



# GENIUS HOME

Energy-efficient ventilation system with heat recovery for single-family homes

# GENIUS HOME

The GENIUS HOME is a ventilation unit with heat recovery designed for top efficiency. It's perfect for large apartments, single-family homes, and small offices, ensuring controlled air exchange, reducing excess humidity, and promoting a healthy indoor environment.

Weighing just 16 kg, this unit is easy to install, and its slim design takes up minimal space when mounted on a wall. The casing is made of high-quality polypropylene (EPP) with a vacuum-formed plastic front cover.

This well-equipped ventilation system has an air capacity of 250 m<sup>3</sup>/h and is available with either a mechanical or electronic bypass, offering flexible expansion options.

Options for connecting CO<sub>2</sub> and RH sensors, preheating air with a separate preheater, additional moisture recovery via an enthalpy exchanger, or integration into smart home systems leave nothing to be desired.

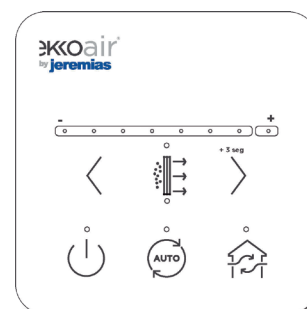
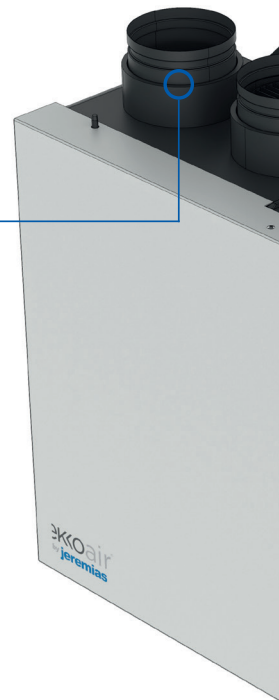
Special features include automatic airflow regulation that compensates for pressure loss and an optional external heater with up to 1 kW power. With an energy efficiency class of A, this ventilation unit ensures highly energy-saving operation.

The GENIUS HOME combines efficiency, flexibility, and modern design, providing an ideal solution for comfortable and healthy indoor air.



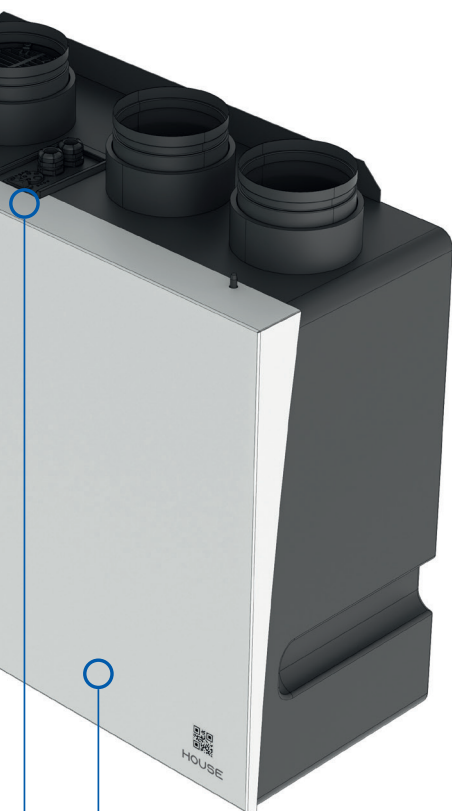
## Connections

Connections Ø125mm with seals

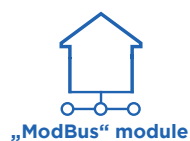


## Control Unit

Controls for airflow, bypass, and automatic operation



**ACCESSORIES:  
ADDITIONAL FEATURES**



92% heat recovery



100% seal



Vertical and horizontal  
installation



Space-saving, only 210  
mm deep



Low noise level



**Interchangeable, efficient filter**

Efficient M5 filter (Epm10 55%) for air  
purification

## CONNECTIONS



**EHA**

Exhaust of used, warm air  
(Exhaust Air)

**ODA**

Intake of fresh, cool outside air  
(Fresh Air)



**ETA**

Extraction of used, warm air  
from the building (Extract Air)

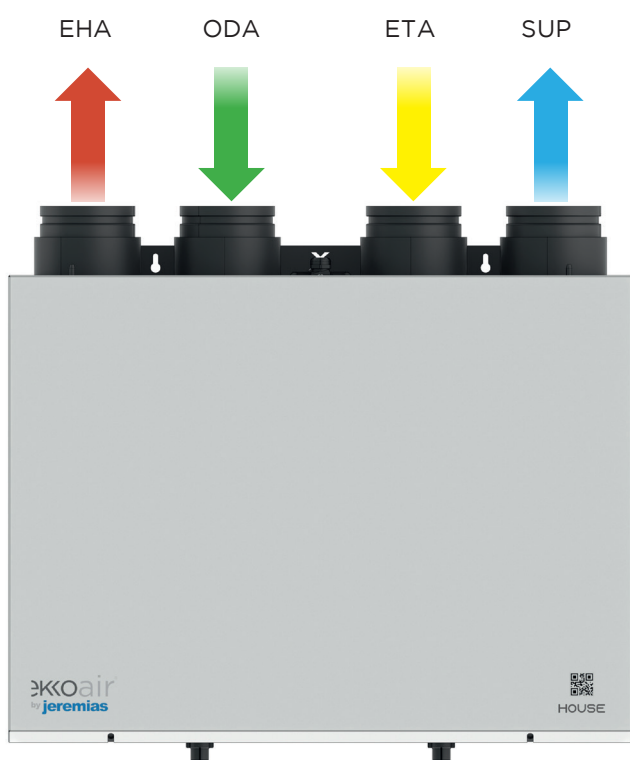
**SUP**

Supply of fresh air into the  
building (Supply Air)

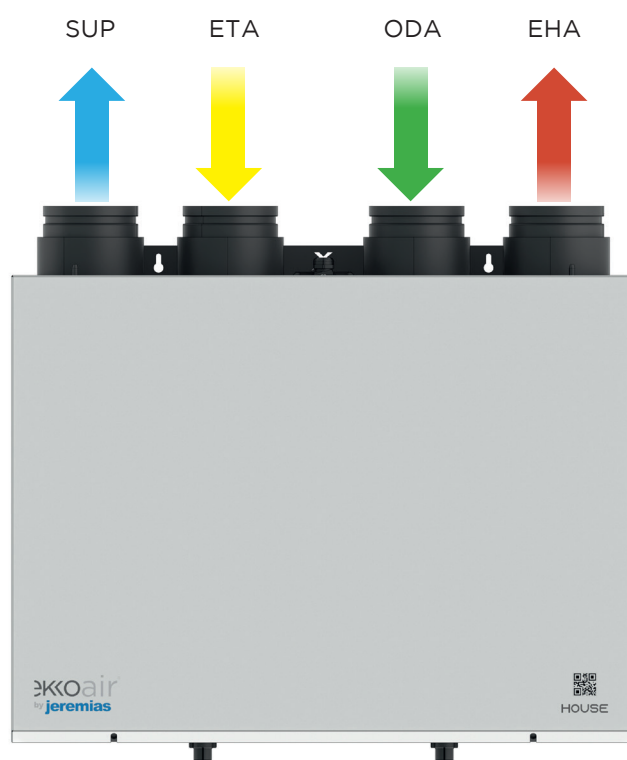
RIGHT EXECUTION

LEFT EXECUTION

RIGHT EXECUTION

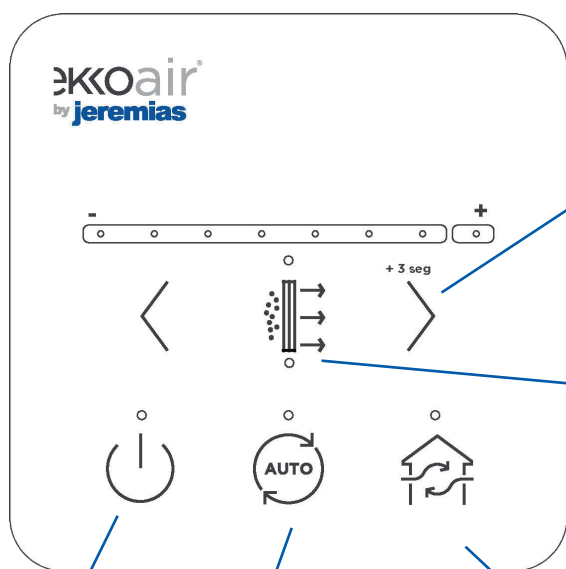


LEFT EXECUTION





# CONTROL PANEL



## AIRFLOW CONTROL / AIR BOOST

Press and hold the button for intensive ventilation lasting 30 seconds.

## FILTER INDICATOR

If the filter is clogged, this indicator will start flashing.

ON / OFF

## SUMMER BYPASS

Cool your living space on warm summer nights with refreshing night air.

## AUTO / MANUAL

Choose between manual and sensor-controlled automatic mode.



Optionally, you can expand the control unit with a Wi-Fi module (accessory) to conveniently operate the device via an online application. Additionally, it connects to a building automation system via ModBus.

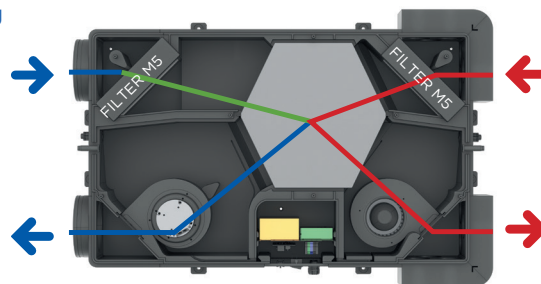
# GENIUS HOME BYPASS FUNCTION

On cool summer nights, you can use the device's bypass function alongside regular ventilation, like opening windows. The bypass redirects exhaust air around the heat exchanger, preventing the 'cool' fresh air from being warmed by the exhaust.

## MECHANICAL VS. ELECTRONIC BYPASS

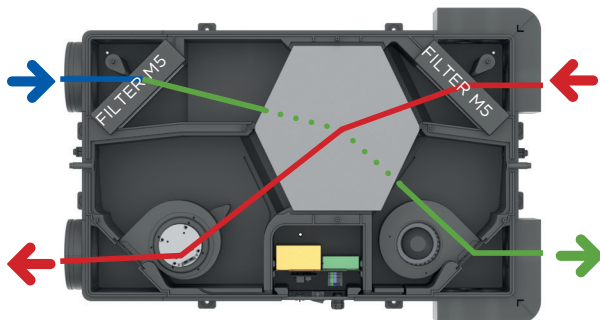
The mechanical bypass ensures fresh air is supplied without heat recovery when needed. A flap opens the bypass channel and closes the recuperation section to stop heat exchange between air streams. With the electronic bypass, the exhaust fan is turned off during operation, allowing only fresh, cool night air into the building without expelling exhaust air outside.

❄ Heat recovery during winter

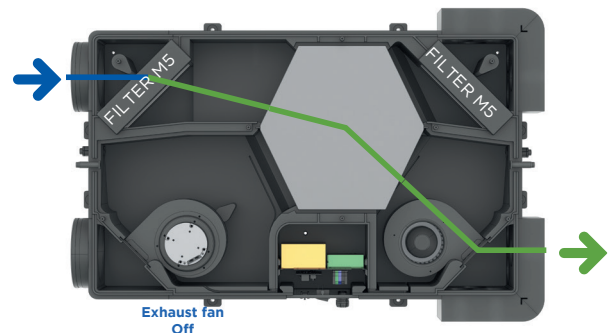


☀ Automatic Bypass activated to cool the home on summer evenings

Mechanical Bypass



Electronic Bypass



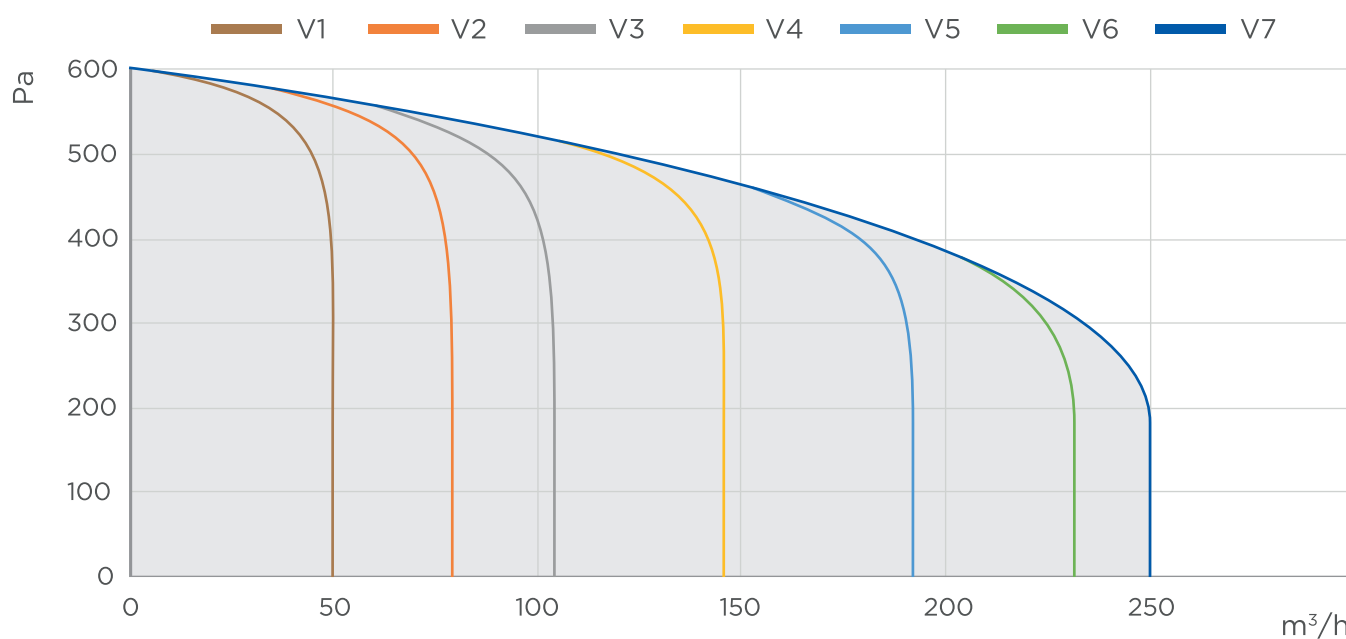


## TECHNICAL PARAMETERS

Parameter	Unit	Values
Max. Flow Rate	m <sup>3</sup> /h	250
Sound Pressure L <sub>Pa-3m</sub> *	dB	42
Diameter of Connectors	mm	4xØ125
Control		8 Speeds
Mounting / Installation		Wall Mount
IP		IP 20
Filter Type		M5 Coarse 90% ISO 16890
Weight	kg	17
Dimensions	mm	800x600x210
Multifunction Control	Speed Level	1   2   3   4   5   6   7   boost
	m <sup>3</sup> /h	50   75   105   145   190   235   250   250
Cover & Body		EPP Body + Metal Cover
Performance**	%	88,3

\* In open field at the reflection plane

\*\* According to UNE EN 308 at 70% of nominal flow rate



## OPTIONAL ENHANCEMENTS

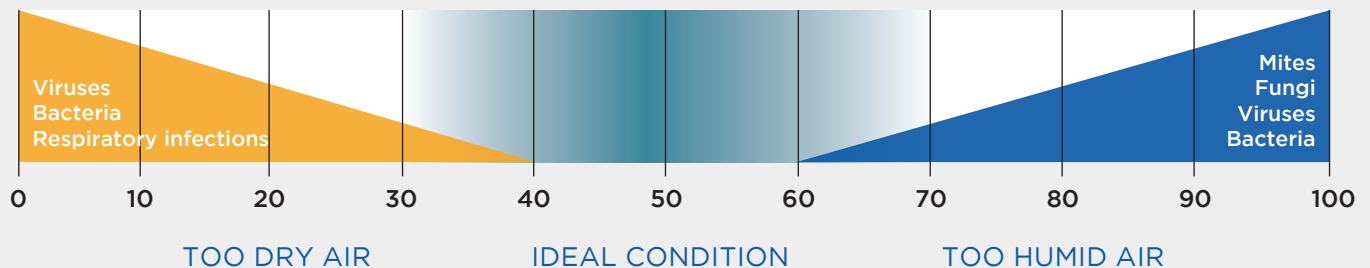
### USE OF AN ENTHALPY EXCHANGER

An enthalpy exchanger helps create a comfortable indoor environment by recovering not just heat, but also moisture—perfect for combating dry air in winter. This benefits your health, prevents respiratory irritation, and protects furniture and wooden floors. At the same time, it lowers heating and cooling costs and reduces energy consumption.

The GENIUS HOME can be ordered with or without an enthalpy exchanger.



### CONDITIONS INDOORS (RELATIVE HUMIDITY %)



### ADDITIONAL SENSORS

Our extensive range of accessories helps make the GENIUS HOME even more versatile and precise.

For example, you can install a CO<sub>2</sub> sensor, a humidity sensor (RH), or a combined CO<sub>2</sub>/RH sensor. These sensors allow the system to automatically adjust airflow, ensuring optimal air conditions.

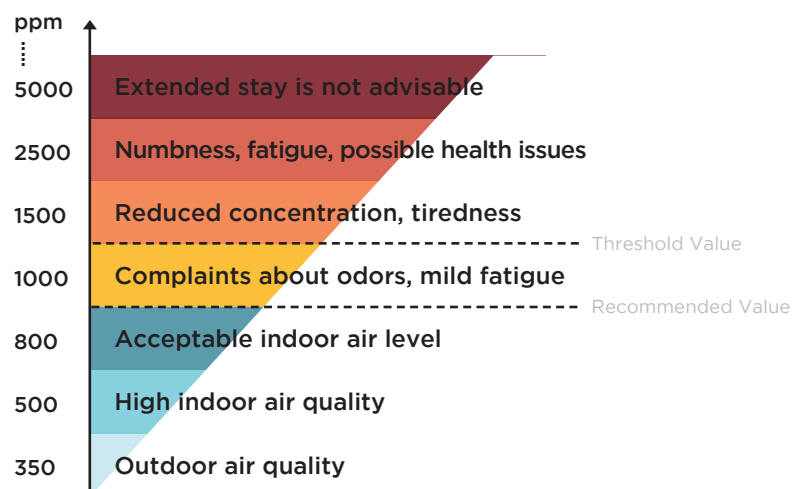






## IMPACT OF CO<sub>2</sub> CONCENTRATION ON HUMANS

The built-in CO<sub>2</sub> sensor automatically adjusts the ventilation system as needed, within a range of about 600 to 1,200 ppm. This ensures optimal comfort while keeping operating costs low.



## PRE- AND POST-HEATER

A pre-heater can be optionally added to prevent icing in the heat exchanger and ensure the device's efficiency in winter by warming the incoming air. Without it, the moist exhaust air could condense and freeze in the heat exchanger during cold outside temperatures, blocking airflow and damaging the unit.

A post-heater is used when heat recovery alone is insufficient to maintain a comfortable temperature in the home. Pure heat recovery can only raise the temperature up to the exhaust air temperature.

Our GENIUS HOME can be directly obtained with an integrated pre-heater, while the post-heater is available as optional accessory.



# GENUIS-HOME STANDARD DEVICES

## WITH ELECTRONIC BYPASS

Heat Recovery without  
Preheater



ri. 403-COVE270N0001  
le. 403-COVE270N0002

Heat Recovery with Prehe-  
ater



ri. 403-COVE270N0003  
le. 403-COVE270N0004

Heat Recovery with Enthal-  
py, no Preheater



ri. 403-COVE271N0001  
le. 403-COVE271N0002

Heat Recovery with Enthalpy  
and Preheater



ri. 403-COVE271N0003  
le. 403-COVE271N0004

## WITH MECHANICAL BYPASS

Heat Recovery without  
Preheater



ri. 403-COVE100N0008  
le. 403-COVE270N0005

Heat Recovery with Prehe-  
ater



ri. 403-COVE270N0006  
le. 403-COVE270N0007

Heat Recovery with Enthal-  
py, no Preheater



ri. 403-COVE271N0005  
le. 403-COVE271N0006

Heat Recovery with Enthalpy  
and Preheater



ri. 403-COVE271N0007  
le. 403-COVE271N0008



## OUR ACCESSORIES

M5 Filter



403-COVE100N0009

M7 Filter



403-COVE100N0010

WIFI module



403-COVE100N0011

CO<sub>2</sub> Sensor

403-COVE100N0013

Option to control the device  
via a mobile app

Humidity Sensor



403-COVE100N0014

Combined CO<sub>2</sub> and  
Humidity Sensor

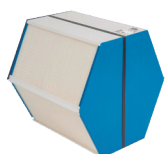
403-COVE100N0015

Module allowing connection of HR Heat Exchanger  
up to 8 air quality sensors

403-COVE100N0016

403-COVE100N0017

Enthalpy Exchanger



403-COVE100N0018

Post-Heater



403-COVE100N0019

Valve Siphon with connection  
options for Ø 16/20/25 mm

403-COVE103N0001

Recovery of heat **and** moisture  
from exhaust air

## GERMANY

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Jeremias high quality products to be installed only by selected experts.

