Radon control option for
M-WRG-S... units

The aim of the radon control option (part no. 200212) is to reduce elevated radon concentrations in interior areas – especially basement and ground floor areas. This is done by modifying the pressure in a targeted manner with an excess of supply air. The overpressure thus generated can reduce or prevent radon-contaminated soil vapour flowing in. At the same time, the controlled supply of fresh air via the ventilation unit lowers the existing radon concentration in the room.

HOW THE M-WRG-S… VENTILATION UNIT WITH RADON CONTROL WORKS:

The following effects to minimise radon contamination are achieved via the ventilation:

- Generation of a slight overpressure (excess of supply air) to reduce the ingress of radon-contaminated air
- Controlled supply of fresh air to lower existing increased radon concentrations in interiors and to dissipate radon-contaminated air

This measure effectively reduces the ingress of radon-contaminated air into shared spaces and especially into basement areas.

SIDE EFFECTS AND NOTES ON RADON CONTROL:

In the summer months, a rise in the relative humidity in the interior can occur due to the supply of warm, damp outdoor air. With insufficient dehumidification, there is a risk of condensation, ultimately resulting in mould formation.

Please note: For this reason, the unit is supplied without additional sensors (such as humidity or CO_2 sensors) for radon control operation. The use of the customer's own dehumidifiers should be reviewed as part of the overall planning and should be put into use, if appropriate.

FROST PROTECTION STRATEGY – ADAPTION TO AVOID UNBALANCED OPERATION

To ensure balanced air renewal – even at low external temperatures – the frost protection rule for the M-WRG-S… ventilation unit was adapted as follows:

- No excess of extract air in the event of frost -> no unwanted negative pressure situation
- Early cut-off of the ventilation at low temperatures to avoid frost damage
- Avoidance of radon ingress even in winter mode by maintaining the pressure balance

These measures guarantee a mode of operation appropriate for radon control without detriment to the ambient air quality, even in winter.

NOTES ON OPERATION AT VERY LOW EXTERNAL TEMPERATURES:

At extremely low external temperatures, we recommend using switch position I on the ventilation unit. In this mode, the unit ventilates in a balanced manner which causes the frost protection mechanism to be activated after a delay. This means that normal operation can be maintained for longer before being cut off by the frost protection. Even in this mode, the continuous mixing of the air causes a reduction in the radon concentration in the ambient air.

CHANGED SETTING FOR THE M-WRG-S… VENTILATION UNIT WITH RADON CONTROL OPTION

Switch position I
(4-way wireless pushbutton switch I)
SUP 15 / ETA 15 m³/h
Switch position II
(4-way wireless pushbutton switch II)
SUP 30 / ETA 20 m³/h
Switch position III
(4-way wireless pushbutton switch III)
SUP 50 / ETA 40 m³/h

These settings also apply to the 4-way wireless pushbutton switch M-WRG-FT.