

# ECO 175



- Flexible – vertical or horizontal installation
- Compact design suitable for a 60 cm module
- Right/left version in same unit



The ECO 175 is a heat recovery ventilation system with a highly efficient counterflow exchanger that has a heat recovery rate of up to 94% as well as fans with energy-saving EC motors. The ECO 175 is particularly suitable for apartments or smaller homes where the ventilation system is either installed in a technical room or in a loft space.

The ECO 175 stands out by being particularly energy-optimised and adapted to the strictest energy requirements in Europe. Despite the compact installation dimensions adapted to a standard 60x60 cm cabinet module, the performance of the ECO 175 is equivalent to systems that require significantly more space. As standard, the ECO 175 comes with G4/Coarse filters on the outdoor air intake and exhaust air (M5/F7 filter available as an accessory). The ECO 175 can be delivered as either a right- or left-configured system (defined by the exhaust air connection). The ECO 175 can also be mounted horizontally (with horizontal duct connections) or vertically (with vertical duct connections).

As an accessory for the ECO 175, an external compact modulating preheater is available that ensures balanced air supply even in very cold outdoor temperatures and with minimal energy input.

#### The system comes with an Optima 270 controller that allows:

- Passive comfort cooling with fully automatic 100% bypass.
- Reduction of energy consumption through use of the modulating humidity control and the calendar program.
- Connection of electric preheating or post-heating coil, which adjusts the temperature according to needs.
- Can be connected to a BMS system via Modbus communication.
- An integrated RJ45 connection on the circuit board for cloud connection of the system.
- Can be used without a control panel or with the possibility of connecting 2 optional types of control panel (Basic/Touch).
- Built-in data logging and the option of remote monitoring.

**Please note that the control panel is sold separately.**

*The ECO 175 is expected to be ready for sale in early 2025.*

# Dimensioned sketch

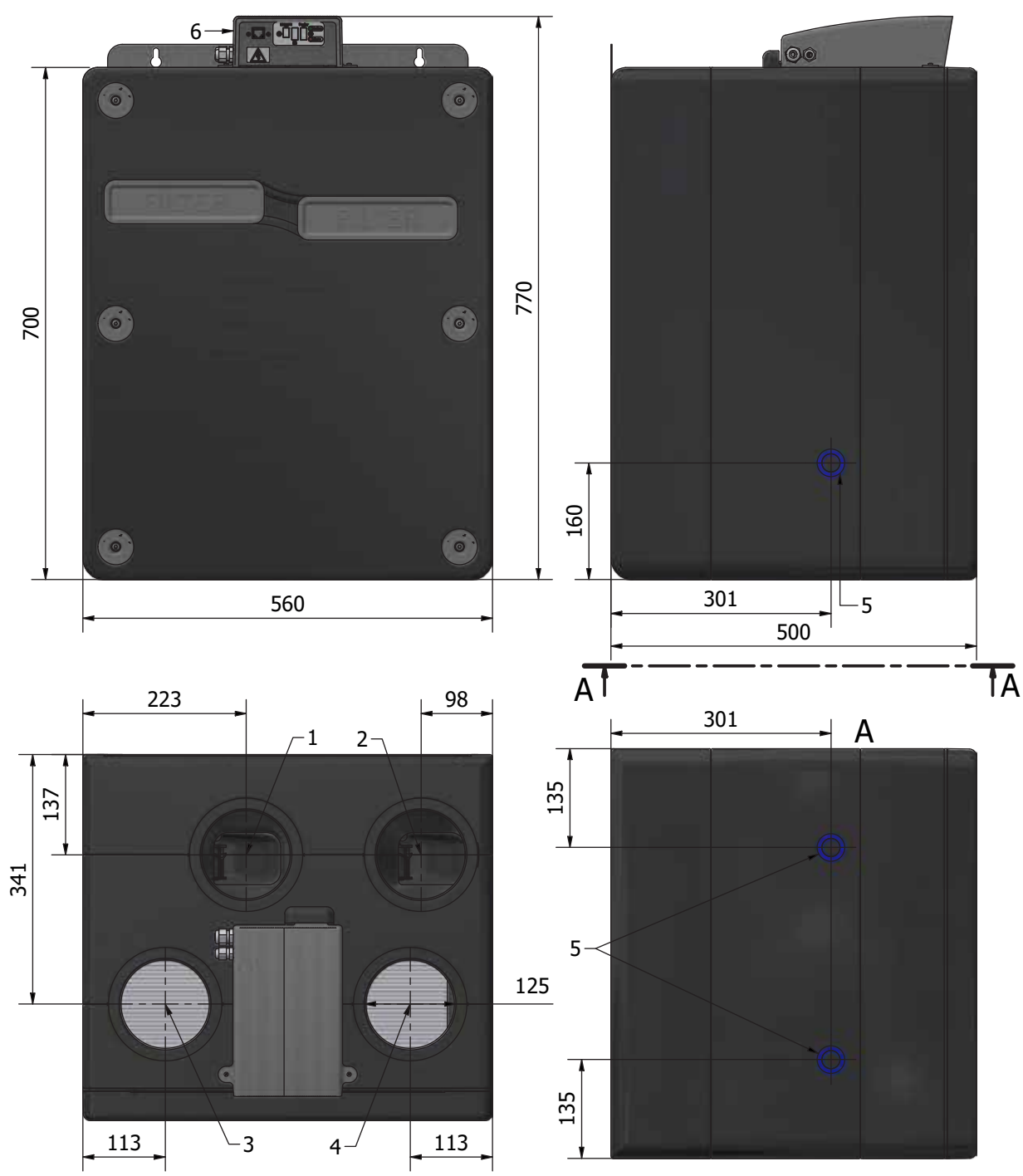
Dimensions in mm

**Right facing**

- 1. Exhaust air
- 2. Supply air
- 3. Outdoor air
- 4. Extract air
- 5. Condensate drain
- 6. Controller/electrical connection

**Left facing**

- 1. Supply air
- 2. Exhaust air
- 3. Extract air
- 4. Outdoor air
- 5. Condensate drain
- 6. Controller/electrical connection



## Technical specifications

ECO 175	
Electrical connection	1 x 230V + N + PE 10 A, 50 Hz
Fans	Ø133 mm backward-curved blades
Motor	EC motor with integrated electronics
Insulation class for fan	B
Fan protection class	IP 54
Product protection class	IPX1B
Fan speed	5750 rpm
Energy consumption (max. per motor)	85 W
Power consumption for fan	0.75 A
Dimensions (h x l x d) excl. connectors	770 x 560 x 500 mm
Cabinet	Exterior: EPP Interior: EPP
Duct connection	Ø125 mm
Front	EPP
Wall mounting	Wall bracket with keyholes
Heat exchanger	Aluminium, PET or enthalpy
Working temperature	-20°C to +50°C
Condensate drain	Ø15 mm hose coupling nipple
Filters	G4/Coarse (outdoor air/exhaust air) - F7/ePM1 (accessory)
Sound pressure level (Lp) at 1 m	47 dB(A) @ 204 m³/h, 50 Pa
Weight	18 kg (30 kg with white powder-coated galvanised steel housing)
Energy class	A

## ECO 175 and ECO 175 light

There are two models: ECO 175 and ECO 175 light. The ECO 175 light is 12 kg lighter than the ECO 175 – as the machine is delivered in EPP material without a sheet metal housing – this allows also for factory-installed side connection for air intake/exhaust.

For the minimal noise level, Genvex recommends the ECO 175 in the standard version (with sheet metal housing). As standard, the ECO 175 is fitted with an aluminium heat exchanger to achieve the highest possible heat recovery rate. However, the system can also be configured with an enthalpy exchanger, which in addition to heat can also recover moisture from the exhaust air.



ECO 175

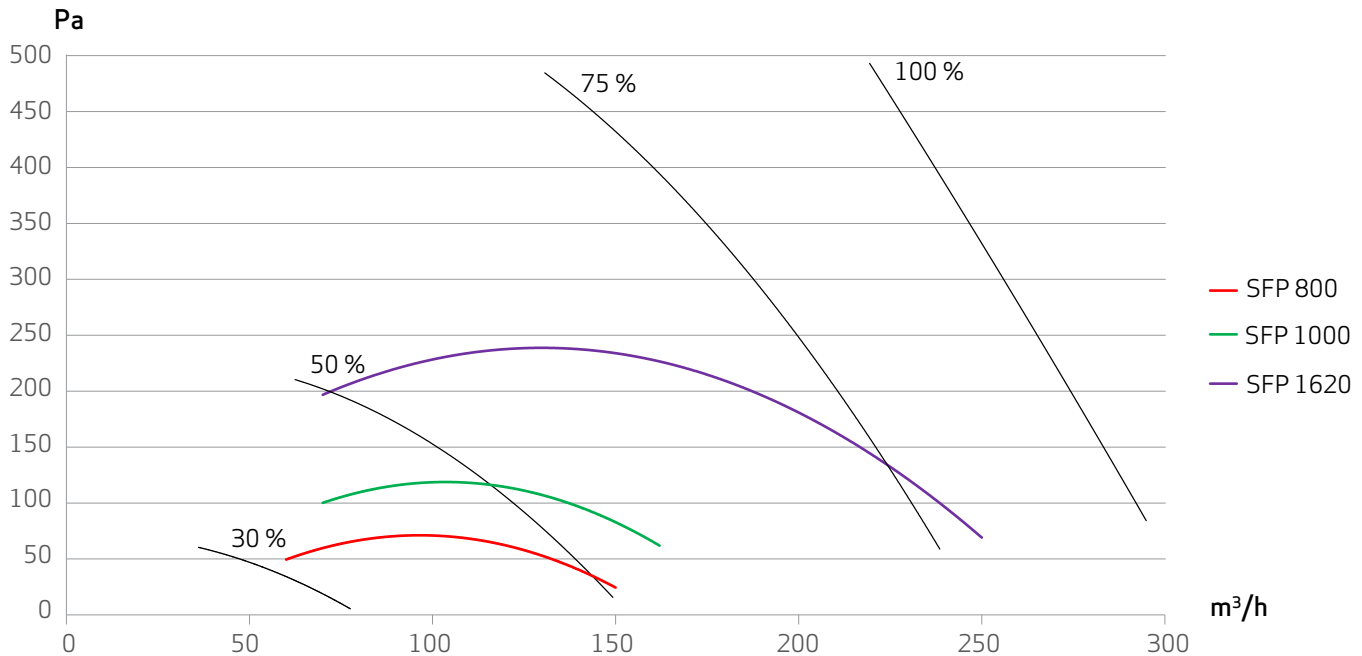


ECO 175 light

## Fan capacity

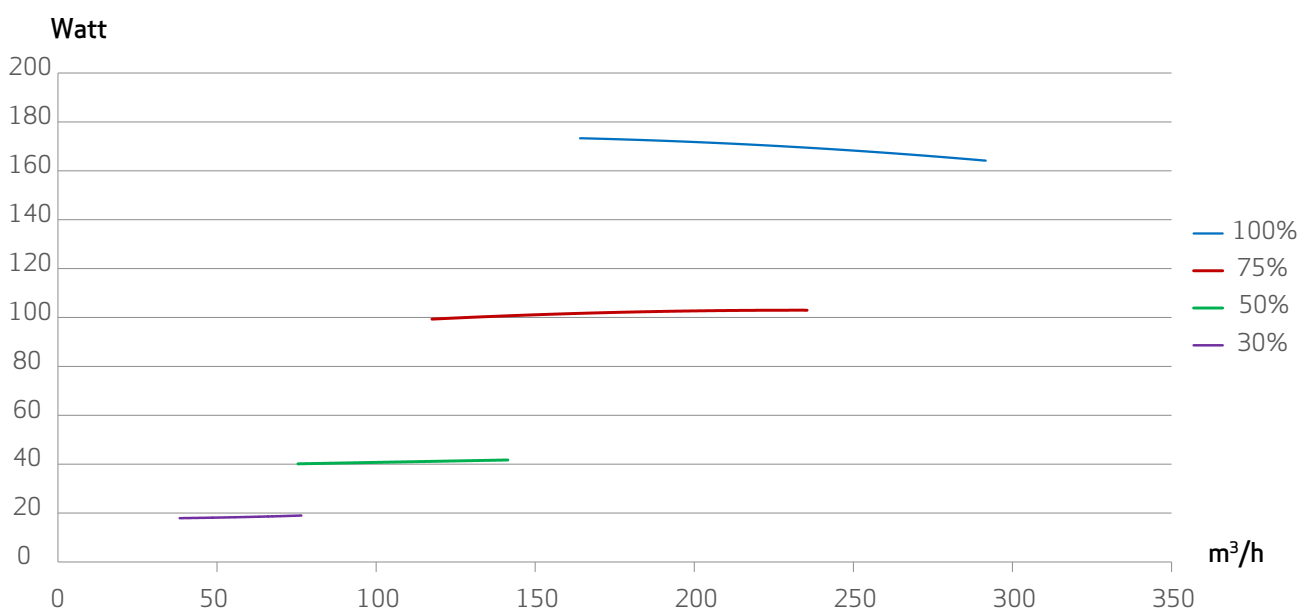
The capacity lines are based on an average value of supply and exhaust air volume in a ventilation system. The graphs indicate the average external pressure available at a given air volume. Power input for the controller is not included in the SFP value (approx. 6 watts).

SFP factors ECO 175 - measured according to 13141-7 (G4/G4 PET)



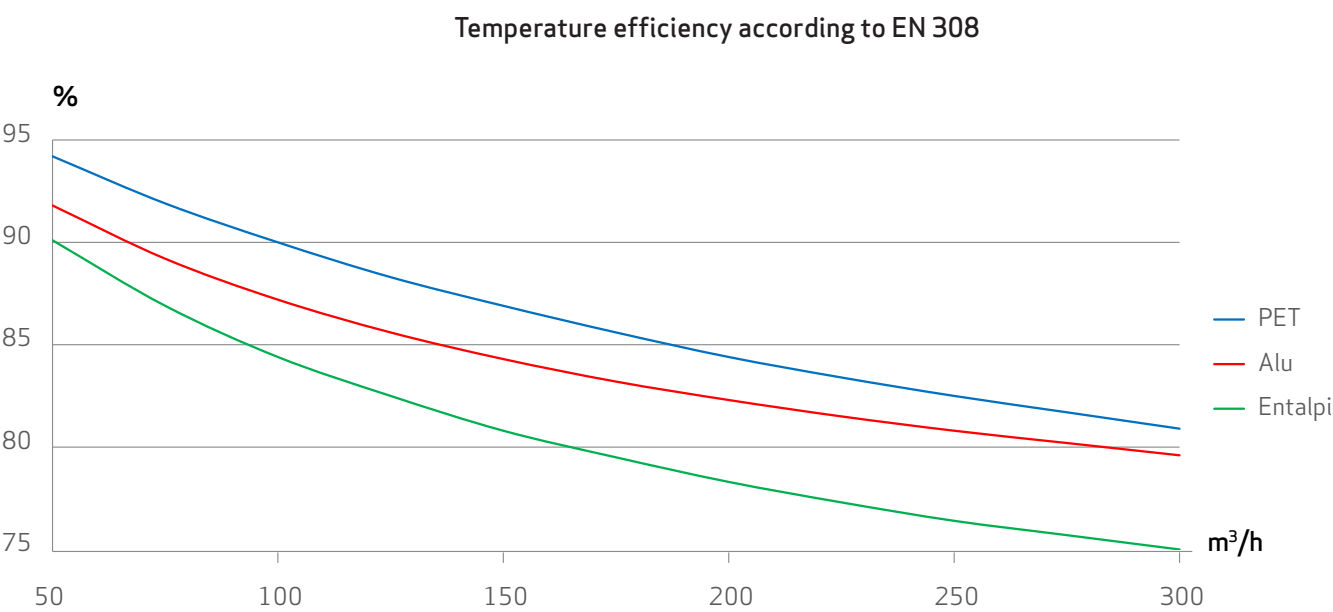
Note: e.g.  $1620 \text{ J/m}^3 = 0,45 \text{ W/m}^3$

Power consumption



# Temperature efficiency

“Dry” temperature efficiency in accordance with EN 308 and identical air flow on the outdoor air and exhaust air side. This does not take into account any ice that may accumulate on the heat exchanger at low outdoor temperatures.



Sound data

Airflow (m3/h)	Pressure (Pa)			Frequency/Hz								
				63	125	250	500	1000	2000	4000	8000	Total
70	50	Sound power level Lw dB(A)	Supply air	27.05	37.95	50.13	46.19	45.92	38.19	28.65	14.94	52.96
			Exhaust	22.95	24.70	30.62	30.67	16.65	7.74	3.30	2.77	34.58
			Outdoor	20.63	19.97	23.68	29.91	17.98	12.88	1.31	2.69	31.81
			Extract	28.18	38.11	43.64	44.93	45.28	38.29	28.67	18.69	50.12
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	14.41	19.84	26.53	16.47	17.70	18.81	20.24	19.99	29.90
			Cabinet (light)	12.40	16.51	23.11	25.15	22.20	18.40	12.56	10.66	30.00
	70	Sound power level Lw dB(A)	Supply air	28.26	38.32	54.91	47.66	47.09	39.65	31.05	14.13	56.40
			Exhaust	23.84	25.52	35.37	31.66	18.58	9.46	4.25	4.84	37.48
			Outdoor	22.23	19.71	22.81	30.41	18.41	7.71	2.24	3.37	32.12
			Extract	29.58	38.24	46.96	45.57	46.27	39.98	31.31	15.10	51.67
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	19.87	23.99	22.34	17.88	17.99	19.08	20.31	20.02	29.92
			Cabinet (light)	12.50	19.11	28.41	23.15	22.30	20.50	13.56	10.86	32.10
100	50	Sound power level Lw dB(A)	Supply air	31.59	41.95	52.42	51.27	52.18	45.88	39.89	21.58	57.32
			Exhaust	26.16	28.08	40.03	35.74	22.54	12.65	8.20	8.37	41.78
			Outdoor	24.74	23.15	27.12	35.44	19.86	15.50	5.61	4.46	36.69
			Extract	30.75	40.45	53.36	49.95	50.89	45.81	39.48	14.82	56.97
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	17.21	22.46	28.09	20.56	18.80	19.36	20.31	20.03	31.44
			Cabinet (light)	15.10	22.81	28.21	29.95	26.10	23.90	17.96	10.46	34.30
	70	Sound power level Lw dB(A)	Supply air	32.00	42.15	54.65	51.98	52.59	46.40	40.62	19.89	58.48
			Exhaust	27.69	29.48	40.08	36.54	21.49	13.12	9.14	8.97	42.15
			Outdoor	24.65	22.72	27.30	35.06	19.84	16.12	7.88	5.62	36.42
			Extract	33.23	42.44	52.27	51.56	51.87	46.82	40.92	15.53	57.37
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	16.77	24.53	27.35	21.97	19.21	19.42	20.30	19.99	31.60
			Cabinet (light)	15.80	23.01	28.81	32.55	27.80	24.70	18.36	10.86	34.60
126	70	Sound power level Lw dB(A)	Supply air	43.67	45.41	62.16	69.12	57.58	51.78	47.78	24.40	70.28
			Exhaust	31.40	32.88	42.28	41.36	25.27	16.73	12.02	11.72	45.35
			Outdoor	40.95	27.57	35.01	44.80	24.49	22.19	12.22	6.71	46.70
			Extract	41.38	44.59	57.90	61.12	55.61	51.37	46.75	22.31	63.98
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	17.19	28.94	26.05	27.63	21.48	20.48	20.44	19.99	33.65
			Cabinet (light)	20.90	26.61	32.51	39.45	32.80	29.80	24.46	11.86	40.80
	100	Sound power level Lw dB(A)	Supply air	38.75	46.04	53.58	62.14	58.28	52.43	48.39	25.04	64.52
			Exhaust	41.13	34.44	43.07	49.43	26.66	17.38	14.31	11.18	50.94
			Outdoor	34.66	26.95	35.70	43.90	23.91	21.95	13.55	12.71	45.07
			Extract	37.36	45.10	52.91	61.39	58.03	51.99	47.49	23.43	63.91
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	17.63	32.14	26.17	27.68	21.81	20.76	20.55	20.03	35.07
			Cabinet (light)	18.10	27.71	29.21	36.75	30.20	30.40	25.16	12.06	39.90
162	70	Sound power level Lw dB(A)	Supply air	40.16	48.58	55.49	69.82	61.68	56.80	53.63	30.92	70.87
			Exhaust	34.19	34.15	39.07	47.68	28.61	19.65	16.08	12.58	48.61
			Outdoor	34.26	31.35	33.98	49.27	32.05	27.54	14.27	15.41	49.69
			Extract	38.51	46.82	54.72	73.02	60.34	56.76	53.82	31.26	73.46
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	27.41	29.81	28.26	33.05	26.96	23.54	21.30	20.10	37.16
			Cabinet (light)	21.40	32.71	33.31	47.75	34.40	35.30	31.86	15.86	48.20
	100	Sound power level Lw dB(A)	Supply air	45.67	49.35	56.09	69.83	62.13	57.36	54.17	32.20	71.00
			Exhaust	33.20	35.11	40.22	51.67	30.11	19.96	17.17	13.06	52.15
			Outdoor	35.79	30.19	34.19	48.73	29.75	28.24	15.73	17.80	49.22
			Extract	41.05	47.72	55.11	63.70	60.59	56.95	53.74	31.63	66.65
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	32.52	29.39	29.03	30.65	26.56	23.79	21.24	20.04	37.46
			Cabinet (light)	22.10	30.71	34.01	48.95	36.50	35.60	22.26	16.16	49.30
216	70	Sound power level Lw dB(A)	Supply air	46.92	54.22	60.15	73.31	67.35	63.59	61.39	41.79	75.04
			Exhaust	35.82	37.47	43.15	50.56	35.48	26.84	18.86	15.02	51.70
			Outdoor	38.45	34.25	39.90	51.88	36.14	33.41	23.61	18.87	52.55
			Extract	42.92	55.36	58.21	70.08	64.83	62.00	59.76	39.94	72.25
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	25.06	33.79	32.74	34.75	29.57	27.53	23.02	20.14	39.72
			Cabinet (light)	25.70	36.81	37.41	47.25	39.90	40.90	40.36	24.86	49.80
	100	Sound power level Lw dB(A)	Supply air	45.20	53.86	59.80	73.73	67.01	63.22	60.91	41.06	75.21
			Exhaust	36.21	37.85	42.96	51.90	34.01	27.47	19.96	15.78	52.75
			Outdoor	39.00	35.29	40.61	53.11	36.09	33.60	23.89	21.87	53.69
			Extract	42.07	51.67	58.81	75.88	65.50	62.36	60.11	40.43	76.62
		Sound pressure level Lp dB(A)@ 1 m.	Cabinet	25.66	33.49	32.56	36.36	29.79	27.56	23.06	20.11	40.25
			Cabinet (light)	26.80	37.41	38.21	45.95	40.20	40.60	40.56	25.26	49.20

## Controller

The ECO 175 comes with an Optima 270 controller.

The Optima controller comes with a factory setting that allows the system to be put into operation without first needing to configure the system's operating menu.

The factory setting is just a basic setting that can be changed to match the operational desires and requirements of your home.

### The ECO 175 is available with the following accessories:

- Genvex Automatic Fire Control.
- Water-based post-heating surface, incl. motor valve, or electric heating surface for installation in ventilation duct.
- Brine-based preheating/cooling surface.
- External electric preheater.
- Optima Basic or Optima Touch control panel.
- CO<sub>2</sub> sensors.
- White painted cabinet.

## Control panel



### Speed

With this function, it is possible to set the fan speed in steps 0-1-2-3-4.



### Extended operation

With this function, it is possible to set the timer for forced operation for between 0 and 9 hours.



### Lock display

This function locks the display for 5 seconds. Typically used when wiping down the display



### Main menu

With this function, it is possible to enter the main menu, where you will find the following sub-items: calendar, user menu, display, information menu and service menu.



### Information

With this function, it is possible to get a good overview of the system's current operating condition, e.g. temperature, fan setting, relay status/functions, alarm, timer, etc.



### Temperature

With this function, it is possible to set the desired temperature.

## Contact us

