

MC-07_VEGETABLE BELT TYPE METAL DETECTOR MC



METALTRAP SS CONVEYOR

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APPLICATION

This is Continuous Belt Type Metal Part Detective machine. This Machine is specifically uses for metal part removal for any food product.

The working principle is i.e. 'PRIMARY' coil carries high frequency sinusoidal voltage which generates steady electromagnetic field inside Metal Detector Test coil aperture. The Pick-up i.e. 'SECONDARY COILS' Which are electronically balanced, sense the change in the electromagnetic field by a moving metal. With the help of Phase Sensitive Detection, good detection sensitivity is achieved for all types of Metals i.e. 'FERROUS', 'NON-FERROUS' and S.S. metal particles.

Small signal change in the Secondary Coils is amplified with large electronic circuit gain. Signal is further filtered & processed with digital circuits. Signal is compared with the set 'Defect Threshold'. If signal level crosses the set threshold level, signal is indicated as 'DETECTED' on 'REJECT LED'. The same is also displayed on LCD Display, also 'AUDIOALARM' is given & 'REJECT RELAY' is activated which in turn operates 'REJECTION MECHANISM' to reject Metal Contaminated product. Rejection quantity of the product can be optimized by precise Delay settings.

MODEL-SS-GF-100 TECHNICAL SPECIFICATION

1	Application for	All Food Product
2	Installation type	Online
3	Flow rate	1000 – 2000 Kg/hr
4	Connectivity	USB port & Ethernet port for Modbus TCP/IP PLC connection.
5	Aperture size	700 mm(W) x 225 mm(H)
6	Belt size	650 mm width
7	Display	4.5" HMI
8	Structure MOC	SS 304 matt finish
9	Utility	230 V / 1 Phase / 50 Hz
10	Required air pressure	6 bar pressure
11	Sensitivity	Fe – 2.2mm, NFe – 2.5mm, SS – 3.0mm
12	Rejection method	Flap type rejection mechanism

MOC DETAILS & FEATURE

SR	COMPONENT	MOC / BRAND DETAILS
1	Construction	Stainless Steel / Mild Steel
2	Contacts for interlock	Floating relay
3	Operating temperature	0 to 45°C ambient
4	Humidity	Up to 95% relative humidity
5	Rejection Mechanism	As per Requirement
6	Other Attachment	Various infeed mechanism like bottle separator, stabilizer, turn table etc. available

FEATURES

1	Uses ARM controller with Digital Signal processing
2	4.5" HMI Display
3	Statistical Data with event time stamping
4	Audio & graphic indication on detection of metal contamination
5	3 level Security provided
6	LCD bargraph / Numeric display to monitor Noise and Signal
7	Auto setting facility
8	Sample E- signature
9	Product auto tracking
11	Auto Validation
12	Continuous online self check monitoring system
13	Set parameter data retention on loss of power
14	Different types of rejection mechanisms depending upon type and nature of product / pack and application requirement
15	Reject confirmation
16	Data transfer to PC with MPDL software
17	Fail- safe mechanism

PREVENTIVE MANTANCE

	Caution:
	Every 4 hours need to clean belt with water
-	During Opening or closing the unit for maintenance work, or change of parts or components.
-	If a measurement, troubleshooting or an adjustment is unavoidable, this work must be done by a specialist, who is familiar with the risk involved.
	In case of any fult, check the following:
1	Disconnect the test head.
2	Check mains voltage at terminals namely L,N,E on terminal strip provided in the instrument. This voltage should be 230 VAC
3	check DC supplies at both SMPS output terminals with reference to respective grounds.
	Check if any loose connections in the system.
	SMPS 1 O/P : +12V, -12V, +24V, +5V, -5VDC
	SMPS 2 O/P : +24V, +5VDC
	If any of these voltages are not there,check loose connection if any.
	Press all respective connectors & check, then replace respective SMPS.
4	If all voltages are OK, then connect test coil.
	Check DC voltages in both SMPS once again.

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