

111538E-12  
2016-11

# Spirit UNI 2



## **E** Installation Instructions

Air Handling Unit & Automatic Control

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## Important Safety Instructions:

It is the installer's responsibility to carry out a full safety and function assessment of the appliance.

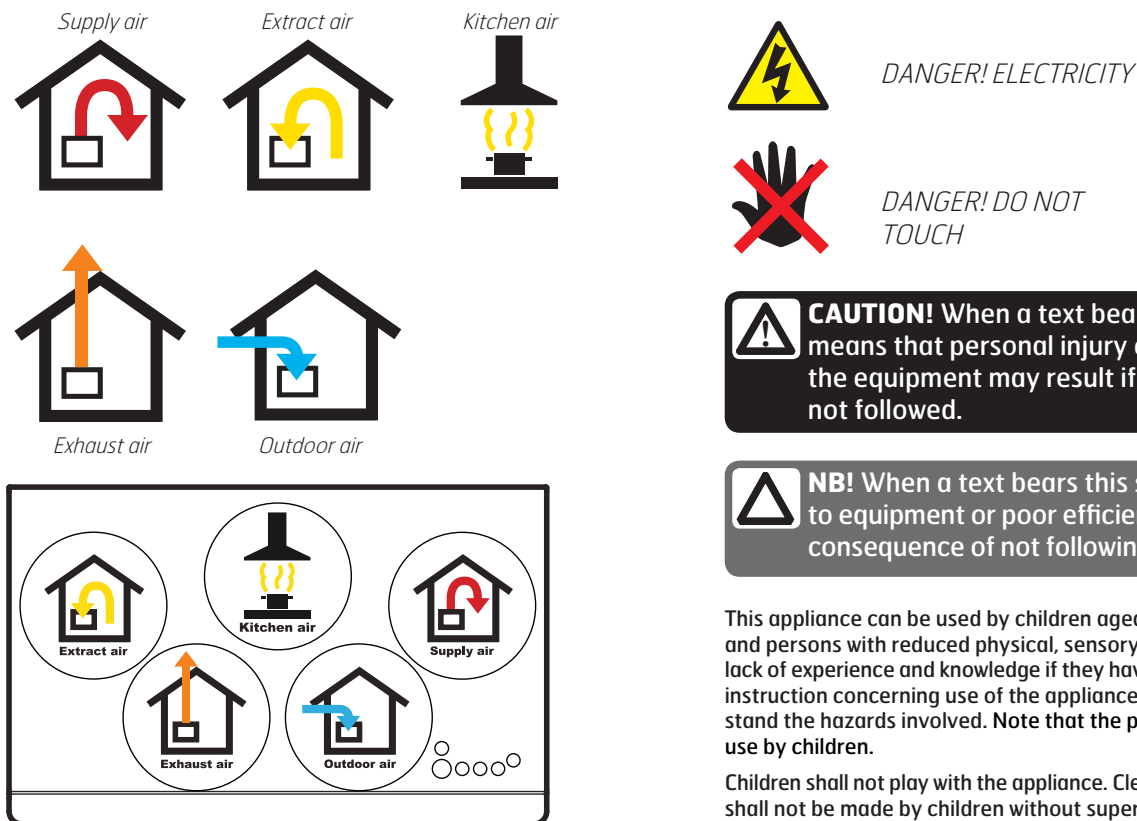
To reduce the risk of fire, electric shock or injury, read all the safety instructions and warning texts before using the appliance.

- 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.
- 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.
- Tumble dryers should not be connected to the unit.

**To maintain a good indoor climate, comply with regulations and avoid condensation damage, the unit must never be stopped apart from during service/maintenance or in connection with an accident.**

## Symbols used

These products bear a number of symbols used for labelling the actual product and in installation and user documentation.



*EXAMPLE OF NIPPLE LOCATION  
(shown as a right-hand model)*

*Our products are subject to continuous development and we therefore reserve the right to make changes.  
We also disclaim liability for any printing errors that may occur.*

# 1 Planning and preparation work

## 1.1 Joiner / fitter

### Door gaps

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

### Kitchen

If the kitchen fan is designed with a motor, sufficient supply air must be ensured. See chapters 10 and 11 for more information.

### Fireplace

If a fireplace is used, sufficient supply air must be ensured, e.g. by installing a wireless forcing switch.

### Location in the building

Location of the unit on an internal wall requires insulation of the wall, cut-off studs and boards, and double plasterboard or a wall structure of similar quality (see chapter 2.1 on installation). Cabinet units in wet rooms should be placed outside zone 2.

Wall-mounted unit with vertical bosses, IP21 rated. See fig. 1.



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

### Hanging a cabinet unit

Suitable transoms between studs are required for the screws (min. 48x98 mm).

### Access

The unit must have good access for service/maintenance. See chapters 2 and 3 for details.

### Fire requirements

Any fire safety requirements must be clarified.

### Duct covers

Plan and calculate the exact positioning of the unit and duct cover carefully before you start. See chapters 2.3 and 4 for more information.

**The positioning of heat sources** must be coordinated with extract air valves so that heat is not sucked straight out through a valve or door gap.

## 1.2 Plumber (if the unit has a water battery)

**The water pipe layout and positioning of the water battery** (channel battery) must be planned. These must be kept warm to avoid frost damage. A closing air 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.

## 1.3 Electrician

### Power supply

The units have an approx. 2.5 m cable with plug and require a single-phase earthed socket nearby. Plug requirements: 10 A. **It is important for the plug to be accessible for servicing when the unit is fully installed.**

If a separate kitchen hood is used, it must have its own socket (10A) in the area above the cabinet. If the kitchen hood is going 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.

### Wiring for control switches.

Ø20 conduit for running the trailing cable for controlling the unit to 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 installation instructions for the individual products must be followed.

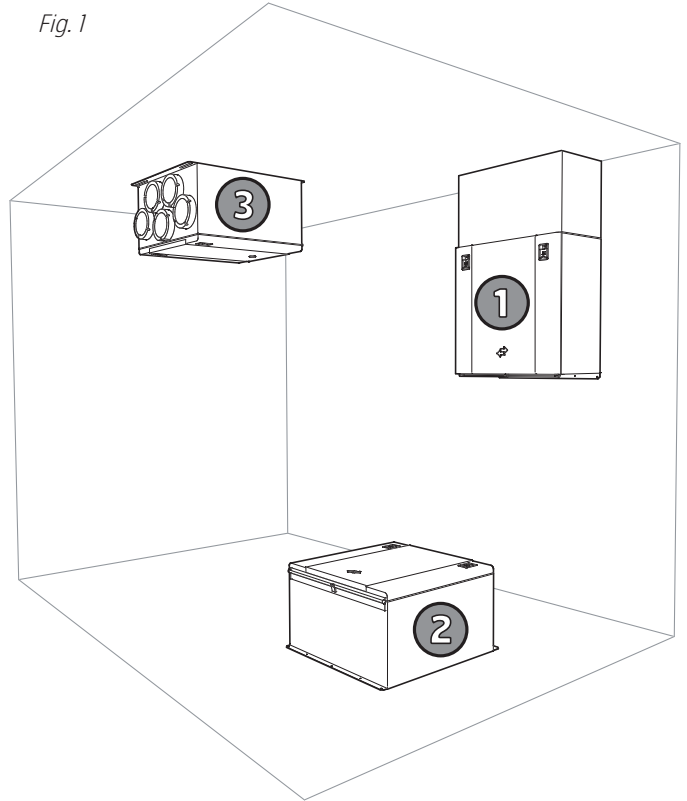
## 2 Installation

The unit can be installed in the following ways:

1. **Horizontally on a wall.** In this case the enclosed wall bracket is used for installation. Duct covers are available as accessories. The only approved installation with an IP21 rating.
2. **On the floor** (lying on its back). In this case absorption feet are recommended (available as an accessory).
3. **On the ceiling.** The unit is mounted straight on the ceiling without a wall bracket.

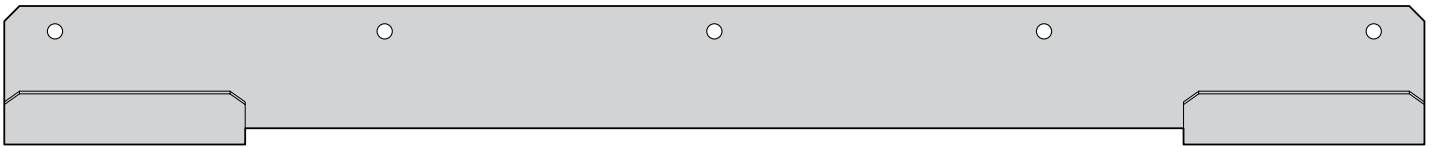
The unit comes in both a left-hand and a right-hand version, depending on what is best with regard to duct positioning.

Fig. 1

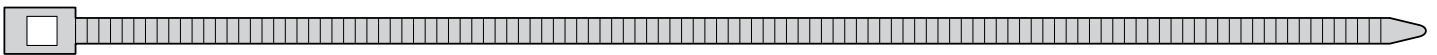


### 2.1 In the box Fig. 2

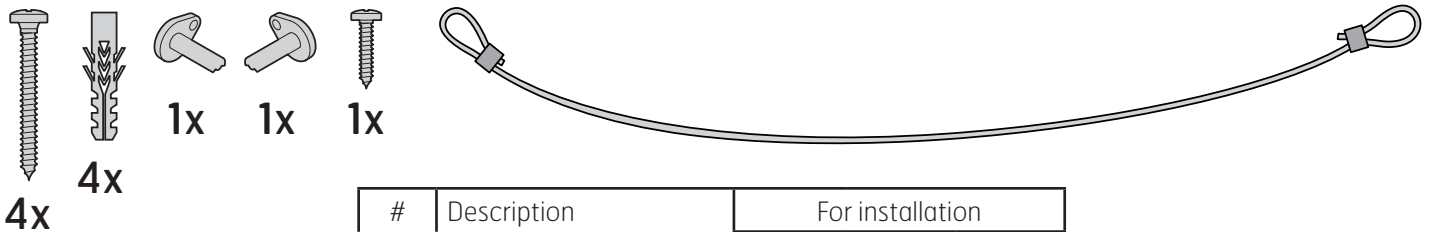
**A** 1x



**B** 4x



**C** **D** **E** **F** **G** **H** 1x




#	Description	For installation		
		Wall	Ceiling	Floor
A	Wall mounting	x	-	-
B	Ties for duct insulation	x	x	x
C	Screws for wall mounting	x	x	-
D	Wall plugs	(x)	(x)	-
E, F	Hinge stop for door	-	x	x
G	Screws for hinge stop	-	x	x
H	Strap for securing door	-	x	x

**2.2 Wall mounting**

**2.2.1 Positioning requirements**

The unit is designed to be installed in boiler rooms, laundry rooms, stores 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 with, for example, rock wool, to reduce the transfer of sound. Double plasterboard in the wall, cut-off studs and cut-off plasterboard are recommended (see Fig. 2).

If the unit is put 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.

**2.2.2 Space requirements**

The unit must be installed with sufficient space for servicing and maintenance such as changing the filters and cleaning the fans and rotary wheel-type heat exchanger (see Fig. 3). The control cable with plug for automatic operation on top of the unit must be easily accessible when the unit is fully installed.

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

Fig. 2

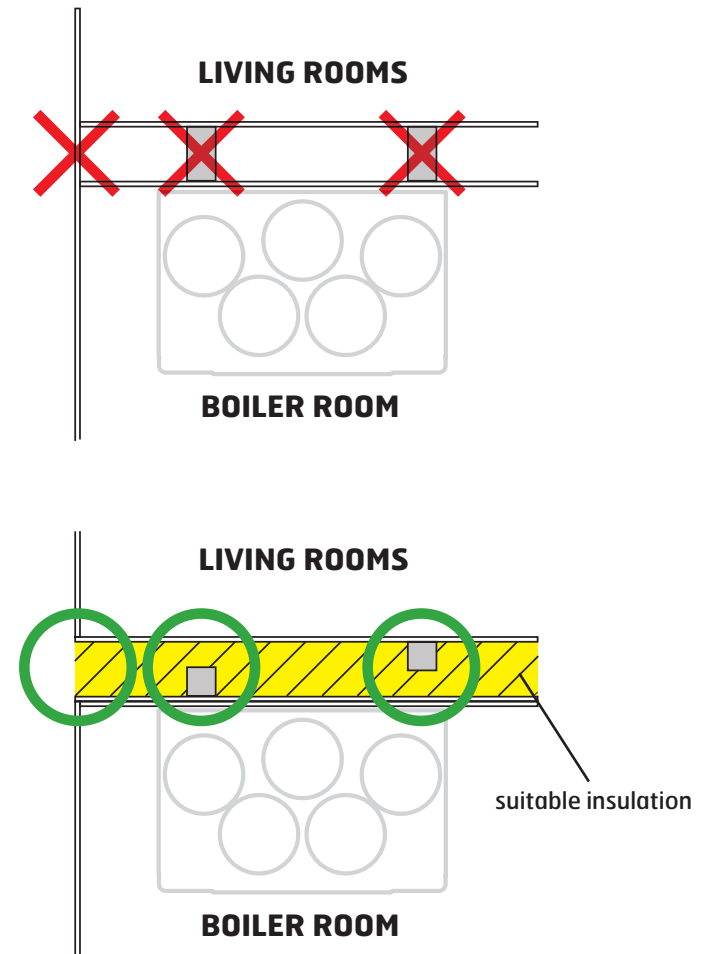
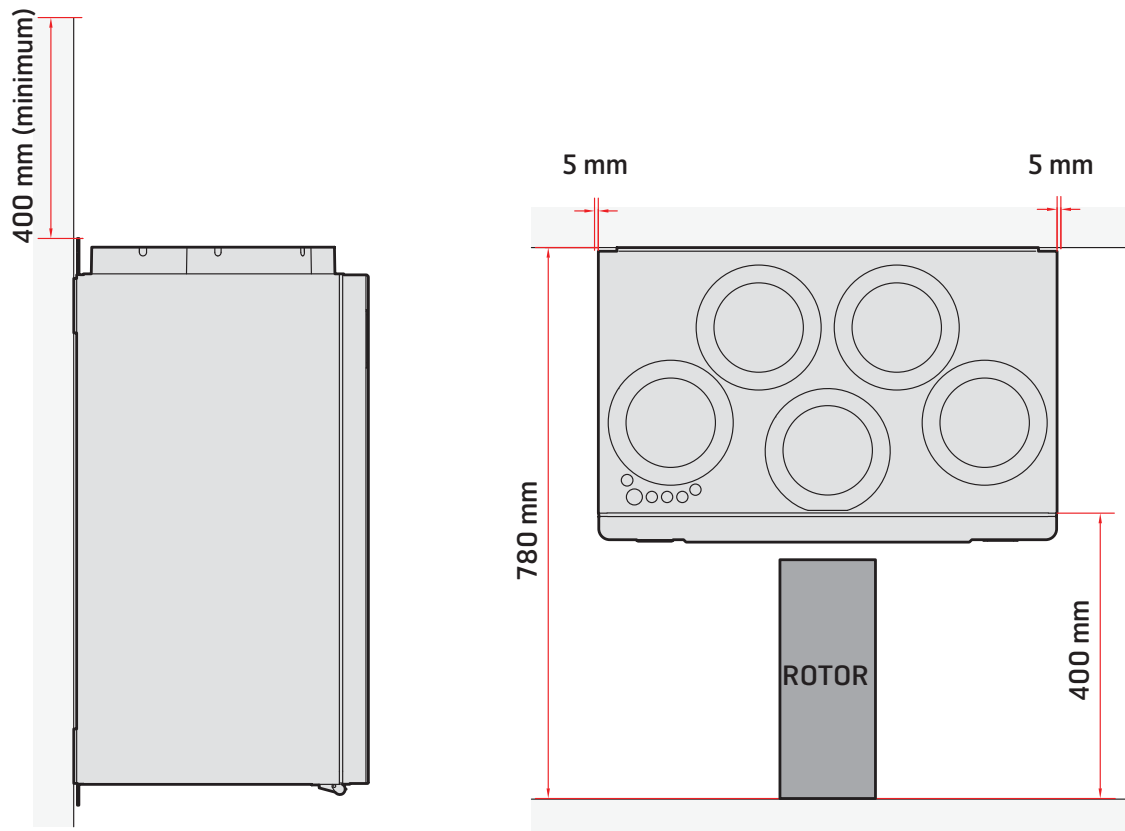


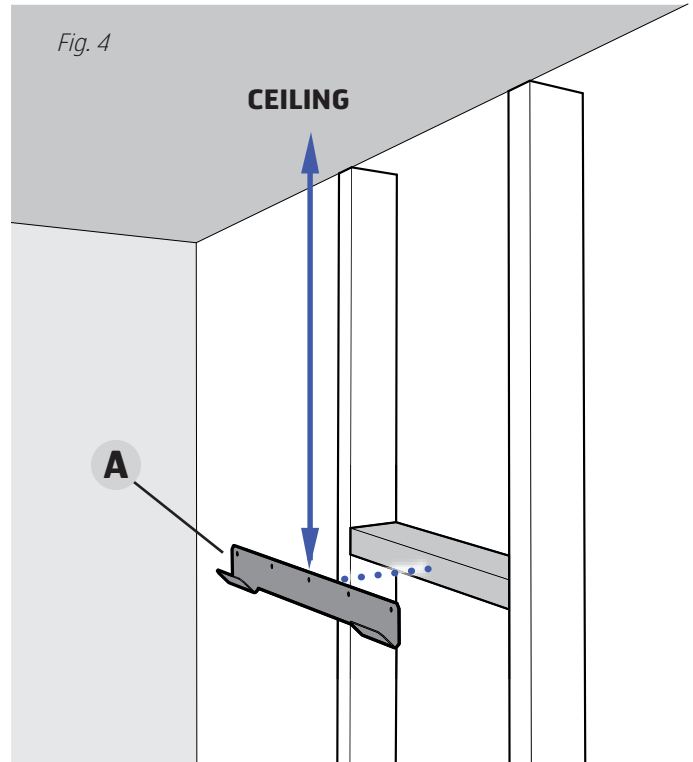
Fig. 3



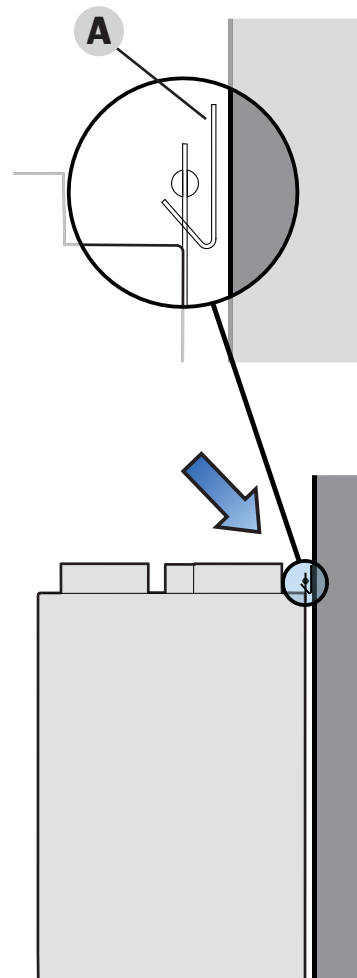
The wall bracket provided is used for wall mounting.

- The wall bracket (Fig. 4) screws to the wall with the screws provided.
- The unit is suspended from the wall bracket (Fig. 5).

The top edge of the wall bracket should be mounted 75mm higher than the top of the unit. If, for example, the top of the unit is 400 mm below the ceiling, the wall bracket should be mounted 325 mm from the ceiling, measured from the ceiling to the top edge of the wall bracket.



*Fig. 5*



## 2.3 Floor mounting

### 2.3.1 Positioning requirements

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



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

In the case of floor installation absorption feet should be used (see Fig. 6) to reduce noise and vibration. Flexit offers suitable absorption feet as accessories (product code 110955). They fit in the holes on the back of the unit. 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 put in a warm room where a lot of moisture is generated (shower, drying cupboard, etc.), condensation may form on the outside of the unit during periods when the outside temperature is low.

The base should be stable and level.

### 2.3.2 Space requirements

The unit must be installed with sufficient space for servicing and maintenance such as changing the filters and cleaning the fans and recovery system (see Fig. 17). The control cable with plug for automatic control must be easily accessible.

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

Fig. 6

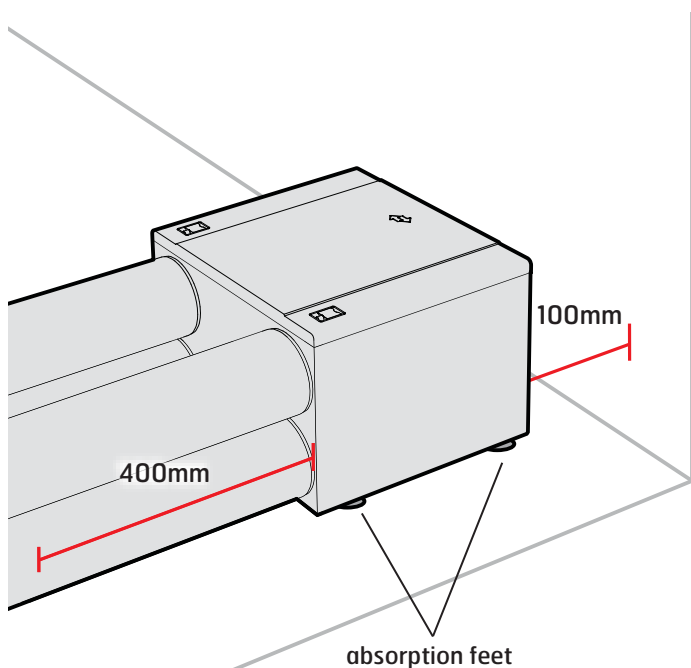
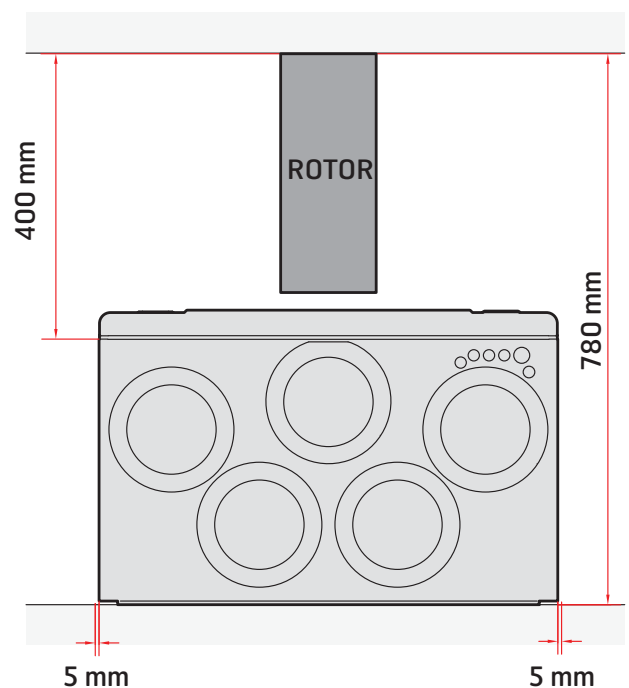


Fig. 7







The door of the unit is too heavy to support itself when the unit is on its back. It therefore has to be secured with two hinge stops and a safety strap.

The hinge stops attach with the screws provided when the door is closed (see Fig. 8 and 9).

The strap is attached to the inside of the door and the inside of the unit (see Fig. 10). It can be attached to either the left- or right-hand side, as required.

Fig. 8

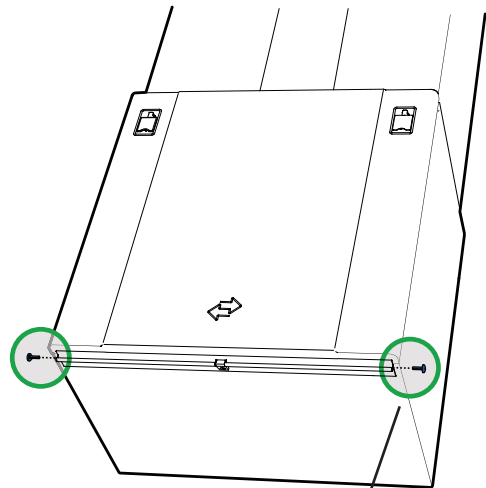


Fig. 9

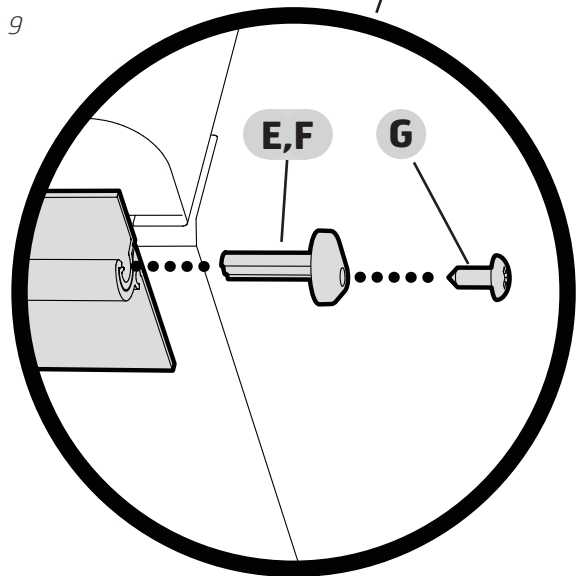
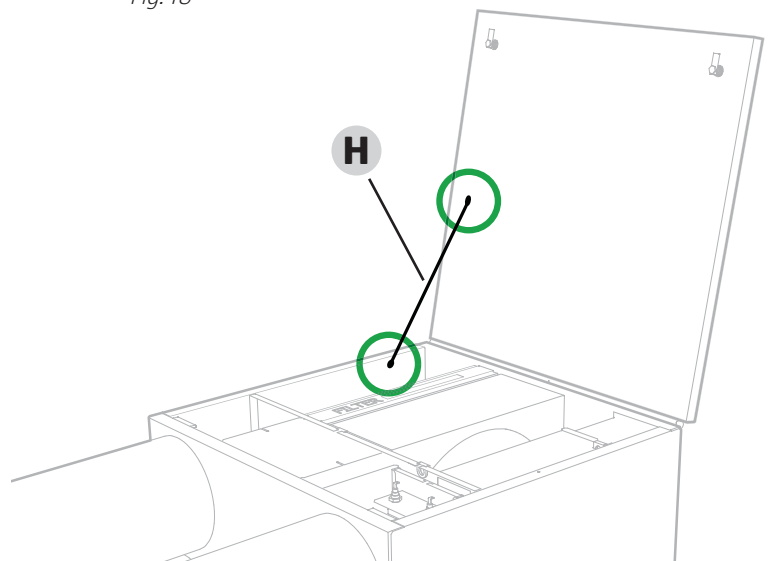


Fig. 10



## 2.4 Ceiling mounting

### 2.4.1 Positioning requirements

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

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 in the vicinity of bedrooms.



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

If the unit is put in a warm room where a lot of moisture is generated (shower, drying cupboard, etc.), condensation may form on the outside of the unit during periods when the outside temperature is low.

The base should be stable and level.

### 2.4.2 Space requirements

The unit must be installed with sufficient space for servicing and maintenance such as changing the filters and cleaning the fans and recovery system (see Fig. 11). 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.**

### 2.4.3 Mounting

The unit has five holes for ceiling mounting (see fig 12).

### 2.4.4 Mounting in concrete

Steel expansion bolts (M5 or M6) are recommended for mounting in concrete. Plastic wall plugs are not recommended.

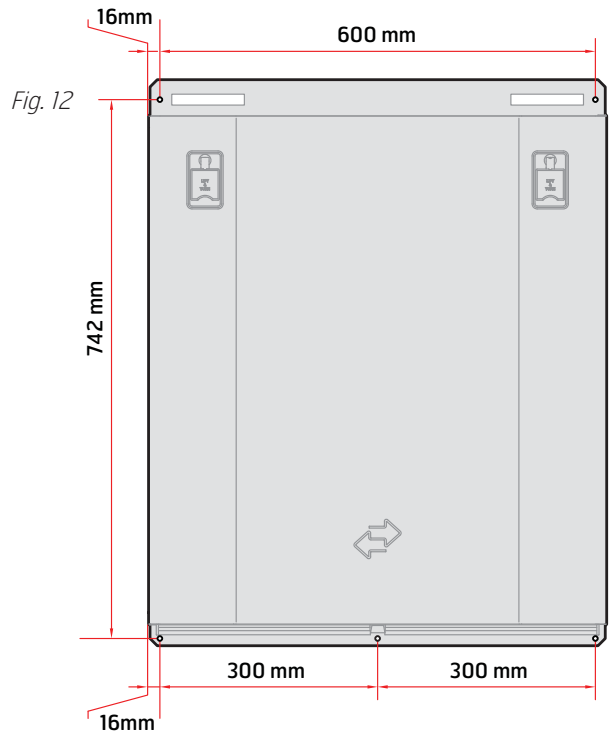
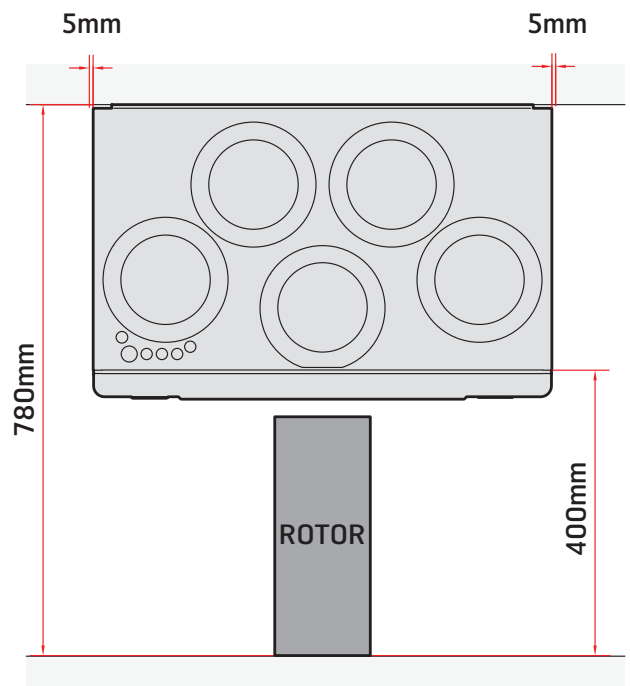
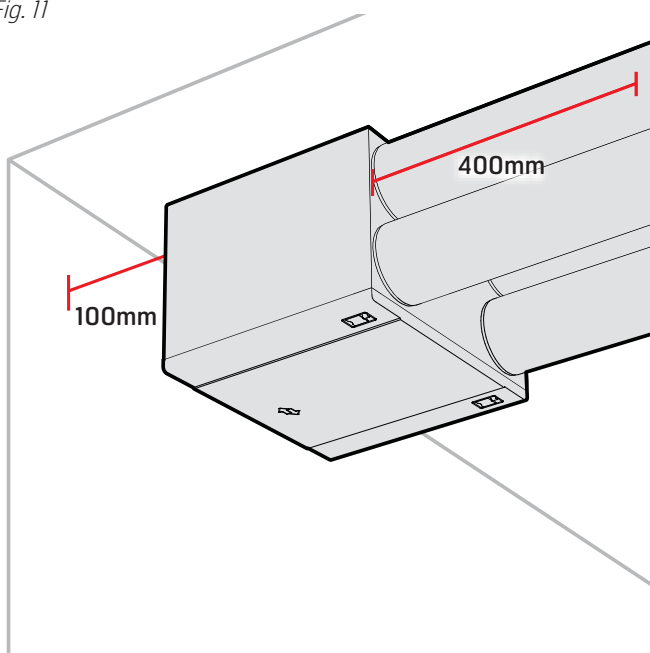


Fig. 11





**The door must be secured with the end studs and strap provided when the unit is mounted on the ceiling. There would otherwise be a risk of the door falling off and causing injury.**

The end studs attach with the screws provided when the door is closed (see Fig. 13 and 14).

The strap is attached to the inside of the door and the inside of the unit (see Fig. 15). It can be attached to either the left- or right-hand side.

Fig. 13

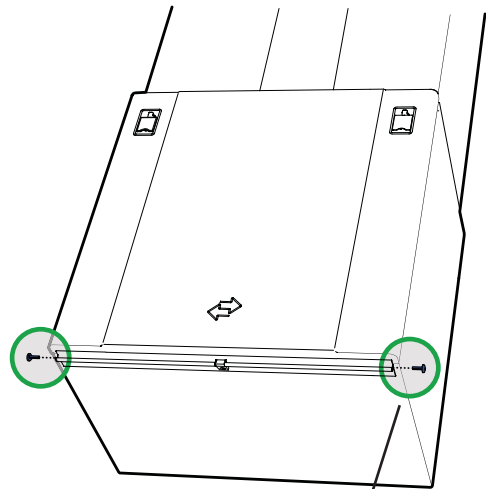


Fig. 14

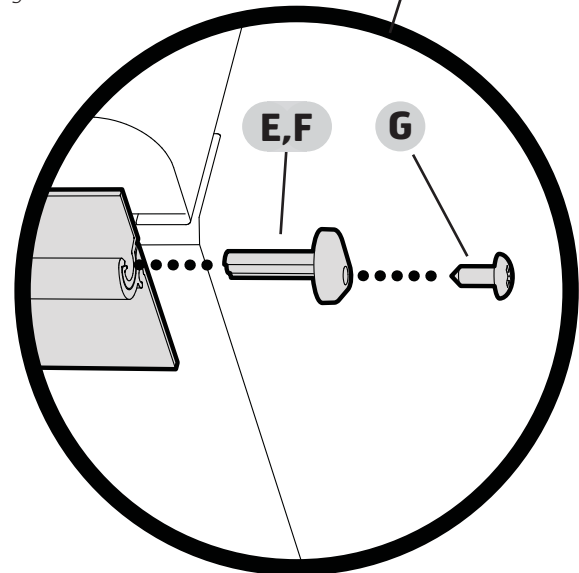
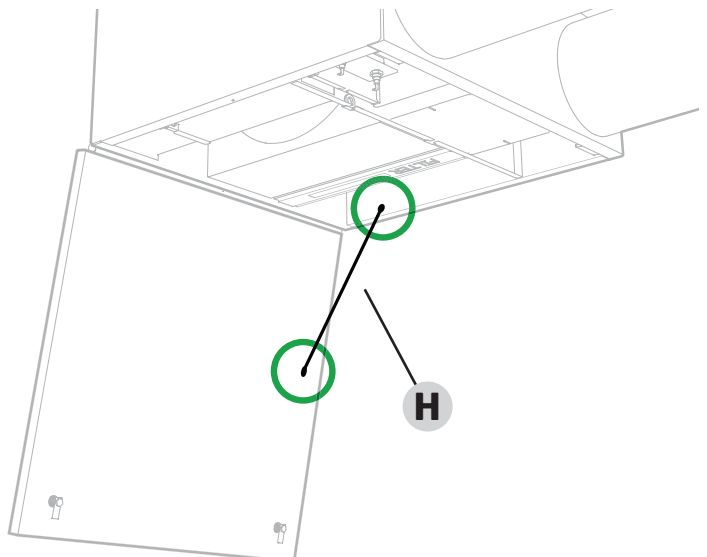


Fig. 15

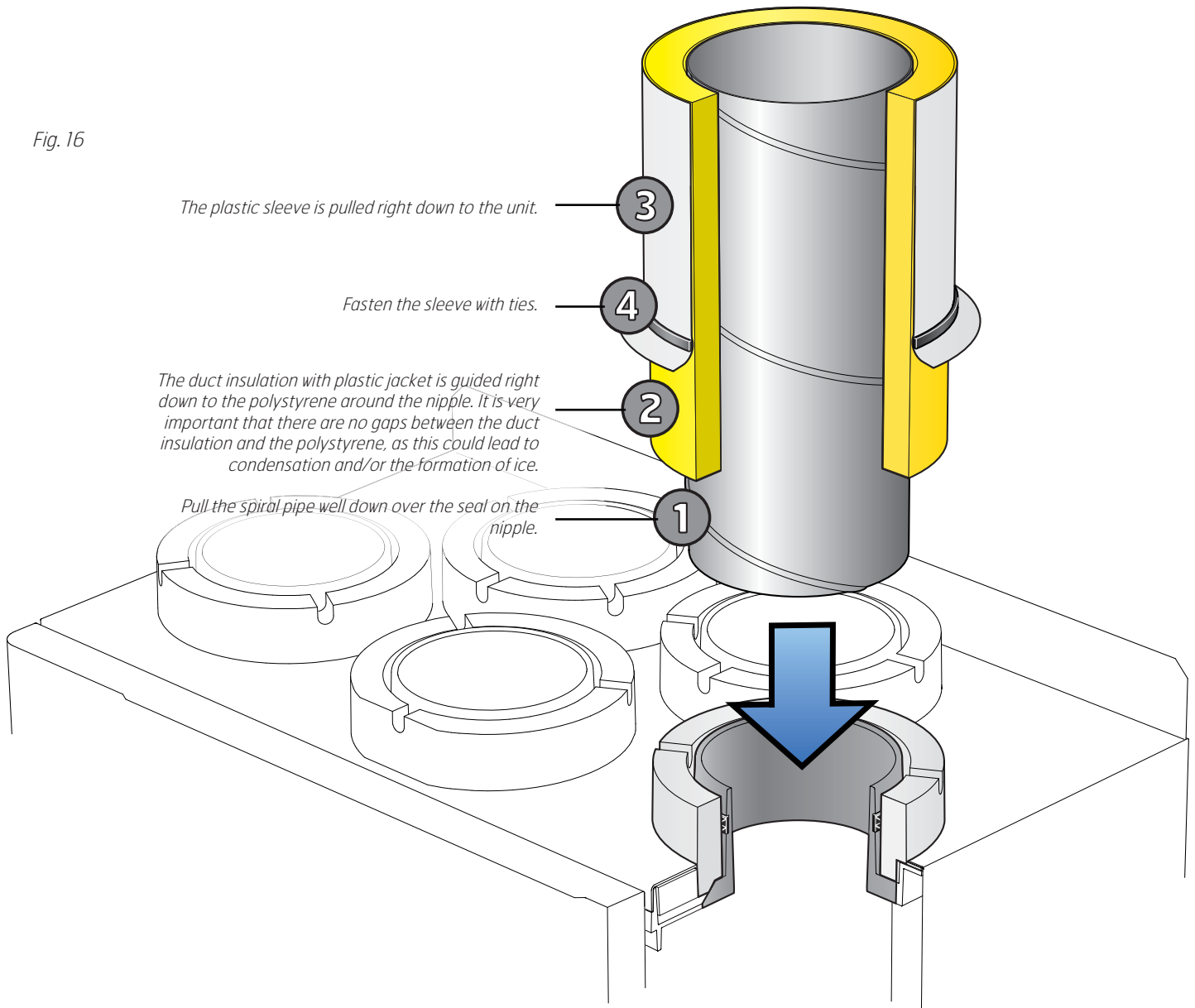


### 3 Duct connection

#### 3.1 Connection to the unit

- See Fig. 16.
- Ensure that the ducts arrive at the right duct - see the markings on the unit (top and behind the door), as well as chapter 11.5.
- 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 to 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 insulation capacity equivalent to  $\lambda = 0.035 \text{ W/m}\cdot\text{°C}$  or better.
- The planner is responsible for ensuring that the necessary correct insulation and steamtight sleeve are used in relation to the location/temperature requirements.
- Lay the outdoor air duct with a slight incline towards the outdoor air cap so that any water that enters drains out again.
- The ducts should be soundproofed properly, especially above the ventilation unit.

Fig. 16



## 4 Cover



For service reasons the cover must have a hatch or removable front.



To prevent the transmission of noise and vibrations, the cover and unit should not be in direct contact with each other.

### 4.1 Preparations

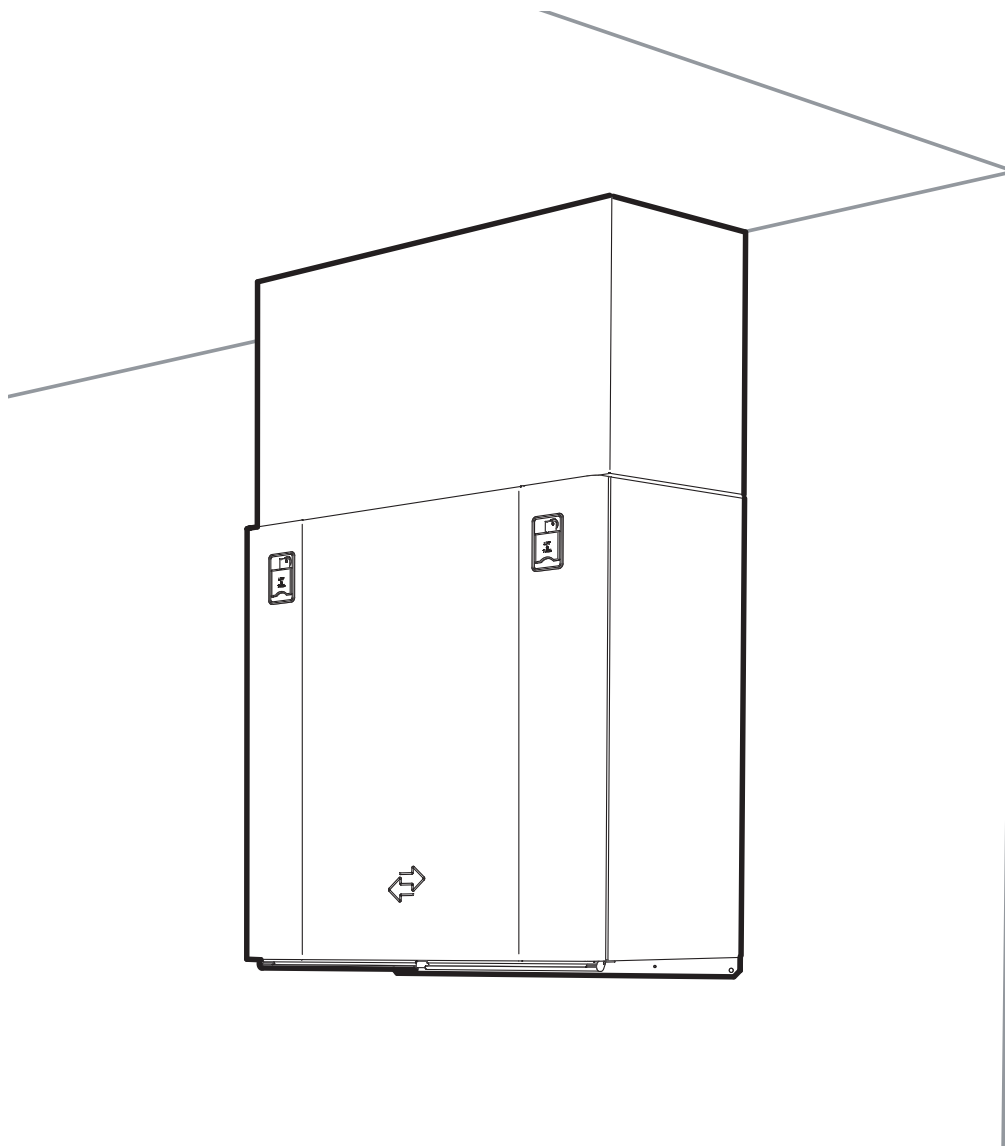
The positioning of the cover is naturally affected by the positioning of the unit. Therefore plan the positioning of both the unit and the cover prior to installation.

The radiated noise from the unit specified in the sound data does not include possible noise from ducting. The cover should therefore be soundproofed too.

### 4.2 Duct covers

Flexit duct covers are available as accessories (see Fig. 17).

Fig. 17



## 5 Installation of the CI60/600 control panel

### 5.1 Contents

Fig. 18



1. Control panel
2. Back piece for flush mounting
3. Back piece for surface mounting
4. Installation instructions
5. Cable for 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 shallow back piece (2)) or surface mounting on the wall (use deep back piece (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.

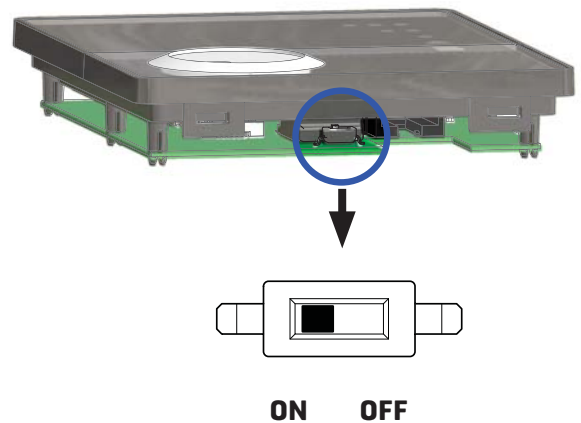


The low-voltage cable must be at least 30 cm from power cables and not exceed 24 m in length. In the case of flush mounting the cable is run in a 20 mm wiring conduit.

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 Fig. 19). Use relevant settings from the table. The panels can be connected in series in any way.

**OFF = MASTER**  
**ON = SLAVE**

Fig. 19



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 back piece (2) over the wall box and click the cable in straight from the back as shown in the illustration (see Fig. 20).

Fig. 20



### 5.4 Surface mounting

Lay the cable between the back piece (3) and the ventilation unit. Cut out the most suitable perforation in the corner of the back piece. Secure the back piece 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 Fig. 21).

Fig. 21



### 5.5 Finishing off – CI60

Slide the panel off as shown by arrow no. 1 (see Fig. 22) and fit the control panel straight into the back piece as shown by arrow no. 2 (see Fig. 23) until it clicks into place. Slide the panel back on.

Fig. 22

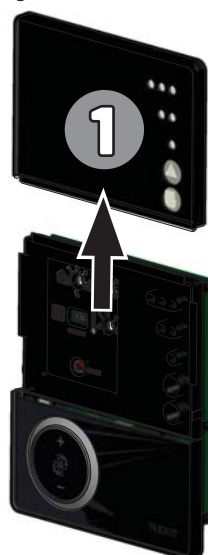
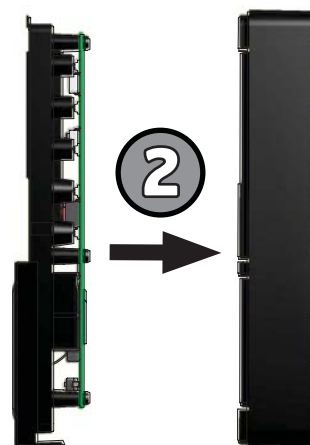


Fig. 23



### 5.6 Finishing off – CI600

Fit the control panel over the hooks in the back piece as shown by arrow no. 1 and then click the panel into place at the bottom edge as shown by arrow no. 2 (see Fig. 24).

Fig. 24



## 6 Electrical work



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



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



Ensure that the plug for the unit is not boxed in.

The unit is supplied with a 2 m cable with plug. The cable comes out of the top 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 chapter 12 for fuse sizes.

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

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 laid between the unit and the switch unit. See chapter 5 about automatic control.



Temperature sensor B1 must be positioned after the water battery.

### 6.1 Supply air sensor for heating (B1) (if unit has a water battery)

This must be placed in the supply air duct (red on Flexit drawing/Symbol use page 3) approx. 1 m from the water battery. Roll out the marked coil of cable on the unit near the supply air nipple. Drill a  $\varnothing$  7 mm hole in the duct where the sensor can be inserted. Seal the hole with acrylic 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 air 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 going to have heating with a water battery.

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



## 8 Adjusting units

### 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 projection documents. Adjust the values based on the projected values.

#### 8.1.1 Adjustment

**Only stage 2 (NORMAL) needs to be adjusted.** Stages 1 and 3 have fixed settings, while stage 2 has to 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 two heating seasons.
NORMAL	Used under normal conditions. On 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 in 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 Fig. 25). The adjustment range is 20-100% of the maximum level according to the scale on the knob.

Factory settings for supply air/extract air:

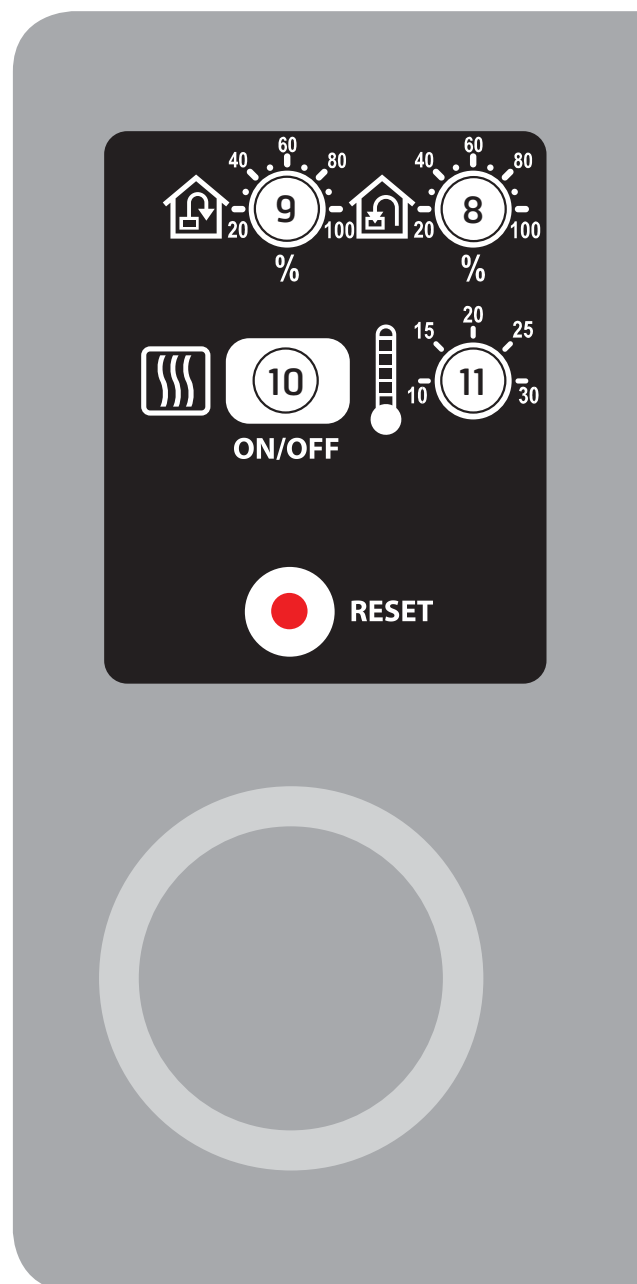
MIN	50% (fixed)
NORMAL	75% (variable)
MAX	100% (fixed)

#### 8.1.2. 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 rotating 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.

Fig. 25



## 8.2 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 projection documents. Adjust the values based on the projected values.

### 8.2.1 Adjustment

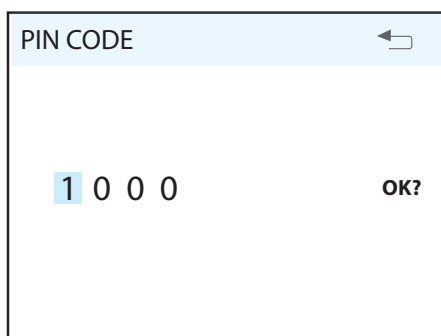
Only stage 2 (NORMAL) needs to be adjusted.

Note that it is also possible to adjusted 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.

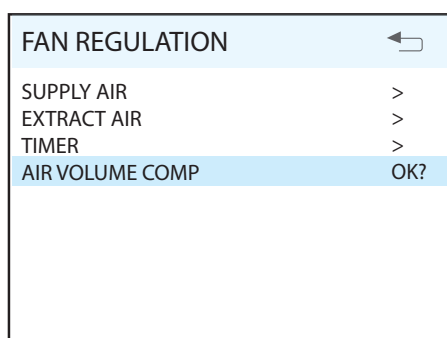
The function of the different stages:

MIN	Must not be used when the home is in use. Must not be used in the first two heating seasons.
NORMAL	Used under normal conditions. On 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.

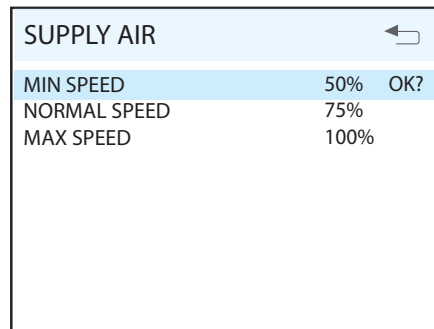
First go to the "Advanced user" menu, enter the PIN and press OK:



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.



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

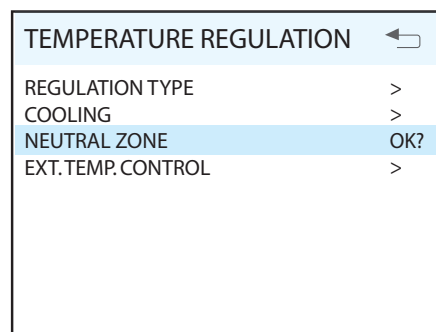


Factory settings for supply air/extract air:

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

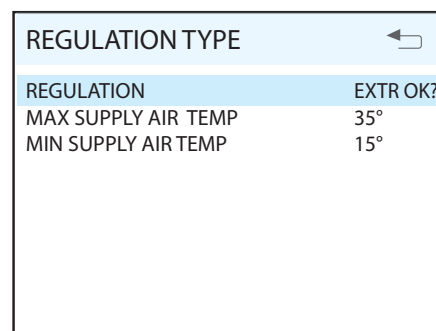
### 8.2.2 Temperature regulation

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 Installation of external kitchen hood

If you use an external kitchen hood, follow the documentation regarding installation and adjusting air flow rates which is supplied with the hood.

### 9.1 Kitchen hoods without a motor (connected to unit)

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

### 9.2 Kitchen hoods with a motor (not connected to unit)

A kitchen hood with a motor is not installed to the unit. This has its own duct system for air evacuation.

With the kitchen hood it is possible to compensate for the amount of air drawn out of the house. See chapter 10.2 for more information.

## 10 Adjusting the kitchen hood

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

### 10.1 Kitchen hoods without a motor (connected to unit)

The air flow rate over the hood is regulated according to the planned air flow rate. Flexit's kitchen hoods handle odour absorption up to 150 m<sup>3</sup>/h. It is not necessary to compensate for the supply air fan to achieve a balanced air flow rate.

### 10.2 Kitchen hoods with a motor (not connected to unit)

When using a kitchen hood with a motor, the extract air flow rate will increase. To compensate for this, the ventilation unit can be set give a higher supply air flow rate than extract air flow rate.

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

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

#### It works like this:

The supply air fan will be increased to the maximum stage, while the extract air fan will continue at the MIN-stage in order to compensate for the volume of air the cooker hood evacuates from the building. This is important to balance the ventilation in the building.

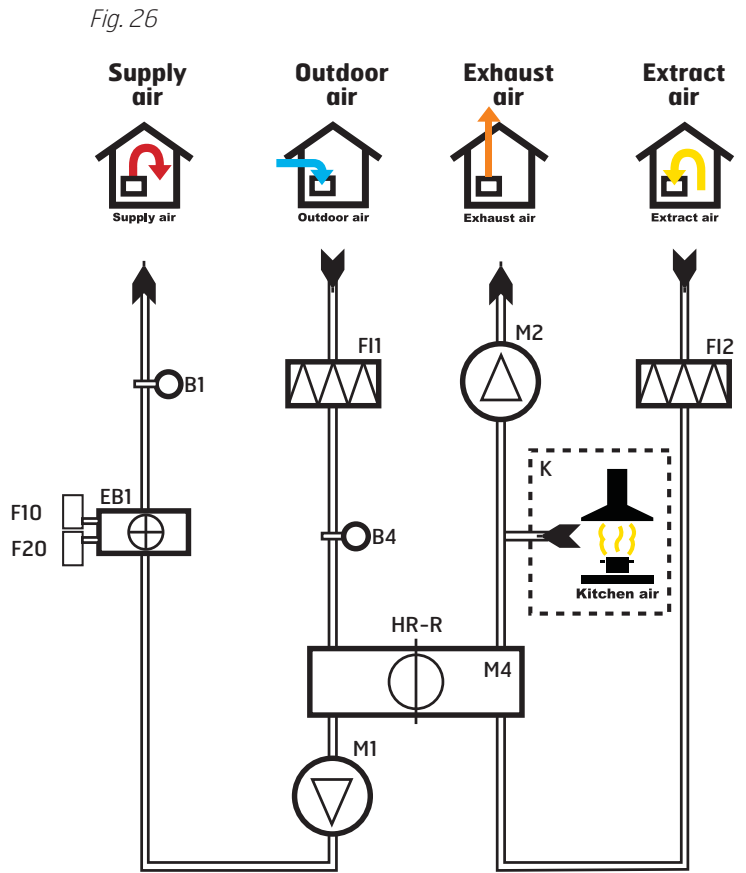
Check the kitchen hood's maximum air capacity (using the enclosed capacity diagram) against the maximum capacity of the air supply fan. If the kitchen hood has a higher capacity than the unit's supply air fan, the unit will not manage to compensate for the loss of air, and sufficient supply air must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

## 11 General and system drawings

### 11.1 System drawing (electric battery)

(shown as left-hand model)

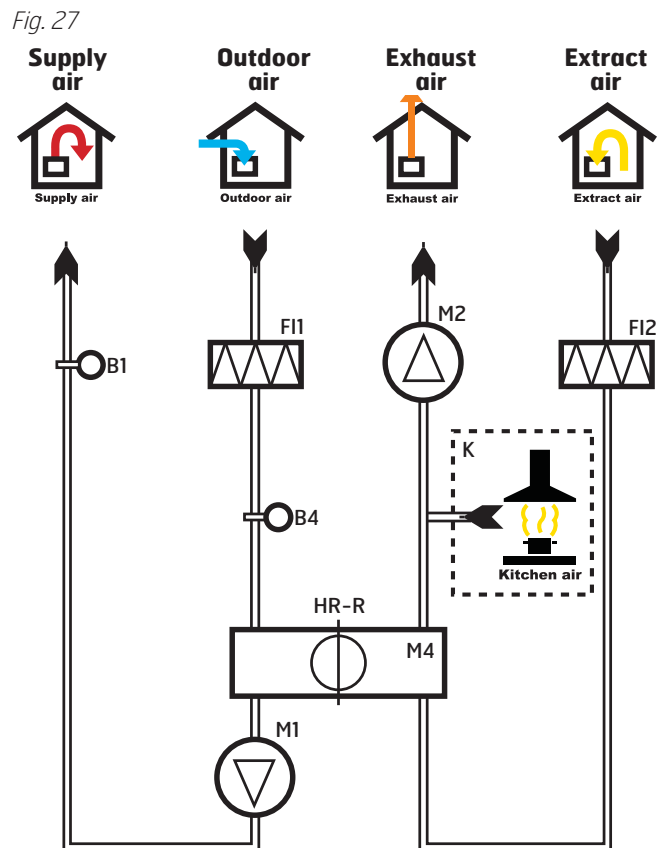
- B1 Supply air temperature sensor
- B4 Outdoor air temperature sensor
- EB1 Heating element
- F10 Overheating thermostat, manual reset
- F20 Overheating thermostat, automatic reset
- F11 Supply air filter
- F12 Extract air filter
- M1 Supply air fan
- M2 Extract air fan
- HR-R Rotary wheel-type heat exchanger
- M4 Rotor motor
- K Kitchen hood



### 11.2 System drawing (without heater)

(shown as left-hand model)

- B1 Supply air temperature sensor
- B4 Outdoor air temperature sensor
- F11 Supply air filter
- F12 Extract air filter
- M1 Supply air fan
- M2 Extract air fan
- HR-R Rotary wheel-type heat exchanger
- M4 Rotor motor
- K Kitchen hood

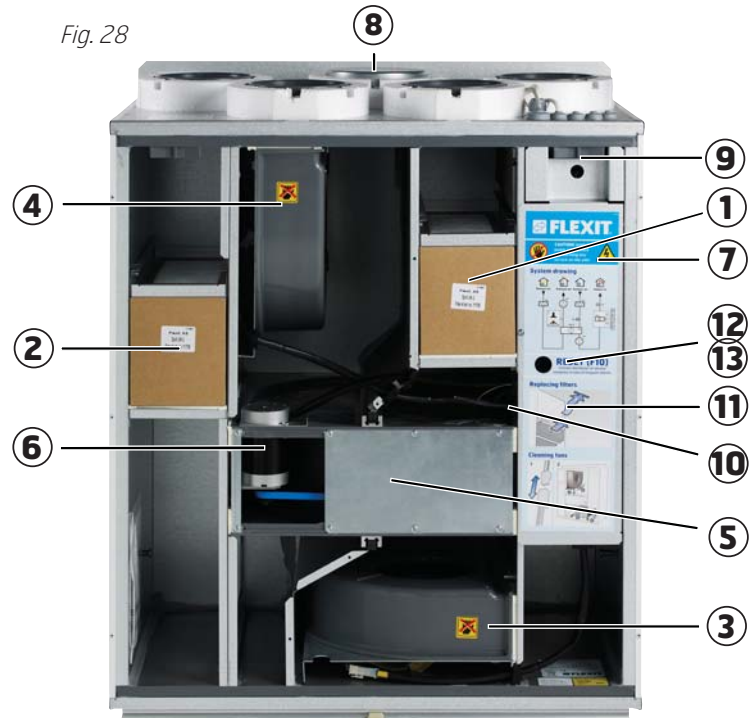


### 11.3 System drawing (electric battery)

(shown as right-hand model)

- |    |      |                                     |
|----|------|-------------------------------------|
| 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 wheel-type heat exchanger    |
| 6  | M4   | Rotor motor                         |
| 7  |      | Control unit                        |
| 8  | K    | Kitchen 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 |

Fig. 28

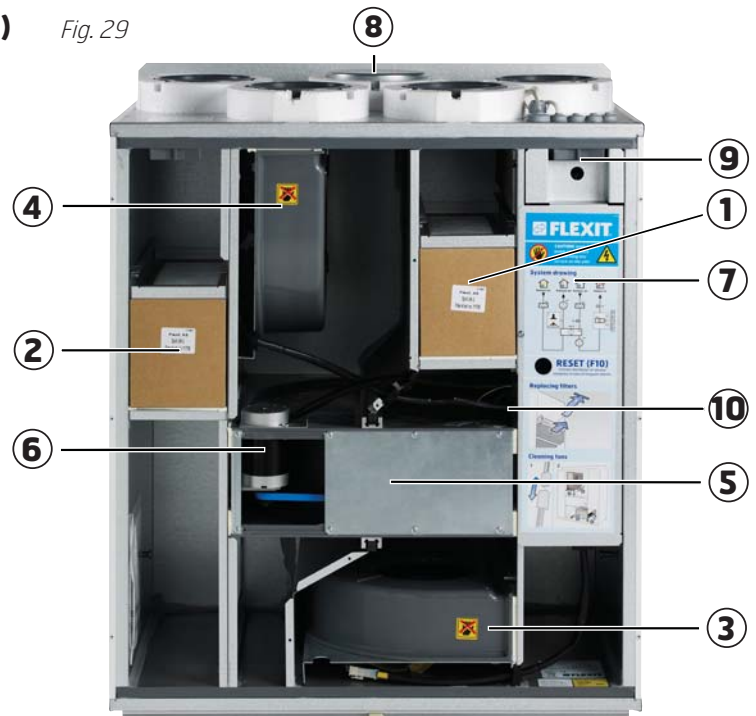


### 11.4 System drawing (without electric battery)

(shown as right-hand model)

- |    |      |                                  |
|----|------|----------------------------------|
| 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 wheel-type heat exchanger |
| 6  | M4   | Rotor motor                      |
| 7  |      | Control unit                     |
| 8  | K    | Kitchen hood                     |
| 9  | B1   | Supply air temperature sensor    |
| 10 | B4   | Outdoor air temperature sensor   |

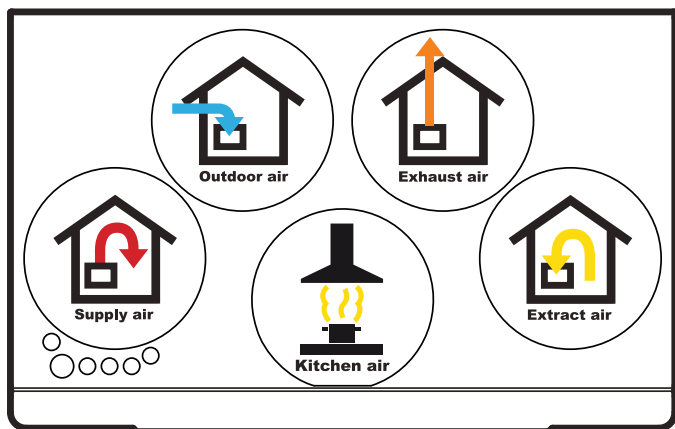
Fig. 29



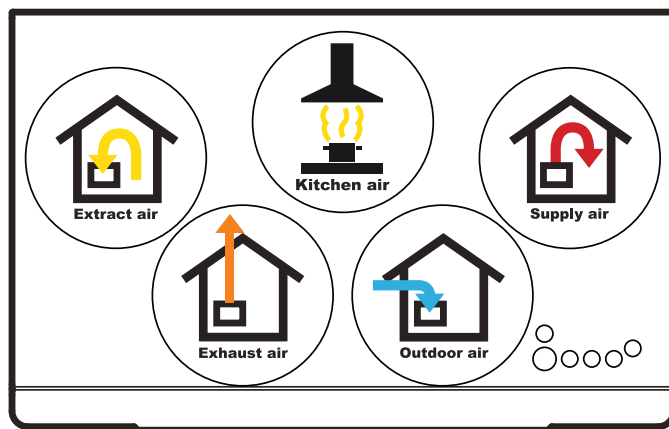
### 11.5 Nipple location

Fig. 30

Left-hand model



Right-hand model

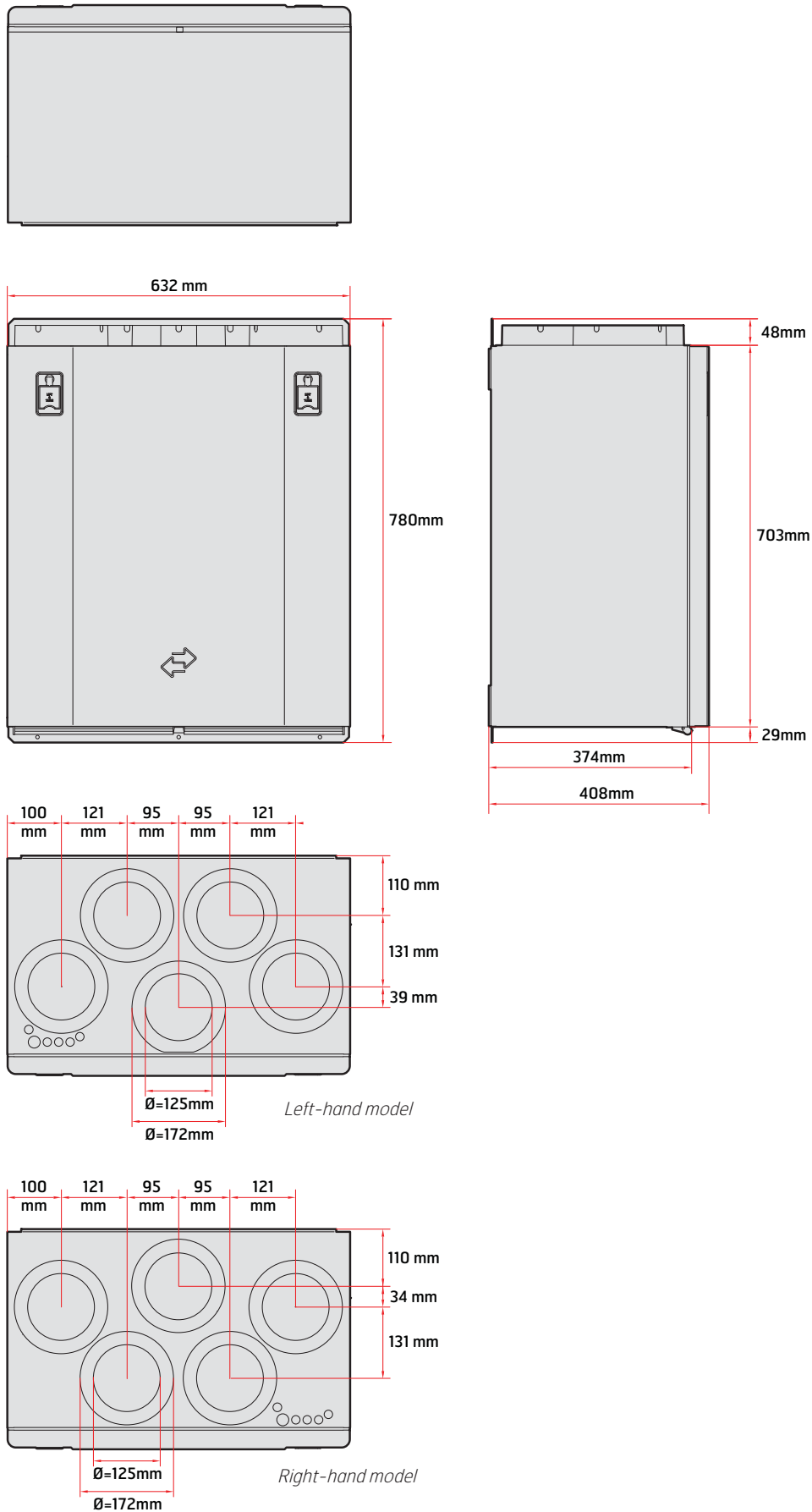


## 12 Technical data

	UNI 2 RE EC	UNI 2 R EC
Rated voltage	230 V 50 Hz	230 V 50 Hz
Fuse	10 A	10 A
Rated current, total	4,4 A	1,3 A
Rated power, total	1015 W	215 W
Rated power, electric battery	800 W	-
Summed rated power, fans	212 W	212 W
Rated preheating power	-	-
Fan type	B wheel	B wheel
Fan motor control	0-10 V	0-10 V
Fan speed - max. rpm	3390 rpm	3390 rpm
Automatic control standard	CU60	CU60
Filter type (TO/FROM)	F7	F7
Filter dimensions (WxHxD)	335x130x113 mm	335x130x113 mm
Weight	45 kg	45 kg
Duct connection	Ø125mm	Ø125mm
Height	780 mm	780 mm
Width	632 mm	632 mm
Depth	408 mm	408 mm

### 13 Sizes/Physical dimensions

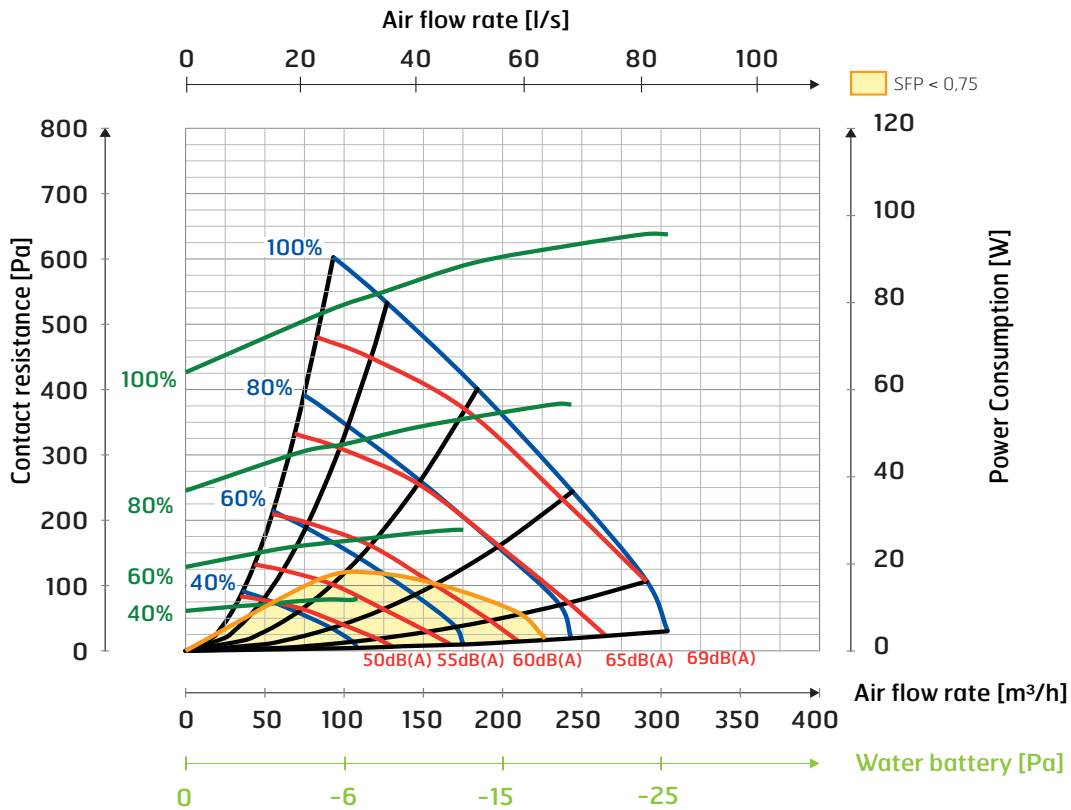
Fig. 31



## 14 Capacity and sound data

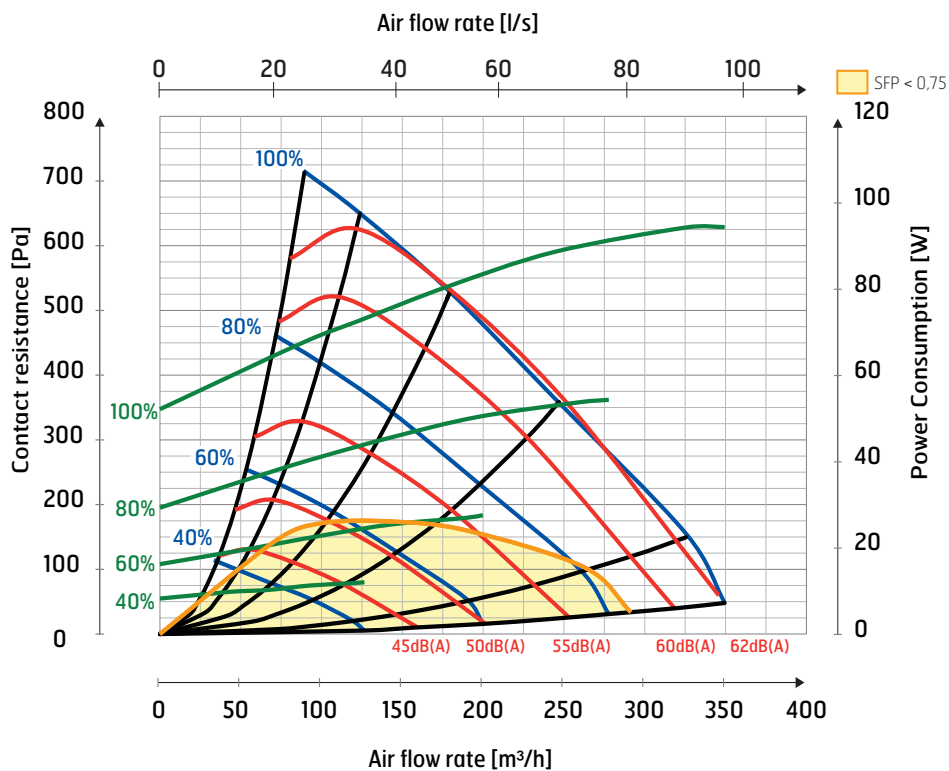
### 14.1 Supply air side

Fig. 32



### 14.2 Extract air side

Fig. 33





### Explanation of the diagrams

Sound data is specified as sound effect level LwA in the capacity diagrams (this is sound to the duct).

These values can be corrected using the table for the various octave bands if you want to look at Lw (without adaptation to A-band).

The correction table for the respective octaves is specified in Lw, which means that, after conversion per octave for the respective supply air and extract air, you get these values in Lw.

Radiated sound from the unit must be calculated on the basis of 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	6	6	3	-1	-8	-13	-22	-30	
Extract air	9	9	6	-5	-18	-21	-33	-33	
Radiated	-12	-12	-12	-19	-31	-35	-40	-41	-18

#### > EXAMPLE 1

##### Sound to the duct in the respective octaves is specified in Lw.

The operating point gives 70 dBA from the capacity diagram for supply air. I am interested in what this is specifically in the 500 Hz range. 70 dBA +3 = 73 dB, which is then an Lw value (sound effect level without adaptation to the ear's A-band)

#### > EXAMPLE 2

##### Radiated sound in Lw per octave.

If, at the working point, you read off 70 dBA in the supply air capacity diagram (which specifies sound to the duct) to then get an Lw value in the respective octaves, you deduct the value in the current octave for the row with radiated sound.

$70 \text{ dBA} - 19 \text{ (for 500 Hz)} = 51 \text{ dB}$ , which is then an Lw value and specifies radiated sound from the unit in this octave.

#### > EXAMPLE 3

##### Total radiated sound from the unit in LwA.

At the bottom of the table, a total value is specified for radiated sound from the unit in LwA. This is an aggregate value and is the total of the radiated values in Lw for the various octaves. It has then been corrected for A-band.

This is used as follows:  
You read off the LwA value in the supply air capacity diagram, in our example 70 dBA, and then deduct the total value (also an LwA value).  
 $LwA \text{ 70 dBA} - 18 \text{ dBA} = 52 \text{ dBA}$  (which is then specified in LwA sound effect level adapted to the ear's A-band).

## 15 Final checks / Starting

### 15.1 Final checks

Check the following points:

Description	Chapter	Per- formed
Duct insulation has been carried out in accordance with the manual and technical documents	3	
Ducts have been connected to the correct nipples	11	
Adjustment has been carried in accordance with the manual and projection documents	8	
The unit operates normally in all stages	-	
Rotor rotates freely (sense of rotation indicated on rotor module)	-	
Rotor rotates when heating is required	-	
Heating comes on	-	
Unit has filters for both outdoor air and extract air	11	

### 15.2 Starting

- 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 set on the control panel and, in the case of AC models, on the adjustment panel/transformer.
- Changes in settings are made from the control panel.
- Adjustment has been carried out in accordance with the manual and
- projection documents (documentation of ventilation data).

## 16 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 Machinery Directive (Safety)**

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

**Type: UNI 2 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: 2011**

**FLEXIT AS 29.11.2016**



Frank Petersen  
CEO





Flexit AS, Televeien 15, N-1870 Ørje [www.flexit.no](http://www.flexit.no)