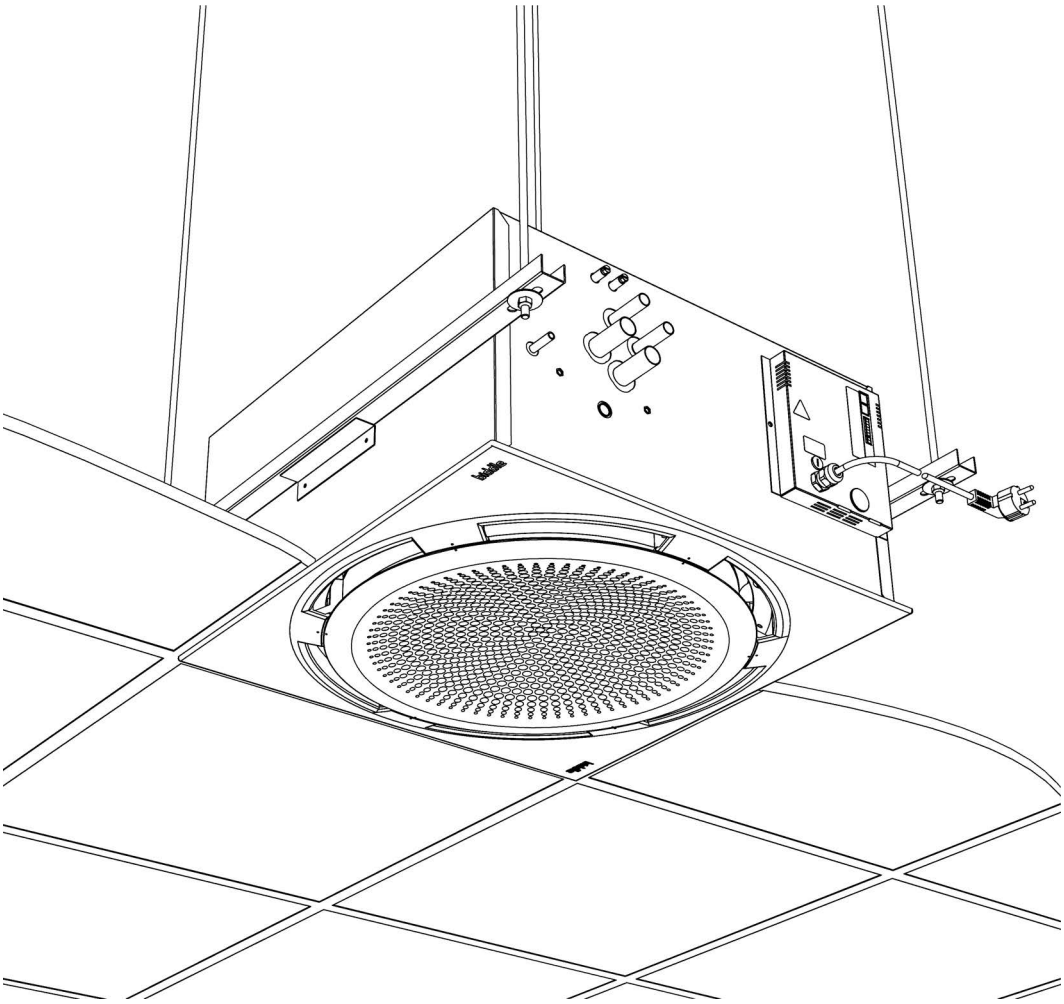
Installation, Operating And Maintenance Manual

Cassette Fan Coil Unit

Model CC_2



Version 1.0
Original Manual

English

CE

EUROPEAN PATENT

Biddle

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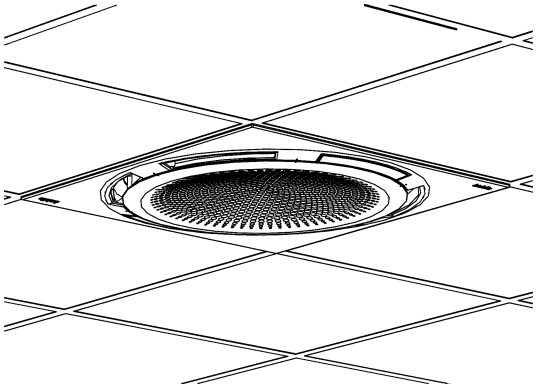
1 Introduction

1.1 About this manual



This manual describes the installation, operation and maintenance of , the cassette unit model Comfort Circle$_2$. The manual also provides instructions and information for servicing activities.

1.2 How to read this manual

1.2.1 Designations used in the manual

The following symbols are used in the manual:

Note:

Refers to an important section in the text.

Caution:

If you do not carry out the procedure or action correctly, you may cause damage to the unit.

Follow the instructions precisely.

Warning:

If you do not carry out the procedure or action correctly, you may cause physical injury and/or damage.

Follow the instructions precisely.

Danger:

Is used to designate actions that are not permitted.

Ignoring this prohibition may lead to serious damage or to accidents resulting in physical injury.

1.2.2 Symbols used on the unit and in the manual

The following symbols indicate possible risks or hazards. The same symbols will also be found on the unit.

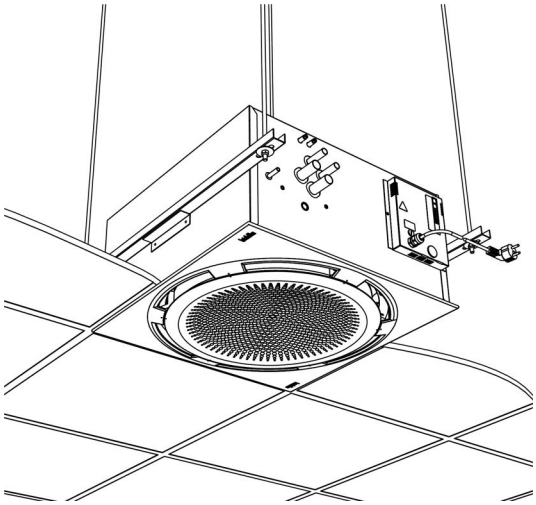
SYMBOL	DESCRIPTION
 	**You have accessed a section of the unit containing components which carry a voltage.** Access restricted to qualified maintenance staff only. Caution is required.
 	**This surface or component may be hot. Risk of burns on contact.**

1.2.3 Related documentation

In addition to this manual, the following documentation is also supplied with the unit:

- wiring diagram for installation and servicing.

1.3 About the unit



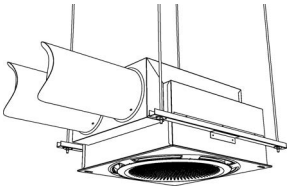
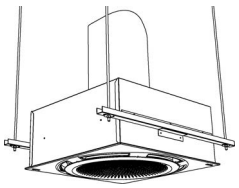
1.3.1 Applications

The Comfort Circle$_2$ is designed for heating, cooling and/or ventilating rooms.

The model is designed for integration into suspended ceilings but can be used in other ceilings as well. The unit is designed to be mounted at a height of 2m to 4m (from floor to discharge grille).

The recirculation unit draws air from the room, heats or cools it, and blows it back into the room.

The ventilation unit draws air from elsewhere, heats it, and blows it into the room. This may be either unconditioned outside air or preconditioned air supplied by an air handling system. The ventilation unit is available in two models: air intake from a side (CC$_2$ V-H), and air intake from above (CC$_2$ V-V).

CC V-H	CC V-V
	

Other versions and intended use

Upon request, we can supply versions for non-standard applications.

Warning:

Applications other than those described above are deemed to be 'usage other than for the intended purpose'. Biddle is not liable for damage or loss resulting from usage other than for the intended purpose. Usage for the intended purpose also entails observance of the instructions in this manual.

1.3.2 Working

The Comfort Circle$_2$ blows out a flow of heated or cooled air, creating a comfortable climate in the room.

The units M1 and S1 control packs that can both heat and cool have automatic discharge angle control, which determines the discharge angle based on the mode (cooling or heating). The other units have a fixed discharge angle setting.

The units that can cool come standard with an integrated condensate draining pump.

The unit can be delivered with three types of control: a basic control (B0), air side control (S0/S1), and air and water side control (M0/M1). The air and water side control controls both the fan speed and water flow rate using both the return air sensor and the discharge temperature sensor to reach the desired room temperature. The air side control controls only the fan speed to achieve this goal. The ventilation units come with modulating control only.

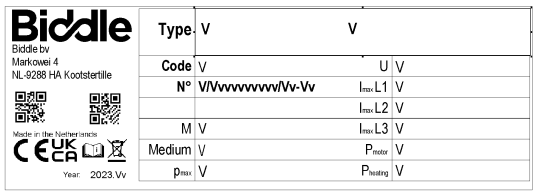
1.3.3 Type designation

The table below provides an overview of the available models of the unit and the corresponding type designations. In combination, the type designations constitute the type code.

Explanation of the type code

TYPE CODE ELEMENT	DESIGNATION	MEANING
product series	CC_2	general designation for the series
size	60	60 x 60 cm
	90	90 x 90 cm
ventilation	V	suitable for ventilation
heat exchanger type	H2	water heating, element is 2 rows thick
	H3	water heating, element is 3 rows thick
	C2	water cooling, element is 2 rows thick
	C3	water cooling, element is 3 rows thick
	H1C2	water heating, 1 row thick and water cooling, 2 rows thick
control	B	basic version (without controls)
	S	thermostatic control
	M	modulating control
discharge angle adjustment	0	without automatic angle adjustment
	1	with automatic angle adjustment
ventilation connection (optional)	H	horizontal (CC_2 V-H)
	V	vertical (CC_2 V-V)

1.3.4 Type plate



The type plate is located on the front of the unit.

Designations on the type plate

DESIGNATION	MEANING
Type	complete type code of the unit
Code	configuration code
N°	serial number, production week and year
M	weight of unit
Medium	medium
P_{max}	maximum permissible operating pressure
U	power supply voltage
I_{max}	max. current
P_{motor}	max. power consumption by fans

1.3.5 CE (and UKCA) declaration

The unit is compliant with the applicable CE standards. For the UK market, the unit is also compliant to the applicable UKCA standards. The Declaration(s) of Conformity can be found on the website.

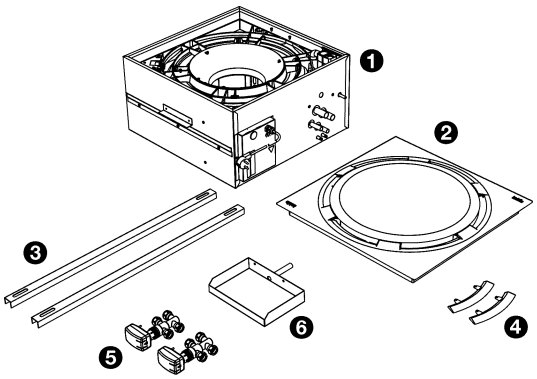
1.3.6 Modifications and changes

Without our approval, no changes or modifications may be made to the unit that could adversely affect safety. The CE (and UKCA where appropriate) declaration is no longer valid if the unit has been modified or changed in any way.

1.4 Components and accessories

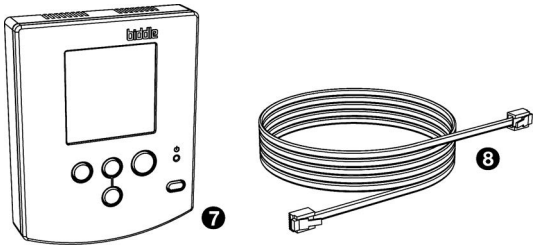
1.4.1 What's in the box

The unit comes in a box, which contains the following components:



- unit ❶;
- cover ❷;
- 2 suspension profiles ❸;
- 2 blind plates ❹ with fixing screws to adjust the discharge pattern;
- 1 or 2 valves ❺ with actuators (only for units with modulating control CC_2 M);
- external drip tray ❻ with fixing screws (only for units supplied with pressure independant control valves).

The following components are delivered separately but are always required:



- controller ❼;
- control cable ❽, available in various lengths.

1.4.2 Accessories

The following accessories are available as options:

- suspension kit consisting of steel channel (rails) and threaded rods;
- low-limit sensor for change-over detection;
- ductwork spigot for additional discharge connection;
- edge sections for edge finishing in suspended ceilings

1.4.3 Components not supplied

The following components required for installation must be obtained from third parties:

- threaded rods (M8)
- other cabling
- **on models with ventilation (type V):** insulated ducts

1.5 Safety instructions

1.5.1 Safety in use

Warning:

Do not put any objects into the inlets and outlets.

Warning:

Do not obstruct the unit's inlets or outlets.

Warning:

The upper surface of the unit becomes hot during operation.

Warning:

The maximum ambient temperatures during operation are:
- in cooling mode: 35 °C
- in heating mode: 30 °C

Caution:

In exceptional situations, water may run out of the unit. Therefore, do not place anything under the unit that could be damaged as a result.

1.5.2 Safety issues relating to installation, maintenance and servicing

Danger:

The unit may only be opened by qualified technical staff.

Warning:

Perform the following actions before opening the unit:

1. Switch the unit off, using the control panel.
2. Wait until the fan has stopped.

Danger:

The fan may continue rotating for a while.

3. Allow the unit to cool down.

Caution:

The heat exchanger get very hot.

4. Disconnect the mains supply (turn off at the isolation switch).
5. **For water-heated models:**
   isolate the water connections.

Warning:

The fins of the heat exchanger are sharp.

2 Installation

2.1 Safety instructions

Warning:

Installation activities may only be performed by technical staff qualified for this purpose.

Warning:

Before starting installation: read the safety instructions.

2.2 Inspection on delivery

- Check the unit and the packaging to ensure that they have been delivered in good order. Notify the supplier and, if possible, the driver immediately if any shipping damage is detected.
- Ensure that all components are present. Notify supplier of any missing parts immediately.

2.3 General working method

2.3.1 Sequence of operations

Biddle recommends working as follows when installing the unit:

1. Hang the unit up.
2. **For models with water-heating /-cooling (type H , C and HC)**:
   connect the unit to the central heating system.
3. **In the case of models for cooling (type C):**

   Attach the condensate drain.
4. **In the case of models with ventilation (type V):**

   Connect the unit to the air ducts.
5. Connect the unit to the mains supply.

6. Install the control panel and (any optional) connections to external controls.
7. Complete the installation of the unit.
8. Switch the mains supply on and check that the unit is working properly.
9. Connect the unit to any building management systems (if required).

General instructions

Some parts of this section only apply to certain models. Where this is the case, it will be indicated. If no specific model is referred to, then the description applies to all models.

Note:

Make sure that you perform all installation operations that are applicable to your unit.

Check the type plate and consult the manual if in doubt about the model or type of your unit.

Note:

During the installation period, protect the unit against damage and penetration of dust, cement, etc. You can, for instance, use the packaging for protection.

2.4 Hanging the unit up

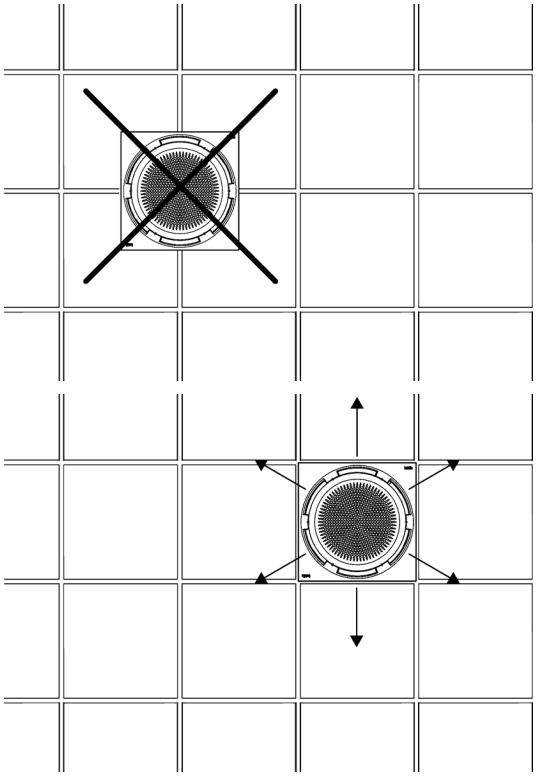
2.4.1 Positioning the unit

Warning:

Make sure that the structure from which the unit is about to be suspended can hold the weight of the unit. The weight is specified on the type plate.

Warning:

The *minimum* mounting height is 2.0 m.



- Ensure the following:
  - Position the unit between the ceiling profiles.
  - Pay attention to the unit's orientation in the room (it is possible to adapt the discharge pattern to the room).
  - The maximum mounting height for the unit is 4 m. (measured from floor to ceiling).

Caution:

The ceiling tiles should not rest on the cover. Instead, use the T-beams of the suspended ceiling.

Note:

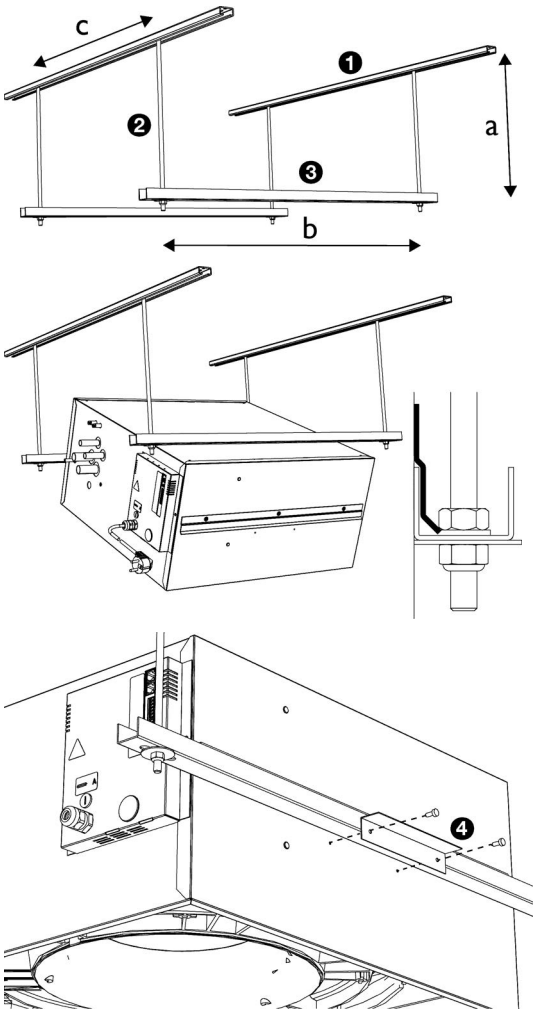
After hanging the unit, it is no longer possible to change the orientation of the cover.

Note:

Provide for an inspection hatch in the ceiling if the CC_2 is not fitted in a suspended ceiling.

Note:

Mounting the unit above the maximum height may affect the proper working of the unit.



2.4.2 Suspending and securing the unit

1. Mount steel channels (rails) ❶ and fit threaded rods M8 ❶ according to the dimensions in the table

Caution:

Make sure the threaded rods are perpendicular.

2. Mount the suspension profiles ❸ to the threaded rods.
3. Hook the unit into the suspension profiles.
4. You can still change the position of the unit somewhat by moving it in the suspension profiles and steel channels (rails).
5. Secure the suspension on both sides using the securing brackets ❹.

Warning:

The unit may come down if you do not secure the suspension.

6. Bring the underside of the unit in line with the T-beams of the ceiling..

Caution:

Ensure that the unit is level.

Dimensions for suspending the unit

REFERENCE		DIMENSION
a		as needed
b		670 - 750 mm
c	CC_2 60	600 mm
	CC_2 90	900 mm

2.5 Connecting The Unit Controls (Basic Units Only)

2.5.1 General

This section of the manual refers to the units with basic controls (type B0), whilst the rest of the manual refers to units with the advanced/digital controls S1, S0, M1, M0. The CC_2 basic unit is available with the following different control options to suit the application:

- Temperature controlled single speed operation (internal potentiometer)

- Temperature controlled single speed operation (B-Control)
- Slave unit to a CC_2 S or CC_2 M unit

2.5.2 Temperature controlled single speed operation (internal potentiometer)

This unit will use an external thermostat to switch on the fan when the temperature goes above or below the set limit. Install the thermostat in a suitable location such that it isn't affected by any local temperature disturbances. The fan speed can be set using the potentiometer located inside the unit. There are no valves on the unit so ensure that the maximum discharge temperatures aren't exceeded as detailed in earlier section.

Note:

The ring will be fixed in a single position only and can't operate to change the discharge angle.

Note:

Multiple units can be controlled this way. Biddle recommend the maximum number of 4 units.

Temperature controlled single speed operation (B-Control)

The unit will function as above however the B-Control can be used to vary the speed of the fans after installation.

Note:

Both the B-Control and the Thermostat can switch the fan off so ensure the values are set correctly.

Note:

Multiple units can be controlled this way. Biddle recommend the maximum number of 4 units.

Slave Unit to a CC_2 S or CC_2 M unit

A basic unit can be configured to work as a slave unit by wiring it into terminal X90 on a master CC_2 unit so the two units will work at the same fan speed.

Note:

Only models with S1 or M1 will have functional grilles, units with Basic, S0 or M0 controls will not have a functional discharge angle grille.

Note:

Only units with M0/M1 controls will be supplied with valves. Care should be taken on heating and cooling systems to design the system such that the heating does not operate when the cooling does.

To install the units, run a suitable 2 core cable between the CC_2 units.

Note:

Size the cable sufficiently to ensure voltage drop is kept to a minimum.

2.6 Connecting the unit to the central heating and air heat recovery system

2.6.1 Special points regarding the water connection

Caution:

The central heating system's supply and return pipes must be attached to the correct corresponding connectors. On the unit, the directions are indicated with arrows.

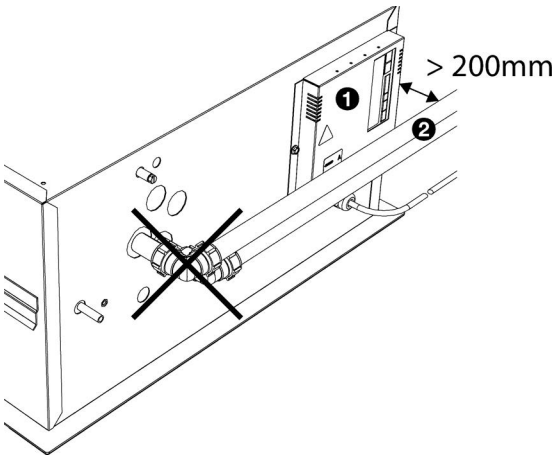
SYMBOL FEED PIPE	SYMBOL RETURN PIPE
	
arrow points towards the connection	arrow points away from the connection

Warning:

Use only compression fittings to connect the unit to the system.

Connection sizes of fittings.

TYPE		COMPRESSION FITTING
CC_2 60	H2,C2, H3, C3	ø22 mm
	H1/C2	H: ø15 mm – C: ø22 mm
CC_2 90	H2, C2, H3, C3	ø22 mm
	H1/C2	H: ø15 mm – C: ø22 mm



Caution:

The electronics module must remain accessible. The distance between the pipes ❷ and the electronics module ❶ must be at least 200 mm.

Danger:

Take measures to limit the discharge temperature.

Take account of the critical discharge temperatures and water flow-paths indicated in the section Field of application.

Note:

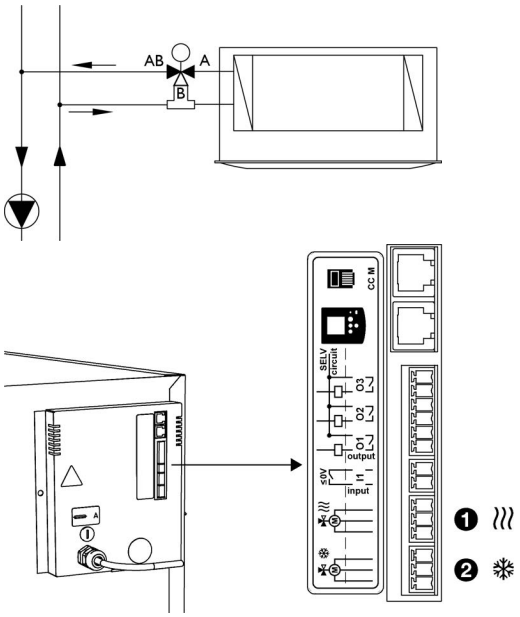
The central heating system must be fitted with an overpressure cut-out with an initial pressure not exceeding the permitted pressure of the unit. This is shown on the type plate at P_{max}.

Note:

Make sure that the central heating system has sufficient capacity.

2.6.2 Connecting the unit to the CH and CW systems

Units with water side control (CC_2 M)

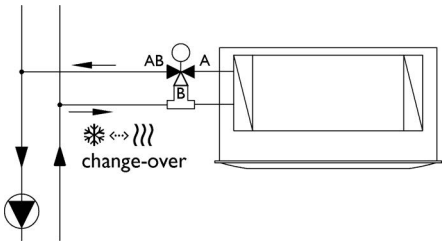


1. Connect the unit and the valve to the CH system according to the opposite diagram.
2. Connect the heating valve to connector ❶ (≀≀≀), according to the wiring diagram.
3. Connect the heating valve to connector ❷ (❄), according to the wiring diagram.
4. Fully insulate all cooling valves and pipework to prevent condensation occuring.

2.6.3 Connecting the unit

1. Connect the unit to the central heating system.
2. Vent the heat exchangers.
3. Check the connections for leakage.

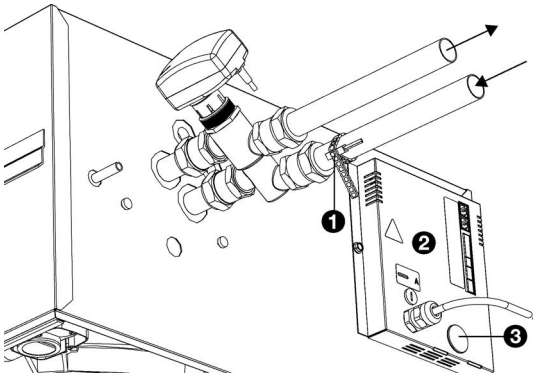
2.7 Connect change-over signal

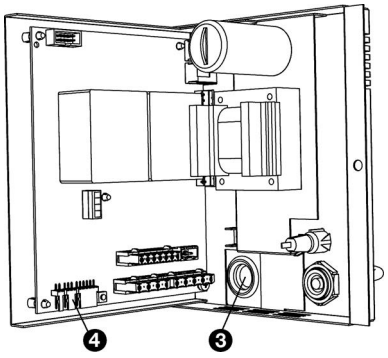


If an appliance is connected in a change-over system, the controller must know whether the system supplies hot water or cold water. There are three options for this:

1. Pipe temperature sensor;
2. Signal on the input of the device;
3. Signal on the output of the device.

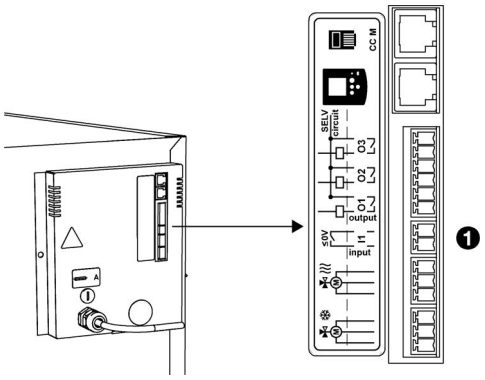
2.7.1 Connect pipe sensor





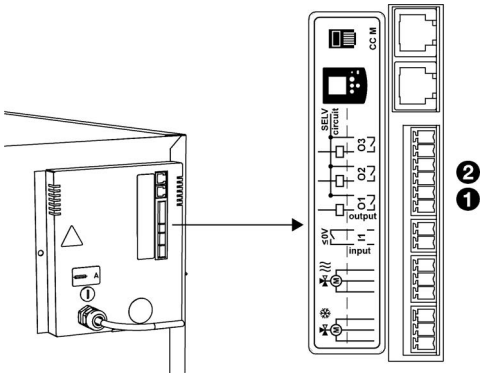
1. Mount the contact sensor ❶ on the system supply pipe.
2. Open the electrical box ❷.
3. Cut a cross in the grommet ❸.
4. Feed the cable from the sensor through the grommet.
5. Connect the sensor to terminal X360 ❹ on the control board, according to the diagram.
6. Close the electrical box.
7. Set function 79 to value 1. The appliance now follows the mode of the system.

2.7.2 Signal on device input



If a contact is made at the input of the appliance, the appliance switches from heating mode to cooling mode.

1. Connect the signal cable to the ❶ input of the device.
2. Set function 90 (function input) of it installer menu to value 1 (change-over input signal heating/cooling).



2.7.3 Signal on the output of the device

Both a boiler/heat pump and a chiller can be controlled via the outputs of the unit. They can be connected separately to an output, or togther so that the appliance determines whether the change-over system cools or heats.

Separate connections to boiler/heat pumps and chillers:

1. Connect the signal cable to the boiler/heat pump from output O1❶.
2. Connect the signal cable to the chiller from output O2 ❷.
3. Set function 91 (function output O1) of the installation menu to value 55 (heat demand).
4. Set function 91.5 to value 0 (NO contact).
5. Set function 92 (function output O2) to value 56 (cooling demand).
6. Set function 92.5 to value 0 (NO contact).

Joined connections to boiler/heat pumps and chillers:

1. Connect the signal cable from the change-over system to output O1 ❶.
2. Set function 91 (function output O1) of the installer menu to value 57 (change-over output signal heating/cooling).
3. Set function 91.5 to value 0 (NO contact). When the appliance switches from heating mode to cooling mode, a signal is applied to the output.

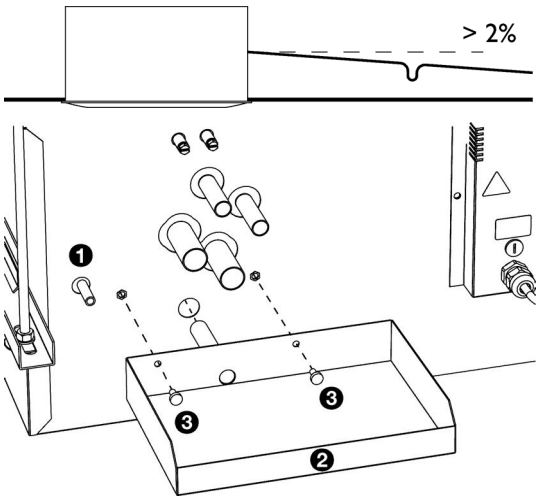
2.8 Connecting Condensate Drainage

Only models with cooling

The appliances with cooling are standard equipped with a condensate drain pump. The condensation is discharged via a flexible hose out of the appliance.

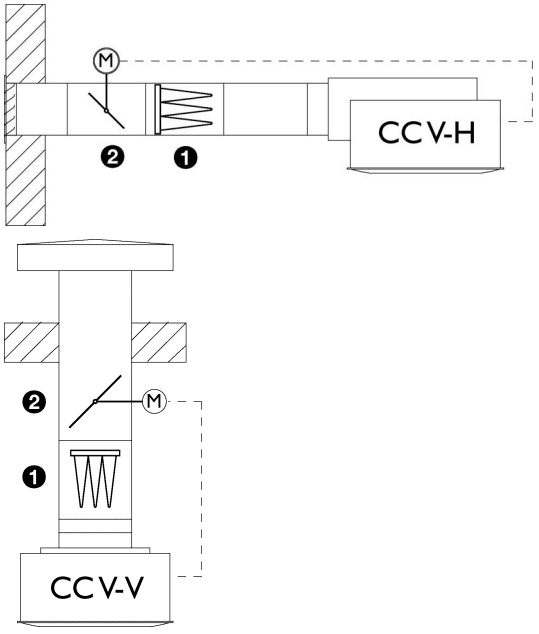
Note:

The maximum head is 1 meter.



1. Connect to a waste system using a trap to stop any smells.
2. Connect the flexible drain hose ❶ to the drain system. Please note the following:
   - For good condensate drainage, the drain pipe must be routed downwards (2%).
   - Avoid kinks in the drain hose.
   - The drain hose must be insulated above the ceiling.
3. When PIC valves are supplied with the unit, mount the external drip tray ❷ with the supplied screws ❸.

2.9 Connect ventilation unit



2.9.1 Connecting ventilation ducts (CC_2 V)

The ventilation units are suitable for drawing in air from elsewhere and blowing it into the room. This can be filtered outside air, but also pre-treated air.

It is possible to open and close air valves with the device.

Warning:

The ventilation unit must be supplied with filtered air ❶.

Note:

To prevent drafts when the appliance is switched off, Biddle recommends incorporating air valves ❷ in the ventilation ducts.

When using a CC_2 ventilation section, the filter and the air damper are integrated.

1. Connect insulated ducts to the unit.

Channel connection dimensions

MODEL		CHANNEL DIAMETER	NUMBER
CC_2 60	V-H	ø200 mm	2
	V-V	ø280 mm	1
CC_2 90	V-H	ø200 mm	4
	V-V	ø400 mm	1

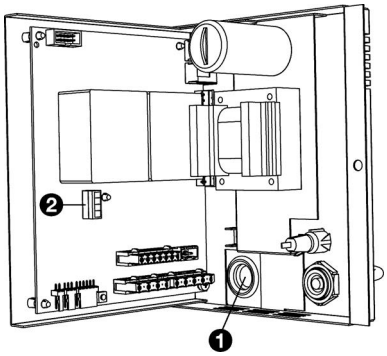
2. Connect the servo motors of the air dampers to the unit, according to the connection diagram.

2.9.2 Control air dampers

There are two options for controlling air valves:

- via the 0-10VDC output on the control board for controlling 0-10VDC servo motors.
- via a signal on output O3 (24V~1A).

0-10VDC output

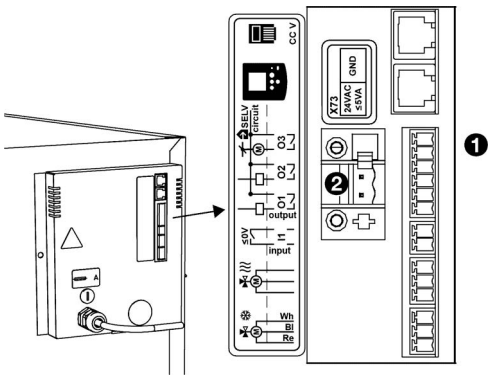


1. Open the electrical module.
2. Cut a cross in the grommet ❶.
3. Feed the wiring through the grommet.
4. Connect the wiring to terminal X340 ❷.
5. Set function 85 (0-10 VDC output) of the installer menu to value 1 (enabled).
6. Set functions 86, 87 and 88 to value 99. The air dampers are always controlled fully open when the unit is in operation.

Caution:

Values other than 99 ensure that the air valves are not fully opened. This will negatively affect the operation of the device.

Signal on output O3



The function of output O3 in ventilation units is set to value 70 by default. Contact is made on the output when the fans turn on. If the outlet temperature falls below 6°C, the contact is broken and the ventilation units are switched off.

This signal can be used to drive suitable servo motors directly, or to drive a 24V relay that controls the servo motors.

1. Connect the wiring to output O3 ❶.

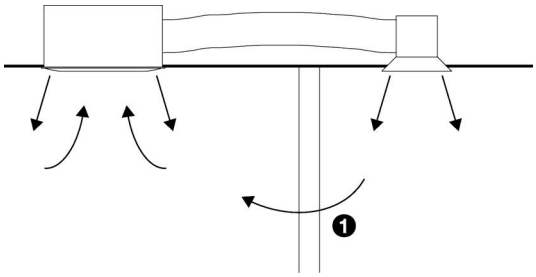
2.9.3 Servo motor power supply

Power supply for the air damper actuators can be obtained via connection X73 ❷ on the electronics module.

Caution:

The maximum load is 24V~, maximum 5VA.

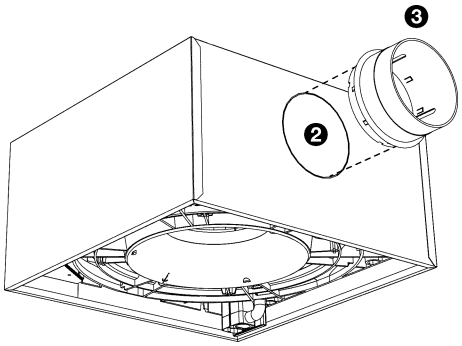
2.10 Mounting Additional Discharge Ductwork



The CC_2 is provided with a pre-punched opening in the casing. An air duct with a diameter of ø160 mm can be mounted on this, with which exhaust air can be brought to an extra air grill.

Caution:

If the extra exhaust is placed in a room other than the appliance, provision must be made for an air return path ❶, for example a wall or door grille or a shortened door.



1. Cut the connections of the pre-punched opening ❷.
2. Cut through the insulation material.

Caution:

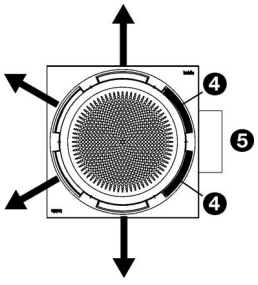
Do not damage the heat exchanger.

3. Press the saddle piece ❸ onto the opening.
4. Fit the duct work and the outlet grille.

Caution:

Note the following when selecting ductwork:

- Use ducts suitable for operating temperatures of 80°C continuously.
- Use insulated ducts with cooling appliances.



5. Mount the two blind plates supplied ❹ in the outlet grille on the side of the air connection ❺.

Caution:

The blanking plates must be mounted for the correct operation of the appliance.

2.11 Connecting the mains supply

2.11.1 Special points regarding the mains supply

Warning:

Do not turn unit ON/OFF at its power supply. Use the control panel.

Warning:

The unit must be earthed.

Warning:

The unit must be connected in accordance with the applicable local requirements.

Warning:

Each unit must be fused in accordance with the table below.

Fuse ratings

	MAXIMUM FUSE VALUE A
≤ 10A	16 A

Note:

A single fuse may only be used for multiple units if they draw a total current of less than 10A.

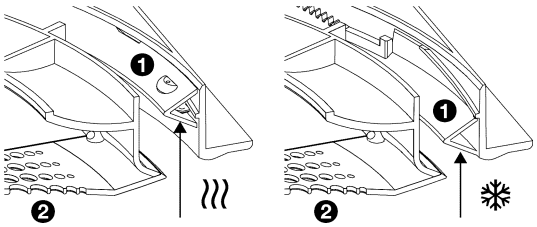
- Make sure that there is a power socket (earthed) available at no more than 1.5 m from the left-hand side of the unit.

Note:

The power socket must remain accessible after installation so that the unit can be disconnected for service and maintenance.

2.12 Mounting the cover

In units without automatic angle adjustment (type 0):



- In heating and ventilating units, the ring ❶ is in a high position (≀≀≀).
- In cooling units (❄) the ring ❶ is in a low position.

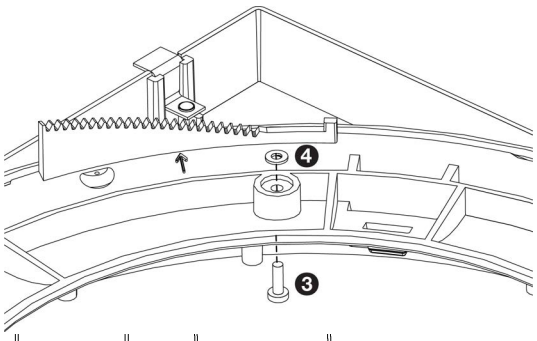
Caution:

Do not change the preset fixed angle.

1. *In units with automatic angle adjustment (type 1):*

   Turn the ring ❶ to the middle position.

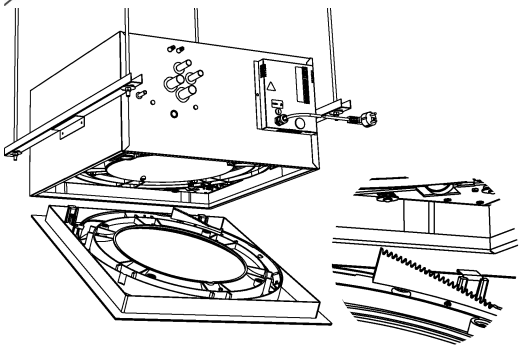
2. Remove the air inlet grille ❷ by turning it anticlockwise (bayonet catch).

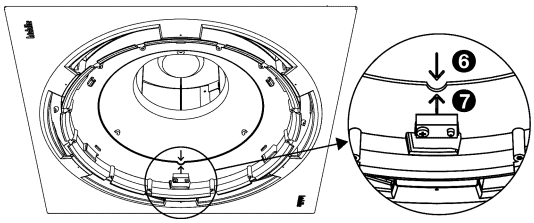


3. Fit the supplied screws ❸ and anti-loss rings ❹ into the cover.

4. Mount the cover into the unit:

   - Hook the cover into the unit using the metal lips;
   - Tighten the screws in the indicated order.



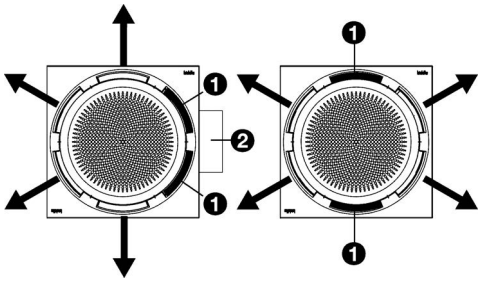


Caution:

Ensure that the projection ❻ of the unit falls into the recess ❼ of the cover. The cover fits to the unit in only one way.

5. Put back the air inlet grille.

2.13 Adjusting the discharge pattern



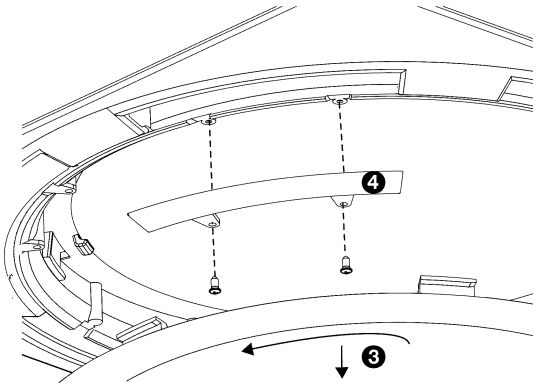
The discharge pattern can be adjusted to the room using the supplied blind plates.❶.

Caution:

If use is made of the air connection for an adjoining room, the two blind plates must be mounted in the two holes on the side of this connection ❷.

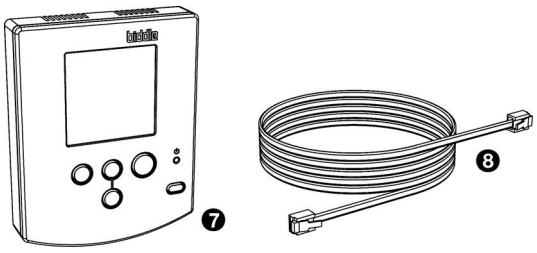
Caution:

Do not mount more than two blind plates per unit.



1. Remove the air inlet grille ❸ by turning it anticlockwise (bayonet catch).
2. Place the blanking plate ❹ into the desired opening, and fix it with the supplied screws.
3. Replace the air inlet grille.

2.14 Installing the control panel



2.14.1 Special points regarding the control panel

Positioning

- You can attach the control panel to the wall or to a standard junction or pattress box.

Cabling

Note:

Take the following into account, otherwise errors may occur:

- The length of the control cable between the control panel and the unit connected may not exceed 50 m.
- Keep control cables away from electromagnetic fields and interference sources such as high-voltage cables and fluorescent light starters.

Note:

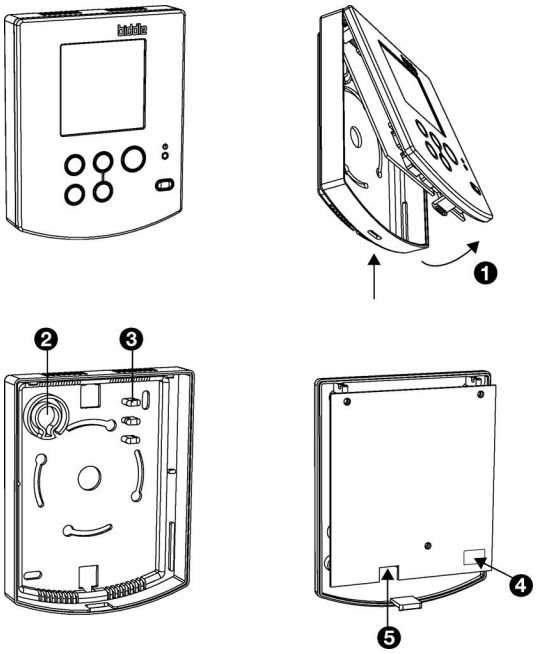
Use Biddle control cables only. Standard modular telephone cable is NOT suitable.

Multiple units operated from a single control panel

- A maximum of 10 units can be connected to a single control panel.
- The following combinations of units are possible:

Note:

The unit code is indicated on its type plate.



- The total length of the control cables between the first and the last unit must not exceed 100m . If the distance is too great, an additional control panel must be connected.

2.14.2 Mounting and connecting the control panel

1. Lay the control cable.
2. **If the external control input on the control panel is used:**
   Lay the necessary cable for this. The cable core diameter must not exceed 0.75mm^2.
3. Open the control panel ❶.
4. Lead the control cable and (if applicable) the external control cable through the back plate.
5. Screw the back plate onto the junction box or the wall.
6. Feed the control cable through the strain relief ❷.

Caution:

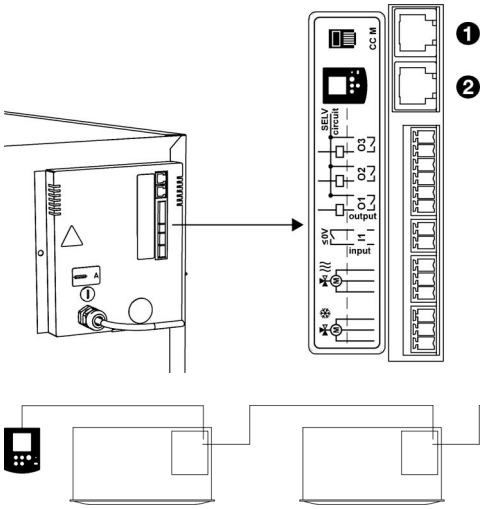
The cable must protrude about 9 cm from the strain relief.

7. Lead the external control cable (if used) through the strain relief ❸.

Caution:

The cable must protrude about 9 cm from the strain relief.

8. Connect the control cable to the control board (connector ❹)
9. Connect the external control cable (if used) to the printed circuit board (connector ❺)



2.14.3 Connecting the controller to the unit

The connections for the control ❶and ❷ are located on the connector plate on the front of the device - either connection can be used.

1. Connect the control cable to the free one connection ❶ or ❷.

Multiple devices with one control panel

1. Remove the blanking plug at ❶ from the first device.
2. Interconnect the devices: connect the control cables between ❶ and ❷.

3 Settings

3.1 Settings

The Settings menu allows you to enter settings which influence the day-to-day use of the unit.

3.2 Levels of Operation

The control panel has four menu levels:

1. The *User Menu* is the level where the control panel normally works. This contains the functions neccessary for everyday usage.
2. In the *timer menu* you can set the timer.
3. In the *installation menu* you can make settings to of the appliance to suit the room and the installation. Usually you only need to use this level during installation, maintenance and service.
4. In the *service menu* you can view and change the settings of the device.

The installation menu is covered in this chapter. Access to the installer menu and timer menu can be limited by changing a switch on the control panel.

3.2.1 Multiple devices with one control panel

If multiple devices are connected to the control panel, the settings are global and they will apply to all connected devices.

3.3 Settings To Change During Installation

The settings in the installation menu are optional. In most cases, the default settings will suffice.

When using the inputs and outputs of the device, functions no. 90, 91, 92 and 93 must always be set at installation.

3.3.1 Installation menu settings

Go to installation menu from home page

- Press the program and the ⏻ keys simultaneously for five seconds.

  The text **PROGRAM** appears in the display. You are now in the installation menu.

In settings table lists the functions in the installation menu are displayed. The big numbers on the display indicate the number of the function, the small digits the value.

Note:
Depending on the type of device, some functions may or may not be shown.

Operation in the installation menu

- Press the program key to go to the next function.
- Press the ✲ key to go to the previous function.
- Press ⊕ or ⊖ to change the value of the function.
- Press ⊕ and ⊖ simultaneously to return the setting to the default value. to make.
- Press the program key for 3 seconds to return to go to the usage menu and save the changes.
- Press the ⏻ key to return to the user menu *without* saving the changes.

If you do not press any buttons for two minutes, the control panel will go automatically returns to the user menu *without* the changes store.

Features in the installation menu

NO.	FUNCTION	OPTIONS
50	Reset settings All settings in the installation menu and timer menu can be reset to the default values be placed.	dF = all functions are at default -- = er are functions with different values *Reset:* • press at the same time ⊕ and ⊖.
51	Filter life	Adjustable between 1 and 51 weeks (26)
52	Ignore error code F1	0 = show error code (default value) 1 = ignore error code
55	Temperature measurement by control panel correction Use this function if the displayed room temperature differs from the actual temperature.	Adjustable between -3 and +3°C (0°C)

NO.	FUNCTION	OPTIONS
56	Night temperature	Adjustable between 5 and 30°C (15°C)
57	Heating minimum outlet temperature	Adjustable between 12 and 55°C (22°C)
58	Cooling minimum outlet temperature	Adjustable between 0 and 30°C (CC_2 V: 12°C; CC_2 R: 5°C)
59	Dead band for switching between heating and cooling (CC_2 S and M) It is also used for disabling of the fan in the *auto* position (CC_2 M)	Adjustable between 1 and 5°C (1.5°C)
61	Dead band around set temperature when heating (CC_2 S)	Adjustable between 0.5 and 4°C (0.8°C)
62	Dead band around set temperature when cooling	Adjustable between 0.5 and 1.0°C (0.8°C)
64	Temperature Control PID Factors	*Do not change these settings, except on Biddle's instructions.*
64.0		
64.5		
70	CC_2 M: Position 2 to position 3 during heating CC_2 S: Stage 1 to stage 2 when heating	1-5, Off (1.5) This is it difference between the set and the room temperature at which the appliance in the *auto* position switches to a different speed. In front of position 2 to position 3, the value must be from position 1 to position 2 at the value are added up. With the CC_2 M, positions 1 and 2 are automatically controlled.
70.5	CC_2 S: Stage 2 to stage 3 in heating	
71	CC_2 M: Position 2 to position 3 in cooling mode CC_2 S: Stage 1 to stage 2 in cooling mode	
71.5	CC_2 S: Position 2 to position 3 in cooling mode	
72	Time-based heating up speed	0 = off 1 = on (default) if the set temperature is not reached within a certain time, the fan will start to rotate one step higher. If after certain time the temperature has not yet been reached, the fan will turn on again position to turn lower. This only works in fan setting *auto* at the CC_2 S.
73	Time-based ramping cooling	
74	Minimum running time in a fan stage	1-5 minutes, Off (Off)
76	Choice of room temperature control or fixed discharge temperature (CC_2 V) *Use the fixed discharge temperature setting only with ventilation units.*	0 = room temperature control 1 = fixed set discharge temperature *At a fixed discharge temperature the room temperature control is switched off. When pressing the ⊕ and ⊖ buttons, the ✋ symbol appears in the display.*
77	Fixed discharge temperature (only if 76=1)	12-55°C (20°C)

NO.	FUNCTION	OPTIONS
78	Night cooling (CC_2-V only)	0 = no night cooling 1 = night cooling With night cooling, the appliance cools to the set day temperature with free cooling. This only happens if the outside temperature is 2°C lower is the daytime temperature.
78.5	Start time night cooling (CC_2-V only)	Start time in whole hours Adjustable between 0 and 23 hours (3 hours)
79	Change-over sensor choice (CC_2 C with Change-over system)	0 = room temperature sensor 1 = water temperature sensor
80	Device is controlled by CO_2 sensor on 0-10 VDC input	0 = no control by CO_2 sensor 1 = control by CO_2 sensor
81	• Input voltage position 1	0-99 (30) in tenths of volts
82	• Input voltage position 2	0-99 (40)
83	• Input voltage position 3	0-99 (50)
85	0-10 VDC output This output can, for example, be used to control an exhaust fan or an air valve.	0 = not enabled 1 = enabled
86	• Output voltage at ventilation position 1	0-99, on (40) in tenths of volts
87	• Output voltage at ventilation position 2	0-99 (60)
88	• Output voltage at ventilation position 3	0-99 (80)
90.x	Function input for external controls	See table in section 'External Controls' for input functions for output functions 0 = Make contact (NO) 1 = Break contact (NC) Input and output functions work on all connected devices.
91.x	Function output O1	
92.x	Function output O2	
93.x	Function output O3	
96.0	Heating minimum temperature to be set	10-30°C (15°C)
96.5	Maximum heating temperature that can be set	10-30°C (30°C)
97.0	Minimum settable cooling temperature	10-40°C (15°C)
97.5	Maximum cooling temperature that can be set	10-40°C (40°C)
98.0	Minimum fan speed ventilation units	0-3 (0)
98.5	Maximum fan speed ventilation units	1-3 (3)
99	Set device code	Change the value 0 to 1 to enter the device code. -- = function not possible

3.3.2 Block access to menus

Access to the installer menu and timer menu can be restricted by flipping a switch on the control panel.

1. Open the control panel.

2. Set switch to the “Lock” position.
3. Replace the control panel.

3.4 External Controls

3.4.1 External Input Signals

Function 90 in the installation menu allows you to choose which function the input on the device. In table below the options for the entrance are shown.

Multiple devices with one control panel

A signal on one device has the same effect on all on the control panel connected devices.

Input functions

NO.	INPUT SIGNAL	DESCRIPTION
0	No function	
1	Change-over input signal heating/cooling	A signal on the input switches the unit switch from heating mode to cooling mode.
2	Device is started by pipe thermostat	The fan will not turn on until the unit is supplied with hot water. This avoids draughts by blowing cold air.
3	Device always on	The appliance continues to run, at least in fan speed 1, even if the control panel is in night mode/standby is set.
4	Ventilation unit on or one position higher	The ventilation unit is switched on or if the device was already on, it will be set one fan speed higher.
5	Ventilation unit off	The ventilation unit is switched off.
6	Device always on	The appliance continues to run, at least in fan speed 2, even if the control panel is in night mode/standby is set.
7	Device always on	The appliance continues to run, at least in fan speed 3, even if the control panel is in night mode/standby is set.
10	Summer mode (CC_2 H)	By making a contact across this input, the temperature control of the appliance is switched off. The ⊕ and ⊖ keys have no function anymore, when pressed - - appears in the display. The fan speed can still be arranged. This can be used to cool down in the summer by getting extra circulation.ON. appears in the display>
11	External on and off	The unit is turned on and off by making and breaking a contact on the input.

3.4.2 External Output Signals

With the functions 91, 92 and 93 you can choose which functions the outputs must have on the device. In table below the options for the outputs are shown.

The functions of the outputs are individually adjustable.

Multiple devices with one control panel

The output signals are always the same for all on the control panel connected devices.

Functions of the outputs

NO.	OUTPUT SIGNAL	DESCRIPTION
0	no function	
51	filter lifetime reached	When the filter life has expired (see also setting 51), this contact is made
52	danger of frost	If the temperature in the room is below 5°C this contact made
53	general malfunction	In the event of a product malfunction, this contact created
54	danger of frost or general malfunction	Combination of no. 52 and 53.
55	call for heat	To be used to leave a central heating installation enable by the device.
56	call for cool	To be used to leave a cooling installation enable by the device.
57	change-over output signal heating/cooling	To be used to reverse the Change-over system switch between heating and cooling. Normally closed during cooling.
58	*With only recirculation or only ventilation units and enabled device*(☀): fan is running	If the control calls the fan to run, this contact is made. Note: This is not an actual running check of the fan.
	With a combination of recirculation and ventilation units and enabled device(☀): fan is switched on	If the system is set to ventilate (🏠🏠) this contact has been made. if the system is on recirculation (🏠) this contact is broken.
59	Device turned on/off	If the device is turned on (☀), this contact has been made. If the device disabled (◖) or in idle mode is, this contact is broken.
62	ventilation unit in speed 2	The ventilation unit is actively calling the fan to run in mode 2. Note: This is not an actual fan rotation check.

NO.	OUTPUT SIGNAL	DESCRIPTION
63	ventilation unit in speed 3	The ventilation unit is active in fan mode 3. Note: This is not an actual fan rotation check.
70	*CC_2 V only:*The fan is running.	If the discharge temperature falls below 6°C, the contact is broken and the fan is switched off. In the event that one or more ventilation units are connected is output O3 permanently set to function 70. This function works per unit (local).

4 Operation

This chapter describes the functions required for the daily use of the S1, S0, M1, M0 CC_2 unit. If you have a CC_2 basic unit, then please refer to the instructions from the installer as different controls options are available.

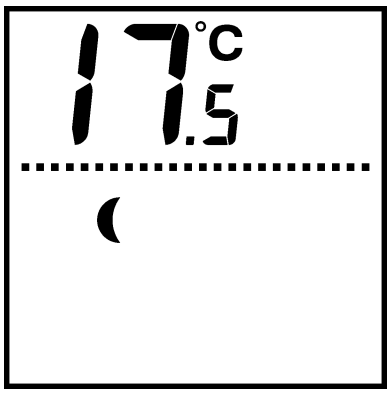
All functions are controlled with the control panel. This allows you:

- to switch the unit on and off;
- regulate the temperature in the room;
- determine the speed of the fan.

4.1 Multiple devices with one control panel

If multiple units are connected to the control panel, the settings on the panel are the same for all devices. Exception here is the combination of recirculation units with ventilation units - the ventilation can be controlled separately.

4.2 Switching the unit on and off

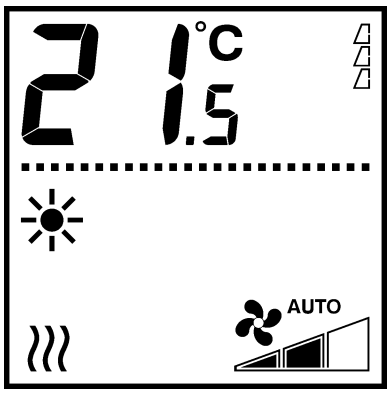


You can switch the unit on and off manually.Alternatively, the device can be controlled by external controls.

- To switch the unit on ⏻ or off (☀) press the (☾) key briefly.

When the unit is turned off, the LED on the control panel is lit. If the room temperature falls below the set night temperature (default 15°C), the unit will operate until the night temperature is reached.

4.3 Control fan speed

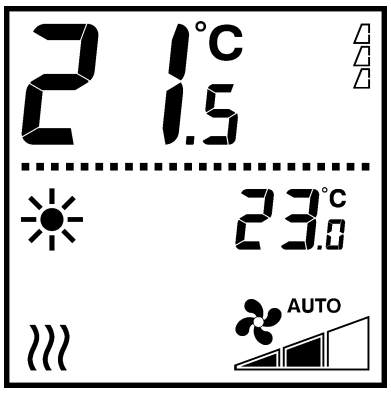


Press the ⊛ key to select the fan speed:

- Low
- Medium
- High
- *auto* AUTO

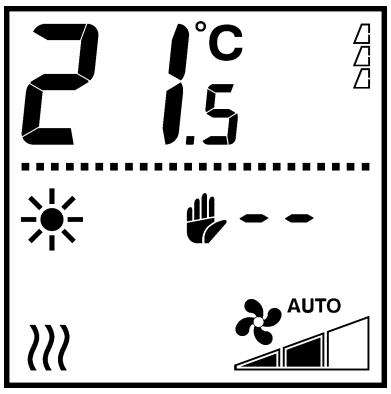
In the *auto* position, the fan speed is determined automatically by the controls of the Comfort Circle$_2$.

4.4 Temperature control



Press ⊕ or ⊖ to set the desired room temperature.

The appliance will try to reach the desired temperature. For units with standard control (S0 and S1), the fan switches off when the desired temperature has been reached. For units with modulating control (M0 and M1), the fan continues to run in a low speed whereby the discharge temperature is reduced, or turns off, depending on settings.

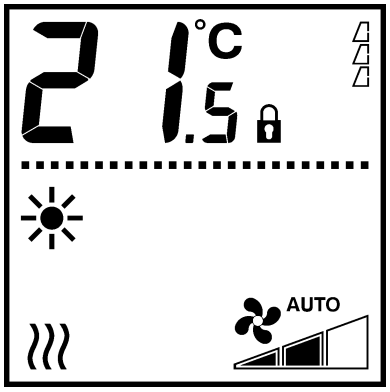


When the ✋ symbol appears in the display when pressing the ⊕ or ⊖ key, you cannot control the room temperature. The unit has been set to have a fixed discharge temperature.

The large numbers indicate the current room temperature.

The small numbers indicate the set (desired) room temperature at.

4.5 Locking the keys

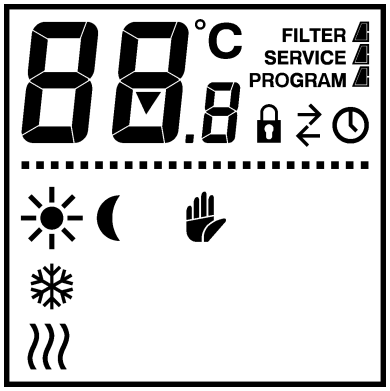


It is possible to lock the keys of the control panel to prevent unwanted use.

To lock or unlock the buttons, simultaneously press ⊕, ⊖ and program .

When the buttons are locked the 🔒 symbol appears in the display and pressing buttons has no effect on the operation of the unit.

4.6 Display messages



4.6.1 Dirty filter indicator

The number of 'filled' triangles indicates how long the filter is in usage: the more triangles, the longer it has been and the sooner it will need replacing.

If the **FILTER** text appears, the The filter's service life has expired, it must then be cleaned or replaced.

4.6.2 Heating or cooling

The ⌇⌇⌇ symbol indicates that the device is working in a heating only mode.

The ❄ symbol indicates that the device is working in a cooling only mode.

4.6.3 External controls

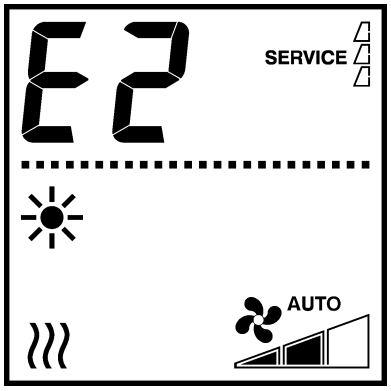
The ⏲ symbol in the display indicates that the unit is being turned on or off by a timer in or on the control panel. During this time, the ⏻ key will not work.

The ⇄ symbol indicates that a connected device the input signal of an external control is in operation.

The operation of the unit depends on the settings for the external control. It is possible that certain functions do not work or only work to a limited extent.

If the settings change due to the external control, the display will update to reflect this.

4.6.4 Malfunctions



When an error has occured, the **SERVICE** message will light and the screen will show an error code.

Warning:

Some malfunctions may cause damage or danger to persons if they are ignored. If SERVICE is displayed, see troubleshooting section and warn the installer if necessary, or contact Biddle.

Note:

The fault code disappears as soon as you press a key. However, the **SERVICE** designation will remain as long as the failure does not occur has been rectified.

If an error code is displayed without the **SERVICE** designation, the error has resolved itself. You only need to take action if the fault occurs more than once.

5 Timer

The unit is equipped with a weekly timer as standard. It allows you to use the device for specific times and days of the week. The switching moments are per half hour adjustable.

Note:

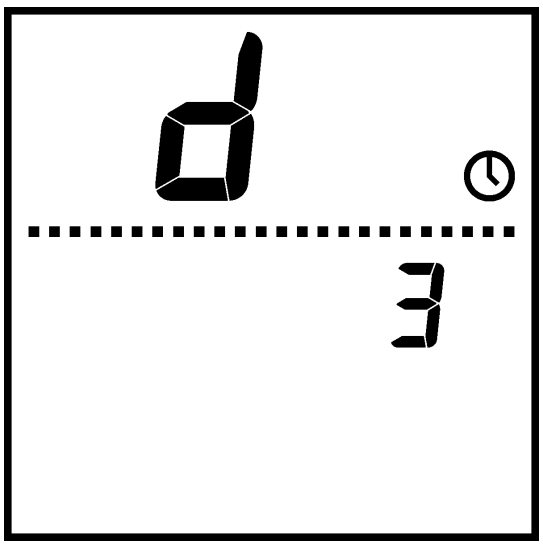
If you want to control switching on and off more precisely, you can use create an external timer that needs to be connected separately to the control panel.

Note:

The control panel is equipped with a battery to to keep the time running in the event of a power failure. This battery has a service life of at least 10 years, after which time after a power failure the day and time must be reset.

5.1 Set current time

1.



Briefly press the program key, on the display a "d" and the ⏲ symbol will appear.

2. Set the day with ⊕ and ⊖, finish with the program -button (Monday = d1 ... Sunday = d7).

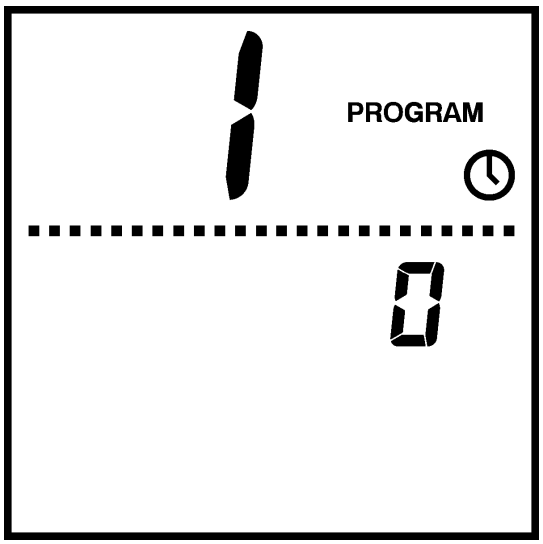
3. Set the hour H with ⊕ and ⊖, save with the program key.
4. Set the minutes m with ⊕ and ⊖, save with the program key.
5. Set the day and time by pressing the program button and holding it down for five seconds. The display returns to the normal operating position. You can also exit the menu without the settings by briefly pressing the ⏻ button.

5.2 Set Timer

1. Press the program key for three seconds.

Note:
Access to the timer menu may be restricted by means of the switch on the control panel.

2.

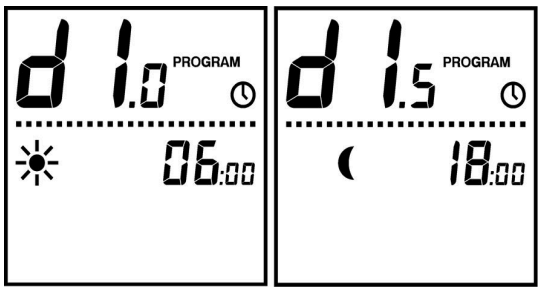


A large 1 will now appear on the display. Use the ⊕ and ⊖ keys to select:

- 0 = The appliance can still be switched on and off independently of the timer be used with the ⏻ key
- 1 = The unit is only turned on and off by the timer. The ⏻ key will then no longer work. With this choice the ⏲ symbol appears in the display.

3. Press the program key to go to the next setting. A large 2 will now appear in the display.
4. Use the ⊕ and ⊖ keys to choose:

- 0 = do not use internal timer in the control panel or use an external timer;



- 1 = use the timer in the control panel.

5. Press the program key to go to the next setting. program d1.0 will now appear in the display along with the ☀ symbol. This is the start time on Monday.
6. Set the desired start time with the ⊕ and keys.
7. Press the program key to go to the next setting. You will now see d1.5 in the display along with the ☾ symbol. This is the stop time on Monday.

   If the start and stop times are the same, the unit will not turn on.
8. Set the desired stop time with the ⊕ and buttons.
9. Repeat steps 5-8 for the remaining days (d2 through d7).
10. By pressing the program key for three seconds, the settings are saved. You can also leave the menu *without* fix the settings by briefly pressing the ⏻ key to push.

Note:

If after setting the timer the ⏲ symbol flashes in the display, you still need to set the current time.

6 Maintenance

6.1 Cleaning the unit

You can clean the outside of the unit with a slightly damp cloth and a household cleaner. Do not use solvents.

Warning:

Make sure that no water runs into the device.

Warning:

The electronic module must not be cleaned with a damp cloth.

6.2 Introduction

The filter must be cleaned regularly. A dirty filter can cause insufficient heating and a high noise level. The environment determines how long it takes for the filter to be cleaned.

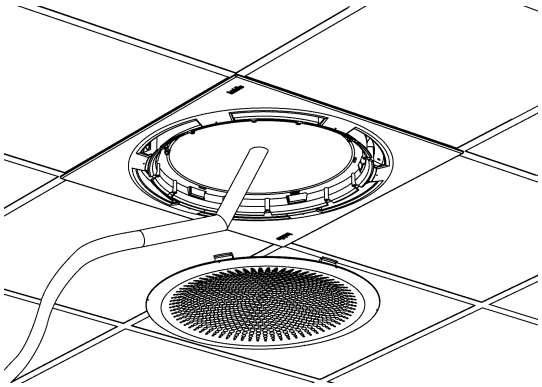
The unit is designed in such a way that the filter can remain in the appliance when cleaning. If desired, the filter can also be cleaned or replaced be removed from the device.

Warning:

If the filter is damaged, the filter must be replaced immediately.

6.2.1 Track filter life

The control panel keeps track of the filter usage time. You can set the service life (the usage time after which the filter is considered dirty) in the installer menu.



6.2.2 Filter cleaning

1. Switch the unit off using the controller.
2. Remove the air inlet grille.
3. Clean the filter using a vacuum cleaner.
4. Replace the air inlet grille.
5. Switch the unit on.
6. Reset the filter's service life by pressing + and - simultaneously.

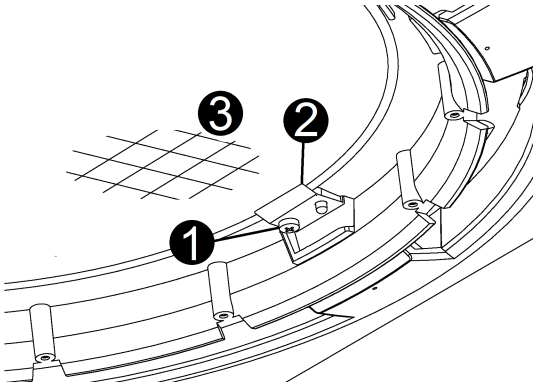
6.2.3 Removing and replacing the filter

Danger:

This may be carried out by qualified staff only.

Warning:

Replace the filter if it is damaged.



1. Switch the unit off.
2. Disconnect power supply (remove plug from socket or move main switch to Off).
3. Remove the air inlet grille.
4. Loosen screw ❶, but do not remove it from the unit.
5. Turn away the locking plate ❷.
6. Take out the filter ❸.
7. Clean or renew the filter.
8. Replace the filter.
9. Re-apply the locking plate to the filter.
10. Tighten screw ❶.
11. Replace the air inlet grille.
12. Switch the power on again.
13. Reset the filter's service life by pressing ⊕ and ⊖ simultaneously.

Danger:

For safety reasons, the unit may not be used without a filter.

6.3 Scheduled maintenance

Biddle recommends having the following inspection and maintenance activities performed annually by an installer or other technical expert.

- Check that the heat exchanger is clean. Settled dust may cause an unpleasant smell.
- Carefully remove dust with a vacuum cleaner.

Caution:

The fins of the heat exchanger are delicate parts.

Warning:

The fins of the heat exchanger are sharp.

- Check the operation of the fans.
- Clean the drip tray in the unit.

7 Errors

7.1 Safety instructions

Danger:

All work on the inside of the unit may only be carried out by personnel who are technically qualified to do so.

Warning:

Before you begin: read the safety instructions.

7.2 Resolving simple problems

Danger:

The actions in the table below may be performed by competent staff only.

Fault finding by the installer

PROBLEM	LIKELY CAUSE	WHAT TO DO
The controller displays an E- or F-code.	A fault has occurred in the unit.	Press any key of the controller. 1. If the code disappears, the fault is no longer current, and there is no need for immediate action. 2. Refer to table 7-3 for resolving the fault if the code does not disappear, or if the code shows up frequently.
The controller works normally but the unit does not respond.	The fan is not receiving a power supply or is faulty.	1. Check the fuse on the electronics module. 2. Check the wiring between the PCB and the fan.

PROBLEM	LIKELY CAUSE	WHAT TO DO
The unit does not work, the controller display is blank, and the LED is not lit	The unit is not receiving power.	Check the power connections, the wiring and the fuse of the electronics module.
	The connection between the controller and the unit is not correct.	Check the control cable.
	The PCB does not work.	Check the mains supply, 1. Replace the PCB.
	The controller is defective.	Check the controller by connecting it to another unit. 1. Replace the controller if it does not work.
The fan does not work.	The fan is not receiving a power supply or is faulty.	1. Check the fuse on the electronics module. 2. Check the wiring between the PCB and the fan. 3. Replace the fan.
The fan does not operate at a certain speed.	The connection for the relevant speed is not correct.	Check the wiring between transformer and PCB. 1. Replace the transformer.
Not all connected units are working.	The controller does not communicate with one or more connected units.	Check if mains power is supplied to all connected units.. 1. Check the control cables. 2. Check the fuses in all connected units.

7.3 Error messages on the control panel

7.3.1 Reading out errors

Current errors

Current errors are displayed on the Home screen. If an error has remedied itself, a corresponding message will be displayed.

When the error message is touched, the screen displays an explanation, together with a list of the actions to be taken. The message will disappear from the Home screen only when the error has been remedied.

There may be more than one error at the same time. You can read out a list of current error codes via menu > Maintenance > Current errors.

No-longer-current errors

If an error has remedied itself, a corresponding message will be displayed. Touch this message to display the error history and to read out the last five errors and the times of their occurrence. This list can also be read out via menu > Maintenance > Error history.

This message will disappear when touched or when the unit is switched on again.

7.3.2 Delete errors

Most error messages will disappear automatically when the problem is resolved. Certain errors have to be remedied, however, by deleting the error message via menu > Maintenance > Current errors.

7.3.3 Reset system

Some errors can be remedied by resetting the control panel via menu > Maintenance > Reset system: the panel will then search for connected units again.

All settings are retained.

7.3.4 Reading faults

Current faults

If SERVICE appears in the display, there is a malfunction. In addition, the error code is displayed.

The error code disappears as soon as you press a key. However, the SERVICE will remain as long as the error is not resolved.

Try to rectify faults associated with a fault message by table. This requires technical expertise.

No more current faults

If a malfunction has occurred during your absence and has has resolved itself, only the fault code is displayed. This one disappears as soon as you press a key.

In the service menu you can read the codes and times of the last read out faults that have occurred, function no. 23 to 27).

7.3.5 Clear Faults

Most fault messages disappear on their own as soon as the problem is solved dissolved. Some malfunctions can be cleared by using the control panel to be reconfigured in the service menu: the panel will then search for connected devices (function 20).

Error codes

CODE	PROBABLE CAUSE	WHAT TO DO
E1	The control panel has no communication with one or more connected devices. This malfunction can occur: • if a connected device has been removed or replaced; • due to a short failure in the power supply of a connected appliance; • due to incorrect cabling; • due to a defect.	Reset the control panel. 1. Check whether all connected devices have mains power. 2. Check the control cables.
E2	Devices are connected with a non allowed or unknown device code, or an unauthorized combination of device codes.	Check and compare the device codes on the nameplate.
	The control panel has power, but no communication with a device.	Reset the control panel. 1. Check the control cables.
E4	There is a fault in the condensate pump. The unit is switched off to prevent damage from condensation leaking.	Reset the control panel. 1. Check whether there is extreme condensation due to high humidity. 2. Check that the float of the condensate pump is not stuck. 3. Check the connections and wiring of the condensate pump. 4. Replace the condensate pump.
E6	There is a risk of frost due to too low a temperature. The frost protection is in operation (see section 2.5.2). **Freezing can damage the heat exchanger.**	Make sure that the temperature in the room exceeds 8°C. 1. Check the operation of the heating system 2. Check the wiring and connection of the discharge temperature sensor (connector X350). You can prevent this malfunction by the central heating system by having the appliance switched on.

CODE	PROBABLE CAUSE	WHAT TO DO
F1	Malfunction in the automatic angle adjustment.	Clear the error message. 1. Change the desired room temperature on the control panel so that the control panel switches from heating to cooling or vice versa and check whether the angle adjustment ring moves. 2. Remove any obstacles from the reach of the angle adjustment ring. 3. Check wiring and connectors between actuator, microswitch and the control board. 4. Replace the angle adjustment motor.
F4	The temperature sensor in the control panel is defective.	Replace the control panel.
F5	The temperature sensor in the outlet of the device does not work.	Check the wiring and connection of the sensor (connector X350). 1. Replace the sensor.
F6	The temperature sensor in the suction of the appliance does not work (CC_2 V).	Check the wiring and connection of the sensor (connector X360). 1. Replace the sensor.
F7	The change-over sensor does not work.	Check the wiring and connection of the sensor (connector X360). 1. Check the wiring and connection of the sensor (connector X360)
F8	Error on 0-10 VDC input: • voltage is higher than 10 V • voltage is 0 V	Check the wiring on the 0-10 VDC input. 1. Check the operation of the accessory on this input. 2. Replace the accessory on this input.

8 Service

8.1 Safety instructions

Warning:
Servicing activities may only be carried out by personnel who are technically qualified to do so.

Warning:
Before you begin: read the safety instructions.

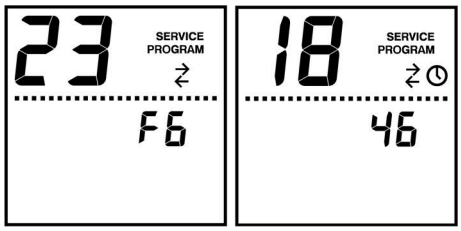
8.2 Service-menu

In the service menu you can read values that provide information about the operation of the unit

- Simultaneously press the **?** key and the ⊛ buttons.
- Press the **?** key to move through the menu.
- Press the ⏻ key to exit the menu.

Read-out values in the service menu

NO.	FUNCTION
20	Reset and reconfigure control panel Settings made are reset here.
21	Current filter life in weeks (1 week = 50 operating hours)
22	Software version number
23	Error history
24	
25	
26	
27	



(23 = oldest, 27 = newest error message)
The display successively shows the number with the error code ❶ and the elapsed time ❷ since its occurrence in hours.

28	Number of devices connected to the control panel
29	Input voltage on the 0-10 VDC input in tenths of Volts
30	Status of the input (1 = closed circuit)
31	Status of output O1 (on/off)

NO.	FUNCTION
32	Status of output O2 (on/off)
33	Status of output O3 (on/off)
34	Change Over Temperature Sensor Reading
35	Average inlet temperature ventilation units
36	Average outlet temperature ventilation units
37	Average inlet temperature recirculation units
38	Average discharge temperature recirculation units
39	Average valve position heating
40	Average valve position cooling
41	Set value outlet temperature (determined by controller)

Note:

Depending on the type of device, some functions may or may not be displayed.

8.3 Reset and reconfigure control panel

In some cases it is necessary to reset and reconfigure the control panel. Use this function:

- to clear faults E1 or E2;
- after you have replaced a control board;
- after you remove or replace a device.

8.3.1 *Reset and reconfigure:*

- simultaneously press ⊕ and ⊖.

The control panel will then search for connected devices again (function 20) and return back to the user level.

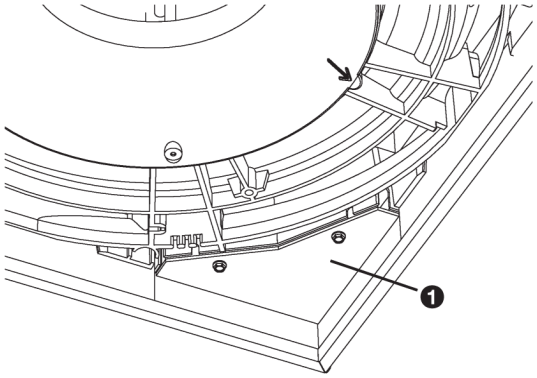
8.4 Accessing the interior of the unit

8.4.1 Recirculation units

1. Switch the unit off using the controller.

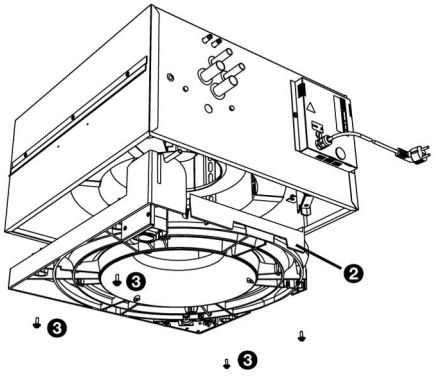
Warning:

Disconnect the power supply (pull plug from socket or move isolation switch to Off).



2. Remove the main cover.
3. Remove the main cover ❶..
4. Detach the connections of fan, condensate pump,angle adjustment motor and temperature sensors from the PCB.
5. Detach the cables of fan, condensate pump and angle adjustment motor from their guides

.



6. Remove the drip tray ❷ using screws ❸.

Caution:

The drip tray comes completely loose when you remove the screws. Ensure it does not fall down.

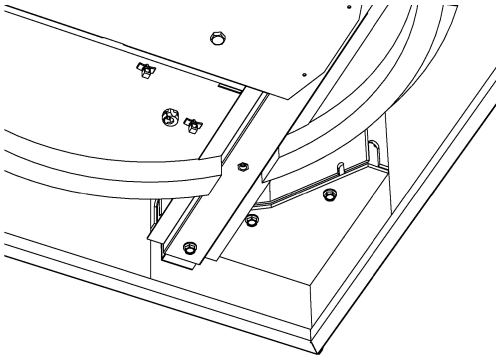
Caution:

The drip tray may still contain some water.

Warning:

The heat exchanger can be hot.

8.4.2 Ventilation units



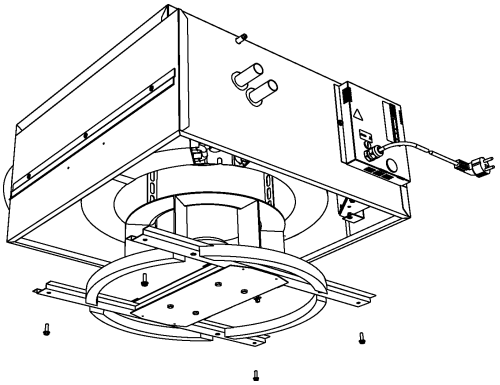
1. Switch off the unit using the control panel.

Warning:

Isolate from the mains supply (remove the plug from the socket or turn off the operating switch).

2. Remove the cover.
3. Remove the cover ❶ from the electronics module.

4. Disconnect the fan from the control PCB.



5. Remove the fan frame ❷ with screws ❸.

Caution:

The fan frame will come off completely when you remove the screws, make sure it doesn't fall.

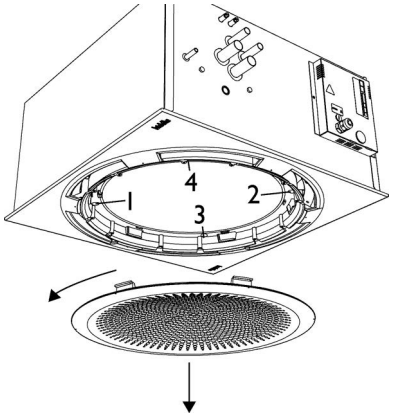
Warning:

The fan frame is heavy.

Warning:

The heat exchanger may be hot.

8.5 Removing the main cover



1. Switch the unit off using the controller.

Warning:

Disconnect the power supply (pull plug from socket or move isolation switch to Off).

2. Remove the grille by turning it anticlockwise (bayonet catch).
3. Loosen the screws in the indicated order. If anti-loss rings were mounted upon installation, the screws stay in the cover.

8.6 Positioning angle adjustment ring

If the angle adjustment ring is skewed in the hood, the ring must be repositioned.

1. Remove the cover.
2. Remove the retaining plate.

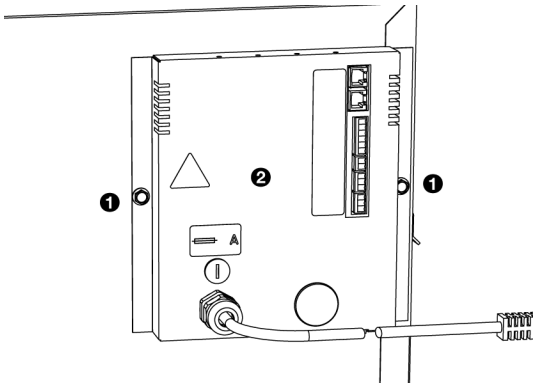
3. Unscrew the angle adjustment ring with the hood.
4. Orient the arrows on the ring and cap.
5. Turn the ring into the hood.

Caution:

Make sure that the threads in the cap are in all six bearings.

6. Install the retaining plate.
7. Replace the cover.

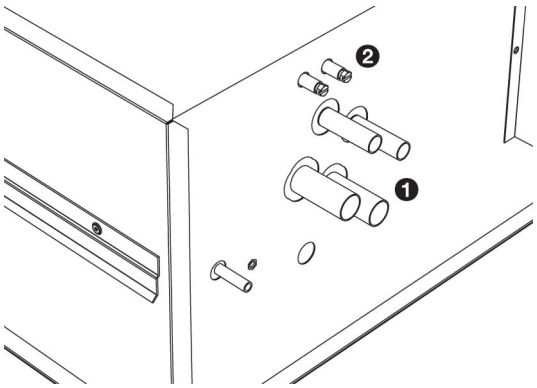
8.7 Fuse



The unit's electronics module has one fuse. The fuse rating is specified on a sticker near the fuse..

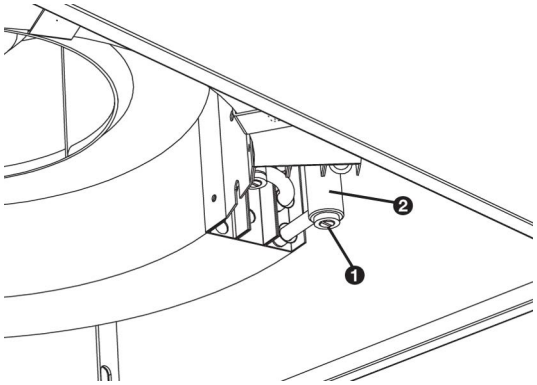
1. Disconnect the power supply (pull plug from socket or move isolation switch to Off).
2. Loosen fuse holder positioned above the power supply cable.
3. Replace the fuse.

8.8 Venting the heat exchanger



The vent valve(s) ❷ are above the CH connections. The CC_2 H1/C2 has two vent valves.

8.9 Draining the heat exchanger



The heat exchanger can be completely drained.

1. Recirculation units: Remove the main cover and the drip tray.

   Ventilation units: Remove the main cover and the fan mounting frame.

2. Open the drain plug ❶ of collector ❷. The CC_2 H1/C2 had two drains.

Caution:

After refilling the system, check the sealing of the drain plug.

8.10 Set device code

The device code must be set after replacing the control PCB. The code depends on the unit configuration and is indicated on the type plate.

Caution:

Setting the device code only works if there is one device connected to the control panel. If necessary, connect the control panel separately to the relevant device.

1. Reset the control panel.
2. Enter the installation menu by pressing the program key and the ⏻ key simultaneously for five seconds.
3. Use the program key to go to function 99.
4. Change the value from 0 to 1 with the ⊕ key.
5. Press program for three seconds and then the device code input screen appears.
6. The control panel displays four digits. These form the device code. The first digit flashes.
7. Press ⊕ or ⊖ to increase or decrease the number.
8. Press the program key to move to the next digit.
9. Repeat the previous two steps until you have set all the numbers. No more digit flashes.

10. Capture the device code by pressing the ⏻ key to push. The device code is now set.

If more devices were connected to one control panel:

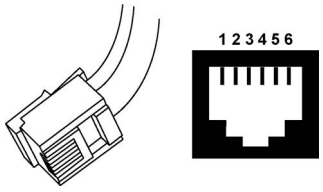
1. Reconnect the other devices to the control panel.
2. Reset the control panel.

8.11 Biddle control cable composition

The control cable for the control system is constructed as follows:

- The plugs are modular connectors of the type 6P4C.
- Connectors are untwisted, i.e. at both cable ends, cores are connected to the same electrode.

Colour coding of Biddle cables



ELECTRODE	COLOUR
1	(not used)
2	black
3	red
4	green
5	yellow
6	(not used)

9 Dismantling

The dismantling of the installation and the handling of the coolant, oil and other components must be carried out by a qualified fitter in accordance with the relevant local and national legislation and regulations.

Pursuant to EU legislation, used electrical and electronic appliances must be collected for recycling. By ensuring that this product is disposed of in the correct manner, you are helping to prevent potential negative consequences for the environment and public health. For more information about this, please contact your supplier or the relevant government authority.

10 Addresses

If you have any comments or queries relating to this product, please do not hesitate to contact your Biddle branch.

Biddle bv
P.O. Box 15
9288 ZG Kootstertille
The Netherlands

Biddle bv
P.O. Box 15
9288 ZG Kootstertille
The Netherlands
T +31 (0)512 33 55 55
E info@biddle.nl

Biddle France
21 Allée des Vendanges
77183 Croissy Beaubourg
France
T +33 (0)1 64 11 15 55
E contact@biddle.fr
I www.biddle.fr

N° Vert 0 800 24 33 53

N° Vert 0 800 BI DD LE

Biddle Air Systems
St. Mary's Road, Nuneaton
Warwickshire CV11 5AU
United Kingdom
T +44 (0)24 7638 4233
E sales@biddle-air.co.uk
I www.biddle-air.com

Biddle GmbH
Emil-Hoffmann-Straße 55-59
50996 Cologne
Germany
T +49 (0)2236 9690 0
E info@biddle.de
I www.biddle.de

T +31 (0)512 33 55 55
E info@biddle.nl

Biddle Air Systems
St. Mary's Road, Nuneaton
Warwickshire CV11 5AU
United Kingdom
T +44 (0)24 7638 4233
E sales@biddle-air.co.uk
I www.biddle-air.co.uk

N° Vert 0 800 24 33 53

N° Vert 0 800 BI DD LE

Biddle France
21 Allée des Vendanges
77183 Croissy Beaubourg
France
T +33 (0)1 64 11 15 55
E contact@biddle.fr
I www.biddle.fr

Biddle GmbH
Emil-Hoffmann-Straße 55-59
50996 Cologne
Germany

T +49 (0)2236 9690 0
E info@biddle.de
I www.biddle.de

Keywords

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Liability as regards the manual

Although great care has been taken to ensure the correct and, where necessary, complete description of the relevant components, Biddle shall not be held liable for damages as a consequence of errors and/or imperfections in this manual.

Biddle reserves the right to alter the specifications as mentioned in this manual.

Should you nevertheless discover any errors or ambiguities in the manual, we shall be glad to learn that from you. It helps us to improve the documentation still further.

For more information

If you have any comments or queries relating to this product, please do not hesitate to contact Biddle. You will find the contact information for your Biddle branch in the Addresses chapter.

Biddle bv
P.O. Box 15
9288 ZG Kootstertille
The Netherlands

T +31 (0)512 33 55 55
E info@biddle.nl
I www.biddle.nl

Name and telephone number of installer: