BUNTING Magnetics Co.

S-Tron Metal Detection System

for In-Flight Metal Detection in Pneuamtic Conveyors

- Engineered for flexibility; works on vacuum and pressure systems
- Compact, space-saving design
- Advanced electronics to conserve good material
- Easy installation

For technical assistance CALL

(800) 835-2526

Outside U.S. and Canada 1-316-284-2020

500 S. Spencer Ave. • P.O. Box 468 • Newton, Kansas 67114 • USA

Email: bmc@buntingmagnetics.com

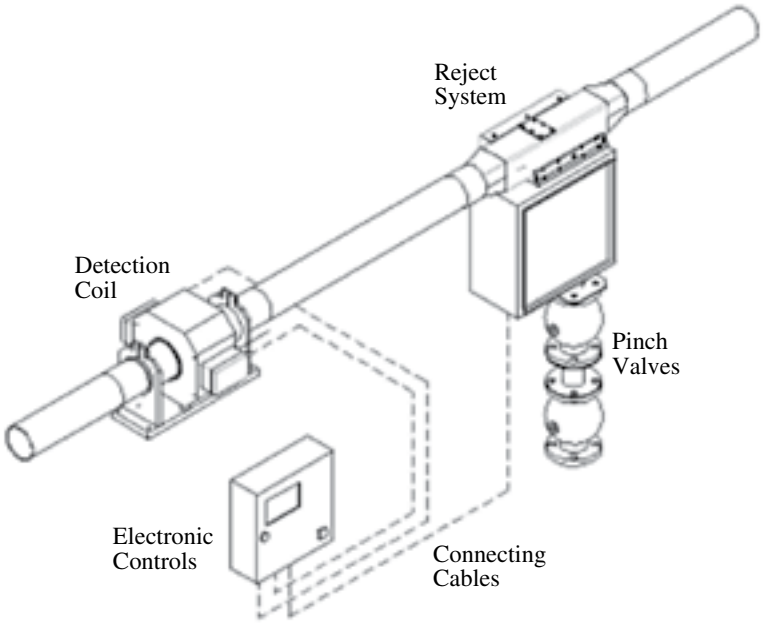
Find ALL your metal detection solutions at www.buntingmagnetics.com

S-Tron Metal Detector

W T C F P R Q

Specifications:
Contact Parts: Painted steel cabinet or Stainless Steel
Operating Temperature: 14° F - 158° F
(optional high temperature version available).
Orientation: Horizontal or Vertical
Controls: AMD 05 Triple coil, high frequency & product effect compensation.
Coil Model: "Metron" CR 05
Operating Voltage: 110/220 V AC, 50/60 Hz
Maximum particle speed: 98 feet per second (30 meters per second)
Line Sizes: 40mm; 50mm; 60mm; 70mm; 80mm & 100mm

Features: Positive Speed Control (PSC)
Pinch Valves



P.S.C. (Positive Speed Control)

This feature is extremely important in pneumatic conveying lines and can only be implemented when using a triple coil metal detection system. Since the distance between the first receiver coil (R1) and the second receiver coil (R2) is fixed, the speed of the material traveling through the detector can be established by calculating the time it takes for the metal object to pass from one winding to the other. Then by us using this calculated value, the reject system automatically adjusts the duration of the reject system to stay open longer for slower moving metal objects but react quickly for fast moving metals.

All other conventional in-line detection systems rely on simply setting the reject duration to stay open longer all the time to make sure they reject the particle under all conveying speeds. If the time is set to short, slower moving metals may not make it to the diverter in time before the reject cycle is complete and will therefore pass undetected.

Pinch Valve Reject System

The second component of the S-Tron system is the reject device. The housing is constructed of heavy gauge stainless steel and made to withstand pressures of up to 15 PSI. Both the inlet and the outlet ports are custom built to match the exact ID/OD of the existing pipe so that it install into the line with a Morris Coupling or similar clamping device.

The internal reject chamber is sealed so that during the reject event there is no loss in line pressure. There is also a pinch valve on the reject outlet that acts as an Air-lock, again preventing a loss in pressure during reject.

Upon detection of metal, a signal is sent to the Reject valve which diverts the flow of material downwards into the reject chamber while allowing the air to bypass the valve and continue to convey material.

Immediately after the material is diverted and the reject valve moves back to home position, a series of signals are sent to the pinch valves to cycle them open and closed to evacuate the material that was just rejected. One valve is always closed while the other is open so that air pressure is not lost during the evacuation period. The cycle frequency along with how often the system cycles can be adjusted on the main controls to ensure all materials is discharged properly.