



# VORT MONO RANGE



  
MADE IN ITALY

Decentralised heat  
recovery units





**VORTICE S.p.A.** is now part of a multinational group, **the VORTICE GROUP**, which operates through its own companies or local distributors in over 90 countries worldwide and has a rich product portfolio that guarantees air quality and climate comfort. The headquarters of VORTICE S.p.A are in Tribiano (Milan).



The VORTICE GROUP also includes:

[1]  
**VORTICE UK Ltd**, English branch of VORTICE S.p.A established in 1977 and based in Burton on Trent.  
[2]

**VORTICE INDUSTRIAL**, created in 2010 through the acquisition of Loran srl, based in Isola della Scala (VR - Italy).

[3]  
**VORTICE Ventilation System**, a company inaugurated in 2013 with headquarters in Changzhou, China.  
[4]

**VORTICE Latam**, based in Alajuela in Costa Rica, established in 2012.

[5]  
**CASALS VENTILACIÓN AIR INDUSTRIAL S.L.**, a historic Spanish brand based in Sant Joan de les Abadesses, Girona, acquired in 2019.

With the development and evolution of this technology, VORTICE takes a further step towards the future, confirming its commitment to the value that has always distinguished the company: improving the well-being of people by improving the air they breathe.

## HEAT RECOVERY TECHNOLOGY

Heat recovery or controlled mechanical ventilation (MCV) is a technology that through devices equipped with latest generation, variable speed, low consumption and low noise extractor fans, guarantees:

- The introduction into the rooms of fresh air extracted in from the outside and suitably filtered.
- The removal of stale air from the inside.
- The recovery of the energy contained in the removal air through a high efficiency exchanger, transferring it to the air introduced into the rooms.

Thanks to this technology, we optimise the energy efficiency of the buildings in which we live and reduce heating and air conditioning costs, whilst ensuring well-being and living comfort. Furthermore, through proper ventilation and air exchange, we significantly reduce the risk of infection transmitted by air, protecting our health.

## Regulatory standards

The products of the VORT MONO range comply with the following European Norms, Directives and Regulations:

- Electrical Safety Regulations: EN 60335-1; EN 60335-2-80; EN 60529; EN 62233;
- Aeraulic Performances Regulations: UNI EN ISO 5810;
- Electromagnetic Compatibility Regulations: EN 55014-1  
EN 55014-2  
EN 61000-3-2  
EN 61000-3-3
- European Directives for CE marking
- Low Voltage Directive (2006/42/EC)
- Electromagnetic Compatibility Directive (2004/108/EC)
- RED Radio Equipment Directive (2014/53/EU)
- ErP 2009/125/EC Ecocompatible Design Directive according to the following regulations:
- European Regulation No. 1253/2014/EU Residential Ventilation Units



# VORT MONO RANGE

## Decentralised heat recovery units.

Ventilation unit with heat recovery specifically designed for the exchange of air in residential and commercial premises. Commercial premises, new builds, renovations, characterised by high levels of thermal insulation.

Can be installed on perimeter walls between 260 mm and 700 mm thick. Available in the manual control on the machine or remote control version, all with relative humidity, temperature and ambient light sensors.

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Ø 160

VORT HRW 40 MONO EVO  
Code 12435  
On-board controls

VORT HRW 40 MONO EVO HCS  
Code 12437  
With remote control and humidistat

Ø 100

VORT HRW 30 MONO EVO  
Code 12434  
On-board controls

VORT HRW 30 MONO EVO HCS  
Code 12436  
With remote control and humidistat

MADE IN ITALY





## BENEFITS FOR THE INSTALLER

01

### Easy installation

Low weight: 3.10 kg - 3.30 kg

Universal duct connection  
Ø nominal 100-160 mm.

No condensation drains required.

Easy to operate manual closing system, with  
machine closing indicator (red lever)

02

### Easy maintenance

Easily accessible internal components.

## BENEFITS FOR THE USER

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01

### Easy maintenance

Simplified maintenance, without the help of  
specialised personnel.

02

### Stylish design

It integrates perfectly into any residential  
environment.

03

### Low consumption

<5 W at maximum flow rate

04

### Silent

Sound pressure levels at 3m

19dB(A) first speed  
25.4dB(A) third speed  
31.8dB(A) fifth speed

05

### High efficiency 90%

High heat exchange efficiency values up to 90%  
at minimum flow rate.

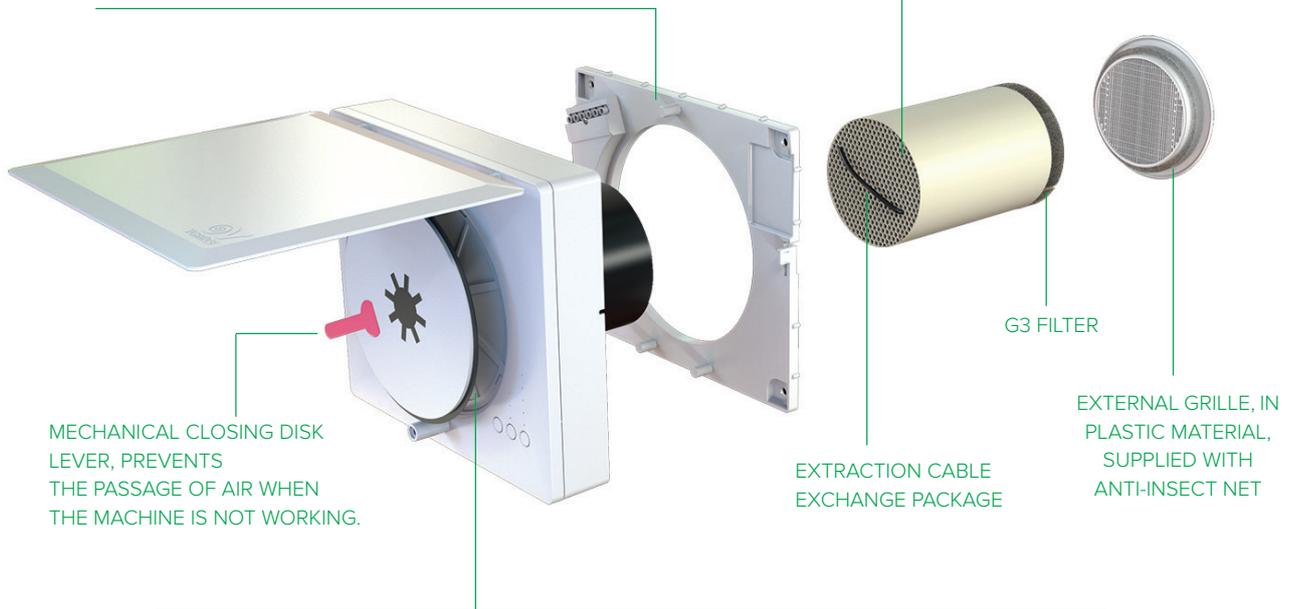
# VORT HRW 30 MONO EVO

## VORT HRW 30 MONO EVO HCS

Decentralised heat recovery units Ø 100 mm, with on-board controls or with remote control and HCS sensor.

WALL INSTALLATION FLANGE WITH PRE-INSTALLED TERMINAL BLOCK. THE PROTECTION CLASS OF THE TERMINAL BLOCK ALLOWS AN INEXPERIENCED USER TO REMOVE THE FAN BODY AND TO PROCEED WITH THE REMOVAL AND CLEANING OF THE EXCHANGE PACK, OF THE G3 FILTER AND TO RESET THE SYSTEM.

EXCHANGE PACK OF THE ACCUMULATION TYPE, MADE OF CERAMIC MATERIAL WITH ASSEMBLED EXTERNAL FILTER.



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MECHANICAL CLOSING DISK LEVER, PREVENTS THE PASSAGE OF AIR WHEN THE MACHINE IS NOT WORKING.

EXTRACTION CABLE EXCHANGE PACKAGE

G3 FILTER

EXTERNAL GRILLE, IN PLASTIC MATERIAL, SUPPLIED WITH ANTI-INSECT NET

CO-MOLDED FRONT DISC: IT HELPS TO ATTENUATE THE SOUND WAVE CREATED BY THE VENTILATING APPARATUS AND BY THE AIR FLOW DURING THE INTRODUCTION INTO THE ENVIRONMENT. ITS SURFACE WITH SPHERICAL CAPS TENDS TO REFLECT THE NOISE IN DIFFERENT DIRECTIONS, ATTENUATING ITS EFFECT.

BY REMOVING THE FRONT DISC, IT IS POSSIBLE TO ACCESS THE DUST FILTER THAT PROTECTS THE EXCHANGER FROM THE INSIDE AND BY REMOVING IT CAN BE EASILY CLEANED OR REPLACED



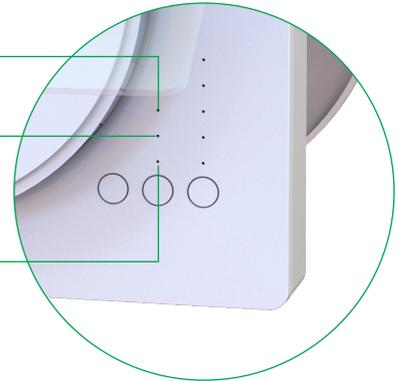
REMOTE CONTROL FOR MODEL HCS



**LED**  
EXTRACTION/AUTO COMFORT

**LED**  
INTRODUCTION/AUTO HR%

**LED**  
RECOVERY/AUTO NIGHT



**SPEED BUTTON**  
5-position selector

**FUNCTION BUTTON**  
To activate or deactivate the 3 different AUTO functions available and activate or deactivate the stand-by mode

**MODE BUTTON**  
3-position selector  
Selects the recovery, introduction, extraction and natural ventilation modes

# VORT HRW 40 MONO EVO

## VORT HRW 40 MONO EVO HCS

Decentralised heat recovery units Ø 160 mm, with on-board controls or with remote control and HCS sensor.

WALL INSTALLATION FLANGE WITH PRE-INSTALLED TERMINAL BLOCK. THE PROTECTION CLASS OF THE TERMINAL BLOCK ALLOWS AN INEXPERIENCED USER TO REMOVE THE FAN BODY AND TO PROCEED WITH THE REMOVAL AND CLEANING OF THE EXCHANGE PACK, OF THE G3 FILTER AND TO RESET THE SYSTEM.

THE POLYPROPYLENE RINGS FEATURE SOME PROTUBERANCES FOR THE ALIGNMENT OF THE FRONT SURFACE OF THE EXCHANGER WITH THE OUTLET/INLET OF THE FAN AND THE CORRECT INCLINATION OF THE EXCHANGER WITH RESPECT TO THE CONTAINMENT PIPE INSERTED IN THE WALL

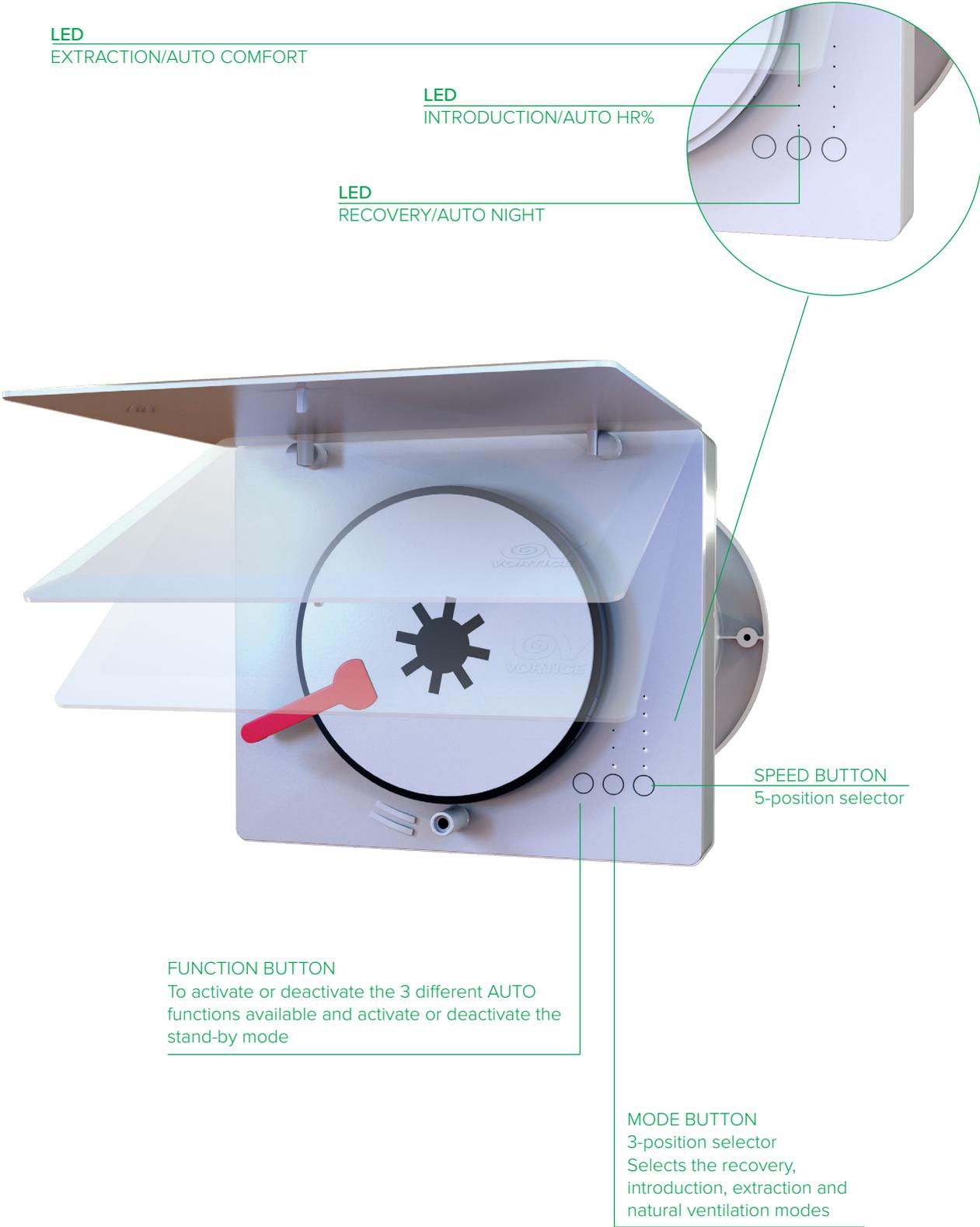


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CO-MOLDED FRONT DISC: IT HELPS TO ATTENUATE THE SOUND WAVE CREATED BY THE VENTILATING APPARATUS AND BY THE AIR FLOW DURING THE INTRODUCTION INTO THE ENVIRONMENT. ITS SURFACE WITH SPHERICAL CAPS TENDS TO REFLECT THE NOISE IN DIFFERENT DIRECTIONS ATTENUATING ITS EFFECT.

BY REMOVING THE FRONT DISC, IT IS POSSIBLE TO ACCESS THE DUST FILTER THAT PROTECTS THE EXCHANGER FROM THE INSIDE AND BY REMOVING IT CAN BE EASILY CLEANED OR REPLACED

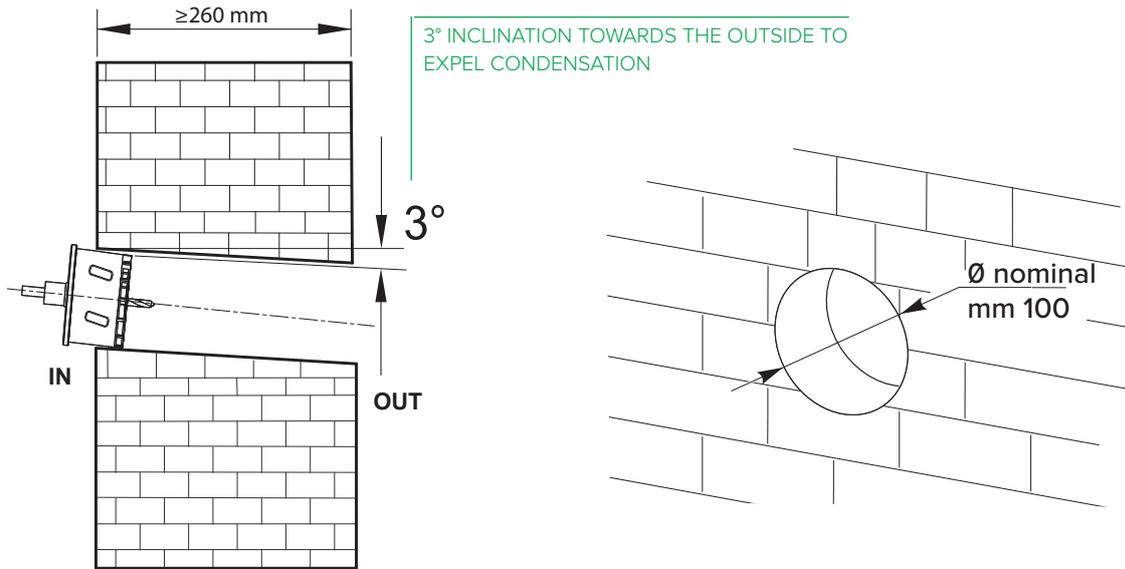




# INSTALLATIONS

## VORT HRW 30 MONO EVO - HCS

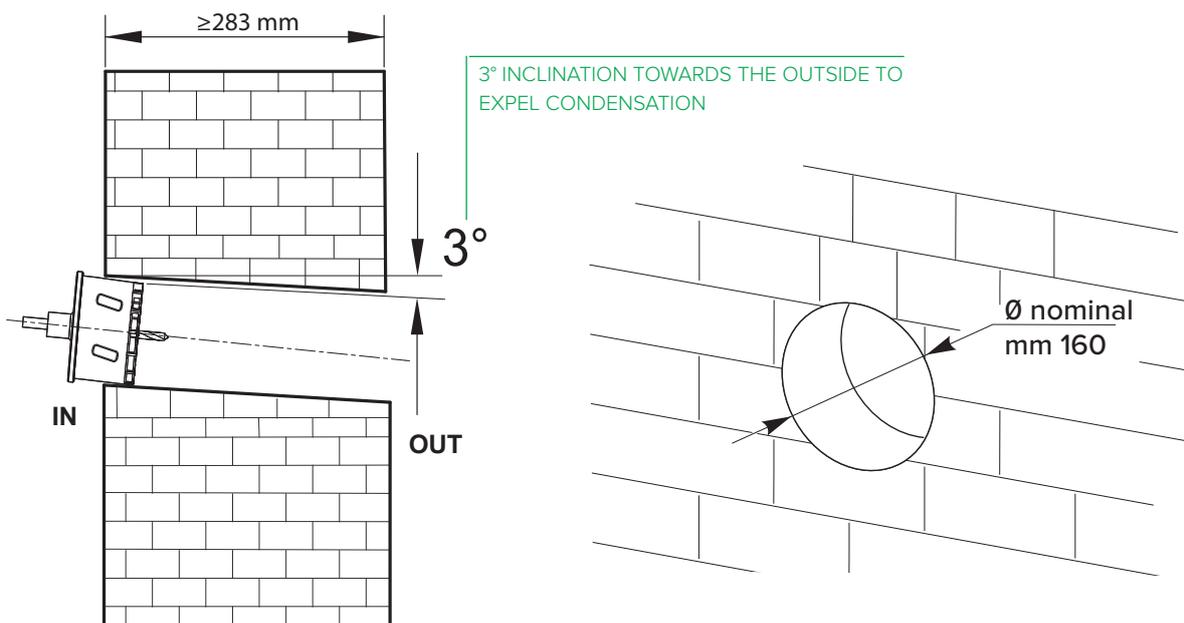
It must be mounted inside a perimeter wall with a thickness of at least 260 mm.



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## VORT HRW 40 MONO EVO - HCS

It must be mounted inside a perimeter wall with a thickness of at least 283 mm.



# APPLICATIONS



## TECHNICAL CHARACTERISTICS

### Available models

4 models

#### **VORT HRW 30 MONO EVO**

(code12434) - Ø100 mm

With on-board controls.

#### **VORT HRW 30 MONO EVO HCS**

(code 12435)- Ø100 mm

With remote control and relative humidity, temperature and light sensors.

#### **VORT HRW 40 MONO EVO**

(code12436) - Ø160 mm

With on-board controls.

#### **VORT HRW 40 MONO EVO HCS**

(code12437) - Ø160 mm

With remote control and relative humidity, temperature and light sensors.

### Heat exchanger

High efficiency 90% storage heat exchangers, made of ceramic material of the hexagonal cell type to maximize the heat exchange surface. In winter operation (in summer the logic is reversed), thanks to the periodic inversion of the rotation direction of the motor fan, the exchange pack is cyclically heated by the extracted hot air and subsequently transfers most of this heat to the incoming cold renewal.

### Filters

Washable G3 filters, easily accessible for maintenance/cleaning.

Pre-filters, housed on the internal side.

### 3 operating modes:

#### **Ventilation with heat recovery:**

the fan periodically reverses the direction of rotation for the transfer of the flow at a lower temperature than the heat previously accumulated in the exchanger.

#### **Ventilation in extraction mode:**

the fan always operates in extraction mode.

#### **Ventilation in introduction mode:**

the fan always operates in introduction mode.

### Casing

In expanded polypropylene (PPE), designed for housing in a hole, with a nominal diameter of (100/160 mm), drilled in the target perimeter wall.

### Fans

The fans used on products of the VORT MONO RANGE comply with the European ErP Directive no. 2009/125.

### Fan motors

EC motor fans, to guarantee very low consumption, powered by low voltage and with shafts mounted on ball bearings. Characterised by 5 operating speeds, for the best compromise between air flow rate, consumption and noise emission, they are designed to work in a clockwise and anti-clockwise direction, and thus allow the product to operate in the Intake, Ventilation and Ventilation with heat recovery modes.

### Grilles

External molded rubber grilles, fit from the inside through the hole in the target wall, to simplify the installation of the product.

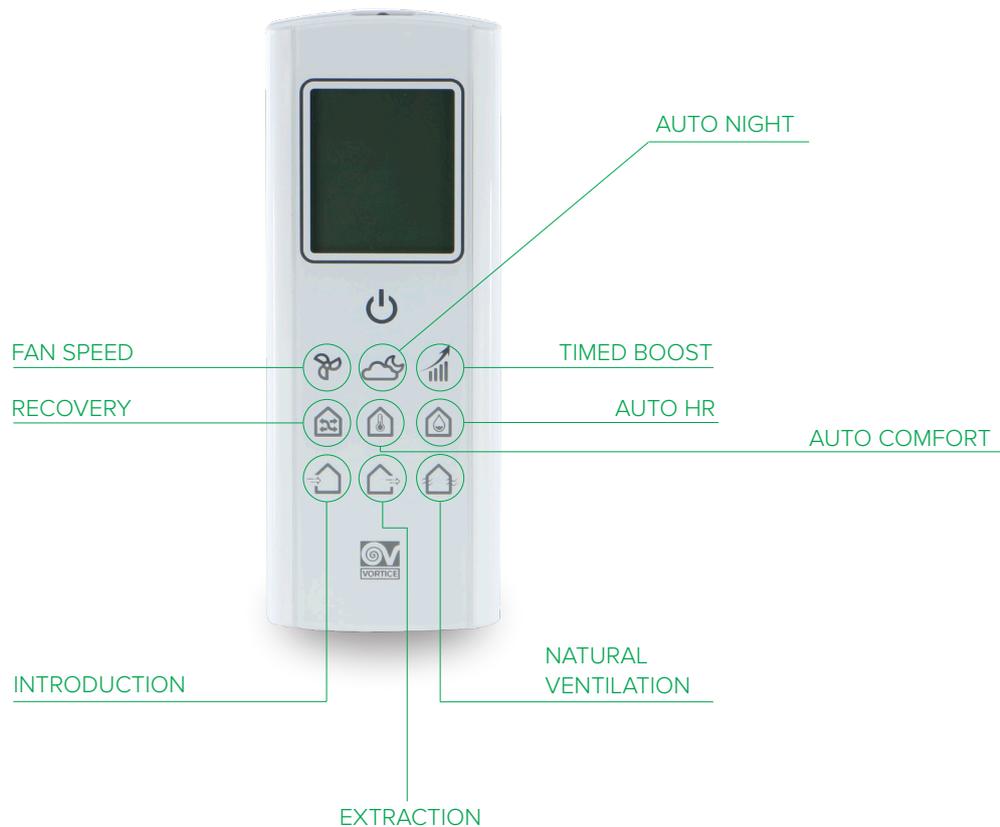
The grilles include an easily removable insect net to simplify cleaning operations.

### Insulation class: II

Grounding not required.



## IR remote control (only for HCS model)



## HCS models are supplied with remote control with LCD display.

By default the recovery function auto-comfort, auto HR% and auto night modes are active. The humidity threshold is set at the maximum value (90%) and the fan is set at maximum speed to obtain the maximum flow rate (5 fans displayed). The remote control transmits its default status to the product and updates the status on the appliance accordingly. If the status of the machine does not synchronised with the status of the remote control, point the remote control at the appliance and press a button on the remote control to activate the synchronisation.

### AUTO NIGHT

The ambient light sensor detects the presence or absence of light in the environment. Therefore, if it is night and no daylight is detected, the product will run at minimum speed and will not be allowed to go above minimum speed. When the presence of daylight is detected again, the product returns to operate at the previously set speed, the switch to higher boost speeds is allowed via remote input or HR% sensor.

### AUTO HR%

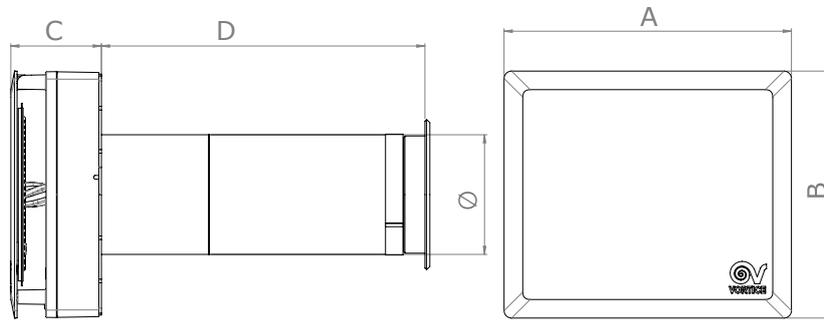
In case of humidity above the alarm threshold (60%, 75% or 90% - the default value is 75%), the extraction mode at maximum speed is automatically selected.

### AUTO COMFORT

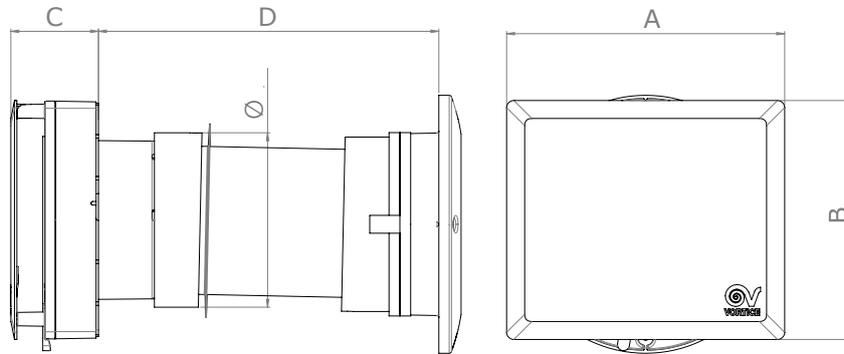
In heat recovery mode, the timing that determines the inverted rotation of the fans is fixed according to the temperature of the air released into the environment: if the weather is too cold, the cycle time is reduced.

**VORT MONO RANGE**  
DECENTRALISED HEAT RECOVERY UNITS

**Dimensions**



12434 VORT HRW 30 MONO EVO - 12436 VORT HRW 30 MONO EVO HCS



12435 VORT HRW 40 MONO EVO - 12437 VORT HRW 40 MONO EVO HCS

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| PRODUCTS                 | A   | B   | C  | D   | Ø   |
|--------------------------|-----|-----|----|-----|-----|
| VORT HRW 30 MONO EVO     | 231 | 200 | 73 | 260 | 97  |
| VORT HRW 30 MONO EVO HCS | 231 | 200 | 73 | 260 | 97  |
| VORT HRW 40 MONO EVO     | 231 | 200 | 73 | 283 | 146 |
| VORT HRW 40 MONO EVO HCS | 231 | 200 | 73 | 283 | 146 |

Dimensions in mm

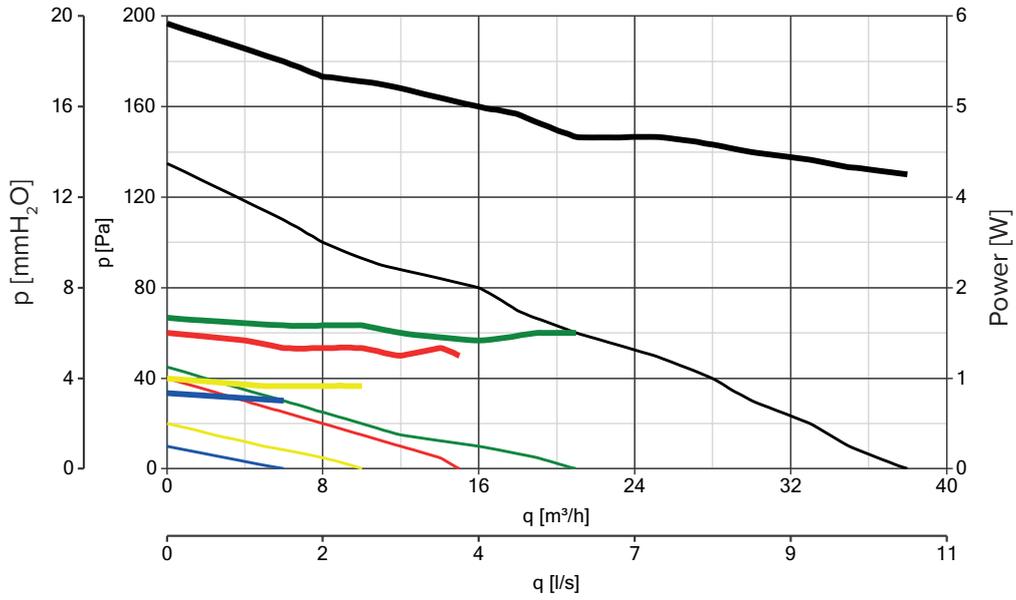
**Technical data**

| PRODUCTS                    | CODE  | V~50-60HZ | W<br>max | A<br>max | MAX FLOW RATE                |                | MAX PRESSURE                  |               | LP DB (A)<br>3m<br>min/max | °C<br>MAX | KG  |
|-----------------------------|-------|-----------|----------|----------|------------------------------|----------------|-------------------------------|---------------|----------------------------|-----------|-----|
|                             |       |           |          |          | m <sup>3</sup> /h<br>min/max | l/s<br>min/max | mmH <sub>2</sub> O<br>min/max | Pa<br>min/max |                            |           |     |
| VORT HRW 30<br>MONO EVO     | 12434 | 220-240   | 4        | 0.04     | 6<br>38                      | 1.7<br>10.5    | 1<br>13.7                     | 10<br>130     | 19.1<br>49.2               | 30        | 3.1 |
| VORT HRW 30<br>MONO EVO HCS | 12436 | 220-240   | 4        | 0.04     | 6<br>38                      | 1.7<br>10.5    | 1<br>13.7                     | 10<br>130     | 19.1<br>49.2               | 30        | 3.1 |
| VORT HRW 40<br>MONO EVO     | 12435 | 220-240   | 5        | 0.05     | 15<br>40                     | 4.2<br>11.1    | 1.7<br>4.8                    | 17<br>47      | 19<br>31.8                 | 30        | 3.3 |
| VORT HRW 40<br>MONO EVO HCS | 12437 | 220-240   | 5        | 0.05     | 14<br>40                     | 4.2<br>11.1    | 1.7<br>4.8                    | 17<br>47      | 19<br>31.8                 | 30        | 3.3 |



## Curves

VORT HRW 30 MONO EVO Code 12434 - VORT HRW 30 MONO EVO HCS Code 12436



### LEGEND:

#### NIGHT MODE

— Pressure  
**—** Power

#### QUIET MODE

— Pressure  
**—** Power

#### PERFORMANCE MODE

— Pressure  
**—** Power

#### HIGH PERFORMANCE MODE

— Pressure  
**—** Power

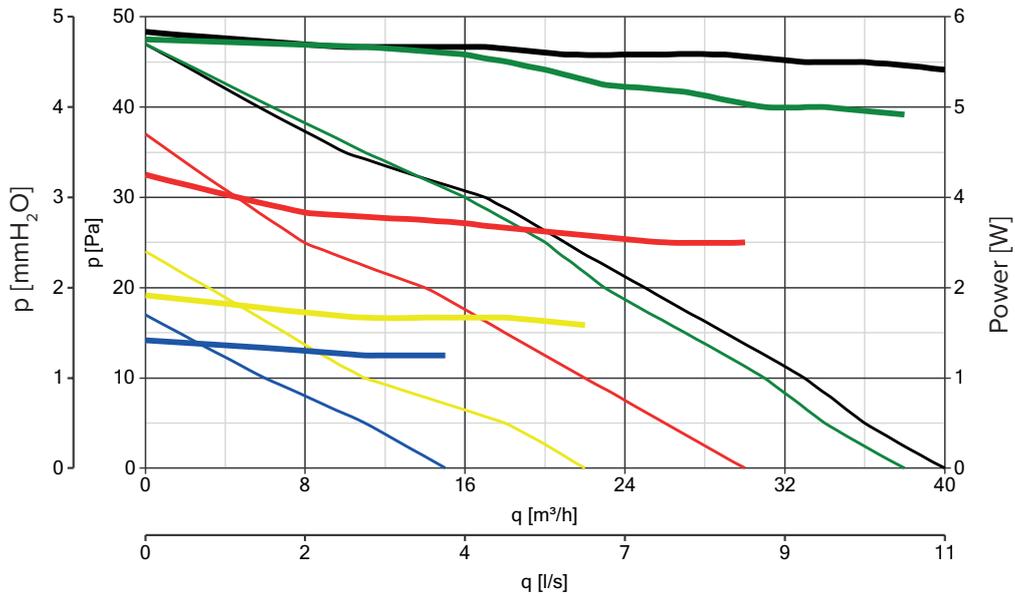
#### BOOST MODE

— Pressure  
**—** Power

**VORT MONO RANGE**  
DECENTRALISED HEAT RECOVERY UNITS

**Curves**

VORT HRW 40 MONO EVO Code 12435 - VORT HRW 40 MONO EVO HCS Code 12437



**LEGEND:**

**NIGHT MODE**

— Pressure  
— Power

**QUIET MODE**

— Pressure  
— Power

**PERFORMANCE MODE**

— Pressure  
— Power

**HIGH PERFORMANCE MODE**

— Pressure  
— Power

**BOOST MODE**

— Pressure  
— Power





## Accessories

| MODELS  | DESCRIPTION  | CODE  | PRODUCTS       |
|---|--|-------|----------------|
|    | <b>MWS Ø 100</b><br>Windproof metal panel<br>for outdoor in stainless steel sheet  | 21883 | 12434<br>12436 |
|    | <b>WA Ø 100</b><br>90° round/square adapter for extraction and exhaust<br>through a window frame.<br>Circular attachment diameter 100 mm | 21884 | 12434<br>12436 |
|    | <b>KIT FTR</b><br>Filter kit   | 21891 | 12434<br>12436 |
|    | <b>PVC PIPE Ø 100</b>  | 21879 | 12434<br>12436 |
|    | <b>C TEMP</b><br>Sensor to check<br>the ambient air temperature  | 12992 | 12435<br>12437 |
|   | <b>C HCS</b><br>Sensor to check the<br>relative humidity (RH) in the air   | 12994 | 12435<br>12437 |
|  | <b>PVC PIPE Ø 160</b>  | 22559 | 12435<br>12437 |
|  | <b>KIT FTR</b><br>Filter kit   | 22466 | 12435<br>12437 |
|  | <b>MWS</b><br>Windproof metal panel<br>for outdoor in stainless steel sheet<br>Circular attachment diameter for 160 mm                   | 21148 | 12435<br>12437 |
|  | <b>RGR</b><br>External rubber grille   | 21190 | 12435<br>12437 |
|  | <b>WSG-INOX</b><br>Rectangular stainless steel grid for the WA kit   | 21192 | 12435<br>12437 |
|  | <b>WSG-W</b><br>Powder coated stainless steel rectangular grid<br>for the WA kit   | 21193 | 12435<br>12437 |
|  | <b>FTR M5</b><br>Filters   | 21926 | 12435<br>12437 |
|  | <b>WA</b><br>90° round/square adapter for extraction and exhaust<br>through a window frame.<br>Circular attachment diameter for 160 mm   | 21191 | 12435<br>12437 |

**VORT MONO RANGE**  
DECENTRALISED HEAT RECOVERY UNITS

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### TOLL-FREE NUMBER

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