FLEXIT

114529EN-05
2016-11

C2



EUROVENT CERTIFIED PERFORMANCE
RAHU 19.12.007
Nordic
www.eurovent-certification.com

INSTALLATION INSTRUCTIONS

EN

Assembly Instructions

Ceiling mounted air handling unit and automatic control system

ART. NO.:
700030
700031
700032
700033



SAFETY INSTRUCTIONS

- It is the installer's responsibility to carry out a full safety and function assessment of the appliance.
- To reduce the risk of fire, electric shock or injury, read all the safety instructions and warning texts before using the unit.
- This unit is only designed for ventilation air in homes and commercial buildings.
- It must not be used to extract combustible or flammable gases.
- Remove the power plug before commencing any service and maintenance work.
- Before opening the door: switch off the heat, let the fans continue for 3 minutes to remove hot air, unplug the unit and wait 2 minutes before opening the doors.
- If the power cable is damaged, it must be replaced by the manufacturer, the manufacturer's service agent or a similarly qualified person.
- The unit contains heating elements that must not be touched when they are hot.
- The unit must not be operated without the filters being in place.
- Do not heat any combustible substances under the cooker hood if one is installed.
- Do not leave a saucepan or frying pan containing oil or fat unsupervised when using a cooker hood.
- Warranty claims will only be valid if the instructions in the manuals have been followed.
- To maintain a good indoor climate, comply with regulations and avoid condensation damage, the unit must never be stopped except during service/maintenance or in connection with an accident.
- All electrical connections must be carried out by qualified electricians.
- All plumbing work must be carried out by an authorised plumber.
- The water battery must be located in a room with a drain.



When servicing ceiling-mounted units, be aware of the danger of components falling down.

This appliance may be used by children of 8 years or above or by persons with reduced sensory capacity or reduced physical or mental capacity, or by persons with lacking experience or knowledge, provided they have received instructions in the safe use of the appliance or are supervised to ensure safe use and providing they are aware of the risks. The product is not suitable for use by children.

Children must not be allowed to play with the appliance. Children must not carry out cleaning or maintenance without supervision.

Our products are subject to continuous development and we therefore reserve the right to make changes.

We disclaim all liability for printing errors.

See the following documents for more information on the product:



114531 Spare parts list
114537 Wiring diagram without electric battery
114536 Wiring diagram with electric battery
110827 CI60
110828 CI600

Innhold

1 How to read the document 4
2 Planning and preparation work 5
2.1 Joiner / fitter 5
2.2 Plumber (if the unit has a water battery) 5
2.3 Electrician 5
3 Installation 6
3.1 Mounting the safety strap 6
3.2 What is supplied? 6
3.3 Ceiling mounting 7
3.4 Wall mounting 13
3.5 Floor (attic) mounting 15
4 Duct connection 16
4.1 Connection to the unit 16
5 Installation of the CI60/600 control panel 17
5.1 Contents 17
5.2 Installation of the CI60/600 17
5.3 Installation with a flush-mounted wall box 18
5.4 Surface mounting 18
5.5 Finishing off – C160 18
5.6 Finishing off – C1600 18
6 Electrical work 19
6.1 Supply air sensor for heating (B1) 19
6.2 Frost sensor for water battery (B5) (if the unit has a water battery) 19
6.3 Outdoor air damper (if the unit has a water battery) 19
7 Plumbing work* 19
8 Adjustment 20
8.1 Adjustment with CI60 20
8.2 Adjustment 20
8.3 Adjusting the temperature 20
8.4 Adjustment with CI600 21
9 Installing the cooker hood 22
9.1 Installation of external cooker hood 23
9.2 Adjusting the cooker hood 23
10 General and system drawings 24
10.1 System drawing (electric battery) 24
10.2 System drawing (electric battery) 25
10.3 Nipple location 26
11 Technical data 27
11.1 Dimensioned drawing 28
11.2 Capacity and sound data 29
12 Final checks / Startup 32
12.1 Final checks 32
12.2 Startup 32
13 CE Declaration of Conformity 33

1 How to read the document

NB! When a text bears this symbol, damage to equipment or poor efficiency may be the consequence of not following the instructions.

CAUTION! When a text bears this symbol, it means that personal injury or serious damage to the equipment may result if the instructions are not followed.

Symbols used

These products have a number of symbols that are used to label the product itself and in the installation and user documentation.





DANGER!
ELECTRICITY



DANGER! DO NOT TOUCH

2 Planning and preparation work

2.1 Joiner / fitter

Airflow
Check that the air moves from rooms with supply air valves to rooms with extract air valves.

Kitchen
If a kitchen fan with a motor is included, sufficient supply air must be ensured. See Chap. **9.1 Installation of external cooker hood** and Chap. **9.2 Adjusting the cooker hood** for more information.

Fireplace
When using a fireplace, sufficient air supply from a separate supply air point must be ensured.

Location in the building
Location of the unit on an internal wall requires insulation of the wall, interrupted studs and boards, and double plasterboard or a wall structure of similar quality (see Chap. **3.4.1 Positioning requirements**).

Positioning must accord with individual countries' electrical safety legislation. Check which rules apply in your country.

Suspension of unit
See **kap. 3 Installation på side 6.**

Access
The unit must have good access for service/ maintenance. See **kap. 3 Installation på side 6** for details.

Fire requirements
Any fire safety requirements must be clarified.

Location of heat sources must be coordinated with extraction valves, so that heat is not sucked straight out through the valves or door gaps.

2.2 Plumber (if the unit has a water battery)

Water pipe layout and location of the water battery (duct battery) must be planned. These must be kept warm to avoid frost damage. A closing damper with spring must be used. See separate instructions that accompany the water battery.

The water battery must be located in a room with a drain.

2.3 Electrician

Power supply
The units have an approx. 2 m cable with plug and require a single-phase earthed socket nearby. Plug requirements: 10 A. We recommend a separate circuit for the unit. It is important that the plug is accessible for servicing when the unit is fully installed.

If a cooker hood is to be connected to the ventilation unit, a minimum Ø16 conduit must be installed for the two-core signal cable.

NB!
The PG nipple for the power cable must be tightened with a torque of 2.0 Nm if the cable is replaced.

For exact positioning of the electrical bushings, see **11.1 Dimensioned drawing.**

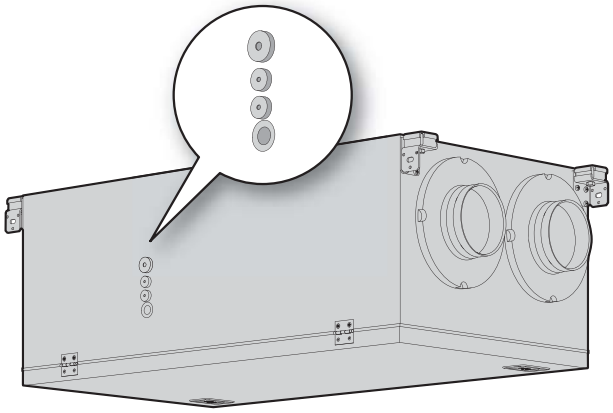


figure 1 *Positioning of bushings for electrical conductors.*

Wiring for control switches.
Ø20 conduit for running the trailing cable for controlling the unit should be laid between the unit and an easily accessible place in the home (e.g. outside the bathroom) and terminated with a flush-mounted single wall box. The control switch is located here. The control cable must be located min. 30 cm away from any power cables. The control cable must be max. 24 m to ensure a signal.

Control panel
The control panel is designed for flush mounting over a single wall box or surface mounting on the wall.

The assembly instructions for the product must be followed.

3 Installation

The unit can be installed in the following ways:

- On the ceiling.
- Horizontally on a wall.
  Mounting devices for this can be purchased as an accessory.
- On the floor (lying on its back).
  In this case absorption feet are recommended (available as an accessory).

The unit comes in both a left-hand and a right-hand version, depending on what is best with regard to duct positioning.

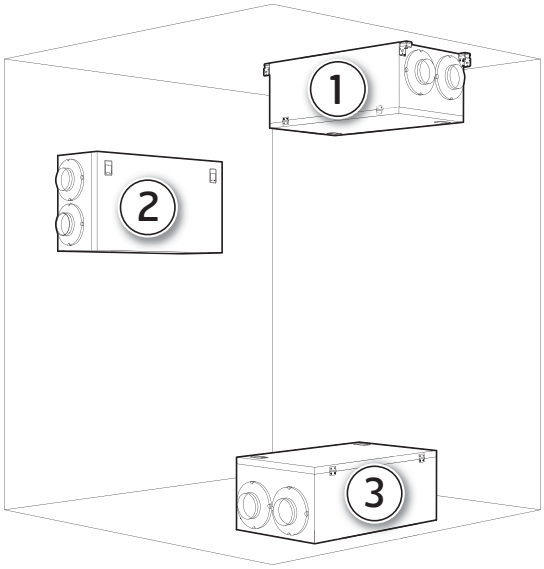


figure 2 *Location options*

3.1 Mounting the safety strap

Mount the safety strap as shown on **figure 3**.

When the unit is located on the floor, this strap must always be mounted.
We also recommend its use for ceiling mounting.

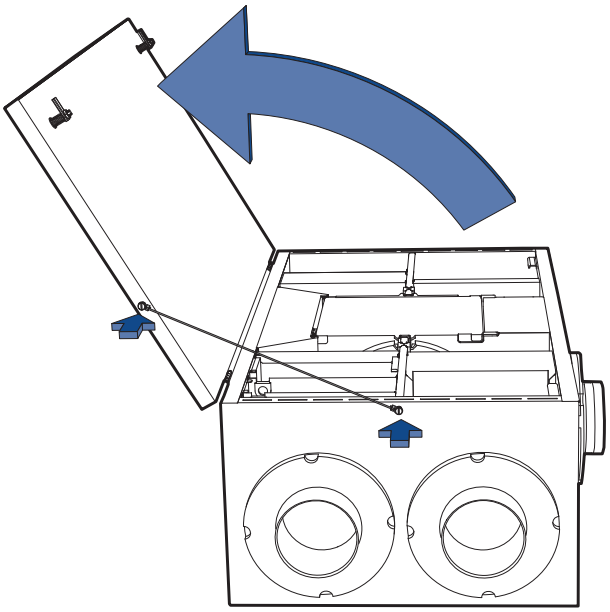


figure 3 *Fixed safety strap*

3.2 What is supplied?

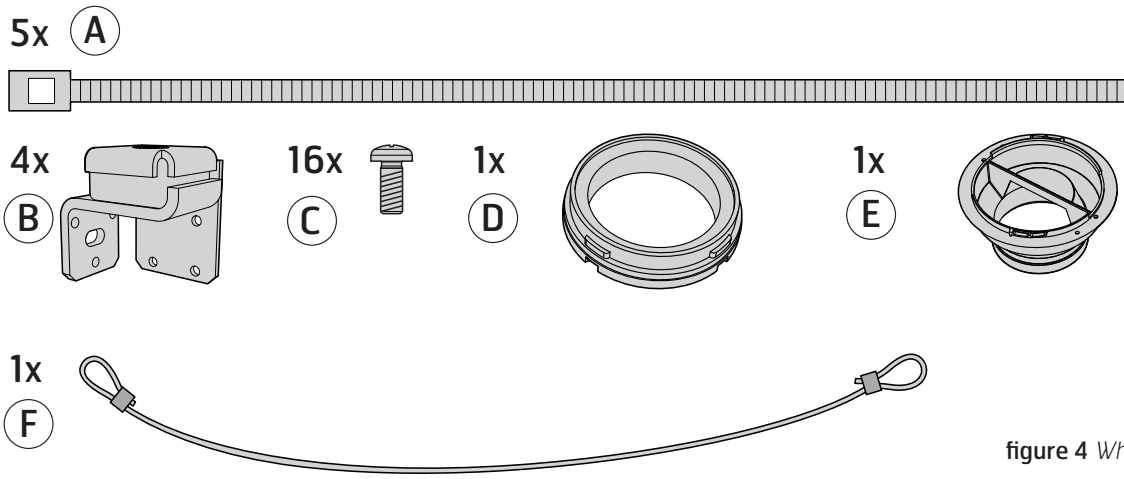


figure 4 *What is supplied?*

3.3 Ceiling mounting

3.3.1 *Positioning requirements*

The unit is designed to be installed in boiler rooms, laundry rooms, stores, lofts or other suitable areas.

Positioning must accord with individual countries' electrical safety legislation. Check which rules apply in your country.

The unit should be positioned in such a way that there is no danger of noise nuisance in nearby rooms.

If the unit is located in a warm room where a lot of moisture is generated, condensation may form on the outside of the unit during periods when the outside temperature is low.

The base should be stable and level.

3.3.2 *Space requirements*

The unit must be installed with suitable space for servicing and maintenance such as filter replacement and cleaning of fans and recovery system.
See **figure 5**. The control cable with plug for automatic control must be easily accessible when the unit is fully installed.

These are minimum requirements and only take service needs into account.

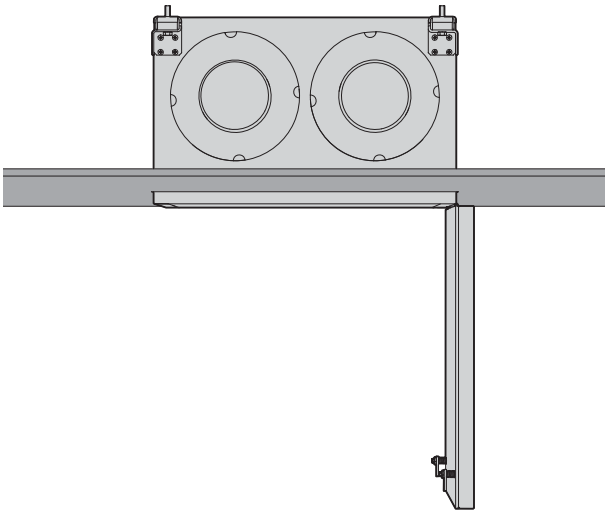
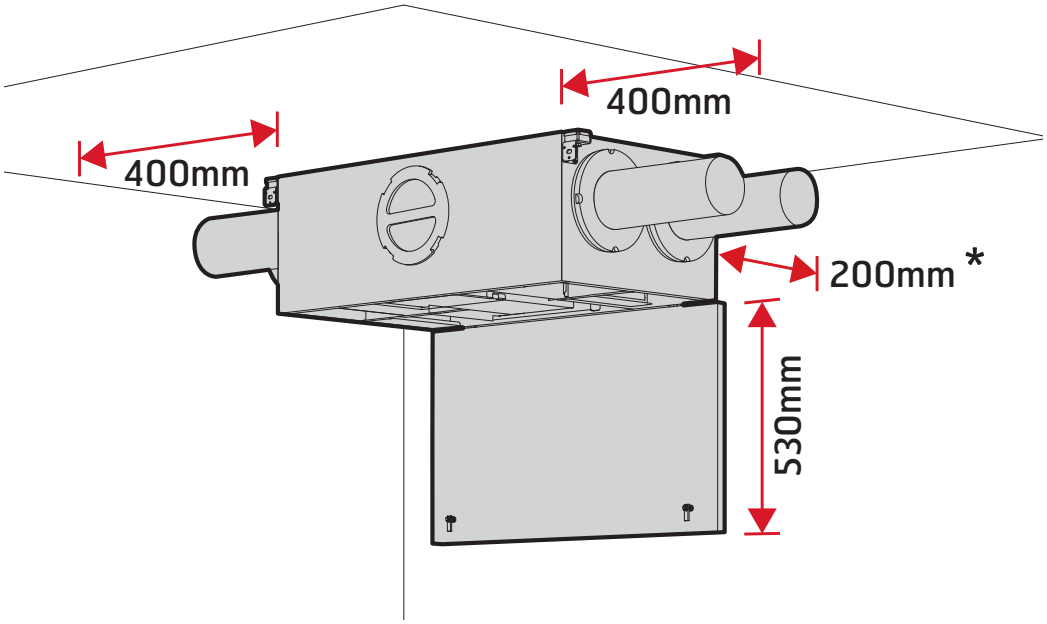


figure 6 *Opening the door in case of ceiling mounting*

In the case of mounting in an enclosure or a suspended ceiling, remember that the door must be able to open by 120°.

Ensure there is servicing access to electrical bushings. See the dimensioned drawing for exact location.



** required for access to electrical bushings*

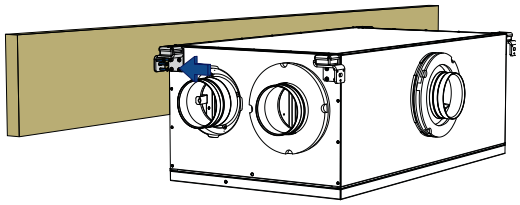
figure 5 *Space requirements for ceiling mounting*

3.3.3 *Mounting of fixing bracket*

The air handling unit can be mounted in the ceiling in several different ways.



Alternative 1 – Top mounting



Alternative 2 – Side mounting

Fixing brackets to be mounted in the same way regardless of top or side mounting

1



2

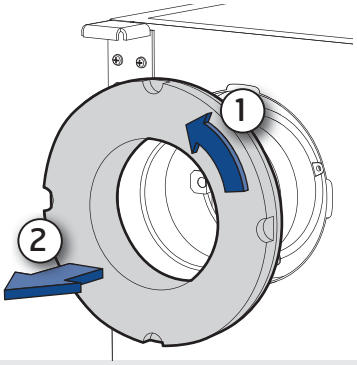


3



4

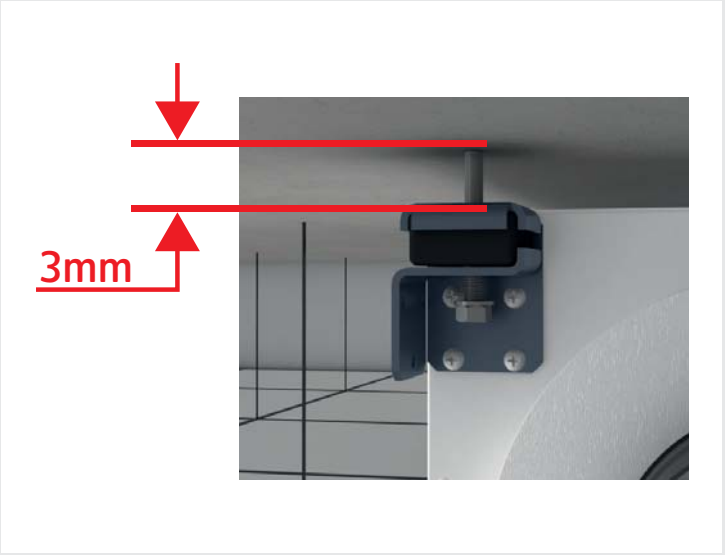
To facilitate access to the fixing bracket, the polystyrene rings round the bosses may be removed.



Alternative 1 – Top mounting



The unit must always be mounted at min. 3mm distance from the mounting substrate, as shown in figure 12. This is to prevent structural sound.

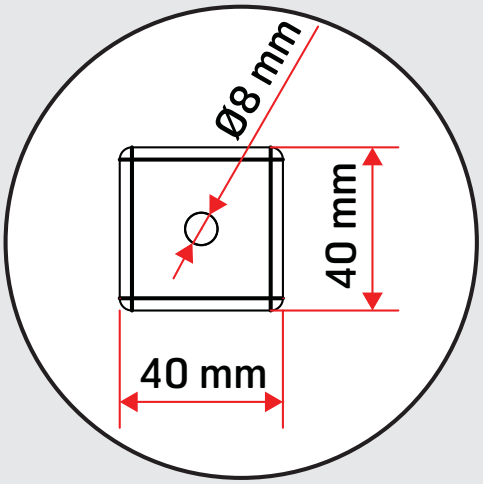


Alternative 1 - Top mounting

If it is necessary to pre-drill your mounting substrate, the drilling pattern is given here:

Select a suitable fixing device which matches your mounting substrate.

Remember that the unit weighs 46 kg and the fixing device must be able to support this.



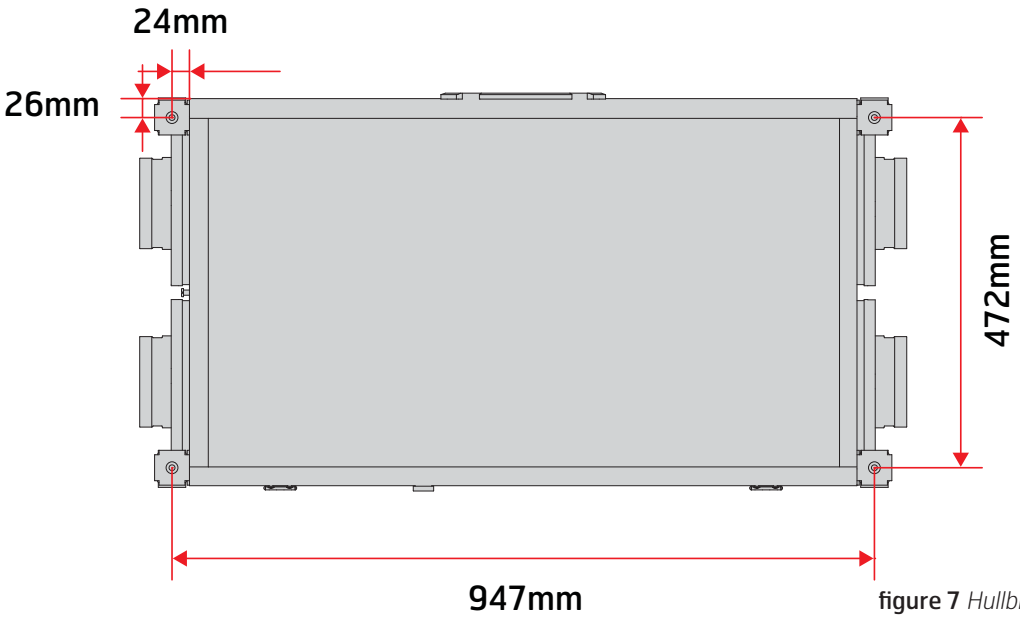
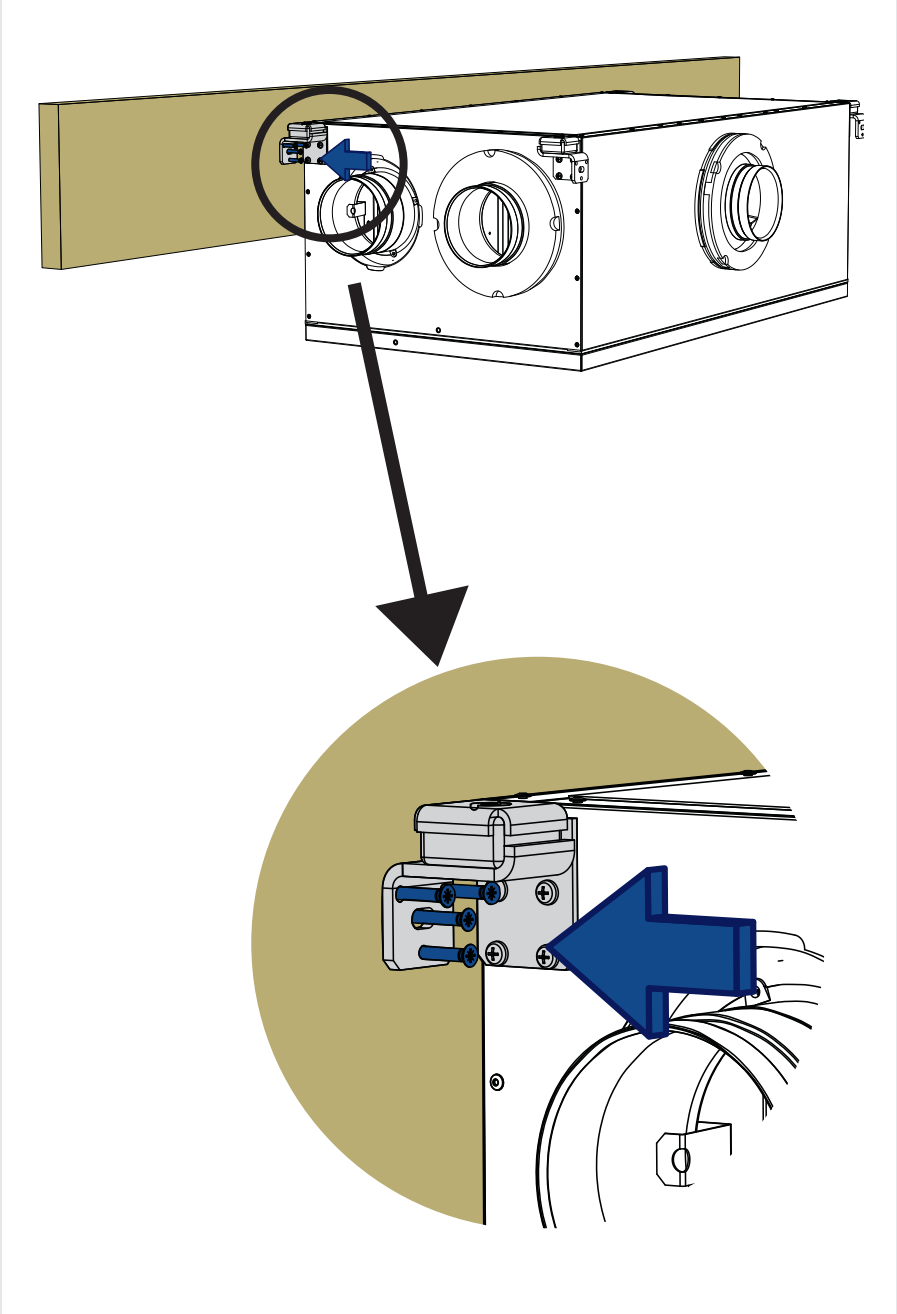


figure 7 *Hullbilde topp*

Alternative 2 - Side mounting

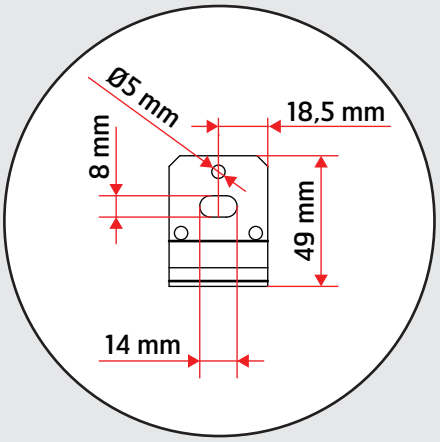


Alternative 2 - Side mounting

Select a suitable fixing device which matches your mounting substrate.

Remember that the unit weighs 46 kg and the fixing device must be able to support this.

If it is necessary to pre-drill your mounting substrate, the drilling pattern for the two mounting alternatives is given here:



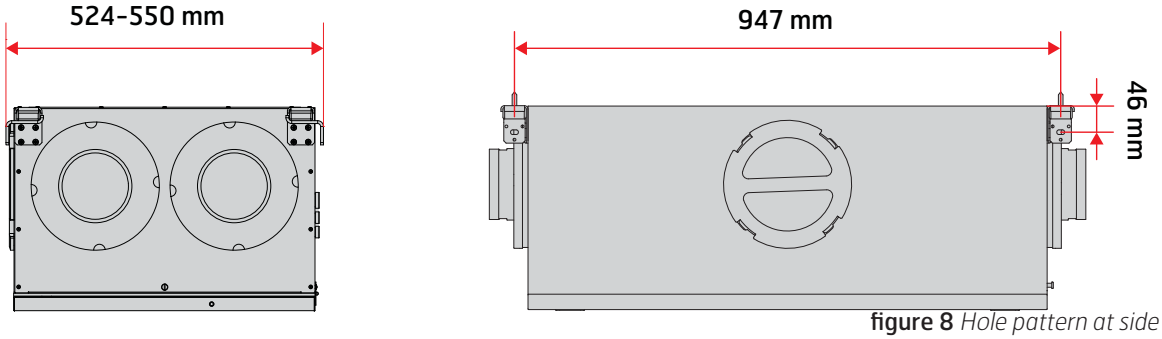


figure 8 *Hole pattern at side*

Make sure the mounting substrate only touches the fixing brackets and not the unit.

This is to prevent structural sound.

The fixing bracket can therefore be adjusted sideways in both directions to avoid this.

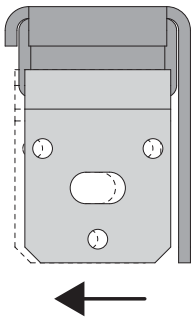


figure 9

3.4 Wall mounting

3.4.1 *Positioning requirements*

The unit is designed to be installed in boiler rooms, laundry rooms, stores, lofts or other suitable areas.

Positioning must accord with individual countries' electrical safety legislation. Check which rules apply in your country.

The unit should be positioned against a wall that has no room on the other side that is sensitive to noise. The wall should be soundproofed, e.g. with mineral wool, to reduce the transfer of sound. Double plasterboard on the wall, interrupted studs and interrupted plasterboard are recommended. See **figure 10.**

If the unit is located in a warm room where a lot of moisture is generated, condensation may form on the outside of the unit during periods when the outside temperature is low.

The base should be stable and level.

See separate instructions for mounting the wall fixing.

Mounting devices for this can be purchased as an accessory.

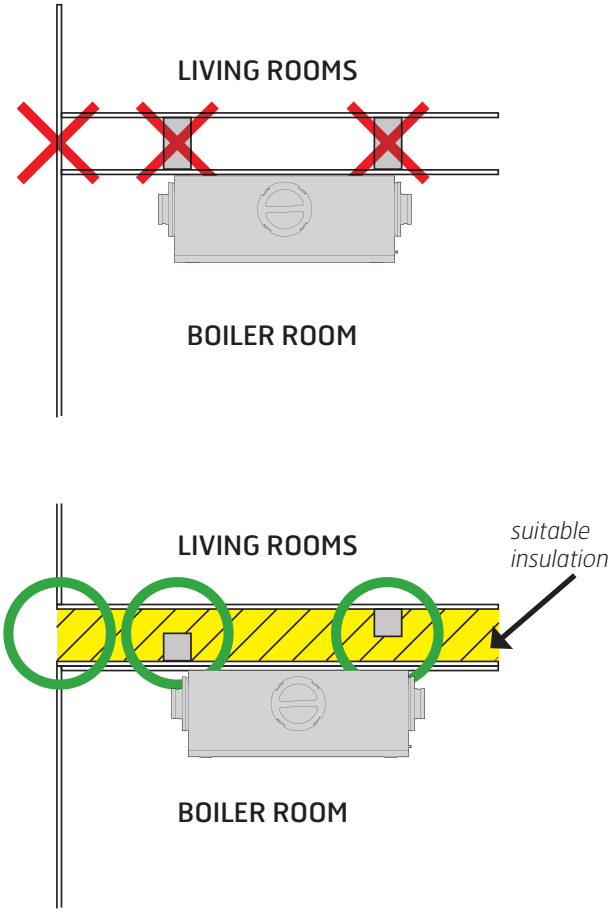


figure 10 *Recommended wall construction*

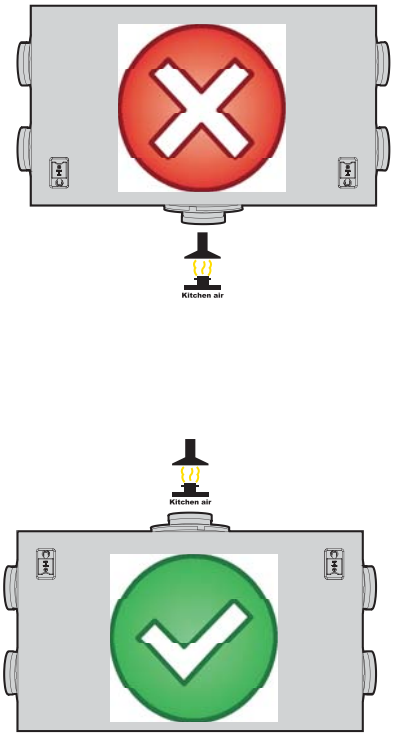


figure 11 *Recommended direction*

3.4.2 *Space requirements*

The unit must be installed with space for servicing and maintenance such as filter replacement and cleaning of fans and rotary heat exchangers. The control cable with plug for automatic control must be easily accessible when the unit is fully installed.

These are minimum requirements and only take service needs into account.

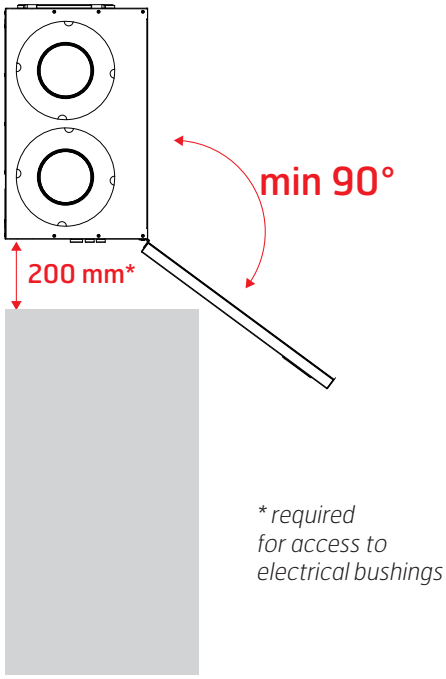


figure 13 *Space requirements for wall mounting*

Ensure there is servicing access to electrical bushings. See the dimensioned drawing for exact location.

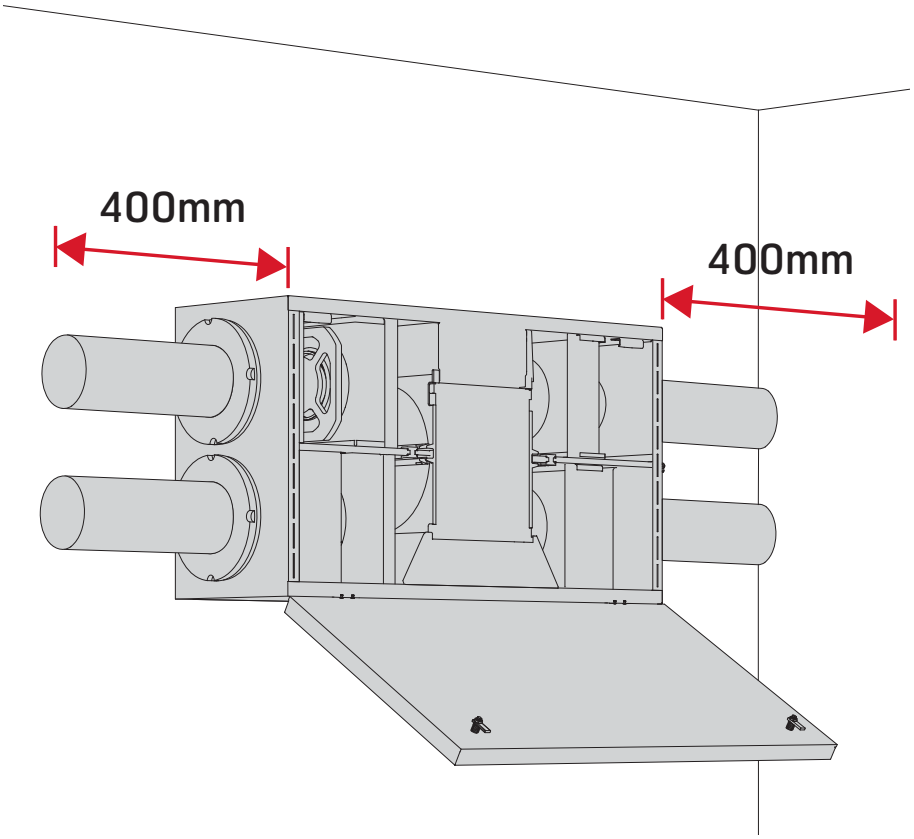


figure 12 *Space requirements for wall mounting*

3.5 Floor (attic) mounting

3.5.1 *Positioning requirements*

The unit is designed to be installed in boiler rooms, laundry rooms, stores, lofts or other suitable areas.

Positioning must accord with individual countries' electrical safety legislation. Check which rules apply in your country.

When installing on the ceiling, absorption feet should be used, for the sake of noise and vibrations. Flexit offers suitable absorption feet as accessories, see **figure 15**. The unit should be positioned in such a way that there is no danger of noise nuisance in nearby rooms. It is especially important not to position the unit directly above bedrooms.

If the unit is located in a warm room where a lot of moisture is generated, condensation may form on the outside of the unit during periods when the outside temperature is low.

3.5.2 *Space requirements*

The unit must be installed with space for servicing and maintenance such as filter replacement and cleaning of fans and rotary heat exchangers. The control cable with plug for automatic control must be easily accessible when the unit is fully installed.

The base should be stable and level.

These are minimum requirements and only take service needs into account.

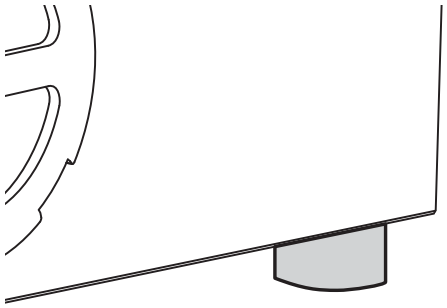
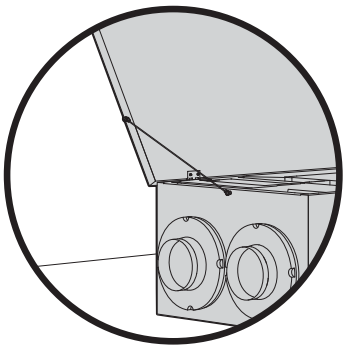
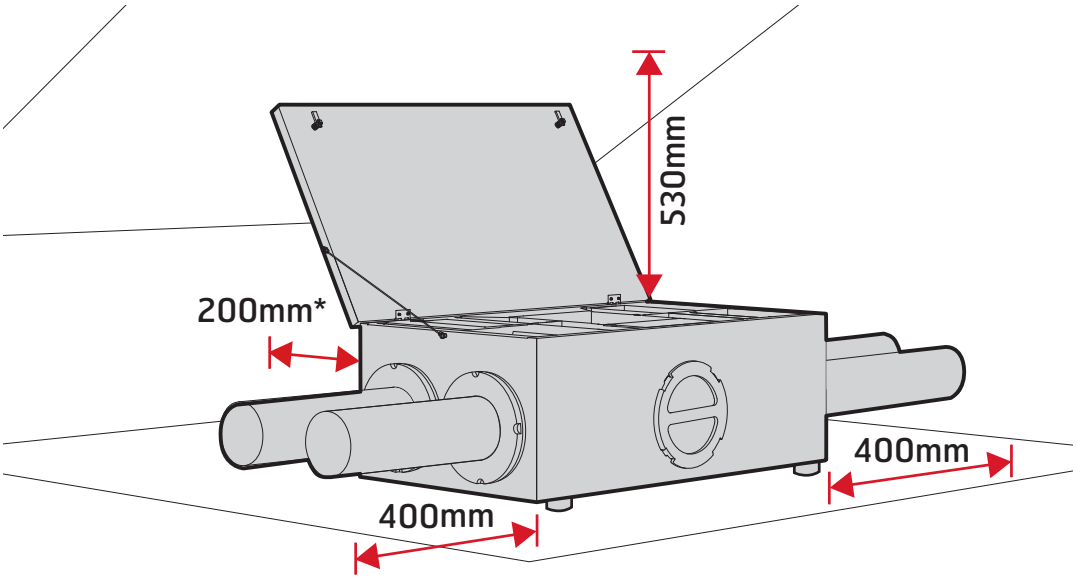


figure 15 *Absorption feet*



Floor-mounted units must always be fitted with a safety strap.

Ensure there is servicing access to electrical bushings. See the dimensioned drawing for exact location.



** required for access to electrical bushings*

figure 14 *Space requirements for ceiling (floor) mounting*

4 Duct connection

4.1 Connection to the unit

See **figure 16.**
Ensure that the ducts are fitted to the correct nipple - see the markings on top of the unit and **kap. 10 General and system drawings på side 24**

Pull the duct insulation well up to the unit.
To avoid the formation of condensation, it is particularly important for the outdoor and exhaust air ducts to have insulation and a plastic sleeve pulled right down to the unit. Seal the plastic sleeve against the unit with ties.

All ducts that pass through a cold zone must be insulated.
The ducts normally require min. 50 mm insulation, with an efficiency corresponding to λ = 0.035 W/m.°C or better.
The project engineer is responsible for use of the required insulation and vapour-proof sleeves in accordance with location/temperature.

Lay the outdoor air duct with a slight fall towards the outdoor air cap so that any water that enters drains out again.

Ducts should have good sound insulation, particularly above the unit.

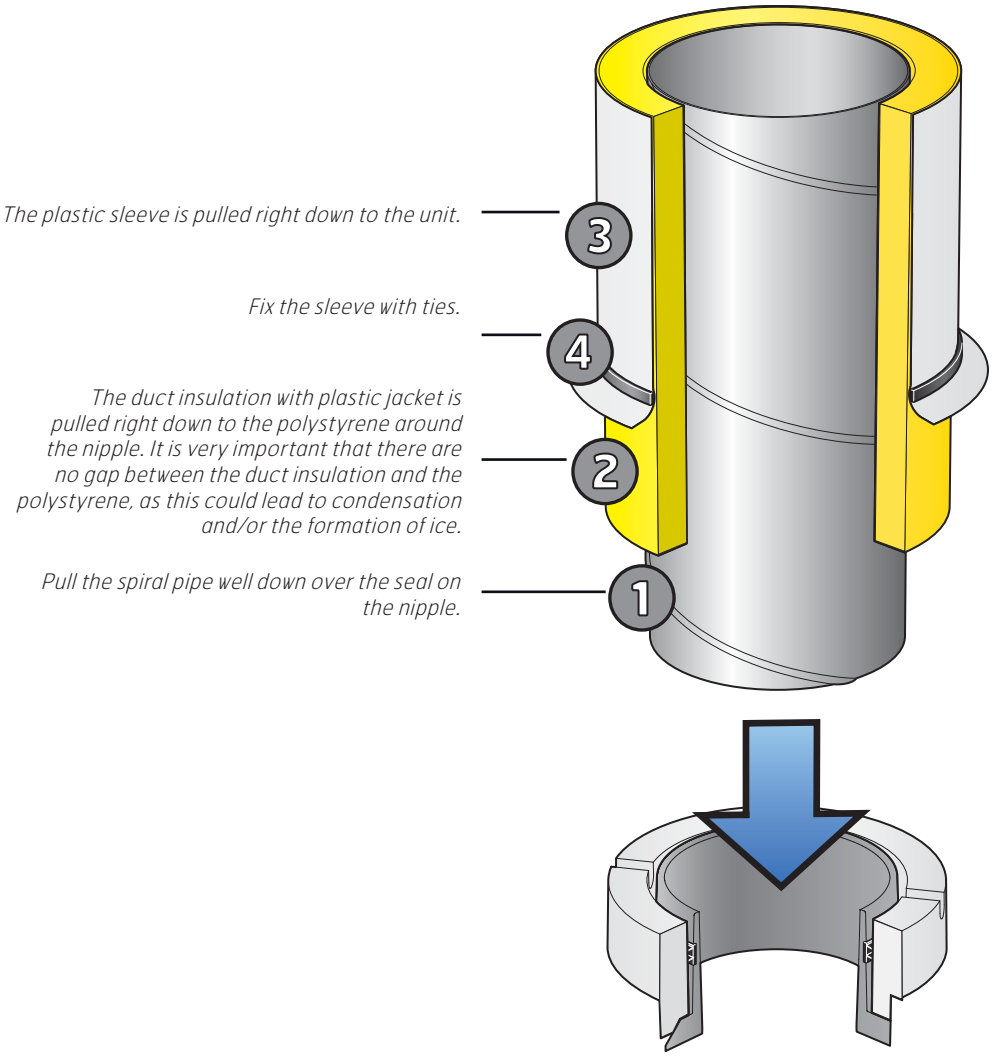


figure 16 *Duct connection*

5 Installation of the CI60/600 control panel

5.1 Contents



Control panel
Backplate for flush mounting
Backplate for surface mounting
Installation instructions
Cable for control panel

figure 17 *Contents control panel*

5.2 Installation of the CI60/600

The control units must be connected to the unit before power is connected to the unit in order to ensure communication.

Run the cable for the control panel between the ventilation unit and the control panel. The control panel is designed for flush mounting over a single wall box (use low backpiece (2)) or for surface mounting on the wall (use high backpiecee (3)).

The cable clicks into the contact on the control panel from the back and into the contact on the top of the ventilation unit.

The low-voltage cable must be at least 30 cm from power cables and not exceed 24 m in length. In the case of flush mounting the cable is run in a 20 mm wiring conduit.

It is possible to connect two CI60 panels and one CI600 panel to each unit. If several CI60 panels are used, each panel must have a separate identity. This can be selected by means of a switch on the panel's circuit board, see **figure 18**. Use relevant settings from the table. The panels can be connected in series in any way.

OFF = MASTER
ON = SLAVE

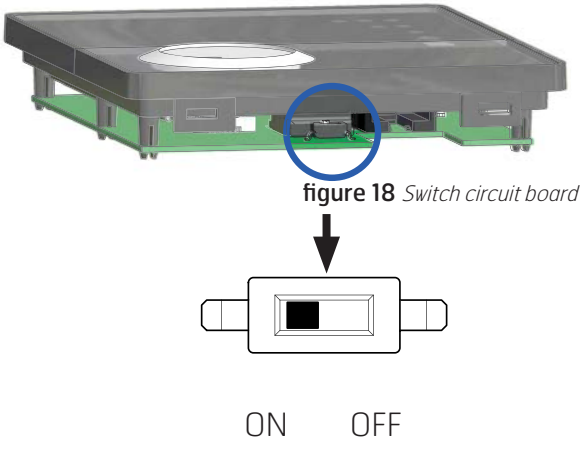


figure 18 *Switch circuit board*

Configuration	Setting
CI 600 (MASTER)	Automatic
CI60 1 (SLAVE)	OFF
CI60 2 (SLAVE)	ON
CI60 1 (MASTER)	OFF
CI60 2 (SLAVE)	ON
CI 600 (MASTER)	Automatic
CI60 (SLAVE)	Any

5.3 Installation with a flush-mounted wall box

Run the cable between the wall box and the ventilation unit in the pre-installed wiring conduit. Fit the backplate (2) over the wall box and click the cable in straight from the back as shown in the illustration, see **figure 19**.



figure 19 *Installation of flush-mounted wall box*

5.4 Surface mounting

Run the cable between the backplate (3) and the ventilation unit. Cut out the most suitable perforation in the corner of the backplate. Secure the backplate to the wall with suitable screws. Click the cable into the control panel from below where there is a socket in the circuit board, see **figure 22**.



figure 22 *Surface mounting*

5.5 Finishing off – C160

Slide the panel off in the direction of arrow no. 1, see **figure 20**, and guide the control panel straight into the backplate, in the direction of arrow no. 2 see **figure 21**, until it clicks into place. Slide the panel back on.



figure 20

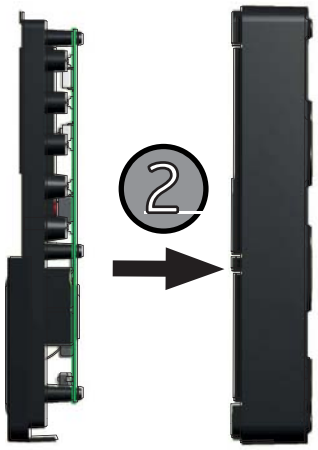


figure 21

5.6 Finishing off – C1600

Guide the control panel over the hooks in the backplate, in the direction of arrow no. 1 and click the panel into place at its lower edge in the direction of arrow no. 2 see **figure 23**.



figure 23 *Finishing off*

6 Electrical work

The unit must be installed with a separate earth fault breaker. All electrical connections must be carried out by qualified electricians.

The unit is supplied with a 2 m cable with plug. The cable exits the long side of the unit and is connected to a 230 V 50 Hz single-phase earthed power point that is placed in an easily accessible position close by. The power plug should be used as the service switch. See **kap. 11 Technical data på side 27** for fuse sizes.

The plug for the unit must not be boxed in.

The control panel is designed for flush mounting over a **single** wall box or for surface mounting on the wall.

The unit has a control cable (with joint) that is intended for the control panel. It is important that this plug is easily accessible afterwards for possible faults, or when changing the unit. The control cable is enclosed in the packaging for the control panel.

The control panel is in a box in the unit's packaging. The low-voltage cable must be run between the unit and the switch unit. See **kap. 5 Installation of the CI60/600 control panel på side 17**.

The control cable must be max. 24 m long. It must be at least 30 cm from power cables and should be laid in a 20 mm wiring conduit at installation.

Temperature sensor B1 must be positioned after the water battery

6.1 Supply air sensor for heating (B1)

This must be located in the supply air duct.



- Where electric heating is retrofitted, the supply air sensor must be mounted in the supply air nipple.
- When mounting a water battery, the supply air sensor must be positioned approx. 1 m from the water battery. Roll out the marked coil of cable on the unit near the supply air nipple. Drill a Ø 7 mm hole in the duct where the sensor can be inserted. Seal the hole with sealant and tape the cable in place on the outside of the duct so that it stays in place.

  See the wiring diagram enclosed with the unit and the instructions that come with the water battery.

6.2 Frost sensor for water battery (B5) (if the unit has a water battery)

To avoid frost in the battery, a water battery sensor (B5) must be installed in the water battery pipe where the cold water leaves the battery.

For more information, see instructions for water battery.

6.3 Outdoor air damper (if the unit has a water battery)

To avoid frost damage to the water battery during outages/power cuts, a closing damper must be installed on the outdoor air duct. The damper motor must have a spring so that it closes when power is disconnected.

7 Plumbing work*

*If the unit is designed for heating with a water battery.

All plumbing work must be carried out by an authorised plumber. See instructions for water battery.

8 Adjustment

8.1 Adjustment with CI60

The unit's air supply MUST be adjusted before the unit is used for the first time. This should be done in accordance with the project engineering documents. Adjust the values according to the projected values.

8.2 Adjustment

Only stage 2 (NORMAL) needs to be adjusted. Stages 1 and 3 have fixed settings, while stage 2 must be adjusted as required in the individual home.

The function of the different stages:

MIN	Must not be used when the home is in use. Must not be used in the first year of operation.
NORMAL	Used under normal conditions. With this setting, the air supply must be adjusted according to current regulations.
MAX	Used if there is a need for increased air supply on account of higher occupancy or a raised humidity level, for example during showering or when clothes are being dried. This setting is normally used for limited periods.

The ventilation unit's air supply is adjusted at speed level NORMAL, using the knobs on the back of the cover. Knob 9 is used for supply air level and knob 8 for extract air level, see **figure 24**. The adjustment range is 20-100% of the maximum level according to the scale on the knob.

Factory settings for supply air/extract air:

MIN	50% (fixed)
NORMAL	75% (variable)
MAX	100% (fixed)

8.3 Adjusting the temperature

The temperature required for the supply air can be set with knob 11. The adjustment range is 10-30°C. It should normally be set to around 18°C. Use of the factory setting is recommended.

If necessary, the ventilation unit's additional heating can also be switched ON/OFF with switch 10. In this case only the rotary heat exchanger is used as a source of heat. It is best to leave it in ON position, as the unit will then respond automatically when there is a need for additional heating.

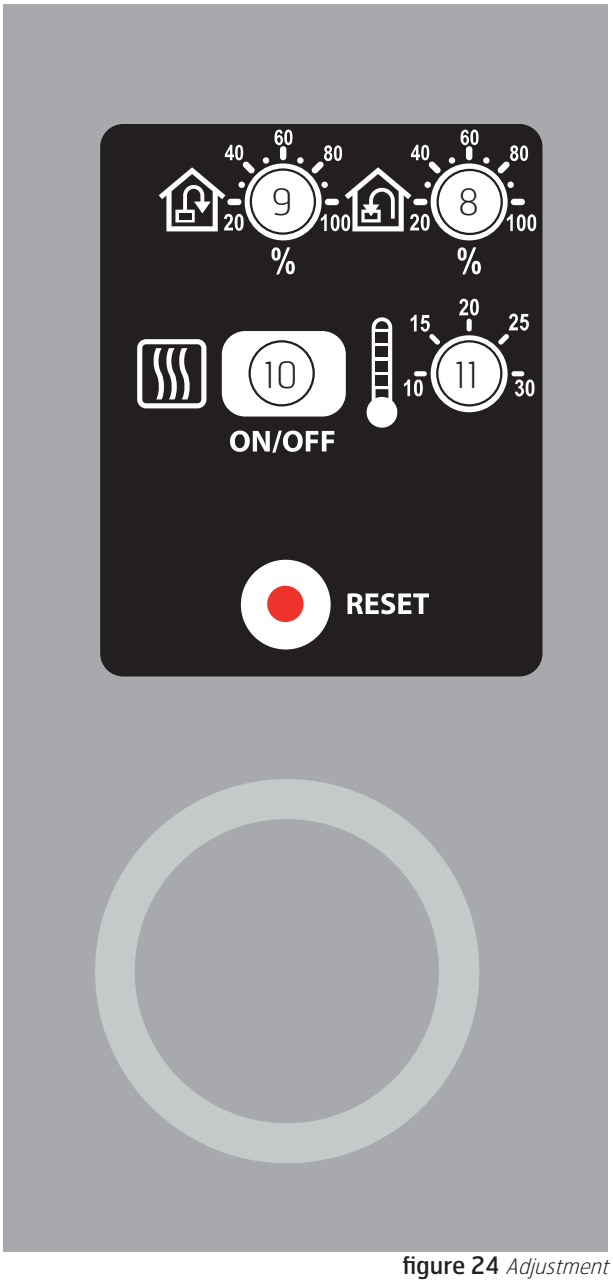


figure 24 *Adjustment*

8.4 Adjustment with CI600

The unit's air supply MUST be adjusted before the unit is used for the first time. This should be done in accordance with the project engineering documents. Adjust the values according to the projected values.

8.4.1 *Adjustment*

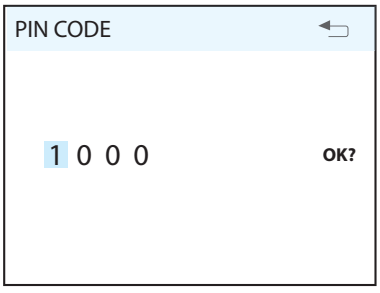
Only stage 2 (NORMAL) needs to be adjusted.

Note that it is also possible to adjust stages 1 and 3 with a CI600 control panel. This should only be done if a special need arises, however. This is because it is extremely important to have adequate air flow rates.

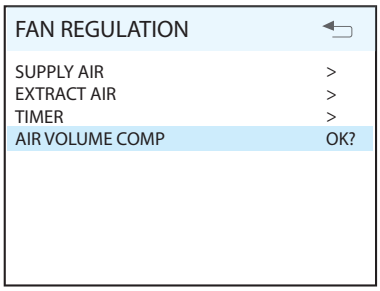
The function of the different stages:

MIN	Must not be used when the home is in use. Must not be used in the first year of operation.
NORMAL	Used under normal conditions. With this setting, the air supply must be adjusted according to current regulations.
MAX	Used if there is a need for increased air supply on account of higher occupancy or a raised humidity level, for example during showering or when clothes are being dried. This setting is normally used for limited periods.

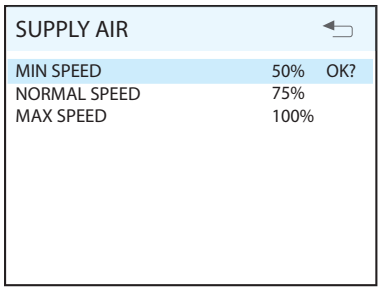
First go to the "Advanced user" menu, enter the PIN and press OK:



Then go to the "Fan control" menu. The fans are selected and configured in this menu screen. Then go to adjustment of the extract air fan and supply air fan.



The dialogue is identical for the supply air and extract air fans. The fans are adjusted individually to the desired capacity for the respective speed.

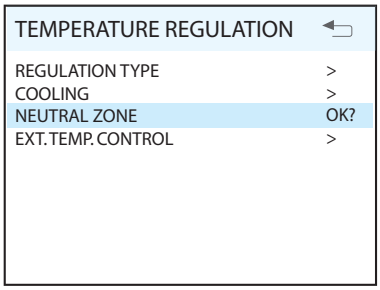


Factory settings for supply air/extract air:

MIN	50% (variable)
NORMAL	75% (variable)
MAX	100% (variable)

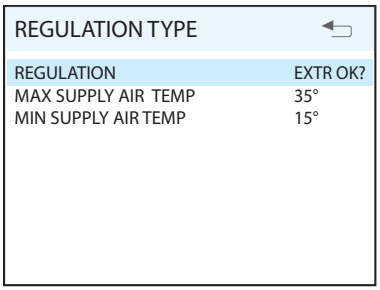
8.4.2 *Temperature regulation*

In this menu screen (located under "Advanced user") you configure the temperature regulation and cooling functions.



Regulation type

If supply air regulation is selected, no further settings can be set here. If extract air regulation is selected, the max. and min. supply air temperatures can also be specified.



9 Installing the cooker hood

When a cooker hood is to be connected to the unit, the cooker hood nipple and polystyrene ring must be retrofitted. This is done by removing the polystyrene cover and plastic cover which cover the cooker hood connection. The plastic cover is fixed with two screws, which must be released before removal. The plastic nipple is then screwed on with two screws and the polystyrene ring fixed on top, as shown in **figure 25**.

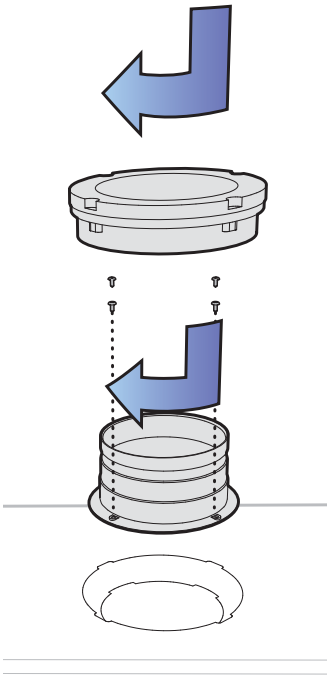


figure 25 *cooker hood nipple*

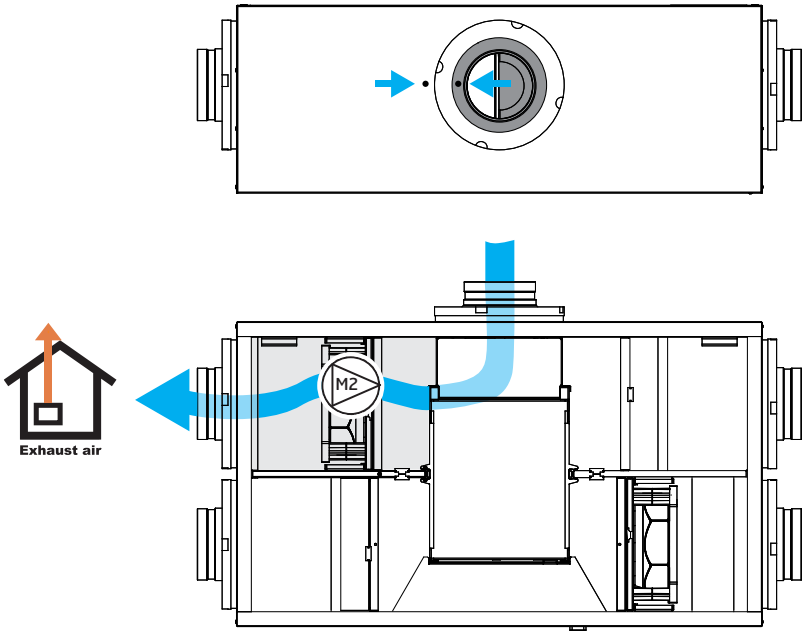


figure 26 *Left-hand model cooker hood nippel*

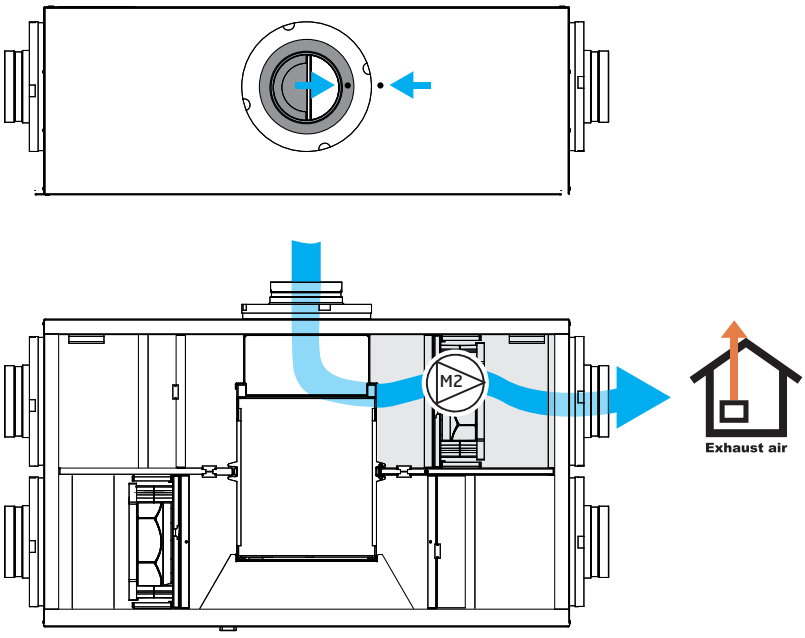


figure 27 *Right-hand model cooker hood model*

9.1 Installation of external cooker hood

When using an external cooker hood, documentation regarding installation and adjustment of air flow rates is supplied with the hood.

9.1.1 *Cooker hood without motor (mounted on unit)*

The ventilation unit has a separate connection point for cooker hoods without a motor. Between the unit and the hood an electrical cable (low-voltage) must be connected in order to provide forced air flow in the hood via the switch on the hood.

9.1.2 *Cooker hood with motor (not mounted on unit)*

The cooker hood with motor is not mounted on the unit. It has a completely separate duct system for air evacuation.

Using the cooker hood, it is possible to compensate for the amount of air drawn out of the house See **9.2.2** for more information.

9.2 Adjusting the cooker hood

If the hood is not supplied by Flexit, the cooker hood supplier must plan air flow rates both for extract air and in the hood, and arrange for supply air to the hood.

9.2.1 *Cooker hood without motor (mounted on unit)*

The air flow rate over the hood is regulated according to the planned air flow rate. Flexit's cooker hoods perform odour removal up to 150 m³/h. It is not necessary to compensate for the supply air fan to achieve a balanced air flow rate.

9.2.2 *Cooker hood with motor (not mounted on unit)*

If a cooker hood with a motor is used, the volume of air extracted from the building increases.
The ventilation unit can be adjusted to provide more supply air than extract air to compensate for this.

A signal to the unit is required when the cooker hood is used:

- External switch with OFF/ON signal is to be connected to 3-core cable on unit (SP4-G0, see wiring diagram).
- Install the pressure relay (accessory).

This functions as follows:
The supply air fan will switch to Maximum, while the extract air fan will continue on Minimum, to compensate for the air flow that the cooker hood extracts from the house. This is necessary in order to balance the ventilation in the building.

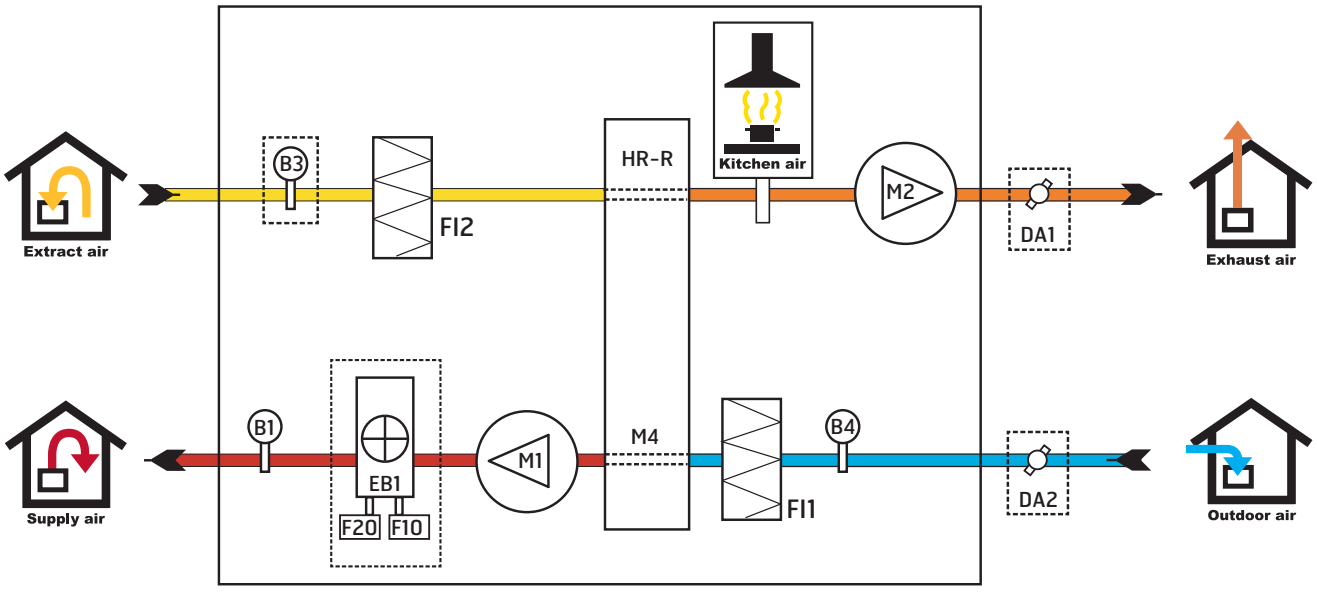
Check the maximum air capacity of the cooker hood (based on the capacity diagram) against the maximum capacity of the supply air fan. If the cooker hood has a higher capacity than the unit's supply air fan, the unit will not be able to compensate for the loss of air and sufficient supply air must be arranged in some other way.

10 General and system drawings

10.1 System drawing (electric battery)

(shown as a right-hand model)

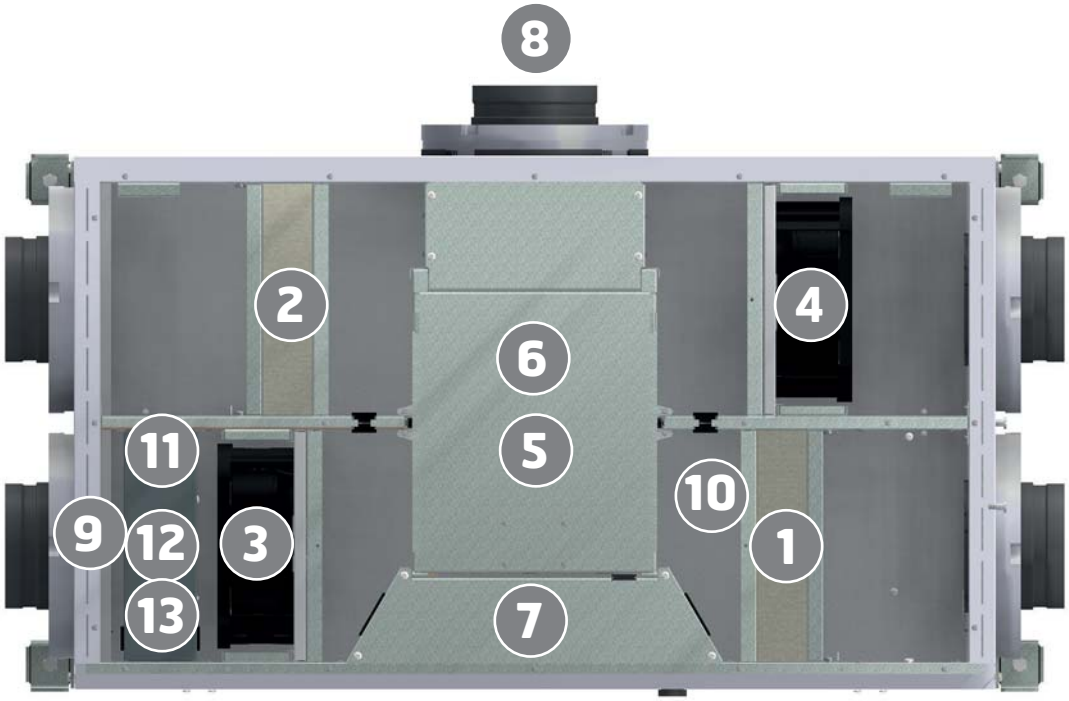
Abbreviation	Description
B1	Supply air temperature sensor
B4	Outdoor air temperature sensor
EB1	Heating element
F10	Overheating thermostat, manual reset
F20	Overheating thermostat, automatic reset
FI1	Supply air filter
FI2	Extract air filter
M1	Supply air fan
M2	Extract air fan
HR-R	Rotary heat exchanger
M4	Rotor motor



10.2 System drawing (electric battery)

(shown as a right-hand model)

No.	Abbreviation	Description
1	FI1	Supply air filter F7
2	FI2	Extract air filter F7
3	M1	Supply air fan
4	M2	Extract air fan
5	HR-R	Rotary heat exchanger
6	M4	Rotor motor
7		Control unit
8	K	Cooker hood
9	B1	Supply air temperature sensor
10	B4	Outdoor air temperature sensor
11	EB1	Heating element
12	F10	Heating overheating thermostat man.
13	F20	Heating overheating thermostat auto



10.3 Nipple location

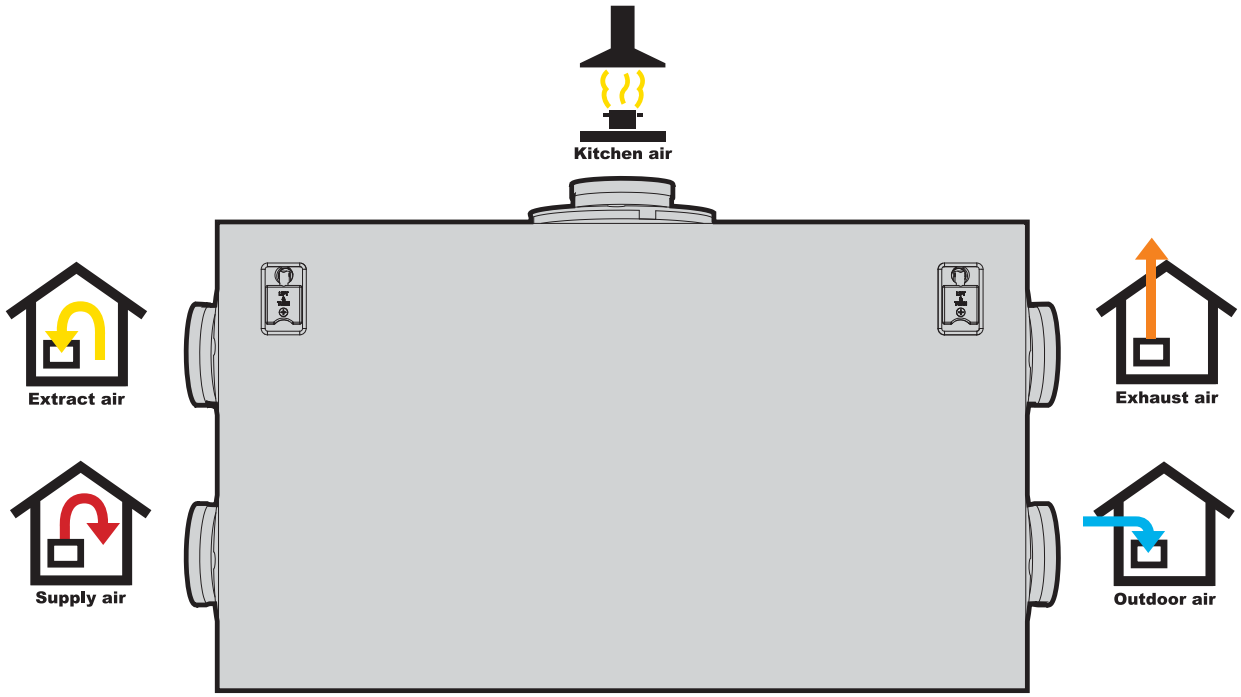


figure 28 *Right-hand model*

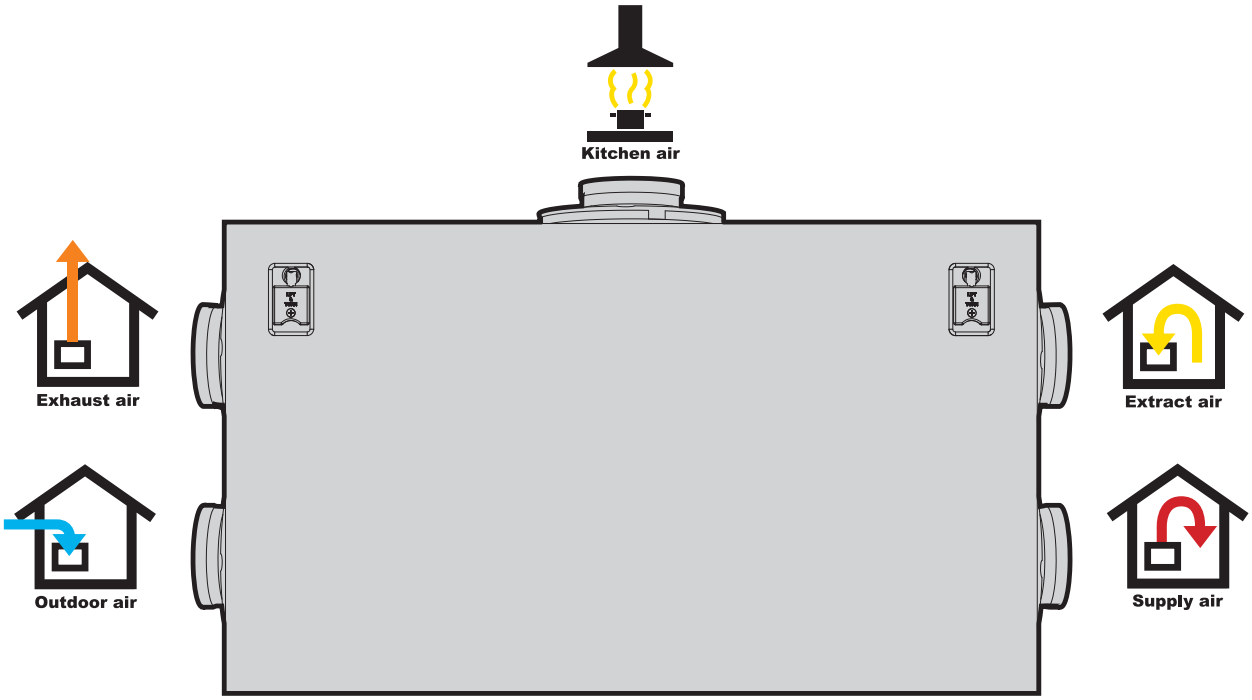


figure 29 *Left-hand model*

11 Technical data

Design data	C2 R with electric battery	C2 R without electric battery
Rated voltage	1 x 230 V	1 x 230 V
Fuse size	1 x10 A	1 x 10 A
Rated current, total	3.0 A	1.5 A
Rated power, total	670 W	170 W
Rated power, electric battery	500 W	-
Total rated output fan	85 W	85 W
Fan type	B wheel	B wheel
Fan motor control	0-10 V	0-10 V
Fan speed - max. rpm	4050	4050
Automatic control standard	CU 60	CU 60
Filter class	ePM1 55% (F7)	ePM1 55% (F7)
Filter dimensions (WxHxD)	293x226x48 mm	293x226x48 mm
Weight	*46*	*46*
Duct connection	Dia. 125	Dia. 125
Height*	525	525
Width*	900	900
Depth*	350	350
Colour	White	White
RAL	9016	9016
Gloss	25-35	25-35

* see dimensioned drawing for dimensions, including fixing brackets.

11.1 Dimensioned drawing

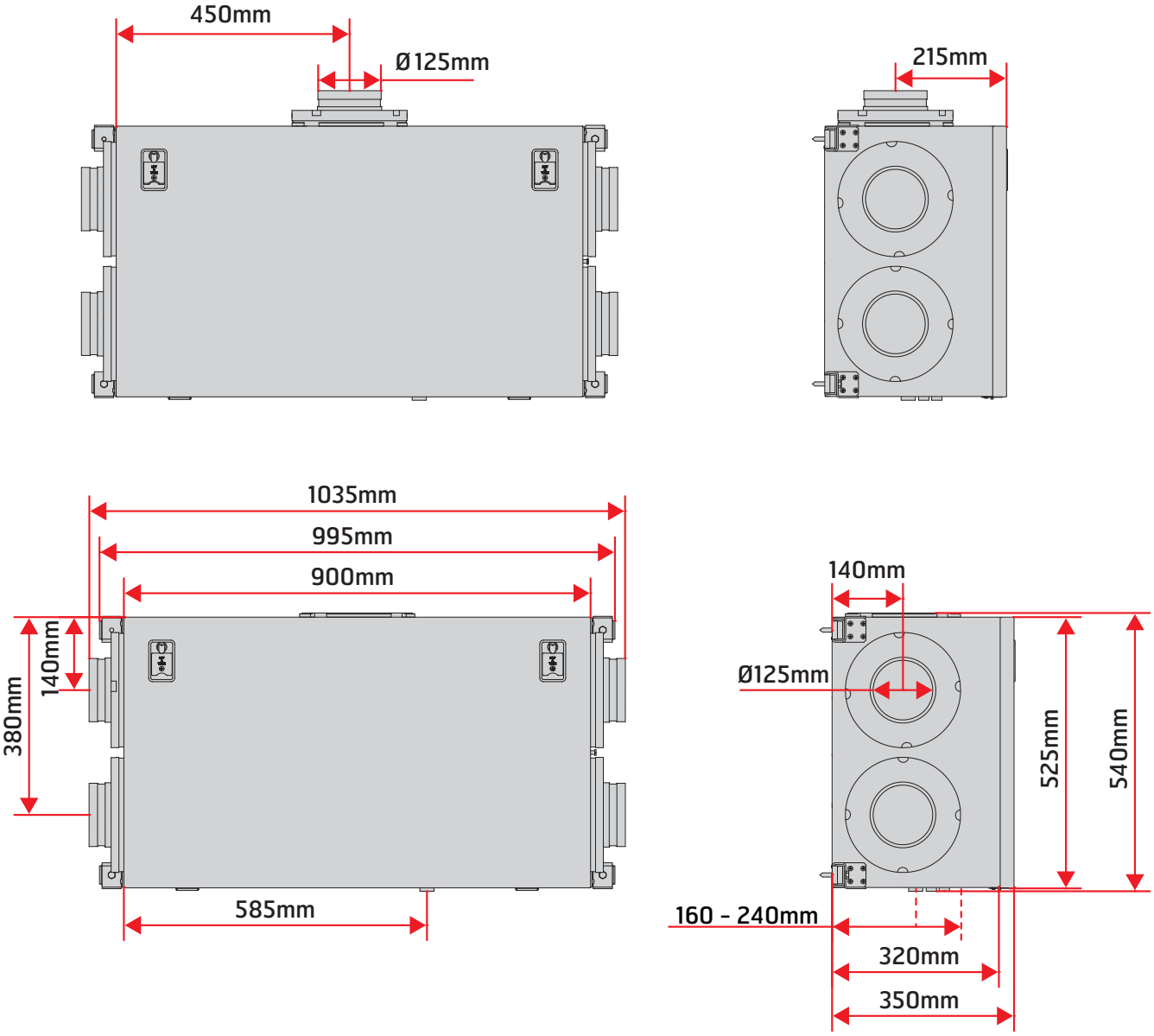
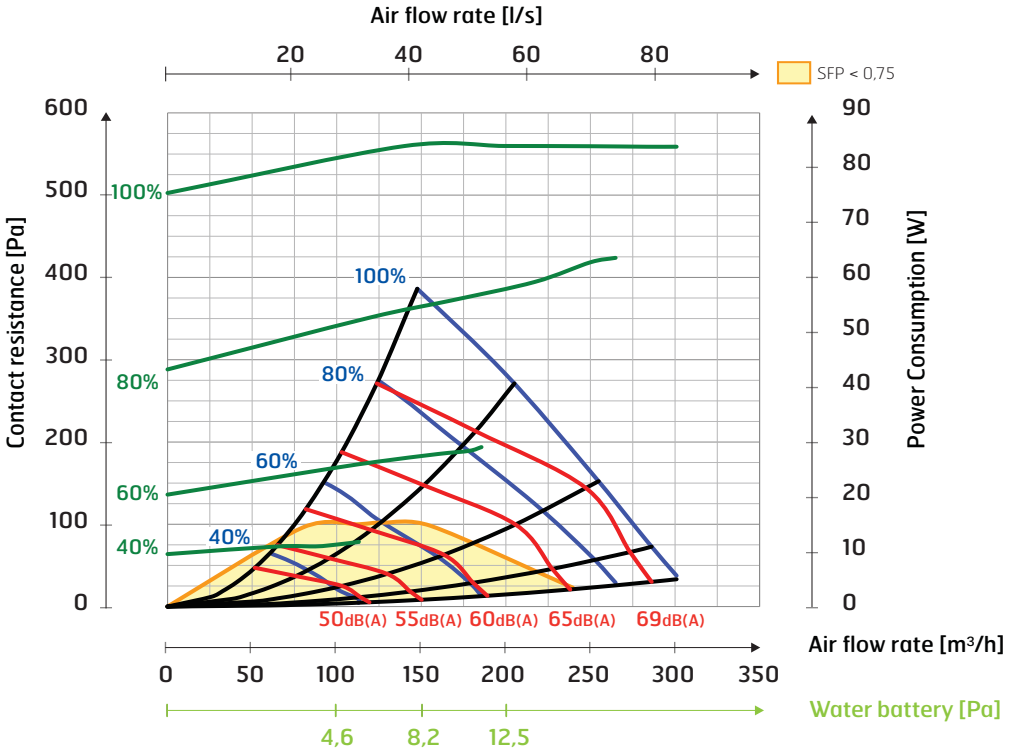


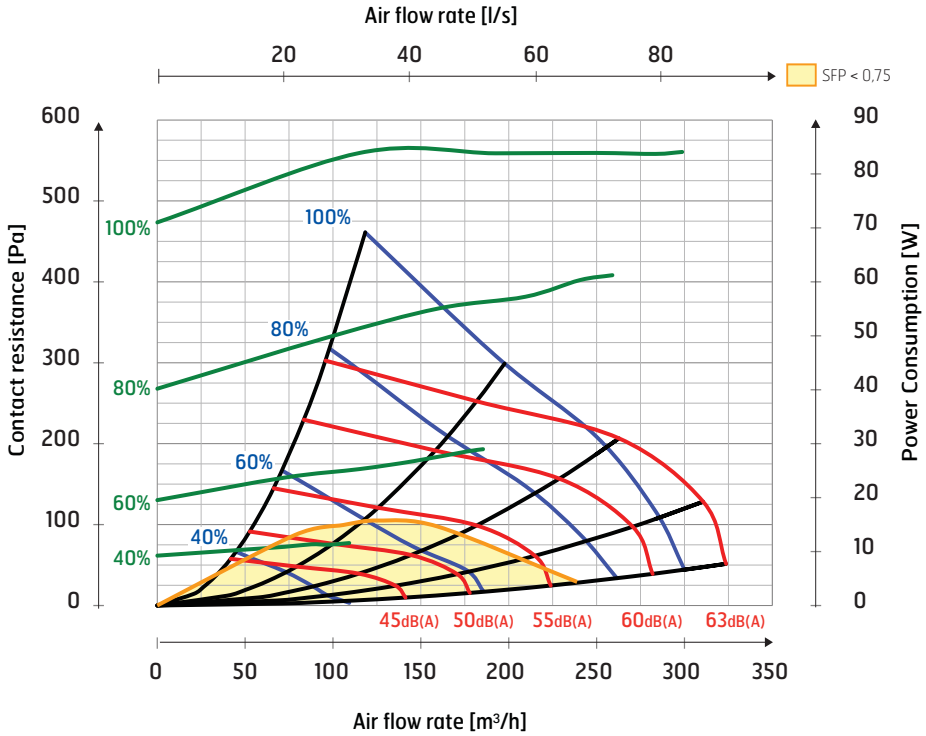
figure 30 *Dimensioned drawing*

11.2 Capacity and sound data

11.2.1 *Supply air side*



11.2.2 *Extract air side*



Explanation of diagram:
Sound data is stated as the sound output level LwA in the capacity diagrams (these are for sound to the duct)

These values can be corrected by means of the table for the different octave bands if it is wished to look at Lw (without adaptation to A band)
The correction table for the various octaves is stated in Lw, which means that the Lw values are after conversion of each octave for supply air and extract air.

Radiated sound from the unit must be calculated from the supply air diagram.

Correction factor for Lw

Hz	63 Lw(dB)	125 Lw(dB)	250 Lw(dB)	500 Lw(dB)	1000 Lw(dB)	2000 Lw(dB)	4000 Lw(dB)	8000 Lw(dB)	LwA (dBA)
Supply air	4	4	**4**	-2	-9	-11	-17	-24	
Extract air	11	7	5	-4	-11	-18	-25	-30	
Radiated 1	-9	-17	-18	**-31**	-34	-33	-34	-38	**-24**
Radiated 2	-7	-9	-8	-27	-28	-29	-31	-35	-16

Working point 110 m^3/h against100 Pa.

figure 31 *Correction factor table*

> EXAMPLE 1

Sound to duct in the various octaves is stated in Lw

The working point gives 60 dBA from the capacity diagram for supply air. I am interested in what this is specifically in the 250 Hz range.

60 dBA + 4 = 64 dB which is an Lw value (sound output value without adaptation to the ear's A band)

> EXAMPLE 2

Radiated sound in Lw per octave

At the working point a reading of 60 dBA is taken from the supply air capacity diagram (which indicates sound to duct), in order to arrive at a subsequent Lw value for the various octaves. A deduction is then made from the value for the relevant octave for the row with radiated sound.

60 dBA – 31 (for 500 Hz) = 29 dB which is an Lw value and indicates the radiated sound from the unit in this octave.

This example relates to radiated sound from a unit flush-mounted in the ceiling.

> EXAMPLE 3

Radiated sound in total from the unit in LwA.

At the bottom right of the table, a total value for radiated sound from the unit is stated in LwA. This is a total value, and the values for the radiated sound for the different octaves have been totalled up and then corrected for A band.

This is used as follows:
The LwA value is read from the supply air capacity diagram, in our example 60 dBA, and this is then subtracted from the total value (this is also a LwA value). LwA 60 dBA – 24 dBA= 36 dBA (which thus states in LwA, the sound output level adapted to the ear's A band).

This example relates to radiated sound from a unit flush-mounted in the ceiling.

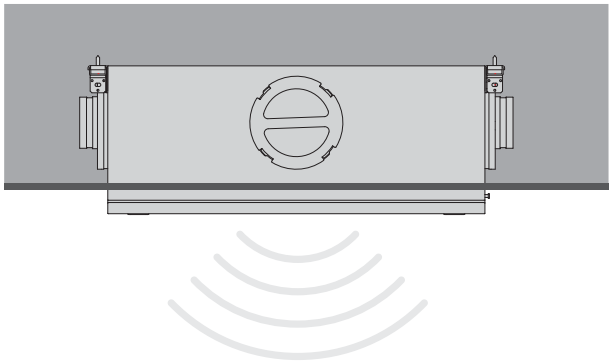


figure 32 *Radiated 1*
Built-in ceiling

**The test was performed with ceiling panels in 19mm MDF.*

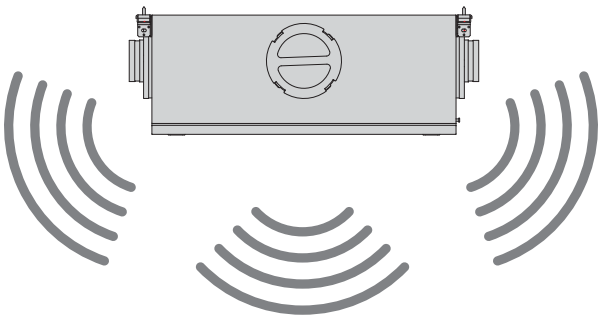


figure 33 *Radiated 2*
Free hanging

12 Final checks / Startup

12.1 Final checks

Check the following points:

Description	Chapter	Performed
Duct insulation has been carried out in accordance with the manual and technical documents	**4**	
Ducts have been connected to the correct nipples	**10**	
Adjustment has been carried in accordance with the manual and projection documents	**8**	
The unit operates normally in all stages	-	
The rotor rotates freely	-	
Rotor rotates when heating is required	-	
Heating comes on	-	
Unit has filters for both outdoor air and extract air	**10**	

12.2 Startup

Check that the control panel has been wired up and was connected before the unit was started up.
Connect the mains plug to the unit.
The unit will now start.
The unit will automatically carry out a startup procedure lasting approx. 1 min.
After the startup procedure the unit will follow the operating settings that are set up in the control panel.
Changes in settings are made from the control panel.
Adjustment has been carried out in accordance with the manual and
project engineering documents (documentation of ventilation data).

13 CE Declaration of Conformity

This declaration confirms that the products meet the requirements in the following Council Directives and standards:

2014/30/EC	Electromagnetic compatibility (EMC)
2014/35/EC	Low-voltage Directive (LVD)
1253/2014	Ecodesign regulation
1254/2014	Energy labelling regulation

Our products have been tested in accordance with parts of:

2006/42/EC	Machine Directive (Safety)

Producer: FLEXIT AS, Televeien 15, 1870 Ørje, Norway

Type: C2 R Ventilation unit

Compliance with valid versions of the following standards on the date on which the declaration of conformity was signed:

Safety standard	EN 60335-1 EN 60335-2-80
EMF standard:	EN 62233
EMC standard:	EN 55014-1 EN 55014-2 EN 61000-3-2 EN 61000-3-3

The product is CE-marked: 2015

FLEXIT AS 29.11.2016



Frank Petersen
CEO

Warranty claims on this product are accepted in accordance with the applicable terms of sale, **provided that the product is correctly used and maintained**. Filters are consumables.



The symbol on the product shows that this product must not be treated as household waste. It must be taken to a reception station for recycling of electrical and electronic equipment.
By ensuring correct disposal of the equipment, you will contribute to preventing the negative consequences for the environment and health that incorrect handling may entail. For further information on recycling of this product, please contact your local authority, your refuse collection company or the company from which you purchased it.

Warranty claims due to incorrect or defective installation must be submitted to the installation company responsible. Warranty claims may be invalid if the system is used incorrectly or maintenance is grossly neglected.

Flexit AS, Televeien 15, N-1870 Ørje **www.flexit.no**

EUROVENT CERTIFIED PERFORMANCE
RAHU 19.12.007
Nordic
www.eurovent-certification.com

Flexit participates in the ECP programme for RAHU.
Check ongoing validity of certificate:
www.eurovent-certification.com

The product is listed in the database for building products that can be used in **Nordic Swan Ecolabelled buildings.**