

ABQM Case story

Sky Tower, Poland

Sky-high comfort, the sustainable way

The tallest building of the EU now resides in Wrocław in Poland. As a beautiful landmark to modern architecture, high user comfort and sustainable practice, the 696 ft. (212 m.) tall Sky Tower forms the pleasant setting for thousands of people living and working in the building.

Sky Tower Wrocław offers 51 floors of shopping, offices and 240 luxurious apartments. The overriding idea of the building is to delight

people with outstanding indoor comfort and low energy consumption fulfilling the latest standards of energy efficiency.

The impressive building structure providing sky-high comfort to users and residents is a perfect match to the new image that the city of Wrocław has earned within Europe as a dynamic and trendsetting city.



253

AB-QM valves installed

in the fan coil units
control the temperature
of the 51-floor building to
perfection.

Advantages of the cooling solution from Danfoss

- High energy efficiency
- Pleasant indoor climate
- The cooling can be adjusted by the individual user/resident
- Low maintenance and service costs
- Fast installation and easy commissioning



User comfort and sustainability have guided the building design

The ambition of the building owner has been to provide users and residents with superior indoor comfort. To match the ambition the concept of "comfort air conditioning" has been applied in the cooling solution of the Sky Tower. This means that the temperature can be changed by users and residents to create pleasant thermal comfort in every room depending on the use of each room, the outdoor temperature, etc.

The heating and cooling of the Sky Tower is designed as a four pipe solution, where heating and cooling are separate systems.

In pace with the seasons the change from cooling to heating or vice versa is performed automatically from a central function.

State-of-the art cooling with pressure independent control valves

Danfoss was in charge of designing the complete cooling solution, applying pressure independent balancing and control valves (AB-QM) to secure an even flow, easy to control and with low maintenance costs throughout the service life of the installation.

"The installation contractor M+W has had previous positive experiences with the AB-QM pressure independent balancing and

control valves in large, hydronic balancing systems. They chose the AB-QM valves from Danfoss due to the technical features of the valves and benefits like the fast installation, easy commissioning and the high reliability of the valves", says Sebastian Brzoza, Product Manager for Hydronic Balancing at Danfoss Poland.

The reliable and flexible cooling solution achieved by the use of pressure independent balancing and control valves has also resulted in a very high energy efficiency of the building.

About the Sky Tower

- The tallest building in the EU, 696 feet high (212 m.), 51 floors
- Office space: 237,000 square feet (21,987 m.), commercial space: 262,000 square feet (24,349 m.), 240 apartments
- Construction period: 2007-2012
- Investor: LC Corp
- Installation contractor: M+W Wroclaw
- Architect: Studio Architektoniczne FOLD s.c.



Sky Tower provides Class A+ offices with comfort air conditioning controlled by the individual user. The cooling solution has been designed and commissioned by Danfoss using AB-QM pressure independent balancing and control valves for perfect flow control.

Sebastian Brzoza,
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Hydronic Balancing



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