111537E-05
2012-11

FLEXIT SPIRIT UNI 2

E

User Manual

Air Treatment Unit ξ Automatic Control

Contents

Important Safety Instructions:

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

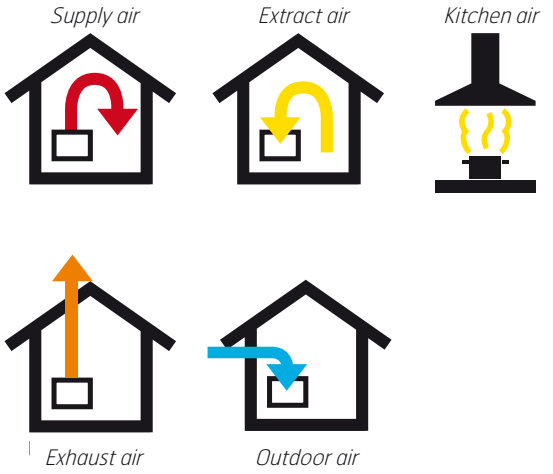
To reduce the risk of fire, electric shock or injury, read all the safety instructions and warning texts before using the unit.

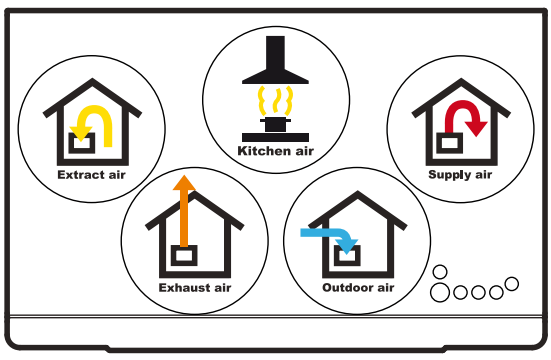
- This unit is only designed for ventilation air in homes and commercial buildings.
- It must not be used to extract combustible or flammable gases.
- Remove the power plug before commencing any service and maintenance work.
- Before opening the door: switch off the heat, let the fans continue for 3 minutes to remove hot air, unplug the unit and wait 2 minutes before opening the doors.
- If the power lead 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 cook any combustible substances under the kitchen hood if one is installed.
- Do not leave a saucepan or frying pan containing oil or grease unsupervised when using a kitchen hood.
- The instructions in the user manual must be followed for complaints to be accepted.

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 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.

According to IEC/EN 60335-1
Note that the product is not designed for operation by persons with impaired physical, motor or mental abilities. Nor may the product be used by persons lacking experience or knowledge, unless they have received guidance or instructions in operating the product safely by a person responsible for safety. Children must be instructed not to play with the unit.

1 Functional description of balanced ventilation

1.1 Fans (M1, M2)

The fans ensure that air enters and leaves the building. They can be individually adjusted for optimal operation. The unit can be regulated at three different speeds via the control panel: Min, Normal and Max. See chapter 5.1 for more information.

Adjustment must always be carried out by qualified staff before the installation is used for the first time.

1.2 Filters (FI1, FI2)

Filters with a high filter grade (F7) are used as standard for both supply air and extract air so that the air which enters the building is clean. The filters also ensure that the unit stays clean and can maintain thermal efficiency and air flow.

1.3 Rotor (HR-R)

The air passes through the rotary wheel-type heat exchanger (recovery). The rotor functions as a heat magazine. The heat from the extract air heats up one part of the rotor. When the heated part comes over to the supply air side, the heat is transferred to the supply air.

1.4 Heating element (EB1) (for UNI 2 E)

If the energy recovered from the extract air is insufficient to maintain the set supply air temperature, an electric heating element will help raise the temperature. The heating element is protected against overheating by the thermostat (F20) which cuts out at high temperature. For extra safety, the thermostat (F10) cuts out at critical temperatures. If the thermostat (F10) is tripped, it has to be reset manually by pressing the reset button (see Fig. 2). If the alarm is tripped repeatedly, contact the service company or distributor. See chapters 4.7 and 7.10 for more information.

1.5 Temperature sensors (B1, B4)

The unit has two temperature sensors as standard. The supply air sensor (B1) registers the temperature after the heating battery. The outdoor air sensor (B4) registers the temperature of the outdoor air.

Fig. 1

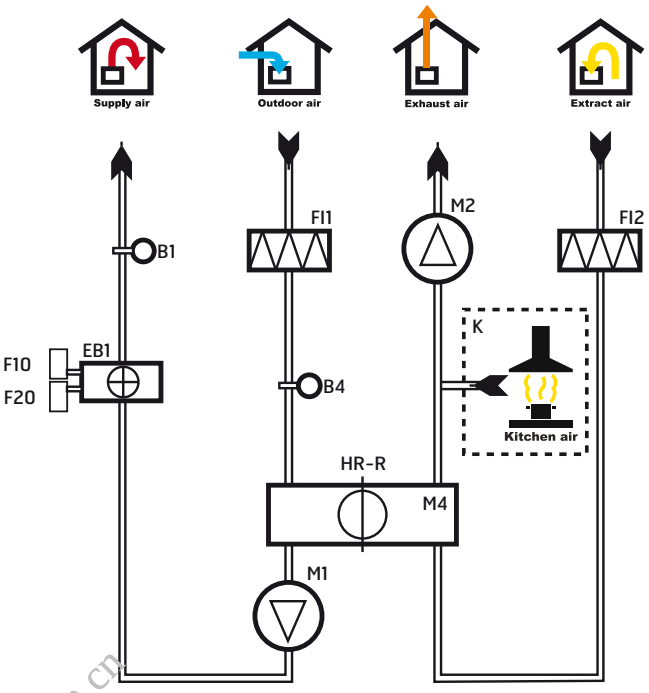
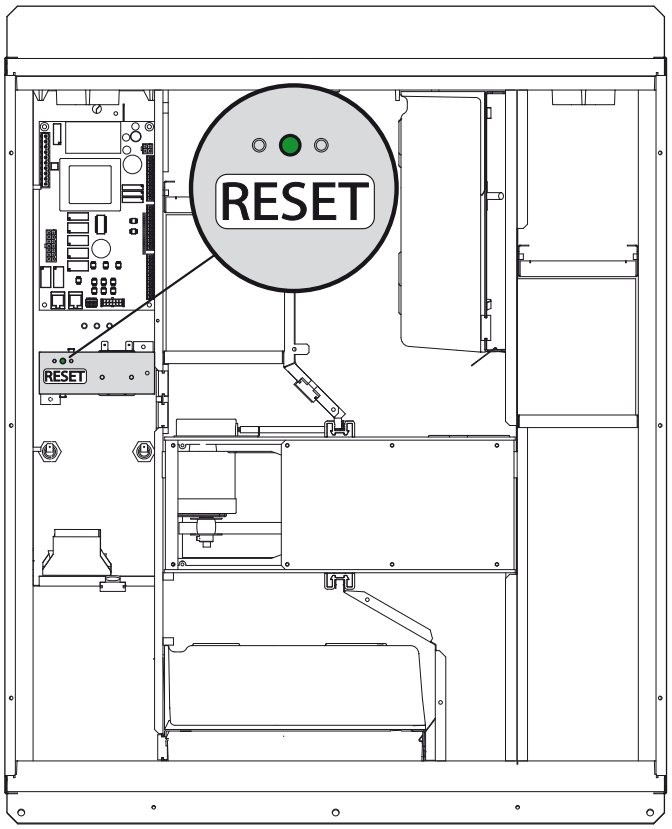


Fig. 2



2 Operating the door

2.1 Wall-mounted unit

1. First undo the screw in the top of the door (see Fig. 3).
2. Pull the handles out and rotate to the side (see Fig. 4).
3. The door can now be opened to hang open at 180° (see Fig. 5) or unhooked (see point 2.4).

Fig. 3

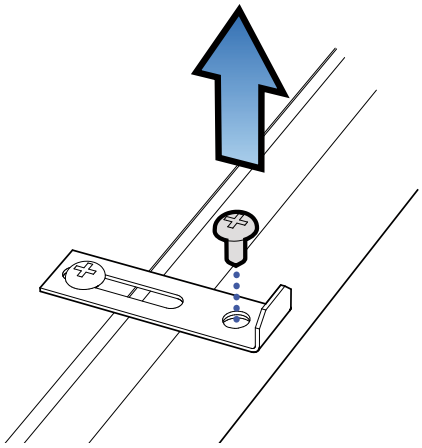


Fig. 4

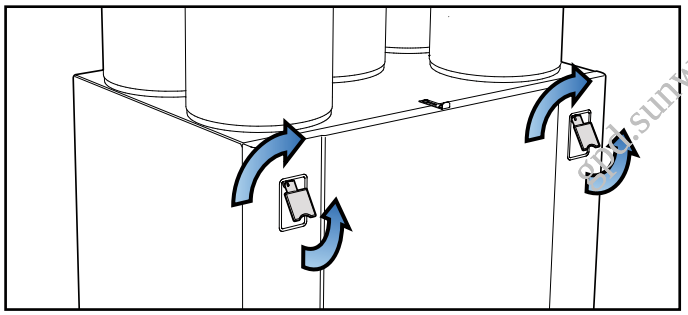
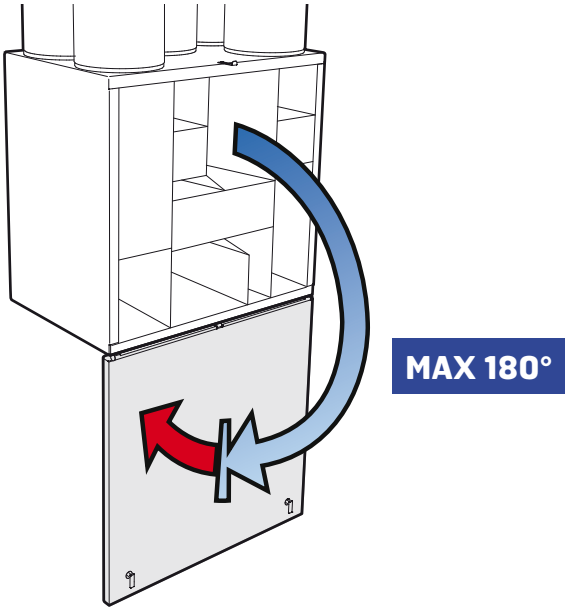


Fig. 5



If the door needs to be removed

The door can be removed when it is open between 40° and 105°. If there is limited space in front of the unit, the lock screw on the underside of the unit can be unscrewed temporarily (see Fig. 6). Then the door can be pushed out sideways (see Fig. 7).

The door is heavy, so take care when removing it.

Fig. 6

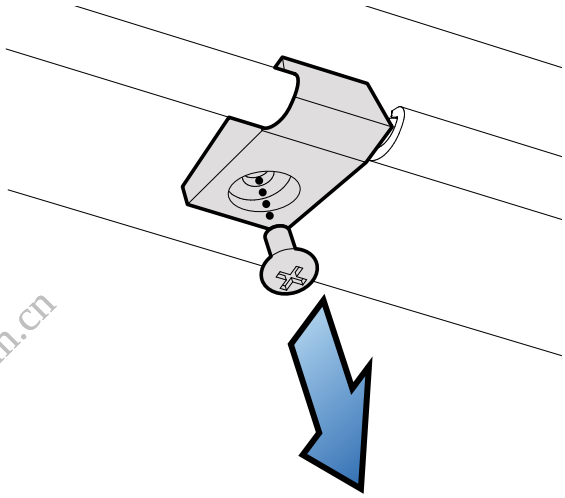
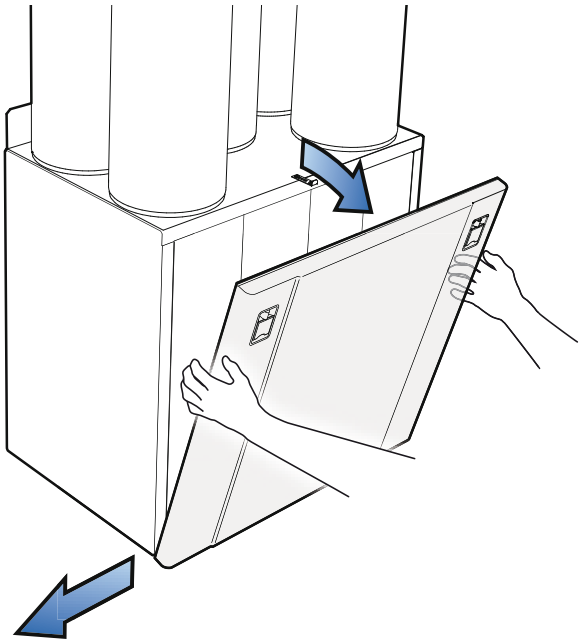


Fig. 7



2.2 Floor-mounted unit

1. Make sure that hinge stops and a door strap are fitted (see Fig. 8, 9 and 10).
2. Undo the screw in the top (see Fig. 11).
3. Pull the handles out and rotate to the side (see Fig. 4).
4. The door can now be opened to a maximum of 105° (se Fig. 8).

Fig. 8

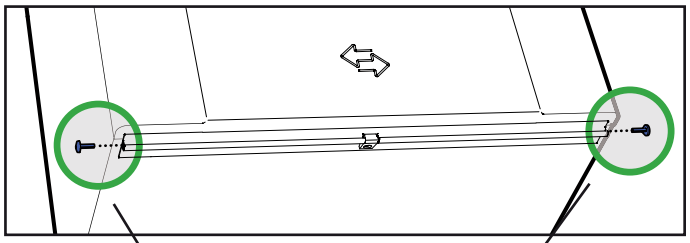


Fig. 9

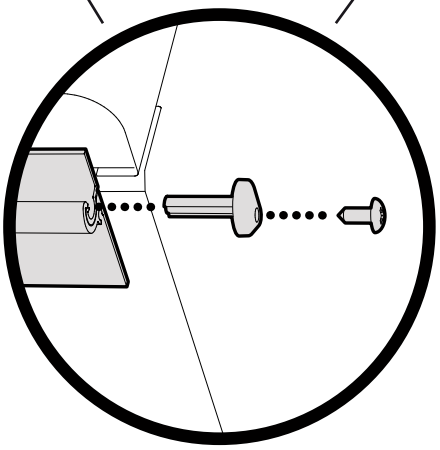


Fig. 10

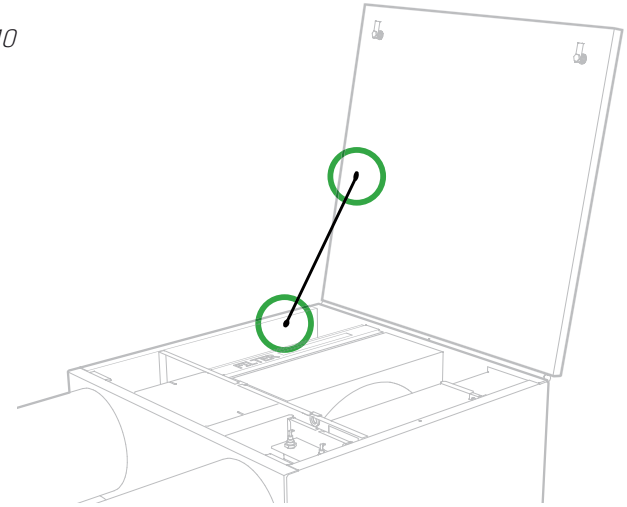


Fig. 11

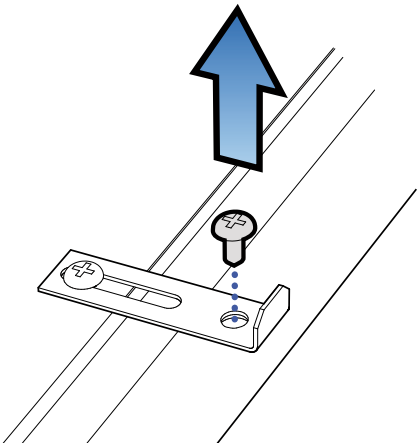


Fig. 12

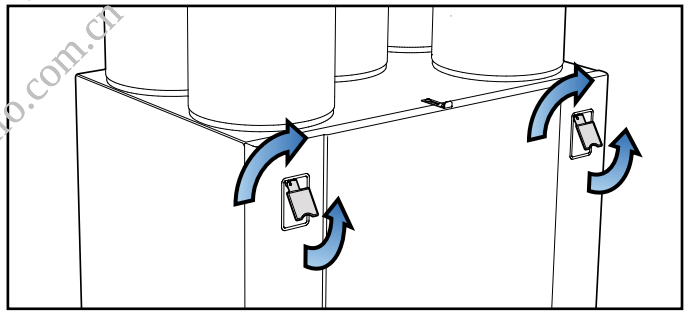
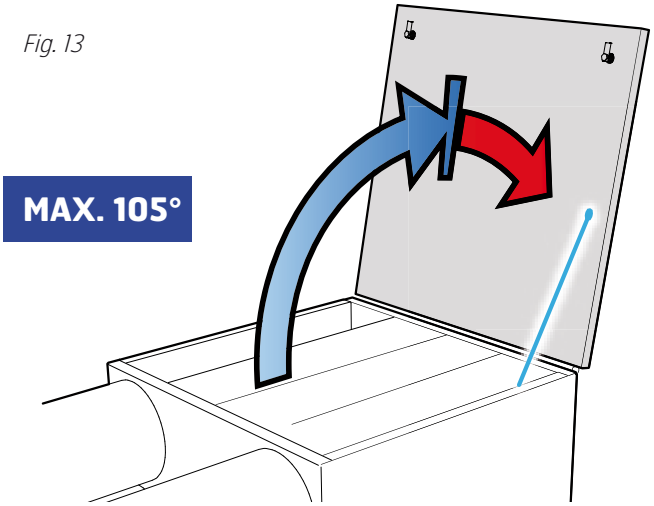


Fig. 13



2.3 Ceiling-mounted unit

Check first that hinge stops are fitted (see Fig. 14 and 15). If not, the door could fall off when opened! Be careful!

Note that a door strap also needs to be fitted if the unit is mounted on the ceiling. This protects the hinge stops against damage and prevents the door from opening more than 105° (see Fig. 16).

1. First undo the screw in the top of the door (see Fig. 17).
2. Pull the handles out and rotate to the side (see Fig. 18).
3. The door can now be opened to a maximum of 105° (see Fig. 19).

Fig. 14

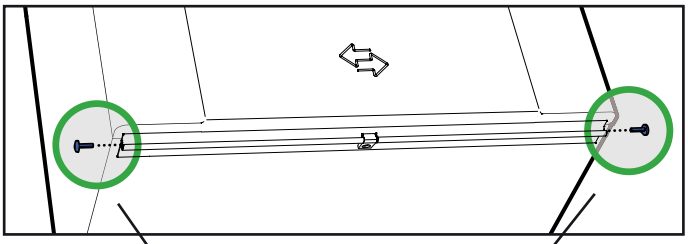


Fig. 15

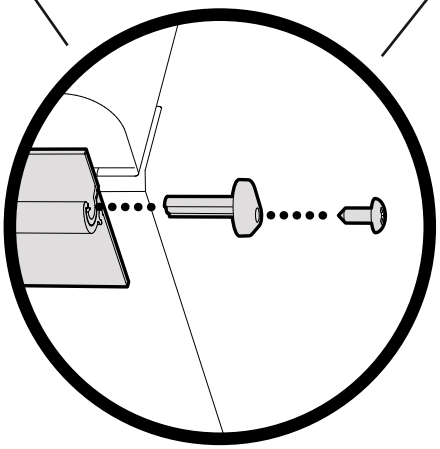


Fig. 16

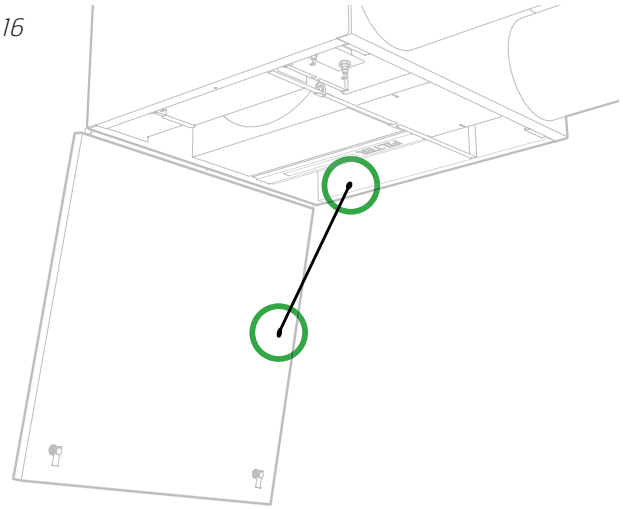


Fig. 17

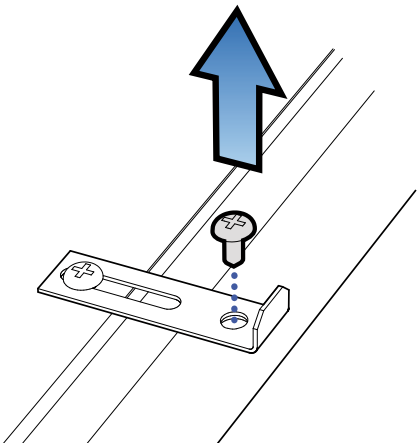


Fig. 18

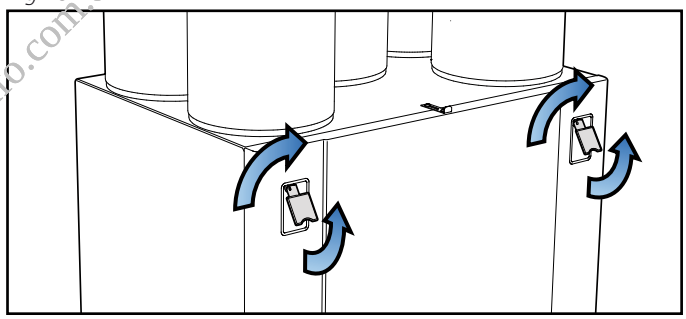
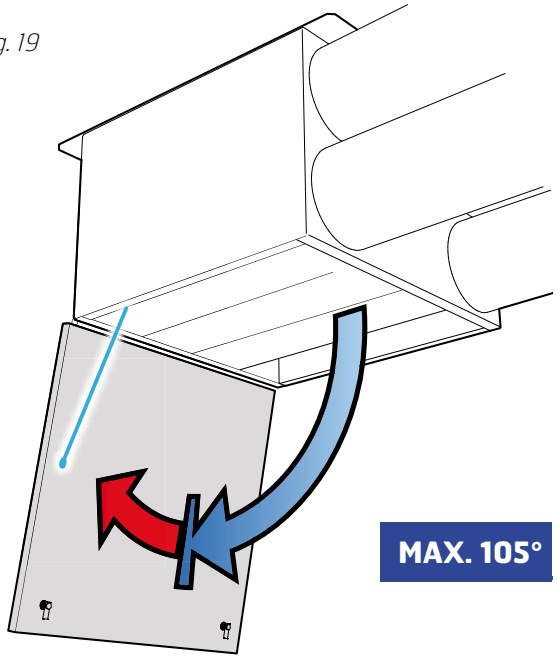
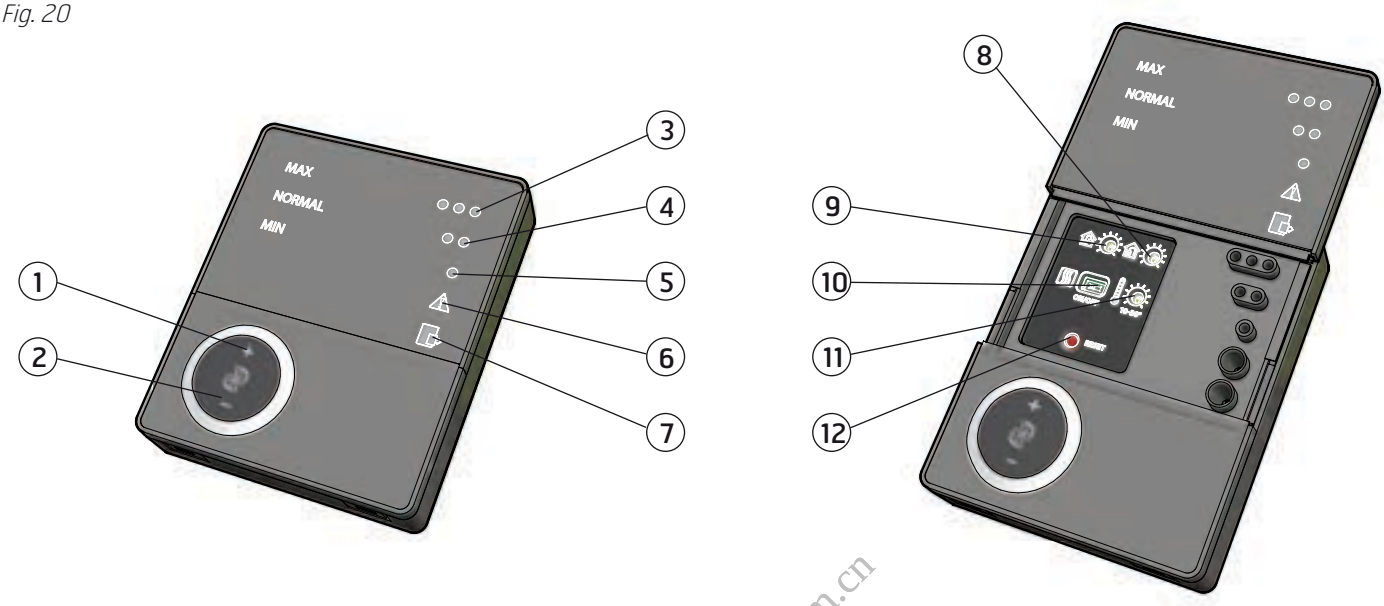


Fig. 19



3 Overview of CI60 control panel

Fig. 20



No.	Description
1	Switch for increased ventilation
2	Switch for decreased ventilation
3	Indication of **MAX** speed
4	Indication of **NORMAL** speed
5	Indication of **MIN** speed
6	Indication of **ALARM**
7	Indication of **FILTER CHANGE**

No.	Description
8	Potentiometer for adjusting extract air at **NORMAL** speed
9	Potentiometer for adjusting supply air at **NORMAL** speed
10	Switch for additional heating **ON/OFF**
11	Potentiometer for adjusting supply air temperature
12	Switch to reset alarm

Nos. 8, 9 and 10 are used to adjust the unit before it is used for the first time.

**The numbers are used as references in subsequent descriptions*

4 CI60 in use

4.1 General

The control unit consists of pressure switches, LEDs for indication, plus knobs and switches for adjusting the ventilation unit. The control unit communicates with the ventilation unit via a low-voltage cable.

4.2 Increasing/reducing the air supply

Use switches 1 and 2 to increase and reduce the fan speed and with it the air flow rate. The following speeds are used depending on the operating situation.

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.

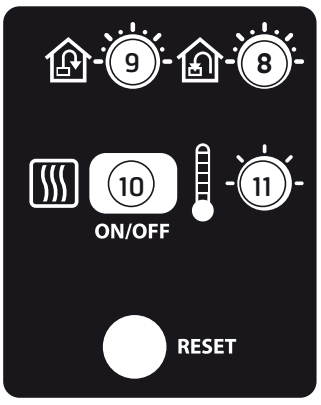
The different speeds are indicated by LEDs 3, 4 and 5.

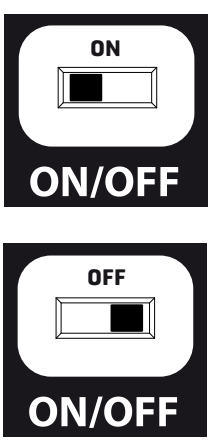
4.3 Adjusting the temperature

The temperature required for the supply air can be set with knob 11. The adjustment range is 10 - 30°C. Use of the factory settings is recommended.

If necessary, the ventilation unit's 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.

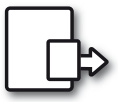
Fig. 21





4.4 Changing the filters

LED 7, which is yellow, lights up every six months as a reminder that it is time to change the air filters in the unit. See section 9.1 for more information on changing filters.



Once the activity has been carried out, the indicator must be reset. See more under the section on resetting.

4.5 Alarm

If anything unforeseen occurs with the ventilation unit, indicator 6 lights up.
The signal given by the indicator depends on the reason for the indication.

A permanent light indicates:
- Fault return water detector (B5)
- Heat recovery fault (B)

A permanent light with indicator 5 (MIN speed) flashing indicates:
- Fault supply air detector (B1)
- Fault extract air detector (B3)
- Fault outdoor air detector (B4)

A flashing light indicates:
- Overheating thermostat fault (applies only to electric heating)
- Fault in external fire/smoke detector (accessory)
- Heat recovery fault (A)
- Additional heating fault (applies only if the unit has a water battery)

4.6 Resetting

Once the filter has been changed or the cause of the alarm rectified , the alarm must be reset. This is done by pressing switch 12.

If the indicator goes out, the action has been carried out correctly. If the indicator remains on, the fault has not been rectified correctly.

NB! If thermostat F10 trips, the unit will have to be opened up and physically reset **before** resetting on the panel. If the alarm is tripped repeatedly, contact the service company or distributor. See chapter 1.4 for more information.

5 Overview of CI600 control panel

Fig. 22

No.	Description
1	**UP/INCREASE** switch
2	**BACK/CANCEL/NO** switch
3	**DOWN/DECREASE** switch
4	**OK/YES** switch
5	**HELP** switch
6	Display
7	Indication of **OPERATION/OK** -Green light
8	Indication of **FILTER CHANGE** -Yellow light
9	Indication of **ALARM** -Red light

**The numbers are used as references in subsequent descriptions*

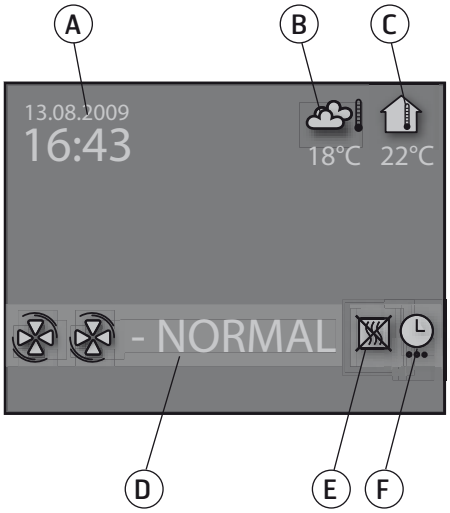
6 CI600 in use

6.1 General

The control unit consists of a colour display, pressure switches and indicators (LEDs). See figure on left for more information. The unit communicates with the ventilation unit via a low-voltage cable.

6.2 Idle mode

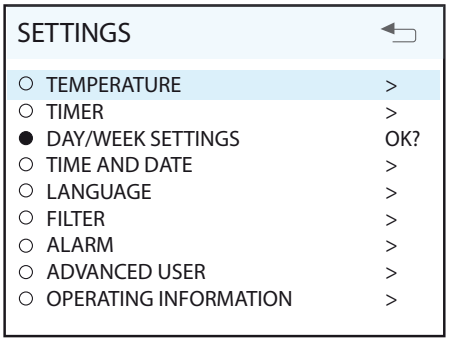
The panel will go into idle mode if it is not used for a while. Operating information is displayed in idle mode. The panel will come out of idle mode if one of the buttons is pressed.



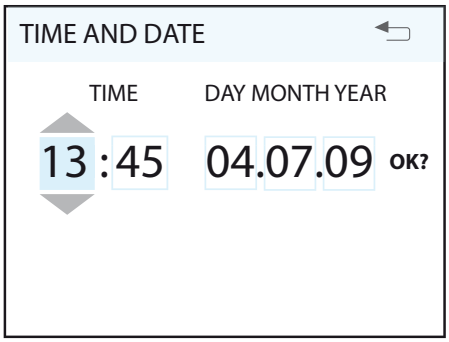
A. Time and date
B. Outdoor air temperature
C. Room temperature
D. Current speed
E. Additional heating activated/deactivated
F. Daily/weekly timer active

6.3 Menu navigation

Buttons 1 and 3 are used to navigate through the menu lines. The cursor is illustrated by the line being light blue. If it is possible to make a selection on the current menu line, this is displayed with OK? to the right of the line. A selection is confirmed by pressing button 4. If a menu line contains submenus, this is illustrated with a '>' sign at the end of the line.



If you select a function that has numerical values, the current value is displayed with a light blue cursor. The value is changed with buttons 1 and 3 and then confirmed by pressing button 4.



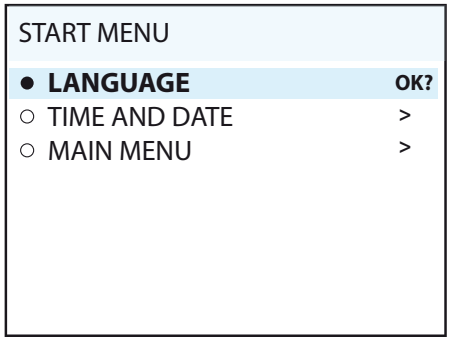
If several values can be changed, the cursor jumps to the right when a selection is confirmed with button 4. The procedure is repeated until all settings have been changed to the desired values.

If you want to cancel a function or return to the previous menu screen, use button 2.

Button 5 activates a help text that briefly describes the current menu screen.

6.4 Startup

When the system is started, a special startup menu is opened.



The basic language and date settings are set in this menu. When this activity has been carried out, you choose to go to the main menu.

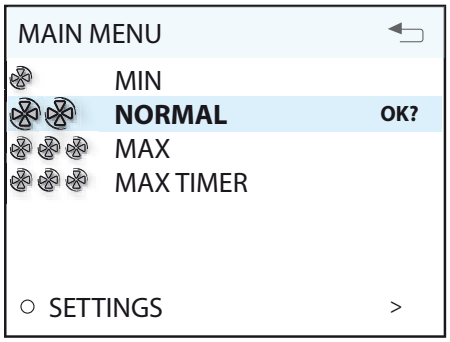
6.5 Operating status

In normal operation without problems, the green LED 7 lights up to confirm that everything is working normally. How any problems affect the system is described in subsequent sections.

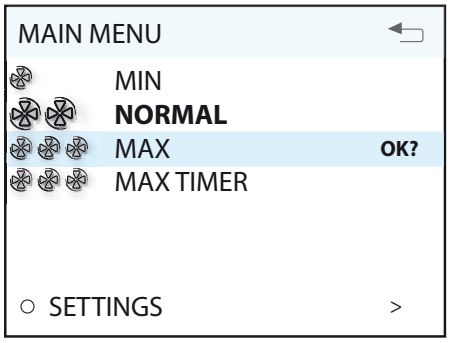
7 CI600 main menu

7.1 Fan speeds

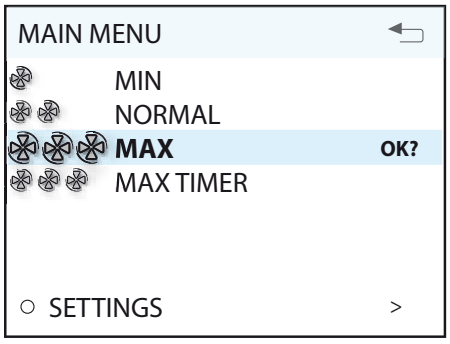
The main menu contains various choices. Most concern fan speeds. The speed selected is indicated with large fan symbols and bold text.



To change the speed, move the cursor with buttons 1 and 3.



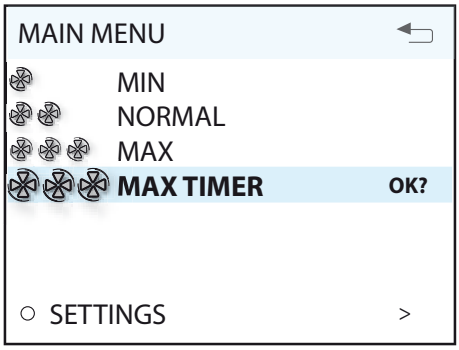
Then confirm your selection with button 4 and the speed selected will be highlighted with large fan symbols and bold font.



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.

7.2 Max timer

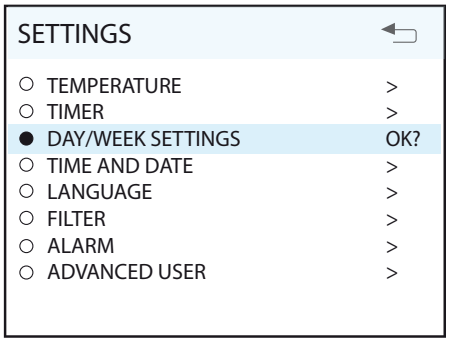
This menu item activates a function that increases the speed to MAX for a limited period before returning to the speed selected previously. The period of time can be adjusted under the SETTINGS menu item. This function is ideal during showering, for example, when there is a greater need for extraction for a limited period.



When the function is active, the time is counted down on the display. If you select TIMER OFF, the function will be cancelled and the speed will return to the previous selection.

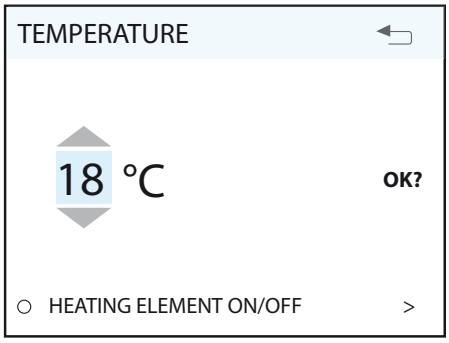
7.3 Settings

Under the SETTINGS menu item, you can adapt the system as you want.



7.4 Temperature

This is where the desired temperature of the supply air is set.

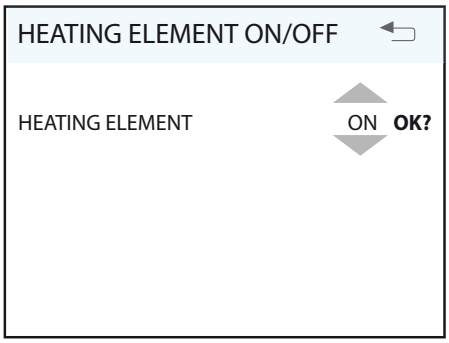


A good rule is to adjust the temperature to max. 18° so that the air is mixed optimally with the air already in the building.

If necessary, the ventilation unit's heating can also be turned off. In this case only the rotating heat exchanger is used as a source of heat. It is best to leave it ON, as the unit will then respond automatically when there is a need for additional heating.

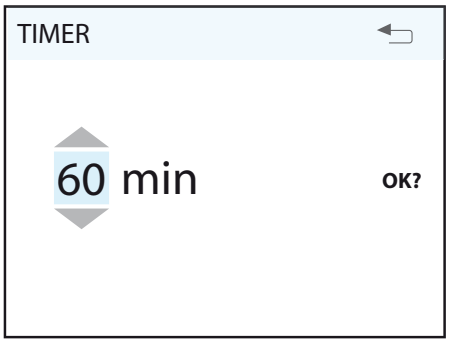
NB! This does not apply if the unit has a water battery.

If the heating element is switched off, this symbol is displayed when the display enters idle mode.



7.5 Timer

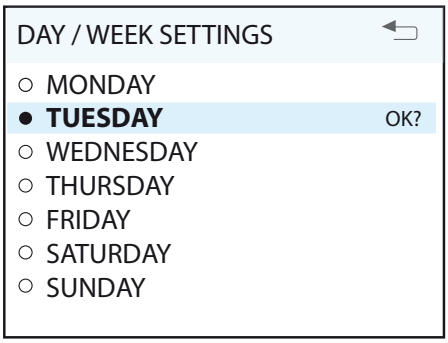
Here you set the time you want for the MAX TIMER function. This is used when the function is activated from the main menu.



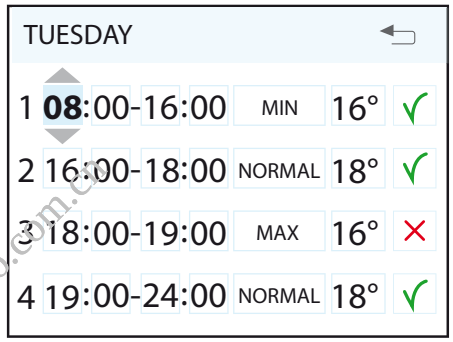
To adjust the time interval for MAX TIMER, see chapter 8.4 under "Timer".

7.6 Daily/weekly timer

Programming the timer begins with selecting the day.



A new menu screen appears under each day.



Each day can be programmed with four different time intervals. Adjust the start and stop times for each interval and then adjust the desired speed and temperature. To activate the interval, select a green tick. The interval will then be active for the selected time and day of the week. A red cross means that the interval is not activated. If necessary, then select another interval and repeat the procedure.

The following rules apply to the programming:
- **An interval can never be started before the previous one has ended.**
- **The stop time can never be before the start time.**

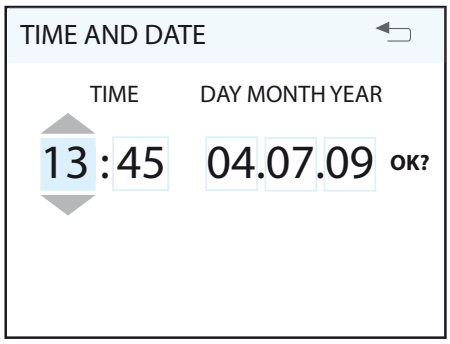
Once you have finished programming a day, repeat the procedure for the other days.

When the timer is active, this symbol is displayed when the display enters idle mode.

If there is no new time interval registered after the finished period, the speed and temperature return to the setting that was previously active.

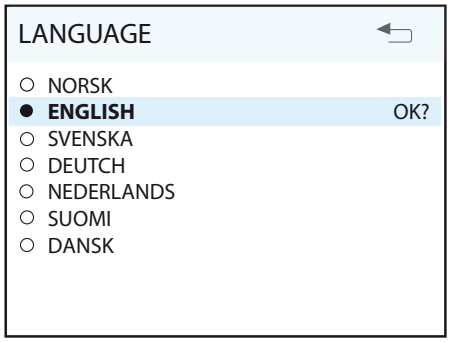
7.7 Time and date

The time and date can be adjusted in this dialog.



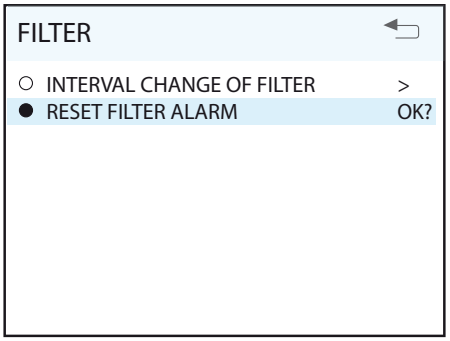
7.8 Language

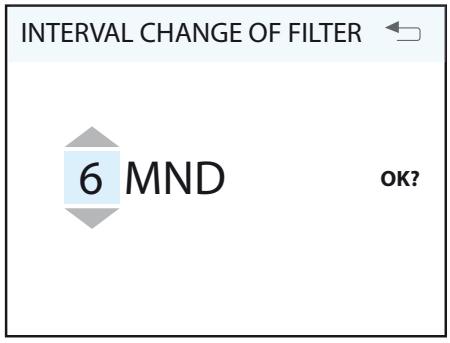
The language selected can be changed in this dialog.



7.9 Filters

A reminder appears regularly on the display. In this dialog, the time interval can be adjusted and the filter alarm reset.





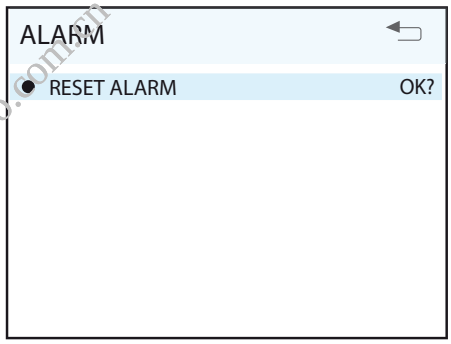
The normal time is 6 - 12 months, depending on the environment.

When the filter alarm is tripped, the yellow indicator 8 lights up and an information text appears. Follow the instructions in the text. It is possible to go directly to this dialog from the message or via the menu tree. After the alarm has been reset, the countdown to the next filter change begins.

7.10 Alarm

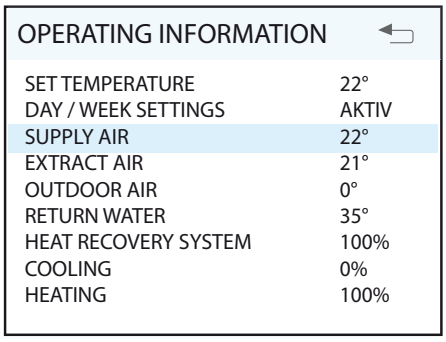
If a problem occurs in the operation of the ventilation unit, an alarm will be tripped. The red indicator 9 lights up and an information text appears in the display. Follow the instructions in the text. It is possible to go directly to this dialog from the message or via the menu tree.

NB! If thermostat F10 trips, the unit will have to be opened up and physically reset **before** resetting on the panel. If the alarm is tripped repeatedly, contact the service company or distributor. See chapter 1.4 for more information.



7.11 Operating information

This general screen displays current temperature values, whether the daily/weekly timer is active and activity as 0-100% for cooling, heat exchanger and additional heating.

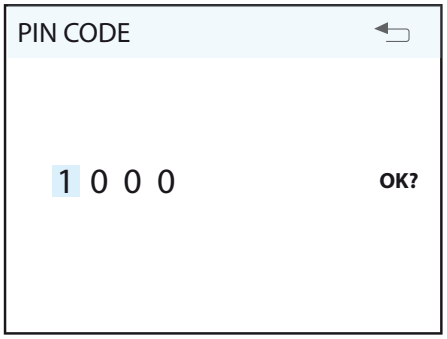


8 CI600 advanced user menu

For more information on the "Advanced User" menu see "CI600 Reference Manual" on Flexit's website.

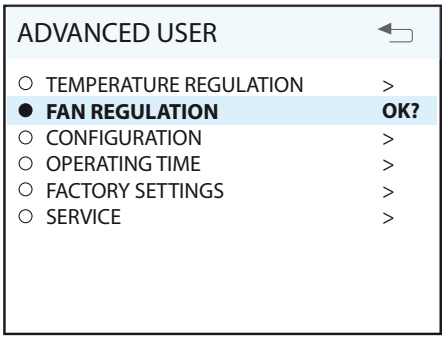
8.1 PIN

To access the menu item, you need to enter the PIN 1 0 0 0.



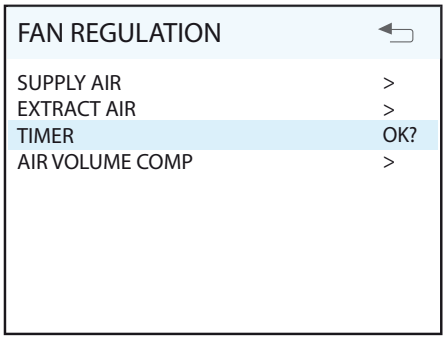
8.2 Advanced user

This menu contains functions for monitoring, configuration and troubleshooting. Information to do with adjustment can be found in the installation instructions. Complete documentation of all menus, including configuration for accessories and extras, etc., is described in the CI600 reference manual, which is available at www.flexit.no.



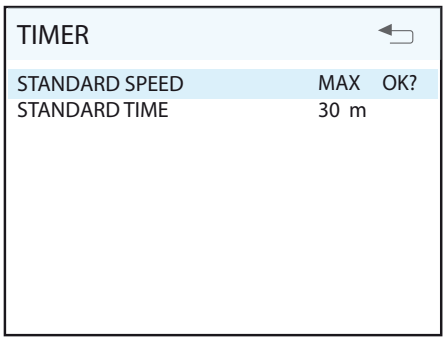
8.3 Fan control

The fans are selected and configured in this menu screen.



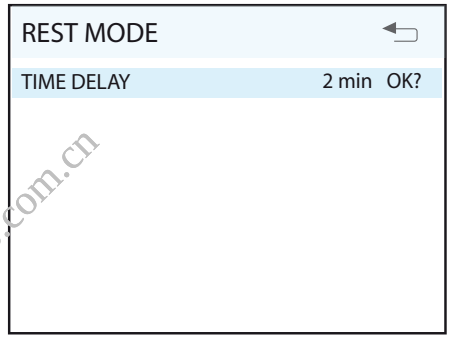
8.4 Timer

Settings are entered in this menu for the speed and time that are to apply to the 'MAX TIMER' function in the main menu.



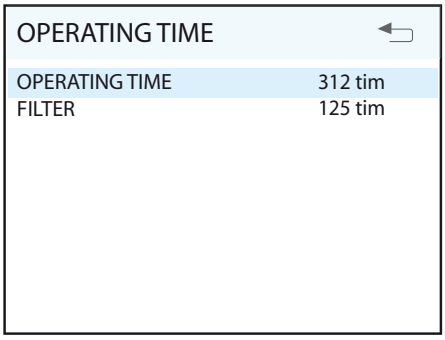
8.5 Idle mode

In this menu you can adjust the time it takes before the display enters idle mode.



8.6 Operating time

This menu screen displays the ventilation unit's total operating time and how much time has passed since the last filter change.

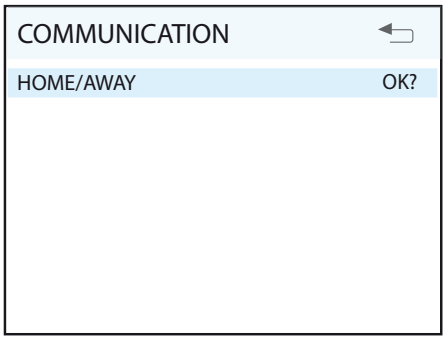


8.7 Communication

Proceed to the 'HOME/AWAY' submenu. This function can be used to make the unit run on other operating settings using an external switch.

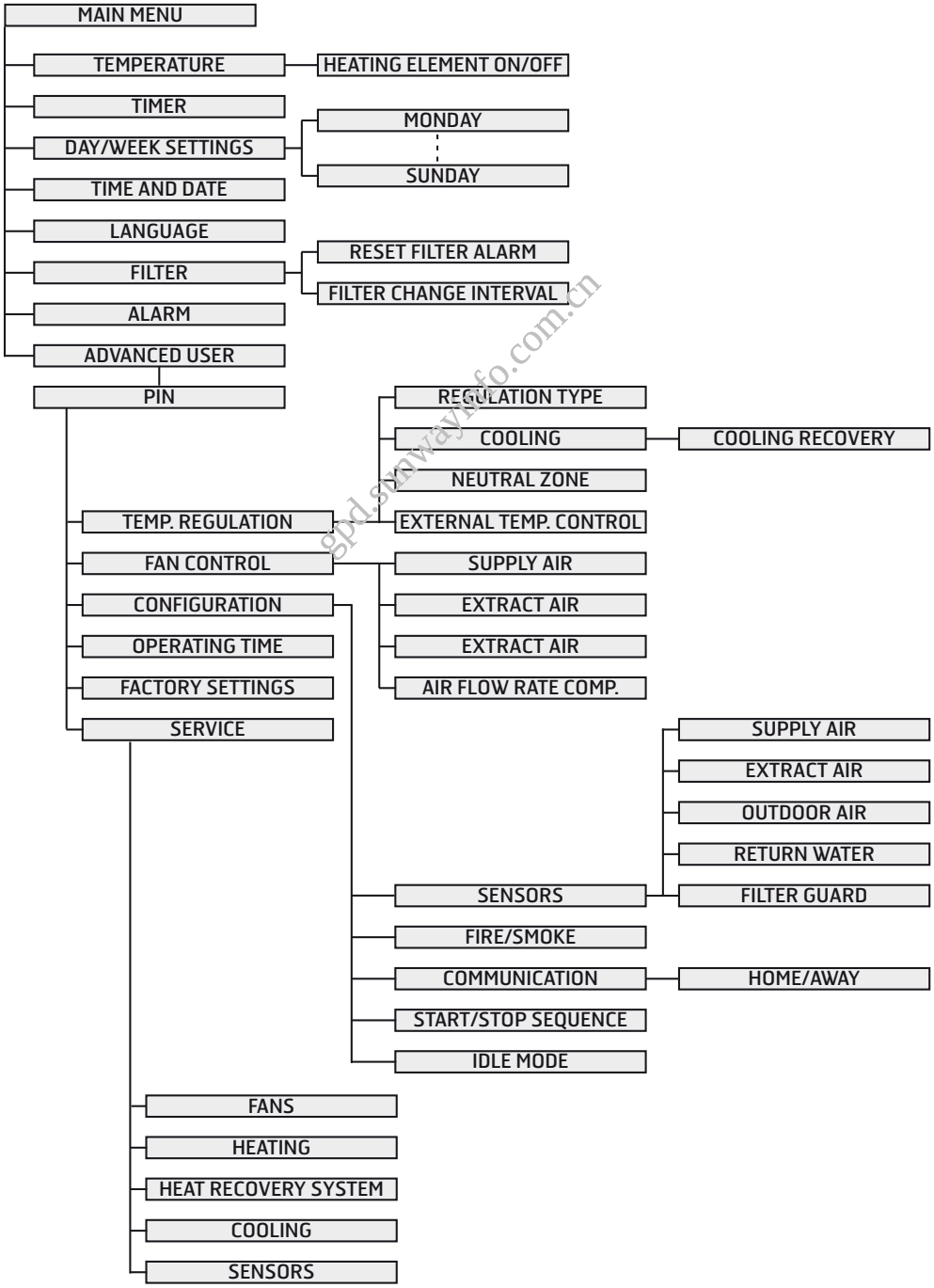
NB! The settings have no effect unless an external switch is connected.

The settings are entered for the AWAY selection. Speed and temperature can be selected, plus how long after activation the new setting should take effect.



8.8 Menu tree

Fig. 23



9 Cleaning and maintenance

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.

9.1 Changing the filters

The filters have a limited life, and to preserve a healthy indoor air quality it is important to change them when they are dirty.

How often the filters need to be changed depends on the degree of contamination of the air where they are installed. In general, the filters need to be changed at least once a year, preferably in the autumn (after the pollen season). In areas with a lot of dust and contamination, the filters should be changed in the spring and autumn.

Dirty filters can, among other things, lead to:
- Reduced performance of the unit
- The unit becoming dirty
- Humidity damage in the home
- Reduced indoor air quality

A filter subscription is recommended to ensure full benefit from the system. **The order no. for a new set of filters is 111738.** Both filters should always be changed.

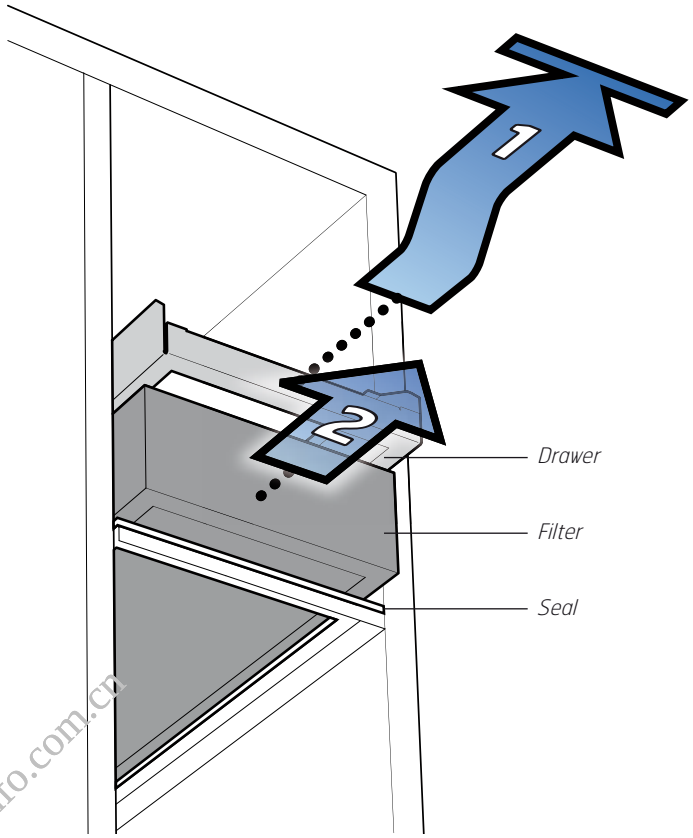
To take out the filters:
1. Pull the filter drawer out as far as it will go (see Fig. 24). The drawer does not have to be removed completely.
2. The filter is now loose and can be removed.
3. Put a new filter in and push the drawer properly into place.

Make sure that the filter is not damaged during fitting. Use the filter's outer edge to push it in. A damaged filter reduces the unit's effect and the air's purity.

When changing the filter, check that the whole unit is working normally.

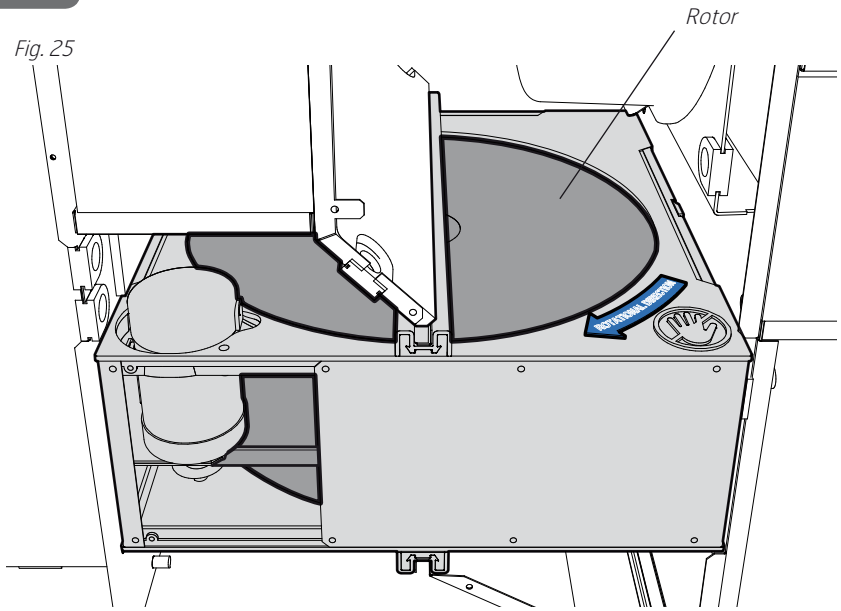
Use the following checklist:
- Check that the rotor is rotating. Turn the rotor in the direction of rotation as shown on the rotor cassette (see Fig. 25).
- If necessary, clean the rotor (see chapter 9.4).
- Check that the fans are clean (see chapter 9.2).

Fig. 24



Check that the seal is intact before inserting the filter. Then push the filter drawer properly into place to prevent air leakage.

Fig. 25



9.2 Cleaning the fans

The fans must be cleaned at least once a year. Clean the fan blades with a grease solvent on a cloth (e.g. methylated spirits) and compressed air if possible. NB! Do not use water.

To take out the top fan:

1. Pull out the electric quick-release contact for the fan (see Fig. 26).
2. Press down the hook on the spring under the fan housing and pull the housing sideways (see Fig. 27-1 and 27-2). Then take the fan housing out of the unit. Take care not to damage the seal when you pull the fan housing out.

To take out the bottom fan:

1. Pull out the electric quick-release contact for the fan (see Fig. 26).
2. Undo the safety screw and pull the fan housing out of the unit (see Fig. 27-1 and 27-2). Take care not to damage the seal when you pull the fan housing out.

To put the fan back, follow points 1 and 2 in reverse order.

Fig. 26

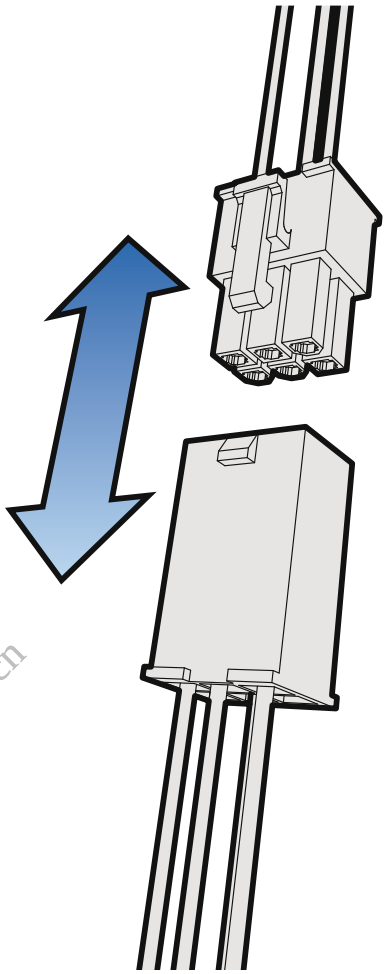


Fig. 27

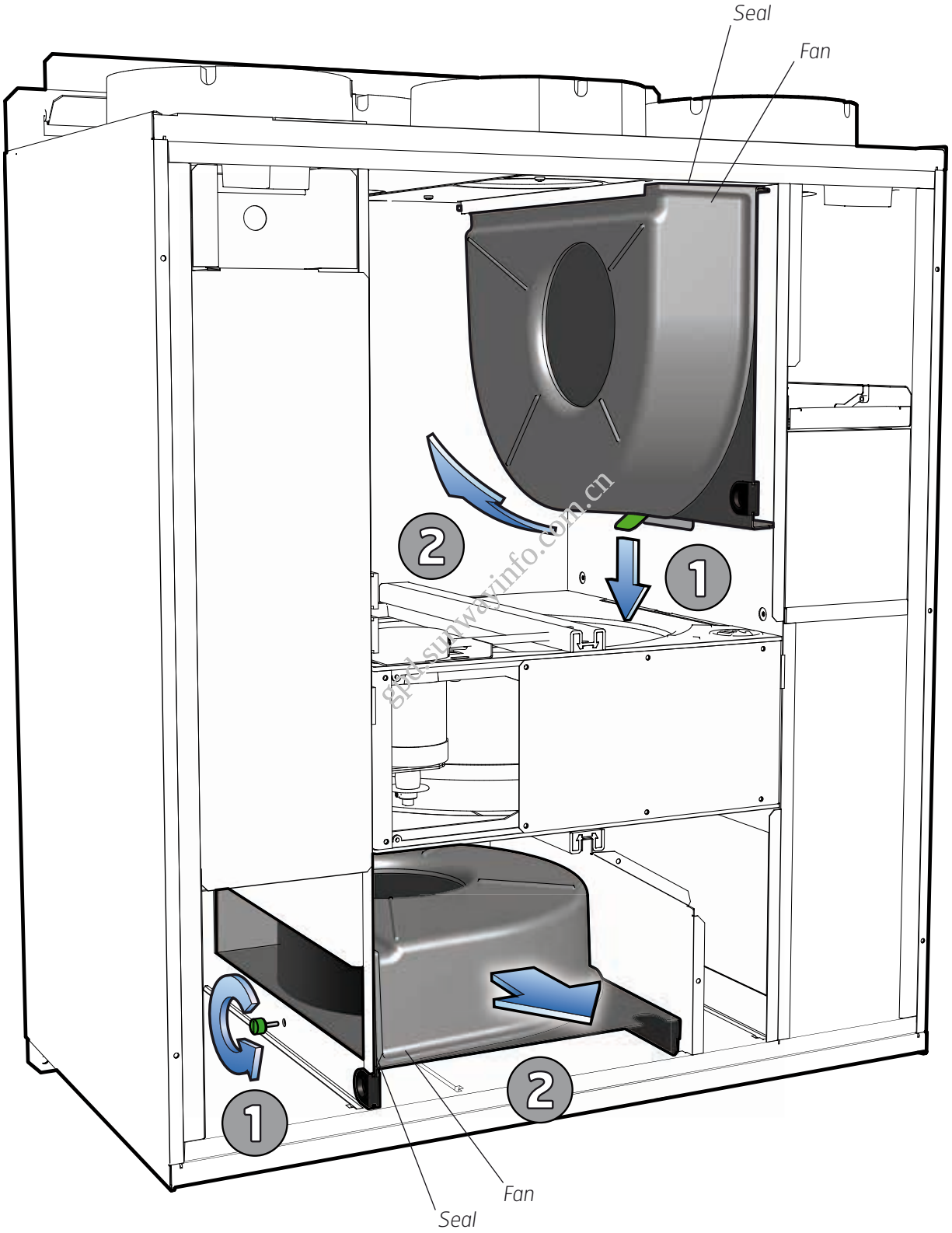
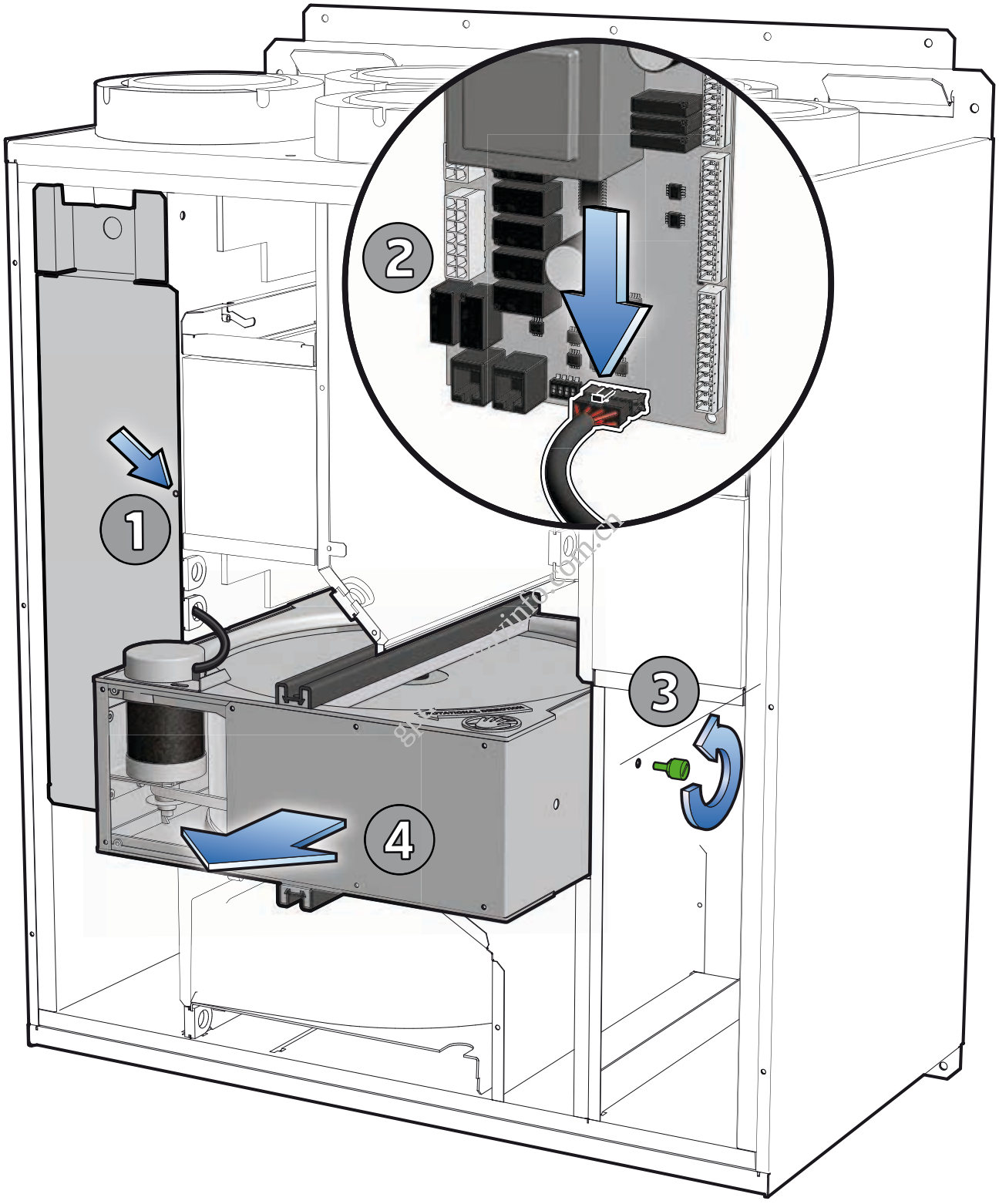


Fig. 28



9.3 Changing the brush strips

The brush strips become worn over time. If they do not sit tightly against the rotary wheel-type heat exchanger, it may be necessary to change them (product code 102686)**.** Alternatively, they can be moved closer to the rotor, as the aluminium profile they are mounted in has two grooves.

Unplug before starting!

Proceed as follows:

1. Undo the screw for the electric cover (see Fig. 28-1) and take the cover off.
2. Disconnect the rotor's quick-release contact from the circuit board by pressing the release down and pulling the contact (see Fig. 28-2).
3. Undo the safety screw for the rotor module (see Fig. 28-3).
4. Pull the rotor module straight out.
5. Remove the screw in the centre of the aluminium profile and pull the profile out (see Fig. 29).
6. Pull the brush strips out of the groove. Move them up from level 1 to level 2 (see Fig. 30), or replace them with new ones if they are completely worn out.

9.4 Cleaning the rotor

As the unit has high impermeability filters installed, it is not usually necessary to clean the rotor. If, for various reasons, it should still be necessary, dust can be removed with a soft brush. Further cleaning is possible by removing the rotor, spraying it with a grease solvent and then blowing it clean from the opposite side. Distance approximately 60 mm and max. pressure 8 bar. Ensure that the motor is not exposed to water during cleaning. Ensure that all seals around the rotor are intact and tight. Ensure that there is no damage to the rotor belt, and that the rotor rotates freely.

9.5 External cleaning

Many kitchen surface cleaners contain chemicals that may damage the product's plastic components. Therefore use a soft cloth moistened with warm water and a neutral detergent to clean the outside of the product.

Do not use abrasive cleaners or scouring powder, as such products can damage the surfaces. Cleaners containing ammonia or citrus must not be used. Products that give stainless steel an anti-fingerprint coating must not be used either.

Fig. 29

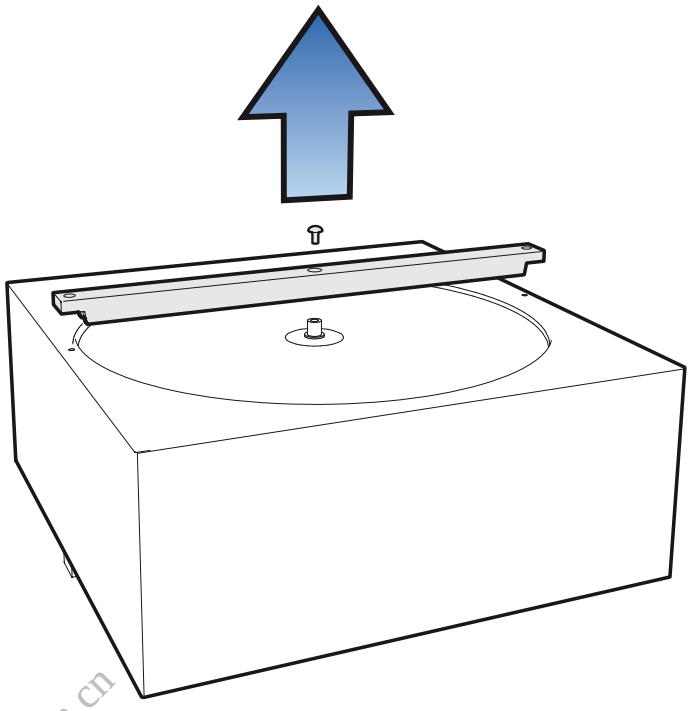
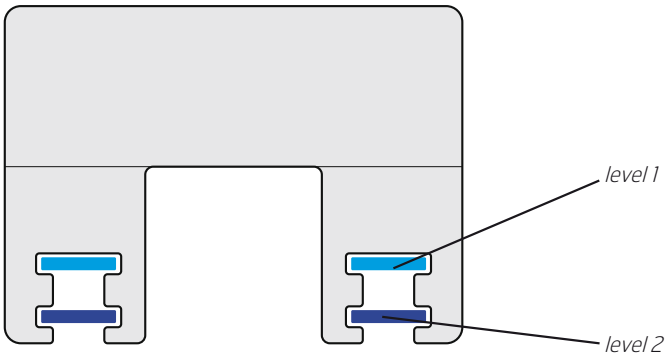


Fig. 30



10 Maintenance table

Component	Action	Interval
Filter	Filters must be changed at least once a year. It is best to change them twice a year, before and after the pollen season. Check that the filter seal is completely tight.	6-12 months
Fans	Fans must be cleaned at least once a year to maintain fan efficiency.	12 months
Rotary wheel-type heat exchanger	Check that the surfaces are clean. Check that the sealing strips face in towards the rotary wheel-type heat exchanger. Check that the rotor belt is intact and not too slack.	12 months
Kitchen hood*	Wash the grease filter. Check that the damper is clean and closes fully.	2 weeks
Seals	Check that the seals on the door, under the filters, on the fan modules and on the rotor module are intact.	12 months
Valves	The supply air and extract air valves (for the bathroom, bedroom, laundry room, etc.) must be cleaned at least once a year.	12 months
Air intake	Check that no leaves and other items have caught on the grille. In periods of sea smoke during winter the air intake can freeze up. If necessary it must be scraped clean so that the air can pass through.	12 months
Roof cowl	If the unit has a roof cowl, this must be checked for leaves and the like. Also check that the drain slots are open.	12 months
Ducts	Check that the ducts are clean.	10 years
Brush strips	Check that the brush strips are intact and sit tightly against the rotor. If they are worn, they can be moved to the next groove in the profile so that they are closer to the rotor.	3 years
Inside unit	A combination of a very low outside temperature and damp extract air can lead to the formation of ice. Normally this will not be a problem - when normal operating conditions return the ice crystals will be converted to steam and removed from the unit via the exhaust air. In the case of extreme cold over extended periods the unit should be checked for ice.	
Capacitor	In the electrical compartment there are two cylindrical electrical components called capacitors. The life span of these components are limited to about 5 years, after which they will need to be replaced. An exhausted capacitor may damage the fan motor. **The capacitors must be replaced by a professional.** New capacitors can be ordered from Flexit (art. no. 110354).	5 years

***For units with extract air from the kitchen hood connected to the unit.**

11 Troubleshooting

Type of fault	Remedial action
Cold draughts	Check what supply temperature has been selected. See control panel.
	Check that the rotor is rotating.
	Check that heating comes on.
	New extract filter needed.
Fans not working	Check that power is connected to the unit.
	Check that the overheating thermostat has not cut out.
	Reset by pressing the button. Must also be reset on the automatic panel. See chapters 1.4, 4.7 and 7.10.
Low air flow rate	Check what speed the unit is set to.
	Check that the filters are tight.
	Check the intake grille.

12 CE Declaration of Conformity

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

2004/108/EC Electromagnetic Compatibility (EMC)
2006/95/EC Low-voltage Directive (LVD)
2006/42/EC Machine Directive (Safety)

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

Type: **UNI 2 R** **Ventilation unit**

Complies with the following standards:

Safety standard	EN 60335-1:2002
EMF standard:	EN 50366:2003
EMC standard:	EN 55014-1.2000 EN 61000-3-2:2000 EN 61000-3-3:1995 EN 55014-2:2:1997

The product is CE-marked: 2011

FLEXIT AS 23.08.2011

Frank Petersen
CEO

The right to give notice of lack of conformity applies to this product in accordance with the existing 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 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.

Notice of lack of conformity as a result of incorrect or defective installation must be submitted to the installation company responsible. The right to give notice of lack of conformity may lapse if the system is used incorrectly or maintenance is grossly neglected.

Flexit AS, Televeien 15, N-1870 Ørje **www.flexit.com**