



## București tram funds allocated



Photo: Gabriel Dumitriu

25 Jul 2016

ROMANIA: An amendment to the București city budget for 2016 has allocated €7.3m to transport authority RATB. Most of this will be used to modernise and procure trams.

Modernisation work on 10 trams, budgeted at €4.2m, will include the replacement of the middle section with a low-floor middle. Bogies, traction motors and brakes will also be replaced.

A further €1m is to be spent on the procurement of a three-section air-conditioned Bucur 65% lowfloor tram for €1m. RATB already has 15 such trams in operation, built in-house by RATB's URAC subsidiary.





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# Astra develops Authentic low-floor tram



06 May 2016

ROMANIA: Astra Vagoane Arad has started testing a prototype low-floor tram, which is currently being trialled at night on the Timişoara network.

The standard gauge two-section Authentic tram is aimed at operators in Romania and neighbouring countries.

The 100% low-floor tram is 18.6 m long, 2 400 mm wide and 3.6 m high. The tare weight is 25 t and the tram has a maximum axle load of less than 10 t. It has a top speed of 70 km/h, maximum loaded acceleration of 1.25 m/s2, service braking deceleration of 1.5 m/s2 and emergency braking deceleration of 2.8 m/s2.

Each section of the articulated car is carried on a centrally mounted 1 800 mm wheelbase with 600 mm diameter wheels, enabling the tram to cope with a minimum curve radius of 18 m. Each axle is powered by a 120 kW asynchronous traction motor supplied by ICPE Saerp. Regenerative braking is also fitted.

The unidirectional tram has three 1 300 mm wide double doors, 32 seats and space for 90 standing passengers at 6/m2. Air-conditioning, a passenger information system and a passenger counting system are all fitted.

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# EBRD loan to fund Cluj-Napoca tram purchase



19 Apr 2016

ROMANIA: Cluj-Napoca Mayor Emil Boc announced on April 18 that city transport authority CTP is to receive a €20m ERBD loan towards the purchase of five to seven trams and 50 buses.

The loan is to be disbursed in mid-June and would be paid back over 10 years using proceeds from a special 6.65% tax established in 2013 on every ticket sold by CTP.

In recent years CTP spent €32m on modernising tram infrastructure and €6m on the purchase of four Pesa Swing trams, with the help of EU funds.





#### Timișoara presents modernised trams



ROMANIA: Two modernised trams for Timisoara were presented to the public on July 8 to coincide with the city's annual Urban Transport Day.

A consortium of Electroputere VFU Pascani and Astra Vagoane Călători Arad won a €14.4m contract last year to refurbish up to 30 trams over four years.

Work on the first two ex-Bremen Wegmann GT4 vehicles started in June 2014, and they will now undergo test running at night on the standard gauge network.

The two-section unidirectional trams are 18.38 m long, 2 310 mm wide and 3.7 m high. They have 29 seats and capacity for 135 standees at  $6/m^2$ . Four sets of 1 200 mm wide double doors include one set with a wheelchair ramp.

As part of the refurbishment, the trams have a new steel body shell, and glass fibre reinforced plastic front and rear ends. Passenger information screens have been installed, along with airconditioning and three external CCTV cameras.

Two motor bogies each with a 200 kW asynchronous motor fed by two traction inverters supplied by ICPE SAERP give a maximum speed of 70 km/h, but the trams are electronically limited to 50 km/h. A DC traction voltage of between 400 V and 720 V can be used; the Timisoara network is electrified at 600 V.

The AC drives have been designed for regenerative braking, so that energy can be recovered for use by other trams. Hanning & Kahl mechanical brakes are also fitted.

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### Modernised tram presented to laşi



The rebuilt tram is branded GT4M.

Historical data only

ROMANIA: Electroputere VFU presented the first rebuilt GT4 tram to Iaşi Mayor Gheorghe Nichita on June 27. The project was jointly developed by city transport operator RATP and Electroputere VFU, which carried out the work at its Paşcani factory.

Nichita praised the 'European standard' of the upgraded tram, now branded GT4M.

The city plans to upgrade its entire fleet of 120 trams for €80m rather than purchasing new cars at a cost of €240m. Nichita hopes to finance this with the help of EU funds being made available from 2014.

'We have a big advantage because we already have a large proportion of modernised infrastructure. We can thus more easily access funds to upgrade trams', said RATP Director Maricel Gherca.

According to Electroputere VFU, the entire fleet could be upgraded within two years. The work would include making the trams low-floor.

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The car is one of the first batch of 10 GT4s purchased from Stuttgart in 1997. Built by Maschinenfabrik Esslingen in 1962, it operated in Stuttgart for 35 years. The vehicle was taken out of service for rebuilding in late 2010.

After testing that began in 2012, the modernised tram was approved for use by regulatory authority AFER, and will now be trialled on several routes on the metre-gauge network in laşi.

The two-section tram has capacity for 138 passengers, including 29 seated. Its maximum speed is 60 km/h. Only the original under frame remains in its entirety, and this has been reinforced in places. The body has been partly rebuilt to accommodate heavier equipment on the roof, including a Schunk pantograph. The bogies have been rebuilt with two new traction motors and four independent braking systems.

The car is the first in Romania to be fitted with a data recorder.

Other features include air conditioning, a passenger information system, electronic displays, ticket validators and CCTV. The driver's cab is larger and instead of mirrors has screens showing images from three external cameras. Around 60% of the new equipment was manufactured in Romania.

According to Electroputere VFU President Gruia Stoica, Timişoara and Craiova are also interested in modernising their tram fleets. Electroputere VFU had previously modernised four trains for Moldova.

Courtesy: Railway Gazette