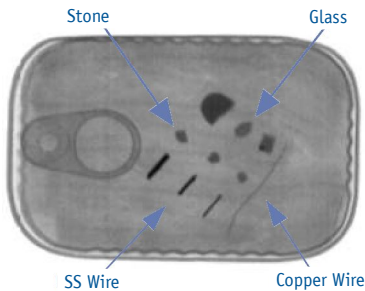




XRAY SHARK® G20/G20+/G40 **X-Ray Inspection System**

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XRAY SHARK® G20/G20+/G40 X-Ray Inspection System

The Most Advanced Detector Design for Highest Speed and Sensitivity

Inspection of the product flow is achieved by the computer controlled family of low energy generators (G20) or high energy generators (G40) and the high performance computer image analysis system, making Cassel inspection systems superior at detecting small statistical variations in the product that signal product contamination or deviation from accepted specifications. Sophisticated image processing software provides immediate analysis, detection and rejection – automatically.

Designed for Industry Standards

To comply with Vendor Certification programs and satisfy HACCP requirements, the G20 and G40 are available with a certified statistical process control package for automatic data collection and image storage (SHARKNET®). This system is optionally available and fitted with Ethernet networks for data collection, quality check monitoring and production scheduling.

Straightforward operation with minimal intervention

The G20/G40 series of conveyor inspection systems is designed for simple and efficient operation, with fully adaptive inspection and easy to understand operating procedures.

You can adjust the software ideally to your product so that you can use the x-ray pattern in its entirety. The software adjusts all complex settings by itself. It computes the “Normal x-ray” of the product and checks it automatically for anomalies. With only a few parameters you can increase or decrease the tolerance towards anomalies.

Easy maintaining

The inner workings of the XRAY SHARK® is clearly structured and all components can be connected and disconnected very easily. This allows a very easy maintenance.

Detectable contaminants

The size of the detectable contaminants depends basically on the consistence, density, thickness and structure of the product. Therefore we can only quote exact sizes of detectable contaminants when we have tested the product.

XRAY SHARK® - the better solution

The XRAY SHARK® is an x-ray device with an integrated conveyor belt which is to be integrated in an existing production line. It analyses x-ray patterns automatically.

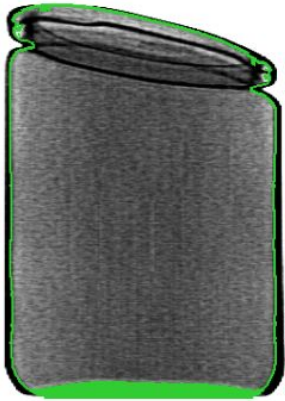
The XRAY SHARK® G20 and G40 are the third generation x-ray systems, using the latest high sensitivity linear sensors. The combination of the Low Energy inspection technology, up-to-the-minute hardware and high performance image processing software give the systems a clear advantage in providing optimum protection for your product and your Brand name.



Inspection Features

Mask

The mask features exclude certain areas of the image from foreign object detection, e.g. the very dense jar bottom. This improves the detection performance in the remaining product.



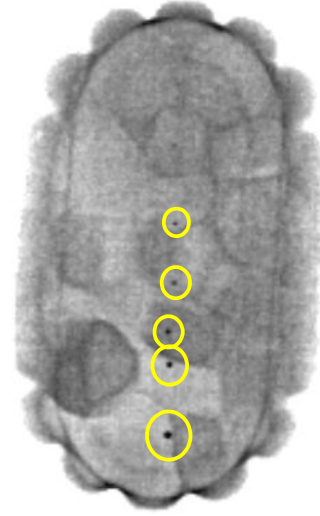
SuperContrast

The SuperContrast function enhances small dense (dark) structures in the image. This significantly improves detection of small foreign bodies, which only then become visible.

Regular X-Ray Image

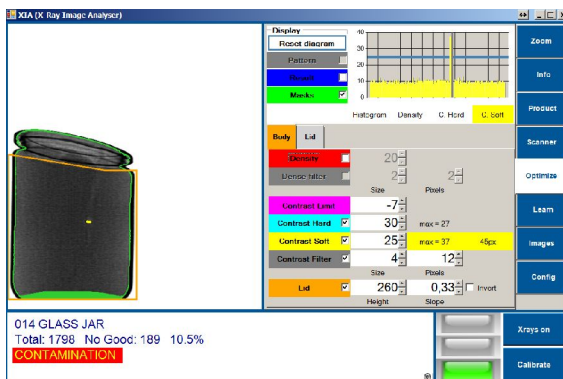


With SuperContrast



Easy Control

Color coded and graphical sensitivity settings. The impact of an adjustment is simultaneously projected into the x-ray image.



Data Transfer and Reporting

Cassel's SHARKNET[®] 2 software networks XRAY[®] SHARK X-ray machines to a Windows computer. The operating data are automatically recorded and displayed as a report. Manual records are no longer required. By SHARKNET[®] 2, the IFS and HACCP documentation is simple. The software collects all necessary data into a SQL database and prints the required report at specified intervals automatically.

IFS/HACCP-Report X-Ray System SHARKNET UNIT # 1 - G40 Xray



Internet Connection



Safety

Top notch german safety standards certified by TÜV.



The Cassel G20/G40 series features long In/Outfeed tunnels, thus preventing workers from x-ray exposure. Their hand cannot easily reach the radiation zone.



Competitor: Human arm is easily exposed to radiation. Safety only rely on a photo sensor.



G20/G40: Human arm cannot reach the radiation zone due to mechanical protection.

Maximum Operation Time

The product tunnel is equipped with quick access doors. Any product jam is instantly cleared within minutes. Opening the access doors automatically stops the x-ray radiation.

Reject Devices

As an optional equipment Cassel offers two reject device versions.



TP Pusher and reject bin integrated with G20/G40. For small sized products.



TP Pusher and reject receive roller table, at a separate conveyor. For bigger sized products.

Specification

Model	XRAY SHARK® G20	XRAY SHARK® G20+	XRAY SHARK® G40
X-Ray source	1 pcs. low power x-ray generator, with max. 70 kV @ 2.0mA (140W), variable in voltage + current	1 pcs. low power x-ray generator, each with max. 70 kV @ 2.0mA (140W), variable in voltage + current	1 pcs. high power x-ray generator, each with max. 80 kV @ 4.5mA (360W), variable in voltage + current
Cooling	Integrated closed loop oil cooling system Optional: Additional device with active cooling (Aircon or Peltier)		
Safety	X-ray emission max 1 µSv/h or less, at using all safety devices		
Display	15" Color-TFT Touchscreen		
Max. Product Dimensions WxH product aligned to aperture center	250x50 / 230x100 / 200x140 / 170x200 mm	340x60 / 300x100 / 250x160 / 200x200 mm	340x60 / 300x100 / 250x160 / 200x200 mm
Product Memory	250		
Conveyor type	PU belt conveyor, included		
Conveyor speed	Max. 80 m/min (depends on application)		
Environmental conditions	0 to +30 ° C, with relative humidity max 90% non-condensing With optional additional cooling device: 0 to +45 ° C		
Power supply	230V 1 phase 50 to 60 Hz		
Power consumption	1,3 kW	1,3 kW	1,6 kW
Degree of protection	Overall: IP42 (due to the required cooling air slots) With optional wet room package: overall IP54 and product tunnel IP66		
False Reject rate	1/5000 1/10000		
Weight	470 kg	540 kg	610 kg
Compressed air consumption	Without pusher 0 (zero) liters / hour. With optional pusher system: less than 20 liters / hour		
X-ray detector resolution	Diode size 0.8 mm, optional 0.4 and 0.2 mm		
Operating costs at 2 shifts	Circa 6.000 € / year (includes power supply and depreciation for X-ray tube replacement)	Circa 7.000 € / year (includes power supply and depreciation for X-ray tube replacement)	Circa 8.000 € / year (includes power supply and depreciation for X-ray tube replacement)
Supplied test equipment	Certified test cards with glass, ceramics, steel spheres in various diameter		
Inspection features	Density, Hard Contrast, Soft Contrast, Masking Technology, SuperContrast, AutoEdge, Images AutoSave/Load, Multi Segment Inspection, Metal Can and Metal Foil inspection, Fill Level, Generator Energy by Product, Password protection		
Data Transfer and Reporting	USB, Ethernet, Sharknet Interface for auto reporting and auto recording, Internet Remote Maintenance		
Other Features	Sanitary stainless steel finish, Direct variable conveyor speed by product, Barcode Reader Interface, MultiCore CPU, Win XP OS		
24V In/Outputs	8x programmable outputs (pusher, error, alarm, conveyor speed, others) 8x programmable inputs (photo sensor, air monitor, reject monitor, bin full, blockage sensor, others)		
Certificates	CE, comply to German x-ray regulations, certified by TÜV		
Available Accessories	Radiometer, Sharknet Software, BRC Kit (British Retailer Compliance), Pusher Devices, Barcode Reader		