HCV 300

HCV 300

- Demand-controlled ventilation with integrated humidity sensor, reducing power consumption at times with low ventilation demands
- Reduced 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 an inbuilt 100% by-pass, 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)
- Highly customisable units with options to add a high variety of internal as well as external accessories
- HCV 300 models take up less space than a 60 x 60cm cupboard and are perfect for concealed installation
- Ducts can be connected to the top of the unit, with the option to connect the supply duct to the base if ducts are to run beneath the floor

The HCV 300 is a highly efficient residential ventilation unit for houses, villas, and apartments. It comes as a packaged basic ventilation unit complete with built-in control panel, and is delivered with all parts necessary for wall installation.

The HCV 300 is either delivered in RAL 9016 cabinet colour and packaged individually one unit on a pallet or in a variant without filter lid and with a galvanised metal surface packaged four units on a pallet to minimise use of packaging in consideration of the environment and to ease handling at building sites.

Third part tests and certifications

Code	Description
DIBt Pending	Certified by the German Institute of Construction Technology
PHI	Passivhaus certified
ErP	Compliant with EU regulations for Eco-design
EPB	Listed in the database for Energy Performance of Buildings in Belgium
Nordic Swan Ecolabel	Listed in the Nordic Swan database for products suitable for Ecolabelled buildings
EPD	Environmental product declaration for declared product variant is available in the epddanmark.dk database

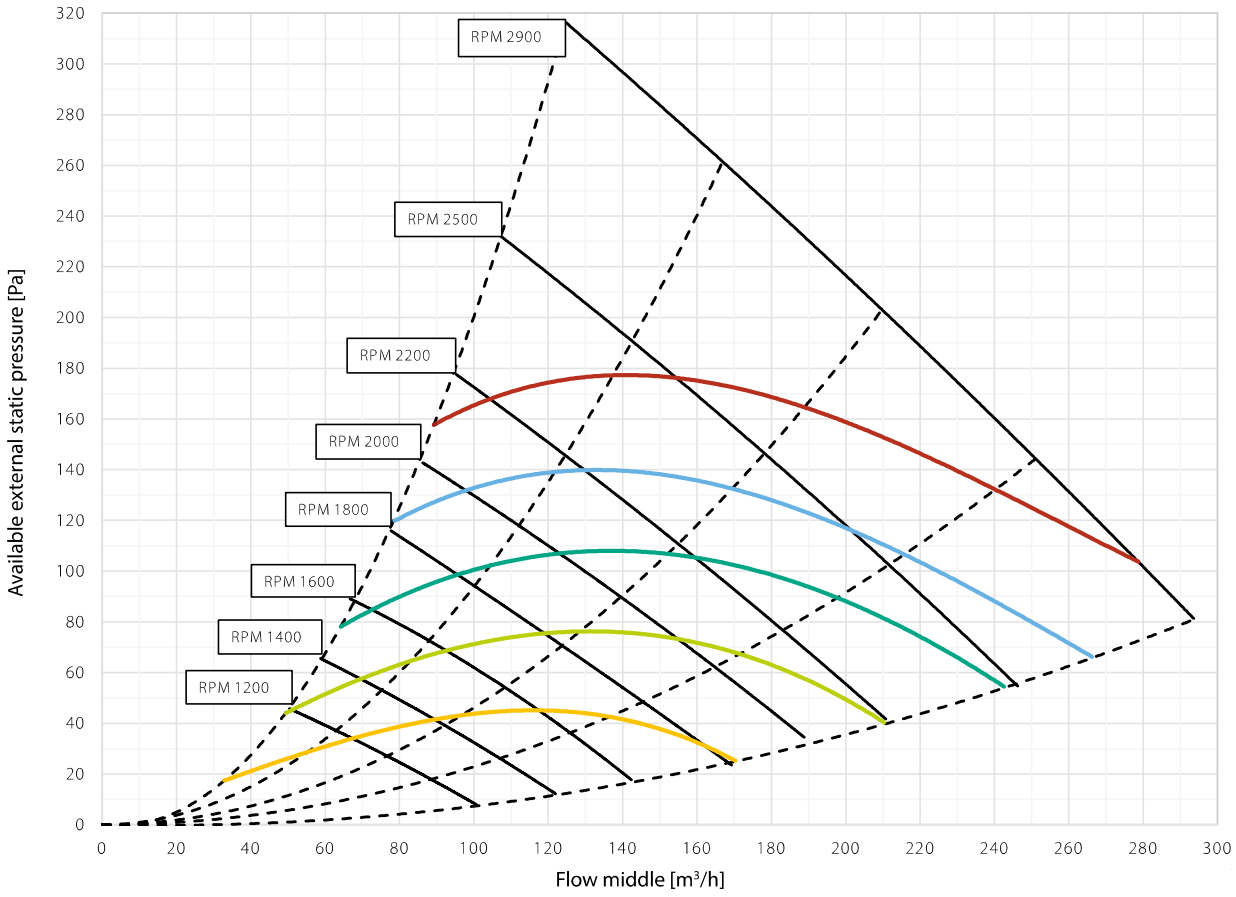
HCV 300

Specifications	Units		HCV 300
Maximum achievable flow at 100Pa	V100Pa	m^3/h	280
Maximum declared flow at 100Pa	Vmax.rated	m^3/h	180
Recommended operating range	V	m^3/h	50-180
EN 13141-7 reference flow	50Pa	m^3/h	126
Performance			
Thermal efficiency in accordance with EN13141-7	η_{SUP}	%	86
Specific power consumption in accordance with EN13141-7	SFP	$W/m^3/h$	0.28
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 surrounding temperature	t_{SURR}	°C	+12 to +50
Outdoor temperature without preheater installed	t_{ODA}	°C	-12* to +50
Outdoor temperature with preheater installed	t_{ODA}	°C	-20 to +50
Maximum absolute humidity in extract air	x	g/kg	10
Cabinet			
Exterior dimensions without wall brackets	w x d x h	mm	600 x 430 x 1000
Spigots/duct connections	Ø	mm	125 – female
Weight		kg	36
Heat conductivity – polystyrene insulation	λ	W/mK	0.031
Heat transition figures – polystyrene insulation	U	W/m^2K	<1
Fire classification of the polystyrene insulation	class	-	DIN 4102-1 class B2 EN 13501 class E
Drainage hose	Ø/length	"/m	¾/1
Cabinet colour	RAL	-	9016/galvanised metal grey
Electrical			
Voltage	U	V	230
Maximum power consumption without/with preheater	P	W	170/870
Frequency	f	Hz	50
Protection class	-	-	IP21

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

HCV 300

Capacity and SPI curves with G4/G4 filters



SFP/SPI/SEL*	0.45 W/m³/h	0.39 W/m³/h	0.33 W/m³/h	0.28 W/m³/h	0.22 W/m³/h
	1620 J/m³	1400 J/m³	1200 J/m³	1000 J/m³	800 J/m³
	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

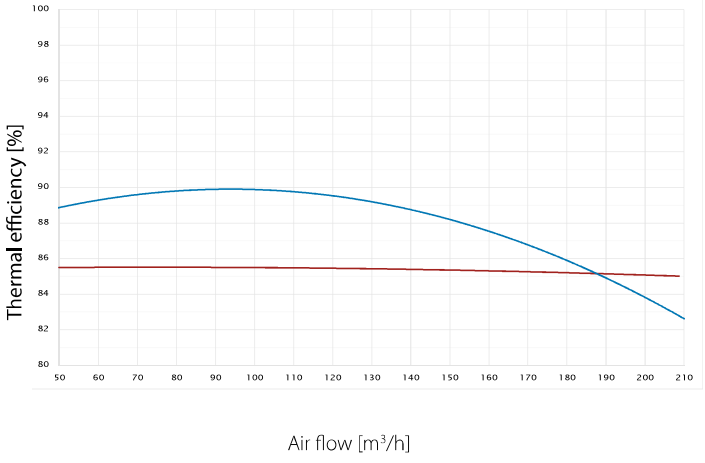
* SFP/SPI/SEL includes power consumption of both fans and the control

Thermal efficiency curves

Legend

- Thermal efficiency according to EN 13141-7 (dry)
  Operational conditions: outdoor air: 7°C, 85% RH; extract air: 20°C, 38% RH
- Thermal efficiency according to EN 13141-7 (with condensation)
  Operational conditions: outdoor air: 2°C, 80% RH; extract air: 20°C, 60% RH

All values at balanced flow



Sounds power level (Lw) – ducts

		[dB(A)]								
RPM	Duct	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
1000	supply/exhaust	22.2	23.7	26.3	26.3	23.1	12.7	6.6	18.4	31
	extract/outdoor	23.8	32.1	34.4	38.6	27.9	20.9	9.7	13.0	41
1200	supply/exhaust	24.5	27.3	31.3	30.8	28.5	20.3	20.3	21.9	36
	extract/outdoor	26.4	36.8	38.2	42.3	32.1	27.1	17.7	16.7	45
1400	supply/exhaust	27.3	30.1	35.1	35.6	32.8	26.8	21.4	22.4	40
	extract/outdoor	29.2	38.3	41.5	45.6	35.5	31.6	22.3	21.8	48
1600	supply/exhaust	29.5	31.0	38.9	38.5	35.8	30.1	22.8	22.8	43
	extract/outdoor	32.1	38.5	44.7	49.2	38.6	35.5	26.4	22.0	51
1800	supply/exhaust	31.7	33.0	42.3	41.3	38.7	33.1	23.9	23.2	46
	extract/outdoor	34.1	39.6	48.2	51.4	41.3	38.5	30.0	22.2	54
2000	supply/exhaust	33.8	34.9	47.4	43.6	41.5	35.9	25.3	23.6	50
	extract/outdoor	36.0	41.4	56.1	53.0	43.4	40.8	32.8	22.4	58
2200	supply/exhaust	36.2	36.5	49.3	45.5	44.1	38.6	28.1	24.3	52
	extract/outdoor	38.3	43.4	56.2	54.6	45.7	43.2	35.6	22.7	59
2500	supply/exhaust	39.1	38.9	52.4	48.9	47.2	41.8	31.1	24.7	55
	extract/outdoor	42.2	47.8	57.6	57.4	47.2	44.0	36.4	22.8	61
2900	supply/exhaust	41.6	41.8	55.1	53.4	51.1	45.4	35.7	27.3	59
	extract/outdoor	44.8	50.7	61.0	61.9	51.2	47.8	41.3	25.2	65

Sound pressure level (Lp) – cabinet

	[dB(A)]								
RPM	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
1000	5.8	13.6	16.6	22.2	16.6	9.3	7.9	2.9	24
1200	6.4	13.5	20.1	22.4	19.5	11.8	8.3	4.0	26
1400	7.0	17.0	23.8	26.3	24.8	17.9	10.5	4.0	30
1600	8.2	19.4	29.6	28.6	27.0	21.4	20.9	13.7	34
1800	9.2	20.0	34.2	31.5	30.3	25.3	21.1	13.8	38
2000	9.9	21.0	34.6	33.6	32.3	27.5	21.3	6.7	39
2200	10.4	22.1	34.2	35.9	34.4	30.2	21.5	10.2	40
2500	12.6	24.8	36.7	39.1	37.6	33.1	24.2	14.7	43
2900	15.7	27.6	38.3	42.4	40.7	36.8	28.7	20.2	46

	[dB(A)]								
RPM	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
1000	5.5	10.1	4.2	22.1	16.5	9.0	7.5	1.6	24
1200	4.2	10.3	13.4	23.2	18.7	11.3	7.9	1.6	25
1400	5.1	13.0	16.6	24.8	21.0	14.0	8.3	2.9	27
1600	5.8	13.9	21.4	28.0	24.6	21.4	20.7	13.5	31
1800	6.4	16.3	29.2	31.0	27.6	24.0	20.7	13.7	35
2000	6.5	17.3	29.3	33.3	30.4	25.3	21.2	13.8	37
2200	8.5	19.2	30.3	35.8	32.1	27.7	21.3	14.0	39
2500	12.2	22.7	31.5	38.5	35.5	30.9	22.3	14.2	41
2900	15.1	25.2	35.2	42.1	38.6	34.7	26.4	17.7	45

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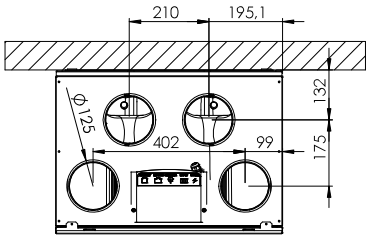
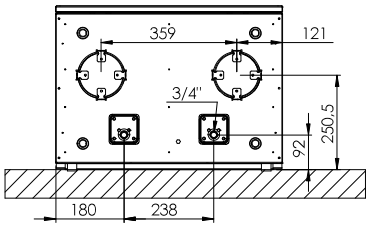
Dimensions

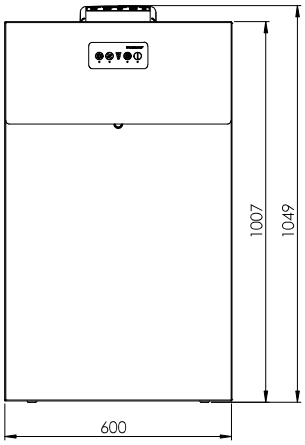
On the HCV 300 it is possible to connect the supply duct to the bottom if the ducts are to run beneath the floor.

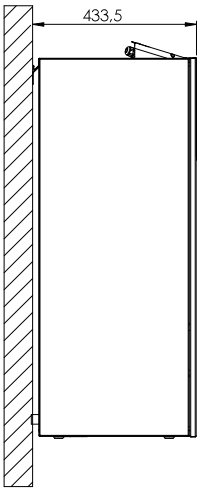


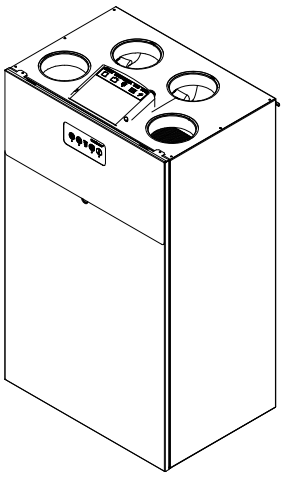
Top view



Bottom view







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

Duct connections

2 set-up in 1 unit, easy change on site

(A) LEFT SET-UP
Factory set-up

- **T1** Outdoor air
- **T2** Supply air
- **T3** Extract air
- **T4** Exhaust air

(B) RIGHT SET-UP Optional -
easy change on site