Thermo Scientific APEX 500/300 HD (Heavy Duty) Metal Detector

Ultra reliable metal detection for conveyor and drop through applications

The Thermo Scientific™ APEX 500/300 HD metal detectors are designed to thrive in harsh environments where typical metal detectors fail, eliminating expensive downtime, service costs and repair bills. The unique design offers the lowest total cost of ownership possible and can improve operational efficiency in many applications where standard metal detectors are in use today.

The Thermo Scientific APEX 500/300 HD metal detectors go beyond IP69K washdown and are designed to survive up to 10,000 thermal shocks, excessive mechanical vibration and repeated sanitation with caustic chemicals. This assures that your production line has minimal downtime. The advantages of this design extend over a wide range of food processing and packaging applications but are of most value in meat, poultry, seafood and other fresh food processing facilities.

The extremely high level of quality and reliability is achieved by utilizing a robust solid fill epoxy designed to improve sealing and lifetime. Additionally, the metal detector case is made of 316 stainless steel to resist corrosion caused by harsh cleaning chemicals.

Like all APEX metal detectors, the HD can quickly and completely fulfill your quality goals, protect expensive downstream production equipment and provide assurance that your production shipments don't contain any unwanted metallic foreign objects.

Features

- Unique case design and epoxy fill for reliable use in thermal shock environments
- Corrosion-resistant 316 alloy stainless steel
- Multi-coil design with high sensitivity and low false rejects
- Dual frequency/dual gain operation for application flexibility
- Intellitrack XR (IXR) advanced signal processing software
- Available in a wide range of aperture sizes to optimize performance
- All construction materials FDA approved
- Easy to install with all electronics integral or remote to the metal detector
- Unique icon-driven interface with multilingual Help and Auto Learn functions

Options:

- Mounting conversion kits to make installation easy
- Field compression flanges to minimize the metal free zone
- Remote control panel
- Modbus serial and Ethernet communications
- Alarm and fault output packages and reject indicators/reset switches
- Washdown isolation transformers to shield the metal detector from power line problems
- Thermo Scientific conveyor and gravity systems designed to your specifications

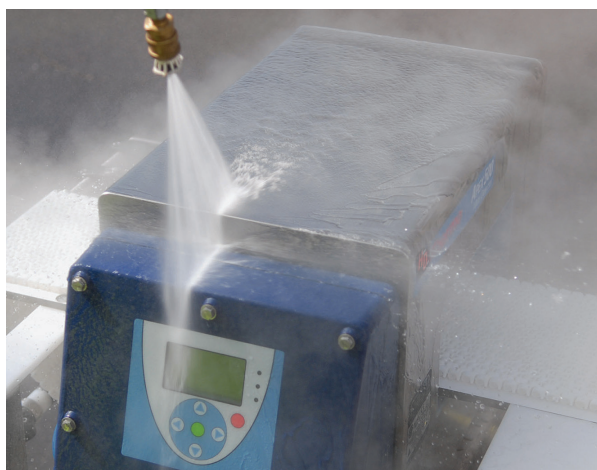(Please note that the Auditcheck option is NOT available for APEX HD metal detectors.)

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Thermo Scientific APEX 500/300 HD Metal Detector Specifications

Application and metal detection specifications	
Frequency Range	50 to 460 kHz, one or two configured in the factory or by service in the field
Foot Pattern and Aperture Placement	Refer to layout drawings, varies by aperture size and orientation
Aperture Sizes*	Same as APEX 500 standard sizes and APEX 300 dropthough/pipeline heads
Construction	Stainless steel 316 straightlined case and ABS plastic front panel. Aperture filled with a special thermally compliant epoxy.
Human Machine Interface (HMI)	Backlit display and touch panel with icons/help text
Product Speed	0.5 m/min (1.7 ft/min) to 1000 m/min (3,300 ft/min)
Output Types	6 Relay outputs; Relays: 250 volt AC 2 amp max. 50 volt DC 1 amp max
Output Allocation (Software Selectable)	Reject 1, Reject 2, Fault, Alarm, Warning, QA Lamp
Input Types	6 Inputs - Active low with auxilary supply for input sensors. NPN sinking.
Input Allocation (Software Selectable)	Speed Sensor, Keylock, Product Select 1, Product Select 2, Infeed PE, Reject Confirmation 1 and Bin Full, External Supression, External Alarm, External Reset
Communications Options	ModBus serial or Ethernet modules
Help-Text Languages	English, Spanish, French, German, Italian, Chinese, Czech, Russian, Polish, Thai, Korean and Brazilian Portuguese

Not all combinations possible; contact Thermo Fisher for details.

Environment, electrical and operational specifications	
Ambient Temperature	-10° to 40°C (14° to 104°F)
Product Temperature in Aperture	-10° to 55°C (14° to 131°F)
Maximum Washdown Temperature	80° C (176° F)
Relative Humidity	20% to 80% non-condensing
Electrical Supply	85 volts to 260 volts AC single phase plus earth ground; 47 Hz to 65 Hz, 100 watts maximum

Conformance tests and certifications	
Protection Ratings	IP69K
Export and Safety	cCSAus, CE
Manufacturing Quality	ISO9001 certified

APEX HD metal detectors go beyond IP69K and offer improved resistance to thermal shock and caustic chemicals.

APEX 500 HD metal detector on Quickfit conveyor (North America only)

Find out more at thermofisher.com/APEXHD

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