



FLEXIT S4 R S6 R S7 R

E **User Manual**
Air Handling Unit
Cabinet Models with Heat Recovery -
Rotor

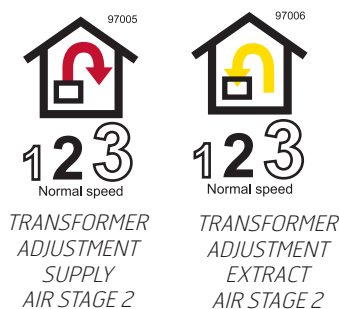
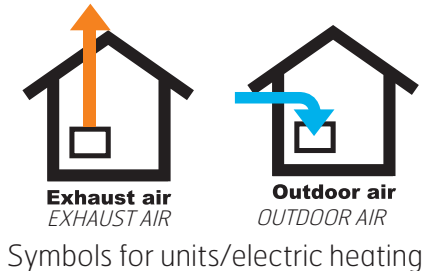
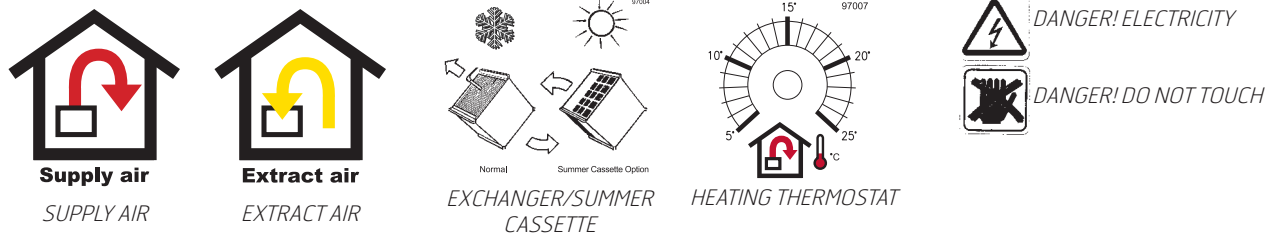


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Symbols Used

This product has a number of symbols that are used to label the product itself and in the installation and user documentation. Here is an explanation of some of the commonest symbols.



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 Important Safety Instructions



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 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 be given time to stop (min. 2 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.
- Follow the user manual precisely.



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.

2 Functional Description

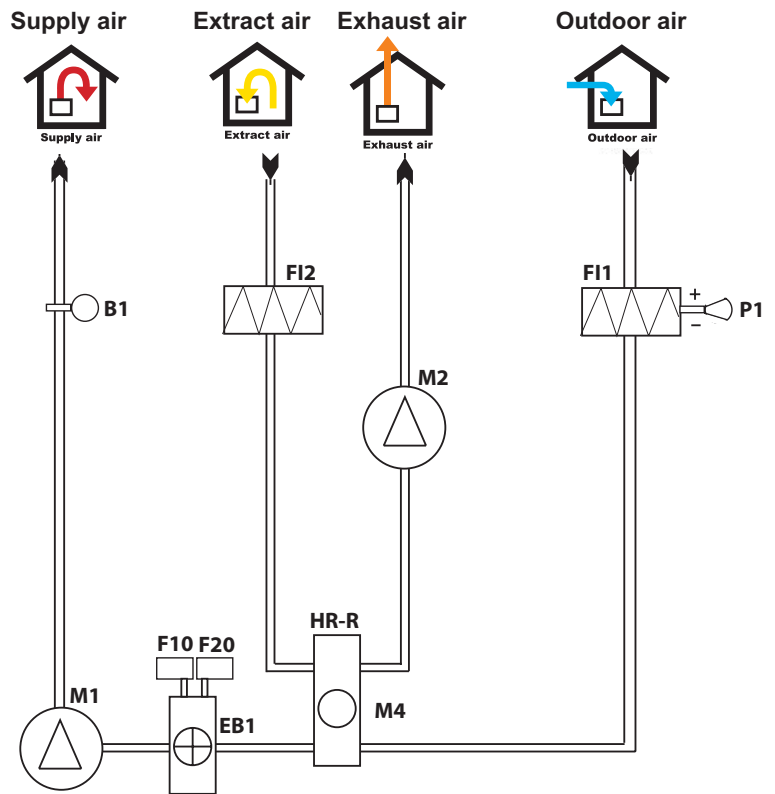
In the rotor **HR-X**, the cold outdoor air and the warm extract air pass each other without being mixed. With this principle, approximately 80–90% of the heat in the extract air will be transferred to the supply air. In addition, a thermostat-controlled heating element **EB1** will ensure that the supply air has the desired temperature if the outdoor temperature falls very low. This supply air is passed via ducts and valves to living rooms and bedrooms. The extract air is extracted either from the same room or via door gaps/overflow gratings to toilets and wet rooms. The used air is passed via a duct system back to the unit, emits heat as stated above and is blown out of the building via a roof hat or wall grating.

The temperature of the supply air is controlled by the rotor. The heating element will not start up until the rotor is unable to maintain the set temperature. When there is no need for heating (summer), the rotor will stop.

2.1 Heating Elements

The heating elements are protected against overheating by the overheating thermostat **F20**, which switches off at 65°C. As an additional safety measure, the overheating thermostat **F10** switches off at 80°C. The overheating thermostat can be reset manually by removing the white plastic cover and pressing the reset button. The thermostat is accessible once the doors are open. It is located at the bottom of the compartment right above the heating element. See the label - RESET.

2.2 System Drawing



- B1 SUPPLY AIR TEMPERATURE SENSOR
- EB1 HEATING ELEMENT
- F10 OVERHEATING THERMOSTAT
- F20 OVERHEATING THERMOSTAT
- F11 SUPPLY AIR FILTER
- F12 EXTRACT AIR FILTER
- M1 SUPPLY AIR FAN
- M2 EXTRACT AIR FAN
- HR-R ROTOR HEAT EXCHANGER
- M4 ROTOR MOTOR



This is purely a ventilation system and not a heating system. The home must be heated in the normal manner. The heat gained from heat recovery must be seen in relation to a situation in which the extract air is blown right out of the home without recovery.

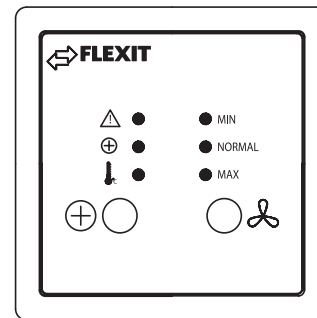
3 Operation - Control



The speed of the fans in the unit is controlled from a separately mounted SP 30 control switch. Depending on the operating situation, the fan speed is set to the desired level.

- MIN stage:** Used when not as much ventilation as normal is required.
- NORMAL stage:** Normal operating ventilation. This is the position for daily operation.
- MAX stage:** Used when increased ventilation is required in wet rooms or throughout the flat. Must be used during and for a while after showering and clothes drying, for example, to avoid condensation in the ducts.

Red
Green
Yellow



If there is a power cut, the unit will automatically be set to the speed stage Normal and rotor active when it restarts, i.e. the rotor will operate if heating is required.

SP 30 Control Switch for Electronic Automatic Control with a Thermoguard

This contains the following functions:

- Right pressure switch (fan symbol) to choose between min, normal and max speeds with an indicator lamp to show which speed stage is active.
- Left pressure switch (+ symbol) to choose heating OFF/ON. This switch is used to switch the rotor and heating element off/on (disconnected during the warm part of the year).

The temperature adjustment (item no. 3 /Chap. 6) is factory-set to 20 °C in the unit and should not be set to over 25 °C. The temperature is adjusted with a flat screwdriver. The temperature sensor is located in the supply air duct. Some heat loss up to the valves must be expected where ducts pass through a cold environment.

- **Red lamp (!):** Slow flash: Filter must be replaced (provided that a pressure guard is installed).
Fast flash: Overheating thermostat triggered.
- **Green lamp (+):** Permanently on: Both errors
This lights when the rotor and heating are active.
- **Yellow lamp (°C):** This lights when the rotor is in operation (the rotor stops when heating is not required).

4 Troubleshooting

FAULT	DO THE FOLLOWING
If the fans are not working or cannot be adjusted	<ul style="list-style-type: none"> • Check that the power plug is correctly inserted in the power point. • Check that the fuses in the electrical cabinet are switched on. • The overheating thermostat (item no. 5/Chap. 6 General Drawings) may have been triggered. Reset as described.
If the supply air feels too cold	<ul style="list-style-type: none"> • Check that the control switch + is activated. The green and yellow lamps light. • Check that the drive belt for the rotor (8) is intact and in place. • The heating thermostat (3) can be set to a higher temperature. • The overheating thermostat (5) may have been triggered. Reset as described.
If the air flow rate has been seriously reduced	<ul style="list-style-type: none"> • The filters (item nos. 1, 2) may be clogged by dirt. Clean or replace them. See under "Cleaning - Maintenance". • The grille in the outdoor air cap may be clogged. See under "Cleaning - Maintenance".

If none of this helps, please contact your supplier for service. Please state the serial number on the rating plate inside the unit (open the door).

5 Cleaning - Maintenance



Before opening the door of the heat recovery system or carrying out maintenance on the kitchen hood: switch off the heat, let the fans continue for three minutes to remove hot air, remove the power from the unit and wait 2 minutes before opening the doors.

Doors: Opened by unscrewing the two screws in one door.

Fans: Item nos. 6 and 7/Chap. 6 General Drawings. The fans normally do not need to be inspected. If necessary, the fan blades may be cleaned with a small brush and compressed air, if possible. NB! Do not use water. Disassemble as follows: Open the doors as directed. Pull out the electric quick-release contact for the motor. Unscrew 2 screws under the front edge of the motor's mounting plate. The fan can then be carefully pulled down and out of the unit.

Filters:

To preserve a healthy indoor environment, it is important to change filters when they are dirty. Dirty filters lead to:



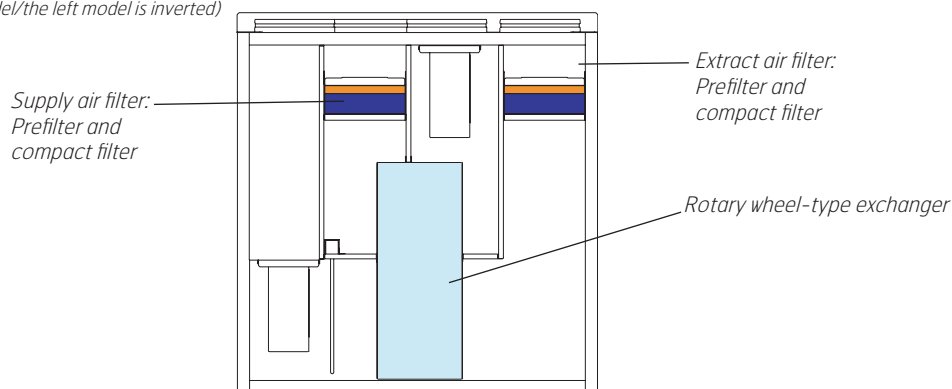
Increased air resistance in the filter – less air in the home – the risk of bacterial growth in the filter – in the worst case scenario, the system can be damaged.

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 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. The supply air filter and extract air filter (2 and 1) consist of an EU 3 prefilter on top (coarse filter) and a compact filter (EU7). They are pushed into place and fastened with filter tighteners. It is recommended that you order a filter subscription to ensure full benefit from the system and the cheapest prices.

Order no. for a complete set of filters: 12327

Rotor model filter location

(the drawing shows the right model/the left model is inverted)


Rotor:

The rotor (8) should be checked roughly once a year for dust and dirt in the air ducts. If you find signs of clogging, contact your supplier for service. Check also that the round belt is intact and tight.

Valves and duct system:

The valves should be cleaned at least once a year. The duct system should be cleaned at least every 10 years.

Outdoor air intake:

Check once a year that the grille is not clogged with leaves, dust and dirt.

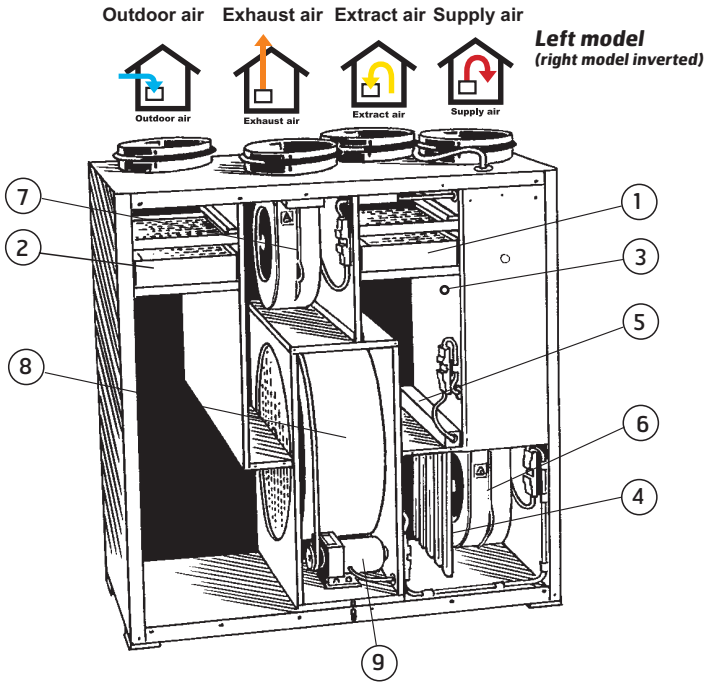
Roof hat:

Check once a year that the drainage gap at the bottom is not clogged with leaves. This applies only if the system has a roof hat.

Summer operation:

During the warm part of the year (outside the heating season), there is no need to recover heat. The switch + on the control switch can be pressed in so that the green lamp + goes out. This avoids heat recovery on cool nights, and the house is not heated as fast during the daytime. When heat recovery is required again, press the switch + so that the green lamp lights again.

6 Overview Drawing S4 R/S6 R/S7 R



Item Part no.

- 1 G3 + F7 extract air filter
- 2 G3 + F7 supply air filter
- 3 Heating adjustment
- 4 Heating battery
- 5 Overheating thermostat
- 6 Supply air fan
- 7 Extract air fan
- 8 Rotary wheel-type exchanger
- 9 Rotor motor

7 Technical Data

7.1 Technical Data, S4 R

Rated voltage	230 V/50 Hz
Fuse	10 A
Rated current, total	6.7 A
Rated power, total	1545 W
Rated power, electric battery	1200 W
Rated power, fans	2 x 165 W
Rated preheating power	
Fan type	F-wheel
Fan motor control	Transformer
Max. fan speed	2230 RPM
Standard automatic control	SP30
Filter type (SUP/EXTR)	F7/F7
Filter dimensions, SUP (WxHxD)	468x200x50 mm
Filter dimensions, EXTR (WxHxD)	468x200x50 mm
Weight	85 kg
Duct connection	Dia. 200 mm
Height	900 mm
Width	900 mm
Depth	550 mm

7.2 Technical Data, S6 R

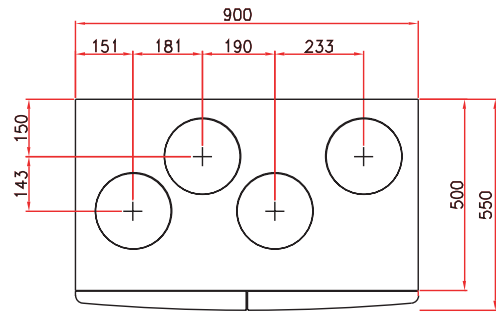
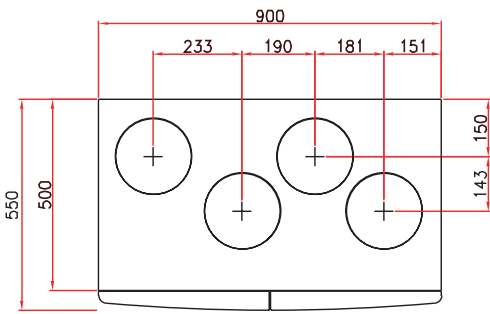
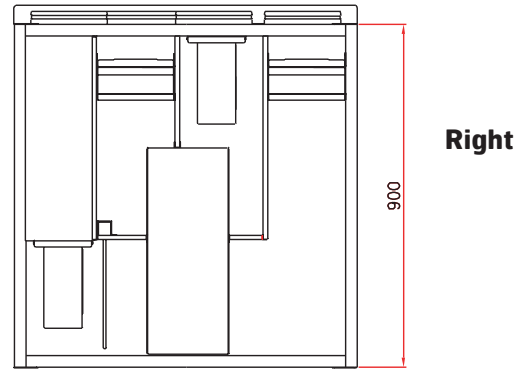
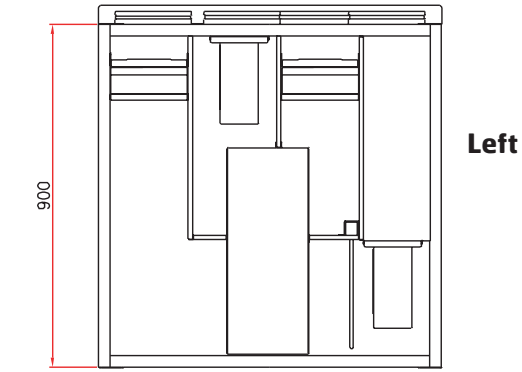
Rated voltage	230 V/50 Hz
Fuse	10 A
Rated current, total	9.8 A
Rated power, total	2255 W
Rated power, electric battery	1700 W
Rated power, fans	2 x 270 W
Rated preheating power	
Fan type	F-wheel
Fan motor control	Transformer
Max. fan speed	2150 RPM
Standard automatic control	SP30
Filter type (SUP/EXTR)	F7/F7
Filter dimensions, SUP (WxHxD)	468x200x50 mm
Filter dimensions, EXTR (WxHxD)	468x200x50 mm
Weight	86 kg
Duct connection	Dia. 200 mm
Height	900 mm
Width	900 mm
Depth	550 mm

7.3 Technical Data, S7 R

Rated voltage	230 V/50 Hz
Fuse	16 A
Rated current, total	14.2 A
Rated power, total	3265 W
Rated power, electric battery	2500 W
Rated power, fans	2 x 375 W
Rated preheating power	
Fan type	F-wheel
Fan motor control	Transformer
Max. fan speed	2000 RPM
Standard automatic control	SP30
Filter type (SUP/EXTR)	F7/F7
Filter dimensions, SUP (WxHxD)	468x200x50 mm
Filter dimensions, EXTR (WxHxD)	468x200x20 mm
Weight	92 kg
Duct connection	Dia. 200 mm
Height	900 mm
Width	900 mm
Depth	550 mm

8 Dimensioned Drawings

S4 R/S6 R/S7 R



* Measures in mm

10 CE Declaration of Conformity

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

89/336/EEC Electromagnetic compatibility (EMC)

73/23/EEC Low-voltage Directive (LVD)

89/392/EEC Machinery Directive (MD)

EC 335-1 :91 + A1:94 + A2:99

EN 60335-1 :94 + A11:95 + A1:96 + A13:98 + A14:98 + A15:00 + A2:00 + A16:01

EN 50081-1:92, EN 50082-1:97

Manufacturer: FLEXIT AS, Televeien 15, N-1870 Ørje
Equipment group: Ventilation units for installation in ducts

Type: **S4 R**
S6 R
S7 R

The product is CE-marked: 2002

FLEXIT AS 20/09/2002



Pål J. Martinsen
General Manager

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 or on its packaging indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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.

