Luxury Parking
Ramp of a Legend

Modern building technologies in Stuttgart’s Mercedes-Benz Museum

The Mercedes-Benz Museum in Stuttgart, Germany opened its doors to the public in May 2006 – just a stone’s throw from the DaimlerChrysler factory in Stuttgart-Untertürkheim and the Gottlieb-Daimler Stadium. Siemens supplied its power distribution, communications equipment and technical fire protection expertise to the project.
THE MERCEDES-BENZ MUSEUM takes visitors on a unique two-hour journey through the 120-year history of the automobile. 160 vehicles and more than 1,500 exhibits are on display over an area of 16,500 square meters of exhibition space on nine floors, including Chancellor Adenauer’s last official car, Pope Paul VI’s “pope mobile” and even the legendary Silver Arrows. The exhibition entitled “Fascination of Technology” is a central feature of the museum. Insights into the daily activities of the Mercedes-Benz developers and engineers are elaborately presented, and include an outlook of the future of automobiles.

Striking architecture

The Dutch architect Professor Ben van Berkel was entrusted with designing and planning what many are already calling the building of the century. The museum concept and exhibition design is the work of the Stuttgart company hg merz. The extremely unusual structure is 80 meters long and features a clover-shaped floor plan. Two inclined floors spiral around the 42-meter-high atrium from top to bottom in a DNA-like double helix shape, leading the visitors through the museum. Architectural highlights include 33-meter-wide clear-span rooms as well as double-arch structural support elements known as twists, applied for the first time ever in this shape and scale. No fewer than 1,800 different panes of glass were used in the window strips. An arcade measuring some 100 meters in length and housing restaurants, shops and event areas links tradition with modernity. Through this passage, visitors can easily stroll from the Mercedes-Benz Museum to the Mercedes-Benz Center Stuttgart, where they can admire, examine and buy the latest models of the car with the star on the hood in a showroom with approximately 9,100 square meters of display space. The building also houses an exclusive delivery center and one of the most modern Mercedes-Benz service stations with 16 car spaces.

Ben van Berkel, born in Utrecht (Netherlands) in 1957, is a graduate of Amsterdam’s Rietveld and London’s Architectural Association (AA) (1987). After working in Zaha Hadid (London) and Santiago Calatrava (Zürich), he founded the van Berkel & Bos Architectuurbureau in Amsterdam together with Caroline Bos in 1988. In 1998, they jointly initiated the Designbüro UN Studio, UN standing for united net, to operate alongside their architectural firm. As a visiting professor, van Berkel lectured at Columbia University and Harvard in 1994, and at the Architectural Association, London, from 1996 to 1999. He currently teaches architecture at the State University for the Fine Arts (Städelschule) in Frankfurt/Main.

Legend 3 / Times of Change – diesel and superchargers: strolling past several airplane engines made by Mercedes-Benz, visitors enter the 1930s

Ben van Berkel sketching the outline of the new Mercedes-Benz Museum
Proven partnership

When the idea of a Mercedes-Benz World was first born at DaimlerChrysler in 2002, Siemens was almost immediately contacted. “We were already well-prepared when the first invitations to tender reached our desks, and it didn’t take us long to submit qualified tenders,” as Roland Schweizer, account manager in charge at Siemens Power Transmission and Distribution (PTD) at the time, recalls. In the end, PTD, Automation and Drives (A&D), Siemens Building Technologies (SBT) and the Siemens Com communications group won the order for most of the technical building equipment. “Siemens has been successfully supplying the Untertürkheim plant with products and solutions for many years. A study convinced DaimlerChrysler not to supply the power for the Mercedes-Benz World over external power utility source, but rather through a network link to the factory,” Roland Schweizer adds. That is where the expertise of Siemens PTD power engineering came in. “We provided a power supply system with medium-voltage systems, transformer stations with an installed power of 7 MVA for the general and emergency power supply and associated components,” Roland Schweizer explains. High-current busbars from Siemens A&D link the transformers to the low-voltage switchgear, transfer the power via three riser ducts to the nine museum levels and – via an underground media duct – to the Mercedes-Benz Center located some 100 meters away. Thus, the fire load, ohmic losses and electrical field-related effects were also minimized.

Siemens Com provided the smooth communication. The entire building was equipped with WLAN access points and network technology. The building is “illuminated” with DECT (digital enhanced cordless telecommunications), “meaning that telecommunications are wireless via 42 base stations and 60 gigaset terminals,” as Com account manager Wolfgang Krüger points out. Another 50 fixed network telephones were installed in the administration and reception areas. The entire telephone system is linked to the site network of the nearby plant.

A very special automobile museum

Architect:
UN studio van Berkel & Bos, Amsterdam
Museum designer: Prof. HG Merz, Stuttgart
Building height: 47.5 m
Interior space: 210,000 m³
Floor space: 4,800 m²
Exhibition space: 16,500 m²

Additional features: A total of 1,500 exhibits are on display at the Mercedes-Benz Museum, including 160 vehicles. The longest visitor route through the museum measures five kilometers. 1,800 panes of glass were used for the façade; no two are alike. 630 kilometers of electrical and data cables were laid, along with 100 kilometers of heating pipes installed in cement and 12,000 lamps. 38,000 blueprints were produced during the building shell phase.