



Metal Detection and Checkweighing Combination Systems Specification Sheet

One frame that checks a pack for metal and weighs it, rejecting on either result.

Models in this sheet: Rectangular Conveyor Metal Detector Head for Bulk Material, Pipeline Feed Metal Detector for Liquid and Juice, VMS-4 Tunnel Metal Detector Search Head, HKN-800D Conveyor Belt Needle Detector

Figures in this document are those published by the factory for each model. Where a value is shown as TBC it is not published, and we confirm it with the factory before order rather than estimate it. Specifications are subject to change without notice.

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1. Rectangular Conveyor Metal Detector Head for Bulk Material

This detection head separates so it can be fitted over an existing conveyor without cutting the belt, which is the difference between a half-day installation and rebuilding the conveyor. It is aimed at bulk material: coal, cement, paper stock, mineral and food, where metal fragments damage the machinery downstream as much as they contaminate product.

Key benefits

- Detector head separates, so the existing belt does not need to be cut
- Stainless steel detection head
- Stores test data for more than 100 product types
- Self-learning digitally learns and stores product features, no manual parameter setting
- Sends a stop signal to the conveyor system through intermediate relays

Specification

Installation	Horizontal as standard, other angles on request
Detector Head	Separable, stainless steel, no belt cutting required
Product Memory	more than 100 products
Learning	Self-learning, automatic digital storage of product features
Alarm	Sound and light with automatic stop
Line Control	Stop signal sent to the conveyor via intermediate relays
Display Languages	Chinese and English, others selectable
Tunnel Size	made to order

2. Pipeline Feed Metal Detector for Liquid and Juice

This pipeline detector works on electromagnetic induction, so it catches non-ferrous contaminants as well as iron: copper, aluminium, tin and stainless steel all disturb the field, ferrous by changing the magnetic distribution and non-ferrous by eddy current. It combines an induction coil with an automatic removing device, so contaminated product leaves the flow without stopping the line.

Key benefits

- Detects iron plus copper, aluminium, tin and stainless steel
- Induction coil paired with an automatic removing device
- Works on liquid and beverage product inside the pipeline
- Shell in A3 painted steel plate or 304 stainless steel
- Acts as both a detector and a metal separator

Specification

Detection Principle	Electromagnetic induction
Detected Metals	Iron, plus copper, aluminium, tin and stainless steel
Construction	Induction coil plus automatic removing device
Shell Material	A3 steel plate with painted coating, or 304 stainless steel plate
Separator Action Time	0.5 s
Pipe Diameter	TBC - confirm against your pipework
Sensitivity	TBC - confirm against your product

3. VMS-4 Tunnel Metal Detector Search Head

The VMS-4 is a detector head rather than a complete machine, so it can be attached to an existing conveyor instead of replacing it. It runs variable-frequency detection from 31 to 882 kHz, carries a 7-inch touchscreen with 33% more space than the previous generation, and its Auto-Learn gives working sensitivity out of the box. The sealing arrangement is rated beyond IP69K.

Key benefits

- Variable-frequency detection from 31 to 882 kHz
- Auto-Learn delivers high detection sensitivity straight out of the box
- 7-inch touchscreen with 33% more space than previous generations
- Sealing arrangement rated beyond IP69K for washdown areas
- Attaches to an existing conveyor rather than replacing it

Specification

Type	Tunnel metal detector search head
Frequency Range	31 to 882 kHz, variable
Display	7-inch colour touchscreen
Product Setup	Auto-Learn with product selection from the interface
Ingress Protection	Beyond IP69K rating
Standards	Configurable for IFS, BRC and FSMA compliance
Aperture Size	TBC - confirm against your product
Mounting	Attaches to an existing conveyor, or supplied with one

4. HKN-800D Conveyor Belt Needle Detector

The HKN-800D publishes what a needle detector should: detection capability from Fe 0.8 mm at a 100 mm working height, stepping down as height rises to Fe 1.5 mm at 250 mm. Sensitivity adjusts across 12 levels from the touch screen, and a safety lock fixes the setting so it cannot be changed without authority.

Key benefits

- Published detection capability against working height, Fe 0.8 mm at 100 mm up to Fe 1.5 mm at 250 mm
- Sensitivity adjustable across 12 levels from the touch screen
- Safety lock fixes the sensitivity setting against unauthorised change
- Location display indicating where the needle is on the product
- Counter system tracking qualified and unqualified items

Specification

Model	HKN-800D
Detection Method	Magnetic induction, digital process
Detection Capability	Fe 0.8 mm at 100 mm, Fe 0.8 mm at 120 mm, Fe 1.0 mm at 150 mm, Fe 1.2 mm at 200 mm, Fe 1.5 mm at 250 mm
Detection Height	100, 120, 150, 200 or 250 mm
Detection Width	600 mm net width, non-standard sizes to order
Detection Adjustment	Touch, levels 1 to 12
Alarm Method	Sound and light alarm, return, then restart
Power Supply	AC 220 V, 50 to 60 Hz
Rated Output	140 W
Machine Size	1820 x 1050 x 900 mm
Weight	280 kg

