PRODUCT DATA SHEET

Pneumatic Conveying Systems

DensiFlow® – Pressure & Vacuum

RELCO® DensiFlow systems are engineered for efficient, controlled powder conveying across a wide range of dairy and food applications. Both pressure and vacuum configurations are designed to maintain consistent flow, minimize product degradation, and optimize conveying performance based on application-specific requirements.

Each system is custom engineered to match powder characteristics, conveying distance, and process conditions.

System Comparison

Feature	Pressure Conveying	Vacuum Conveying
Flow Direction	Push System	Pull System
Best Use	Single source → multiple destinations	Multiple sources → single destination
Distance	Long distance	Short to medium distance
Control	Precise pressure and velocity control	Controlled vacuum and low-velocity flow
Product Handling	Gentle, low segregation	Gentle, low degradation
Installation	Ideal for silo filling	Ideal for pick-up from multiple points

DensiFlow® – Pressure

Designed for high-rate conveying over long distances, the DensiFlow Pressure system carefully balances air velocity and pressure to ensure stable material flow without stalling or excessive product degradation.

Key Features

- Electronic control of pressure and airflow
- Long-distance conveying capability
- Gentle handling of fragile, agglomerated powders
- Minimal product segregation
- Reduced pipe size vs. lean phase systems
- Optimized bin vent sizing
- Integrated pneumatic control panel with onboard PLC
- System integrity checks and continuous monitoring
- Anti-blocking control with adjustable settings
- Automatic purge after shutdown or interruption
- Lower energy usage vs. lean phase systems

Components

- Pressure vessel(s)
- Control cabinet
- Air receiver
- Bin vent
- Receiving hopper or silo
- Line injectors

Best Fit Applications

- Single source to multiple destinations
- **Silo filling and distribution systems**
- **Long conveying routes**
- Applications requiring minimal product breakdown

DensiFlow® – Vacuum

The DensiFlow Vacuum system is designed for controlled, low-velocity conveying where product integrity and flexible pick-up locations are critical. It excels in applications requiring gentle handling and clean operation.

Key Features

- Low-velocity conveying to minimize product degradation
- Automatic vacuum/pressure control
- Hygienic, easy-to-clean design
- Flexible filtration options (pulse pleated or needle felt)
- Dust-tight operation
- Compact layout for low-height installations
- Integrated pneumatic control panel
- System integrity monitoring and anti-blocking control
- Adjustable conveying parameters for different powders
- Pre-gassing and batch conveying options available
- Lower energy usage vs. lean phase systems

Components

- Vacuum pump
- Inline filter
- Vacuum receiver
- Pick-up hopper / silo connection

Best Fit Applications

- **Multiple sources to a single destination**
- Receiving from silos, bag dumps, or process points
- Short to medium conveying distances
- Low headroom installations
- **Applications requiring contained, dust-free transfer**

Custom engineered to match powder characteristics, conveying rate, and system layout.

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