

AIRPORT AIR



London Heathrow

AIR-WATER SYSTEMS

More and more air-water systems are employed today since the heating and cooling capacity of these systems can be provided independent of the required fresh air flow rate. Various types can be distinguished:

- large-area heating and cooling systems, e.g. chilled ceilings, combined with displacement flow systems
- passive chilled beams combined with mixed flow systems
- active chilled beams

Air-water systems have the advantage that the thermal energy is very efficiently transported by water – rather than by air. This means that less energy is required to provide the same heating or cooling capacity. In the airport areas with offices, shops and restaurants, thermal loads are ideally dissipated by water side heating and cooling systems.

Air-water systems are suitable for the ventilation of functional areas with an average required fresh air volume of up to $12 \text{ m}^3/(\text{h m}^2)$. For areas with a very high occupancy, such as security, an additional system can provide up to $20 \text{ m}^3/(\text{h m}^2)$.

TROX air-water systems allow for the space-saving integration of additional components such as lighting, smoke detectors, loudspeakers

or sprinklers. Air-water systems may be designed as canopies, for example, to accentuate a building's architecture, or blend in inconspicuously with the ceiling construction. All systems can be integrated with the central BMS.

DID 632 ACTIVE CHILLED BEAMS



The DID 632 active chilled beam offers comfortable ventilation and air conditioning for rooms with a high heat load. The aerodynamic properties of ceiling diffusers in combination with the energy-efficient dissipation of heat loads using water make active chilled beams the perfect solution for sustainable architectural concepts.

Primary air:

6 – 85 l/s

22 – 306 m³/h

L: 900 and 3000 mm

B: 593, 598, 618 and 623 mm

H: 210 mm

Cooling capacity up to 2450 W

Heating capacity up to 2970 W

PKV PASSIVE CHILLED BEAMS



PKV passive chilled beams (no supply air) are used to dissipate high interior heat loads, thereby fully achieving the energy benefits of dissipating loads with water.

Rectangular

L: 900 – 3000 mm

B: 180 – 600 mm

H: 110 – 300 mm

Cooling capacity up to 1400 W