

# Global materials expertise leveraged for medical wires

*Global engineering company Sandvik has a long history of innovation in materials science. Its medical business unit leverages the group's expertise in this field, as evidenced, among others, by the fact that it can offer a variety of different composite wire solutions under the EXERA® high precision medical wire brand. The company manufactures medical wire at its production unit in Palm Coast, Florida, where it has actively added and enhanced stranding and coating capabilities in recent years. By doing so the company is stepping up focus on customisable wire solutions based on EXERA® high precision medical wire, as Gary Davies, Manager BU Medical at Sandvik, explains. He also highlights the Sandvik showcase at the most recent Compamed convention in Dusseldorf, Germany, where the company was aiming to raise the profile of the EXERA® brand in the EMEA region.*

Sandvik was founded by Göran Fredrik Göransson, who was first in the world to succeed in using the Bessemer method for steel production on an industrial scale. At an early stage, operations focused on high quality and added value, investments in R&D, close contact with customers, and exports. This is a strategy that has remained unchanged through the years, and that has brought the company global success: Sandvik today is a global engineering group with around 43,000 employees. The company has operations in three business areas: Machining Solutions, Mining and Rock Technology, and Materials Technology. Its medical business unit is part of Sandvik Materials Technology. The company's

production unit in Palm Coast, Florida, is tasked with the development and manufacture of precision wire and wire components.

"Sandvik's Palm Coast facility specializes in make to order manufactured products, so this business model allows us to be agile in our product development and offerings and yet scale as needed with the support of Sandvik Group," Mr. Davies comments. "Sandvik has a long history in specialty metal alloy development and we continue to leverage this capability in the medical device market. Combining the ability to provide unique combinations of alloys and coating combinations in different forms for use in devices that stimulate,

sense and transfer signals in the body provides a competitive advantage and differentiates Sandvik from the competition."

He adds that in recent years, the business unit has actively added new forward integration wire processing capabilities to complement their ultrafine wire core competency. The additional process capabilities include precision stranding, coiling, cut to length and selective polymer stripping. In 2016, the unit attained its ISO13485 certification and installed an ISO class 7 cleanroom on site for wire-based component manufacturing that requires an elevated level of product cleanliness. The EXERA® trademark was also registered in 2016 to differentiate medical fine wire products from other Sandvik products in the market place. "Over the last year, we have bolstered our dedicated sales presence in Europe and Asia to better serve these key geographical regions."

The Sandvik business unit showcased its enhanced capabilities at the Compamed Convention, part of the Medica trade show, in Dusseldorf, Germany, in November 2019. The company notably gave attendees the possibility to explore new applications for customized EXERA® high precision medical wire. "The Compamed show is a key enabler to increase our reach in the EMEA region," says Mr. Davies.

Sandvik's key message at the Compamed tradeshow was to continue to familiarize visitors about the EXERA® trademark for medical wire, wire-based materials and components that are available for existing and future designs. "The booth was staffed with some of our top product specialists and regional

*Surface treatment is one of Sandvik's top competences: the company can offer various colors, both standard and custom. Various spools are also available upon request*





Clean room facility at  
Sandvik's ISO 13485  
Palm Coast site

sales resources, so it provided a platform for detailed discussions about application requirements and possible materials solutions,” says Mr. Davies.

Under the EXERA® brand, Sandvik offers a comprehensive range of high-grade fine wires and wire based components for applications in various fields of medical technology. Mr. Davies believes the brand has unique strengths. “For many of the conventional fine coated wires used in the medical device industry, customers have commented on the exceptional level of quality and wide range of inspection capability that we can employ to meet their highly stringent product requirements. However, the main driver for uniqueness in the EXERA® branded products is related to the variety of different composite wire solutions that have been

developed for specific application needs. The composite wire solutions include multi-layered coatings of insulative and conductive materials, combining multiple product forms together in single package sandwich for increased functionality and capability as well as providing stranded and single ended wire joined products for higher reliability connections.”

EXERA® wire is used primarily in cardiovascular, neuromodulation and biometric sensing applications. Ultrafine wire-based solutions are an integral part of minimally invasive devices created to carry out various therapeutic operations for improving people’s lives. Outpatient or same day surgical techniques can be employed when carrying out procedures with these devices which benefits patient

health and cost. Some examples of wire based cardiovascular devices include those used in electrophysiology, cardiac pacemakers and catheter guidewires. Neuromodulation devices include deep brain stimulation, sacral nerve stimulation and epilepsy probes. Biometric sensing includes devices like continuous glucose monitoring sensors, blood pressure and temperature sensing.

The Compamed showcase was a success for Sandvik, according to Mr. Davies. “We had considerable engagement with existing and potentially new customers. The number of quality leads increased by 20% and we learned more details about how we might be able to address needs in the market place.”



Sandvik Materials Technology, Business  
Unit Medical  
1 Commerce Blvd  
32164 Palm Coast, FL  
USA  
Website: <https://exera.sandvik>

The EXERA® wire program includes various  
wire forms, wire configurations and coatings