Metal Detection

Gravity Flow
Product Inspection System

Stainless Steel Construction

The complete mechanism has smooth flowing lines and can be quickly dismantled to facilitate cowbell inspection

Seal-Tite "Cowbell"

The Seal-Tite cowbell style diverter minimizes system height and prevents leakage. There are no tools required to remove for cleaning and inspecting

User Friendly Interface

The washdown rated control panel is easily understood and was designed to simplify operations.

Safeline Gravity Flow: Product inspection for powder and granular material.

Safeline Gravity Flow Detectors are guaranteed to eliminate all tramp metal contamination from free-flowing materials, maintaining a stringent inspection standard on high volume bulk product lines.

These compact detectors are ideal where space is limited. With integrated digital processing electronics and high-speed diverter valves, product loss is minimized during contaminant removal. The control center can remain with the unit or mounted in a convenient location, where operating parameters are set and reviewed and access codes can be used to prevent unauthorized adjustment.

METTLER TOLEDO

- **Designed for High Volume Applications**
- **Powerphase Protection for Ultimate Sensitivity**
- **Vibration Immunity**

High Efficiency Diverter

The newly designed reject valve incorporates high-speed pneumatics with a cushioned cylinder. The Sealed-Tite "cowbell" style diverter minimizes system height and prevents leakage through the reject port when inspecting dusty product such as flour. It also enables large granular items to be inspected without danger of blockage or wear which can be a problem with rejects utilizing a flexible sealed flap. The complete mechanism has smooth flow lines and can be quickly dismantled without tools for inspection and cleaning.

Reject Confirmation

When additional security is required, or if frequent testing is impractical, the optional reject confirmation will signal an alarm if metal is detected and the reject mechanism fails to respond within a pre-set time.

Safeline's Unique Sealed-Tite "Cowbell" Style Diverter

With our unique "cowbell" style diverter and patented "Zero Metal Free Zone" (ZMFZ) technology working together, reduced space is required from inlet to outlet flange, making Safeline Gravity Flow detectors considerably shorter than comparable units. The ZMFZ technology reduces the length of the infeed pipe and allows the reject device to be positioned close to the detector without interference or false rejects. The valve is mounted beneath the detector at the minimum distance to ensure that it can be fully activated before contamination arrives, even when under maximum load.

For In-Line Testing and Performance Validation

Access and retrieval ports are supplied on the inlet and outlet pipes. Line personnel simply drop a standard test sample, embedded with a metallic test ball, into the product flow. Removable stainless steel grids, mounted on the accept and reject ports, allow the sample to be easily recovered. The detector automatically calls for performance checks when required and issues a "Test Overdue" warning if the test is not promptly completed. Once the test is successfully completed, the detector reverts to normal operation.

Standard models are available with throughput pipes from 1" to 12", for product flows up to 85,000 lbs/hour.

Special systems for specific applications include:

Duplex System

Minimizes waste on costly products such as plastic resin. The product rejected from the first system is trickle fed through a second detector. Contamination is again rejected and up to 80% of the acceptable product is redirected to the main flow.

Incline Gravity Flow

When vertical installation is not possible, special units are supplied for installation at an angle of 45° or 60°.

Internal Water Spray

For flushing the reject mechanism prior to product changeover.

High Abrasive Applications

To inspect abrasive products such as glass cullet.

Hazardous Environment

Systems to comply with Class II, Division 1 and 2 classifications.

Specifications

Electrical: 80 - 260 V 50/60 HZ (consumption 150Va), Air 6 ATS (80 PSI)

SAFELINE GRAVITY FEED METAL DETECTION SYSTEMS

Specifications

Standard Model	Throughput Pipe Internal Diameter		Typical Throughput Rate		Overall System Height		Maximum Fall Height to Input Flange		Sensitivity (mm)		
	mm	(inch)	kg/hr	(pounds/hr)	mm	(inch)	mm	(inch)	Ferrous	Non Ferrous	Non Magnetic Stainless Steel
GF25	25	(1)	400	(880)	720	(28.3)	350	(14)	0.25	0.27	0.32
GF50	50	(2)	1500	(3300)	720	(28.3)	350	(14)	0.40	0.44	0.60
GF100	100	(4)	6000	(13200)	873	(34.4)	550	(22)	0.60	0.70	0.90
GF150	150	(6)	13500	(30000)	1050	(41.3)	800	(32)	0.80	0.90	1.20
GF200	200	(8)	24000	(52000)	1250	(49.2)	800	(32)	1.00	1.10	1.50
GF250	250	(10)	38000	(85000)	1300	(51.2)	800	(32)	1.30	1.40	1.90
Short Frame Model											
GF25/SF	25	(1)	400	(880)	520	(20.8)	300	(12)	0.35	0.40	0.50
GF50/SF	50	(2)	1500	(3300)	520	(20.8)	300	(12)	0.70	0.80	1.05
GF100/SF	100	(4)	6000	(13200)	600	(23.5)	300	(12)	0.80	0.90	1.20
GF150/SF	150	(6)	13500	(30000)	800	(31.5)	500	(20)	1.10	1.20	1.60
GF200/SF	200	(8)	24000	(52000)	1000	(39.0)	500	(20)	1.20	1.40	1.80
Pharmaceutical Model											
GF 68X17	68x17	(2.6x0.7)	1000	22500	720	(28.3)	150	(6)	0.20	0.22	0.3

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