Active chilled beam

PremiAir

Maintenance and installation guide

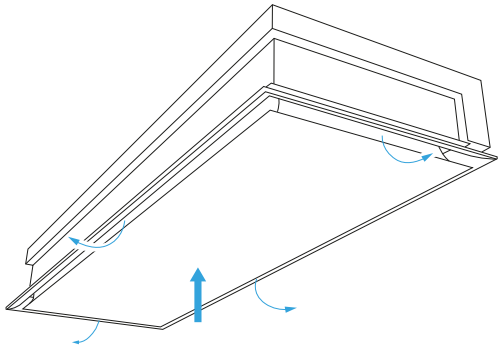
Description

The PremiAir active chilled beam is a four-way induction type air-conditioning unit that is designed for integrated installation, mounted directly in the ceiling. PremiAir is primarily designed to ventilate, cool and/or heat buildings, where a comfortable climate and individual room control is needed. To fit most types of suspended ceiling frameworks on the market with a standard width of 600 mm.

Air duct connection: From 100 mm, 125 mm, 160 mm to 200 mm, depending on the air volume.

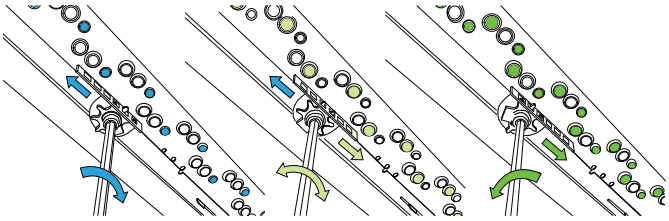
Function

The primary air from the air handling unit is injected into the plenum box within the active chilled beam, and distributed through specially shaped nozzles. As the air is discharged through the nozzles, the high velocity air jets above the coil create a low-pressure zone. This low-pressure zone draws ambient room air through the coil, and as it passes the coil fins it is conditioned (cooling - heating), according to the water temperature flowing through the coil. The conditioned air then mixes with the air jets (ventilation air, humidity control) before it is discharged back into the occupied space. The conditioned/mixed air discharged along the ceiling provides an optimal Coanda effect that is always the objective when the occupied zone requires low air velocities.



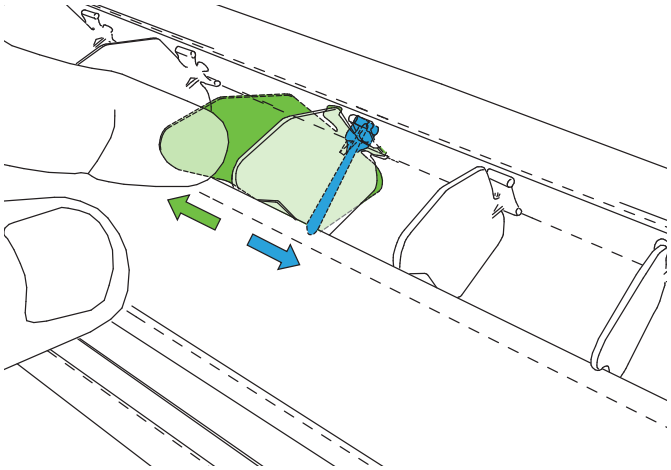
Variable nozzles

As standard, PremiAir is supplied with variable nozzles. This is a unique, elegant and flexible feature, which simplifies the adjustment of the nozzle positions on either side of the plenum box to set the required airflow without modifying the primary air pressure. With the use of an Allen wrench the airflow can be adjusted in five steps on each side of the chilled beam, by covering and uncovering the nozzles. This mechanical solution features some very clever engineering, and was designed to stand the test of time. The requested airflow can be selected in our selection software, and is factory pre-set and can also easily be changed on-site.



AirFlex- adjustable air deflectors

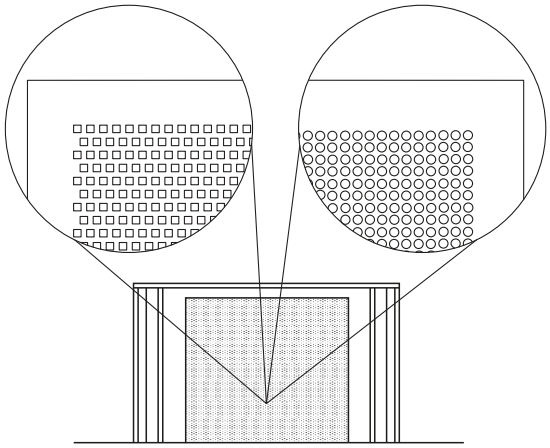
PremiAir is equipped with AirFlex air deflectors, which can be manually and individually adjusted on each side of the air slots, as standard option. AirFlex allows the operator to easily adjust the direction and throw distance of the discharged conditioned air. With the fine-tuning capabilities of the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



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

Materials

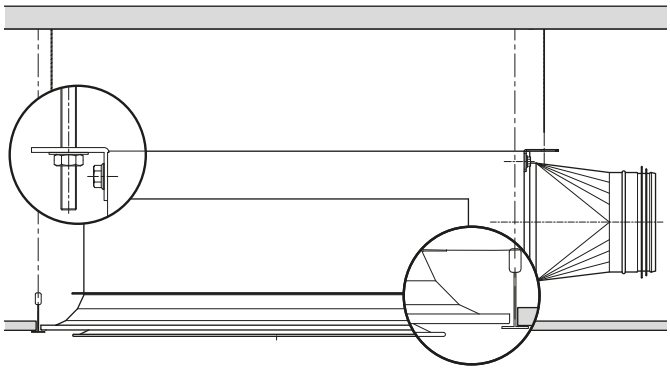
The connection and plenum air box are made of galvanized steel. The visible front plate and side panels are powder coated aluminium and sheet steel painted in standard white RAL 9003 colour. The heat exchanger consists of copper and aluminium. The AirFlex air deflectors are made of Polyamide plastic. Square or circular perforation as standard options.

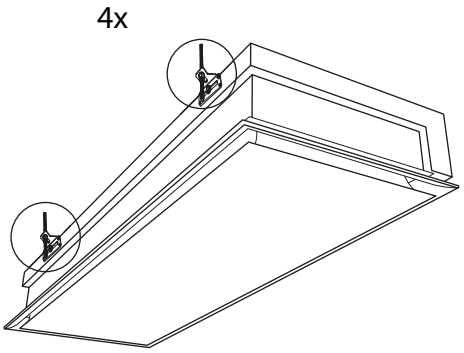


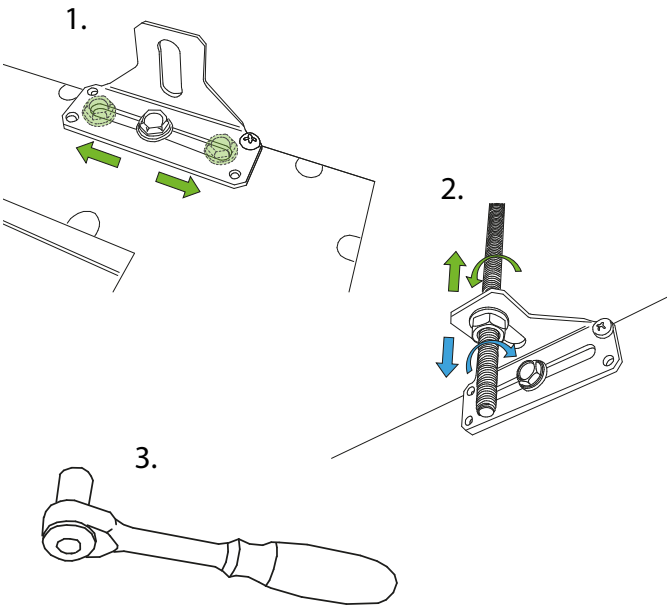
Square or circular perforation as standard options

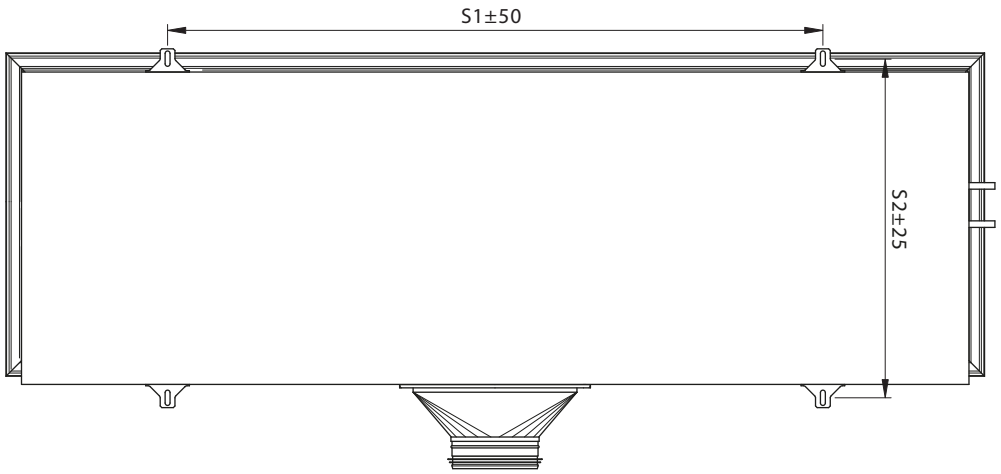
Mounting instructions

The length and width of PremiAir is designed to fit in most T-grid ceiling frameworks. The units are delivered with four factory mounted suspension elements (one in every corner), which can be adjusted separately in four directions. The primary air connection is supplied separately in 125 or 160 mm sizes. The connections are mounted directly on the plenum box and is locked with a screw.







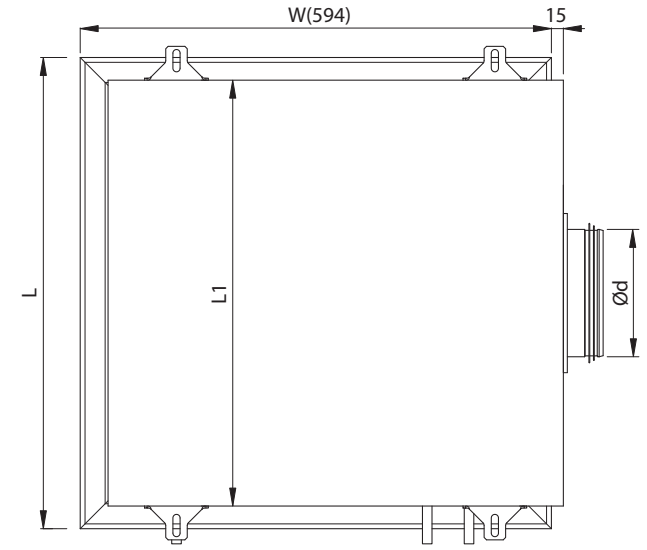


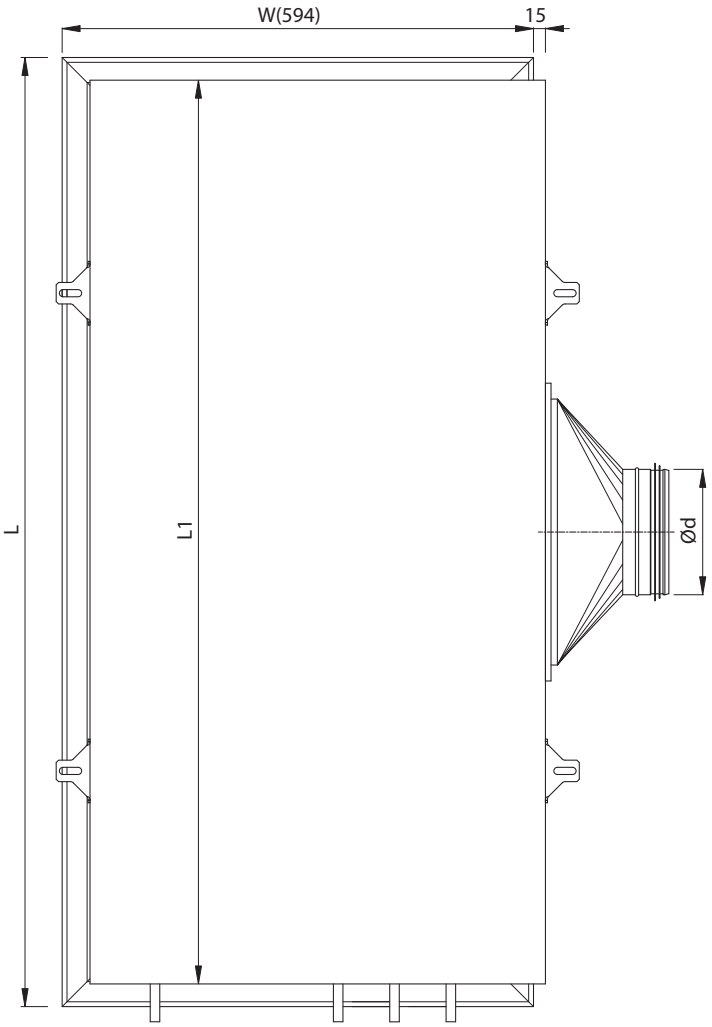
Distance between suspension points

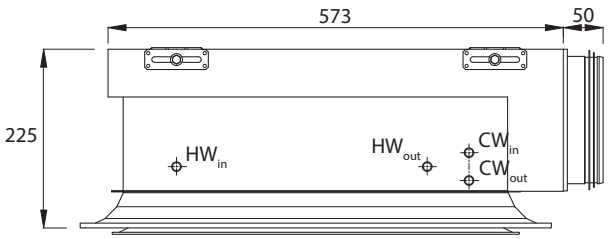
Size	S1	S2	S.p.*
600	400	559	4
1200	600	598	4
1800	1200	598	4

The indicated sizes in mm.
*Suspension points.

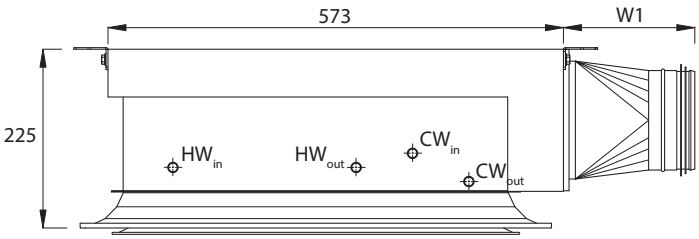
Dimensions







PremiAir 600



PremiAir 1200 / 1800

Dimensions

Size	Number of circuits	Dimensons			Duct dimensions (W1)				Weight (kg)	Water volume (l)
		L	W	L1	Ø100	Ø125	Ø160	Ø200		
600	1-circuit	594	594	534,5	50	50	-	-	14	1,0
1200	1-circuit	1192		1134,5	-	165	155	190	25	1,25
	2-circuits								27	2,5
1800	1-circuit	1792		1734,5	-	165	155	190	43	2,0
	2-circuits								46	4,0

The indicated sizes in mm.

Maintenance

The perforated front panel of PremiAir can be folded down allowing easy access for maintenance. The plenum box and 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.