

## WALL-MOUNTED UNITS

# HCV 500



The HCV 500 is a highly efficient residential ventilation unit for houses, villas, and apartments of up to 450m<sup>2</sup> or more. It comes supplied as a packaged basic ventilation unit complete with built-in control panel, and are delivered with all parts necessary for wall installation. The HCV 500 is ideal for free wall installation with minimum 700mm space. A standard wall rail is supplied with all units.



- Demand-controlled ventilation with integrated humidity sensor, reducing power consumption at times with low ventilation demands
- Summer mode in which supply fan is stopped and any open window will supply cooler outside air, lowering the room temperature
- Automatic free-cooling features via inbuilt 100% bypass, including the possibility of increasing the air flow automatically, lets in cool night air following hot days to help maintain a comfortable temperature throughout the day
- Fireplace mode, creating a temporary inside overpressure to enhance chimney functionality
- High-efficiency heat recovery
- EC fan motors with extremely low energy consumption (low SPI)
- Easy-to-install and commission solution with built-in air pressure spigots for easy calibration
- Highly customisable units, with option a high variety of internal as well as external accessories
- A standard wall rail is supplied with the unit

### Third party testing and certifications

Code	Description
DIBt	Certified by the German Institute of Construction Technology
EPB	Listed in the database for Energy Performance of Buildings in Belgium
ErP	Compliant with EU regulations for Eco-design
Nordic Swan Ecolabel	Listed in the Nordic Swan database for products suitable for Ecolabelled buildings

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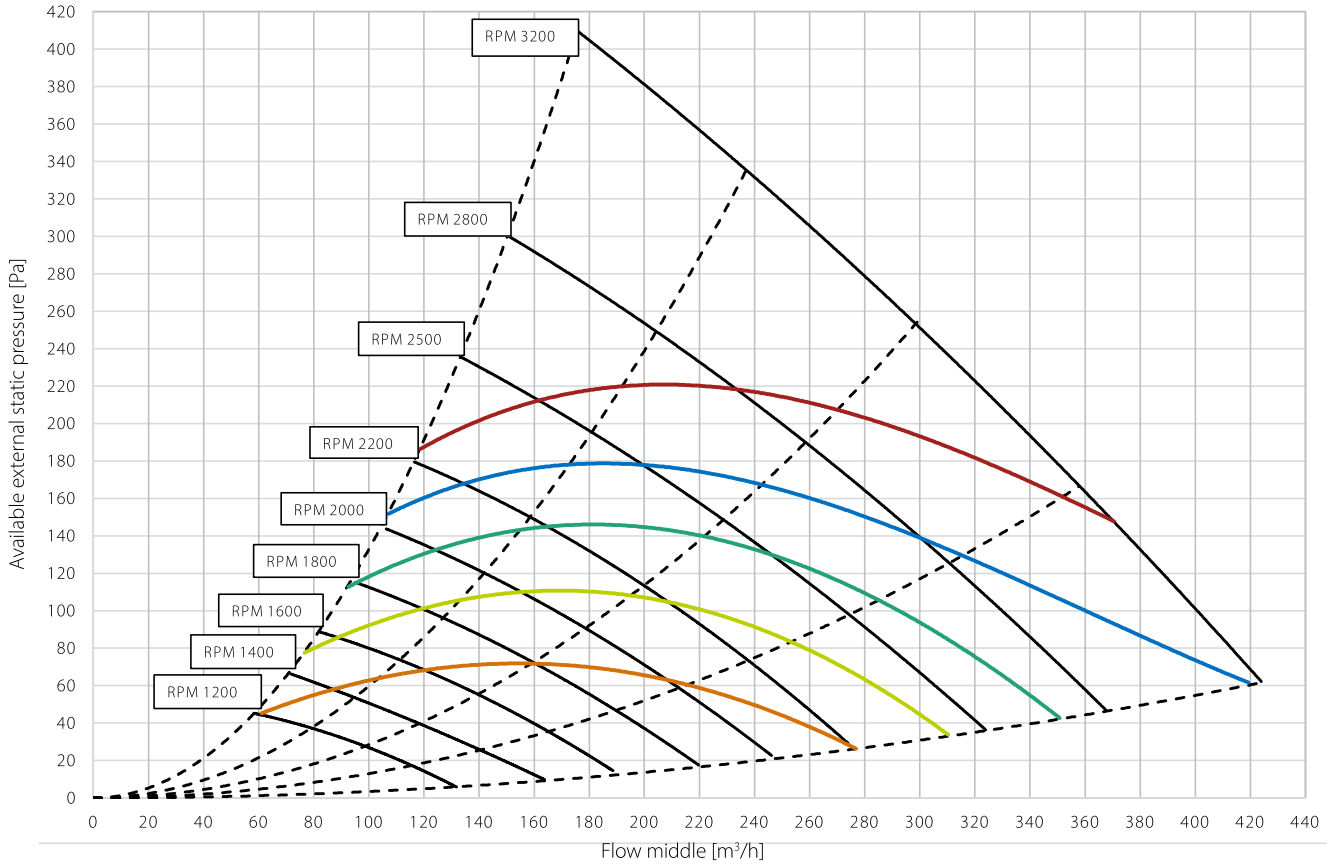
### TECHNICAL DATA

Specifications	Units		HCV 500
Max. flow	V100Pa	m <sup>3</sup> /h	400
Max. rated flow	V <sub>max.rated</sub>	m <sup>3</sup> /h	300
Recommended operating range	V	m <sup>3</sup> /h	70 - 300
EN 13141-7 reference flow at 50Pa	V <sub>ref</sub>	m <sup>3</sup> /h	210
<b>Performance</b>			
Thermal efficiency in accordance with EN13141-7	$\eta_{SUP}$	%	86
Specific power consumption in accordance with EN13141-7	SFP	W/m <sup>3</sup> /h	0.21
Leakage (external and internal) in accordance with EN13141-7	-	%	<2% (Class A1)
Filters in accordance with ISO16890	-	-	ISO Coarse 75% (optional on supply: ePM1 >50%)
Filters in accordance with EN779	-	-	G4 (optional on supply: F7)
Installation ambient temperature	t <sub>SURR</sub>	°C	+12 to +50
Outdoor temperature range without preheater installed	t <sub>ODA</sub>	°C	-12* to +50
Outdoor temperature range with preheater installed	t <sub>ODA</sub>	°C	-20 to +50
Maximum absolute humidity in extract air	x	g/kg	10
<b>Cabinet</b>			
Dimensions (without wall bracket)	w x d x h	mm	700 x 603 x 1050
Spigots/duct connections	Ø	mm	160 – female
Weight		kg	49.5
Thermal conductivity – polystyrene insulation	$\lambda$	W/mK	0.031
Heat transition figures – polystyrene insulation	U	W/m <sup>2</sup> K	<1
Fire classification of the polystyrene insulation	-	-	DIN 4102-1 class B2 EN 13501 class E
Drainage hose	Ø/length	"/m	¾ / 1
Cabinet colour	RAL	-	9016
<b>Electrical</b>			
Voltage	U	V	230
Maximum power consumption (without/with preheater)	P	W	170/1370
Frequency	f	Hz	50
Protection class	-	-	IP21

\*The use of the preheating coil is recommended at outdoor temperature below -3°C to ensure balanced operation.

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## CAPACITY AND SPI CURVES WITH G4/G4 FILTERS



	Red	Blue	Green	Yellow	Orange
<b>SFP/SPI/SEL*</b>	0.45 W/m <sup>3</sup> /h	0.39 W/m <sup>3</sup> /h	0.33 W/m <sup>3</sup> /h	0.28 W/m <sup>3</sup> /h	0.22 W/m <sup>3</sup> /h
	1620 J/m <sup>3</sup>	1400 J/m <sup>3</sup>	1200 J/m <sup>3</sup>	1000 J/m <sup>3</sup>	800 J/m <sup>3</sup>
	1.62 W/l/s	1.40 W/l/s	1.20 W/l/s	1.0 W/l/s	0.80 W/l/s

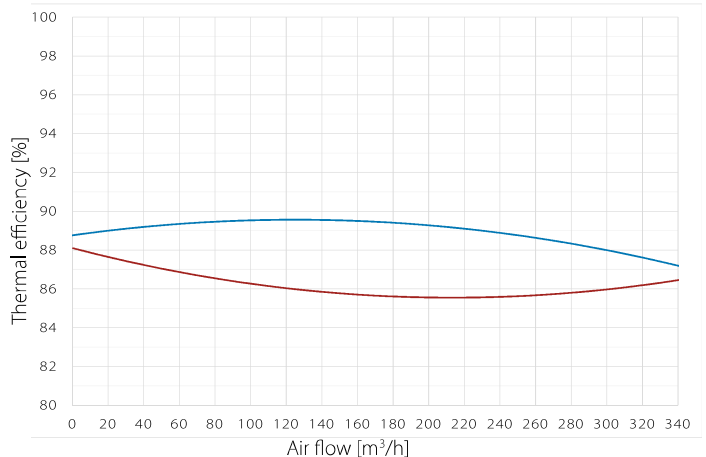
\* SFP/SPI/SEL includes power consumption of both fans and the control.

## THERMAL EFFICIENCY CURVES

### Legend

- Thermal efficiency according to EN 13141-7 (dry)  
Operational conditions: outdoor air: 7°C, 88% RH; extract air: 20°C, 38% RH
- Thermal efficiency according to EN 13141-7 (with condensation)  
Operational conditions: outdoor air: 2°C, 87% RH; extract air: 20°C, 60% RH

All values at balanced flow



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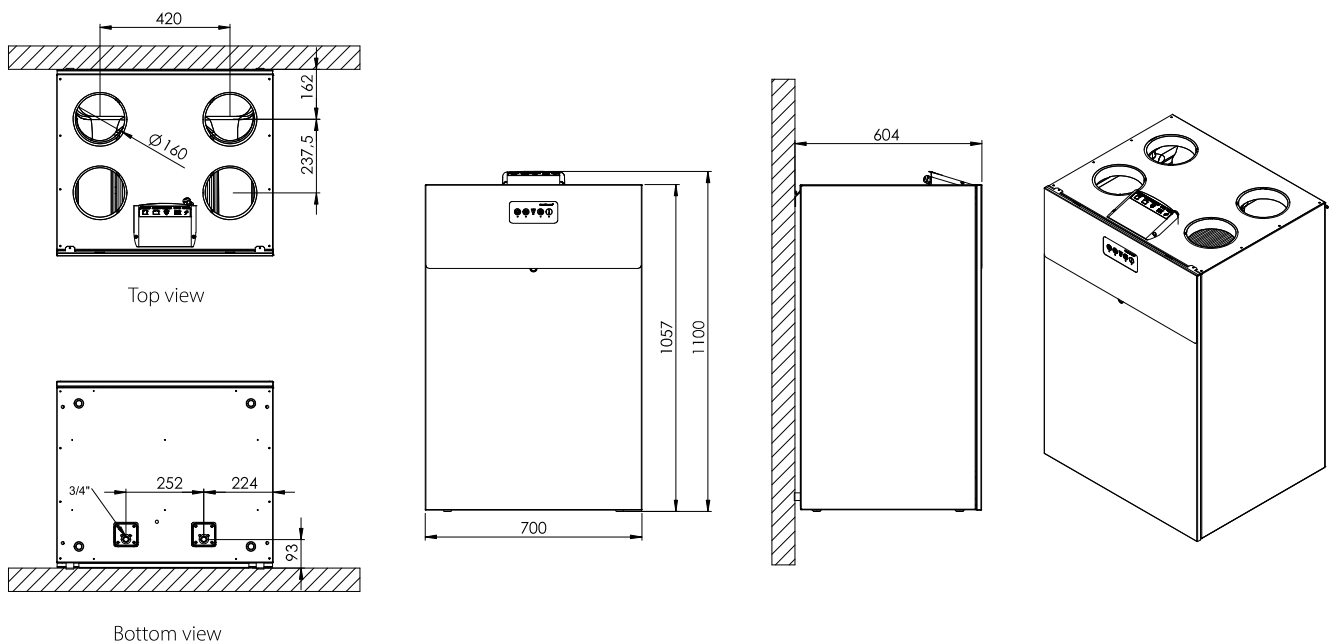
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### SOUND DATA WITH G4/G4 FILTERS

Air volume m <sup>3</sup> /h	Pres- sure Pa	Operational point	Frequency band sound power Lw(A) dB(A)								Total sound power Lw(A) dB(A)	Sound pressure standard room* Lp(A) dB(A)
			63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		
230	100	Supply air	41	44	52	49	42	37	29	22	55	
		Extract air	49	50	59	54	46	44	37	27	61	
		Cabinet	30	41	46	48	42	37	25	19	51	46

\*Standard room = room with 10m<sup>2</sup> floor, 2.4m ceiling height, mean absorption 0.2

### DIMENSIONS



Revit files are available for free on request. Contact your local supplier or Dantherm for access.