

A I R

I N N O V A T I O N



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In the office buildings which has a high population density, shopping centers etc. at the applications, air ventilation needs are more than the other buildings needs. Because of a reason that fresh air's conditioning cost is higher, in these systems air conditioning systems which have high energy efficiency, ability to manage heat and humidity recovery with a high percentage, low electricity consuming and sound leveled, high automation qualification are used.

Nowadays increasing building cost increased the cost of unit areas in buildings and building systems rooming less became a priority for investors. With EVO-TOP DEVICES developed by AERA can minimize the the room volume for air conditioning up to 40% and the trading volume amount can be increased significantly.

Fresh air and exhaust air changing can be managed easily by a shaft in the building with the duct connections over EVO-TOP devices. With an integrated heating battery in device without a additional module the heating can be existed. By SENSO+ integrated in the device developed control selections are provided as a standard. The rotor in use is covered with a coating material which allows to transfer steam only and as both heat transfer efficiency up to 84% and humidity transfer efficiency up to 84% provides, fresh air hided heat load is increased up to 84%. Because of the structure of rotor in use condensation is not occurred so, drainage is not needed.



EVO-TOP

ROTOR TYPE HEAT RECOVERY UNIT
COMPACT AIR CONDITIONING PLANT





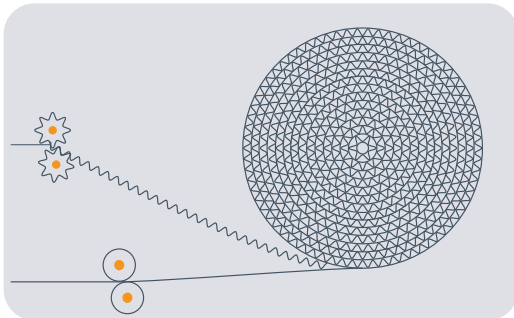
EVO-TOP units are designed with low air velocities, low filter and coil pressure drops are achieved despite its compact design. The fact that the electric preheater and the water type after heater can be placed inside the body contributes to the compact structure, preventing difficulties in wiring and automation. Water heating battery's piping has a specially designed connection, it provides high sealing and easy connection out of the casing. EVO-TOP units are designed in accordance with VDI6022. Inside of the unit is easily cleanable. The used seals are closed cell and prevent germ reproduction. All components that require service, have their own service doors. This way the unit does not have to be disconnected from ducting system for servicing.

CASING

EVO-TOP devices with their compact construction can be placed in building volumes with very low space and easily transported inside the building. By using advanced technology components, EVO-TOP units achieve efficiency levels of today's and tomorrow's standards. The casing, which is developed using the latest engineering methods, also shows superior performance in terms of aerodynamics. The internal turbulence or dead zone losses are reduced to the minimum with the analysis.

In addition to achieving a high-strength design with patented fan support bracket design, the total efficiency is improved by avoiding dead zones and reverse flows which may occur behind the fan body.

EVO-TOP units are designed with low air velocities, low filter and coil pressure drops are achieved despite its compact design. The fact that the electric preheater and the water type after heater can be placed inside the body contributes to the compact structure, preventing difficulties in wiring and automation. Water heating battery's piping has a specially designed connection, it provides high sealing and easy connection out of the casing. EVO-TOP units are designed in accordance with VDI6022. Inside of the unit is easily cleanable. The used seals are closed cell and prevent germ reproduction. All components that require service, have their own service doors. This way the unit does not have to be disconnected from ducting system for servicing.



SORPTION WHEEL

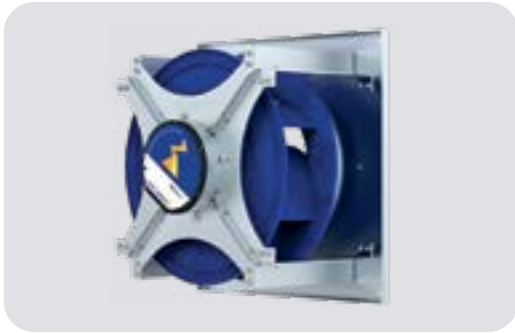
EVO-TOP units present the state of art rotary wheels with high heat and humidity transfer rates. Twin rotary wheels are designed to decrease the height, enabling ceiling installations. Rotary wheel drive consists service free high torque step motor, stepless control drive and polyester chain belt system.

Rotary wheel is coated with 3Å Zeolite material for high humidity efficiency in both winter and summer season, that allows the transfer of water molecules only between air streams. In cooling season, EVO-TOP units promise 115% more energy transfer than a traditional Aluminum wheel and 195% more than a static Aluminum Plate.



FILTER

EVO-TOP devices, at the fresh air side ePM1 55% (F7) class, at the exhaust air side ePM10 50% (M5) class filters are comprised as a standard. By these high efficient filters as they are catching 90% of dust particles which have up to 0,4 µm radius, room air quality is increased. Filters have low starting pressure drop values because of having both their high efficiencies and increased surface area. In order to observe filter pollution differential pressure transmitters are applied at fresh air and exhaust air filters. Thus, as the filter's pressure drop is followed instantly, the used is acknowledged. For different flow rates, as different pressure drops are defined, the dynamic filter alarm can be created by SENSO+. In the fresh air side of devices optionally ePM1 80% (F9) filter can be used.



FAN

EVO-TOP Units are designed using plug type EC fans with high aerodynamic efficiency, low noise levels and low energy consumption. All fans meet ECO-DESIGN criteria set by the Energy Commission of the European Union and are compatible with ERP 2015. Plug fans with EC motors with the help of SENSO PLUS control system, can be driven steplessly with an indoor air quality sensor or with constant volume. Fans are ready to provide constant pressure in VAV systems with the VAV kit supplied as accessory. Plug type fans with EC motors are AC-powered fans with DC motor technology. The DC motor provides high electrical efficiency and can be connected to the AC mains with the converter located on them. It is perfectly matched to the high-tech electronic components used and magnetic noise transmitted to the network is prevented. EC motors communicate with the SENSO PLUS

control system via Modbus. This reduces the number of in-line cabling and provides more information to the user and ensures optimum operating point is used in the unit. The computerized analysis of the fan blades has made it possible to optimize the aerodynamic efficiency and reduce the sound levels. The back plate of the fan impeller has been redesigned for a linear air flow. The EC motors used perform well beyond today's efficiency requirements and all motors comply with the IE4 energy efficiency class.

SENSO+

The advanced control system SENSO PLUS in EVO-C Wheel Units, provides the most efficient control of all components which can be installed internally and as external accessories, ensuring the desired airflow conditions.

DX COIL

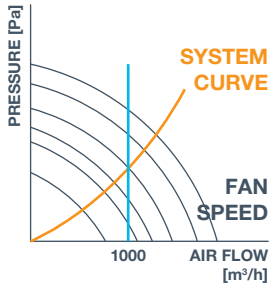
Externally mounted duct type DX batteries are used for purposes such as lowering the supply air temperature, dehumidifying process and bringing the blown air to the desired temperature after dehumidification. It can be step controlled with on / off method, maximum 8 step setting is available.

HUMIDITY CONTROL EQUIPMENT

Humidity control equipments are used to raise or lower the humidity of the supply air. With the SENSO PLUS control, the humidifier / dehumidifiers can be controlled to bring the supply air to the desired humidity value.

The SENSO PLUS control also provides system control besides equipment control, which means that the devices can be operated with the Yearly Timer Function according to the working periods: Daily, Weekly, Monthly or Yearly. In the Timer Function, values such as weekly working days, vacation times, daylight savings time can be defined and reported retrospectively.

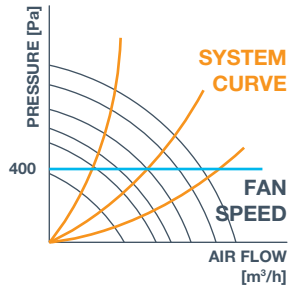
Besides, the Support Function which is used to prevent the undesired conditions from occurring indoors even when the device is not working. The indoor temperature from falling below or exceeding a certain value even during non-working hours is ensured.



Constant Air Volume

To meet the desired constant airflow requirement in the EVO-C Handling Units, the SENSO PLUS control measures the air pressure drop in the suction ports of the fans and compares the air flow with the set value to produce a working signal that will change the EC fan fan speed.

Contamination of the filters can be controlled by static flow control within the fan operating curve, to the static pressure requirements of the unit which result in higher or lower than the project values.



Constant Air Pressure

In EVO-C Units, constant pressure control is used to meet the variable airflow requirement of the air duct system. The SENSO PLUS control generates a working signal that will change the EC fan speed by continuously measuring the static pressure created in the supply air duct and comparing it with the value defined in the system. When a VAV damper opens or closes, higher or lower external static pressure needs can be met with constant pressure control within the fans operating curve. This way extreme noise in the ducts, unbalanced airflow distribution in different volumes is prevented.

ROTARY HEAT EXCHANGER CONTROL

In EVO R air handling units, rotary heat recovery exchanger is produced with a variable revolution rotor drive with SENSO PLUS control. By controlling the supply air temperature, the rotor revolution is automatically adjusted according to the required heat recovery. If the outside air conditions are appropriate, the rotor is stopped and free cooling is performed. An alarm signal is sent and the user is warned by the sensor attached to the device if the rotor does not rotate due to any malfunction. If the rotor is not spinning for 30 minutes due to suitable outdoor conditions, rotor will turn for 20 seconds at 12 rpm for automatic cleaning.

COOLING COIL

Externally mounted duct-type water cooling coils are used for such purposes as lowering the blowing temperature and dehumidifying the air in the units. It can be driven either proportionally or by on / off method.

Heating Coil

Heating coils are used for increasing the supply air temperature and for bringing the supply air to the desired temperature after dehumidifying process. Hot water coils can be driven by proportional control via 2 or 3 way valves. With the SENSO PLUS control, frost protection mechanism is available as standard to prevent the temperature of the supply water from reaching freezing conditions in extreme cold climates. If the return water temperature falls below a certain value set on the control, the heating valve is switched to the 100% open position and a run signal is sent to the heating water circulation pump. If the temperature still does not rise to the desired value, the device is stopped and the user is given a freeze alarm.

Indoor Air Quality Control

The air quality sensor or the CO2 sensor, which is placed in the critical volume or return channel in the interior, continuously measures the air quality. This value generates a signal that will change the EC fan speed by comparing it to the set point on the controller. If the indoor air quality is lower than the desired value, the fan speed and thus the fresh air amount is increased; if the indoor air quality is higher than the desired indoor air quality, the fan speed and fresh air speed are decreased; Energy saving is achieved in considerable amounts in heating or cooling loads caused by fresh air.

FILTER POLLUTION CHECK

The pressure drops of the filters used to clean the air, can be controlled by SENSO PLUS control. Users are notified about the filter cleaning and replacement intervals. Pressure drop control can be made according to a constant pressure drop (Static) or variable air flow (Dynamic). Especially with units designed with variable speed fans, Dynamic Filter Control enables filter service at the right time.

USER INTERFACE

With SENSO+ EVO ECO control panel which has buttons or EVO TOUCH 7" touch screen control panel is presented. Also there is a web server for observing or controlling the device which is integrated in the card. On the server the settings can be done, also both of the instantaneous operating values and history of operating values are able to be followed.



The web server on SENSO+, as connecting to web, via a computer/tablet or a mobile phone at anywhere in the world, operating situation can be viewed and the access for changing the settings is provided. Without needing a complex web settings, this feature can be activated with a simple web connected cable.

The devices in the different projects, with cumulating all of the devices in the same display, as it is synchronized, operating values, active alarms etc. values as followed and the settings can be changed if it is desired. Especially in the projects within the multiple devices or for servicing the multiple devices in different places this system is provided optionally together with SENSO+ .

COMMUNICATION OPTIONS

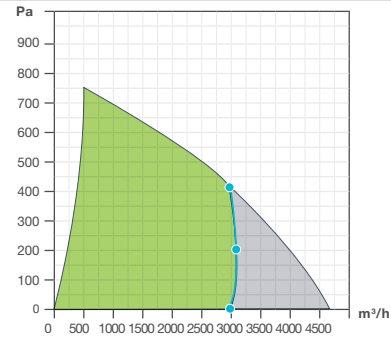
SENSO PLUS control supports all of the universal communication protocols and interacts with other air handling units as well as with other building automation systems. ModBUS, BACnet and EXOline protocols are open as standard and there is also possibility to connect with LONWORKS protocol as an option.



■ EVO-TOP 30



■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	EVO-TOP 30
Exchanger Type	Adsorption Wheel (5)
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor / Outdoor (3)
Installation Position	Vertical
Service Location	Front surface (4)
Case structure	50 mm Insulated Double Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m ³ /h)	480
Nominal Flow Rate (m ³ /h)	3080
Efficiency (EN 308)	79%
Efficiency (-5°C OA, 22°C 50%RH RA)	81%
Efficiency Humidity Transfer Efficiency	81%
According to EN 1886 Case Features	D1/L1/TB3/T3
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-20/+50
Protecting Class	IP 31

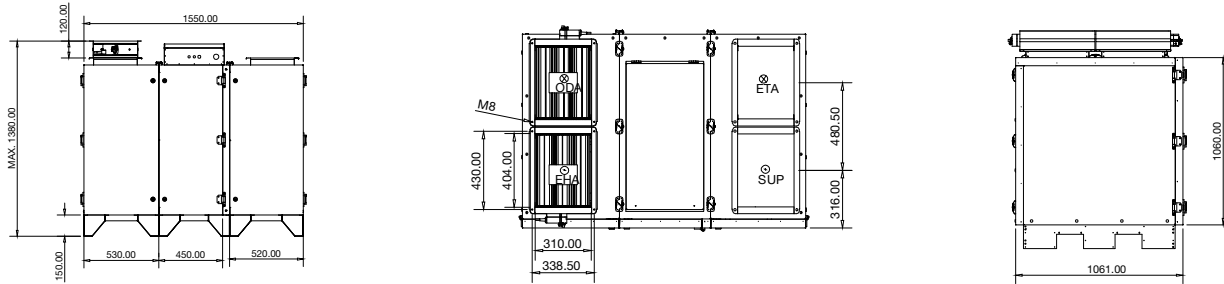
Electrical Informations

Communicating Informations	BACnet, Modbus TCP/IP
Supply Voltage	400V, 3~, 50 Hz
Total Power (1) (kW)	2,9
Maksimum Current (A)	3,4

Sound Information (2)

Sound Level at Supply (dBA)	74
Sound Level at Return (dBA)	65
Surrounding Sound 1m. Distance (dBA)	48
Surrounding Sound 3m. Distance (dBA)	38
Surrounding Sound 5m. Distance (dBA)	34

■ DIMENSIONS [mm]



ACCESSORIES

Electric Pre Heater	Optional	External of device	Page 168
Electric After Heater	Optional	Internal of device	Page 168
Water After Heater	Optional	Internal of device	Page 168
Water Cooler	Optional	External of device	Page 169
Duct Connection Damper	Optional	Page 169	
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	-	-	
Bulk Siphon	-	-	
Room Control Panel Type1	EVO ECO	Page 172	
Room Control Panel Type2	EVO TOUCH	Page 172	
Room Control Panel Type3	-	-	
Cloud Connections Right	Optional	Sayfa 171	
VOD Sensor CO2	Optional	Page 170	
VOD Sensor RH%	Optional	Page 170	
VOD Sensor VOC	Optional	Page 170	
Signal Converter	Optional	Page 171	
Constant Pressure Kit	Optional	Page 171	

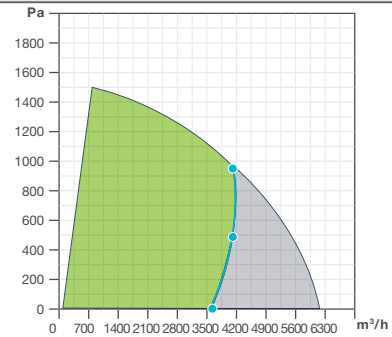
Exhaust Filter Coarse	-
Exhaust Filter ePM10 50%	Standard
Fresh Air Filter Coarse	-
Fresh Air Filter ePM10 50%	Optional Page 170
Fresh Air Filter ePM1 55%	Standard
Fresh Air Filter ePM1 80%	Optional Page 170

- (1) Together with Electrical Preheater
- (2) As a result of the measurement according to ISO 5136
- (3) Outside Kit is used
- (4) Bidirectional installation is provided via service covers located at front and back
- (5) Humidity transfer is possible with the selection of Adsorption Rotor

■ EVO-TOP 40



■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	EVO-TOP 40
Exchanger Type	Adsorption Wheel (5)
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor / Outdoor (3)
Installation Position	Vertical
Service Location	Front surface (4)
Case structure	50 mm Insulated Double Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m ³ /h)	670
Nominal Flow Rate (m ³ /h)	4140
Efficiency (EN 308)	80%
Efficiency (-5°C OA, 22°C 50%RH RA)	82%
Efficiency Humidity Transfer Efficiency	82%
According to EN 1886 Case Features	D1/L1/TB3/T3
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-20/+50
Protecting Class	IP 31

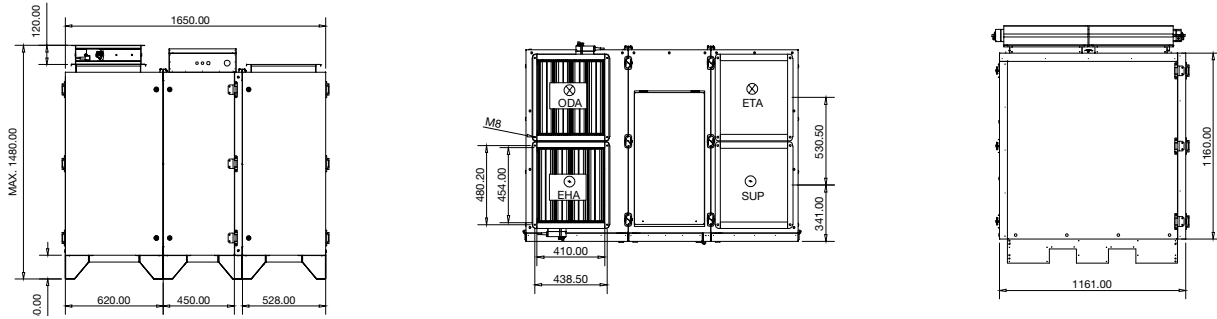
Electrical Informations

Communicating Informations	BACnet, Modbus TCP/IP
Supply Voltage	400V, 3~, 50 Hz
Total Power (1) (kW)	5,2
Maksimum Current (A)	7,8

Sound Information (2)

Sound Level at Supply (dBA)	81
Sound Level at Return (dBA)	73
Surrounding Sound 1m. Distance (dBA)	54
Surrounding Sound 3m. Distance (dBA)	45
Surrounding Sound 5m. Distance (dBA)	40

■ DIMENSIONS [mm]



ACCESSORIES

Electric Pre Heater	Optional	External of device	Page 168
Electric After Heater	Optional	Internal of device	Page 168
Water After Heater	Optional	Internal of device	Page 168
Water Cooler	Optional	External of device	Page 169
Duct Connection Damper	Optional		Page 169
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	-	-	
Bulk Siphon	-	-	
Room Control Panel Type1	EVO ECO		Page 172
Room Control Panel Type2	EVO TOUCH		Page 172
Room Control Panel Type3	-	-	
Cloud Connections Right	Optional		Sayfa 171
VOD Sensor CO2	Optional		Page 170
VOD Sensor RH%	Optional		Page 170
VOD Sensor VOC	Optional		Page 170
Signal Converter	Optional		Page 171
Constant Pressure Kit	Optional		Page 171

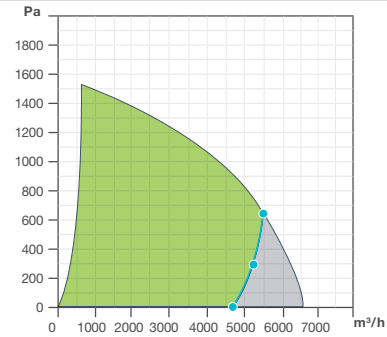
Exhaust Filter Coarse	-	
Exhaust Filter ePM10 50%	Standard	
Fresh Air Filter Coarse	-	
Fresh Air Filter ePM10 50%	Optional	Page 170
Fresh Air Filter ePM1 55%	Standard	
Fresh Air Filter ePM1 80%	Optional	Page 170

- (1) Together with Electrical Preheater
- (2) As a result of the measurement according to ISO 5136
- (3) Outside Kit is used
- (4) Bidirectional installation is provided via service covers located at front and back
- (5) Humidity transfer is possible with the selection of Adsorption Rotor

■ EVO-TOP 50



■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	EVO-TOP 50
Exchanger Type	Adsorption Wheel (5)
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor / Outdoor (3)
Installation Position	Vertical
Service Location	Front surface (4)
Case structure	50 mm Insulated Double Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m³/h)	730
Nominal Flow Rate (m³/h)	5470
Efficiency (EN 308)	80%
Efficiency (-5°C OA, 22°C 50%RH RA)	82%
Efficiency Humidity Transfer Efficiency	82%
According to EN 1886 Case Features	D1/L1/TB3/T3
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-20/+50
Protecting Class	IP 31

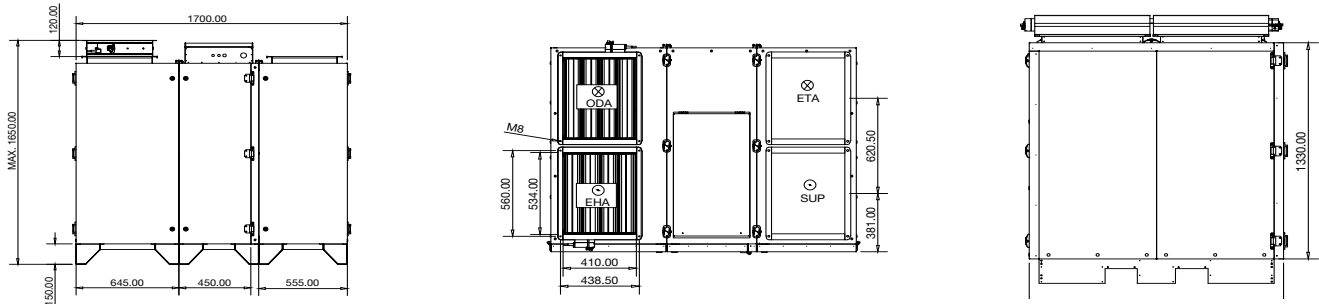
Electrical Informations

Communicating Informations	BACnet, Modbus TCP/IP
Supply Voltage	400V, 3~, 50 Hz
Total Power (1) (kW)	5,2
Maksimum Current (A)	7,8

Sound Information (2)

Sound Level at Supply (dBA)	75
Sound Level at Return (dBA)	65
Surrounding Sound 1m. Distance (dBA)	49
Surrounding Sound 3m. Distance (dBA)	40
Surrounding Sound 5m. Distance (dBA)	35

■ DIMENSIONS [mm]



ACCESSORIES

Electric Pre Heater	Optional	External of device	Page 168
Electric After Heater	Optional	Internal of device	Page 168
Water After Heater	Optional	Internal of device	Page 168
Water Cooler	Optional	External of device	Page 169
Duct Connection Damper	Optional		Page 169
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	-	-	
Bulk Siphon	-	-	
Room Control Panel Type1	EVO ECO		Page 172
Room Control Panel Type2	EVO TOUCH		Page 172
Room Control Panel Type3	-	-	
Cloud Connections Right	Optional		Sayfa 171
VOD Sensor CO2	Optional		Page 170
VOD Sensor RH%	Optional		Page 170
VOD Sensor VOC	Optional		Page 170
Signal Converter	Optional		Page 171
Constant Pressure Kit	Optional		Page 171

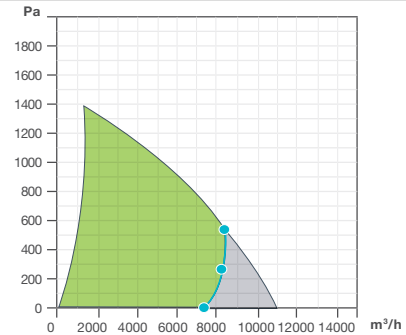
Exhaust Filter Coarse	-	
Exhaust Filter ePM10 50%	Standard	
Fresh Air Filter Coarse	-	
Fresh Air Filter ePM10 50%	Optional	Page 170
Fresh Air Filter ePM1 55%	Standard	
Fresh Air Filter ePM1 80%	Optional	Page 170

- (1) Together with Electrical Preheater
- (2) As a result of the measurement according to ISO 5136
- (3) Outside Kit is used
- (4) Bidirectional installation is provided via service covers located at front and back
- (5) Humidity transfer is possible with the selection of Adsorption Rotor

■ EVO-TOP 70



■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	EVO-TOP 70
Exchanger Type	Adsorption Wheel (5)
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor / Outdoor (3)
Installation Position	Vertical
Service Location	Front surface (4)
Case structure	50 mm Insulated Double Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m ³ /h)	1240
Nominal Flow Rate (m ³ /h)	7800
Efficiency (EN 308)	79%
Efficiency (-5°C OA, 22°C 50%RH RA)	81%
Efficiency Humidity Transfer Efficiency	81%
According to EN 1886 Case Features	D1/L1/TB3/T3
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-20/+50
Protecting Class	IP 31

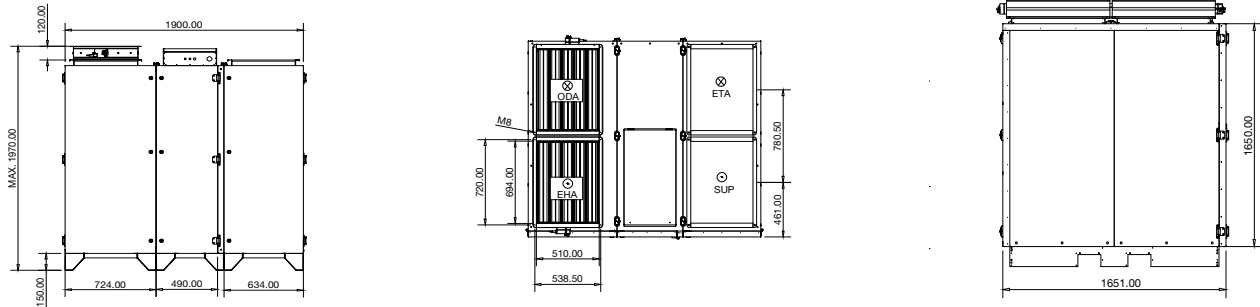
Electrical Informations

Communicating Informations	BACnet, Modbus TCP/IP
Supply Voltage	400V, 3~, 50 Hz
Total Power (1) (kW)	10
Maksimum Current (A)	15,4

Sound Information (2)

Sound Level at Supply (dBA)	84
Sound Level at Return (dBA)	76
Surrounding Sound 1m. Distance (dBA)	59
Surrounding Sound 3m. Distance (dBA)	50
Surrounding Sound 5m. Distance (dBA)	45

■ DIMENSIONS [mm]



ACCESSORIES

Electric Pre Heater	Optional	External of device	Page 168
Electric After Heater	Optional	Internal of device	Page 168
Water After Heater	Optional	Internal of device	Page 168
Water Cooler	Optional	External of device	Page 169
Duct Connection Damper	Optional		Page 169
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	-	-	
Bulk Siphon	-	-	
Room Control Panel Type1	EVO ECO		Page 172
Room Control Panel Type2	EVO TOUCH		Page 172
Room Control Panel Type3	-	-	
Cloud Connections Right	Optional		Sayfa 171
VOD Sensor CO2	Optional		Page 170
VOD Sensor RH%	Optional		Page 170
VOD Sensor VOC	Optional		Page 170
Signal Converter	Optional		Page 171
Constant Pressure Kit	Optional		Page 171

Exhaust Filter Coarse	-	
Exhaust Filter ePM10 50%	Standard	
Fresh Air Filter Coarse	-	
Fresh Air Filter ePM10 50%	Optional	Page 170
Fresh Air Filter ePM1 55%	Standard	
Fresh Air Filter ePM1 80%	Optional	Page 170

- (1) Together with Electrical Preheater
- (2) As a result of the measurement according to ISO 5136
- (3) Outside Kit is used
- (4) Bidirectional installation is provided via service covers located at front and back
- (5) Humidity transfer is possible with the selection of Adsorption Rotor

ACCESSORIES

■ ELECTRICAL PREHEATER

Used in order to prevent freezing at the exchanger in the situations which the outside air is very low. Controlled as a single step with SENSO control. Provides controllable energy efficiency with SENSO+ control via proportional signal.



Model	Heater Capacity (kW)	Current (A)	Control
ET-PREH 30	7,5	10,5	Oransal
ET-PREH 40	9	12,6	Oransal
ET-PREH 50	9	12,6	Oransal
ET-PREH 70	12	16,8	Oransal

■ ELECTRICAL AFTER HEATER

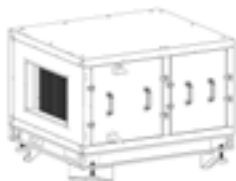
Used for increasing the supply air temperature. Operates automatically according to desired room temperature or desired supply temperature. Controlled as a single step with SENSO control. Provides controllable energy efficiency with SENSO+ control via proportional signal.



Model	Heater Capacity (kW)	Current (A)	Control
ET-PREH 30	7,5	10,5	Oransal
ET-PREH 40	9	12,6	Oransal
ET-PREH 50	9	12,6	Oransal
ET-PREH 70	12	16,8	Oransal

■ WATER AFTER HEATER

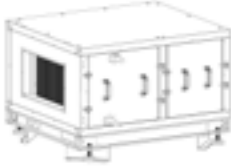
Used for increasing the supply air temperature. Operates automatically according to desired room temperature or desired supply temperature. Controlled as a single step with SENSO control. Provides controllable energy efficiency with SENSO+ control via proportional signal.



Model	Heater Capacity (kW)	Water Regime	Control
ET-POWH 30	7,5	80-60	Oransal
ET-POWH 40	9	80-60	Oransal
ET-POWH 50	9	80-60	Oransal
ET-POWH 70	12	80-60	Oransal

■ WATER COOLING

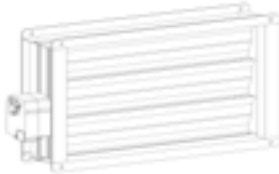
Used for cooling inside, water type cooling batteries are existed as accesories. With SENSO+ control, controlled proportionally according to desired supply temperature or desired room temperature.



Model	Heater Capacity (kW)	Water Regime	Control
ET-KR 30	6	7-12	Oransal
ET-KR 40	6	7-12	Oransal
ET-KR 50	9	7-12	Oransal
ET-KR 70	12	7-12	Oransal

■ Duct Connection Damper

The motor operated damper, as turned itself off when the devices is turned off, prevent the leakage can be occurred via air duct. It can be implemented in or out of device. Has the Class 3 impermeability as a standard.



Model	Operation Time	Energy Supply
ET-DAMP 30	40...75 s	24C DC , yay geri dönüşlü
ET-DAMP 40	40...75 s	24C DC , yay geri dönüşlü
ET-DAMP 50	40...75 s	24C DC , yay geri dönüşlü
ET-DAMP 70	40...75 s	24C DC , yay geri dönüşlü

■ SENSO HMI

The keypad user panel provides the communication with main PCB via the AERA-link protocol. Connection is made with 2x0.75 mm2 cable.



Model
SENSO HMI

ACCESSORIES

■ FILTER

In the projects, it is designed as a standard for more sensitive than the present filter's filtering



Model	Code
Taze Hava filtresi ePM10 50%	ET30FAEPM10-50
	ET40FAEPM10-50
	ET50FAEPM10-50
	ET70FAEPM10-50
Taze Hava filtresi ePM1 80%	ET30FAEPM1-80
	ET40FAEPM1-80
	ET50FAEPM1-80
	ET70FAEPM1-80

■ VOD

Located in inside of critical volume or return duct, the optional air quality sensor (VOC or CO₂) or relative humidity sensor (RH%) consistently measures the air quality or relative humidity. This value, as being compared with set value which is arranged on control, creates operating which changes EC fan's fan speed. If the air in room is lower than desired air quality or the relative humidity is higher than the desired value, the fan speed is increased so, fresh air amount increased, if the air in room is higher than desired air quality or the relative humidity is lower than the desired value, the fan speed is decreased so, fresh air amount decreased; Thus, a significant energy save is provided at the heating or cooling loads caused by the fresh air.



Model	Measurement	Installation Position
VOD-VOC-RM	VOC	Room
VOD-VOC-DUCT	VOC	Channel
VOD-CO ₂ -DUCT	CO ₂	Room
VOD-CO ₂ -RM	CO ₂	Channel
VOD-RH-DUCT	RH%	Room
VOD-RH-RM	RH%	Channel
PS-MW	-	-

■ CLOUD CONNECTION

The web server on SENSO+, as connecting to web, via a computer/tablet or a mobile phone at anywhere in the world, operating situation can be viewed and the access for changing the settings is provided. Without needing a complex web settings, this feature can be activated with a simple web connected cable.



Model
SENSO+ CLOUD

■ Constant Pressure Kit

Used for serving the purpose of ventilation system's varying flow rate. SENSO+, creates the signal which can change EC fan's fan speed as measuring static pressure value consistently, as comparing with defined value to the system. Turning up or down the VAV damper which are different volume in duct system, serve the purpose of static pressure out of device as a result of higher or lower values than projected values with constant pressure control. In the fan operating characteristic, extreme volume sound occurred in the ducts and flow rate in different volumes are prevented.



Model
SENSO-CAP

■ Signal Converter

SENSO+ devices as make an access that connect up to 3 VOD sensors, both measure gas and different volume gases, change the capacity according to these measurements of air conditioning plants. Via Signal Converter, in 3 different types, for each type up to 6 measurements or obtained values from 18 different measurement volumes are used for controlling air conditioning plant is provided.



Model
SENSO+ SK

ACCESSORIES

■ EVO-ECO

Is a user panel used as a user interface in the devices has the SENSO+ control card. Connected to control panel via 4x0.75 cable or RJ-12 Jack.



Model

EVO-ECO

■ EVO-TOUCH

Is a 7" sized touch type user panel used as a user interface. Connected to control panel via 4x0.75 cable or RJ-12 Jack.



Model

EVO-TOUCH

NOTES

A large rectangular grid of graph paper, consisting of 20 columns and 30 rows of small squares, intended for taking notes.



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THE MANUFACTURER RESERVES THE RIGHT TO CHANGE THE SPECIFICATION WITHOUT PRIOR NOTICE.

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