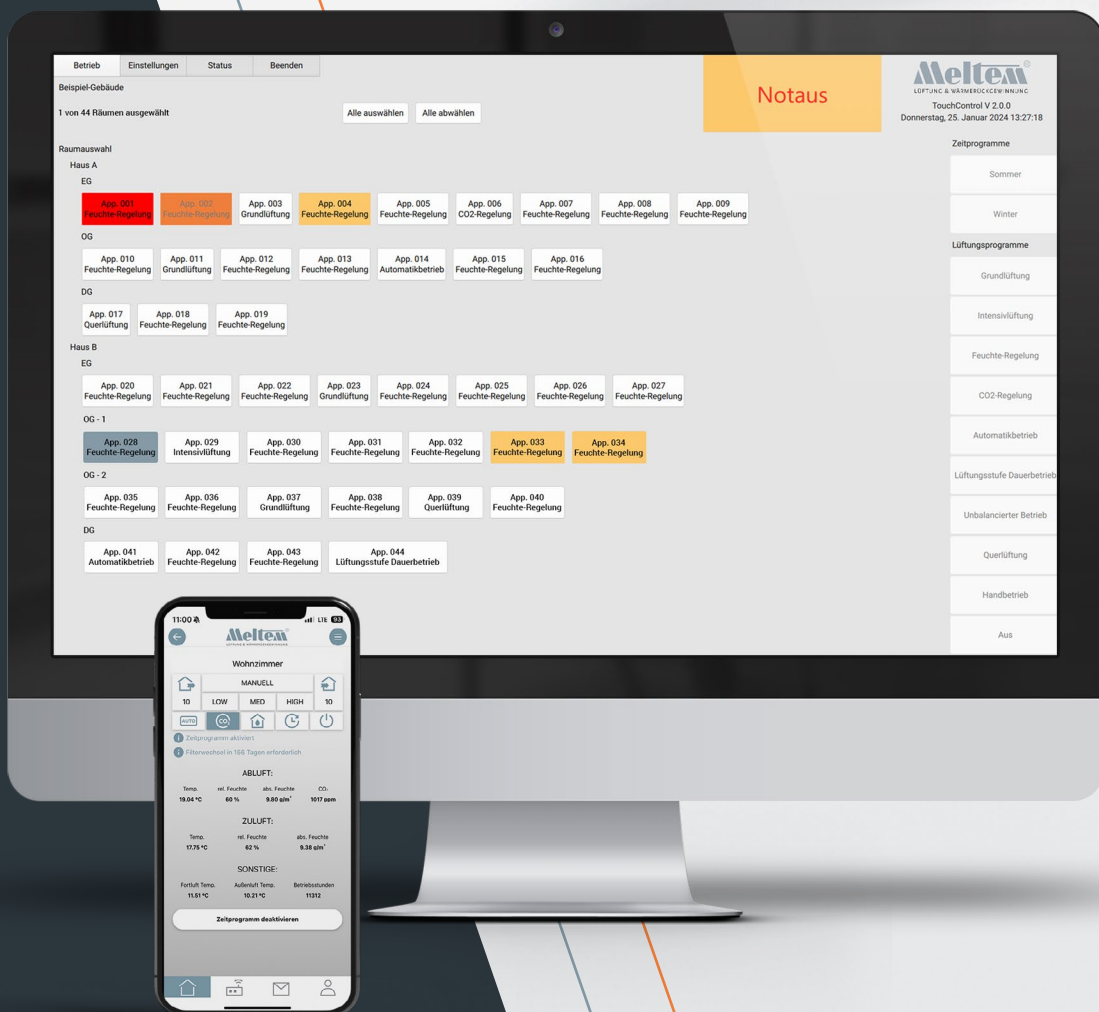


# USER CONTROL OPTIONS FOR OUR COMFORT VENTILATION SYSTEM

For individual  
and flexible control





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# MELTEM

## Your partner for ventilation

You have been depending on us for ventilation solutions for over 40 years, relying on our rigorous use of the latest electronics and high-quality components. The result is individual ventilation solutions for a wide range of construction projects. The quality of our “Made in Germany” comfort ventilation units is demonstrated by various approvals and essential eligibility for grant funding.



### MOISTURE PROTECTION

- Protection against moisture damage
- Prevention of mould growth
- Securing the structure



### NOISE PROTECTION

- Ventilation without outside noise
- High level of sound insulation
- Virtually noiseless operation



### HEALTHY LIVING

- Wellness through clean and pre-heated fresh air
- Hypoallergenic due to high-performance air filters
- No draughts



### ENERGY CONSERVATION

- Save on heating costs and reduce CO<sub>2</sub> emissions
- Extremely low power consumption
- Cost-effective way to build an “efficiency house”



# Cloud-based: Convenient control from the app.

## Control by app for our comfort ventilation

The new Meltem app can be used for bidirectional control, programming and reading of ventilation units from the M-WRG-II and M-WRG series. It can be used decentrally, centrally on site or online from anywhere in the world. It allows time programs to be saved for different controllers according to the unit configuration. And, of course, the user can also set various unit functions and controls. Top priority is given to data protection; your data is fully encrypted and can only be released by the user. Naturally all Meltem ventilation units can also be controlled without the app. You will find further information in our operating and installation instructions.

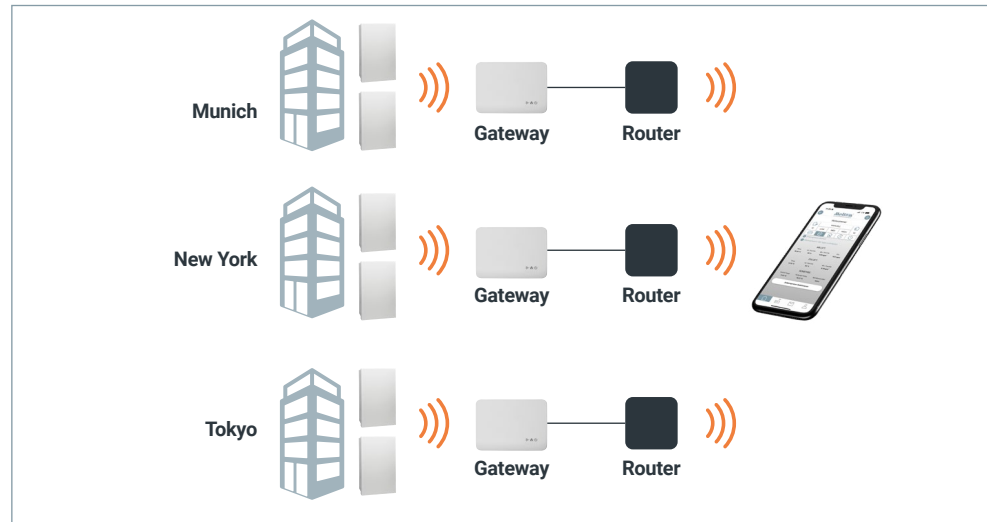
### BENEFITS OF THE MELTEM APP AT A GLANCE:

- Increased comfort – from anywhere in the world
- Link units to the app quickly and simply
- Customised ventilation and timer programs
- Remote maintenance possible online
- Multiple buildings can be linked into the app
- Easy to retrofit
- Connect up to 15 units to each gateway
- Can be used with pre-2020 units. Contact us for further details.

### YOU WILL NEED:

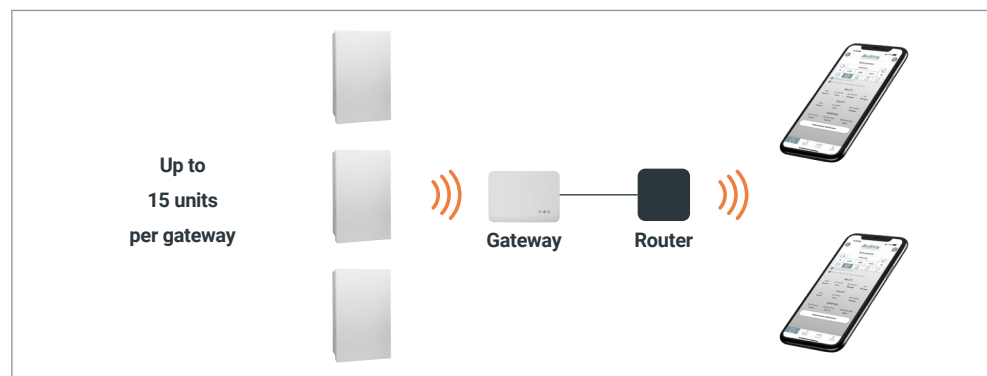
- The Meltem app
- Meltem Gateway with cable and mains plug
- Ventilation units from the M-WRG-II and M-WRG series constructed 2020 or later
- Router with Internet access
- Smartphone or tablet, iOS or Android operating system

# Increased comfort with the Meltem app



## Added value for all

- Selecting and setting various program functions
- Displaying operating statuses
- User-specific settings can be made
- Optimum ventilation guaranteed even when building is unoccupied
- Online support possible via remote maintenance
- Fault messages and filter change indicator
- Can be controlled via iOS or Android

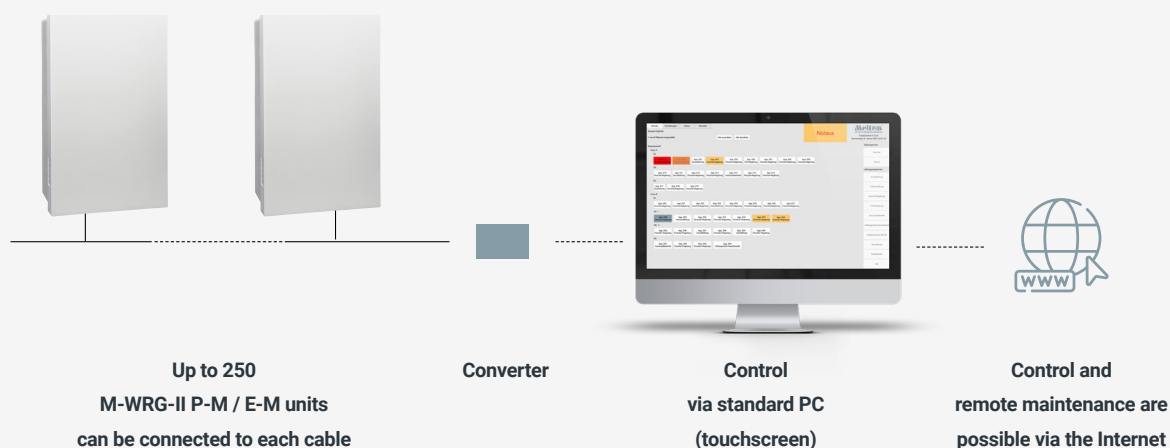


## In the home

- In every room, the units are equipped and can be operated with a simple controller
- The manager has access to the app and so can make basic settings and check fault messages at a central location. If users request changes to the settings, the manager can again implement these centrally



# Massive performance & flexibility



## A centralised control unit offers unsurpassed ease of use

Meltem bus solutions are the first choice for buildings with multiple ventilation units. Up to 250 M-WRG-II P-M / E-M or M-WRG-S M units per cable can be controlled centrally via a computer using the Modbus network solution. Its clear graphical user interface (touchscreen) visualises all the relevant data concerning the ventilation units and is simple to use. The control system tailors the ventilation to each individual room. It is also possible to control the ventilation as needed based on the humidity and/or CO<sub>2</sub> content of the ambient air, and the timer programs can be set as required, e.g. for operation during the summer, winter, holiday periods or at weekends.

- Individual options for controlling individual units, groups of units or the entire ventilation system
- 230 V external control input on the M-WRG-II P-M / E-M or M-WRG-S M\* ventilation unit to which a switch, time switch, motion detector or similar may be connected. The input is equipped with a switch-on delay and time-delay relay.
- Up-to-date information concerning the operating status, temperature, frost protection, filter change, etc.
- Clear graphical display for visualising the operating statuses and allowing simple input of control commands using predefined input boxes on the touchscreen

\* constructed from 2018 onwards

### **Fresh air for sensitive areas**

There is virtually no area that cannot be professionally ventilated. Meltem ventilation units provide draught-free, fresh air with low energy and operating costs even in sensitive public buildings:

#### **USES:**

- Residential buildings
- Retirement homes
- Halls of residence
- Hotels / boarding houses
- Day-care centre
- Communal facilities
- Office buildings
- Doctor's surgeries
- Modular construction

No one would disagree that schools and daycare centres have different needs to private homes with respect to ventilation. For example, Meltem comfort ventilation units installed in the Markt Indersdorf primary and secondary school supply fresh air and thus create a healthy atmosphere for learning.

Retirement homes and halls of residence should create a comfortable climate for residents. This includes providing fresh air in living and shared areas. Meltem comfort ventilation units are centrally controllable, individually adjustable and, if two rooms (living area and wet room) are connected for ventilation purposes, they are also extremely economical to use.





# On-demand & individual control

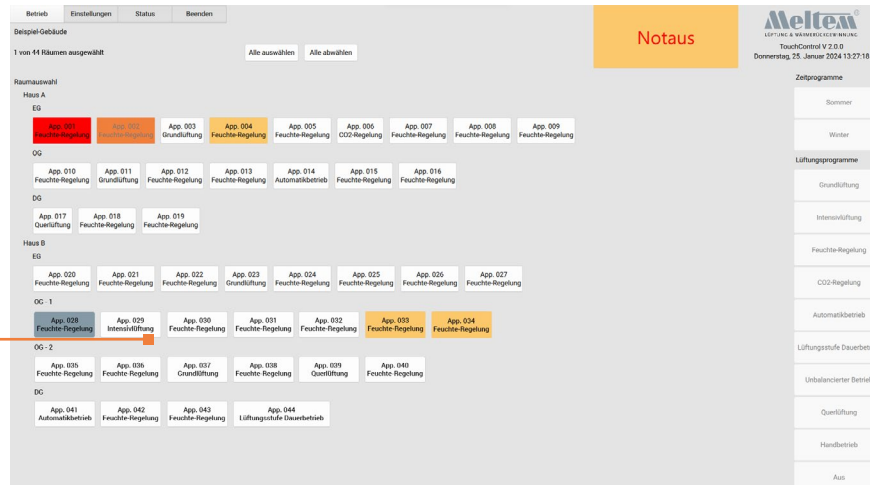
As the private or public building owner and operator, you not only benefit from the cost-effectiveness of decentralised (living) room ventilation; when combined with a centralised controller it also becomes unprecedentedly easy to use:

- Individual options for controlling the units using independent variables (relative humidity, air quality, timer programs)
- Up-to-date information (operating status, temperature, frost protection, filter change, etc.) from the unit
- Visualisation of operating statuses and notifications by graphical displays
- Straightforward remote maintenance by facility management

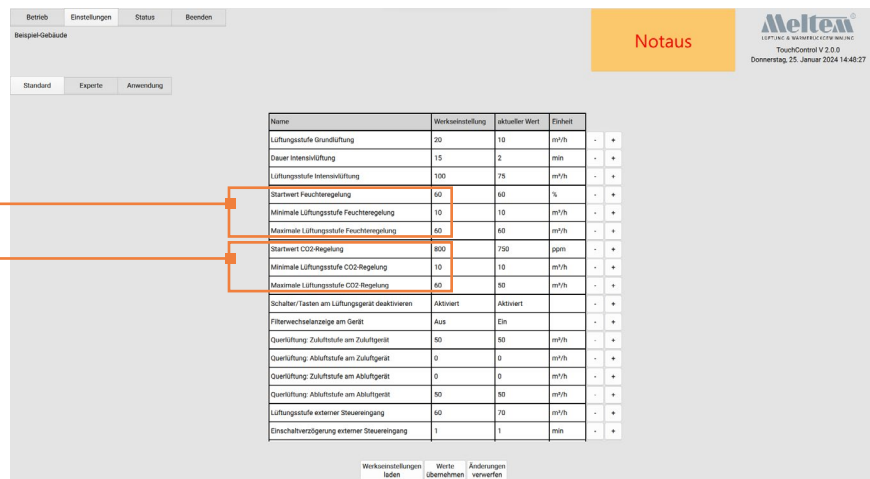
And of course extensive advice at the planning and implementation stages of your individual solution are given for us. If you would like more information about the comfort ventilation system with heat recovery from Meltem, please do not hesitate to contact us.



Individual centralised control of each individual room via the network



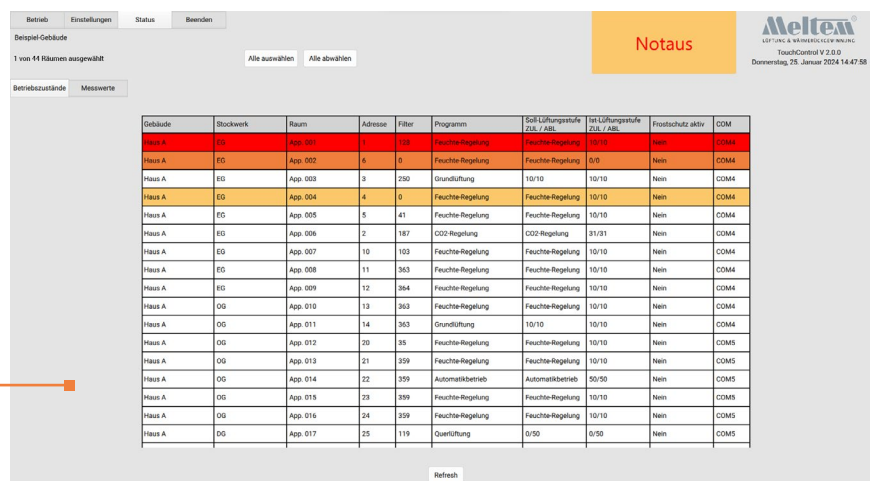
Control based on relative humidity



Control based on air quality (CO<sub>2</sub>)

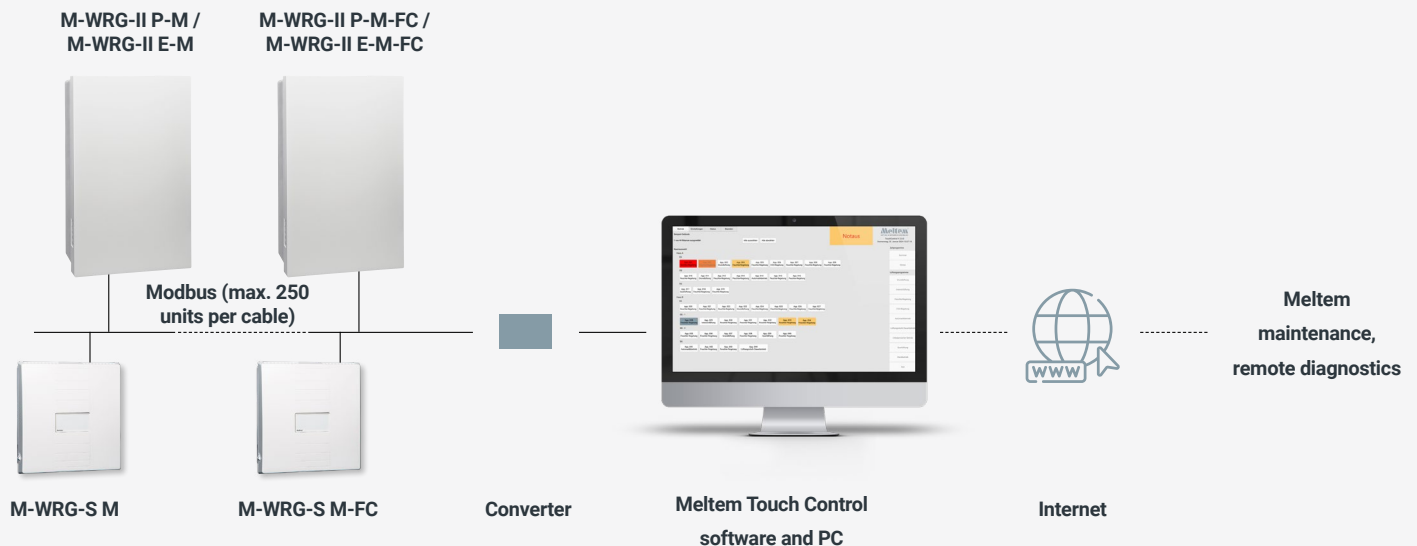
Individual options for controlling the units using independent variables (relative humidity, air quality, timer programs)

Visualisation of operating statuses and notifications by graphical displays



The Meltem Touch Control software can be quickly and easily adapted to various applications. Graphical representation of the room arrangement provides a clear overview and is easy to use.

# Decentralised ventilation – Centralised control



## CENTRALISED CONTROL OF M-WRG-II / M-WRG VENTILATION UNITS IN A MODBUS NETWORK

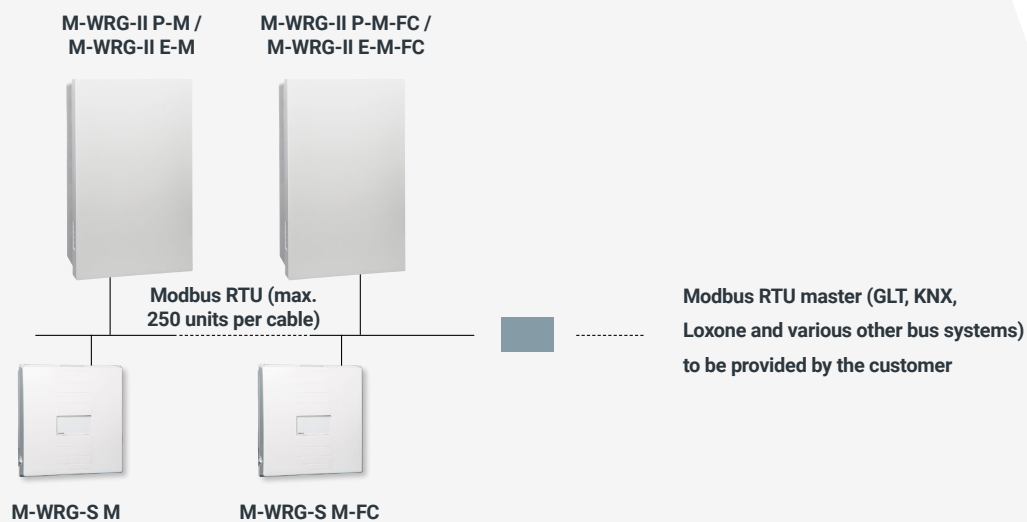
Up to 250 M-WRG-II P-M / E-M or M-WRG-S M units per cable can be controlled centrally via a Modbus network solution. The following components will be needed to set up the network:

- M-WRG-II P-M / E-M or M-WRG-S M ventilation units  
(To control humidity or air quality, these units are also available with humidity or CO<sub>2</sub> sensors: M-WRG-II P-M-F / E-M-F or -FC or M-WRG-S M-F or -FC)
- M-WRG-SUM 3 converter from Modbus to USB
- (Touchscreen) PC

The Touch Control software is used to control the units. This offers the following functions:

- Centralised control of individual units, groups of units or the entire ventilation system
- Demand-controlled ventilation based on the CO<sub>2</sub> content in the ambient air
- Freely-configurable timer programs (timer function) for operation during the summer, winter, holiday periods or at weekends, etc.
- Display of operating status, fault messages, filter change indicator

On the other hand, if local control is required, the ventilation unit can be operated using the membrane touch pad on the unit or the stepping switch. This can be disabled or enabled by the Touch Control software as required.



## CENTRALISED CONTROL OF M-WRG-II / M-WRG VENTILATION UNITS USING MODBUS RTU

### **M-WRG-II P-M / E-M (F, FC) / M-WRG-S M (F, FC)**

The ventilation units have a Modbus RTU connection that allows them to be controlled using the Modbus RTU protocol.

The KNX gateway used is the Modbus-KNX gateway M-WRG-KNX-GW (part no.: 5048). The gateway is preconfigured and can be incorporated into the system via the ETS software.

A Loxone Modbus extension must be provided (by the customer) for incorporation into Loxone. The Loxone library contains a suitable template for this.

If incorporation into another bus system is required, the customer must check with the relevant manufacturer (a Modbus RTU gateway will be needed for the specific system).

**Please contact us if you have any questions.**

# 4-way

## wireless pushbutton switch

### Lots of functions – No additional wiring – Can be positioned anywhere in the room

The 4-way wireless pushbutton switch with LED feedback is a user-friendly way to operate ventilation units from the M-WRG-II and M-WRG series. You will need one wireless pushbutton switch for each unit. You can position the switch anywhere you like in the same room as the ventilation unit. It will always work! The switch can be simply glued to the wall or integrated into a switch box. You no longer need to wire the switch to the unit, saving you time and money. This is particularly useful when retrofitting the ventilation unit. The wireless pushbutton switch can also be retrofitted, allowing the unit to be operated from any point in the room or dwelling. It is thus ideal for barrier-free living.



### The wireless pushbutton switch has 4 buttons which are assigned to the following ventilation levels by default:

		M-WRG-II	M-WRG
I	Reduced ventilation	10 m³/h	15 m³/h
II	Normal ventilation	30 m³/h	30 m³/h
III	Increased ventilation	50 m³/h	60 m³/h
⌚	Intensive ventilation	100 m³/h for 15 min	

With the M-WRG-II O/LFS or O/MVS and M-WRG-O/LFS or -O/MVS options (for M-WRG units constructed 2020 or later), the assignment of buttons I, II, III is different: 20 / 40 / 60 m³/h.

### LED feedback

You receive the following feedback from the LED in the middle of the switch. The LED feedback is shown every time a button is pressed (apart from "Green 2x").

LED colour	Flashing	Description
Green	1x	The ventilation unit has received and is carrying out the command
Green	2x	The wireless connection to the ventilation unit was established successfully
Orange	1x	The battery in the wireless pushbutton switch needs to be changed
Orange	2x	The air filters in the ventilation unit need to be changed
Red	1x	No wireless connection to the ventilation unit
Red	2x	Error message from the ventilation unit

Product data	
Dimensions	83 × 83 × 17 mm (W/H/D)
Weight	Approx. 52 g
Transmission frequency	868.3 MHz, minimum output power 0 dBm. May only be used in Europe due to the HF frequency used.
Auxiliary voltage	1× CR2032 battery, service life: 6 years, supplied as standard

Compatibility: ventilation units from the M-WRG-II and M-WRG series constructed from July 2018 onwards and with device no. 11807xxxx or later (excluding RS-485 types); only one ventilation unit may be operated using the wireless pushbutton switch. On the other hand, up to 5 wireless pushbutton switches may be registered with one unit.

### Optional programs that can be assigned to the three buttons I, II, III

(must be set at the factory on the ventilation unit when you purchase your unit and 4-way switch; some programs only possible on units with appropriate sensors), with sensors, button III is assigned as follows:

- Humidity control
- CO<sub>2</sub> control
- Automatic mode with humidity and CO<sub>2</sub> control

	M-WRG-II	M-WRG
Supply air operation low:	50/0 m³/h	50/15 m³/h
Supply air operation medium:	70/0 m³/h	70/15 m³/h
Supply air operation high:	100/0 m³/h	100/15 m³/h
Extract air operation low:	50/0 m³/h	50/15 m³/h
Extract air operation medium:	70/0 m³/h	70/15 m³/h
Extract air operation high:	100/0 m³/h	100/15 m³/h

### Notes:

The optional M-WRG-FBH wireless remote control can be used to program the basic settings of the 4-way wireless pushbutton switch. The switch may be combined with other design lines (e.g. Gira System 55). You will need to test this on site on an individual basis.

The pushbutton switch may also be used together with the U<sup>2</sup> installation version and all M-WRG-II and M-WRG covers.

# InControl

## pushbutton sensor

### Convenient buttons and ease of use – 6 ventilation levels/programs

The InControl pushbutton sensor can be used to control and operate 1 - 5 ventilation units in a room. 6 buttons are used to select 6 ventilation levels/programs. At the touch of a button, switch to Summer mode (supply air operation) or set the ventilation for moisture protection (e.g. people absent). Fixed values are stored for the humidity and CO<sub>2</sub> control. LEDs integrated into the buttons provide continuous feedback on the current operating statuses or report a unit fault or pending maintenance (air filter change). As it is hard-wired, this user control option is ideal for new builds.



**For the M-WRG-II P-T / E-T (F, FC) or M-WRG-S/Z-T (F, FC) ventilation unit types, the following ventilation levels / programs are available on the pushbutton sensor:**

	Ventilation programs	M-WRG-II	M-WRG	without sensors	with humidity sensors	with humidity and CO <sub>2</sub> sensors
	Reduced ventilation	10 m <sup>3</sup> /h	15 m <sup>3</sup> /h	x	x	x
	Normal ventilation	30 m <sup>3</sup> /h	30 m <sup>3</sup> /h	x	x	x
	Increased ventilation	50 m <sup>3</sup> /h	60 m <sup>3</sup> /h	x	x	x
	Intensive ventilation	100 m <sup>3</sup> /h for 15 min		x	x	x
	Supply air operation	50/0 m <sup>3</sup> /h	50/15 m <sup>3</sup> /h	x	x	
	Extract air operation	50/0 m <sup>3</sup> /h	50/15 m <sup>3</sup> /h	x		
	Humidity control	10 to 60 m <sup>3</sup> /h	15 to 60 m <sup>3</sup> /h		x	x
co <sub>2</sub>	CO <sub>2</sub> control (optional automatic mode)	10 to 60 m <sup>3</sup> /h	15 to 60 m <sup>3</sup> /h			x

With the M-WRG-II O/LFS or O/MVS and M-WRG-O/LFS or -O/MVS options (for M-WRG units constructed 2020 or later), the assignment of buttons I, II, III is different: 20 / 40 / 60 m<sup>3</sup>/h.

### LED feedback via the buttons on the InControl pushbutton sensor

	Indicator	Description
	LED flashes	Fault indicator
	LED flashes	Air filter change required
	LED flashes	The humidity of the supply air is greater than that of the extract air, which means that dehumidification is not possible
co <sub>2</sub>	LED flashes	The VOC value of the supply air is greater than 1500 ppm for 10 minutes (factory setting, only for M-WRG-II units with the M-WRG-II O/VOC-AUL option)

Product data	
Dimensions	80.8 × 80.8 × 9.3 mm (W/H/D)
Material	Thermoplastic (PC) or stainless steel
Colour	White or stainless steel
LED colour	Red
IP code	IP20
Installation	Flush-mount installation in flush-mount switch box to be provided by customer

#### Notes:

InControl pushbutton sensor connection to the ventilation unit: via the data cable, e.g. J-Y(St)Y 10 × 2 × 0.6 mm<sup>2</sup> or 10 × 2 × 0.8 mm<sup>2</sup>

#### Compatibility:

M-WRG-II P-T (F, FC), M-WRG-II E-T (F, FC), M-WRG-S/Z-T (F, FC) ventilation units



# Wireless remote control

## with display

### Increased functionality – no additional wiring – low investment and installation costs

The wireless remote control makes it so easy to customise and control Meltem ventilation units with heat recovery from the M-WRG-II and M-WRG series exactly to your requirements. The available ventilation programs and displays differ according to the unit features.



### 7 ventilation programs with flexible change of settings depending on the unit type:

- Continuous operation
- Intensive ventilation
- Supply air operation
- Extract air operation
- Humidity control
- CO<sub>2</sub> control
- Automatic mode with humidity and CO<sub>2</sub> control

### BENEFITS

- Simple and convenient to use
- Up to 6 ventilation units of the same type in one room can be controlled in parallel with one wireless remote control
- Operating hours display

### Additional information on the display, such as

- Battery status for wireless remote control
- Current ventilation level
- Current air humidity and CO<sub>2</sub> levels in the extract air (only possible on units with the appropriate sensors)
- Frost protection mode
- Fault and filter change indicator

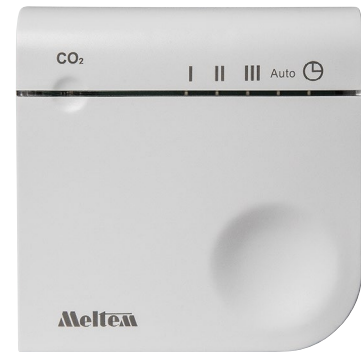
The wireless remote control can also be used to program M-WRG-II and M-WRG units. Individual settings can be stored on the InControl pushbutton sensor for each ventilation program.

The wireless pushbutton switch can also be used in conjunction with the U<sup>2</sup> installation version and all M-WRG-II and M-WRG covers.

# External wireless CO<sub>2</sub> sensor

## CO<sub>2</sub> controlled ventilation – Can be positioned anywhere in the room

In demand-controlled mode, ventilation units work extremely efficiently and save energy. In houses, offices and commercial premises or in public buildings such as schools and daycare centres, it is always a good idea to dissipate an excessively high CO<sub>2</sub> concentration. The external wireless CO<sub>2</sub> sensor is used to detect the CO<sub>2</sub> level in the room, and thus to monitor the air quality. The sensor may be used as an alternative to the ventilation unit's internal CO<sub>2</sub> sensor if, for example, a more flexible arrangement in the room is required (such as barrier-free living) or for retrofitting for units without sensors. 5 ventilation levels/programs, including automatic CO<sub>2</sub> control and temporary intensive ventilation can be selected at the push of a button. LEDs show the current operating status and any feedback. A 230 V connection is needed for the wireless CO<sub>2</sub> sensor.



## The wireless sensor is assigned the following ventilation levels/programs by default:

		M-WRG-II	M-WRG
I	Reduced ventilation	10 m <sup>3</sup> /h	15 m <sup>3</sup> /h
II	Normal ventilation	30 m <sup>3</sup> /h	30 m <sup>3</sup> /h
III	Increased ventilation	50 m <sup>3</sup> /h	60 m <sup>3</sup> /h
Auto	CO <sub>2</sub> control	10 to 60 m <sup>3</sup> /h	15 to 60 m <sup>3</sup> /h
🕒	Intensive ventilation	100 m <sup>3</sup> /h for 15 min	

With the M-WRG-II O/LFS or O/MVS and M-WRG-O/LFS or -O/MVS options, the assignment of ventilation levels I, II, III is different: 20 / 40 / 60 m<sup>3</sup>/h.

Product data	
Dimensions	100 × 100 × 25 mm (W/H/D)
Weight	Approx. 125 g
IP code	IP30
Measured value	400 to 2,000 ppm
Operating voltage	195 to 253 VAC / 50 Hz
Power consumption	Max. 4 W
Transmission frequency	868.3 MHz, minimum output power 0 dBm. May only be used in Europe due to the HF frequency used.

## LED feedback

The Mode LED on the wireless sensor can provide the following feedback: indication that an air filter needs to be changed, error message from the ventilation unit. Optional programs that can be assigned to ventilation levels I, II, III (must be set at the factory on the ventilation unit when you purchase the unit and wireless CO<sub>2</sub> sensor):

## Notes:

The optional wireless remote control can be used to set and program the basic settings of the wireless CO<sub>2</sub> sensor for the various programs – such as the air flow.

The wireless sensor may also be used together with the U<sup>2</sup> installation version and all M-WRG-II and M-WRG covers.

Compatibility: Only one wireless CO<sub>2</sub> sensor may be linked to each ventilation unit. If the unit has an internal CO<sub>2</sub> sensor, the internal sensor value is replaced by the value from the wireless sensor. On units without a CO<sub>2</sub> sensor, the value from the external sensor is used. The wireless sensor can be registered and operated together with the app, a 4-way wireless pushbutton switch, wireless remote control and wireless humidity sensor on the ventilation unit.

# External wireless humidity sensor

## Humidity-controlled ventilation – No additional wiring – Can be positioned anywhere in the room

In demand-controlled mode, ventilation units work extremely efficiently and save energy. In houses, offices and commercial premises or in public buildings such as schools and daycare centres, it is always a good idea to dissipate excessive humidity from the room. The external wireless humidity sensor is used to detect the level of humidity in the room, and thus to monitor the air quality. The sensor may be used as an alternative to the ventilation unit's internal humidity sensor if, for example, a more flexible arrangement in the room is required (such as barrier-free living) or for retrofitting for units without sensors.

5 ventilation levels/programs, including automatic humidity control and temporary intensive ventilation can be selected at the push of a button. LEDs show the current operating status and any feedback. The wireless humidity sensor is battery-operated.



## The wireless sensor is assigned the following ventilation levels/programs by default:

		M-WRG-II	M-WRG
I	Reduced ventilation	10 m³/h	15 m³/h
II	Normal ventilation	30 m³/h	30 m³/h
III	Increased ventilation	50 m³/h	60 m³/h
Auto	CO <sub>2</sub> control	10 to 60 m³/h	15 to 60 m³/h
🕒	Intensive ventilation	100 m³/h for 15 min	

With the M-WRG-II O/LFS or O/MVS and M-WRG-O/LFS or -O/MVS options, the assignment of ventilation levels I, II, III is different:  
20 / 40 / 60 m³/h.

Product data	
Dimensions	100 × 100 × 25 mm (W/H/D)
Weight	Approx. 125 g
IP code	IP30
Measured value	0 % to 100 % RH
Transmission frequency	868.3 MHz, minimum output power 0 dBm. May only be used in Europe due to the HF frequency used.
Auxiliary voltage	2x AA mignon battery, service life: roughly 2 years, supplied as standard

## LED feedback

The Mode LED on the wireless sensor can provide the following feedback: battery change required, indication that an air filter needs to be changed, error message from the ventilation unit. Optional programs that can be assigned to ventilation levels I, II, III (must be set at the factory on the ventilation unit when you purchase the unit and wireless humidity sensor):

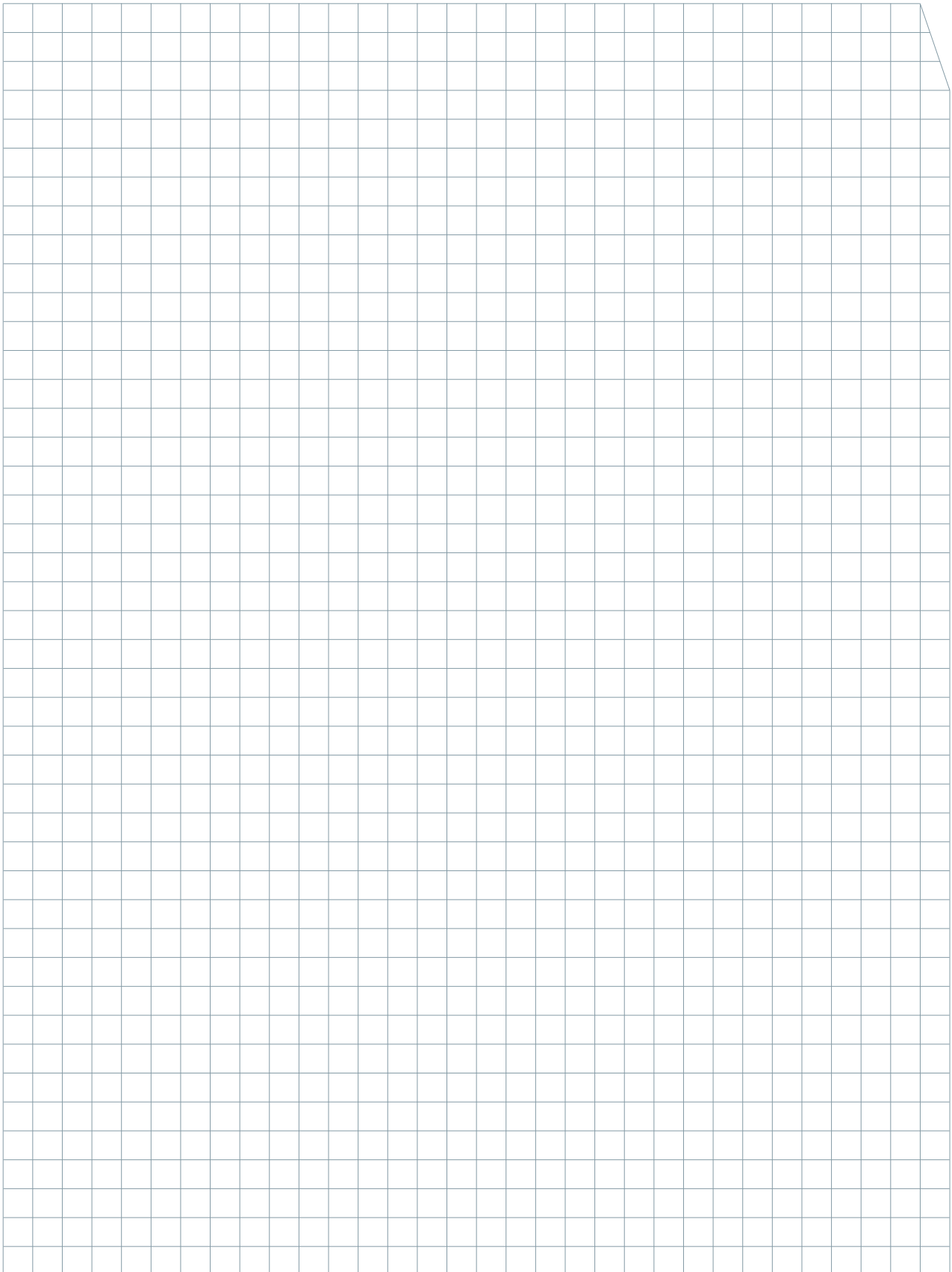
## Notes:

The optional wireless remote control can be used to set and program the basic settings of the wireless humidity sensor for the various programs – such as the air flow.

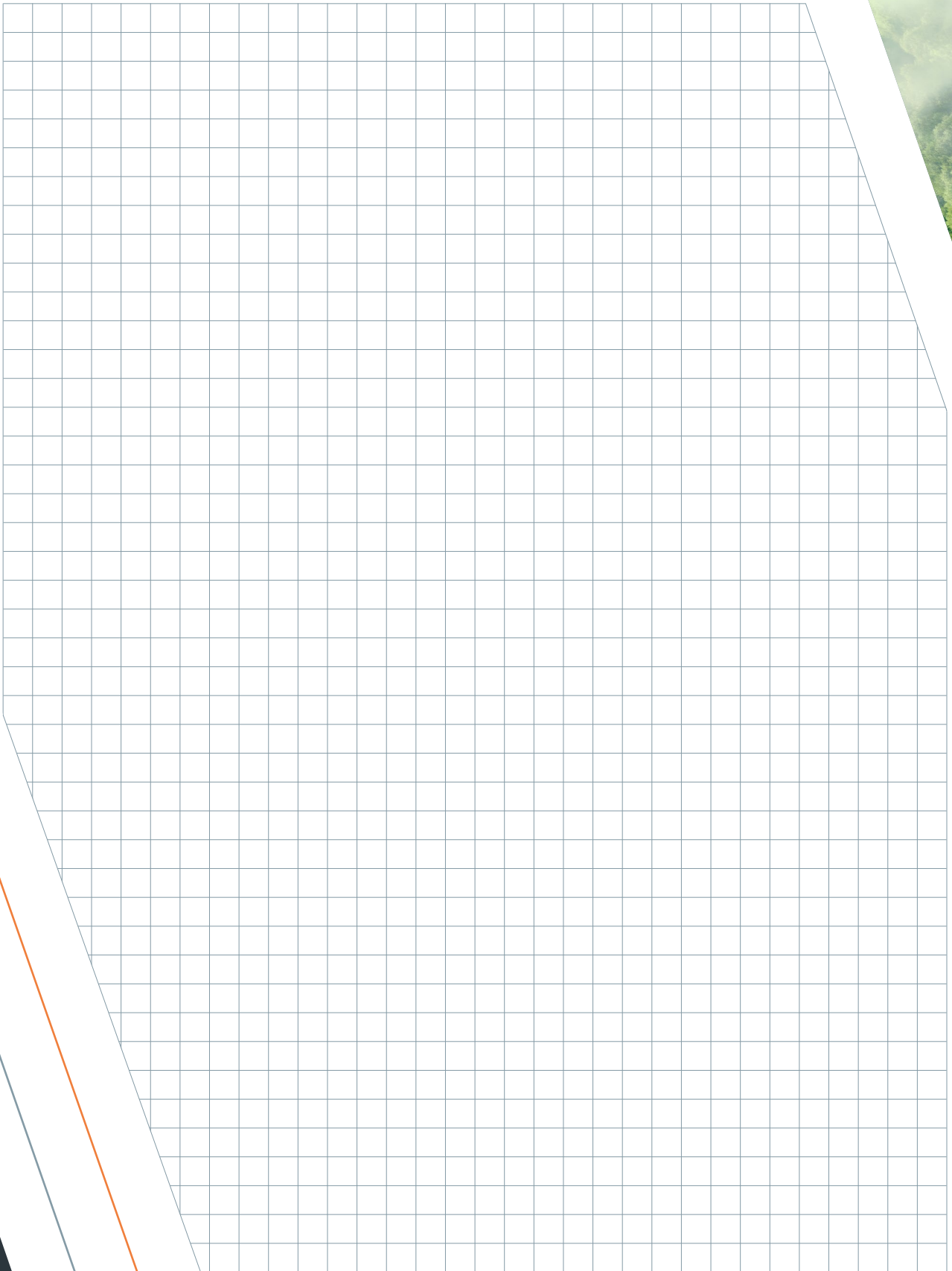
The wireless sensor may also be used together with the U<sup>2</sup> installation version and all M-WRG-II and M-WRG covers.

Compatibility: Only one wireless humidity sensor may be linked to each ventilation unit. If the unit has an internal humidity/temperature sensor on the extract air side, the internal sensor value is replaced by the value from the wireless sensor. On units without a humidity sensor, the value from the external sensor is used. With this solution there is no comparison of the humidity on the extract air and supply air sides. The wireless sensor can be registered and operated together with the app, a 4-way wireless pushbutton switch, wireless remote control and wireless CO<sub>2</sub> sensor on the ventilation unit.

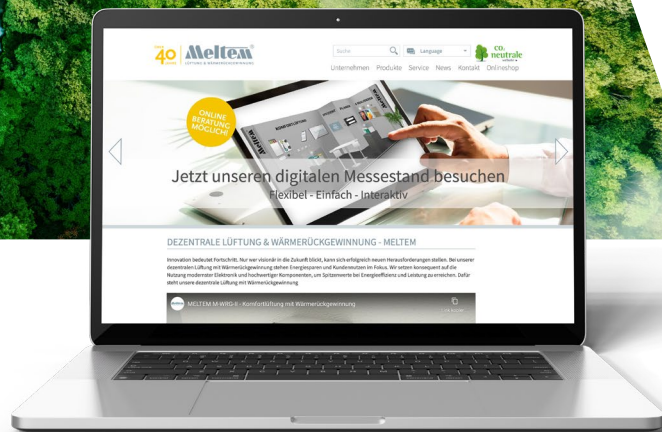
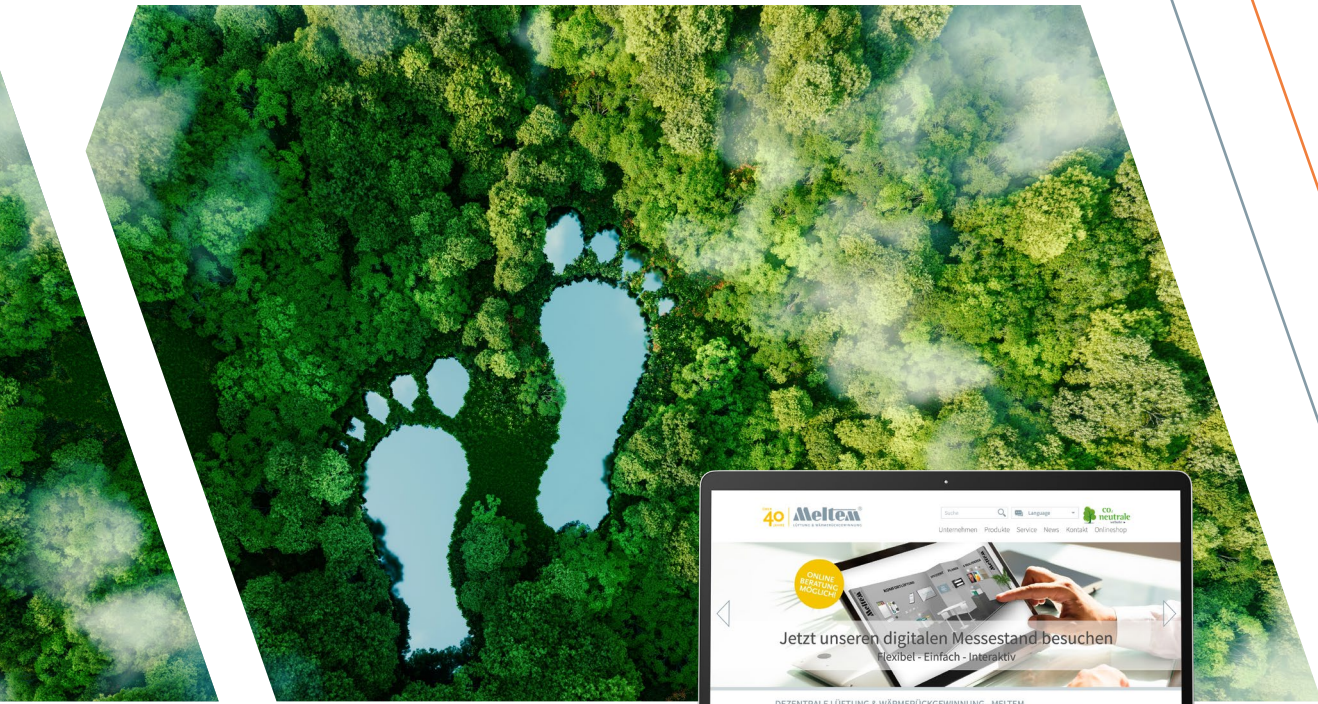
Space for your notes



# Space for your notes







# In print or online – sustainability is key

## CERTIFIED CLIMATE-NEUTRAL PRINTED MATTER

Sadly we cannot avoid printed documents entirely, but we can ensure that our printing is as environmentally-friendly as possible. Our printed matter is therefore certified as climate-neutral by ClimatePartner. This means that only recycled papers and organic printing inks are used and all machines needed for printing run on 100 % green electricity. And at the finishing stage we place great emphasis on the environmental sustainability and biodegradability of the materials used. We also support climate protection projects such as plasticbank, which campaigns to protect the seas and for sustainable power generation.

## OUR WEBSITE AND DIGITAL SHOWROOM ARE CO<sub>2</sub>-NEUTRAL

Even running and using a website creates CO<sub>2</sub>. Indeed this now represents a considerable proportion of the world's emissions. We can clearly see there is a need for action, so we are affiliated with the CO<sub>2</sub> Neutral Website initiative. We use known values and a tool to calculate the power consumption and resulting CO<sub>2</sub> emissions created by our meltem.com website and messe.meltem.com digital showroom.

To compensate we make appropriate contributions to projects that are able to demonstrate a high level of CO<sub>2</sub> neutralisation.





# Ventilation.

As simple as it should be.

Meltem is a leading manufacturer in the field of comfort ventilation systems. Meltem creates innovative solutions to provide fresh and clean air so that you can feel happy and healthy at home or in your professional environment.

For planning and installation, please read our installation manuals which are available on our website. All information in this brochure is supplied without guarantee. Subject to technical modifications and misprints.

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