

Flexim Company Building in Berlin

The first two of a total of six gradually expandable and interconnected structures of the expanding company Flexim are timber-concrete hybrid construction with a low-tech building concept.

Büro ZRS Architekten Ingenieure realized a new company building in Berlin Marzahn for Flexim GmbH, a leading international company in the development and manufacture of ultrasonic flowmeters. In 2013, the

of its existence, Flexim GmbH was able to move into its newly constructed company building at the end of 2017.

The building concept can be gradually expanded as required and can comprise up to 45,000 square meters of gross floor space. The courtyard concept, inspired by historical Berlin industrial courtyards, is based on the internal production and logistics processes and offers flexibly usable spaces with many communal and communication zones. The completed first construction phase with two courtyards and a gross floor area of 13,700 square meters, together with the forecourt, forms the company address in Berlin Marzahn.

The timber-concrete hybrid building was constructed as a skeleton structure with a curtain-type timber frame façade. The basement is made of reinforced concrete; the first floor and the first and second floors have access cores, columns, and beams made of reinforced concrete and a timber-concrete composite ceiling. Apart from the access cores, the third floor is a pure timber construction. Simple, visible timber constructions (F-90-B), calculated for fire resistance, made it possible to forego elaborate fire protection cladding.

The diffusion-open and climate-active building envelope is also made entirely of wood and insulated with cellulose. These material measures are complemented by an appropriate proportion of glass, shading, and night-time cooling elements, which ensure a very high level of comfort even in summer and low energy requirements throughout the year. Thanks to this and the use of renewable energy sources (waste heat from municipal waste water, heat pump, collector, and PV system), it was possible to undercut the German EnEV by 30 percent.



Shell construction of the second floor with a load-bearing structure made of reinforced concrete, timber-concrete composite ceilings and a timber frame façade.

company invited tenders for a selection process with a preliminary design concept. ZRS emerged as the winner with a timber-concrete hybrid building that could be extended in stages and was commissioned to implement the first construction phase. In the 25th year



Timber-concrete hybrid building that can be extended in stages with a timber frame curtain wall façade.

Light-flooded atrium in the southern part of the building with a cafeteria on the first floor. Training and meeting rooms are arranged around the atrium.



Facts and figures

ADDRESS Wolfener Straße 36, 12681 Berlin, Germany
 ARCHITECTURE ZRS Architekten www.zrs.berlin
 STRUCTURAL ENGINEERING ZRS Ingenieure www.zrs.berlin
 APPROVAL STATICS IBRF www.ibrf-berlin.de
 CLIMATE CONDITIONING DESIGN IB Hausladen www.ibhausladen.de
 LANDSCAPE CONCEPT Capatti Staubach – Urbane Landschaften www.capattistaubach.de
 LANDSCAPE PLANNING Atelier 8 www.atelier8.berlin
 TBE PLANNING ISB Schneider & Bauer www.isb-berlin.com
 HYBRID TIMBER CONSTRUCTION MBN Bau AG in Cooperation with ZÜBLIN Timber (formerly Merk Timber)
 CLIENT Flexim GmbH
 PHOTOS ZRS Architekten Ingenieure
 PROCUREMENT PROCEDURE private procurement with design competition
 GROSS FLOOR AREA 13,700 m²

Timetable

COMPETITION July 2013 COMPETITION DECISION September 2013 START OF CONSTRUCTION July 2014 OPENING November 2017

Construction and materials

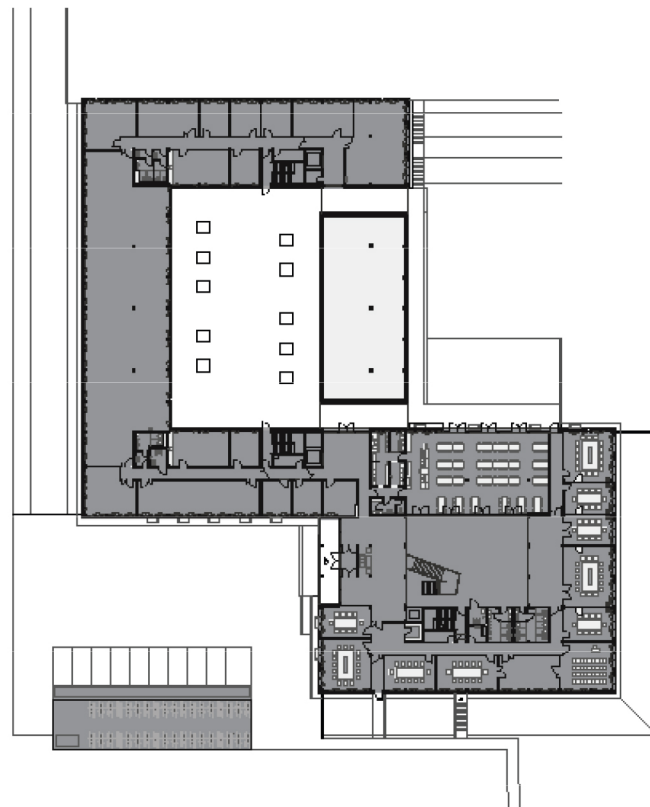
BASIC CONSTRUCTION timber-concrete skeleton construction with suspended timber frame façade; basement and stiffening access core plus supporting structure (columns and beams) up to the 2nd floor in reinforced concrete, timber-concrete composite ceilings, 3rd floor pure timber construction INTERIOR WALLS stud frame with gypsum fiber cladding EXTERIOR WALLS timber frame construction with timber façade and cellulose insulation ROOF Timber construction; green roof with PV system

Wood

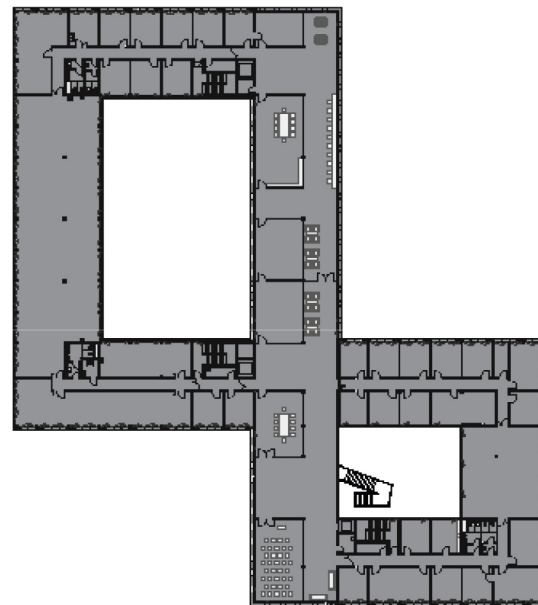
KINDS OF WOOD glulam made of spruce for columns and beams; untreated larch for the façade

Other sustainability aspects and TBE

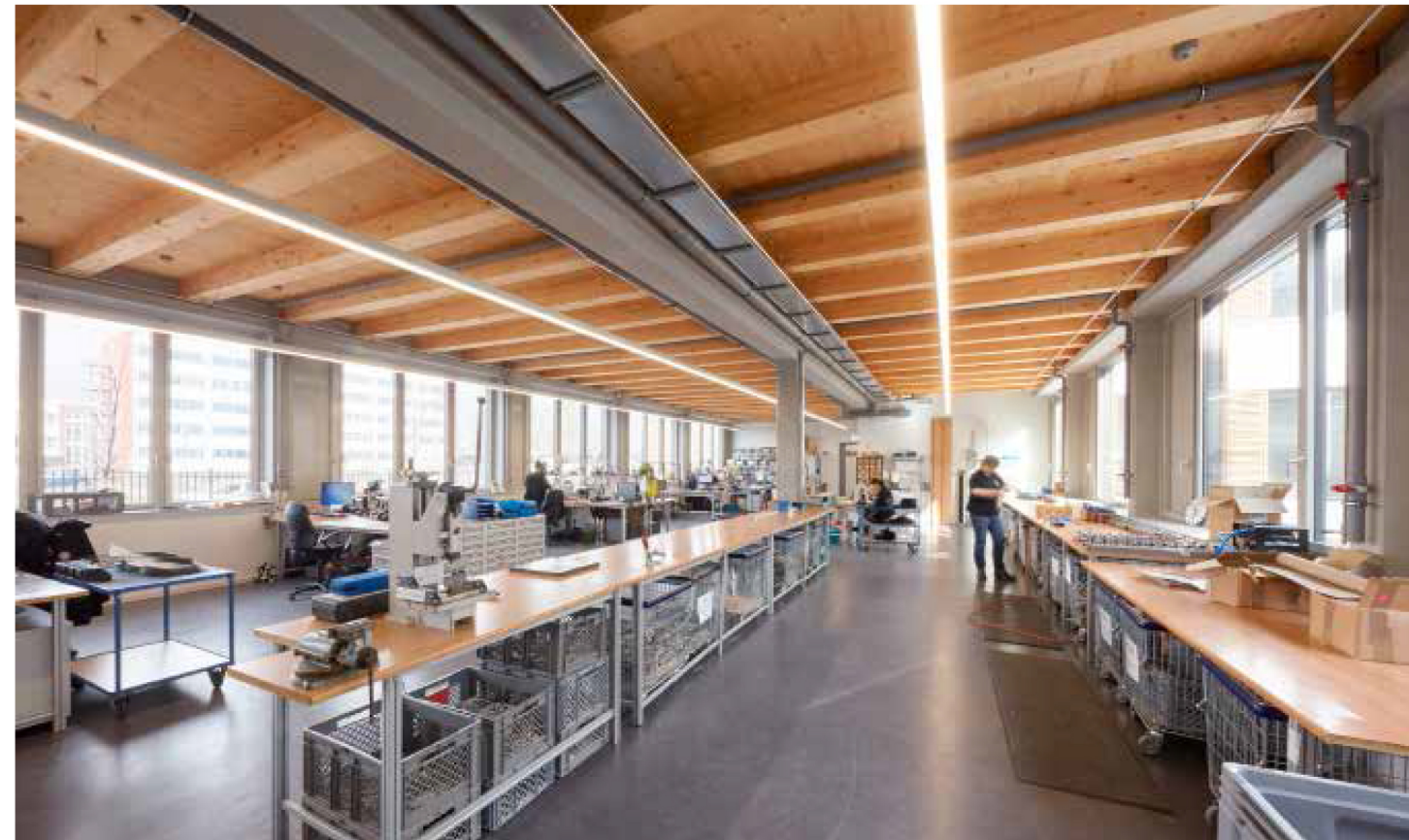
Low-tech building concept: the climate-active and diffusion-open building envelope made of wood and cellulose controls the indoor air humidity and temperature so that expensive technology such as ventilation and air conditioning systems can be foregone; appropriate proportion of glass, shading, and after-cooling elements ensure a high level of comfort even in summer and low energy requirements throughout the year; 80 % of the heat supply comes from the use of municipal wastewater heat via heat exchangers in the sewer adjacent to the property; PV collectors on the roof supplement hot water supply



Ground floor



First floor



The two existing inner courtyards are connected to each other with the so-called boulevard through the building structures and offer flexibly usable spaces for the employees.

Light-flooded production line on the second floor of building section B.

Boulevard with a view of the inner courtyard. The story ceilings are composite elements made of wood and concrete.

