



Regio CITADIS for Kassel and the region

ALSTOM

Transport
Project Story

A regional line directly into the heart of the city

Innovative tram-trains developed for Kassel and Northern Hesse will enter passenger service in December 2004. At the end of 2005, in a major technological leap, the world's first standard hybrid tram-trains will follow.



Regio CITADIS connects Kassel with its region in an innovative way

To improve the attractiveness and efficiency of its regional traffic service, Nordhessische Verkehrsverbund (NVV), in cooperation with Kasseler VerkehrsGesellschaft mbH (KVG), developed a concept that would enable its passengers to travel by rail from suburban areas outside Kassel directly into the city's centre without having to change trains.

Under this idea, the tramway network in Kassel would be directly connected with different railway lines in Northern Hesse. As well as eliminating unpleasantness of time-consuming and hurried train changes, the design also suited the city perfectly, offering passengers a more comfortable ride in an attractive environment.

Regio CITADIS: the concept takes form

In 2001, Regionalbahn Kassel (RBK) in cooperation with Kasseler VerkehrsGesellschaft (KVG) and Kassel-Naumburger-Eisenbahn AG (KNE) ordered 28 three-car, low-floor Regio CITADIS™ from ALSTOM.

Two vehicle types will be supplied: 18 electric two-system vehicles and 10 hybrid vehicles. The first tram-trains will begin passenger service in December 2004, with the delivery of the first eight electric vehicles. The remaining 10 electric vehicles as well as the 10 hybrid vehicles will be handed over by the end of 2005.



Accompanied by drum-rolls, fireworks and the applause of around 120 guests the first of the 28 Regio CITADIS vehicles for the city of Kassel officially left the ALSTOM workshop in Salzgitter on 6 July 2004.



Mobility for the city and the countryside

For passengers: first-class quality

ALSTOM's Regio CITADIS for Kassel offers its customers a high degree of comfort. The modern passenger cabin, with its air conditioning and heating systems, guarantees pleasant temperatures throughout the year. Wide, low entries combined with a continuous low-floor interior permit quick and easy access for all, including mobility-impaired passengers. And passengers will find the seating area quiet and comfortable for longer journeys. Each tram-train is equipped with a spacious multi-purpose area and luggage racks. A ticket vending machine and modern passenger information system are two more practical and convenient features. Double-glazed windows contribute to a calm and relaxed journey in the sound-insulated interior.



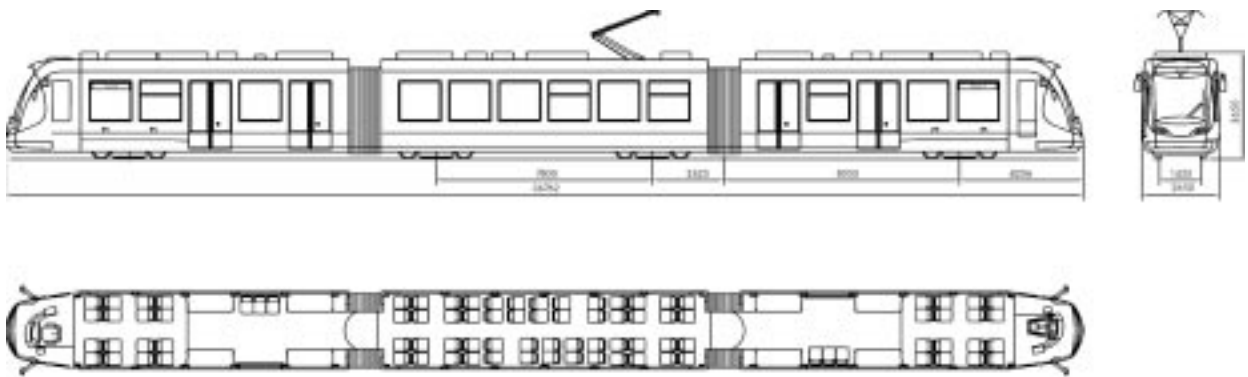
Regio CITADIS for Kassel interior without barrier

For operators: flexibility and adaptability

The operator will particularly benefit from the adaptability of its new vehicles. The 18 two-system vehicles can operate on both tramway and railway networks equally, under overhead catenary. The first 10 standard diesel-electric hybrid tram-trains are an exciting new introduction – a world's first. They can be operated in the city using the tramway's existing overhead contact line as well as on non-electrified railway lines in the outlying regions as diesel vehicles. By relying on existing infrastructure, the Regio CITADIS represents major savings in initial costs. And, thanks to the nearly identical design of both vehicle types, the owner/operator will also benefit from low maintenance costs.

The simple concept of similar vehicles with different traction systems behind ALSTOM's Regio CITADIS allows transport companies to choose from a range of possibilities to link and optimize their networks. ALSTOM's long-standing experience and innovative technology contributed largely to realising this trend-setting concept. The result is a vehicle with a high degree of flexibility and cost efficiency for transport companies.

In all, some 78 vehicles have already been ordered from this innovative product range. Fifty will be in passenger service in The Hague, the Netherlands, from 2006.



Schematic diagram of Regio CITADIS

Technical Data and Main Dimensions

Vehicle type	bi-directional vehicle
Vehicle length	36,762 mm
Vehicle width	2,650 mm
Maximum vehicle height (above TOR)	3,650 mm
Track gauge	1,435 mm
Minimum negotiable radius	22 m
Floor height (above TOR)	
– low-floor area	413 mm
– high-floor area	663 mm
Low-floor portion	approx. 75 %
Entrance height (above TOR)	362 mm
Entrance doors per side	4
Seats	90
Standing facilities (4 pers. per m ²)	E-E variant: 139, E-DE variant: 127
Multipurpose areas	2
Power supply	750VDC + 15 kV AC 16 ² / ₃ Hz and 750VDC + diesel-electric
Axle arrangement	Bo' 2' 2' Bo'
Maximum speed	100 km/h

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