

# PUMAVision – first climate-neutral complex in the sporting industry

Sustainability at PUMAVision headquarters day after day – thanks to intelligent building automation and control from Siemens

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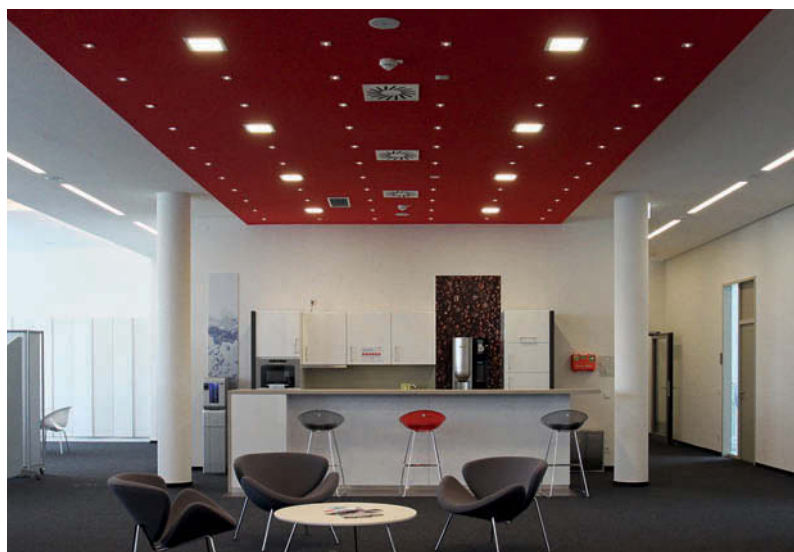
Top performance: Operation of the new PUMAVision headquarters in Herzogenaurach, Germany, has no impact on the climate – with electricity fully generated by renewable energy sources, a thermally active building structure (TABS), and an intelligent building automation and control concept.

## Modern building complex with unparalleled sustainability

The new headquarters of PUMA AG, one of the largest sporting and lifestyle goods manufacturers worldwide, comprises a usable area of 35,000 m<sup>2</sup> and accommodates an administration center with office spaces, a company-owned congress center, and a PUMA store. Thanks to renewable forms of energy and intelligently interlinked technology, the building complex embodies the company's sustainability concept called PUMAVision. The demand for electric power is met by supplies from the renewable energy sources of Lichtblick AG, Hamburg, a photovoltaic power plant of 1,000 m<sup>2</sup> installed on the PUMA store's roof, and another 140 m<sup>2</sup> of photovoltaic modules integrated in the building's facades. What's more, PUMA supports a CO<sub>2</sub> compensation project in the form of a wind park in Turkey.

## A partner committed to building automation and control

The system house "Innovatives Projektmanagement für Gebäudeleittechnik GmbH (IPM)" – a certified Solution Partner of Siemens – was responsible for the DESIGO™ building automation and control system installed in the building complex. IPM successfully developed customized, innovative building automation solutions. To ensure optimum planning and implementation of the hydraulic systems and the complex TABS, IPM was involved at an early stage of the project.



### Flexibility and energy efficiency as challenges

Key requirements of the project were the efficient use of electricity plus an optimum interplay of heating, cooling, ventilation, lighting, and shading. Also, the TABS demanded in-depth know-how in control technology. The challenge resulting from the room automation concept was the different requirements from the office spaces, the shop and congress rooms, and the flexible allocation of spaces desired by the owner.

### Flexible, convenient solution with high energy efficiency

The solution is based on the DESIGO building automation and control system supplied by Siemens. It controls the TABS via DESIGO TABS Control using innovative control strategies that were developed in cooperation with the Swiss Federal Institute of Technology in Zurich (ETH). Individual control of heating/cooling is ensured via the concrete ceilings, the facade-oriented fan coil units, and radiators.

DESIGO RX individual room controllers give consideration to the requirements of different types of rooms and provide control depending on demand, thus saving energy for heating, cooling, ventilation, lighting, and shading. Congress rooms are ventilated via scheduler programs, or depending on demand, and are heated or cooled to preselected setpoints. Presence detectors and twilight switches override the lighting system and switch it off when nobody is present or when sufficient daylight is available. All heat loads are monitored in terms of consumption and controlled via DESIGO PX automation stations.

The DESIGO INSIGHT management station monitors all building technologies from a central location. Graphs very close to realistic operating conditions simplify complex processes. User-friendly operation cuts operating costs and improves security. In addition, DESIGO is extremely flexible, allowing future premises to be easily integrated into the existing system structure.

### Highlights

- High energy efficiency thanks to individual room control and TABS
- Convenient room functions as all disciplines are integrated into DESIGO
- Investment protection thanks to easy and flexible system extensions
- One competent partner for all questions

Solution Partner

Building Technologies

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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