

# X-ray inspection system Dylight S

Low dose horizontal X-ray for small upright containers



## ⓘ Advantages

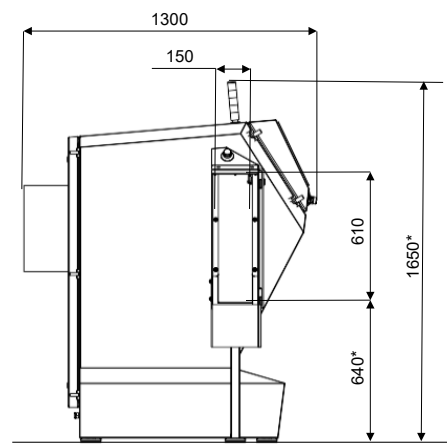
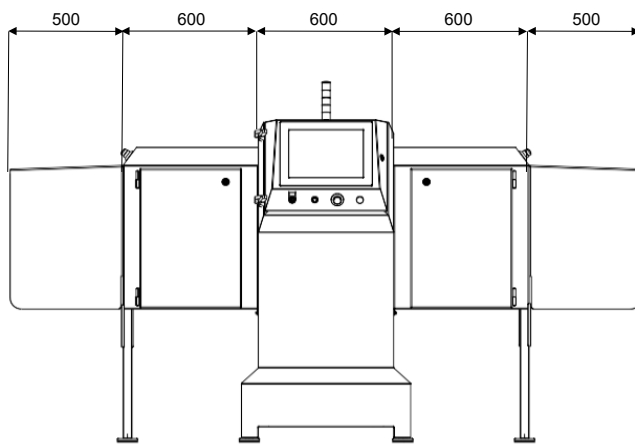
- Reliable inspection with a high detection sensitivity
- Seamless integration and installation
- Experience flexible setup and enhanced efficiency with the advanced X-ray software
- Quick and easy cleaning thanks to the hygienic design

*The Dylight S sideshooter offers reliable detection of foreign bodies in small, upright packaging. The compact hygienic design, interfaces and reliable image processing allow for efficient integration into automated production process.*

## Impeccable safety for the small and light upright products

- ⓘ For product quality and safety, Dylight S is able to detect the foreign contaminants for metal, glass, stone and various plastics.
- ⓘ The real compact design with straight conveyor ensures easy installation, operation, maintenance and cleaning.
- ⓘ Features like filling level monitoring, food ingredient and package integrity are also included.
- ⓘ The Dylight S offers flexible communication across SPC@Enterprise, OPC-UA, Modbus and Ethernet.

## Dimensions



\* Can be increased within +200 mm

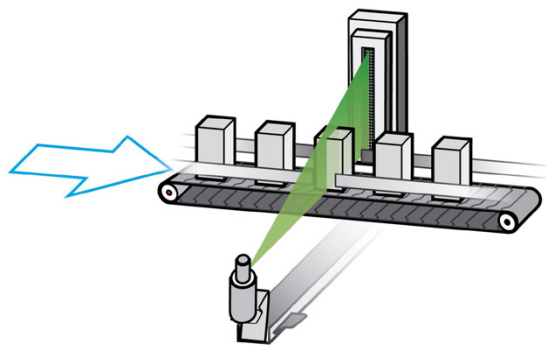
## Technical data

Beam design	Single beam, single detector
X-ray power	60 kV, 1,6 mA (100 W)
Detector resolution	0.8 mm (standard)   0.4 mm (optional)
Conveyor belt speed	Up to 50 m/min
Min. product spacing	10 mm
Approvals	CE, UKCA
Safety locks	SIL 3 Category IV PL e, magnetic
User interface	15-inch touchscreen
Operating temperature	5 to 35 °C
Cooling	Air fans Air conditioner Nema 4X
Relative humidity	20 % to 90 %, non condensing
Digital output	Available
Digital input	Available
USB port	Yes
Network Port	Ethernet
Compressed air	5.5 - 6.9 bar
Radiation safety	FDA CFR 21 part 1020.40
International Protection Rating (IP)	IP54 with air fans Nema 4X with air conditioner
Electrical supply	230 VAC ±10 % (standard)
Weight	450 kg
Conveyor height	850 - 1100 mm
Safety curtains	FDA approved
Connectivity	Modbus TCP (standard), OPC-UA, XML messages on TCP, Profibus, Profinet, SPC@Enterprise, others on request

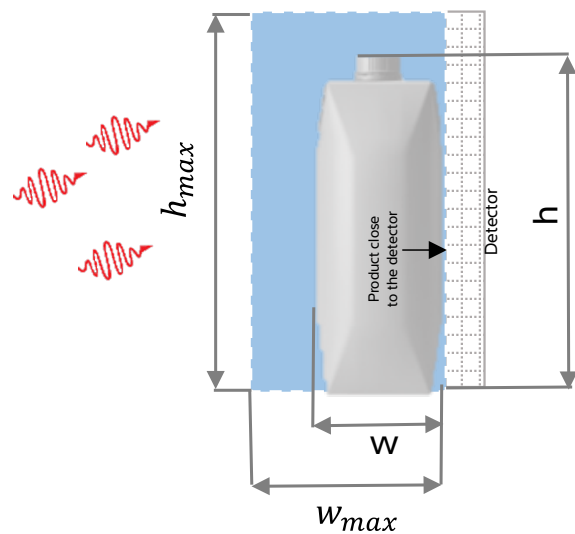
## Options

- Remote control
- Acoustic signal emitter
- Extended warranties
- Service contact
- Bar code reader

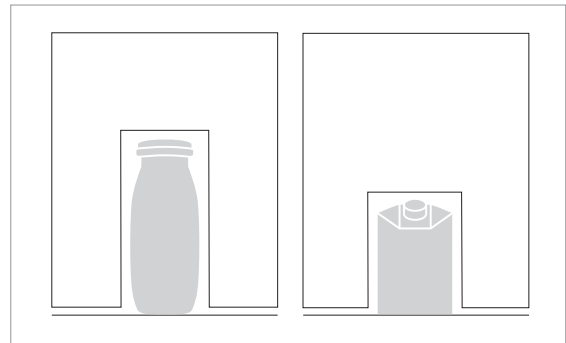
## Product dimensions for the inspection



$h$	Product height
$W$	Product width
$h_{max}$	Maximum product height
$W_{max}$	Maximum product width



The new Dylight S designed with straight layout for the transportation system, which can be easily integrated in the existing production line. At the infeed and outfeed regions, Dylight S features a special designed "Trap" rubber plate that replaces traditional curtains, tailored to precisely fit your products, enhancing both efficiency and safety. The Dylight S is designed with considerations for X-ray radiation safety and power, accommodating products up to **180 mm in height ( $h_{max}$ )** and **80 mm in width ( $W_{max}$ )**, ensuring highly reliable inspection results.



Schematic view for products and tailored "Trap" rubber plates

## In-line inspection for product quality and integrity

The Dylight S side shooters ensure reliable horizontal inspection and come with additional quality assurance functions. Foreign objects made of metal, glass, stone, bone and various plastics are detected in product packaging and eliminated from the production line. In addition, a wide range of standard features ensure product integrity and quality, such as:



Completeness check



Package integrity check

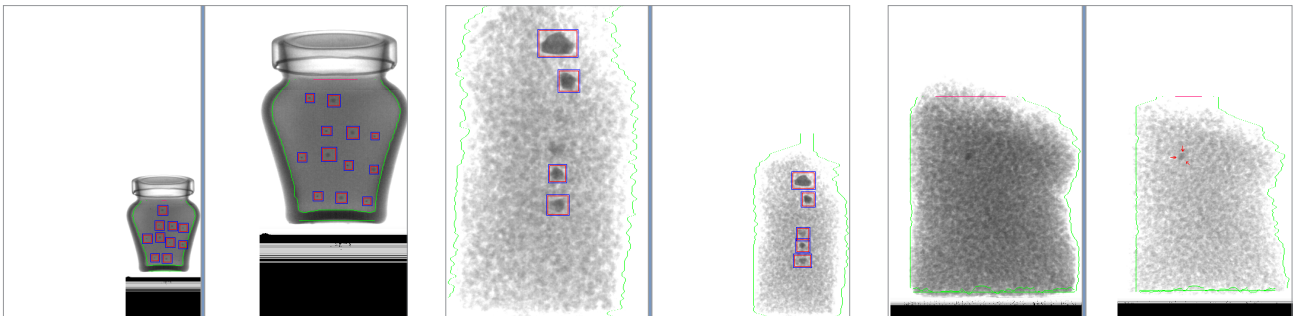


Fill level monitoring

The Dylight S X-ray software enables users to optimize product quality and productivity efficiently through **autonomous parameter adjustments** and image enhancements.

First, it enhances product quality by significantly reducing false rejects. In **automatic** mode, the software **continuously corrects problematic parameters** while proactively adjusting other potential issues within the same batch, based on X-ray records. These images, whether newly acquired or stored, improve inspection accuracy **without interrupting production**.

Secondly, the **enhancement feature** provides superior quality control by generating a supplementary image based on the original grayscale image. This process improves visibility and enhances detection capabilities by allowing adjustments to scale, brightness, and contrast.



Enhancement feature: in each set, the original captured X-ray image appears on the left, with the enhanced image on the right—showing Enlargement (left), Downsizing (middle), and Brightness Adjustment (right).

**Enlargement** allows for enhanced space to fine-tune the detection algorithm and revealing details that the original scale might miss. **Downsizing** of the original image enhances grayscale filtering for improved clarity and distinction of subtle textures and variations. **Brightness adjustment** leads to partial saturation and heightened contrast in the center, focusing analysis on the core areas.

## Connectivity - Ready for Industry 4.0

For systematic monitoring and analysis of machine and line output, side shooter range systems can be quickly and easily integrated into your production process.

We offer interface for

- Modbus TCP (standard)
- OPC-UA
- Profibus
- Profinet
- SPC@Enterprise



SPC@Enterprise by Minebea Intec converts metrics into valuable information which helps to ensure product quality and safety and an increase in productivity.

The products and solutions presented in this data sheet make major contributions in the following sectors:



Food and  
beverages



Pharmaceutical



Cosmetics

The technical data given serves as a product description only and should not be understood as guaranteed properties in the legal sense.

Specifications subject to change without notice.  
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