Series

VENTS ENAVE-C 100/120 P

EC motor

Heat recovery air handling units in sound- and heat-insulated casings.
Air flow up to **156 m³/h**.
Heat recovery efficiency up to **94 %**

Description

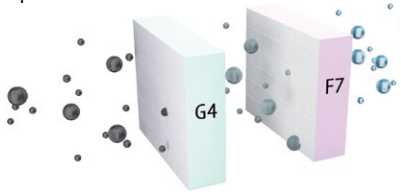
The air handling units are the fully featured ventilation units with heat recovery for air filtration, fresh air supply and stale air extract. The units offer energy-efficient ventilation for small appartments.

Casing

The casing is made of expanded polypropylene (EPP) possessing high heat- and sound-insulating properties.

Filter

Two built-in Coarse 90% (G4) and ePM1 65% (F7) filters provide efficient air filtration.

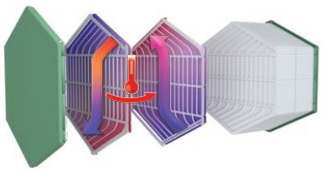


Fans

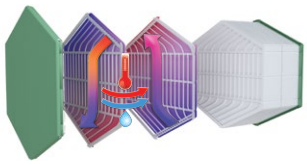
Efficient electronically commutated motors with external rotor and impeller with forward curved blades.

Heat exchanger

Enave-C units are equipped with a counter-flow polystyrene heat exchanger.



Enave-CT units are equipped with an enthalpy heat exchanger.



Automation

Enave-C 100/120 P A21 units are equipped with automation system. The **A21** controller allows to integrate the unit into the **Smart Home system** or **BMS (Building Management System)**. To control the unit via Wi-Fi, download the **Vents Home** smartphone app. **Enave-C 100/120 P A14** units are equipped with an integrated control system and an **A14** wall-mounted control panel with LED indication.

Google play

Download on the App Store

Modbus

Freeze protection

In the **Enave-C 100/120 P** units freeze protection is provided by the shutdown of the supply fan. Optional duct pre-heater is available for units with **A21** control system.

Mounting

The unit is designed for suspended ceilling mounting. The mounting position of the unit must provide service access for maintenance and repair.

Control and automation

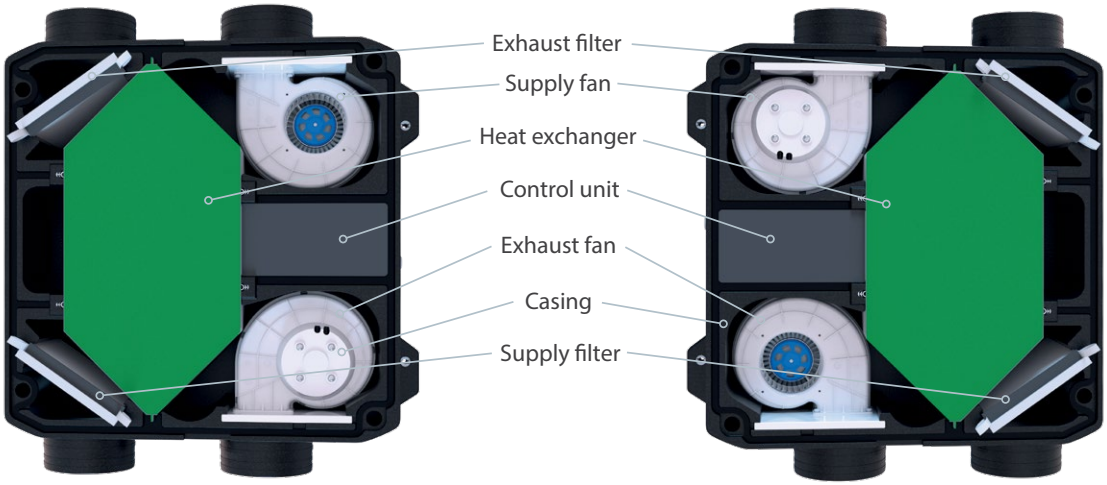
Functions	A21	A14
Wired remote control pane	A22 (option)	A14
Control via a wired remote LCD control panel	A25 (option)	-
Wireless remote control panel	A22 Wi-Fi (option)	-
BMS	ModBus RTU (RS-485) ModBus TCP/IP (Wi-Fi, Ethernet)	-
Vents Cloud Server service	+	-
Control via Wi-Fi using a smartphone app	+	-
Frost protection	+	+
Bypass	Auto, manual	Manual
Week-scheduled operation	+	-
Filter replacement indication	Filter timer	+
Alarm indication	+	+
Speed selection	+	+
Timer	+	-
RH% sensor	Option	Option
CO_2 sensor	Option	Option
VOC sensor	Option	Option
PM2.5 sensor	Option	Option
Boost mode	+	-
Fireplace mode	+	-
Preheater connection	+	-
Reheater connection	+	-
Fire alarm sensor connection	+	+
Minimum supply air temperature control	+	-

Designation key

TM	Model	Casing modification	Heat exchanger type	Nominal size	Modification	Casing type	Heater	Controller	Service side
VENTS	Enave	C – Compact	_ – heat recovery T – energy recovery	Air flow m^3/h / 10	0 – standard	P – suspended	_ – w/o heater	A21, A14	L – left R – right

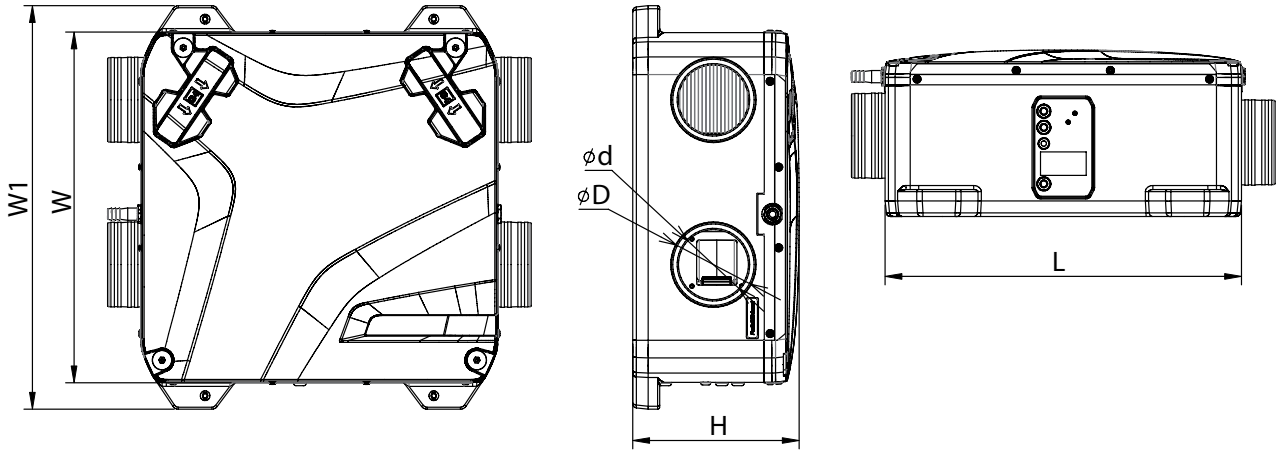
Unit design

Enave-C 100/120 P L **Enave-C 100/120 P R**

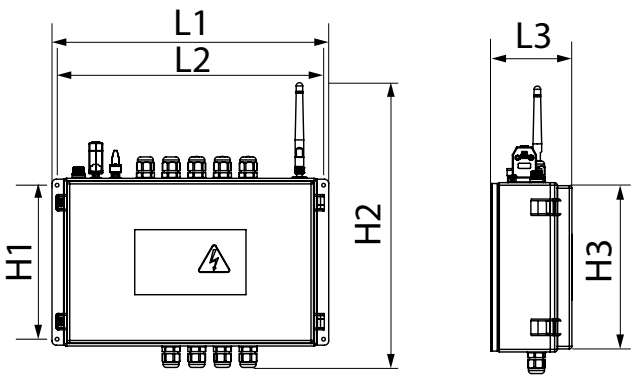


Overall dimensions

Model	Dimensions [mm]						
	ØD	Ød	H	W	L	W1	B
Enave-C 100/120 P	125	104	247	522	530	600	630



	Dimensions [mm]					
	L1	L2	L3	H1	H2	H3
External automation unit (only units with A21 automation)	324	313	93	180	330	196

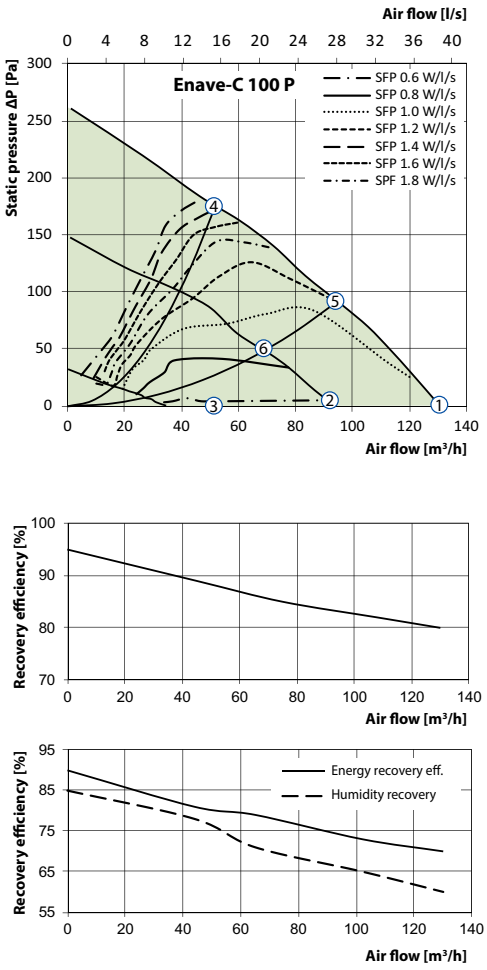


Technical data

	Enave-C 100 P	Enave-CT 100 P
Voltage [V/50-60 Hz]	1~ 230	
Max. unit power [W]	45	
Max. unit current [A]	0.34	
Max air flow [m³/h]	130	
Max. sound pressure level at 3 m distance (breakout) [dBA]	32	
Max. operating temperature [°C]	- 23...+40	
Case material	EPP	
Insulation [mm]	25	
Extract filter	G4 / Coarse > 60%	
Supply filter	G4 / Coarse > 60% (option F7 / ePM1 60%)	
Connected air duct diameter [mm]	100 / 125	
Weight [kg]	8	
Heat recovery efficiency [%]	82-94	73-88
Heat exchanger type	Counter-flow	
Heat exchanger material	Polystyrene	Enthalpy membrane
SEC class	A+	A

Point	Air flow [m³h] (ls)	Total sound pressure level (break-out) at 3 m (1 m) distance [dBA]
	Enave-C(T) 100 P	Enave-C(T) 100 P
1	130 (36)	32 (42)
2	91 (25)	25 (35)
3	52 (14)	16 (26)
4	52 (14)	31 (41)
5	96 (27)	33 (42)
6	68 (19)	25 (34)

VENTS Enave-C 100 P



A-weighted sound power level (p.5 on the diagram)		Gen.	Octave-frequency band [Hz]							LpA, 3 m	LpA, 1 m
		dBA	200	400	800	1000	2000	4000	8000	[dBA]	[dBA]
L_{WA} to exhaust inlet	dBA	59	44	45	49	51	44	37	38	38	48
L_{WA} to supply outlet	dBA	47	41	36	33	31	29	22	24	27	36
L_{WA} to environment	dBA	53	37	41	43	42	38	34	29	33	42

Calculation of air temperature downstream of the heat exchanger:

$$t=t_{outd}+k_{hr}*(t_{extr}-t_{outd})/100,$$

where

t_{outd} is outdoor air temperature [°C]

t_{extr} is extract air temperature [°C]

k_{hr} is heat exchanger efficiency (according to the diagram) [%]

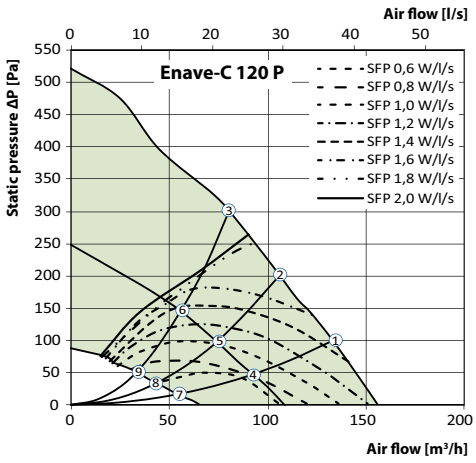
Technical data

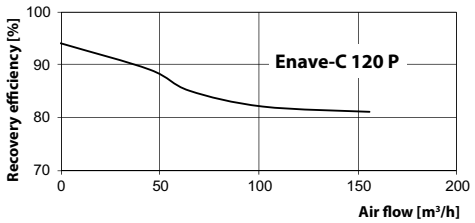
	Enave-C 120 P	Enave-CT 120 P
Voltage [V/50-60 Hz]	1~ 230	
Max. unit power [W]	59	
Max. unit current [A]	0.5	
Max air flow [m^3/h]	156	
Max. sound pressure level at 3 m distance * (breakout) [dBA]	27	
Max. operating temperature [°C]	- 25...+40	
Case material	EPP	
Insulation [mm]	25	
Extract filter	G4 / Coarse > 60%	
Supply filter	G4 / Coarse > 60% (option F7 / ePM1 60%)	
Connected air duct diameter [mm]	100/125	
Weight [kg]	8	
Heat recovery efficiency [%]	94	81
Heat exchanger type	Counter-flow	
Heat exchanger material	Polysterene	Enthalpy membrane
SEC class	A	A

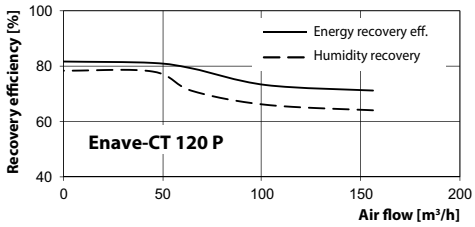
*Sound pressure level at 3 m distance is specified at point 4 [dBA] in average spherical free-field, for comparitive use only.

Point	Total power of the unit, W	Total sound pressure level (break-out) at 3 m (1 m) distance [dBA]
	Enave-CT 120 P	Enave-CT 120 P
1	55	38 (48)
2	55	36 (45)
3	55	35 (44)
4	21	27 (37)
5	21	28 (37)
6	21	29 (39)
7	7	17 (27)
8	7	17 (27)
9	7	16 (26)

VENTS Enave-C 120 P







A-weighted sound power level (p.1 on the diagram)	Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
	dBA	63	125	250	500	1000	2500	4000	8000	[dBA]	[dBA]
L_{wA} to supply inlet	62	33	36	40	50	53	49	47	45	43	51
L_{wA} to supply outlet	65	35	38	42	53	56	52	49	47	45	54
L_{wA} to exhaust inlet	51	30	33	37	42	38	31	26	24	31	40
L_{wA} to exhaust outlet	54	32	35	39	44	40	33	27	25	33	42
L_{wA} to environment	59	30	38	37	41	44	41	38	32	38	48

A-weighted sound power level (p.4 on the diagram)	Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
	dBA	63	125	250	500	1000	2500	4000	8000	[dBA]	[dBA]
L_{wA} to supply inlet	55	28	30	34	43	48	41	37	32	35	44
L_{wA} to supply outlet	57	29	32	36	45	50	43	39	34	37	46
L_{wA} to exhaust inlet	44	24	27	31	35	33	24	21	24	24	33
L_{wA} to exhaust outlet	46	25	28	33	37	35	25	22	25	25	35
L_{wA} to environment	48	30	38	37	40	39	32	29	24	27	37

Calculation of air temperature downstream of the heat exchanger:

$$t=t_{outd}+k_{hr}*(t_{extr}-t_{outd})/100,$$

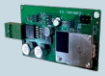
where

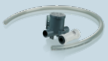
t_{outd} is outdoor air temperature [°C]

t_{extr} is extract air temperature [°C]

k_{hr} is heat exchanger efficiency (according to the diagram) [%]

Accessories for air handling units

	Filter G4	Filter F7	Control panel	Control panel	Wi-Fi Control panel	Internal humidity sensor	Internal CO_2 sensor
							
Enave-C 100 P A21	SF 176x150x22 Coarse >60% G4	SF 176x150x22 ePM1 60% F7	A25	A22	A22 Wi-Fi	HV2	CO2-3
Enave-CT 100 P A21							
Enave-C 120 P A21							
Enave-CT 120 P A21							
Enave-C 100 P A14	SF 176x150x22 Coarse >60% G4	SF 176x150x22 ePM1 60% F7	-	-	-	HV2	-
Enave-CT 100 P A14							
Enave-C 120 P A14							
Enave-CT 120 P A14							

	External CO_2 sensor with indication	External CO_2 sensor	External humidity sensor	Electrical preheater	Electrical reheater	Syphon kit	Silencer	Air damper	Electric actuator
									
Enave-C 100 P A21	CO2-1	CO2-2	HR-S	NKP 125 A21 V.2	NKD 125 A21 V.2	SH-32	SR 125	KRV 125	TF 230
Enave-CT 100 P A21									
Enave-C 120 P A21									
Enave-CT 120 P A21									
Enave-C 100 P A14	CO2-1	CO2-2	HR-S	-	-	SH-32	SR 125	KRV 125	TF 230
Enave-CT 100 P A14									
Enave-C 120 P A14									
Enave-CT 120 P A14									