

Coperion High Pressure Rotary Valve Dense Phase Rotary Valve Pneumatic Conveying

Dense phase rotary valve systems employ high air pressure — above 1 bar(g) [15 psi(g)] — and low air volume as the motive force to convey mostly coarse granular and pellet sized bulk solid materials through a pipeline at low velocity. The low velocity makes this type of conveying especially suitable for friable materials — such as coffee beans, grains, — as well as plastic pellets. Specially designed Coperion ZVH rotary valves are employed for continuous gentle conveying of larger particle size materials such as plastic pellets, coffee beans, grains, etc.

Dense phase rotary valve systems are ideal for achieving high conveying capacities, even at long distances. These parameters are possible due to the rotary valve's ability to withstand 3.5 bar(g) [51 psi(g)] while minimizing leakage and through use of Coperion LMR-X air control unit. The high pressure rotary valve system is ideal for coarse granular or pellet size, friable or temperature sensitive materials at various rates and/or long distances depending upon the application.

The LMR-X air control unit is used to vary compressed air pressure and flow to achieve all phases of conveying. The unit includes a pressure relief valve for system protection and an assortment of instruments for optimizing the performance. It provides for adjustment of the air flow rate and pressure to suit different pipe diameters as well as different conveying capacities, conveying routes and various materials, all in the same conveying system.

Features

- Low material conveying velocity
- Minimal headroom requirements
- Reduces material degradation/attrition
- Material conveys in slugs minimizing segregation
- Capable of high conveying rates & long distances
- Continuous or batch operation modes
- Optimizes compressed air consumption through use of Air Control Unit LMR-X
- Simple to operate controls
- Robust, reliable, safe
- Components are shipped fully assembled

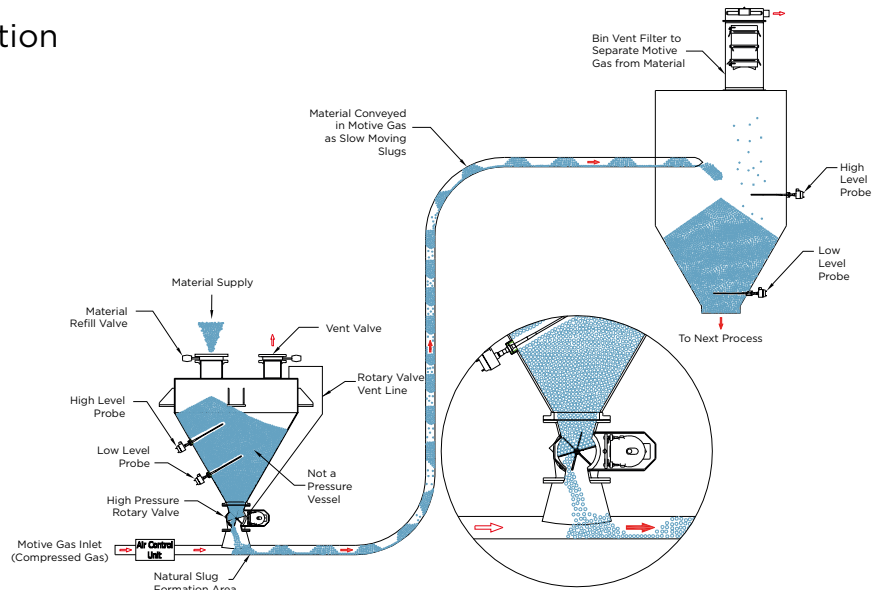


Natural slug formation

The dense phase continuous high pressure rotary valve configuration with natural slug formation is particularly adept at gently handling pellet and granular materials at high feed rates over long distances without degrading the material.

The slugs form naturally from a combination of the geometry of the high pressure rotary valve pickup shoe and the distance to the first vertical convey line direction change.

Coperion's CONTI-SCHUB™ technology has provided proven results for over 25 years.



Artificial slug formation

The dense phase continuous high pressure rotary valve configuration with artificial slug formation is particularly adept at gently handling pellets and granular materials if the product or piping layout causes problems with natural slug formation.

Coperion's TAKT-SCHUB™ technology has provided proven results for over 25 years.

