

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



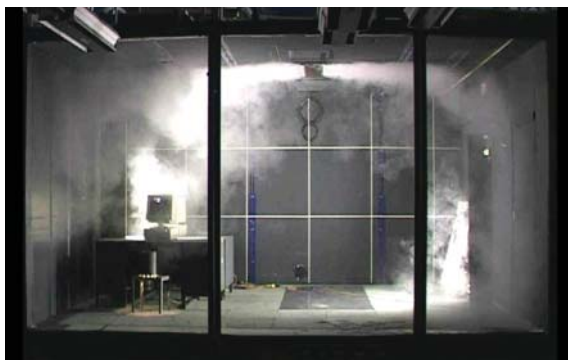
Example: expanded metal grid as suction grid

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

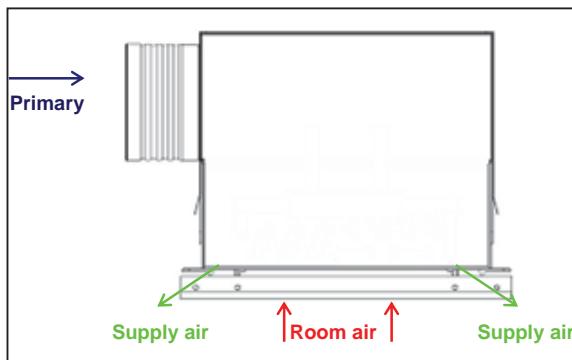
Installation example



Installation in plasterboard ceiling

Function

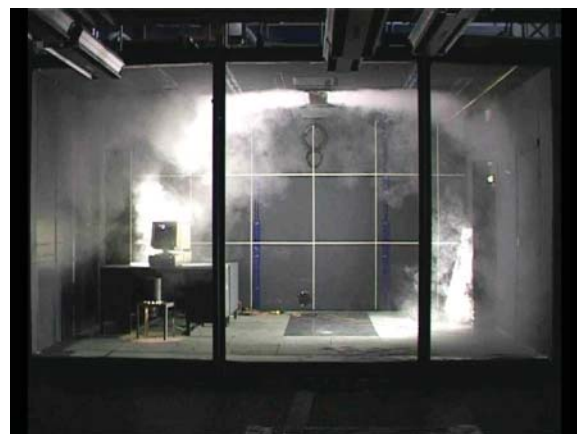
The supply air, a mixture of primary and secondary air, is expelled into the room in two directions via ceiling jet.



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)