AERA
air innovation

aera.com.tr | **aerabim**.com | **aeracloud**.com | **aeraselect**.com

Energy sources are limited thus it increases the energy costs and makes availability harder. The governments to decrease the limited energy consuming, started to create the efficiency criterias for devices that use energy and these criterias became mandatory for manifacturers to obey. For ventilation devices too the energy criterias are defined by Europe Union with their Ecodesign directives and since 2016 it was accepted as mandatory for CE certicate's precondition.

In Turkey, heat recovery ventilation devices in significant amount of small, big and medium projects, listed according to heat recovery efficiency and consumed fan power criterias in the directives effectuated after 2016, the devices not regular for standards are forbidden to enter in EU countries.

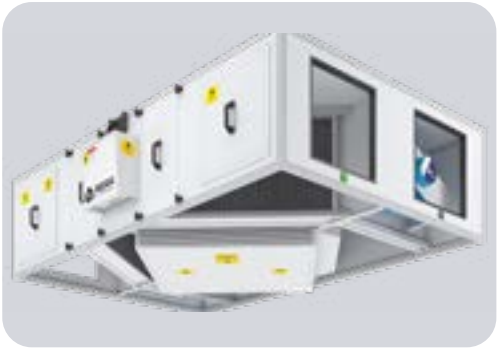
ERP PRO Device's Significant Features

- EC Fan which has low SFP values,
- Platter heat recovery exchanger which has large heat transfer surface area (n> % 73),
- Filtration at fresh air side F7 (ePM1 55%), at exhaust air side M5 (ePM10 50%),
- Performance suitable for ECO-DESIGN 2018,
- Case design allows servicing and cleaning components easily ,
- By-pass ventilation
- Alternative duct connection.

ECO DESIGN RoHS 2002/95/EC CE TSEK International Organization for Standardization ISO 9001

ERP PRO

CROSS FLOW
HEAT RECOVERY VENTILATION



CASING

The body of ERP PRO devices are basically 2 different types. ERP PRO 1200 and ERP PRO 2200 body are manufactured from polyester coated sheet with high corrosion resistance as single wall. Insulation is provided by placing 10 mm sponge on the inner part of the neighborhood. ERP PRO 3200 and ERP PRO 4200 body are manufactured from polyester coated outer sheet with high corrosion resistance, and the sheets used in the device are manufactured from Aluminum and Zinc coated AZ 150 quality Aluzinc inner sheet. High insulation is provided by using 25 mm thick fire protection rock wool between inner and outer sheet. The body is designed with high strength principle and its design is patented and protected.

FAN

ERP PRO units are designed with high energy efficiency, low sound pressure and low power consumption plug fans. All the fans are compliant with ECO-DESIGN criteria by Eruopean Union Energy Comitee and ErP 2015. Plug fans with EC motors can be driven with 3 fixed speeds or steplessly with the help of an air quality sensor thanks to built in smart control system SENSO

Plug fans with EC motors are AC-powered fans with DC motor technology. DC motor provides high electrical efficiency while it can be connected to AC mains via on board converter. It is perfectly in harmony with the high-tech electronic components used and magnetic noise transmitted to the network is prevented.

HEAT RECOVERY EXCHANGER

The heat recovery exchangers used in ERP PRO units reaches up to 90% efficiency by offering a combination of cross and counter flow with special fin structure.The special fin structure increases efficiency and helps to achieve low pressure drops. The heat exchanger consists of Aluminum plates with high corrosion resistance. Thus, the highest versatility of heat recovery exchangers in their class ensures the continuity of the performance values with the EUROVENT certificate.

FILTER

ERP PRO units are produced with F7 (ePM1 55%) class on the supply air side and M6 (ePM10 65%) class filter on the exhaust side as ECO-DESIGN directives. With these highly efficient filters, indoor air quality is increased by keeping 90% of dust and particles up to diameter of 0,4 µm in the indoor environment.

High efficiency filters are produced especially for extending the surface area and reducing pressure drops. Filters fill up because of the particles they hold and this results in reduced air flow. In order to avoid dirty filters to affect air balance in the building, the unit has a filter cleaning alarm based on working hours.

SENSO

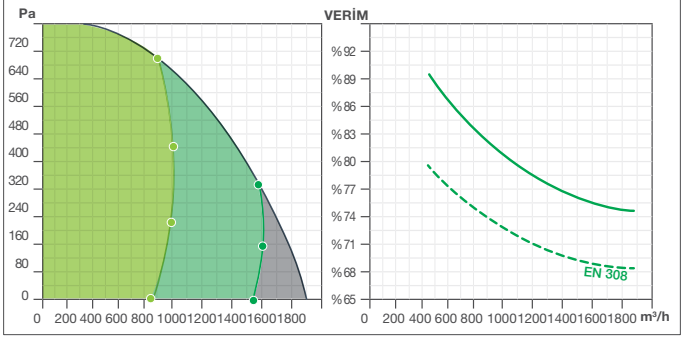
SENSO Smart Control which is specifically developed and adjusted for Ceiling Type devices, controls both standard components in device and componets attachable to ducts optionally to manage the desired supply air conditions. All of our devices works with plug and play logics are sent after complete comprehensive tests of control equipments and all components.

The basic functions provided by SENSO control in ventilation

- Fan speeds are adjusted in 3 different speed independently
- Weekly time schedule
- Building automation connection (ModBUS)
- Preheater control (Step control)
- Afterheater Control
- Exchanger Freezing Control
- Battery Freezing Control (with Optional Sensor)
- Automatical BOOST Mode (with Optional Sensor)
- Automatical Flow Rate Conttrol (with Optional Sensor)
- Filter Polution Control (with Optional Sensor)

■ ERP PRO 1200

■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	ERP PRO 1200
Exchanger Type	Aluminum Plate Cross Flow
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor
Installation Position	Horizontal
Service Location	Side and Bottom
Case structure	10 mm Insulated Single Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m3/h)	180
Nominal Flow Rate (m3/h)	940
Efficiency (EN 308)	73%
Efficiency (-5°C OA, 22°C 50%RH RA)	81%
Weight (kg)	185
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-12/+46

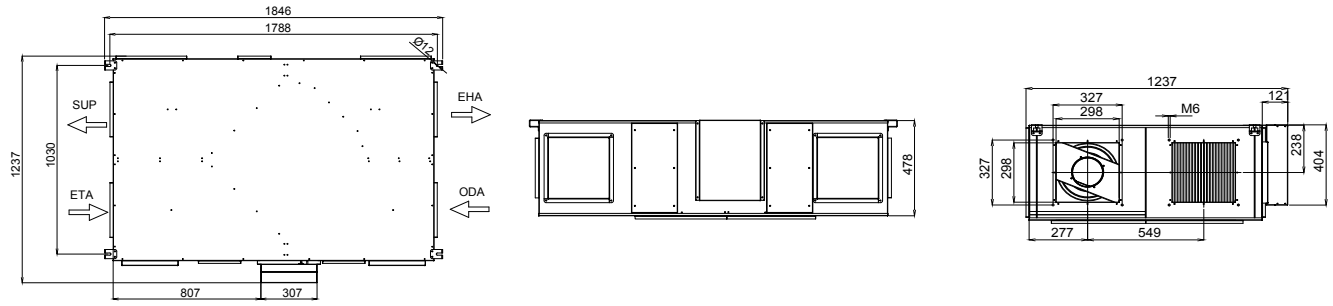
Electrical Informations

Communicating Informations	Modbus RTU
Supply Voltage	230V, 1~, 50 Hz
Total Power (1) (kW)	0,9
Maksimum Current (A)	4,9

Sound Information (2)

Surrounding Sound 3m. Distance (dBA)	43

■ DIMENSIONS [mm]



ACCESSORIES

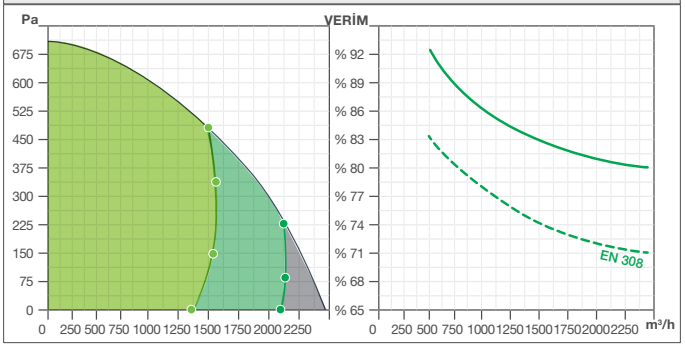
Electric Pre Heater	Optional	External of device	Page 150
Electric After Heater	Optional	Internal of device	Page 150
Water After Heater	Optional	Internal of device	Page 150
Water Cooler	-	-	-
Duct Connection Damper	-	-	
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	Optional	Page 151	
Bulk Siphon	Optional	Page 152	
Room Control Panel Type1	Standard	-	
Room Control Panel Type2	-	-	
Room Control Panel Type3	-	-	
Cloud Connections Right	-	-	
VOD Sensor CO2	Optional	Page 152	
VOD Sensor RH%	Optional	Page 152	
VOD Sensor VOC	Optional	Page 152	
Signal Converter	Optional	Page 153	
Constant Pressure Kit	-	-	

Exhaust Filter Coarse	-	
Exhaust Filter ePM10 50%	Standard	
Fresh Air Filter Coarse	-	
Fresh Air Filter ePM10 50%	-	-
Fresh Air Filter ePM1 55%	Standard	
Fresh Air Filter ePM1 80%	Optional	Page 151

(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 sevice covers located at front and back
(5)	Humidity transfer is possible with the selection of Adsorption Rotor

■ ERP PRO 2200

■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	ERP PRO 2200
Exchanger Type	Aluminum Plate Cross Flow
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor
Installation Position	Horizontal
Service Location	Side and Bottom
Case structure	10 mm Insulated Single Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m3/h)	230
Nominal Flow Rate (m3/h)	1520
Efficiency (EN 308)	73%
Efficiency (-5°C OA, 22°C 50%RH RA)	82%
Weight (kg)	265
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-12/+46

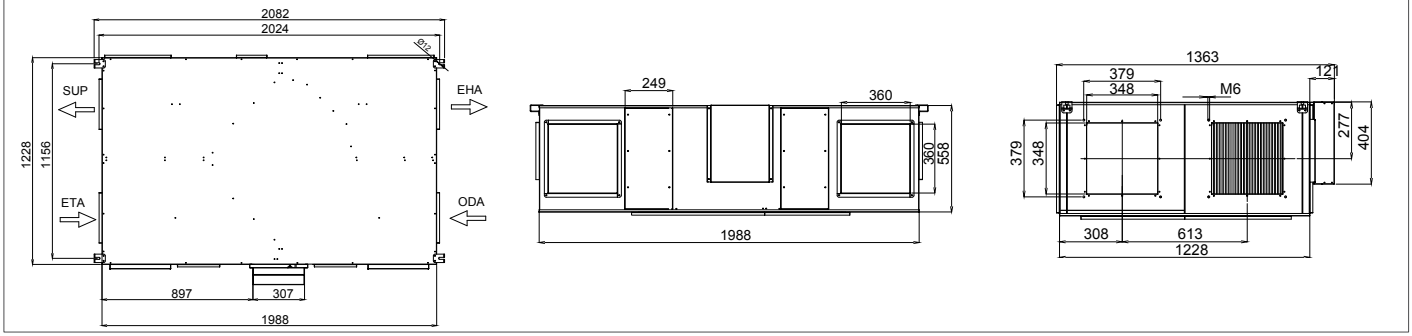
Electrical Informations

Communicating Informations	Modbus RTU
Supply Voltage	230V, 1~, 50 Hz
Total Power (1) (kW)	1,1
Maksimum Current (A)	5,1

Sound Information (2)

Surrounding Sound 3m. Distance (dBA)	54

■ DIMENSIONS [mm]



ACCESSORIES

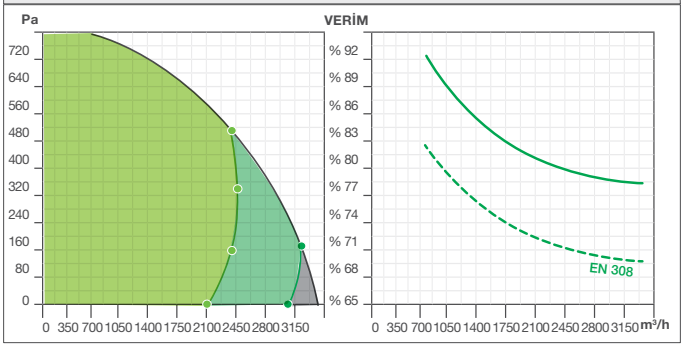
Electric Pre Heater	Optional	External of device	Page 150
Electric After Heater	Optional	Internal of device	Page 150
Water After Heater	Optional	Internal of device	Page 150
Water Cooler	-	-	-
Duct Connection Damper	-	-	
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	Optional	Page 151	
Bulk Siphon	Optional	Page 152	
Room Control Panel Type1	Standard	-	
Room Control Panel Type2	-	-	
Room Control Panel Type3	-	-	
Cloud Connections Right	-	-	
VOD Sensor CO2	Optional	Page 152	
VOD Sensor RH%	Optional	Page 152	
VOD Sensor VOC	Optional	Page 152	
Signal Converter	Optional	Page 153	
Constant Pressure Kit	-	-	

Exhaust Filter Coarse	-	
Exhaust Filter ePM10 50%	Standard	
Fresh Air Filter Coarse	-	
Fresh Air Filter ePM10 50%	-	-
Fresh Air Filter ePM1 55%	Standard	
Fresh Air Filter ePM1 80%	Optional	Page 151

(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 sevice covers located at front and back
(5)	Humidity transfer is possible with the selection of Adsorption Rotor

■ ERP PRO 3200

■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	ERP PRO 3200
Exchanger Type	Aluminum Plate Cross Flow
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor
Installation Position	Horizontal
Service Location	Side and Bottom
Case structure	25 mm Insulated Double Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m3/h)	310
Nominal Flow Rate (m3/h)	2420
Efficiency (EN 308)	73%
Efficiency (-5°C OA, 22°C 50%RH RA)	82%
Weight (kg)	405
According to EN 1886 Case Features	D1/L2/TB4/T4
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-12/+46
Protecting Class	IP 20

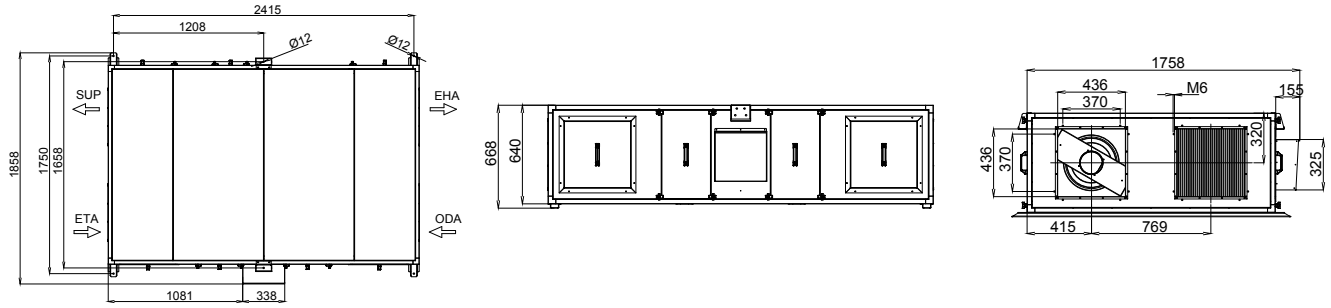
Electrical Informations

Communicating Informations	Modbus RTU
Supply Voltage	230V, 1~, 50 Hz
Total Power (1) (kW)	1,6
Maksimum Current (A)	7,8

Sound Information (2)

Surrounding Sound 3m. Distance (dBA)	52

■ DIMENSIONS [mm]



ACCESSORIES

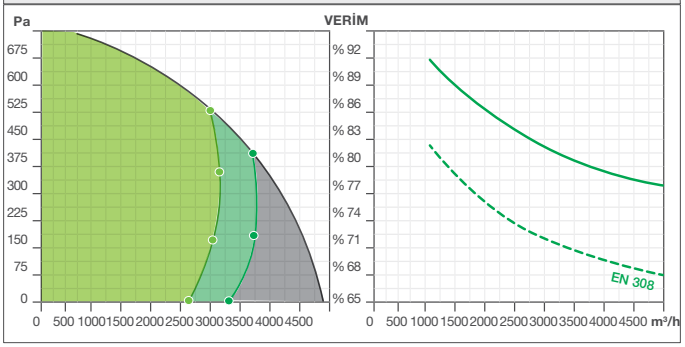
Electric Pre Heater	Optional	External of device	Page 150
Electric After Heater	Optional	Internal of device	Page 150
Water After Heater	Optional	Internal of device	Page 150
Water Cooler	-	-	-
Duct Connection Damper	-	-	
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	Optional	Page 151	
Bulk Siphon	Optional	Page 152	
Room Control Panel Type1	Standard	-	
Room Control Panel Type2	-	-	
Room Control Panel Type3	-	-	
Cloud Connections Right	-	-	
VOD Sensor CO2	Optional	Page 152	
VOD Sensor RH%	Optional	Page 152	
VOD Sensor VOC	Optional	Page 152	
Signal Converter	Optional	Page 153	
Constant Pressure Kit	-	-	

Exhaust Filter Coarse	-	
Exhaust Filter ePM10 50%	Standard	
Fresh Air Filter Coarse	-	
Fresh Air Filter ePM10 50%	-	-
Fresh Air Filter ePM1 55%	Standard	
Fresh Air Filter ePM1 80%	Optional	Page 151

(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 sevice covers located at front and back
(5)	Humidity transfer is possible with the selection of Adsorption Rotor

■ ERP PRO 4200

■ FAN PERFORMANCE CURVES



UNIT INFORMATION

	ERP PRO 4200
Exchanger Type	Aluminum Plate Cross Flow
Fan Type	EC Plug Fan
ERP Compatibility	ERP 2018
Installation	Indoor
Installation Position	Horizontal
Service Location	Side and Bottom
Case structure	25 mm Insulated Double Walled

TECHNICAL INFORMATIONS

Minimum Flow Rate (m3/h)	510
Nominal Flow Rate (m3/h)	2950
Efficiency (EN 308)	73%
Efficiency (-5°C OA, 22°C 50%RH RA)	83%
Weight (kg)	445
According to EN 1886 Case Features	D1/L2/TB4/T4
Fresh Air Filter	ePM1 55% (F7)
Exhaust Filter	ePM10 50% (M5)
Operating Temperature (1) (°C)	-12/+46
Protecting Class	IP 20

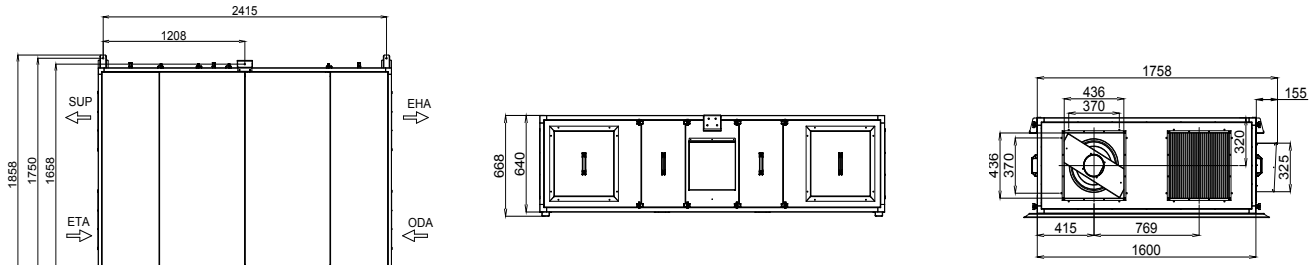
Electrical Informations

Communicating Informations	Modbus RTU
Supply Voltage	400V, 3~, 50 Hz
Total Power (1) (kW)	3
Maksimum Current (A)	4,8

Sound Information (2)

Surrounding Sound 3m. Distance (dBA)	48

■ DIMENSIONS [mm]



ACCESSORIES

Electric Pre Heater	Optional	External of device	Page 150
Electric After Heater	Optional	Internal of device	Page 150
Water After Heater	Optional	Internal of device	Page 150
Water Cooler	-	-	-
Duct Connection Damper	-	-	
Outside Protection Sheet	-	-	
Fresh Air Spigot	-	-	
Exhaust Spigot	-	-	
Drainage Pump	Optional	Page 151	
Bulk Siphon	Optional	Page 152	
Room Control Panel Type1	Standard	-	
Room Control Panel Type2	-	-	
Room Control Panel Type3	-	-	
Cloud Connections Right	-	-	
VOD Sensor CO2	Optional	Page 152	
VOD Sensor RH%	Optional	Page 152	
VOD Sensor VOC	Optional	Page 152	
Signal Converter	Optional	Page 153	
Constant Pressure Kit	-	-	

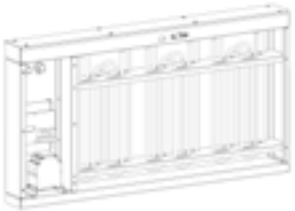
Exhaust Filter Coarse	-	
Exhaust Filter ePM10 50%	Standard	
Fresh Air Filter Coarse	-	
Fresh Air Filter ePM10 50%	-	-
Fresh Air Filter ePM1 55%	Standard	
Fresh Air Filter ePM1 80%	Optional	Page 151

(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 sevice 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
EP-PREH 1200	3	4,2	On/off
EP-PREH 2200	6	8,4	On/off
EP-PREH 3200	7,5	10,5	On/off
EP-PREH 4200	9	12,6	On/off

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
EP-POEH 1200	3	4,2	On/off
EP-POEH 2200	6	8,4	On/off
EP-POEH 3200	7,5	10,5	On/off
EP-POEH 4200	9	12,6	On/off

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
EP-POWH 1200	3	80-60	On/off
EP-POWH 2200	6	80-60	On/off
EP-POWH 3200	7,5	80-60	On/off
EP-POWH 4200	9	80-60	On/off

Drainage Pump

Used when unloading the water occured from condensation at the exchanger or battery cell in the device not possible via the present slope.

Model	Maximum Flow (l/h)	Max Head (m)	Max Suction Height (m)	Energy Supply
DP 01	13	10	1,5	230 V, 50/60 Hz
DP 02	40	10	2	230 V, 50/60 Hz

FILTER

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

Model	Code
Taze Hava Filtresi ePM1 80%	ERP1200FAEPM1-80
	ERP2200FAEPM1-80
	ERP3200FAEPM1-80
	ERP4200FAEPM1-80

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

■BULK SIPHON

Used for disposal of water In the heat recovery sections, the result of condensation at the exhaust air or the result of condensation at the cooking batteries. Can operate in both positive negative pressure.

Model
SIPH

■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 arrenged 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	-	-

■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

AERA iKLiMLENDiRME TEKNOLOJiLERi SAN. VE TiC. AŞ
SALES OFFICE Varyap Meridian, Grand Tower A Blok No:130 Ataşehir, İSTANBUL - TR
TEL +90 216 504 76 86 FAX +90 216 504 76 90
FACTORY 3. Cadde No:13 Pancar OSB, Torbalı, İzmir - TR
TEL +90 232 799 0 111 FAX +90 232 799 01 14 E-MAIL info@aera.com.tr
R&D CENTER 3. Cadde No:13 Pancar OSB, Torbalı, İzmir - TR

AERA
air innovation