PASSIV ENERGIE

KNX MEMBER

SINGLE ROOM HEAT RECOVERY VENTILATION SYSTEM

HOKKAIDO 400 SERIES

KNX LINE PRODUCT

* Hokkaido 400 series

* VMPX-UV8/KNX KNX control regulator

FOR APARTMENT AND HOUSE

- NETWORKING THROUGH KNX
- HEAT RECOVERY UP TO 95%
- MOISTURE AND MOLD PROTECTION
- CUSTOMIZABLE WITH OTHER KNX DEVICES

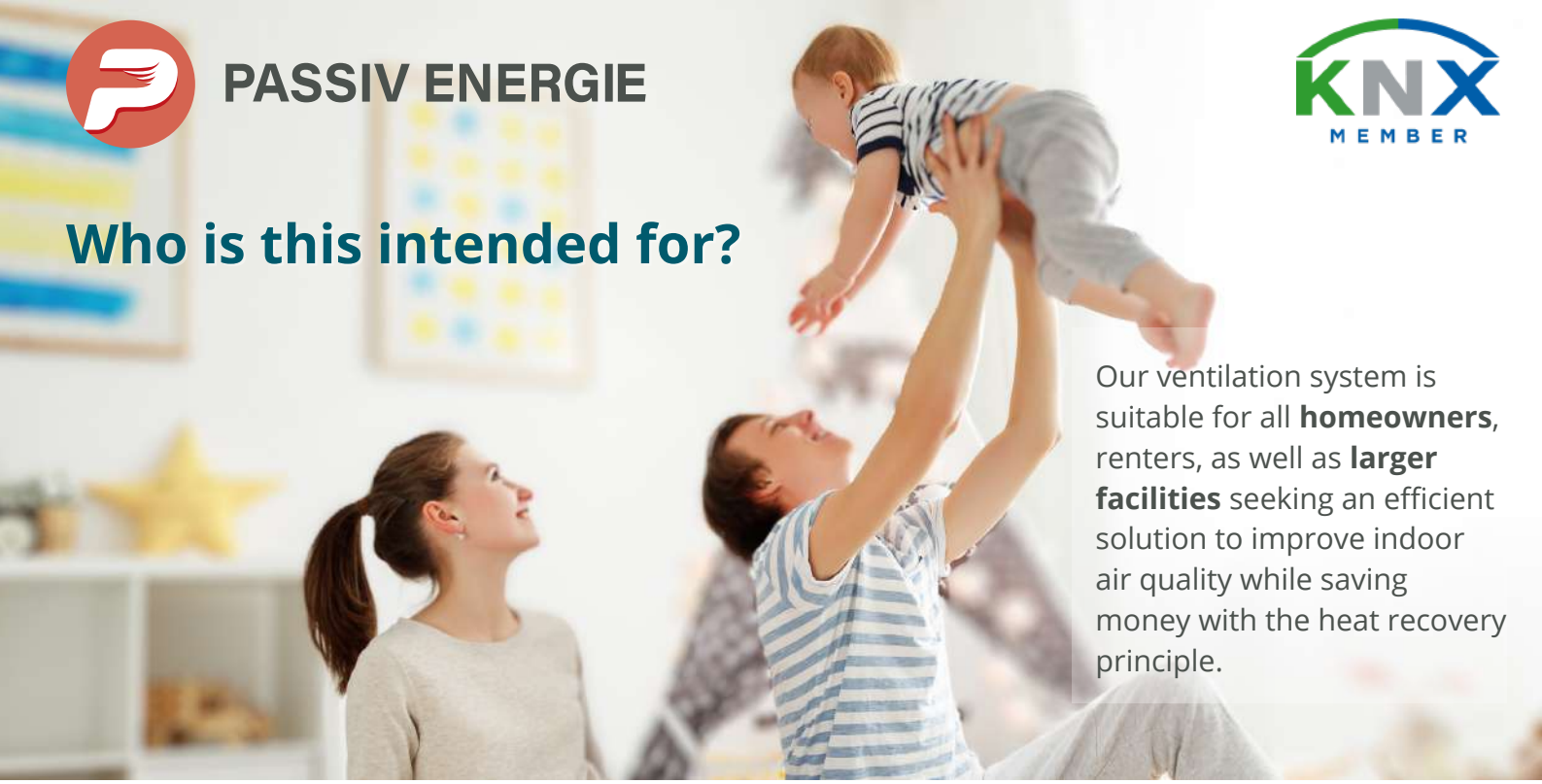
READY FOR A NEW LIVING EXPERIENCE THROUGH THE TECHNOLOGY OF THE FUTURE?

Discover the ultimate comfort and efficiency of fan control with the innovative **KNX bus system!** Our state-of-the-art fans, whether utilized as single-room ventilators or integrated into decentralized ventilation systems with intelligent **KNX technology**, offer unparalleled indoor climate control and an exceptional user experience. All of this is achieved while effectively reducing your energy consumption.

PASSIV ENERGIE

KNX MEMBER

Who is this intended for?



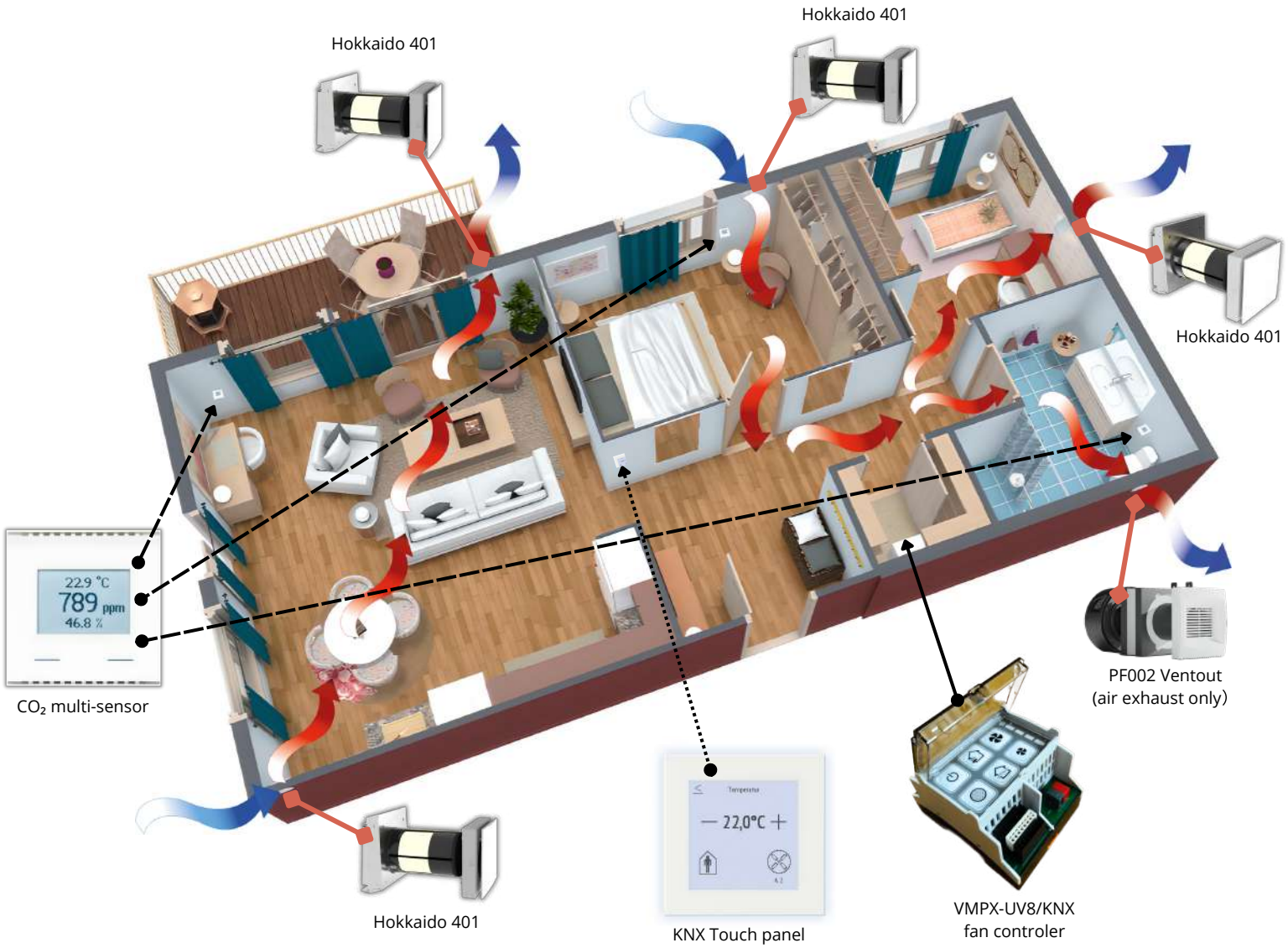
Our ventilation system is suitable for all **homeowners**, renters, as well as **larger facilities** seeking an efficient solution to improve indoor air quality while saving money with the heat recovery principle.

ADVANTAGES

1. Firstly, enhance the **air quality** in your home significantly as our system filters pollutants, lowers CO_2 levels, and maintains optimal humidity.
2. Secondly, experience efficient **heat recovery** that not only reduces **energy costs** but also ensures a consistently comfortable **room temperature**.
3. Thirdly, compared to the competition, our ventilation system is particularly **user-friendly**, offering intuitive controls and a straightforward maintenance process. Additionally, we take pride in being among the few to provide a **KNX-compatible ventilation solution**.

Our ventilation system is versatile, suitable for use in almost **all rooms**, including **bedrooms**, **living rooms**, **kitchens**, and **offices**. It's the perfect choice for anyone seeking to create a healthier and more comfortable environment without compromising on performance and efficiency.

PASSIV ENERGIE



INSTALLATION EXAMPLE: HOKKAIDO WITH KNX

OPERATION

Our innovative ventilation system with **heat recovery** ensures optimal air quality while enabling significant energy savings. **By integrating KNX**, you can seamlessly combine the best of both worlds, achieving smart and efficient room control.

The heat recovery function extracts used indoor air, recovering its heat energy to warm incoming fresh air. The result is a continuous supply of fresh air, efficient energy utilization by reducing heating demand, and a consistently pleasant room temperature.

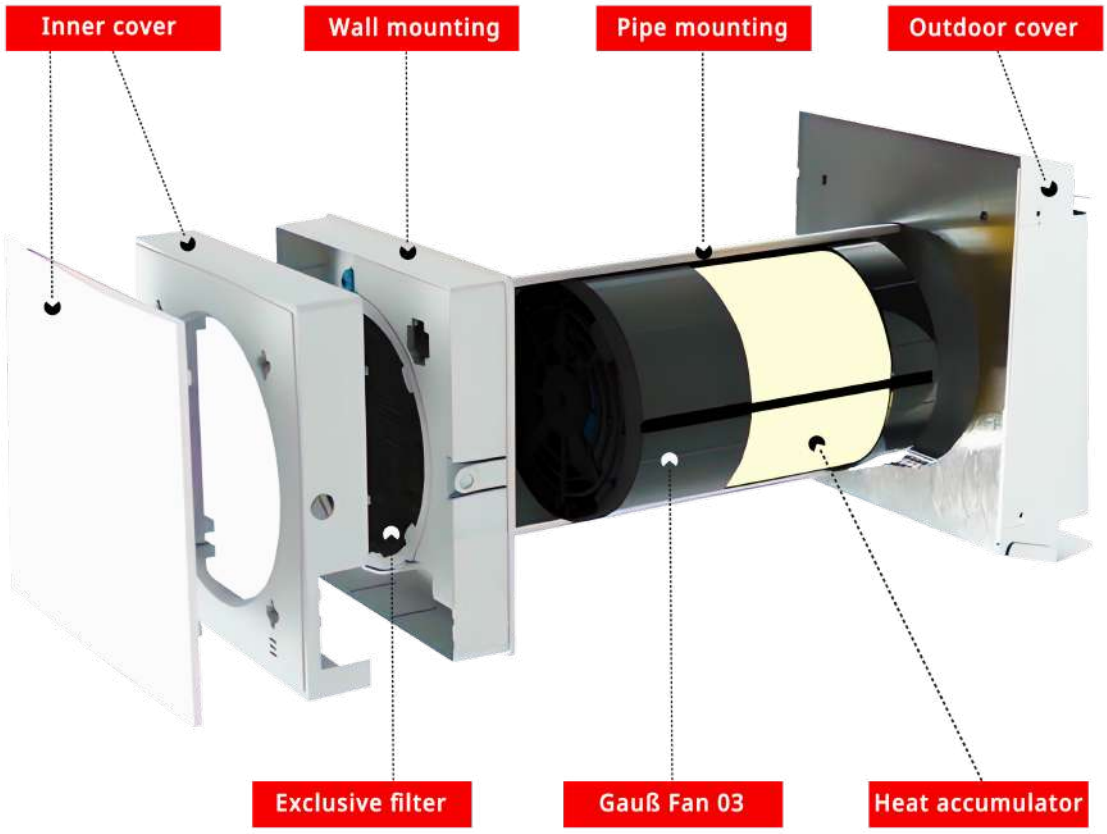
The integration with KNX grants you complete control and automation of this ventilation system, allowing you to link it with other KNX devices in your home for optimized ventilation automatically.

The benefits of connecting our ventilation system with KNX are diverse. You not only enjoy the comfort of a constant room temperature but also save energy and reduce heating costs, actively contributing to protecting both your wallet and the environment without any drawbacks.

PASSIV ENERGIE

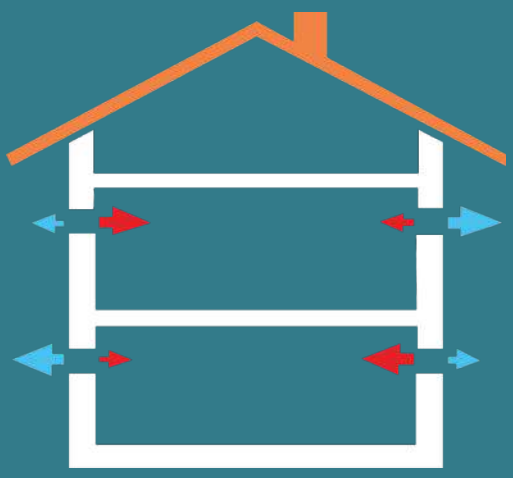
OUR VENTILATION SYSTEM HAS BEEN SPECIALLY DESIGNED TO IMPROVE INDOOR AIR QUALITY WHILE SAVING ENERGY

The fan employs a heat exchanger to uphold a comfortable temperature and humidity level. Unlike systems that necessitate air ducts for effective ventilation, ours generates a natural airflow within the house. Multiple filters are in place to ensure the removal of harmful particles and odors from the air.



The ventilation system distinguishes itself with remarkable **efficiency and energy savings**. Featuring a high air exchange rate of 70m³ per hour, only a few fan units are needed for an entire house. Notably **cost-effective**, the system has a low power consumption of 0.02 watts per hour. Furthermore, the heat recovery efficiency stands at an impressive 95%, ensuring the retained heat energy stays within the house.

For every floor or residential unit, a minimum of two Hokkaido 401 fresh air heat exchangers is required, depending on the floor area. Each unit alternately handles both supply and exhaust air. (Except in moisture extraction, where only humid exhaust air is removed).

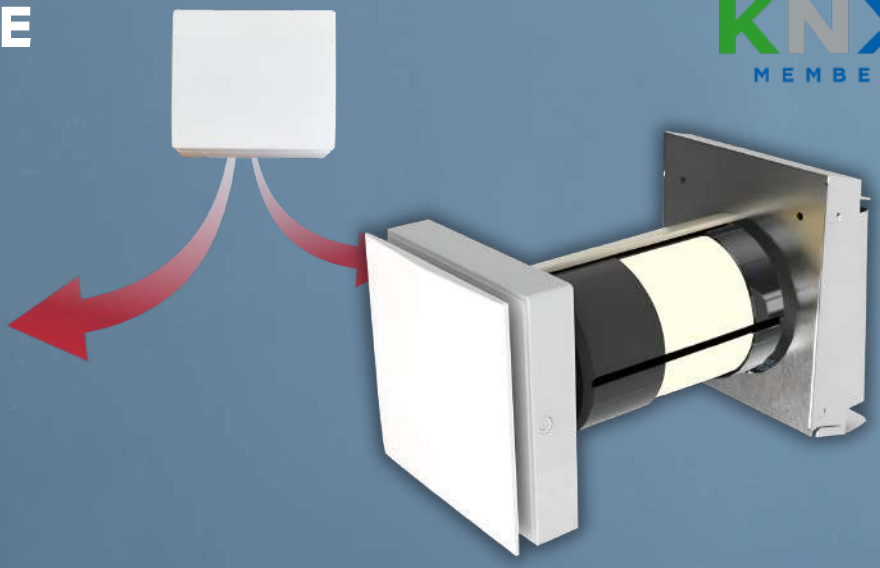


PASSIV ENERGIE

KNX MEMBER

HOKKAIDO 401

Fan unit with ceramic heat storage and KNX compatibility



Heat Recovery

Free Cooling

Dehumidification

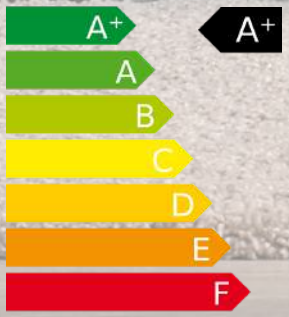
CO_2 Control

Sleep Mode

Low Noise Operation

(Level 1: 9.2 dB, Level 4: 42.4 dB)

Filter Options



Energy Class A+: Cost savings through energy-efficient heat recovery.

Simple and **cost-effective installation**, suitable for both new construction and existing buildings.

Improved indoor **air quality** for better health. Efficient reduction of CO_2, humidity, and odors.

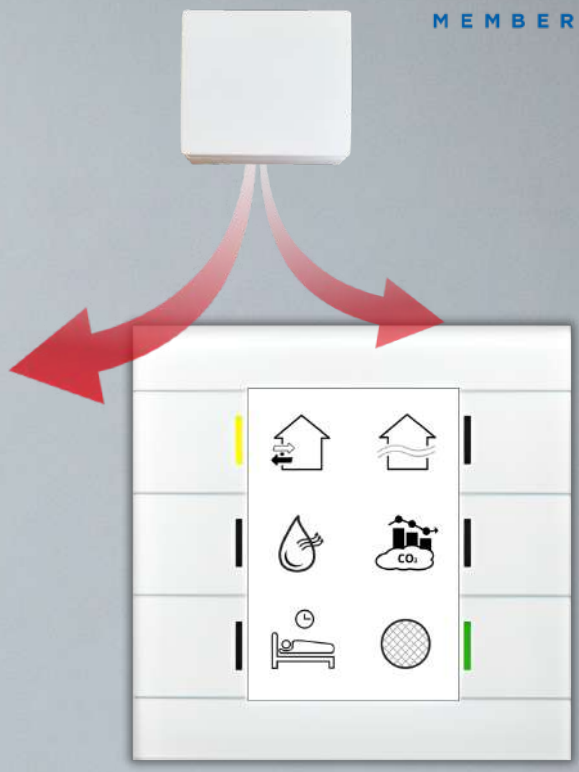
PASSIV ENERGIE

KNX MEMBER

HOKKAIDO 401

ARE YOU LOOKING FOR THE MOST RECENT AND ADVANCED TECHNOLOGY IN DECENTRALIZED VENTILATION DEVICES?

The **Hokkaido HK-401** is the perfect choice for you! An ultimate, energy-saving ventilation system for your home or business



KNX touch panel, customizable according to your preferences!

up to 95% Heat recovery

Maintenance of temperature, saving energy costs.

Free Cooling Effect

The system extracts heat from your building in hot weather, guaranteeing a cool and comfortable indoor climate.

50% rH Humidity and mold regulation

The HK-401 keeps indoor air at a comfortable humidity level, preventing the formation of mold.

<1000ppm CO_2 & Humidity measurement

The KNX sensors measure CO_2 and humidity levels, adjusting the ventilation stage accordingly to ensure optimal air quality.

Sleep mode

The fan temporarily switches off for an hour to promote ease of falling asleep and ensure a restful night.

Filter replacement cleaning reminder

The system prompts you to change or clean the filters, ensuring optimal performance.

PASSIV ENERGIE

KNX MEMBER

THE PRINCIPLE OF HEAT RECOVERY IN OUR VENTILATION SYSTEM

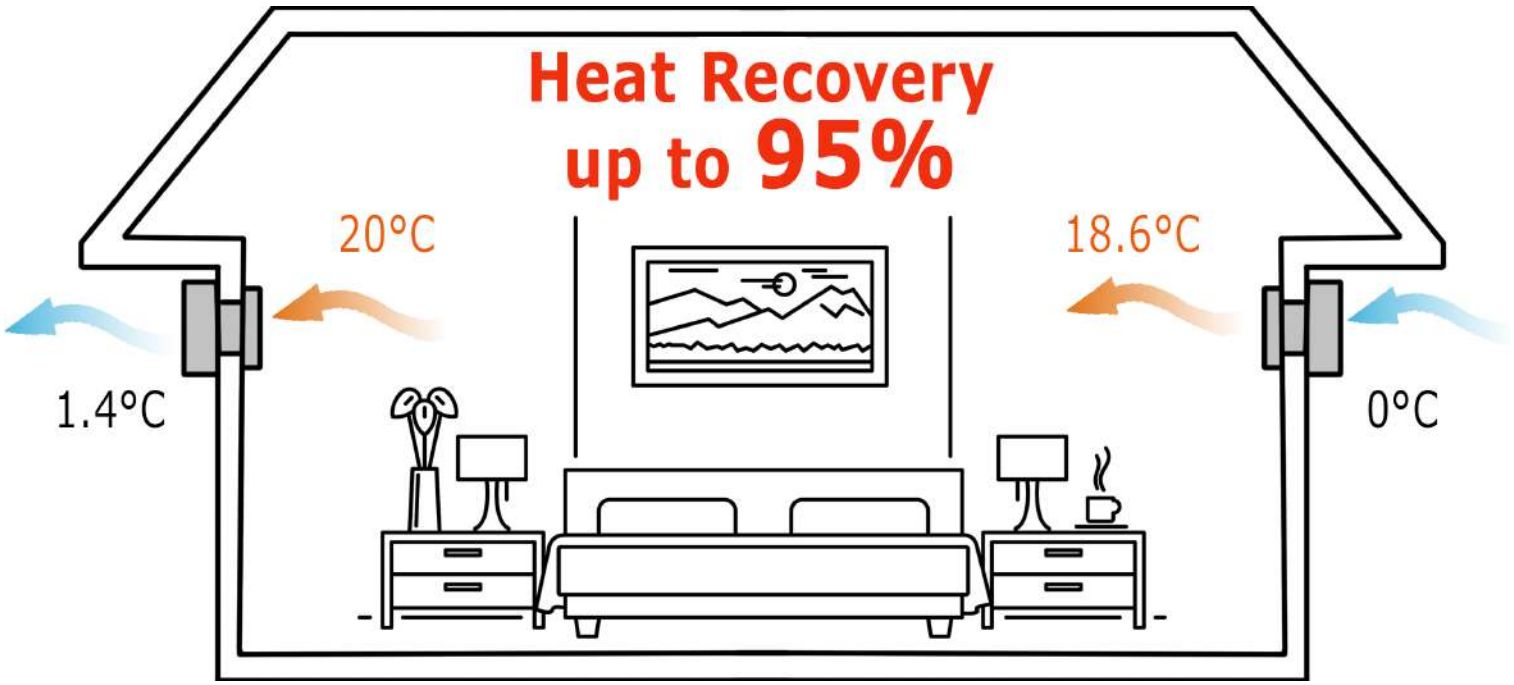
Our energy-saving, heat-recovery ventilation system alternates between supply and exhaust air at regular intervals by reversing the fan's rotation. In the exhaust phase, heat and moisture are captured in the heat exchanger and subsequently released into the room with the supply air.

EXHAUST MODE IN WINTER

The used air is expelled through a ceramic heat exchanger, storing the captured heat within the fan unit.

EXHAUST MODE IN SUMMER

The exhaust air cools the heat exchanger, allowing the retention of energy within the system.



SUPPLY AIR MODE IN WINTER

The energy stored in the heat exchanger warms the cold outside air, which is then reintroduced into the room at nearly the same temperature as the indoor air.

SUPPLY AIR MODE IN SUMMER

The fan's heat exchanger cools the hot outside air before supplying it to the room, ensuring that the room temperature remains at a comfortable level.

PASSIV ENERGIE

KNX MEMBER

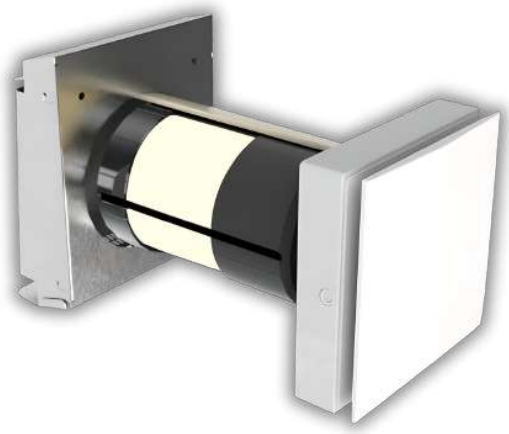
VENTILATION INSTALLATION IN CONJUNCTION WITH CO_2 SENSOR

INSTALLATION EXAMPLE AQS/TH-UP

SMART ROOM VISUALIZATION

Our innovative KNX devices offer not just advanced control options but also an impressive visualization of your room climate. Featuring high-resolution screens, you can easily access at-a-glance information about the humidity, temperature, and CO_2 levels in your space.

Why is this visualization so valuable? Quite simply, it enables a **deeper understanding** and **better control of your room climate**. By monitoring the current values on the screen, you obtain clear and precise information about the current state of your indoor environment.



With this visual representation, you can promptly respond to changes and take appropriate measures. If the humidity is too high, you'll see it immediately and can dehumidify the room. If the temperature is too low, you'll know at a glance and can adjust the heating. Is the CO_2 level too high? No problem! Our ventilation system will react accordingly. This way, you can create a comfortable and healthy indoor climate that perfectly suits your needs.

PASSIV ENERGIE

KNX MEMBER

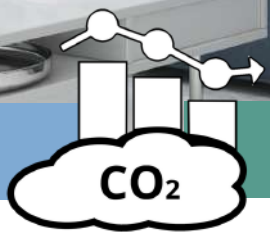
COMBINATION OF CO_2 AND HUMIDITY SENSORS FOR BETTER INDOOR AIR QUALITY

IMPROVED INDOOR AIR QUALITY

Integrating CO_2 and humidity sensors into the KNX system enables real-time monitoring of indoor air quality. The CO_2 sensor measures carbon dioxide levels, while the humidity sensor detects moisture content. If there's an increase in CO_2 levels or elevated humidity, the KNX system can initiate appropriate actions.

HEALTH-PROMOTING INDOOR ENVIRONMENT

Monitoring and controlling CO_2 and humidity are crucial for creating a **healthy indoor environment**. Elevated CO_2 levels and high humidity can result in an uncomfortable indoor climate, leading to fatigue and concentration difficulties. The integration of sensors with our ventilation system ensures **proper ventilation and humidity control**, contributing to a healthier and more comfortable indoor climate.



EFFECTIVE VENTILATION AND DEHUMIDIFICATION

Our ventilation system operates with high efficiency, **expelling stale air and bringing in fresh air**. When connected to the KNX system and CO_2 and humidity sensors, intelligent control is achieved. If there's a rise in CO_2 levels or high humidity, the ventilation system can be automatically triggered to renew the indoor air, ensuring optimal air quality.

ENERGY EFFICIENCY

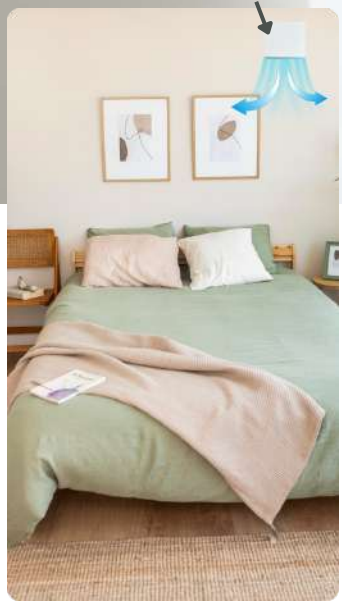
Through the integration of KNX and sensors, our ventilation system becomes demand-driven. It activates only when necessary, responding to measured CO_2 levels or humidity. This ensures efficient energy use, as the ventilation system operates in accordance with the specific conditions in the room.

PERSONALIZATION AND CUSTOMIZATION

With the KNX system, customization of settings and thresholds for CO_2 and humidity is at your fingertips. Depending on your preferences and the specific requirements of the room, you have the flexibility to specify the CO_2 level or humidity level at which the ventilation system should respond. This allows for a tailored solution that precisely meets your needs.

PASSIV ENERGIE

KNX MEMBER



DIVERSE CONTROL WITH KNX

As an example, we've selected the **"Glastaster Nunio KNX M-T"**, available in single, double, triple, or quadruple button configurations. It offers a myriad of options for customizing your indoor environment to suit your preferences. Its **versatile programming functions** provide an intuitive control experience.

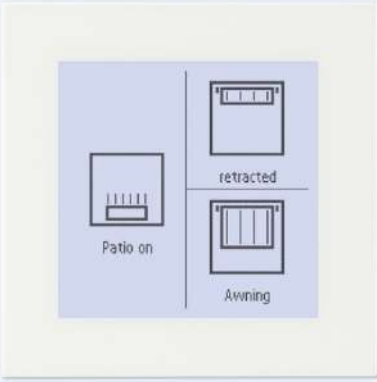
MAXIMUM PROGRAMMING OPTIONS

The button's flexibility is achieved through its extensive programming options. **You have the ability to configure the number of touch areas visible and assign various functions.** For instance, you can control room lighting by switching and dimming based on mood and occasion, automate blinds and curtains, send values, call up scenes, or regulate our fan. Your individual needs and preferences take center stage, allowing you to customize room control as desired.

In addition, the PI controller for one- and two-stage heating and cooling systems is integrated into the KNX application. **The setpoint, mode, fan speed, etc. can be easily configured on a separate display page.**

ROOM CONTROL

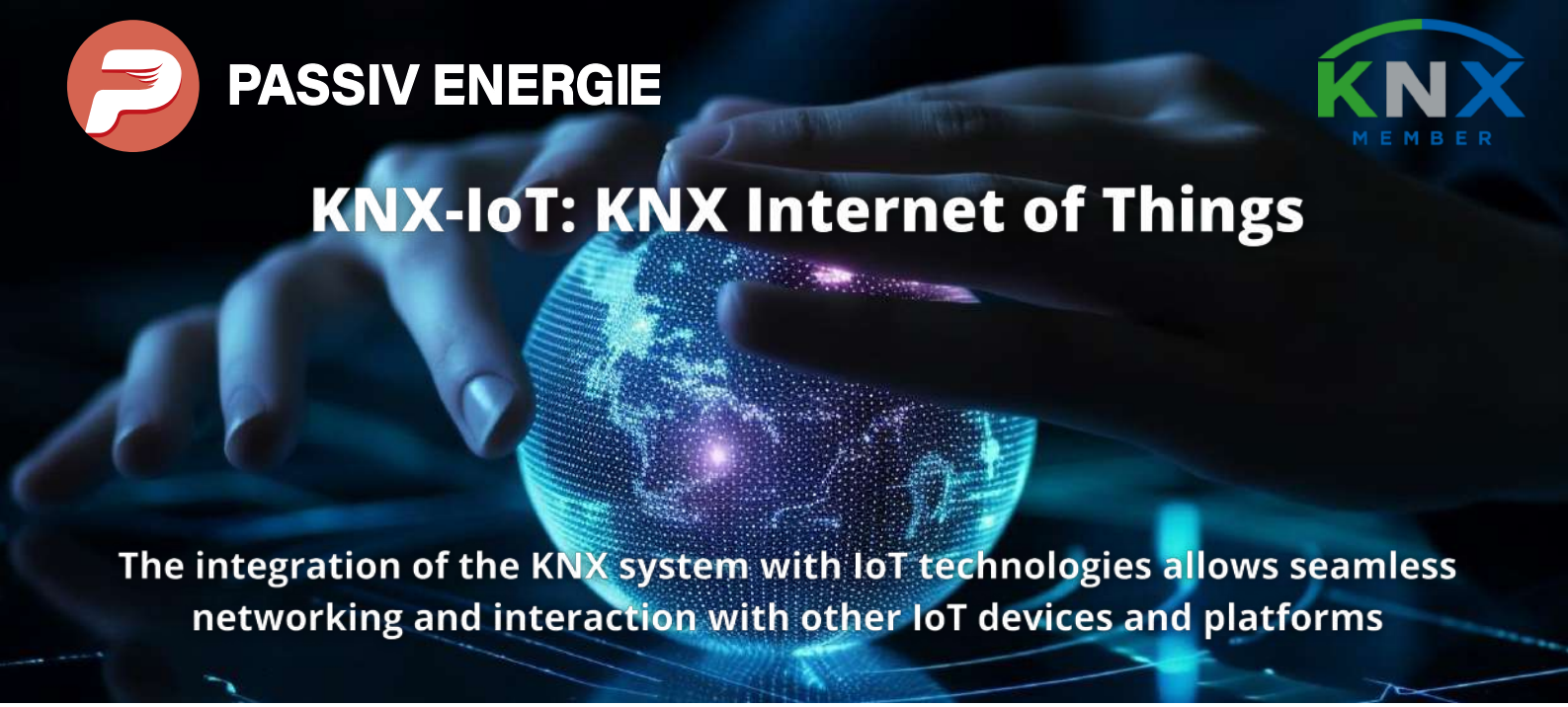
KNX enables individual control of the ventilation system for each room. **You have the flexibility to define various ventilation zones within a building,** such as living rooms or bedrooms, and control ventilation in each room individually. This empowers you to optimize air quality in every area.



PASSIV ENERGIE

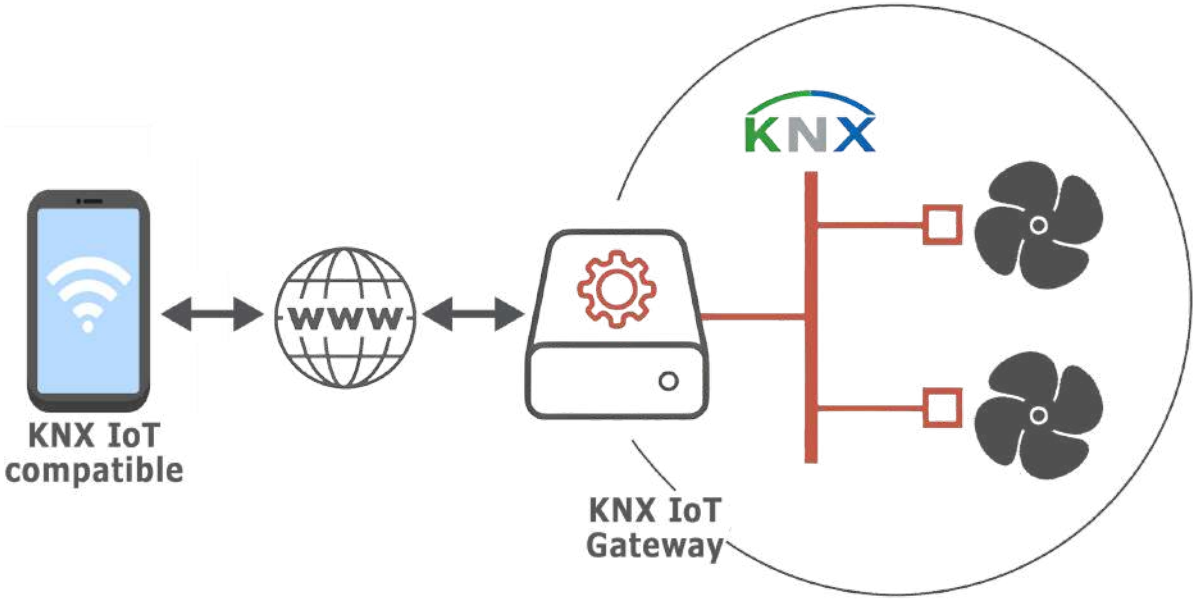
KNX MEMBER

KNX-IoT: KNX Internet of Things



The integration of the KNX system with IoT technologies allows seamless networking and interaction with other IoT devices and platforms

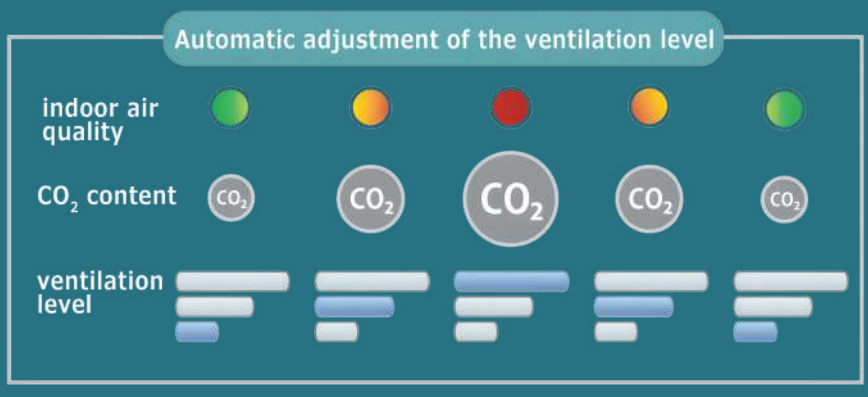
COMPATIBILITY: The integration of KNX with various IoT protocols and platforms, including MQTT, REST APIs, and cloud services, facilitates seamless communication and collaboration between KNX devices and our ventilation system with a diverse array of IoT devices and systems.



CLOUD CONNECTION: With KNX-IoT, KNX systems can seamlessly integrate into the cloud, enabling remote control, monitoring, and management of KNX devices and the ventilation system via the internet. The cloud connection not only facilitates these functions but also allows for data collection, analysis, and utilization in applications like energy management or data analysis.

ADVANCED AUTOMATION:

Integrating KNX with IoT technologies enables the realization of advanced automation scenarios. For instance, sensor data from IoT devices can be harnessed to define intricate control sequences, all centrally managed via the KNX system.



PASSIV ENERGIE

KNX MEMBER

VMPX-UV/KNX
KNX CABINET CONTROLLER

KNX AND CONNECTIVITY

The **VMPX-UV8/KNX version serves as a controller for managing ventilation units and establishing communication with other devices in the KNX bus system.** It receives commands from KNX controllers or other devices via the KNX bus, translating them into physical actions such as switching the Hokkaido fan on and off or adjusting the fan speed.

Room sensors, including humidity, temperature, or CO_2 sensors, are connected to the controller through the KNX bus. Tailored to individual preferences, specific values can be programmed for a particular room. These sensors then transmit signals to the controller upon reaching set threshold values, which in turn regulates or controls the fan accordingly.

OPERATING OPTIONS

HEAT EXCHANGE MODE

During ventilation, the system recovers up to 95% of the heat from the exhaust air, heating the supply air. The fan units regularly switch between supplying fresh air and extracting indoor air.

FAN SPEED

The four freely adjustable fan levels provide flexibility for individual adjustments, catering to your daily preferences and needs

SUMMER NIGHT COOLING

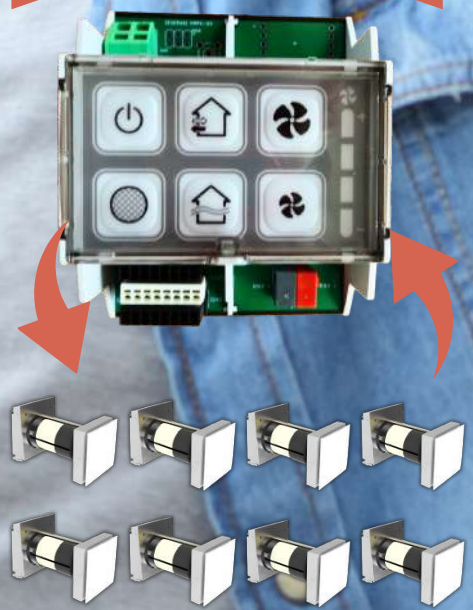
Heat from the room is expelled to the outside, and refreshing cool air is drawn in, producing a delightful cooling effect.

FILTER REPLACEMENT

An indicator signals when it's time to replace the fan filter, ensuring optimal performance

VMPX-UV8/KNX
Power supply for fans:

CONTROL UP TO 8 VENTILATION UNITS



PASSIV ENERGIE

KNX MEMBER

THE CERAMIC ELEMENT AND THE Gaußfan®03 SERVE AS THE CORE COMPONENTS OF OUR HOKKAIDO VENTILATION SYSTEM

The ceramic element is notable for its honeycomb shape, contributing to a **remarkable heat recovery rate of up to 95%.** Paired with our specially developed air circulation fan, it achieves an **impressive air volume of up to 80m³ per hour.**

Here are all the relevant technical data:

Fan unit	Heat recovery rate	Volume flow (Turbo mode)	Energy consumption (MAX)	Relative energy consumption	Operating costs per unit (1kWh= 0.29€)
Gaußfan®03	95%	80m³/h	1.6W/h	0.04W/(m³/h)	1.53€

Heat recovery element	Nominal diameter Heat recovery element	Length HRE	Required wall thickness	Outer dimension of the sleeve tube	Length of the sleeve tube
Honeycomb ceramic Cartridge type	150⌀	150mm	326~980mm	165mm	400mm

Gaußfan®03 SOUND PRESSURE

Ventilation speed level	Level 1	Level 2	Level 3	Level 4
Sound pressure level [dB] 3 m acc. ISO 11203	9.2	18.7	34.9	42.4

PASSIV ENERGIE

KNX MEMBER

Passiv Energie GmbH
Unsöldstraße 2
80538 München
Deutschland
office@passiv-energie.gmbh
www.passiv-energie.gmbh
+49 894892 9906

Passiv Energie Austria GmbH
Siezenheimerstraße 35
5020 Salzburg
Österreich
office@passiv-energie.at
www.passiv-energie.at
+43 662 234 529 069