

# ATTIC AND WALL-MOUNTED UNITS

## HCH 5



The HCH 5 residential ventilation units are primarily designed for 1-2 family houses. The units are supplied as packaged ventilation units complete with built-in demand-control and a control panel. The residential ventilation units are fitted with highly efficient counter-flow heat exchangers which are optimised to a very high efficiency level thus achieving a very low specific fan power (SFP value) for the entire unit.



- Demand-controlled ventilation with integrated humidity sensor, reducing power consumption at times with low ventilation demands
- High-efficiency heat recovery
- EC motors with extremely low energy consumption (low SFP)
- Easy-to-install solution with pressure pipes for air volume measurement and adjustment via PC-Tool
- HCH models are suitable for installation on uninsulated attics
- Summer mode in which the 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
- Highly customisable units with the option to add a high variety of internal as well as external accessories
- Internal pre-heater as accessory

### Third party testing and certifications

Code	Description
PHI	Passivhaus certified
PCDB listed SAP App. Q	Listed in the UK database for balanced whole-house mechanical ventilation with heat recovery
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

# ATTIC AND WALL-MOUNTED UNITS

## HCH 5

### TECHNICAL DATA

Specifications	Units	HCH 5
<b>Performance</b>		
Max. flow at 100Pa	m <sup>3</sup> /h	350
Max. rated flow at 100Pa	V <sub>max.rated</sub> + m <sup>3</sup> /h	300
Recommended operating range	V + m <sup>3</sup> /h	80 - 300
EN 13141-7 reference flow at 50Pa	V <sub>REF</sub> + m <sup>3</sup> /h	210
Energy consumption class – average climate	SEC-class	A
Energy consumption class – average climate	SEC-class	A+ *
Heat exchanger type		Dantherm aluminium counter-flow heat exchanger
Thermal efficiency		Up to 94% **
Bypass		Yes
Filters in accordance with EN779		G4 (optional on supply: F7)
Filters in accordance with ISO 16890		ISO Coarse 75% (optional on supply: ePM1 >50% )
Surrounding temperature where the unit is installed	°C	-12 to +50
Operational temperature range without preheating	°C	-13 *** to +50
Operational temperature range with preheating	°C	-20 to +50
Leakage (external and internal) according to EN 13141-7	class	<2% (Class A1)
<b>Cabinet</b>		
Dimensions (w x h x d)	mm	1180 x 600 x 580
Duct connection	mm	160
Weight unit	kg	52
Weight including packaging	kg	66
Dimensions including packaging and pallet (w x d x h)	mm	1210 x 610 x 750
Outer cabinet material		Aluzinc
Colour	RAL	Alzunik grey
Cabinet insulation, polystyrene	mm	40
Insulation factor – cabinet	W/m <sup>2</sup> x °K	0.78
Fire classification – polystyrene cabinet	DIN 4102	class B1
Fire classification – whole unit	EN 13501	class E
Protection class		IP20
<b>Electrical data</b>		
Supply voltage	V	1 x 230
Frequency	Hz	50
Maximum power consumption (without/with preheater)	W	154/1554

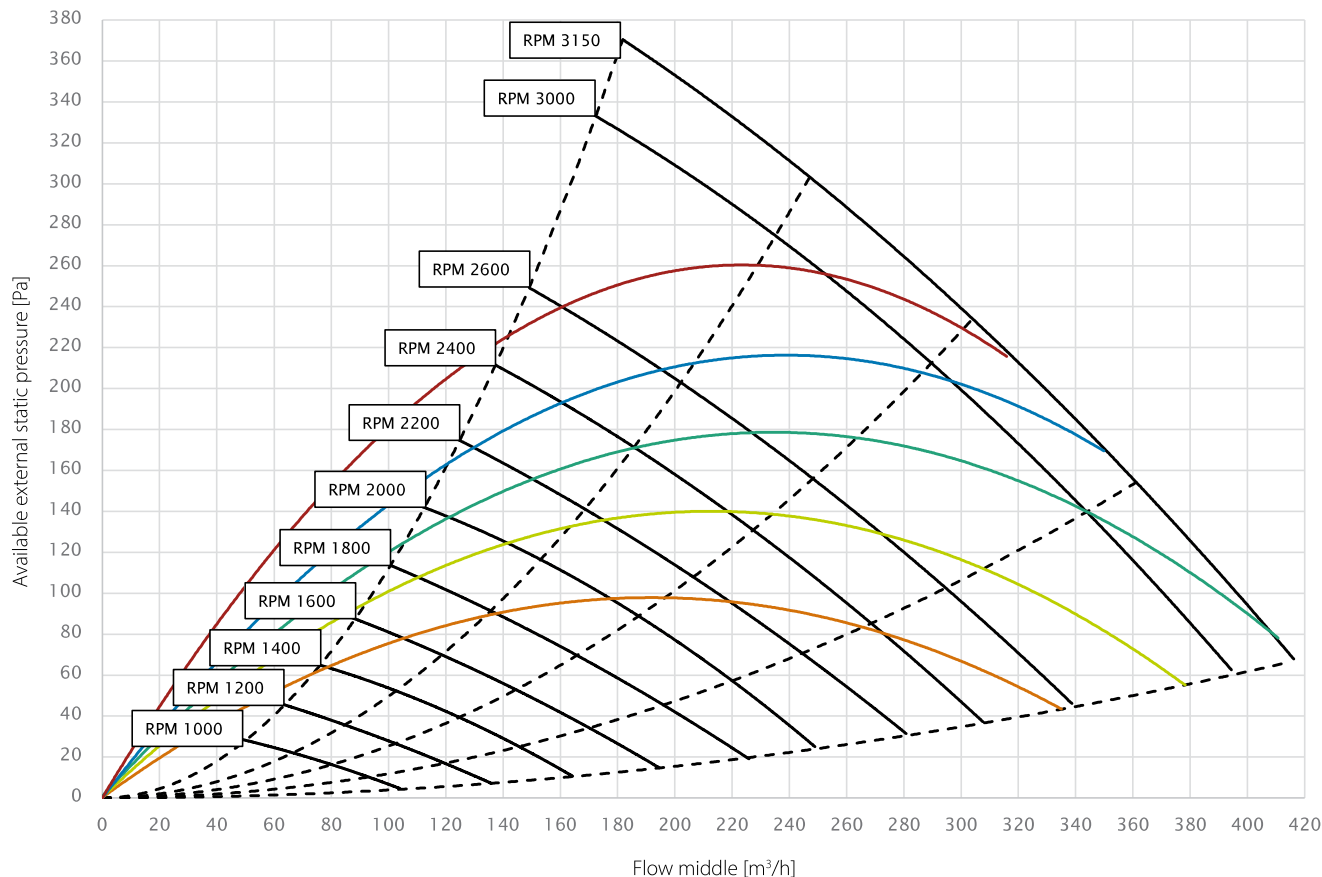
\* Requires an Energy Efficiency Class A+ kit (including CO<sub>2</sub> sensor and HAC 1 accessory control). Described under Accessories.

\*\* Condensing operation.

\*\*\* We recommend preheating at temperatures under -3°C to ensure a balanced operation.

# ATTIC AND WALL-MOUNTED UNITS HCH 5

## 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

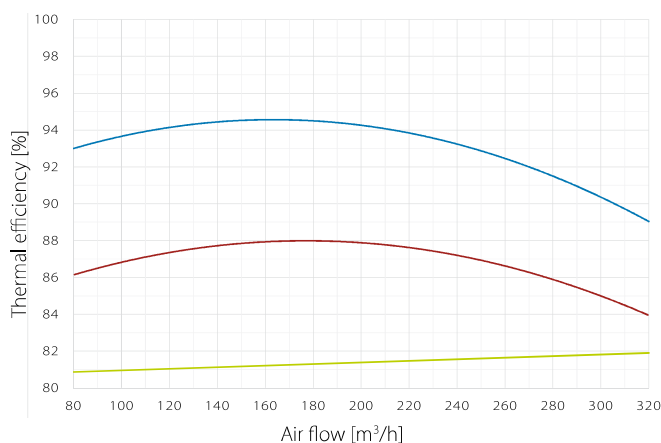
\* SFP/SPI/SEL includes power consumption of both fans and the control.

## THERMAL EFFICIENCY CURVES

### Legend

- Thermal efficiency according to EN 13141-7 (dry)  
Operational conditions: outdoor air: 7°C, 80% RH; extract air: 20°C, 38% RH
- Thermal efficiency (with condensation)  
Operational conditions: outdoor air: -10°C, 50% RH; extract air: 25°C, 55% RH
- Thermal efficiency according Passivhaus Institut  
Operational conditions: outdoor air: 4°C, 90% RH; extract air: 21°C, 32% RH

All values at balanced flow



# HCH 5

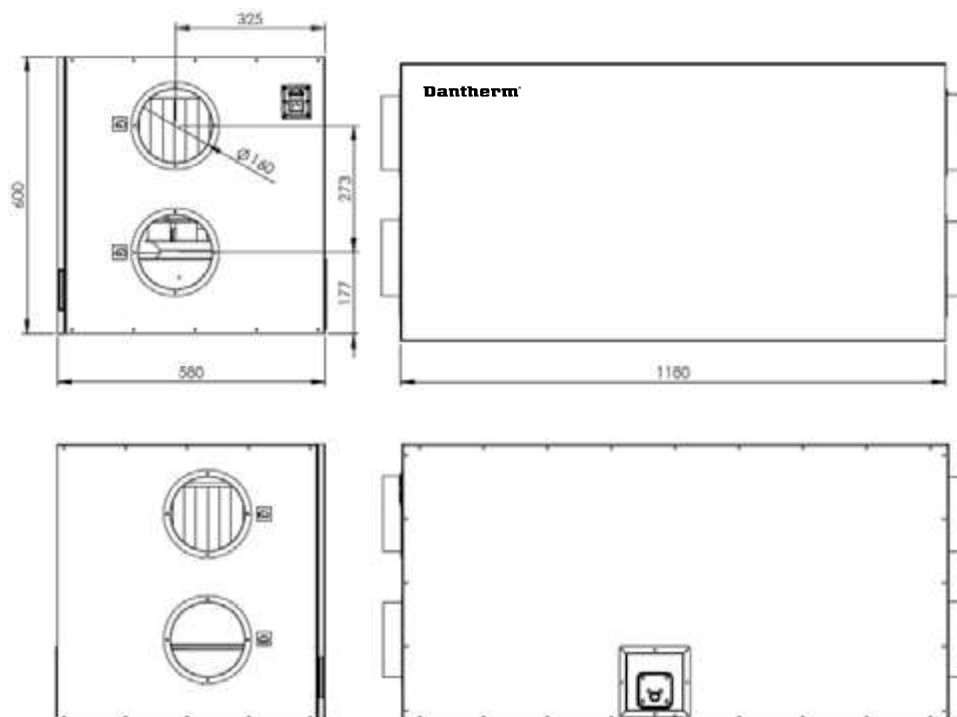
## SOUND DATA WITH G4/G4 FILTERS

Flow m <sup>3</sup> /h	Pressure Pa	Measure Point	Frequency band sound power Lw dB(A)								Total sound power Lw dB(A)	Sound pressure Standard room* Lp dB(A)
			63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		
162	70	Supply air duct	23	34	40	36	29	25	17	18	42	
		Extract air duct	23	33	39	37	29	24	18	18	42	
		Cabinet	22	31	39	41	31	29	23	21		40
	100	Supply air duct	25	35	43	38	31	28	18	18	45	
		Extract air duct	25	36	42	39	40	25	17	18	45	
		Cabinet	23	34	41	42	33	31	24	21		41
216	70	Supply air duct	26	36	44	39	33	30	19	18	46	
		Extract air duct	28	36	43	41	34	29	18	18	46	
		Cabinet	28	35	45	44	37	35	27	21		45
	100	Supply air duct	26	37	44	40	34	31	19	18	47	
		Extract air duct	27	37	45	42	35	30	19	18	48	
		Exhaust air duct	34	43	52	52	47	51	38	21	57	
		Cabinet	26	34	46	45	38	36	28	21		46
250	100	Supply air duct	28	39	46	42	37	33	21	18	49	
		Extract air duct	30	39	48	45	38	33	20	18	50	
		Cabinet	28	36	50	48	41	39	32	22		49

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

# ATTIC AND WALL-MOUNTED UNITS HCH 5

## DIMENSIONS



## DUCT CONNECTIONS

