

## Metal Shark BD

Conveyor installation

Food compatible  
Stainless design



### METAL SHARK BD

Typically, the BD types are used in conveyor belts and provide highest performance in detecting magnetic and non-magnetic metals. Different methods are available to reject metal objects (pusher, belt stop + alarm etc).

Typical products for which to use METAL SHARK BD are:

- Deep freeze products**
- Candies**
- Bread, cakes and pastries**
- Fish**
- Meat and meat products**
- Ready-to-serve-meals**
- Raw material checks**



The devices are 100% Stainless Steel and specifically designed for use in the food industry.

#### Order information Metal Detector

##### METAL SHARK BD a x b

Example METAL SHARK BD 450 x 175 (18"x7")

a = Aperture width 450 mm (18")

b = Aperture height 175 mm (7")

Scope of supply:

- Digital Control Unit SHARK
- Sensor Head, non divide able

#### Order information Conveyor

##### HQ a x b - c

Example HQ 1800x400 - GK (HQ 6'x16" - GK)

a = Total conveyor length 1800 mm (6 feet)

b = Belt width 400 mm (16 inch)

c = Belt type (GK=Chain link belt, PU=Polyurethan-belt)

Scope of supply:

- Conveyor unit complete
- Castors with brakes (4x)
- Belt control unit with Start/Stop/Reset
- Frequency inverter for smooth belt speed control
- Belt speed adjustable 5-30 m/min. (16-100 ft/min.)
- Belt height = 800 +/-100 mm (32 +/- 4 inch)

Optional accessory is specified in the clear text. Example: including log printer.

Tip: The digital electronic control system type SHARK is described in detail elsewhere in this catalogue.

### Complete systems

Cassel offers complete systems consisting of conveyor belt HQ and metal detector METAL SHARK. The belts are available in standard (short terms of delivery) and customized equipment. A complete system is ready for operation immediately after installation.

#### How to choose the installation place

Both packed and unpacked products can be tested for metal.

As a rule, the smaller the aperture opening of the metal detector, the better the metal detection performance.

If possible, only packaged goods should be tested, as this prevents new metal contaminating.

If the metal detector is used for machine protection, it should be installed as close as possible before the machine to be protected.

#### Metal detector METAL SHARK BD installation in existing conveyor belts:

The conveyor belt must have a stable frame support. Supports made of angle metal sheets are not suitable to install metal detectors!



## METAL SHARK BD



*Belt control unit,  
with optional turn key buttons  
(lock keyboard, reset metal alarm)*



*METAL SHARK BD 450x175 with Conveyor HQ 1800x400-GK,  
Options: Chain link belt Intralox blue (Standard=White belt)*



*Reject option:  
Switching flap at belt end*



*Reject option:  
Pneumatic transversal pusher  
(for packed foods)*

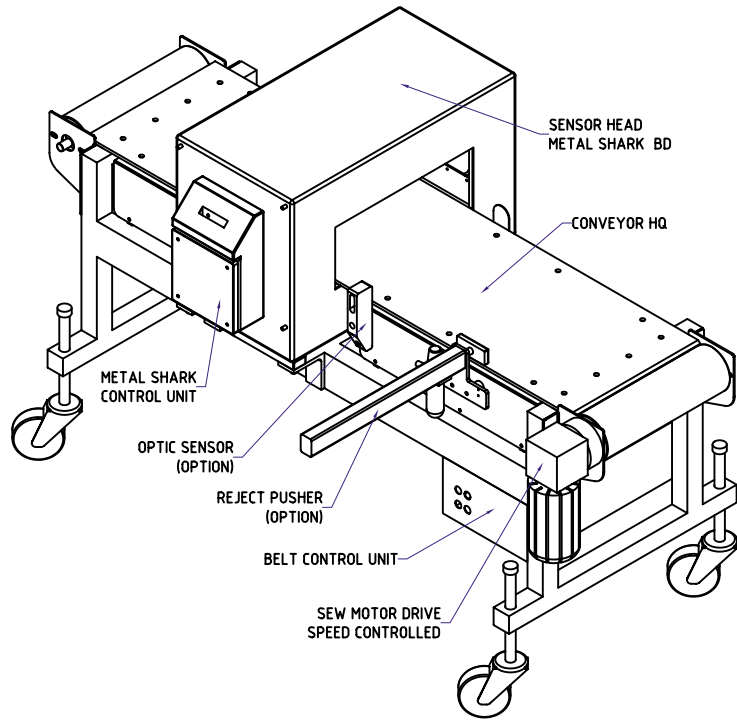


*Reject option: Pneumatic push arm  
(e.g. to reject glasses)*

## Metal Shark BD

### Conveyor installation

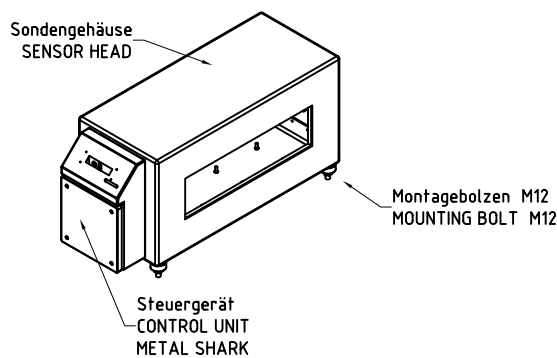
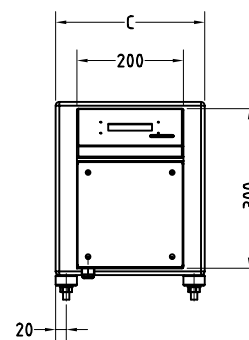
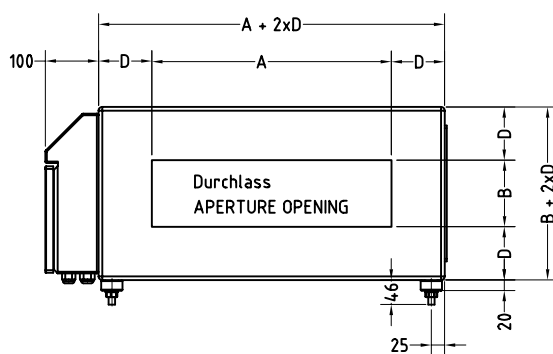
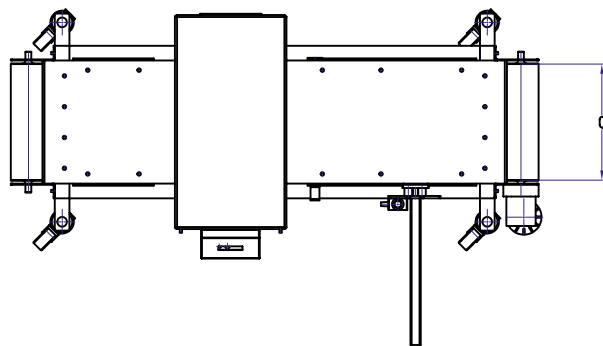
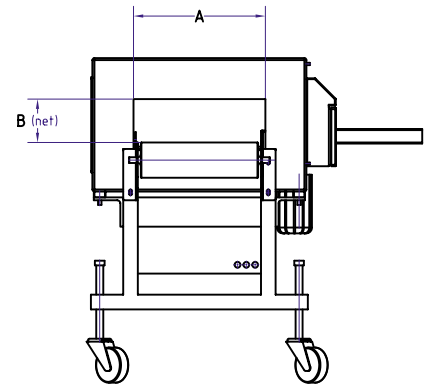
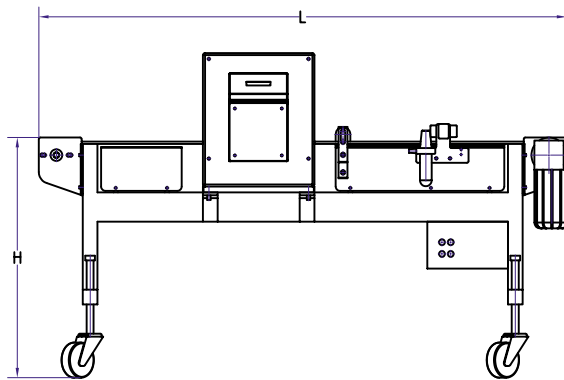
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Type	METAL SHARK BD (Detector) HQ (Conveyor)
Aperture width	50 - 1000 mm / 2 - 40 inch
Aperture height	50 - 500 mm / 2 - 20 inch
Sensor type	Non divide able
Installation	typical horizontal, but each angle is applicable
Metal free zone Before/after detector	Fix metal = 1,0 x aperture height Moving metal = 1,5 x aperture height
Power supply	85-264 V / 50-60 Hz
Power input	100 Watts
Ambient temperature	-10...+50 C / 15...120 F
Product (food) temperature	-20...+80 C / 0...180 F
Degree of protection	Control unit IP65 (Nema 4x, 12) Sensor IP67 (Nema 6P, 12)
Sensor head	Stainless steel housing
Control unit	Stainless housing, attached to the side of sensor head (Option: prepared for wall mounting, with link cable)
Link cable	2,5 m(8,2 feet), with cable protection tube, applies only with wall mounting option for the control unit
Timer	yes, for reject device control Delay and duration adjustable from 0-9990 ms
Conveyor speed	25 - 2000 mm/sec. (1" - 6,6 feet/sec.)

Out signals	Metal relay changeover contact (max 250V/1A) Metal alarm signal for PLC (out 24V/20mA) Fault relay changeover contact (max 250 V/1 A) Reject device drive, e.g. solenoid valve (24V DC/30mA)
In Signals	Reject trigger, e.g. optical sensor (24V DC) Control air pressure of reject device (24V DC) Control reject success (24V DC) Remote metal reset push button (24V DC) Remote lock keyboard against unauthorized access (24V DC)
Logging interface	Rs232, e.g. printer to log process data according HACCP
Network interface	Rs485 (as option)
Options	<ul style="list-style-type: none"> <li>* Pneumatic transversal pusher</li> <li>* Switching reject flap at belt end</li> <li>* Belt revers with metal alarm</li> <li>* Various reject devices</li> <li>* Air pressure control signal</li> <li>* Belt revers with metal alarm</li> <li>* Reject confirmation signal</li> <li>* Remote product selector switch</li> <li>* Customized conveyor design</li> <li>* Various belt types (Chain link, Polyurethan etc.)</li> <li>* Belt control unit Start/Stop/Reset with frequency inverter</li> <li>* Alarm flash light</li> <li>* Alarm horn</li> <li>* Logging printer</li> <li>* Ethernet Interface 10Mbit/s</li> <li>* Test cubes with metal spheres</li> </ul>

## METAL SHARK BD



A o. B [kleineres Maß] [SMALLER DIM]	C	□
0 - 175	280	100
176 - 250	330	120
251 - 300	380	140
301 - 350	380	160
351 - 400	380	180
401 - 500	430	200
> 500	...	...