

New Product



To solve the problems of environmental load and traffic congestion, there has recently been an increasing demand for the automated people mover (APM) system for use as medium-capacity transport in cities and airports all over the world.

Mitsubishi Heavy Industries, Ltd. (MHI) has developed the "Crystal Mover" geared to new and updated demands for the APM system abroad. An outline of the "Crystal Mover" vehicles is given herein.

1. Specifications

The "Crystal Mover" is an APM vehicle with rubber tires. It comprises a fully automated, driverless operation system, carrying about 100 passengers in each car. The principal specifications are shown in Table 1.

2. Features and design

2.1 Features

As compared with vehicles for use in Japan, the new vehicles are larger and faster, flexibly satisfying different transit demands with variations in each location. Using rubber tires, this is also a low-noise, low-pollution, comfortable, people- and environment-oriented transport system.

It is applicable to various specifications and standards

Table 1 Specifications (an example of single-car type for the Land Transport Authority Singapore)

Vehicle configuration	Single car
Capacity (passengers/car)	105
Vehicle size: Length (mm)	11 200
Width (mm)	2 690
Height (mm)	3 615
Vehicle mass (tons/vehicle)	14.9
Gauge (mm)	Tread: 1 850 Guide rail span: 3 200
Electric power supply system	750 VDC
Vehicle performance	Maximum speed: 80 km/h Maximum acceleration: 1.0 m/s ² (3.6 km/h/s) Maximum deceleration: 1.0 m/s ² (3.6 km/h/s) (In emergency): 1.3 m/s ² (4.7 km/h/s)
Traction motor	Three-phase induction motor Continuous rating 80 kW X 2 units
Propulsion control system	VVVF inverter vector control
Brake system	Electric command pneumatic brake with regenerative brake

Automated People Mover "Crystal Mover" Series

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required in overseas locations. Its outstanding features are crashworthiness and conformity with fire resistance standards.

To meet a wide range of customers' needs, the train formation is free and flexible, permitting a one-car, two-car or three-car vehicle configuration. A variation of vehicle configuration is shown in Fig. 1.

2.2 Design

The keyword "CRYSTAL," which expresses the design concept of "Crystal Mover," was adopted so that the product might have universal, distinctive, futuristic and diamond-like images. The front design is variable according to customers' wishes or the local environment. The interior design is also variable in layout and color according to use (city or airport) or wishes of customers.

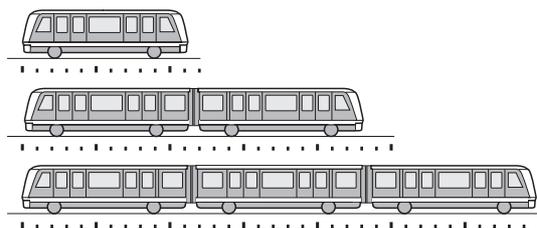


Fig. 1 Variation of vehicle configuration

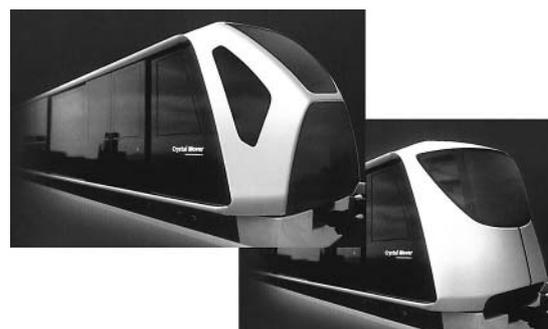


Fig. 2 Example of variation of exterior design



Fig. 3 Example of variation of interior design