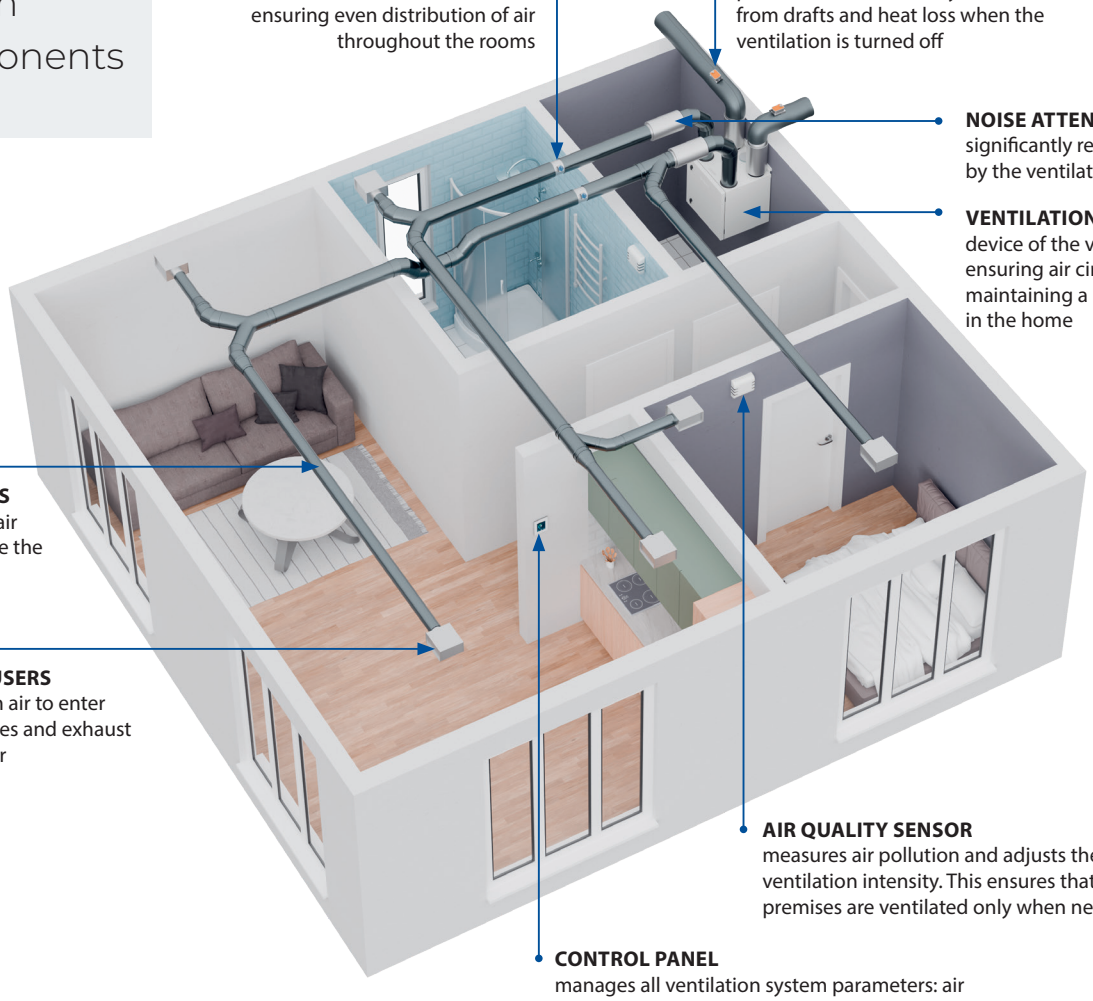
komfovent

DOMEKT

SMART HOME COMFORT

Residential ventilation system with heat recovery

Ventilation system components



Air balancing is performed with **AIR REGULATING DAMPERS**, ensuring even distribution of air throughout the rooms

AIR SHUT-OFF DAMPERS protect the ventilation system from drafts and heat loss when the ventilation is turned off

NOISE ATTENUATORS significantly reduce the noise emitted by the ventilation equipment

VENTILATION UNIT – the main device of the ventilation system, ensuring air circulation and maintaining a healthy microclimate in the home

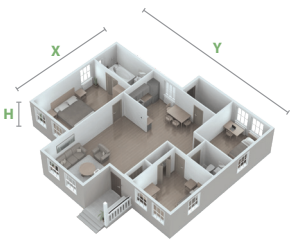
AIR DUCTS distribute air flows inside the building

AIR DIFFUSERS allow clean air to enter the premises and exhaust polluted air

AIR QUALITY SENSOR measures air pollution and adjusts the ventilation intensity. This ensures that the premises are ventilated only when needed

CONTROL PANEL manages all ventilation system parameters: air volume, temperature, and air quality level

What should the ventilation unit's performance be?



Only a sufficient amount of fresh air will ensure a comfortable and healthy environment in your home. This can be achieved by replacing the entire air in the premises with fresh air at least once per hour. The ventilation unit's performance should be approximately equal to the volume of the ventilated space.

Room volume X × Y × H (m^3)	×	Air change frequency times/h	=	Unit performance (m^3/h)

Example:

House volume: 3 × 10 × 15 = 450 m^3.
Recommended air change frequency: 1 time/h.
Required unit performance:
450 m^3 × 1/h = 450 m^3/h.
The approximate unit performance should be around 450 m^3/h.

This calculation is approximate. The actual unit performance is selected based on other important factors, such as the number of people and individual needs. The precise data required for efficient ventilation will be provided by the specialist designing your system.

What should you know about the ventilation system?

DOMEKT ventilation units

Energy savings

To ensure maximum energy efficiency, advanced heat exchangers and economical fans are used in the units. The smart control system optimizes ventilation for effective operation.

Plug & Play

Ventilation units with an integrated control system come fully ready for operation. Users can select from pre-set operating algorithms or configure functions to meet individual needs.

Reliability

The units are constructed from durable materials. The casing is made of galvanized steel, coated with a double-layer anti-corrosion protection. All DOMEKT units feature an integrated heater to prevent frost formation. Units undergo testing during production and independent verification in Swiss and German testing centers.

Smart control

Minimal energy consumption is achieved without compromising comfort at home. This is ensured through a weekly schedule, multiple operating modes, and energy-saving features. The ventilation system can be conveniently controlled via the "Komfovent Control" mobile app.

Installation options

Users can choose between vertical, horizontal, or flat ventilation units, depending on space availability, installation requirements, and ease of maintenance.

Quiet operation

Statically and dynamically balanced fans ensure quiet and smooth operation. Noise levels are minimized thanks to the double-wall casing, which significantly reduces sound transmission.

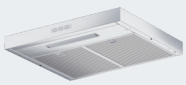
Especially compact units

Domekt R 200 V C8

The unit is convenient to integrate into the kitchen furniture set above the extractor hood. Its dimensions are specially designed to fit the standard size of a kitchen cabinet. The unit combines two functions:

1. Supply of clean air and removal of polluted air while saving heat and restoring humidity in winter.
2. Removal of odors and vapors accumulating in the kitchen through the extractor hood with automatic airflow balancing.

Two extractor hood models can be connected to the unit:



Monolithic extractor hood with LED lighting (in stainless steel or white colour).

Slim telescopic hood (white)

Domekt R 600 H C6M

When the device's doors and back panel are removed, its width is only 470 mm. Such unit is easy to lift into the attic through a standard hatch or carry down narrow stairs to the basement.

COMPACT design, yet HIGH-performance unit

Domekt R 150 F C8, Domekt R 300 F C8

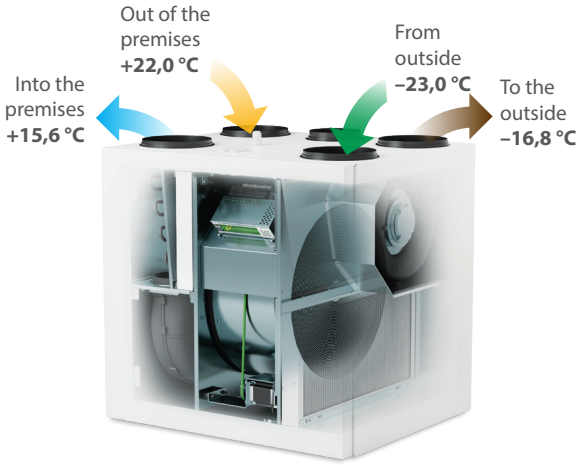
The height of these flat units is only 280 mm, making them ideal for installation above suspended ceilings.

Types of heat exchangers

The heat exchanger is one of the main parts of the ventilation unit, transferring heat or cool from the exhaust air to the supply air that enters the premises.

Rotary heat exchanger

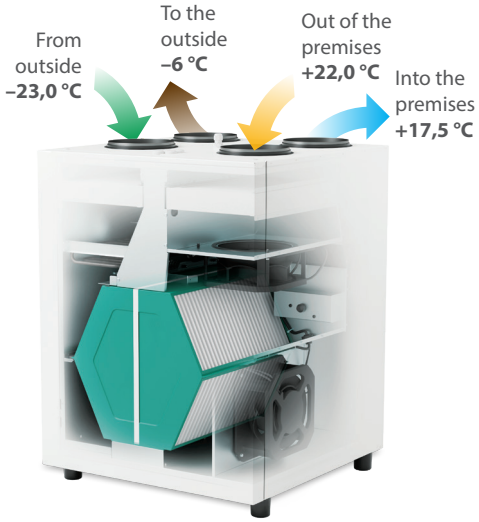
- Option to choose a standard condensing or sorption-enthalpy heat exchanger.
- Returns up to 90% of heat.
- Works effectively even in outdoor temperatures as low as -30°C.
- When operating under normal indoor air conditions, the rotary heat exchanger does not freeze.
- Moisture transfer coefficient of a standard condensing heat exchanger is up to 60%, while a sorption-enthalpy heat exchanger transfers up to 90%.
- Significantly reduces cooling costs in summer.
- No condensate drainage required.



The operating principle of the rotary heat exchanger

Counterflow plate heat exchanger

- Option to choose a standard condensing or diffusion-enthalpy heat exchanger.
- Returns up to 92% of heat.
- Works down to -30°C (using a primary heater).
- The diffusion-enthalpy counterflow heat exchanger returns up to 80% of moisture back into the premises in winter.
- Condensate drainage required.
- Significantly reduces cooling costs in summer.



The operating principle of the plate heat exchanger

ODA – air taken from outside **SUP** – air supplied to the premises **ETA** – air exhaust from the premises **EHA** – air exhaust to the outside

Humidity transferring heat exchangers

Sorption-enthalpy rotary heat exchanger

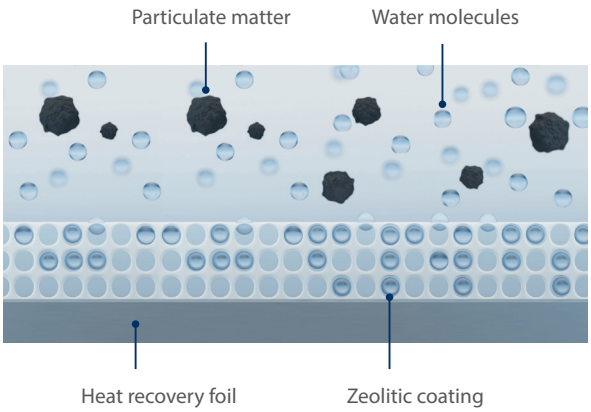
By using heat exchangers with a zeolitic coating, air humidity in residential spaces can be effectively controlled. Their moisture recovery and retention efficiency can reach up to 90%. In winter, this significantly reduces the power needed for humidification, while in summer, it lowers air conditioning costs by limiting excess moisture.

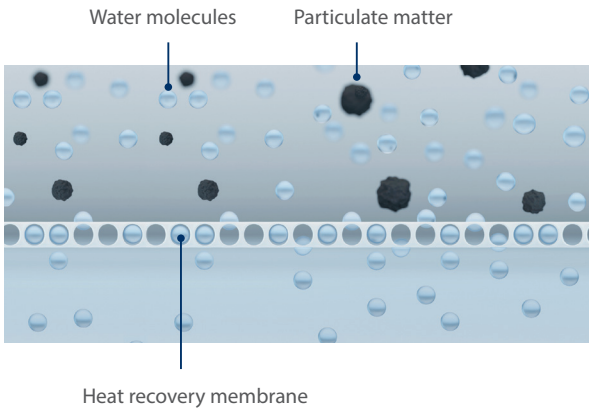
The operating principle of the sorption-enthalpy rotary heat exchanger is based on selective adsorption and molecular attraction. Water molecules from the exhaust air adhere to the zeolitic coating, while the outdoor air supplied in winter is always drier than the indoor air, allowing it to absorb the retained moisture from the zeolitic surface.

Diffusion-enthalpy counterflow heat exchanger

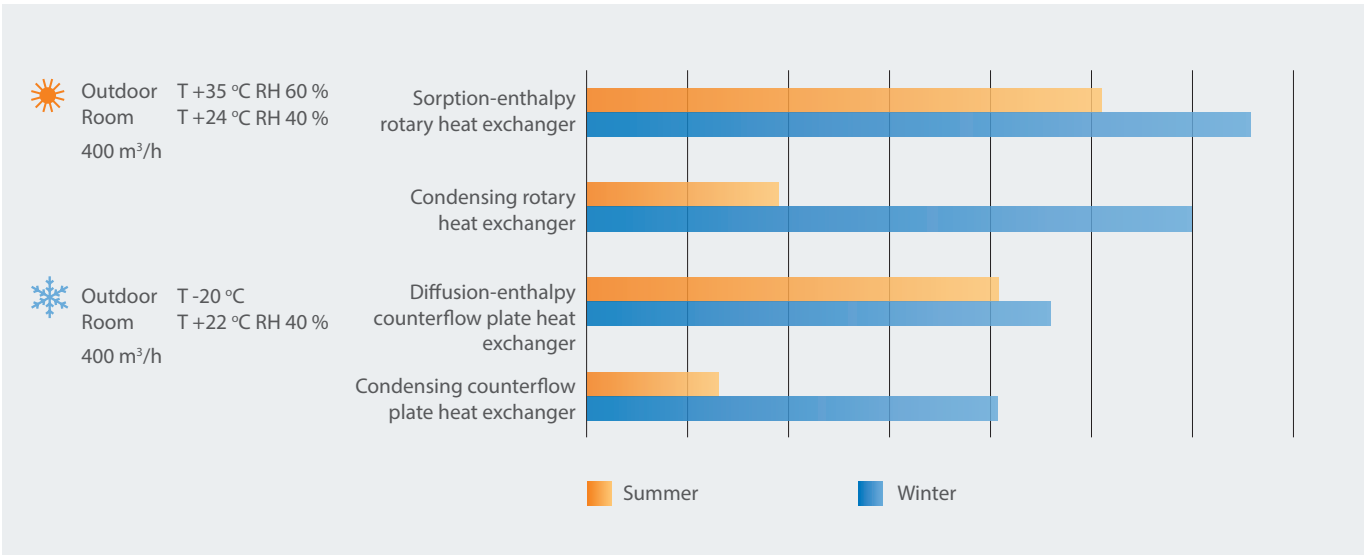
The moisture recovery and retention efficiency of these heat exchangers is slightly lower than that of rotary heat exchangers with a zeolitic coating, reaching 80%. However, they still significantly reduce the need for both humidification and dehumidification.

Their operating principle differs – in winter, moisture from the exhaust air is transferred to the incoming air through a special patented membrane that prevents direct air exchange. In summer, the system removes excess indoor moisture, helping to maintain a balanced indoor climate.





Energy recovered by different heat exchangers



Smart control automation C6M, C8

For Beginners and Experts

A user-friendly interface enables intuitive navigation and control of the unit. The core philosophy behind the design of C6M, C8 – the ventilation unit would operate properly without constant adjustments from the user. Different ventilation modes are optimized for the user's daily needs. Automatic air quality control selects the most appropriate mode and ensures the comfort conditions in the room.
Advanced users can control the unit's operation according to their needs, many settings and control possibilities are provided as well:

- Airflow modes: CAV/VAV/DCV*;
- Intensity control based on air quality, CO_2, and humidity level sensors.

Various operating modes

- 8 operating modes.
- Advanced energy-saving modes.
- Automatic air quality control.
- Extended weekly schedule.

Energy meters *

- Real-time energy consumption indicator.
- Ability to monitor the unit's energy usage.
- Efficiency meter.

"Komfovent Control" app

The cloud-based application is designed to control residential ventilation units with C6M, C8 control system. A user-friendly interface ensures intuitive control. As the application fully replicates control panel functions, you will have access to all monitoring and control possibilities available in the control panel.
The application is available on Google Play, App Store and Huawei AppGallery.

* Except for the C8 control system.

Control options

"Komfovent Control" app

Control remote

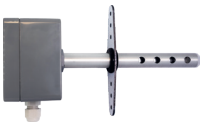
Internet server

Connection and protocols

Air quality function

The air quality function helps conserve electricity by ventilating the space only when needed. When indoor air quality is optimal, the unit's fans operate at the lowest speed. However, when excess moisture needs to be removed, the ventilation intensity automatically increases. Air quality and humidity levels can be monitored using the unit's control remote or measured with separately purchased sensors.

Control remote with integrated humidity and temperature sensor



Duct-mounted humidity or air quality sensor

Room humidity or air quality sensor

Quick device selection table

Device	Efficiency class	Building energy efficiency class*	Device max. performance, m^3/h at 100 Pa	Device performance at reference point, m^3/h at 50 Pa	Energy recovery efficiency, %*	Recommended area up to m^2	Device dimensions (b x h x l) mm	Fan electricity consumption, W*
Units with a rotary heat exchanger								
Domekt R 150 F C8	A	A++	150	105	82	55	460×280×780	17×2
Domekt R 200 V C8	A	A++	233	163	80	95	325×625×600	23×2
Domekt R 250 F C8	A	A++	250	175	80	90	602×310×842	34×2
Domekt R 350 V C8	A+	A++	352	246	86	130	494×512×598	37×2
Domekt R 300 F C8	A	A++	288	202	83	110	630×280×1090	32×2
Domekt R 400 V C6M	A+	A++	373	261	86	140	495×561×598	43×2
Domekt R 400 H C6M	A+	A++	500	350	84	170	515×567×660	52×2
Domekt R 400 F C6M	A+	A++	421	295	83	170	700×310×1170	39×2
Domekt R 450 V C6M	A+	A++	496	347	86	180	585×655×680	55×2
Domekt R 600 V C6M	A+	A++	669	468	84	230	610×750×905	59×2
Domekt R 600 H C6M	A+	A++	650	455	83	250	570×600×1060	62×2
Domekt R 700 V C6M	A+	A++	738	517	84	260	637×950×1070	76×2
Domekt R 700 H C6M	A+	A++	742	519	84	260	634×700×930	73×2
Domekt R 700 F C6M	A+	A++	764	535	83	250	850×420×1240	74×2
Domekt R 900 V C6M	A	A++	942	659	83	300	637×950×1070	118×2
Units with a counterflow plate heat exchanger								
Domekt CF 150 F C6M	A+	A++	202	141	90	80	560×294×1100	14×2
Domekt CF 200 F C8	A+	A++	202	141	90	70	560×294×1100	14×2
Domekt CF 200 V C6M	A+	A++	199	139	92	110	630×790×595	16×2
Domekt CF 250 F C6	A	A++	292	204	86	110	604×294×1250	33×2
Domekt CF 300 V C6M	A+	A++	304	213	88	120	630×790×595	35×2
Domekt CF 400 V C6M	A+	A++	422	295	89	130	585×750×598	48×2
Domekt CF 500 F C6M	A+	A++	650	455	89	190	1045×292×1400	56×2
Domekt CF 700 V C6M	A+	A++	650	455	89	240	491×1220×1020	73×2
Domekt CF 700 H C6M	A+	A++	621	435	89	240	487×700×1500	71×2
Domekt CF 700 F C6M	A+	A++	706	494	88	260	875×344×1365	67×2

V – vertical **H** – horizontal **F** – flat

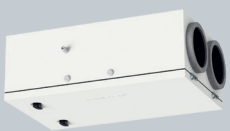
* at reference point – 70% of the unit's performance, 50 Pa.

Depending on installation and duct connections, ventilation units are classified into:

VERTICALLY connected units, where all ducts are connected at the top of the unit

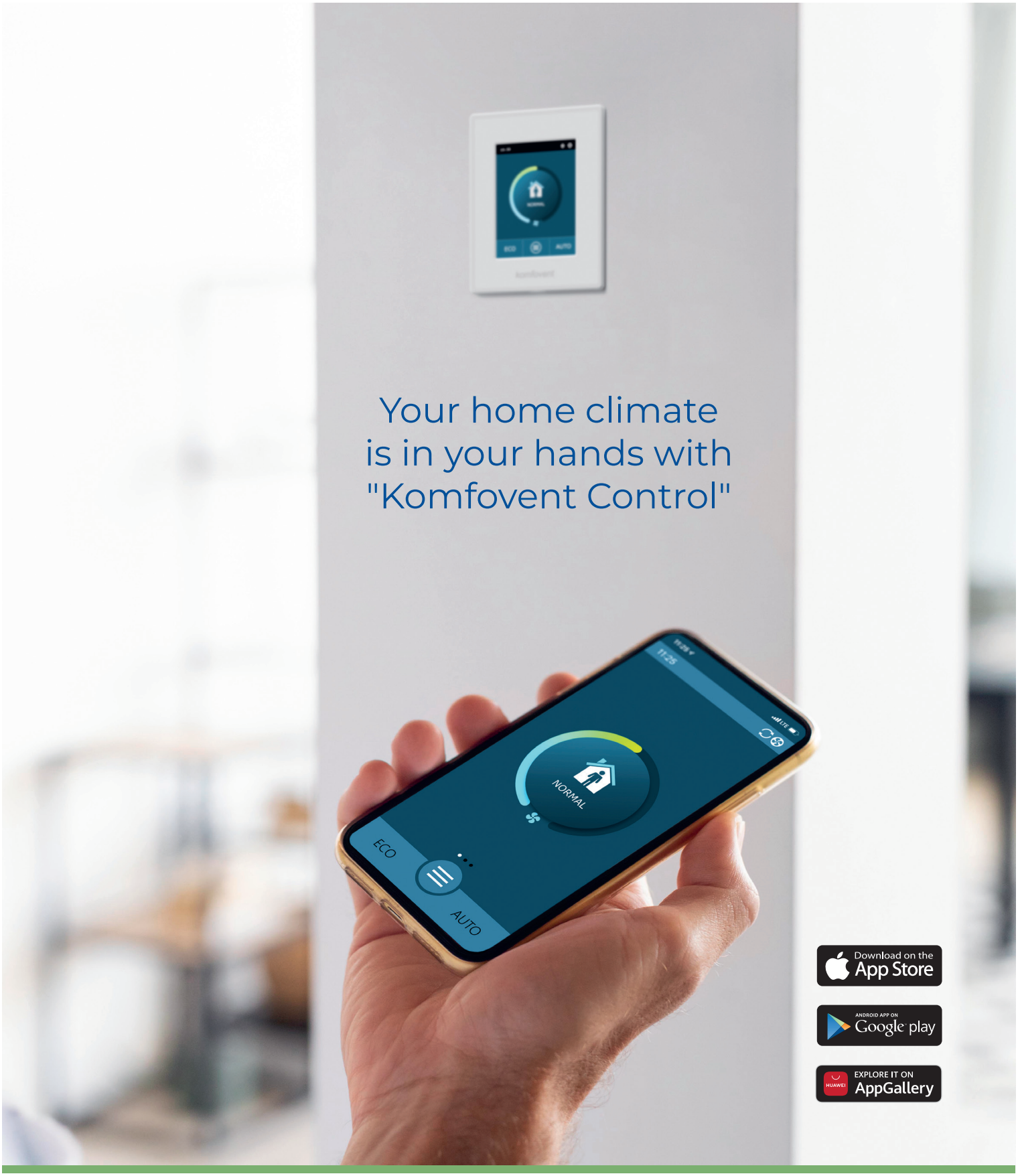
HORIZONTALLY connected units, where all ducts are connected to the sides of the unit

FLAT units, designed for installation above suspended ceilings. All ducts are connected to the sides of the unit.



Where to install the DOMEKT ventilation unit?

A wide range of units allows you to choose a device that fits any location in your home – in the kitchen, storage room, corridor, or attic.



KOMFOVENT UAB
Lentvario str. 146
25132 Vilnius
Lithuania
info@komfovent.com
www.komfovent.com

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