



We love humidity
Produktivität, Nachhaltigkeit und Gesundheit durch Wasser und Luft

CONDAIR NORDERSTEDT SITE FACTSHEET – A SHOWCASE FOR SUSTAINABLE BUILDING AND HEALTHY INDOOR CLIMATE

- The global leader in humidification and evaporative cooling has made extensive use of both its own innovations and comprehensive technologies and those of reputable partners in ensuring an optimum environment at its new site.
- A complex, coordinated system of energy-saving technologies have reduced the energy demand of the new Condair building to almost that of a passive house-standard construction.
- The new Condair site in Norderstedt truly stands as a showcase for sustainable construction thanks to its energy and carbon dioxide savings.
- An impressive experience from the reception area and showrooms to the training infrastructure permit the implementation of professional internal and external educational concepts.

Responsible for planning and implementing construction work:

Friedhelm Lütz, certified management consultant,
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SURFACE AREA/SPACE

Administration:	3,242 m ²
Manufacturing & warehouse areas:	5,186 m ²
Total constructed surface area:	8,428 m ²
Overall surface area:	13,000 m ²
Developed space:	49,137 m ³

BUILDING SERVICES ENGINEERING

The building performs almost 50% better than the German Energy Saving Ordinance (EnEV) 2014 with a maximum heat demand of just $\leq 35 \text{ kWh}/(\text{m}^2 \cdot \text{a})$. Thanks to triple-glazing and innovative building services engineering, the new site practically achieves passive house standards.

Geothermal power

Use of geothermal power as a natural energy source: two high-performance energy piles driven into the ground. The water contained in the centrifugally-cast concrete is used by the hybrid ceiling structure to cool the air. This energy-saving functional principle offers stable cooling which is almost unaffected by external temperature fluctuations. The use of energy piles helps avoid high investment costs and reduces maintenance expenses considerably.

- High-performance energy pile: length: 28 m, diameter: 1.6 m, capacity: approx. 40 m^3



Hybrid cooling ceiling

Around 3,000 square metres of the building are controlled by reversible heating/cooling ceiling systems (radiation and hybrid systems). The hybrid ceiling system reacts quickly and acts as a heat/mass storage system in combination with the building shell. The system also controls room ventilation.

The absorbent ceiling elements also dampen noise, thereby creating pleasant acoustics.

- Ventilation technology: $22,000 \text{ m}^3/\text{h}$
- CO_2 savings resulting from use of geothermal power and connection technologies: approx. $42,000 \text{ kg}$ per annum

Humidification & Evaporative Cooling

A Condair exit air evaporative cooling system together with a combined circulation system for heat recovery ensure an additional cooling boost on hot summer days, and a Condair gas-fired steam humidifier fulfils the requirements for basic air humidity in the entire new construction. Thanks to exhaust air heat recovery from the Condair GS gas-fired steam humidifier, an extra boost can even be provided on cold winter days.

In addition, a series of other Condair direct room humidifier systems in manufacturing areas and the warehouse and offices react to any peaks in demand, and offer localised adjustment to ensure the air humidity remains within the healthy range of between 40% and 60% relative humidity.

Building automation & control system (BACS)

Installation of coordinated devices from different manufacturers (ensuring interoperability) with efficient control and readjustment.

- Energy savings of between 20% and 40% compared to standard

Photovoltaic system

Almost all the site energy requirement is provided by a photovoltaic system installed on the production building (approx. 60 m × 35 m) along with a green area.

- CO₂ savings via solar green roof combination (approx. 99.8 kWp system): approx. 50,000 kg per annum

ABOUT CONDAIR

With around 700 employees, the Condair Group is the world's leading manufacturer of commercial and industrial humidification systems, setting standards globally for energy-efficient and hygienic solutions through its main Condair brand. Today we are represented in 17 countries by our own sales and service organisations, and are supported by distribution partners in a further 50 countries. We operate production sites in Europe, North America and China.