



FLEXIT UNI 4 Air Handling Unit and Automatic Control Instruction Manual

[Home](#) » [FLEXIT](#) » FLEXIT UNI 4 Air Handling Unit and Automatic Control Instruction Manual 

Contents

- [1 FLEXIT UNI 4 Air Handling Unit and Automatic Control](#)
- [2 Product Information](#)
- [3 Contents](#)
- [4 Important Safety Instructions](#)
- [5 Symbols Used](#)
- [6 Usage Instructions](#)
- [7 Planning and preparation work](#)
- [8 Wall mounting](#)
- [9 Floor mounting](#)
- [10 INSTALLATION](#)
- [11 Adjusting the unit](#)
- [12 General drawings and system drawings](#)
- [13 Technical data](#)
- [14 Physical dimensions](#)
- [15 Final checks / Starting](#)
- [16 CONTACT](#)
- [17 Documents / Resources](#)



FLEXIT UNI 4 Air Handling Unit and Automatic Control



Product Information

- **Product Name:** UNI 4 Air Handling Unit & Automatic Control
- **Model Number:** 110674EN-13
- **Date of Manual:** 2022-02

Contents

1. Planning and preparation work
2. Duct Connection
3. Electrical work
4. Plumbing work
5. Encasing

Important Safety Instructions

- It is the installer's responsibility to carry out a full safety and function assessment of the appliance.
- To maintain a good indoor climate, comply with regulations and, to avoid condensation damage, the unit must never be stopped apart from during service/maintenance or in connection with an accident.

Symbols Used

- Supply air
- Extract air

- Kitchen air
- DANGER! ELECTRICITY
- DANGER! DO NOT TOUCH
- Exhaust air
- Outdoor air
 - **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.
 - **NB!** When a text bears this symbol, damage may occur as a consequence of not following the instructions.

Usage Instructions

1. **Planning and preparation work:** Before installation, ensure that door gaps are sealed properly and that the kitchen is equipped with suitable ventilation ducts. Refer to the manual for specific instructions on door gaps and ventilation duct installation.
2. **Duct Connection:**
 1. **Duct connection in the base:** Follow the instructions provided in section 4.1 of the manual to connect the ducts to the base of the unit.
 2. **Connecting the unit:** Refer to section 4.2 of the manual for detailed instructions on connecting the unit to the duct system.
3. **Electrical work:**
 1. **Temperature sensor for heating (B1) (if the unit has a water battery):** Install the temperature sensor according to the instructions in section 5.1 of the manual.
 2. **Frost sensor for water battery (B5) (if the unit has a water battery):** Follow the instructions in section 5.2 of the manual to install the frost sensor.
 3. **Outdoor air damper (if the unit has a water battery):** Install the outdoor air damper as per the instructions provided in section 5.3 of the manual.
4. **Plumbing work:** Refer to section 6 of the manual for guidance on plumbing work related to the installation of the unit.
5. **Encasing:** Follow the instructions in section 7 of the manual for proper encasing of the unit.

Important Safety Instructions

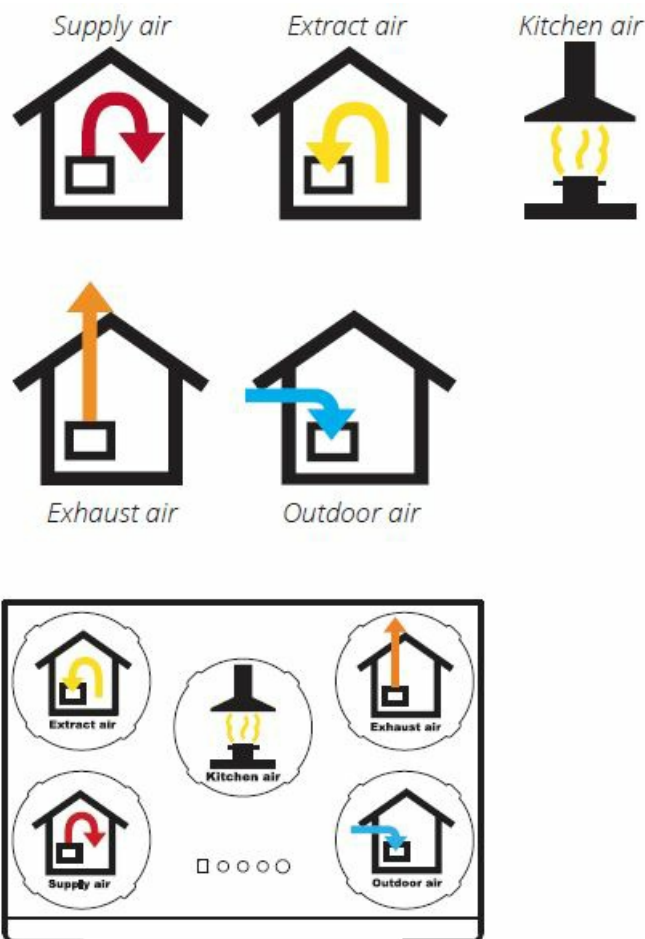
It is the installer's responsibility to carry out a full safety and function assessment of the appliance. To reduce the risk of fire, electric shock or injury, read all the safety instructions and warning texts before using the unit.

- This unit is only designed to handle ventilation air in housings 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 you open the door, the unit must be dead and the fans must have been given time to stop (min. 3 minutes)
- 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 driers should not be connected to the unit

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

Symbols Used

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



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



- DANGER! ELECTRICITY



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

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Note that the product is not

intended for use by children. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Planning and preparation work

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 ventilator is designed with a motor, suitable supply air must be ensured. See "Chap. 10. Installing a kitchen fan" on page 20 and "Chap. 10.2. Adjusting the kitchen fan" on page 20 for details.

Fireplace

When using the fireplace suitable supply air must be ensured.

Installation in the building

The unit should not be placed near rooms that are sensitive to noise. When placing by an inner wall, an isolated wall with cut off studs and cut off boards, as well as double plaster board, is recommended ("Fig. 1" on page 5). Cabinet units in wet rooms should be placed outside zone 2.

Positioning must accord with individual

countries' electrical safety legislation. Check which rules apply in your country.

Suspension of cabinet unit

Suitable transoms between studs minimum (48 × 98 mm) are required for the screws.

Access

The unit must have good access for service/maintenance. See "Chap. 2. Wall mounting" on page 5 and "Chap. 3. Floor mounting" on page 10 for details.

Fire requirements

Any fire safety requirements must be clarified.

Duct cover

Plan and calculate the placement of the unit and duct cover carefully before you start. See "Chap. 7. Encasing" on page 15 for details.

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

PLUMBER (IF THE UNIT HAS A WATER BATTERY)

Water pipe layout and placement of the water battery (channel battery) must be planned. These must be kept warm to avoid frost damage. See separate instructions that accompany the water battery. The water battery must be located in a room with a drain.

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 power cable grommet must be fastened with a torque of 2.0Nm.

Wiring for control switches

Pipe & 20 for pulling of ISDN cable for control of the unit, laid between the unit and an easily accessible place in the property (e.g. outside the bathroom) and ending with a simple flush-mounted double wall box. The control switches are placed here. The control wire must be placed min. 30 cm away from cables carrying mains voltage or higher.

Control panel

The control panel is adapted for concealed installation over a single connection box, or surface installation on the wall.

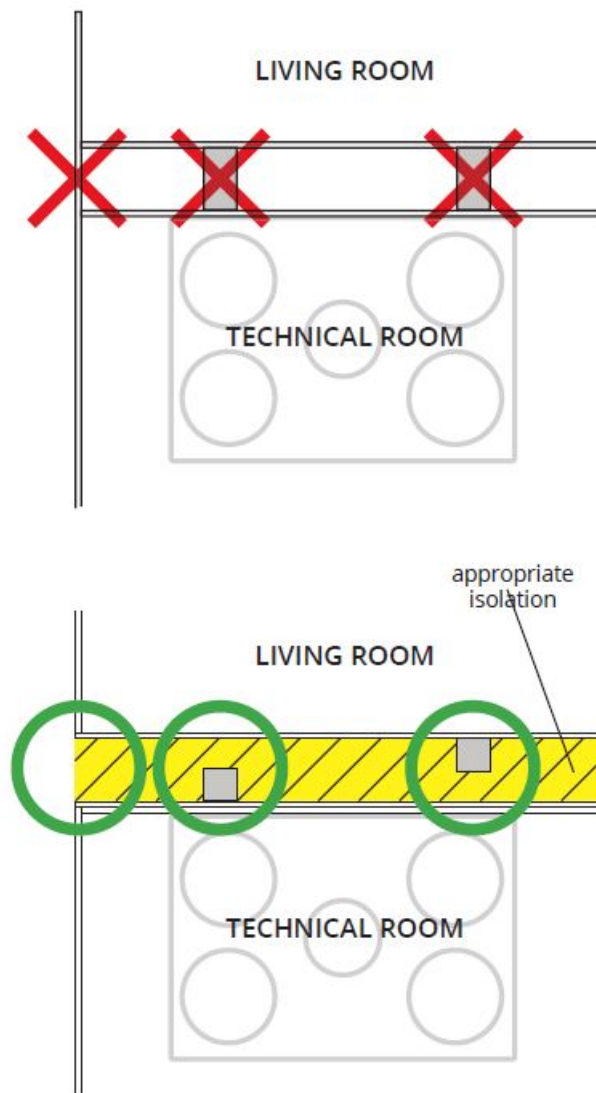
CAUTION! Each product's installation instructions must be followed.

Wall mounting

LOCATION 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 placed regarding to sound (see sound data), If the unit is placed in a room that does not have sound requirements, then it shall be built up so that the sound pressure does not exceed the requirement in the adjoining room.
- The unit should be placed by 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 is recommended (see Fig. 1).
- If the unit is placed in spaces with high humidity (bathroom etc), condensation might occur on the surface of the unit when outdoor temperatures are very low. The base should be stable and level.

Fig. 1



SPACE REQUIRED

The unit must be installed with space for servicing and maintenance such as filter replacement and cleaning of fans and rotary wheel-type heat exchanger (see Fig. 2). The control cable with plug for automatic operation on top of the unit must be easily accessible. These are minimum requirements and only take service needs into account. Positioning must accord with individual countries' electrical safety legislation. Check which rules apply in your country.

LOFT INSTALLATION

If needed, the rear door of the ventilation unit can be removed temporarily, leaving the depth of the unit at 484mm, in compliance with minimum trapdoor dimensions. Unscrew the six screws holding the door to remove NB! When fastening the door, the door gas- ket must be compressed to 3mm.

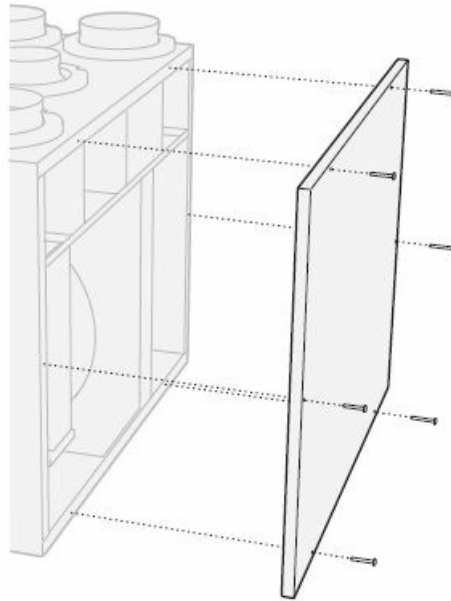
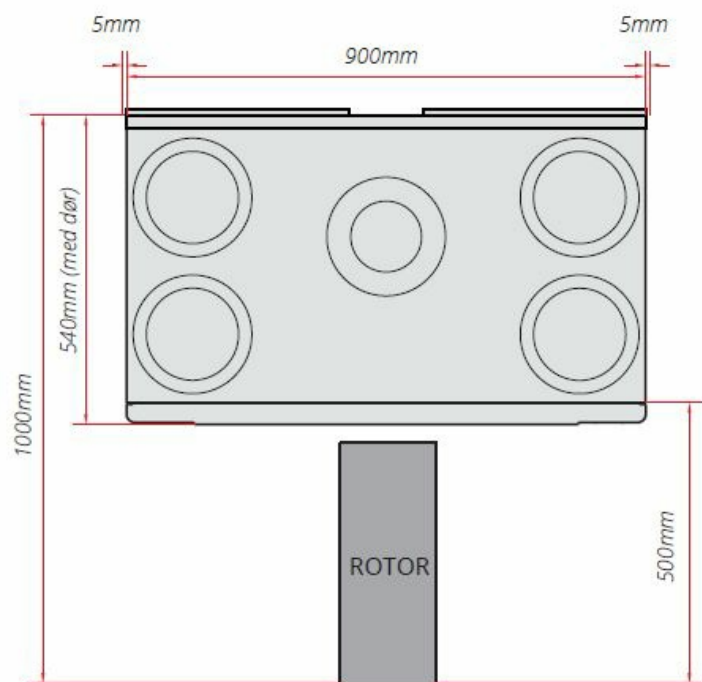
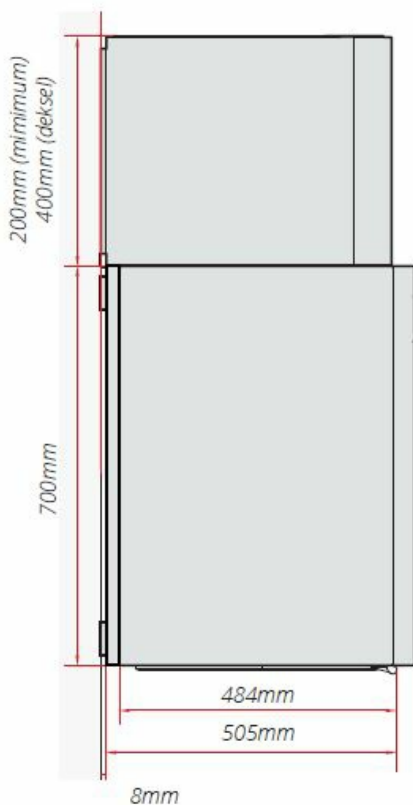


Fig. 2



DUCT LOCATIONS

The unit is available in left and right versions (exhaust air duct to the left or right), depending on what is the most favourable duct location. The duct connections for outdoor air can be moved to the bottom of the unit if desired, by exchanging the ducts and covers. See “Chap. 4. Duct Connection” on page 12 and “Chap. Duct location” on page 23 for information about moving ducts, as well as duct placement in the bottom and top of left and right models respectively.

Alternative wall mounting methods:

1. Horizontal installation (Fig. 3)
2. Sideways installation (Fig. 4)

Fig. 3

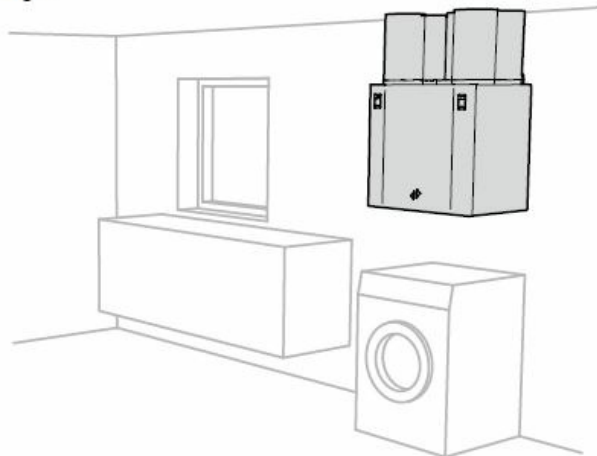
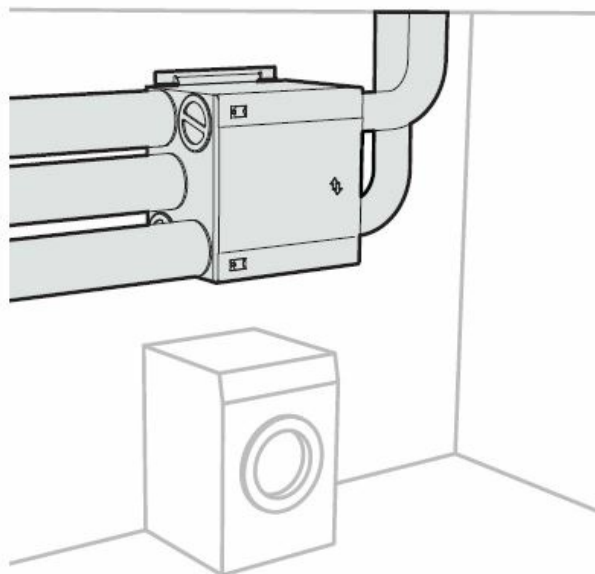


Fig. 4



The attached wall bracket, as well as the enclosed bracket, are used for wall mounting. The same mounting is used whether the unit is installed with ducts up or out to the side (see Fig. 5). As standard, the unit has the mounting bracket mounted on the top. In case of sideways mounting, the rear wall of the unit must be dismantled, and then remounted after the mounting bracket has been moved (see Fig. 5 and “Chap. 2.3. Loft installation” on page 6).

- The wall bracket (Fig. 6) is screwed to the wall using the enclosed screws.
- The unit is suspended from the rail (Fig. 7). Hold the unit at an angle when hooking it onto the wall. The upper edge of the wall bracket should be mounted 65 mm higher than the top of the unit. If one desires, for example, that the top of the unit shall be 400 mm under the ceiling, the wall bracket should be mounted 335 mm from the ceiling, measured from the ceiling and down to the upper edge of the wall bracket. In the case of sideways wall mounting, the rear wall must be detached before moving the brackets (see Fig. 5).
 - **CAUTION!** Due to the size and weight of the unit, two persons must take part in the wall mounting of the unit.

Fig. 6

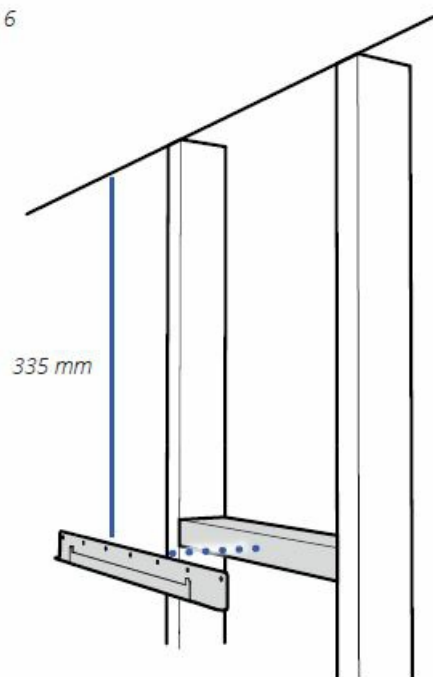


Fig. 5

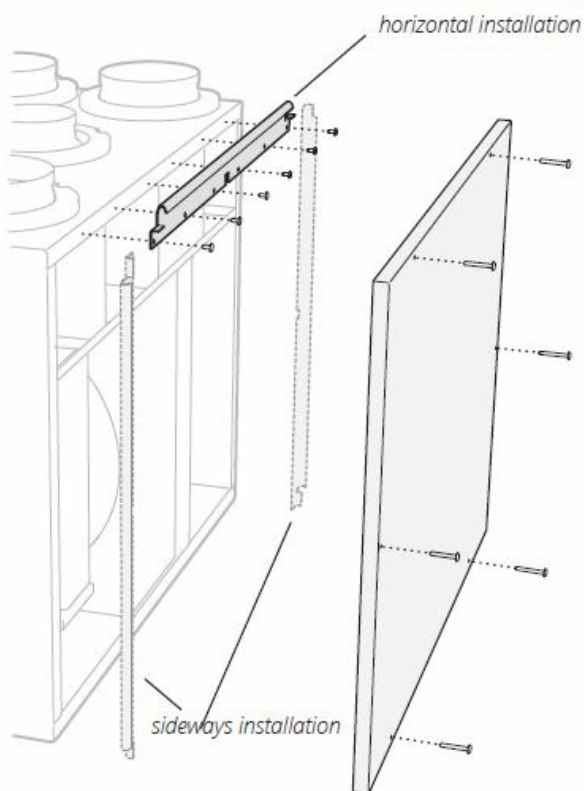
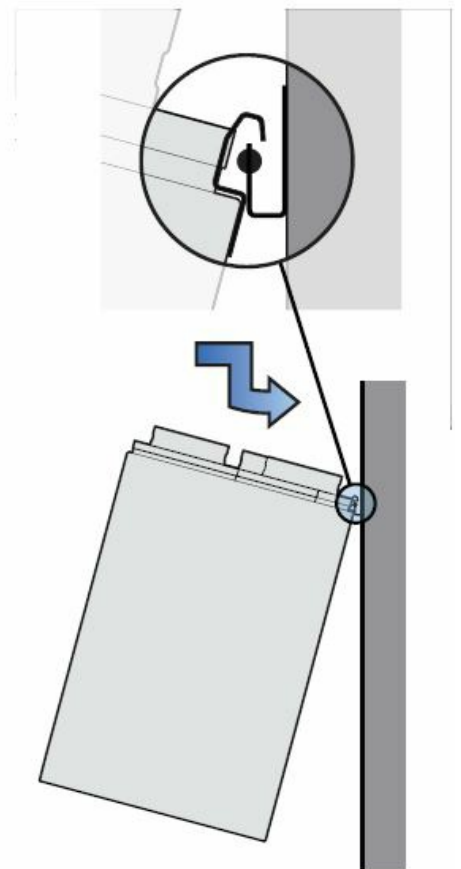


Fig. 7



- **NB!** When the unit is hung sideways the door must be secured with two end studs and a strap
- The end studs are screwed on with the enclosed screws 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). There are attachment points both in the left and right ends of the unit. Use the attachment points that are uppermost when the unit is hung on the wall. This will prevent the strap from catching in the door when it is closed.

Fig. 8

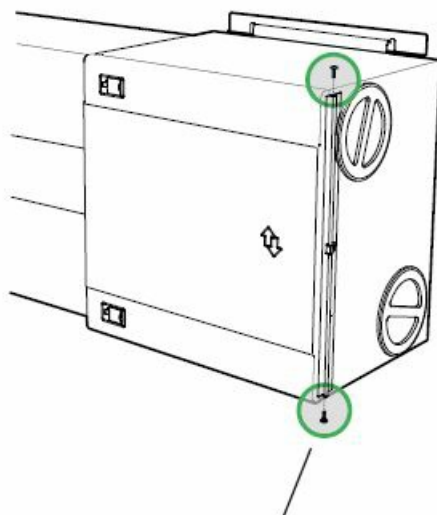


Fig. 9

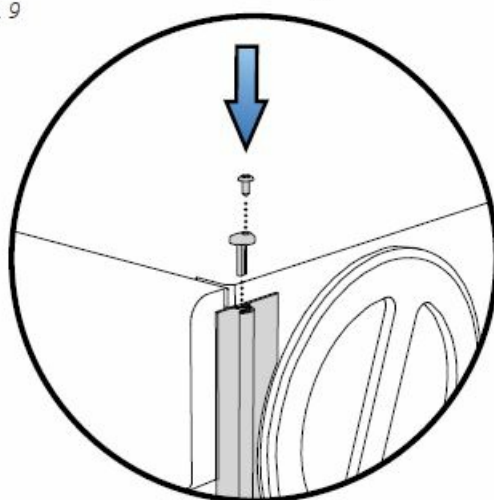
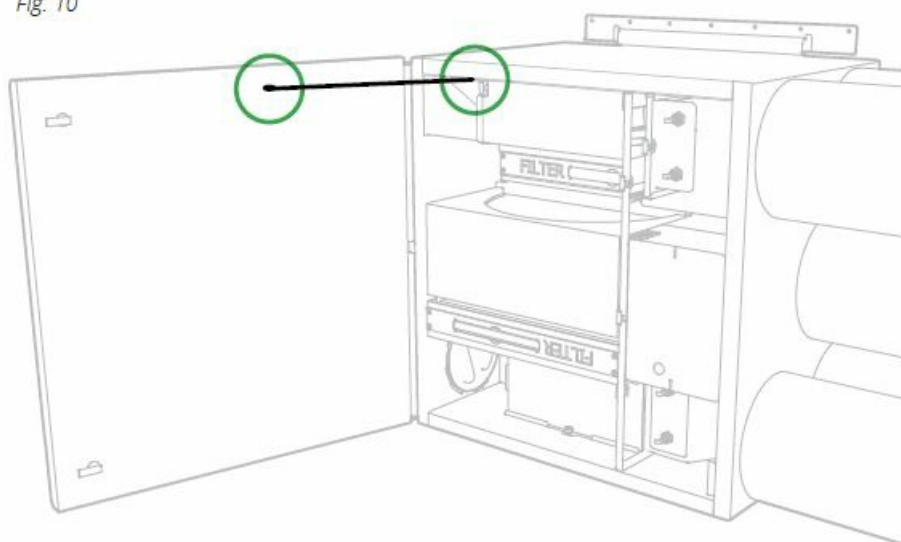


Fig. 10



Floor mounting

LOCATION 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.

- When installing on the floor (for both vertical and horizontal units), for the sake of noise and vibrations, absorption feet should be used (see Fig. 11). Flexit offer absorption feet as accessories (art.no. 110955).
- The unit should be placed so that there is no danger of bothersome noise in nearby rooms. It is especially important that the unit is not placed directly over bedrooms.
- If the unit is placed in spaces with high humidity (bathroom etc), condensation might occur on the surface of the unit when outdoor temperatures are very low. The base should be stable and level.

SPACE REQUIRED

- The unit must be installed with suitable space for servicing and maintenance such as filter replacement and cleaning of fans and recovery system (see Fig. 12).
- Control cable with plug for automatic control must be easily accessible.
- These are minimum requirements and only take service needs into account.

INSTALLATION

- The unit is available in left and right versions (exhaust air duct to the left or right), depending on what is the most favourable duct location.
- The duct connections for outdoor air can be moved to the bottom of the unit if desired, by exchanging the ducts and covers. See “Chap. 4. Duct Connection” on page 12 and “Chap. 4. Duct location” on page 23 for information about moving ducts, as well as duct placement in the bottom and top of left and right models respectively.

Fig. 11

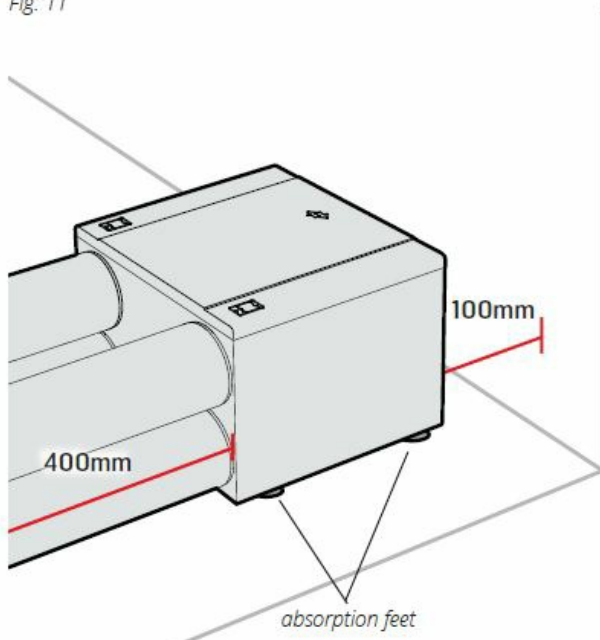
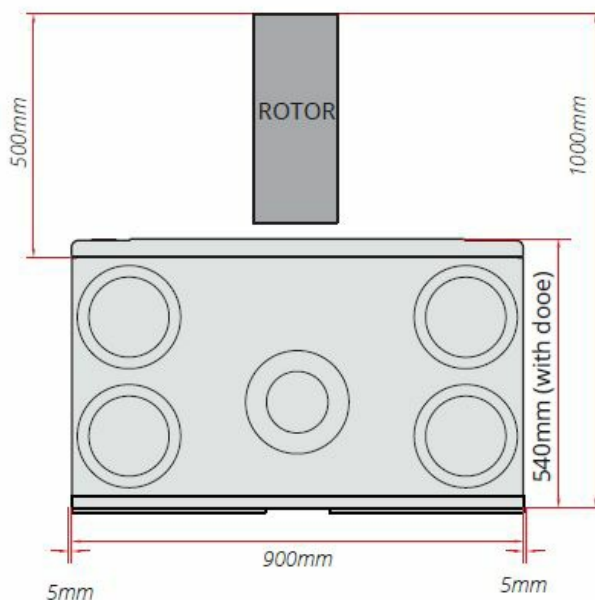


Fig. 12



- **NB!** The door of the unit is too heavy to hold itself closed when the unit is on the floor.
- It must therefore be secured with two end studs and a strap.
- The end studs are screwed on with the enclosed screws 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). This can be attached to either the left or right side.

Fig. 13

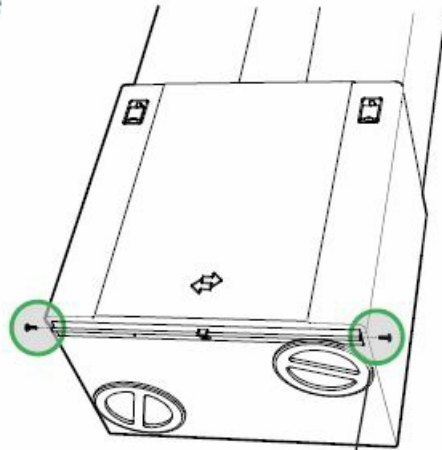


Fig. 14

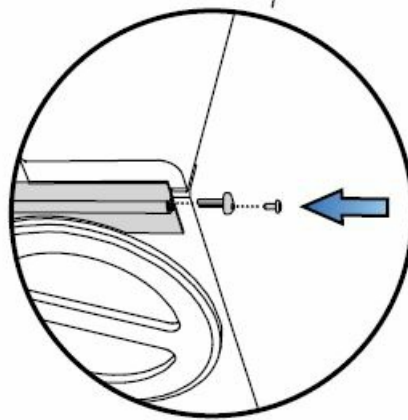
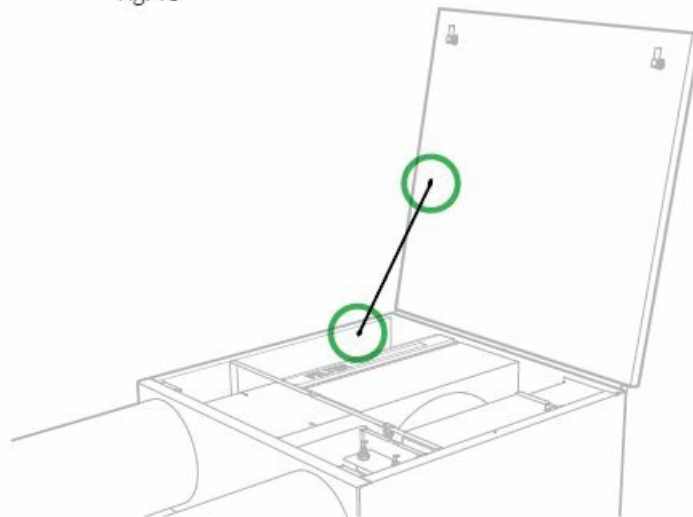


Fig. 15



Duct Connection

DUCT CONNECTION IN THE BASE

The duct connections for outdoor air can be moved to the bottom of the unit if desired, by exchanging the ducts and covers. To loosen the insulation and ducts, do the following (see Fig. 16):

1. Turn the duct insulation (polystyrene) a quarter turn so that the marks in the insulation and in the top of the unit are directly over each other, and then lift up the insulation.
2. Unscrew the fastening screws which sit in the plastic duct.

3. Screw off the plastic duct. When installing the ducts, follow the same procedure in reverse order. Install the sealing ends in the bottom of the ducts which will be used.

CONNECTING THE UNIT

- See Fig. 17.
- Ensure that the ducts arrive at the right duct – see the markings on the unit (top and behind the door), as well as “Chap. 11.5. Duct location” on page 23
- 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 $\lambda = 0.035 \text{ W/m} \cdot ^\circ\text{C}$ 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

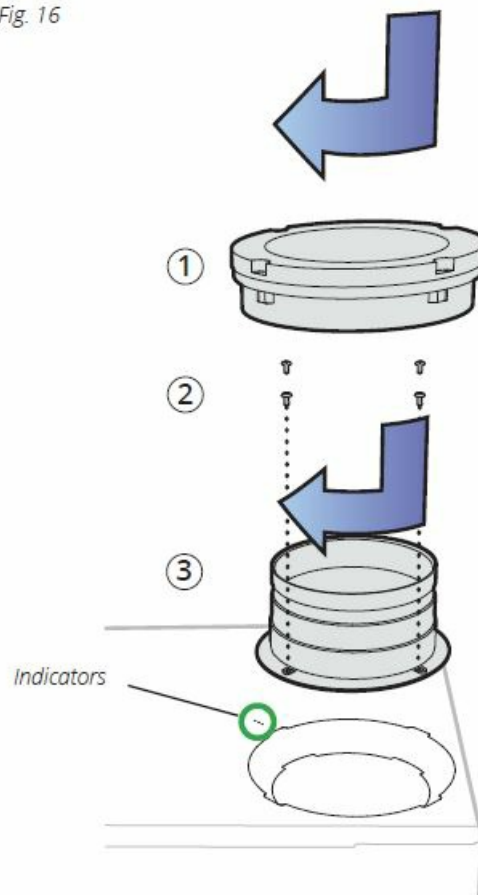
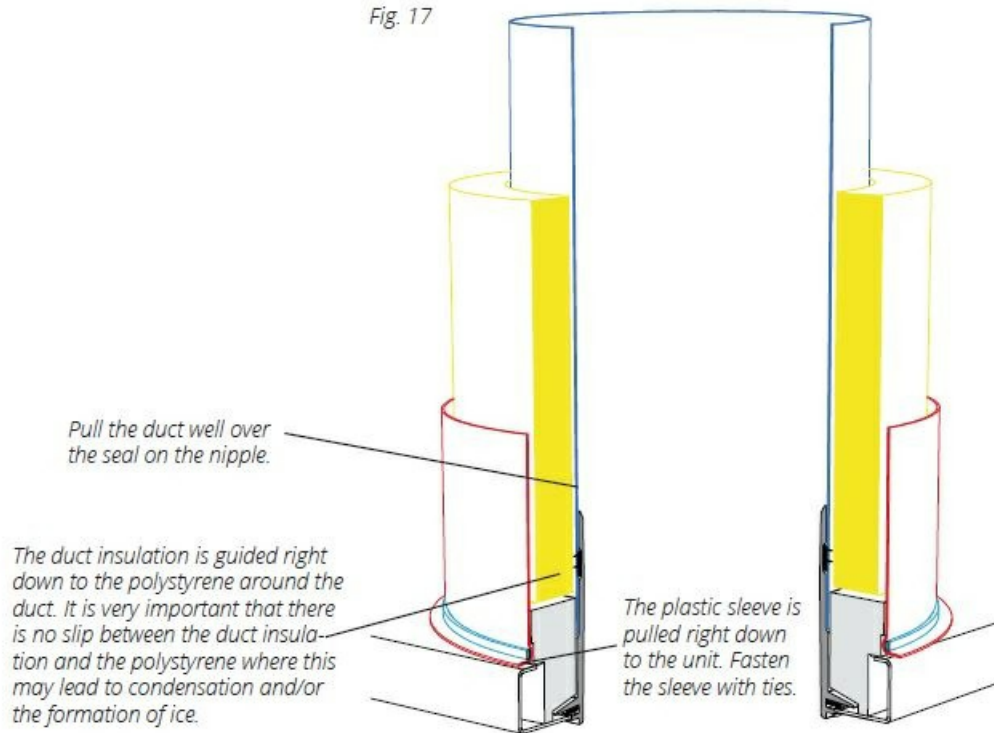


Fig. 17



Electrical work

- **CAUTION!** The unit should be installed with an earth fault breaker.
- We recommend a separate circuit for the unit. All electrical connections must be installed by qualified electricians.
- Positioning must accord with individual countries' electrical safety legislation.
- Check which rules apply in your country.
- **NB!** Ensure that the plug for the unit is not boxed in.
- The unit is supplied with a 2.5 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 shall be used as the service switch. See "Chap. 12. Technical data" on page 24 for fuse sizes.
- The control panel is adapted for concealed installation over a single connection box, or surface installation on the wall.
- The unit has a low-voltage 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.
- **NB!** The low voltage cable must be laid a minimum of 30 cm from cables carrying mains voltage or higher, and shall be pulled through 20 mm conduit pipe when installed.
- The cable length must not exceed 24 meters.
- The low-voltage cable is enclosed in the control panel packaging.
- You'll find the control panel in a box in the ventilation unit packaging.
- The low-voltage cable must be laid between the unit and the switch unit. See "Chap. 8. Installation of control panel (I 60/600* on page 16. NB!
- Temperature sensor B1 must be positioned after the water battery.



- **CAUTION!** Each product's installation instructions must be followed.
- For more information on automatic control see www.flexit.com. or the manual for C\$60 and the control panel (110828).

	Cable type	
1	Cable for control panel	
2	Not in use (accessory)	
3	Not in use (accessory)	
4	3-core cable (for e.g. kitchen fan)	SPEED 3 SPEED 4
5	Power cable, unit	

TEMPERATURE SENSOR FOR HEATING (B1) (IF THE UNIT HAS A WATER BATTERY)

This shall 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 duct. Drill a \varnothing 7 mm hole in the duct where the sensor can be inserted. Tighten the hole with acrylic sealant and tape the cable in place on the outside of the duct so that it stays in place. See wiring diagram enclosed with the unit.

FROST SENSOR FOR WATER BATTERY (B5) (IF THE 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. See wiring diagram enclosed with the unit.

OUTDOOR AIR DAMPER (IF THE UNIT HAS A WATER BATTERY)

To avoid frost damage to the water battery during downtime/loss of power, 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 stopped.

Plumbing work

If the unit shall have heating with water battery. All plumbing work must be performed by an authorised plumber. Place the unit close to a gully to avoid damage caused by any water leaks.

Encasing

NB! For service reasons the casing must have an opening or a removable front.

NB! To prevent transferring noise and vibrations from air handling unit, the cover should not be in direct contact with the unit.

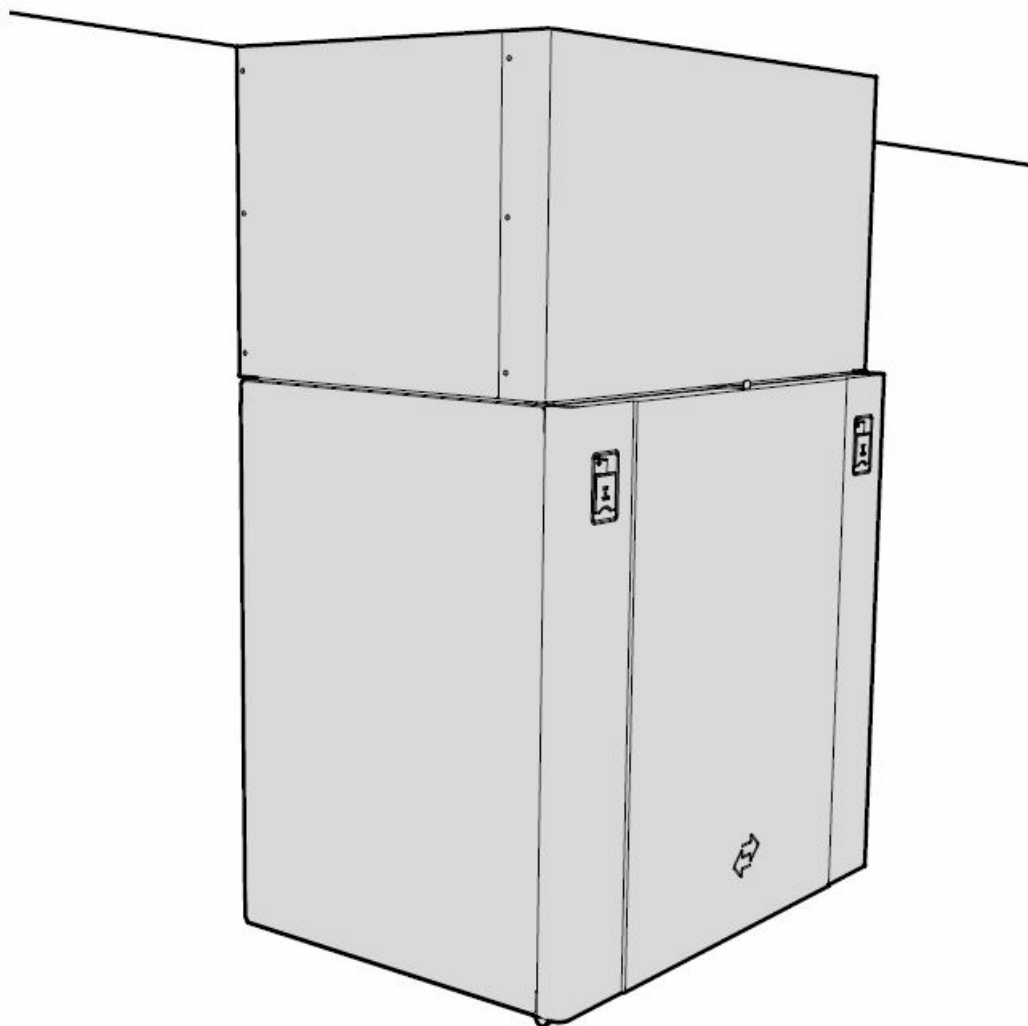
PREPARATIONS

The placement of the cover is naturally affected by the placement of the unit. Therefore plan the placement 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.

FLEXIT DUCT COVER

The Flexit duct cover is available as an accessory (see Fig. 18).

Fig. 18



Installation of control panel CI 60/600

CONTENT

Fig. 19

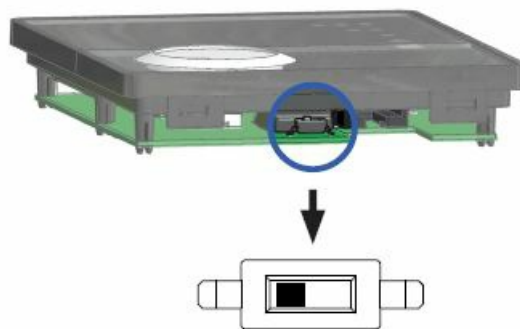


1. Control panel
2. Back piece for concealed installation
3. Back piece for surface installation
4. Installation instructions
5. Cable for control panel

INSTALLATION OF CI60/600

CAUTION! The control panel must be connected to the ventilation unit before the ventilation unit is connected to mains. Lay the cable for the control panel between the ventilation unit and the control panel. The control panel is adapted for concealed installation over a single connection box (use low back piece, item no. 2) or surface installation on the wall (use high back piece, item no. 3). Click the cable into the contact at the back of the control panel and into the contact on the top of the ventilation unit.

Fig. 20



- **NB!** The low-voltage cable must be placed at least 30 cm from cables carrying mains voltage or higher. With concealed installation, the cable is laid in 20 mm conduit pipes.
- The cable length must not exceed 24 meters.
- It is possible to connect two CI60 panels and one C1600 panel to each unit. If several CI60 panels are used, each panel must have its own identity. This is selected with the switch on the panel's printed circuit board (see Fig. 20). Use the appropriate table settings. The panels can be connected serially, in arbitrary order.
 - **OFF** = MASTER
 - **ON** = SLAVE

(onfiguration	Setting
CI 600 (MASTER)	Automatic
CI60 1 (SLAVE)	OFF ON
CI60 2 (SLAVE)	
CI60 1 (MASTER)	OFF ON
CI60 2 (SLAVE)	
CI 600 (MASTER) CI60 (SLAVE)	Automatic
	Irrelevant

CONCEALED INSTALLATION

Lay the cable between the wall box and the ventilation unit in the preinstalled conduit pipe. Fit the back piece (item no. 2), over the wall box and click the cable in directly from behind as in the illustration (se Fig. 21).

Fig. 21



SURFACE INSTALLATION

Lay the cable between the back piece (item no. 3), and the ventilation unit. Cut out the perforation in the corner of the back piece that is suitable for installation. Screw 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 printed circuit board (se Fig. 29).

Fig. 22



FINISHING OFF – CI60

Slide the panel off as shown by arrow no. 1 (see Fig. 30) and fit the control panel straight into the back piece as shown by arrow no. 2 (see Fig 31) until it clicks into place. Slide the panel back on.

Fig. 23



Fig. 24



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. 32).

Fig. 25



Adjusting the unit

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.

Adjustment

Adjustments only apply to level 2 (NORMAL). 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. 26). The adjustment range is 20-100% of the maximum level according to the scale on the knob.

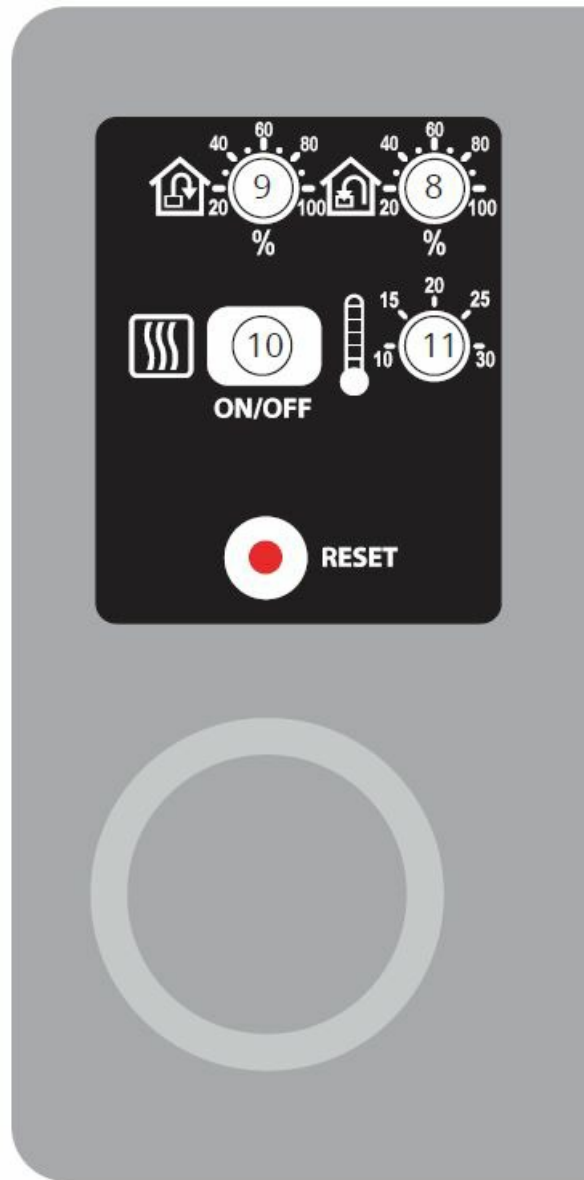
Factory settings for supply air/extract air:

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

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. 26



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.


Adjustment

Adjustments only apply to level 2 (NORMAL). 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:

PIN CODE 

1 0 0 0 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.

FAN REGULATION 


SUPPLY AIR >

EXTRACT AIR >

TIMER >

AIR VOLUME COMP OK?

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.

SUPPLY AIR 

MIN SPEED 50% OK?

NORMAL SPEED 75%


MAX SPEED 100%

Factory settings for supply air/extract air:

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

TEMPERATURE REGULATION

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

TEMPERATURE REGULATION 

REGULATION TYPE >

COOLING >

NEUTRAL ZONE OK?

EXT. TEMP. CONTROL >

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.

REGULATION TYPE	
REGULATION	EXTR OK?
MAX SUPPLY AIR TEMP	35°
MIN SUPPLY AIR TEMP	15°

Installing a kitchen fan

• INSTALLATION OF EXTERNAL KITCHEN FAN

If an external kitchen fan is going to be used, documentation regarding installation and adjustment of air flow rates is supplied with the fans.

• Kitchen fan without motor (connected to unit with duct connection)

The ventilation unit has a separate connection point for kitchen fans without a motor. An electric cable (low-voltage) must be connected between the unit and the fan in order to force the air flow in the hood via the switch on the hood.

• Kitchen fan with motor (not connected to unit)

The kitchen fan with motor is not connected to the unit. It has a completely separate duct system for air evacuation. With the kitchen fan it is possible to compensate for the amount of air drawn out of the house. See “10.2.2. Kitchen fan with motor” for more information.

• ADJUSTING THE KITCHEN FAN

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

• Kitchen fan without motor (connected to unit)

The air flow rate over the hood is regulated according to the planned air flow rate. In order to achieve 75% odour absorption above Flexit kitchen units, an air flow rate of 150-180 m³/h is required. Any air flow rate higher than this must be supplemented by an additional air supply from a wall vent, for example.

• Kitchen fan with motor (not connected to unit)

If a kitchen fan 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 kitchen hood is used:

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

The supply air fan will be increased to the MAX-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 fan's maximum air capacity (using the enclosed capacity diagram) against the maximum capacity of the air supply fan. If the kitchen fan 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

General drawings and system drawings

SYSTEM DRAWING (WITH HEATING ELEMENT) (left model)

- B1 Temperature sensor, supply air
- B4 Temperature sensor, outdoor air
- EB1 Heating element
- F10 Overheating thermostat, manual reset
- F20 Overheating thermostat, automatic reset
- Supply air filter
- F12 Extract air filter
- M1 Supply air fan
- M2 Extract air fan
- HR-R Heat recovery system
- M4 Rotor motor
- K Kitchen hood

SYSTEM DRAWING (WITHOUT HEATING ELEMENT) (left model)

- B1 Temperature sensor, supply air
- B4 Temperature sensor, outdoor air
- FIT Supply air filter
- F12 Extract air filter
- M1 Supply air fan
- M2 Extract air fan
- HR-R Heat recovery system
- M4 Rotor motor
- K Kitchen hood

Fig. 27

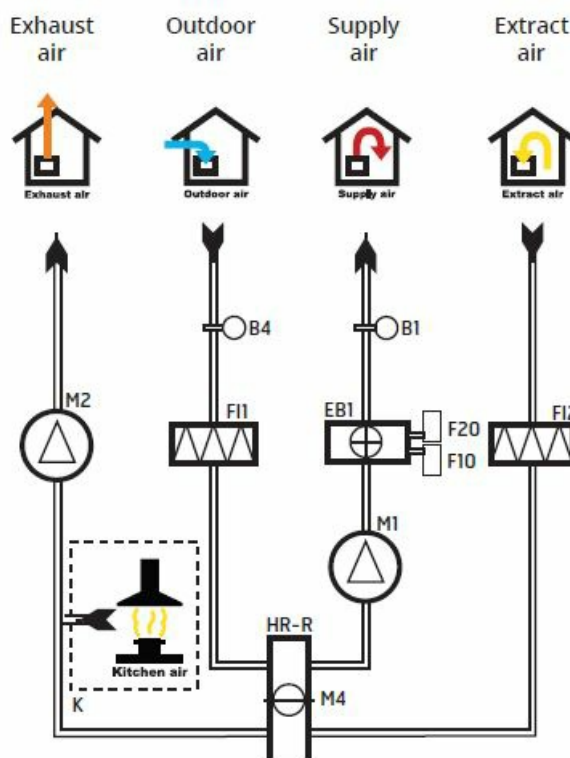
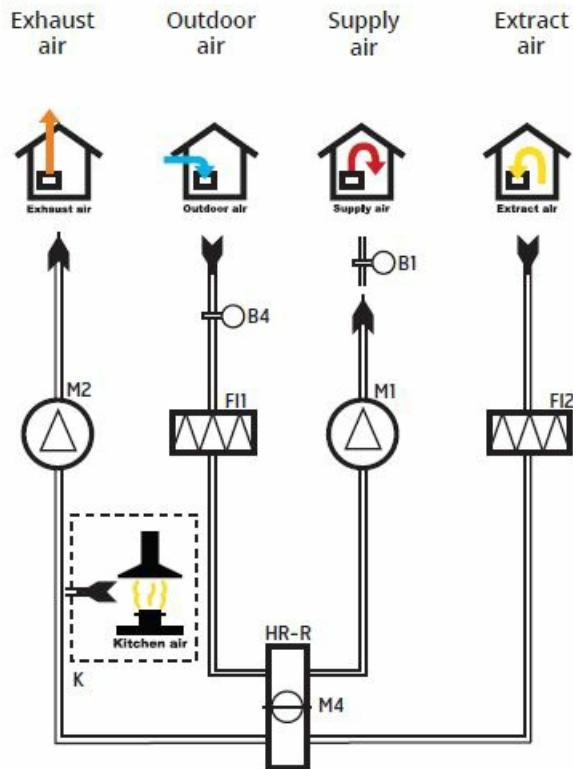
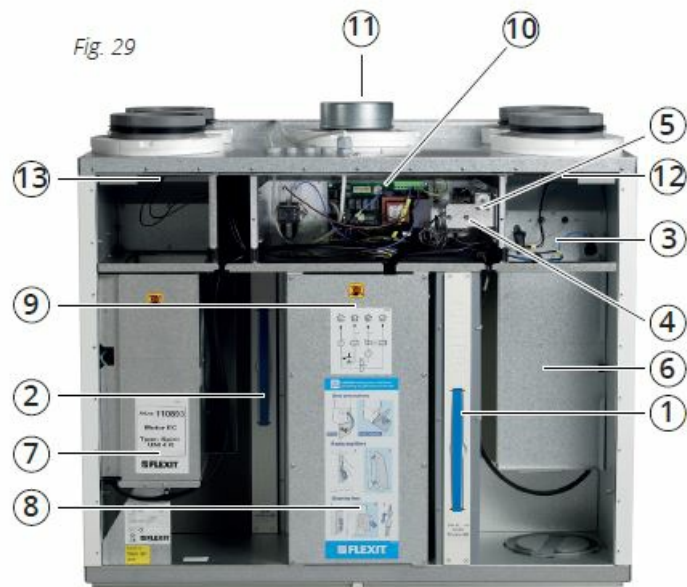


Fig. 28



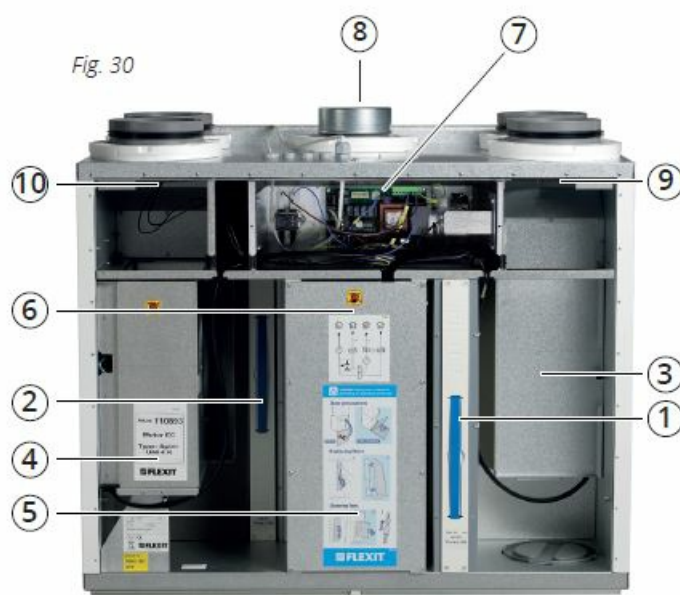
GENERAL PICTURE (WITH HEATING ELEMENT) (left model)

1. (F12) Extract air filter F 7
2. (F11) Supply air filter F7
3. (EB1) Heating element
4. (F10-20) Heating overheating thermostat (Reset)
5. (F10-20) Heating overheating thermostat (Reset)
6. (M1) Supply air fan
7. (M2) Extract air fan
8. (HR-R) Heating recovery system
9. (M4) Rotor motor
10. Control unit
11. Connection for external kitchen hood
12. Temperature sensor, supply air
13. Temperature sensor, outdoor air



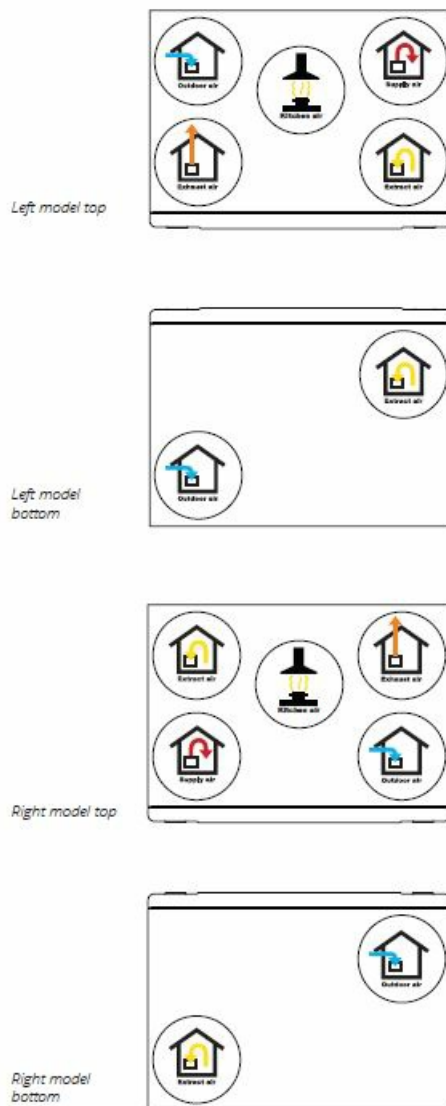
GENERAL PICTURE (WITHOUT HEATING ELEMENT) (left model)

1. (FI2) Extract air filter F 7
2. (FI1) Supply air filter F 7
3. (M1) Supply air fan
4. (M2) Extract air fan
5. (HR-R) Heating recovery system
6. (M4) Rotor motor
7. Control unit
8. Connection for external kitchen hood
9. Temperature sensor, supply air
10. Temperature sensor, outdoor air



DUCT LOCATION

Fig. 31



Technical data

		UNI4 RE with electric battery	UNI4 R
POWER	Rated voltage (AC 50 Hz)	230 V	230 V
	Frequency	50 Hz	50 Hz
	Fuse size	10 A	10 A
	Rated current	7,2 A	2,1 A
	Rated power, total	1 655 W	355 W
	Rated power, max. electric battery	1 300 W	—
	Rated power, fans	2 x 175 W	2 x 175 W
	Rated power, rotor motor	3 W	3 W

VENTILATION	Fan type	B-wheel	B-wheel
	Fan motor control	0-10 V	0-10 V
	Max. fan speed RPM	2 930	2 930
	Automatic control, standard	CU60	CU60
	Filter class	ePM1 55% (F7)	ePM1 55% (F7)
	Filter type (supply air/extract air)	Compact filter	Compact filter

DIMENSIONS	Filter dimensions (WxHxD)	459 x 207 x 31 mm	459 x 207 x 31 mm
	Kitchen fan connection	Ø 125 mm	Ø 125 mm
	Weight, ventilation unit	86 kg	86 kg
	Weight, rotor	14 kg	14 kg
	Weight, door	13 kg	13 kg
	Weight, fan	5 kg	5 kg
	Duct connection	Ø 160 mm	Ø 160 mm
	Height	700 mm	700 mm
	Width	900 mm	900 mm
	Depth	540 mm	540 mm

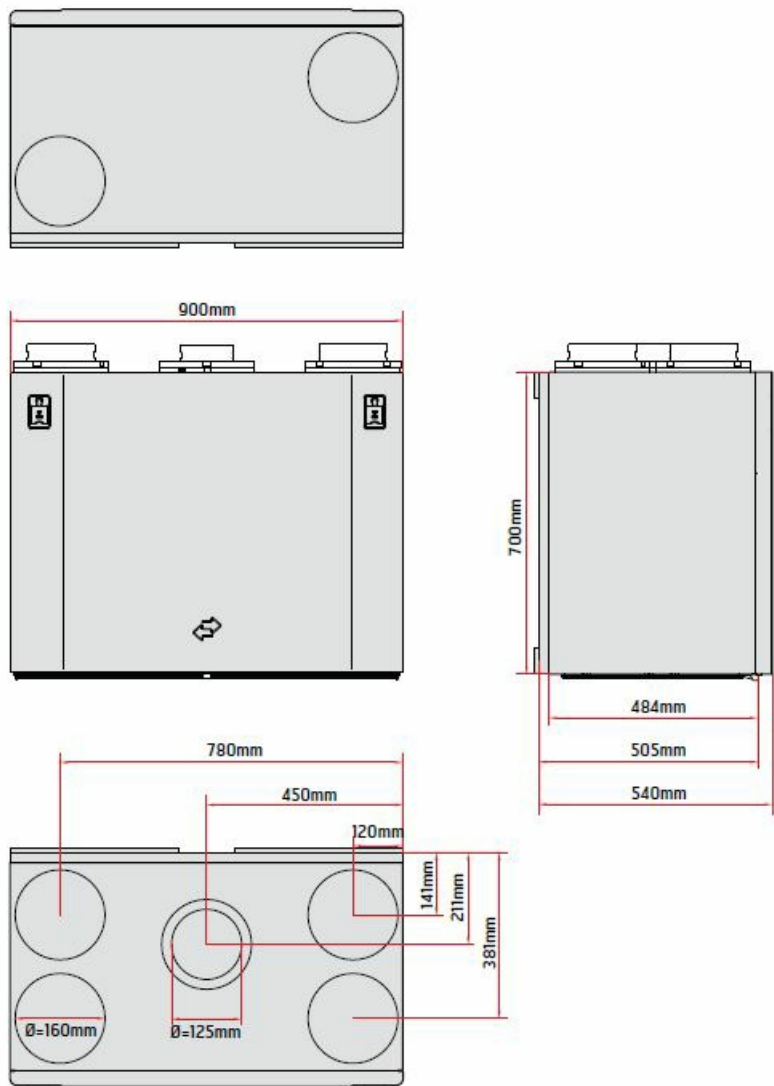
COATING	Colour	White	White
	RAL	9016	9016
	Gloss	25-35	25-35

Energy class:

- CTRL 0.65
- LOCAL DEMAND CONTROL
- Sensor control for different zones
- **Accessories:** App + CO, sensor/motion sensor + damper
- **Result:** Increased air flow rate in zones that need it

Physical dimensions

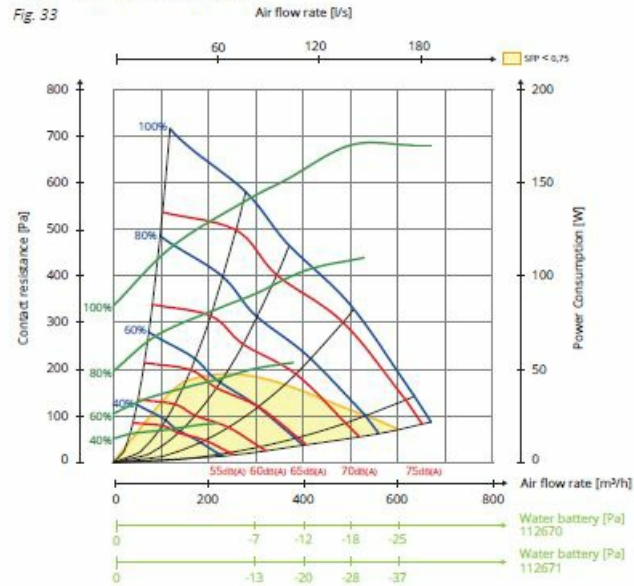
Fig. 32



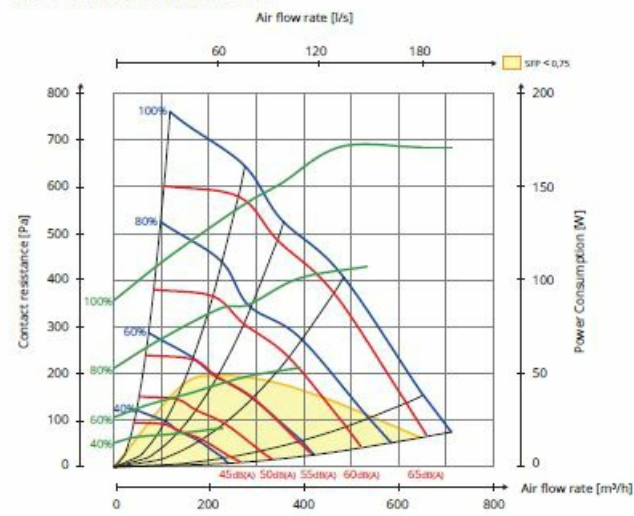
Capacity and sound data

14.1. SUPPLY AIR SIDE L

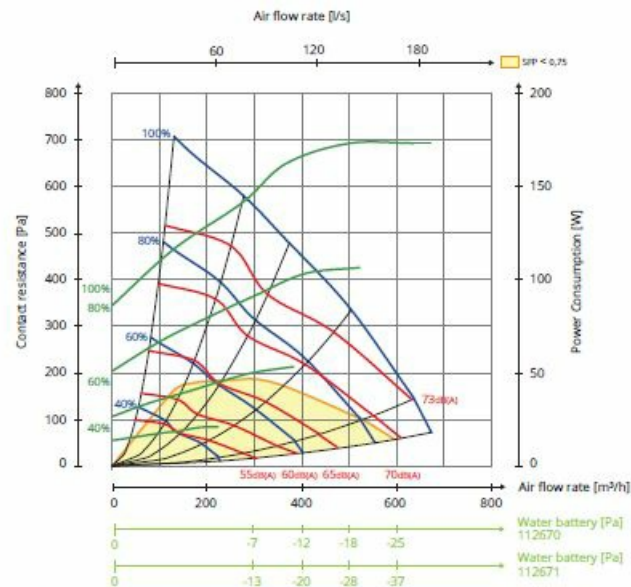
Fig. 33



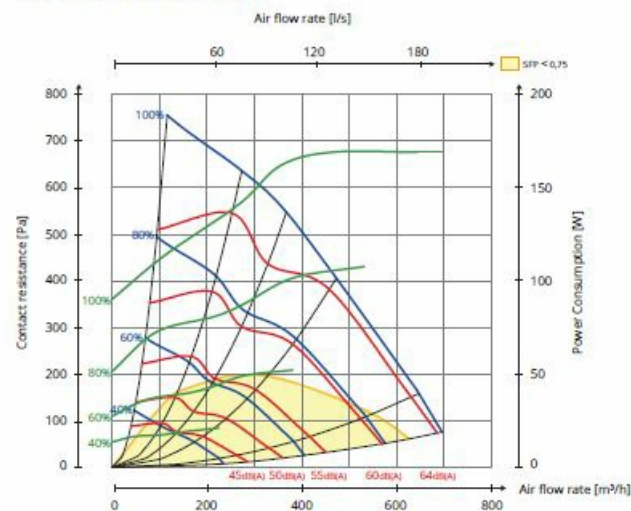
14.2. EXTRACT AIR SIDE L



SUPPLY AIR SIDER



14.4. EXTRACT AIR SIDE R



Explanation of the diagrams

Sound data is specified as sound effect level L_{WA} 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 L_w (without adaptation to A-band). The correction table for the respective octaves is specified in L_w , which means that, after conversion per octave for the respective supply air and extract air, you get these values in L_w . Radiated sound from the unit must be calculated on the basis of the supply air diagram.

Correction factor for L_{wL}

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	5	9	2	-3	-9	-11	-23	-25	
Extract air	9	9	2	-1	-12	-25	-34	-31	
Radiated	-17	-17	-14	-30	-36	-37	-43	-45	-22

> 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.
 $70 \text{ dBA} - 3 = 67 \text{ dB}$, 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.

$70 \text{ dBA} - 30 \text{ (for 500 Hz)} = 40 \text{ dB}$, 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).
 $\text{LwA } 70 \text{ dBA} - 22 \text{ dBA} = 48 \text{ dBA}$
 (which is then specified in LwA sound effect level adapted to the ear's A-band).

Final checks / Starting

FINAL CHECKS

Description	Chapter	Performed
The duct insulation is performed in accordance with the manual and the technical documents	4	
The ducts are connected to the correct ducts	12.5	
Adjustment has been carried out in accordance with the manual and projection documents	9	
The unit operates normally at all stages	—	
The rotor rotates freely	—	
The rotor rotates with heat required	—	
Heating switches in	—	
The unit has filters both for outdoor air and extract air	—	

Check the following points:
STARTING

- Check that the control panel is connected. Connect the mains plug to the unit.
- The unit will now start.
- The unit will automatically carry out a start up procedure of approx. 1 min.
- After the start up procedure the unit will follow the settings that are set up in the control panel.
- Changes in settings are made from the control panel.
- Adjustments have been made in accordance with the manual and project planning documents (documentation of ventilation data).

Complaints

- Warranty claims will only be valid if the instructions in the manuals have been followed.
- Complaints about this product may be raised in accordance with the applicable terms of sale, provided that the product has been used and maintained correctly.
- The right of complaint may be voided if the system is used incorrectly or maintenance is grossly neglected.
- Complaints as a result of incorrect or defective installation must be submitted to the installation company responsible. Filters are consumables.
- 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.


Waste handling

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

CONTACT

- Flexit AS, Televeien 15, N-1870 Orje www.flexit.com
- www.eurovent-certification.com.
- Flexit participates in the CP 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.

Documents / Resources

	<p>FLEXIT UNI 4 Air Handling Unit and Automatic Control [pdf] Instruction Manual</p> <p>UNI 4 Air Handling Unit and Automatic Control, UNI 4, Air Handling Unit and Automatic Control, Handling Unit and Automatic Control, Automatic Control</p>
---	--

Manuals+.