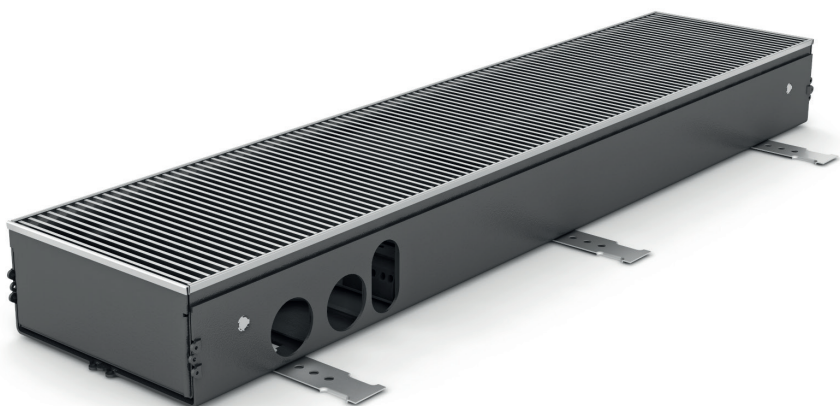


**jaga**

CLIMATE DESIGNERS

# Micro Canal

INSTALLATION INSTRUCTIONS



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### DECLARATION OF CONFORMITY

CEO JAGA N.V.  
Jan Kriekels



08/01/2015

JAGA N.V. - Verbindingslaan 16 - B 3590, declares under its sole responsibility that the product to which this declaration relates: **MICRO CANAL** is in conformity with the following standards or documents provided that these are used in accordance with our instructions: **NBN EN 60335-1 based on EN 60335-1:2002 + A11:2004 + A1:2004 + A12:2006 + A2:2006 + A13:2008 + A14:2010 + A15:2011**  
**NBN EN 60335-2-80 based on EN 60335-2-80:2003 + A1:2004 + A2:2009**

Following the provision of Directives as amended:

- Low Voltage 2014/35/EC
- EMC 2014/30/EC
- Machinery 2006/42/EC



Jaga N.V.

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As product development is a continuous process, all mentioned data are subject to change.

## 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:

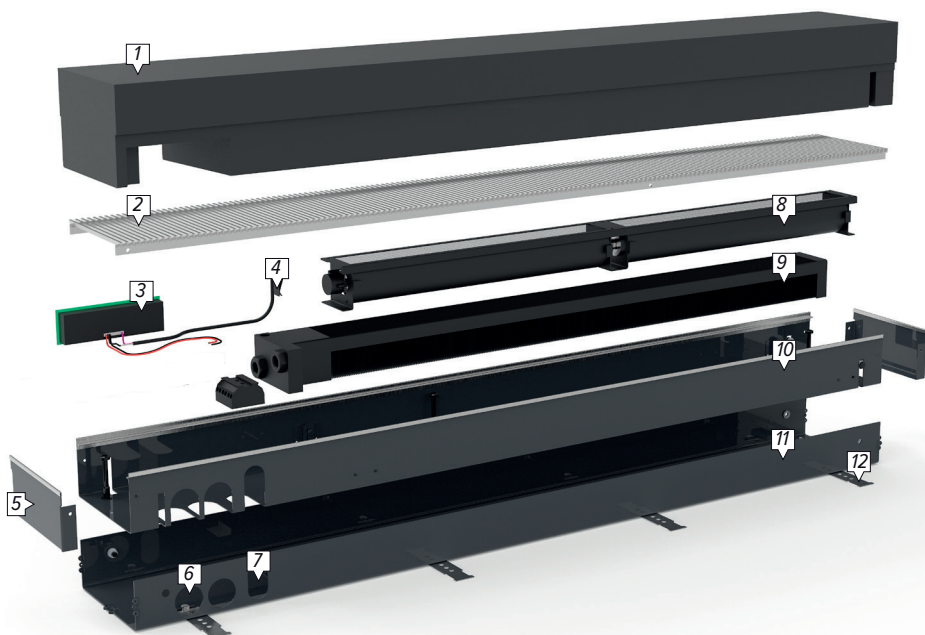
Before restarting:

- 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 Micro Canal is only  $2\frac{3}{64}$  inch in height and  $\frac{5}{8}$  inch in width. It is fitted with small but powerful dynamic coils and quiet fans with EC-motors. Micro Canal combines minimalistic aesthetics and architectural freedom with an unprecedented heat output. Micro Canal can be integrated into any interior. By making use of the latest EC-motors, the Micro canals use 50% less power.

### 6.1. OVERVIEW OF THE DIFFERENT PARTS

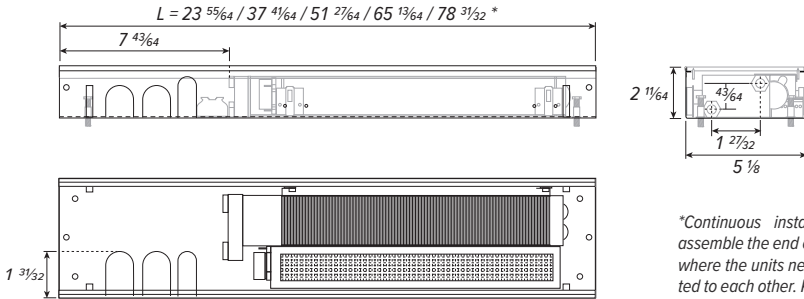


1. Polyethylene protection block
2. Stainless steel grille
3. Control board
4. Water temperature sensor
5. End cap
6. Hydraulic connection (always on the left hand side)
7. Electrical connection (always on the left hand side)

8. Tangential fans with EC-motor
9. Dynamic coil
10. Inner trench with stainless steel grille holder
11. Outer trench
12. Internal height adjustment

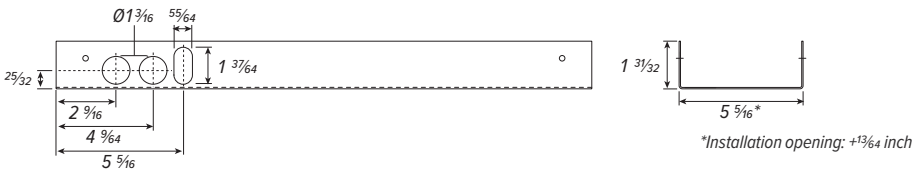
## 7. TECHNICAL DATA

### 7.1. DIMENSIONS OF THE INNER TRENCH

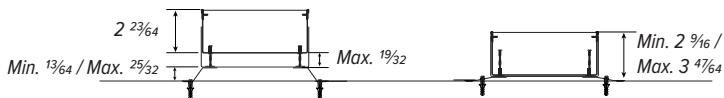


*\*Continuous installation: Do not assemble the end caps on the sides where the units need to be connected to each other. Keep in mind that the units are  $\frac{1}{8}$  inch shorter without the end caps.*

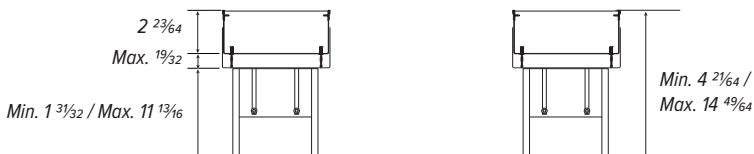
### 7.2. DIMENSIONS OF THE OUTER TRENCH



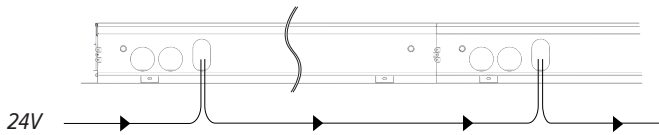
### 7.3. HEIGHT ADJUSTMENT



### 7.4. OPTION: ADJUSTABLE RAISED FLOOR PEDESTALS



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

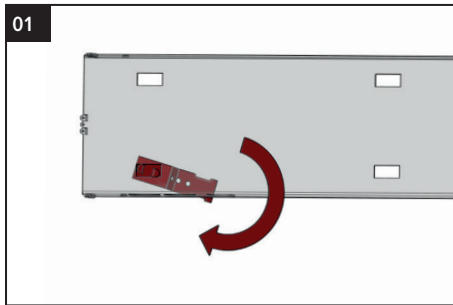


DISTANCE FROM POWER SUPPLY IN FT.	30	60	100	130	160	200	230	260	300	330
<b>Ø</b>	<b>TYPE 1 (1.3W) NUMBER OF MICRO CANALS</b>									
17 AWG	63	32	21	16	12	10	9	8	7	6
16 AWG	95	48	32	23	19	16	13	12	10	9
14 AWG	160	80	53	40	32	26	22	20	17	16
<b>Ø</b>	<b>TYPE 2 (1.7W) NUMBER OF MICRO CANALS</b>									
17 AWG	48	24	16	12	9	8	7	6	5	4
16 AWG	73	36	24	18	14	12	10	9	8	7
14 AWG	120	60	40	30	24	20	17	15	13	12
<b>Ø</b>	<b>TYPE 3 (2W) NUMBER OF MICRO CANALS</b>									
17 AWG	41	20	13	10	8	6	5	4	3	2
16 AWG	62	31	20	15	12	10	8	7	6	5
14 AWG	102	51	34	25	20	17	14	12	11	10
<b>Ø</b>	<b>TYPE 4 (3.4W) NUMBER OF MICRO CANALS</b>									
17 AWG	24	12	8	6	4	3	2	1	1	1
16 AWG	36	18	12	9	7	6	5	4	3	2
14 AWG	60	30	20	15	12	10	8	7	6	5
<b>Ø</b>	<b>TYPE 5 (3.7W) NUMBER OF MICRO CANALS</b>									
17 AWG	22	11	7	5	4	3	2	1	1	1
16 AWG	33	16	11	8	6	5	4	3	2	1
14 AWG	56	28	18	14	11	9	8	7	6	5

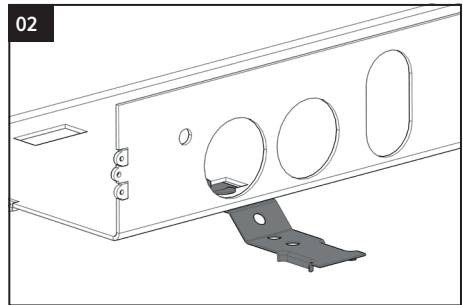


## 8. INSTALLATION

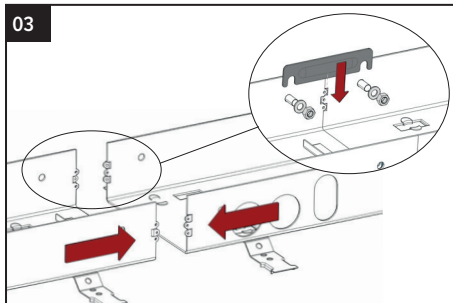
**⚠** ALWAYS SWITCH OFF THE MAINS SUPPLY BEFORE INSTALLATION!



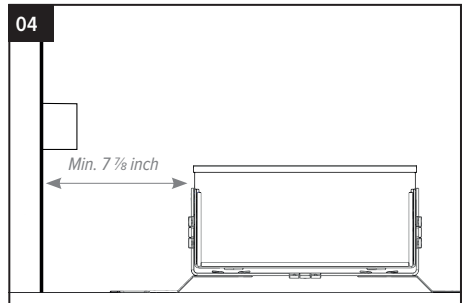
Place the mounting strips on the unit's outer trench.



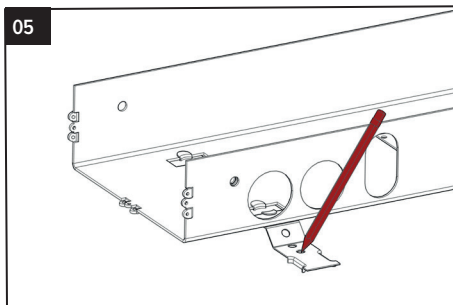
Bend the mounting strips (max.  $2\frac{3}{32}$  inch).



Multiple Micro Canals: make sure that the unit is correctly positioned and that the grille holders are tightly connected. Use the provided connectors to connect the different units to each other.

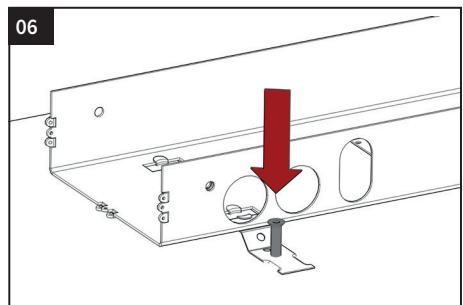


Position the units correctly, with the coil towards the wall.  
**⚠** Position the unit at a distance of at least  $7\frac{7}{8}$  inch from a window wall.



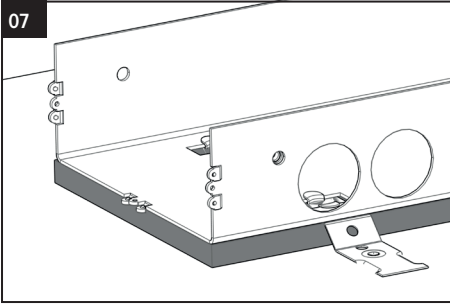
Mark the drill holes. Drill the holes (drill dia.  $\frac{5}{16}$  inch) and insert the plugs

**⚠** Make sure to use the correct type of plug for your floor type!



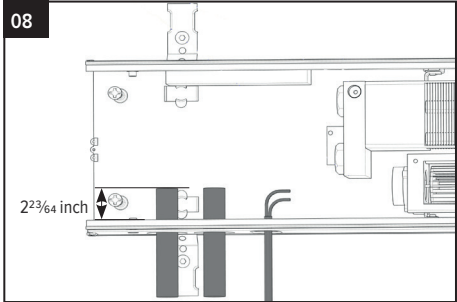
Secure the unit to the floor with mounting strips.

07



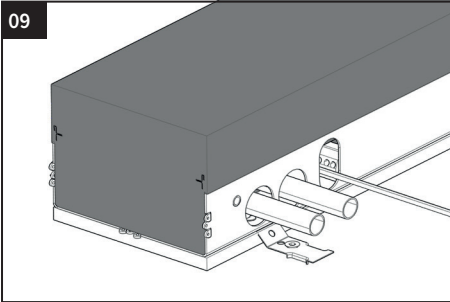
Fill the cavities underneath the trench with a solid mass.

08



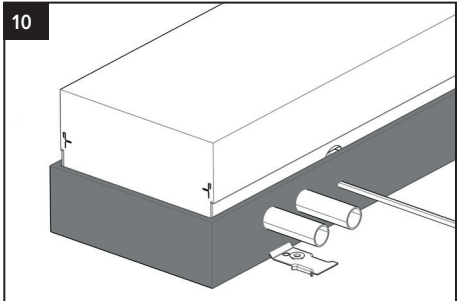
Place both the supply and return hoses as well as the power cable. Make sure that there is at least 2  $\frac{3}{64}$  inch of both hose and cable inside the trench.

09



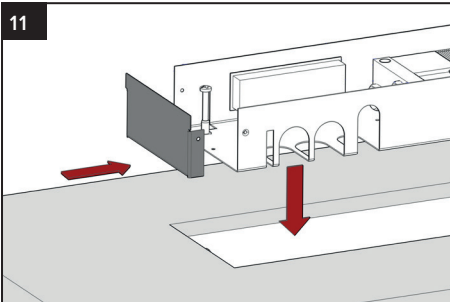
Cover the unit with the protection block.

10



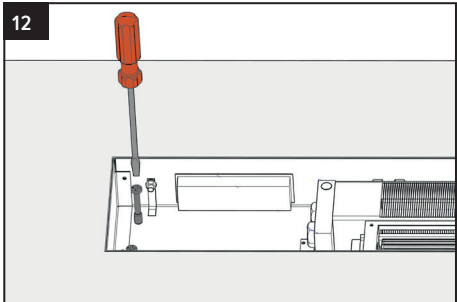
With screed (concrete or cement), installation of edge insulation is required around the unit in order to protect it from stress.

11

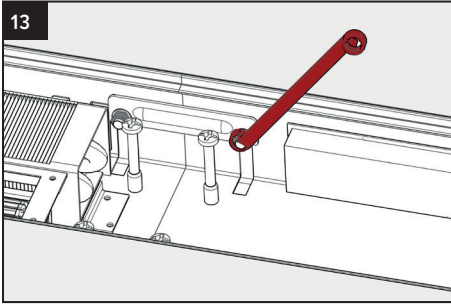


Remove the protection block. Assemble the end cap and place the inner trench in the outer trench.

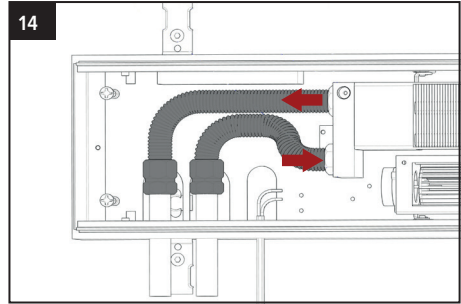
12



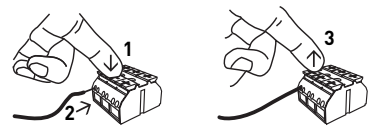
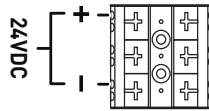
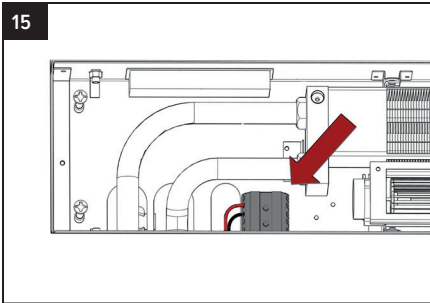
Use the adjustment-screws to adjust the unit's height. Make sure that the top is level with the finished floor.



13 Secure the inner trench.

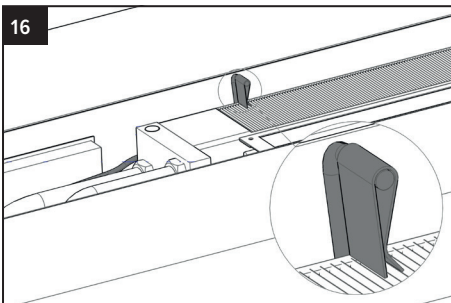


14 Connect with flexible hoses (supplied by others) to the coil's supply and return connections.

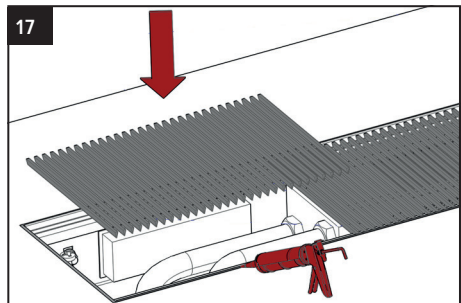


15 [+] and [-] need to be connected to the unit's electrical connection.

**⚠** Always switch off the mains supply before installation!



16 Click the water temperature sensor on top of the coil. The water temperature should be at least 34°C. If it is lower, remove the sensor and turn on/off the fans by means of a potential free thermostat.



17 After placing the subfloor and the finished floor: remove the protective cover and the foil, place the grille and then apply the finishing touches.

## 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)

augustus 9, 2021 2:24 p.m. - Jaga Inc.