



SIEMENS



Made for America by Americans

Committed to delivering safe, reliable and
efficient rail vehicles built in the United States.

Rail Systems

usa.siemens.com/railsystems

The North American market leader in light rail, manufacturing in the United States since the 1970s.



Siemens is an international leader in providing rolling stock and related services. Its portfolio covers the full range of vehicles – from light rail vehicles, metros and coaches, to locomotives and street cars. Siemens has experience in the areas of local, long-distance and logistical transport to provide environmentally friendly, efficient and reliable rail vehicles, which are already in use in more than 40 countries.

Siemens Rail Systems is already addressing what the federal government aims to do by:

- Providing zero-emission transportation options to move people and goods
- Creating jobs
- Manufacturing with many green technologies and products
- Expanding business operations

Siemens has taken concrete steps to expand its manufacturing capacity in North America to meet the demand for diverse urban mobility and infrastructure solutions, ranging from light and high-speed rail to enhanced signaling and safety systems as well as intelligent traffic systems.



High-speed rail solutions: Velaro and push-pull trainsets provide flexible and fast systems for every U.S. corridor

Siemens is ready to bring its leading high-speed rail systems to the North America and build them here using sustainable, environmentally friendly technologies and processes.

Siemens has the world's leading train technologies in its portfolio for all speed ranges and diverse requirements from rail systems that can run in speeds of up to 125 mph on existing tracks, to systems built for speeds up to 220 mph and run on new alignments.

- The push-pull solution has spacious modern interior and wide closed gangways, and can run on existing tracks. The push-pull system is the only high-power intercity train capable of running on diesel and electric traction without any modification of the passengers' coaches. With diesel traction the coaches can run up to 125 mph, using electric locomotives the same coaches can be operated at speeds up to 155 mph.

Bringing the push-pull solution to North America will elevate intercity passenger rail to a new level of convenience, while providing passengers with a higher level of comfort. The state-of-the-art design results in reduced fuel consumption, thereby lowering the operating costs for the railroad.

For true high-speed segments, the Velaro has the best global references and is the optimum choice with top speeds up to 220 mph. Already in operation on some of the most successful lines in Germany, Spain, Russia and China, the Velaro is the perfect solution for the high-speed systems planned in the United States.

- Going green at speeds up to 220-mph, the Velaro is very energy efficient. It has a fuel consumption of nearly 700 miles per gallon per passenger seat, making it one of the most environmentally friendly high-speed trains on the market today.



Siemens is building Amtrak's next generation of electric locomotives for operation on the Northeast and Keystone Corridors.

Locomotives:

The ACS-64 locomotive is a high acceleration and top speed of 125 mph - light weight and technologically advanced piece of rail equipment that will generate up to 8700 HP (6.4 MW) of tractive power. It will be the first of its kind in the United States and offers a high level of occupant safety due to it's sophisticated crash energy management system, designed to absorb energy in the event of a frontal collision. The locomotive also supports a high level of system redundancy and features advanced control, monitoring and diagnostics systems to ensure optimum reliability and performance. The ACS-64 is also energy efficient; it will regenerate energy while braking, feeding the energy back into the power grid, making it at least 10 percent more energy efficient than conventional locomotives. Due to a load dependant auxiliary control system, equipment cooling blowers only operate on demand, reducing auxiliary power needs considerably.

The locomotives will be manufactured in our Sacramento, Calif. rail manufacturing plant with deliveries expected to commence in the summer of 2013.

Furthermore, Siemens is in the process of developing a high-speed diesel electric locomotive (up to 125 mph) to support the growing demand for accelerated passenger rail services in North America.

Components:

In addition to the production and supply of bogies for light rail vehicles in Sacramento, Siemens also supplies propulsion equipment and systems to external customers.

Siemens is currently supplying propulsion systems equipment to other car builders in United States, and intends to expand this business in the coming years.



*NEW METRO BOGIE
(based on the SF7000)*



*UNDERFLOOR
TRACTION INVERTER*

Customer Service

Vehicle retrofits represents a key part of Siemens strategy to diversify the portfolio and increase our offerings in customer service at Siemens Rail Systems. The goal is to strengthen our relationship with existing and new customers, by broadening our service offering, which will enable us to provide additional support throughout the life of their vehicles. The customer service business can offer support in the following areas:

Spare parts

Getting the right parts at the right time is critical for our customers operations.

- Siemens offers 48 hour part-exchange program for propulsion system and auxiliary power system.
- Siemens offers full supply chain management and ensures that you will have the materials you need to keep your operations running.



Maintenance

Siemens has several long-term full-maintenance contracts all over the world. That kind of global experience speaks volumes about our capabilities.

- Maintenance solutions are custom fit to your business needs, and can range from technical consulting to running the full maintenance operations.
- The bogie service center based in Sacramento, Calif. will maintain your bogie, the heart of your vehicle, including all your major service intervals. Siemens offers everything from wheel and axle pressing to complete bogie overhauls.

Refurbishments

- Let Siemens extend the life of your current rolling stock with vehicle refurbishment and modernization services. Fifteen to twenty years of service is hard on any vehicle. Siemens will breathe new life into your aging fleet by improving them mechanically and cosmetically.
- Accidents happen. Some are minor and are easily repaired and some require a significant amount of work. Nobody makes a better accident repair shop than your vehicle manufacturer. Siemens has crash simulation software that can recreate the accident to identify the location of damage that might not be readily visible. Your vehicle will be restored to your satisfaction and made as safe as any other vehicle operating in your fleet for a fraction of the cost of a new one.



The Present and Future of Rail in America

Sacramento, California

One-stop manufacturing plant

Siemens' Sacramento manufacturing plant can do it all from start to finish: design, engineering, testing, carshell, bogies, sub-assembly and final assembly.

- As Siemens continues to expand its Sacramento manufacturing plant, the company has the flexibility to produce a wider array of products to respond to America's rail needs.
- With potential future expansions, Siemens could add up to 250,000 square feet of additional manufacturing space, for a total of 550,000 square feet, and up to 1,700 direct employees.
- With all aspects of the manufacturing process taking place at one facility, Siemens offers customers unparalleled access, optimum project management and quality, from start to finish right here in North America.

Diversity spoken here

Siemens draws skilled employees from a multitude of cultures and backgrounds – more than 26 languages are spoken at our facility.

Nearly invisible carbon footprint

Approximately 80 percent of the Sacramento manufacturing plant's electricity needs are supplied by the solar energy. Siemens' solar panel project covers approximately two acres and more than 10,000 installed solar panels produce a total AC power of 2 megawatts.

Proud to be an American company

Siemens employs more than 62,000 people in the United States at more than 700 locations across all 50 states, making us one of the largest and most diverse manufacturing companies in America and a Fortune 150 company.



Radical recycling

More than 90 percent of all the non-food/wet waste materials from the Sacramento plant are sent for sorting and recycling, and all emptied 55-gallon drums on the property are either sent back to the supplier for reuse or recycled into scrap metal.

Reduce carshell welds/high-tech training

Reducing the amount of welds by 30 percent combined with reducing the weight of the carshell provides our customers with double savings by reducing the energy needed to build the vehicle and reducing the energy needed to operate it. Siemens' offers a special on-site welding training center that evaluates new recruits and offers veteran welders the opportunity for continued growth and advanced certification.

Smaller footprints, bigger results

Siemens' portfolio of environmental products is the world's largest and will help our customers reduce their carbon emissions by 300 million tons in 2011.

