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Koja HiLTO ECO

A HIGH-EFFICIENCY HEAT RECOVERY UNIT

From Finland. Unrivalled.

KOJA

ENERGY EFFICIENT AND HIGH-EFFICIENCY HEAT RECOVERY UNIT FOR OFFICE, COMMERCIAL, PUBLIC AND RESIDENTIAL BUILDINGS

Energy recovery from exhaust air

More than half the thermal energy can be recovered from exhaust air when HiLTO ECO is attached as part of the heat recovery system. Using this thermal energy reduces the heating costs of the property.

The HiLTO heat recovery unit saves energy and is equipped with a decentralised ventilation system. It is ideal for use on both renovation sites and in new constructions , because it transfers the heat from the exhaust air to preheat service water or heating water.

The key in heat recovery is the lamella batteries powered by heat transfer fluid combined with the HiFEK ECO technology. Permanent magnet technology with an integrated frequency converter has been applied in the motor design. Excellent efficiency is achieved with EC motors, and the rotational speed is controlled effortlessly. The motors are reliable and user-friendly. The Modbus (RS485, RTU) is included in the motors as standard. The Modbus interface is connected to a convenient junction box.

The enclosure rating is IP54, and the operating temperature range is very wide, from -35 ˚C to 60 ˚C. The basic model is wired and connected at the factory. The control line has a junction box to which all motor connectors are brought for easy access. The rotational speed can be controlled via the bus (Modbus) or using a voltage signal (0–10 V) from building automation.

HiLTO is easy to install and service thanks to its hinged service doors at the service side. The filters and lamella batteries equipped with condensate tanks are installed upright. The hinged fan is easy to tilt to service position. HiLTO includes handy HiLTO-18 mounting feet as a standard.

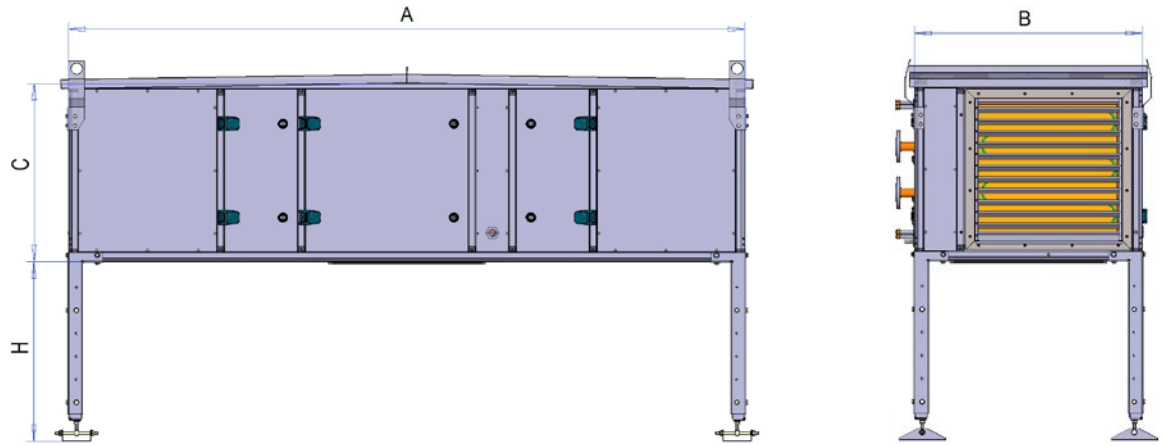
The HiLTO heat recovery unit is ideal for airflow range between 0.1 and 3.6 m^3/s.

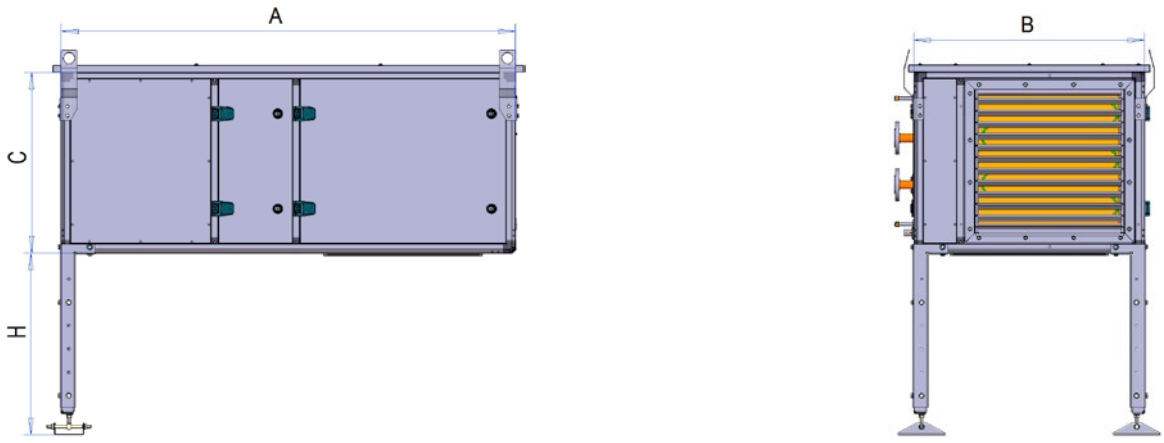
Power

Model	Volume flow	Pressure loss in the channel system	LTO's power range	Fan	Power	Current	Voltage
HiLTO ECO 12	0.1–1 m³/s	200 Pa	3–30 kW	HiFEK ECO 12	1.32 kW	2.1 A	3~400 V
HiLTO ECO 20	0.4–1.8 m³/s	200 Pa	5–50 kW	HiFEK ECO 20	2.5 kW	3.8 A	3~400 V
HiLTO ECO 40	0.6–3.6 m³/s	200 Pa	15–100 kW	HiFEK ECO 40	2.95 kW	4.5 A	3~400 V

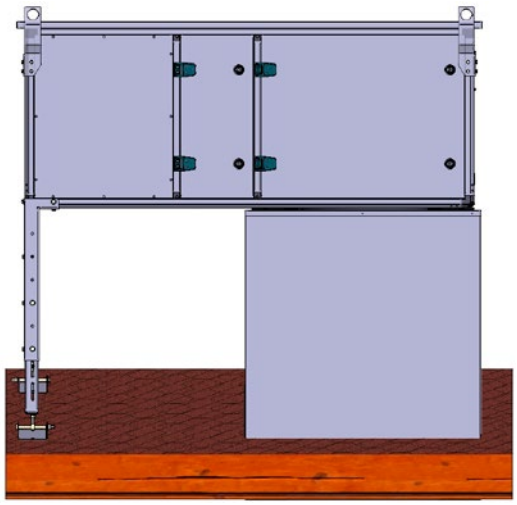
Dimensions and weight

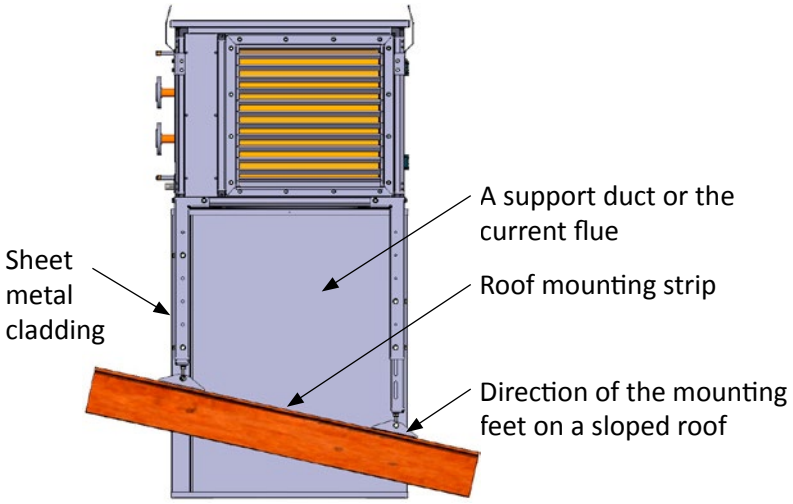
Model	A, max	B	C	H	Max. mass in kg
HiLTO ECO 12	1,950	990	790	900	400
HiLTO ECO 20	2,934	990	790	900	600
HiLTO ECO 40	2,934	1,350	1,070	900	750





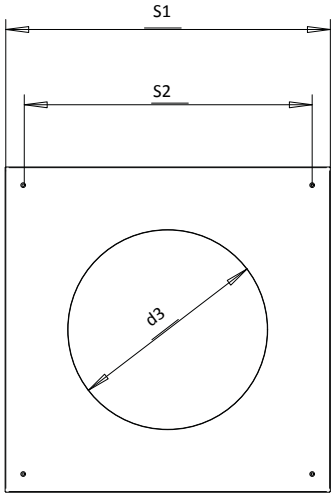
Installation direction on a roof





Fixing dimensions

HiLTO	HiFEP	S1	S2	d3
HiLTO ECO 12	18	1,024	710	630
HiLTO ECO 20	18	1,024	710	630
HiLTO ECO 40	36	1,024	910	630



Ask your local salesperson for dimensioning and a quote. For dimensioning, find out the air and/or fluid flow, the exhaust air and/or fluid temperature, the exhaust air humidity or enthalpy. Pressure losses in batteries and the channel system should be considered when dimensioning fans.

HILTO ECO 12

Nominal values:

Rotational speed	2,060 rpm
Power	1.32 kW
Current	2.1 A
Voltage	3~400 V
K value	50

HILTO ECO 20

Nominal values:

Rotational speed	2,450 rpm
Power	2.5 kW
Current	3.8 A
Voltage	3~400 V
K value	52.22

HILTO ECO 40

Nominal values:

Rotational speed	1,500 rpm
Power	2.95 kW
Current	4.5 A
Voltage	3~400 V
K value	96.67

Formula for the k value: $\frac{k*\sqrt{\Delta p}}{1000} = [m^3/s]$, where Δp = differential pressure from the measuring nozzles of the fan (Pa)

WIDE RANGE OF AUTOMATION EQUIPMENT AND ACCESSORIES

Option A

Versatile and easy to use regulator for a heat recovery unit

- Includes all control and monitoring functions of a heat recovery unit
- Easy-to-use user panel with a display
- Modbus RTU bus connection to building automation
- Category 1 and 2 alarms (also as contact data)
- The regulator is supplied with a detailed user manual

Option B

Terminal block machine

- Terminal block machine
- Field equipment already installed and wired for the machine's terminal block housing
- The machine is controlled via a building automation system

Example order

HiLTO-18-a-c, 18 = size

a: 1 = hot galvanised steel sheet
2 = epoxy painted, exterior surface 60 µm*

c: 1 = without a service switch
2 = with a service switch (not installed)
3 = with a service switch (installed)

* in accordance with RAL Classic basic colour chart

Accessories

- HiLTO-18 spare filter kit (G4)
- HiLTO-18 connecting pipes
- G4 class filters are included in the standard delivery
- Automation

TECHNICAL PIONEER, FOR THE CUSTOMER.

Koja delivers cost- and energy-efficient air handling solutions that exceed expectations. We challenge ourselves from your baseline. We create the best solutions for all conditions, throughout the life cycle of the equipment. We serve you in everyday situations with 80 years of experience. You can always count on us.

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For more information

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