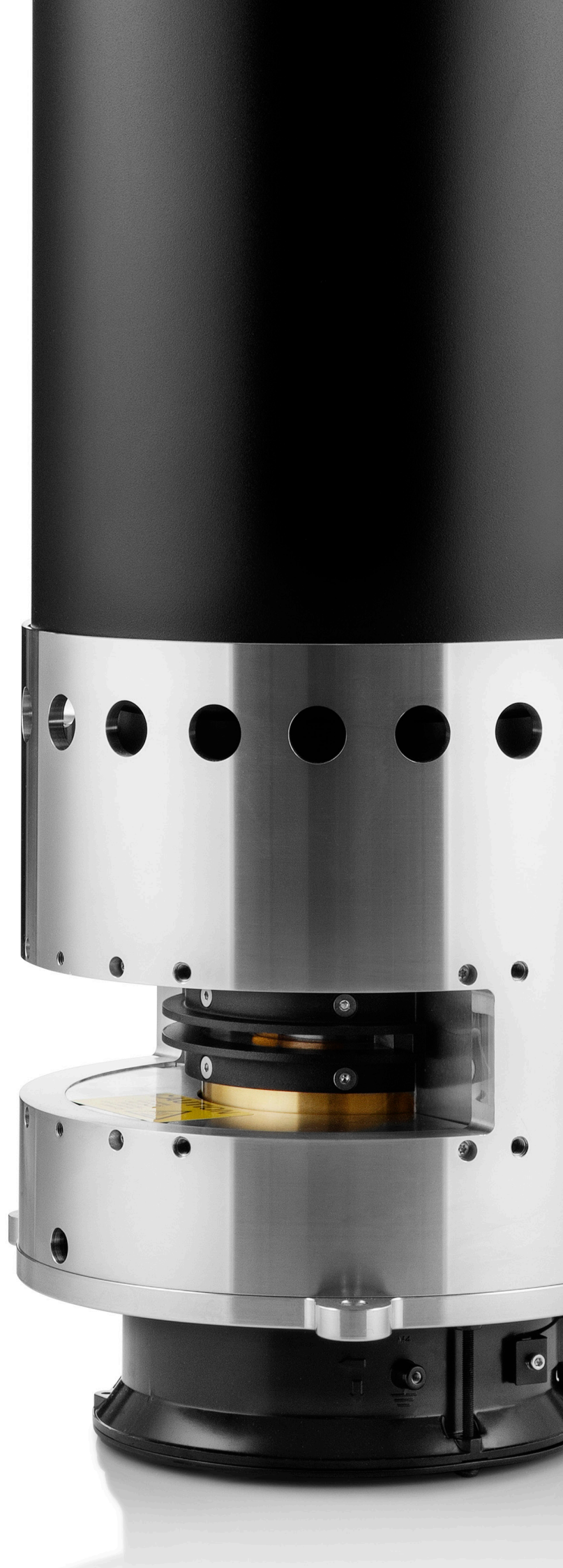


Revealing insights.

ION Series

An ideal vantage point



c•met
x-ray

ION Series

The ideal X-ray system for your scanning applications

The ION integrated X-ray series is tailor-made for X-ray scanning applications and ideal for industries such as food processing, sorting, thickness gauging, and security in particular.

These systems guarantee continuous and reliable performance, preventing costly production stops caused by unscheduled maintenance and they ensure accuracy, speed, and X-ray dose-stability, which is critical for real-time imaging and measurement.

A growing number of items that require screening means that security screening systems need to be increasingly efficient. X-ray security inspection systems operating at logistics centers, airports, ports, and institutions help ensure greater public safety and security. The ION system is the perfect solution, identifying unwanted elements and illegal goods in vehicles, luggage, and containers.

ION systems are flexible and scalable, perfect for tailoring specifications, and creating unique systems that make a world of difference to our customers.

»
The ION series X-ray system consists of a tube head module with integrated cooling and the high voltage generator, and an industrialized control unit with power supply, safety, and control modules. It's a flexible and scalable technology platform and can be customized to specific customer needs.



A compact system with a significant impact

The compact design of the ION series allows for flexible system installation. The X-ray tube and high voltage generator are integrated into one compact module, minimizing the required shielding, and the industrial control module can be mounted wherever it is convenient. The air-cooled design eliminates the need for external coolers, which reduces the overall system footprint.

Mounting points for collimators and positioning guides make the ION modules easy to align in any existing system geometry. The absence of high voltage connections and cables eliminates the need for regular onsite maintenance.

The system design is tailored to deliver accuracy and reproducibility. Dose-stability is ensured through temperature compensation and high-resolution mA adjustment, which maximizes the dose output even in harsh and challenging environmental conditions.

The fan beam ensures optimum coverage of the detectors, and the hot standby functionality enables full ramp-up from an idle state to maximum kV / mA within one second, contributing to a prolonged filament lifetime and eliminating the need for external mechanical shutters.

The ION series' flexible system architecture supports seamless connectivity to advanced functionality through RS232, Ethernet, and USB.





1

High performance Excellent technical capabilities

The ION 300F X-ray system is precise and accurate, with optimized X-ray beam geometry tailored for scanning applications.

It is equipped with a high-quality metal ceramic X-ray insert ensuring accuracy and extended product lifetime. The ION 300F fan beam system is available as an air-cooled version, making it ideal for a range of climatic environments.

2

Easy to integrate Compact and low-weight

The ION 300F X-ray system is compact and low-weight, with a separate tube head and control unit, and it can be mounted in any orientation, making it easy to integrate.

Its alignment features ensure smooth and precise alignment with other system components, and the built-in safety setup supports easy integration into any overall system safety concept. The ION tube head and control unit modules can be exchanged without the need for specialized training, thus ensuring maximum uptime.

3

Speed and accuracy Reproducibility and constant kV levels

The ION 300F X-ray system delivers speed, accuracy, and reproducibility, critical parameters for scanning applications for imaging and material discrimination.

The system's temperature compensation ensures that kV levels are within the specification for the ambient temperature range. The ramp-up to maximum kV in 1 second increases overall system efficiency during cyclic operation.

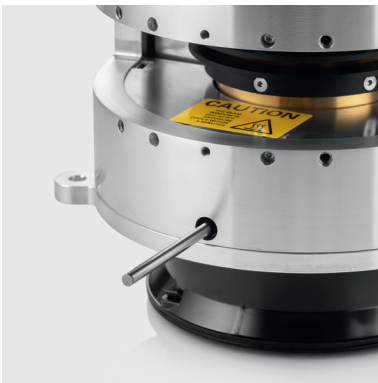
Specifications

ION	ION 300F 450/105	ION 300F 600/105	ION 300F 600/120
Weight	37 kg	37 kg	37 kg
Height	821 mm	821 mm	821 mm
Tube head housing	ø 225 mm	ø 225 mm	ø 225 mm
Focal spot size ASTM 1165	1.4 x 1.4 mm	1.4 x 1.4 mm	1.4 x 1.4 mm
High voltage adjustment	150 - 300 kV	60 - 300 kV	150 - 300 kV
High voltage steps	1 kV	1 kV	1 kV
kV accuracy at max kV	+/- 0.5 %	+/- 0.5 %	+/- 0.5 %
kV reproducibility	+/- 0.5 kV	+/- 0.5 kV	+/- 0.5 kV
mA adjustment	0.1 - 2.0 mA	0.5 - 3.0 mA	0.5 - 3.0 mA
mA adjustment steps	+/- 10 µA	+/- 10 µA	+/- 10 µA
mA accuracy	+/- 10 µA	+/- 10 µA	+/- 10 µA
mA reproducibility	10 µA	10 µA	10 µA
Max X-ray power	450 W	600 W	600 W
Beam angle	5° x 105°	5° x 105°	5° x 120°
Filtration	0.5 mm Ti	0.5 mm Ti	0.5 mm Ti
Leakage radiation max, 1 m	5.0 mSv/h	5.0 mSv/h	5.0 mSv/h
Environment	IP65	IP65	IP65
Temperature range	-10°C to +50°C	-10°C to +40°C	-10°C to +40°C
Cooling	Air	Air	Air
System number	20108941	20130513	20113041

CONTROL ION

Weight	15 kg
Height	268 mm
Length	507 mm
Width	276 mm
AC mains	90 - 264 VAC, 45 - 65 Hz
Environment	IP40
Temperature range	-10°C to +60°C
Communication interface	RS232, USB, ETHERNET
Cooling	Air

Features



Alignment rod

For alignment of the ION series tube head to other system components.



Cooling fan

The powerful cooling fan ensures efficient cooling of the ION series X-ray tube head.



Mounting brackets

For easy attachment of the ION series X-ray tube head.



RS232 & Ethernet

Ports for remote operation of the ION series X-ray system.



Diodes

Indicating the status of the ION series X-ray system.



X-ON connection

Port for remote operation of "X-ray ON" and "hot standby".

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