

Cosylab and DE.TEC.TOR. Introduce the First Turnkey Nozzle Solution for Particle Therapy

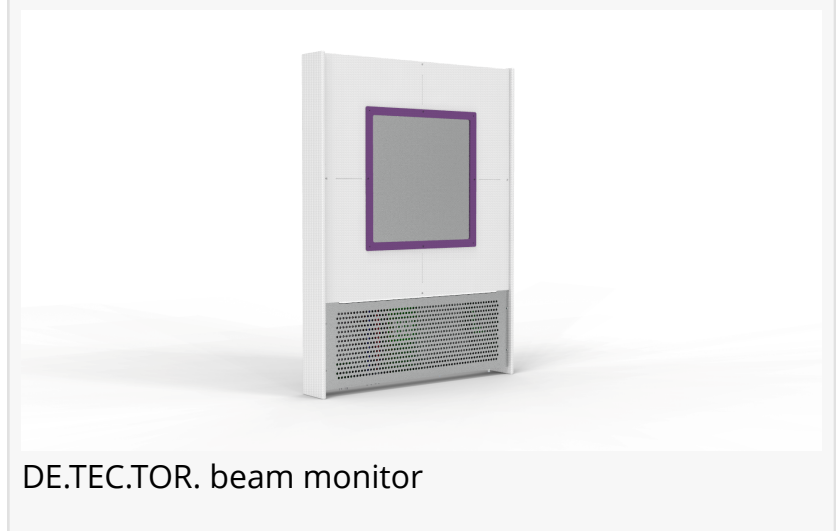
LJUBLJANA, SLOVENIA, June 8, 2023 /EINPresswire.com/ -- DE.TEC.TOR., the premier designer and manufacturer of high-performance medical devices for therapeutic particle beam monitoring and verification, and Cosylab, the leading provider of turnkey software solutions for the world's most complex, precise and advanced systems, have teamed up to develop the unique, next-generation scanning solution for particle therapy devices, an advanced radiation technique for inoperable and radio-resistant tumors. The companies will present their joint turnkey particle therapy nozzle solution at the 61st Annual Particle Therapy Co-Operative Group (PTCOG) Conference in Madrid on June 15, 2023.

Particle therapy (PT) takes advantage of the unique properties of charged particles, such as protons and carbon ions, to deliver highly targeted radiation directly to cancerous cells while minimizing damage to surrounding healthy tissue. The nozzle is a critical part of the PT device that optimizes the beam delivery process and ensures accurate delivery of radiation beam to the patient. Its advanced design allows for precise shaping and modulation of the radiation beam, adapting to the unique contours of the tumor.

DE.TEC.TOR.'s innovative hardware solution for the turnkey nozzle is a beam monitoring system, offering several benefits. This system utilizes customizable ionization chambers, dedicated

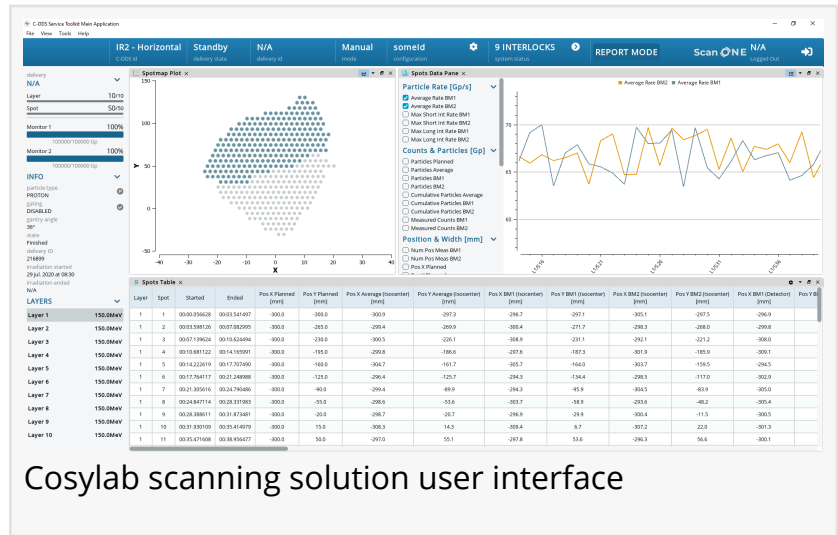


Cosylab modular scanning system



DE.TEC.TOR. beam monitor

electronics, a control system, and interfaces. Placed inside the nozzle, it directly controls the particle beam during patient treatments and measures important parameters like position, shape, and flux. The system is flexible and modular, meeting different accelerators' mechanical and clinical requirements. It features ultra-thin ionization chambers and the TERA front-end chip, which is the core component of DE.TEC.TOR. beam monitors. With different ionization chamber settings and the TERA chip's broad intensity range measurement capability, the system can handle both conventional rates and upcoming FLASH therapy.



Cosylab's solution for the turnkey nozzle is a state-of-the-art modular scanning system that controls complex delivery in PT that consists of an accelerator, beamline, high-voltage scanning magnets, and, finally, precise ionization chambers provided by DE.TEC.TOR. The solution can operate in extreme time regimes as it operates in microseconds, all according to the doctor's plan. What is unique about Cosylab's solution is that it is not limited to any specific hardware but can be installed into existing or new systems. As part of Cosylab's OncologyOne suite for radiation therapy devices, the solution meets the highest quality standards, enables a hassle-free certification, and makes the device ready to treat patients.

"During these years of working on joint projects with Cosylab, I saw a unique team of excellent physicists and engineers working together. I think this is great potential for the future of particle therapy and growth for all of us. I'm proud of working and collaborating with Cosylab; we share the same common values of respect for the people, dedication to work, and enthusiasm for future challenges", said Giuseppe Pittà, founder and CEO of DE.TEC.TOR..

"We aim to make particle therapy more effective, safer and affordable. Cosylab's software expertise and DE.TEC.TOR.'s hardware excellence have complemented each other to create a unique, integration-ready scanning subsystem suitable for all current and future particle therapy devices. We believe this is another significant step forward in making particle therapy more accessible and bringing better clinical outcomes to patients around the globe," pointed out Mark Plesko, PhD, co-founder and CEO of Cosylab.

Join DE.TEC.TOR. and Cosylab at their special event, "The turnkey solution for your customized particle facility," at the 61st annual PTCOG event on June 15, 2023, at 2:30 pm, in the Cosylab booth (S6). The event will explore the hardware and software of the cutting-edge scanning system that is bringing the future to the particle therapy facility and offer a valuable opportunity to participate in an open Q&A session with the experts.

About DE.TEC.TOR.

Founded in 2009, DE.TEC.TOR. Devices and Technologies Torino Srl is based in Torino, Italy, and provides solutions for particle detection in radiation therapy. It specializes in the design and manufacturing of high-performance medical devices for the monitoring and verification of particle beams both during patient treatment and daily quality control of the particle accelerator. Starting from actively collaborating with the main European research and treatment centers, DE.TEC.TOR. has now equipped clinical facilities across the world. The company's founding mission is transforming breakthrough technology into state-of-the-art medical devices for particle therapy. www.detector-group.com/detector/

About Cosylab

Cosylab d.d. is the leading provider of software solutions for the world's most complex, precise, and advanced systems. Its technology enables organizations to discover scientific breakthroughs, offer state-of-the-art cancer treatment and healthcare innovations, and bring clean fusion power to the future energy market. Cosylab provides software products and services to the largest medical device manufacturers and cancer centers worldwide. By making radiation therapy safer, more effective and affordable, Cosylab enable its partners to deliver better health care worldwide. The company's solutions are integrated into the most significant Big Science international projects, including CERN and ITER. Through its headquarters in the EU and subsidiaries across Europe, North America and Asia, Cosylab has worked on hundreds of multi-year and multi-team projects worldwide. www.cosylab.com

Metka Silar Sturm

Cosylab

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/638350525>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2023 Newsmatics Inc. All Right Reserved.