

## Maglev (Low Speed)

This is a relatively new technology that has one operating system in Nagoya, Japan: the Linimo. The system design is proprietary and is unlikely to be interchangeable with other maglev technologies. These vehicles travel along rails beneath the vehicle and are suspended using attractive magnetic levitation. They are propelled with linear induction motors (LIM) so, while it is moving, the only physical interaction, beyond magnetic forces, between the vehicle and the guideway is the contact with the third rail for power. The system features level boarding at stations and the trains have a “walk through” design. The Linimo has an attendant in the driver’s position, but operates under full ATO. The Linimo vehicle, model 100 L is represented in the table below and is comprised of three cars per vehicle. The supplier, CHSST, also has a shorter vehicle, model 100 S, which operates on a test track. Switching is accomplished similar to a monorail with “beam replacement”. That is, the entire running surface module moves to a new position. These vehicles are moderately efficient in terms of passenger carrying capacity per unit of length. They also fall in the moderate range in terms of weight per bearing area.



The Linimo maglev vehicle, at left, and a 100 L vehicle on the test rack, at right.

Element	Typical Characteristics		
Vehicle Dimensions	<i>Length:</i> 43 m (triplet) (141 ft)	<i>Width:</i> 2.6 m (8.5 ft)	<i>Height:</i> 3.2 m (10.5 ft)
Vehicle Capacity/ Max. Cruise Speed	<i>Capacity:</i> 290 passengers (at 0.25 sq m (2.7 sq ft) per standing pass.)		<i>Cruise Speed:</i> 96 kph (60 mph)
Consist Sizes	One to two vehicles per train.		
Min. Horizontal Turning Radius	50 m (164 ft)		
Empty Vehicle Weight	53,500 kilograms (117,500 pounds) on five levitation modules.		
Power Source	Third rail		
Suspension	Magnetic levitation		
Sample Suppliers/ Applications	CHSST “Linimo” Line in Nagoya, Japan		