ecoVENT

A control system for recuperation devices used for heat recovery in mechanical ventilation systems

The ecoVENT is a control device used for mechanical ventilation systems with heat recovery function. Through control over supply and exhaust fans this controller ensures a high level of heat recovery efficiency from ventilated areas. The controller comes also with great coniguration possibilities. It can control additional electric or water heaters or cooler in a luent and smooth manner thus ensuring high operation comfort and precision of regulation over ventilated air. The controller is equipped with digital outputs for reading and processing signals from alarm control panel and other automatic control systems. Through outside signals the controller can cease the operation of AHU or lower its e ciency according to chosen settings. Additionally, the controller was equipped with a variety of safety and diagnostic mechanisms in order to ensure operation security together with signaling the user discovered malfunctions or abnormal operation. A registry system allows to storage all alarm states discovered during operation and thus ensures appropriate response of the system for given problems. Additionally, the controller ensures a way of communication through Modbus RTU protocol, which can be used for control and supervision of an entire device from an external building management system.

The ecoVENT controller can be remotelly controlled through our website **www.econet24.com** .
It is also possible to control of AHU from diferent places of a building using **ecoTOUCH** remote control panel.

watch eco NET VIDEO

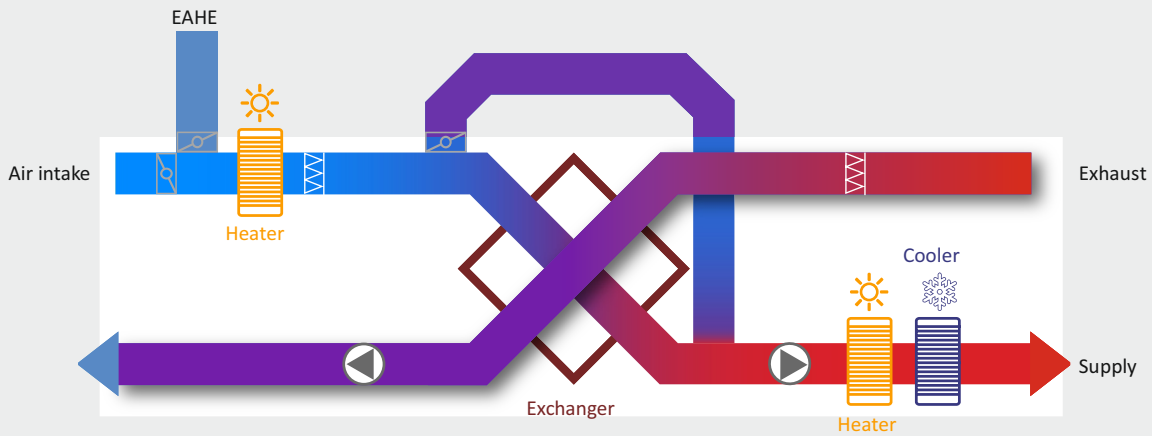
watch eco TOUCH VIDEO

HESTOR
ul.Szczęśliwa 46, 80-176 Gdańsk, Poland
biuro@hestor.pl **www.hestor.pl**

Functions

- Regulation for a constant airlow, preset during activation or smooth control with constant editable temperature assurance.
- Time schedules for reductions or operational pause – ensures the choice of time intervals where the recuperator will not be in operation or will operate with reduced airflow.
- Bypass function – work modes: open, close or automatic (based on temperatures) – an actuator control in order to skip the heat exchanger during ventilation.
- Calculation of heat recovery efficiency based on temperature values.
- A detection mechanism based on signals from presostat for the necessity of changing the air filters.
- Operational time counters for fans and automatic devices with signaling the necessity of service inspections.
- Control and supervision based on carbon dioxide sensor readings – this function allows to detect a high concentration of carbon dioxide and reorders AHU to work in emergency mode.
- A detection of alarm signals from heaters and fans.
- A possibility to extend controller functionality with additional modules in order to control over additional flaps, ventilation zones or other automatic devices.
- A manual mode for separate activation of given automatic devices.
- Registration of any alarms or unusual operation, detected during AHU operation.
- Detection of temperature sensors malfunctions and appropriate system reaction for these malfunctions.
- Safety precaution protecting the heat exchanger against freezing – a function of automatic or manual heat exchanger defrost during winter time.
- Control over additional electric or water heaters with smooth temperature regulation, 0-10V or PWM method of control.
- Control over coolers with smooth temperature regulation, 0-10V or PWM method of control.
- Control with remote control panel and room thermostat ecoSTER TOUCH.
- A possibility for periodic change of AHU work efficiency through additional work modes: Party, Airing, Exit, Comfort, Economic, Summer – Winter.

ecoVENT schematics



HESTOR
ul.Szczęśliwa 46, 80-176 Gdańsk, Poland
biuro@hestor.pl **www.hestor.pl**

Communication

- A possibility to use radio communication between devices in order to reduce costs and avoid problems with wiring.
- Communication and control through Modbus RTU protocol (BMS control) – a possibility of AHU remote control by using external building management systems.
- Full remote access from everywhere, ensured with ecoNET 300 internet module.

Work modes

PARTY
AHU operation with higher e ciency for given time period.

AIRING
Exhaust fan only operation for airing in given time period.

EXIT
AHU operation pause during temporary absence of household members.

AUTO

ECONOMIC

COMFORT

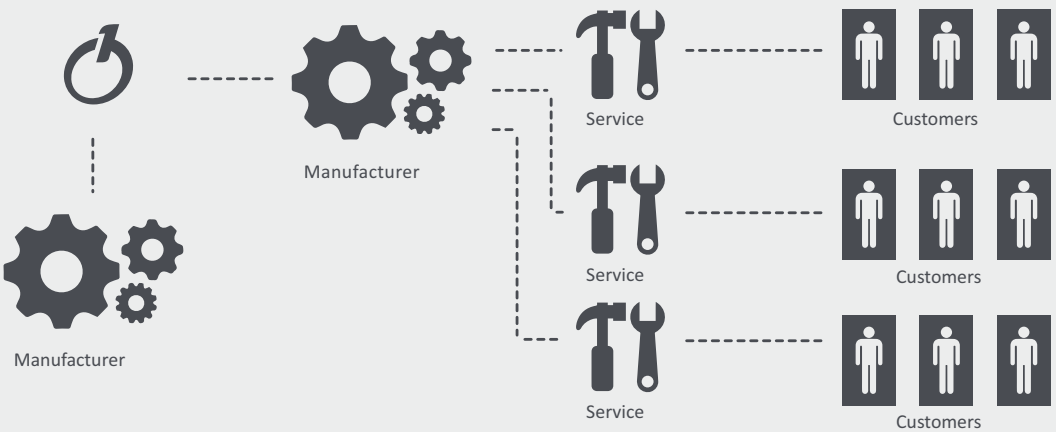
SUMMER

WINTER

COMFORT, ECONIOMIC, AUTO – work modes for higher or lower airlow during day or night.

SUMMER, WINTER – work modes used for saving operational costs and ensuring optimal operation according to given weather conditions.

Internet service



HESTOR
ul.Szczęśliwa 46, 80-176 Gdańsk, Poland
biuro@hestor.pl **www.hestor.pl**

The ecoTOUCH device – a new era of touchscreen controllers

A series of TOUCH controllers for heat recovery and air handling units. Our devices working on a principle of intelligent menu architecture which is hiding the settings of components not being currently plugged-in. Patented hint system ensures easy and comfortable control over functions. Additionally there is an easy way to change the sotware using microSD memory card. There is also an unique design of TOUCH controllers and clear function iguration in form of icons.

The ecoNET system – online service

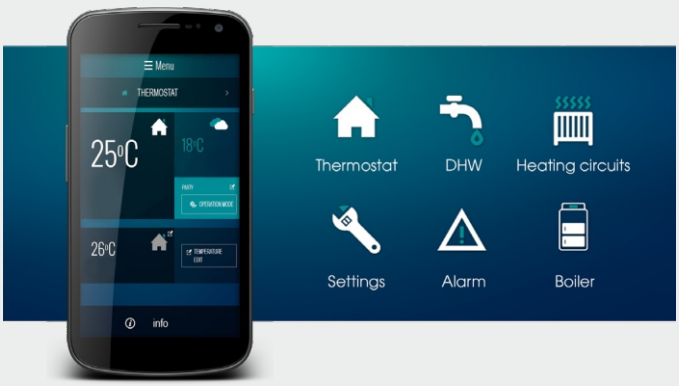
An ecoNET 300 internet module ensures remote access to the controller using PC, tablet or mobile phone. The user has the ability to edit basic and service parameters thus having an inluence upon operation of heat recovery unit. From the user point of view, a clear and straightforward interpretation of operational history in form of graphs is an additional advantage.

An ecoNET app – fast and secure access

An ecoNET application for smartphones have the following functionality:

Modern interface and graphic layout designed according to the newest trends. Intuitive operation – a straightforward layout allows the user an easy navigation through application.

Control over heating circuits online – the user has the ability to change settings of heat recovery unit from everywhere.



HESTOR
ul.Szczęśliwa 46, 80-176 Gdańsk, Poland
biuro@hestor.pl **www.hestor.pl**