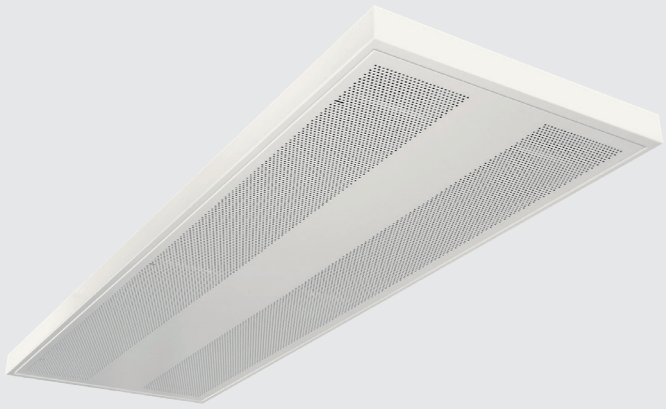
Active chilled beam

FreeAir

Maintenance and installation guide.

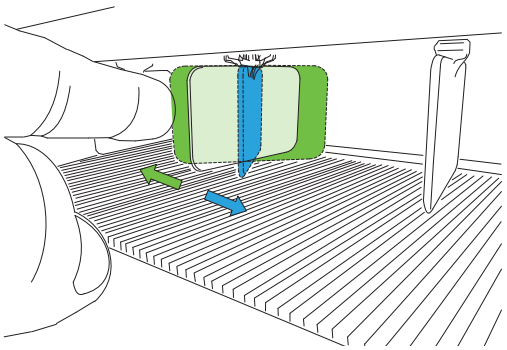


Description

The FreeAir active chilled beam is a two-way induction type air-conditioning unit that is designed for exposed installation, mounted directly against the ceiling. It is suitable for ventilation, cooling and heating. The primary air from the air handling unit is injected through the specially shaped nozzles and discharged into the room along the ceiling. Causing induction of the room air to flow through the cooling and/or heating coil, which then mixed with the primary air flows back into the room through the linear slot openings on the two sides of the beam. The conditioned/mixed air discharged along the ceiling provides the optimal coanda effect which is always the objective when the occupied zone requires low air velocities.
Air duct connection: Ø100 mm

AirFlex - adjustable air deflectors

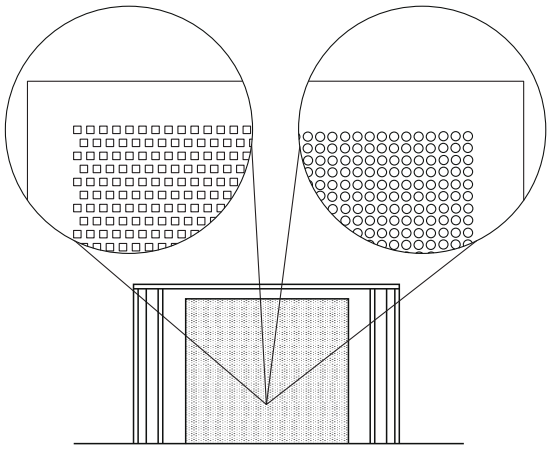
FreeAir is equipped with AirFlex air deflectors, which can be manually and individually adjusted on each side of the air slots, as a standard option. AirFlex allows the operator to easily adjust the direction and throw distance of the discharged conditioned air. With the fine-tuning capabilities of the AirFlex deflectors, a highly flexible, pleasant and draft-free indoor climate can be achieved.



AirFlex
- Less risk of draft
- Shorter throw length
- Individually adjustable

Materials

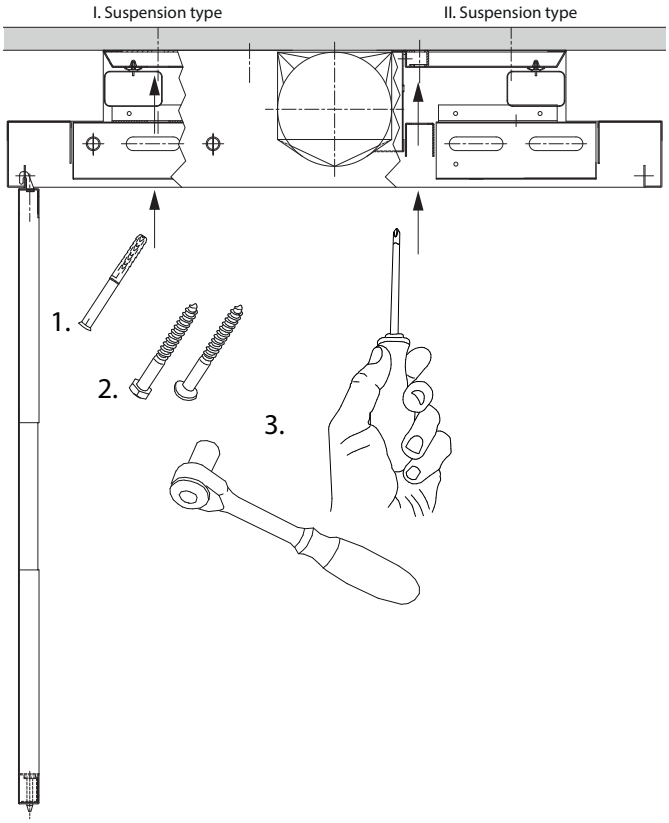
The duct and plenum air box are made of galvanized steel. The visible front plate and side panels are powder coated sheet steel painted in standard white RAL 9003 colour (or in any other RAL colour requested by the customer). The heat exchanger fins are made of aluminium, and the pipes are made of copper. The AirFlex air deflectors are made of polyamid plastic. Square or circular perforation as standard options.

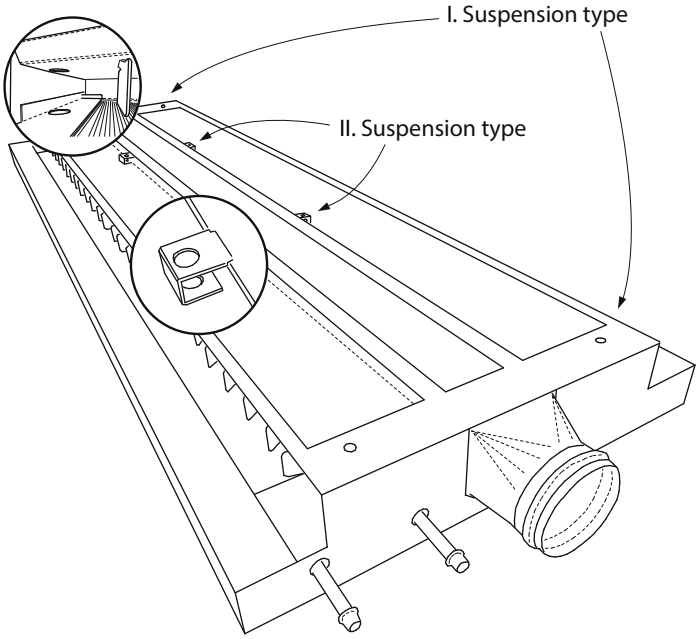


Square or circular perforation as standard options

Mounting instructions

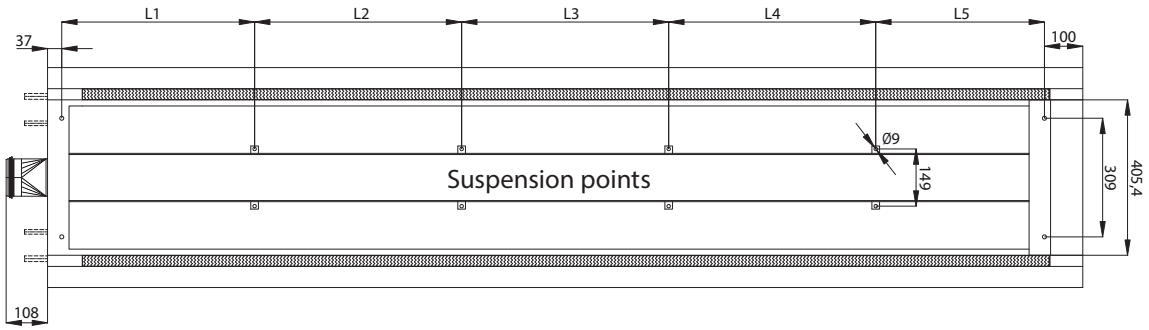
FreeAir is mounted against the ceiling. For the suspension there are fixing points towards the ceiling. The air and water can be connected from the short side or from the top. Factory installed control equipment available in several designs, contact Airvent for detailed information.



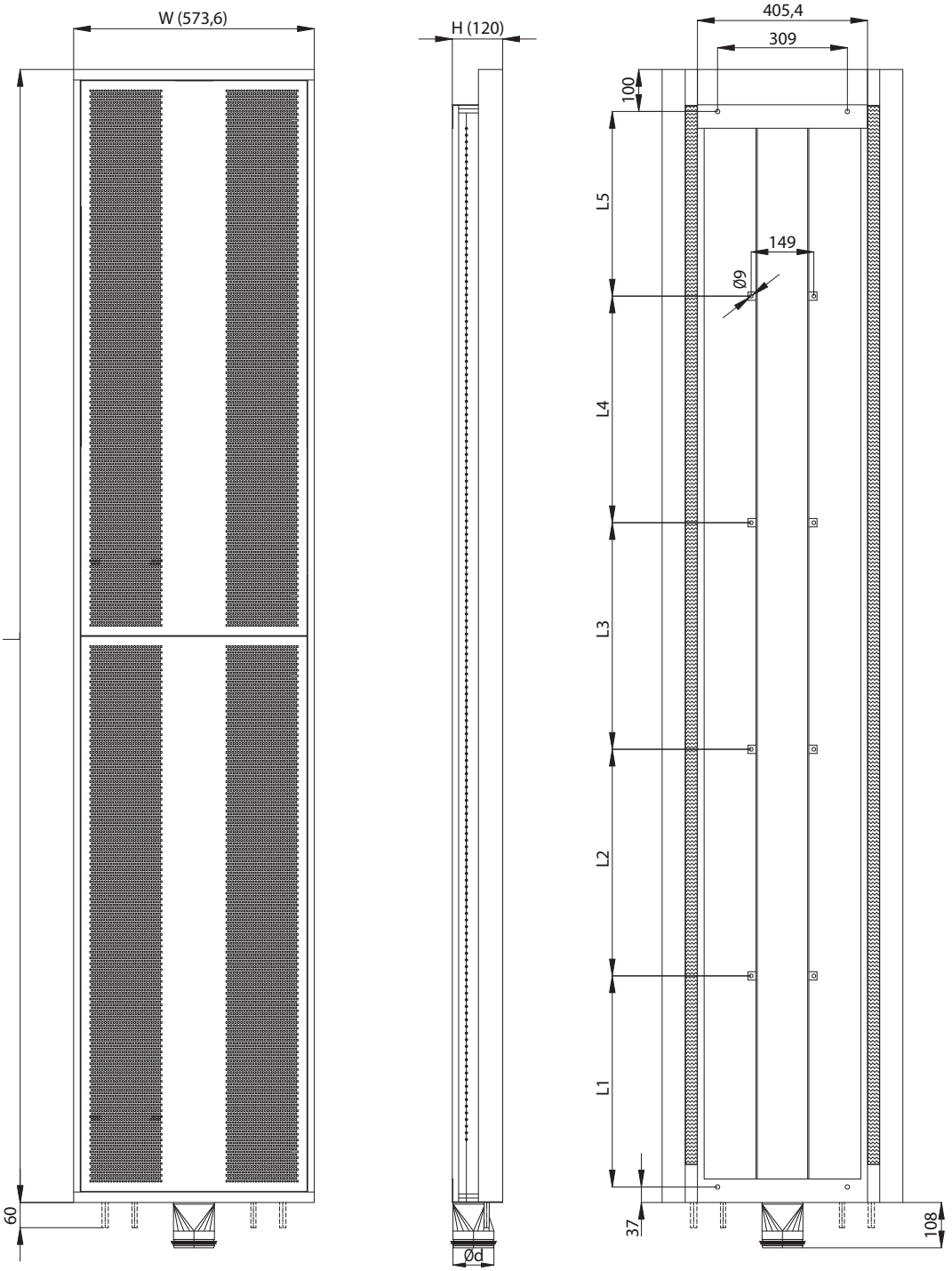


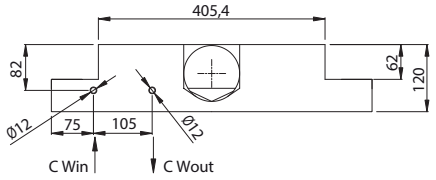
Distance between suspension points

Size	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	Suspension points
1200	563	563				6
1500	463	500	463	-	-	6
1800	563	600	563	-	-	6
2100	488	525	525	488	-	8
2400	563	600	600	563	-	8
2700	503	540	540	540	503	10
3000	563	600	600	600	563	10

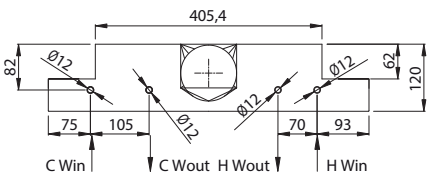


Dimensions

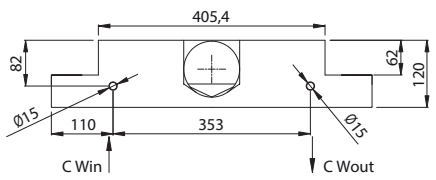




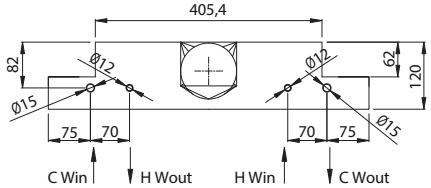
1 circuit cooling (C1) /
1 circuit changeover (C10)



1 circuit cooling
and heating (C1H)



2 circuit cooling (C2) /
2 circuit changeover (C20)



2 circuit cooling
and heating (C2H)

Dimensions

Size (mm)	Dimensions (mm)					Weight (kg)	Water volume(l)
	L	W	W1	H	Ød		
1500	1500	573,6	405,4	120	100	27	1,4
1800	1800					29	1,6
2100	2100					32	1,9
2400	2400					34	2,2
2700	2700					37	2,5
3000	3000					40	2,7

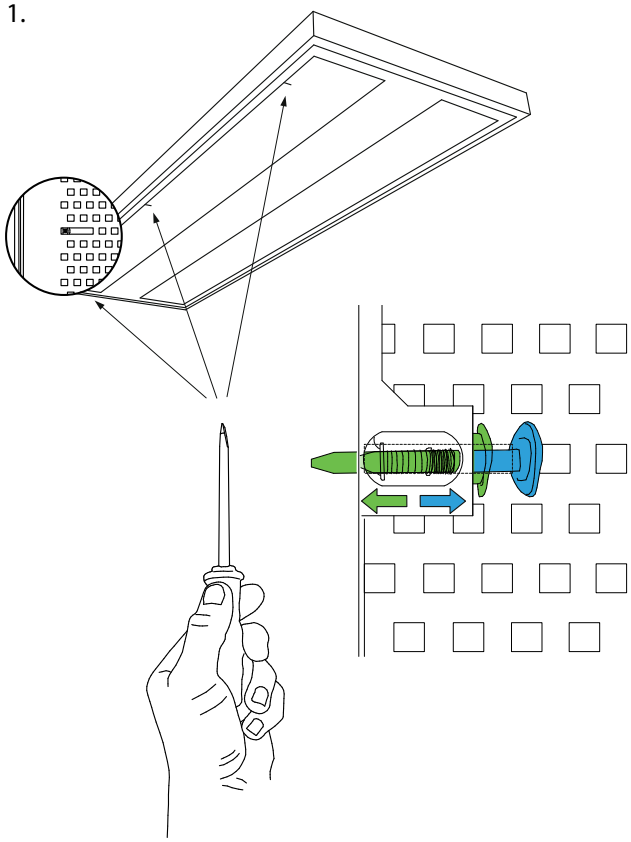
Tube dimensions

Number of water circuits	15	18	21	24	27	30
1	Ø12					
2	-	-	Ø15			
Heating	Ø12					

Maintenance

The perforated front panel of the active chilled beam can be folded down allowing easy access for maintenance. The heat exchanger have to be cleaned by carefully using a vacuum cleaner so that the aluminium fins and the copper tubes are not damaged. The parts that are out of reach for the vacuum cleaner have to be wiped off with a soft cloth. If required, mild preferably neutral cleaning detergent could be used. The electrical parts have to be maintained in accordance with the relevant prescriptions. The points of connection/ shock protection and the functional ability of the components must be checked. The maintenance operation has to be carried out at least twice a year.

1.



2.