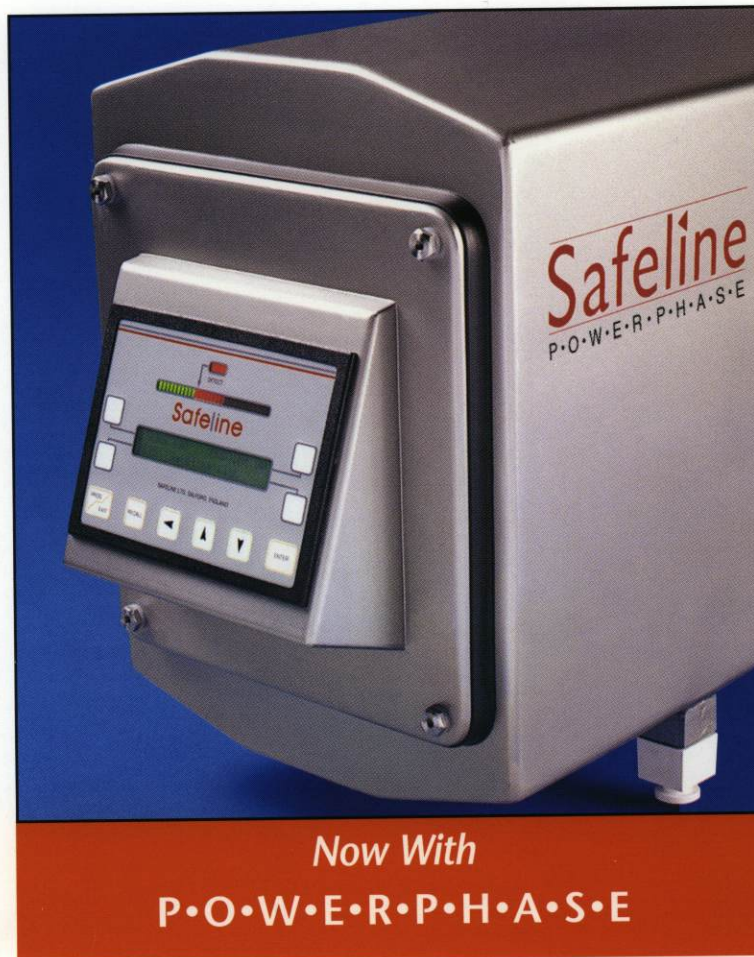


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# Safeline

METAL DETECTION

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*The Modern Solution to  
Metal Contamination Problems*

**FOURTH EDITION**



**S**AFELINE metal detectors are designed for detecting small particles of all types of metal contamination-ferrous, non-ferrous and stainless steel-in the processing industry.

Sales, Application and Technical Support are available in 40 countries worldwide and throughout North America.

**Typical applications include:**

*Bakery • Dairy • Fresh Produce • Confectionery • Snack Foods • Pumped Liquids • Poultry • Frozen Foods  
Meat Processing • I.Q.F. • Plastics • Chemicals • General Processing • Bulk Solids • Cereals • Rubber*

With several thousand units in operation, Safeline has developed a reputation for quality and reliability. All detectors are microprocessor based and use digital signal processing, incorporating a host of sophisticated techniques, to ensure simplified setup, optimize detection standards and minimize false rejects and other operational problems.

**Fully Automatic Setup**

Equipment setup may be carried out automatically, by simply passing several product samples through the detector. Once adjusted to optimum performance, the settings are held in memory for future recall. Automatic Balance Control allows the highest sensitivity levels to be maintained without readjustment or periodic false rejects caused by temperature fluctuations, electronic aging or product buildup in the aperture.

**Mechanical Coil Design**

The heart of all metal detectors is the coil system. The uniquely domed detector head and the polymer resin used to encapsulate the coil gives exceptional rigidity. This minimizes vibration interference which can cause false rejects and limit performance. Openings are available in any aperture size from small 25mm (1") to case size openings.

Standard finish is white baked acrylic, sealed to NEMA 4 for dry and dusty environments or light duty cleaning. For meat, poultry, and dairy applications, a USDA approved stainless construction is used for extreme washdown conditions.

**Zero Metal Free Zone - Reduced Installation Space.**

Traditional metal detectors need space close to the opening to be free of metal for proper operation. A new technique, *patented* by Safeline, overcomes this requirement allowing installation in much restricted space. Even large metal structures, rollers and hoppers, have no effect on performance. This feature is available as an option for conveyor installations, pipelines, gravity feed and for units installed between scale and vertical form fill seal baggers.

*Request special data sheet.*

**Key Pad Interface**

All detector adjustments are made on the washdown keypad. It is simple, user-friendly and requires minimal training. Access codes prevent unauthorized adjustments or tampering. Different codes allow adjustment of just a few, or all parameters. A bright green/red bar graph indicates detection signal size and a supertwist LCD provides clear operating information.

**P·O·W·E·R·P·H·A·S·E**

The new P·O·W·E·R·P·H·A·S·E range of detectors are available as an option on all conveyor style applications. They incorporate a completely new coil structure and digital signal processing module and provide the ultimate protection against metal contamination. Sensitivity is especially improved to stainless steel, when inspecting conductive products such as meat, cheese and bread.

This new ground breaking technology provides:

**Multi Frequency**

Ordinary detectors have a fixed frequency. P·O·W·E·R·P·H·A·S·E operates at different frequencies, depending on the product being checked, to optimize the detection level.

**Vibration Immunity**

False rejects and interference from vibrations are cancelled out--*totally*.

**Uniphase**

Unlike ordinary detectors, P·O·W·E·R·P·H·A·S·E doesn't rely on just filtering out the "noise" signals. It eliminates the signal at the source, in the coil system. This means that multiple products, all with different product effect signals, can often be inspected at the same detector settings.

*Request P·O·W·E·R·P·H·A·S·E Data Sheet.*





## FAST AND SIMPLE SERVICE

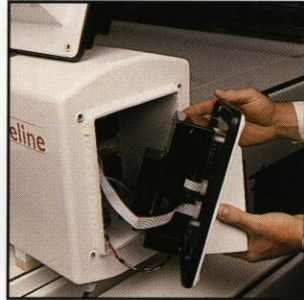
Continuous self-checking circuits monitor the detector's performance and give an alarm if a fault develops or detection levels drop by more than 10%. The complete electronic module can be replaced by the user in minutes, without training or test/setup equipment. There are no switches or "pots" to adjust and all previous

detector settings are downloaded to the new module. Modules are universal for any aperture size and for any application—conveyor unit, pipeline, or gravity fall. Down time and service costs are virtually eliminated. A module exchange program is available worldwide.

There are four easy steps to be back in operation fast.



*Loosen 4 bolts.*



*Remove complete module and unfasten "quick connect" cables.*



*Connect another electronic module.*



*Replace the 4 bolts, switch on—and it's ready.*

## SAFELINE CONVEYOR SYSTEMS

Safeline integrates the metal detectors with a variety of mechanical handling and auto reject devices, for a complete inspection system. The design of the conveyor system will have a major impact on your detector's performance. Standard on all Safeline

conveyors is heavy gauge polished stainless steel tubing, TIG welded with no bolted assemblies. Eddy current loop isolation is optimized to prevent static buildup or false rejects and to ensure rapid startup and commissioning. Standard conveyors and customized complex mechanical handling systems for packaged, bulk, frozen or sticky products, are detailed in a separate brochure.

*Request "Conveyor and Auto Reject Systems" brochure.*





## ***Inspecting Pumped Liquids and Slurries***

Detection of metal in soup, peanut butter, meat, jam and similar products may be carried out with the Pipeline inspection system consisting of a metal detector, throughput pipe and automatic 3-way divert valve mounted in a framework for suspended or floor mount. Available in pipe diameters from 25mm (1") to 150mm (6"), the systems are constructed from stainless steel, USDA approved, suitable for washdown to exceed NEMA 4X/IP66 and are built to stringent sanitary standards.

Heavy duty pipes with swagged metal fittings are designed to withstand up to 1000 PSI burst pressure. Each pipe may be individually pressure tested and provided with certificate, if required.

*Request "Pipeline" data sheet for specifications.*

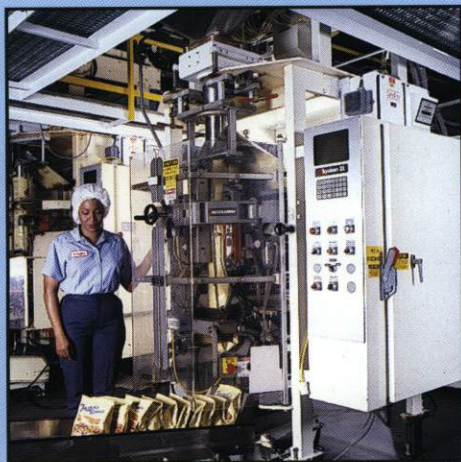


## ***Inspecting between Scale and VFFS Bagger***

A range of detectors, from 2" to 10" diameter, incorporate zero or reduced metal free zone capability for installation between scale and VFFS bagger in the minimum possible space or below an auger filler.

Typical applications include snack food and cereals. Available with non-metallic throughput pipes, funnels and custom built support frames for any scale/bagger combination.

*Request booklet "Metal Detector Installations Between Scale and Bagger," with specification and drawings of typical layouts on various single and twin scales and baggers.*



## ***Inspecting Bulk Powders and Granules***

The gravity feed metal detection systems are designed to inspect any free-flowing bulk powder or granular material such as flour, sugar, cereals, plastic pellets, peanuts and chemicals. The unit fits into an existing pipeline or beneath a feed hopper and the product falls by gravity. A high speed reject valve diverts ferrous, non-ferrous and stainless steel contamination from the main flow.

Standard systems are available with circular throughput pipes from 25mm (1") to 250mm (10") to cope with throughput rates up to 100,000 pounds/hour. Rectangular and larger throughput systems are available to special order, suitable for floor or suspended mounting.

*Request "Gravity Feed" data sheet for details of system dimensions, throughput rates and sensitivity.*



## ***Inspecting Pharmaceutical Tablets***

The pharmaceutical detector inspects tablets at up to 10,000 per minute, at the outlet of the press either before or after the deduster. Ultra high sensitivity gives exceptional sensitivity to stainless screen wire. Easily disassembled for cleaning. Validation procedure and test pieces available.

*Request "Pharmaceutical" data sheet for specifications.*

***Other detectors in the Safeline range. Request individual data sheets.***

### ***Ferrous-in-Foil Detector -***

Detects ferrous metal in products packaged in aluminum foil.

### ***Single Face Detector -***

Mounted above or below the line to inspect wide thin product such as textile and carpet.

### ***Inverse Detector -***

Confirms the presence of an essential metal component in every pack, such as foil premiums in cereals or medical supplies. Packs with missing components are automatically rejected.



## THE SAFELINE DIFFERENCE

**W**hen you buy a metal detector what you really want is a metal free product. No problems, no hassles.

That is why since 1990, thousands of users have decided it was worth extra to switch brands and purchase the "top of the line" metal detector. Not just for more detector features or higher sensitivity but the Engineering Excellence and commitment to total customer support that Safeline offers.

**Customer Support.** Support such as Training Seminars by our own qualified auditors to help you develop an effective metal detection program and by producing the widely used "Guide to Reducing Metal Contamination in the Food Processing Industry."

**Guaranteed Sensitivity.** Sensitivity guarantees given by Safeline are just that—guarantees. Should equipment fail to perform as guaranteed, it can be returned and your money refunded.

**Meet Critical Startup Dates.** With over \$1 million of metal detectors in inventory and a brand new manufacturing and engineering facility, Safeline can respond quickly to meet your critical startup dates.

**Approval by Vendor Programs.** Using the detector approved by so many Vendor Certification Programs, means that you can rest assured you will be able to meet your detection standards, as well as comply with new vendor requirements in the future.

**Maintain Confidence of Line Operators.** Problems with detectors tend to be erratic operation and frequent false rejects. If line personnel lose confidence in the system and assume rejected product is good, frustration develops and the whole inspection process may be compromised.

By relying on the "top of the line" detector you avoid these problems and know you are doing everything possible to provide your customers with the very best quality product.

### THE SAFELINE CORPORATE MISSION.

- ▶ To be the preferred supplier of metal detection systems to the processing industries.
- ▶ To give total support to our customers and guarantee satisfaction before and after the sale.
- ▶ To educate our customers with:
  - Comprehensive QA training and audits
  - Educational Seminars
  - Publication of the informative "Guide to Reducing Metal Contamination in the Food Processing Industry."
- ▶ To exceed our customers expectations.
- ▶ To never compromise on quality or design for short term gain.
- ▶ To conduct our business with integrity.

## SAFELINE EXTREME

High pressure washdown - no leakage or water intrusion, *guaranteed*.

The USDA approved stainless enclosure is designed for the tough environments in meat, poultry and dairy plants and is suitable for repeated washdown to 1,000 psi—far exceeding NEMA 4X specifications. No more costly and time consuming repairs. The Safeline unit is designed to keep out the water and keep on running—guaranteed. *Request Safeline Extreme data sheet.*

The membrane keypad may be hosed directly. No bolts need to be loosened or covers opened each time an adjustment is required. This avoids the common problem of water intrusion from covers being left open, or improperly tightened, and gasket seals becoming worn from repeated openings. This technique also has a benefit in dusty environments by preventing dust reaching critical electronic components causing premature failure.

The joint between the liner and stainless case is another common source of water ingress. Safeline eliminated it by permanently bonding a second heavy duty liner and fixing with a stainless bezel.

Condensation is prevented by using a polycarbonate spacer to maintain an air barrier between detector electronics and the equipment exterior.





## QUALITY MANAGEMENT

Eliminating metal contamination depends not only on the metal detector you choose but also your overall metal detection program. Safeline provides quality audits and quality training seminars to assist companies in incorporating metal detection into their HACCP and other quality management programs such as ISO 9000.

In addition, the Safeline detector incorporates additional capabilities to ensure your overall quality program is optimized.

## Performance Validation Routine

This feature allows users to confirm that the metal detector is tested by qualified personnel with known test standards at agreed time intervals. Performance Validation will be increasingly demanded by Vendor Certification Programs. The test sample sizes are programmed into the detector for each metal type and the required interval between testing is determined. After the elapsed time, a warning is given indicating machine testing is due or overdue.

To complete the test, authorized personnel pass correct sample sizes of each metal. If the test is successful, the detector reverts to normal operation.

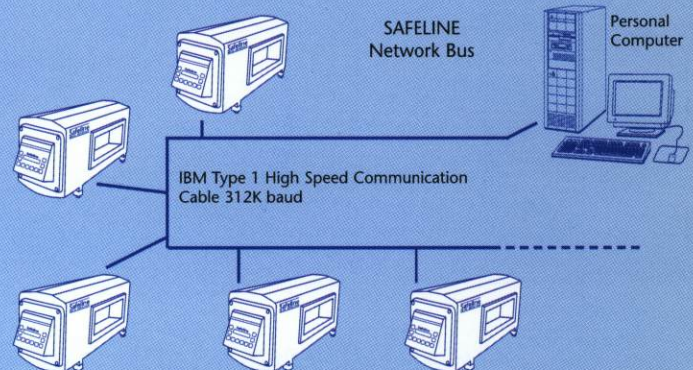
## Printer Output

The printer port is compatible with any low cost hand held printer and may be used to provide written evidence that inspection has been carried out to agreed standards and testing has been properly completed. An internal clock allows time/date stamping of all important events.

## Safenet Plus - Detector Networking

Networking all metal detectors to a central PC, provides users with comprehensive management information. Using the "Windows" based Safenet Plus program, up to 50 detectors can be linked on a single network. Operating and test status of each detector is immediately visible. All detector controls can be reviewed and adjusted and shift reports prepared to provide quality documentation and evidence of inspection. A detailed booklet is available answering common questions about networking and discusses hardware/software needs.

*Request Safenet Plus Information Booklet and data sheet.*



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