

CITADIS™ Tramway for Avignon



The City of Avignon, classified a World Heritage Site by UNESCO, selected Alstom's latest high-powered Citadis X05 tram to meet the transport needs of the city's growing population. Twenty-four meters long and capable of carrying up to 45,000 passengers per day, the Citadis X05 is 95% recyclable and improves urban quality of life thanks to a noise level that is 4 times quieter (-5 dBA).



KEY BENEFITS

High degree of passenger comfort and convenience

Including spacious design with double doors, 40% high windows for balcony concept effect, real-time information on-board, direct & indirect lighting based on LED technology - all leading up to a more pleasurable passenger experience.

Lower Opex

11% reduction of maintenance costs based on proven track-record and technical innovation, reduced energy consumption thanks to permanent magnetic motors, optimized HVAC, Ecodrives, etc...

Environmental

REACH compliant, 99% for recoverable at end-of-life, 99% of braking energy recovered with HESOP technology, (*) 10-15% energy savings with energy monitoring and Eco-driving (*).

(*) as an option

Country:
Project:

France
In June 2013, officials of the Greater Avignon Metropolitan Area selected Alstom for the delivery of a fleet of 24 trams in spring 2016 for the region's future 14.4 km network. The 2 line tramway network consists of the 9.2 km Line A with 16 stops ; the 5.2 km Line B with 10 stops. Entry into commercial service is slated for late 2016.

City Context:

Avignon, the "City of Popes", is the largest city and capital of the department of the Vaucluse, a French commune in southeastern France. Its historic center, the palace of the popes, Rocher des Doms, and the bridge of Avignon are well-preserved and were registered as Unesco world heritage sites in 1995. Avignon counts 94,787 inhabitants of which approximately 12,000 live in the ancient town center surrounded by its medieval ramparts.

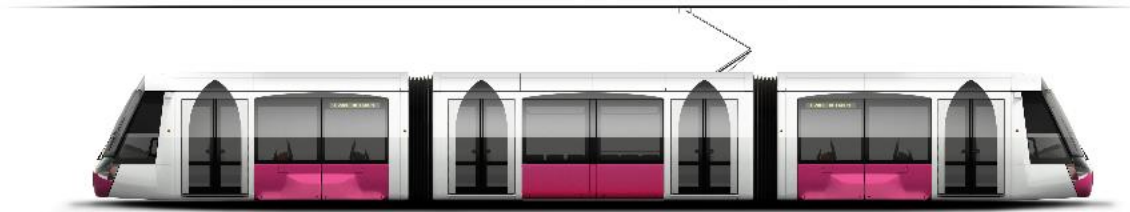
Solution:.....

To meet increasing transport needs, city officials selected Alstom's latest high performance Citadis X05 - 24 meters long and capable of carrying 144 passengers, depending on the interior layout. Thanks to the modular design of Citadis X05, Alstom provides styling with interior and exterior features that reflect the City of Avignon's architectural heritage. Citadis' high performance is due to a proven industrial organisation, a continuous improvement approach and comprehensive feedback from equipment in use for more than 15 years and having run for more than 500 Million km.

TECHNICAL SCOPE AND KEY FEATURES

Vehicle length	23.9 m
Vehicle width	2.4 m
Track gauge	1435 mm
Number of bogies/ vehicle	2 motor bogies
Number of carbody/ vehicle	3
Provision for subsequent vehicle extension	Yes
Low floor percentage	100%
Floor height (entrance)	360 mm
Gangway width in section over bogies	750 mm
Number & types of doors	
Seating configuration	Modular arrangements
Passenger Capacity	144 with 4 passengers per m ² 199 with 6 passengers per m ²

Passenger information equipment	4 TFT screens
HVAC (Heating, Ventilation, Air Conditioning)	Independent controls for passengers & driver zones/scaled to relevant climatic conditions
Motorization Ratio	100%
Maximum speed	70 km/h
Maximum acceleration	1.3 m/s ²
Service deceleration	1.2 m/s ²
Compression Load	400 kN
Crash absorption resistance	meets EN 15227 standard
Minimum horizontal curve radius	20 m (in depot)
Operation	bidirectionnal
Traction motors	PMM (Permanent Magnet Motor)
Power supply voltage	750 Vdc



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