



Y-Valve Gravity Fall

Robust construction

Rapid, in-process test facilities

Easy-clean design

Y-Valve Gravity Fall

Metal Detection Systems for Powders & Granules

Maximum Protection, Ultimate Product Quality

Optimised Operational Efficiency

Designed to deliver ultimate product quality and total peace of mind for you and your customers, METTLER TOLEDO SAFELINE's Y-Valve Diverter gravity fall systems inspect free falling fine powdered products for metal contamination.

High frequency operation and sophisticated electronic filtering techniques combine to deliver the ultimate in metal detection sensitivity. This enables all metals to be identified in the product flow. Contaminants readily detected include ferrous, non-ferrous (including aluminium) and the most difficult to find non-magnetic stainless steels.

On detection of metal, a fully automatic, high speed diverter device is operated removing the contaminated product from the main product flow. The combination of maximum detection capability and the most efficient rejection systems lead to optimised operational efficiency, maximised profitability, and compliance with both internal and external standards and regulations.

Rapid set-up through easy to use interfaces

Set up could not be easier through a choice of easy to use intuitive operator interfaces which can be located either adjacent to, or remotely from the working environment.



The Signature software platform provides access through a robust, menu driven membrane key panel.



The Profile software platform provides additional features through a full colour touch screen interface.

Flexible design to suit all applications

Y-Valve gravity fall systems incorporate circular inlets and outlets as standard enabling easy integration with surrounding equipment and systems to take place. They are particularly suitable for the inspection of fine, dusty, high value powders. Innovative seal design provides a dust-tight seal to minimise the escape of good product into the reject channel reducing product waste.

Installation in the tightest spaces

All METTLER TOLEDO SAFELINE gravity fall systems utilise patented Internal Cancellation Field (ICF) technology which enables them to be installed close to other metal structures without compromising sensitivity performance. This combined with compact, innovative reject device design means that systems can be installed in the most restricted of spaces.

Reliable, robust design

Built for installation in tough environments, all METTLER TOLEDO SAFELINE gravity fall systems utilise fully welded stainless steel support frames and robust construction techniques. This leads to low maintenance requirements and maximum reliability providing the lowest overall cost of ownership.

Maximised uptime through easy clean design

Y-Valve diverters are designed for ultra-rapid dismantling. The whole diverter device is hinged, enabling it to be swung out of the process line without the need for special tools. This makes it particularly suitable for use in instances where product changes are frequent and regular cleaning between production batches is required. This means that clean down procedures are shortened and production capacity is maximised.

Rapid in-process testing facilities

Optional integrated test facilities can be provided enabling performance validation procedures to take place without disrupting the production process to maximise up-time and plant efficiency. Data gathered from test procedures can be used to prove compliance with industry standards and regulatory requirements.

ATEX compliance for explosive atmospheres

Designed for use in dusty environments, METTLER TOLEDO SAFELINE gravity fall systems can be supplied with full compliance with ATEX EXII Cat 2D T79 C.

Optional extras

- Inclined systems
- Special throughput tubes for high abrasive non-food applications
- Air-cooled systems for high temperature products



Rapid dismantling without the need for tools for easy cleaning and minimised downtime



Integrated test facility provides efficient means of testing detector performance and reject diverter operation

Product Data

Model	Nominal Internal Tube Diameter	Typical Throughput Kg/hr*	Overall Length**	Max Fall Height***
GF 50	50 mm	1,500	850 mm	350 mm
GFRH 50	50 mm	1,500	730 mm	300 mm
GF 75	75 mm	3,500	1030 mm	550 mm
GFRH 75	75 mm	3,500	810 mm	300 mm
GF100	102 mm	6,000	1000 mm	550 mm
GFRH 100	102 mm	6,000	810 mm	300 mm
GF 125	121 mm	9,500	1,075 mm	800 mm
GFRH 125	121 mm	9,500	900 mm	500 mm
GF 150	145 mm	13,500	1,150 mm	800 mm
GFRH 150	145 mm	13,500	1,000 mm	500 mm
GF 200	200 mm	24,000	1,400 mm	800 mm
GFRH 200	200 mm	24,000	1,200 mm	500 mm
GF 250	250 mm	37,500	1,500 mm	800 mm

Larger diameter (300 mm) is available upon request.

* Actual rates will depend on the bulk density of the product and its flow characteristics.

** Overall length, excluding test kits

*** Distance from inlet flange of the detector to the point where the product starts to fall

Sensitivity

Sensitivities are given as a guide to performance and the data quoted is based on the SAFELINE "boost" performance algorithm being switched out. Achievable sensitivity will be dependent upon the product being inspected, the physical installation of the unit and the final specification of the model chosen.

Enhanced performance may be attainable in some installations by using the SAFELINE "boost" algorithm.

Model	Fe	Non-Fe *	SS**
GF 50	0.3 mm	0.3 mm	0.4 mm
GFRH 50	0.4 mm	0.4 mm	0.6 mm
GF 75	0.4 mm	0.4 mm	0.6 mm
GFRH 75	0.5 mm	0.6 mm	0.8 mm
GF100	0.5 mm	0.5 mm	0.7 mm
GFRH 100	0.6 mm	0.7 mm	0.9 mm
GF 125	0.6 mm	0.6 mm	0.8 mm
GFRH 125	0.8 mm	0.8 mm	1.1 mm
GF 150	0.7 mm	0.8 mm	0.9 mm
GFRH 150	0.9 mm	1.0 mm	1.2 mm
GF 200	0.8 mm	1.0 mm	1.1 mm
GFRH 200	1.1 mm	1.3 mm	1.4 mm
GF 250	1.0 mm	1.2 mm	1.3 mm

* Non-Fe includes aluminium, brass, copper, phosphor bronze, etc.

** Stainless Steel sensitivities quoted are for "non-magnetic grades."

www.mt.com/metaldetection

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Subject to technical changes

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Printed in UK

SLMD-BRO-EN-Y-Valve-0408