

# CASA<sup>®</sup> R3 Smart



## Ventilation unit with rotary heat exchanger

Designed for detached houses, multi-dwelling houses and holiday cottages less than 150 m<sup>2</sup>. Also suitable for renovation projects. The unit's maximum air flow is 80 l/s with a temperature efficiency for the heat exchanger of over 85 %. R3 can be located together with a cooker hood, installed instead of a spice rack above the cooker.



# Smart - intelligent ventilation



The new Smart technology ensures that the ventilation is energy efficient and that the indoor air in the home is always healthy for both the home and its inhabitants.

## Smart control panel

The easy-to-use Smart control panel allows you to effortlessly adjust the ventilation in your home to suit many different situations. You can switch as required to an appropriate operating mode from the control panel, or let the pre-programmed weekly clock switch operating mode according to the diurnal rhythm you want. You can also let the Smart-function manage everything automatically (optional).



## Cooker hood control

In apartment blocks and in terraced houses, the ventilation unit is primarily controlled from a cooker hood. There are three buttons on the Swegon CASA cooker hoods that allow you to control the fan speed (Home/Away/Boost), the cooker hood's shut-off damper (30, 60 or 120 minutes) as well as the cooker hood lighting.



### Boost

A large airflow is used when the ventilation requirement increases, e.g. for cooking, taking a sauna, showering and drying laundry.



### Home

Normal air flow. Guarantees that there is sufficient fresh indoor air in the home, and that the building construction is at its best.



### Away

Low air flow. Reduces power consumption when the ventilation requirement in the home is small.



### Traveling

Very low air flow and lower supply air temperature. Used when no one is present in the home.



### Auto home/away/boost

Measures the indoor air's carbon dioxide content and, based on this value, determines which operating mode to use (optional).



### Auto humidity control

Automatically regulates the ventilation according to the indoor air's humidity levels (accessories).



### Auto air quality control

The most advanced automation function to achieve the best indoor air quality. Responds to numerous factors that affect air quality, such as different fragrances and cooking odours (accessory).



### Fireplace function

An intelligent fireplace switch function that produces the correct amount of replacement air, specifically for your fireplace. Facilitates lighting the fire and ensures clean combustion.



### Central vacuum cleaner function

Balances the ventilation when a central vacuum cleaner is used. Prevents excessive negative pressure and improves the cleaning result.



### Cooker hood function

Balances the ventilation when a cooker hood is used. Prevents excessive negative pressure and improves fume extraction capability of the cooker hood.



# Swegon CASA R3 Smart



- › Ecodesign energy class A
- › Airflow range 25 - 80 l/s
- › Heat exchanger temperature efficiency up to 86 % (EN 308)
- › Annual efficiency up to 75 %
- › Advanced Smart control technology
- › The ventilation is controlled automatically by the need
- › Automatic summer function and passive cooling
- › The defrost function ensures continuous ventilation
- › External units for heating and cooling are available
- › Can be connect to the automated building management system
- › Can be mounted directly next to the cooker hood

## Heat recovery

Heat in the indoor air is taken care of in the heat exchanger and is then used to heat the cold outdoor air that is taken in. R3's rotary heat exchanger is made of aluminium fins and its efficiency is high, above 80 %. As the rotor rotates, heat is stored in the heat exchanger's ducts on the warm extract air side, and is emitted to the cold air on the supply air side. Even though the same surfaces are in contact with both the extract air and the supply air, there is very little risk that odour transfer will occur.

## Anti-frost protection

R3's reliable defrosting function guarantees continuous and balanced ventilation in the home even during extreme conditions. If there is a risk of the unit's heat exchanger freezing, the speed of the fans increases and the warm extract air prevents freezing occurring inside the heat exchanger. The supply air fan does not stop completely, ensuring a continuous ventilation in the home.

## Comfort heating

Usually the extract air's heating energy is sufficient to heat up the supply air. In cold conditions, you can use an electric 500W reheating coil to ensure a comfortable indoor air quality is maintained even during periods of intense cold. An adjustable thermostat switches on the air heater when the supply air temperature drops below the required value.

## Fans

In R3 the fans have low-energy, economical, type EC direct-current motors, whose power consumption is substantially lower than that of traditional fans driven by AC motors. The advantage of the EC fans is that their speed is variably controllable and their efficiency is high even when operated at lower speeds. The power and control cables on the fans are fitted with quick connectors, which mean they can be quickly dismantled from the unit.

## Automatic summer mode

R3's intelligent summer function helps to maintain the home's indoor air comfort even during hot summer days. Very economical comfort coolness can be produced almost free of charge by utilising the difference in indoor and outdoor temperatures and the heat exchanger intelligently. The heat exchanger takes care of the cool indoor air during hot summer days and cools the incoming outdoor air. At night the air passes the heat exchanger and the home is cooled with fresh outdoor air. This is managed by an advanced automatic system that can be set according to the resident's requirements!

## Units for heating and cooling

Using separate units for heating and cooling you can change the ventilation unit into an efficient and functional heating or cooling unit. The units for heating and cooling can be connected directly to the waterborne main heating system in the residence and can be controlled directly from the Smart panel.

## Installation

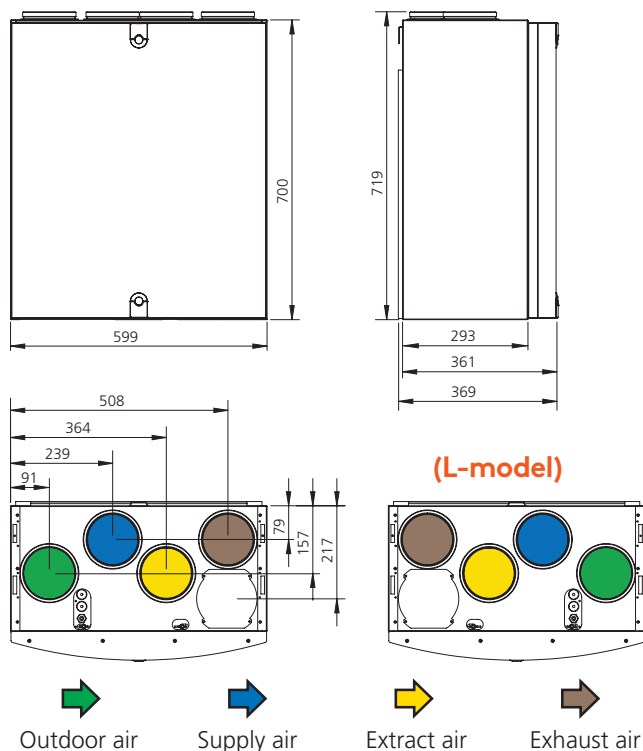
The unit can either be mounted on a wall or suspended from the ceiling using a separate ceiling mounting frame. R3 is also suitable for mounting on the wall above the cooker hood in place of a spice rack. Swegon CASA Jazz cooker hood is connected directly to the unit.

## Control system and connection options

R3 is easy to connect as part of a building automation system via the DDC control (standard) or Modbus (optional). When used in a real estate business, it enables centralised monitoring and control, and in doing so reduces service and maintenance costs.

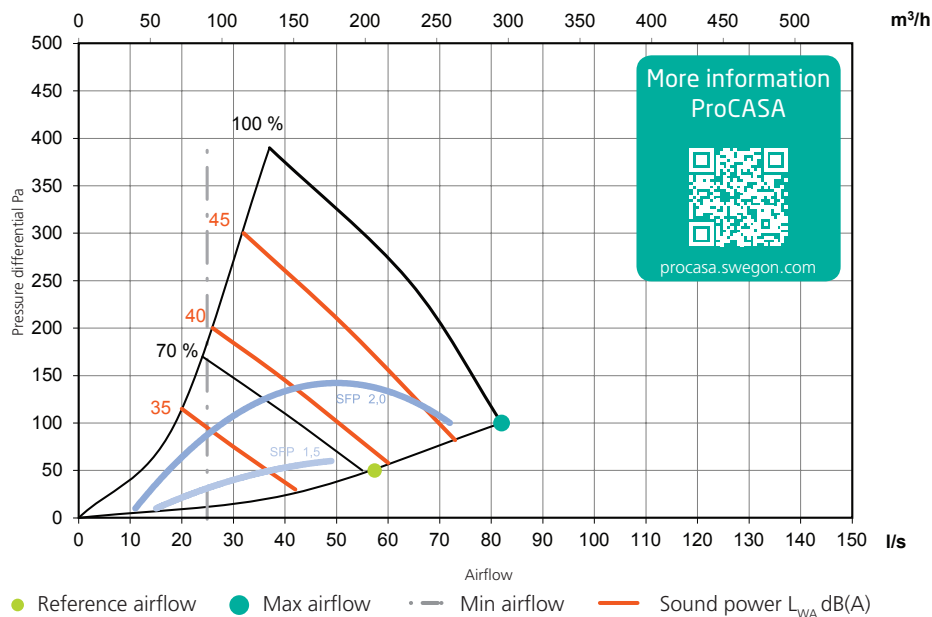
# Technical data

## Dimensions (R model)



	R3	R3 with reheating
Connection	230 V, 50 Hz, 10 A	230 V, 50 Hz, 10 A
Fans	230 W	230 W
Air heater, reheating	-	500 W
Water-based heating coil	duct mounted available	duct mounted available
Water-based cooling coil	duct mounted available	duct mounted available
Total output	250 W	750 W
Fuse protection	10 A	10 A
Weight	50 kg	50 kg
Ducts	Ø 125 mm	Ø 125 mm
Condensate connection	3/8" male thread	3/8" male thread

## Air volumes (EN 13141-7)



Swegon CASA R03VR05S00H

A+

A

B

C

D

E

F

G

**A**

39 dB

295 m<sup>3</sup>/h

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## Correction table sound data

Sound to surroundings	Sound power level L <sub>w</sub> (dB), table K <sub>OK</sub>							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
	13	10	4	-8	-12	-14	-21	-30

More detailed sound data for surroundings and ducts according to set values is available in ProCASA.

(SEC) in kWh		
Cold	-82,7	A+
Average	-39,8	A
Warm climate	-15,2	E

Energy class can vary depending on equipment level of the unit.