

New rolling stock for RhB's Albula line

The Swiss metre-gauge Rhätische Bahn (RhB) is launching the third phase of its fleet modernization concept with an order for new passenger coaches for the Chur – St. Moritz line. This follows on from the orders for 15 dual-system “Allegra” EMUs for the Bernina and other lines, and five single-system units for suburban services in the Chur region. This latest order worth CHF 110 million (EUR 88 million) has also been awarded to Stadler Rail. The new purchase contract for seven units, each consisting of six close-coupled coaches, was signed on 20 December 2010. Classic compositions

with locomotives and coaches are more suitable than multiple units for the Chur – St. Moritz Albula line, which by Swiss standards has the character of a long-distance route. Moreover, RhB already has modern, high-performance locomotives in the shape of the Ge 4/4 IIIs it has purchased since 1993. The permanently coupled six-coach units, of which two coaches are first-class, have gangway bellows closed all round as on the Allegra EMUs and a redundant shared on-board power supply which furthermore is prepared for later conversion to 1000 V heating voltage. Depending on demand, the

units can be augmented by additional passenger coaches from the existing RhB fleet.

Manufacturer and RhB alike designate the compositions as “articulated trainsets”. In the railway business, this term is used to signify trains whose coaches are supported on shared running gear, and it therefore usually involves a great deal of effort to separate them. However, that is not the case with the new Albula coach train units: each coach is supported on two classic bogies as is also the case, for instance, with Deutsche Bahn’s ICE trains or the ÖBB Railjet. For all that, close-coupled coach units are less flexible in operation than classic trains made up of individual coaches. In the event of a serious fault occurring in one coach, the entire multi-coach unit may well fail.

Passengers will be able to travel in the first of the new compositions as early as 2013. Each coach has one single-leaf entrance door with a retractable step on both sides. There is a spacious multifunctional compartment in each entrance area. The same amenities such as air-conditioning and customer information system to be found in the Allegra trains are of course also provided in the Albula units. A new feature for RhB is a family compartment with play corner and, in the rear of the end coach, a “photo compartment” with windows almost all round. The side windows here, unlike in the



Top: Locomotive Ge 4/4 III with one of the new six-coach units on the Landwasser Viaduct (photomontage: Stadler).

Bottom: Type drawing (source: Stadler)





other five coaches, can be opened. There is room for up to 14 passengers on a row of tip-up seats arranged along one side (see photo top left) where they can enjoy the best possible view of the mountain panorama – providing it is not obstructed by standing photographers. This coach also features a low-floor area with a wheelchair-accessible toilet. Otherwise, both the Class B 577 and A 570 coaches have two standard toilets each.

Top left: The “photo compartment” with windows nearly all round allows splendid views (drawing: Stadler).

RhB is investing a total of at least CHF 310 million into the first three phases of its fleet modernization concept. Delivery of the 15 Allegra ABe 8/12 dual-system EMUs ordered from Stadler began in May 2010 and is still in progress (see RU 7-12/2010). Eleven Allegra multiple units had been delivered by the end of 2010. Nine compositions have been running eight scheduled return services since the start of the winter timetable 2010/2011, with one composition kept in reserve at Landquart.

Top right: The first-class compartment offers a high standard of travel comfort (drawing: Stadler).

Mondays to Fridays, the Allegra trains currently cover four return services on the Bernina line, three between Landquart and Davos, and one service between Chur and Arosa. At weekends there are five return services on the Bernina line. In the morning,

Right: Room for up to ten bikes is available in the multifunctional compartment (drawing: Stadler).



one Allegra composition travels from Chur to Arosa and back, and is then dispatched from Chur to Tirano. On its return from the Valtellina (Veltlin) it operates another Chur – Arosa – Chur service.

deployed mainly on the RhB corridor Schiers – Landquart – Chur – Thusis starting in 2012. Unlike the Bernina Allegra the trains for local services can only operate under AC catenary. (mr)

Apart from the 15 ABe 8/12s, RhB has also ordered five Allegra ABe 4/16 multiple units from Stadler for local traffic in the greater Chur region. These are scheduled to be

Allegra unit ABe 8/12 3509 with additional coaches near Langwies en route from Chur to Arosa (photo: U. Jossi, 16. December 2010).

Technical data

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| Coach types: | |
| First class | A 570, A 571 |
| Second class | B 573, B 574, B 577, Bi 576 |
| Minimum curve radius | 50 m |
| Commissioning | 2012 – 2014 |
| Seats per 6-coach unit | 256 (incl. 70 first-class) |
| Unit length over buffers | 112 350 mm |
| Distance between pivots (coach) | 12 800 mm |
| Length of coach body | 17 800 mm |
| Height | 3700 mm |
| Width | 2670 mm |
| Bogie wheelbase | 1800 mm |
| Wheel diameter, new | 685 mm |
| Floor height, standard | 960 mm |
| Floor height, low floor | 450 mm |
| Entrance width | 1200 mm |
| Longitudinal compressive force | 800 kN |
| Service weight | 132 t |
| Gross weight | 153 t |
| Maximum speed | 100 km/h |
| Train bus bar voltage | 320 V or 1000 V |

