



# CONVEYOR METAL DETECTOR



Metal Detectors are an important inspection system in the Food processing Industry. Almost all the processes industries use metal separators in order to safeguard their machineries and also to avoid reaching the end consumer. One cannot imagine any food processing industry without Metal Detectors.

PMG EQUIPMENT, is a leading Manufacturer and supplier of metal detection system. There is a wide range of customized solutions provided for varied industries who are in the processes of Foods, Pharmaceutical Chemicals, Plastics, Rubber, Feeds, Textiles & Garments etc. PMG Metal Detection systems have become part of several industries where metal contaminants have to be avoided which get into the processes. These contaminants need to be removed for avoiding damages to expensive machineries. The company offers an extensive range of metal detection and separation solutions for every type of processes industries. The conveyor METAL DETECTOR series are widely used before packing and after packing of the food materials. These detectors will pinpoint the metal contaminant before packing and separate it out. The metal detection unit is constructed in stainless steel to meet the strict, modern standards of the food industry. Every aspect of reliability and performance is being taken into account while designing the system.



## How does tramp metal get into Processes?

There are many ways and at various stages a tramp metal can enter a product. The two major stages which are widely accepted are the raw material stage and the in processes stages. The metal contaminants of the raw material stage are removed by magnetic separators and are largely ferrous contaminant. During production processes equipment continuously operates and there are chances of screws, bolts washers, sieve wires and even metal filings caused by line repairs accidentally get into the processes. Once the tramp metal becomes a part of the processes it has to be removed at the earliest before it causes any damage to the proceses machinery. Sometimes it can reach the end consumer for consumption. Utmost care needs to be taken especially in the food processing industries to avoid the tramp metal reaching the end consumer.

PMG always offers solutions to its customers and help them in onsite installation and commissioning, and in providing training to effectively carryout preventive maintenance. After sales support has always been on top priority for the company. Free service is provided for a period of one year and there after the customer can enter into an annual maintenance contract both for service and calibrations. There is also provision to enter into lifetime service package. You can be sure that by using Inline supplied Metal Detector test pieces, fully calibrated and certificated, you will be demonstrating your commitment to quality and due diligence.



**Conveyor Metal Detectors** are usually manufactured in SS 316 or 304 Finish. It is always customized to the requirement. The tunnel sizes are determined based on the size of the product that has to pass through it. The type of rejection systems is also designed based on the product and operating speeds. PMG is always striving to improve upon its product lines by continuously doing R&D and incorporating it in its products..





## Digital Gravity Feed Metal Detector Model: PMG-D-GFMD

### Features

- ▶ Automatic Balance coil principle
- ▶ 25 Product memory (Digital)
- ▶ 20 character X 4 Lines LCD Display for clear information (Digital)
- ▶ High sensitivity to all type metal pieces
- ▶ Compensation of electrical Noise.
- ▶ Improved and compact search head
- ▶ Sensitivity, Product settings and Rejection counts are recorded
- ▶ Reliable /simple and easy to operate with robust construction.
- ▶ Search heads are customized and are available to suit the requirement.
- ▶ Tiny metal pieces can either be identified or removed.
- ▶ Audio indication and Tower light indication for metal contaminants
- ▶ Automatic and manual reject systems are provided
- ▶ Waterproof search heads.
- ▶ Timer having adjustable delay and duration is provided for rejection.



**Key Pad Set Up** : The setup mode is a touch panel membrane keypad. It is simple, user friendly, easy to operate, menu driven and requires minimum operator training.

**Password protected Access** : The unit is protected with a password. This will help in avoiding tampering with the settings by the operators. Separate levels of access are provided for making changes

**Product storage memory** : There is provision to store data of 25 products. The product with its name, sensitivity, rejection time with corresponding to real time can be retrieved when required.

**Auto test validation** : There is provision provided to carry out the self test of the equipment. The Gravity feed metal detector during the self test mode will automatically check for its performance. The frequency of the self test can be fixed from a minute to 999minutes in real time. The results are documented in real time.

**Compatibility with External port** : This function allows the Metal Detector to transmit data to related equipment using an RS 485 or RS 232 interface (optional).

### APPLICATION

Food Ingredients  
Chemicals & Dyes  
Spices

Food Processing  
Pharmaceuticals  
Dough

Plastic Pellets  
Bulk Drugs  
Namkeens

Rubber Granules  
Dehydrated Materials  
Free flow Powders





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**Product storage memory :** There is provision to store data of 25 products. The product with its name, sensitivity, rejection time with corresponding to real time can be retrieved when required.

**Auto test validation :** There is provision provided to set the self test of the equipment. The Tablet metal detector during the self test mode will automatically check for its performance. The frequency of the self test can be fixed from a minute to 999 minutes in real time. The results are documented in real time.

**Compatibility with External Port :** This function allows the detector to transmit data related to equipment using and Rs 485 or RS 232 interface (Optional).

**Preset Parameter Retention :** As the instrument gets switched on, the preset parameters are automatically reloaded, eliminating the need to repeat set-up procedure. Automatic Production selection for faster system setup the storage and rapid recall of product data of differing materials simplifies the tasks of system set-up and operation, eliminating only unnecessary downtime.

**HACCP Compatibility :** Logging capability to a printer for HACCP and ISO 9001 Documentation. Operation history can be confirmed in printouts. Operations including power on/off, setting change, metal detection, etc. are stored in memory with each time. Conveyor belt can be easily detached and attached for cleaning.

**Automatic Reject Facility :** For Precise and accurate Rejection of the detected metal contamination, this metal detection system can be used in combination of a variety of reject devices like, flap type, pusher type, Puller type, Blower type etc





## Technical Specifications

MSMD- DATA SHEET

Technical Specifications	Model : PMG CMD (Digital )	Model : PMG CMD (Analogue )
Electrical Supply	Metal Detector :230 V AC single phase with earth; 50 Hz to 60 Hz Conveyor Systems: 415 AC 3Phase with Earth; 50 Hz to 60 Hz	Metal Detector :230 V AC single phase with earth; 50 Hz to 60 Hz Conveyor Systems: 415 AC 3Phase with Earth; 50 Hz to 60 Hz
Relative Humidity	20% to 80% non-condensing	20% to 80% non-condensing
Current consumption	Max 0.75 A without Conveyor / Mechanism	Max 0.75 A without Conveyor / Mechanism
Outputs	01 No.PFC relay Changeover.5A Rating. ( Optional)	01 No.PFC relay Changeover.5A Rating. ( Optional)
Operating Temperature	-50C to + 600C	-100C to +750C
Communication Port	Configurable: RS232 / RS485 or Serial / Parallel Printer Port	Not Available
Continuous Self Test	Yes	Not Available
Aperture Size	Custom Built	Custom Built
Reject Confirmation	Yes	Not Available
Sensitivity	Depends Up on Aperture Size	Depends Up on Aperture Size
Product Speed	0.1 to 05 meters/ second and standard condition.	0.1 to 05 meters/ second and standard condition.
Conveyor Belt Option	PVC, PU (Food Grade),Rubber, slatted, Canvas Sliding arrangement	PVC, PU (Food Grade),Rubber, slatted, Canvas Sliding arrangement
Metal Detector Construction	Stainless steel 316/304 or Aluminum Finish	Stainless steel 316/304 or Aluminum Finish
Conveyor System Construction	Stainless steel 316/304 or Mild Steel Power Coated / Painted	Stainless steel 316/304 or Mild Steel Power Coated / Painted
System Length with Conveyor	1.5 to 2.0 meters (Standard)	1.5 to 2.0 meters (Standard)
Rejection Mechanism	Pneumatically operated	Pneumatically operated
Reject Mechanism Option	Flap Type/ Retracting type/ Diverter type/ Pusher type/ Belt Stop type	Flap Type/ Retracting type/ Diverter type/ Pusher type/ Belt Stop type
Air Supply	Approx.4.0 bar (To Operate Reject Mechanism)	Approx.4.0 bar (To Operate Reject Mechanism)

### APPLICATION

**Food Ingredients**  
**Chemicals & Dyes**  
**Spices**

**Food Processing**  
**Pharmaceuticals**  
**Dough**

**Plastic Pellets**  
**Bulk Drugs**  
**Namkeens**

**Rubber Granules**  
**Dehydrat ed Materials**  
**Free flow Powders**