

Lindab **Premium / Premax**

Active chilled beam

Installation instructions



Installation instruction Premum/Premax

1. Content and symbols

1. Content and symbols.....	2
1.1 Content	2
1.2 Symbols	3
2. Control of delivery	3
2.1 Before starting.....	3
2.2 Safe operation.....	3
2.3 Receipt of goods.....	3
2.4 Unloading of goods.....	3
2.5 Handling / Carrying.....	3
2.6 Tools	4
2.7 Installation	4
2.8 Where to find additional instructions or technical documentation.....	4
2.9 Cleaning after assembly/before commissioning.....	4
2.10 Packing, unpacking guideline	5
2.11 Product labelling.....	6
2.12 Order code	7
2.13 Order code examples.....	7
2.14 Label	7
2.15 Contents of order	8
2.16 Plus features.....	8
2.16.1 Inlet faceplates.....	8
2.16.2 Outlet front grilles.....	8
2.16.3 Integrated valves	8
2.16.4 Integrated Actuators.....	8
2.16.5 Integrated Regula components.....	8
2.16.6 Airguides.....	8
2.16.7 Heating	8
2.17 Accessories	8
3. Product specification.....	9
3.1 Product description.....	9
3.2 Dimensions	9
3.3 Premum / Premax.....	10
3.4 Material data	10
3.5 Environmental Declarations.....	10
3.6 Pressure class.....	10
3.7 Water quality	10
3.8 Air quality	10
3.9 Capacity test.....	10
4. Connections	11
4.1 Water connections	11
4.1.1 Before installation	11
4.1.2 Push on fitting	12
4.1.3 Compression fitting.....	12
4.1.4 Flexible hoses.....	12
4.1.5 Possible connections water cooling (2-pipe, standard).....	13
4.1.6 Possible connections water cooling and heating (4-pipe, plus feature)	14
4.2. Air connections.....	15
4.2.1 Air connection installation.....	15

4.2.2 Possible connections supply air.....	15
4.2.3 Possible connections extract air	15
4.3 Possible combination of connections	15
4.4 Electrical connections	16
4.4.1 Regula components on the beam.....	16
4.4.2 Example 1: Wiring scheme with Regula Connect multi.....	17
4.4.3 Example 2: Wiring scheme with Regula Connect basic.....	17
4.4.4 Regula Connect on the beam.....	18
4.4.5 Regula Secura on the beam	18
4.4.6 Valves and Actuators on the beam.....	18
4.4.7 Regula Combi on/with the beam	18
4.4.8 Actuators.....	18
5. Installation of product.....	19
5.1 Handling of product	19
5.2 Adaption to ceiling systems.....	19
5.2.1 Ceiling systems	19
5.3 General installation principles	20
5.3.1 Recessed in suspended T-bar ceiling	20
5.3.2 Exposed, sealed to the ceiling	20
5.3.3 Exposed, free hanging.....	20
5.3.4 Free hanging above perforated or eggcrate ceiling	20
5.3.5 Recessed in suspended (permanent) ceiling	20
5.3.6 Recessed in suspended (permanent) ceiling without cover flanges.....	20
5.4 Preparation for installation on the product.....	21
5.5 Basics steps of installing the product	23
6. Adjustment and commissioning.....	24
6.1 Airflow and pressure	24
6.1.1 Jet cone adjustment pins	24
6.1.2 Finding values for JetCone pins	26
6.1.3 Adjusting air flow and pressure with JetCone pins.....	26
6.2 Adjustment of air distribution profile	28
6.3 Measuring air pressure and calculating the air flow	29
6.3.1 Measuring static nozzle pressure and air pressure	29
6.3.2 Calculating the actual air flow	30
6.3.3 Changing the actual air flow	30
6.3.4 Changing the air distribution profile	30
6.3.5 Premum / Premax pressure / airflow diagrams ...	30
6.4 Water flow rate.....	31
6.4.1 Pre-setting of valves	31
6.4.2 Balancing strategy	31
7. Maintenance.....	32
7.1 Remove the outlet front grille	32
7.2 Open inlet faceplate	32
7.3 Opening inspection hatch.....	32
7.4 Lower battery	32
8. Accessories.....	33

Installation instruction Premium/Premax

1.2 Symbols



Hot water



Cold water



Vacuum cleaner



Heavy Load - 2 man job -
It is recommended to use
a "lift" for mounting.



Hand-pull



Dust cleaner

2. Control of delivery

2.1 Before starting

Read through the entire installation instruction before commencing installation in order to determine which parts that needs to be performed and in what order to be done.

Lindab is a supplier of complete water products, but we offer also a wide range of accessories which suit perfectly to our water products simplifying your installation work, e.g. different type of hangers, Tektite-couplings, closing valves, thermostatic valves and actuators, flexible hoses, customized regulation components, customized cabling and more. See also the separate document "Accessories."

Lindab will also provide you with a full ventilation system, with a wide range of Lindab Safe components. See also "Air Duct Systems."

2.2 Safe operation

Beware of sharp edges, especially of the coils. Always wear thin gloves and protective clothing.

All existing safety regulations must be observed when working with Lindab water products. Check the weights of the beams or the panels with the installation instruction before carrying.

2.3 Receipt of goods

Start by checking that the delivery is complete according to the order and that everything listed on the consignment note has been delivered. Then carry out a review of the products and make sure that nothing was damaged during transportation. If you discover damage that has occurred during delivery, it must be notified immediately.

Lindab is not responsible for costs associated with the replacement of products, that have been installed in any way other than shown in these installation instructions.

2.4 Unloading of goods

The beams and panels are normally delivered packed on wooden pallets. Lift the pallets carefully with a fork lift and place them on a dry and plain surface/ground. If the beams are delivered in single boxes, wooden blocks should be placed on the ground at one-metre intervals (or a pallet), before the boxes are been placed to store. Lindabs water products must be stored on a plane surface in a dry and well ventilated place, preferably indoors. If they have to be stored outdoors, protect them with a waterproof cover and store them protected from rain beneath a roof or other until they are fitted.

2.5 Handling / Carrying

The beam or panel must be handled with care, ensuring that it will not be scratched or bended during transportation, preparation and installation.

Always carry the beams or panels piecewise into the building. Keep the product in the package as long as you can.

Never use piping connections or edges to lift them, neither when you unpack them nor when you carry them towards the construction site.



Do not place the product directly on the floor. Use the protective corners from package or other clean means from package to place the product before installation.

Be careful if you must carry a long panel horizontally; if the panels are bended lengthwise, the profiles may be deformed and the piping could loosen from the panel. When opening the box with a knife, be careful not to damage the product.

Each beam is equipped with protective film to avoid any damage during transportation and handling on building site. The film needs to be removed before commissioning the products.

Installation instruction Premum/Premax

2.6 Tools

To install the beam, panel or facade unit, the following tools are required.



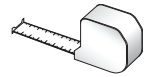
Knife



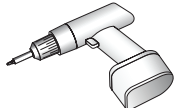
Gloves



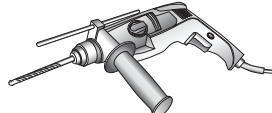
Shoes with soft soles



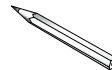
Tape measure



Drill machine



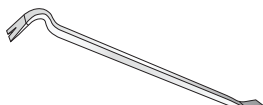
Percussion drill



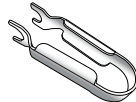
Pencil



Spanner



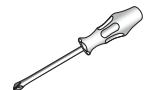
Crowbar



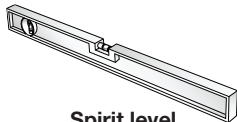
Tectite tool 12mm
(Order no: 884087)



Tectite tool small 12mm
(Order no: 646881)



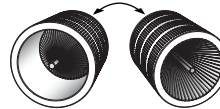
Screwdriver



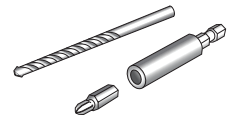
Spirit level



Lindab PC410
(Order no: 103344)



Deburring tool



Bits and drills



Vacuum cleaner



Dust-cleaner

2.7 Installation

It is important to use the correct hangers and the recommended amount for all installation principles. Different possible installation principles are shown in the installation instruction and hangers from Lindab should be used to ensure, that they are intended for the purpose and are safe to use.

Lindab's water products can be ordered, to be adapted to a wide range of different ceiling systems, please check installation instruction to ensure best adaptation.

The Lindab water products should always be installed separately hanged up from the recessed ceiling. The weight of the product should not be covered by the ceiling system.

Use plastic folio or other to protect the product during on site construction continually to keep the products in best condition and avoid any scratches.

2.8 Where to find additional instructions or technical documentation

In the following chapters we will refer to additional technical documents or/and instructions by a certain keyword written as a link.

If so you will easily find it with our Lindab Quick Selection Tool: www.lindQST.com

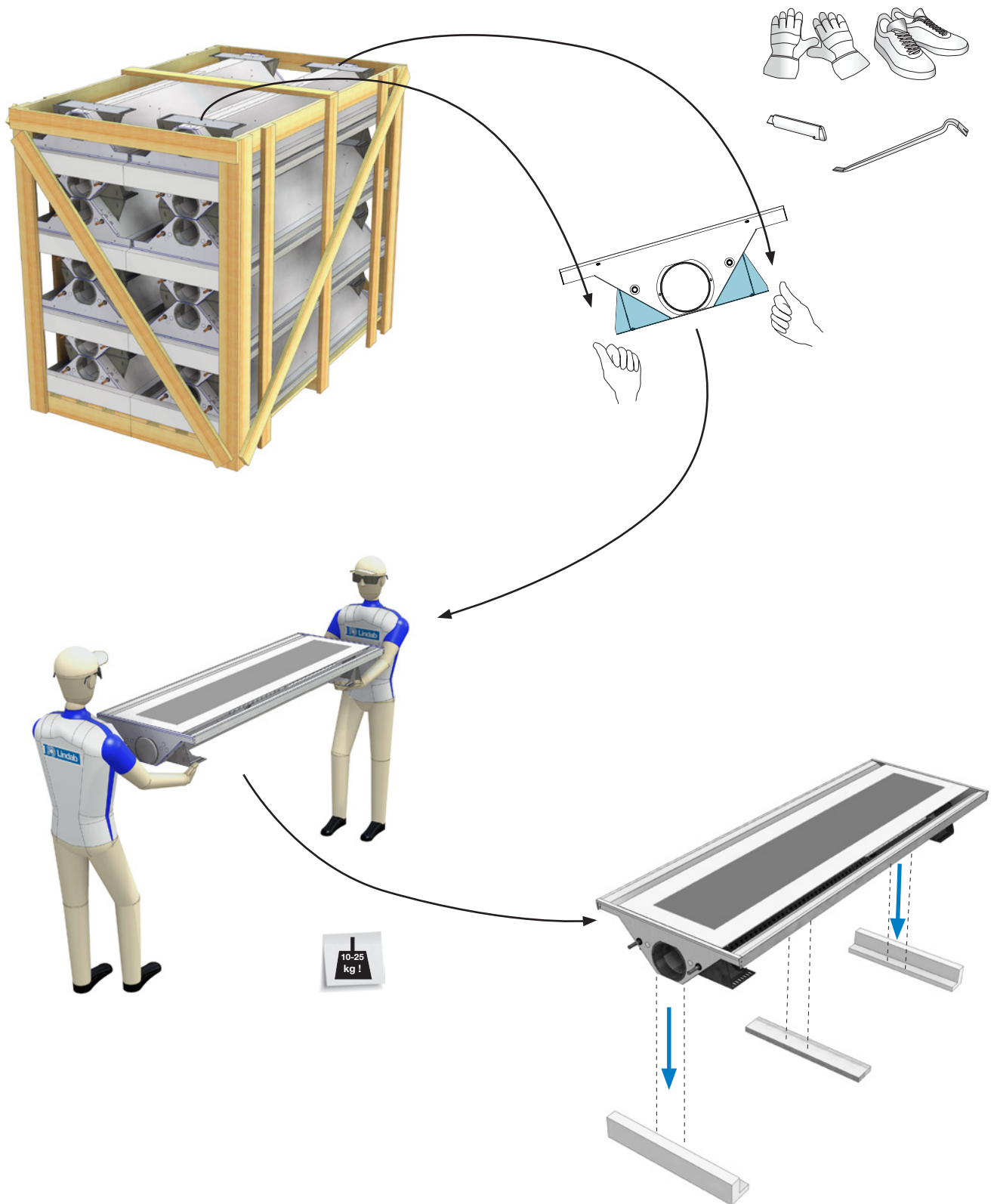
1. Visit www.lindQST.com
2. Select "documentation finder"
3. Select keyword (product name)
4. Follow the link
5. Find your document under "Related documents"

2.9 Cleaning after assembly/ before commissioning

Please remember to remove plastic folio and other protection material before commissioning and clean the product before hand over.


Installation instruction Premium/Premax

2.10 Packing, unpacking guideline



Installation instruction Premum/Premax

2.11 Product labelling

Order : xx-xxxxx 

Pos : xx

PREMUM X-XX-xx-125-xx-x,x-xx-xx x,xx m


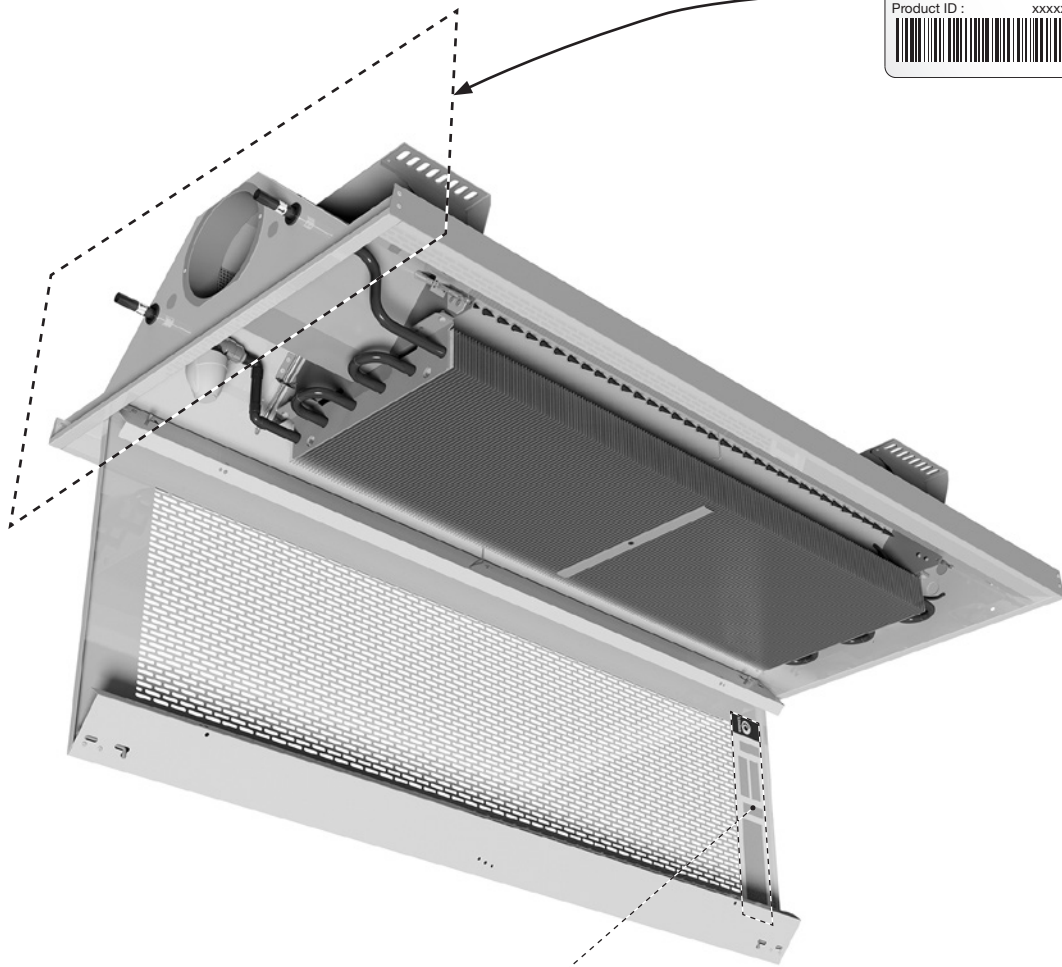
Pressure: AA Pa **Flow:** BB l/s


Project : xxxxxx xxxxxxxx

Mark : xxxxxx

Nozzles: N/A **Plugs:** N/A **Sign.:** _____

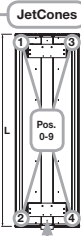
Product ID : xxxxxxxx

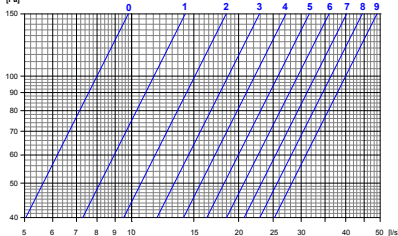


Lindab

Date	P _{stat} [Pa]	q _v [l/s]	1	2	3	4	Signature



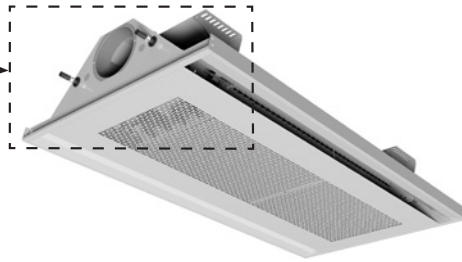
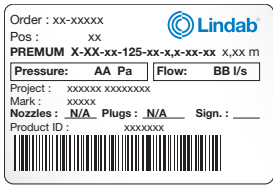
Premum / Premax 1,2m < L ≤ 2,0m Position of JetCone adjustment pins



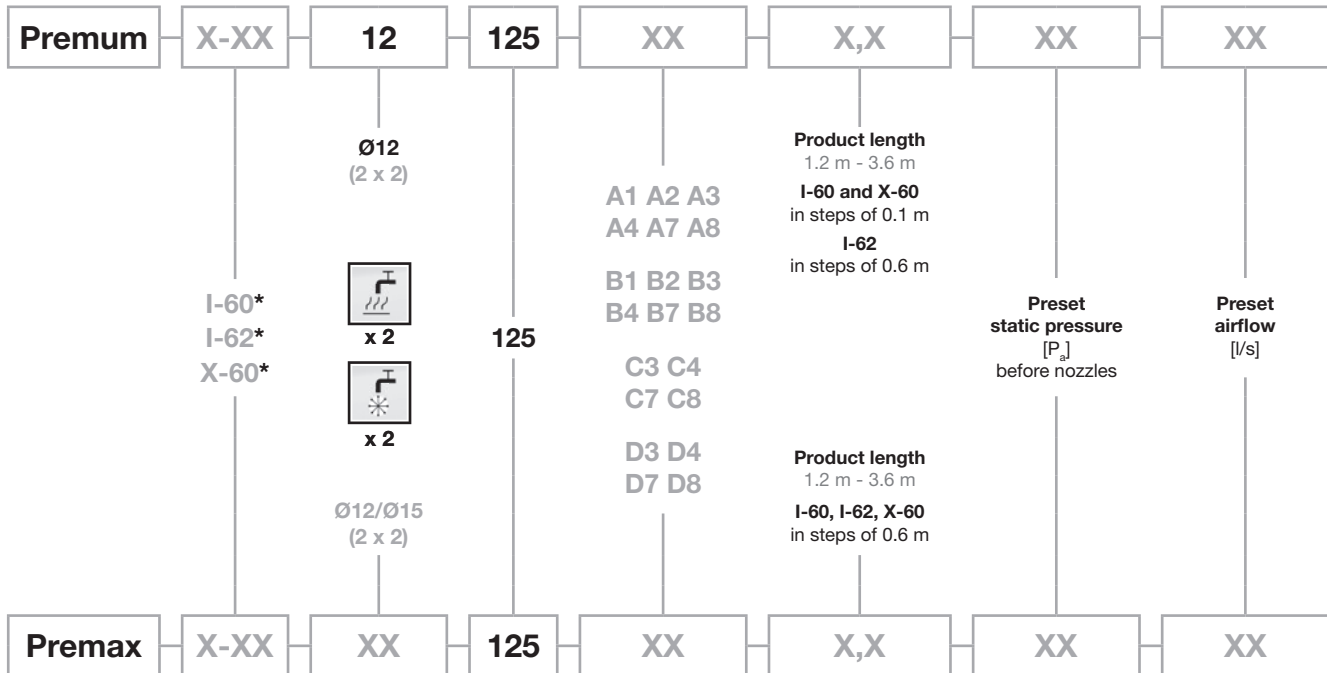
Rev.Premum/Premax-04032016

Installation instruction Premum/Premax

2.12 Order code

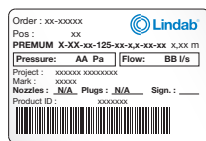


Premum/Premax

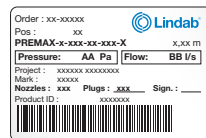


* As a plus feature the Premum/Premax Y-60 and Z-60 models can be ordered as well. See 3.2 for more details.

2.13 Order code examples



→ Premum - I-60 - 12 - 125 - A1 - 2.5 - 60 - 15

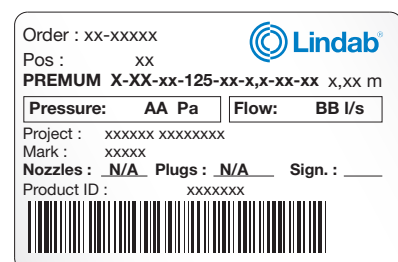


→ Premax - I-60 - 15 - 125 - A1 - 2.4 - 60 - 15

2.14 Label

On the label you'll find:

- Order: Order identification number
- Pos.: Order position
- Product: Product configuration and product length
- Data: Preset static pressure and preset airflow
- Project: Project name
- Mark: Marking noted on order
- Product ID: Product number
- Sign: To be signed when checked and commissioned on site



Installation instruction

Premum/Premax

2.15 Contents of order

Standard package/order contains:

- Beam
- Plus features (pre-installed in factory)
- 4 pc/beam of copper insets (separate in smaller box)
- Accessories (separate in smaller box)

NB! Outlet front grille does not belong to the beam and needs to be ordered separately!

2.16 Plus features

2.16.1 Inlet faceplates

Not relevant for Premum/Premax

2.16.2 Outlet front grilles

Not relevant for Premum/Premax

2.16.3 Integrated valves



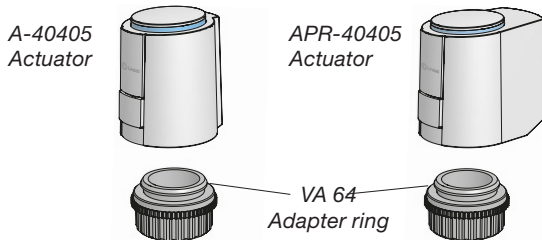
LinFlow-S, straight valve



LinFlow-A, angled valve

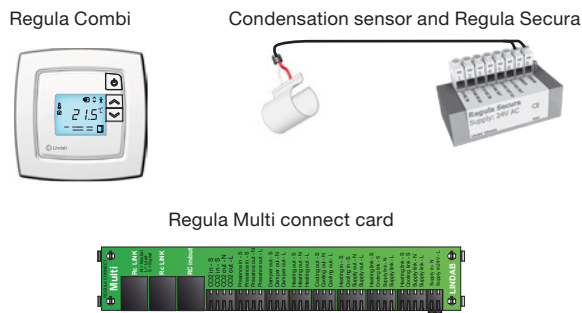
See [LinFlow-A](#) and [LinFlow-S](#) for details.

2.16.4 Thermoelectric actuators



The actuators can be pre-installed on the integrated/enclosed valves and connected to the integrated Regula connect card /Regula Secura (plus feature). Go to [Actuators](#) for details. See also [Adapter ring](#).

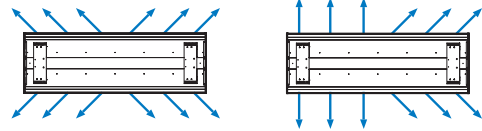
2.16.5 Integrated Regula components



Go to [Regula](#) for details.

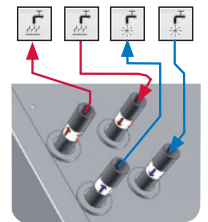
2.16.6 Airguides

The Lindab AirGuide system offers readjustable air spread pattern control. The AirGuide deflectors integrated in the Premum/Premax faceplate have 32 different settings. For details see 6.2.



2.16.7 Heating

Premum/Premax is in the standard version always equipped with a cooling in/out "2-pipe connection." The beams can be equipped with an additional heating circuit, providing a heating function as well as cooling.



2.17 Accessories

Here are some general accessories. For full range and order numbers, see separate [Accessories](#) document. The components under 2.16.3 to 2.16.5 are also available as accessories. Go to "8. Accessories" in this document to find accessories order numbers.

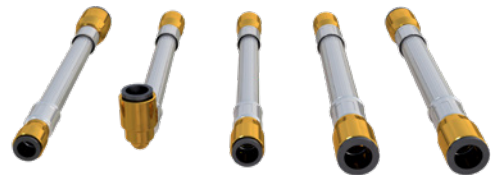
Threaded rod kit



- M8 x4 per beam when $L_{nom} \leq 2700$ mm
- M8 x6 per beam when $L_{nom} > 2700$ mm

Go to 5.4 "Preparation for installation on the product" for more details. Order no: See Order no: see [Accessories](#).

Flexible hoses



Order no: 680080 (0.4m push on, 12 and 12 mm). See [Accessories](#)

Transformer

Order no: See [Transformers](#)



Tectite fittings



Order no: 647690, 884050 and 642623 (12 mm). see [Accessories](#).

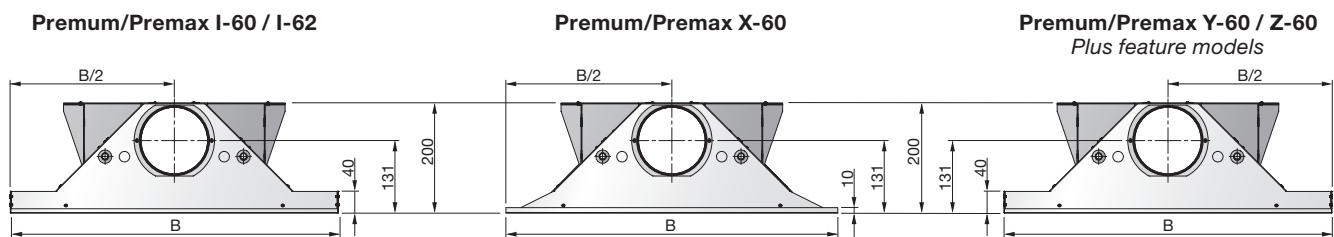
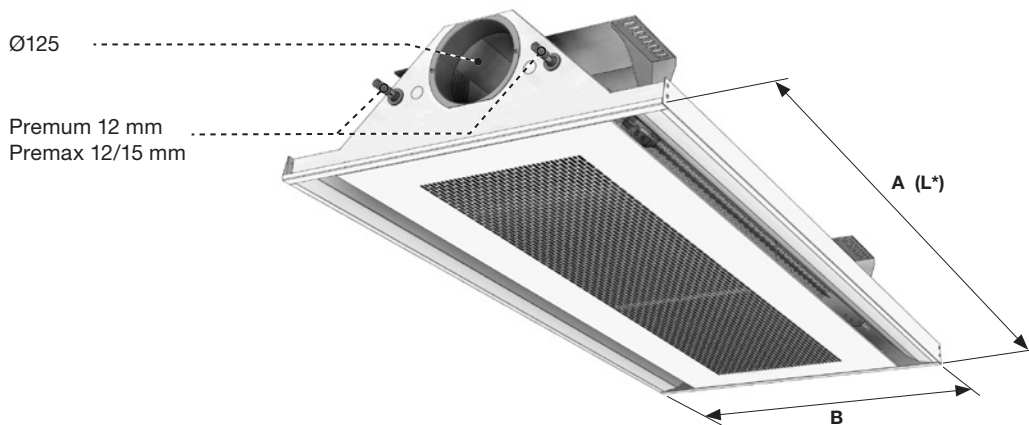
Installation instruction Premum/Premax

3. Product specification

3.1 Product description

The Premum/Premax air beams are standardly prepared for ventilation and cooling (2-pipe connection). They are available in ceiling system integrateable I-60, I-62 and X-60 models. As a plus feature also integrateable Y-60 and Z-60 models are available.

3.2 Dimensions



PREMAX	L* (mm)	A (mm)	B (mm)	kg / m	Ceiling type
I-60	1200, 1800, 2400, 3000, 3600	1192, 1792, 2392, 2992, 3592	592	18	1, 2
I-62	1200, 1800, 2400, 3000, 3600	1242, 1867, 2492, 3117, 3742	617		21, 22
X-60	1200, 1800, 2400, 3000, 3600	1199, 1799, 2399, 2999, 3599	599		3, 4, 5, 6, 7, 8, 14

Premax plus feature models

PREMAX	L* (mm)	A (mm)	B (mm)	kg / m	Ceiling type
Y-60	1200, 1800, 2400, 3000, 3600	1174, 1774, 2374, 2974, 3574	575	18	9, 11
Z-60	1200, 1800, 2400, 3000, 3600	1184, 1784, 2384, 2984, 3584	584		10

L* = Nominal length (Order length).

PREMUM	L* (mm)	A (mm)	B (mm)	kg / m	Ceiling type
I-60	1200 - 3600 (Steps of 100 mm)	1192 - 3592 (Steps of 100 mm)	592	15	1, 2,
I-62	1200, 1800, 2400, 3000, 3600	1242, 1867, 2492, 3117, 3742	617		21, 22
X-60	1200 - 3600 (Steps of 100 mm)	1199 - 3599 (Steps of 100 mm)	599		3, 4, 5, 6, 7, 8, 14

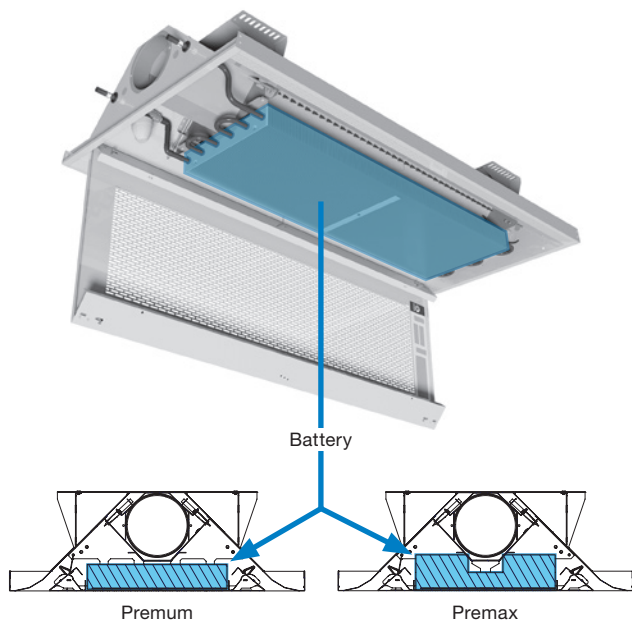
Premum plus feature models

PREMUM	L* (mm)	A (mm)	B (mm)	kg / m	Ceiling type
Y-60	1200 - 3600 (Steps of 100 mm)	1174 - 3574 (Steps of 100 mm)	575	15	9, 11
Z-60	1200 - 3600 (Steps of 100 mm)	1184 - 3584 (Steps of 100 mm)	584		10

L* = Nominal length (Order length).

Installation instruction Premum/Premax

3.3 Premum / Premax



3.4 Material data

Type	Premum	Premax
Dry weight [kg/m]	15	18
Water content, cooling [l/m]	0.6	1.2
Water content, heating [l/m]	0.2	0.2
Copper pipes quality	EN 12735-2 CU-DHP	
Pressure class	PN10	

Table 1. Material data

3.5 Environmental Declarations

Please follow the links below:

- [Building product declaration](#)
- [Declaration of conformity](#)
- [Eurovent certificate](#)

3.6 Pressure Class

The waterborne products in Lindab, active chilled beams (battery products), passive chilled beams (battery and strips products), facade units (battery) and radiant panels (strips and panels) are produced according to pressure class PN 10 according to EN 1333: 2006.

This means the maximal working pressure for the products at a water temperature of 20°C must not exceed 10 bar.

3.7 Water quality

Lindab recommend water treatment and quality to be according to VDI 2035-2.

- The water preparation and maintenance for the chilled beam water circuit must be handled by a specialist.
- To prevent corrosion, the water circuit must be airtight.
- The water system must also be equipped with aerators to remove any build-up air in the system.
- The water must be oxygen free, to prevent corrosion.
- The water system must be filled with potable water that complies with the "EC directive 98/83/EC."
- The pH value of water must be between approximately 6-9 pH.
- The water velocities should not exceed 1 m/s, and should be kept as close to the nominal flow as possible to minimize noise and optimize the energy yield.
- Use in-line strainers to remove dirt particles from the water.
- If the water contains any additive inhibitor, then it must be appropriate to use with copper and solder.

3.8 Air quality

Primary supply air have to be clean, dry and filtered before reaching the beam.

3.9 Capacity test

Lindabs active chilled beams are Eurovent-certified and tested according to EN-15116.



Please visit [Premum](#) or [Premax](#) on www.lindab.com and see [Eurovent](#) for more details.

Installation instruction Premium/Premax

4. Connections

4.1. Water connections

Flow indication arrows are shown on the inlet and return pipes in order to assist the installer.

If the control valves have been ordered separately, a special direction of the flow must be upheld to ensure correct flow through the control valve. Please note the flow direction indicator on the valve to insure correct installation in relation to the desired flow.

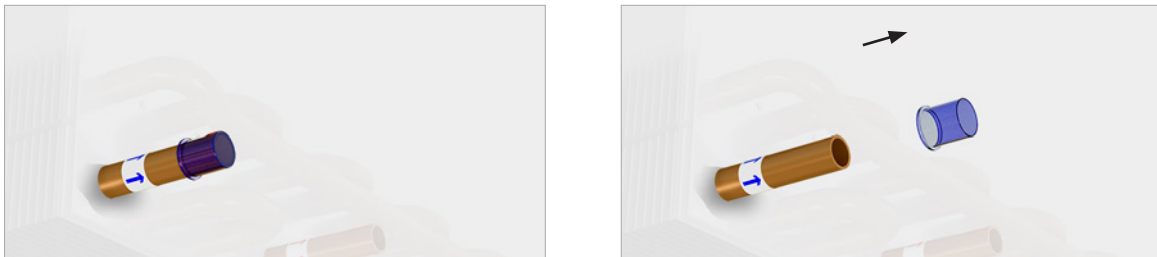
When connecting a panel or a beam with the piping system either a push-on fitting or a compression coupling should be used. Lindab have tested and recommends John Guest push on fittings as well as push-on fittings from Tectite (available as accessory. See [Accessories](#)).

To avoid sound being transported over the beam, we recommend to use our flexible hoses between the piping and the beam connections. See [Accessories](#).

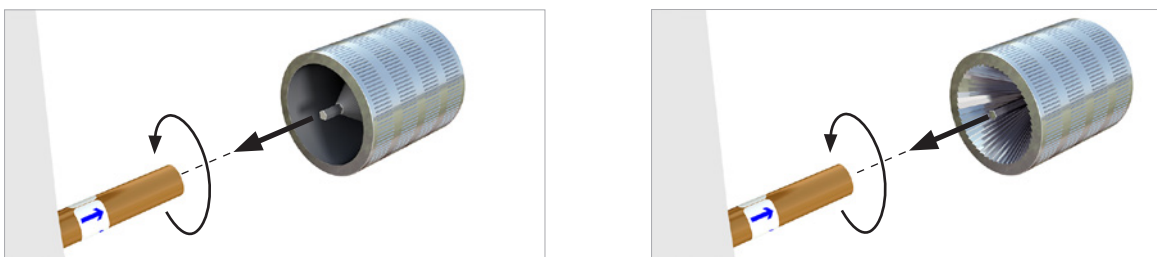
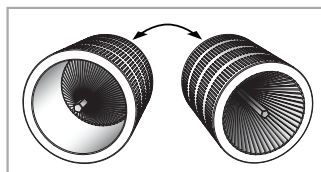
NB! Every control valve can create sound when it is installed directly connected to the water in- or outlet (or into the piping in close distance to the in- or outlet of the water product). To avoid unwanted sound generation we recommend to always use a Lindab control valve [LinFlow-A](#) (angled) or [LinFlow-S](#) (straight) and calculate the beam with the valve in [LindQST\waterborne calculator](#).

4.1.1 Before installation

- Notice! The connection pipes are internally soft-welded, therefore it is not allowed to solder the beam to the pipes. For other than Lindab fittings and valves, please consult the installation guide for the specific fitting for further details on proper installation.
- Both inlet- and return pipes are covered by a plastic or rubber protection cover, which must be removed before installation.



- After removing the protection cover, make sure that the pipe is intact and undamaged, especially at the pipe end, as even small dents and scratches potentially pose a risk of leakage in the system.
- Eventually deburr the pipe ends on the inside and the outside, using a deburring tool before installation.



- Always remember to do a pressure test after assembly the pipe work.

Installation instruction Premum/Premax

4.1.2 Push-on valve

- Mount a push-on valve to the pipe. Make sure the valve has the correct flow direction (see indication arrow on the valve) and that you have the correct valve, when integrated valve has been chosen (see indication on valve or follow cabelling to Regula Connect card). Cooper inserts aren't required!
- Please refer to the suppliers manual.

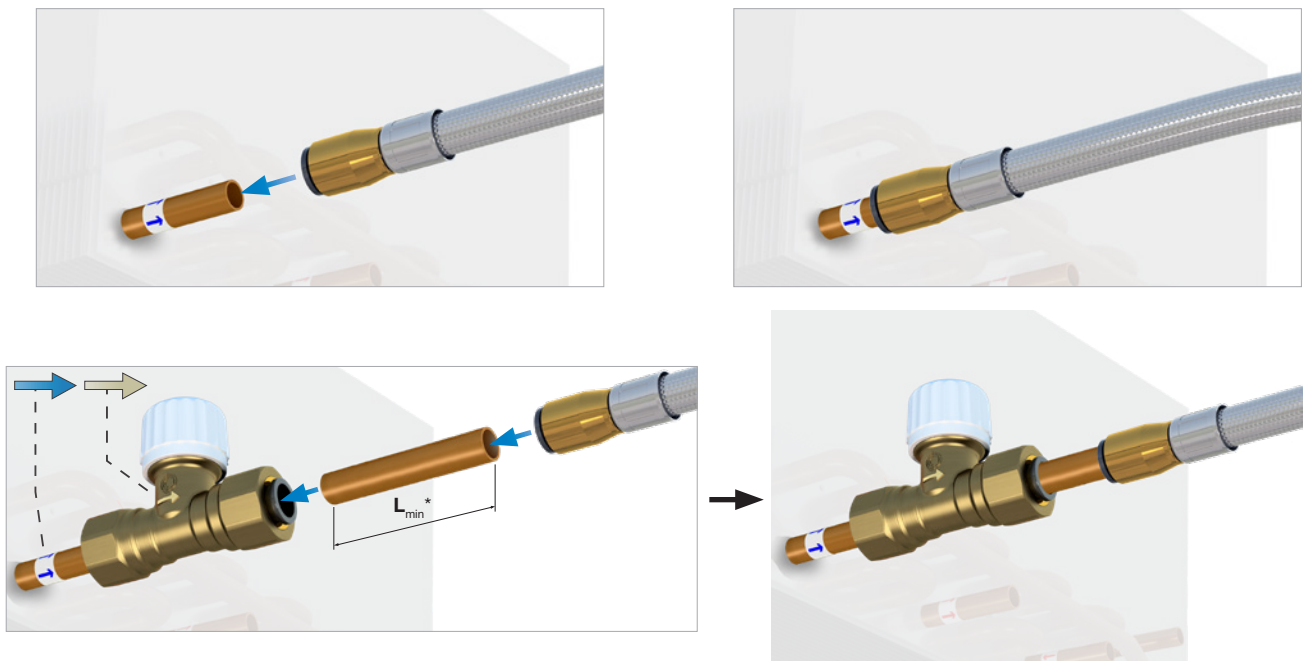


4.1.3 Compression fitting

- While mounting a compression fitting, the pipe will be exposed to a big amount of force, creating a risk of crushing the pipe. To ensure that the pipe won't be crushed when mounting the compression fitting, a copper insert must be inserted into the pipe (always part of the delivery).
- The copper insert should be placed inside the pipe on the beam. Always support the copper pipe coil when inserting the copper insert into position.
- Mount a compression coupling and/or a valve to the pipe. Don't stress the nut too much, since this may crush the pipe.
- Please refer to the suppliers manual.

4.1.4 Flexible hoses

- Our flexible hoses with straight ends can be used with both push-on and compression fitting.
- We recommend to use our flexible hoses with push-on fittings, for easier and faster mounting.
- For the connection to an enclosed valve with integrated push on coupling a flexible hose with straight end (male) or with push on (female) and a short copper pipe can be used.
- Please refer to the suppliers manual.



* $L_{min} = 70 \text{ mm}$ (to ensure you can open the couplings again).

Lindab flexible hoses are available with straight end (male) for direct connection to Lindab valves also.

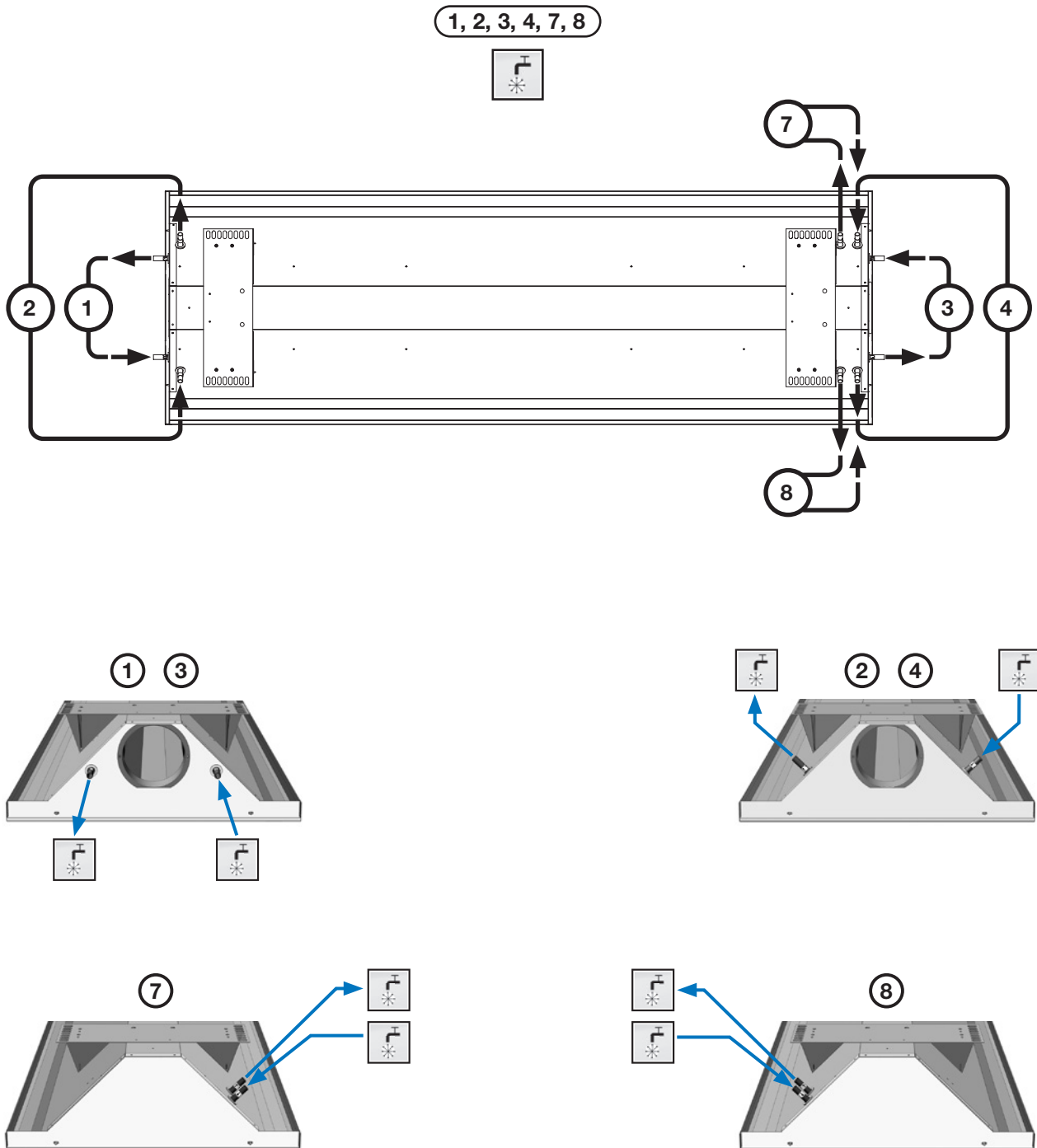
Installation instruction Premum/Premax

4.1.5 Possible connections water cooling (2-pipe, standard)

All the Premum/Premax active chilled beams are in the standard version equipped with a so called “2-pipe connection” and contain one water circuit (cooling).

The dimension for all water pipe connections are 12 mm. Besides, the Premax can also be configured with 15 mm pipe connections.

Premum/Premax I-60, I-62, X-60 cooling (standard), Y-60, Z-60 (plus features).



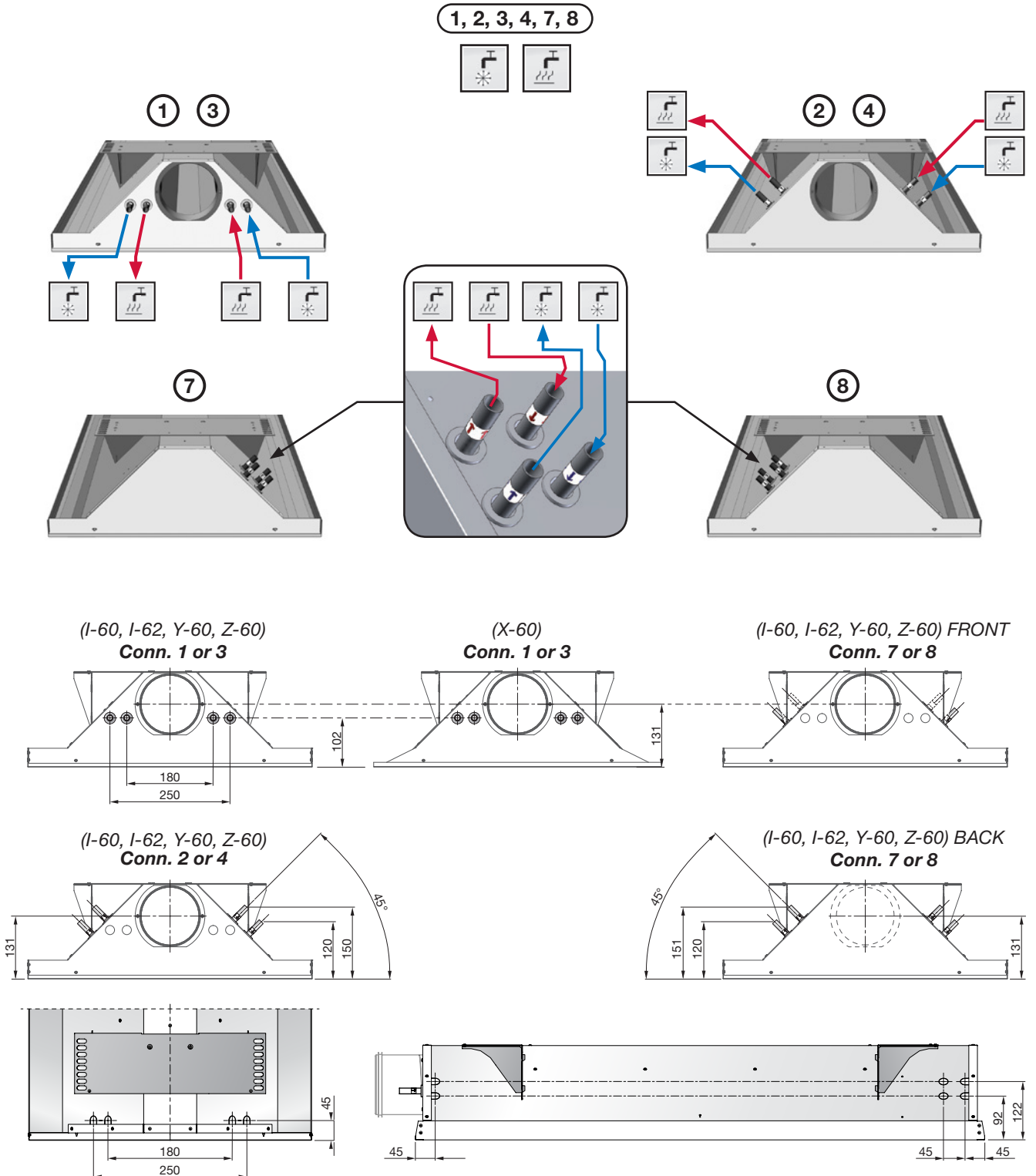
Installation instruction Premum/Premax

4.1.6 Possible connections water cooling and heating (4-pipe, plus feature)

All Pemum/Premax' can have a 4-pipe water connection (plus feature), beside the cooling circuit also includes a heating circuit.

The dimension for all water pipe connections are 12 mm. Besides, the Premax can also be configured with 15 mm pipe connections (cooling only!).

Premum/Premax I-60, I-62, X-60, Y-60, Z-60 cooling and heating (plus feature).



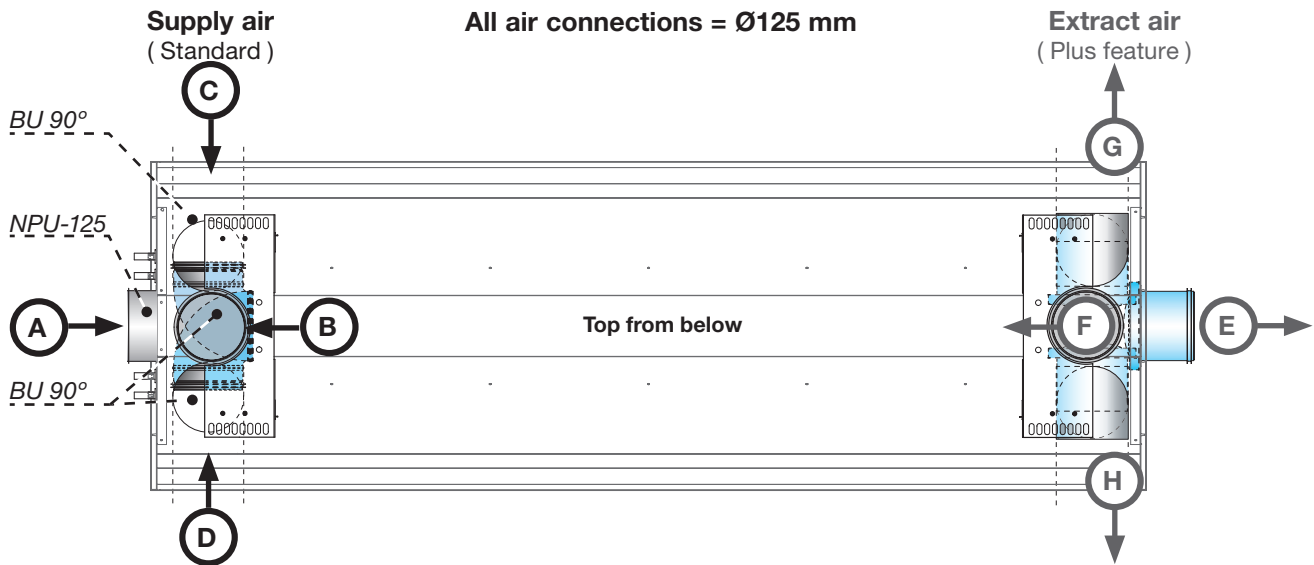
Installation instruction Premium/Premax

4.2 Air connections

4.2.1 Air connection installation

The primary air supply must be connected with instructions from a ventilation specialist. Lindab's chilled beams can beneficially be used together with Lindab's Safe® duct systems.

We recommend a flexible duct connection, like Lindab DRATMFU-125, to balance out different installation heights or directions between connection and duct and avoid sound will be diverted from piping system to the ceiling.

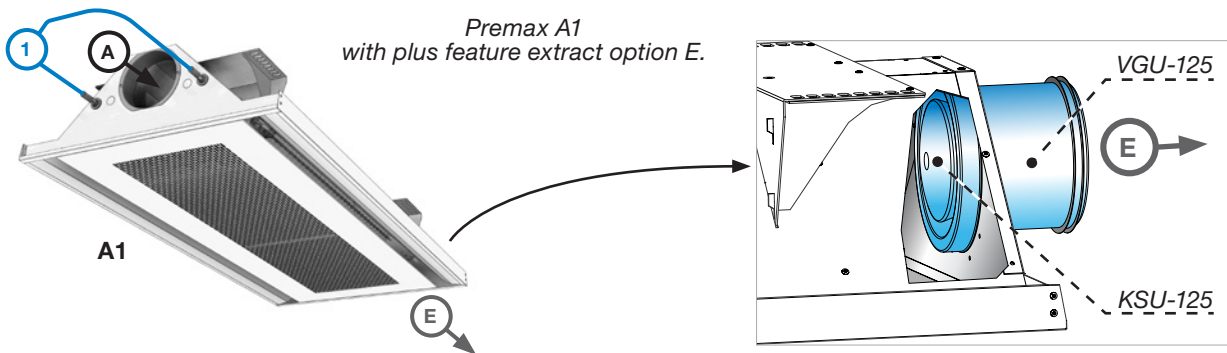


4.2.2 Possible connections supply air (A, B, C, D)

Connection A is delivered with Lindab's standard nipple NPU-125. For connection B, C and D Lindab's elbow piece BU 90° is included.

4.2.3 Possible connections extract air (plus feature) (E, F, G, H)

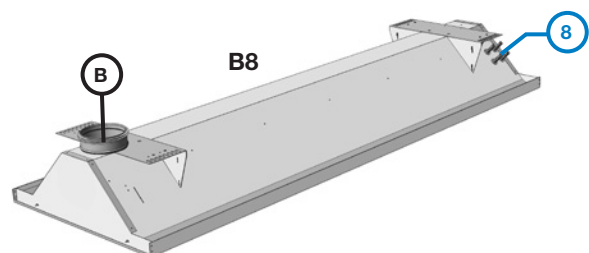
Extract air connections must be placed at opposite end of chosen supply air connection. All 4 extract combinations are possible, BUT NOTE THAT extract air outlets can not be placed at the same point as the water inlet/outlets. The extract air plus feature includes a KSU-125 valve and a VGU-125 or a BU90°-125 piece as standard.



4.3 Possible combinations of connections (standard)

Possible Premium /Premax connections, Supply air (A, B, C, D) and water (1, 2, 3, 4, 7, 8).

- A: 1, 2, 3, 4, 7, 8
- B: 1, 2, 3, 4, 7, 8
- C: 3, 4, 7, 8
- D: 3, 4, 7, 8

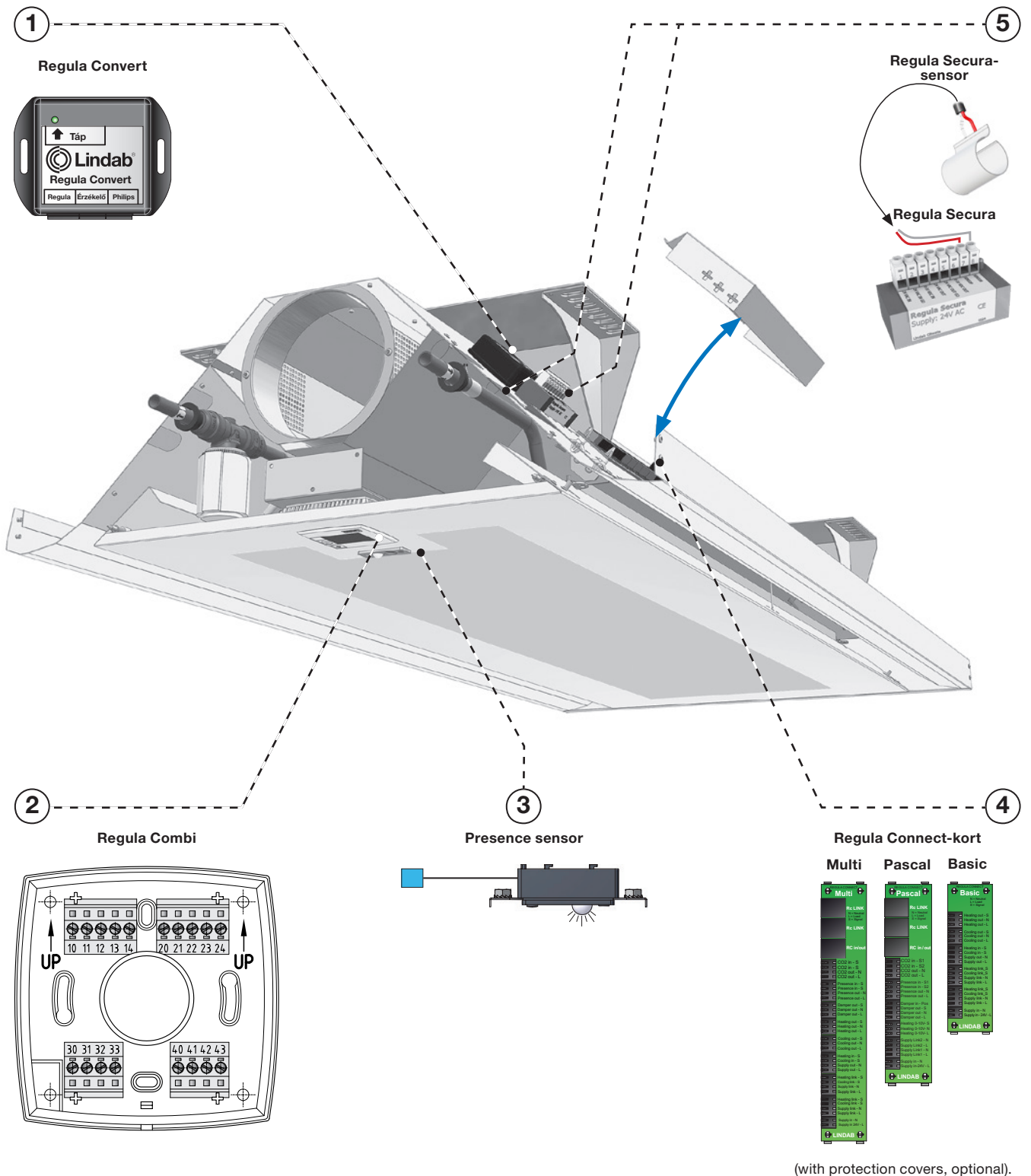


Installation instruction Premum/Premax

4.4 Electrical connections

Electrical connections on the beam are only necessary, when plus features are chosen and thanks to the pre-fabrication it is as easy as “plug and play”. The components are always installed near the water-connection at the end of the beam. For further information, see [Regula](#).

4.4.1 Regula components on the beam

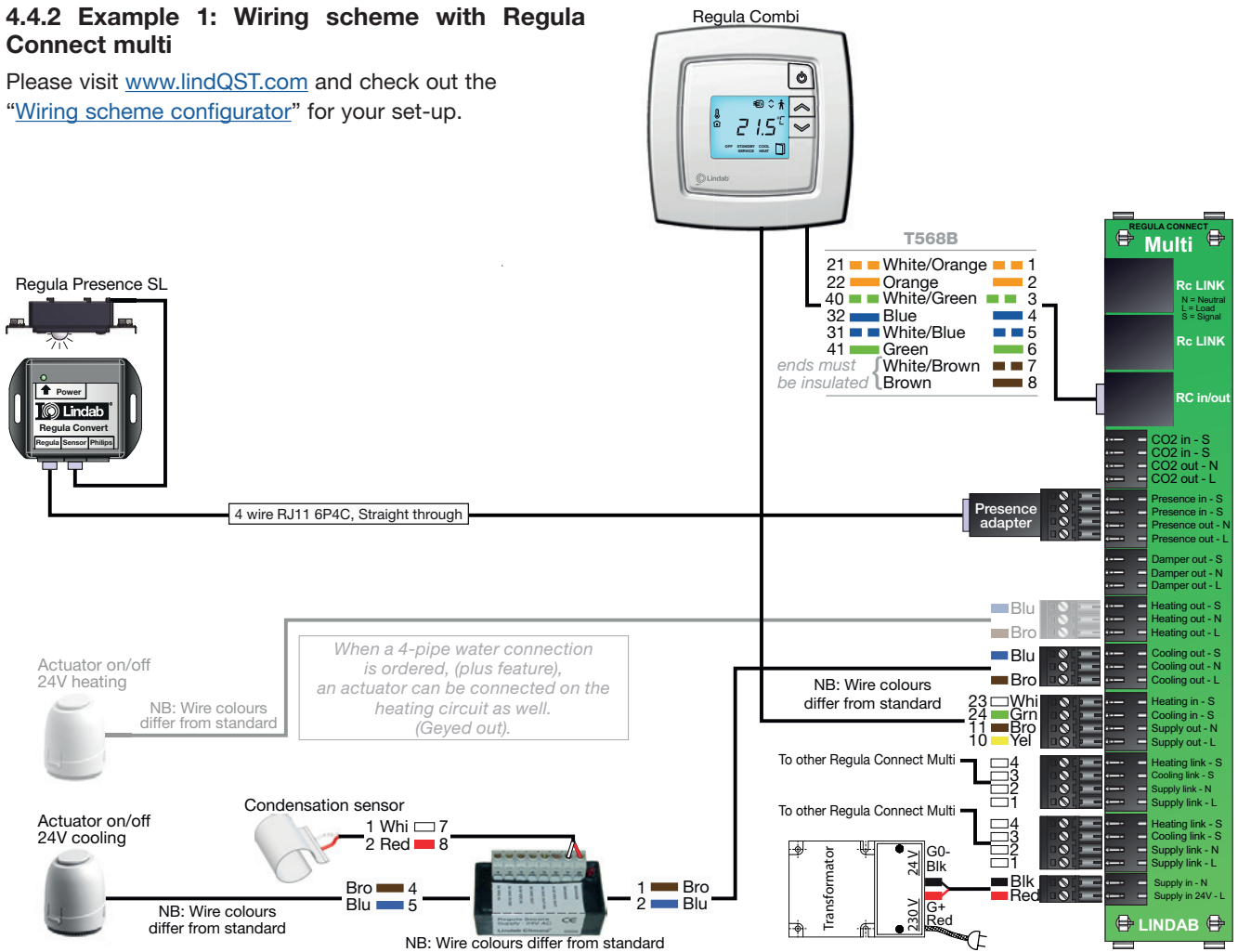


(with protection covers, optional).

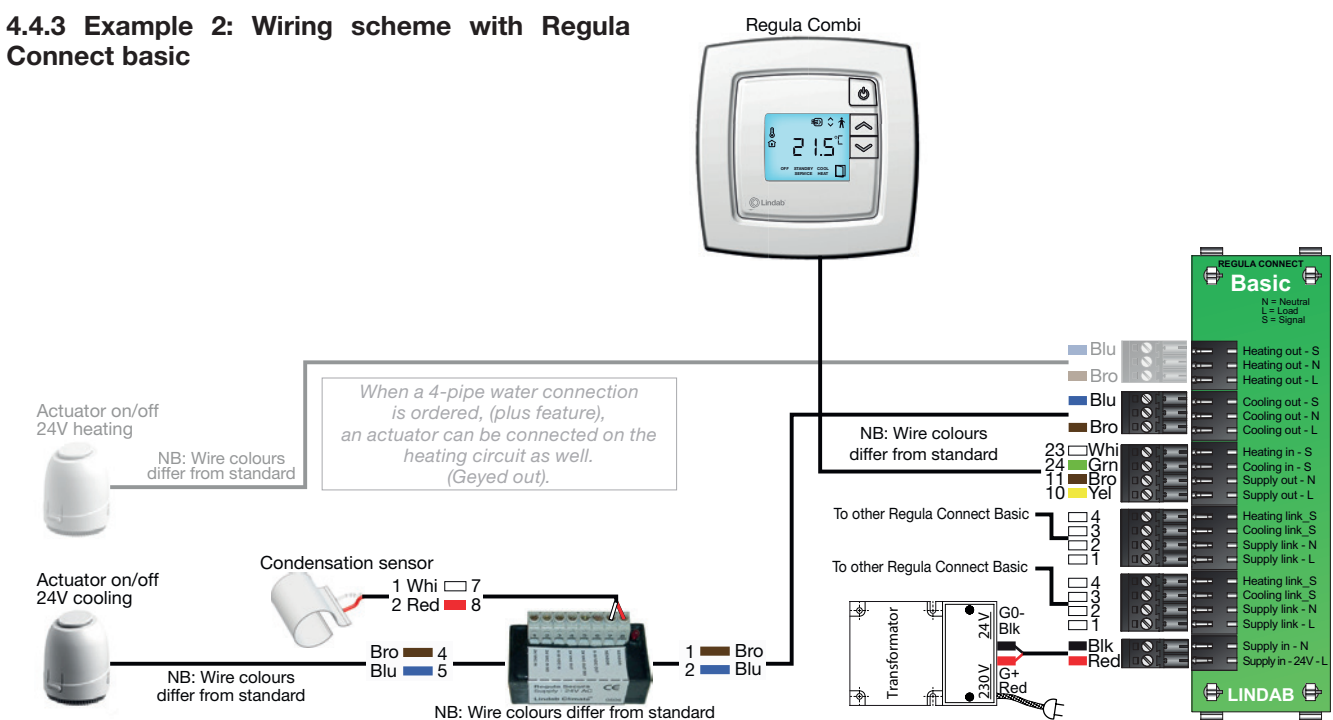
Installation instruction Premium/Premax

4.4.2 Example 1: Wiring scheme with Regula Connect multi

Please visit www.lindqst.com and check out the "Wiring scheme configurator" for your set-up.



4.4.3 Example 2: Wiring scheme with Regula Connect basic



Installation instruction Premum/Premax

4.4.4 Regula Connect on the beam

Connect cards are pre-installed when the beam is ordered with PLUS-features. See [Regula Connect](#) for more details.

Regula Connect Basic



Regula Connect Pascal



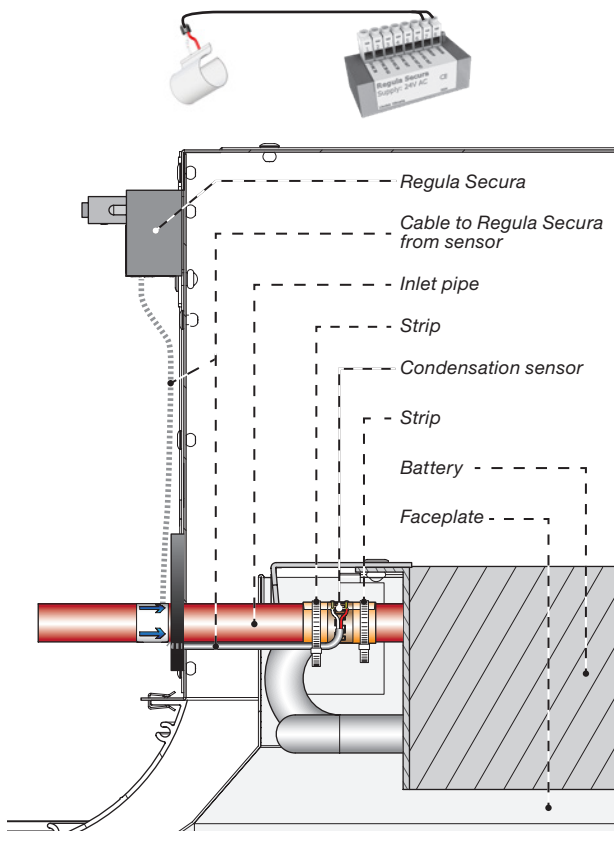
Regula Connect Multi



4.4.5 Regula Secura on the beam

Regula Secura is pre-installed when the beam is ordered with PLUS-features. See [Regula Secura](#) for more details.

Condensation sensor and Regula Secura



4.4.6 Valves and Actuators on the beam

Description, see 2.16.3 and 2.16.4

4.4.7 Regula Combi on/with the beam

The Regula Combi can be controlled and programmed locally in the display, or at a remote location by a EXOLINE or MODBUS communication system. Handles both 24V and 0-10V devices.



See the [Regula Combi](#) documentation.

4.4.8 Actuators

Description, see 2.16.4.

Installation instruction Premium/Premax

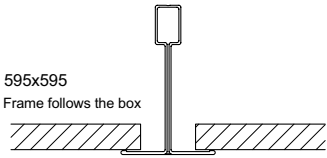
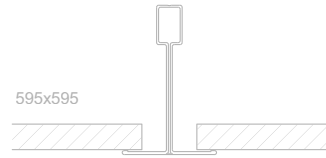
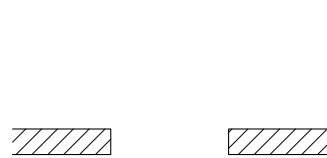
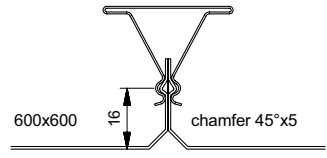
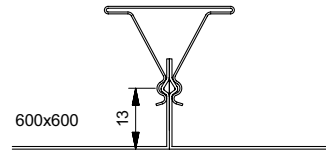
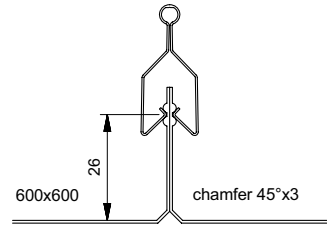
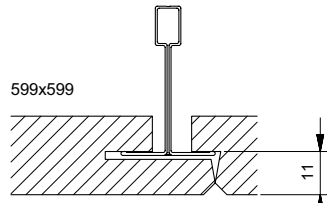
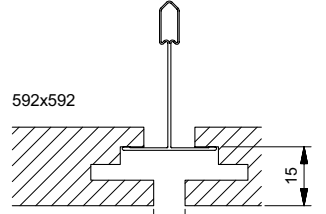
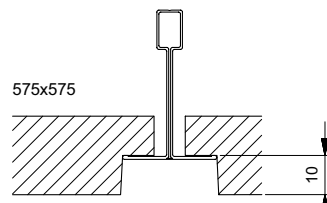
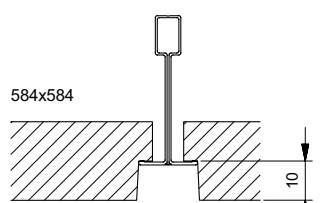
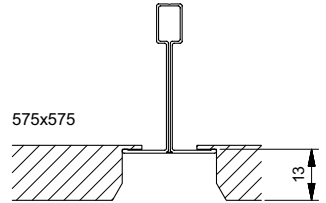
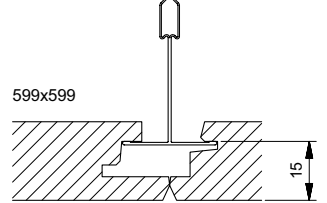
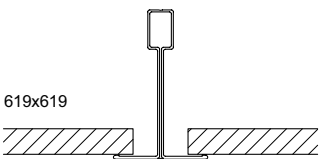
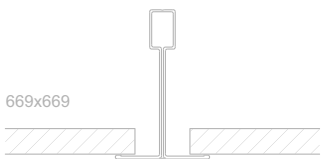
5. Installation of product

5.1 Handling of product

For the handling of the product please refer to 2.5.

5.2 Adaption to ceiling systems

5.2.1 Ceiling systems

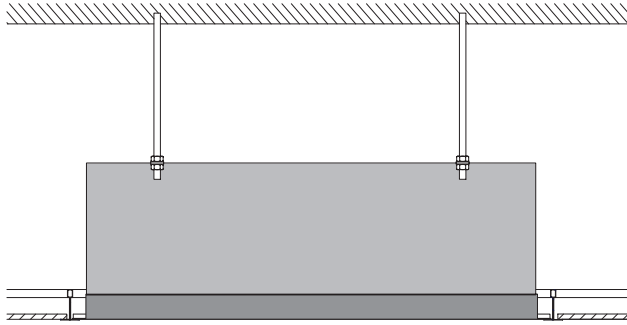
<p>① T24/T15 Lay-in 600 (I-60) Water Danotile T24/T25 Ecophon T24 Rockfon A24</p>  <p>595x595 Frame follows the box</p>	<p>② T24/T15 Lay-in 600 (I-60) Water not cleanable</p>  <p>595x595</p>	<p>③ Permanent ceiling (X) Water</p> 
<p>④ Dampa Clip-in bevelled edge (X) Water</p>  <p>600x600 16 chamfer 45°x5</p>	<p>⑤ Dampa Clip-in square edge (X) Water</p>  <p>600x600 13</p>	<p>⑥ Luxalon SQ Clip-In (X) Water</p>  <p>600x600 26 chamfer 45°x3</p>
<p>⑦ Danotile Contur (X) Water Ecophon D Rockfon D-XL</p>  <p>599x599 11</p>	<p>⑧ Ecophon Focus DG (X) Water</p>  <p>592x592 8 15</p>	<p>⑨ Rockfon E10_24 (Y) Water Ecophon - E / T24</p>  <p>575x575 10 (Plus feature)</p>
<p>⑩ Rockfon E10_15 (Z) Water Ecophon - E / T15</p>  <p>584x584 10 (Plus feature)</p>	<p>⑪ Danotile Markant (Y) Water</p>  <p>575x575 13 (Plus feature)</p>	<p>⑭ Ecophon Focus DS (X) Water Rockfon Sonar X</p>  <p>599x599 15</p>
<p>⑳ T24/T15 Lay-in-625 (I-62) Water ㉑ T24/T15 Lay-in-625 (I-62) Water not cleanable</p>  <p>619x619</p>	<p>㉒ T24/T15 Lay-in-675 (I-67) Water ㉓ T24/T15 Lay-in-675 (I-67) Water not cleanable</p>  <p>669x669</p>	

Installation instruction

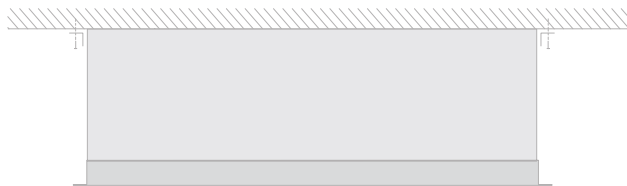
Premum/Premax

5.3 General installation principles

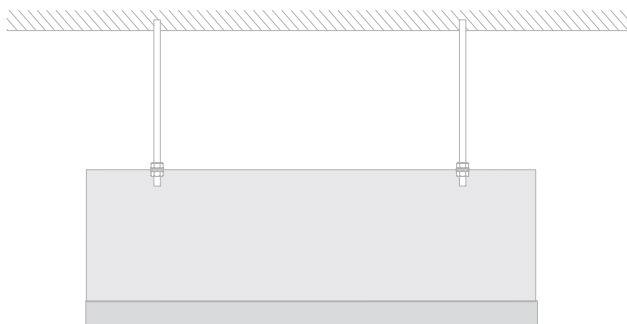
5.3.1 Recessed in suspended T-bar ceiling



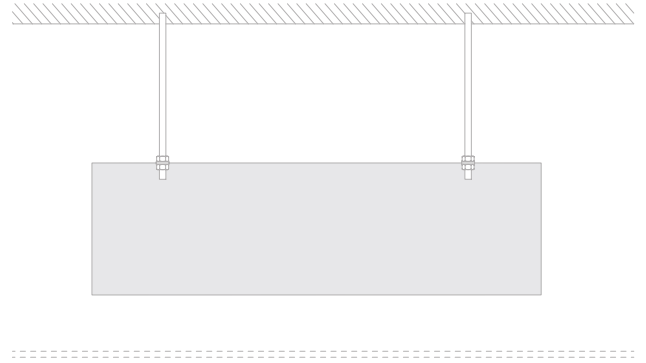
5.3.2 Exposed, sealed to the ceiling



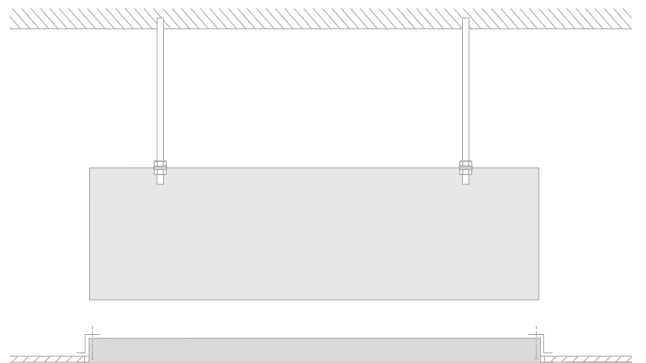
5.3.3 Exposed, free hanging



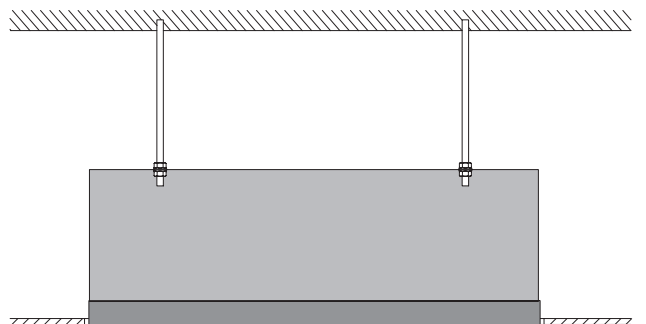
5.3.4 Free hanging above perforated or egg-crate ceiling



5.3.5 Recessed in suspended (permanent) ceiling



5.3.6 Recessed in suspended (permanent) ceiling without cover flanges.

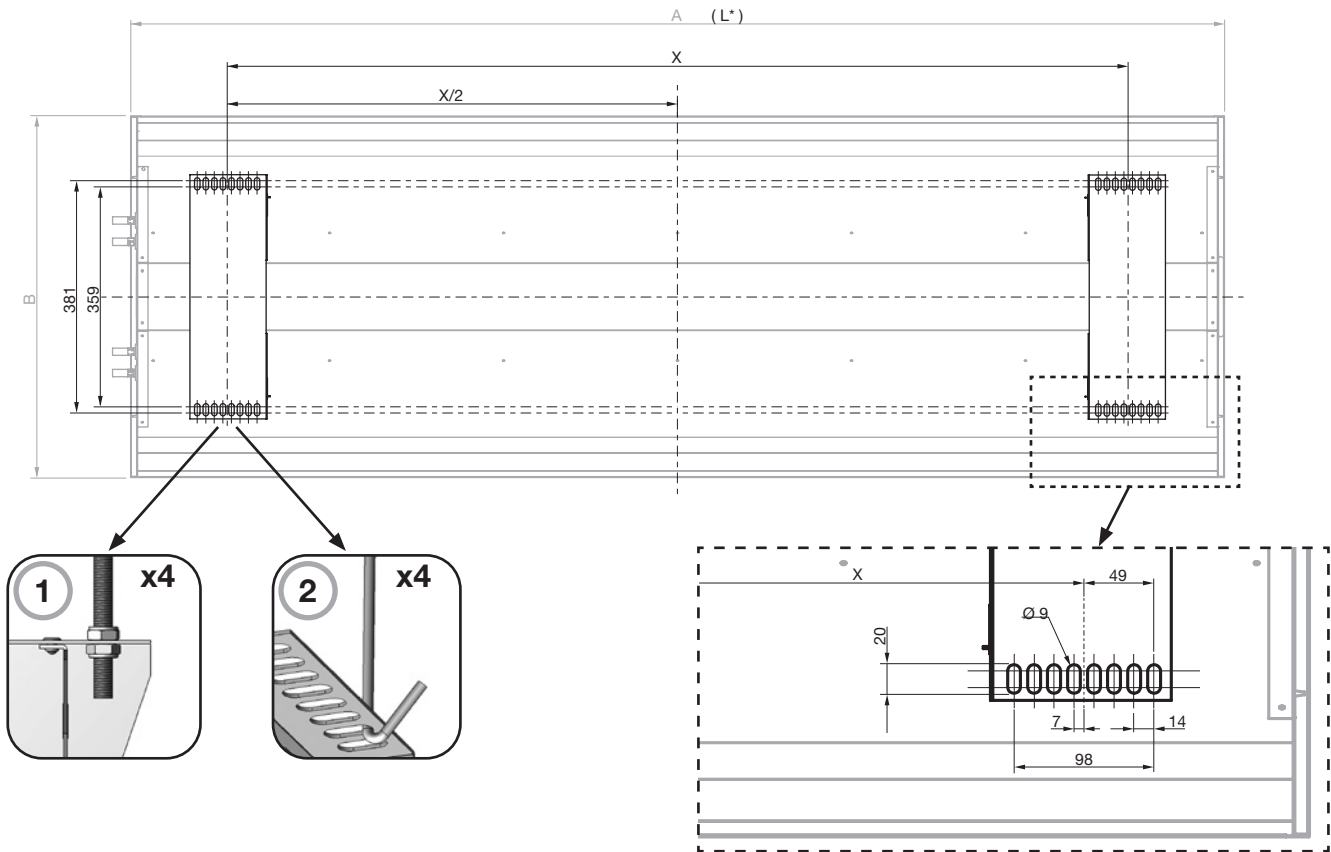


Installation instruction Premum/Premax

5.4 Preparation for installation on the product

The beam is prepared for installation by hangers (4 x per beam).

- Threaded rods M8
- Pendulum hangers (in different sizes)



PREMAX	L* (mm)	A (mm)	B (mm)	X (mm)
I-60	1200, 1800, 2400, 3000, 3600	1192, 1792, 2392, 2992, 3592	592	L - 325 (875, 1475, 2075, 2675, 2675, 3275)
I-62	1200, 1800, 2400, 3000, 3600	1242, 1867, 2492, 3117, 3742	617	
X-60	1200, 1800, 2400, 3000, 3600	1199, 1799, 2399, 2999, 3599	599	

Premax plus feature models

PREMAX	L* (mm)	A (mm)	B (mm)	X
Y-60	1200, 1800, 2400, 3000, 3600	1174, 1774, 2374, 2974, 3574	575	L - 325
Z-60	1200, 1800, 2400, 3000, 3600	1184, 1784, 2384, 2984, 3584	584	

PREMUM	L* (mm)	A (mm)	B (mm)	X
I-60	1200 - 3600 (Steps of 100 mm)	1192 - 3592 (Steps of 100 mm)	592	L - 325
I-62	1200, 1800, 2400, 3000, 3600	1242, 1867, 2492, 3117, 3742	617	
X-60	1200 - 3600 (Steps of 100 mm)	1199 - 3599 (Steps of 100 mm)	599	

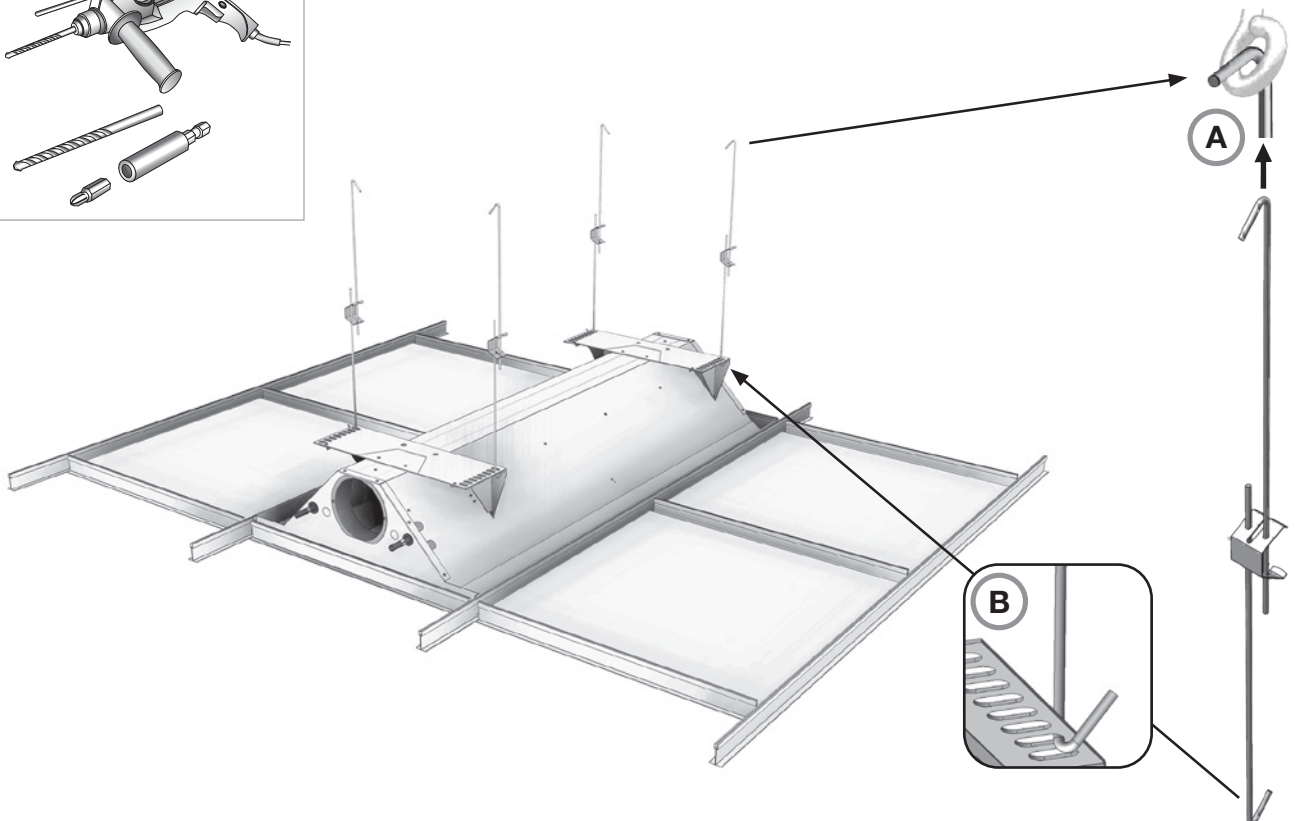
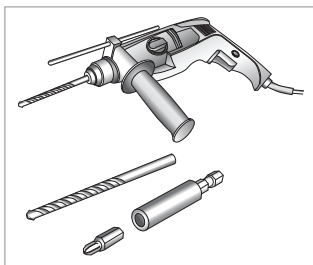
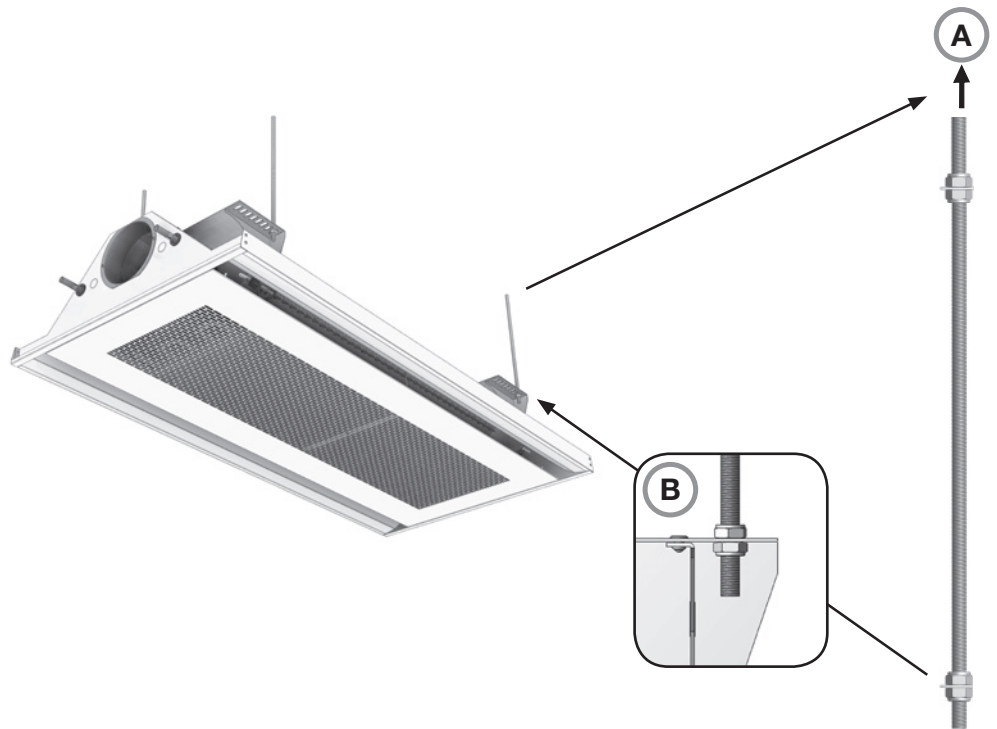
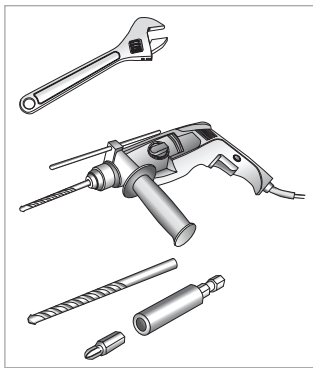
Premum plus feature models

PREMUM	L* (mm)	A (mm)	B (mm)	X
Y-60	1200 - 3600 (Steps of 100 mm)	1174 - 3574 (Steps of 100 mm)	575	L - 325
Z-60	1200 - 3600 (Steps of 100 mm)	1184 - 3584 (Steps of 100 mm)	584	

L* = Nominal length (Order length).

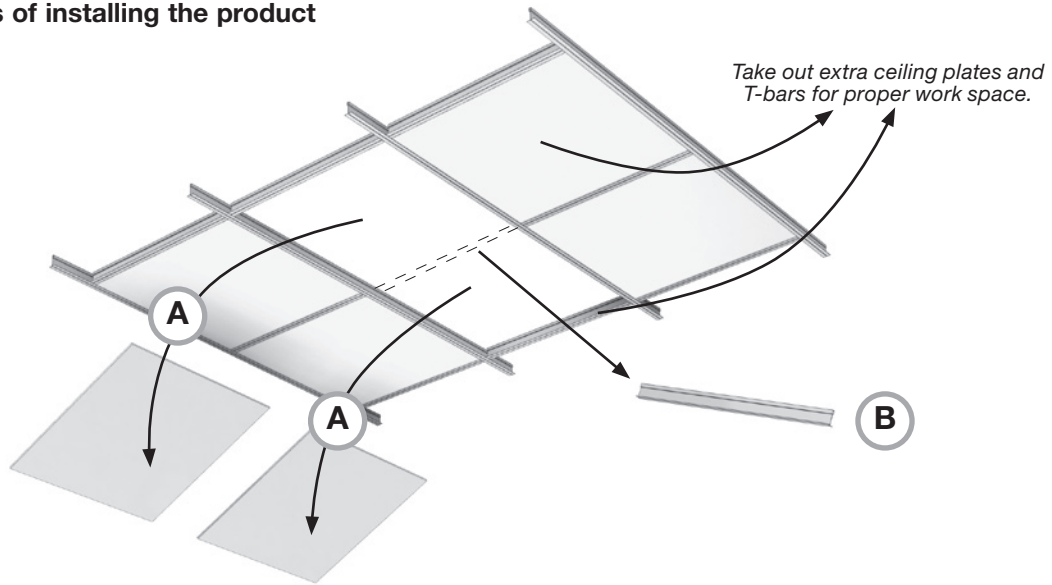
Installation instruction

Premum/Premax

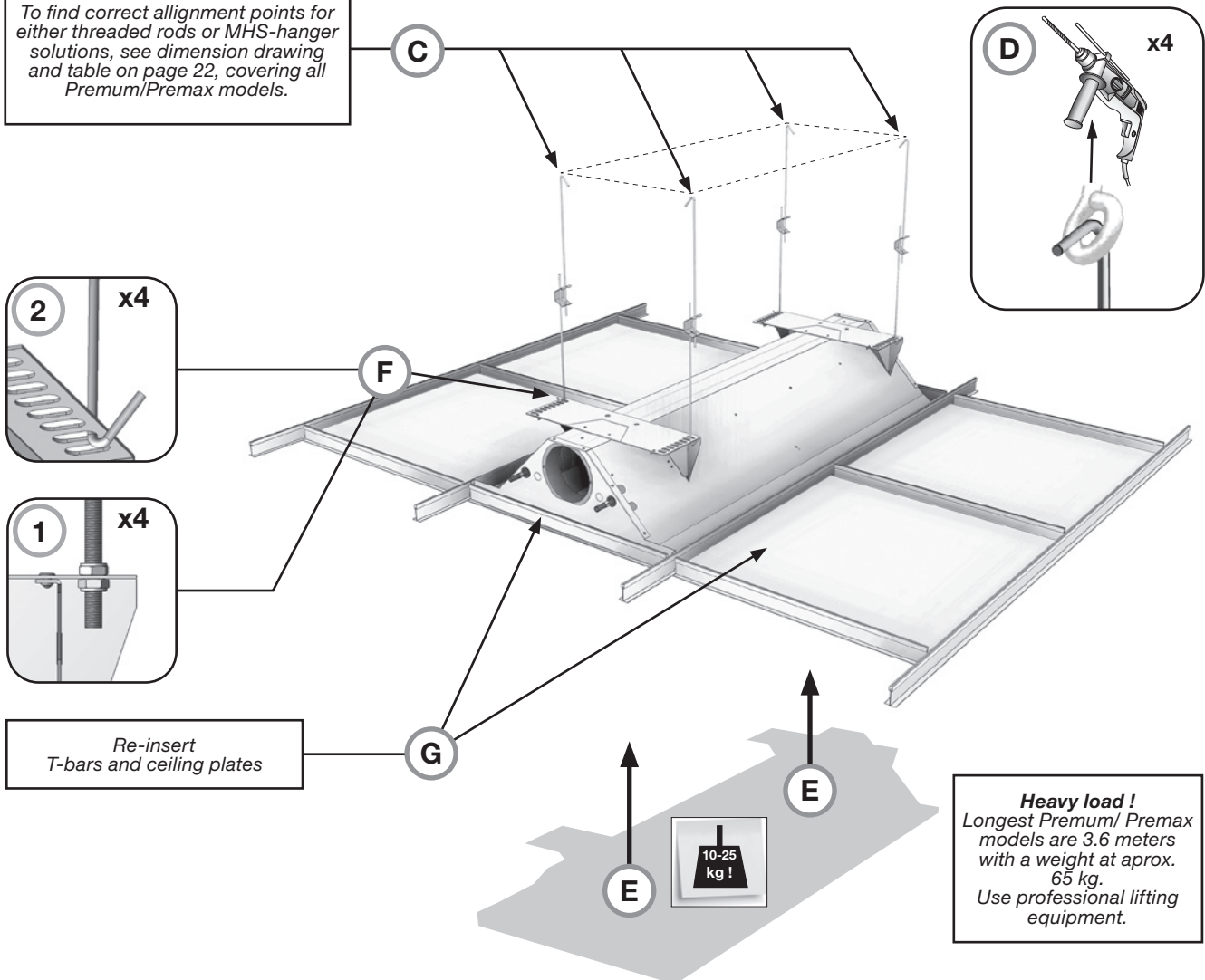


Installation instruction Premum/Premax

5.5. Basics steps of installing the product



To find correct alignment points for either threaded rods or MHS-hanger solutions, see dimension drawing and table on page 22, covering all Premum/Premax models.



Note that this installation procedure shows installation in an existing T-bar ceiling. In a completely new building the beams will often be installed before the ceiling system.

Installation instruction Premum/Premax

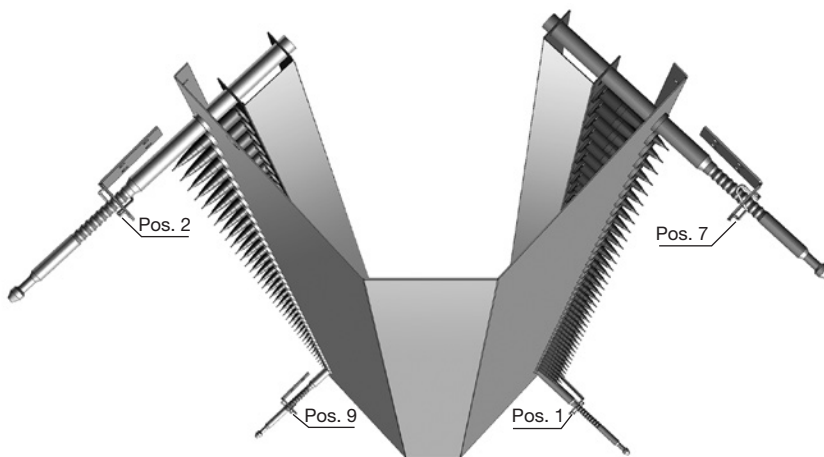
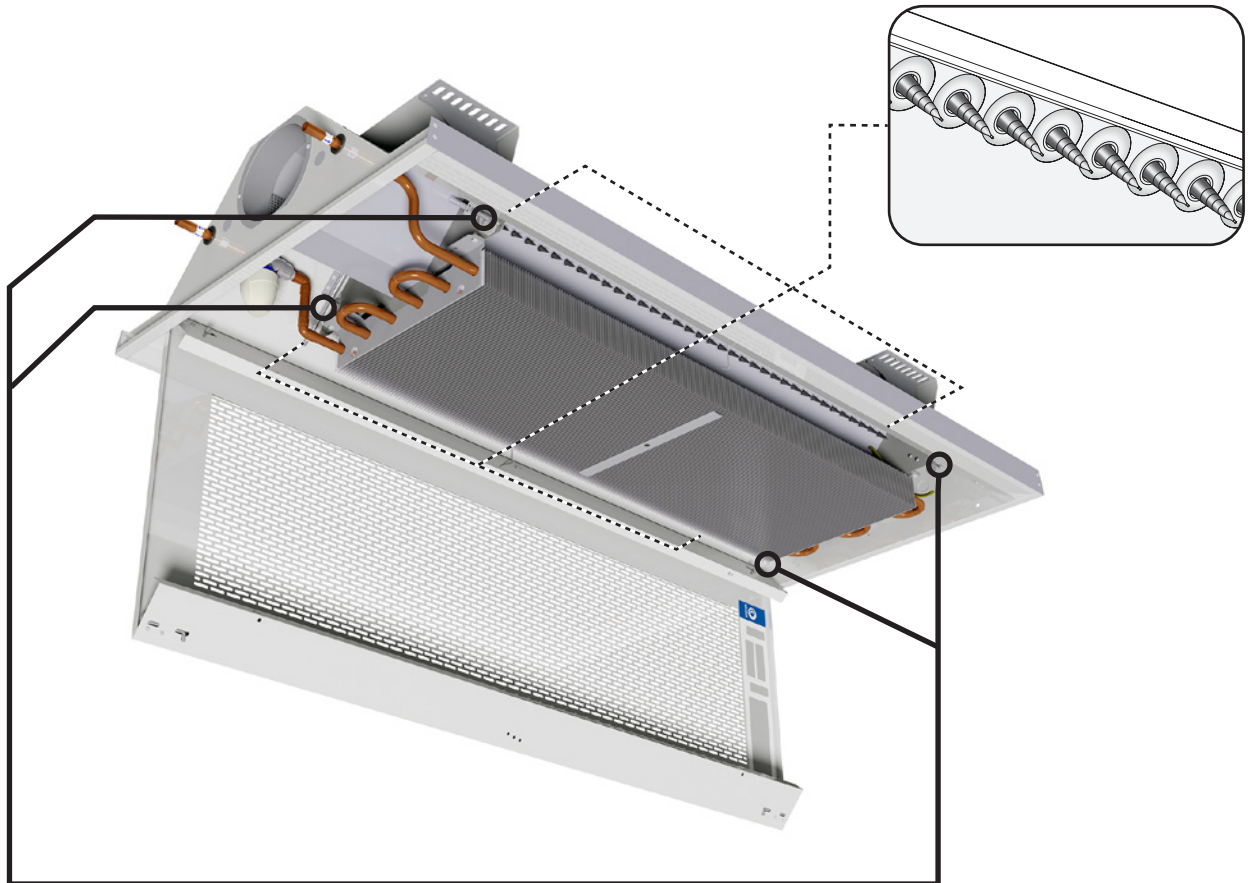
6. Adjustment and commissioning

6.1 Airflow and pressure

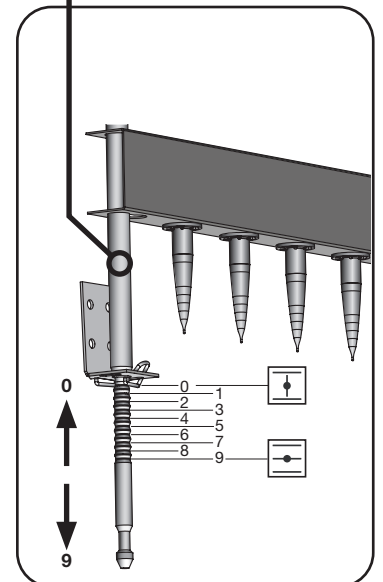
The JetCone System enables an easy and fast adjustment in both pressure and air volume (primary airflow rate) through the front side.

6.1.1 Jetcone adjustment pins

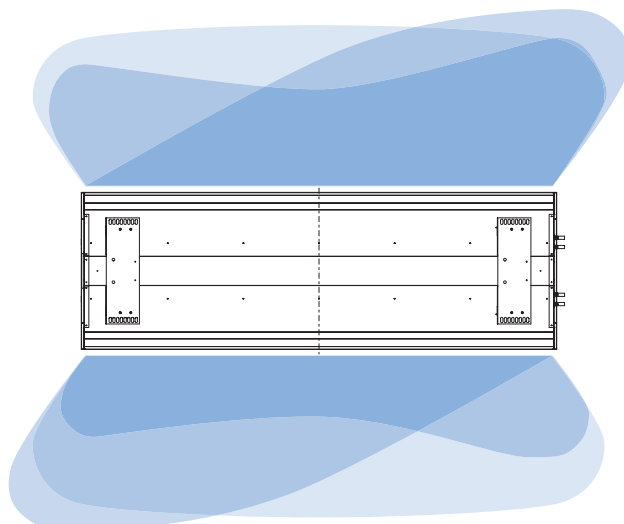
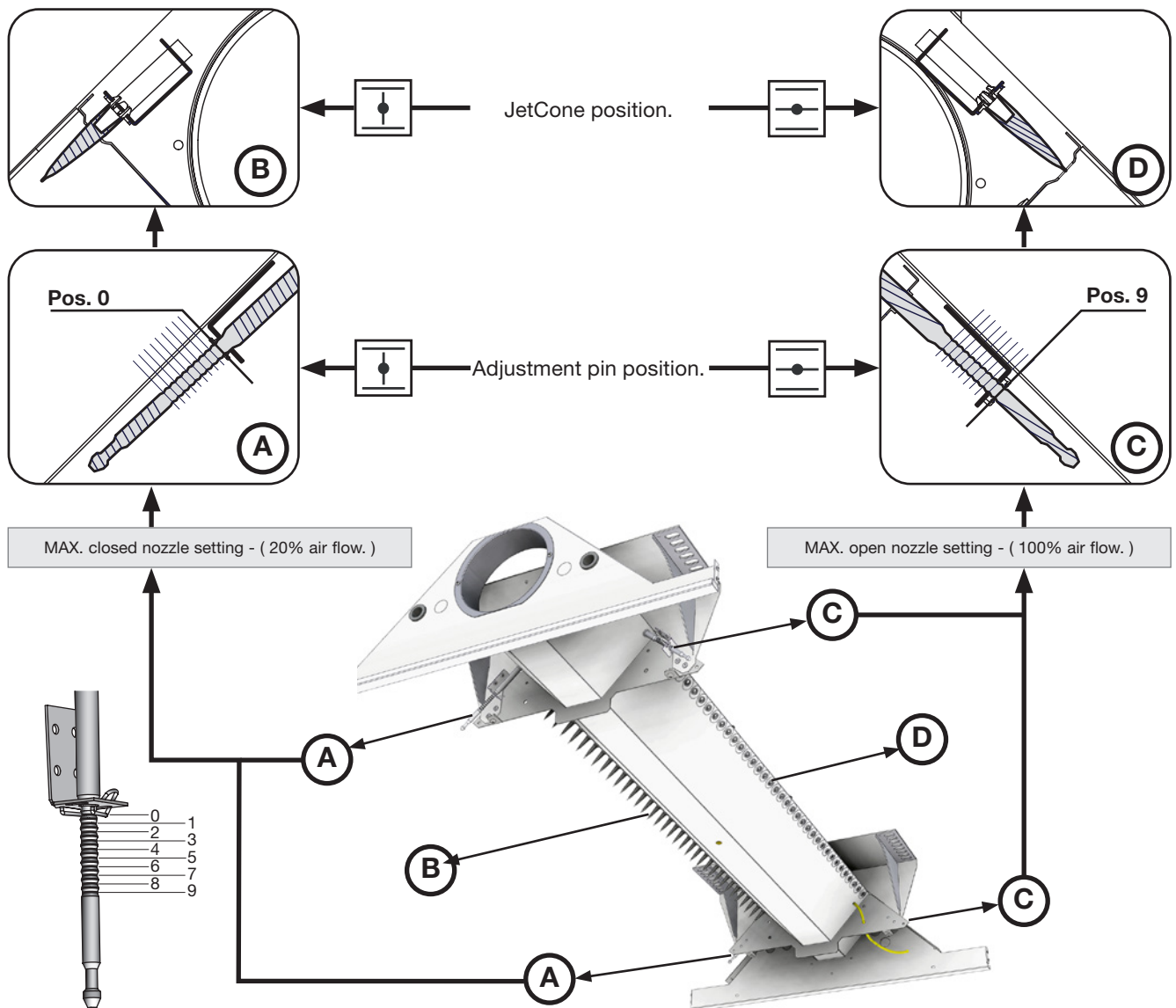
Premum seen from below with faceplate open, showing location of the 2 Nozzles with JetCone units and the 4 adjustment pins.



Example showing asymmetrical adjustment pin settings.



Installation instruction Premum/Premax



Example of different air patterns that can be obtained using different pin positions.

Installation instruction

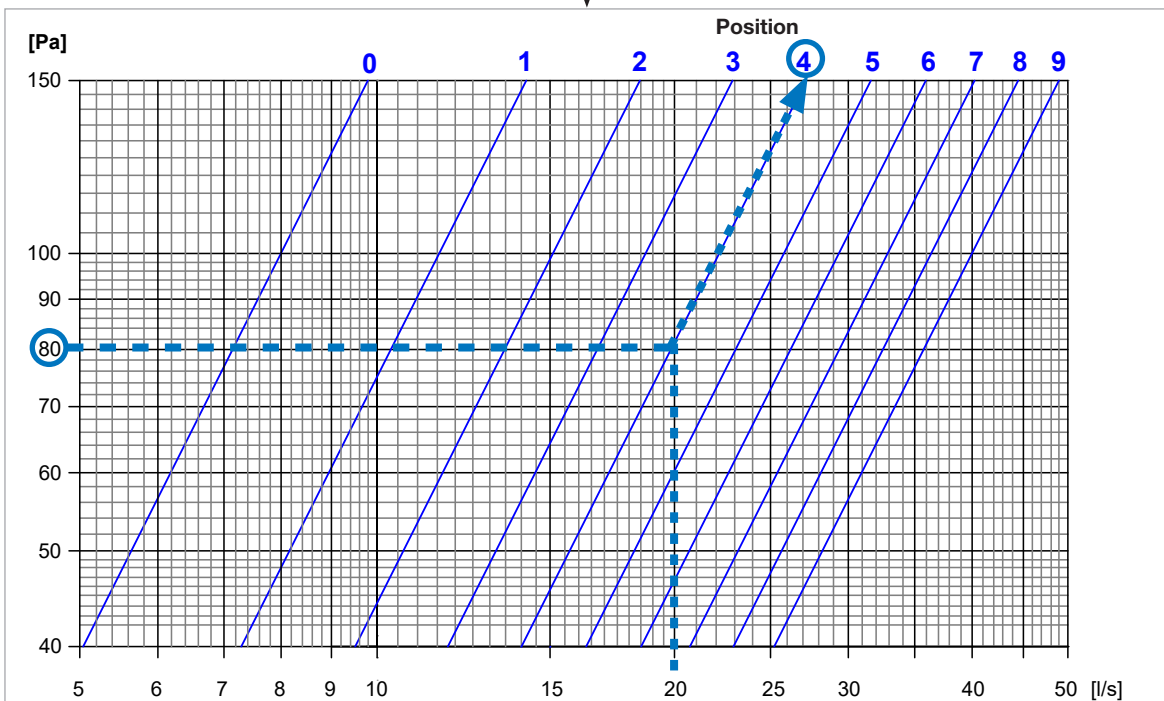
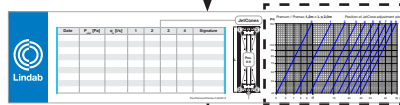
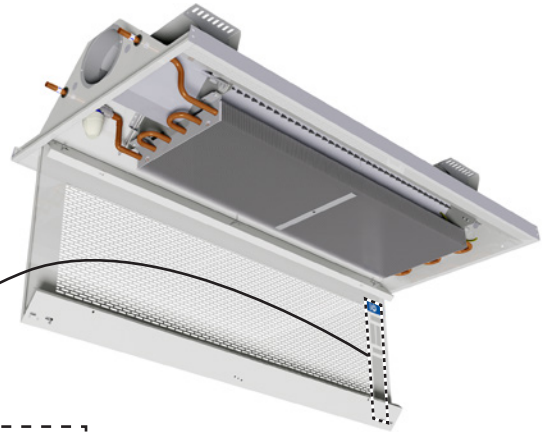
Premum/Premax

6.1.2 Finding values for JetCone pins

Example 1: (Valid for Premum/Premax $1.2 \text{ m} \leq L \leq 2.0 \text{ m}$)

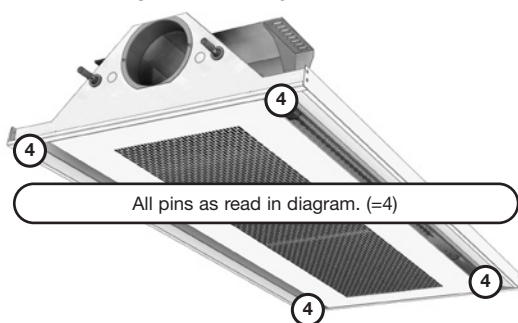
Premax-I-60-12-125-A1-1800-80-20

$\Delta p_{\text{stat}} = 80 \text{ Pa}$ (Static pressure)
 $q_a = 20 \text{ l/s}$ (Primary airflow rate)

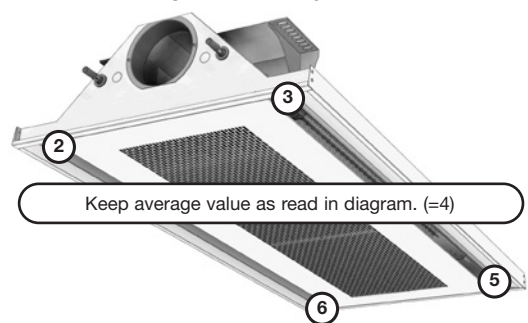


6.1.3 Adjusting air flow and pressure with JetCone pins.

Symmetric adjustment



Asymmetric adjustment



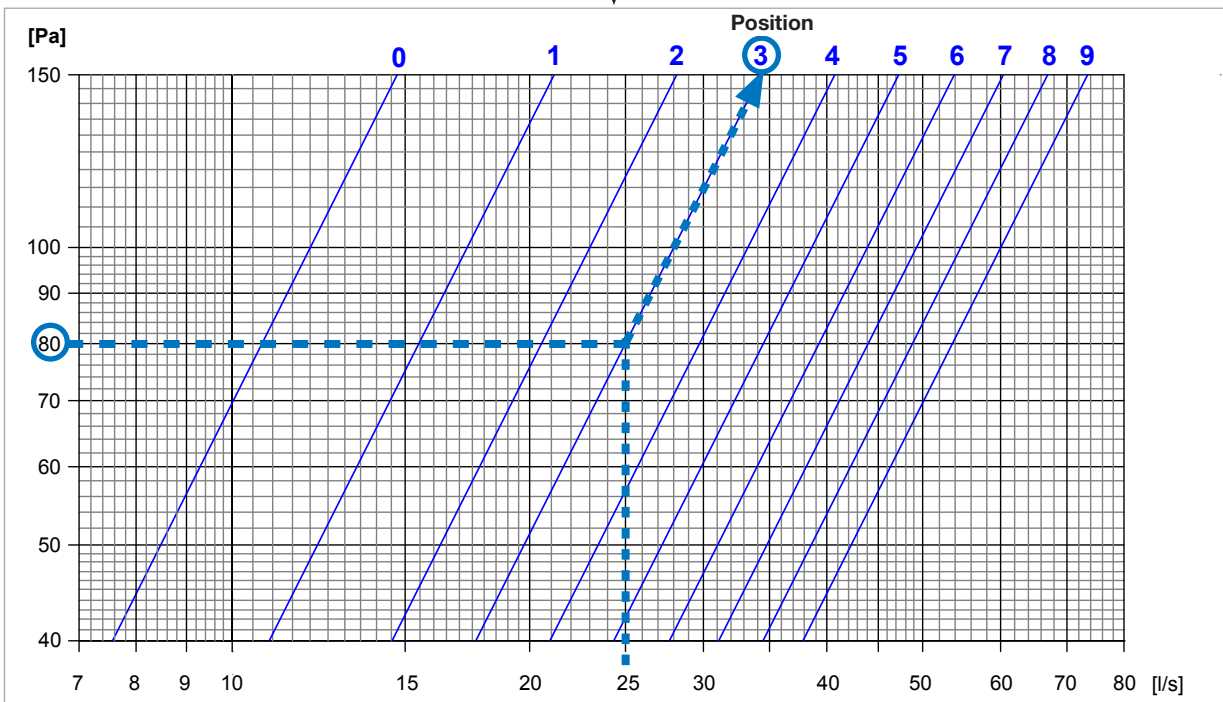
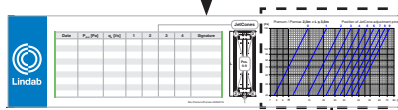
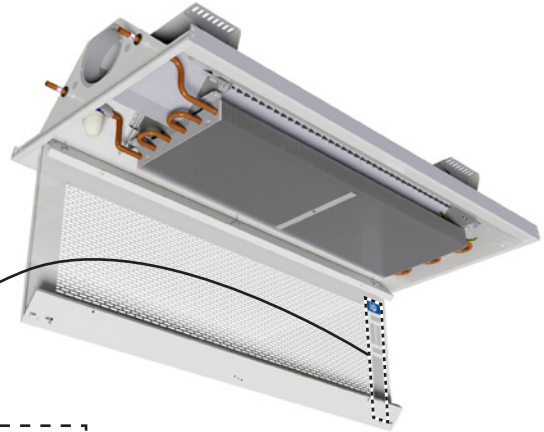
Installation instruction Premum/Premax

Finding values for JetCone pins

Example 2: (Valid for Premum/Premax 2.0 m < L ≤ 3.6 m)

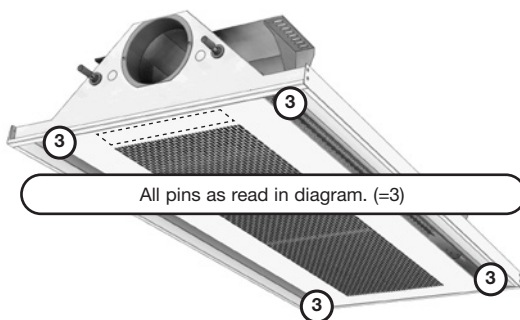
Premax-I-60-12-125-A1-2400-80-25

Δp_{stat} = 80 Pa (Static pressure)
 q_a = 25 l/s (Primary airflow rate)

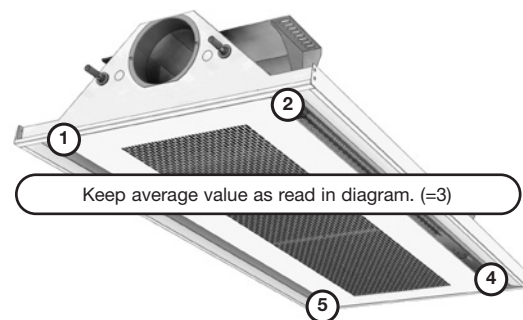


Adjusting air flow and pressure with JetCone pins

Symmetric adjustment



Asymmetric adjustment



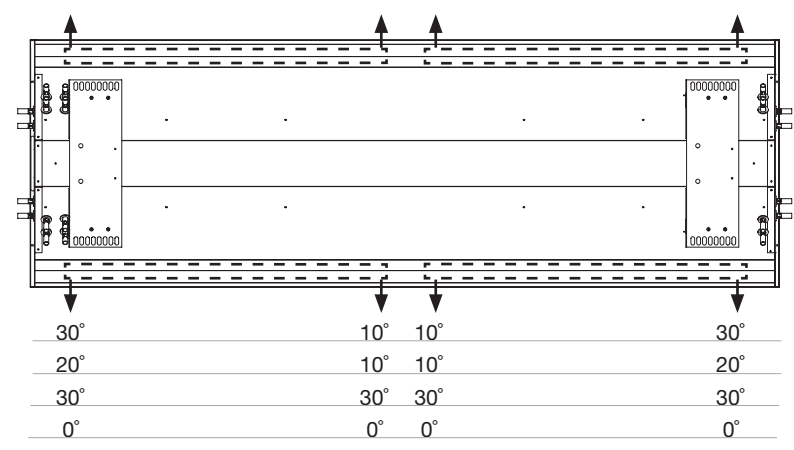
Installation instruction Premum/Premax

6.2 Adjustment of air distribution profile (plus feature)

Premum/Premax' come as standard with fixed angled JetCone Nozzles. As a plus feature the inlet faceplate comes with the Lindab Airguide system pre-installed and pre-adjusted from factory, offering a readjustable air spread pattern control.

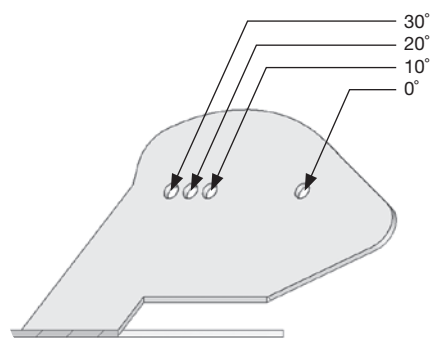
The Faceplate include 4 separate adjustable deflectors.

Recommended configurations

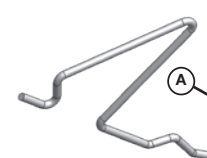


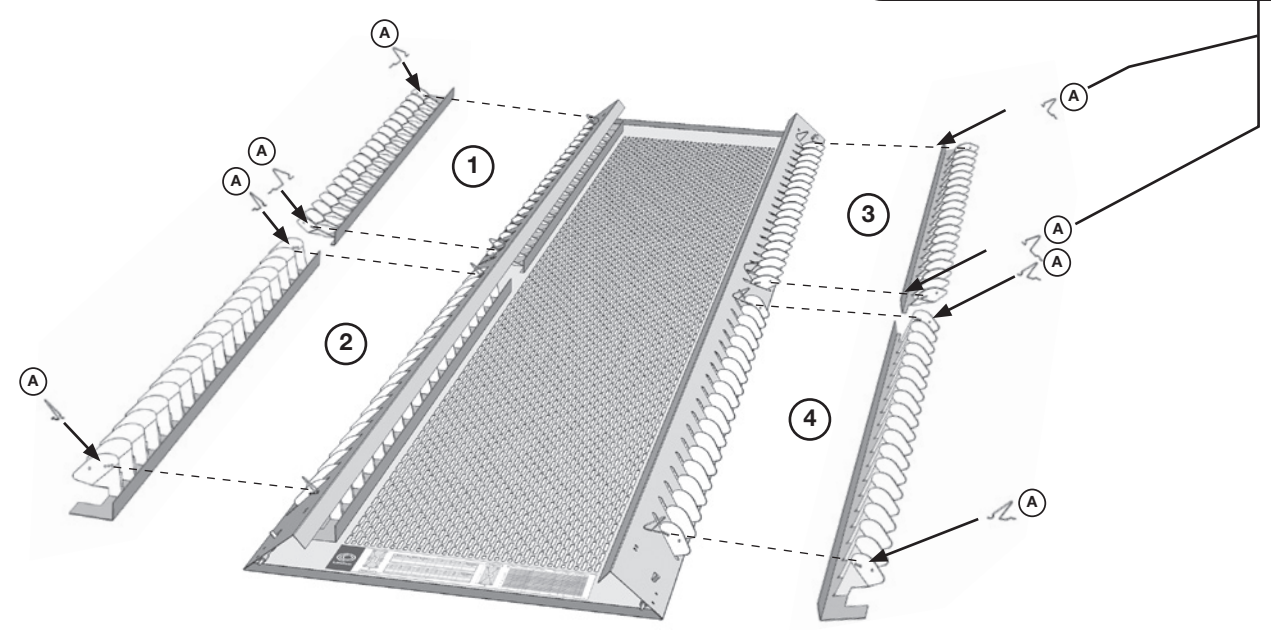
30°	10°	10°	30°
20°	10°	10°	20°
30°	30°	30°	30°
0°	0°	0°	0°

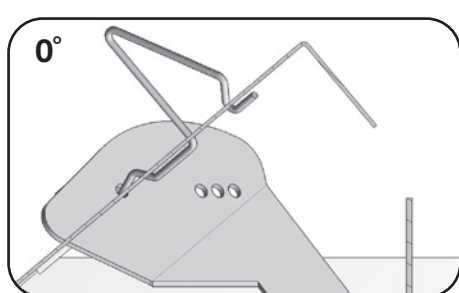
4 x 2 possible positions / deflector



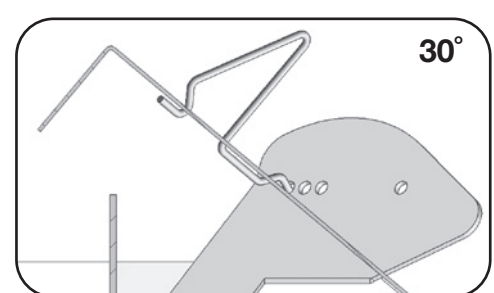
Each deflector has 2 adjustment "clips".







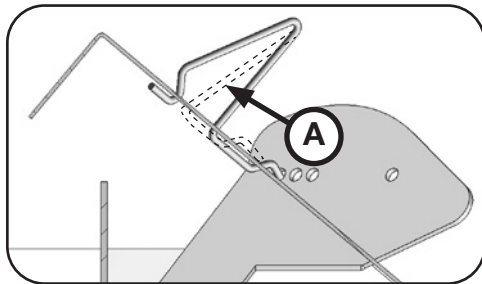
0°



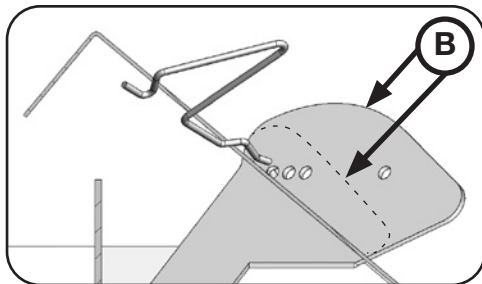
30°

Installation instruction Premium/Premax

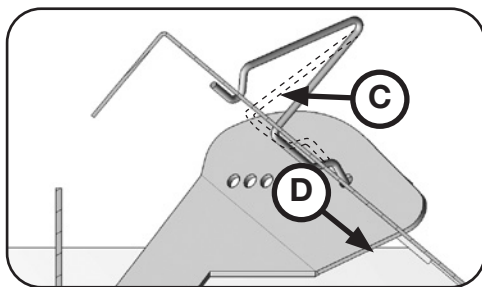
Reposition adjustment "clips." (Lindab Airguide system).



Press and release "clips" from deflector position.



Align deflector at desired position.



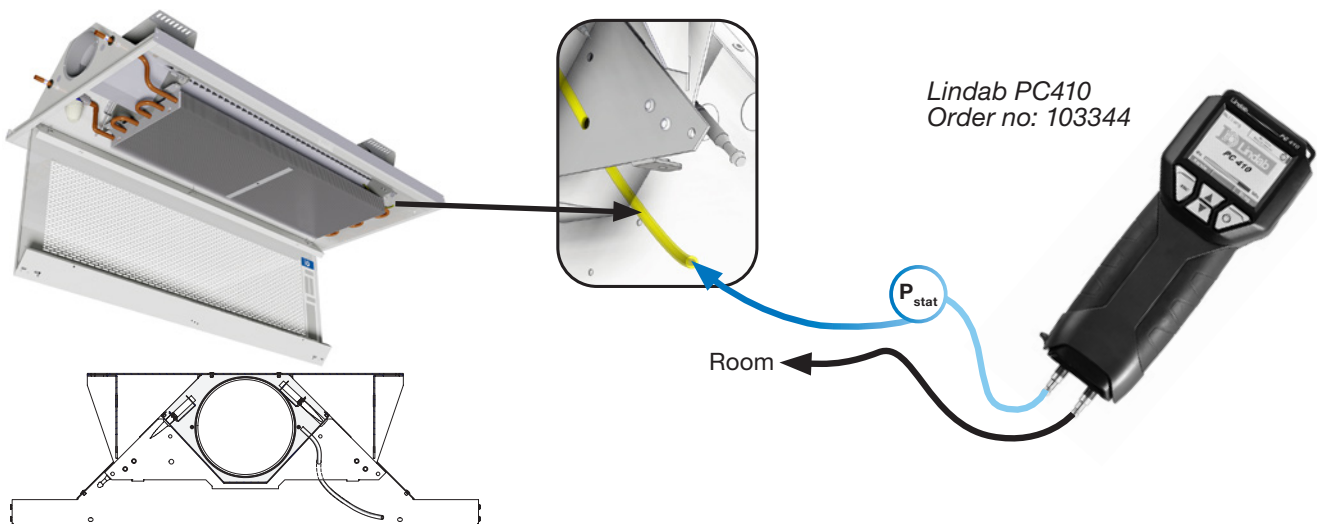
Press and release "clip" so it slips into new position.

6.3 Measuring air pressure and calculating the air flow

Before calculating the airflow, the static nozzle pressure must first be measured. The static nozzle pressure is the air pressure available at the nozzles.

6.3.1 Measuring static nozzle pressure and air pressure

- To measure the air pressure, a manometer, (analogue or digital) will be needed. Lindab recommends PC410.
- Insert the measuring tube onto the specialized measuring nozzle.
- Read of the static nozzle pressure from the manometer (PC410).



Installation instruction Premum/Premax

6.3.2 Calculating the actual air flow

- After measuring the static pressure, read the settings of the four JetCone adjustment pins to find the mean value of the pins.
- Locate the diagram inside the openable perforated faceplate, (also see diagrams in 6.3.5), and use the static nozzle pressure and the mean value of the pins to find the current airflow.

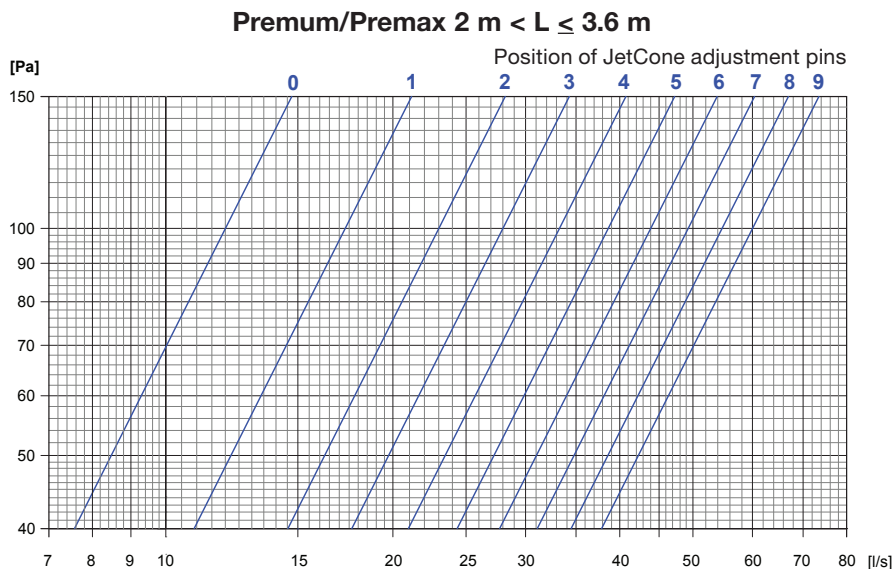
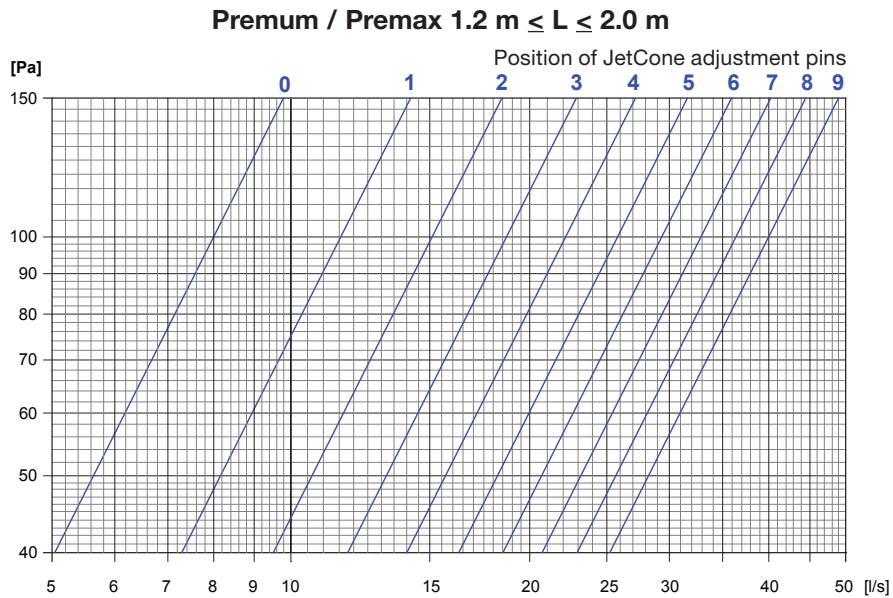
6.3.3 Changing the actual air flow

- Measure the static nozzle pressure.
- Locate the air pressure/airflow diagram inside the openable perforated faceplate. (Also see diagrams in 6.3.5).
- Find the mean value of the 4 pins to reach the desired airflow, in the diagram. Use the static nozzle pressure and the desired airflow to find the mean value of the 4 pins.
- Adjust the 4 pins in the beam, so the mean value of the pins will correspond with the mean value found in the diagram.
- See example in 6.1.2 / 6.1.3.

6.3.4 Changing the air distribution profile

See 6.2.

6.3.5 Premum / Premax pressure / airflow diagrams



Installation instruction Premium/Premax

6.4 Water flow rate

6.4.1 Pre-setting of valves

All the integrated control valves (plus feature) are delivered not set. The presetting has to be done on site. For the presetting of valves, please see [LinFlow-A](#) (Angled) and [LinFlow-S](#) (Straight) water valves documentation.

6.4.2 Balancing strategy

Lindab recommends always balancing the water system to guarantee thermal comfort in all areas, to avoid noise nuisance problems and to save energy. A hydraulic balance is obvious to ensure that all the beams (panels or facade units) in the system will always be supplied with their required (planned) water flow rates (calculated with [LindQST\waterborne calculator](#)).

Lindab refers to the proportional method, where all beams (panels or facade units) are balanced to the same proportion of the requested water flow rate.

Installation instruction Premum/Premax

7. Maintenance

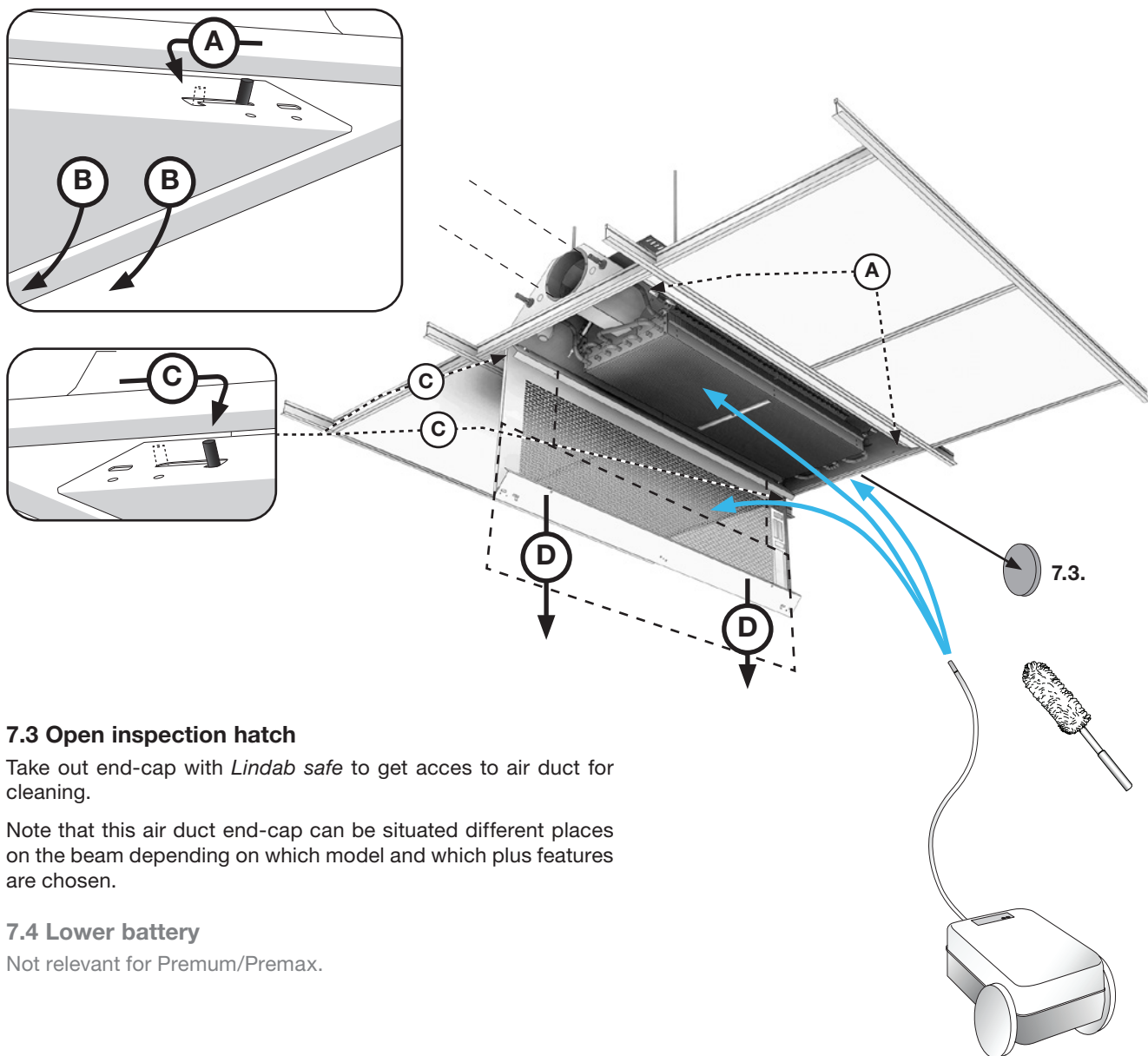
The interval of cleaning depends on the indoor environment where the beam is placed. Under optimal conditions the beams only need cleaning every 5 years.

- Open the inlet plate using no tools (7.2).
- Clean the battery downside and the inlet faceplate inner parts with a dust cleaner / vacuum cleaner.
- Only use lukewarm water and a mild detergent and a piece of wet cloth to clean the inlet face plate.
- Open the inspection hatch (7.3).
- Clean the air plenum chamber and air connection with a vacuum cleaner.
- Clean the top side of the battery, nozzle plate, JetCones and the mixing chamber with a dust cleaner / vacuum cleaner.

7.1 Remove the outlet front grille

Not relevant for Premum/Premax.

7.2 Open inlet faceplate



7.3 Open inspection hatch

Take out end-cap with *Lindab safe* to get access to air duct for cleaning.

Note that this air duct end-cap can be situated different places on the beam depending on which model and which plus features are chosen.

7.4 Lower battery

Not relevant for Premum/Premax.

Installation instruction Premium/Premax

8. Accessories

Ask Lindab for the accessories mentioned in this document. Additional accessories (or additional dimensions) are available on request.**

Order code	Order number
2-way Control valve LinFlow-S-12 straight - push on	686552
2-way Control valve LinFlow-S-15 straight - push on	686553
2-way Control valve LinFlow-A-12 angled - push on	686554
Actuator A 40405 24 V on/off NC - 1 m, non-halogen cable	684601
Actuator A 41405 24 V on/off NO - 1 m, non-halogen cable	684603
Actuator APR 40405 0-10 V mod. NC, 1 m, non-halogen cable	684667
Actuator APR 40405 0-10 V mod. NC, 1 m, cable	684604
Ballofix Broen 12 mm with handle - shut-off valve	642663
Ballofix Broen 12 mm without handle - shut-off valve	642662
Ballofix Broen 15 mm with handle - shut off valve	642122
Ballofix Broen 15 mm without handle - shut off valve	642121
Copper insert 12 x 1,0 mm	884022
Copper insert 15 x 1,0 mm	653455
Flexible hose O2stopp_DN10 0,4 m - JG12 push - JG12 push	686566
Flexible hose O2stopp_DN10 0,4 m - JG12 push - straight end 12 mm	175984
Flexible hose O2stopp_DN10 0,4 m - JG15 push - JG15 push	686568
Flexible hose O2stopp_DN13 0,4 m - JG15 push - JG15 push	175808
Lindab PC 410	103344
Pendulum 180-300 mm	642480
Pendulum 540-1000 mm	646742
Regula Combi see: "Accessories"	**
Regula Connect Card Basic	*/**
Regula Connect Card Multi	*/**
Regula Secura	**
Aerator 12 mm - tectite	647690
Aerator 15 mm - tectite	647691
Tectite angle 12 mm	884014
Tectite angle 15 mm	642596
Tectite straight 12 mm	884050
Tectite straight 15 mm	642597
Tectite demounting tool 12 mm	884087
Tectite demounting tool 12 mm, small	646881
Tectite demounting tool 15 mm, small	646882
Touch-up paint RAL 9010 - 25 ml	642531
Touch-up paint RAL 9003 - 25 ml	174759
Transformer 24V AC output	*/**

*see: "[Regula Connect – What do I get?](#)"

**see: "[Accessories](#)"



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