

## Magnetic Attraction

Most common manufacturing applications have a requirement for the use of Industrial metal detection systems for the inspection of bulk powders, granular or free flowing products. This is common place within the majority of most Food, Pharmaceutical and O.E.M applications where metal detection systems are used as part of a quality control programme. SHAPA members offer a complete range of solutions to meet this type of application and 2 of the most typical are a Gravity Fall system or a Throat type metal detector for more information on the types of equipment available just visit the SHAPA website at <https://www.shapa.co.uk/metal-detectors/metal-detectors.php>

### Gravity Fall

An Integrated Metal Detection System can be specifically designed for the inspection of granular and powder products and the elimination of any contaminating metals, whether magnetic, non-magnetic or stainless-steel.

The design of the system can also incorporate fast reject valve drive response times to detect and reject any contaminants without adversely affecting the product flow. The technological and design choices made by SHAPA members allow the parts that are in contact with the product flow to be disassembled, cleaned and maintained without



significant delays to the manufacturing process, The systems can also operate in a fail-safe mode, thus avoiding the risk of contaminants passing through even when the system is deactivated or when the electrical power supply is interrupted.

These metal detection solutions are available for Atex applications and SHAPA members can offer fully certified systems covering zone 20-22 together with an in built test kit facility and catching grid to accurately challenge the sensitivity of the metal detection unit in actual working conditions.

ATEX Gravity fall system.

### Throat Detection.

Another solution for the inspection of powder and granular products is to incorporate a Throat type metal detector.



Typical applications would include the positioning of a Throat detector underneath a multi-head weighing machine, underneath a volumetric filler, or above a IBC for bulk filling applications and by sending a signal to a bag making machine to indicate a detection event contaminates can be excluded from the downstream process.

This type of Metal Detector can be available in a various range of aperture sizes from 50mm to 250mm

## **Custom Magnetic Separators**

In addition to a range of standard products SHAPA members can design and manufacture bespoke industrial magnets for the removal of metal contamination. These magnets can be manufactured to meet your own project specifications using both 2D/3D CAD software, and can be imported into your designs for your approval prior to manufacture. Magnets can be constructed from either 304 or 316 stainless steel and can be fully welded, crack and crevice free to food or pharmaceutical standards. Various finishes are also available such as painted, bead blast, dull polish, or mirror finish.

## **Magnet Testing**

The British Retail Consortium (BRC) requires that magnetic separators that are to be used for metal contamination removal in the food industry, are tested and certified. SHAPA members can test your existing magnetic systems, providing accurate and relevant documentation as required by the BRC to complement your existing HACCP procedures.

As can be seen there are many differing processes and equipment under the global heading of metal detection, this is where SHAPA can help, with its members many years of expertise through operating and providing magnetic detection and contaminant removal solutions you can be assured that SHAPA members have the right solution for your process. A quick visit to the Equipment Finder section on the SHAPA website [www.shapa.co.uk](http://www.shapa.co.uk) will guide you through the different choices ensuring you have the right solution for your process needs.

For more information and assistance with all your solids and bulk handling requirements, visit the SHAPA website at [www.shapa.co.uk](http://www.shapa.co.uk) or email your requirements to [info@shapa.co.uk](mailto:info@shapa.co.uk) where our members will be happy to help.

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