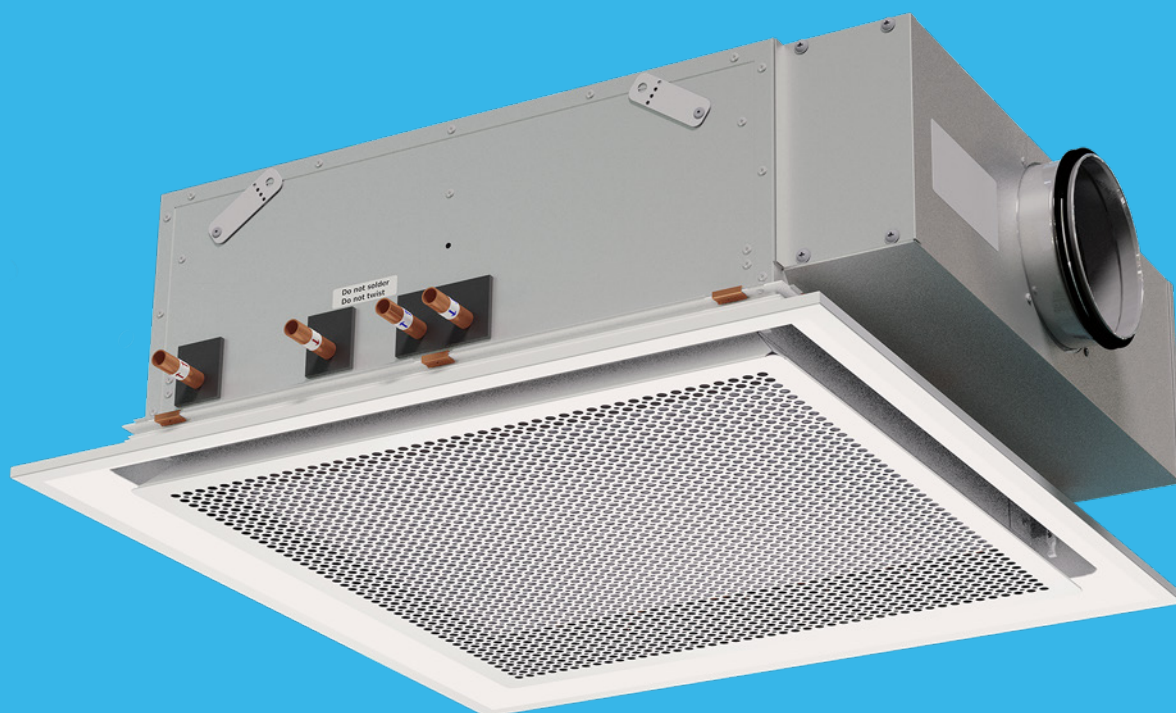




# Lindab **Plexus**

Active chilled beam



# Active chilled beam

# Plexus

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# Active chilled beam

# Plexus

## Use

Lindab's active chilled beam unit Plexus gives many placement possibilities since it fits into any suspended ceiling 600 x 600 alternative 1200 x 600.

Plexus is provided with Angled Nozzles which are controlling the primary air into non-parallel jets in a 360 degree air pattern. The 360 degree air pattern results in shorter air throws (30%) and a draft free indoor climate.

Plexus can be used for both cooling, heating and ventilation.

Plexus can be equipped with the functions, Regula Secura condensation guard, down foldable battery for better accessibility and pre-mounted valves and actuators. The possibilities are many and the flexibility large.

## Installation

Plexus is provided in both an integrated and a free hanging model.

Plexus I is mounted recessed in suspended ceilings where the unit is placed above the standard T-bars or in suspended permanent (gypsum) ceilings.

Plexus F is mounted free hanging or close to the ceiling.

Plexus can be delivered with horizontal or vertical air connection and with horizontal water connection.

## Worth noting

By the many adaptations to ceiling tiles the Plexus beam easily can be mounted into modern buildings.

Because of Plexus 360 degree air pattern and the resulting shorter air throws many Plexus beams can be mounted into same room without creating any draft problems.

The primary air volume can easily be adjusted with Lindab's patented JetCone system, which creates a great flexibility.

The new Plexus type H-120 can handle high air volumes, up to 100 l/s at 100 Pa, with low draft risk, low sound level and low additional pressure drop in the air connection. In addition, it has a wider airflow range from 20-100 % of max airflow (with adjustable JetCone and K-factor =10).

Plexus is provided with a high quality design outlet frame made from powder coated strang-aluminium. The version ISA offers a precoated steel casing with integrated outlet frame.

The water battery can be turned easily on site to change e.g. connection (A5) to (A6) or vice versa (only available for 2-pipe connections and models without plus features).

The beam can be easily integrated/used in a Pascal water system to enable VAV/DCV.

Lindab's active chilled beams are Eurovent certified according to EN-15116.



## Key figures

|           |                                                       |
|-----------|-------------------------------------------------------|
| Length:   | 600, 1200 mm                                          |
| Width:    | 600 mm                                                |
| Height:   | 220 mm to 255 mm                                      |
| Capacity: | 769 W Plexus I (S/SA) 60<br>992 W Plexus I (S/SA) 120 |

### Calculation setup:

Room temperature: 25 °C, water temperature: 14-17 °C,  
primary air temperature: 18 °C, nozzle air pressure: 80 Pa,  
primary air flow: 25 l/s.



2 way air pattern



4 way air pattern



Plexus 360° air pattern

Picture 1. Unique for the Plexus is that the air is supplied in a 360° air pattern instead of a traditional 4 way pattern. This feature allows approximately 30% shorter air throws.

# Active chilled beam

# Plexus

## Function

Plexus works by the induction principle. The primary air is let in by induction Angled JetCone Nozzles directly controlled into a 360° sunflower shaped pattern.

The heated room air which is inducted through the cooling battery/coil is 4-5 times larger than the supplied primary air. The battery consists of aluminium fins fitted onto CU-tubes where the cooled water runs through and thereby absorbs the rooms heated air, it is then let to a central cooling machine.

## Lindab Pascal Water Solution VAV/DCV combined with active chilled beams

For an extra energy- and cost saving and environmentally friendly ventilation and cooling system, the Lindab Pascal Water solution should be applied.

The Pascal solution will optimize the ventilation, cooling, heating and even lighting for a perfect indoor climate at the lowest running cost by combining the active chilled beam with VAV (Variable Air Volume) or DCV (Demand Controlled Ventilation) technique.

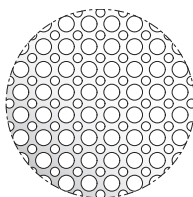
Please refer to: [Pascal Water Solutions](#)

## Hygiene

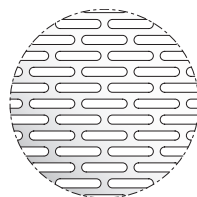
Plexus can as an option even be delivered with a partially down foldable battery to ease access for cleaning all parts of the unit (picture 3).

## Perforation pattern

The Plexus beam is available in two perforation pattern Dotx2 50% (standard) and Slot 50% (plus feature).



Dotx2 50%



Slot 50%

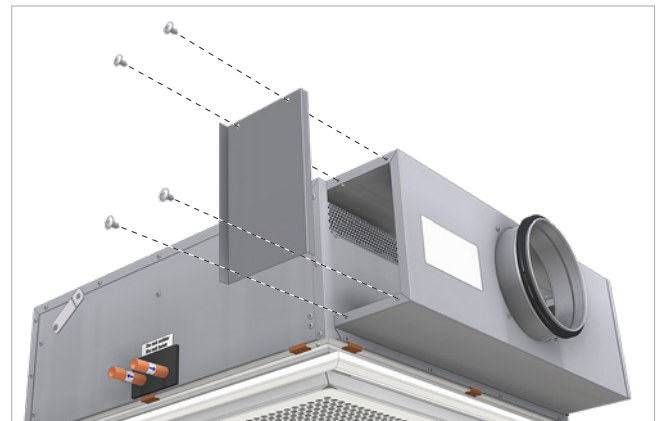
Picture 2. Available perforations.



Picture 3. The battery is recessed for inspection and maintenance of the inner parts (plus feature).

## Cleaning hatch

Plexus comes as standard with an inspection and cleaning hatch. Through this you can easily access and clean the perforated air inlet plate and air inlet duct.



Picture 4. Opening the inspection hatch for access to perforated inlet plate and duct.



# Active chilled beam

# Plexus

## Construction

Plexus is developed and constructed to reach shortest possible air velocities in the comfort zone.

This is achieved by the Angled Nozzles which let the air spread into a 360° around the beam. Plexus is a comfort unit and is very compact in its design but still delivers optimal capacities and easy access for cleaning and inspection.

The water pipes are made of copper. The water flowing through the beam should always be free from oxygen to guarantee that corrosion does not occur.

Plexus S, L, M and H are provided with a high quality design outlet frame made from powder coated strang-aluminium.



Picture 5.a Design model with aluminium outlet frame. (S, L, M, and H).

The version ISA offers a good quality precoated steel casing incl. the outlet frame.



Picture 5.b Standard model ISA with pre-coated steel outletframe.

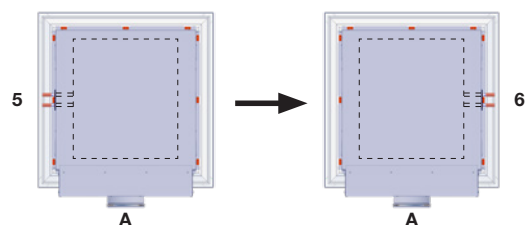
The perforated face plate is fitted in the height of the recessed ceiling, to give an aesthetic and complete integration in the ceiling.

## Turnable battery

The water battery can be turned easily on side to change e.g. water connection (A5) to (A6) or vice versa (only available for 2-pipe connections and models without plus features).

The casing of the beam contains additional holes on the opposite side of the actual connections. These holes are closed by plastic end caps and must be opened before turning the battery. The remaining open holes must be closed, with these caps, afterwards to guarantee full function.

For further more detailed instruction please refer to: [Plexus installation instruction](#), 7.5 Turnable battery.



Picture 6. Changing standard Plexus A5 to A6.

## Heating

The Plexus beam is a 360° comfort unit and is standardly prepared for ventilation and cooling (2-Pipe connection).

The 2-pipe connection can as an alternative be used as a change over system including heating.

A 4-pipe connection with a separate cooling and heating circuit makes it possible to direct the hot air in only one direction to the cool surface of the room where it is needed the most. See next page for details about Zone Heating.



Picture 7. Plexus IS-60-A5 with 4-pipe Zone Heating solution.

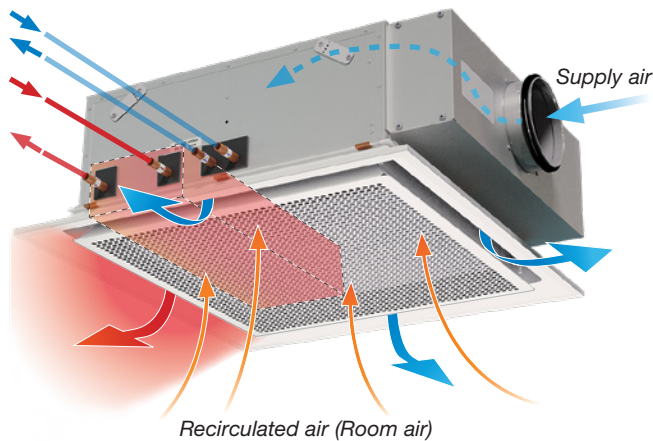
# Active chilled beam

# Plexus

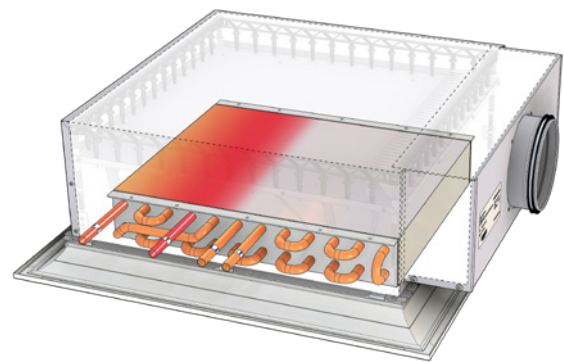
## Zone Heating for Plexus

Plexus can, as a plus feature, be equipped with Lindab's patented Zone Heating solution. By placing the heating coil in the end of the battery, instead of in the middle as normally on chilled beams, even better mixing ventilation is received and the vertical gradient will be distinguishably reduced. By placing the heating coil closest to for example a window, (see picture 10), the down draughts will be reduced and the primary cooling source becomes eliminated fast and effectively.

Patented  
Technology  
by Lindab

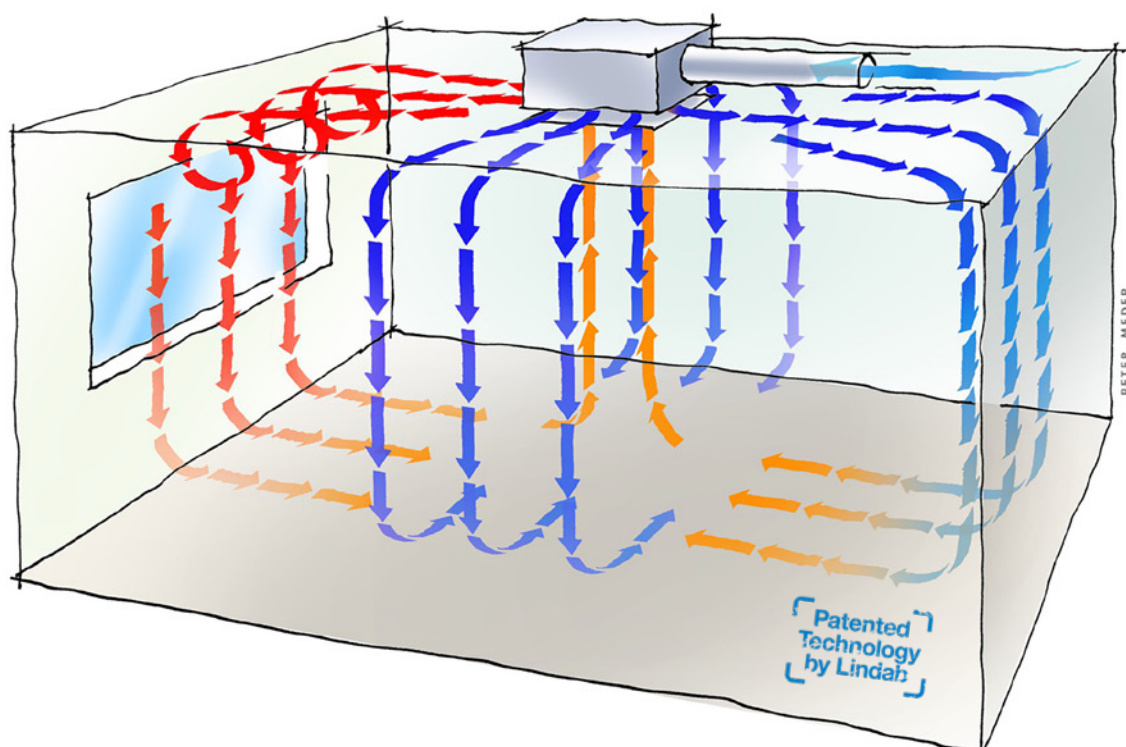


Picture 8. The principle in Lindab's patented Zone Heating solution.



Picture 9. The heating coil is placed on the opposite side of the air connection.

As shown below the Plexus chilled beam with Zone Heating supplies hot air in only one direction to the cool surface where it is needed the most. The cold wall surface then cools the hot air whereby it slowly floats towards the floor and mixes with the room air. In the other 3 directions supplied air is slightly cooler than the room temperature, meaning that the cool air drops and mixes with the room air, reducing cold draft and optimizing ventilation.



Picture 10. Lindab's patented Zone heating for Plexus.

# Active chilled beam

# Plexus

## JetCone air volume adjustment system

Plexus is delivered as standard with Lindab's JetCone air volume adjustment system. JetCone makes Plexus to a very flexible product with possibility of adjusting air diffusion, primary air volume and air pressure.

Adjustment is made by setting the four adjustment regulators into different positions. The adjustment is done without any tools, which makes it very fast and easy. The fast adjustment system gives an opportunity within planning, since the product choice can be made in an early stage and the products can be drawn into the planning of the project even though the planner do not have all the required data.

### Plexus 60

To offer the best flexibility concerning the ventilation air volume, Plexus 60 can be ordered in four different types S (standard), L (low), M (medium) and H (high).

The different types results in that Plexus receives different operating ranges for minimum and maximum air volume. By limiting the operating ranges in different configurations, you can with our JetCone adjustment system easily obtain a very accurate adjustment to requested air volume.

Type S is Lindab's standard type which has a variable air volume capacity covering the most common demands. In configuration L, M and H we have combined the JetCone system with angled nozzles to be able to offer three predefined operating ranges. These operating ranges are overlapping each other to be able to give a very accurate regulation. Type L is predefined to the same operating range such as S, while M and H have a operating range which gives higher air volumes. The big advantage is that L, M and H easily can be re-configured and replace each other.

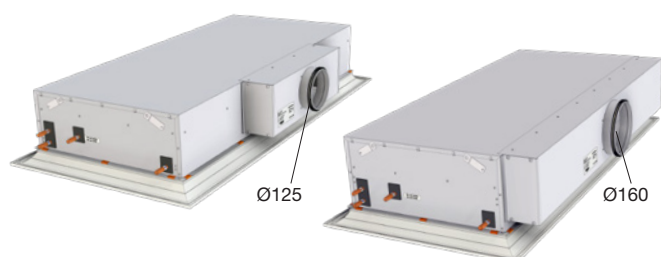
The difference between type L, M, H and type S is that type S can handle a higher nozzle pressure with low sound levels and gives a little bit higher capacities at those operating circumstances.

### Plexus 120

Plexus 120 is available in standard type S and H (high).

Type S is Lindab's standard type which has a variable air volume capacity covering the most common demands.

In configuration H the Plexus can handle higher primary air flow with a lower pressure drop in the connection, which results in a lower sound level.



Picture 11. Plexus IS-120 (left) and Plexus IH-120 (right), both with A5 cooling/heating solution (plus feature).

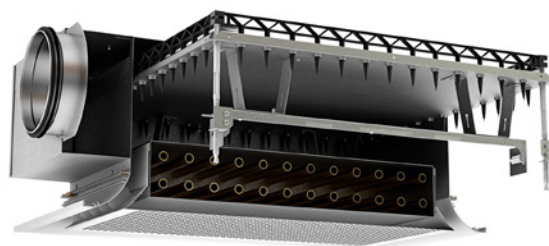
### Example

Today one person is sitting in a cell office. The company is making an expansion and employs one more person, who should be placed in the same room.

The air volume then needs to be adjusted to cover the fresh air requirement for two persons instead of one person. The air volume is adjusted by modifying the position of the adjustment point and the requested result is given.

If it is requested to direct the air diffusion in a certain way this is also possible to do.

With the JetCone adjustment system it is possible to get an asymmetric air pattern.



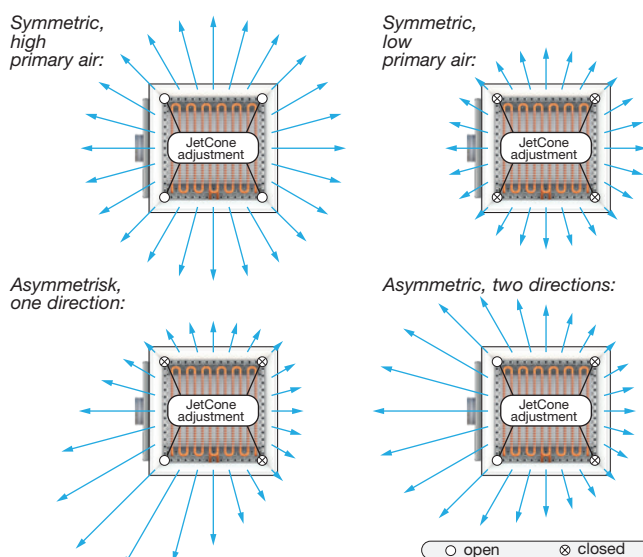
Picture 12. Lindab's JetCone system.

## Optimal Air Distribution Pattern

As the air is not supplied in parallel rays (stream), but in a sun shaped 360° pattern. The air rays (stream) never collide with the result of longer throws. Plexus has 30% shorter throws than similar products.

The significant shorter throw makes it possible to place the units closer together and thereby it is possible to supply much more cooling capacity to the room.

In addition to this advantage, the air can also be adjusted asymmetrically in the selected direction, which ensures a draft-free indoor climate even with high air flows and cooling needs.



Picture 13. Plexus with 360° symmetric and asymmetric air distribution patterns.



# Active chilled beam

# Plexus



Picture 14. Plexus I-60, cooling.

## Data

### standard version

The Plexus beam is a 360° comfort unit and is standardly prepared for ventilation and cooling (2-pipe connection). It is available in an integrateable (I..60 / I..120) and an exposed free-hanging version (F..60 / F..120).

#### Lengths/width:

Plexus models are available in 600 mm x 600 mm and 1200 mm x 600 mm.

#### Height:

The height varies from 220 to 255 mm depending on model. See page 15-16.

#### Water connection:

The water connections for cooling are 12 mm (2-pipe connection).

#### Air connection:

The air connection is available horizontal Ø125 mm or vertical Ø125/160. Plexus H 120 is available with horizontal Ø160 mm only!

#### JetCone:

The JetCone is standard feature. The factory settings will be done according to desired static pressure (Pa) and primary air flow (l/s) and can be changed easily on site.

#### Angled Nozzles:

The Angled Nozzles are manufactured in an optimized fixed position (no visible fixed deflectors).

#### Design:

Perforated with Dotx2 50%, perforation (see page 4). Plexus is provided with a high quality design outlet frame made from powder-coated strang-aluminium. The version ISA offers a precoated steel casing with integrated outlet frame.



Picture 15. Plexus F-60, cooling.

#### Turnable Battery:

The water battery can be turned easily on side to change e.g. water connection (A5) to (A6) or vice versa (only available for 2-pipe connections and models without plus features). See [installation instruction](#) 7.5.

#### Surface treatment:

Plexus is manufactured as standard from galvanised sheet metal and extruded aluminum (frame).

#### Colour:

The product is available as standard, in signal white RAL 9003 or in pure white RAL 9010, gloss value 30. Other RAL colours on request.



# Active chilled beam

# Plexus

## Plus features

### Factory pre-installed.

#### Heating:

The product can be equipped with an extra water circuit, with 12 mm connections in the battery to provide a heating function (4-pipe connection).

#### Enclosed control valves and actuators:

Valves with adjustable  $K_v$  values and various actuators can be pre-assembled at the factory upon request. A separate valve with actuator is required for the additional heating function. For details, see [Accessories](#).

#### Integrated condensation guide Regula Secura:

Lindab's [Regula Secura](#) condensation protection can be installed in the product.

#### Integrated Regula Connect:

The product can be equipped with the [Regula Connect](#) connection card.

#### Adaptation for suspended ceilings:

The product can be adapted to most types of suspended ceilings offered on the market.

See [installation instruction](#) 5.2 - 5.3.

Note: The type ISA (integrated steel frame) is available for T24/T15 lay-in 600 (ceiling type 1) only!

#### Design:

There is another perforation pattern available (see page 4).

#### Down foldable battery:

Requires connection with flexible hoses. Battery can be folded down about 20 cm at the other end.

See [installation instruction](#) 7.4.

#### Special model:

Plexus can also be delivered for ventilation only (without cooling battery).

#### Integrated regulation unit:

It is possible to have Lindab's room regulator, Regula Combi, pre-installed in the product. The control panel is fully accessible through the frontplate. Please see the [Regula Combi](#) documentation.

## Accessories

### Delivered separately.

#### Flexible air connection:

For flexible air connection, a flexible duct is available in Lindab's ADS assortment:

Sample order code:

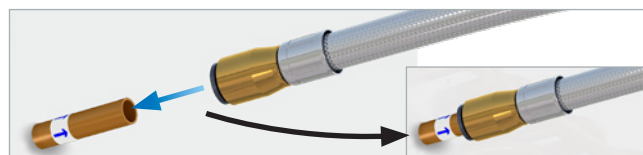
DRATMFU-125-500



Picture 16. Lindab's flexible duct assortment.

#### Flexible water connection:

For flexible connection, an oxygen diffusion impermeable, flexible hose with JG push-on couplings or other coupling types (on demand) are available. See ["Accessories"](#) document.



Picture 17. Example of water connection cooling outlet with push-on flexible hose.

#### Hangers:

For recommended installation principles (see: ["Plexus Installation Instruction"](#) 5.4).

All these different hangers are available at Lindab:

- pendulum hangers (in different sizes)
- threaded rods M8

#### Control equipment:

Lindab offers control equipment that is very simple to use. To avoid the heating and cooling being activated at the same time, the system is controlled sequentially (Regula Combi). For the technical data, refer to the [Regula Combi](#) documentation.



Picture 18. Regula Combi.

For additional accessories, go to the ["Accessories"](#) document.

# Active chilled beam

# Plexus

## Dimensioning

The specific dimensioning of the active chilled beam can be easily done with our waterborne calculator in our online quick selection tool LindQST®.

[Calculate the Plexus here](#)

## LindQST®



Picture 19. LindQST - Indoor Climate Designer.

LindQST® helps you select the right waterborne products, e. g. active chilled beams, passive radiant chilled beams, radiant cooling- and heating panels and facade units and quickly finds the corresponding documentation.

In [Thermal comfort ventilation](#) you can easily find all available product documentation. Always in the latest version.

In [Waterborne Calculator](#) you can do a professional calculation based on your specific input data to finetune your choice or calculate different variants of the product. Smart warnings point out if a set-up will not work.

In [Waterborne Selector](#) you can compare the proposed products according to your specific requirements and select the one which fits best to your needs.

Not enough? With [Indoor Climate Designer](#) you can insert your selected waterborne product into your room and simulate the actual air distribution, optimize the placing in the ceiling taking into account the calculated air velocities and sound levels.

You can at anytime display your selection and calculations graphically. In addition, you can print or save all results and related documents for your documentation (incl. data sheets, dxf-files and room books).

With lindQST® you will easily find the most suitable product for your project.

It provides an easy and quick access to the latest product information, technical specifications and assembly instructions on the Internet, making it the ideal tool for installers, consultants and architects alike.

[www.LindQST.com](http://www.LindQST.com)

- Easy access to all current documentation.
- Fast design of waterborne products.
- Indoor Climate Designer: Graphical representation of the spatial situation in 2D / 3D and floor plans from AutoCAD®.
- Calculation of capacities, sound power levels, pressure losses and flow conditions.
- 3D particles or smoke show the air distribution in the room.
- Diagram showing the time course of the CO<sub>2</sub> concentration in the room.
- Room book generation and data sheet for individual rooms and outlets or entire projects.
- Project can be saved and exchanged in its own project area.
- Fast product selection waterborne products in accordance to Eurovent (chilled beams and facade units).



# Active chilled beam

# Plexus

## Minimum flow

Please note that flows below the recommended minimum water flow  $q_{w \min}$ , can result in unwanted air in the water pipes. Exceeding the nominal flows  $q_{w \text{ nom}}$  is not recommended as the capacity gains will only be minimal.

| System             | Pipe diameter<br>[mm] | $q_{w \min}$<br>[l/s] | $q_{w \text{ nom}}$<br>[l/s] |
|--------------------|-----------------------|-----------------------|------------------------------|
| Cooling or heating | 12                    | 0.025*                | 0.038                        |

Table 1. Water flows  $q_{w \min}$  and  $q_{w \text{ nom}}$  of the beam.

\* Only valid for Plexus 60, cooling 2-pipe system.

## Plexus - Weight

| Type   | Function | Dry weight [kg] |
|--------|----------|-----------------|
|        |          | Total           |
| I-60   | 2-pipe   | 11.6            |
|        | 4-pipe   |                 |
| F-60   | 2-pipe   | 17.2            |
|        | 4-pipe   |                 |
| I-120  | 2-pipe   | 18.6            |
|        | 4-pipe   | 20              |
| F-120  | 2-pipe   | 28.9            |
|        | 4-pipe   | 30.3            |
| IH-120 | 2-pipe   | 19.6            |
|        | 4-pipe   | 21              |
| FH-120 | 2-pipe   | 29.9            |
|        | 4-pipe   | 31.3            |

Table 2. Plexus - Weight.

## Material data

| Type                  | Plexus            |
|-----------------------|-------------------|
| Copper pipes, quality | EN-12735-2 CU-DHP |
| Pressure class        | PN10              |

Table 3. Plexus material data.

Lindab's active chilled beams are Eurovent-certified and tested according to EN-15116.



## Noise levels $L_{W \text{ oct}}$

Plexus noise levels for each octave band in the beam are calculated by adding the corrections  $C_{\text{oct}}$  from the table below to the sound power level  $L_{WA}$  [dB(A)].

$$L_{W \text{ oct}} = L_{WA} + C_{\text{oct}}$$

## Correction $C_{\text{oct}}$

| Plexus   | Correction $C_{\text{oct}}$ [dB] |     |     |     |    |     |     |     |
|----------|----------------------------------|-----|-----|-----|----|-----|-----|-----|
|          | Center frequency [Hz]            |     |     |     |    |     |     |     |
|          | 63                               | 125 | 250 | 500 | 1k | 2k  | 4k  | 8k  |
| S/SA 60  | 12                               | -3  | -4  | -4  | -4 | -8  | -11 | -16 |
| S/SA 120 | 11                               | -1  | -1  | -2  | -5 | -9  | -15 | -20 |
| L 60     | 12                               | -4  | -4  | -5  | -4 | -7  | -14 | -20 |
| M 60     | 11                               | -5  | -3  | -3  | -4 | -8  | -17 | -18 |
| H 60     | 10                               | -2  | -1  | -1  | -4 | -12 | -21 | -18 |
| H 120    | 2                                | -1  | -2  | -3  | -5 | -9  | -11 | -13 |

Table 4.  $C_{\text{oct}}$  correction values.

## Plexus - Water content

| Type                   | Function | Battery type<br>CC HH | Water content [l] |         |       |
|------------------------|----------|-----------------------|-------------------|---------|-------|
|                        |          |                       | Cooling           | Heating | Total |
| I-60 / F-60            | 2-pipe   | 24 00                 |                   |         | 1.2   |
| I-60 / F-60            | 4-pipe   | 20 04                 | 1.0               | 0.2     | 1.2   |
| I-120 / IH-120 / F-120 | 2-pipe   | 12 00                 |                   |         | 1.3   |
| I-120 / IH-120 / F-120 | 4-pipe   | 12 04                 | 1.3               | 0.4     | 1.7   |

Table 5. Plexus - Water content.

## Sound attenuation $\Delta L$

Plexus sound attenuation  $\Delta L$  [dB], between air duct and room including end-reflection.

| Plexus   | Internal sound attenuation $\Delta L$ [dB] |     |     |     |    |    |    |    |
|----------|--------------------------------------------|-----|-----|-----|----|----|----|----|
|          | Center frequency [Hz]                      |     |     |     |    |    |    |    |
|          | 63                                         | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| S/SA 60  | 15                                         | 14  | 6   | 10  | 7  | 6  | 9  | 17 |
| L/M/H 60 | 17                                         | 11  | 3   | 7   | 4  | 5  | 7  | 13 |
| S/SA 120 | 17                                         | 12  | 3   | 10  | 8  | 7  | 9  | 18 |
| H 120    | 17                                         | 12  | 3   | 10  | 8  | 7  | 9  | 18 |

Table 6. Plexus's internal sound attenuation.

# Active chilled beam

# Plexus

## Connection variants for air and water

The connection variants for Plexus are optimised in order to meet all practical coupling strategies. For further more detailed information, please refer to [Installation Instruction](#).

## Supply air connections

Both the horizontal (A) and the vertical (B) supply air connections are equipped with Lindab SafeClick® as a standard. This makes the usage of screws or pop rivets unnecessary, and facilitates fast installation of the units, for secure installation with tightness class D.

The available ventilation connections are: Ø125 mm and Ø160 mm, depending on variant.



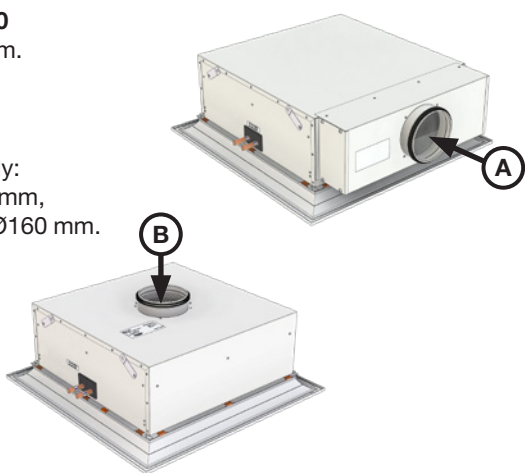
### Plexus I-60

A: Ø125 mm.

Alternatively:

B: **S** Ø125 mm,

B: **L/M/H** Ø160 mm.

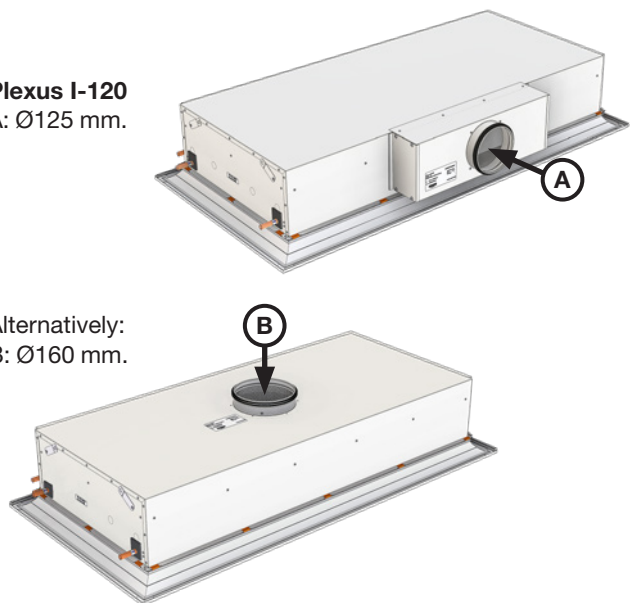


### Plexus I-120

A: Ø125 mm.

Alternatively:

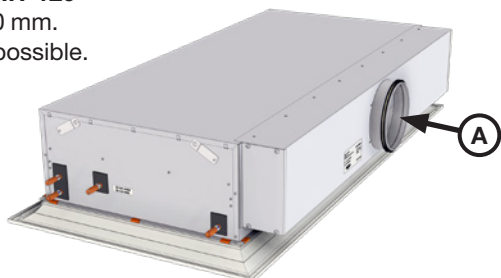
B: Ø160 mm.



### Plexus IH-120

A: Ø160 mm.

B: Not possible.



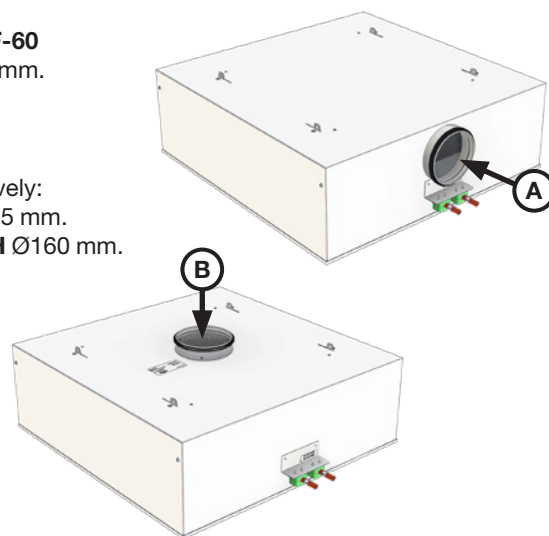
### Plexus F-60

A: Ø125 mm.

Alternatively:

B: **S** Ø125 mm.

B: **L/M/H** Ø160 mm.



### Plexus F-120

A: Ø125 mm,

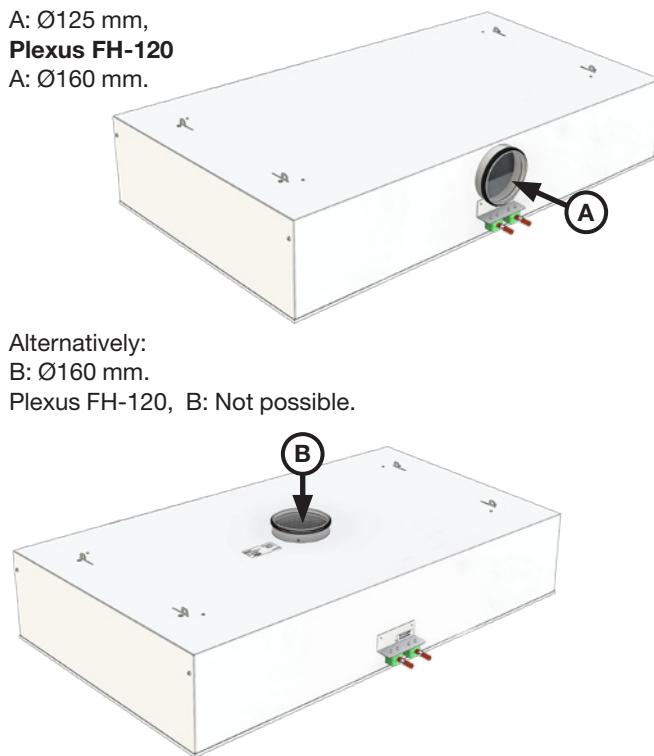
**Plexus FH-120**

A: Ø160 mm.

Alternatively:

B: Ø160 mm.

Plexus FH-120, B: Not possible.



Picture 20. Possible Plexus supply air connections.



# Active chilled beam

# Plexus

## Water in- and outlet connections

The beam is available with one water circuit (2-pipe system) or two water circuits (4-pipe system).

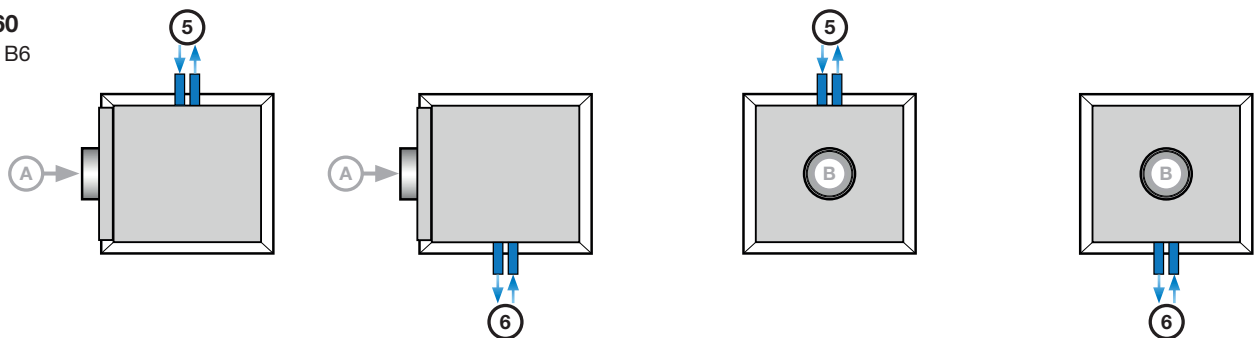
**The 2-pipe water connection beam contains one water circuit only. It can be used:**

- When the beams are used for cooling only (e. g. in combination with a separate independent radiator heating system).
- In change-over systems for both cooling and heating (e. g. the water circuit is connected to both a chiller and a boiler and can be used for both seasonal heating or cooling in change-over).
- In combination with a 6-way valve (where both a cooling and a heating system are controlled by a 6-way valve using the water coil of the beam for both functions).

The dimension for all water pipe connections are  $\varnothing = 12$  mm.

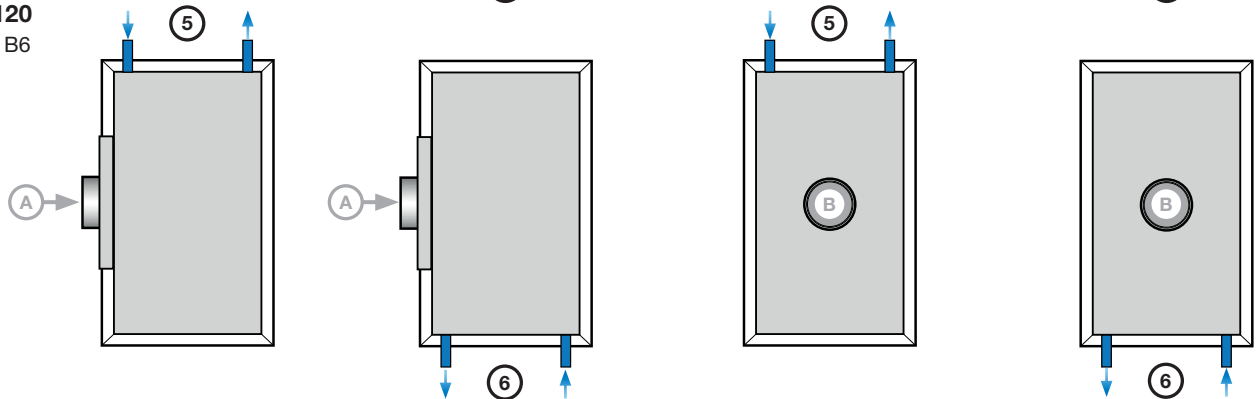
### Plexus I-60

A5, A6, B5, B6



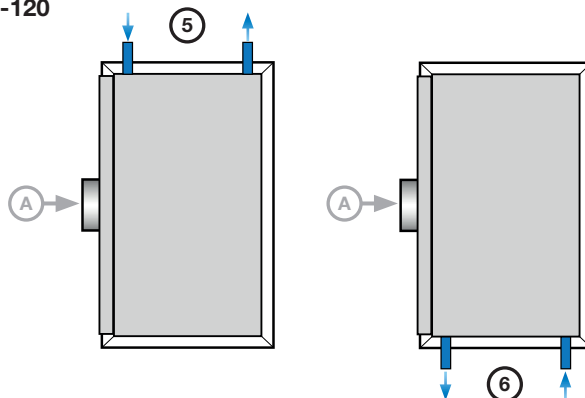
### Plexus I-120

A5, A6, B5, B6



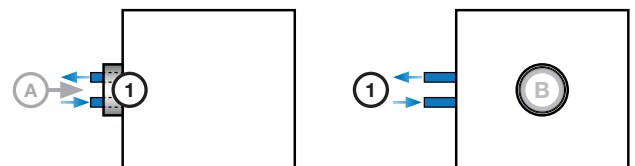
### Plexus IH-120

A5, A6



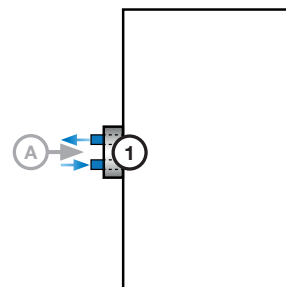
### Plexus F-60

A1, B1



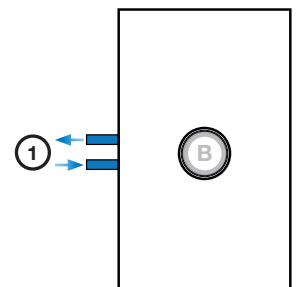
### Plexus F-120 / FH-120

A1



### Plexus F-120

B1



Picture 21. Possible 2-pipe water connections.

# Active chilled beam

# Plexus

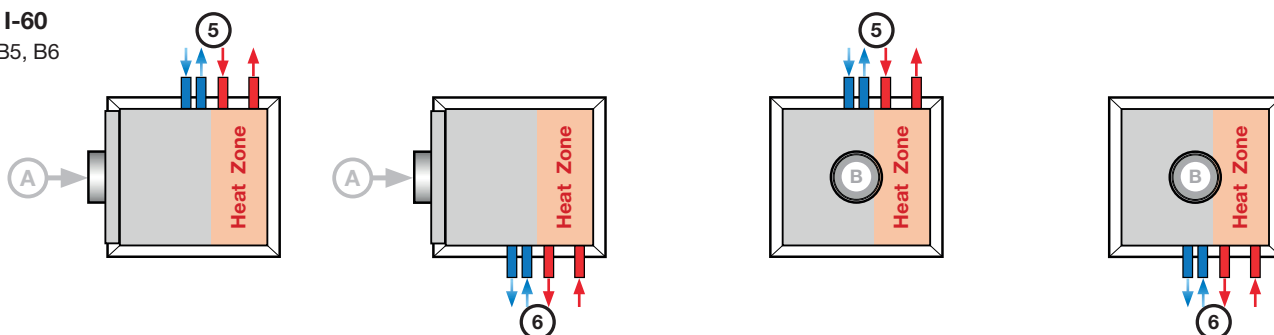
The 4-pipe water connection beam contains two water circuits. One for heating and one for cooling. This is the Lindab recommendation as it shows the most advantages:

- No additional water piping to the outside wall or along the facade (e. g. compared to a radiator heating system).
- Free facade for architectural freedom (e. g. full glass facade).
- Two separate hydronic systems for easy commissioning, control and lowest energy demands.
- Optimised water flows for cooling and heating with easy hydronic balancing.
- Lindab's patented Zone Heating solution (see page 6 for more details).

The dimension for all water pipe connections are  $\varnothing = 12$  mm.

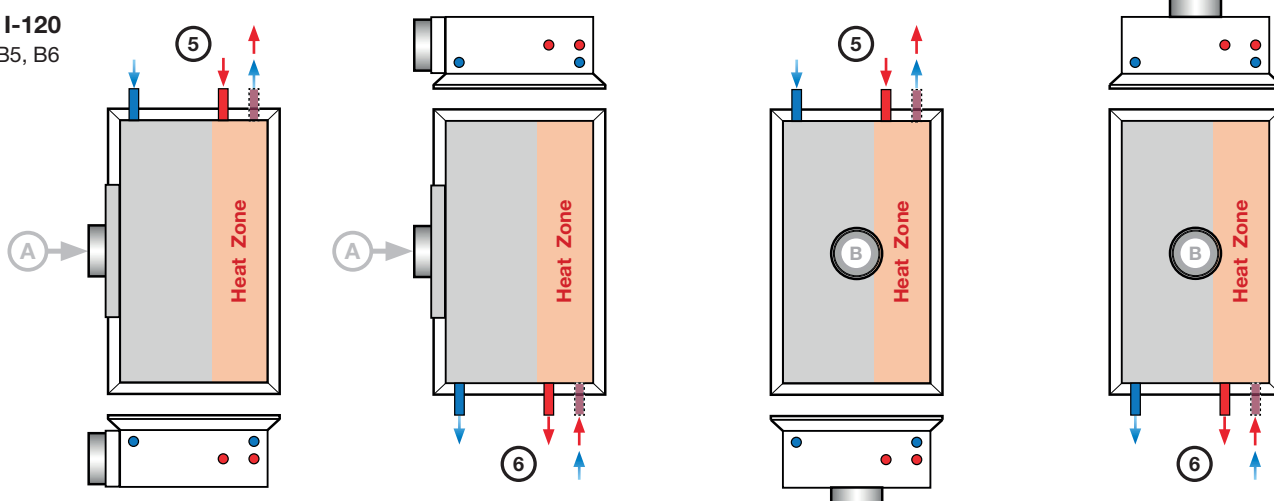
## Plexus I-60

A5, A6, B5, B6



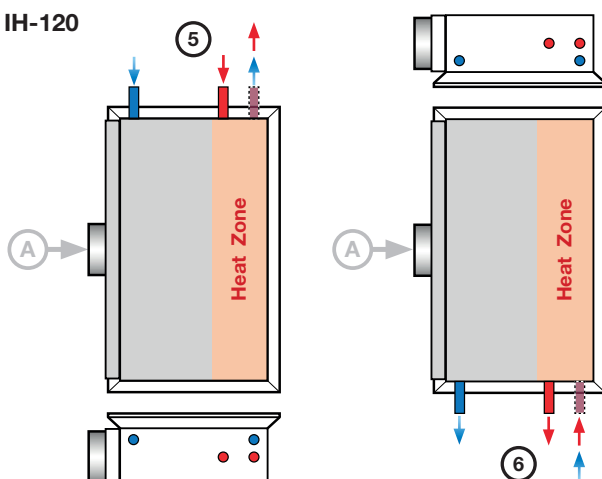
## Plexus I-120

A5, A6, B5, B6



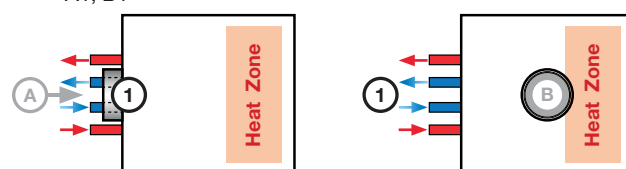
## Plexus IH-120

A5, A6



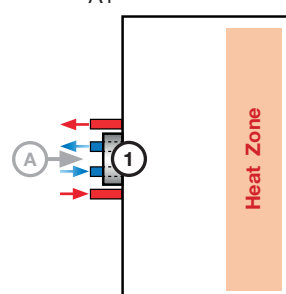
## Plexus F-60

A1, B1



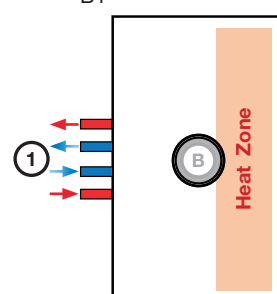
## Plexus F-120 / FH-120

A1



## Plexus F-120

B1



Picture 22. Possible 4-pipe water connections.

# Active chilled beam

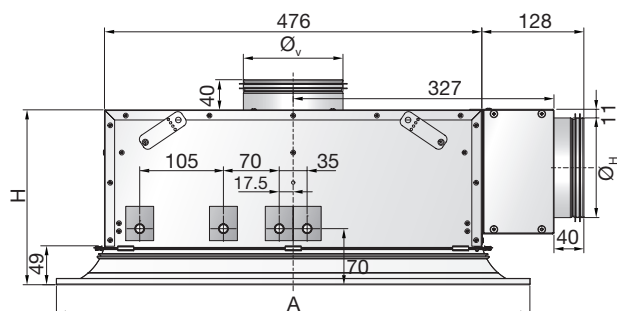
# Plexus

## Dimensions

### Plexus I models

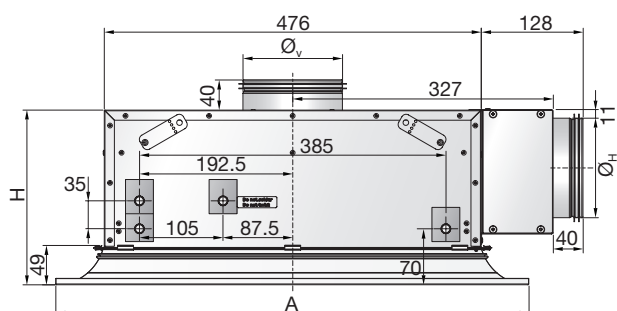
All dimensions in mm.

#### Plexus I-60

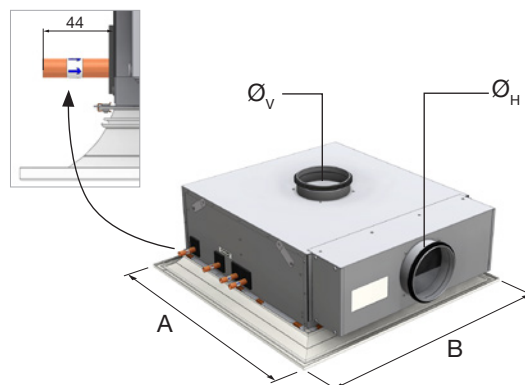


Picture 23. Plexus I-60 dimensions.

#### Plexus I-120



Picture 24. Plexus I-120 dimensions.



Picture 25. Plexus I-60 connections.

| Type           | Dimensions [mm] |      |     |                |                |
|----------------|-----------------|------|-----|----------------|----------------|
|                | A               | B    | H   | Ø <sub>H</sub> | Ø <sub>V</sub> |
| I (S/SA) 60    | 594             | 594  | 220 | 125            | 125            |
| I (L, M, H) 60 | 594             | 594  | 220 | 125            | 160            |
| I (S/SA) 120   | 594             | 1194 | 220 | 125            | 160            |
| I (H) 120      | 594             | 1194 | 250 | 160            | N/A            |

Table 7. Dimensions.

Plexus I, see [Plexus installation](#) instruction for adaption to different ceiling systems.

NB! The Plexus I has high horizontal ventilation connections for recessed installation in a suspended ceiling (integrated version).

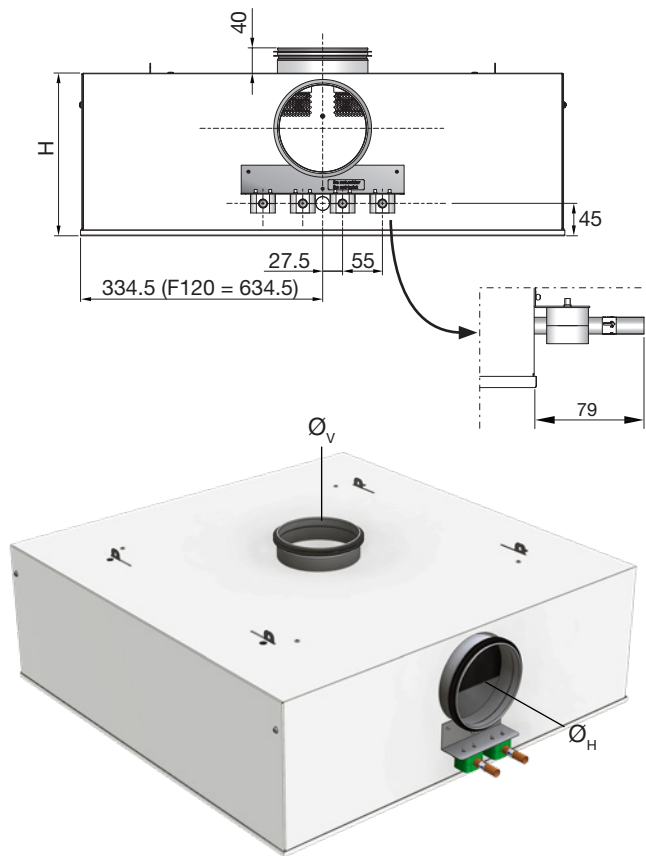
# Active chilled beam

# Plexus

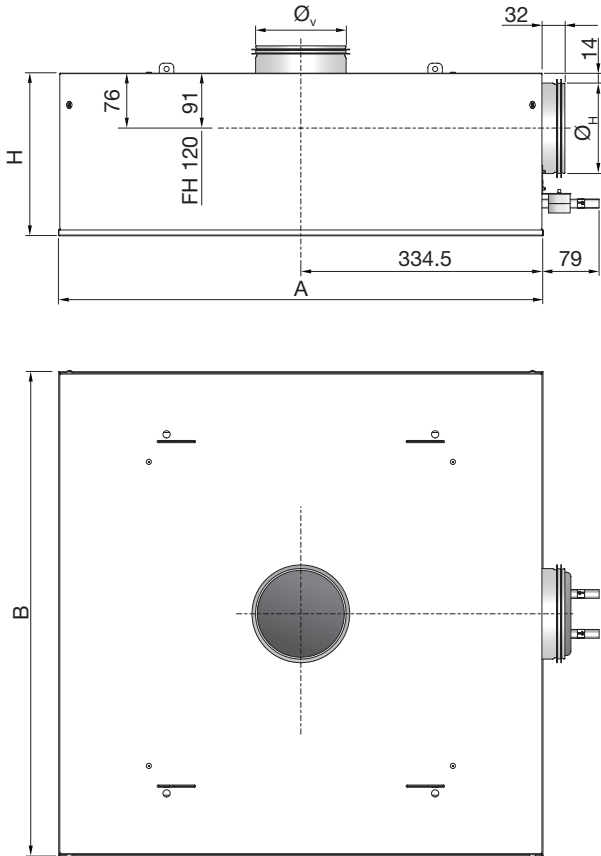
## Dimensions

### Plexus F models

All dimensions in mm.



Picture 26. Plexus F connections.



Picture 27. Plexus F dimensions.

| Type           | Dimensions [mm] |      |     |                 |                 |
|----------------|-----------------|------|-----|-----------------|-----------------|
|                | A               | B    | H   | $\varnothing_h$ | $\varnothing_v$ |
| F (S) 60       | 669             | 669  | 225 | 125             | 125             |
| F (L, M, H) 60 | 669             | 669  | 225 | 125             | 160             |
| F S 120        | 669             | 1269 | 225 | 125             | 160             |
| F H 120        | 669             | 1269 | 255 | 160             | N/A             |

Table 8. Plexus F dimensions.



# Active chilled beam

# Plexus

## Programme text

Lindab's active chilled beam comfort unit Plexus gives many placement possibilities since it fits perfectly into any suspended ceiling 600 x 600 alternative 1200 x 600.

Plexus works by the induction principle. The primary air is let in by induction Angled JetCone Nozzles directly controlled into a 360° sunflower shaped pattern, what results in shorter air throws (30%) and a draft free indoor climate.

The primary air volume can easily be adjusted with Lindab's patented JetCone system, which creates a great flexibility. Plexus can be used for both cooling, heating and ventilation, and can be equipped with the functions, Regula Secura condensation guard, down foldable battery for better accessibility and pre-mounted valves and actuators. The possibilities are many and the flexibility large.

Plexus is available with both 2-pipe and 4-pipe water connection and can be installed both exposed free hanging (F-) or recessed in a suspended ceiling (I-) in: single- and open offices, meeting rooms, entrance halls, schools, kinder gardens, banks, etc. By the many adaptations to ceiling tiles the Plexus beam easily can be mounted into modern buildings.

The water battery can be turned easily on site to change e.g. connection (A5) to (A6) or vice versa (only available for 2-pipe connections and models without plus features).

Plexus can, as a plus feature, be equipped with Lindab's patented Zone Heating solution. By placing the heating coil in the end of the battery, instead of in the middle as normally on chilled beams, even better mixing ventilation is received and the vertical gradient will be distinguishably reduced. By placing the heating coil closest to for example a window, the down draughts will be reduced and the primary cooling source becomes eliminated fast and effectively.

Plexus IS, IL, IM, IH are provided with a high-quality design outlet frame made from powder coated strang-aluminium. The version ISA offers a precoated steel casing with integrated outlet frame.

Lindab's active chilled beams are Eurovent-certified and tested according to EN-15116.

The beam can be easily integrated/used in a Pascal water system to enable VAV/DCV.

Plexus is available as standard, in signal white RAL 9003, gloss value 30. Other RAL colours on request.

Plexus can as an option even be delivered with a partially down foldable battery to ease access for cleaning all parts of the unit.

Plexus comes as standard with an inspection and cleaning hatch, through this you can easily access the unit and ducts.

The Plexus beam is available in two perforation pattern Dotx2 50% (standard) and Slot 50% (plus feature).

The new Plexus type H-120 can handle high air volumes, with low draft risk with low sound level and low additional pressure drop in the air connection. In addition, it has a wider airflow range from 20-100 % of max airflow (with adjustable JetCone and K-factor =10).

- Sun shaped 360° pattern - low draft risk
- Patented JetCone system – great flexibility
- High capacity battery -highest cooling output
- Patented Zone Heating – reducing cold drafts
- High quality high hygiene – easy to clean
- Down foldable battery – easy access
- Eurovent certified

## Technical data (example)\*

|                                           |                               |
|-------------------------------------------|-------------------------------|
| <b>Manufacturer:</b>                      | Lindab                        |
| <b>Product:</b>                           | Plexus                        |
| <b>Type:</b>                              | PLE-IH-120-12-160-A5-80-50-01 |
| <b>Length:</b>                            | 1194 mm                       |
| <b>Width:</b>                             | 594 mm                        |
| <b>Height:</b>                            | 250 mm                        |
| <b>Water connection:</b>                  | 12 mm                         |
| <b>Supply air connection:</b>             | 125 mm                        |
| <b>Connection type:</b>                   | A5                            |
| <b>Static nozzle pressure:</b>            | 80 Pa                         |
| <b>Primary air flow rate:</b>             | 50 l/s                        |
| <b>Primary air temperature:</b>           | 18 °C                         |
| <b>Water temperatures cooling in/out:</b> | 14/ 17°C                      |
| <b>Room temperature:</b>                  | 25°C                          |
| <b>Water flow rate:</b>                   | 0.0784 l/s                    |
| <b>Pressure loss water:</b>               | 11.4 kPa                      |
| <b>Cooling capacity/beam:</b>             | 942 W                         |
| <b>Induction ratio:</b>                   | 2.3                           |
| <b>Sound power level:</b>                 | 27 dB(A)                      |
| <b>Colour:</b>                            | RAL 9003, gloss 30            |

**Amount:** 2 pieces

\* For correct update of your program text use the [Waterborne calculator](#) on [www.LindQST.com](http://www.LindQST.com).

# Active chilled beam

# Plexus

## Specifications

**Product:** Plexus  
**Type:** F-60, F-120, I-60, I-120

### Battery type function:

I-60 / F60

2-pipe (cooling or heating) 2400  
 4-pipe (cooling and heating) 2004

I-120 / F-120

2-pipe (cooling or heating) 1200  
 4-pipe (cooling and heating) 1204

**Configuration airflow:** standard, low, medium, high

**Connection diam. water, [mm]:** 12

**Connection diam. air, [mm]:** 125 or 160

**Coupling options:** A5, A6, B5, B6 (Plexus F: A1, B1)

**Nominal length L, [m]:** 0.6, 1.2

**Static nozzle pressure, [Pa]:** 30-120

**Primary airflow rate, [l/s]:** 6-110

**Distribution profile:** 360°

**Plus features:** See page 9

## Order code

### Plexus

**Product:** PLE - I - S - 60 - 12 - 125 - A5 - 2400 - 60 - 20 - 01

PLE

**Type:**

F = Free hanging

I = Integrated

**Configuration Airflow range:**

S = Standard

L = Low

M = Medium

H = High

SA = Standard w. steel frame

**Size:**

60, 120

**Water connection [mm]:**

12

**Air connection [mm] \*:**

A: Ø125 / Ø160 B: Ø125 / Ø160

**Connection type:**

A5, A6, B5, B6 (Plexus F: A1, B1)

**Battery type:**

1200, 2400, 1204, 2004

**Static nozzle pressure [Pa]:**

30-120

**Primary Air flow rate [l/s]:**

6-110

**Ceiling adaption \*\*::**

01, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14, 21, 31

\* The available connection types are depending on Product type and size. See page 12-14 or use Lindab's [waterborne calculator](https://www.lindab.com/waterborne-calculator) in [www.LindQST.com](https://www.LindQST.com).

\*\* The available ceiling adaptations can be found in [Plexus - Installation instruction](#).



Most of us spend the majority of our time indoors. Indoor climate is crucial to how we feel, how productive we are and if we stay healthy.

We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

[Lindab](#) | For a better climate