

# WS 170 . WS 320 . WS 470

Ventilation units with heat recovery and  
App / Web tool operation

*@home*  
*AIR!*



Unique: Now also in  
A+ efficiency class!

# The best WS family yet.

If you talk about home as being a feel-good oasis of wellness, most people think of beautiful furniture, modern décor and lots of space. The most important element is often forgotten; healthy room air, free from pollutants, smells and humidity!

The new generation of MAICO ventilation units with heat recovery, the WS 170, WS 320 and WS 470, ensures perfect room air without the need for window ventilation, and a lot more besides. For example, uniquely high energy efficiency, flexibility and ingeniously easy operation through the free-of-charge App / web tool, air@home.

AND THE RESULT IS COMFORTABLE DOMESTIC VENTILATION.

Thanks to the continuous, optimum level of ventilation, the fabric of the building is effectively protected against mould and the expensive renovation work that it can lead to. The ideal room air also minimises the risk of adverse effects on health, such as asthma, allergies, headaches and much more.

## The most important facts about the WS 170:

- Volumetric flow: 40 - 170 m<sup>3</sup>/h
- Volumetric constancy, 4 settable levels
- Very space-saving and quiet
- Automatic bypass (100%)
- Different equipment options
- Connection sockets can be replaced and rotated
- DIBt approval, PH certificate



# WS 170

## For apartments and single family-unit houses up to 120 m<sup>2</sup>

### PERFECT FOR SMART SAVERS.

The extremely high heat recovery efficiency of up to 90% and the two efficient DC motors save power and money.

The air flows in the heat exchanger are kept apart from each other, so that neither smells nor pollutants are transferred to the incoming fresh air.

### TINY UNIT.

The premium quality product is a very compact and space-saving unit.

### WORKS FLEXIBLY AND ONLY WHEN REQUIRED.

The four ventilation levels, holiday, day, night and intensive mode, ensure a need-based, energy-saving ventilation and air extraction.

A further benefit is that you are free to choose between a left and right version and between the Standard, Comfort and Bypass variants.

### VIRTUALLY SILENT.

The double decoupled housing and integrated heavy mat make the unit very quiet.



### MOBILE CONTROL.

The WS 170 can be operated in the Bypass version with the free-of-charge App / web tool, air@home.

UNIT CONCEPT WITH HIGH FLEXIBILITY	STANDARD	COMFORT	BYPASS
Housing	EPP with steel enclosure	EPP with additional insulation and sound optimised housing	EPP with additional insulation and sound optimised housing
Housing cover	Double-skinned	Double-skinned	Double-skinned with bypass channel
Antifreeze heating	○	PTC heating element	PTC heating element
Simple operating panel	●	●	○
Digital operator unit	○	●	●
Bypass	○	○	●
Right or left version	●	●	●
Operation using air@home (App or web tool)	○	○	●
TECHNICAL DATA	WS 170 R WS 170 L	WS 170 KR WS 170 KL	WS 170 KBR WS 170 KBL
Article number	0095.0081 0095.0082	0095.0083 0095.0084	0095.0087 0095.0088
Degree of heat provision >90%	●	●	●
Rated voltage: 230 V	●	●	●
Power consumption at 100 Pa: 50 / 80 / 130 m <sup>3</sup> /h 22 / 31 / 55 W	●	●	●
Connection diameter: 125 mm	●	●	●
Air volume: 40 –160 m <sup>3</sup> /h	●	●	●
Filter class (exhaust air / outside air)	G4/ G4	G4/F7	G4/ F7
Weight	38 kg	43 kg	47 kg
Airstream temperature: -15 to +60° C	●	●	●
Sound power level: L <sub>WA2</sub> = housing emission	44 dB(A)	34 dB(A)	34 dB(A)
L <sub>WA5</sub> = free intake (exhaust air)*	43 dB(A)	43 dB(A)	43 dB(A)
L <sub>WA6</sub> = free outlet (supply air)*	45 dB(A)	45 dB(A)	45 dB(A)

\* L<sub>WA5</sub>/L<sub>WA6</sub> sound power level emitted to the free surroundings, measured at 100 Pa. Measured at the connections facing the room (supply and exhaust air, level 1).

● inclusive ○ exclusive ● optional

# WS 320 . WS 470 . WR 310 . WR 410

For single- and multiple-family units  
and offices up to 450 m<sup>2</sup>

## UNIQUE: EFFICIENCY CLASS A+!

Thanks to the construction that has been designed down to the smallest detail and to the energy-efficient EC motors, the new ventilation units are extremely energy- and cost-saving in operation.

The WS 320 is the only unit in its class to hold the A+ energy efficiency class label! It doesn't get any better than that!

## EFFICIENT: UP TO 95% HEAT RECOVERY!

The highly efficient cross counterflow heat exchanger ensures that the energy in the exhaust air can be reused and transferred to the fresh supply air. In addition, the fact that it is equipped with an enthalpy heat exchanger makes it possible to transfer humidity to the supply air, which is an advantage in winter, when otherwise the room air is dry.



**FLEXIBLE: 16 POSSIBLE VARIATIONS!**

Maximum flexibility means that you get modular unit construction, leading technology with many system components and accessories, selectable wall or stand installation and individual equipment and control options, which can be modified later, if required. In short, a perfect solution for every customer requirement and every installation application.

**CLEVER: WELL THOUGHT-OUT OPTIONS!**

With the bypass option, the incoming supply air is fed past the heat exchanger and is not

pre-warmed. This results in a cooling function, which is a benefit to residents on warm summer nights.

In winter, the optional PTC preheating register prevents the heat exchanger from frosting up.

The optional additional boards for the expandable electronic compartment open up many different application options, including a controlled brine geothermal heat exchanger operation.

**SMART: OPERATION VIA APP / WEB TOOL!**

The ultra-modern units can be controlled via the optional touchscreen control unit or using the free-of-charge App and the corresponding web tool, air@home.

The unit can be integrated into the BMS through a MODBUS interface or an optional KNX plug-in module. The optional EnOcean module, which can be integrated if desired, offers additional wireless control possibilities.



EQUIPMENT	ART. NO.	BYPASS	PREHEATING REGISTER	ENTHALPY HEAT EXCHANGER	MOBILE CONTROL
WR 310 / WR 410	0095.0220 / 0095.0228	–	–	–	•
WS 320 K / WS 470 K	0095.0222 / 0095.0230	–	•	–	•
WS 320 B / WS 470 B	0095.0221 / 0095.0229	•	–	–	•
WS 320 KB / WS 470 KB	0095.0223 / 0095.0231	•	•	–	•
WS 320 ET / WS 470 ET	0095.0224 / 0095.0232	–	–	•	•
WS 320 KET / WS 470 KET	0095.0226 / 0095.0234	–	•	•	•
WS 320 BET / WS 470 BET	0095.0225 / 0095.0233	•	–	•	•
WS 320 KBET / WS 470 KBET	0095.0227 / 0095.0235	•	•	•	•

**TECHNICAL DATA**

	WS 320/WR 310 ...	WS 470/WR410 ...
Air volume at 100 Pa	80 – 320 m³/h	80 – 470 m³/h
Connection diameter	160 mm	160 mm
Degree of heat provision according to PHI	Typically 93%	Typically 90%
Humidity conditions with enthalpy heat exchanger (DIN EN 13141-7)	Typically 70 %	Typically 70 %
Sound power level $L_{WA2}$ at 200 m³/h and 100 Pa	Typically 42 dB(A)	Typically 42 dB(A)
SPI value	0.18 Wh/m³	0.26 Wh/m³
Standby power consumption	< 1 W	< 1 W
Airstream temperature	-15° to +40°C	-15° to +40°C
Filter class	G4 / F7	G4 / F7
Dimensions H x W x D	857 x 841 x 598	857 x 841 x 598
Weight	approx. 67 kg	approx. 67 kg

\* with enthalpy heat exchanger, approx. 73 kg

# APP-/WEB-TOOL AIR@HOME

## Latest technology, smartest operation

### MOBILE VENTILATION CONTROL AND ADJUSTMENT

The free-of-charge iOS App and the corresponding web tool air@home give the user smart access to one or more heat recovery units, whether out-and-about or at home on the sofa.

Facility managers, tradesmen or end-users can all have convenient access to heat recovery units by Smartphone, tablet or PC.

End-users can adjust and control their ventilation unit flexibly with the app. In addition to this, tradesmen and building management companies can use the web tool to adjust and manage units.

Building management companies have the added advantage that they can support their tenants with the correct ventilation strategy and they can adjust the volumetric flows in advance to match the conditions (Example: Apartment usage by a single person or by a family of five).



## Key information at a glance:

- Select and set various functions such as ventilation level, weekly time program, zone ventilation, summer/winter operation, holiday function and party mode.
- Select and set temperature, room humidity and sensors.
- Depiction of temperature, humidity and CO<sub>2</sub> trends and the energy recovered.
- Filters can be ordered by e-mail.

## Advantages for all

### ADVANTAGES FOR END-USERS

- Smart handling of the ventilation system by Smartphone.
- Safety in relation to correct ventilation (green line = ventilation is in the right range).
- Ensuring an optimum room climate, even when no-one is at home.
- Documentation as proof of correct ventilation.
- App usage with unlimited end-devices.

### ADVANTAGES FOR BUILDING MANAGEMENT

### COMPANIES

- Simple and flexible unit setting with the web tool.
- Perfect control over multiple systems.
- Interventions when incorrect ventilation is identified.

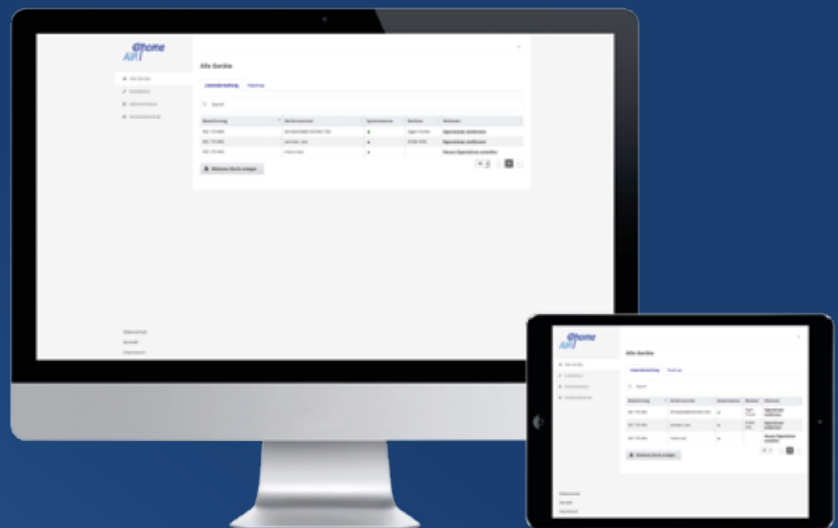
### ADVANTAGES FOR TRADESMEN

- Simple and flexible unit setting with the web tool.
- Remote service option.

## More secure than other solutions

All the data transferred with air@home is encrypted. The app never communicates directly with the ventilation unit, but via the secure MAICO server.

Should a Smartphone be lost or the tenant/end-user change, access to ventilation units is easy to block and re-issue.



The browser-based web tool for many different operating systems and end-devices.

Do you have any questions about the new heat recovery generation or about air@home?

**We will be happy to answer them on [sales@maico.de](mailto:sales@maico.de)**

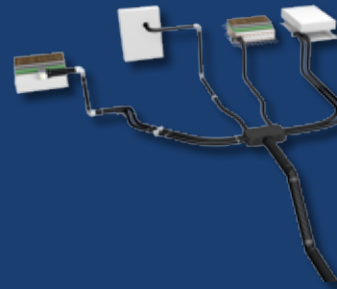
# Systematically better ventilation

## The right MAICO duct system for every requirement

### MAICOFlex

The practical all-rounder duct system with the "click".

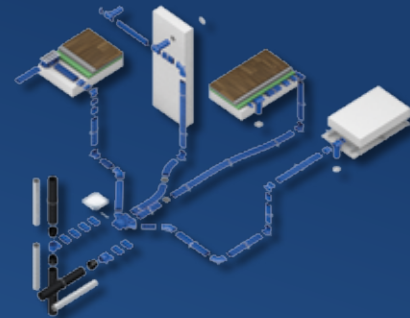
- Complete solution with distributors, ducts, adapters and various installation accessories.
- Available in the nominal sizes of 63, 75 and 90 mm.
- Suitable for both new builds and redevelopments.



### MAICOFFS

The extra low-profile duct system - perfect when space is at a premium

- Because of the low mounting height of the components, it is perfect for deployment where there is limited space, as is often the case with retro-spective installation during renovation work.
- Provides the best quality room air thanks to the high distributor air throughput.



### MAICOTherm

The thermally insulated ventilation duct system that leaves nothing to chance

- Stands out particularly through the transport of outside and outgoing air.
- Outstanding heat and sound insulation properties.

