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News Release

FOR IMMEDIATE RELEASE

Hitachi Energy launches innovative oil-free and plug-and-play traction transformer

RESIBLOC® Rail dry-type traction transformer with integrated cooling system is designed to reduce CO₂ emissions and total operating costs, while increasing energy efficiency



RESIBLOC® Rail with integrated cooling system and voltages up to 25 kV

Zurich, September 21, 2022 – Hitachi Energy today announced the launch of its innovative oil-free traction transformer RESIBLOC® Rail, with integrated cooling system and voltages up to 25-kilovolt (kV), at InnoTrans, the international trade fair for rail transportation at the Berlin Messe in Germany happening from September 20-23, 2022.

This plug-and-play solution is a breakthrough technology for dry-type on-board traction transformer. By integrating an efficient cooling system, Hitachi Energy significantly reduces installation complexity for train manufacturers while retaining the benefits of dry-type transformers.

In 2018, Hitachi Energy officially launched its flagship dry-type traction transformer: RESIBLOC $^{\circ}$ Rail with voltages up to 15 kV. Since then, the technology has evolved, and its voltage rating has increased up to 25 kV.

Hitachi Energy has now further enhanced the capabilities of this technology and is introducing RESIBLOC® Rail up to 25 kV with integrated cooling system. This traction transformer comes with a factory-fitted cooling system that is integrated with the design of the traction transformer, thus offering a never-before possibility of a plug-and-play solution of dry-type traction transformer to the customer.

Traction transformers route power from overhead train cables to essential train functions like traction, lighting, heating and ventilation, brakes, signalling and communication. They are installed on the train and are therefore also known as "on-board" rail transformers. Dry-type (oil-free) traction transformers bring the benefits of high-level efficiency, people and environmental safety, lower maintenance, and failure rate reduction by removing liquid that brings potential risk and additional maintenance.

Safety, reliability, availability, low maintenance and high efficiency are key for the rail industry players to design better trains for passengers, operators and planet. Carbon emissions are impacting more and more the environment, and it is the responsibility of all value chain players in the rail industry to reduce CO₂ emissions. Ambitious targets set by the governments are also a challenge for rail operators and can be only achieved through collaboration and innovation.

This plug-and-play and oil-free traction transformer is a result of Hitachi Energy's deep commitment to innovation to offer substantially lower operating costs with lesser energy consumption and CO₂ emissions, while coupled with low asset maintenance. The RESIBLOC[®] Rail with integrated cooling traction transformers is now available today.

"Dry-type transformers offer unmatched protection to people, property and the surrounding environment," said Bruno Melles, Managing Director of Transformers Business Unit at Hitachi Energy. "This pioneering RESIBLOC® Rail transformer technology developed by our world-class engineers will help accelerate a sustainable energy future for societies and the rail industry," he added.

RESIBLOC® Rail website

https://www.hitachienergy.com/de/de/offering/product-and-system/transformers/special-application-transformers/traction-transformers

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About Hitachi Energy Ltd.

Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all. We serve customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, we pioneer technologies and enable the digital transformation required to accelerate the energy transition towards a carbon-neutral future. We are advancing the world's energy system to become more sustainable, flexible and secure whilst balancing social, environmental and economic value. Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries. Headquartered in Switzerland, we employ around 38,000 people in 90 countries and generate business volumes of approximately \$10 billion USD.

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About Hitachi, Ltd.

Hitachi drives Social Innovation Business, creating a sustainable society with data and technology. We will solve customers' and society's challenges with Lumada solutions leveraging IT, OT (Operational Technology) and products, under the business structure of Digital Systems & Services, Green Energy & Mobility, Connective Industries and Automotive Systems. Driven by green, digital, and innovation, we aim for growth through collaboration with our customers. The company's consolidated revenues for fiscal year 2021 (ended March 31, 2022) totaled 10,264.6 billion yen (\$84,136 million USD), with 853 consolidated subsidiaries and approximately 370,000 employees worldwide. For more information on Hitachi, please visit the company's website at https://www.hitachi.com.

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