
BETA BEAMS

ITOPP

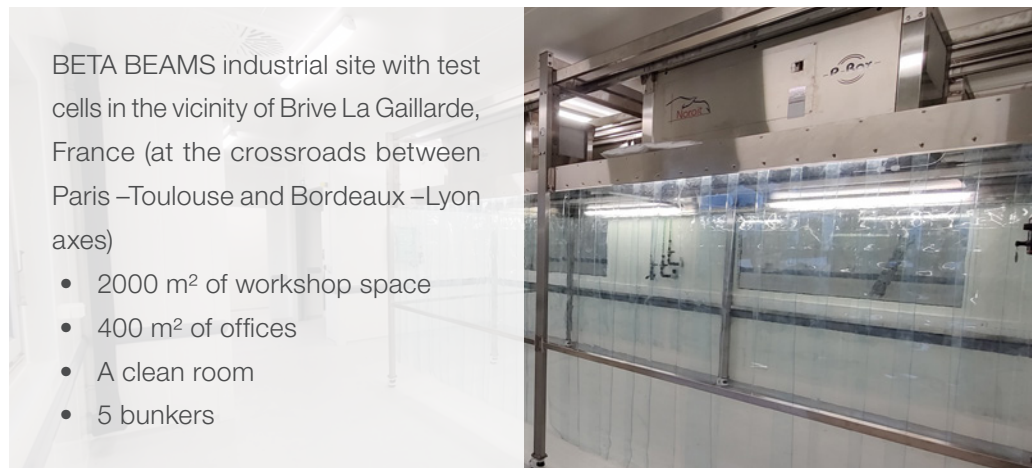
Electron accelerators for industrial use

BETA BEAMS, a supplier of
electron accelerators for surface
and core sterilization



Electron beam accelerators for sterilization

BETA BEAMS, an ITOPP business unit, is a supplier of electron accelerators for industrial use. BETA BEAMS is focused on in-line and in-house e-beam sterilization and offers solutions over a range of energy from 50 keV to 800 keV. (continuous and pulsed beams). The company has essential expertise in the field of ionizing radiation and manages all processes for the development and integration of e-beam equipment.



BETA BEAMS industrial site with test cells in the vicinity of Brive La Gaillarde, France (at the crossroads between Paris –Toulouse and Bordeaux –Lyon axes)

- 2000 m² of workshop space
- 400 m² of offices
- A clean room
- 5 bunkers

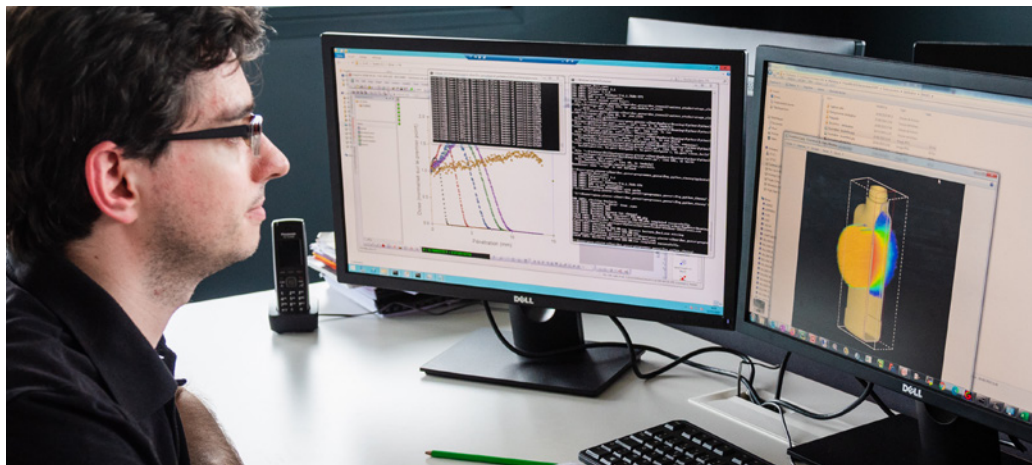
BETA BEAMS' offer

- **Supplier and integrator** of electron accelerators for the pharmaceutical industry.
- **Provider of studies** to assist manufacturers in determining the parameters of their E-beam equipment.
- **Customer service and maintenance** of E-beam equipment: preventive and corrective maintenance, on-site interventions or remote assistance, integration of in-line units, diagnostics of existing lines and equipment improvements.

BETA BEAMS' expertise

BETA BEAMS experts support the customer throughout their projects, in a number of fields such as radioprotection, dosimetry, microbiology:

- **Feasibility evaluation** and characterization of the critical parameters of the machine,
- **Calibration & measurement capabilities:** thanks to its dedicated laboratory BETA BEAMS performs dosimetry measurements and microbiological trials to guarantee the expected level of sterility assurance (SAL).



Low energy electron beam accelerators for surface sterilization

BEAMS200k

BETA BEAMS develops electron beam accelerators for surface treatment and supports the customers in the operation of low energy equipment. The electrons deposit their energy on the surface of the product to be treated and slightly penetrate the material. This type of electron accelerator is suitable for treating products whose contents/innards do not require to be sterilized.

Technical features

Energy	Up to 200 keV
Continuous Beam Current	Up to 4 mA
Maintained Vacuum	No flashes in operation
Normal Use	Industrial use

Exemple of applications

Continuous aseptic transfer of tubs for pre-filled syringes



Low energy electron beam accelerators for core sterilization

BEAMS250-800k

BETA BEAMS develops electron beam accelerators using pulsed power technology. The pulsed mode consists in delivering a large quantity of electrons in an extremely short time (approximately a nanosecond), in order to achieve very high and instantaneous dose rates. Depending on the energy settings, the electrons will penetrate the products to provide core sterilization.

Technical features

Energy	250 keV to 800 keV
Pulsed Beam Current	6 kA
Maintained Vacuum	No flashes in operation
Normal Use	Industrial use

Exemple of applications

Core sterilization of medical products





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