Switch for diverting or converging granular and powder materials

The Dynamic Air Multi-Port Switch automatically diverts granular and powder materials from a single pneumatic conveying system to as many as ten different destinations, such as bins, hoppers, or silos. Or, it can converge materials from several different pneumatic conveying systems to a single convey line. The smooth indexing swing tube, constructed of all steel or stainless steel, aids material flow and minimizes material buildup at corners and seams. Welds are smooth so there are no dead spots for material to collect, making the Multi-Port Switch ideal for food products or other applications where cross contamination is a major concern.

Inflatable air seals eliminate dust problems

The heart of the Multi-Port Switch is its inflatable seal at both ends of the swing tube, which contains conveying pressure up to 100 PSIG. These seals are located at the upper pivot point and at each of the outlet port connections. When the swing tube indexes to the desired port, both the top and bottom seals inflate, squeezing the spout from both directions to form a dust-tight pressure seal. The blind or unused ports are similarly sealed when the swing tube is not moving so hoppers and bins are not exposed to the atmosphere.

To index the swing tube to a new position, the seals are deflated, giving the swing tube clearance to rotate freely 360° around the center support shaft with minimal friction and effort. On the two way switch the swing tube is moved by a rotary actuator for positive positioning. When more than two positions are desired, a unique and simple Geneva drive with a single motor is utilized for exact positioning.

Features

- Dust-tight design
- Positive indexing
- Positive inflatable air seals
- All steel swing tube
- Select up to 10 or more positions
- Fully dust tight

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