



# ELECTRICAL LOW-FLOW AREA MULTIPLE UNIT

Ferrovie autolinee regionali ticinesi (FART),  
Switzerland

Ferrovie autolinee regionali ticinesi is procuring four 3-car adhesion multiple units ABe 6/12 for the Locarno – Camedo (national) route section and four 4-car adhesion multiple units ABe 8/16 for the Locarno – Domodossola (international) route section.

The adhesion multiple units must meet the existing as well as future operating conditions and also ensure efficient passenger service as a 2-car consist ABe 4/8 through the separation of the 3-car or 4-car consists.

This vehicle procurement is part of an extension and modernisation of the range and serves to increase customer benefits and meet the vehicle access requirements for people with limited mobility.

Passengers who require a wheelchair and/or walking frame will find a wheelchair section with two wheelchair spaces and six tip-up seats, a disabled-access toilet and a lounge for travel groups in end carriage A, which is a permanent feature of all multiple unit configurations and is always the first carriage in journeys towards Camedo (national) or Domodossola (international).

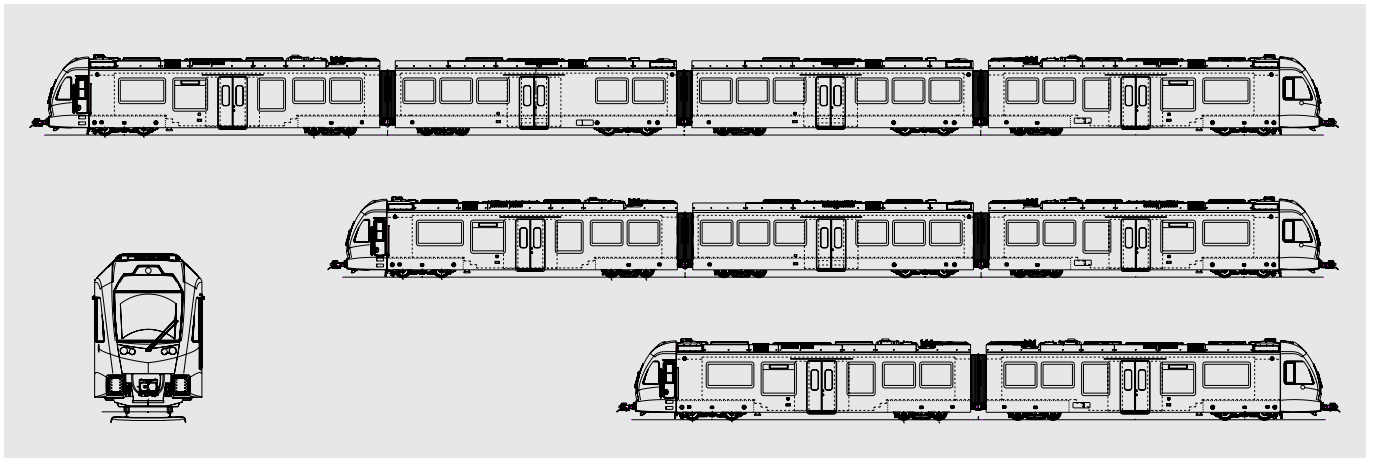
End carriage B is equipped with a multifunctional section including three second class seats and eight tip-up seats as well as a maximum-size low-floor area for the transport of pushchairs, bicycles or bulky luggage.

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## Technical features

### Technology

- 4-car adhesion multiple unit ABe 8/16
- 3-car adhesion multiple unit ABe 6/12
- 2-car adhesion multiple unit ABe 4/8
- Efficient traction equipment
- Aluminium lightweight case for all car bodies

### Comfort

- 1 passenger door per carriage for quick passenger boarding and alighting
- Compliance with the Swiss Act on the Elimination of Discrimination against People with Disabilities (BehiG) ensured by low-floor entrances and sliding step bridge gaps
- Disabled-access toilet
- Contemporary appearance with modern levels of comfort (elegant vehicle front, air suspension, HVAC system, passenger information system, low-floor entrances)
- Large windows in the low-floor area

### Reliability / Availability / Maintainability / Safety

- Redundant drive equipment for high reliability
- Vehicle front that meets the Swiss Office of Transport's current crash requirements for metre gauge railways (EN 15227)

## Vehicle data

<b>Customer</b>	Ferrovie autolinee regionali ticinesi (FART)
<b>Operated networks</b>	Locarno (CH)–Domodossola (ITA)
<b>Track gauge</b>	1,000 mm
<b>Designation</b>	ABe 8/16 & ABe 6/12 & ABe 4/8
<b>Supply voltage</b>	1,350 VDC
<b>Axle arrangement</b>	(4-car) Bo' 2' + 2' Bo' + 2' Bo' + 2' Bo' (3-car) Bo' 2' + 2' Bo' + 2' Bo' (2-car) Bo' 2' + 2' Bo'
<b>Number of vehicles</b>	Four 4-car vehicles and four 3-car vehicles
<b>Commissioning</b>	2024 and 2025
<b>Seats</b>	(4-car) 128 (1st cl. 37 / 2nd cl. 91) (3-car) 95 (1st cl. 20 / 2nd cl. 75) (2-car) 49 (1st cl. 20 / 2nd cl. 29)
<b>Standing capacity</b>	(4-car) 210 (3-car) 163 (2-car) 125
<b>Tip-up seats</b>	14 (6 IV/8 regular)
<b>Wheelchair spaces</b>	2 in end carriage A
<b>Floor height</b>	Low-floor area 450 mm from TOR High-floor area 970 mm from TOR
<b>Entrance width</b>	1,200 mm
<b>Body strength</b>	800 kN (pressure)
<b>Vehicle length</b>	(4-car) 63,400 mm (3-car) 48,930 mm (2-car) 34,460 mm
<b>Vehicle width</b>	2,650 mm
<b>Vehicle height</b>	3,898 mm from TOR
<b>Seats</b>	(4-car) 128 (1st cl. 37 / 2nd cl. 91) (3-car) 95 (1st cl. 20 / 2nd cl. 75) (2-car) 49 (1st cl. 20 / 2nd cl. 29)
<b>Bogie wheelbase</b>	Motor bogie 1,900 mm Trailer bogie 1,700 mm
<b>Wheel diameter, new</b>	730 mm (drive wheel) 750 mm (trailer wheelset)
<b>Wheel performance / tractive effort</b>	(4-car) 8 x 125 kW / 160 kN (3-car) 6 x 125 kW / 120 kN (2-car) 4 x 125 kW / 80 kN
<b>Starting acceleration</b>	1.15 m/s <sup>2</sup> (gross)
<b>Maximum speed</b>	60 km/h (90 km/h in design)