

Facts & Figures

The MAX BAHR DIY and garden store in Hamburg-Stellingen

Address:	MAX BAHR Bau- und Gartenmarkt Kieler Strasse 499 22525 Hamburg Phone +49 (0)40 53003690 www.maxbahr.de
Business hours:	Monday to Saturday from 8 am to 8 pm
Store manager:	Sven Görtz (42), MAX BAHR employee since 1985, previously store manager in Lübeck-Moisling
Opened:	26 March 2007, 6 am
Property size:	about 40,000 square metres
Sales area:	More than 15,400 square metres of total sales area, divided into about 10,200 square metres for the DIY store, approx. 3,200 square metres for the garden centre and approx. 2,000 square metres for the fully roofed outdoor warehouse. The store's total area is some 18,000 square metres.
Departments:	Building materials, tiles, bathroom and plumbing, windows & doors, wallpaper, interior design, paints, flooring, wood, cutting to size, furniture/shelving, lighting, ready-made/assembled wood products, kitchens, ironware, electrical, electrical machines, vehicles/bikes, household Garden centre (garden, plants, plant accessories, garden tools)
Product range:	approx. 60,000 items
Noteworthy information:	The DIY and garden store in Hamburg-Stellingen is the first DIY store in Germany to be built with an energy-saving concept: <ul style="list-style-type: none">- optimisation of the cladding with extensive heat insulation- use of natural ventilation- use of daylight- photovoltaic systems to produce electricity- extensive renaturation and roof greening- rainwater cisterns- wood pellet heat generation with neutral emissions- green area (approx. 600 square metres) with ecological nature trail and children's playground (in cooperation with "Schutzgemeinschaft Deutscher Wald e.V.")

- Services:
- integrated kitchen studio from “*Küche & Co.*”
 - roofed customer loading area with bulky goods checkout
 - paint mixing station
 - linking service
 - machine hire
 - craftsman finding service
 - trailer hire
 - sales-personnel paging system
 - New: *Traumbäder* (dream bathrooms – due to open on: 27.1.2009)
- Employees: 68, one of which is the store manager, three are team leaders and four are trainees
- Parking spaces: about 360 free customer parking spaces

The MAX BAHR DIY and garden store in Hamburg-Stellingen

The building

The L-shaped building forms a clear line from a town planning perspective to Kieler Strasse and to the Autobahn slip road. The south side is about 190 metres in length, and the east side around 150 metres. The parapet height of the DIY store is about 10 metres, and that of the garden centre some eight metres.

The roof of the DIY store

The roof area of the DIY store is of a shed-like construction with skylights to the north side and photovoltaic panels to the south side. The module area consists of 216 modules with a total area of 1,400 square metres. Due to the south-west orientation and relatively low inclination of the modules, estimates put electricity generation output at about 73 megawatt hours per year. This value corresponds to the consumption of about 20 single-family homes and was ascertained during a simulation taking account of the average number of sunshine hours in Hamburg per year. Measured against the energy mix used for conventional power generation in Germany, the photovoltaic system on the roof of the MAX BAHR store saves some 47,400 kilos of CO₂ every year.

Rainwater and building heating

The roof of the garden centre has been covered with greenery. Rainwater is collected in a 100-cubic metre cistern. The rainwater can be used e.g. to water the garden centre's plants. This system will allow MAX BAHR to save an estimated 2,300 m³ per year. An emission-neutral wood pellet heating system is primarily used to heat the building; it burns wood pellets without a smell and produces practically no residue.

Construction of the building and façade

The building is made of ferro-concrete, pre-cast columns with moulded individual foundations. The roof structure was created as a steel lattice-type construction and subsequently covered with corrugated sheet metal. The DIY store area's façade has 16-centimetre thick heat-insulated sheet steel cassette walls covered on the rear with rear-ventilated sheet steel panels. The metal areas were coated variously in the MAX BAHR

corporate design colours and freely implemented in the façade. The individual metal pieces are approx. 300 x 50 centimetres in size. The façade of the garden centre is vitrified with a post and beam construction. The horizontal glass permits a visual reference to the DIY store area's metal façade. The 2,000-square-metre outdoor warehouse is vitrified on the Kieler Strasse side and the side facing the entrance. The side facing the car park has a metal fence around it. The DIY and garden store is lit and ventilated via the shed roofs. The skylights thus help to significantly reduce the amount of required artificial lighting. Casement windows were built into the DIY store's façade to provide natural ventilation, and the windows are covered on the outside with painted perforated sheet metal.

Renaturation and nature conservation

The DIY and garden store was planned and built according to state-of-the-art energy values. If possible, natural and recycled raw materials were used, and in general, as few raw materials were used as possible. An example is the use of the rubble that was created in the course of the demolition of the building that used to stand on the site. Intensive renaturation through plants and green areas on the property, as well as greenery on the roof of the garden centre and outdoor warehouse, represent additional key features of the building and its surroundings. Together with the *Schutzgemeinschaft Deutscher Wald e.V.*, MAX BAHR created an ecological nature trail for kids on the premises around the store. Once a month, an educational event is held on forests and nature conservation, during which kids can learn about different types of trees and how to build nesting boxes, while adults get safety tips they should keep in mind when chopping wood.

The sun as a natural power station

A display panel is installed in the entrance area of the store, reading: "*Unser Kraftwerk ist die Sonne*" (The sun is our power station). It continually shows the current solar yield in kilowatts, the energy yield since March 2007 in kilowatt hours and the total CO₂ savings in kilos.