

# Power Meets Comfort – and Highest Requirements

## Active Chilled Beam HDF



### Energy-efficient Cooling with State-of-the-art Technology

- Energy-efficient due to low primary pressures with high cooling output
- Low-noise: high performance at low noise level
- Flexible: for any desired room layout thanks to diffusion to four or two sides
- Unit lengths from 4' (in 12" increments) to band installation can be realized
- Highest performance according to certified test procedure (WSP lab)



## Air-water systems Active chilled beam for ceiling installation type HDF 600

Active chilled beam for ceiling installation with low height and soundproof housing.  
For 4-pipe and 2-pipe systems.

### Unit view



Example: expanded metal grid as suction grid

### Function

The supply air, a mixture of primary and secondary air, is uniformly diffused to four sides into the room via preset, divergent ceiling jets covering all four room directions.



### Indoor air flow



HDF room air flow test in the LTG lab  
(LTG Engineering Services)

### Features

- **Low primary air pressures between 50 and 150 Pa**
  - Low-noise operation; sound pressure may be selected so as to remain below 35 dB(A)
  - Very low SFP value for secondary air conveyance (< 0.04 kW/(m³/s)) possible
  - High secondary (water-side) output with low primary pressure
  - Excellent air flow balance of the units that form one duct run
- **Flexible nozzle design**
  - Six calibrated, well-matched jet combinations
  - Non-combustible metal nozzles
  - Exchangeable jet strip, optional
- **Low installation height (200 mm)**
  - Installation possible in suspended ceilings of low height
  - Facilitates the crossing of lines
- **Efficient injector and heat exchanger**
  - High specific secondary output even with low primary air flow rate (in certain areas > 1W/K/(m³/h))
  - High heating capacity even with low LPHW supply temperatures (e.g. +30 °C)
  - Lower overtemperature in the heating mode, thus better ventilating efficiency
  - High cooling capacity with high CHW supply temperatures (e.g. +16 °C)
  - Low water flow rates designed for a temp. range of 3 K
- **Flexible connection of services**
  - Primary air connection with NW 125 on the longitudinal side (standard)
  - Air connection left or right, as required
  - Eccentric air connection, if required, not conflicting with ceiling suspension
  - Water connections outside the unit on top in order to enable connection on the left or right
- **Easy maintenance design**
  - Easy removal of secondary air grille, secured by mooring lines
  - Easy access to and cleaning of heat exchanger / jets
  - No protective air filter required for heat exchanger.
- **Virtually draught-free indoor air flow**
  - Optimized air distribution with steady, preset divergent, inductive ceiling jet
- **Attractive appearance**
  - Visible surfaces powder coated e.g. sim. to RAL 9010
  - Secondary air grille in the form of a perforated sheet grille (open surface > 63%)
- **Easy commissioning**
  - Measuring equipment to determine the air flow rate (standard)



## Air-water systems Active chilled beam for ceiling installation type HDF 300

Active chilled beam for ceiling installation with low height and soundproof housing.  
 For 4-pipe and 2-pipe systems.

### Unit view



Example: air intake grille of stainless steel

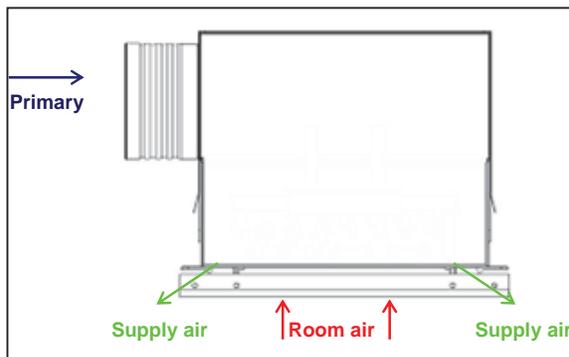
### Installation example



Installation in plasterboard ceiling

### Function

The supply air, a mixture of primary and secondary air, is expelled into the room in two directions via ceiling jet.



### Features

- Low primary pressures possible with high caloric outputs to reduce energy consumption.
- Supply and return air in one unit.
- Low sound power level (below 35 dB(A)) with high caloric outputs.
- High water-side cooling capacities with low water mass flows.
- Individualized design of the primary air flows to match the room use is possible thanks to various nozzle forms possible.
- Efficient and large-area heat exchanger also suitable for low water supply temperatures of +30 °C when heating.
- Low construction height:  
 type HDF 230 mm, type HDF-N 160 mm.
- Air diffusion on both sides providing high flexibility how to divide the room.
- Easy to clean, meeting VDI 6022 sanitation requirements.
- Completely made of non-combustible materials, thus perfectly suited for projects with high fire protection requirements.
- Can be installed to look like a continuous band.
- Customized air intake grille versions possible

### Indoor air flow



HDF room air flow test in the LTG lab  
 (LTG Engineering Services)