

ABB powering sustainable transportation

A long legacy in the rail business continues



ABB's power and automation technologies for railways are helping to drive the development of rail transportation around the world.

When it comes low-emission transport and fast, safe mobility, rail travel is difficult to beat. Increasingly, cities are turning to high-speed trains to improve intercity connections, as well as light rail, metro systems and trams to alleviate urban congestion, reduce emissions and generally improve quality of life.

ABB has grown its rail activities considerably over the past years, evolving from the position of an outsider to a major supplier to numerous train manufacturers and local network operators.

Today ABB continues to develop, manufacture and service critical components introducing new technologies for both AC rail systems and DC urban rail transport applications. ABB is also working with partners to revamp trains to meet needs of future passengers as sustainable transport enters its next generation.



ABB's broad offering

ABB provides automation and power technology for customers ranging from train makers to rail operators. It designs, engineers and commissions solutions to achieve customer goals of safe, reliable, and cost-effective rail freight and passenger transportation.

ABB produces traction transformers, motors and converters to move vehicles quickly and reliably between cities. And for diesel trains, ABB's generators and turbochargers boost efficiency and power.

The portfolio also includes critical infrastructure including traction substations that feed and distribute electricity to the lines, as well as high- and medium-voltage switchgear, converters and transformers necessary to power trains at a frequency they can use. ABB products improve power quality and protect the network that trains rely on as well as the surrounding grid from voltage disturbances.

ABB also offers complete service, maintenance and refurbishment solutions, which are becoming increasingly important as rail operators seek cost-effective solutions to update or retrofit fleets to meet the demands of the future.

Marquee projects

- Deutsche Bahn: After helping to develop Germany's high-speed ICE trains, ABB is now refurbishing them with a new traction converter to reduce energy use and minimize motor stress.
- Swedish Rail: ABB is providing energy-efficient power conversion and control systems on Sweden's high speed SJ 2000 trains, a cost-effective solution to keep the trains on the rails for the coming decade.
- Swiss Federal Railways SBB: ABB is installing highly energy-efficient traction converters in more than 100 SBB Re460 locomotives, also known as "Lok 2000," extending the service life of the locomotives by another 20 years.
- Switzerland's Stadler: ABB is outfitting trains made by Swiss manufacturer Stadler Rail with traction and power equipment. The trains will bolster fleets in Germany, Hungary, Italy, Norway and Switzerland.

- Network Rail: One of the U.K.'s oldest and busiest railways has turned to ABB for traction substations to upgrade its electrification system, boosting the reliability of trains running between England and Wales.
- SEPTA: ABB partnered with the Southeastern Pennsylvania Transit Authority (SEPTA) to install the ENVILINE™ unique hybrid energy storage system for DC rail transportation, reducing energy consumption and generating revenue.
- China's CNR: ABB supports the rapid development of China's rail transit and new urbanization with leading traction systems installed on the latest rapid regional trains (RRT) developed by CNR Changchun Railway Vehicles Co.

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