

Food X-ray Inspection

DYLOG[®]

H I T E C H

DYMOND

DSV



DYMOND SIDE VIEW MACHINE

The use of advanced components and an attentive, innovative and compact design, together with a high-performance and intuitive software allows Dymond machines to be fit for the ever higher standards set by food and pharmaceutical companies.

ADVANTAGES OF X-RAY INSPECTION

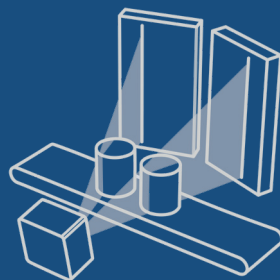
This is a **non-destructive analysis**, which, without altering the chemical composition or the organoleptic properties of the products, detects contaminants inside them (in any type of container or package) and verifies their wholeness and conformity. Contaminants having a density higher than the density of the inspected products (metals, glass, highly calcified bones, stones, shells, ceramics, PVC, Viton®) will no longer be a problem.



X-RAY POWER

500 W

POINT OF VIEW



PRODUCTS



Hardware

DYmond DSV has been designed to combine the Dymond S ease of use and the DYmond D high performances level.

The x-ray source, a 500W mono-block, is the same installed on the Dymond 80-120-160-5 series, but in this case a wider aperture of the beam is used to illuminate two detectors positioned at a different angle to the products. This configuration allows to increase the contaminants' probability of detection in the "critical" areas of the containers usually processed with multi-beam systems (bottom, cap, sidewalls) compared to the ones achievable by a single beam machine.

Moreover, the internal components architecture does not require the 1-diameter gap, typical of the two beams systems, allowing a significant saving in terms of investments and required room.

Not needing a spacing device and thanks to the optimized power level, also the shielding covers kit is small and simple, comparable to the easy one normally needed in case of a DYmond S, either straight or "chicane" shaped.

Finally yet importantly, the easy mechanical alignment system between conveyor, x-ray source and detector is the same of the Dymond S, allows to shorten the installation time and makes the Dymond DSV a very versatile solution, which can be quickly integrated in any production line.

Software

The Dylog contaminant detection software ensures a high performance level; thanks to new filtering technology and parallel elaboration, **the X-ray images are almost noiseless** with a high contrast level even at high product speed.

The innovative hardware design is coupled with an entirely new software interface for the Dymond M, that combines user friendliness with a complete set of functions, the result of over 20 years of experience in food and pharmaceutical industry.

Sophisticated algorithms constantly refined provide excellent performances even when compared to systems with higher power.

The machine can be controlled from remote and features a **5-level password security system** allowing to track the activity of each operator, logging in with a unique password.

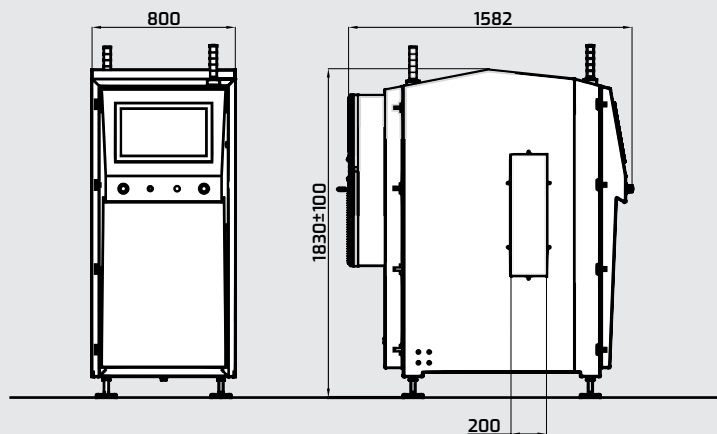
Production and usage data are redundantly stored to grant top-notch level security, while the data accessibility is granted by easy to read automatic reports.

The system is **compatible with the strictest control protocols** implemented by the food industry largest companies.

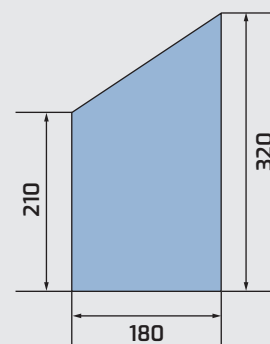
Technical Features

Power	500 W (monoblocco 110 kV)
Detector resolution	0,4 mm
Conveyor belt speed	Up to 70 m/min
Conveyor height	740-1060 mm
Curtains	Optionals – lead-free
Safety switch / interlock	SIL 3 Category IV PLe, magnetic
HMI	21,5" LCD – touch screen
Operating temperature	5–40 °C
Relative humidity	20%–90% (non-condensing)
Power supply	230 VAC ±10% (standard) single-phase
Compressed air	5,5–6,9 bar
Cooling	Air Conditioner IP34 - Nema 4X 1100W on request
Radiation protection	FDA CFR 21 part 1020.40
International Protection Rating (IP)	IP34 - Nema 4x on request
Connectivity Options	Ethernet available with communication protocols: Modbus TCP (standard), OPC-UA, XML messages on TCP, others on request
Production data trail	Complete records on parameters, users and products

Dimensions



BEAM GEOMETRY



Subject to modifications and improvements.