VENTURE TRAINSETS

Amtrak Airo

Amtrak sought to acquire the most sustainable and efficient trains on the market, including Siemens Mobility's dual powered and hybrid battery vehicles. These new Venture trainsets will replace Amtrak's 40-to-50 year old fleet, with state-of-the art equipment, extended capacity, and the ability to shorten trip time and is expected to add over 1.5 million Amtrak riders annually. Siemens Mobility will bring modern, sustainable vehicles to the market, enhancing the American transportation system and adding new value for rail passengers across the country.

Performance

The Venture trainsets are powered by the Siemens Charger locomotives and are equipped with a proven propulsion system powered by a fuel-efficient Cummins QSK95, 16-cylinder diesel engine providing 4,200 hp. In addition to diesel mode the trainsets can run in fully electric mode under overhead catenary (25kV / 12.5kV) and can transition seamlessly between both modes. On top of that, the trainsets include the first application of hybrid battery operations significantly reducing emissions and enabling full battery operation.

Accessibility

Each trainset provides level boarding access at high platforms, has at least 8 onboard wheel-chair lifts installed for low-platform access and provides at least 9 mobility aid spaces that provide ample space for wheelchair users as well as companion seating. Large and fully accessible washrooms allow for easy wheelchair maneuverability, clearer floor area, more hand grabs, a wider door opening and a power-operated door.

Braille signage is provided on important features such as seat numbers, call-for-aid buttons and at-seat

Performance and Capacity

Maximum operational speed Electric mode Diesel mode Battery mode	 125 mph / 201 km/h 110 mph / 177 km/h 60 mph / 96.5 km/h
Rated power maximum	5,700 hp / 4,250 kW
Head end power	1000 kW
Tractive effort (max.)	82,000 lbs. / 365 kN
Passenger capacity	Economy: 286 / 430 seats* Business: 49 seats Wheelchair lifts: 8 /12* Mobility aid spaces: 9 / 11

*Depending on trainset configuration (6-car and 8-car).

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attendant call buttons at Mobility Aid Spaces. Onboard announcements are also available in both audio and visual formats and additionally via a hearing loop in every car.

Safety
Fully electric sliding-plug doors with gap fillers offer improved ease of entry to high-level platfoms and an automated rotating step system for low-level platforms. Modern sealed gangways (passage between cars) are wider and have a smooth floor surface allowing for an easy transition from one car to another isolated from weather.

Passenger areas are equipped with CCTV that can be accessed by the Operations Control Center.

Intelligent Train
The fully integrated IT system provides the backbone for innovative applications such as vehicle diagnostics, maintenance, ride quality monitoring, passenger information system, CCTV, and internet on board.

Passenger Comfort:
- Modern suspension design, featuring air spring technology delivers the highest level of comfort.
- Automatic touchless interior doors, large and adjustable tray tables, wider and more comfortable and ergonomic seats with integrated power outlets, USB charging, tablet holder and integrated reading lights.
- A self-contained roof-mounted HVAC system with thermal and acoustic insulation maintains a pleasant environment.
- Enhanced Wi-Fi improves connectivity and supports high-speed reliable data connection.
- In-seat recline allows seat adjustment without encroaching into the space behind.
- Latest state-of-the-art galleys optimize passenger service abilities.

Environmental Considerations:
- These bi-directional trainsets operate more efficiently, reducing emissions and operating costs.
- The engines meet EPA (Environmental Protection Agency) – Tier 4 emission standards which will allow for an 85%-95% reduction in particulate matter (PM) and Nitrogen Oxide (NOx) emissions and significantly contribute to improving air quality.
- The trains feature energy-saving LED lighting and dual pane windows.
- The locomotives use a microprocessor-controlled electrodynamic braking system which allows the braking energy of the traction motors to feed into the train's onboard electrical system, reducing overall fuel consumption.
- A state-of-the art water dispenser provides passengers with access to fresh water using their own water bottles.

Optimized Maintenance:
- Onboard trainset data can be continuously monitored and analyzed to enable early detection of faults, support preventative maintenance and reduced downtime.
- Predictive and condition-based maintenance can be paired with a computerized maintenance management information system (CMMIS) to extend the useful life of components and optimize the maintenance schedule to ultimately increase the fleet reliability and availability.

Passenger Car Dimensions

Length	85 ft	25908 mm
Width	10 ft 6 in	3201 mm
Height	14.6 ft	4436 mm
Floor height above top of rail	51 in	1296 mm
Side door width	34 in	864 mm
Aisle width Coach class Business class	 24 in 33 in.	 610 mm 838 mm
Distance between truck centers	59 ft 6 in	18136 mm
Trainset Weight*	1,126,529 lbs	510,985 kg

*For a standard trainset configuration, which consists of five coaches, one cab car and one locomotive. The configuration is flexible and can be increased as needed.

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