



Nordic L6

ITEM NO. 800150

EN **INSTALLATION MANUAL** Air handling unit

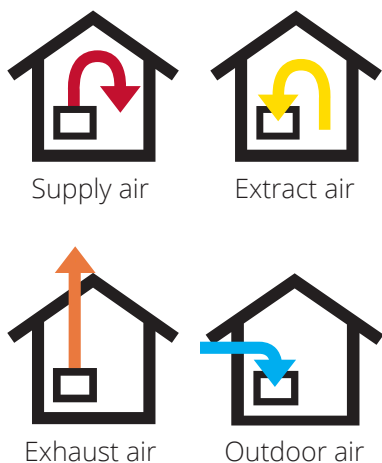


Innhold

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Symbols used

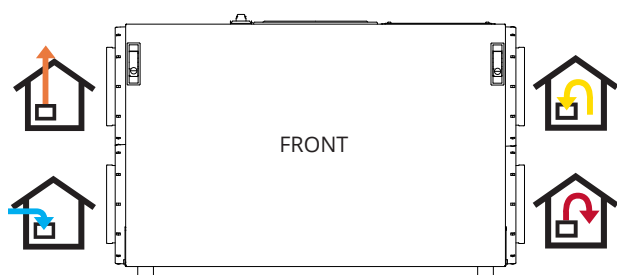
These products feature a range of symbols used for marking the product as well as in the installation and user documentation.



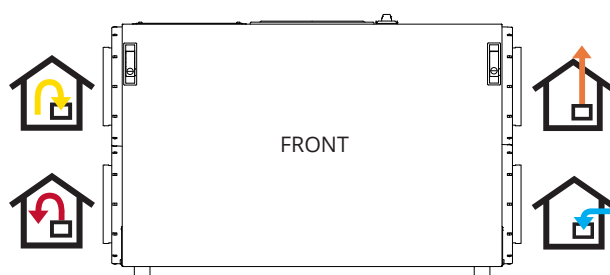
DANGER:
ELECTRICITY



DANGER!
DO NOT TOUCH



EXAMPLE OF NIPPLE LOCATIONS
(Placed with cold ducts to the left)



EXAMPLE OF NIPPLE LOCATIONS
(Placed with cold ducts to the right)



DANGER! When a panel is highlighted in this colour, it means that life-threatening or serious injury could result if the instructions are not followed.



CAUTION! When a panel is highlighted in this colour, it means that not following the instructions could lead to reduced efficiency or operational issues with the product.



CAUTION! When a panel is highlighted in this colour, it means that material damage may result if the instructions are not followed.



INFO! When a panel is highlighted in 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 risk of fire if the equipment is not cleaned in accordance with the instructions.
- All electrical connections must be carried out by qualified personnel.
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 installer is responsible for carrying out a full safety and function assessment of the appliance.
- Before opening the door: The product must be put into service mode and disconnected from the power supply because the unit contains elements that must not be touched when hot. See Flexit GO user manual.
- This appliance may be used by children of eight years or above or by persons with reduced sensory capacity or reduced physical or mental capacity, or by persons with a lack of experience or knowledge, provided they have received instructions 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 play with the unit. Children must not carry out cleaning or maintenance without supervision.
- Precautions must be taken to prevent gases from flowing back into the room from open vents of gas appliances or other fuel-powered devices (for duct and wall fans).



- 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 except during servicing/maintenance or in the event of an accident.
- The unit must not be operated without the filters being in place.
- All pipework installation must be executed by authorised HVAC specialists.
- The location of the water reservoir must be approved by an HVAC specialist owing to the risk of water leaks.



- Tumble dryers must not be connected to the unit.
- There must be a sufficient supply of air to the room when products such as gas cooking ranges, gas fires, open fireplaces, wood-burning stoves and oil-fired heaters are used.

1. Planning and preparation work

1.1. JOINER/FITTER

Airflow

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

Fireplace

When using the fireplace sufficient supply air must be ensured.

Location in the building

The unit is designed to be placed on the floor in a heated area and in a cold loft.



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

Transporting the unit into a home

To make it easier to transport the unit up to the loft, we recommend removing the doors and rotating heat exchanger (see user manual, item no. 121223). The unit is designed to be lifted by the sockets.

Access

The unit must have good access for servicing/maintenance. See kap.2.4.2. Space requirements for vertical floor mounting på s. 10 for details.

Fire safety requirements

Any fire safety requirements must be clarified.

Heat sources should be positioned in coordination with extract air valves to prevent heat from being drawn directly out through a vent or door gap.

1.2. ELECTRICIAN

Power supply

The units have an approx. 2 m cable with plug and require a single-phase earthed socket nearby. Plug requirements: 10 A.

We recommend a separate circuit for the unit. For permanent installation, an approved fuse can be used in the network, provided it can be secured in the off position. Alternatively, a separate approved service switch can be installed.



It is important for the plug/switch to be accessible for servicing when the unit is fully installed.



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



Ensure there is servicing access to the unit's electrical bushings. See the dimensioned drawing for exact location.

For use with the app:

The unit must be connected to the internet or an access point for local communication with the app. It is recommended to install a conduit of at least Ø20 mm between the unit and the home router for the network cable.

For use with a control panel:

Lay a Ø20 mm conduit for running the cable for controlling the unit between the unit and an easily accessible place in the home (e.g. outside the bathroom) and terminate with a flush-mounted single wall box. Locate the control panel here. The control cable must be located at least 30 cm away from any power cables. To ensure a signal, the control cable must be no longer than 24 m.

For use with accessories:

Lay a Ø16 mm conduit between the unit and the location of the accessory in question (kitchen fan, pressure relay etc.).

NB: The PG nipple for the power cable and control cable must be tightened with a torque of 2.0 Nm if the cable is replaced.

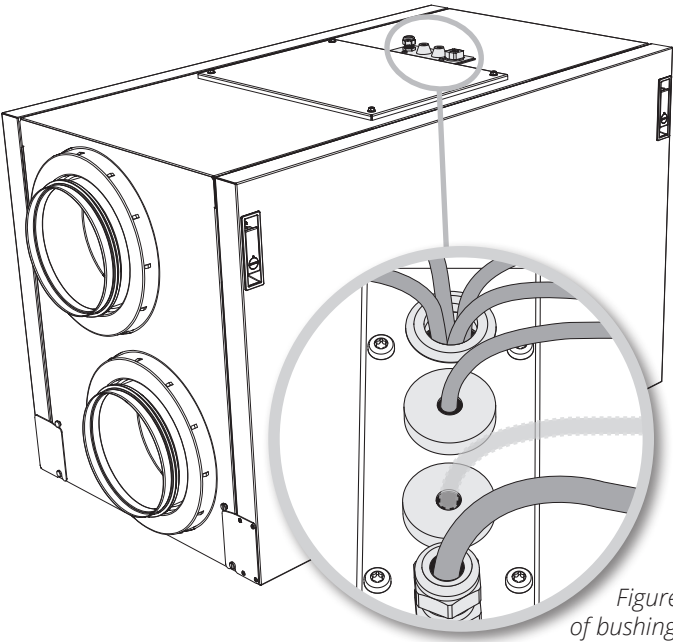
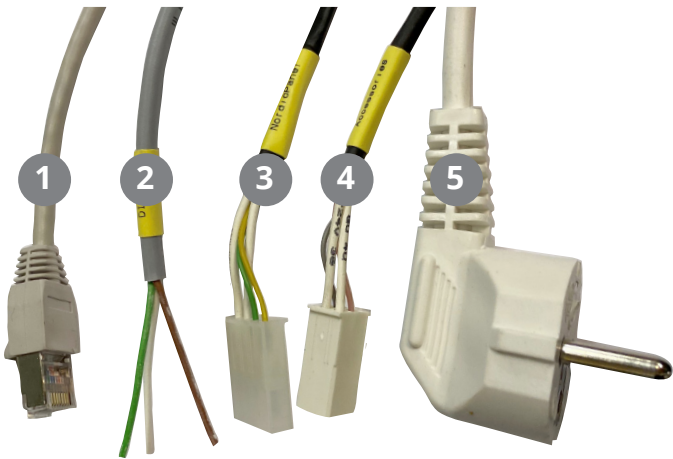


Figure 1 Positioning of bushings for electrical conductors



The installation manual for the individual products must be followed.

For more information on automatic control, see www.flexit.no or the Flexit GO manual and the control panel manual (120018).

	Cable type	
1	Network cable	
2	3-core cable (for e.g. kitchen fan)	(DI1&DI2)
3	Cable for control panel	(NordicPanel)
4	Not in use (accessory)	(Accessories)
5	Power cable, unit	

For exact positioning of the electrical bushings, see kap.8.
Dimensioned drawing på s. 16.

2. Installation

2.1. WHAT IS INCLUDED?

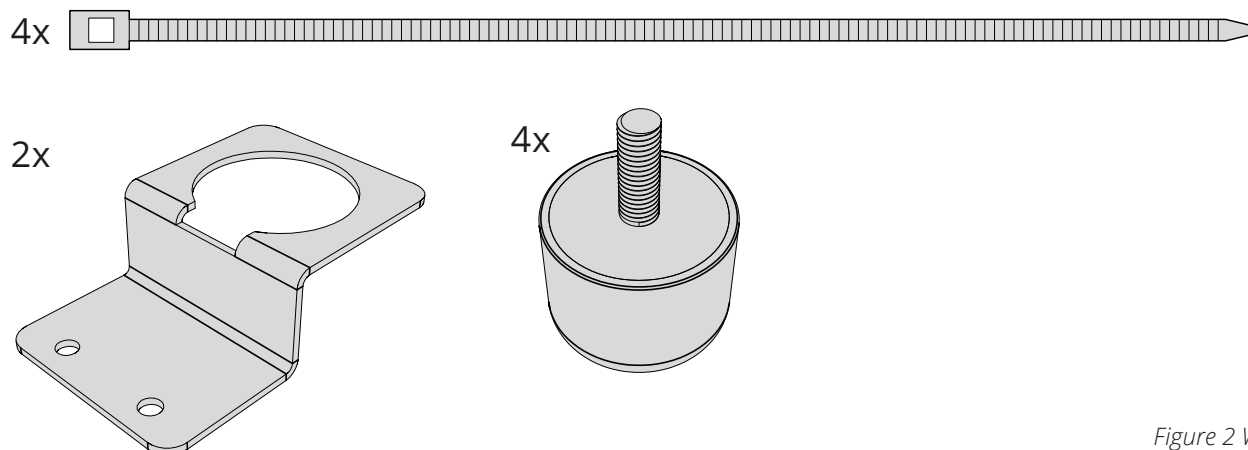


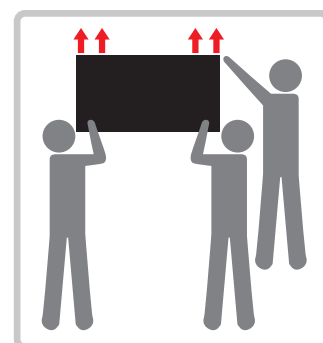
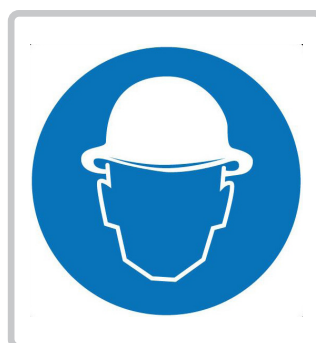
Figure 2 What is included?

2.2. HEAVY COMPONENTS

We recommend wearing a safety helmet during transportation.



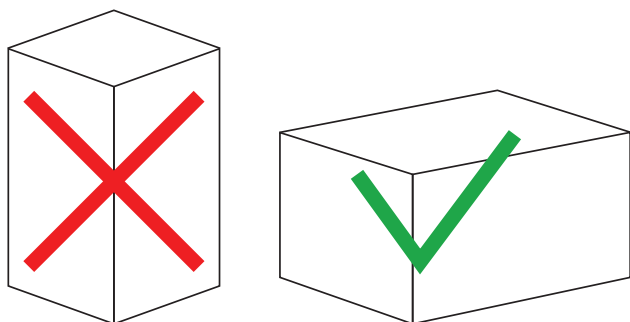
Be aware that some of the unit's components are heavy.



2.3. TRANSPORTATION

Storage

The unit should not be stored on its side.



Inbound transport

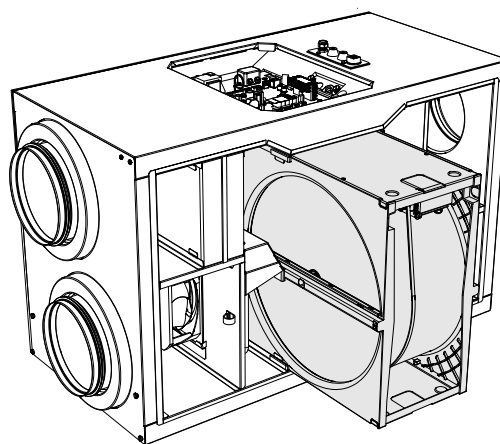
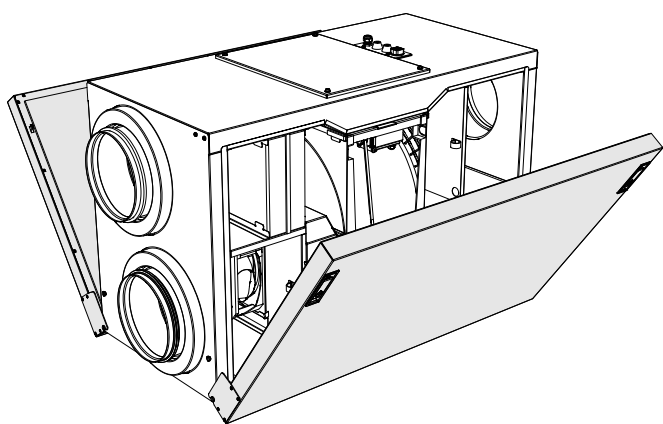
The unit must always be handled by at least two people.

The unit can be transported in the following ways:

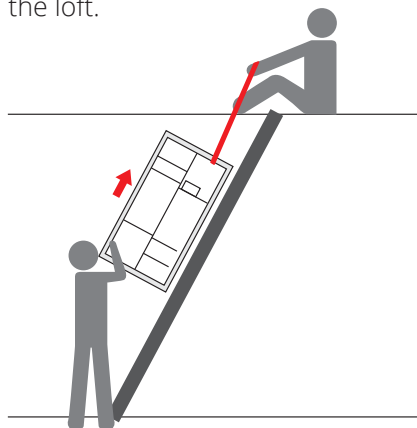
- Lifted by packaging openings.
- Lifted by sockets. We recommend you wear gloves due to sharp edges.

Transport to the loft

For easier transport to the loft, remove doors and rotating heat exchanger module. Take into account internal partition walls and cables with openings when transporting up the loft stairs.



We recommend using a lifting strap for transporting to the loft.



2.4. INSTALLATION

The unit is installed as follows:

Standing on the floor (vibration dampers must be used). It must not be installed leaning on the door.

The unit features two doors, allowing it to be rotated and installed to suit the layout of the duct system. The system label on the top of the unit shows the duct location and air directions. The unit only needs to be operated from the side that is easiest to access.



There is a risk of condensation forming on the outside of the unit in high-humidity rooms.

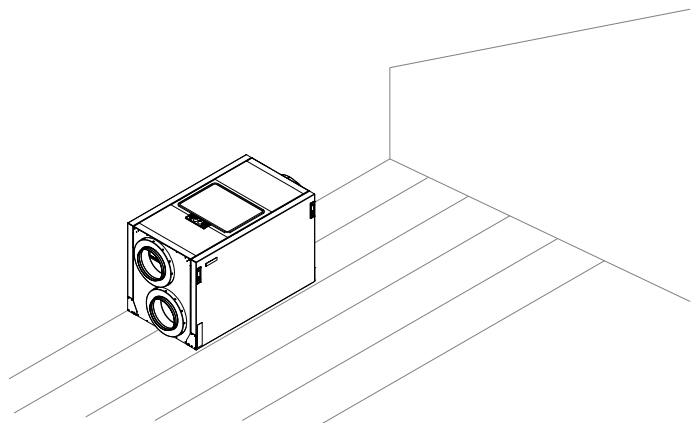


Figure 3 Location options
The unit can be located in a cold zone such as a loft.

2.4.1. Positioning requirements

The unit is designed primarily for installation in the loft or a knee wall space. The unit can be placed in a cold location.

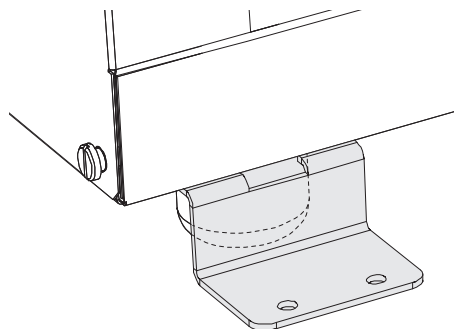


Positioning must accord with individual countries' electrical safety legislation. Check which rules apply in your country.

The unit should be placed so that there is no risk of causing noise disturbance in nearby rooms.

The base should be stable and level.

To reduce the risk of noise and vibrations from the unit, the supplied vibration dampers must be used. To lock the unit into position, the supplied locking brackets can be used.



- If the unit is located in a warm room where a lot of moisture is generated, condensation may form on the outside of the unit during periods when the outside temperature is low.

2.4.2. Space requirements for vertical floor mounting

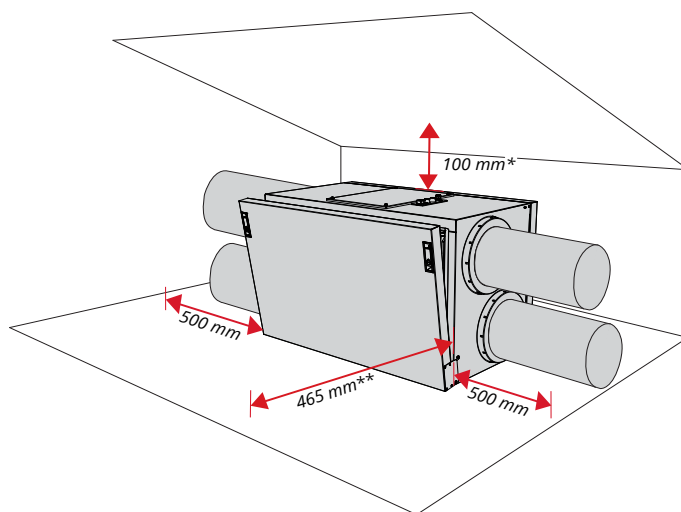
The unit must be installed with sufficient space for servicing and maintenance such as filter replacement and cleaning of fans and the recovery system. See Figure 4.

These are minimum requirements and only take servicing needs into account.

All electrical conductors from the unit must be easily accessible when the unit is fully installed.



Ensure there is servicing access to electrical bushings. See the dimensioned drawing for exact location.



* space required for access to electrical bushings

** space required to remove the rotating heat exchanger

Figure 4 Space requirements

3. Duct connection

3.1. CONNECTION TO THE UNIT

See Figure 5 Duct connection.

Ensure that the ducts are fitted to the correct nipple – see the markings on top of the unit, and kap.6. System and overview diagrams på s. 13.

Pull the duct insulation well up to the unit. To prevent condensation, it is particularly important for the outdoor air 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 at least 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 ensuring that the required insulation and vapour-proof sleeves are used in accordance with location/temperature.

Lay the outdoor air duct with a slight slope down 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.

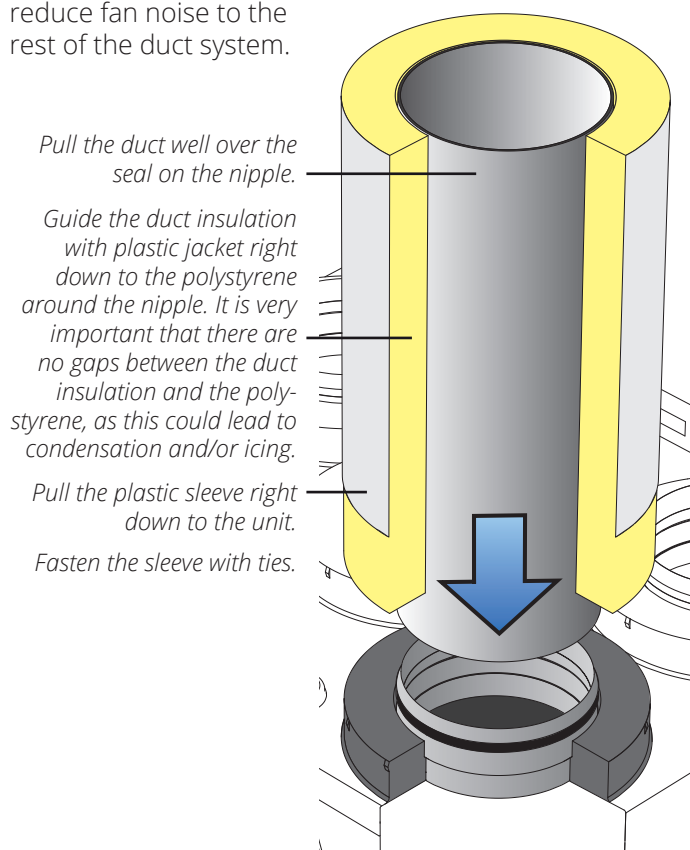


Figure 5 Duct connection

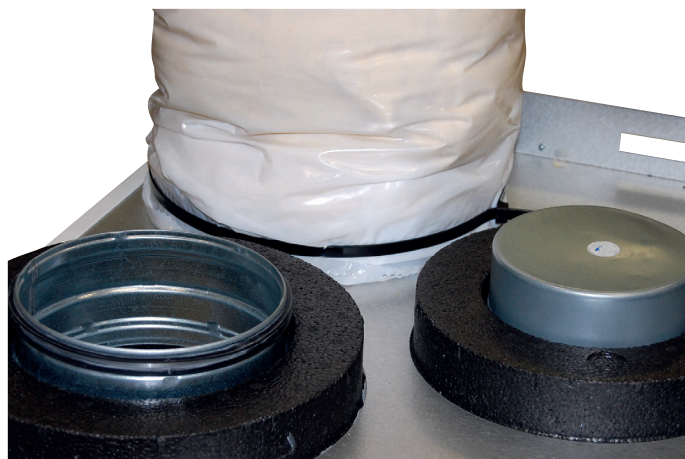


Figure 6 Fitted duct

4. Electrical work



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 m cable with plug. The cable exits at the top of the unit and must be 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 is to be used as a service switch. See kap.7. Technical data på s. 15 for fuse sizes.



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



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

Internet access:

To control the unit remotely and access updates and other cloud services, the unit must be connected to the internet. Lay a network cable between the unit and the home's router, and connect.

Accessories:

Wireless accessories

The wireless adapter can be connected to the 4-pin connector marked "Accessories". For configuration with the Flexit GO app, see the manual supplied with the accessories.

Other accessories

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

Marking	Colour	Function	Description
DI1	Brown	HIGH (default)	Forced air flow rate
DI2	Green	COOKER (default)	Adjusted for selected function
+24 V (REF)	White	Reference	

The inputs can be configured for other functions with the Flexit GO app, see manual (117078).

Control panel:

A control panel can be connected to the 4-pole contact marked "NordicPanel".

For more information, see control panel manual (120018).



Signal cables must be at least 30 cm from power cables and should be laid in a 20 mm wiring conduit on installation. The cables must be no longer than 24 m.

5. Calibration

5.1. UNIT

Operating modes should be adjusted to ensure that the unit functions correctly. Air volumes must be adjusted by qualified personnel in accordance with applicable national requirements.



Defective/incorrect settings may cause damage to the product and the home.

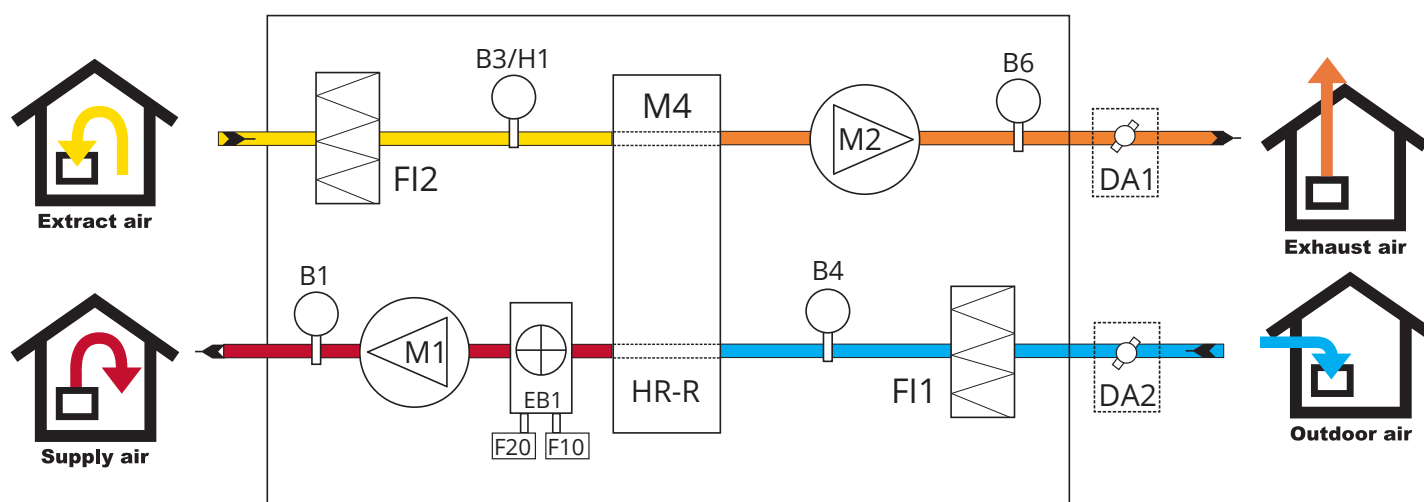
Damage resulting from an incorrectly adjusted ventilation system may lead to the rejection of a potential warranty claim. For setting ventilation modes, see the automatic control manual.

6. System and overview diagrams

6.1. SYSTEM DIAGRAM

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
FI1	Supply air filter
FI2	Extract air filter
M1	Supply air fan
M2	Extract air fan
HR-R	Rotary wheel-type heat exchanger
M4	Rotating heat exchanger motor
*DA1	Damper
*DA2	Damper

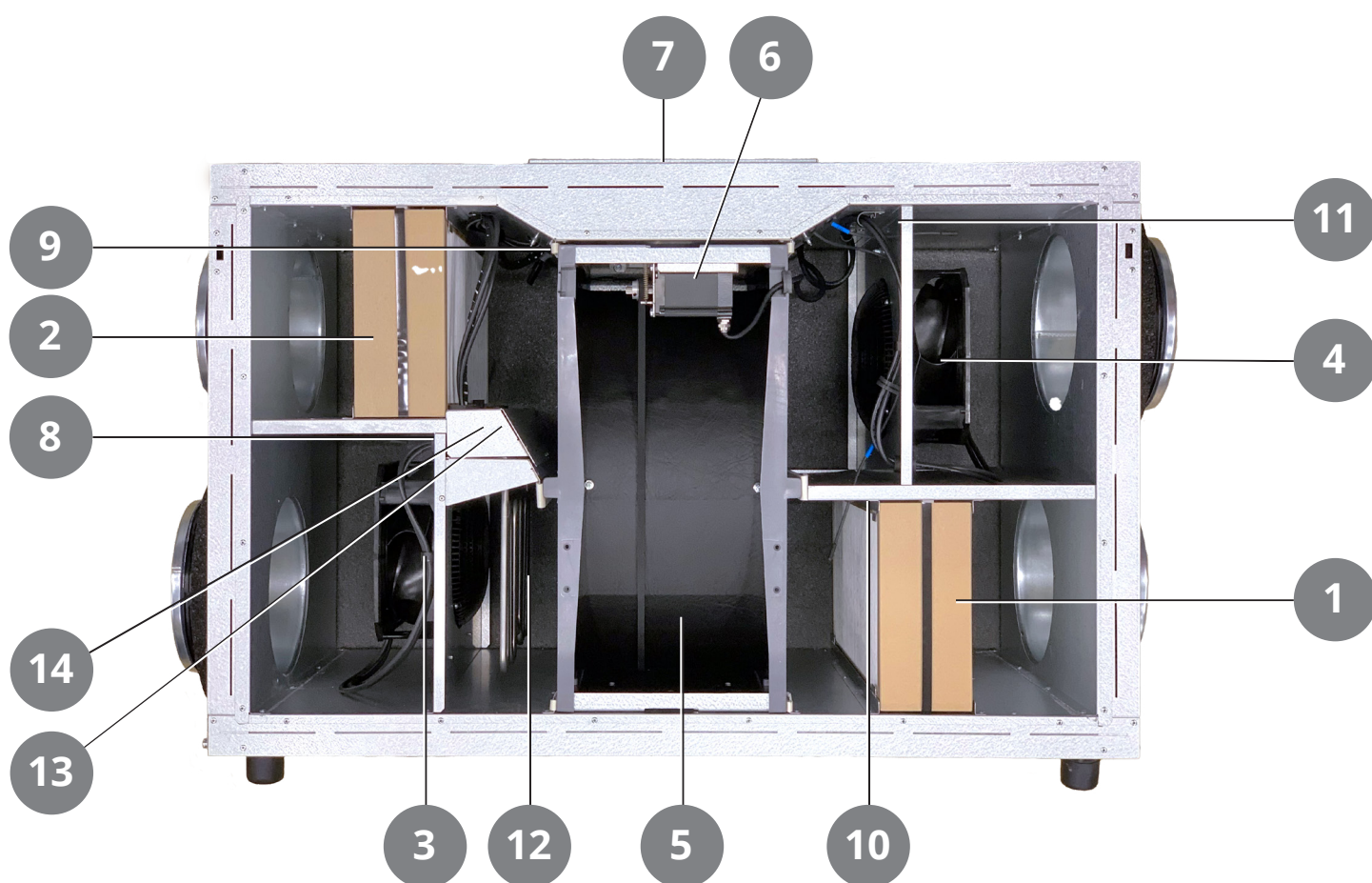
* Accessories, not supplied with the product



(Placed with cold ducts to the right)

6.2. OVERVIEW DIAGRAM

No.	Abbreviation	Description
1	FI1	Supply air filter
2	FI2	Extract air filter
3	M1	Supply air fan
4	M2	Extract air fan
5	HR-R	Rotary wheel-type heat exchanger
6	M4	Rotating heat exchanger motor
7		Control unit
8	B1	Supply air temperature sensor
9	B3/H1	Temperature and humidity sensor, extract air
10	B4	Outdoor air temperature sensor
11	B6	Exhaust air temperature sensor
12	EB	Heating battery
13	F10	Heating overheating thermostat manual
14	F20	Heating overheating thermostat automatic



(Placed with cold ducts to the right)

7. Technical data

		with electric battery
POWER	Rated voltage (AC 50 Hz)	230 V
	Frequency	50 Hz
	Fuse size	10 A
	Rated current	8.1 A
	Rated power, total	1,855 W
	Rated power, max. electric battery	1,500 W
	Rated power, fans	2 x 170 W
	Rated power, rotating heat exchanger motor	4 W
	IP classification*	21

VENTILATION	Fan type	B-wheel
	Fan motor control	0–10 V
	Automatic control	Flexit GO
	Supply air filter class	ePM1 55% (F7)
	Extract air filter class	ePM1 55% (F7)
	Filter type (supply air/extract air)	Compact filter

DIMENSIONS	Filter dimensions (W x H x D)	460 x 218 x 96 mm
	Weight, unit	67 kg
	Weight, rotating heat exchanger cartridge	15 kg
	Weight, door	2 x 9 kg
	Weight, fan	2 x 1.6 kg
	Duct connection	Ø 200 mm
	Height	620 mm
	Width	1,095 mm
	Depth	559 mm
	Depth without doors	465 mm

Energy class:

A+

CTRL 0.65

LOCAL DEMAND CONTROL

Sensor control for different zones

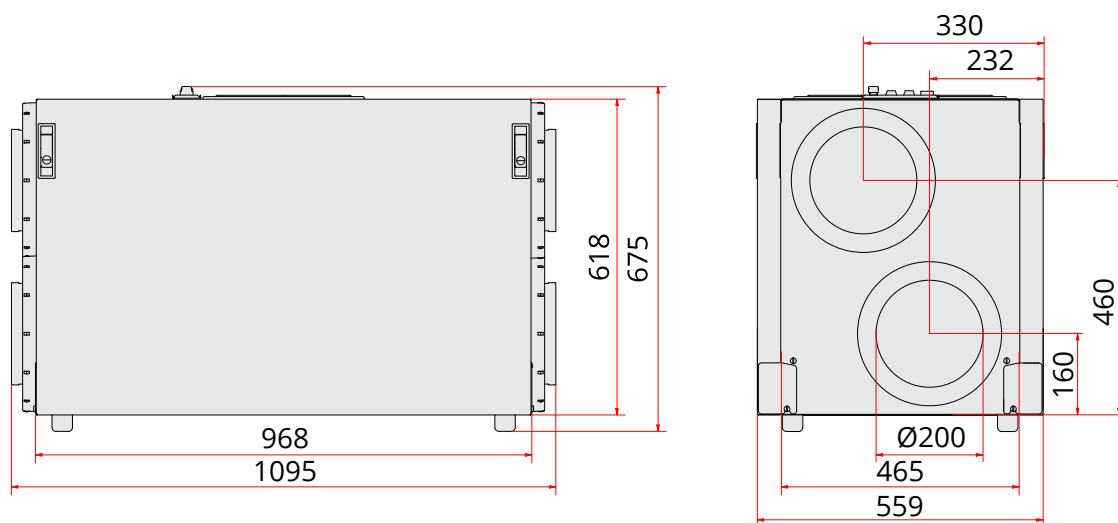
Accessories: App + CO₂ sensor/motion sensor + damper

Result: Increased air flow rate in zones that need it

www.flexit.no

8. Dimensioned drawing

Dimensions in mm



If the unit is to be boxed in, the service hatch must cover the entire width of the unit.

9. Capacity and sound data

Capacity diagrams and performance data for the units can be found in the product data sheets and in our calculation tool Flexit Select.



Product data sheet
Nordic L6

10. Final inspection/Commissioning

10.1. FINAL INSPECTION

Check the following points:



Description	Chapter	Performed
The duct has been insulated in accordance with the manual and technical documents	3	<input type="checkbox"/>
Ducts have been connected to the correct nipples	6	<input type="checkbox"/>
The unit has been calibrated in accordance with the manual and project engineering documents	-	<input type="checkbox"/>
The unit operates normally in all stages	-	<input type="checkbox"/>
The rotating heat exchanger rotates freely	-	<input type="checkbox"/>
The rotating heat exchanger rotates when heating is required	-	<input type="checkbox"/>
The heating comes on	-	<input type="checkbox"/>
Unit has filters for both outdoor air and extract air	3	<input type="checkbox"/>

10.2. COMMISSIONING AND CONNECTING THE UNIT

Flexit GO app

For installers,
see startup guide
(116628) for
connection to
the internet.

For end users,
see the startup
guide (116908)
for connection
to the internet.



Using the Flexit GO app:

Option 1: Connect the unit to the home's router.

Option 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 users (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 the unit has been calibrated in accordance with the manual and project engineering documents (ventilation data documentation).

NordicPanel (accessories)

See manual
(120018).



For use with a control panel (accessories):

- Check that the control panel is connected, and also connected to the unit in accordance with 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 the unit has been calibrated in accordance with the manual and project engineering documents (ventilation data documentation).



NordicPanel is suitable for Nordic units manufactured after 1 October 2022.

To quickly determine whether the unit is suitable, look for a cable on top labelled "NordicPanel".

NordicPanel can also be installed on older units manufactured between May 2019 and September 2022. A cable set can be purchased as an accessory. Contact your nearest dealer for more information.



*startup guide
(installers)*



*startup guide
(end users)*



*NordicPanel
installation manual*

11. Warranty claims



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 applicable terms of sale, **provided that the product is used correctly and is properly maintained.**

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

Warranty claims 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 reserve the right to make changes.

We also disclaim liability for any printing errors that may occur.

12. Disposal



This 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.

Proper disposal of the appliance helps prevent potential environmental and health risks associated with improper handling.

For further information on recycling this product, please contact your local authority, your refuse collection company or the company from which you purchased it.



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

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



Flexit AS, Moseveien 8, 1870 Ørje, Norway
www.flexit.no