First Tango tram for Geneva Public Transport

Geneva Public Transport (Transports Publics Genevois, TPG) took delivery of its first "Tango" tram on 16 September 2011 from the Swiss manufacturer Stadler. The new vehicles are needed to keep pace with the growing demand and to cover the next network expansion stage, the Cornavin – Onex – Bernex connection, which has gone into operation with the change of timetable on 11 December.

Unlike the "Flexity Outlook" recently delivered by Bombardier which made the journey from Belgium to Switzerland by road transport, the Stadler trams are being transported by rail from Bussnang to Genève La Praille. The 44-meter long vehicles consisting of six modules then cover just the final kilometre from the freight station to TPG's Bachet-de-Pesay depot by road.

Because TPG's only tram depot is virtually full to bursting at night time, the impressive transport convoy was scheduled for a morning, which necessitated the temporary closure of a busy road. While offering a great spectacle for the many photographers and camera crews who turned out, it caused considerable obstruction of the traffic for a good hour, which also played havoc with the timetable on several TPG bus routes.

Partial low-floor design

Stadler is planning to deliver another seven Tango trams to TPG before the end of 2011, and further vehicles are to follow until 2014. A firm order has been placed for 32 trams

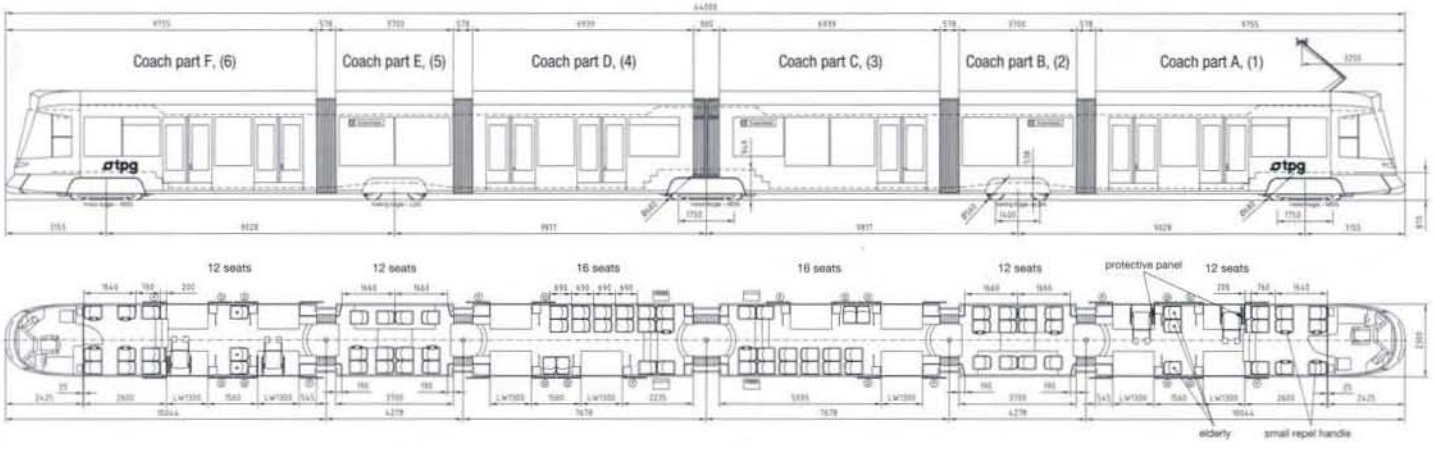
Below left: The special transport reverses along the Route des Jeunes on its way from La Praille station to the TPG depot (photo: M. Rellstab, 16 September 2011).

Below right: The interiors of the Tango trams for Genève are of a sober design, as with the vehicles delivered to BLT (photo: M. Rellstab).

Bottom: Type drawing. According to the initial plan, the rearmost module was to be equipped with only one door. TPG dispensed with tip-up seats for fear of vandalism (drawing: Stadler).

Technical data

Track gauge	1000 mm
Seats	80
Standing passengers (4/m²)	181
Floor height (low floor)	320 – 370 mm
Length without coupler	44 m
Width	2300 mm
Height	3590 mm
Weight (tare)	57 t
Weight (operational)	85 t
Outside doors	7 each side
Driving wheel diameter, new	680 mm
Trailing wheel diameter, new	560 mm
Catenary voltage	600 DC
Traction power	6 x 125 kW
Maximum speed	70 km/h
Minimum curve radius	20 m (Depot: 18 m)



which will be designated with operating numbers Be 6/10 1801 – 1832. TPG has also taken two options for the delivery of 14 and 10 additional trams respectively.

It is notable in this case that TPG is acquiring only partially low-floor trams, since its last procurement order was for 39 vehicles with 100 % low-floor design. Apparently the fact that some of the seats over the bogies are only accessible via steps is not seen as a serious disadvantage – unlike in Basel where this was one of the reasons why BVB (Basel Stadt, city Public Transport) withdrew from a joint order with BLT (Baselland, country Transport).

In Genève, another factor could be that the network is gradually being developed from a purely urban tram into a mass transit system comprising many route sections separated from road traffic and with long distances between stops. This already applies to TPG's line Cornavin – Meyrin – CERN, and the trend is continuing with the recently opened line to the suburbs Onex and Bernex and the planned extensions across the border to France. Under such conditions it can be advantageous to deploy vehicles with classic air-suspended bogies. One possibility that cannot be ruled out is that TPG deliberately opted for a Swiss manufacturer after the first series of Bombardier trams was built in Austria and the second in Belgium.

Contrary to the original plan, the Tango trams are now fitted with seven doors on each vehicle side instead of six. While on the one hand this involves the loss of eight seats, the number of standing places has increased. Dual-direction vehicles are essential for the line to Meyrin – CERN because this line has no terminal loops and a number of stops have central platforms.

Only three lines remaining

When the new line to Onex und Bernex being in operation, the number of tram lines in Genève has been reduced from seven (lines 12 – 18) to three (lines 12 – 14). Expansion of the tram network means that the existing system linking all terminal stations was no longer viable. Moreover, service disruptions on one line had severe repercussions because all lines were operationally interlinked. With the new system the individual lines operate services at shorter intervals, with a tram every three minutes at peak hours. (mr/lüt)

EU Commission releases new plans for transport network

On 19 October 2011 the European (EU) Commission presented the latest proposal for the modernisation of the Trans-European Transport Network (TEN-T). Under the title "Connecting Europe" EUR 31.7 billion are to be invested in the expansion of the transport infrastructure between 2014 and 2020. The new plan replaces the previous list of 30 priority projects and concentrates on ten corridors of the so-called core network. These are mostly railway lines, but there are also a few shipping routes. Road projects are no longer included. As several bordering corridors have been joined together, the total number of corridors has been reduced.

According to the proposal of the EU Commission, the TEN-T network includes the following corridors (shipping routes in brackets):

1. (Helsinki –) Tallin – Riga – Kaunas – Warszawa – Katowice, Gdynia – Katowice, Katowice – Ostrava – Brno – Wien, Katowice – Žilina – Bratislava – Wien, Wien – Graz – Klagenfurt – Villach – Udine – Venezia – Bologna – Ravenna (Baltic – Adriatic corridor);
2. Brest – Warszawa – Poznań – Frankfurt an der Oder – Berlin – Hannover – Osnabrück – Enschede – Utrecht – Amsterdam / Rotterdam – Felixstowe – Birmingham / – Manchester – Liverpool;
3. Algeciras – Madrid – Tarragona, Sevilla – Valencia – Tarragona, Tarragona – Barcelona – Perpignan – Lyon – Torino – Milano – Venezia – Ljubljana – Budapest – Csop (Mediterranean corridor);
4. Hamburg / Rostock – Berlin – Praha – Brno – Bratislava – Budapest – Arad – Timişoara – Sofia, Sofia – Burgas / Svilengrad, Sofia – Thessaloniki – Piraeus (– Limassol – Lefkosia);
5. Helsinki – Turku – Stockholm – Malmö – København – Fehmarn – Hamburg – Hannover, Bremen – Hannover – Nürnberg – München – Brenner – Verona – Bologna – Roma – Napoli – Bari / Palermo (– Valletta);
6. Genova – Milano / Novara – Lötschberg / Gotthard – Basel – Mannheim – Köln – Düsseldorf – Rotterdam / Amsterdam, Köln – Liège – Bruxelles – Zeebrugge;
7. Sines / Lisboa – Madrid – Valladolid, Lisboa – Aveiro – Oporto, Aveiro – Valladolid – Vitoria – Bordeaux – Paris – Mannheim / Strasbourg;
8. Belfast – Dublin – Holyhead – Birmingham, Glasgow / Edinburgh – Birmingham, Birmingham – London – Lille – Bruxelles, (Dublin / Cork / Southampton –) Le Havre – Paris, London – Dover – Calais – Paris;
9. Amsterdam – Rotterdam – Antwerpen – Bruxelles – Luxembourg – Dijon – Lyon, Luxembourg – Strasbourg – Basel;
10. Strasbourg – Stuttgart – München – Wels / Linz, Strasbourg – Mannheim – Frankfurt – Würzburg – Nürnberg – Regensburg – Passau – Wels / Linz, Wels / Linz – Wien – Budapest – Arad – Brašov – București – Constanța – Sulina.

Each corridor includes at least three member states. Within the individual corridors the EU Commission proposal lists individual projects. In the financial period up to 2020 some projects will only be planned, whilst others will be under construction or even completed. The entire core network should be completed by 2030 in the following financial periods.

On inspection of the new network and the projects therein, it is evident that Germany and Austria have negotiated well. In Germany all important national projects are included: Hamburg / Bremen – Hannover, Hannover – Berlin, Dresden – Praha, München – Kufstein, Karlsruhe – Basel, Frankfurt – Mannheim, Karlsruhe – Stuttgart – München and München – Mühldorf – Freilassing. The revised EU proposal thus includes significantly more German projects than before.

Austria's main success is the new Baltic – Adriatic corridor. This makes possible the co-financing of the Semmering base tunnel and the Koralm tunnel by the EU. However, also new is the section Wels – Passau, in which the upgrade will be funded. Further projects affect the section Wels – Salzburg, in which by 2020 the planning of the upgrade of the existing line and of the new section Seekirchen – Salzburg is to be funded, as well as the completion of the four-track upgrade of the Westbahn by 2017/2018. Finally, the Brenner base tunnel must also be mentioned; as part of corridor 5 it is to be co-financed by the EU. In the latest "target network plan 2025+" released by ÖBB and the Austrian Federal Ministry for Transport (BMVIT) the completion of the Brenner base tunnel is foreseen for 2032. However, the EU would like the core network to be completed by 2030. In its paper, the EU Commission has emphasised that within Europe Austria is second only to Switzerland in having the highest investment per capita in the railway sector.

These ten corridors will be supplemented by further sections. Worthy of mention in Germany are the cross-border sections München – Praha, Nürnberg – Praha, Wrocław – Dresden as well as the lines Frankfurt – Fulda – Erfurt – Berlin and Halle – Leipzig – Nürnberg, on which various bottlenecks are to be removed. In Austria the international connection Graz – Maribor is part of the supplementary network.

The proposal of the EU Commission will come before the European Parliament in spring 2012 and must also be coordinated with the European Council. In this round of discussions the co-financing of individual projects will also be specified. There will therefore still be a lot of haggling over the distribution of the available EUR 31.7 billion. More than two thirds of this sum will come from the so-called "Connecting Europe Facility", the remainder from the cohesion fund. The EU Commission has already declared that it will work together with the European Investment Bank for the financing. Compared to earlier periods the EU has markedly increased the financial framework for transport infrastructure projects. (5036)