



Nordic KS3

ART.NO. 800300, 800301

EN

INSTALLATION INSTRUCTIONS

Air handling unit with optional kitchen hood connection

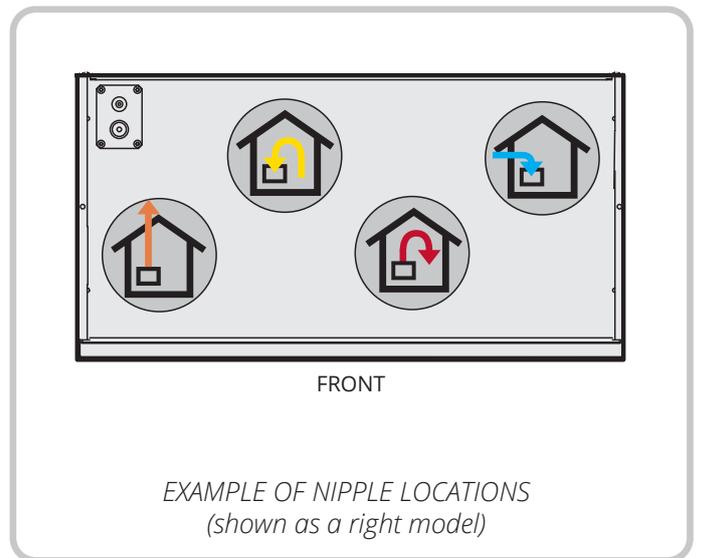
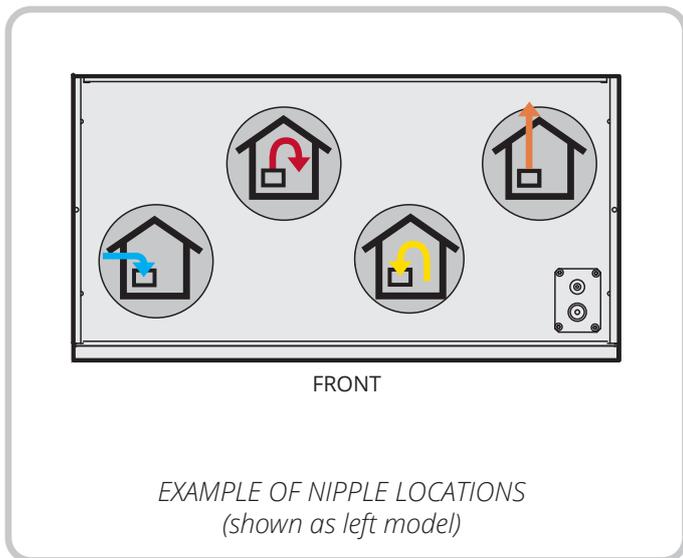


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Symbols used

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



 **DANGER!** When a text box is this colour, it means that a life-threatening or serious personal injury may be the consequence of not following the instructions.

 **NOTICE!** When a text box is this colour, it means that a poor utilisation ratio or product operating issues may be the consequence of not following the instructions.

 **CAUTION!** When a text box is this colour, it means that material damage may be the consequence of not following the instructions.

 **INFO!** When a text box is this colour, it means that it contains important information.



SAFETY INSTRUCTIONS



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

- There is a fire risk if cleaning is not carried out in accordance with the instructions.
- All electrical connections must be carried out by qualified electricians.
- 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 must not be used to extract combustible or flammable gases.
- The air must not be released into extract air ducts used for air extracted from appliances which burn gas or other fuel.
- CAUTION! Accessible parts may become hot when used together with kitchen equipment.
- Do not flame food under the kitchen hood.
- It is the installer's responsibility to carry out a full safety and function assessment of the appliance.
- WARNING! Failure to install the screws or fixing device in accordance with these instructions may result in electrical hazards.
- Follow the current regulations for extract air.
- 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, as the unit contains elements that must not be touched when hot.
- Connection/disconnection to supply mains and interconnection of separate components must be possible.
- Allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring.
- Dette apparatet kan brukes av barn over 8 år eller personer med redusert

sensory capacity or reduced physical or mental capacity, or by persons lacking experience or knowledge, provided they have received instruction in the safe use of the appliance or are supervised to ensure safe use and providing they are aware of the risks.

- The product is not suitable for use by children. Children must not be allowed to play with the appliance. Children must not carry out cleaning or maintenance without supervision.



- This unit is only designed for ventilation air in homes and commercial buildings.
- 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.
- The unit must not be operated without the filters being in place.
- All plumbing work must be carried out by an authorised plumber.
- The location of the water battery must be approved by a plumber owing to the risk of water leaks.



- Tumble dryers must not be connected to the unit.
- The room must have a separate, adequate air supply when products such as gas cookers, gas heaters, fireplaces, wood-burning stoves, oil-fired boilers, etc., are used.



- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- **Applicable for Germany market only:** When the range hood and appliances supplied with energy other than electricity are simultaneously in operation, the negative pressure in the room must not exceed 4 Pa (4×10^{-5} bar).

1. Preliminaries

See separate documentation for installation of ducts, valves, etc.



INFO! The unit is designed for indoor installation.

1.1. INSPECTION/MAINTENANCE

The unit must be installed with space for service and maintenance such as filter replacement and cleaning the fans and recovery system. The control cable with plug for automatic control on top of the unit must be easily accessible.

1.2. SPACE REQUIRED

Type	A	B	C
KS3	280 mm	1 mm	300-540 mm

- A: Space in front of unit
- B: Space at side of unit
- C: Space above unit

These are minimum requirements and only take service needs into account. National statutory requirements for electrical safety may deviate from this. Check which rules apply in your country.

1.3. LOCATION REQUIREMENTS

Nordic KS3 has been designed for location in the kitchen over the cooker as it contains an integrated kitchen hood.

The unit can also be placed in other heated rooms and used without a kitchen hood.

KS3 is available in left or right versions (exhaust air nipple to the left or right), depending on what is the most favourable in relation to the duct location.

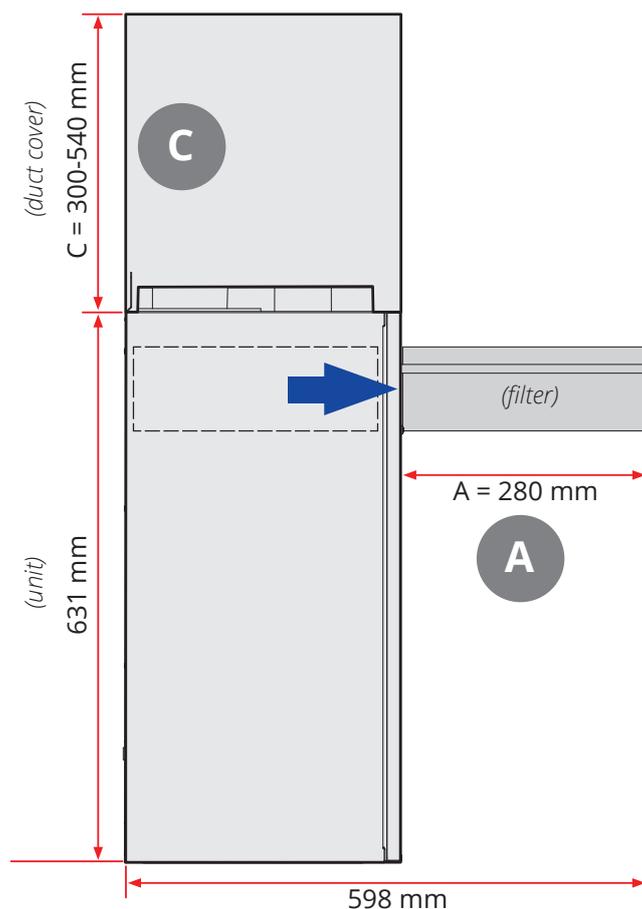


Figure 1

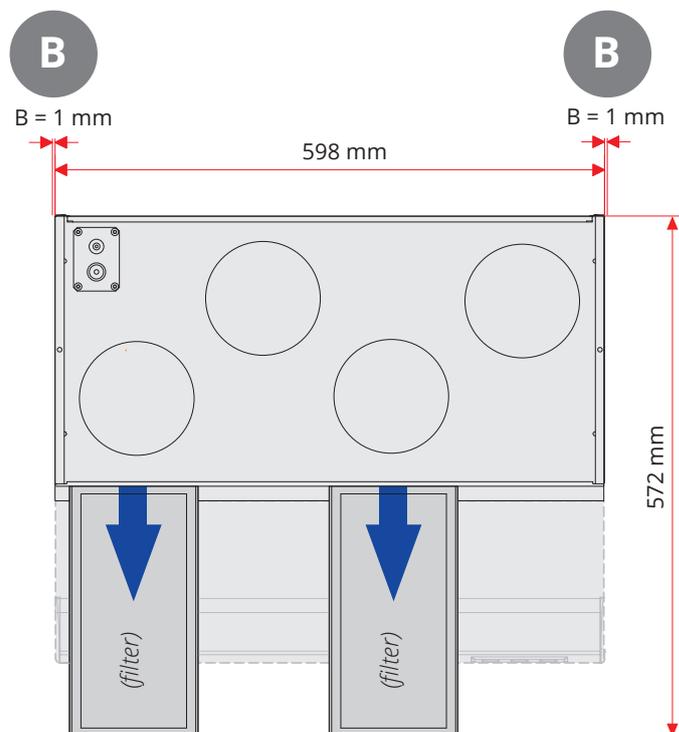


Figure 2

Where there is a duct enclosure over the unit

To be able to lift the design front/external front off, there must be at least 15 mm clearance above it, see figure 3.

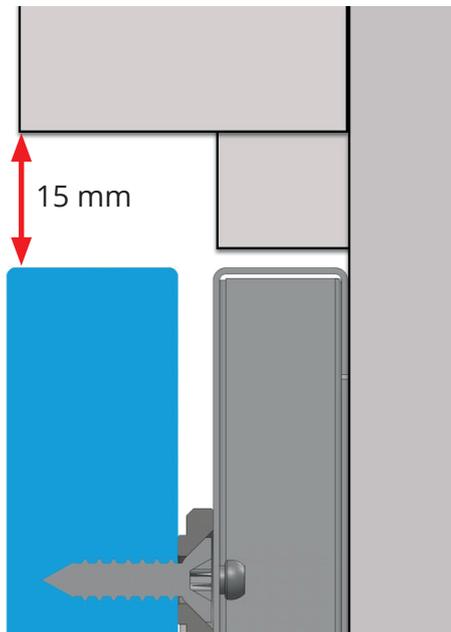


Figure 3

1.4. RECOMMENDED SOUND ATTENUATION FOR WALL-MOUNTING

The wall bracket is used for wall mounting (included).

The unit should preferably not be placed against a wall where noise is undesirable in the room on the other side (bedroom).

Insulation, double plasterboards or interrupted studs can be used to avoid transmission of noise and vibrations.

2. Installation

Nordic KS3 is designed for installation in the kitchen above the cooker, see Fig. 7. The unit can also be placed in other heated rooms and used without a kitchen hood. KS3 is available in left and right versions, depending on what is the most suitable for the duct location (see chap. 5.3. Nipple location on page 16.)

The unit can only be installed to hang on a wall (wall mounting and screws are supplied), see Fig. 4.

Attach the wall mounting to the wall and hang the unit in place on the upper edge of the mounting bracket. Remember to attach the damping strips to the mounting bracket. Hold the unit at an angle when hooking it onto the wall, see Fig. 5.

The unit must also be attached to the wall at the lower edge by means of a small attachment plate. This is necessary, regardless of whether a kitchen hood is connected or not. The attachment plate can be found at the back of the unit. Turn the plate downwards and attach it with a screw to the wall (the screw is supplied). See Fig. 6.

For secure mounting, it is necessary to use additional studs (transoms). The location of these is shown in Fig. 7.

NB The wall must have good sound insulation, see chap. 1.4. Recommended sound attenuation for wall-mounting on page 7.

The wall must be completely flat behind the unit and the kitchen hood. If tiles are to be attached over the top of the cooker, there should be no tiles on the wall where the kitchen hood is installed.

The distance between the bottom of the grease filter and the cooker must be at least 45 cm for electric cookers and at least 65 cm for gas cookers. For the external dimensions of the unit, see chap. 7. Dimensioned drawings on page 18.

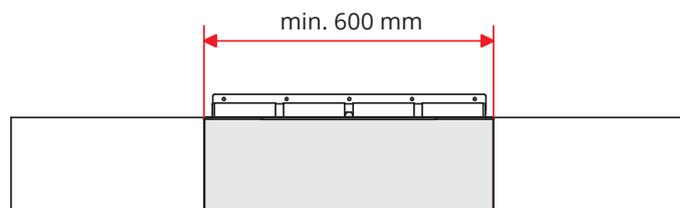


Figure 4

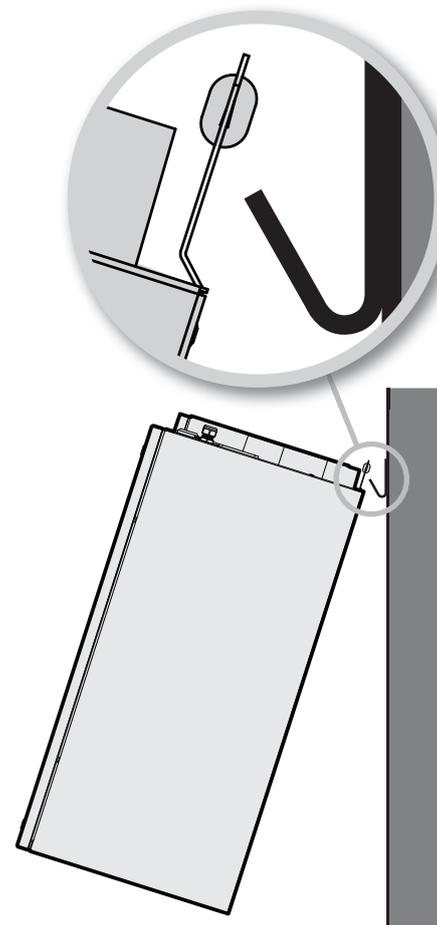


Figure 5

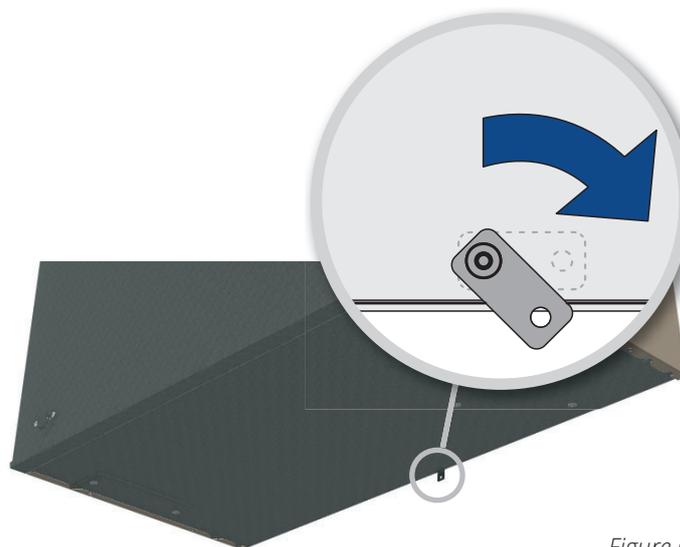
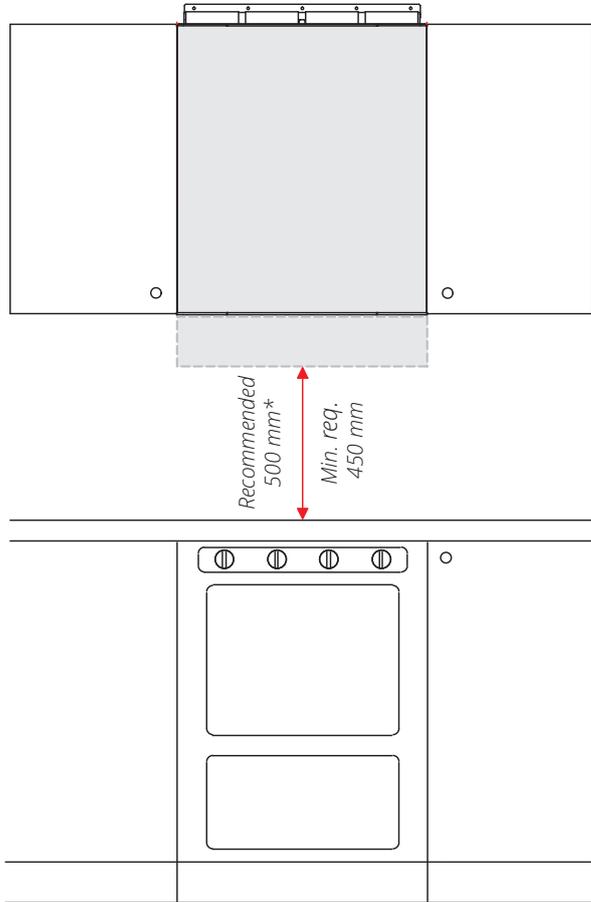
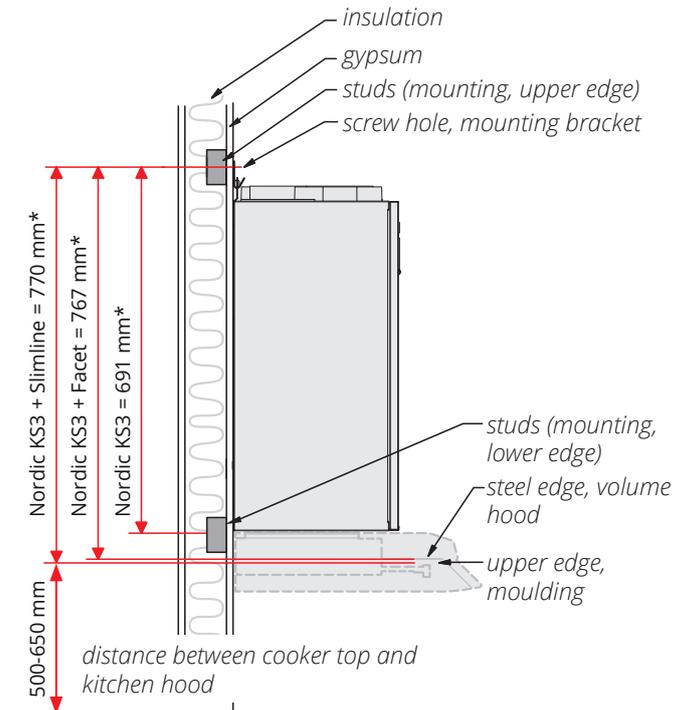


Figure 6



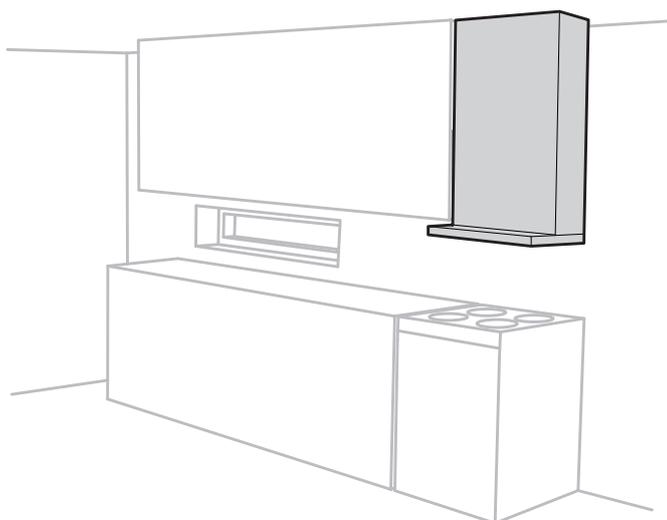
*min. req. 650mm for gas cookers



* Dimensions so that the unit incl. kitchen hood is on a level with the lower edge of the top cabinet. E.g. with 500 mm between the top cabinet and worktop, the distance from the worktop to the screw hole in the mounting bracket must be 500 + 770 mm when KS3 is used together with Slimline.

Figure 7

2.1. WITH KITCHEN HOOD

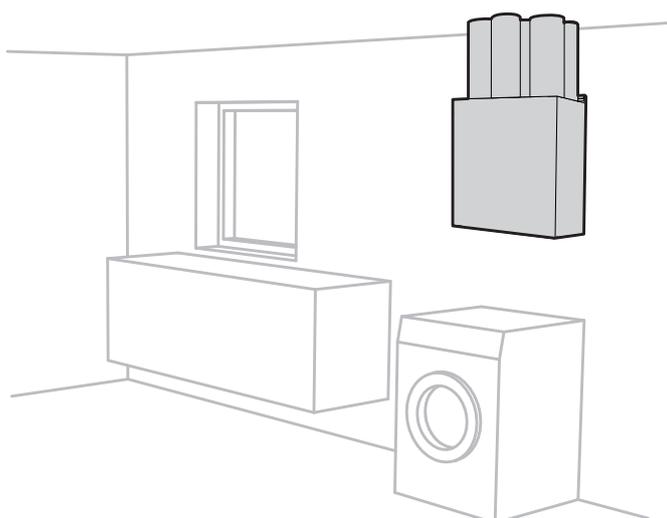


Hanging on a kitchen wall.



There may be a risk of external condensation on the unit if it is placed in a room with high humidity.

2.2. WITHOUT A KITCHEN HOOD



Hanging on wall, e.g. in laundry room.

2.3. WHAT IS INCLUDED?

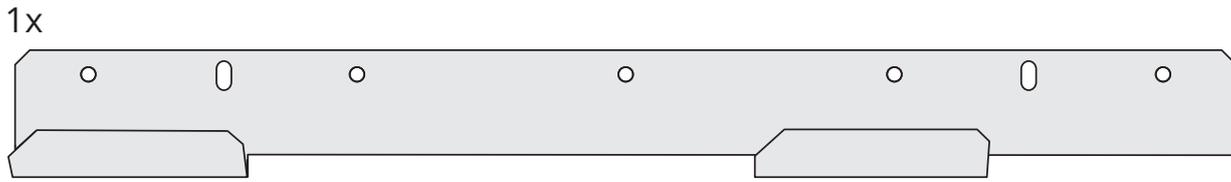
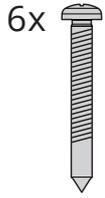
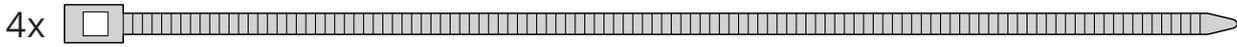


Figure 8 What is included?

3. Duct connection

3.1. CONNECTION TO THE UNIT

See Figure 9 Duct connection.

Ensure that the ducts are fitted to the correct nipple - see the markings on top of the unit and see chap. 5. System and general drawings on page 15.

Pull the duct insulation well up to the unit. To prevent 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 efficiency corresponding to $\lambda = 0.035 \text{ W/m} \cdot ^\circ\text{C}$ or better. The fitter is responsible for the required insulation and vapour-proof sleeves being used in accordance with location/temperature.

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

Silencers should be installed on the main trunk to reduce fan noise to the rest of the duct system.

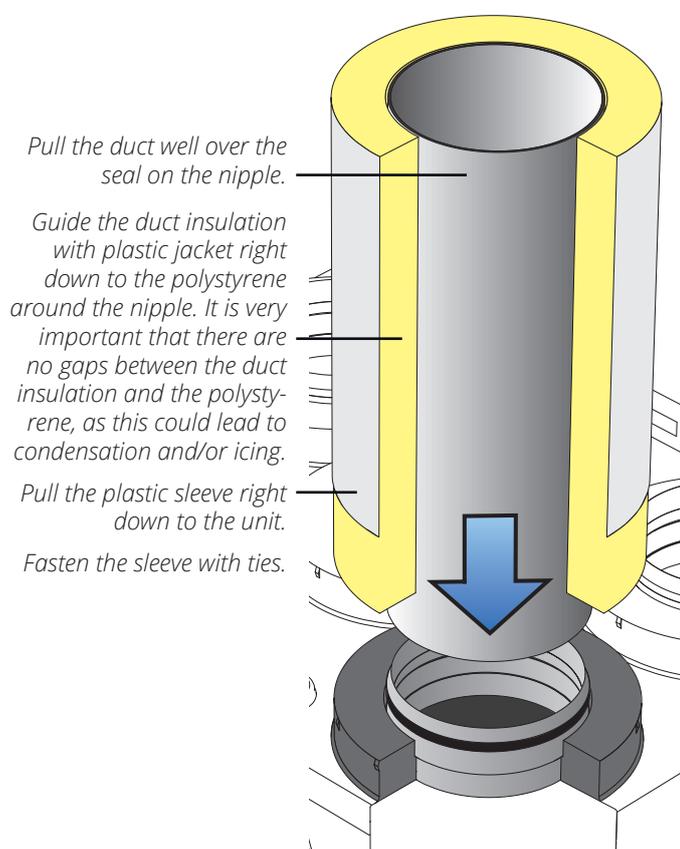


Figure 9 Duct connection



Figure 10 Fitted ducts

4. Electrical work



DANGER! All electrical work must be performed by an authorised person.



The unit should be installed with an earth fault breaker. We recommend a separate circuit for the unit.

The unit is supplied with a 2.8 m cable with plug. The cable comes out of the top of the unit and is connected to a 230 V 50 Hz single-phase earthed power point that is placed in an easily accessible position close by. The power plug should be used as the service switch. For fuse sizes see, see chap. 6. Technical data on page 17.



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



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

Accessories

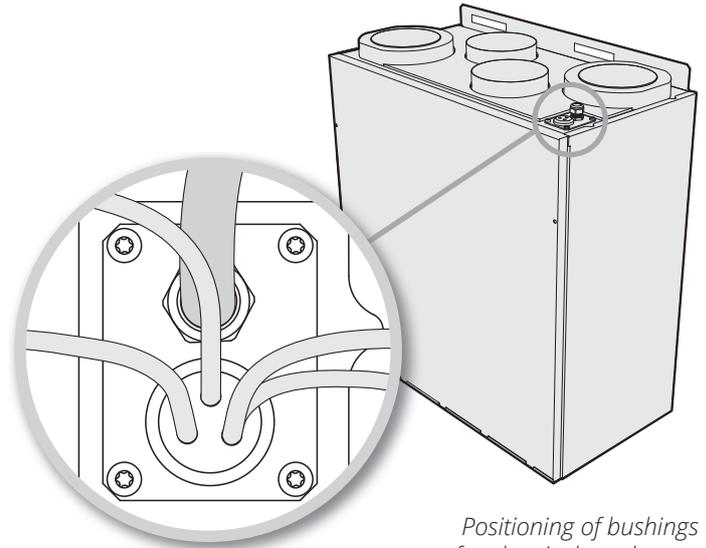
Cables are led out of the unit for a 230V network connection, accessories (for example a control panel) etc. It is important that there is easy access to these contacts later on – should faults occur or when replacing the unit.

Accessories with a closing contact can be connected to a 3-core cable on top of the unit.

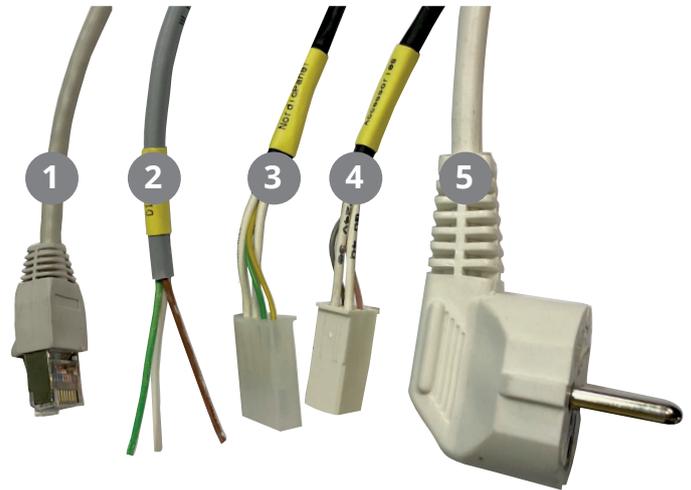
Configurable inputs

Marking	Colour	Function	Description
DI1	Brown	Speed 3	Forced air flow supply air/extract air
DI2	Green	Speed 4	Forced air flow supply air
G0	White	Reference	

Factory default settings.



Positioning of bushings for electrical conductors (shown as a left model)



The installation instructions for the individual products must be followed.

	Cable type	
1	Network cable	
2	3-core cable	(DI1&DI2)
3	Cable for control panel	(NordicPanel)
4	Not in use (accessories)	(Accessories)
5	Power cable, unit	

For installation of a control panel, see chap. 9.2. Startup and connection of the unit on page 21.

4.1. AUTOMATIC CONTROL

The signal cable must be laid between the unit and the switch unit. See the separate instructions for automatic control.



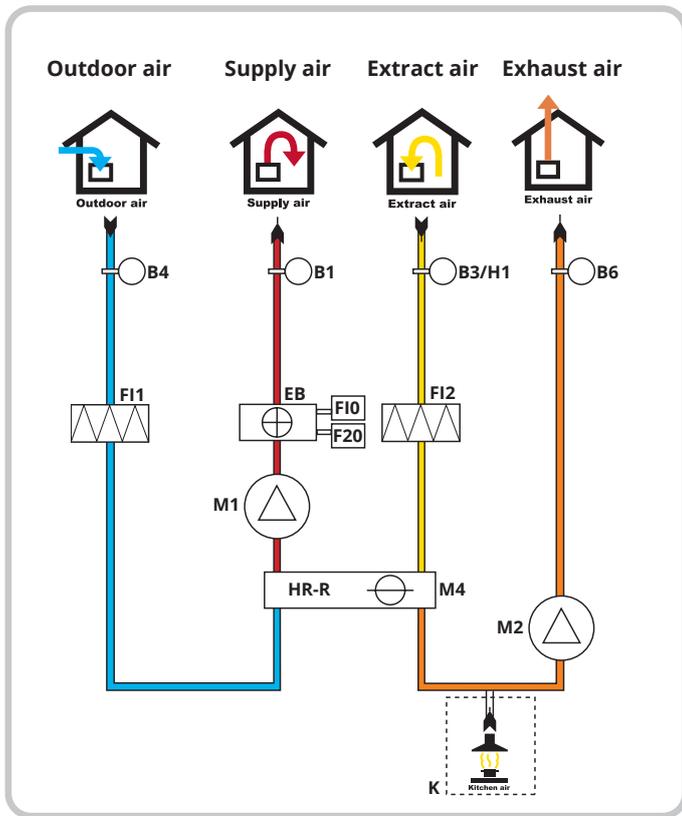
Signal cables must be at least 30 cm from power cables, dimmers, thermostats etc. and should be laid in a 20 mm wiring conduit at installation. The cables must not be more than 24 m long.

4.2. EXTERNAL COMPONENTS

See wiring diagram enclosed with unit.

5. System and general drawings

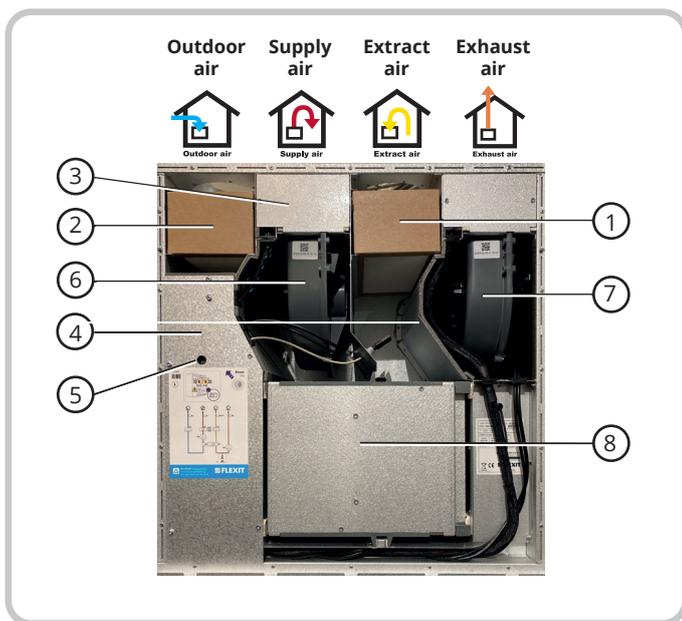
5.1. SYSTEM DRAWING (ELECTRIC HEATING BATTERY)



Abbreviation	Description
B1	Supply air temperature sensor
B3	Temperature and humidity sensor, extract air
H1	Humidity sensor, extract air
B4	Outdoor air temperature sensor
B6	Exhaust air temperature sensor
EB	Heating battery
F10	Overheating thermostat, manual reset
F20	Overheating thermostat, automatic reset
F11	Supply air filter
F12	Extract air filter
M1	Supply air fan
M2	Extract air fan
HR-R	Rotary wheel-type heat exchanger
M4	Rotor motor
K	Kitchen hood connection
DA4	Damper

(Shown as left-hand model. The right-hand model is inverted.)

5.2. GENERAL DRAWING

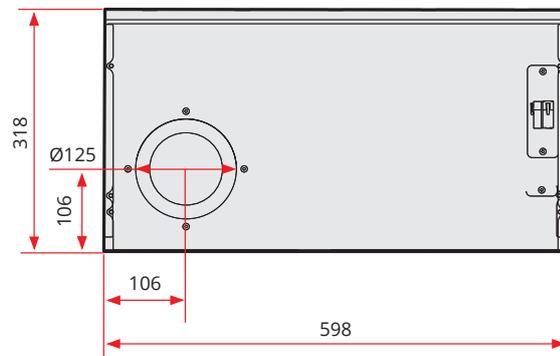
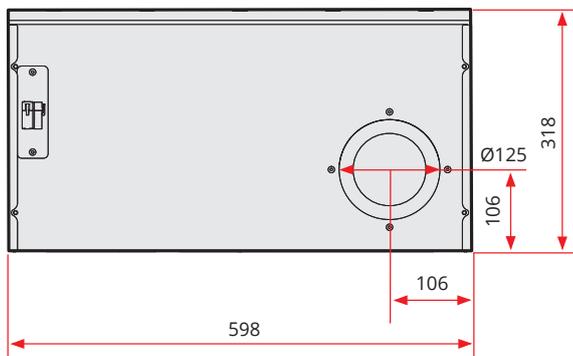
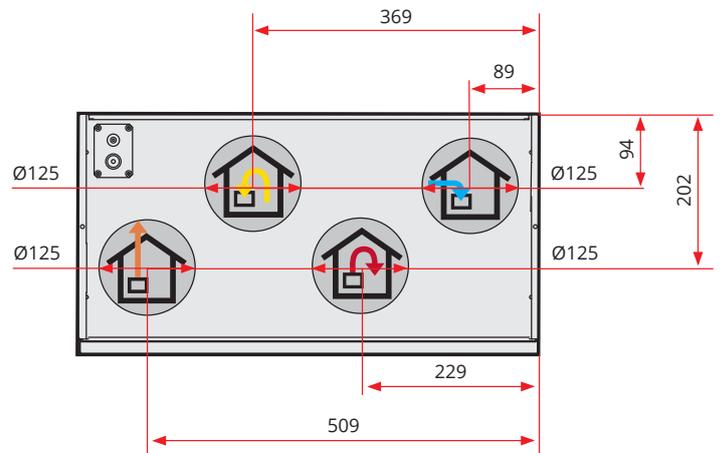
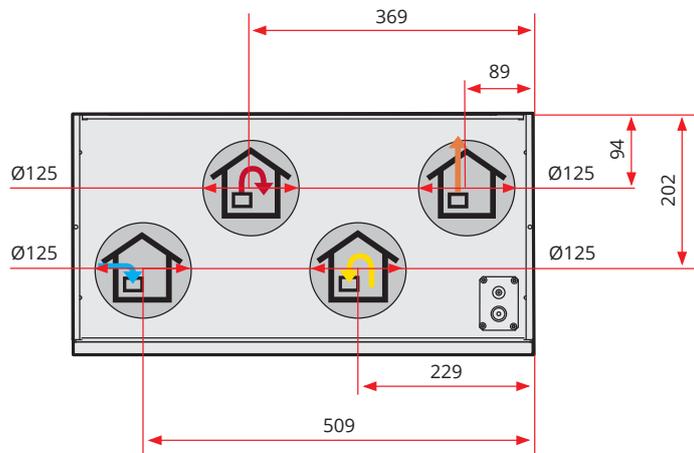


No.	Abbreviation	Description
1	F12	Extract air filter
2	F11	Supply air filter
3	EB	Heating battery
4	F10	Overheating thermostat, manual reset
4	F20	Overheating thermostat, automatic reset
5		F10 reset button
6	M1	Supply air fan
7	M2	Extract air fan
8	HR-R	Rotary wheel-type heat exchanger

(Shown as left-hand model. The right-hand model is inverted.)

5.3. NIPPLE LOCATION

Dimensions in mm.



(Shown as a left-hand model)

(Shown as a right-hand model)

6. Technical data

POWER	Rated voltage (AC 50 Hz)	230 V
	Frequency	50 Hz
	Fuse size	10 A
	Rated power, total	679 W
	Rated power, max. electric battery	500 W
	Rated power, fans	2 x 85 W
	Rated power, rotor motor	6 W

VENTILATION	Fan type	B-wheel
	Fan motor control	0-10 V
	Max. fan speed RPM	6 500
	Automatic control	Flexit GO
	Heat exchanger	Rotating 250*200*2,0
	Humidity sensor	Integrated
	Protection rating	IP21
	Filter class	ePM1 55% (F7)
	Filter type (supply air/extract air)	Compact filter

DIMENSIONS	Filter dimensions (WxHxD)	275 x 96 x 132 mm
	Weight, ventilation unit	45 kg
	Weight, rotor	6,5 kg
	Weight, door	7 kg
	Weight, fan	0,9 kg
	Duct connection	Ø 125 mm (sleeve)
	Height	631 mm
	Width	598 mm
	Depth	318 mm

COATING	Colour	White side/galvanised door
	RAL	9003
	NCS	0502-B50G
	Gloss	55-65

Energy class:

A

CTRL 0,65

LOCAL DEMAND CONTROL

Sensor control for different zones

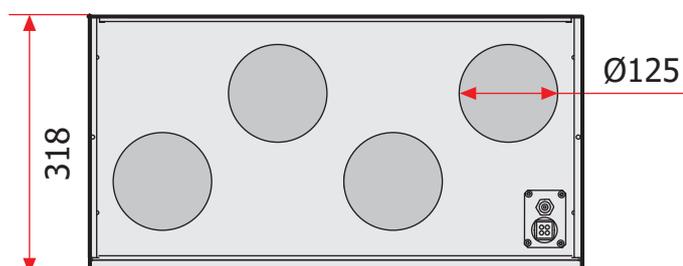
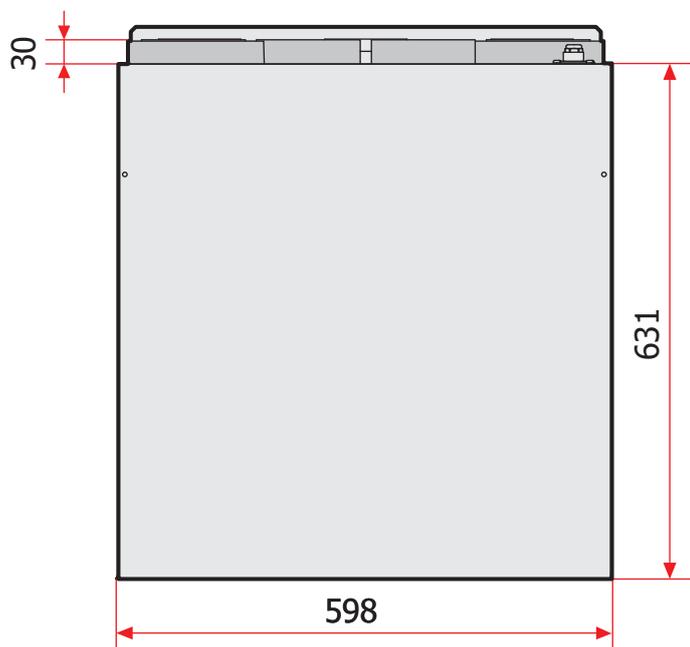
Accessories: App + CO₂ sensor/
motion sensor + damper

Result: Increased air flow rate in
zones that need it

www.flexit.com

7. Dimensioned drawings

Dimensions in mm.



8. Capacity and sound data

Capacity diagrams and performance data for the unit can be found in the product data sheet and in our calculation program Flexit Select.



*Product data sheet
Nordic KS3*

9. Final checks/Starting



CAUTION! The installer may be held liable for any incorrect or defective installation.

9.1. FINAL CHECKS

Check the following points:



Description	Chapter	Performed
Duct insulation has been carried out in accordance with the manual and technical documents	3	<input type="checkbox"/>
Ducts have been connected to the correct nipples	5	<input type="checkbox"/>
Adjustment has been carried out in accordance with the manual and project engineering documents	-	<input type="checkbox"/>
The unit operates normally in all stages	-	<input type="checkbox"/>
The rotor rotates freely	-	<input type="checkbox"/>
Rotor rotates when heating is required	-	<input type="checkbox"/>
Heating comes on	-	<input type="checkbox"/>
Unit has filters for both outdoor air and extract air	-	<input type="checkbox"/>

9.2. STARTUP AND CONNECTION OF THE UNIT

Flexit GO app



For installer, see startup guide (116628) for connection to net.

For end user, see startup guide (116908) for connection to net.

Using the Flexit GO app:

- Alt. 1: Connect the unit to the home's router.
- Alt. 2: Connect the unit to its own access point, see manual 116734.
- Connect the unit's power cable.
- The unit will now start.
- The unit will automatically carry out a startup procedure lasting approx. 3 min.
- Check that the app is connected to your unit. If not, follow the connection instructions in the startup guide for end user (116908).
- After the startup procedure the unit will follow the factory default operating settings.
- The settings can be changed using the app.
- Make sure that adjustment has been carried out in accordance with the manual and project engineering documents (ventilation data documentation).

NordicPanel
(accessory)



See manual (120018).

For use with a control panel (accessory):

- Check that the control panel has been wired up and connected to the unit according to the manual (120018).
- Connect the unit's power cable.
- The unit will now start.
- The unit will automatically carry out a startup procedure lasting approx. 3 min.
- After the startup procedure the unit will follow the control panel's default settings.
- The settings can be changed from the control panel.
- Make sure that adjustment has been carried out in accordance with the manual and project engineering documents (ventilation data documentation).



*Installation instructions
NordicPanel*



*Startup guide
(installer)*



*Startup guide (end
user)*

10. Complaints



Warranty claims will only be valid if the instructions in the manuals have been followed.

This product is covered by warranty in accordance with the current terms of sale, **provided that the product is used correctly and properly maintained.**

The warranty may be rendered invalid if the system is used incorrectly or maintenance is grossly neglected.

Complaints resulting from 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.

11. Disposal



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 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.



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

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



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www.flexit.com