

SANTOS 370 DC

COMPACT COMFORT VENTILATION 'MVHR' UNIT
SANTOS F 370 DC WITH HUMIDITY RECOVERY

WITH HUMIDITY
RECOVERY



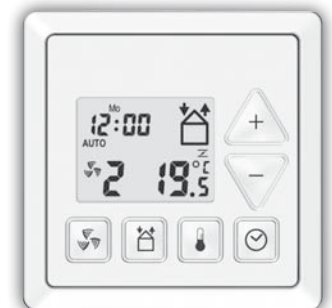
PASSIVE
HOUSE
compliant
COMPONENT
Dr. Wolfgang Feist



 **PAUL**
WÄRMERÜCKGEWINNUNG



3-step switch
surface or flush mounted



Sealed keypad
surface or flush mounted

PRODUCT DESCRIPTION

The Comfort Ventilation unit **santos 370 DC** or **santos F 370 DC** is a mechanical ventilation heat recovery (MVHR) unit for use in apartments and single-family houses. Two highly efficient electronically commutated direct-current motors with high-duty impellers pass the air over a counter-flow heat exchanger at a heat recovery rate of up to 90%. Optionally, the standard heat exchanger can be replaced by a membrane-based moisture-heat exchanger, which achieves up to 90% heat recovery and can reclaim a high percentage of the air humidity from the extract air. This is a noticeable improvement for apartments with very dry room air conditions. In addition, the plate heat exchanger design with separate supply and extract air flows guarantees perfect hygienic conditions. This device has a special control system that prevents overhumidification. It has G4 filters on the intake and extract air with the option of a F7 pollen filter on the intake.

The housing is made of powder coated steel. The inner lining is high-quality polypropylene for heat insulation and sound absorption. Depending on the level of configuration, the MVHR unit can be controlled by either a 3-step switch or by a sealed keypad. Both controls can be installed in any room regardless of where the MVHR unit is located. The 3 ventilation levels can be varied in 1% increments. With the sealed keypad following additional functions can be provided: 4-step control of air flows, supply-only or extract-only, a free programmable weekday timer and air flow controls (CO₂, Humidity). An automatic bypass control with motorised bypass flap in association with a ground to air heat exchanger ensures gentle cooling of the rooms in summer. The automatic frost protection system needs no auxiliary energy and can optionally be extended for fireplace operation via special configuration software.

The duct connections are DN 160 and the ductwork can be connected from the side or top of the unit, depending on the circumstances of installation. The condensate drain is a 1 ¼" male thread socket located at the bottom on the left or on the right, depending on the model.

THE UNIT PROVIDES 10 BENEFITS:

1. More comfort by moisture recovery along with heat recovery
2. Heat efficiency up to 127%
3. Perfect hygienic plate heat exchanger
4. Standard heat exchanger replaceable by moisture-heat exchanger
5. Small number of moving parts, low repair needs
6. No critical response to poor maintenance
7. No risk of freezing at outdoor air temperatures $\geq -10^{\circ}\text{C}$; defroster heater or ground heat exchanger can be dispensed with
8. No bad odours even after many years of service
9. Low-cost care and maintenance
10. Good price-performance ratio

santos 370 DC

Unit dimensions:

H x W x D [mm]: 892 x 714 x 597

Installation:

wall mount, horizontal;
(bottom edge at least 235 mm above finished floor level), or vertical on base frame

Place of installation:

frost free, preferably > 10°C

Duct connections:

4 x 160 mm dia. socket size

Condensate:

1 1/4" male thread

Material:

Housing:
powder coated steel, light grey;
thermal bridge free heat and sound insulation by means of EPP foam
Front cover:
plastic in water blue
Heat exchanger:
polystyrene (standard heat exchanger)
salt ion membrane (moisture-heat exchanger)

Weight:

39 kg

Filters:

intake air: G4, optionally F7
extract air: G4

Electrical connection:

230 V, 50 Hz: ready for connection – no plug

Cable lengths:

- power cord (230 V): 2 m
- 3-step switch to terminal box (230 V): any (by customer)
- Sealed keypad to terminal box: max. 10 m (by others)

Control:

- 3-step switch or
- sealed keypad

Protection:

IP 22

Ventilators:

2 230 V DC radial fans

Power input/flow/available pressure:

see chart 1

Heat recovery rate:

92.7 % for santos 370 DC (acc. to EN 308)
up to 127 % for santos F 370 DC (as referred to sensitive heat in the extract air stream)

Moisture recovery rate:

up to 65 %

Sound pressure level acc. to DIN EN ISO 3743-1: (1.5m distance in dB(A))

V*	50	100	270	360
Lp	19	31	52	58

Temperature range of heat exchanger:

can be used between -20°C and 40°C

Summer operation:

motorized summer bypass

Frost protection:

- frost protection circuit based on intake air flow reduction (no auxiliary energy), fireplace option, or
- frost protection heater, or
- ground to air heat exchanger

Back-up heating:

- hot water duct heater as external unit, or
- electric duct heater as external unit

Information:

Subject to change in the interest of technical progress.

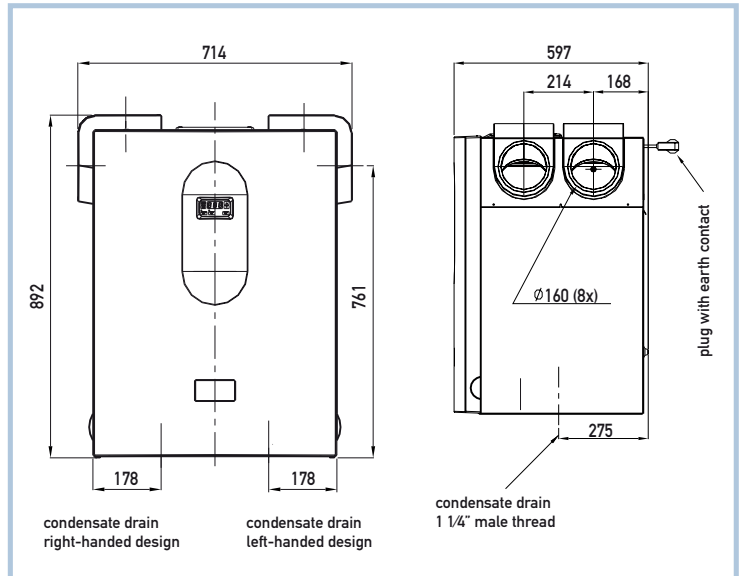
* flow rate [m³/h]

- Environment award
- Innovation awards
- European and German patents
- Product of the Year award
- First Passiv Haus certified MVHR system
- Environment Oscar award
- INTEC award for Saxony

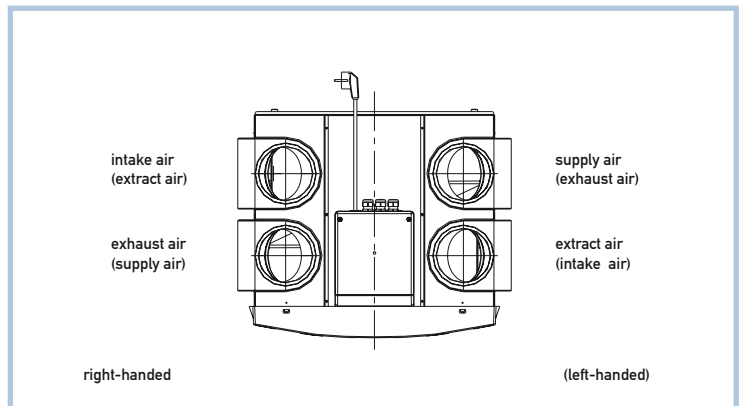


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Picture 1: Front view / Side view from the right



Picture 2: Top view

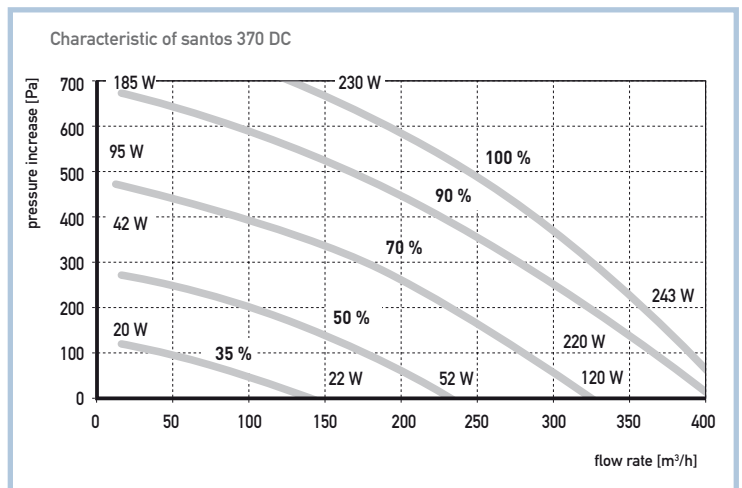


Chart 1: Characteristics for flow rate, externally available pressure and power input

PAUL Comfort Ventilation obtained innovation awards both on the German state and Saxon regional levels, and received the German Environment Award (European-wide competition), as well as the Product of the Year and Environment Oscar awards.

PAUL offers equipment for controlled residential ventilation with efficiencies of up to 99% – groundbreaking in the industry.

Our motto is "New ideas in ventilation" – for fresh and healthy air in homes with energy saving systems for safeguarding the integrity of the environment.