

SIEMENS

Ingenuity for life

Cityval / Airval

The latest generation Val system provides a fully automated transport solution for cities and airports, with eco-friendly design and operation.



Fully automated mobility solution from Siemens

Cityval / Airval, the new generation Val, is a fully automated, rubber-tire, people mover system that guarantees unequaled safety, efficiency and availability. With a modular design and great flexibility, the new generation Val is the result of 40 years of experience in fully automated mobility solutions. It equips a growing number of cities and airports worldwide, such as the city of Rennes (France), and the Bangkok and Frankfurt airports.



Enhanced passenger experience

- Real-time information and entertainment: live digital information and on-board WI-FI
- Passenger comfort : floor to ceiling glazing, lighting, low level of noise, air conditioning, wide interior space, flexible seat configuration
- Wide entrance doors : 1.95 m
- No step on boarding and inside the train
- No technical equipment within the car



Increased value sustainability over the entire life cycle

- Electrical braking, down to 0 km/h, can reduce energy consumption by up to 15 % and guarantees low particle emission
- 95 % recyclability of rolling stock
- Green depot design : rubble and waste management, demolition and disposal
- Reduced noise and vibration levels



Guaranteed availability

- Outstanding availability : 99.8 % rate, 24/7 service
- Best-in-class Trainguard MT CBTC system used on all GoA4 Siemens projects worldwide
- 60 second headway between trains
- Highly flexible design, enabling train configurations between 2 to 9 cars
- It can navigate steep gradients (up to 10-12%), and tight curves (down to 30 m in line) on viaducts and in tunnels
- 5 billion passengers transported without any accident

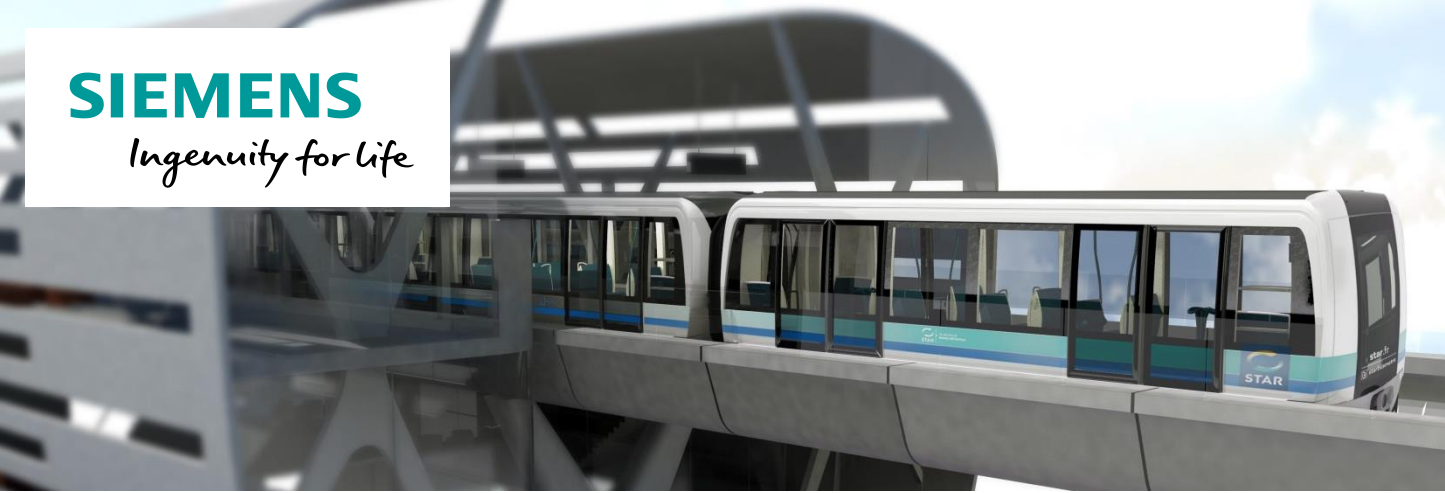


Intelligent systems & services

- Machine learning based on data collection for predictive maintenance and virtual test track aiming to 100% availability
- Advanced data analytics for enhanced performance and reduced operating costs
- Gradual services for Operation & Maintenance (full O&M, Maintenance services, technical assistance,...)
- Built-in cybersecurity solution

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Lowest total cost of ownership

The new generation Val system is perfectly suited to the highly constrained environments of modern cities and airports. With its central guidance system, it can adapt to shortened stations, hoppers, viaducts, and tunnels and offers small depot footprint.

All costs are optimized : reduced civil work requirements can reduce costs by up to 30 %, ensuring the lowest total cost of ownership for cities and airports.



Modular design and train configuration

With trains ranging from 2 to 9 cars, with or without inter-car gangways, the system can easily handle an increase in ridership from 1 000 to 45 000 passengers per hour and per direction through headway adjustment and dynamic reconfiguration.

Technical Data

| | |
|---------------------------------|------------------|
| Length | 11.20 m |
| Width | 2.65 m or 2.80 m |
| Height | 3.615 m |
| Possible train configurations | 2 to 9 cars |
| Number of doors per car | 2 |
| Number of seats per car | Up to 24 |
| CBTC GoA4 | ✓ |
| Automated shuttle mode (Airval) | ✓ |

Performance Data

| | |
|---------------------------------|----------------------|
| Minimum Headway | 60 s. |
| pphpd | 1 000 to 45 000 |
| Maximum Operating Speed | 80 km/h |
| Minimum horizontal curve radius | 30m / 17m (depot) |
| Minimum vertical curve radius | 200 m |
| Gradient | 10 % (max. 12%) |
| Acceleration, service braking | 1,3 m/s ² |
| Power distribution system | 750 VDC |

Options

Inter-car gangways, WI-FI, dynamic information system
Front-end evacuation

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Siemens Mobility is a separately managed company of Siemens AG. As a leader in transport solutions for more than 160 years, Siemens Mobility is constantly innovating its portfolio in its core areas of rolling stock, rail automation and electrification, turnkey systems, intelligent traffic systems as well as related services. With digitalization, Siemens Mobility is enabling mobility operators worldwide to make infrastructure intelligent, increase value sustainably over the entire lifecycle, enhance passenger experience and guarantee availability. In fiscal year 2017, which ended on September 30, 2017, the former Siemens Mobility Division posted revenue of €8.1 billion and had around 28,400 employees worldwide. Further information is available at: www.siemens.com/mobility.

Read the QR code for more information about the Cityval /Airval

