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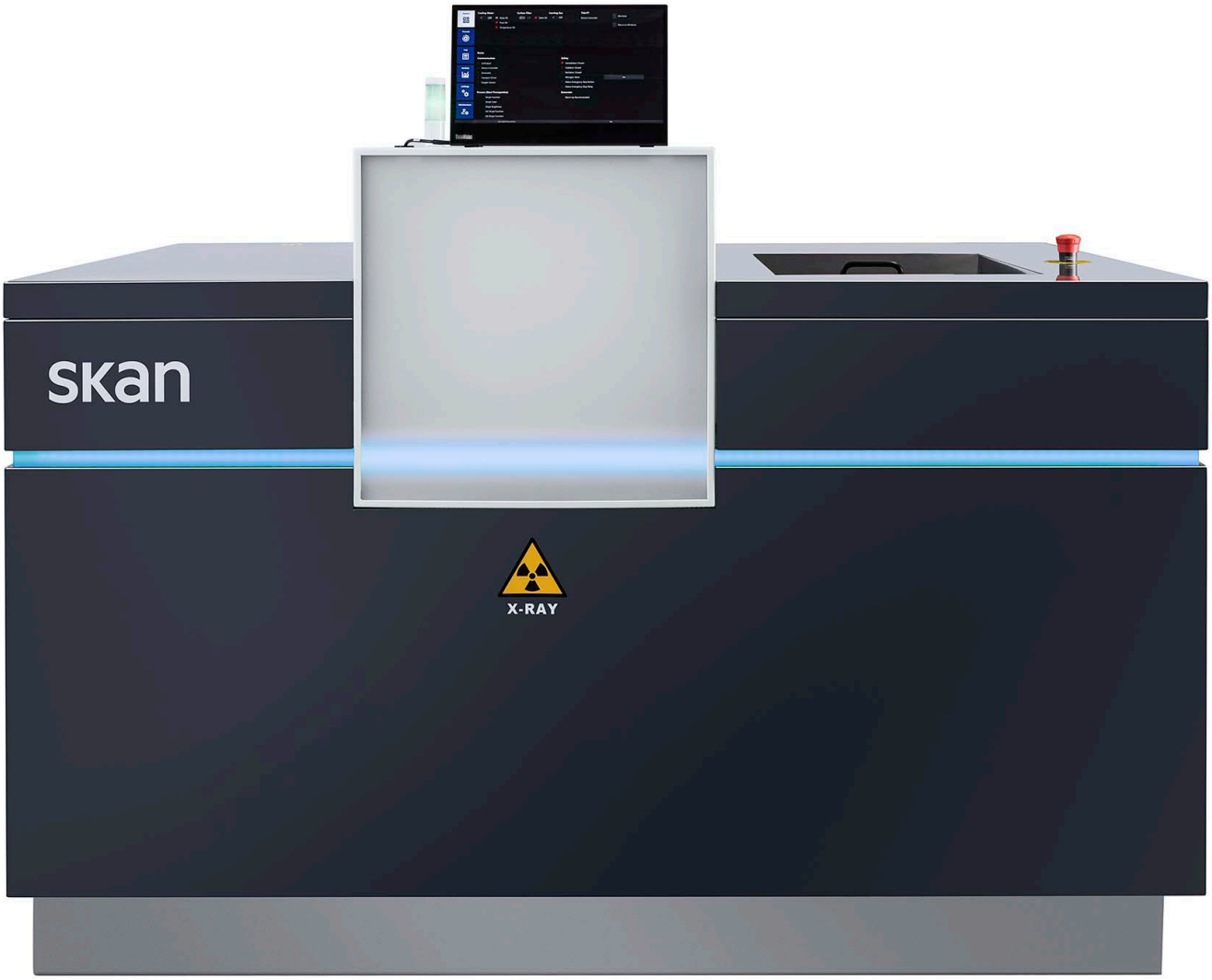
EBLab200

Create radical innovations with ebeam



EBLab200

Compact, flexible, and easy to use

Develop and optimise new products and processes with low energy ebeam. The EBLab200 is as reliable as it is versatile. This fully shielded system enables experiments and quality control tests to be performed in the smallest of spaces without the need for additional infrastructure. The EBLab gives innovation teams the tools they need to explore far beyond boundaries through easy access using electron beam processing .

The next generation EBLab200 builds on the heritage of the very popular machines in use since 2012 in many Industries and research facilities.

Along with industrial great features, the new EBLab200 offers the following improvements:

- Removable transport casette design though service door allows easy servicing of the whole transport system without the need for radiation survey after service
- Increased maximum power of 3kW
- New (optional) closed loop cooler with lower noise level
- Touchscreen digital interface
- More efficient cooling circuit with improved serviceability
- Improved residual oxygen sensor

The compact, sealed ebeam lamps used in the EBLab200 allow for a maximum beam energy of 200 keV and transport speeds of 3–30 m/min, allowing doses of up to 950 kGy in a single pass. Samples may be as large as an A4 letter (216 mm × 279 mm) and up to 50 mm thick. With nitrogen inerting and optional ozone extraction, researchers have the freedom to work with oxygen-sensitive or inert chemistries.

User friendly

⟶ Touchscreen

Safe

⟶ Fully shielded. No personal dosimeters needed

Versatile

⟶ Large, adjustable sample holder

Powerful and flexible

⟶ From 80 to 200 keV

Real Science

⟶ Detailed records of test parameters

Reliable

⟶ Industrial ebeam engine

Convenient

⟶ Compact, freestanding

Maintenance-free

⟶ No vacuum pump. No need to change foils, cathodes, or cables

Worldwide

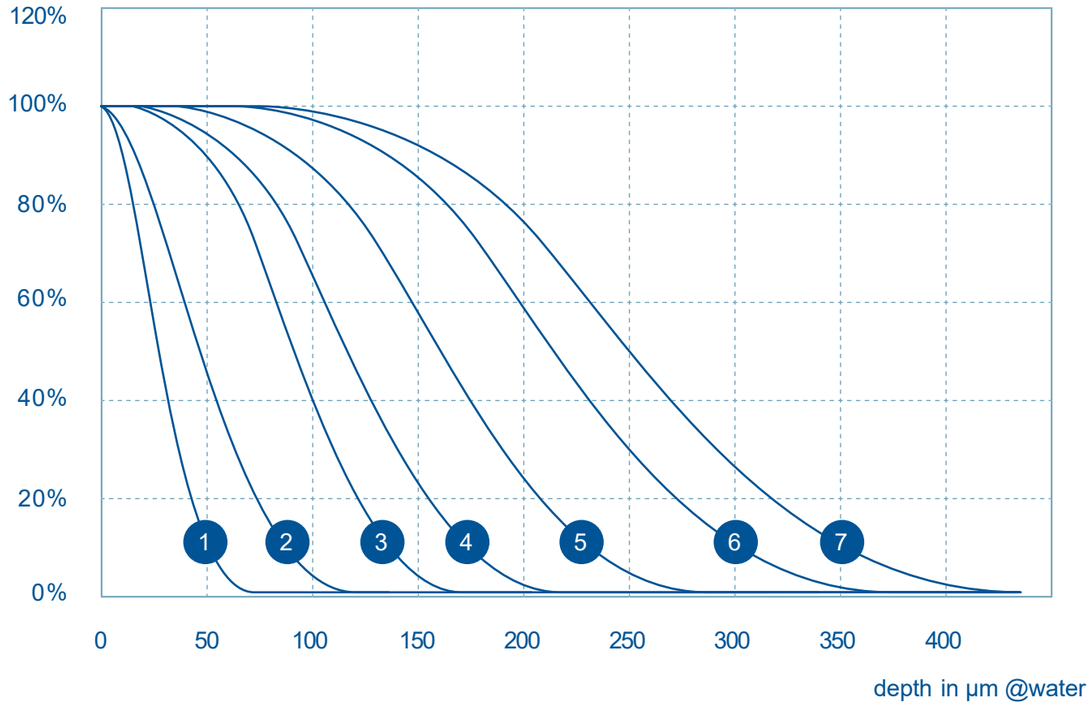
⟶ First-class customer support

EBLab200

Technical Data

Electron penetration

Dose % of surface dose



1. 80 keV
2. 100 keV
3. 120 keV
4. 140 keV
5. 160 keV
6. 180 keV
7. 200 keV

Features

High voltage range	80–200 keV, precision > 99 %
Max. power ebeam lamp	3 kW
Max. beam current (high voltage dependent)	22 mA, precision > 99%
Sample transport speed	3–30 m/min
Sample size	DIN A4 (216×297 mm), height-adjustable up to 50 mm (in steps of 5 mm)
Air gap	5–55 mm (considering a sample of height zero)
Oxygen measurement device	included
Operating modes	with and without inerting gas (optional)
Nitrogen inerting	residual oxygen concentration limit below 200 ppm
ebeam lamp	EBA-200/270-OA
Options	ozone extraction kit active carbon ozone filter closed loop water cooler low N_2 volume cassette

User interface

Push buttons	emergency stop
Warning and Operational lamps	red, green and dynamic LED light
Monitor screen	14"
Data input	Touchscreen
Graphic User Interface	Windows-based

Physical data

Weight	1450 kg (gross) / 1300kg (net)
Min. floor loading	1000 kg/m^2
Size (width, depth, height)	1700, 980, 1470 mm

Radiation safety

Fully shielded system	Lead-lined painted steel cabinet
Max. leakage radiation	< 1µSv/ h at 10 cm from surface

Electrical data

Input supply voltage	PNE 230V AC (single phase)
Power consumption	max. 6 kVA
Recommendation external circuit breaker	30 A

Supply lines

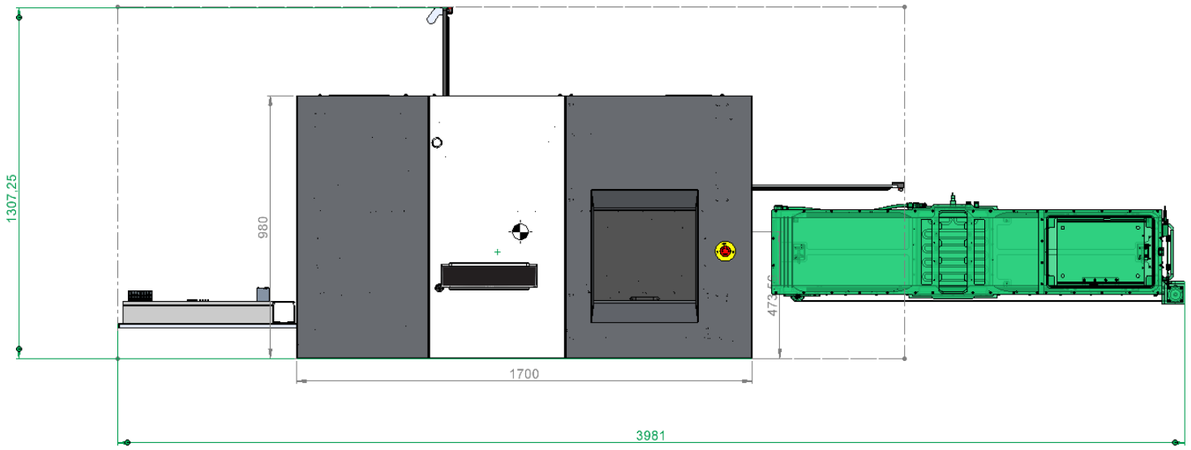
Cooling water min. flow rate	> 3 l/min
Temperature	25 °C to 35 °C always > 3 °C above ambient temperature
N_2 flow rate	200 l/min Peak
N_2 pressure	min. 4 bar (at 200 l/min), max. 6 bar

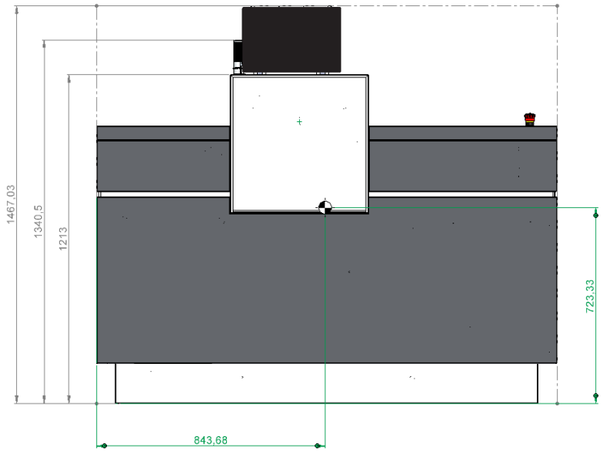
Environmental conditions

Ambient temp. range	10 to 35°C
Relative humidity	10 to 70 %

EBLab200

Space Requirements





SKAN Stein AG

SKAN Stein AG, a division of the SKAN Group, is a world leader in the industrial use of electron beam technology. We explore, develop and produce innovative engines for cost-effective and environmentally-friendly processes. The ebeam technology has many uses, including sterilisation for pharmaceutical applications, packaging, curing of inks, modification of innovative new plastics and many others.

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