

## TECHNICAL SHEET



Horizontal unit for room air renewal with high efficiency heat recovery (~90%), and summer dehumidification. Differentiated fresh air and supply air flow rate with possibility of recirculation, even partial recirculation (fresh air flow rate 160÷300 m<sup>3</sup>/h settable - supply air flow rate 300÷500 m<sup>3</sup>/h settable). Functionality of air renewal, recirculation, free-cooling, boost, dehumidification, summer and winter sensible power integration. UC 501-MHE can be operated with Remote Control-Type 1 or with Wi electronic control unit. Mandatorily provide 3 siphons on condensate drain (SF-M or SF-P).

- Dehumidification capacity (recirculation) 31.2 l/24h with (26 °C RH 55%)
- Dehumidification capacity (renewal) 74.1 l/24h with (35 °C RH 50%)
- Summer sensible power integration: 1870 W
- Stainless steel condensate collection tray
- Finned exchangers with hydrophilic treatment
- Max electrical power: 1100 W
- Power supply 230 Vac - 50 Hz
- Nominal water flow rate (at 15 °C): 500 l/h

### The following air treatments can be carried out:

- Air renewal with high-efficiency heat recovery, with possible winter heating or summer cooling;
- Air renewal with free-cooling, that is, without heat recovery, both in summer and winter;
- Air recirculation in winter, with possible heating;
- Air recirculation in summer, with cooling, dehumidification or cooling and dehumidification;
- Air recirculation with a renewal rate, together with all the treatments provided for recirculation.

### Air flow rates can take the following values:

- Supply air, flow rate settable from 300 m<sup>3</sup>/h up to 500 m<sup>3</sup>/h;
- Fresh air, settable flow rate from 160 up to 300 m<sup>3</sup>/h.
- Free-cooling, settable fresh air flow rate from 160 to 300 m<sup>3</sup>/h.

Description	Dimensions	Weight	Code
UC 501-MHE	1287x424x961 mm	105 kg	7041456

## COMPONENTS

### AIR FLOWS

- Fresh air inlet
- Exhaust air
- Stale air extraction
- Supply air
- Recirculation air

### AIR FILTER

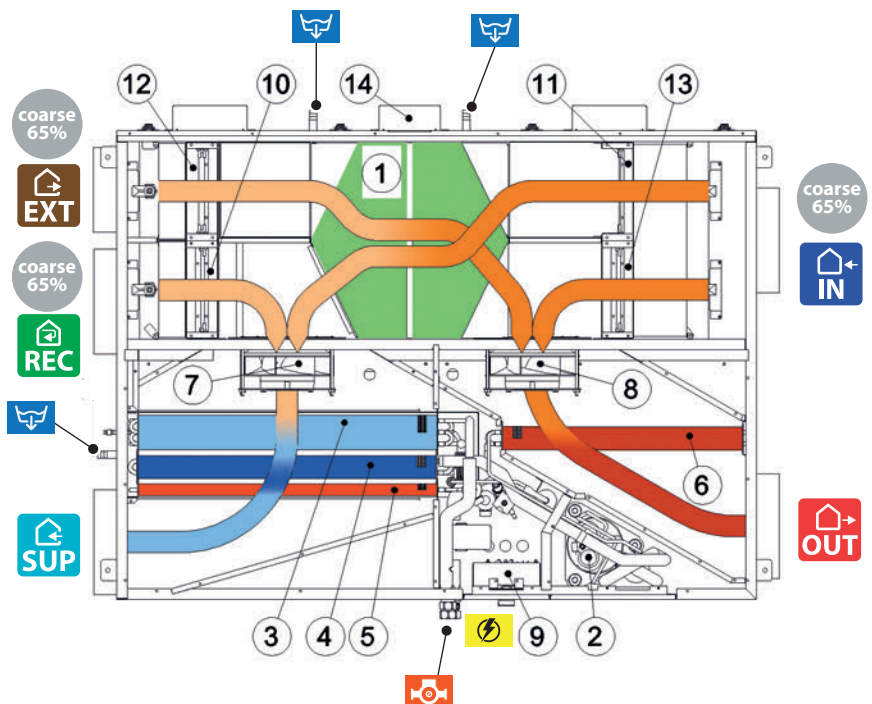
Classes, Minimum Efficiency, Type Of Particulates

- e(PM10) min ≤50 %  
Hairs

Condensate drain Ø 14 mm

Wiring box

Hydraulic connections 3/4" F



Ref.	Description	Ref.	Description
1	Air to air heat exchanger	8	Air exhaust fan
2	Cooling compressor	9	Wiring box
3	Water finned coil	10	Room air recirculation damper
4	Cooling evaporator	11	Fresh air intake damper
5	Freon/air condenser	12	Stale air extract damper
6	Freon/air discharge condenser	13	Auxiliary air intake damper
7	Air supply fan	14	Recovery bypass damper

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## DIMENSIONS AND TECHNICAL CHARACTERISTICS

### AIR FLOWS



Fresh air inlet



Exhaust air



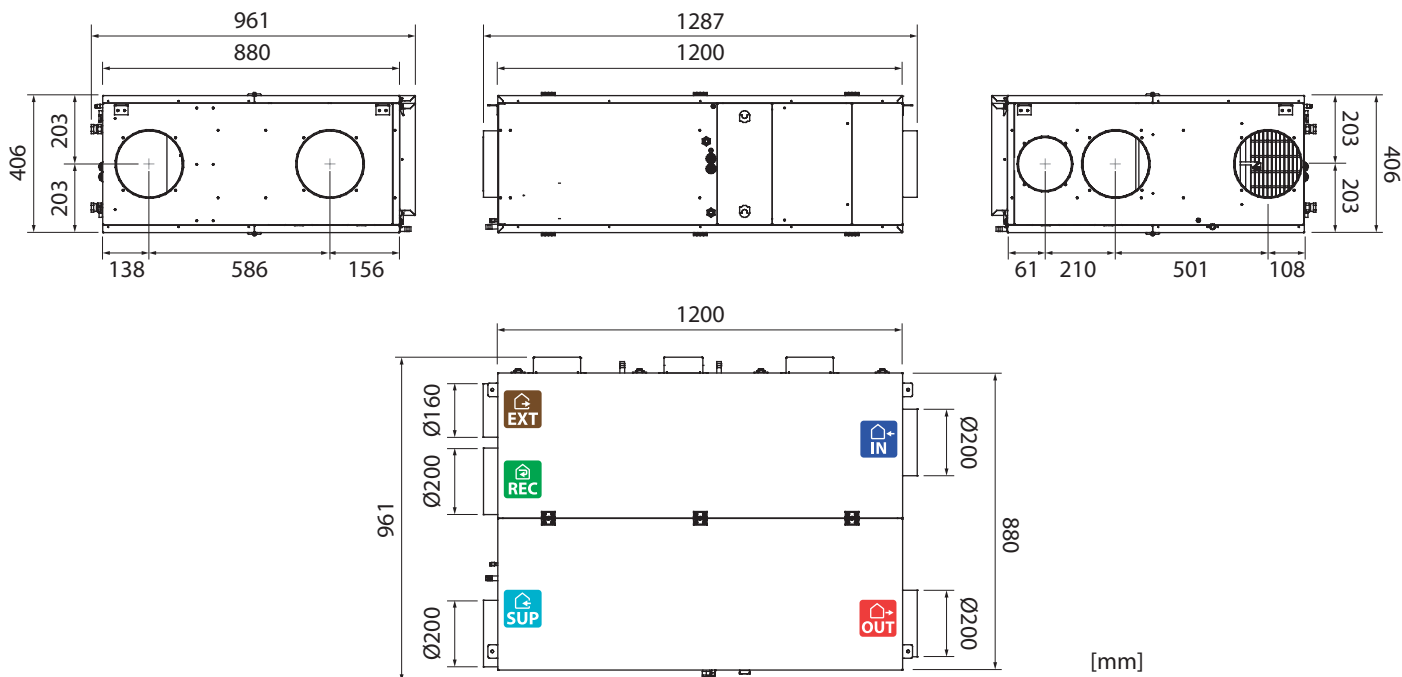
Stale air extraction



Supply air



Recirculation air



### Overall unit dimensions

Height	406 mm
Width	1287 mm
Depth	961 mm
Weight	105 kg

### Technical characteristics



#### Technical specifications

Power supply	V/Ph/Hz	230/1/50
Total dehumidification capacity (Outdoor temperature 35 °C, 50% R.H.)	l/24h	74,1
	W	2090
Useful dehumidification capacity (referring to recirculation, room temperature at 26 °C, 55% R.H.)	l/24h	31,2
	W	880
Refrigerant Gas Content R410a	kg	0,450
Useful cooling capacity (referred to recirculation, room temperature at 26 °C, 55% R.H.)	W	2580
Maximum electrical power use of compressor	W	780
Required water flow	l/h	500
Water circuit load loss	kPa	11
Maximum cooling capacity required by water circuit (outdoor air at 35°, 50% R.H., max flow-rate in only Ventilation and Ventilation+Recirculation mode)	W	2050
Power consumption for the air supply fan (min - max)	W	20 - 160
Flow rate of the air supply fan (min - max)	m <sup>3</sup> /h	160 - 500
Available pressure of the air supply fan	Pa	260
Power consumption for the air exhaust fan (min - max)	W	20 - 160
Flow rate of the air exhaust fan (min - max)	m <sup>3</sup> /h	160 - 500
Available pressure of the air exhaust fan	Pa	260
Energy efficiency during winter operation (20 °C - 50% R.H. indoor, -5 °C - 80% R.H. outdoor)	flow rate 160 m <sup>3</sup> /h	91,70%
	flow rate 300 m <sup>3</sup> /h	87,50%
Energy efficiency in summer operation (26 °C - 65% R.H. indoor, 35 °C - 50% R.H. outdoor)	flow rate 160 m <sup>3</sup> /h	86,70%
	flow rate 300 m <sup>3</sup> /h	80,40%
Sound pressure level (Open field, distance of 1m)	dB(A)	48



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## MANDATORY COMPLEMENTS


It is mandatory to install no. 3 siphons on the Condensate drain, choosing, as needed, from those proposed.

Condensation drains		Code
	<b>SF-M 13</b> Condensate drainage kit consisting of siphon with membrane, fitting and pipe with DN 13 mm	<b>3600401</b>
	<b>SF-P</b> Condensate drain siphon complete with casing provided for recessed wall mounting to be used in conjunction with RDZ air handling units. Prepared for connection to Ø 20-32 mm piping. Complete with outer casing adjustable according to wall depth. Washable cartridge.	<b>7045504</b>

## ACCESSORIES

Controls		Code
	<b>REMOTE CONTROL - TYPE 1 FOR UC 501-MHE</b> Control panel for DIN rail mounting (6 modules) for displaying operation and setting unit parameters. It is necessary to bring signals to the panel for the management of dehumidification, summer and winter integration, boost and free-cooling. Air renewal can be activated by external consensus or by internal time scheduling.	<b>7041465</b>
	<b>KNX-UTA INTERFACE</b> Interface for integrating the ventilation unit into a home automation system with KNX protocol. Operating statuses and alarms can be displayed, and the setting of the unit can be changed.	<b>7041480</b>

## SPARE PARTS

Air filter kit		Code
	<b>FILTER KIT FOR UC 501-MHE</b> Kit for complete replacement of unit filters containing: <ul style="list-style-type: none"> <li>• 1 ISO Coarse 65% filter - Dimensions 213x205x30 mm</li> <li>• 1 ISO Coarse 65% filter - Dimensions 113x200x30 mm</li> <li>• 1 ISO Coarse 65% filter - Dimensions 333x200x30 mm</li> </ul>	<b>7044165</b>

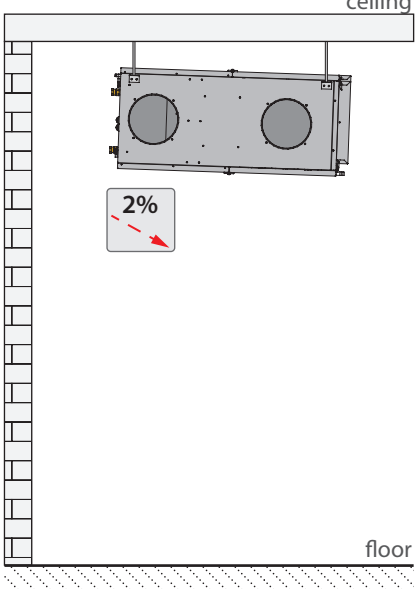
## PERFORMANCE

Fresh air			Recirculating air			Neutral air outlet		Latent cooling power		Sensible cooling power	Cooling power to be supplied to the unit
°C	% R.H.	m <sup>3</sup> /h	°C	% R.H.	m <sup>3</sup> /h	°C	% R.H.	W	l/g	Max	
<b>200 m<sup>3</sup>/h</b>											
35	50	0	26	65	200	26	36,0	1753	60,6	1230	947
<b>300 m<sup>3</sup>/h</b>											
35	50	160	26	65	140	26	36,4	2138	73,9	1750	1850
		250			50		37,3	2379	82,2	1770	2092
		300			0		40,6	2514	86,8	1790	2237
<b>400 m<sup>3</sup>/h</b>											
35	50	0	26	65	400	26	40,1	1841	63,6	2015	1734
		160			240		42,0	2244	77,5	1980	2072
		300			100		44,4	2592	89,5	2010	2405
<b>500 m<sup>3</sup>/h</b>											
35	50	0	26	65	500	26	44,4	1915	66,2	2240	1951
		160			340		46,3	2292	79,2	2200	2247
		300			200		48,6	2600	89,8	2210	2535

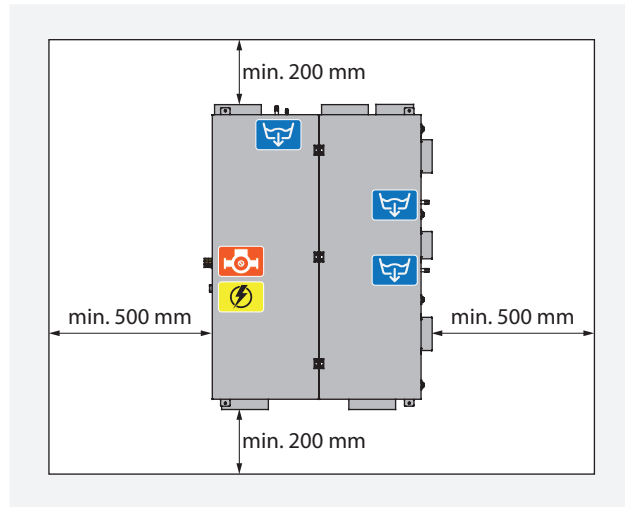
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## MOUNTING

### Positioning to the ceiling



### Minimum space allowances



Condensate drain Ø 14 mm



Wiring box



Hydraulic connections  
3/4" F

