

em



NUVA FEEDER Components

NUVA FEEDER components are specifically selected based on the type of material being conveyed. The UCC inlet and outlet gates along with vent valves have been designed for on/off service in pneumatic ash conveying applications. These components are rugged and easy to maintain.

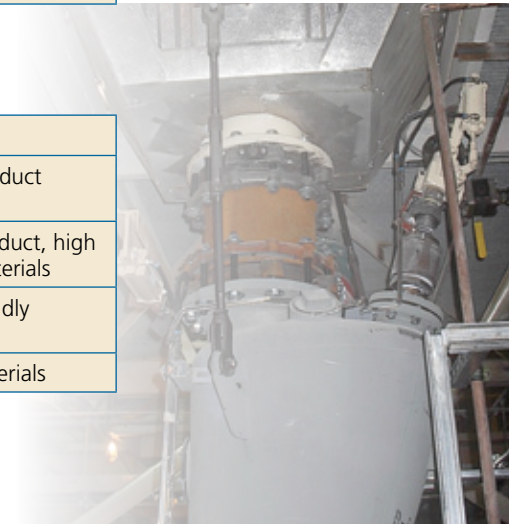


Inlet and Outlet Gates

GATE TYPE	TYPICAL APPLICATIONS
Diffuser Feeder Style	Fluidized materials
Rotary Disc Style w/Hard Chrome-Plated Disc	Low pressure (<18 psig) dry scrubber by-product or high CaO content material
Straight Drop Valve w/without Heater	High pressure (>18 psig) dry scrubber, economizer ash, large particle materials

Vent Valves

VALVE TYPE	TYPICAL APPLICATIONS
Pinch Valve	Low pressure (<18 psig) dry scrubber by-product or high CaO content material
Sheardisk Valve	High pressure (>18psig) dry scrubber by-product, high CaO content material or highly abrasive materials
Swing Disc	Low pressure (<18 psig) fly ash or low to mildly abrasive materials
Swing Disc with Tungsten Carbide Internals	Low pressure (<18 psig) highly abrasive materials



The UCC Commitment

As an industry innovator, we have long been at the forefront of ash handling technology. We recognize the importance of providing customers with the best equipment and latest technology that meet their demanding requirements and plant needs.

With our own advanced testing and technology lab, we are able to maintain control over the quality and delivery of our systems and equipment. The result is superior and predictable performance for our customers.

Our dedicated team of engineers, sales, service and in-house designers spans the globe covering six continents, assuring you that we can provide exceptional service whenever needed. This is our commitment to you.



UCC Material Handling Solutions

Fly Ash (Dilute, Medium and Dense Phase)

- Vacuum Systems
- Pressure Systems

Bottom Ash (Wet and Dry)

- Hydraulic Systems
- Pneumatic Systems
- Mechanical Systems
- Vibratory Systems

Mill Rejects

- Hydraulic System
- Pneumatic Systems

Economizer Ash

- Hydraulic Systems
- Mechanical Systems
- Pneumatic Systems

Dry Sorbent Injection

- Predictive (CFD) Modeling
- On-Site Testing and Demonstration
- Pneumatic Systems
- Installation

Lime Handling

- Truck and Rail Unloading
- Pneumatic Systems

System Components

- Crushers
- Mixer/Unloaders
- Gates/Valves
- Pipe/Fittings
- Filter/Separators
- Tanks/Vessels

NUVA FEEDER®
Positive Pressure Pneumatic System
 For Dilute/Medium Phase Conveying

Global Operations in:
 United States • Europe • China • India
 Systems in over 60 Countries

UNITED CONVEYOR
 CORPORATION

unitedconveyor.com

UCC® and NUVA FEEDER® are registered trademarks of United Conveyor Corporation. All enclosed content is provided for information only. United Conveyor Corporation reserves right to change without notice any information contained within. M10-405 ©2012 United Conveyor Corporation

UNITED CONVEYOR
 CORPORATION

Fly Ash System

NUVA FEEDER® Positive Pressure System

The NUVA FEEDER system is the most versatile of all pneumatic conveying systems. This positive pressure system handles a wide range of material (size, shape and density) and delivers high capacity conveying over long distances. With over 1,000 installations worldwide, the NUVA FEEDER positive pressure system is an industry standard for performance and dependability.

With our extensive knowledge of particle characteristics and flow behavior, United Conveyor Corporation (UCC) has designed the NUVA FEEDER system with the flexibility to handle a variety of materials including fly ash, economizer ash, air heater/SCR ash, dry scrubber by-product, petroleum coke, lime and bed ash. This results in a reliable and cost-effective solution.



Dependable Performance

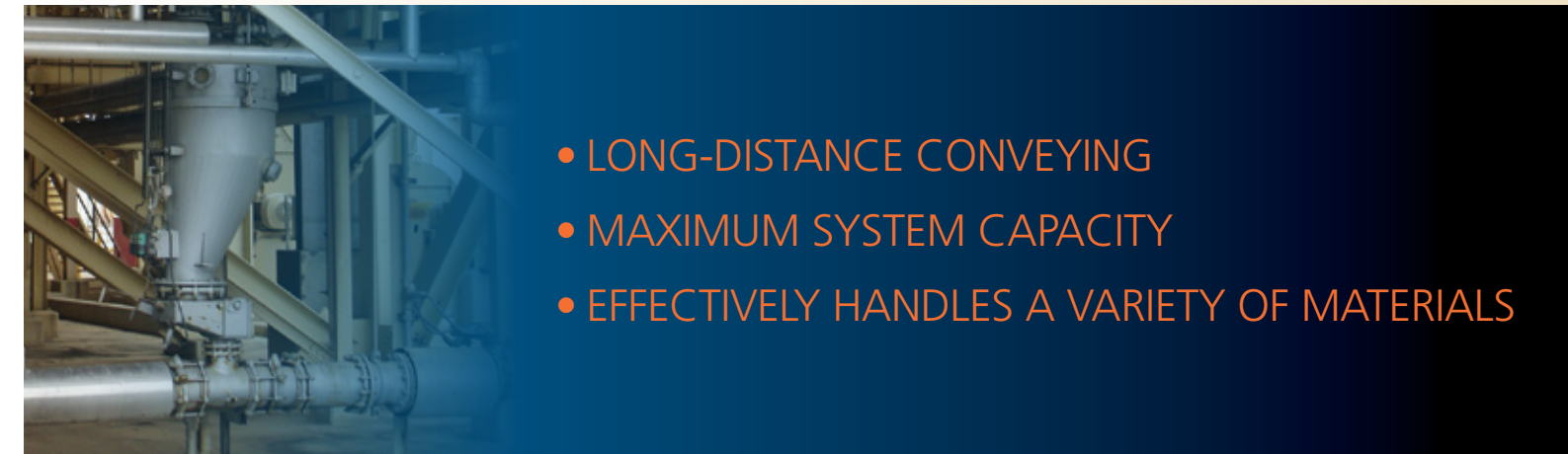
The NUVA FEEDER positive pressure system offers distinct advantages in performance where plant operations require either a continuous or an intermittent mode of operation.

- **Control Flexibility**
Line conditions are monitored through pressure transmitters which control material feed into the conveying line.
- **Start and Stop Control**
Ability to stop and start system operation without plugging due to moderate ash-to-air ratios.



Operating Sequence

- **VENT**
The pressure of the vessel is equalized to the pressure of the hopper which allows material flow into the NUVA FEEDER vessel.
- **FILL**
The upper inlet valve opens permitting material from the hopper to flow into the NUVA FEEDER body. Displaced air is directed through the vent valve to the feeding hopper.



- LONG-DISTANCE CONVEYING
- MAXIMUM SYSTEM CAPACITY
- EFFECTIVELY HANDLES A VARIETY OF MATERIALS

- **PRESSURIZE**
Once the NUVA FEEDER vessel is full, the inlet and vent valves are closed. The feeder is then pressurized and is ready for discharge.
- **DISCHARGE/CONVEY**
The outlet valve opens and the feeder continues to receive pressurizing air. This pressurizing air forces the content of the NUVA FEEDER to discharge into the conveyor air stream.



The NUVA FEEDER System Advantage

Pneumatic conveying has proven itself in abrasive applications for decades. UCC's technical experience and innovative pneumatic technology offers customers optimal solutions for their specific application.

- **High-Capacity and Long-Distance Conveying**
Provides highly reliable and long-distance operation for materials not suitable for dense phase conveying. The NUVA FEEDER system is optimal where conveying capacity requirements exceed the limits of a vacuum system.
- **Conveys a Wider Variety of Materials**
NUVA FEEDER positive pressure technology has relatively low sensitivity to pneumatic material flow characteristics allowing the system to convey larger and denser particles.
- **Highly Stable Conveying**
Controlled feed into the branch line promotes consistent operation throughout the system. Multiple NUVA FEEDER vessels are simultaneously fed on an active branch providing high aggregate feed rates into the conveyor line. This allows smaller vessels to be used for a given system capacity which reduces headroom requirements and cost.

Design Flexibility

The NUVA FEEDER body and component configurations are specifically engineered to the application incorporating considerations such as material flow characteristics, structural layout and headroom requirements. An eccentric body style is preferred in most applications, including those conveying dry scrubber by-product, because of its ability to promote gravity flow of difficult materials. A concentric body style is available for free flowing material applications with limited headroom.

Typical System Capabilities

Maximum Distance:	> 1 mile
Maximum Capacity:	220 TPH (200 MTPH)
Mass Ratio ash:air	5 - 22 #ash/#air
Air Velocity:	2400 - 4800 ft/min (12-25 m/sec)
Maximum Conveyor Line Pressure:	40 psi (275 kPa)
Maximum Prime Mover Pressure:	50 psi (345 kPa)

