

# YXLON



## THE EASY INSPECTION

# YXLON UX20

UNIVERSAL X-RAY AND CT INSPECTION SYSTEM  
FOR MEDIUM TO LARGE CAST PARTS

- Easy operation with Yxlon's award winning user interface Gemini
- Fast results with large inspection envelope in 2D and 3D
- Modern industrial design with a compact footprint



The UX20 is a robust system built to last and combined with many innovative features like carbon chucks for easy part handling.

## Time for a new inspection experience

### **USER INTERFACE**

The award winning user interface Gemini enables an easy inspection, both for your 2D and 3D inspection needs. Our efficient workflows with automation, wizards and presets guide the user. From novice to expert, all levels will discover intuitive controls.

### **IMAGE QUALITY**

The operator makes consistent inspection decisions with our optimized image chain. It combines x-ray tube, detector and image processing providing benchmark image quality.

### **ACCESSIBILITY**

Easy inspection is the sum of many parts. The operator desk, for example, has the absolute essentials you need. You can also vary the height of the desk to accommodate operation from a sitting or standing position.

### **MAINTAINABILITY**

The system can be placed in small corners due to its compact footprint and low height. With access from two sides, maintenance is hassle free. Even the cooler and generator are safely placed internally to prevent damage from the rough environment and improve uptime.

#### **TYPICAL INSPECTION PARTS FOR UX20**

- automotive and aerospace components
- castings
- welded structures
- plastics
- special alloys
- ceramics

#### **TYPICAL APPLICATIONS FOR UX20**

- quality assurance and material analyses
- failure analyses such as flaws, porosities, cracks, inclusions
- assembly checking
- measurements of inner structures
- inspection of small serial productions
- process control



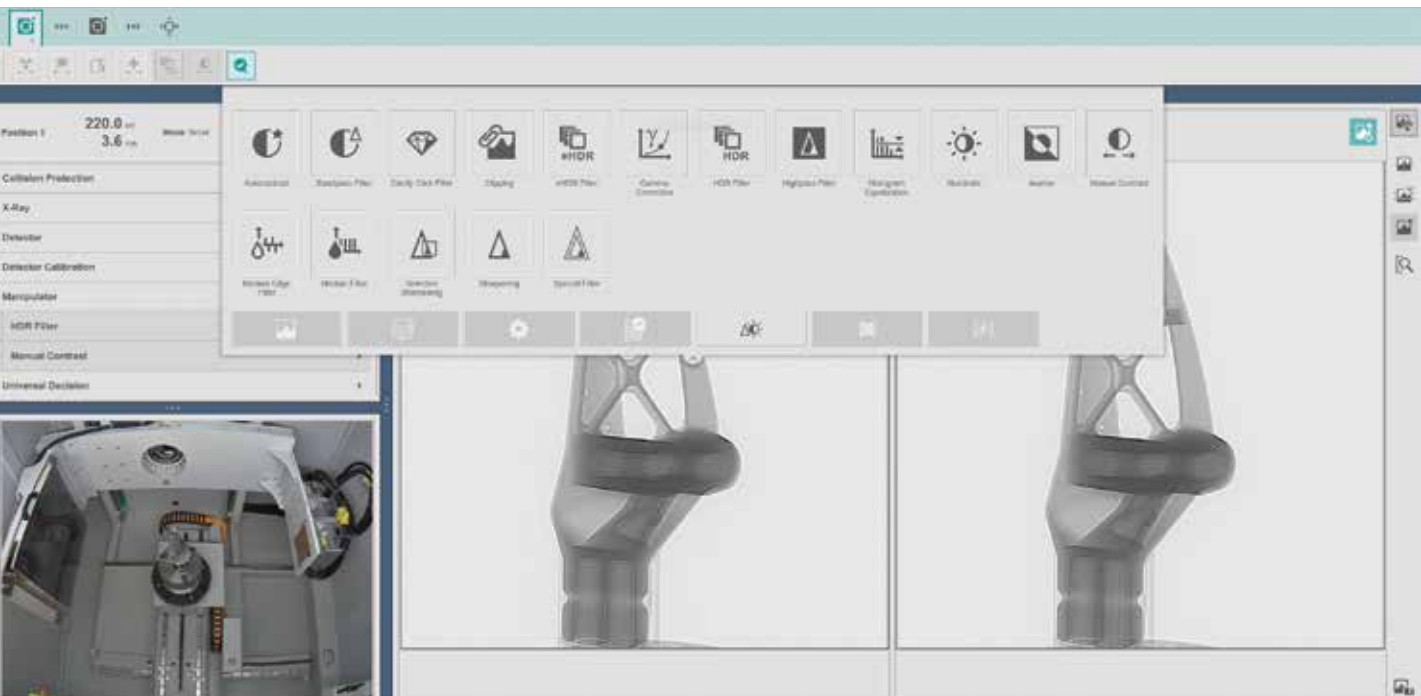
As speed and complexity in our world increases, the UX20 makes your daily life easier. The clean and simple layout of the operator desk allows you focus on your task.



You can also vary the height of the desk to accommodate operation from a sitting or standing position.



The optional CT station is designed to weather your rough environment while allowing you to analyze your scans quickly, and in close proximity to the system.



You can rely on our decades of 2D x-ray experience to make the correct and safe decision every time.

## Software platform Gemini

Gemini is Yxlon's award winning user interface software running on all our latest products. The most important design goal is to help you to get the inspection task done as easily as possible. This starts with having a single software for all workflows. No matter if you run a CT inspection, perform an ad-hoc manual 2D inspection, teach or run an automatic sequence: all are based in Gemini, the one and only software program for all your needs.

Different levels of users can streamline their tasks; from the daily operator that works with preset parameters and predefined tasks, to the expert that puts these in place, you can be sure the system supports all users.

One look at the health-monitor is enough to quickly analyze the system's condition and performance. In case anything is abnormal, the solution is usually just a click away.



Gemini's health monitor shows the current system condition.



Side mirror x-ray image with optimized settings for manual 2D inspection.

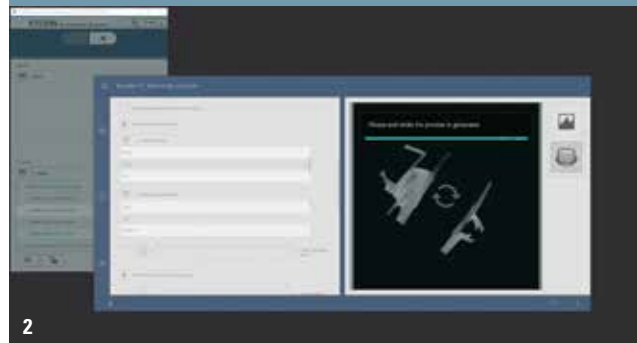
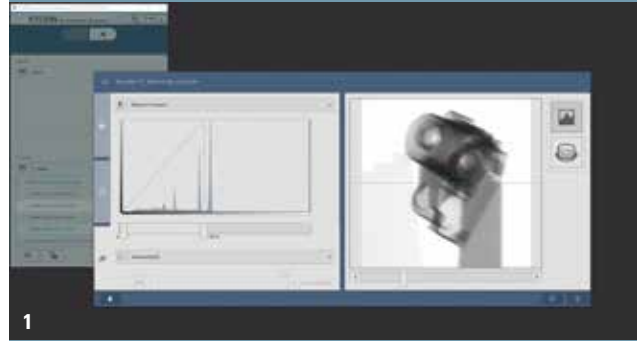
### MANUAL INSPECTION

With input from customers like you, we designed the UX20 system from the ground up for fast and easy x-ray inspection of your parts.

2D inspection is really simple: mount the part and close the door. This is fast with our safe one-button solution. The system can automatically move and show you a good starting x-ray image. The clear buttons and joysticks at the operator console let you focus on the important part, the image. Use the analysis mode to get down to the details with zoom, annotations and measurements. Creating a report of what you see is simple: just use the grading buttons on the console. The final task is to press the eject button and the system is ready for the next part.

### AUTOMATIC INSPECTION

Setting up repeatable testing of a part in an inspection workflow is as easy as a manual 2D inspection. When running the automatic inspection, all non-essential interactions have been removed to create a simple teaching mode. Try it out, inspection has never been so easy.



- 1 Check the projections and scan parameters in the ReconWorkspace.
- 2 Get fast feedback about the effect of your reconstruction settings.

### COMPUTED TOMOGRAPHY

With the heritage of CT inspection systems like the FF35 CT, you can count on a strong suite of computed tomography features.

With ScanExtend, the wizards guide you to set up various scan-field extensions to scan even the largest parts in the system.

With FlexCenter, difficult parts or regions of interest can be set up quickly, enabling you to get your task done in the minimum time.

### SYSTEM PERFORMANCE CHECKS

Sometimes, you want to know how good your x-ray inspection system really is. For that, we offer a number of performance checks referring to international standards like ASTM E1695 or VDI2630 part 1.3. Executing them is simple with our automatic workflows.





1



2

- 1 Critical components are stored safely to keep them out of the rough environment and prevent damage which increases the system uptime.
- 2 Easy maintenance with the extendable cooler unit

## 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
- maintaining the measuring capability of metrology systems [FF20/35 CT Metrology]

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

## YXLON UX20

Cabinet	160 kV	225 kV
Width		2,550 mm
Depth <sup>1)</sup>		1,770 mm
Height, operation		2,350 mm
Height, transport		2,150 mm
Weight	4,300 kg	5,300 kg
Mains connection	230 V ±10%, 50/60 Hz, 1N PE	
Power consumption, maximum	3.8 kVA	
Dose rate, maximum <sup>2)</sup>	1 µSv/h	

1) cabinet only, add 900 mm for operator console

2) at 100 mm distance from the cabinet surface

### Manipulator

Maximum part weight	100 kg
Tilt angle, oblique <sup>1)</sup>	±55 °
Turntable, Ø <sup>2)</sup>	300 mm
Loading door clearance, width x height	840 x 1,625 mm

1) maximum angle on detector Y.Panel 4343DXi

2) optional 600mm t-slot turntable

### Inspection envelope and x-ray detector

	Y.Panel 2323HB	Y.Panel 4343DXi
Active area	230 x 230 mm	430 x 430 mm
Pixel pitch	179 µm	139 µm
Focus-detector distance (FDD)	900 mm	1,150 mm
Part size, maximum	Ø 710 x 1,090 mm height	Ø 830 x 1,100 mm height
Inspection envelope 2D	Ø 710 x 1,090 mm height	Ø 800 x 1,100 mm height
Inspection envelope basic CT	Ø 190 x 165 mm height	Ø 340 x 280 mm height
Inspection envelope extended CT <sup>1)2)</sup>	Ø 315 x 1,090 mm height	Ø 540 x 1,100 mm height

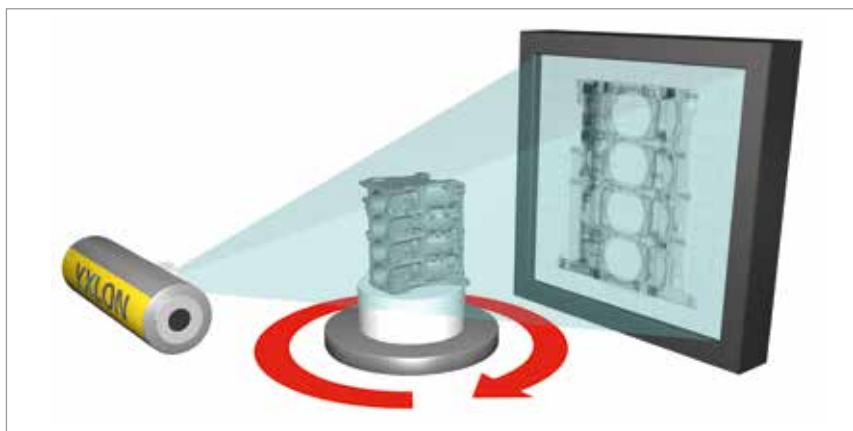
1) requires professional analysis PC

2) artefacts between horizontal scans of a few mm are normal

### X-ray source

	Y.TU160-D06	Y.TU160-D04	Y.TU225-D04
Energy, maximum	160 kV	160 kV	225 kV
Power, maximum	800/1,800 W	640/640 W	800/1,800 W
Focal spot size <sup>1)</sup>	0.4/1 mm	1/1 mm	0.4/1 mm

1) according to EN12543



Principle of cone-beam CT:  
The 3D model comprises all information acquired  
by the detector during the rotation.



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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