Led by experience. Driven by curiosity.

Comet Technologies Product Catalog

Portable and mobile X-ray systems

comet
x-ray

Meet the future

It begins with a dream

Creating a product usually starts with a dream that is often compromised by the design limitations of materials, technology, or resources. At Comet, we don't compromise on our dreams. By combining our years of experience and know-how with the latest design thinking, we've created the most uncompromising product range yet - meet the EVO.

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," explains Product Manager Jan Bressendorff, one of the great minds behind the 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 EVO series, where we've succeeded in making the range even more robust and light-weight while improving the thermal performance."

The heart of the system

The control unit, CONTROL EVO, combined with the redesigned EVO tube head, is 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 primary 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.

Built for extremes

"Part of the brief for the design of the 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 users have to be taken into EVO's stride," says Jan.

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

Looking back and moving forward safely

"Knowing how long-lasting and robust our existing Comet 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 EVO series complies with all international radiation leakage standards and the European machinery directive. It doesn't get safer than that."

Excellent image quality with digital technology

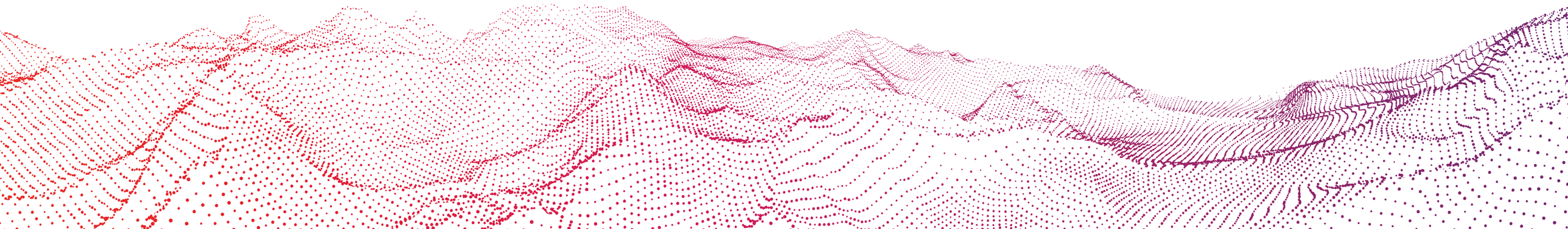
By introducing the small 1.0 mm focal spot, we also significantly improve the image quality by reducing un-sharpness, making the output resolution higher, and detecting defects or seeing small details better, generating much sharper image output.

It ensures superior digital detector based inspection and significant advantages when using a conventional film, optimizing the exposure time and making radiography inspection more efficient.

Winner of the Red Dot Award

EVO is an award-winning top achievement after being presented with the prestigious Red Dot Award, Best of the Best in Product Design.

Statement by the jury: "The design of EVO impressively combines the innovative technology of the CONTROL EVO unit with a portable system for non-destructive testing. As such, this system sets new standards for the future. It fascinates with a highly user-friendly operation, which allows it to be perfectly adjusted to various workflows even under the most extreme conditions. It is compact and ergonomically well thought-through."



The EVO series

Comet Technologies systems are light, of high quality and have been designed for flexible field inspection, in all types of industrial environments. The combination of our new EVO tube heads and CONTROL EVO is the key to a significantly improved workflow.

Built to last

Designed and built in Denmark; the 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

The ergonomic design and the low weight makes the 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

Built to meet the highest international safety standards, each unit is individually tested and measured for safety and accuracy. The EVO systems feature 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.

Specifications	EVO 200P	EVO 300P	EVO 160D	EVO 200D	EVO 225D/DS	EVO 300D/DS	EVO 300DW	EVO225D/1200	EVO 300D/1200
Weight	28 kg	36 kg	22 kg	23 kg	26 kg	29 kg	31 kg	28 kg	36 kg
Height	665 mm	804 mm	611 mm	635 mm	708 mm	774 mm	774 mm	808 mm	910 mm
Focal spot size EN 12543	0.4 x 4.0 mm	0.5 x 5.5 mm	1.0 mm	1.0 mm	3.0 / 1.0 mm	3.0 / 1.0 mm	3.0 mm	3.0 mm	3.0 mm
High voltage adjustment	30 – 200 kV	50 – 300 kV	20 – 160 kV	30 – 200 kV	40 – 225 kV	50 – 300 kV	50 – 300 kV	25 – 225 kV	60 – 300 kV
mA adjustment	0.5 – 6.0 mA	0.5 – 4.5 mA	0.5 – 7.0 mA	0.5 – 6.0 mA	0.5 – 5.5 mA	0.5 – 4.5 mA	0.5 – 4.5 mA	0.5 – 10 mA	0.5 – 6.5 mA
Max X-ray power	750 W	750 W	750 W	750 W	900 W	900 W	900 W	1200 W	1200 W
Beam angle	38° x 360°	38° x 360°	40° x 60°	40° x 60°	40° x 60° / 30° x 60°	40° x 60° / 30° x 60°	40° x 60°	40° x 60°	40° x 60°
Leakage radiation	Max. 2.0 mSv/h	Max. 5.0 mSv/h	Max. 2.0 mSv/h	Max. 2.0 mSv/h	Max. 5.0 mSv/h	Max. 5.0 mSv/h	Max. 5.0 mSv/h	Max. 5.0 mSv/h	Max. 5.0 mSv/h
Environment	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Temperature range	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Cont. exposure 35°C, max kV, max mA	Min. 1 hour	Min. 1 hour	Min. 1 hour	Min. 1 hour	Min. 1 hour	Min. 1 hour	Continuous *	1 hour **	1 hour

* 30°C

** 30°C, 225 kV / 4.4 mA

CONTROL EVO

Built to last

Designed and built in Denmark, the CONTROL EVO is based on state of the art technology. The unit is fitted with a high quality die-casted aluminium chassis protecting all vital parts. It meets the IP66 standard, making the CONTROL EVO fully operational in dusty and wet conditions. It is reliable, long lasting and a sound investment.

Smarter workflow

The ergonomic design and shoulder strap makes the CONTROL EVO easy to handle and re-position. All information is clearly displayed on the 6.5 inches high contrast color screen. The unit features an exposure calculator and has an intuitive interface with a wide range of advanced functionalities – equalling a smarter workflow.

Compatible

The CONTROL EVO is backwards compatible with the PXS portable X-ray systems. It has an Ethernet interface allowing for remote diagnostics and software updates. The USB interface facilitates, control of the system via a USB-to-Serial converter, saving diagnostics reports and can also be used for software updates in the field. It even has Bluetooth™ for future applications. All of these make the EVO system smart and future-proof.

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 power factor correction module ensures stable operation, where AC-mains are unstable.

Specifications

Weight	13 kg
Display	6.5" LCD Color
Max X-ray power	1200 W*
High voltage adjustment / 1 kV Res.	20 – 300 kV*
mA adjustment / 0.1 mA Res.	0.5 – 10 mA*
Exposure time	1 sec. - 60 min. or ∞*
Interfaces	Ethernet, Bluetooth and USB
Number of exposure profiles	100
Exposure history	Last 100 exposures
Environment	IP66
Temperature range	-20°C to +50°C

* Depends on tube head type

Smart service

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.

These initiatives have been tailored to increase operational excellence and support your production flow in the best possible way, maximizing production uptime.

Rebuild package
The rebuild package will extend the overall lifetime of your portable X-ray system and thereby maximize the system's uptime, thus eliminating potential and costly production stoppages.

Service check
The service check ensures that your portable and mobile X-ray system is in optimal condition. Your system will undergo a systematic evaluation of its performance level and overall condition, and will be serviced with a preventative exchange of basic wearing parts.

Calibration package
By calibrating your portable and mobile X-ray system regularly, you will fulfill both internal and external requirements for quality assurance as well as to ensure that your X-ray system performs in accordance with the system's specifications.

Smart solutions

It's a competitive market and even the smallest advantages can prove to be the tipping point in hard fought tenders. As the leading global provider of X-ray inspection equipment for industrial applications, we have the right solution to match nearly every application.

To further strengthen your position, we have designed three initiatives that we trust will support your business and provide you with better customer service.

Rental program
Alleviate cash flow issues with our rental program. Customers have the opportunity to rent portable X-ray systems, with a signed rental agreement, including a specified time frame, terms, and price.

Exchange program
Customers with functional equipment, have the opportunity to return the equipment as a part of an exchange program, where a specified amount will be deducted from the customer's new equipment purchased in exchange for the trade-in.

Extended warranty
An extended 12-month or 24-month full product warranty is available at the time of purchase for portable and mobile X-ray systems of all variants. This option will add to the overall level of customer comfort by eliminating unexpected extra costs in case of product downtime.

Smart accessories

In our world, time is everything. The smarter we help you and your people work, the faster and better you'll get the job done. Working smart means accuracy, safety and reliability, and most important, it means avoiding costly disruptions to your workflow.

A broad range of high-quality accessories is available for the EVO series. These various accessories enable a smarter workflow and support multiple applications in all environments.

Our range of accessories makes the use of portable X-ray equipment safer, more efficient and convenient when challenging working conditions has to be solved.

The accessories are not only designed to be used in rough conditions but also to be agile and user-friendly for customers when using portable X-ray systems.

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1. 4-Legged Tube Stand**
2. 3-Legged Tube Stand**
3. Light-Weight Tube Stand
4. Mobile Tube Stand**
5. Flight Case CONTROL EVO
6. Lead Cone Package*
7. External Lamp, Ultra-Bright
8. Warning Lamps
9. Flight Case EVO Tube Heads*
10. Double Door Contact
11. Revolving Hand Ring only for EVO 225D/1200
12. Water Cooler
13. Lamp Tower with Siren
14. Door and Lamp Cables

* Only for directional X-ray systems
** Only for directional X-ray systems except the EVO 300D/1200

The XMB series

Smarter workflow

The mobile XMB X-ray system from Comet Technologies is easy to handle and perfectly designed for dealing with challenging inspection jobs at power plants, on aircraft structures and in the petrochemical industry. Our mobile X-ray solution supports high voltage cables with lengths up to 20 meters, and combined with a compact metal ceramic X-ray tube mounted on the flexible high voltage cable, it performs excellently in challenging environments in narrow and hard-to-reach areas.

Versatile

The constant potential XMB X-ray system supports a wide range of high quality X-ray tubes, both directional and panoramic variants, with different sizes of focal spots. The modular design of the mobile system means it can be easily adapted to deal with diverse inspection jobs in confined spaces, just by changing the X-ray tube. The XMB is fully compatible with both film and digital imaging and can be used for a large range of difficult tasks without compromising your workflow.

High performance

The XMB is available in 100, 160 and 225 kV variants, and is operative from 7.5 kV up to a maximum of 225 kV, with an extremely high X-ray power of up to 2.25 kW. The system features a broad mA range from 0–20 mA depending on the chosen system and X-ray tube. The versatile XMB high-performance system will give you the competitive edge by reducing exposure time and creating a smarter workflow.

Specifications	XMB 100	XMB 160	XMB 225
Weight	Approx. 180 kg	Approx. 184 kg	Approx. 190 kg
Height x depth	1630 x 980 mm	1630 x 980 mm	1630 x 980 mm
Width of axis	600 mm	600 mm	600 mm
High voltage adjustment	7.5 – 100 kV	7.5 – 160 kV	10 – 225 kV
mA adjustment	0 – 20 mA	0 – 20 mA	0 – 15 mA
Max X-ray power	1500 W	2250 W	2250 W
Cable length	10, 15 or 20 m	10, 15 or 20 m	10, 15 or 20 m

Built to last

Gas compressor station near Egtved, Denmark

Per Kopperup Andersen has been an NDT Inspector with FORCE Technology since 2010, while working with Comet Technologies portable products. He is working alongside his colleague, NDT inspector, Lars Andersen, and inspecting weld seams on pipelines, for ELnet Danmark, during the construction of the new gas compressor station near Egtved in Denmark. Once up and running, the gas compressor station will increase the gas transmission network's capacity in Denmark.

For this inspection job, Per uses the EVO 225D, which is made by Comet Technologies in Denmark. „Relying on your equipment is of paramount importance. The equipment has to withstand all the stress and rough handling that comes with field operation. When you bring a tube head on-site to do an inspection job, it has to work".

„The EVO 225D is reliable and robust. Over the past four years, I have not experienced one single breakdown, and even though I have dropped them a couple of times, they continue to function just fine".

The EVO series is robust and built to endure rough handling, and it is also lightweight for easy positioning.

Since low weight and ergonomics are essential to Lars, he uses the EVO 225D for this inspection job. „NDT Inspectors often find themselves in awkward positions while positioning the tube head. These strenuous situations sometimes result in the operator dropping the tube head, which may damage it".

The EVO series is built for easy positioning and handling and is well suited for these kinds of situations. The tube heads are robust and can withstand bumps from rough handling, and lightweight for easy positioning. „There is a lot to be said about the importance of tube head ergonomics. I prefer tube heads to be as light as possible.

„The relatively low weight of the EVO 225D makes it easy to both handle and position. The EVO is robust and has great ergonomics. It's robust and easy to position on pipes".

Revealing insights

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 Comet, 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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