Series

VENTS Enave V



Heat recovery air handling units
in sound- and heat-insulated casings.
Air flow up to **720 m³/h**.
Heat recovery efficiency
up to **91 %**

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.

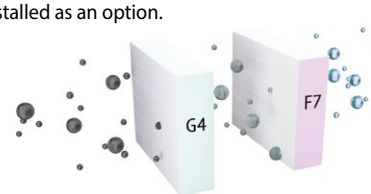
Casing

The casing is made of expanded polypropylene (EPP) possessing high heat- and sound-insulating properties.
Enave L – left-handed version.
Enave R – right-handed version.
Units Enave 351 / 381 / 401 V have flat service hatch design, suitable for decorative panel installation (delivered separately).



Filter

Two built-in **Coarse 90%** (**G4**) filters provide efficient air filtration. **ePM1 65% (F7)** supply filter can be installed as an option.

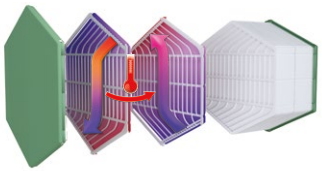


Fans

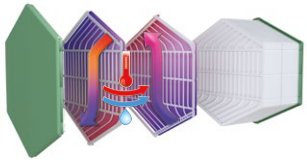
Units' fans are equipped with electronnicaly commutated motors.
Enave(-T) A21 CF units are availiable with Constant flow function - the fans automatically maintain a constant air volume

Heat Exchanger

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



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



Bypass

Units are equipped with a bypass for summer cooling.

Automation

A21 and A71 controllers 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 V A14 units have an integrated control system with a wall-mounted control panel equipped with LED indication.

Google play

Download on the App Store

Modbus

Frost protection

For **Enave V** units the frost protection is realized by shutting down the supply fan. Optional duct pre-heater is available for units with A21 control system.

Mounting

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

Control and automation

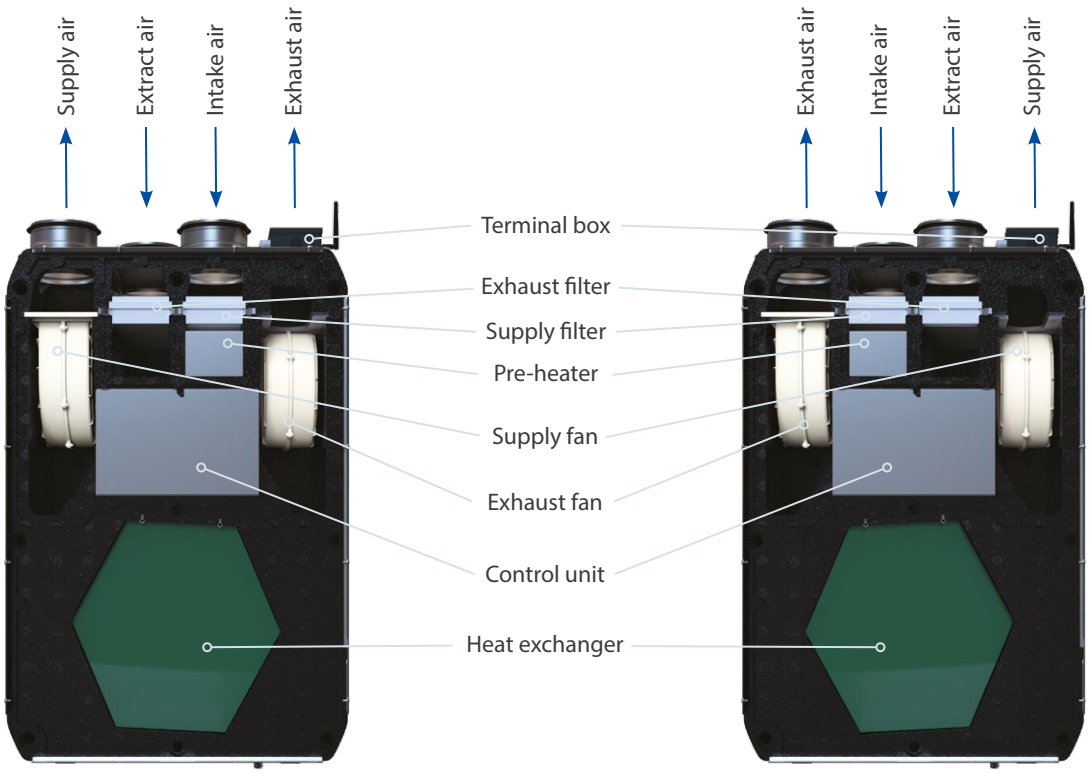
Functions	A21	A71	A14
Mobile App	+	+	-
Wired basic control panel	A22	A22	A14
Wireless basic control panel	A22 Wi-Fi	A22 Wi-Fi	-
Wired advanced control panel	A25	A25	-
ModBUS RTU	RS-485	RS-485	-
ModBUS TCP/IP	LAN / Wi-Fi	-	-
Cloud server connection	+	+	-
Filter replacement indication	Mobile App	+	LED indication
Alarm indication	Mobile App	+	LED indication
Bypass	Auto	Auto	Manual
Week schedule	+	+	-
Adjustable timer	+	+	-
Boost mode	+	+	-
Fireplace mode	+	+	-
Pre-heater connection	+	-	-
Re-heater connection	+	-	-
Fire alarm connection	+	+	+
Humidity sensor	+	"Configurable 0-10 V input*"	+
CO2 sensor	+	"Configurable 0-10 V input*"	-
VOC sensor	+	"Configurable 0-10 V input*"	-
PM2.5 sensor	+	"Configurable 0-10 V input*"	-

*Only one sensor can be connected to A71

Designation key

Model	Heat exchanger type	Nominal size	Modification	Casing type	Heater	Control system	Version	Airflow control
Enave	_ – heat recovery T – energy recovery	Air flow m³/h /10	0 – standard	V - vertical	_ – w/o heater E – integrated pre-heater	A21, A71, A14	L – left R – right	_- standard CF - constant flow

Unit design

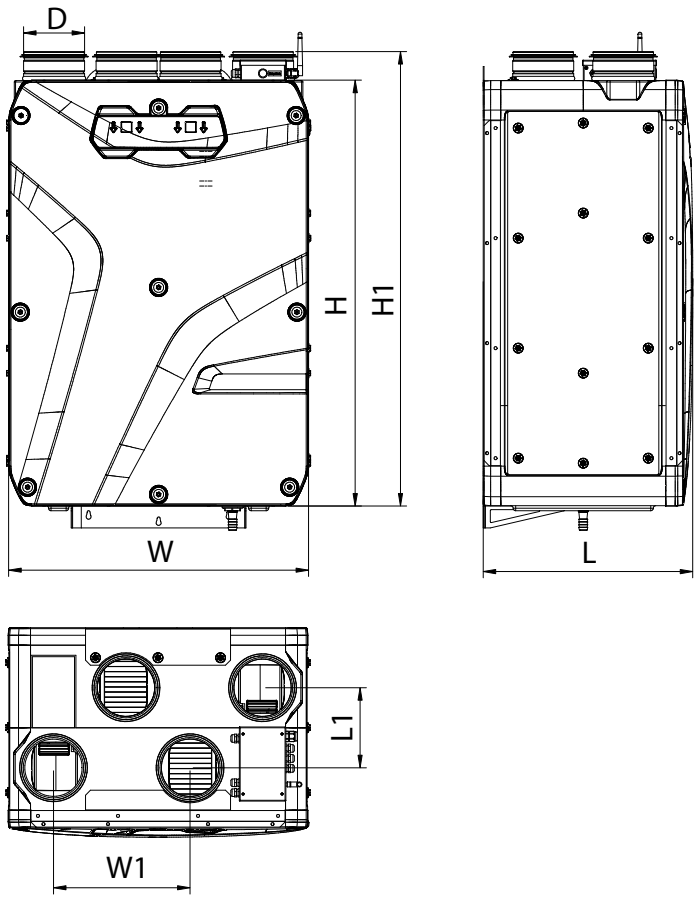


Enave 210 / 270 V L, 240 V CF L

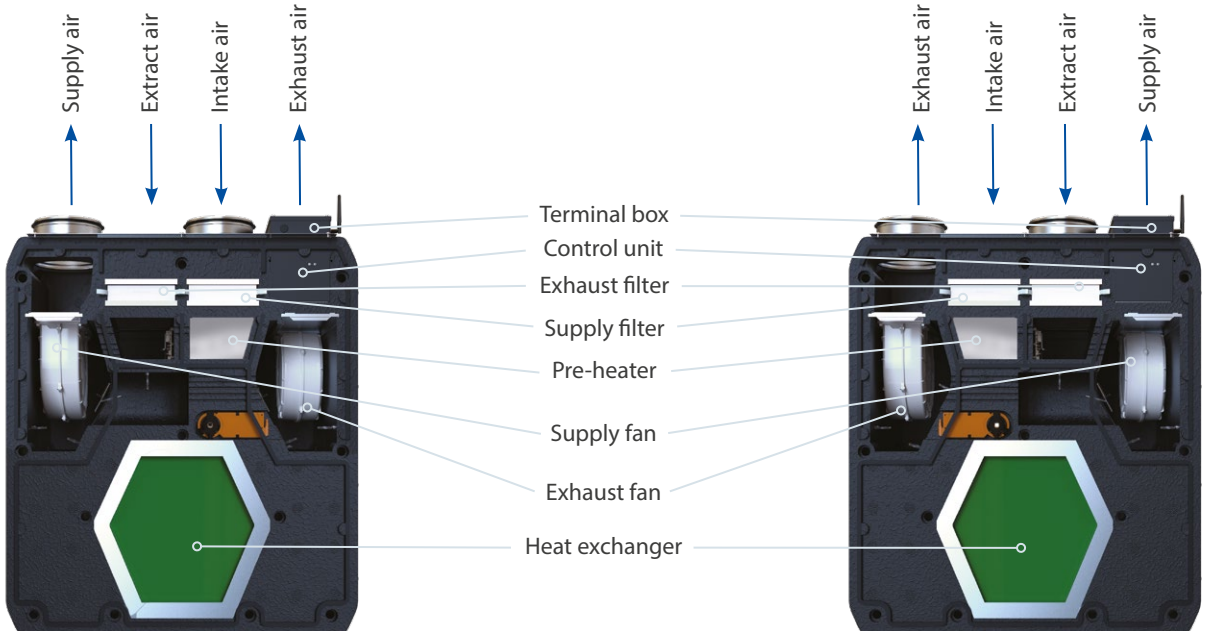
Enave 210 / 270 V R, 240 V CF R

Overall dimensions

Model	Dimensions [mm]						
	H	W	L	H1	W1	L1	ØD
Enave 210/270 V, 240 V CF	900	598	452	958	273	190	125



Unit design

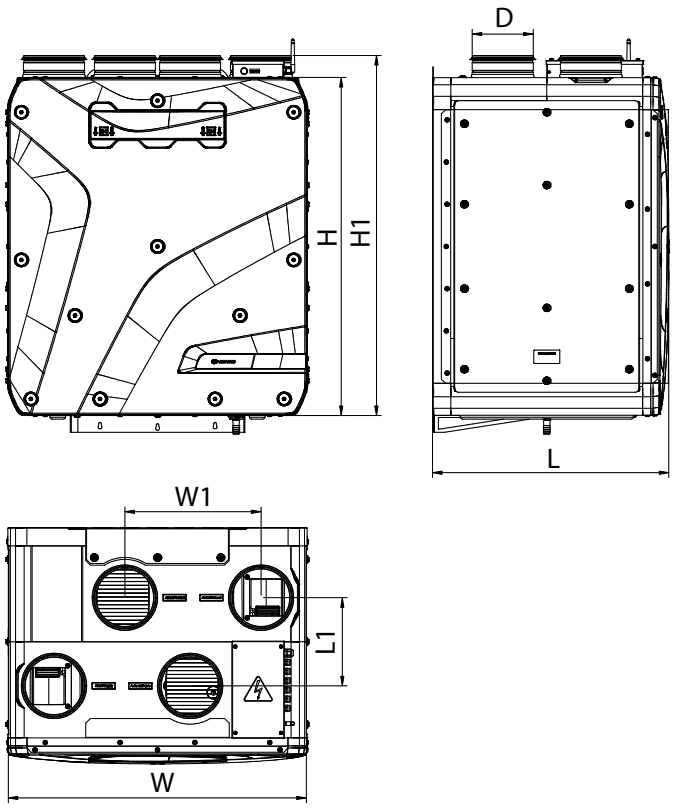


Enave 350 V, 380 V CF, 400 V L

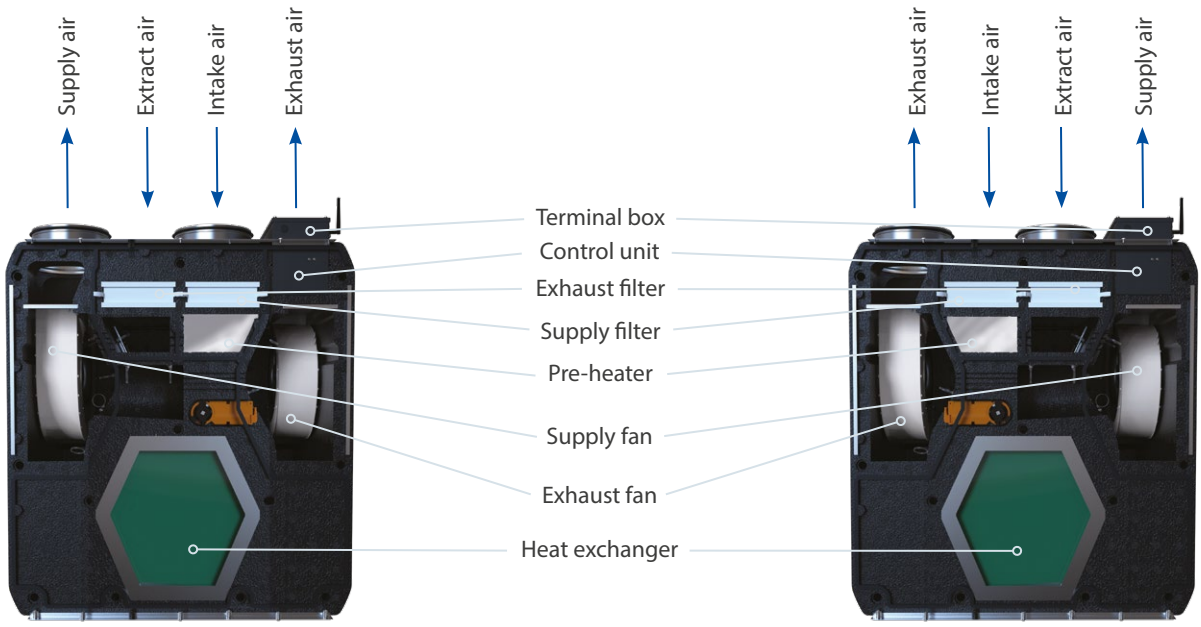
Enave 350 V, 380 V CF, 400 V R

Overall dimensions

Model	Dimensions [mm]						
	H	W	L	H1	W1	L1	ØD
Enave 350 V, 380 V CF, 400 V	880	770	616	939	355	230	160



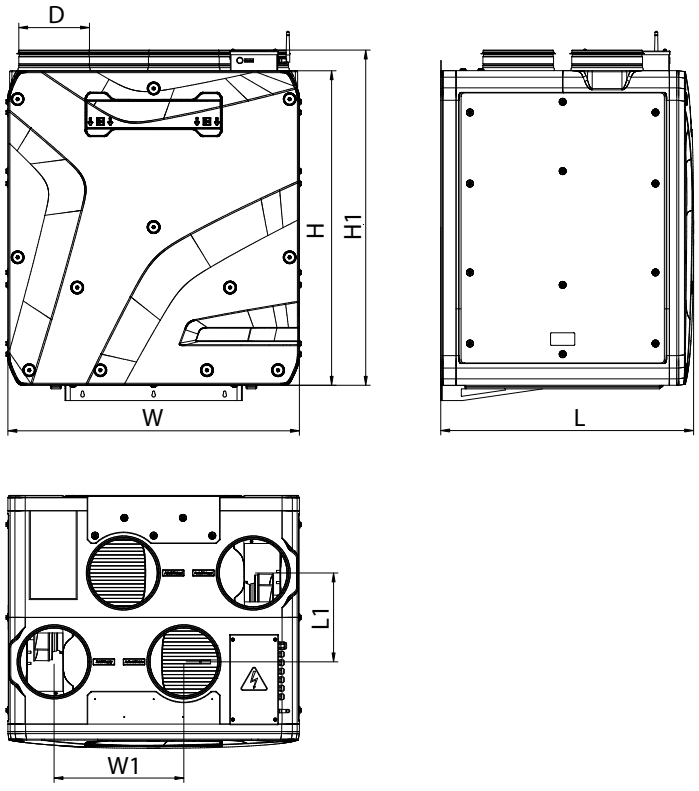
Unit design



Enave 550 V L **Enave 550 V R**

Overall dimensions

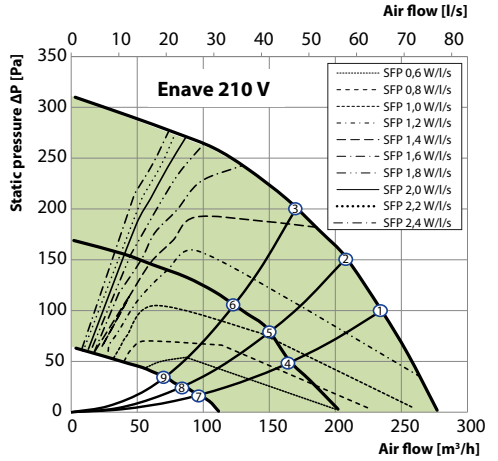
Model	Dimensions [mm]						
	H	W	L	H1	W1	L1	ØD
Enave 550 V	885	830	711	943	365	250	200

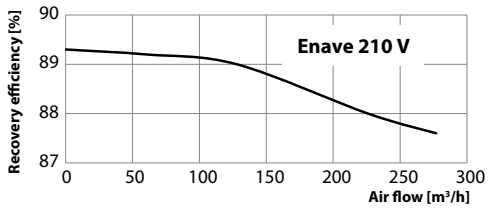


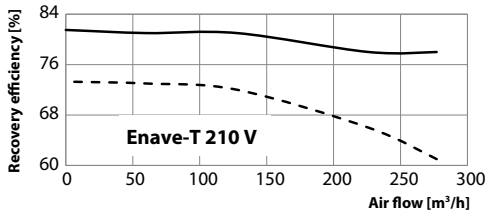
Technical data

	Enave 210 V	Enave-T 210 V	Enave 210 VE	Enave-T 210 VE	Enave 270 V	Enave-T 270 V	Enave 270 VE	Enave-T 270 VE
Voltage [V / 50-60 Hz]	230							
Max. unit power without electric heater [W]	125				182			
Integrated electric heater power [W]	-	-	800	800	-	-	1400	1400
Max. unit power [W]	125	125	925	925	182	182	1582	1582
Max. unit current without electric heater [A]	1.0				1.4			
Integrated electric heater current [A]	-	-	3.55	3.55	-	-	6.21	6.21
Max. unit current [A]	1.0	1.0	4.55	4.55	1.4	1.4	7.61	7.61
Max air flow [m³/h]	277				331			
Sound pressure level at 3 m distance [dBA]	31				34			
Transported air temperature [°C]	- 25...+40							
Insulation [mm]	25							
Extract filter	G4 / Coarse > 60%							
Supply filters	G4 / Coarse > 60% (option F7 / ePM1 60%)							
Connected air duct diameter [mm]	125							
Weight [kg]	20	22	20	22	22	24	22	24
Heat recovery efficiency [%]	89	83	89	83	89	83	89	83
Heat exchanger type	Counter-flow							
Heat exchanger material	Polysterene	Enthalpy membrane	Polysterene	Enthalpy membrane	Polysterene	Enthalpy membrane	Polysterene	Enthalpy membrane
SEC class	A+	A	A+	A	A	A	A	A

Enave 210 V



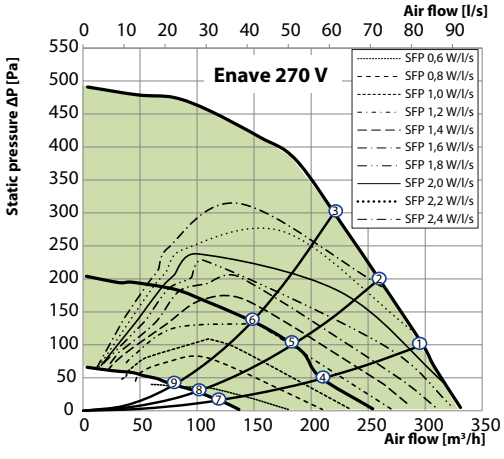


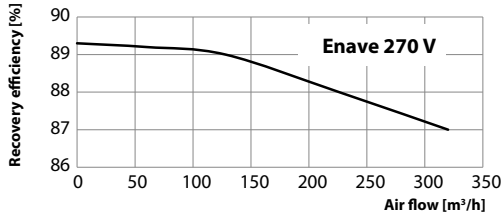


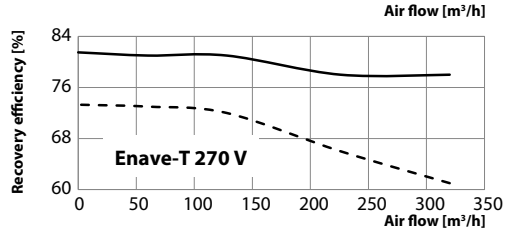
Enave(-T) 210 V A-weighted sound power level (p.1 on the diagram)		Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
		dBA	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	63	41	44	48	53	56	43	44	46	44	52
LwA to supply outlet	dBA	66	43	46	50	56	59	45	46	48	46	55
LwA to exhaust inlet	dBA	47	30	33	37	37	41	30	25	25	27	36
LwA to exhaust outlet	dBA	49	32	35	39	39	43	32	26	26	28	38
L_{WA} to environment	dBA	57	33	41	40	50	49	44	41	36	37	46

Enave(-T) 210 V 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	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	58	36	39	43	47	54	36	36	36	38	47
LwA to supply outlet	dBA	60	38	41	45	49	57	38	38	38	40	49
LwA to exhaust inlet	dBA	42	25	28	32	31	34	22	20	23	21	31
LwA to exhaust outlet	dBA	44	26	29	34	33	36	23	21	24	22	33
L_{WA} to environment	dBA	52	29	37	36	42	46	37	33	27	31	41

Enave 270 V







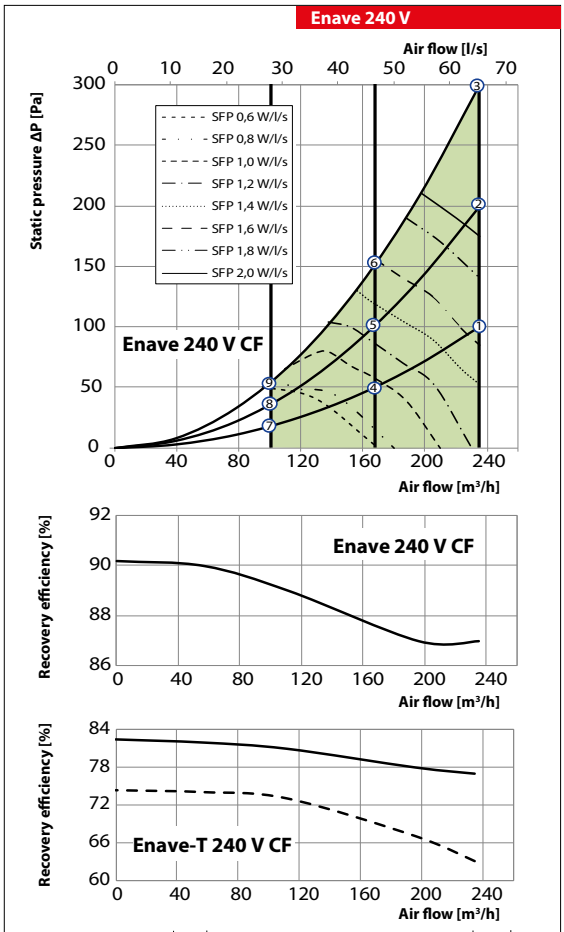
Enave(-T) 270 V A-weighted sound power level (p.1 on the diagram)		Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
		dBA	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	65	44	47	50	56	56	48	48	46	46	54
LwA to supply outlet	dBA	68	46	49	53	59	59	51	50	48	48	57
LwA to exhaust inlet	dBA	51	32	35	39	43	41	37	28	25	30	40
LwA to exhaust outlet	dBA	54	34	37	41	45	43	39	29	26	32	42
L_{WA} to environment	dBA	58	33	41	40	50	48	44	42	37	37	47

Enave(-T) 270 V 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	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	63	39	42	46	53	54	44	44	42	42	51
LwA to supply outlet	dBA	65	41	44	48	56	57	46	46	44	44	54
LwA to exhaust inlet	dBA	48	29	32	36	38	40	35	25	24	27	37
LwA to exhaust outlet	dBA	50	30	34	38	40	42	37	26	25	28	39
L_{WA} to environment	dBA	55	30	38	37	47	46	40	37	33	34	44

Technical data

	Enave 240 V CF	Enave-T 240 V CF	Enave 240 VE CF	Enave-T 240 VE CF
Voltage [V / 50-60 Hz]	230			
Max. unit power without electric heater [W]	190			
Integrated electric heater power [W]	-	-	800	800
Max. unit power [W]	190	190	990	990
Max. unit current without electric heater [A]	1,4			
Integrated electric heater current [A]	-	-	3,55	3,55
Max. unit current [A]	1,4	1,4	4,95	4,95
Max air flow [m^3/h]	235			
Sound pressure level at 3 m distance* [dBA]	28			
Transported air temperature [°C]	- 25...+40			
Insulation [mm]	25			
Extract filter	G4 / Coarse > 60%			
Supply filters	G4 / Coarse > 60% (option F7 / ePM1 60%)			
Connected air duct diameter [mm]	125			
Weight [kg]	20	22	20	22
Heat recovery efficiency [%]	89	83	89	83
Heat exchanger type	Counterflow			
Heat exchanger material	Polysterene	Enthalpy membrane	Polysterene	Enthalpy membrane
SEC class	A+	A	A+	A

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



Enave(-T) 240 V CF 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	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	66	40	43	47	56	58	47	48	48	46	55
LwA to supply outlet	dBA	69	42	45	49	59	61	49	51	51	48	58
LwA to exhaust inlet	dBA	45	26	29	33	35	36	32	24	25	25	34
LwA to exhaust outlet	dBA	47	27	30	35	37	38	34	25	26	26	36
L_{WA} to environment	dBA	55	27	35	34	45	48	40	39	35	34	44

Enave(-T) 240 V CF 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	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	60	34	37	41	48	54	38	38	36	39	48
LwA to supply outlet	dBA	62	36	39	43	51	57	40	40	38	41	51
LwA to exhaust inlet	dBA	39	20	23	27	29	28	21	19	23	18	28
LwA to exhaust outlet	dBA	41	21	24	28	30	29	22	20	24	19	29
L_{WA} to environment	dBA	49	21	29	28	38	44	32	30	26	28	38

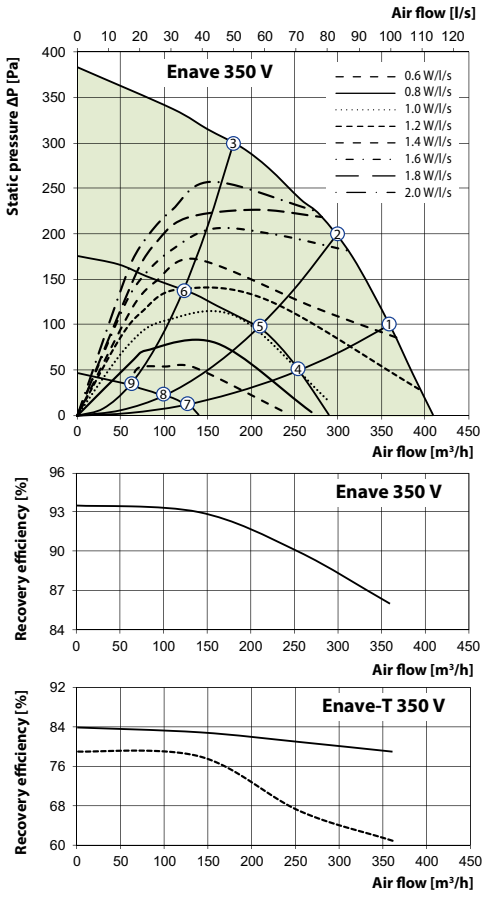
COUNTERFLOW HEAT RECOVERY UNITS IN EPP CASING

Technical data

	Enave 350 V	Enave-T 350 V	Enave 350 VE	Enave-T 350 VE
Voltage [V / 50-60 Hz]	230			
Max. unit power without electric heater [W]	213			
Integrated electric heater power [W]	-		1050	
Max. unit power [W]	213		1263	
Max. unit current without electric heater [A]	1.62			
Integrated electric heater current [A]	-		4.66	
Max. unit current [A]	1.62		6.28	
Max air flow [m³/h]	410			
Sound pressure level at 3 m distance* [dBA]	26			
Transported air temperature [°C]	- 25...+40			
Case material	EPP			
Insulation [mm]	45			
Extract filter	Coarse > 60 %			
Supply filters	Coarse > 60 % (option ePM1 60 %)			
Connected air duct diameter [mm]	160			
Weight [kg]	26			
Heat recovery efficiency [%]	93	83	93	83
Heat exchanger type	Counter-flow			
Heat exchanger material	Polystyrene	Enthalpy membrane	Polystyrene	Enthalpy membrane
SEC class	A+	A	A+	A

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

Enave 350 V



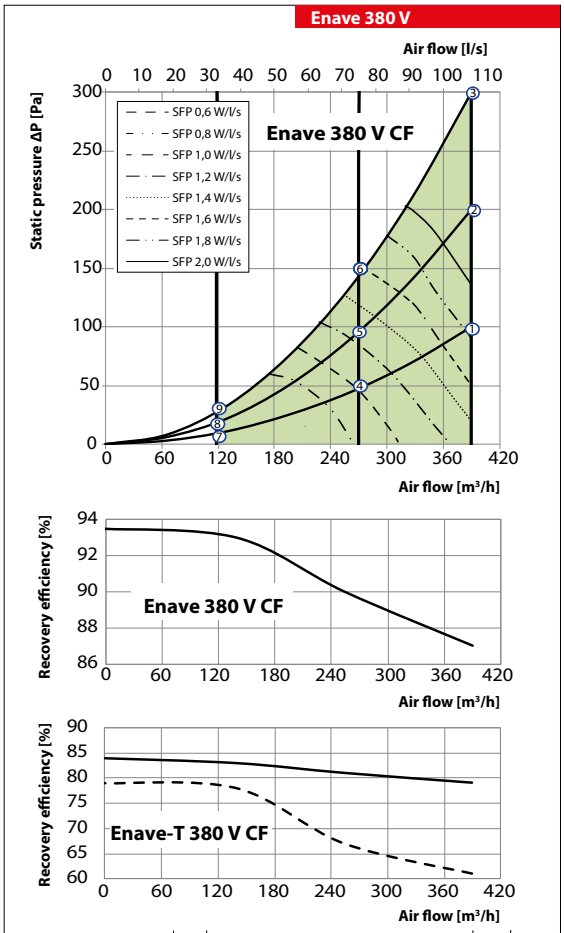
Enave(-T) 350 V A-weighted sound power level (p.1 on the diagram)		Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
		dBA	63	125	250	500	1000	2500	4000	8000	[dBA]	[dBA]
L_{WA} to supply inlet	dBA	61	35	38	42	48	53	48	43	45	40	50
L_{WA} to supply outlet	dBA	64	37	40	44	51	56	50	45	47	43	53
L_{WA} to exhaust inlet	dBA	50	33	36	40	40	39	33	28	26	29	39
L_{WA} to exhaust outlet	dBA	48	31	34	38	38	37	31	27	25	27	37
L_{WA} to environment	dBA	55	31	39	38	44	45	42	37	34	36	45

Enave(-T) 350 V 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	dBA	55	29	31	35	42	50	39	35	35	34	44
L_{WA} to supply outlet	dBA	57	30	33	37	44	53	41	37	37	36	46
L_{WA} to exhaust inlet	dBA	41	24	27	31	30	32	20	19	23	20	30
L_{WA} to exhaust outlet	dBA	43	25	28	33	32	34	21	20	24	22	32
L_{WA} to environment	dBA	46	21	29	28	34	39	30	26	24	26	35

Technical data

	Enave 380 V CF	Enave-T 380 V CF	Enave 380 VE CF	Enave-T 380 VE CF
Voltage [V / 50-60 Hz]	230			
Max. unit power without electric heater [W]	247			
Integrated electric heater power [W]	-	-	1050	1050
Max. unit power [W]	247	247	1297	1297
Max. unit current without electric heater [A]	1,8	1,8	1,8	1,8
Integrated electric heater current [A]	-	-	3,55	3,55
Max. unit current [A]	1,9	1,9	5,35	5,35
Max air flow [m³/h]	390			
Sound pressure level at 3 m distance* [dBA]	26			
Transported air temperature [°C]	- 25...+40			
Insulation [mm]	45			
Extract filter	G4 / Coarse > 60%			
Supply filters	G4 / Coarse > 60% (option F7 / ePM1 60%)			
Connected air duct diameter [mm]	160			
Weight [kg]	26			
Heat recovery efficiency [%]	93	83	93	83
Heat exchanger type	Counterflow			
Heat exchanger material	Polysterene	Enthalpy membrane	Polysterene	Enthalpy membrane
SEC class	A+	A	A+	A

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



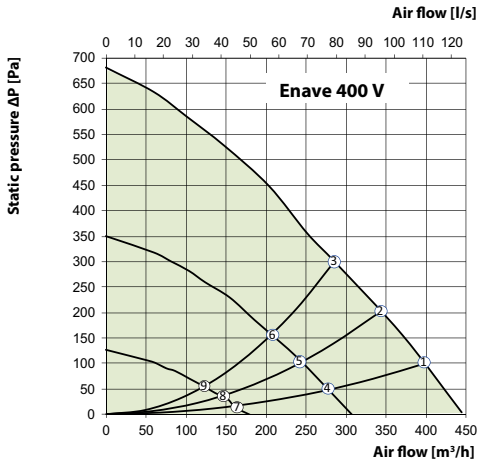
Enave(-T) 380 V CF A-weighted sound power level (p.1 on the diagram)		Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
		dBA	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	61	35	38	42	48	53	48	43	45	40	50
LwA to supply outlet	dBA	64	37	40	44	51	56	50	45	47	43	53
LwA to exhaust inlet	dBA	50	33	36	40	40	39	33	28	26	29	39
LwA to exhaust outlet	dBA	48	31	34	38	38	37	31	27	25	27	37
L_{WA} to environment	dBA	55	31	39	38	44	45	42	37	34	36	45

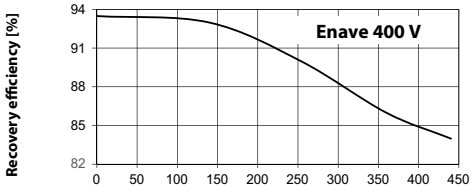
Enave(-T) 380 V CF A-weighted sound power level (p.4 on the diagram)		Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
		dBA	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	55	29	31	35	42	50	39	35	35	34	44
LwA to supply outlet	dBA	57	30	33	37	44	53	41	37	37	36	46
LwA to exhaust inlet	dBA	41	24	27	31	30	32	20	19	23	20	30
LwA to exhaust outlet	dBA	43	25	28	33	32	34	21	20	24	22	32
L_{WA} to environment	dBA	46	21	29	28	34	39	30	26	24	26	35

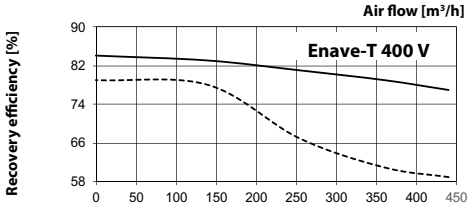
Technical data

	Enave 400 V	Enave-T 400 V	Enave 400 VE	Enave-T 400 VE
Voltage [V / 50-60 Hz]	230			
Max. unit power without electric heater [W]	178			
Integrated electric heater power [W]	-		1050	
Max. unit power [W]	178		1228	
Max. unit current without electric heater [A]	1.4			
Integrated electric heater current [A]	-		4.66	
Max. unit current [A]	1.4		6.06	
Max air flow [m³/h]	445			
Sound pressure level at 3 m distance [dBA]	26			
Transported air temperature [°C]	- 25...+40			
Case material	EPP			
Insulation [mm]	45 mm			
Extract filter	G4 / Coarse > 60%			
Supply filters	G4 / Coarse > 60% (option F7 / ePM1 60%)			
Connected air duct diameter [mm]	160			
Weight [kg]	26			
Heat recovery efficiency [%]	93	83	93	83
Heat exchanger type	Counterflow	Counterflow	Counterflow	Counterflow
Heat exchanger material	Polysterene	Enthalpy membrane	Polysterene	Enthalpy membrane
SEC class	A+	A	A+	A

Enave 350 V







Enave(-T) 400 V 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	dBA	61	35	38	42	48	53	48	43	45	40	50
L_{wA} to supply outlet	dBA	64	37	40	44	51	56	50	45	47	43	53
L_{wA} to exhaust inlet	dBA	50	33	36	40	40	39	33	28	26	29	39
L_{wA} to exhaust outlet	dBA	48	31	34	38	38	37	31	27	25	27	37
L_{wA} to environment	dBA	55	31	39	38	44	45	42	37	34	36	45

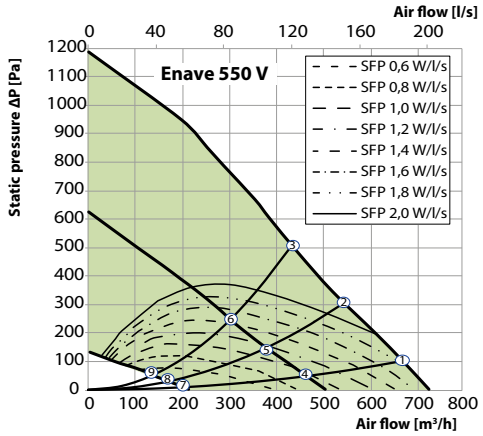
Enave(-T) 400 V A-weighted sound power level (p.4 on the diagram)		Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
		dBA	63	125	250	500	1000	2500	4000	8000	[dBA]	[dBA]
L_{wA} to supply inlet	dBA	55	29	31	35	42	50	39	35	35	34	44
L_{wA} to supply outlet	dBA	57	30	33	37	44	53	41	37	37	36	46
L_{wA} to exhaust inlet	dBA	41	24	27	31	30	32	20	19	23	20	30
L_{wA} to exhaust outlet	dBA	43	25	28	33	32	34	21	20	24	22	32
L_{wA} to environment	dBA	46	21	29	28	34	39	30	26	24	26	35

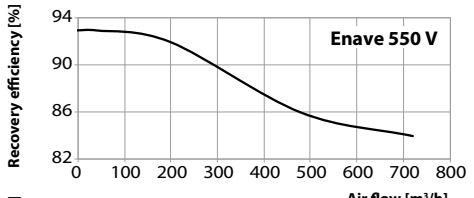
Technical data

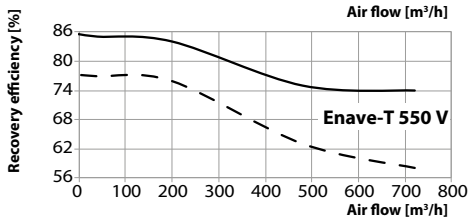
	Enave 550 V	Enave-T 550 V	Enave 550 VE	Enave-T 550 VE
Voltage [V / 50-60 Hz]	230	230	230	230
Max. unit power without electric heater [W]	346	346	346	346
Integrated electric heater power [W]	-	-	1400	1400
Max. unit power [W]	346	346	1746	1746
Max. unit current without electric heater [A]	2.4	2.4	2.4	2.4
Integrated electric heater current [A]	-	-	6.21	6.21
Max. unit current [A]	2.4	2.4	8.61	8.61
Max air flow [m3/h]	720			
Sound pressure level at 3 m distance* [dBA]	38			
Transported air temperature [°C]	- 25...+40			
Case material	EPP			
Insulation	45 mm			
Extract filter	G4 / Coarse >60 %			
Supply filters	G4 / Coarse > 60% (option F7 / ePM1 60%)			
Connected air duct diameter [mm]	200			
Weight [kg]	52	55	52.5	55.5
Heat recovery efficiency [%]	93	85	93	85
Heat exchanger type	Counterflow	Counterflow	Counterflow	Counterflow
Heat exchanger material	Polysterene	Enthalpy membrane	Polysterene	Enthalpy membrane
SEC class	A+	A	A+	A

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

Enave 550 V







Enave(-T) 550 V 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	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	70	46	48	52	60	63	58	51	44	51	61
LwA to supply outlet	dBA	74	48	51	55	63	66	61	54	46	54	64
LwA to exhaust inlet	dBA	57	34	37	41	39	35	38	28	24	38	47
LwA to exhaust outlet	dBA	60	36	39	43	41	37	40	29	25	40	49
L_{WA} to environment	dBA	65	42	50	49	54	53	50	42	35	46	55

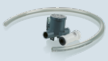
Enave(-T) 550 V A-weighted sound power level (p.4 on the diagram)		Gen.	Octave-frequency band [Hz]								LpA, 3 m	LpA, 1 m
		dBA	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
LwA to supply inlet	dBA	65	43	46	49	57	55	49	42	32	46	54
LwA to supply outlet	dBA	67	45	48	52	60	58	52	44	34	48	57
LwA to exhaust inlet	dBA	47	31	34	38	31	26	28	21	23	27	36
LwA to exhaust outlet	dBA	49	33	36	40	33	27	29	22	24	28	38
L_{WA} to environment	dBA	58	39	47	46	44	44	41	32	25	38	47

COUNTERFLOW HEAT RECOVERY UNITS IN EPP CASING

Accessories for air handling units

	Filter G4	Filter F7	Decorative panel	Control panel	Control panel	Wi-Fi Control panel	Internal humidity sensor	Internal CO_2 sensor
								
Enave(-T) 210 V(E) A21	SF 356x100x48 Coarse 90% (G4)	SF 356x100x48 ePM1 65% (F7)	-	A25	A22	A22 Wi-Fi	HV2	CO2-3
Enave(-T) 240 V(E) A21 CF								
Enave(-T) 270 V(E) A21								
Enave-(T) 210 V A71								
Enave-(T) 270 V A71								
Enave-(T) 210 V A14				-	built-in	-		-
Enave-(T) 270 V A14								
Enave(-T) 350 V(E) A21	SF 496x150x60 Coarse 90% (G4)	SF 496x150x60 ePM1 65%(F7)	PD-Enave 351 V*	A25	A22	A22 Wi-Fi	HV2	CO2-3
Enave(-T) 380 V(E) A21 CF								
Enave(-T) 400 V(E) A21								
Enave(-T) 350 V A71								
Enave(-T) 400 V A71								
Enave(-T) 350 V A14				-	built-in	-		-
Enave(-T) 400 V A14								
Enave(-T) 550 V(E) A21	SF 596x164x60 Coarse 90% (G4)	SF 596x164x60 ePM1 60% (F7)	-	A25	A22	A22 Wi-Fi	HV2	CO2-3
Enave(-T) 550 V A71								
Enave(-T) 550 V A14				-	built-in	-		-

*-for 351, 381, 401 modifications only

	External CO_2 sensor with indication	External CO_2 sensor	External humidity sensor	Electrical reheater	Syphon kit	Silencer	Air damper	Electric actuator
								
Enave(-T) 210 V(E) A21	CO2-1	CO2-2	HR-S	NKD 125 A21 V.2	SH-32	SR 125	KRV 125	TF 230
Enave(-T) 240 V(E) A21 CF								
Enave(-T) 270 V(E) A21								
Enave-(T) 210 V A71				-				
Enave-(T) 270 V A71								
Enave-(T) 210 V A14								
Enave-(T) 270 V A14								
Enave(-T) 350 V(E) A21	CO2-1	CO2-2	HR-S	NKD 160 A21 V.2	SH-32	SR 160	KRV 160	TF 230
Enave(-T) 380 V(E) A21 CF								
Enave(-T) 400 V(E) A21								
Enave(-T) 350 V A71				-				
Enave(-T) 400 V A71								
Enave(-T) 350 V A14								
Enave(-T) 400 V A14								
Enave(-T) 550 V(E) A21	CO2-1	CO2-2	HR-S	NKD 200 A21 V.2	SH-32	SR 200	KRV 200	TF 230
Enave(-T) 550 V A71				-				
Enave(-T) 550 V A14								