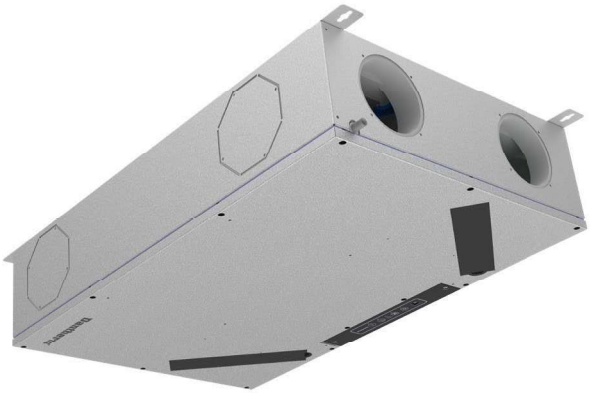
RCC 220P2



- Demand-controlled ventilation with integrated humidity sensor, reducing power consumption at times with low ventilation demands
- Summer mode in which the supply fan is stopped to reduce power consumption. Open windows will supply cooler outside air
- Automatic free-cooling via the integrated bypass function that lets in cool night air on hot days to help maintain comfortable temperatures through 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)
- Requires no more than 200mm installation headroom
- Highly customisable units with the option to add a high variety of internal as well as external accessories
- Two humidity sensors to ease switching from left/right setup
- Prepared for easy mounting of condensate pump

RCC 220P2

The RCC 220P2 is a uniquely flexible and compact residential ventilation unit for small houses and apartments. Based on an ingenious design, it is delivered as a true plug and play solution with a built-in control panel and all necessary parts for on-site installation.

Requiring just 200mm installation headroom, it is perfect for installation in suspended ceilings, on (or inside!) walls or closets. The air flows can be electronically swapped, so the same unit can be mounted with inside/outside ducts connected to either the right or left hand side as needed.

The RCC units come with a galvanised metal surface and are either delivered packaged individually one unit on a pallet in a cardboard box or in a variant packaged four units on a pallet to minimise use of packaging in consideration of the environment and to ease handling at building sites.

Third party testing and certifications

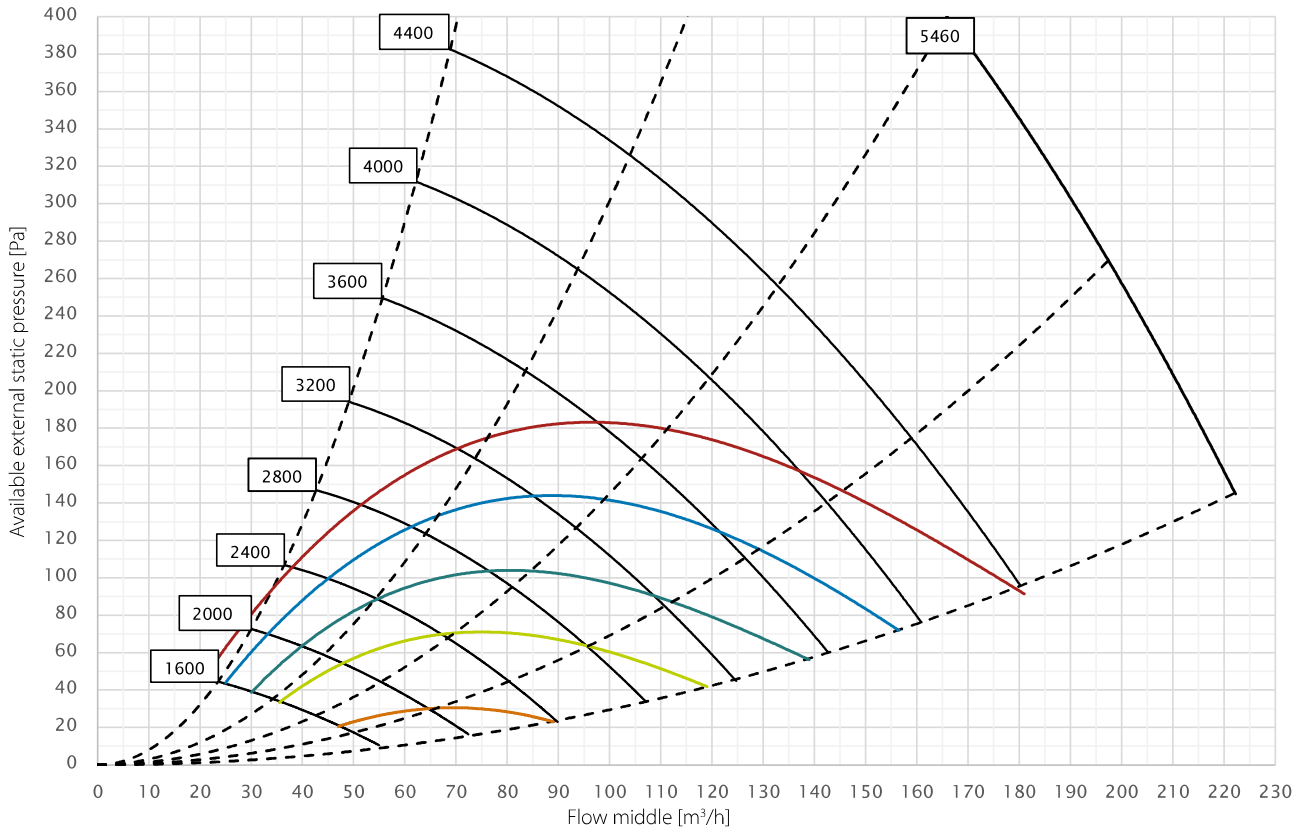
Code	Description
PHI	Pending Passivhaus
DIBt	Pending the German Institute of Construction Technology
PCDB listed SAP App. Q	Pending (listed in the UK database for balanced whole-house mechanical ventilation with heat recovery
ErP	Compliant with EU regulations for Eco-design
Nordic Swan Ecolabel	Listed 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

RCC 220P2

Specifications	Units		RCC 220P2
Maximum achievable flow at 100Pa	V100Pa	m^3/h	220
Maximum declared flow at 100Pa	Vmax.rated	m^3/h	120
Recommended operating range	V	m^3/h	45-130
Operating range DIBt	V_{DBIt}	m^3/h	45-120
Operating range Passivhaus at 100Pa	V_{PHI}	m^3/h	45-115
EN 13141-7 reference flow at 50Pa	V_{REF}	m^3/h	84
Performance			
Thermal efficiency in accordance PHI	η_{SUP}	%	84 (preliminary)
Thermal efficiency in accordance with EN13141-7	η_{SUP}	%	86
Leakage (external and internal) in accordance with EN 13141-7			<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 +45
Outdoor temperature without preheater installed	t_{ODA}	°C	-12* to +45
Outdoor temperature with preheater installed	t_{ODA}	°C	-20 to +45
Maximum absolute humidity of extract air	x	g/kg	10
Cabinet			
Dimensions (without wall bracket)	w x h x d	mm	580 x 200 x 900
Spigots/duct connections	Ø	mm	8 x ø125 – female
Weight		kg	17
Heat conductivity – polystyrene insulation	λ	W/mK	0.031
Heat transfer coefficient – polystyrene insulation	U	W/m^2K	U<1
Fire classification of the polystyrene insulation	-		DIN 4102-1 class B2 EN 13501 class E
Drainage hose (accessory)	Ø	"	1/2
Cabinet colour	RAL	-	Galvanised metal grey
Electrical			
Voltage	U	V	230
Maximum power consumption (without/with preheater)	P	W	173/1073
Frequency	f	Hz	50
Protection class	-	-	IP21

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

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

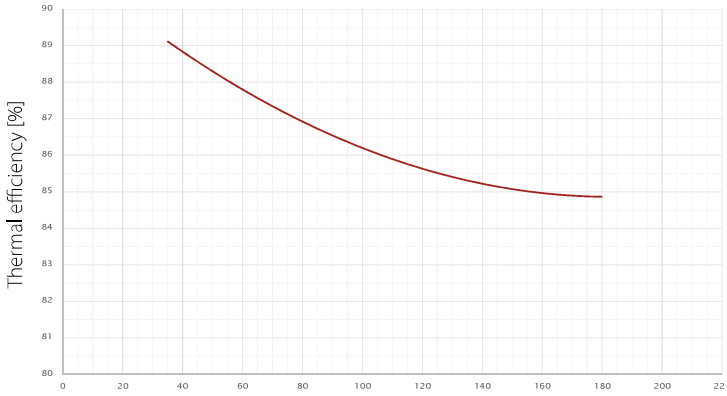
* SFP/SPI/SEL includes power consumption of both fans.

Thermal efficiency curves

Legend

- Thermal efficiency according to EN 13141-7 (dry) Operational conditions: outdoor air: 7°C, 85% RH; extract air: 20°C, 37% RH

All values at balanced flow



Sound power level (Lw) – ducts

		[dB(A)]								
RPM	Duct	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
800	supply/exhaust	12.9	23.6	19.3	19.8	26.3	13.4	-	-	29.4
	extract/outdoor	-	15.3	12.6	-	14.8	10.8	-	-	19.7
1200	supply/exhaust	18.3	39.2	29.8	30.8	30.6	21.2	11.4	-	40.7
	extract/outdoor	10.0	33.1	19.7	19.0	16.8	11.2	-	-	33.6
1600	supply/exhaust	23.8	41.4	44.5	41.8	37.0	28.7	22.8	-	48.0
	extract/outdoor	18.3	33.5	33.6	29.4	20.6	12.5	12.7	-	37.9
2000	supply/exhaust	28.0	43.4	52.3	46.5	41.8	35.9	30.7	-	54.1
	extract/outdoor	22.6	34.5	38.8	33.4	24.6	15.0	14.6	-	41.4
2200	supply/exhaust	29.0	44.4	54.7	47.7	44.8	38.6	34.6	13.4	56.3
	extract/outdoor	24.4	34.9	41.4	34.9	26.3	17.0	15.4	-	43.2
2400	supply/exhaust	31.4	45.4	57.2	49.5	47.6	42.7	38.5	20.6	58.6
	extract/outdoor	26.2	35.4	44.8	37.0	27.8	20.2	16.0	-	46.0
2600	supply/exhaust	33.0	46.6	59.0	52.3	49.5	44.3	40.9	21.7	60.5
	extract/outdoor	28.5	37.3	45.1	38.1	28.9	21.8	16.0	-	46.6
2800	supply/exhaust	34.7	47.9	60.7	55.2	51.4	45.9	43.3	22.7	62.5
	extract/outdoor	29.7	38.7	50.8	43.6	31.7	25.4	16.5	-	51.9
3000	supply/exhaust	36.8	48.9	60.7	61.8	53.0	47.7	45.1	25.4	64.9
	extract/outdoor	32.5	40.4	50.9	49.5	34.5	26.4	18.8	-	53.6
3200	supply/exhaust	38.9	49.9	60.7	68.4	54.6	49.6	47.0	27.5	69.4
	extract/outdoor	32.8	41.9	50.9	56.4	39.8	29.2	20.7	-	57.7
3400	supply/exhaust	39.3	50.9	60.7	69.7	56.3	51.2	48.9	29.8	70.5
	extract/outdoor	37.4	43.4	50.9	57.5	40.5	30.5	23.2	-	58.6
3600	supply/exhaust	39.7	51.9	60.7	71.0	58.0	52.8	50.8	31.9	71.7
	extract/outdoor	37.4	43.5	51.0	58.5	41.2	32.6	24.9	-	59.4
4000	supply/exhaust	43.8	54.4	60.7	71.0	60.8	56.2	53.8	35.6	72.0
	extract/outdoor	37.8	43.6	51.1	60.6	41.3	35.8	28.2	-	61.2
4400	supply/exhaust	43.9	56.2	60.7	71.0	62.5	58.5	56.7	39.3	72.3
	extract/outdoor	38.1	51.0	51.2	60.6	41.8	38.7	31.0	-	61.6
5400	supply/exhaust	47.2	57.4	60.7	71.0	68.3	63.3	61.5	45.5	73.9
	extract/outdoor	39.6	51.0	51.3	60.6	49.2	44.5	37.1	19.8	61.9

Sound pressure level (Lp) – cabinet

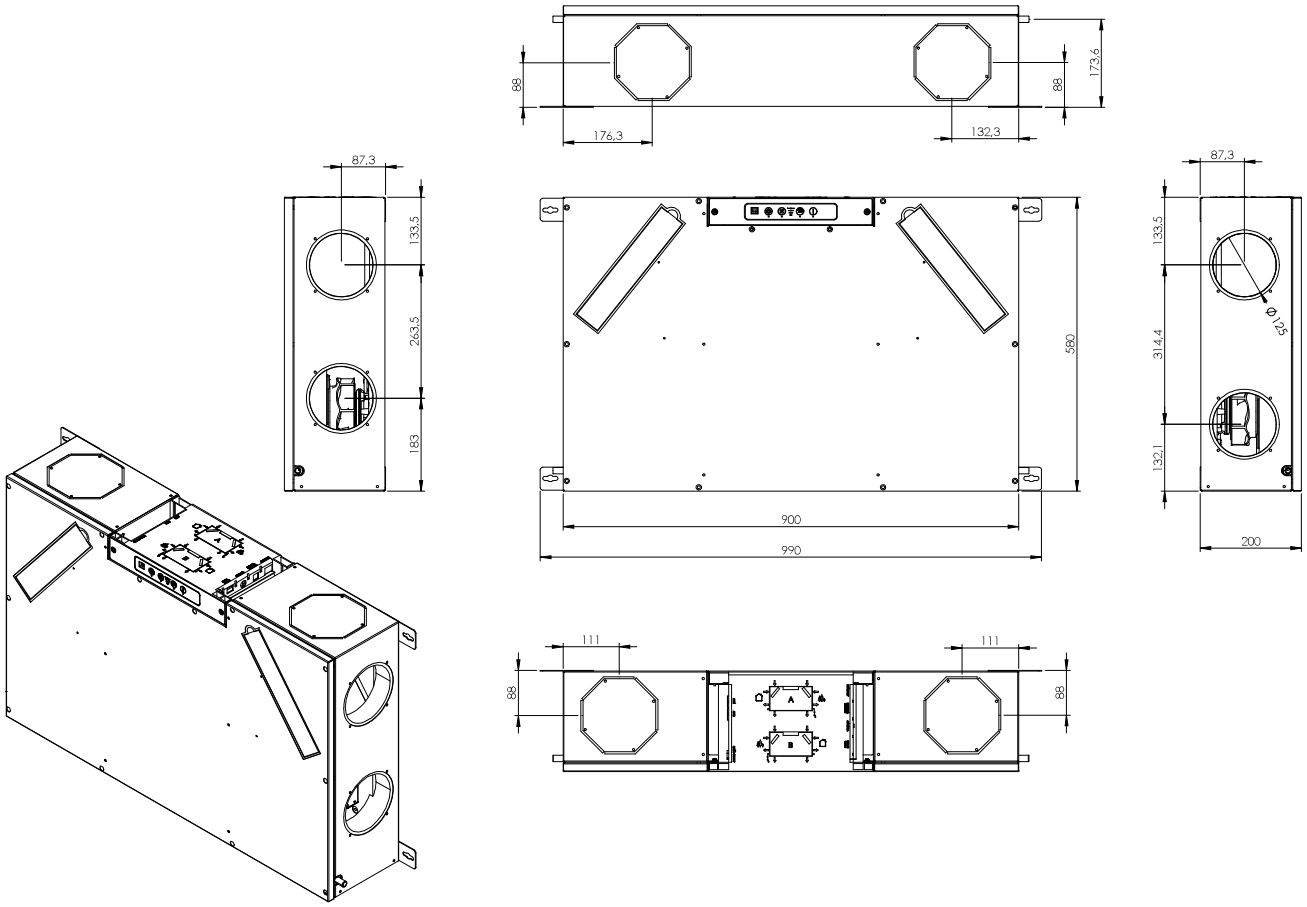
1m distance

	Without background noise weighted [dB(A)]								
RPM	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
800	-	-	14.1	16.3	4.7	13.8	13.7	12.9	21.4
1200	-	10.6	16.0	22.1	22.1	18.9	13.7	13.8	27.0
1600	-	12.0	17.3	23.8	22.1	24.1	20.2	18.6	29.6
2000	-	15.1	22.4	30.0	25.5	25.6	21.2	18.9	33.3
2200	-	16.4	24.5	32.5	27.5	25.6	22.4	19.5	35.2
2400	10.9	18.7	26.9	34.7	29.4	26.7	23.5	20.1	37.2
2600	12.7	19.9	28.0	36.6	31.9	29.0	25.4	21.1	39.1
2800	13.9	21.4	30.1	38.5	33.2	29.0	25.5	21.3	40.6
3000	15.2	22.8	31.5	41.1	34.9	29.0	25.7	21.6	42.8
3200	16.7	23.4	31.5	41.8	36.2	29.1	27.4	22.0	43.5
3400	18.3	24.6	32.5	43.8	38.0	30.7	28.3	22.3	45.4
3600	19.9	26.0	33.8	45.5	39.9	32.9	29.5	22.6	47.1
4000	22.0	27.9	36.0	50.3	43.2	35.8	33.1	23.1	51.4
4400	25.3	29.5	38.0	52.5	46.1	37.9	35.0	23.5	53.7
5000	28.6	33.1	40.6	53.4	50.0	41.5	38.6	24.9	55.5

2m distance

	Without background noise weighted [dB(A)]								
RPM	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
800	-	-	13.4	15.7	4.7	13.5	13.4	12.7	21.0
1200	-	-	15.6	21.2	21.9	18.9	13.7	13.7	26.5
1600	-	-	15.8	21.7	21.9	19.4	16.7	14.6	27.0
2000	-	11.7	20.7	25.4	26.3	19.9	18.6	15.4	30.5
2200	-	13.0	21.5	28.9	26.9	20.4	20.0	16.2	32.2
2400	-	16.3	24.6	30.8	30.2	20.6	21.2	16.9	34.6
2600	11.5	17.8	26.8	33.7	32.3	24.6	22.9	17.6	37.1
2800	12.4	18.4	27.9	35.6	34.2	24.7	24.0	18.2	38.8
3000	14.2	20.1	29.1	38.1	37.3	28.5	26.4	20.6	41.5
3200	15.2	20.8	29.1	39.8	38.3	28.9	26.8	21.3	42.7
3400	17.7	22.1	30.6	41.8	40.0	29.7	27.4	21.9	44.5
3600	18.7	23.2	31.5	43.4	41.8	31.5	29.3	22.4	46.1
4000	21.1	25.0	33.6	46.8	44.5	33.8	31.5	23.0	49.2
4400	23.4	26.9	35.3	50.1	47.4	36.1	34.2	23.5	52.3
5000	27.8	32.1	38.2	54.1	51.8	39.8	37.5	24.8	56.4

Dimensions



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