing, internal sealing components can be safely and quickly changed in line.
- Optional coatings for internal wear surfaces available to extend the life of your valve and reduce maintenance time.
- Variety of actuation options available (pneumatic, electric, gravity and hydraulic actuation).



#### WHEN YOUR PROCESS IS CRITICAL

#### When Conditions Are Demanding, When Your Valve Has To Work, It Has To Be a Plattco Valve

Plattco's superior sealing, quality construction, proven performance, rugged design, and ease of maintenance solve the common costly problems of valve leakage, pressure loss, jamming, warping, corrosion, excessive wear, system failure, and safety hazards.

#### Our Industrial Valves are Designed to Function Perfectly in Applications Such As:

- Air Heater Hoppers
- Air Slides
- Alternate Fuel Feed Airlocks
- Ash Handling System
- Baghouses
- Bulk Handling
- Burner Chutes
- CFB Boiler
- Classifiers

- Clinker Coolers
- Coal Mill Feeders
- Conditioning Towers
- Cooling Towers
- Cyclones
- Filter Receivers
- Dust Collectors
- Grinding Mill
- Kilns

- Pneumatic Conveying
- Precipitator
- Preheater Hoppers
- Roasters
- Scrubbers
- Sorbent Injection
- Spritzer Traps
- Storage Silos
- Vacuum Systems

#### Some of the Dry Material Handling Industries that are Successful with the Plattco Valve:

- Aggregates
- Aerospace
- Asphalt
- Biomass Plants
- Bulk Dry Material Handling
- Castings
- Cement
- Chemicals
- Energy & Incineration
- Energy From Waste

- Environmental System
- Fertilizer
- Gasification
- Iron Ore
- Lime
- Manufacturing
- Metals and Mining
- Mining
- Oil & Natural Gas
- Pharmaceuticals

- Pneumatic Conveying
- Pollution Control
- Positive Pressure Conveying
- Pressure Transport Systems
- Pulp and Paper
- Recycling
- Robotics
- Steel
- Wood

#### We Have More Than 60 Years Experience Handling Dry Materials Such As:

- Aggregate
- Alumina Chips, Powder, & Rocks
- Animal Feed
- Asphalt & Concrete
- Cement, Finish Cement, & Raw Cement
- Broken Glass & Crushed Glass Dust
- Bulk Powder Solids
- Carbon Ash
- Casting Sand
- Dry Chemicals
- Clinker Dust

- Coal & Coal Dust
- Corn, Wheat
- Fiberglass Dust & Granules
- Fly Ash
- Foundry Sand
- Glass Furnace Dust
- Glass, Metal, & Plastic Beads
- Graphite
- Gypsum Rock & Gypsum PelletsStone & Stone Dust
- Iron Ore
- Kiln Dust
- Lead, Lead Chips & Lead Powder

- Metal Powders & Metal Shavings
- Minerals
- Nickel Ore
- Ouarry Dust
- Rocks
- Silica
- Soybeans & Soy Flour
- Styrofoam
- Talc
- Tungsten Carbide
- Waste Material
- Wood Chips & Dust



The Double Pendulum Valve, Double Gate Valve, Double Flap Gate, Double Dump Valves, Tipping Valves, Trickle Valves - are all names used to refer to the product we invented more than 60 years ago.

The primary reason companies buy Plattco Double Flap Valves is the airlock technology - essential to having a tight production system. Plattco Double Flap Airlock valves are designed to create a seal that will eliminate emissions, tramp, and fugitive air into your systems, while continuing to convey dry material.

# DRY MATERIAL HANDLING SOLUTION

Double Flap Airlock Valves are most commonly used in industrial applications for dry, bulk material handling applications, ranging from fine powders to chunky, odd-shape large particles with various types of equipment operating under positive or negative pressure. The primary purpose is to discharge a flow of material while maintaining an airlock at a transition point, preserving the pressure differential above and below the valve in the system. Plattco Double Flap Airlocks are superior to alternatives for bulky or abrasive materials that would jam or damage a rotary airlock.

#### **HOW IT WORKS**

Plattco Double Flap Valves operate using two distinct chambers. First, the top chamber opens to allow collected material to drop through into the bottom valve. The top valve then re-closes to prevent leakage of fugitive and tramp air through the valve. Second, the bottom chamber opens to allow material to pass completely through the valve to the system below. The bottom valve then recloses to prevent leakage of fugitive and tramp air. Then, it continuously cycles to maintain a steady flow of material and maintaining a positive seal on the system. One valve is always in the closed position, which allows the Plattco Double Flap Airlock Valve to maintain a positive seal.

# Plattco Valve Models



### H-Series

#### **PREMIERE FLAP VALVES**

Ideal for dry material handling with successful applications in industries around the world. The robust design of the H-Series is the perfect selection for large volume, large particle sizes, and the most demanding conditions. Rated for up to 40 PSI (2.75 Bar) and temperatures up to 1800F/980C.



### R-Series

#### **RADIAL VALVES**

Same features of the H-Series with an air tight radial (round) opening with round internal mating components (seat/flapper). This valve received its name based on its round (radial) opening. Rated for up to 40 PSI (2.75 Bar) and temperatures up to 1800F/980C.



### S8-Series

#### ROTARY VALVE REPLACE, LOW PROFILE VALVES

Same rugged design as our famous H-Series Flap Valve at roughly half the height for applications when headroom is restricted. This valve is named for its "S"horter profile than our original H-Series. Rated for up to 15 PSI (1.0 Bar) and temperatures up to 1800F/980C.



### **PCV-Series**

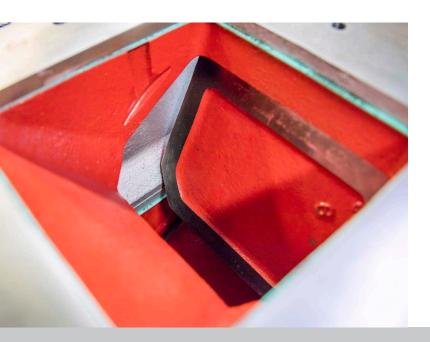
# ROTARY VALVE REPLACEMENT (POLLUTION CONTROL VALVES)

The perfect valve for pollution control systems and other low pressure differential (< 2 psi/.14 Bar) applications, with the same profile as the S8-Series. Rated for up to 750F/400C.

# WHAT IS THE VALUE THAT COMES WITH A PLATTCO DOUBLE FLAP VALVE

### Reliable, Long Lasting Airlock Seal (Direct comparison to Rotary Airlocks)

- No rotary action, eliminating the need to build clearance (leakage) into the valve.
- Housing is not part of the seal, so it can last for decades in the worst operational environments.
- Airlock is maintained even if the material is abrasive, corrosive is pressurized and/or subject to high temperatures.
- Full throat opening eliminates bridging, jamming, and material build up, allowing the passage of large, chunky, fibrous materials and/or foreign objects that may enter the system.
- Double flaps ensure the seal is never broken through the sequence of filling and emptying the valve.
- All cast construction (fabrication available when required), using proprietary alloys for consistency, durability and wear resistance.
- Proprietary Seat and Flapper design, precision machined flat to eliminate air leakage and allow for infinite renewability in-line.



#### **Easy & Inexpensive to Maintain**

- Proprietary Seat and Flapper design (the seal) allows for the components to be resurfaced to a like new condition and can be replaced without moving the valve or taking it out of service.
- Our Field Service and Repair, supplementing or eliminating the routine maintenance burden for our customers.
- The inside of the valve (including Seat and Flapper)
  is reached through access covers in the body of the
  valve making it safer, easier and more convenient
  to perform inspections and maintenance.
- In pressurized applications our patented Mechanical Shaft Seal eliminates the potential for shaft seal leakage.
- Numerous maintenance friendly features: stainless steel shafts, bushings on the arms, external seat screws, and pipe plugs for removal of flapper pins.

#### **Sustainability**

- We want to be a good corporate citizen and partner to our communities and environment which is why we value environmental sustainabiliy in our processes. At Plattco we do the following;
- Utilized reclaimed / recycled metals used in manufacturing process.
- Products designed to be repaired in line not disposed.
- Internal wear components can be restored to OEM specifications through a resurfacing program (saving our users thousands of dollars).
- We offer our customers many options to repair and upgrade our valves including the rebuild program, field services program, and core exchange.

### **Custom Engineered for Optimal Performance**

- We customize solutions to the specifics of the application based on proven technology. You get the advantages of a customized solution combined with the benefits of our expertise in similar applications.
- Variety of alloys from cast iron to stainless steel - to handle extremes of material properties & temperature.
- Pneumatic, electric, hydraulic, gravity, electropneumatic options for actuation. All actuation packages are delivered completely assembled and fully calibrated to insure quick and accurate startup.

#### Why Is Plattco's Reliable, Long-Lasting Seal So Important?

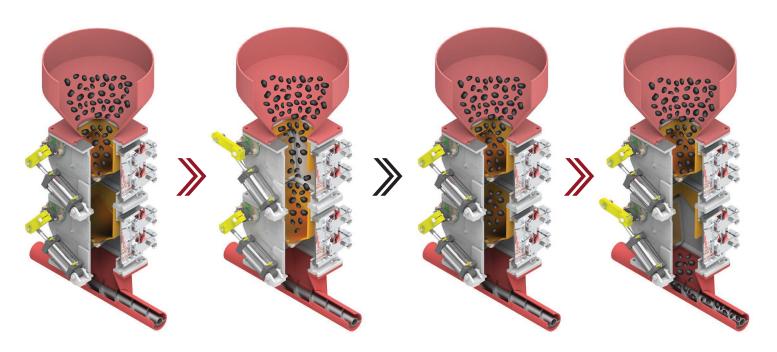
- Air leakage deteriorates system capacity, efficiency and cost-effectiveness.
- When you can't produce the amount of material needed, the result is lower sales, decreased profits, and dissatisfied customers.

- Our patented high-pressure Mechanical Shaft Seal will reduce maintenance costs, eliminate damage caused by air cutting, and assures a seal up to 40 psi (2.75 BAR).
- Four core models and corresponding slide gate options - all available with fully customizable options.
- The inlet and outlet sizes of our valves range from 6" (150mm) to 24" (610mm), based on model.
- Each model allows for the integration of a Dutchman (spool piece) to expand material throughput, cost-effectively. Dutchman (spool pieces) available in 2" to 30", based on model.
- Internal wear components (seat and flapper) are available Ni-Hard, Plattalloy650, NiResist, Stainless Steel, Plattalloy XI, and are available in both classic and knife-edge design.
- Shaft Seals available with standard packing, lantern rings, and our patented Mechanical Shaft Seals to meet your sealing needs.

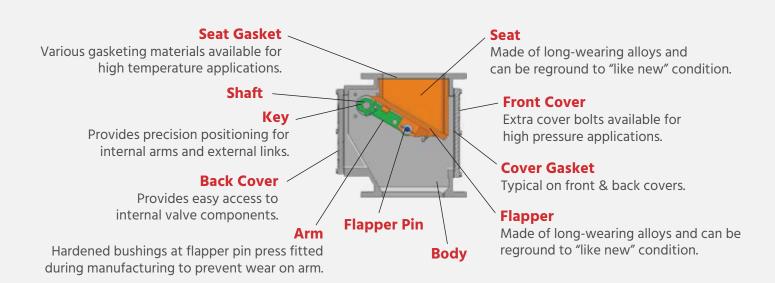


# PLATTCO DOUBLE FLAP AIRLOCK® VALVES ... THE SEAL IS NEVER BROKEN

Throughout the valve sequence, one flapper is always closed allowing the integrity of the airlock to be maintained.



The valve sequence is typically 10 seconds but can be adjusted for different metering requirements.



#### THE DOUBLE FLAP VALVE

Each Plattco Valve is designed specific to your application. This allows you to get all of the functionality you need, without paying for features you don't want. Every application comes with a unique set of needs. Factors like material characteristics, velocity, flow rates, temperatures, particle size/shape, particle hardness, and system design are all evaluated and optimized by our skilled engineering staff, allowing you to reap the benefits of customization of any of our four standard models.

Unlike many other industrial valves - including rotary airlocks that need to be taken out of service and rebuilt on a workbench - the seat and flapper of our valves can be quickly replaced without taking the valve out of service.



Plattco industrial valves are designed to be safely repaired in-line. Outboard mounted shaft bearings, which allow for air circulation, are easy to reach and maintain.

Adjustable seal retainers allow for safe and easy shaft seal adjustment or replacement. The seal pocket modular cartridge makes it quick and easy to change or adjust the shaft seal to like new condition in-line.

- Turned down and polished, stainless steel screws for easy removal of bearing.
- Removeable easy access covers.
- External seat screws for easy access.
- Keyed links and arms provide for precision positioning.
- External bearings and shaft seals retainers are both accessible for easy and safe maintenance and adjustments.
- Removable seal pockets.
- Access doors for safe, easy access for inspections/repair work.
- External actuators for easy adjustments and removal.
- Replaceable wear components to allow the airlock to be restored to factory standards.

By replacing the wear components, the Plattco Double Flap Airlock Valve's housing is designed to stay intact and withstand the test of time. We have Plattco valves that were installed in the 1980's still in service.

#### **CAPACITY CHARTS**

H-SERIES, R-SERIES VALVES			Capacities at 6 cycles/minute for valves below 406mm and 4 cycles/minute for valves 406mm and above								
Valve Size	Std Height	Std Capacity	Height of Spool Piece (mm)								
(in/mm)	(mm)	(m³/hour)	50.8	76.2	101.6	152.4	203.2	254	304.8	457.2	609.6
6" / 152.4	750.9	1.70	2.12	2.35	2.55	3.48	4.10	4.73	5.32	7.16	9.03
8" / 203.2	814.4	2.55	3.28	3.68	4.19	5.32	6.28	7.24	8.18	11.04	13.90
10" / 254.0	916.0	4.25	5.55	6.17	6.71	9.03	10.61	12.20	13.81	18.56	23.35
12" / 304.8	1119.2	8.49	10.07	10.87	12.06	14.83	17.04	19.78	21.51	28.27	34.87
16" / 406.4	1527.2	11.46	13.47	14.46	15.45	21.79	26.04	30.28	34.53	47.23	59.97
18" / 457.2	1679.6	15.28	17.83	19.10	20.38	27.37	32.26	37.58	42.08	56.80	81.51
24" / 609.6	2238.4	40.75	45.28	47.54	49.81	60.45	68.12	75.79	83.46	106.44	129.42

S8-SERIES, PCV-SERIES VALVES			Capacities at 6 cycles/minute for valves below 406mm and 4 cycles/minute for valves 406mm and above								
Valve Size	Std Height	Std Capacity	Height of Spool Piece (mm)								
(in/mm)	(mm)	(m³/hour)	50.8	76.2	101.6	152.4	203.2	254	304.8	457.2	609.6
6" / 152.4	357.2	0.48	0.91	1.10	1.30	2.38	3.06	3.71	4.39	6.40	8.38
8" / 203.2	408.0	0.96	1.67	2.04	2.41	3.74	4.70	5.63	6.59	9.42	12.28
10" / 254.0	509.6	1.87	3.03	3.62	4.19	6.45	8.04	9.62	11.24	15.99	20.77
12" / 304.8	611.2	2.94	4.53	5.32	6.51	9.28	11.49	13.73	15.93	22.64	29.32
16" / 406.4	816.0	4.53	6.54	7.56	8.55	15.17	19.41	23.66	27.90	40.61	53.35
18" / 457.2	917.6	7.08	9.62	10.90	12.17	19.16	24.06	28.95	33.88	48.56	63.31

Plattco valves use a variety of alloys for materials of construction. The following temperature ratings apply; Cast Iron = 400 C, Ni-Resist 650 C, Stainless Steel 980 C.

H-SERIES, R SERIES VALVES		Capacities at 6 cycles/minute for valves below 16" and 4 cycles/minute for valves 16" and above										
Valve Std Height (inches)	Std Height	Std Capacity	Height of Spool Piece (in inches)									
	(cf/hour)	2"	3"	4"	6"	8"	10"	12"	18"	24"		
6"	29 9/16"	60	75	83	90	123	145	167	188	253	319	
8"	32 1/16"	90	116	130	148	188	222	256	289	390	491	
10"	36 1/16"	150	196	218	237	319	375	431	488	656	825	
12"	44 1/16"	300	356	384	426	524	602	699	760	999	1232	
16"	60 1/8"	405	476	511	546	770	920	1070	1220	1669	2119	
18"	66 1/8"	540	630	675	720	967	1140	1313	1487	2007	2527	
24"	88 1/8"	1440	1600	1680	1760	2136	2407	2678	2949	3761	4573	

S8-SERIES, PCV-SERIES VALVES			Capacities at 6 cycles/minute for valves below 16" and 4 cycles/minute for valves 16" and above									
Valve Std Height (inches)	Std Height	Std Capacity	Height of Spool Piece (in inches)									
	(cf/hour)	2"	3"	4"	6"	8"	10"	12"	18"	24"		
6"	14 1/16"	17	32	39	46	84	108	131	155	226	296	
8"	16 1/16"	34	59	72	85	132	166	199	233	333	434	
10"	20 1/16"	66	107	128	148	228	284	340	397	565	734	
12"	24 1/16"	104	160	188	230	328	406	485	563	800	1036	
16"	32 1/8"	160	231	267	302	536	686	836	986	1435	1885	
18"	36 1/8"	250	340	385	430	677	850	1023	1197	1716	2237	

Plattco valves use a variety of alloys for materials of construction. The following temperature ratings apply; Cast Iron = 750 F, Ni-Resist 1200 F, Stainless Steel 1800 F.



# PLATTCO'S HIGH PRESSURE MECHANICAL SHAFT SEAL

Our dry material, Mechanical Shaft Seal assemblies outperform all others. The benefits of our seals cannot be matched by any competitor.

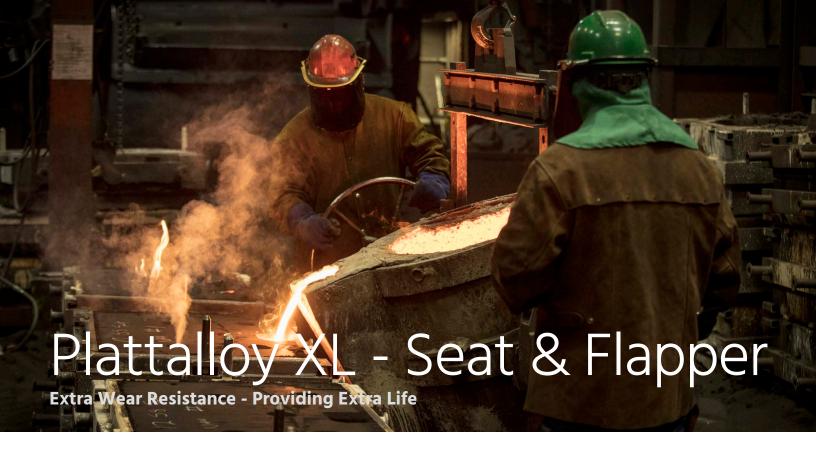
Our patented high-pressure mechanical shaft seal puts Plattco valves in a class all their own when it comes to the tightest and most effective seals available.

The Mechanical Shaft Seal is an option we provide on our models designed to handle high pressure applications.

When maintaining an industrial valve seal is critical to your process, the High Pressure Mechanical Seal of Plattco Double Flap Airlock Valves are absolutely unbeatable.

#### **EXCELLENCE IN DESIGN:**

- Eliminates damage caused by air cutting.
- Seals up to 40 psi (2.75 bar).
- Replacing shaft seal packing is no longer needed with Plattco's Mechanical Shaft Seal.
- Requires no scheduled lubrication or maintenance.
- No air is needed for shaft seals.
- Easy to replace, can be done in line.
- Features a self-contained cartridge.
- Seal can be factory rebuilt for many more years of superior performance at a fraction of the cost.
- Eliminates environmental issues from emissions to atmosphere.
- Standard rating for temperatures up to 400° F
   (200° C) higher temperature ratings available by
   request.



# PLATTCO'S PROPRIETARY PLATTALLOY XL COATING

Plattco is pleased to announce the introduction of our newest innovation, the Plattalloy XL Seat and Flapper. This innovation combines our traditional design with a proprietary coating that extends the service life of your wear parts up to 3 times.

Plattco Seat and Flappers are the two most critical parts in any Plattco Double Flap Valve. When properly maintained, they allow your valve to operate like new. The Plattalloy XL Seat and Flapper take reliability to the next level, extending the time between service intervals and eliminating costly unplanned downtime.

Three options to meet your specific needs:

- Standard Plattalloy: Traditional wear resistant alloy.
- Plattalloy 650: High wear resistant alloy.
- Plattalloy XL: Extreme wear resistant alloy.

"We installed the Plattco Valves in the middle of 2015. On December 29th, 2015 we switched to the coated seats and flappers. Since then we have run approximately 11,000 hours on our 1st mill and approximately 7,000 hours on our second mill. In comparison we were only able to get around 1,500 hours out of the uncoated seats and flappers before we had to change them. The coated parts are showing no sign of wear almost 2 years later. We have had to only replace a few mechanical parts, seals etc., which has virtually eliminated 90 to 95 percent of our down time concerning our feeders. I highly recommend the coated wear components. Should a problem arise, or you have questions, Plattco Corporation customer service is outstanding."

- Lee Fricker, Calcium Carbonate Industry







#### **EZ CHANGE SEAT > OUR NEWEST SOLUTION**

Plattco's patented EZ Seat is an innovative solution to reduce some of our customer's maintenance headaches, making it even easier and safer to replace parts in line!

Our customers have always looked to us for solutions to their most difficult dry material handling issues, and we have engineered thousands of solutions, in dozens of industries throughout the world.

### EZ Seat Provides the Features and Benefits to Our Customers

- Less time to change than a standard seat –
   which frees your maintenance team to focus on other areas of the plant.
- Easier to change than standard seat (lighter) and less risk of damage to housing – keeping not only your Plattco Valve unharmed but your most valuable asset, your employees, safe as well.

- Less space requirements for inventory and lower shipping costs support inventory reduction initiatives.
- Variety of sealing solutions in a single design rubber, metal, spray coating, customized to your application's operating parameters, which allows you to get the benefits you want without paying for features you don't need.
- Create a bubble tight seal, preventing leakage and tramp air, which improves your operating efficiency.
- Conversion kits available to retrofit existing applications – you can convert your valves easily in line today.







Knife gates, slide/isolation gates, orifice gates, butterfly valves, roller, and goggle gates are all names they may go by but there is only one comprehensive line of gates with the Plattco name!

Plattco industrial gates are designed for bulk, dry materials in a variety of applications. We offer simple maintenance shut off gates and high cycling, high temperature gates for the most demanding conditions. Just like our Airlock Valves, customers look to us when an off-the-shelf solution won't do.

Our gates are designed for handling high temperatures up to 2000F (11 OOC), materials where their abrasiveness, corrosiveness or size lead other gates to fail. For exceptional stand-alone performance or combined with our flap valves in an integrated high performance system, Plattco's maintenance, isolation, and goggle gates are ideal for demanding conditions.

Plattco maintenance gates extend the life of your valve and allow your maintenance team to perform preventive repairs safely and easily without having to remove the gate from service. Plattco gates use several different materials in its construction to achieve the best combination of functionality and cost.

## ENGINEERED UNLIKE ANY OTHER

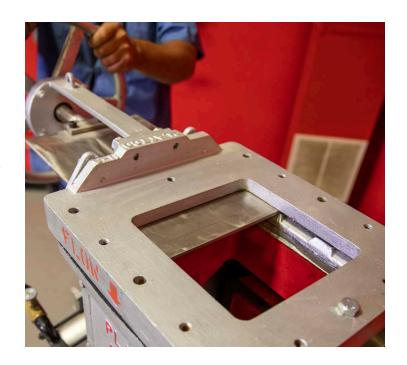
Our gates are specifically engineered to handle dry material, fine powders, pellets, granular and large chunky or fibrous material. Our design doesn't rely on elastomer seals or discs - that by design restrict the flow and decrease throughput. The displacement pockets on our gates, combined with our propriety alloys, overcome the challenges of bridging and packing material, allowing for the positive air and material shut off.

The features of Plattco gates make in-line maintenance quick and easy. Companies around the world choose Plattco when they need a solution that will:

- Minimize air leakage through the gate while maximizing material flow.
- Perform in high pressure and extreme temperatures.
- Reduce friction and power requirements for opening under a heavy standing head of material.
- Fit their specific applications using Plattco's 60 years of experience engineering gates for material handling applications.

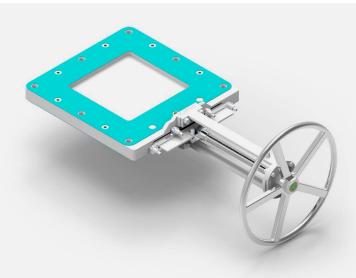
#### **CUSTOM OPTIONS**

Plattco offers an excellent selection of manual, pneumatic, hydraulic, or electric operators to suit your specific demands. Our innovative design provides the platform for a variety of actuators. Customizable options give our customers the ability to change the type of actuator, even after initial installation, as your needs may change over time.





# Plattco Slide Gate Models



This is Plattco's low-profile slidegate valve. It is commonly used as a maintenance gate above a Plattco double flap airlock valve. It is meant for low cycling applications where headroom is limited.

### **U-Series**

- Easily Handle Temperatures up to 750°F/400C and up to 2 PSI/.14 Bar.
- Dry powder and granular material.
- Low-profile design & superior construction allows for easier installation, freestanding or bolted to the valve assembly.
- Our proprietary design features an internal channel that reduces material build up.
- Graphite gate seals w/ adjustable seal retainers create a stronger, longer lasting seal, reducing production downtime, improving reliability, & eliminating spillage.
- Available in 8" (200MM), 1 O" (254 MM) and 12" (305MM) sizes.



This Plattco's most economical roller gate valve. It is commonly used for gravity flow applications that require a reliable gate that won't break the bank.

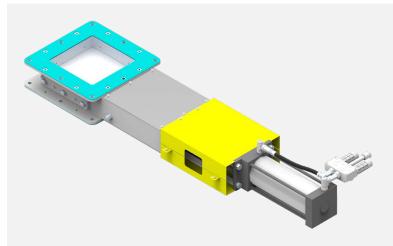




### MT-Series

- Operate in temperatures up to 750F/400C and up to 1 PSI/.01 Bar.
- Dry powders and granular materials.
- Fully customizable for any size or shape, Fully customizable flange patterns.
- Can match almost any height profile (flange to flange).
- Low profile gate with a short 4" inch/100 MM overall valve height across the entire product line to allow the gate to fit into tight spaces.
- Displacement pocket feature allows full closure, even under head of material.
- Beveled stainless steel gate leading edge, will cut through material when closing.
- Gate seals with multiple graphite rope packing with adjustable take up.

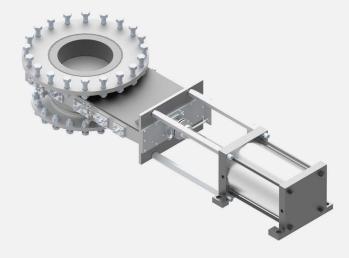
# Plattco Slide Gate Models



This is Plattco's premium roller gate valve. This valve can be customized to fit nearly any installation footprint and application requirement. These valves are common in process critical applications – where operation of your plant depends on a reliable slidegate valve.

### **KT-Series**

- Easily Handle Temperatures up to 750°F/400C and up to 2 PSI/.14 Bar.
- Dry powder and granular material.
- Low-profile design & superior construction allows for easier installation, freestanding or bolted to the valve assembly.
- Our proprietary design features an internal channel that reduces material build up.
- Graphite gate seals w/ adjustable seal retainers create a stronger, longer lasting seal, reducing production downtime, improving reliability, & eliminating spillage.
- Available in 8" (200MM), 1 O" (254 MM) and 12" (305MM) sizes.

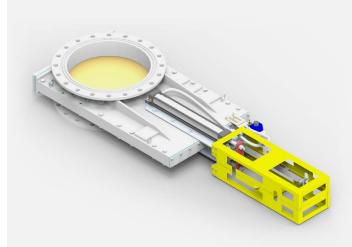


This is Plattco's high temperature slidegate valve. This valve is designed to operate handling materials at extreme temperatures. Our proprietary design allows us to handle materials up to 2000 F (1100 C) safely and reliably.

### HT-Series

- Variety of sizes available from 4"inch/100 MM.
- Fabricated plate valve body design allows for the use of high temperature capable stainless steels and in some cases exotic super-materials to handle the material temperatures.
- The fabricated valve body allows the flexibility to customize the valve's overall height and flange pattern to suit customer specific needs.
- Proprietary and unique floating seat insert allows the valve to handle red hot materials without the possibility of cracking the valve housing - even through thousands of thermal cycles.
- All designs undergo rigorous finite element analysis to ensure the design intent does not compromise the performance of the valve.

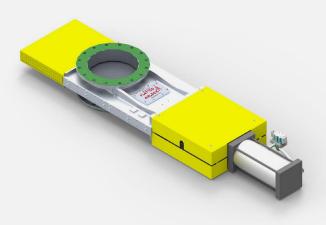
# Plattco Slide Gate Models



IS Series – This is Plattco's coal isolation gate valve invented specifically to act as the main fuel shut off valve to fluid bed boilers. Plattco invented the valve in the 1980s.

### **IS-Series**

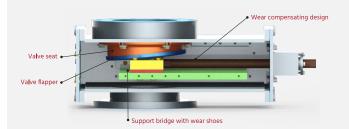
- Maximum temperature capability is 1500F air, ambient temperature materials.
- Maximum pressure capability of 15 psi / 1 Bar
- Handles dry powder materials.
- Cast valve housing made from ASTM A 297 grade HT material withstands the temperature demands of the fuel feed system.
- Standard and custom sizes available, ability to match any flanges and transition to equipment above/below
- High chrome internal sliding gate is both abrasion and heat resistant, allowing the valve to reliably operate for years.
- In-line removable and replaceable rollers and/or pins, actuation, sliding blade (gate) and packing glands to ensure no leakage to atmosphere.



This Plattco's dry scubber discharge gate valve invented specifically for the energy industry. The unique design allows the valve to reliably operate as the discharge seal of a dry scrubber system.

### Goggle Series

- Maximum temperature capability is 500F/260F.
- Maximum pressure capability of 2 PSI/.34 Bar.
- Handles dry powder materials with the capability to handle wet material upset conditions.



#### **Engineered Like No Other**

Our patented design ensures a reliable long lasting seal across the valve when closed. Plattco gates use several different materials in their construction to achieve the best combination of functionality and value.

#### **Operating Parameters**

- Maximum temperature in service of 350 F/ 176 C.
- Maximum pressure capability of 50 PSI/ 3.4 Bar.
- Can be used to handle materials ranging in particle size from powders to lump.





### **HP-Series**

#### HIGH PRESSURE SLIDE GATES

HP Series – High performance and high sealing slidegate valve specially designed for the cement industry to function as a diverter valve in critical pneumatic transport systems. The HP series slidegate valve is designed to handle abrasive dry powder materials at pressures up to 50 PSIG making it the ideal pressure or vacuum pneumatic conveying line shutoff valve.

#### **Excellence in Design**

- Variety of sizes available to match standard industry piping sizes.
- Cast seat and flapper made from Ni-hard and/ or Plattalloy XL alloy provides wear resistance and therefore valve reliability.
- Proprietary and unique valve closing action allows for a self-adjusting and wear compensating design which ensures the valve will perform throughout the production campaign.
- Adjustable gate support bridge allows for tuning of the valve to provide the best seal possible and smooth operation.
- In-line removable and replaceable parts such as: pins, sliding flapper, and packing glands allow for quick and easy maintenance.

### **Custom Slide Gates**

Plattco's engineering and design team are able to collaboratively engineer a solution to meet your dry material handling needs based on your unique combination of application details and headroom available.



# Custom Castings

Plattco has proudly been supplying castings since our origination in 1897. While custom castings were our primary core business over a century ago, today they still represent a significant portion of our sales each year. Our 120 years of metallurgical experience allows us to offer you a quality product at an exceptional value.

Our castings, like our Flap Valves and Slide Gates, still undergo all of our Quality Assurance checks and testing procedures to ensure all specifications are met.

On our campus, we have the ability to perform additional processes, including protyping, reverse engineering, heat treating, machining, coating and assembly, making us a one-stop shop for your casting needs.

Plattco is an integrated manufacturer with our own engineering, pattern shop, foundry, and machine shop in Plattsburgh, NY. Our customers come to us for the custom casting of proprietary designs or obsolete repair parts that can no longer be purchased from the original equipment manufacturer.

#### WHAT WE OFFER:

- Small to medium castings and the ability to cast components up to 2,000 lbs (907,000 grams).
- Capability to cast a variety of different alloys, grades, and classifications, including Cast Iron, Nihard, and Stainless Steel (various grades) just to name a few.
- Capability to cast components ranging in size from 1 inch (25 MM) to 36 inch (914 MM).
- Custom Castings created to customer requirements using state of the art equipment including, Mazak/
   CNC machining centers and lathes.
- On site pattern shop provides the capability to create patterns from drawings.

#### **Examples of our common castings including:**

- Andirons
- Brackets
- Incinerator Components
- Manhole Covers
- Mill Liners

- Anvils
- Grates
- Kettle Bells
- Mill Hammers



#### **EXPERTS ON INDUSTRIAL VALVE REPAIR**

Plattco experts can work on your industrial valves at unmatched labor rates and no hidden costs, enabling you to be confident that the work is done better, faster and cheaper. Only parts recommended by experts are used and provided at a discounted price, you don't spend anything extra on inventory while having exactly what is needed when it's needed. Plattco's expert advice is provided on how to prioritize repairs based on your limited resources, leaving you in control of what work is actually performed.

Our Field Service Program is the perfect option for customers with limited manpower, inexperienced staff, and corporate inventory reduction programs.

Since we do not use storefronts or distributors, there is no other contractor or service provider that has access to our replacement parts. We understand some of the challenges our customers encounter when maintaining or repairing Plattco Valves. Deferring needed repairs when you don't stock the right parts, using limited manpower for unscheduled or unplanned maintenance, or relying on varying degrees of experience, can lead to unintended consequences and create disruptions in planned maintenance.

When our customers are forced to make tough decisions they lose peace of mind and the most critical parts of their business are compromised. This is where Plattco's Factory Certified Technicians come in!





#### **HIGHLIGHTS**

- Plant authorizes the use of all parts prior to installation and parts used receive a 10% discount.
- No re-stocking fee on unused parts.
- All Technicians are Factory Certified.
- "No surprise" flat daily rates.
- Numerous safety qualifications completed (ISN, BROWZ, PICS).
- One year warranty on workmanship.
- Inspection and discovery report provided.
- Classroom and hands-on training available and fully customizable based on plant's needs.
- Customer site may elect an employee to work with our technician to improve his/her skill set.
- Summary report of work completed and work identified for future jobs.
- Compliant with all safety standards (OHSA/MSHA/ TWIC/PLANT) as part of the Plattco Safety Program.





# 40+ POINT VALVE INSPECTION

Our field service team also offers our infield 40+ point inspections and recommendations for maintenance planning. Much like an air conditioner running with an open window, when a Plattco valve's airlock isn't maintained, efficiency is lost and there are direct and indirect costs associated with these inadequacies. Plattco's Factory Trained, Certified Technicians are skilled in analyzing Plattco valves using our custom 40+ point inspection to identify maintenance priorities. They create an execution plan detailing what work needs to be completed, what needs to be refurbished or upgraded to the newest technology.

A standard Plattco valve cycles 6 times per minute, which equates to over 3,000,000 times per year! Plattco's certified field technicians use the 40+ Point Valve Inspection as well as their knowledge, training, and experience to help our customers plan and budget any preventative maintenance or repairs that need to be done.

# THE STORY OF OUR HESSIAN SOLDIER LOGO

With a unique logo like our Hessian Soldier, a common question customers have asked repeatedly over the years is "What's its origin?"

The Hessian Soldier logo is symbolic of an important time in history. The best-known pattern of early 19th century cast andirons is that of Hessian Soldiers. Believed to be inspired by the dislike of mercenary troops brought here by the British in the American Revolution, they were being burned in effigy.

The Hessian Soldier Andiron logo was adopted because of the history to our country and our company. The pattern Plattco originally used to make these Andirons was an original pattern from 1776. When Plattco acquired and used it, the pattern was already 100 years old!

Plattco was - and still is - a modern business with great respect for high quality artisans who came before. Plattco used the pattern to manufacture the andirons, which antique lovers still collect, and honored its history by using the Hessian Soldier as our logo.

#### **OUR LOGO FOR 120 YEARS**

The soldier has remained our logo for over 120 years as Hessian Soldier Andirons were one of the first products ever cast here in our foundry - the campus we reside on today for our manufacturing, engineering and sales operations. Customers were so impressed with the quality and attention to detail of our castings, they began coming to us to cast other items.

Today, over 200 years since the original pattern was created, we manufacture modern products for customers in businesses not yet dreamed of in 1776 or 1897. We are an American company in a global marketplace. We are proud that our logo honors our history, honors American craftsmanship, and honors our American identity with a pattern almost as old as the country itself.



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