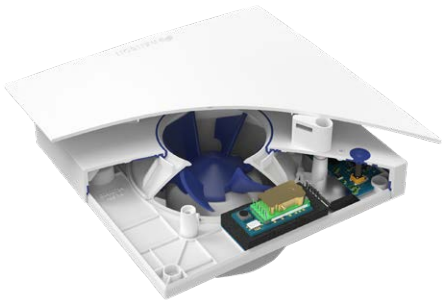
RENSON®
Creating healthy spaces

Technical data sheet
Waves

DECENTRALISED DEMAND CONTROLLED MECHANICAL EXTRACTION



Unlike existing bathroom or toilet ventilation systems (which must be turned on and off with a switch), Waves is fully automated, adapting the ventilation level to the humidity levels and odours, which it detects 24/7. Waves is the perfect solution for those who think of renovating their bathroom, installing an additional toilet or fitting a new kitchen and who always want superior indoor air quality in these rooms.

In addition to the version with the humidity and VOC sensors, Waves is also available in a model that includes a CO_2 sensor. This sensor detects the level of CO_2 in the indoor air. If the CO_2 level rises above the safe threshold in the adjacent rooms, Waves will increase the ventilation level in the bathroom, toilet, and/or kitchen so the indoor air quality can return to normal.

SCOPE OF APPLICATION

Ideal for installation in all wet rooms
- Toilet
- Bathroom
- Kitchen
- Laundry room

Thanks to the CO_2 sensor, the CO_2 level of adjacent rooms can also be detected. Providing a natural supply in the dry areas (bedrooms, office, living room, etc.) will therefore also improve air quality here.

You can create a system by combining several Waves in one home. The different Waves can all be operated with the same app.

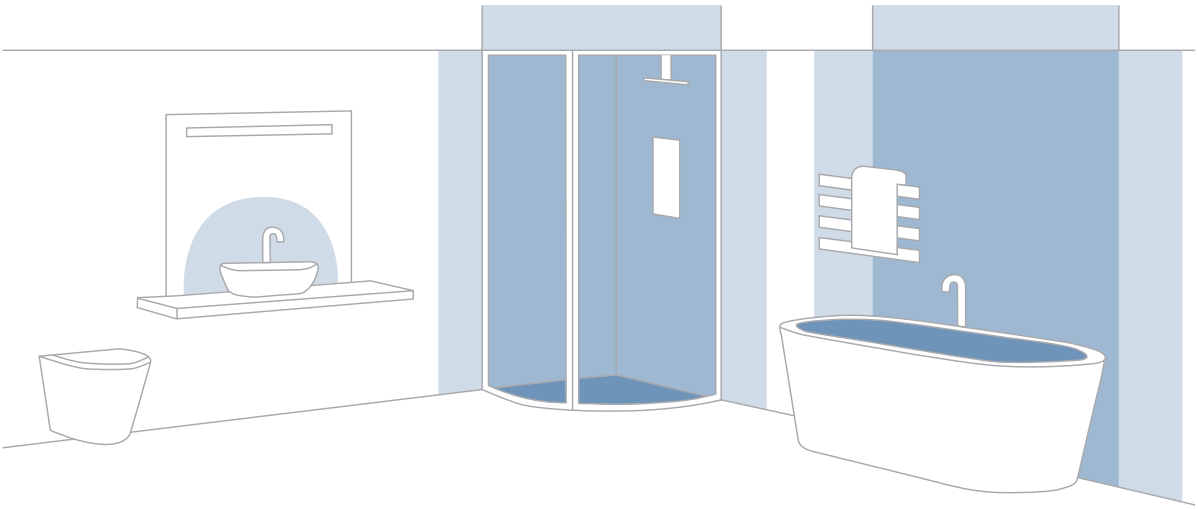
PRIMARY FEATURES

- **Demand controlled ventilation**
  - Guarantee of good air quality with heat saving, ventilates only when truly necessary.
  - Integrated sensors continuously measure the indoor air quality in the extracted airflow.
  - Extraction flow rate control based on the measured indoor air quality.

- **Ventilator**
  - Powerful yet quiet thanks to the specific design with a clamped motor.

- **Easy installation**
  - Wide range of mounting possibilities thanks to IP44 classification and high pressure build-up
    - Wall and ceiling mounting possible.
    - Allowed in wet areas as from zone 2.
    - Pressure build-up, so it can bridge several meters of ductwork.
    - Suitable for ducts of 100 & 125 mm thanks to the foam ring.
  - Step by step assistance with the app
    - Automatic calibration based on pressure measurement, so that the required flow rate is effectively delivered.
    - Choice of room with a possible fine adjustment of the flow rate.

RENSON® Headquarters • Maalbeekstraat 10 • IZ 2 Vijverdam • B-8790 Waregem
Tel. +32 56 30 30 00 • info@renson.eu • www.renson.eu



When installing Waves in the bathroom, you have to take into account that the bathroom is divided into 4 zones (0-3). Based on the IP class, the device can be placed in zones 2 or 3.

Zones

0	Min. IP-X7, protection against immersion, up to 1 m depth
1	Min. IP-X5, protection against water jets
2	Min. IP-X4, protection against splashing of water
3	Min. IP-X1, protection against dripping water

ARTICLE CODE

Article code	Name	Primary content
66000003	Waves CO_2	Humidity, temperature, VOC (odour) and CO_2
66000004	Waves	Humidity, temperature, VOC (odour)

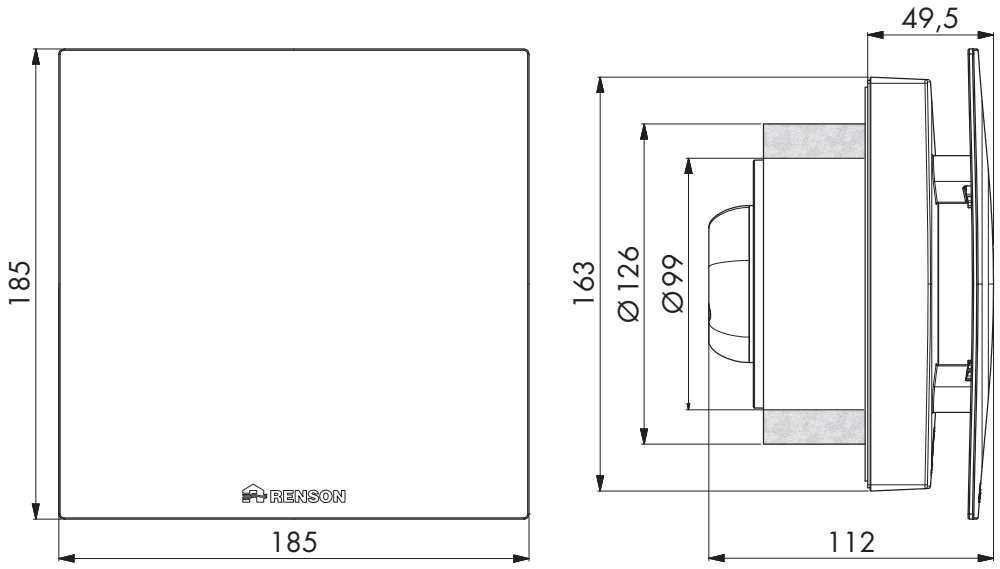
DEMAND CONTROLLED VENTILATION

The control modules provide individual demand controlled ventilation for each connected room. The control is applied according to the selected country setting.

Air quality detection (CO_2, humidity and VOC)	The sensors continuously measure the indoor air quality in the extracted airflow.
Automatic control of ventilation extraction flow rate	Waves automatically adjusts the speed of the motor according to the measured sensor values. This regulates the extraction flow rate depending on the air quality.
Ventilation extraction flow rate control algorithm (BE)	– CO_2 detection: proportionate – VOC detection: dynamic – Humidity detection: dynamic + proportionate

TECHNICAL DRAWINGS

- **Fan unit with control modules**



Ø126 = foam ring

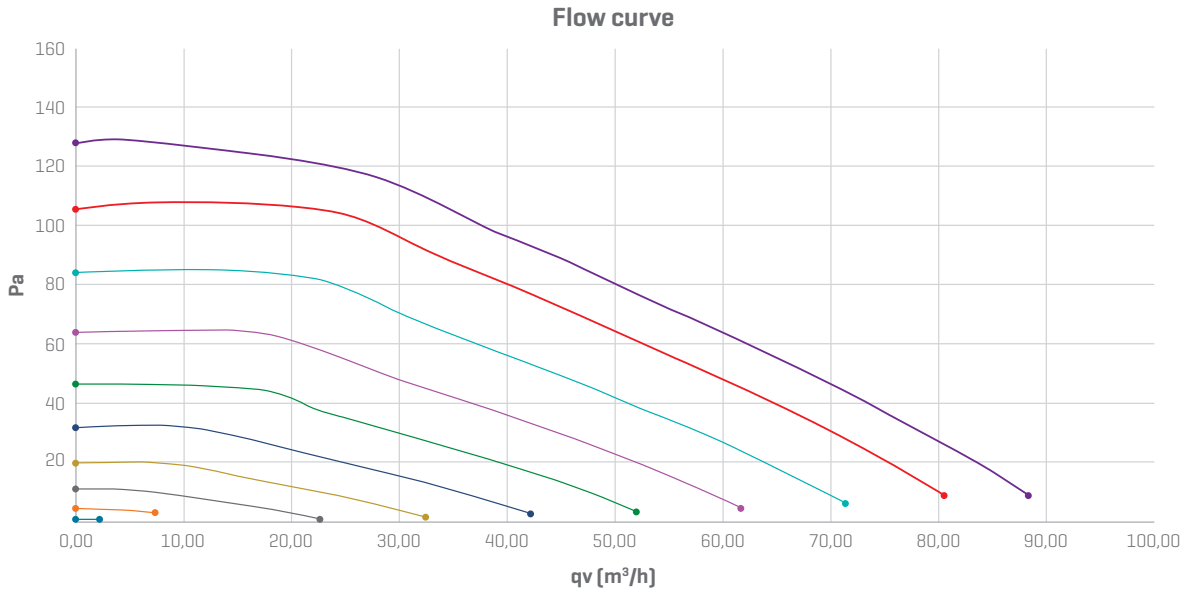
TECHNICAL SPECIFICATIONS

Type of ventilation	Decentral mechanical demand controlled ventilation
Max. airflow rate	75 m³/h (at 38 Pa) 50 m³/h (at 80 Pa) 25 m³/h (at 120 Pa) *For more fan characteristics, see graph below*
Connection voltage	230 Vac ±10% (50 Hz, 60 Hz)
Max. power (at 50 m³/h)	2.5 watts
Dimensions and weight – Device – Packaging – Device weight + packaging	 185 x 185 x 50 mm (LxWxH) 222 x 206 x 128 mm (LxWxH) 800 grams
Ø connection	100 mm or 125 mm with the additional foam ring
Fan	– Extremely quiet & energy-efficient brushless DC motor with 92 mm fan. – The device has a variable pressure adjustment. The lowest possible pressure level is set according to the required extraction rates.
Max. operating pressure	– 120 Pa: max. operating pressure – ≤ 50 Pa: recommended working pressure at the set flow rate – ≤ 25 Pa: reference value of very good working pressure at the set flow rate
Reading out calibration pressure	Initialisation of the calibration can be done with the app and manually. Readout via the app.
Duration of automatic calibration	30 seconds
Internet	Wi-Fi 802.1 b/g/n Pairing with the app or with the WPS button on the device
Security	WPA, WPA/WPA2, WPA2 and WPA Enterprise
Warranty	2 years

OTHER FEATURES

Automatic fault indication	You will receive a message through the app if Waves experiences a fault.
Automatic help screens	If you can't continue during initialisation, the app will guide you with useful tips.
Software updates	When Waves is online, the latest updates will be downloaded automatically each time.
User app	Free download from Google Play (Android) & App Store (Apple). http://www.my-lio.eu/apps/waves Download on the App Store · GET IT ON Google Play
IP classification	IP44 (can be used in zones 2+3 of the bathroom)
EU conformity declaration	*See next page*
Privacy Policy	www.renson.eu/privacy

CHART



EU CONFORMITY DECLARATION

EU CONFORMITY DECLARATION CE

The manufacturer established in the European Union (EU)

RENSON® Ventilation NV
Industriezone 2 Vijverdam
Maalbeekstraat 10
8790 Waregem
BELGIUM

hereby certifies that the residential ventilation systems listed below,

Waves
Waves CO_2

if applied in accordance with the respective technical conditions for these products,

comply with the provisions of the European standards, in particular:

- EN 60335-1:2012 + A11:2014 Household and similar electrical appliances – Safety – Part 1: General requirements

which may give rise to a presumption of conformity with the requirements set out in this document:

- 2006/42/EC Machinery Directive
- 2011/65/EU RoHS Directive
- 2014/53/EU RED Directive (incl. 2014/30/EU EMC Directive and 2014/35/EU Low Voltage Directive)

The undersigned are each individually authorised to compile the technical file.

May 2019,

Paul RENSON
Managing Director

dr. ir. Ivan POLLET
Head of research

VENTILATION
SUNPROTECTION
OUTDOOR

Renson® Headquarters
Maalbeekstraat 10 • IZ 2 Vijverdam • B-8790 Waregem • Belgium
Tel. +32 (0)56 62 71 11 • info@renson.be • **www.renson.eu**

RENSON®
Creating healthy spaces