

PRESSURE DENSE PHASE CONVEYING



Pressure Dense Phase Conveying

Low velocity & high capacity pneumatic conveying systems using compressed air without the risk & maintenance associated with fine tolerance rotary valve airlocks. Ideally suited to powders that do not convey reliably in dilute phase or vacuum conveying systems.

Available in single vessel and dual side by side vessel configurations for continuous conveying in restricted elevations. Each system is custom engineered to suit design parameters based on years of application experience and pressure dense phase testing at PPS.

Applications

- Fragile, agglomerated and instantized powders that need to be conveyed gently
- Mixed powders to maintain blend uniformity and reduce segregation
- Carbohydrate powders that have a tendency for line build up and plugging
- Abrasives powders to reduce component wear
- Granular and powder products
- High convey rates
- Long distance conveying
- Single source to multiple destinations

FEATURES

- Enclosed pneumatic controls, prewired and plumbed for quick installation
- Long life valve seats
- Hygienic design; USDA dairy accepted design options
- Quick clean options; swing away vessel top and outlet cone
- Hygienic air filtration and drying options
- Safety pressure relief and dump valves
- Scales for weigh batching applications



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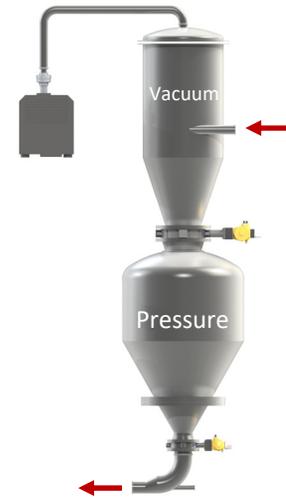
Configurations



Single Vessel - Gravity Load



Dual Vessel - Gravity Load



Single Vessel - Vacuum Load

Controls

The control system continuously monitors vessel and line pressure to actively regulate convey air volume for correct product to air ratios, maintaining reliable low velocity conveying without line plugging.

Use of compressed air boosters along the convey line are automatically regulated to suit a powder's dense phase conveying characteristics and allows conveying to be easily restarted from a stalled or upset condition.

System setting recipes gives a system total flexibility to handle different powders over a range of line distances at different conveying speeds as well as complete line purging.

Benefits

- Low powder breakdown and segregation
- Reduced conveying air volume, less receiving hopper or silo vent filter area
- Smaller line size compared to dilute phase systems for the same capacity
- Low maintenance, few moving parts
- High vertical conveying distance capability
- Rapid response to changes in conveying parameters
- Predictable performance based on PPS experience and pressure dense phase test rig

