

REFERENCES

REGIONAL

Coradia Polyvalent for LEX

Performance and accessibility for France-Vaud-Geneva suburban train

CHALLENGES

Coradia Polyvalent is the regional train of Alstom's latest generation. Its versatility responds to the special needs of each region, facing the challenges of regional transport (increasing traffic volume, new transport offer, intermodality, renewal of rail vehicles, environmental protection).

The passenger is at the centre of this train concept: perfect accessibility, optimal passenger flow, comfort on board, efficient information systems, space for luggage.

Right from the beginning it was designed as a European train (ERTMS, according to STI standard).

It belongs to Alstom's Coradia range with worldwide references on the market for regional trains.

PROJECT

A frame contract for 1,000 trains was signed in October 2009. Up to now, 312 Coradia Polyvalent have been ordered: 251 trains for 9 French regions and 61 for the State for intercity trains. The fleet has already covered more than 50 million kilometres in commercial service.

Alstom has developed a specific version for the Léman Express line, the border-crossing train connection between Geneva and Annemasse, which perfectly connects the French network to the Swiss network in suburban service.

Six Alstom sites in France are involved in this project: Reichshoffen (design and assembly), Ornans (motors), Le Creusot (bogies), Tarbes (traction chain), Saint-Ouen (design and on-board signalling equipment) as well as Villeurbanne (on-board computers and signalling equipment). The project creates 4,000 jobs at Alstom and its suppliers.



Cross-border operation between France and Switzerland



Accessibility, transparency and comfort for cross-border connections



Alstom's site in Villeurbanne (Rhône) is directly involved in the train development

Alstom Transport / TOIMA-C Sassio

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CORADIA POLYVALENT RANGE

Modularity:

- 3 lengths: 56, 72 or 110 m
- 2 types of traction: electric or bimodal
- 3 types of comfort: suburban, regional, intercity
- Border-crossing versions to Germany and Switzerland

Passenger capacity: 162 to 1,000 seats (3 trains of the long version)

Speed: 160 km/h

Interior layout: Customized train: large choice of options, modifiable during lifetime. Absolutely barrier-free.

Passenger comfort: Socket and reading lamp at the seat, silent and low-vibration train, soft air conditioning depending on the occupancy rate (CO₂ value) for better climate comfort.

European train: ERTMS signalling system, STI standard

Maintenance: Maintenance-friendly design (roof equipment, quickly and easily accessible).

Reliability: Service-proven components to guarantee reliability. TrainTracer software to improve maintenance performance.

Economic and ecological train: Energy consumption and CO₂-emissions reduced by 10 to 20% depending on the operating conditions, light train so that its energy consumption is 15% lower than that of previous train generations.

VERSION FOR LEMAN EXPRESS

- **Regiolis:** 72m long, four-unit
- **Capacity:** 204 seats, up to 4 trains can be coupled to obtain 816 seats
- **Traction** electric, three voltages (25 kV, 1500V and 15 kV) to run in France and Switzerland
- **Special equipment:** 7 doors on either side with gap bridging for easy access, space for bicycles, 1st class, passenger counting system, large entrance area
- **Adaptations** to run absolutely safely in the Swiss network

ADVANTAGES

- **Accessibility:** Access at platform height with gap bridging; without steps in the passenger room
- **Short passenger changing times at stops:** Improved passenger flow
- **High acceleration/braking performance** for suburban service
- **Lower energy consumption and reduced maintenance costs**

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