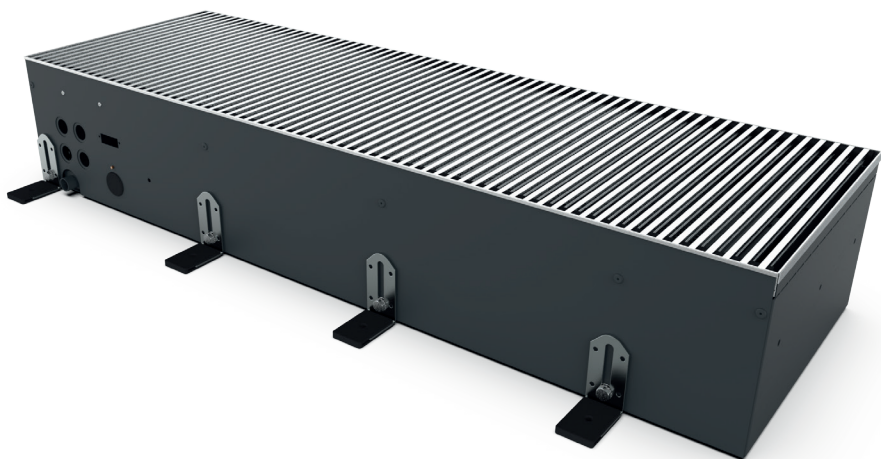


**jaga** CLIMATE DESIGNERS

# **Clima Quatro Canal H19**

INSTALLATION MANUAL



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## 1. USED SYMBOLS



the DANGER sign warns the operator and maintenance staff about risks that may cause death, physical injury or illnesses of any kind.



DANGER: ELECTRICAL HAZARD



DANGER: SHARP EDGES



DANGER: HOT SURFACES



DANGER: MOVING PARTS



ATTENTION: IMPORTANT WARNING



the ENVIRONMENTAL SAFEGUARD sign provides instructions on how to use the unit in an ECO-friendly manner.



### Important info

The unit must be installed by a certified installer in accordance with the installation instructions and the local building codes. Please follow this instruction manual and file it somewhere safe! The unit must always be accessible for maintenance and inspection.

### The warranty is void when:

- the installation, maintenance or operation instructions in this manual are not respected.
- modifications have been made to the product, before, during or after product installation.
- maintenance has been carried out by unauthorized people.
- maintenance has been carried out by someone other than Jaga.
- access to the unit has been restricted due to on-site conditions.
- the initial start-up has been carried out before a general cleaning of both the fan and the coil.

## 2. WARNINGS AND SAFETY

### Handling guidelines:

The unit must be handled with care in order to avoid damage to the unit's interior and exterior parts. The unit might have sharp edges; use gloves during installation/adjustment. All the operations listed below must be carried out in accordance with local health and safety regulations.

### Storage conditions:

Up to four packaged units may be stacked on top of each other. All units must be stored in a dry area.

### Technical spaces and positioning:



Incorrect installation of the unit may cause noise and vibrations issues.

## 3. PACKAGING AND COMPONENTS

Follow these instructions when removing the packaging:

- check for any visible damage
- open the packaging
- check if the manual is in the package
- remove the packaging material and put it in the appropriate collection point or recycling facility, in compliance with the local regulations.



Dispose of the packaging materials in compliance with the national or local regulations.



Do not leave the packaging within reach of children.

## 4. INSTALLATION

- installation must be carried out by certified technicians. Incorrect installation could cause product failure, a reduced performance or an increased noise level.
- the unit must be installed in accordance with the local building codes.
- Always use personal protective equipment.
- the unit must remain accessible for inspection and maintenance, the trench must be removable at all times.

### 4.1. ACOUSTIC INSULATION

#### Sound absorption

Sound is reflected by hard materials. Soft, porous materials are best suited for sound absorption. A combination of different materials can reduce the reflection of sound.

#### Contact noise insulation

Sound travels very easily through hard materials. Soft rubber material can be used to reduce contact noise. The effect of this insulation strongly depends on:

- installation method: make sure that vibrations cannot be transferred between different elements, e.g. between the built-in heaters and other metallic parts, through pipes, along air ducts etc.
- installation of acoustic insulation in hollow acoustic spaces. Avoid cavities between insulation and pipes.

## 5. GENERAL INFORMATION



### DANGER!

The unit is not intended for industrial applications.  
Do not insert objects into the supply and return air openings.



### IMPORTANT!

- the unit will only function correctly if the installation and operation manual is strictly followed.
- all clearances indicated in the manual must be respected in order to guarantee performance, and to allow installation and maintenance.
- in case valve packages are to be installed, make sure that there is enough room left.
- periodic access to the unit is required for inspection, maintenance and repairs.
- pay attention to the signs and symbols indicated on the fan coil units.

### Unit identification:

The serial number is tagged on unit's right side (on the left if the connections are on the unit's right side).

### Information regarding unintended use:

The unit has been designed to function as a fan coil for both heating and cooling applications; any other use is strictly forbidden. Installing the unit in an explosive environment is prohibited.

### Decommissioning:

When the unit is not used for long periods of time, it must be disconnected from the mains electrical connection.

If the unit is not used during the winter period, the water in the system may freeze. A suitable quantity of anti-freeze liquid should be mixed with the water.



Mixing the water with glycol modifies the unit's performance. Pay attention to the safety instructions on the packaging regarding glycol.

### Restart after prolonged shutdown:

Before restarting:

- clean or replace the stainless steel fan guard.
- clean the coil.
- clean or unclog the condensate drain.
- bleed the air from the hydronic system.
- it is advisable to run the unit at maximum speed and to check for abnormalities.

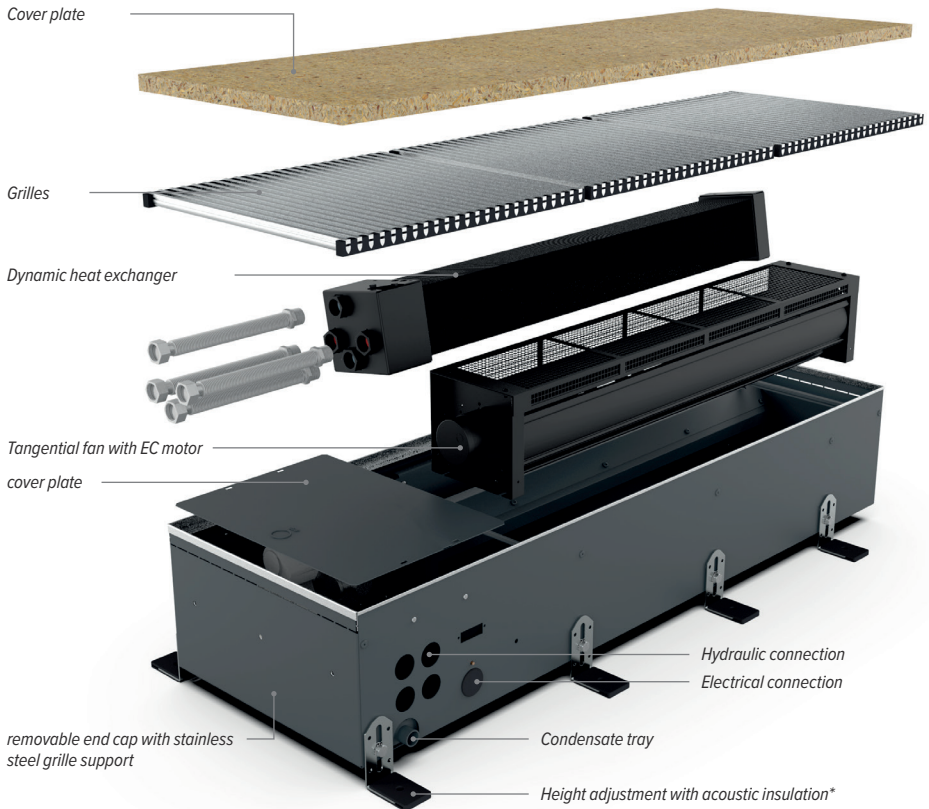
## 6. PRODUCT DESCRIPTION

The Jaga Clima Quattro Canal combines heating, cooling and optionally ventilation in a single pre-assembled trench. The high-tech dynamic 2-pipe or 4-pipe coil and the fan with EC motor provide comfortable heating and cooling from the perimeter of the building. They have been designed to heat the building with low water temperatures for optimal efficiency or cool the building with either total or sensible cooling only.

Using the latest ec motors reduces the electrical energy consumption up to 50% compared to traditional AC motors. and enables easy integration of anyhome automation or building management systems.

The optional JDPC on/off controller allows installation without any control wiring and will automatically start the fans at preset speed for heating and cooling modes.

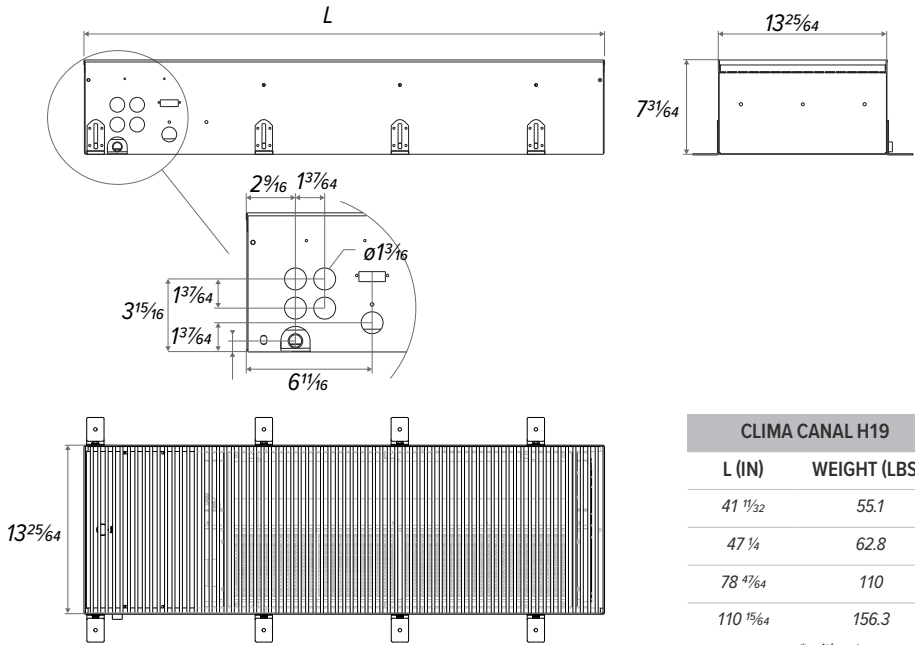
### 6.1. OVERVIEW OF THE DIFFERENT PARTS



\*: parts are supplied separately - not pre-assembled

## 7. TECHNICAL DATA

### 7.1. DIMENSIONS

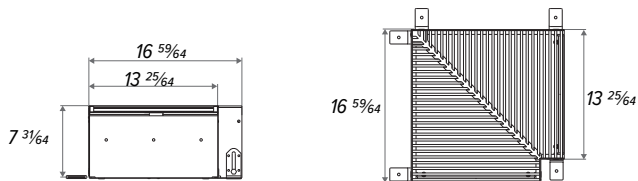


#### CLIMA CANAL H19

L (IN)	WEIGHT (LBS)*
41 $11/32$	55.1
47 $1/4$	62.8
78 $4/64$	110
110 $15/64$	156.3

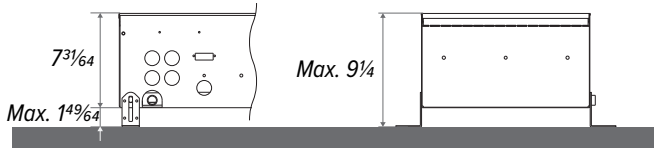
\*without accessories

### 7.2. CORNER PIECE



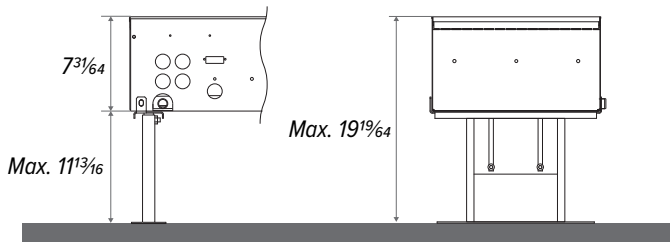
### 7.3. DIMENSIONS - HEIGHT ADJUSTMENT

Standard height adjustments

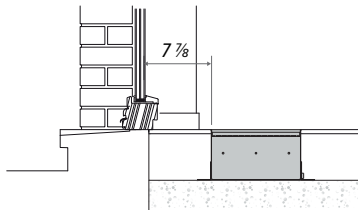


### 7.4. DIMENSIONS - HEIGHT ADJUSTMENT FOR RAISED FLOORS

Option: feet with height adjustment for raised floors



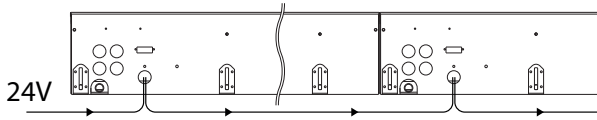
### 7.5. LEAVE SOME ROOM



**!** When installing the trench fancoil in front of a window, make sure to allow sufficient space for curtains. The curtain should never cover the grill of the trench fancoil unit.




## 7.6. MAXIMUM CABLE LENGTH - 24VDC ELECTRICAL CONNECTION



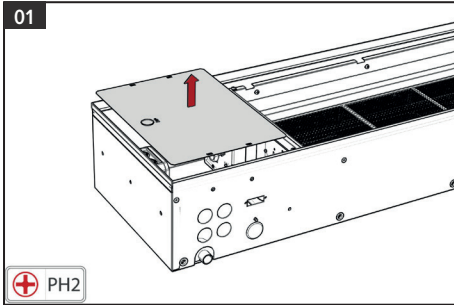
DISTANCE FROM POWER SUPPLY IN FT.	30	60	100	130	160	200	230	260	300	330
<b>Ø</b>	<b>TYPE 1 (15W) NUMBER OF CLIMA CANALS</b>									
17 AWG	10	5	3		2			1		
16 AWG	15	7	5	3			2			
14 AWG	24	12	8	6	5	4		3		
<b>Ø</b>	<b>TYPE 2 (24W) NUMBER OF CLIMA CANALS</b>									
17 AWG	6	3	2			1				
16 AWG	9	4	3	2				1		
14 AWG	15	6	5	3			2			
<b>Ø</b>	<b>TYPE 3 (39W) NUMBER OF CLIMA CANALS</b>									
17 AWG	3		1							
16 AWG	5	2			1					
14 AWG	9	4	3	2				1		
<b>Ø</b>	<b>TYPE 4 (54W) NUMBER OF CLIMA CANALS</b>									
17 AWG	3		1							
16 AWG	4	2		1						
14 AWG	7	3	2			1				

## 8. INSTALLATION

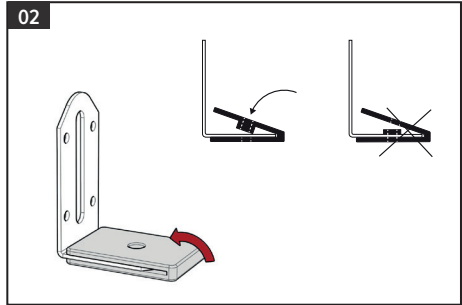
 For general safety information see: warnings and safety

 ALWAYS USE THE MAIN SWITCH TO ISOLATE THE POWER SUPPLY

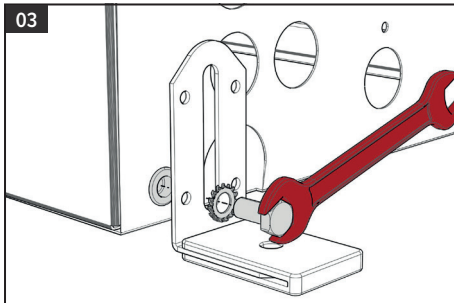
### 8.1. POSITIONING



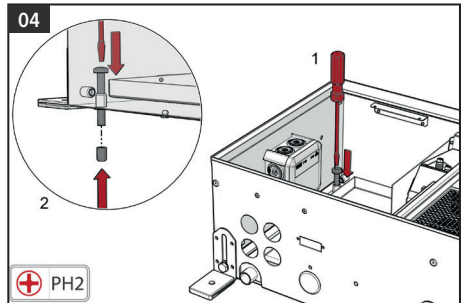
Remove the cover panel before installing the appliance.



Position the acoustic insulation over each floor bracket.



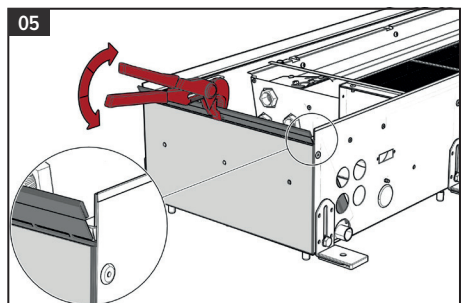
Position the external height adjustment and bolt to the trench. Do not tighten the bolt yet.




Install the leveling screws in the trench and mount the plastic caps to the screws.

If multiple Clima Quatro Canals, empty sections or corner pieces have to be connected in a continuous installation, continue to step 05.

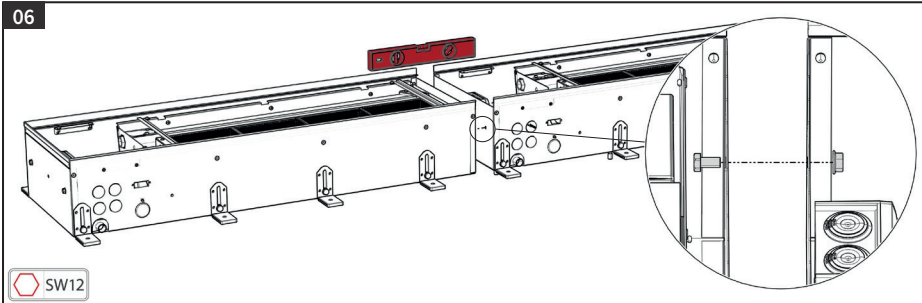
Or individual installations: continue to step 07.



For continuous installation only: Remove the stainless steel trim on the end caps by breaking of the pre-cut piece.

 Only remove the trim pieces on the side where another trench will be connected.

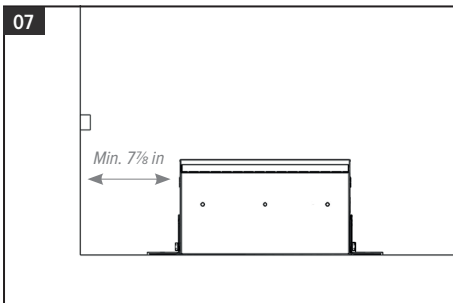
06



SW12

Make sure that the devices are positioned correctly and that the stainless steel frames fit tightly. Use the supplied bolts and nuts to connect the different units.

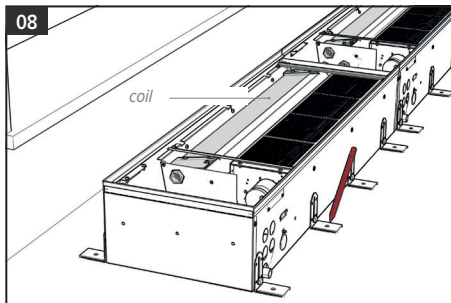
07



Position the trench in the right position.

**⚠** Position the trenches 8" from the window to avoid curtains covering the grills.

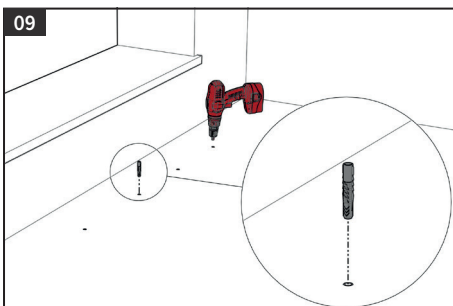
08



**⚠** Always position the fan to the room side and the coil to the exterior of the building.

Mark the drill holes.

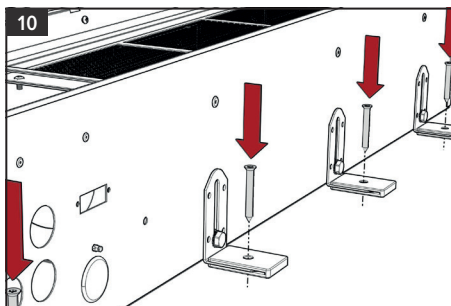
09



Drill the holes into the concrete deck and use plugs to secure the brackets.

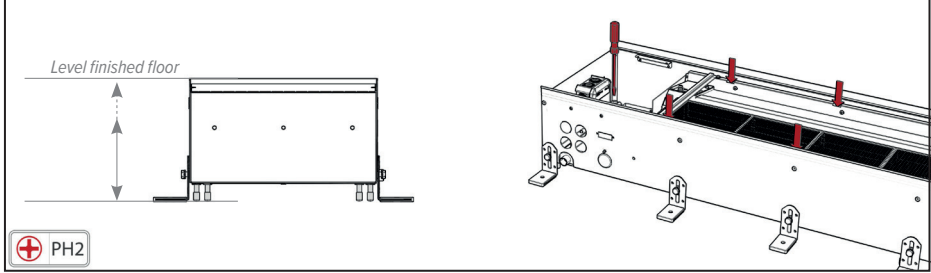
**⚠** Use a plug adapted to the floor type!

10



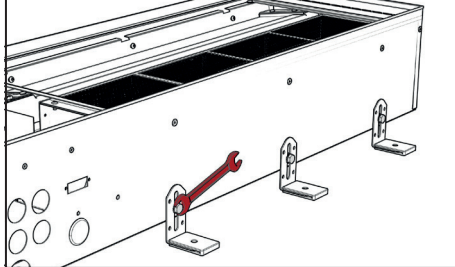
Use the rubber acoustic insulation on the floor brackets.

11



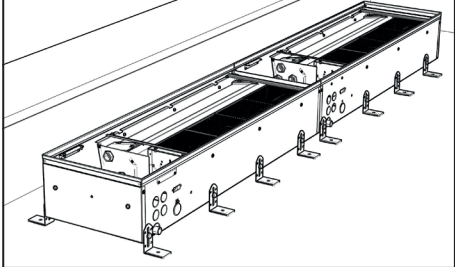
Use the leveling screws to adjust the Clima Canal to the desired height. Make sure that the grill sits flush with the finished floor.

12



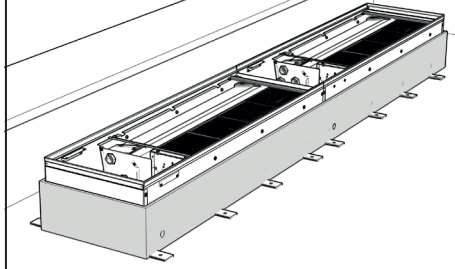
Fasten the floor brackets to secure the position of the trench.

13



Fill up the cavity between the trench and concrete with wet cement or spray foam..

14



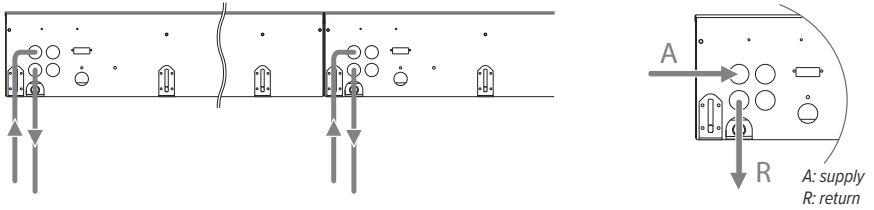
If a screed is to be applied (poured floor or a cementitious screed) rim insulation will be required around of the appliance; to protect it and to cope with expansion differences during heating or cooling.

Complete the electrical and hydronic connection..

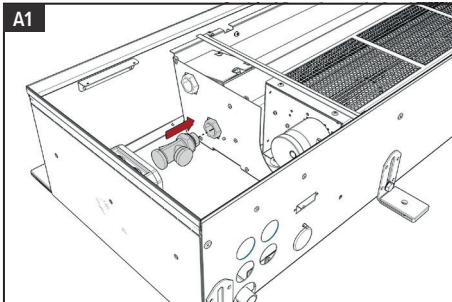
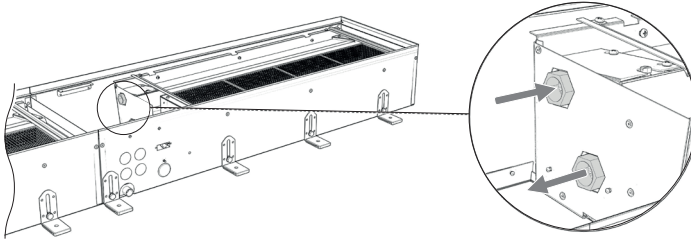
## 8.2. HYDRAULIC CONNECTION

### 8.2.1. 2-pipe connection

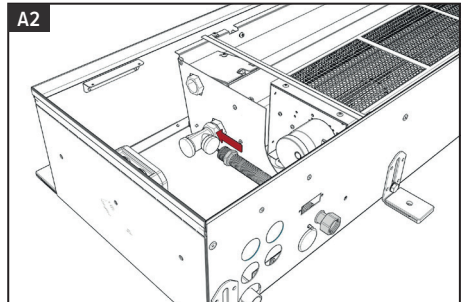
Overview of the perforations in the trench for piping.



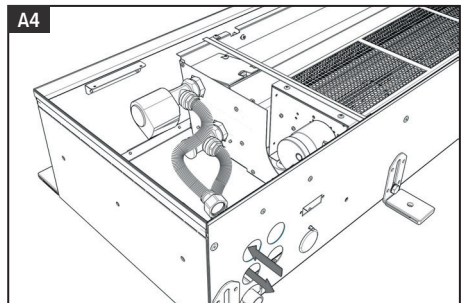
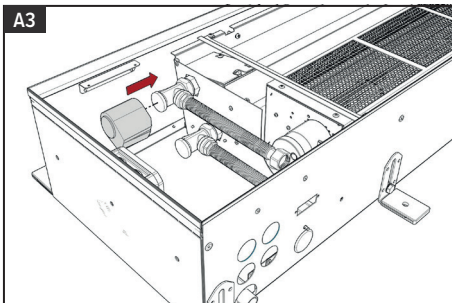
Overview of connections to coil



*Valves by others can be installed inside the trenches. Make sure to verify if the dimensions of the valves fit in the trench prior to installation.*



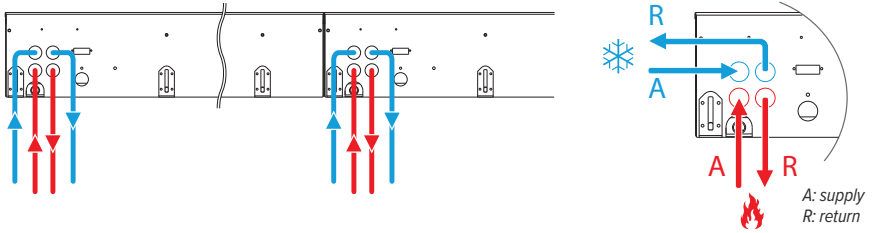
*Flexible stainless steel hoses are recommended.*



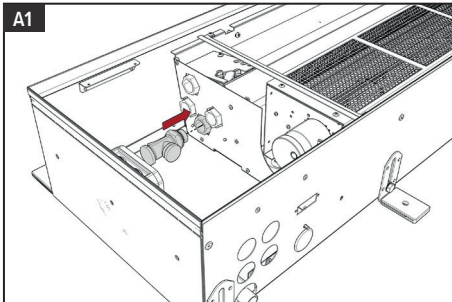
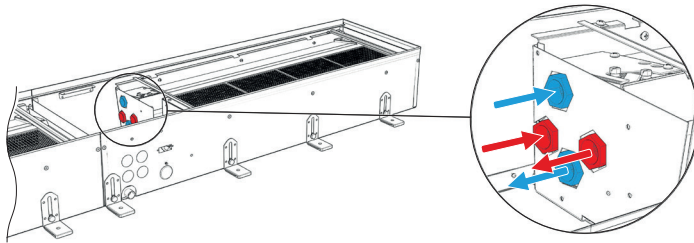
*Complete the assembly by connecting the supply and return pipes to the flexible hoses..*

### 8.2.2. Hydraulic connection: 4-pipe connection

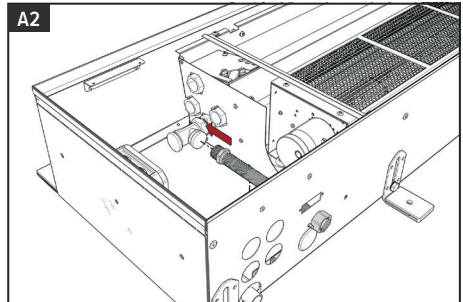
Overview of the perforations in the trench for piping.



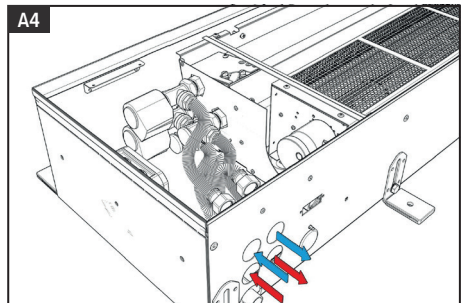
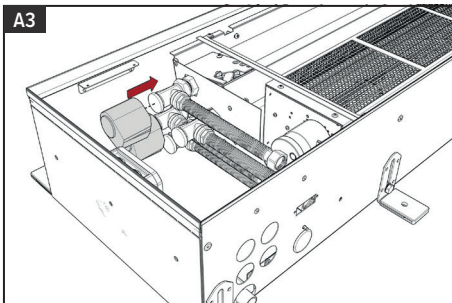
Overview of connections to coil



**A1**  
Valves by others can be installed inside the trenches. Make sure to verify if the dimensions of the valves fit in the trench prior to installation. Start with the lowest position.




**A2**  
Valves by others can be installed inside the trenches. Make sure to verify if the dimensions of the valves fit in the trench prior to installation. Repeat steps A1 and A2.

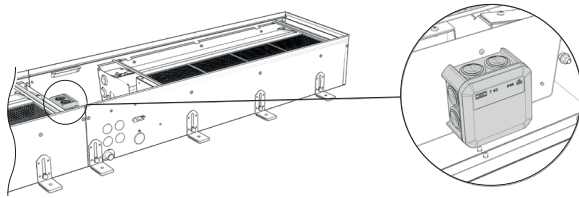


**A4**  
Complete the assembly by connecting the supply and return pipes to the flexible hoses

### 8.3. ELECTRICAL CONNECTION DIAGRAM

 For general safety information see: warnings and safety - page 4

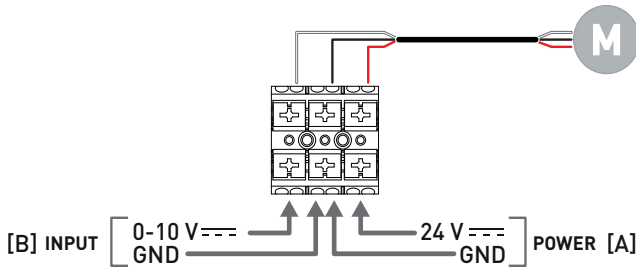
 ALWAYS USE THE MAIN SWITCH TO ISOLATE THE POWER SUPPLY



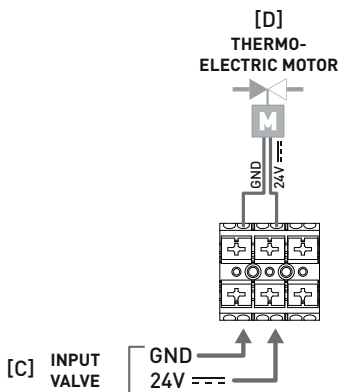
On the side of the hydraulic connection, you can also find the box for the electrical connection

In case different power supplies are used for power of the trenches and fan control, the ground must be common. (A) and (B) must be connected.

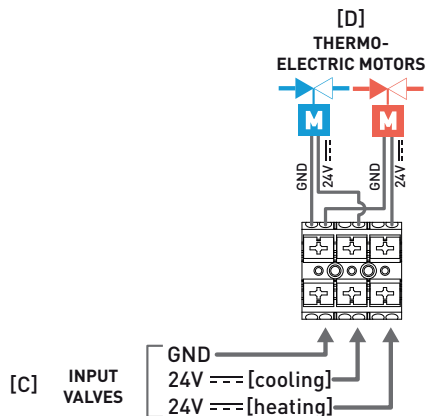
\*JDPC is available as an optional on/off controller based on a water temperature sensor, with a preset fan speed for heating and cooling.



2-PIPE CONNECTION

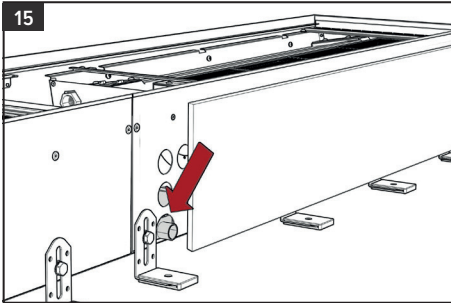


4-PIPE CONNECTION





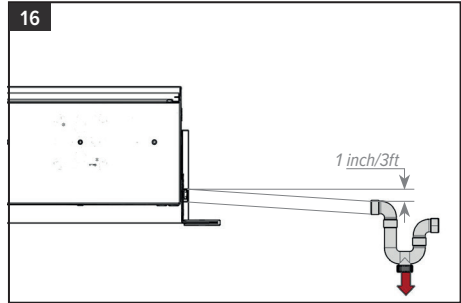
## 8.4. INSTALLATION OF THE CONDENSATE DRAIN



Make sure that the condensate is drained quickly. Keep the condensate drain clean and remove obstacles that can obstruct normal flow.

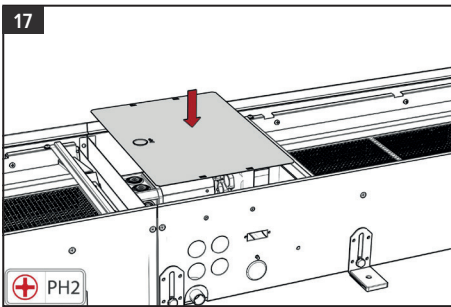
Position the drain pipes without mechanical stress on the drain connection of the unit.

The condensate drain system must get installed with an adequate p-trap in order to prevent the infiltration of odours.

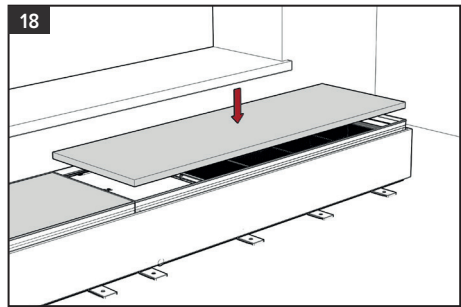


Always install a plug for cleaning in the lower part of the p-trap in order to allow quick disassembly. Pour water into the drain pan and check if the liquid is drained properly. Otherwise, check the inclination and look for possible obstructions.

## 8.5. COMPLETE INSTALLATION FOR INSTALLING FLOOR



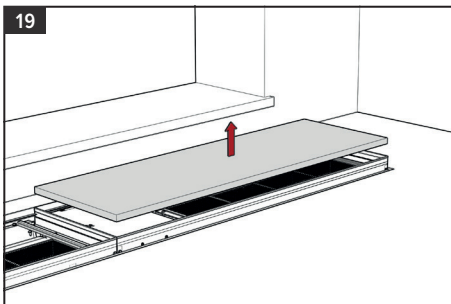
Install the cover plate.



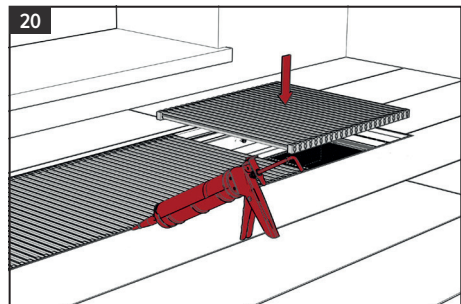
Cover the enclosure with a plastic foil and wooden cover plate.

**!** During construction, this protection must remain in place.

## 8.6. FINISHING THE INSTALLATION



Remove the cover plate and foil before start up of the unit..



After installation of the subfloor and finished floor: install the grille



## 9. INITIAL START



### IMPORTANT!

Start-up and Commissioning of the fancoil must be carried out by skilled staff, qualified to work on this type of product.



### DANGER!

Before start-up, make sure the installation has been carried out in compliance with in this manual.

#### **Before start-up the fancoil unit, check if:**

1. the unit is positioned correctly
2. the supply and return pipes are properly connected and insulated
3. the pipes are clean and air is removed
4. the inclination of the unit towards the drain and the p-trap are correct
5. the coils are clean
6. the wiring connections are correct and properly tightened
7. the supply voltage is correct
8. the electric power consumption is correct and does not exceed the maximum value indicated in the catalog

**Run the fan for minimal 3 hours and check for abnormalities.**

## 10. MAINTENANCE



**DANGER!**

- maintenance must be carried out by qualified technicians.
- do not insert sharp objects into the supply and return grilles
- the unit has sharp edges; use gloves during maintenance!



**DANGER!**

Always use the main disconnect switch to isolate the unit from the mains before carrying out any maintenance or inspection work. Make sure that no one accidentally turns on the power to the unit; lock the master switch in the off position.

### 10.1. SPECIAL NOTE

#### **Maintenance and cleaning of the stainless steel protection grille:**

a dirty grille obstructs the air flow, so clean the grille at regular intervals, depending on the room's purpose and how it's used. The grille should never be disassembled for maintenance and can be easily cleaned by using a vacuum cleaner.

#### **Cleaning the unit:**

always disconnect the power supply before servicing the fan!!

- cleaning at regular intervals is important, depending on the room's purpose and how it's used
- clean with a vacuum cleaner or air compressor. Do not use solvent- or detergent based products.

### 10.2. ROUTINE MAINTENANCE

#### **Every 6 months: Check the condition of the coil and condensate drain:**

If necessary:

- remove any dirt from the coil surface
- remove dust using an air compressor
- wash with water and brush gently
- dry by using compressed air
- keep the condensate drain free from any obstructions that may prevent normal water flow

#### **Bleed air from the system.**

1. start the circulation pump and open the supply valve for a few minutes.
2. stop the circulation pump.
3. loosen the vent screw on the inlet collector and bleed the air.
4. repeat steps 1 to 3 until there is no more air escaping the system

### 10.3. ELECTRICAL CIRCUIT

#### **The following steps are recommended to perform maintenance on the electrical circuit:**

- check the unit's power consumption using a clip-on meter and compare the reading with the values shown in the documentation;
- inspect the electrical contacts for corrosion and loose wires.

## 11. WARRANTY

**The fan coil unit is intended strictly for conditioning the indoor climate. Any unintended use is strictly forbidden and voids all warranty on the product. Installation, maintenance and operation of the unit is only allowed for authorized staff.**

### **Please follow these instructions carefully**

The warranty is void when:

- the installation procedure has not been followed,
- the fan coil has not been periodically cleaned,
- the unit has been used in an improper or irresponsible manner,
- repairs have been carried out by others than Jaga,
- product modifications have been carried out by others, before or after the installation,
- the product is not accessible for cleaning or maintenance.

If you have any questions or complaints, please contact your supplier or installer. The copyright of these instructions is the property of Jaga.

## 12. DISSASSEMBLY INSTRUCTIONS



SAFEGUARD THE ENVIROMENT

### **Jaga cares about protecting the environment.**

When the unit is dismantled it is important to strictly follow these procedures:

- the unit must be dismantled by a firm that is authorized to dispose of scrap machinery/products

### **The unit as a whole is composed of secondary raw materials and the following conditions must be met:**

- if the unit contains antifreeze, then dispose of the antifreeze as indicated in the glycol supplier's instructions.
- the electronic components are considered special waste, and must be recycled as such
- the pipe insulation and the sound-absorbing lining must be removed and processed as urban waste

### **Please follow and file these instructions!**

Jaga Canada Climate Systems  
[www.jaga-canada.com](http://www.jaga-canada.com)

december 20, 2018 2:45 p.m. - Jaga Inc.