FACT SHEET

New XXL trains for the Munich S-Bahn

Key facts and figures for the new train

Length	202.2 meters
Width	3 meters
Weight	365 tons
Drive power	7.8 MW
Top speed	160 km/h
Number of cars	13
Number of axes	28
Seats	480
Maximum capacity	1,820 passengers
Passenger info displays	168 (106 in the interior, 62 above the doors outside)
Number of doors	62 (31 on each side of the train)
Series number	ET 1420

Facts and figures for the mock-up

- True-to-scale model for testing and presentations, with original and replica components that will later be replaced with original parts.
- Around 22 meters long, 3 meters wide and weighing 26 tons. The model is manufactured primarily from wood by Zech und Waibel Modellbau in Neuss.
- As of 2026, the model will be stationed near the future S-Bahn depot in Pasing-Langwied.

Exterior and interior design

- The exterior design is dominated by light gray and “Bahnland Bayern” blue. The doors and window bands contrast sharply in a black-gray tone. The front of the train features a large S-Bahn logo with a diamond pattern. Wheelchair and multipurpose areas are prominently marked in blue that can be seen from a distance.
- Interior: The seats also feature blue tones, complimented by yellow accents and warm natural tones. The interior has colored surfaces, pictograms and color inlays. Visually accented boundaries throughout the cars offer improved passenger guidance.
- The interiors are finished with sustainable, robust, and easy-to-clean materials, including the seat upholstery, flooring, and interior surfaces.

- The train design was developed together with the Neomind design studio with the help of an evaluation of the existing S-Bahn fleet based on passenger surveys, tests, and stakeholder dialogues.

Equipment and comfort

- The train has various areas and a total of up to 480 seats:
  - Two family and group areas at the ends of the train (48 seats)
  - Classic 3- and 4-seat arrangements with 352 upholstered seats and 15 cm of additional space for generous legroom, equipped with storage shelves and two 65-watt USB-C sockets.
  - Five large multipurpose areas evenly distributed throughout the train and equipped with 80 automatically lockable folding seats offer either additional seating or storage space depending on the need – such as for up to 40 bicycles. Three doors on each side of the car allow quick entries and exits with bicycles and luggage.
- 62 doors with a width of 1.40 meters – 20 cm wider than in older trains – and generously dimensioned boarding areas facilitate passenger distribution and greater punctuality.
- Interior lighting automatically adjusts their brightness and color tone to the time of day, ensuring a pleasant ride experience.
- Passengers can stay online at all times with free WiFi service and special windows that optimize mobile reception.
- An air conditioning system operating with environmentally friendly refrigerants is capable of handling ambient temperatures of up to 45°C.

Accessibility

- The trains meet all current accessibility standards and were designed together with the relevant associations.
- The trains have dedicated wheelchair areas in the first and last cars equipped with padded back and side walls, storage space, USB-C sockets, and buttons for calling for assistance and requesting exits. A dedicated display at eye level provides information about the status of elevators and platform height at the next station. The doors accessing the wheelchair areas are equipped with sliding steps to bridge gaps with the platform.
- Passengers with impaired hearing can connect their hearing aids with the train’s PA system via Bluetooth so they don’t miss any announcements. The passenger information displays can be seen from every seat.
- Tactile pictograms, controls printed with Braille, high-contrast design of floors, seats and handrails, markings on doors and seat rows, and acoustic signals further enhance the train’s accessibility.

Passenger information

- LED strips on the car exterior above the windows show the color of the respective S-Bahn line, providing quick and easy orientation.
- Easy-to-understand text-to-speech announcements can also be limited to selected parts of the train.

- 168 displays throughout the train provide real-time passenger information:
    - 106 interior displays (above the doors, along the ceilings, in the car transitions) show the route, line disruptions, network maps, platforms, and passenger TV.
    - 62 exterior displays show the line number, destination, intermediate stops, and door status. Information about the train's occupancy is also possible.
- Displays above the doors inside the cars show passengers their location on the train and on the platform for the next stop, helping them quickly find their way.

Technology, innovation and sustainability:

- The new trains are more innovative, digitalized and networked than ever before.
- The focus is on ensuring minimal lifecycle costs through maximum energy efficiency, minimized maintenance costs, and optimized operational support.
- This includes the use of SiC semiconductors, an innovative drive system, and an efficient dry-type transformer in combination with intelligent control software. The train's lightweight construction and its aerodynamic design ensure lower energy consumption.
- The trains have a large number of redundant components and are equipped with the Railigent X system that enables condition-based, predictive maintenance and guarantees maximum train availability.
- Advanced diagnostic systems continuously monitor the status of relevant components such as door controls, air conditioning, etc. during operation. The data is processed and the information essential for fleet operation is then transmitted to the control centers and depots. The enables maintenance to be planned in a more targeted and efficient manner, and the trains can be taken out of service in good time.
- **Updated software at all times**
    - Through a long-term software maintenance contract up to 2034.
    - This way, Siemens Mobility and DB can jointly develop future-proof train software.
    - Software updates no longer have to be manually installed at the depot – a time-consuming process – but are transmitted to the trains via a secure online link as part of the maintenance.
- **A train control system fit for the future**
    - The trains are equipped with the European Train Control System (ETCS), an Automatic Train Operation (ATO) system, and a Train Integrity Monitoring system.
    - By integrating the ATO over ETCS, the new trains are fit for rail transport of the future.
- **From Bavaria, for Bavaria**
    - Around 51,500 people work for Siemens in Bavaria, including nearly 27,300 in production, 9,000 in research and development, and approximately 15,300 in sales and administration.
    - The company's locations in Munich, Erlangen, Nuremberg and Luhe-Wildenau play an important role in the research and development as well as engineering of the new S-Bahn trains for Munich along with their components.