

WHEN  
THERE IS NO ENERGY  
THERE IS NO COLOR,  
THERE IS NO SHAPE,  
THERE IS NO LIFE

Michelangelo Merisi, Caravaggio.

## Hitachi Rail Italy SpA

Hitachi Rail Italy is one of the most important railway manufacturers in Europe. In November 2015 it was incorporated by Hitachi Rail Europe. It is the result of the merger of two Italian companies of long tradition Ansaldo Trasporti and Breda Costruzioni Ferroviarie, which in 160 years of activity have made the history of urban mobility and rail transport.

The products of Hitachi Rail Italy range from High Speed, with the ETR1000, to urban transport with tramways, metros, traditional and driverless, to the regional trains Rock and TSR.

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Our facilities: Naples, Pistoia, Reggio Calabria

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C A R A V A G G I O

# CARAVAGGIO THE NEW ELECTRIC TRAIN MADE BY HITACHI RAIL ITALY

Caravaggio is the new Hitachi Rail Italy platform of high-capacity trains, the result of the best Italian and Japanese technologies available in the Hitachi group, fully assembled in Italy and relying on a 20-year experience in the manufacture of over 200 electric trains and 700 passenger cars, all of which double-deck, in operation on the Italian rail network.

The innovative architecture, characterized by light alloy cars, distributed power traction and wide volumes available for the passenger compartments, offers performances unique on the market in terms of :

- weight for passenger
- transport capacity for unit length
- energy consumption for passenger/km (30% less compared to the most recent electric trains circulating in Italy).

Moreover, Caravaggio offers high availability, flexibility and diversified solutions to satisfy the specific needs of regional transport.



## MAIN FEATURES

- Total functional flexibility in configurations of 5 and 4-cars, maintaining constant performance, with possibility of operation in consists of two coupled units.
- The exterior design has been released from traditional patterns to represent a highly innovative and recognizable shape that goes beyond the expectations and the current market trends. Bold and full of personality, the whole shape assumes characteristics of dynamism and essentiality making the vehicle architecture a new and decisive interpretation of forms.
- Architecture of the interiors flat thanks to the staircases placed above the bogie areas, allows for a significant increase in transport capacity.
- large glass surfaces of the compartments, with wider windows, also to maximize the transparency to the outside.
- Bicycle space accessible directly from the vestibule to minimize hindrance to the flow of passengers boarding or leaving the train.
- High capacity of luggage transport.
- Led internal and external lighting system to reduce energy consumption.
- Pocket doors that, thanks to a single sliding movement, maximize reliability of functioning. The doors are equipped with a movable step to compensate for the horizontal gap between platform and vehicle. On the DM1 driving car doors, a manual ramp can be applied to facilitate access of disabled people in wheelchairs in full compliance with the latest TSI PRM accessibility regulations.
- Cars in light alloy extruded material to assure high corrosion resistance and low weight.
- Choice of materials made to ensure high levels of recyclability and renewability. Use of recycled raw materials, which together with the reduced fuel consumption characterize the ecological footprint of the train.
- High performance air conditioning system, optimizing energy consumption on the basis of the number of passengers transported.



Configuration	5 cars	4 cars
Length (m)	136.8	110
Width (mm)		2,800
Gauge (mm)		1,435
Height from ToR (mm)		4,300
Bogie wheelbase (mm)		2,650
Wheel diameter (mm)		920
Total seating passengers (standard + priority + flip-up seats)	656	463
Space for bicycles	18	15
PRM with wheelchair		2
Doors/side	10	8
Toilet	2 (1 PMR UNI + 1 Std)	
Power supply	3kV	
Max power(kW)	3,400	
Max speed (km/h)	160	
Max acceleration(m/s <sup>2</sup> )	1.10	
Motor bogies	4	
Trailer bogies	6	4
Axle load	18.5	