



CALGARY, ALBERTA

# S200 High-Floor Light Rail Vehicle

Siemens Mobility delivered the first light rail vehicle (LRV) to the City of Calgary in the late 1970's. The initial success and increased ridership over the years has prompted the city to expand their system with the addition of new lines and the extensions to existing lines. Inspired by iconic images of the area and born from a focus on reliability and innovative technologies, Siemens Mobility created the S200 specifically for the City of Calgary.

A steel carbody construction; fully bi-directional; single articulated; high-floor vehicle ideal for high platform operation and built in North America. Each six-axle S200 light rail vehicle is equipped with two power trucks (one under each cab end) and on non-powered center truck.

The interior of this S200 LRV has been designed to maximize passenger space, incorporating wide

doorways and is equipped with transverse seating near the cab and longitudinal seating through the center of the car.

To provide operators a safe and comfortable work environment Siemens Mobility increased the cab size by 500 mm, allowing for larger cab side windows. The S200 features a wrap-around console for improved

## Performance and Capacity

Maximum operational speed	80 km/h	50 mph
Maximum allowable speed	80 km/h	50 mph
Service acceleration	0.95 m/s <sup>2</sup>	2.13 mphps
Service deceleration	1.32 m/s <sup>2</sup>	2.95 mphps
Emergency braking rate	2.75 m/s <sup>2</sup>	6.15 mphps
Passenger capacity	60 seats Approx. 247 total passengers @ 6 p/m <sup>2</sup> 2 wheelchair spaces and 2 multi-purpose spaces	
Maximum operational gradient	7%	
Motor power rating	145 kW x 4	194 hp x 4
Catenary supply voltage	600 Vdc	

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ergonomics and an operator's seat positioned on the vehicle's centerline for increased visibility. A full-width glass partition provides over 300° of visibility for the operator and increased passenger safety.

Each LRV is equipped with eight glass paneled sliding plug doors, with four to each side of the vehicle. The door spacing has been optimized to allow for greater passenger flow entering and exiting the vehicle, which ultimately decreases the station dwell times.

The vehicle is also equipped with two designated wheelchair spaces and two multi-purpose spaces allowing for priority seating to disabled passengers, parents with strollers, or bicyclists.

To maximize passenger comfort, each vehicle is also equipped with two roof-mounted HVAC units per LRV and independent HVACs for the operator's cab.

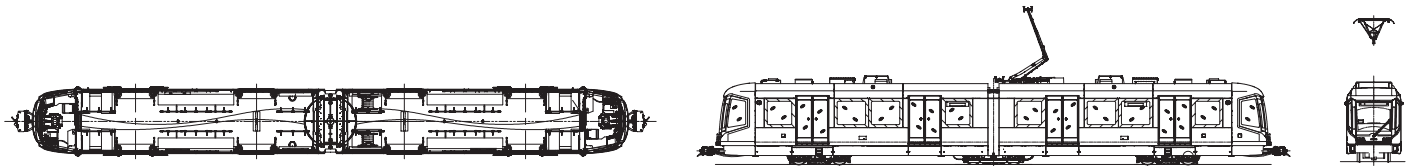
Also, to combat the extreme winter conditions in Calgary, this vehicle features heated flooring in the passenger area; triple-pane insulated windows and increased thermal insulation throughout the vehicle.

The S200 utilizes an advanced passenger information system consisting of operator and automated



announcements, passenger-operator intercoms, exterior electronic destination signs and a surveillance system for increased passenger safety.

Each LRV is electrically powered from an overhead catenary system (OCS) and for Calgary operates at speeds up to 80 km/h, carrying close to 250 passengers in each vehicle with the ability to operate in multiple vehicle consists (up to five) as the maximum operational length. These light rail vehicles remove automobiles off the road, in turn helping cities decrease their CO2 emissions.



### Vehicle Dimensions and Weight

Length over coupler	25800 mm	84.6 ft
Width	2654 mm	8.7 ft
Height with pantograph (locked down)	3850 mm	12.6 ft
Maximum pantograph height	7007 mm	up to 23 ft
Vehicle empty weight	40800 kg	89,950 lbs (AWO)
High-floor section above TOR	982 mm	3.2 ft
Low-floor section above TOR	n/a	n/a
Minimum turning radius	25 m	82 ft
Vertical curve, crest	250 m	820 ft
Vertical curve, sag	350 m	1,150 ft
Track gauge	1435 mm	4.7 ft
Wheel base (power trucks)	1800 mm	5.9 ft
(center truck)	1800 mm	5.9 ft



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