



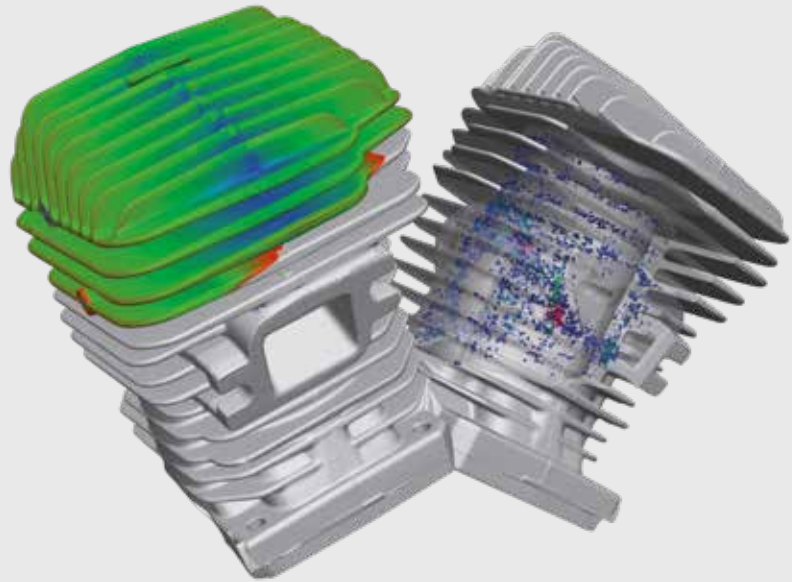
YXLON MU2000-D

UNIVERSAL X-RAY INSPECTION SYSTEM FOR USE IN PRODUCTION,
RESEARCH, AND DEVELOPMENT EVEN IN HARSH ENVIRONMENT

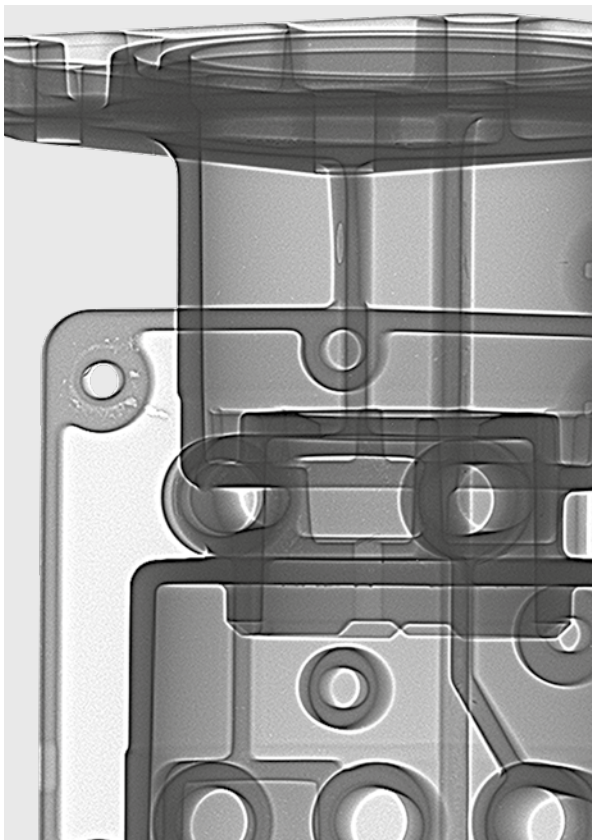
- Robust and reliable digital standard X-ray system (DR)
- For more than 20 years successfully in use worldwide
- Direct switch between radiography and computed tomography
- Compliant with ASTM and individual standards

Where is MU2000 used?

- In foundries for serial and random inspection of castings
- In research and development departments in the automotive and aerospace industries
- In industrial and university laboratories for material and structural analysis
- In educational institutions for weld seam testing



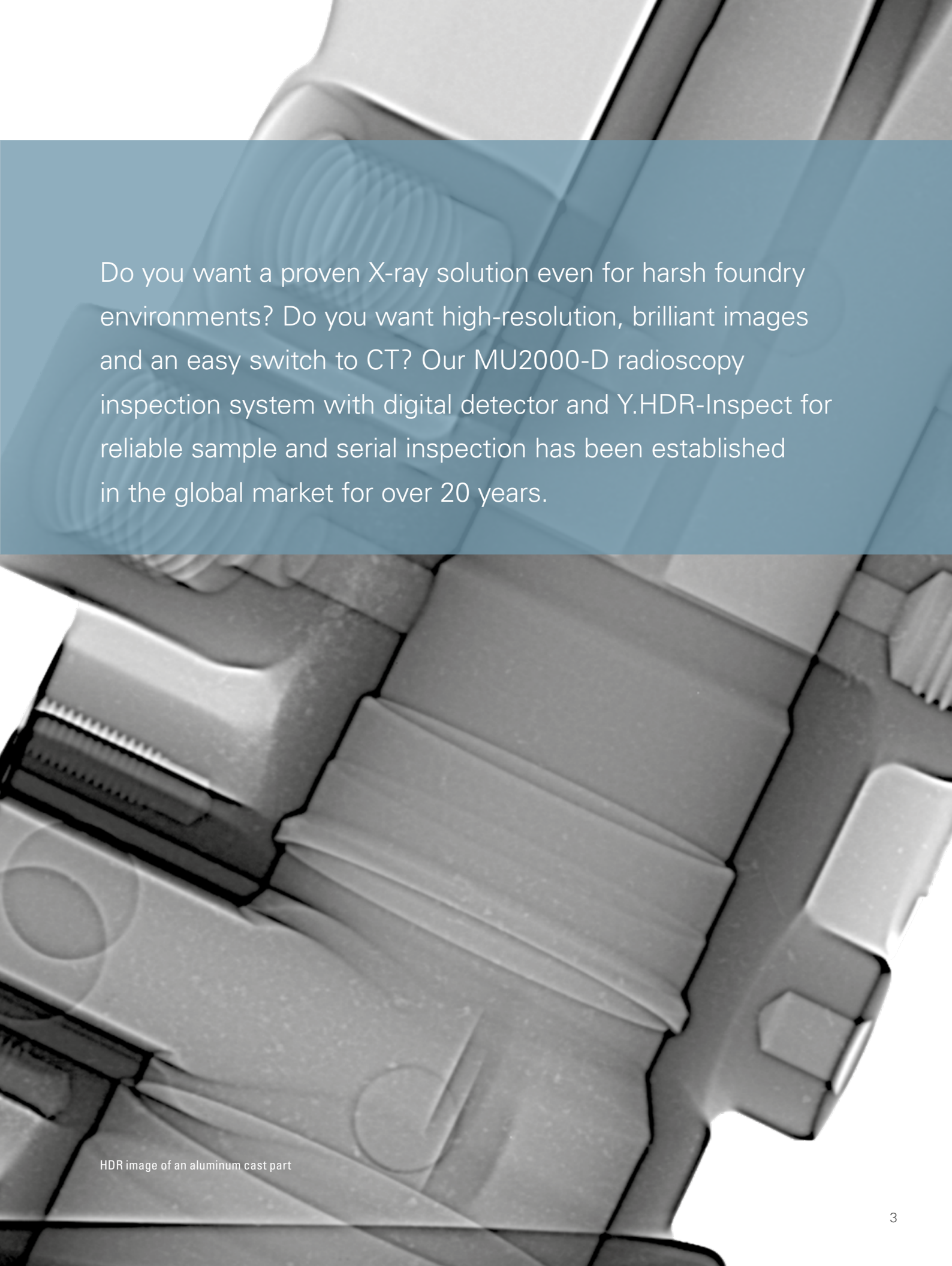
CT volume of a cylinder head with various analyses



Highly Dynamic Radioscopy Makes the Difference

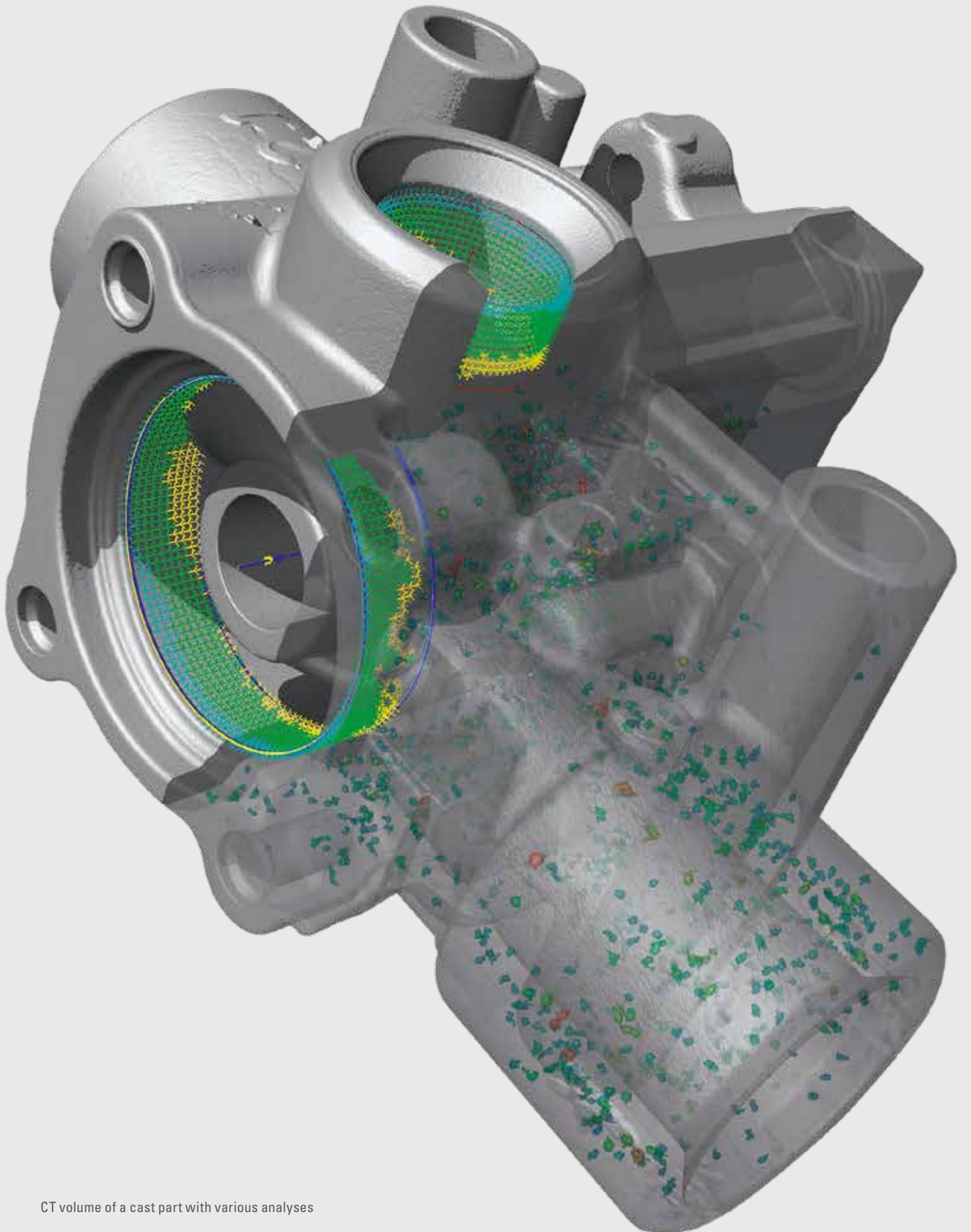
The outstanding image quality of the MU2000-D is based on the interaction between a high-dynamic range digital flat-panel detector (DDA) and Y.HDR-Inspect. The High-Dynamic Radioscopy technology (HDR) provides excellent detail detection even with varying material thicknesses and helps to visually determine the depth of casting defects.

High detail recognition even with varying material thicknesses

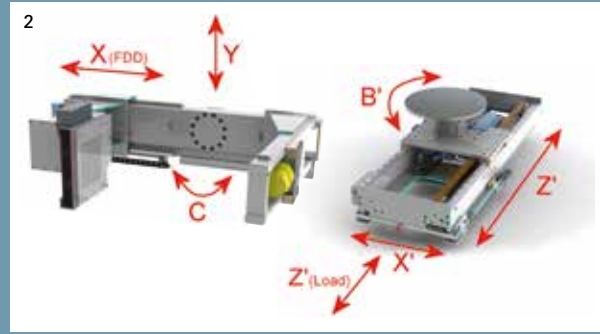


Do you want a proven X-ray solution even for harsh foundry environments? Do you want high-resolution, brilliant images and an easy switch to CT? Our MU2000-D radioscapy inspection system with digital detector and Y.HDR-Inspect for reliable sample and serial inspection has been established in the global market for over 20 years.

HDR image of an aluminum cast part



CT volume of a cast part with various analyses



1 Inside view of shielded cabinet
 2 Manipulation axes
 3 Loading and unloading outside the cabinet

Ready for Industry 4.0

The MU2000-D is future-proof. Its interface provides data that you can utilize in the frame of Industry 4.0, such as Machine Learning, Big Data, Internet of Things, and machine-to-machine communication. It also complies with important standards such as ASTM and DICONDE, as well as individual testing requirements from automotive manufacturers.

MU2000-D IN A NUTSHELL

- Proven, robust, reliable digital X-ray inspection system for harsh environments
- Brilliant, high-resolution image quality for spot checks and serial inspection
- Fast switchover to computed tomography (CT) at the touch of a button (option)
- Intelligent ergonomics for easy operation
- Customized configuration for wheels and tires
- Compliance with ASTM standards and individual inspection requirements of automotive manufacturers

THE MU2000-D IS PARTICULARLY SUITABLE FOR

- Aluminum castings such as engine blocks, cylinders, cylinder heads, pistons, hinge joints, etc.
- Turbine blades
- Wheels and tires (special part manipulator with additional rotation axis)
- Fiber composites
- Ceramics
- Additively manufactured components



Adjustment of the system for measurement tasks

YXLON Service Engine 4.0

To support our customers' success, we created our Service Engine 4.0 including first-class technical problem-solving combined with high economic efficiency. This engine drives our service, our processes and our partners to detect and correct failures quickly and reliably by remote access and during on-site visits. Our service centers and our service partners worldwide are at your disposal and can be contacted by phone, e-mail or via our website.

YOU BENEFIT FROM

- guaranteed operational safety
- maximized system availability
- minimized repair times
- full cost control of life-cycle costs
- extended product lifetime

Our module-based approach such as performance and feature upgrades enable you to adapt to future requirements and safeguard your initial investment by extending the product lifetime. With our Service Engine 4.0, fast support for you is provided by the way we network all service activities with our organization. We not only see your immediate need but are predictive of your future needs.

YXLON LIFECYCLE SERVICES

Academy – full performance from day one through tailored training solutions

SmartExchange – direct replacement of defective or worn-out components to minimize unscheduled system downtime

SpareParts – 100% compatibility and safety through Yxlon qualified spare parts

WarrantyPass – full cost control through our customizable warranty extension program

ServicePass – predictive maintenance and servicing, tailored to your requirements

SmartPass – maximum system uptime for customers with particularly high demands

LifeCyclePass – all-inclusive concept for full cost control over the entire product lifetime

Support – fully digitalized 1st-line support organized in a worldwide expert network, available remote or on-site

Upgrades – performance increase and new features for your Yxlon system portfolio

Check out these facts

	Y.MU2000-D Standard				Y.MU2000-D XL			
	160 kV	225 kV	320 kV	450 kV	160 kV	225 kV	320 kV	450 kV
Inspection envelope/insp. item								
Inspection envelope, radioscopy (diameter x height)	600 mm x 900 mm				800 mm x 1,500 mm			
CT measuring cylinder (diameter x height), approx.	170 mm x 150 mm				180 mm x 160 mm			
Inspection item weight	60 kg (optional 200 kg)				60 kg (optional 200 kg)			
Object carrier								
– Rotary plate	400 mm / 600 mm				400 mm / 600 mm			
– Three-jaw chuck	160 mm / 200 mm				160 mm / 200 mm			
Tilt angle beam path*	± 30° (opt. ± 45°)		± 20°		± 30° (opt. ± 45°)		± 20°	
Radiation-shielded cabinet								
Width, approx.	2,200 mm	2,250 mm	2,400 mm	2,900 mm	2,650 mm	2,700 mm	3,000 mm	3,500 mm
Height (incl. mainstays), approx.	2,700 mm	2,750 mm	2,750 mm	2,800 mm	3,300 mm	3,350 mm	3,500 mm	3,550 mm
Depth, approx.	1,800 mm	1,850 mm	1,950 mm	2,500 mm	2,050 mm	2,100 mm	2,200 mm	2,750 mm
Weight, approx.	4 t	6.5 t	10 t	19 t	6 t	10 t	15 t	25 t
Cabinet door								
Width x height, approx.	from 760 mm x 1,150 mm				from 1,100 mm x 1,700 mm			
Open, close (motor-driven)	~ 2 s	~ 3 s	~ 4 s	~ 5 s	~ 2 s	~ 3 s	~ 5 s	~ 6 s
Detector								
Active area	200 mm x 200 mm				200 mm x 200 mm			
Pixel size	200 µm / 400 µm				200 µm / 400 µm			
Frame rate (14-bit detector)	15 fps / 30 fps				15 fps / 30 fps			
Distance X-ray tube – detector	695 mm – 995 mm				945 mm – 1,245 mm			
Control console								
Width x height x depth, approx.					1,200 mm x 1,800 mm x 1,300 mm			
Power supply					1 x 230 V, 50 Hz / 60 Hz			
Power input					max. 5 kW			
Weight, approx.					250 kg			

ADDITIONAL Y.MU2000-D SOFTWARE OPTIONS

ASTM E2737 system tests

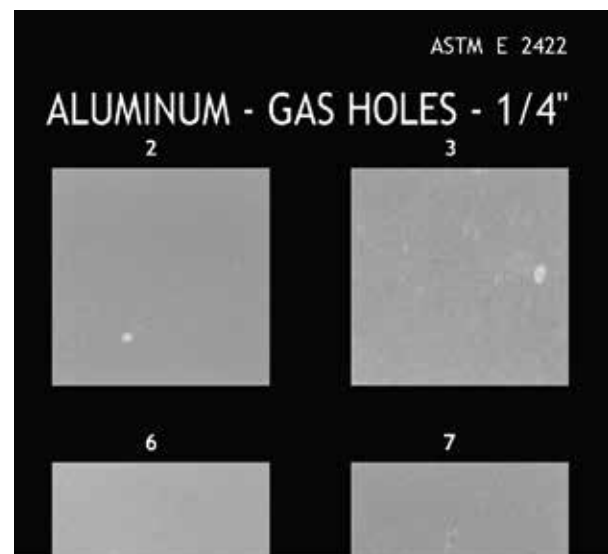
- Automatic creation of standard-compliant system performance reports
- User-defined system performance tests and process checks

ASTM E2339/E2699 DICONDE

- Image compatibility with other manufacturers' systems using standardized archiving

ASTM reference images

- Currently available for aluminum (ASTM E2422), investment steel (ASTM E2660), titanium (ASTM E2669), magnesium (ASTM E2869), and steel (ASTM 2868 Vol. I)
- Support for two monitors (recommended)
- Convenient choice of resolution and types of defects



ASTM reference images for aluminum according to ASTM E2422

YXLON



Would you like to learn more about our systems?
Interested in a test inspection?
Please contact us by phone or e-mail.
We look forward to hearing from you.

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