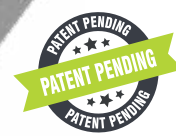


**Dantherm**<sup>®</sup>  
CLIMATE SOLUTIONS



## **RCV 320P1**

RESIDENTIAL VENTILATION

# WALL AND ATTIC-MOUNTED UNITS

## RCV320 P1



The 320P1 is a highly efficient and very compact residential ventilation unit for houses, villas, and apartments. Based on patent-pending technology and 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 wall installation.

All units come with an Aluzinc surface finish and will be packaged four units on a pallet at a time to ease handling at building sites. Heat recovery takes place in a highly efficient counter-flow heat exchanger, which is able to achieve optimum efficiency with the least possible loss of pressure in connection with the low air volumes used in housing.



- 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, and reducing power consumption, and any open window will supply cooler outside air, lowering the room temperature
- Automatic free-cooling features, 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 the option to add a high variety of internal as well as external accessories
- Ducts can be connected through the top of the unit, either side or the bottom as preferred
- Compact design
- External pre-heater as accessory
- Free smartphone App available

### Third party testing and certification

Code	Description
ErP	Compliant with EU regulations for Eco-design
Nordic Swan Ecolabel	Listed in the Nordic Swan database for products suitable for Ecolabelled buildings
PCDB listed SAP App. Q	Pending: Listed in the UK database for balanced whole-house mechanical ventilation with heat recovery
PHI	Pending: Passivhaus certified
EPB	Pending: Listed in the database for Energy Performance of Buildings in Belgium

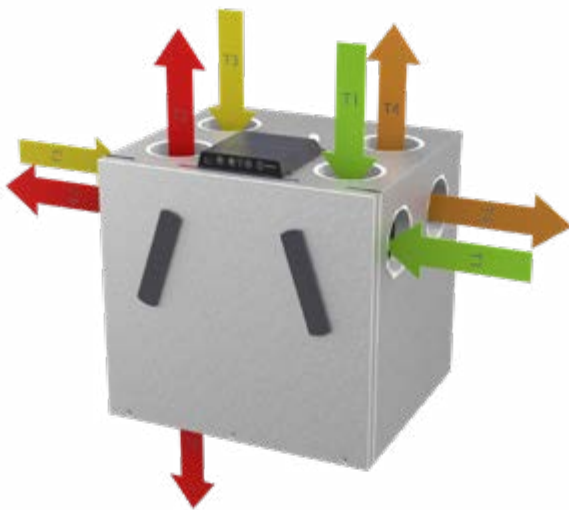
# WALL AND ATTIC-MOUNTED UNITS

## RCV320 P1



### Flexible unit

The factory-mounted duct seals on the side of the unit can easily be removed using a side cutter and then used to seal off other ducts not to be used.

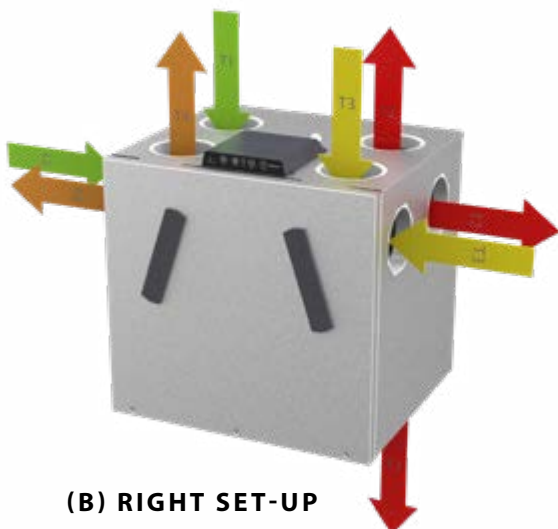


**(A) LEFT SET-UP**

### Tired of having to redo ducting to fit ventilation units?

Unlike all other residential ventilation units on the market, the RCV offers a stunning 48 different ways of connecting ducts to the unit. 24 available combinations for left setups (A) and 24 for right setups (B). Simply choose whichever one is more convenient in terms of installation!

With this flexible unit, you'll be able to find a fast and cost-efficient way to finalise installation work, even in the trickiest of installation areas.



**(B) RIGHT SET-UP**

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

# WALL AND ATTIC-MOUNTED UNITS

## RCV320 P1

### TECHNICAL DATA

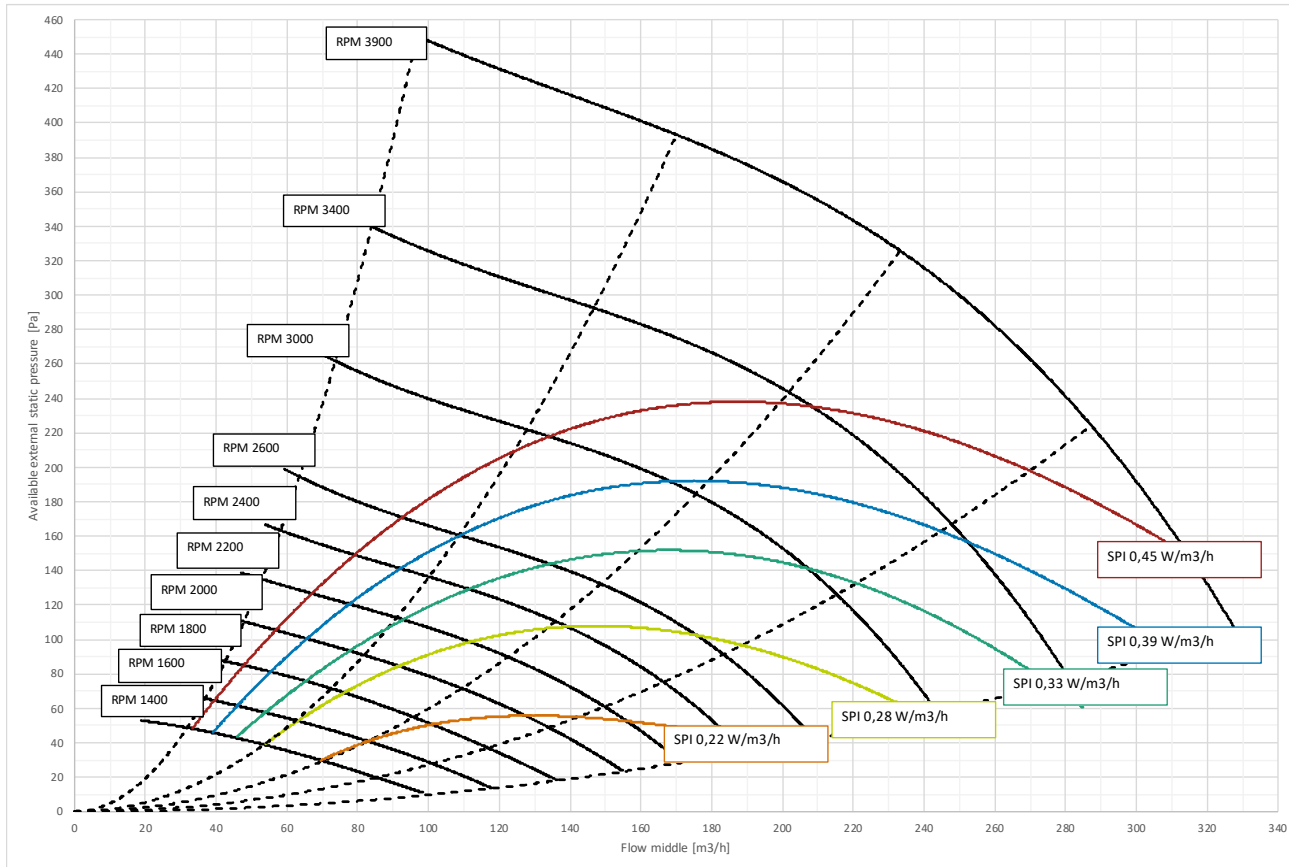
Specifications	Units		RCV 320P1
Maximum flow at 100Pa	$V_{100Pa}$	m <sup>3</sup> /h	320
Maximum rated flow at 100Pa	$V_{max. nom.}$	m <sup>3</sup> /h	200
Recommended operating range	V	m <sup>3</sup> /h	50 - 200
Operating range Passivhaus at 100Pa	$V_{PHI}$	m <sup>3</sup> /h	70 - 160 (preliminary data)
EN 13141-7 reference flow at 50Pa	$V_{REF}$	m <sup>3</sup> /h	140
<b>Performance</b>			
Thermal efficiency in accordance with PHI	$\eta_{SUP}$	%	92 (preliminary data)
Thermal efficiency in accordance with EN13141-7	$\eta_{SUP}$	%	90 (preliminary data)
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 EN779:2012	-	-	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	-15 to +45
Maximum absolute humidity of extract air	x	g/kg	10
<b>Cabinet</b>			
Dimensions (without bracket)	w x h x d	mm	600 x 603 x 526**
Spigots/ducts connections	Ø	mm	8 pcs ø125 and 2 pcs oval (68 x 163) – female
Weight		kg	32
Thermal conductivity – polystyrene insulation	$\lambda$	W/mK	0.031
Heat transition figures – polystyrene insulation	U	W/m <sup>2</sup> K	U<1
Fire classification of the polystyrene insulation	-	-	DIN 4102-1 class B2 EN 13501 class E
Drainage hose included	Ø/length	"/m	ø¾" – 1m
Cabinet colour	-	-	raw Alu-zinc
<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 preheating coil is recommended at outdoor temperature -3°C to ensure balanced operation.

\*\* +20mm fitting.

# WALL AND ATTIC-MOUNTED UNITS RCV320 P1

## CAPACITY AND SPI CURVES WITH G4/G4 FILTERS



	—	—	—	—	—
<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

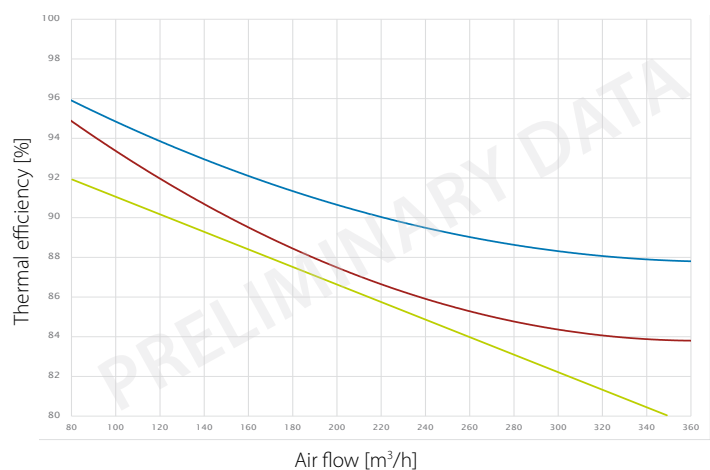
\* SFP/SPI/SEL includes power consumption of both fans and the control.

## THERMAL EFFICIENCY CURVES

### Legend

- Thermal efficiency according to EN 13141-7 (dry)  
Operational conditions: outdoor air: 7°C, 85% RH; extract air: 20°C, 37% RH
- Thermal efficiency according to EN 13141-7 (with condensation)  
Operational conditions: outdoor air: 2°C, 85% RH; extract air: 20°C, 60% RH
- Thermal efficiency acc. PassivHaus Institut  
Operational conditions: outdoor air: 4°C, 94% RH; extract air: 21°C, 30% RH

All values at balanced flow



## WALL AND ATTIC-MOUNTED UNITS

# RCV 320P1

### SOUND POWER LEVEL (L<sub>w</sub>) – DUCTS

RPM	Duct	[dB(A)]								
		63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
1200	supply/exhaust	23.6	33.1	32.8	34.0	30.0	20.8	13.3	18.5	39
	extract/outdoor	20.2	26.0	26.0	30.0	23.9	15.5	6.9	13.0	33
1400	supply/exhaust	26.2	36.1	37.0	37.2	34.4	24.6	19.0	18.6	42
	extract/outdoor	21.9	28.5	30.1	33.7	28.3	21.5	18.1	21.4	37
1600	supply/exhaust	27.8	36.7	41.0	40.2	37.6	28.8	22.0	19.1	45
	extract/outdoor	23.9	29.0	35.6	36.3	31.7	25.5	17.3	21.5	40
1800	supply/exhaust	30.2	38.1	46.1	43.1	40.6	32.1	24.9	13.3	49
	extract/outdoor	26.8	30.4	38.2	38.9	34.7	28.8	18.8	21.7	43
2000	supply/exhaust	32.0	39.8	49.4	45.8	43.5	35.2	28.5	13.0	52
	extract/outdoor	30.2	31.5	41.9	41.3	37.5	31.6	18.1	20.3	46
2200	supply/exhaust	34.2	40.9	51.0	48.1	46.0	38.1	31.8	12.7	54
	extract/outdoor	32.3	33.0	43.4	43.6	39.9	34.1	21.5	21.5	48
2400	supply/exhaust	35.4	42.3	54.4	50.1	47.6	40.6	34.7	18.7	57
	extract/outdoor	33.9	34.2	44.5	45.8	42.0	36.2	20.7	14.9	49
2600	supply/exhaust	38.6	43.9	55.8	52.4	49.7	43.1	37.5	19.7	58
	extract/outdoor	36.6	35.8	47.7	47.8	43.8	38.4	24.8	23.3	52
3000	supply/exhaust	40.1	45.6	59.0	62.5	53.1	47.0	41.9	26.9	65
	extract/outdoor	37.7	37.5	47.7	53.3	47.3	42.5	28.3	23.3	55
3400	supply/exhaust	43.8	51.4	62.4	68.8	57.0	50.2	45.7	31.9	70
	extract/outdoor	40.3	40.1	48.2	61.2	50.2	45.1	31.2	24.6	62

### SOUND PRESSURE LEVEL (L<sub>p</sub>) – CABINET

#### 2m distance

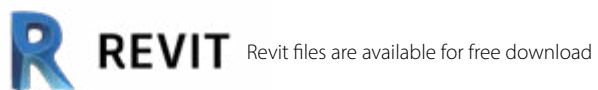
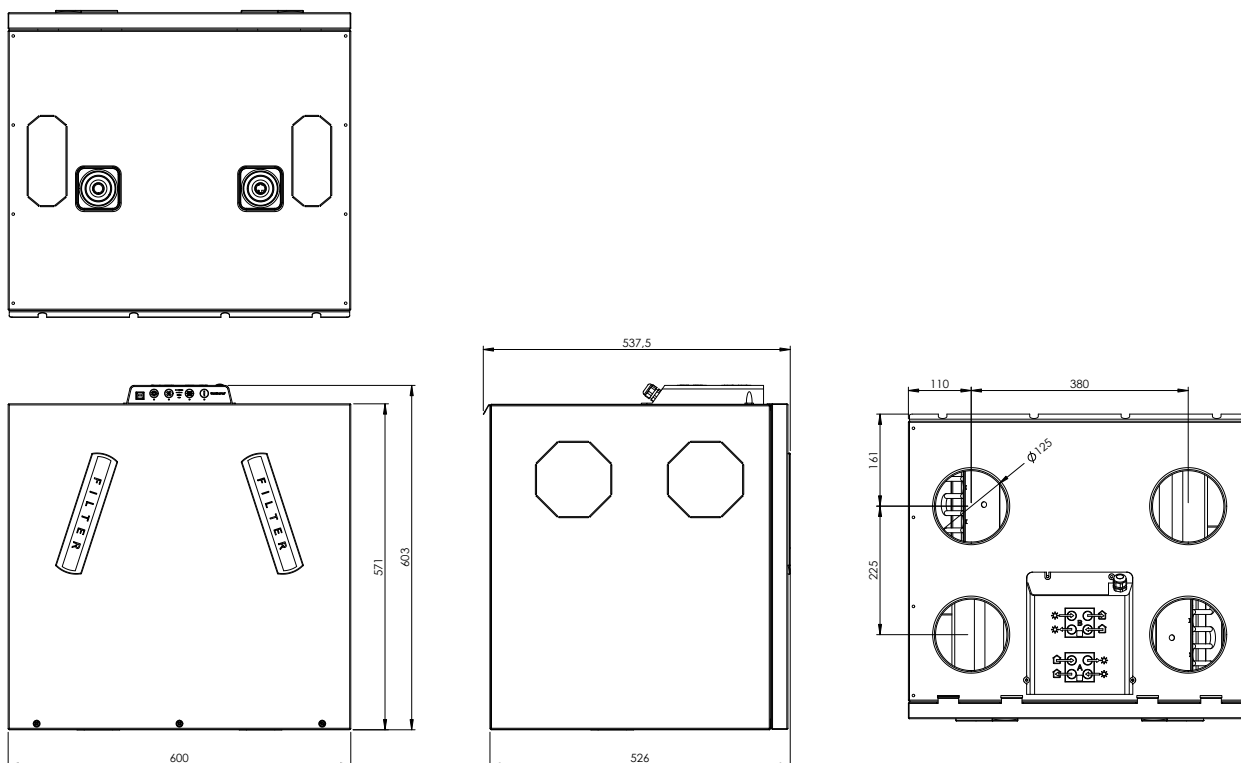
RPM	Without background noise weighted [dB(A)]								
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total
1000	-	2.6	9.5	12.9	9.6	5.8	1.4	3.0	17
1200	-	4.0	11.1	15.8	16.3	12.6	9.4	4.1	21
1400	-	7.1	13.9	17.6	16.4	12.6	5.3	1.7	22
1600	-	8.5	18.0	20.8	17.7	13.2	6.0	-0.1	24
1800	-	10.0	21.9	23.6	20.2	16.3	9.4	4.9	27
2000	-	11.5	22.4	25.7	22.2	18.3	11.6	5.6	29
2200	-	13.3	26.5	28.2	24.6	20.7	13.3	5.6	32
2400	-	18.5	28.1	30.9	27.7	24.4	17.5	5.6	35
2600	11.0	20.1	29.9	34.6	29.5	25.6	18.9	5.6	37
3000	11.1	20.2	32.3	37.9	32.1	29.0	22.8	9.0	40

# WALL-MOUNTED UNITS

## RCV 320P1

### DIMENSIONS

On the 320P1, it is possible to connect the supply duct to the bottom if the ducts are to run beneath the floor.



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