

THE SMART EVO SERIES

Portable X-ray systems

YXLON

Technology with Passion

MEET THE FUTURE

Creating a new product usually starts with a dream; a dream that is often compromised by the design limitations of materials, technology or resources. At YXLON Copenhagen, we don't compromise on our dreams.

By combining our years of experience and know-how with the latest in design thinking, we've created the most uncompromising product range yet. Meet SMART EVO; the future of portable X-ray equipment.

DESIGNED FOR REAL-LIFE CHALLENGES

Creating the successor for the tried and tested Y.SMART series has been a daunting task. To help define the parameters for the new SMART EVO series, we turned to our experts in the field – our customers. Their insight, combined with our technological expertise and uncompromising approach to design and function, was essential in realizing our common vision.

AN UNCOMPROMISING APPROACH

"When we started the EVO project, our ambition was to create a portable product range with high X-ray performance and a state-of-the-art interface between the operator and the equipment," explains Product Manager Jan Bressendorff, one of the minds behind the new SMART EVO series. "When constructing portable equipment, it's crucial to find the right balance. The trick is to make products that are light-weight and still robust with high performance. Usually, this results in a trade-off - but not with the SMART EVO series, where we've succeeded in making the range even more robust and light-weight, while improving the thermal performance."

"We've succeeded in making the range even more robust and light-weight, while improving the thermal performance"



THE HEART OF THE SYSTEM

The new control unit, CONTROL EVO, has catapulted portable X-ray equipment into the 21st century. Combined with the redesigned SMART EVO tube head, it's a system that sets the standard for many years to come.

A powerful computer with an intuitive user interface is the core of CONTROL EVO. With direct access to basic and advanced functions and features such as exposure calculations and exposure profiles, the unit simplifies and speeds up both fieldwork and diagnostics.

An advanced exposure calculator allows users to define input for film type profiles, material type, thickness and density, distance to the object and the required kilovolt. It also calculates the optimal mA setting and exposure in real-time. User support is also provided for all film types and digital imaging.

“When you're out on field inspection, you're not wearing kid gloves”

BUILT FOR EXTREMES

“Part of the brief for the design of the new EVO series was that it should be extremely robust and work anywhere in the world – even in the harshest and most remote environments,” says Jan Bressendorff.

“One of the real-life challenges faced by our customers around the world is an inconsistent or differing electrical power supply. That's why we equipped the new CONTROL EVO with a Power Factor Correction module that can handle voltage input from 85 to 264 VAC. Now, you can be fully operational on every global power grid and insensitive to unstable grid voltages,” he adds. “We also know, first-hand, the treatment our products have to withstand. It's a tough job.” He smiles. “When you're

out on field inspection, you're not wearing kid gloves, and the knocks, drops and scrapes from regular use have to be taken into SMART EVO's stride,” says Jan.

With its smart robust design, improved ergonomics for better handling, and integrated protective bumpers, the SMART EVO series is built to last. And with IP65 protection standard, it's fully operational in dusty and wet conditions, with the cabinet shielding all vital parts.

LOOKING BACK AND MOVING FORWARD SAFELY

“Knowing how long-lasting and robust your existing YXLON products are, we designed the CONTROL EVO to be retro-compatible - with support for all product specific cables. With our new design, we were very much aware that our customers needed to maximize the value of all their existing equipment and to make fleet management flexible and efficient,” says Jan Bressendorff.

“And safe operation is a given,” he adds. “The SMART EVO series complies with all international radiation leakage standards and the European machinery directive. It doesn't get safer than that.

NEW TECHNOLOGY & SMARTER WORKFLOWS

“The SMART EVO project started when we acknowledged that the control units for our existing Y.SMART and Y.XPO systems had been surpassed by modern technology. Our customers’ needs for state-of-the-art equipment proved to us the need for change – and provided us with a chance to update our range,” explains Martin Astradsson, the Chief Software Architect behind the new SMART EVO series.

DESIGNED TO PERFECTION - IN AND OUT

“At YXLON Copenhagen, design is a high priority. We take it very seriously. From the product’s outward form to the architecture of the software; good design is paramount. That’s why we started with a clean slate rather than building on existing technology. Actually, that’s not entirely true: When we design something new, we actually start with a clean slate and 50 years of experience...” admits Martin.

“... for example, when I think of our existing Y.SMART, it’s a piece of equipment that’s built like a tank – robust and reliable. And that’s not a bad thing, knowing how it gets treated. So, we kept this aspect of the design. But when I look at the new SMART EVO, knowing the state-of-the-art technology hidden beneath this heavy-duty armor, I think of it more like a Tesla or a Rolls Royce. It really is in that league now.”

A SMARTER WORKFLOW

Workflows can always be optimized. The new CONTROL EVO technology dovetails naturally with modern customer setups and adds functions that can save time, both in the field and in administration to maximize the use of time - shortening customer processes and increasing their revenue.

“When we upgraded the technical capabilities of the CONTROL EVO, we had the network-based workflows of our customers in mind,” says Martin. “Nowadays, when our customers are out in the field, they often have their laptops with them. Having a modern and future-proof platform with USB, Ethernet and Bluetooth™, we make it possible to provide our customers with new services in the future, so that they can stay connected to their own company legacy systems for immediate upload of exposure data - even when they are out in the field.”

“GPS integration can also be implemented to enable location data as part of the exposure history if needed by our customers,” he adds. “Remote diagnostics and monitoring of instruments is another option, using the network capabilities, and in fact, these features are already extensively used internally at YXLON. Of course, diagnostic reports can also be generated and saved directly on an USB stick and then sent via e-mail when back at the office. The platform is ready; it is only limited by our imagination.”

“The new SMART EVO system does everything it used to, but it does it better and it does it faster - it’s as simple as that”

AN ONGOING PARTNERSHIP

“By learning more about our customers’ workflow, we can easily customize and add functionalities, because we’ve created a platform that is designed to be future-proof. But even with a traditional inspection company setup, the SMART EVO system adds tremendous value. The user interface is intuitive, with all the data clearly displayed and easily accessible. Software updates are as easy as plugging in a USB. The possibilities are endless; it’s just up to our customers to take full advantage of the new technology and make it work for them,” says Martin.

“Some people might say, ‘Do I really need all these new functions? My system works just fine already, and a portable system’s job is simply to make images...’ And they’d be right – but would you ever go back to a manual dial landline after you’d experienced the freedom and efficiency of a cell phone? Probably not. The new SMART EVO system does everything it used to, but it does it better and it does it faster - it’s as simple as that,” states Martin.

“Ultimately, our customers dreamed of a smarter workflow – and to go beyond the practical. We listened to those dreams. Now they’re reality,” concludes Martin Astradsson.



THE SMART EVO SERIES



SPECIFICATIONS

WEIGHT

HEIGHT

FOCAL SPOT SIZE EN 12543

HIGH VOLTAGE ADJUSTMENT

mA ADJUSTMENT

MAX X-RAY POWER

BEAM ANGLE

LEAKAGE RADIATION

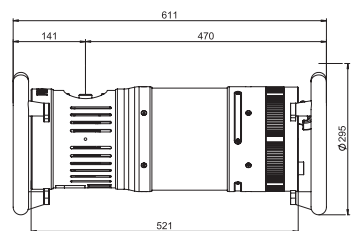
ENVIRONMENT

TEMPERATURE RANGE

CONT. EXPOSURE 35°C. MAX kV, MAX mA

EVO 160D

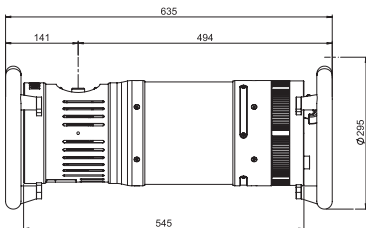
22 kg
611 mm
1.0 mm
20 – 160 kV
0.5 – 7.0 mA
750 W
40° x 60°
Max. 2.0 mSv/h
IP65
-20°C to +50°C
Min. 1 hour





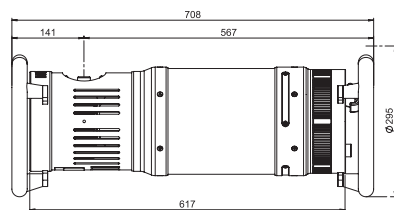
EVO 200D

23 kg
635 mm
1.0 mm
30 – 200 kV
0.5 – 6.0 mA
750 W
40° x 60°
Max. 2.0 mSv/h
IP65
-20°C to +50°C
Min. 1 hour



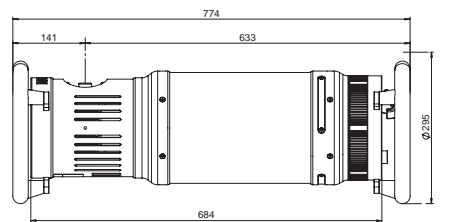
EVO 225D

26 kg
708 mm
3.0 mm
40 – 225 kV
0.5 – 5.5 mA
900 W
40° x 60°
Max. 5.0 mSv/h
IP65
-20°C to +50°C
Min. 1 hour



EVO 300D

29 kg
774 mm
3.0 mm
50 – 300 kV
0.5 – 4.5 mA
900 W
40° x 60°
Max. 5.0 mSv/h
IP65
-20°C to +50°C
Min. 1 hour



A full-page background image showing a male worker in profile, wearing a blue hard hat with a logo, safety glasses, and a high-visibility yellow vest over a dark long-sleeved shirt. He is leaning over a large, light-colored industrial X-ray unit, with his hands near a red and black strap. The background shows an outdoor industrial setting with various pipes and equipment under a clear blue sky.

BUILT TO LAST

IT'S ROBUST AND RELIABLE

Designed and built in Denmark; the SMART EVO systems are comprised of the best components and assembled with the utmost care - making them reliable, long lasting and a sound investment. They are fitted with a high quality metal ceramic X-ray tube and the robust composite casing now protects all vital parts even better. The systems meet the IP65 standard, making them fully operational in dusty and wet conditions.

SMARTER WORKFLOW

IT'S LIGHT-WEIGHT AND EASY TO HANDLE

The ergonomic design and the low weight makes the SMART EVO systems easy to handle and re-position. A broad temperature range from -20°C to +50°C makes the EVO systems reliable and ensures smooth operation even in extreme environments. The intuitive interface allows for a smarter workflow.

HIGH PERFORMANCE

DUE TO IT'S TECHNICAL CAPABILITIES

Built to meet the highest international safety standards, each unit is individually tested and measured for safety and accuracy. The SMART EVO systems features focal spots from 1.0 mm to 3.0 mm and ranges from 750 W to 900 W constant potential X-ray power ensuring high performance, shorter exposure times and high resolution results.



EXPOSURE CALCULATOR

The advanced built-in exposure calculator in the CONTROL EVO ensures fast exposure calculations, as well as uniform results and optimised exposure times. It accommodates the use of a wide range of films, materials and settings.

POWER SUPPLY

The AC-mains voltage range spans from 85 to 264 VAC and from 45 to 65 Hz, supporting global operation. The improved power factor correction module ensures stable operation, where AC-mains are unstable.

OPTIONS

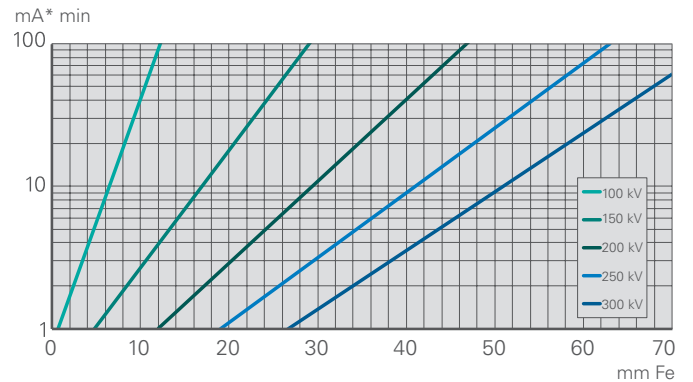
The right set of accessories is important to make your workflow even smarter. Tube stands and other accessories are available, making the X-ray systems versatile, flexible and suited for most applications.

CERTIFICATES

CE (Low voltage EN 61010-1, EMC 2004/108/EC, Machinery EN 60204-1). DIN 54113 and Röntgenverordnung (RöV).

Fe EXPOSURE DIAGRAM

700 mm FFD / D7-type + Pb / D = 2,0



EXPOSURE CALCULATOR

Calculate exposure values

Tube	<input type="text" value="EVO 225D"/>	<input checked="" type="checkbox"/> Auto-calculate
Material	<input type="text" value="Iron (Fe)"/>	
Film manufacturer	<input type="text"/>	
Film type	<input type="text" value="D7 (C5)"/>	
FFD	<input type="text" value="70"/> cm	[30 - 200]
Density	<input type="text" value="2.0"/>	[1.0 - 3.5]
Thickness	<input type="text" value="50"/> mm	
Voltage	<input type="text" value="225"/> kV	[40 - 225]
Current	<input type="text" value="4.0"/> mA	Factor <input type="text" value="1.00"/>
Time	<input type="text" value="14:02"/> min.	Save as profile

QUALITY

You need equipment you can rely on, day in day out. Built in Denmark to stringent specifications with the highest quality components, our products are both built to last and operate accurately even under the harshest situations. For us, the highest priority is placed on quality: the quality of our X-ray equipment and, as a result, the quality of your products.

TRUST

You work in unpredictable challenging environments and sometimes things don't go as planned. That's when it's good to know that we've got your back. With our comprehensive support and local service and repair network, you can trust us to keep downtime to a minimum.

EXPERIENCE

With YXLON Copenhagen, you're in good company. As the leading global provider of X-ray inspection equipment for industrial applications, we have the right solution to match nearly every application. Our years of experience have enabled us to gain the confidence and trust of some of the world's top companies in a wide range of demanding business areas. We'd like to think that your company is next.

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Technology with Passion

YXLON International A/S
a company of the COMET Group
Helgeshøj Alle 38, 2630 Taastrup, Denmark
T +45 72 40 77 00, VAT DK 18 21 52 33
yxlon@cph.yxlon.com, www.yxlon-portables.com



YXLON is proudly represented in
Australia and New Zealand by
AXT Pty. Ltd.
1/3 Vuko Pl., Warriewood
NSW 2102 Australia
T. +61 (0)2 9450 1359 F. +61 (0)2 9450 1365
W. www.axt.com.au E. info@axt.com.au