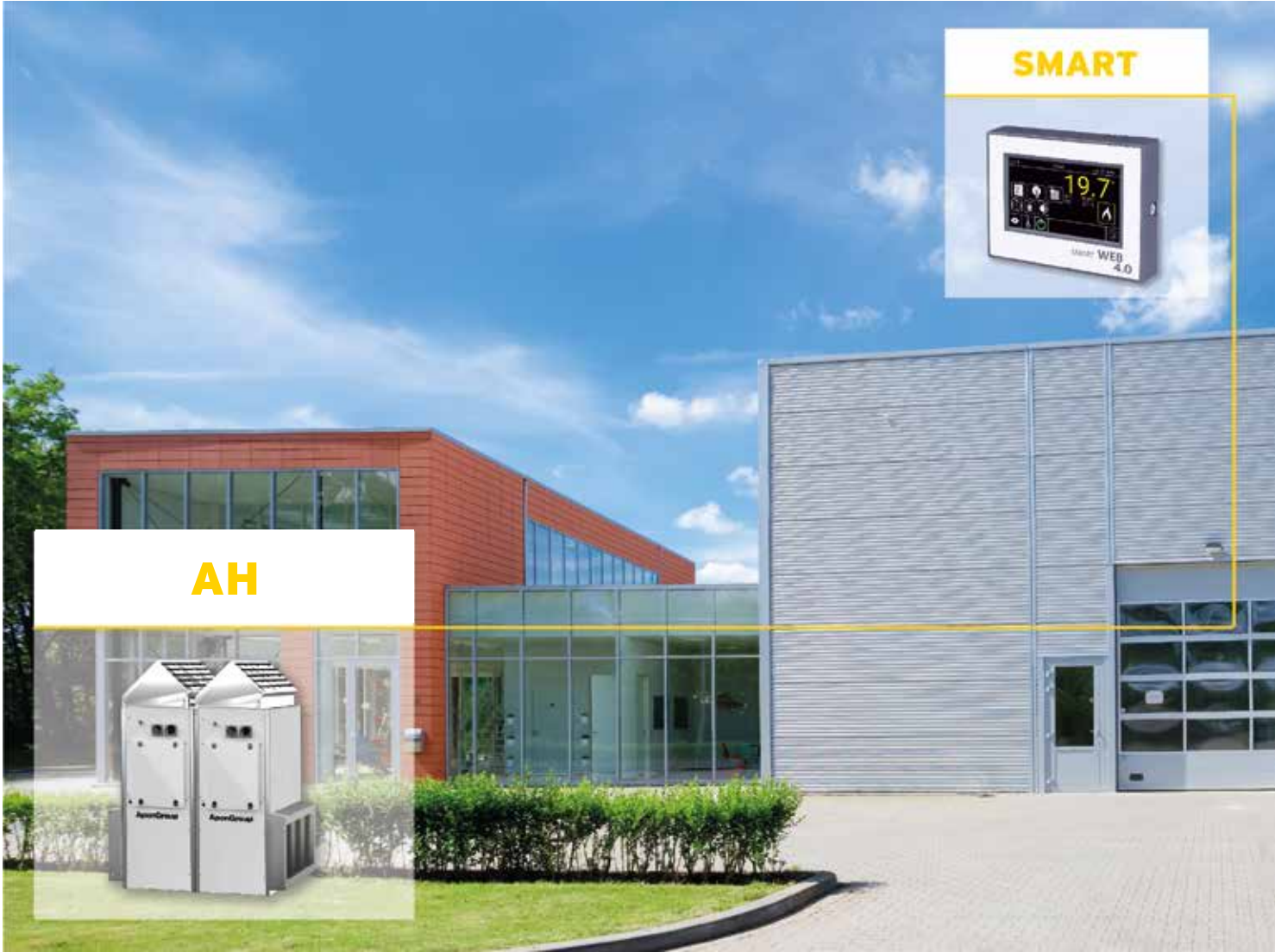


# ApenGroup®



**AH**

**SMART**



AH  
Heating and Ventilation Units

**ApenGroup®**

# AH

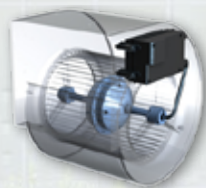
## HEATING AND VENTILATION UNITS



**SMARTWEB  
SUPPLIED  
AS STANDARD**



**DDMP FANS  
INVERTER SUPPLIED AS  
STANDARD**



**ErP  
2021**



# AH SERIES

## Heating and ventilation units

### AH SERIES, HEATING AND VENTILATION UNITS

AH is a condensing direct exchange heating unit with modulating premixed burner.

The project, which is the result of Apen Group's technology and experience in the treatment of hot air, was carried out with the aim of obtaining a product of the highest quality in terms of efficiency, energy savings and respect for the environment.

### INNOVATION AND TECHNOLOGY

The heart of the AH modular units is represented by the stainless steel heat exchanger with the integrated modulating premixed gas burner with very low polluting emissions, which allows to reach efficiencies of 109%.

### FIELDS OF APPLICATION

- Places of worship
- Industries
- Facilities
- Depots
- Warehouses
- Logistics
- Labs
- Garages
- Body shops
- Shopping malls
- Offices
- Farms
- Greenhouses

### RANGE AVAILABILITY

Depending on size and space, a wide range of models from 105 kW to 420 kW is available. The units can be installed both inside and outside the rooms to be heated.

### GUARANTEED SAVINGS

Efficiency and savings on consumption are obtained thanks to DDMP fans with integrated high-efficiency inverter that manage air movement by reducing noise.

### SIMPLE INSTALLATION

The small size and modularity of the product allow for easy installation, simplifying the replacement of old systems, even in particularly small and difficult to access spaces, without the need for demolition or masonry work.

### VERSATILITY

Many accessories complete the product's system: filters, silencers, regulation shutters, fire shutters on both supply and return lines, rain shutters, mixing boxes, vibration joints and temperature probes.

### CERTIFIED QUALITY

The AH heating unit is manufactured in accordance with UNI, UNICIG and CEI technical standards and certified by the Kiwa-Gastec approval body in accordance with the Gas Appliances Regulation 2016/426/EU.

### HIGH QUALITY MATERIALS

The combustion chamber and the air-flue gas heat exchanger are entirely made of AISI 441 stainless steel with low carbon content to guarantee high reliability and long life.

### ECODESIGN ErP 2021 CONFORMITY

AH modular units comply with the ECODESIGN ErP 2021 regulation.

# AH SERIES

## TECHNICAL FEATURES

- Efficiency up to 108%.
- Available in 7 ranges of powers: 34 kW, 65 kW and 105 kW in the monobloc version, and 160 kW, 210 kW, 320 kW and 420 kW in the multiple modular version.
- Combustion chamber in AISI 441 stainless steel, heat exchanger tubes and flue gas collection box in AISI 441 stainless steel with low carbon content.
- Modulating premixed gas burner with low NOx emission in class 5 in accordance with EN 17082 2019.
- Electronic board with continuous power modulation controlled by microprocessor, which allows energy savings up to 50%. Management and signalling of faults, ignition, switching off and modulation of the burner(s).
- It operates in conjunction with the SmartWeb chronothermostat via Modbus connection.
- The SmartWeb chronothermostat can be installed either on board the machine or remotely in the room, with the possibility of installing up to 3 remote probes in addition to the one on board the machine to manage a single zone. Ethernet connection with possibility of remote control via browser and http address.
- The unit switch-on and switch-off depend on the heat demand.
- Variable air flow rate.
- Modulating temperature regulation with PID control on both the ambient temperature and the flow temperature.
- DDMP fans with integrated high efficiency inverter.
- Safety thermostat and condensate detection electrode.
- 230/1P/ 50Hz (34kW) power supply, 400V/3P/50Hz for all other models.
- Suitable for both indoor and outdoor installation.

## STANDARD ACCESSORIES

- SMARTWEB remote control with the function of a stand-alone chronothermostat.
- LPG conversion kit.
- Condensate collection siphon kit.

## ACCESSORIES UPON REQUEST

- Outdoor installation with optional roof.





## OUR RANGE

8 models from 34 to 420 kW.

- 34 kW
- 65 kW
- 105 kW
- 160 kW
- 210 kW
- 250 kW
- 320 kW
- 420 kW

## EASY INSTALLATION

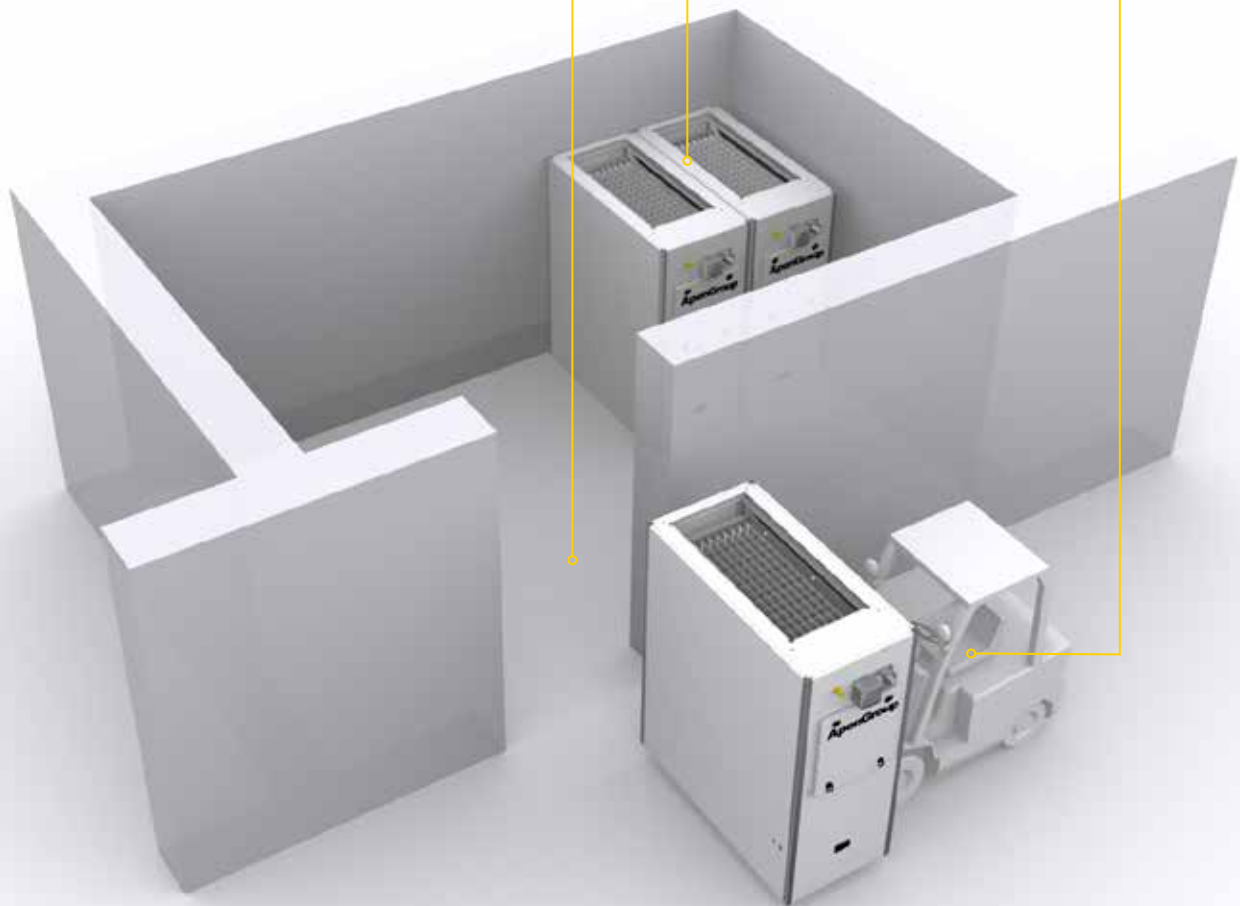
The small dimensions and modularity of the product allow it to be used even in particularly small spaces without the need for demolition or masonry work.

## MODULARITY

- Efficiency up to 108%
- Possibility to couple single modules and increase the potential.

## EASY HANDLING

Possibility of modular installation of the product with reduction of handling, transport and positioning costs.



# AH SERIES

## SMARTWEB CONTROL

The Apen Group remote control of the new SmartWeb series acts as a stand-alone chronothermostat and can be used to control multiple types of systems. Connection via 4 polarised cables is very simple. Installation can be built-in or flush with the wall.

It is possible to install up to three remote probes in addition to the one on board the control. The controls are easy to use thanks to a 4.3" colour display and a very intuitive management menu. The user program is multilingual (9 languages).

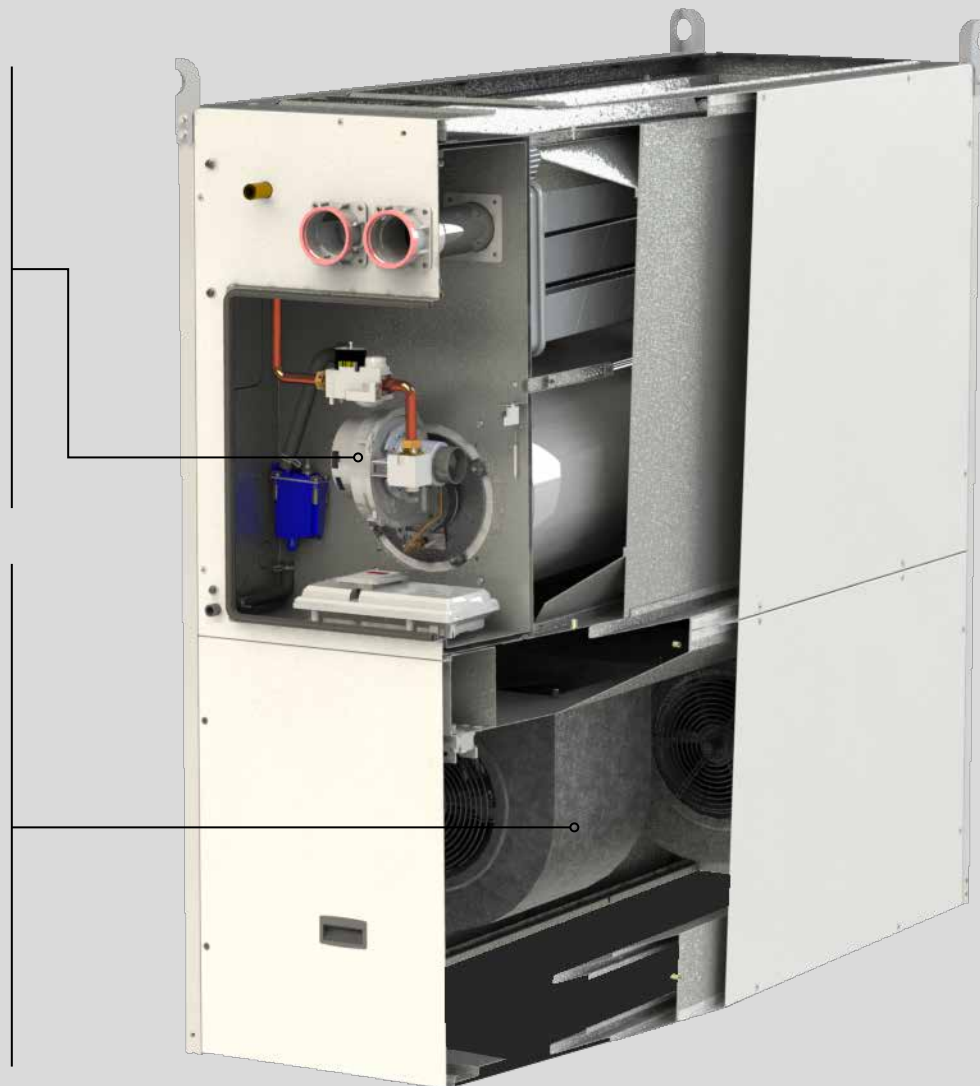
The simplicity of connection, the clear and intuitive management menu and the possibility of reading up to 4 temperature points within the controlled zone make these chronothermostats versatile and suitable for different needs and types of system.



## AH UNIT COMPOSITION

AH units are supplied complete with Apen Group integrated modulating premixed burner. The premixed burner guarantees very low NOx and CO2 emissions and zero CO emissions, thanks to the high combustion efficiency (108%) and the reduction in fuel consumption resulting from the modulation of the heat output.

DDMP direct drive centrifugal fans are equipped with high efficiency EC motors and are more compact. The EC motor, with integrated inverter, has no slip losses and uses less energy than a conventional AC motor under all operating conditions (including partial load operation), making it significantly more efficient and economical.

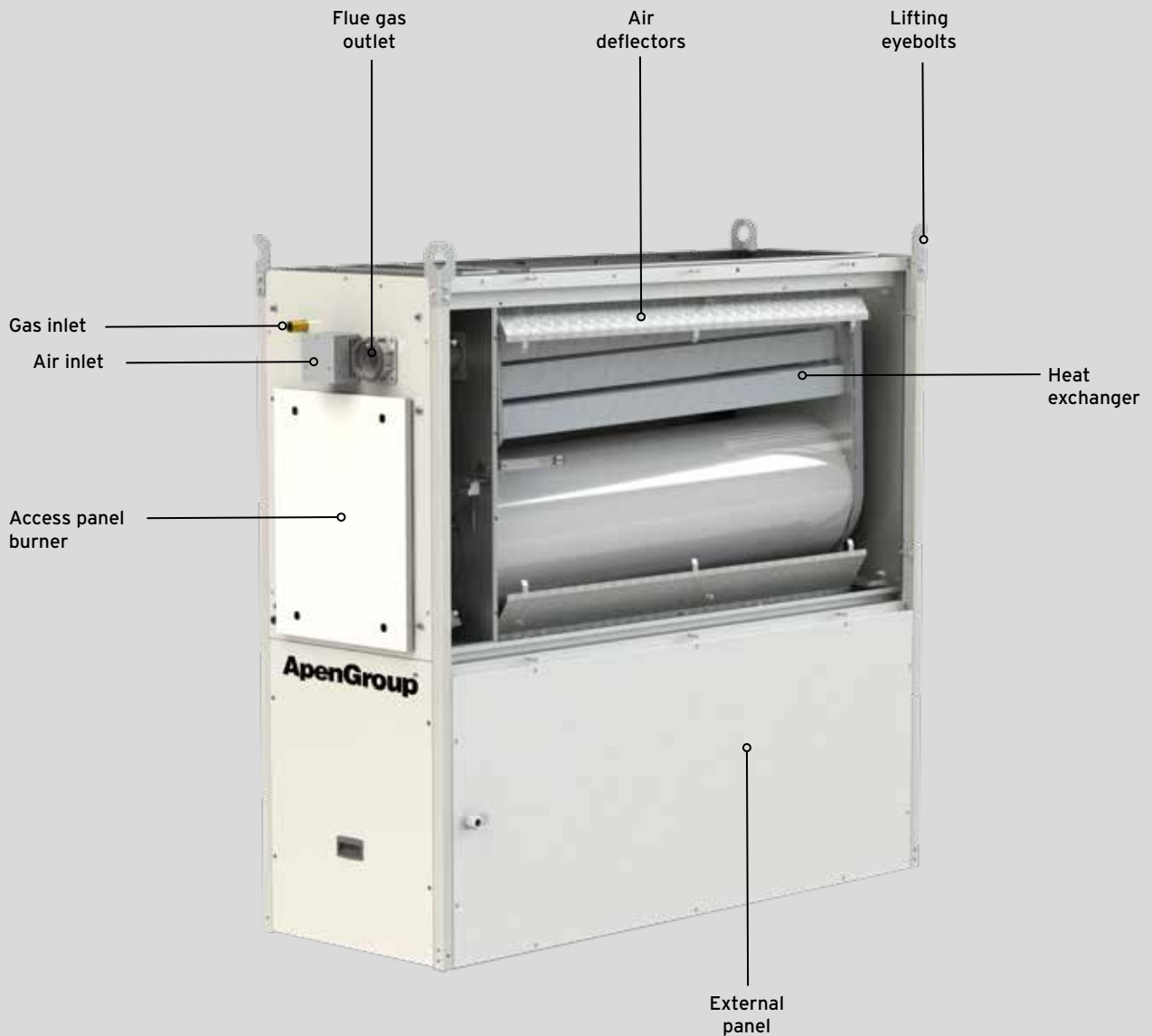


## EASY INSTALLATION

Easier installation for the technician.  
IT IS sufficient to connect the gas line and the power supply.

## HIGH-EFFICIENCY HEAT EXCHANGER

AH modular units integrate an advanced heat exchanger technology (built by robotic welding process) in high quality AISI 441 stainless steel with corrosion resistance, with longer lifetime that reduces life cycle costs.



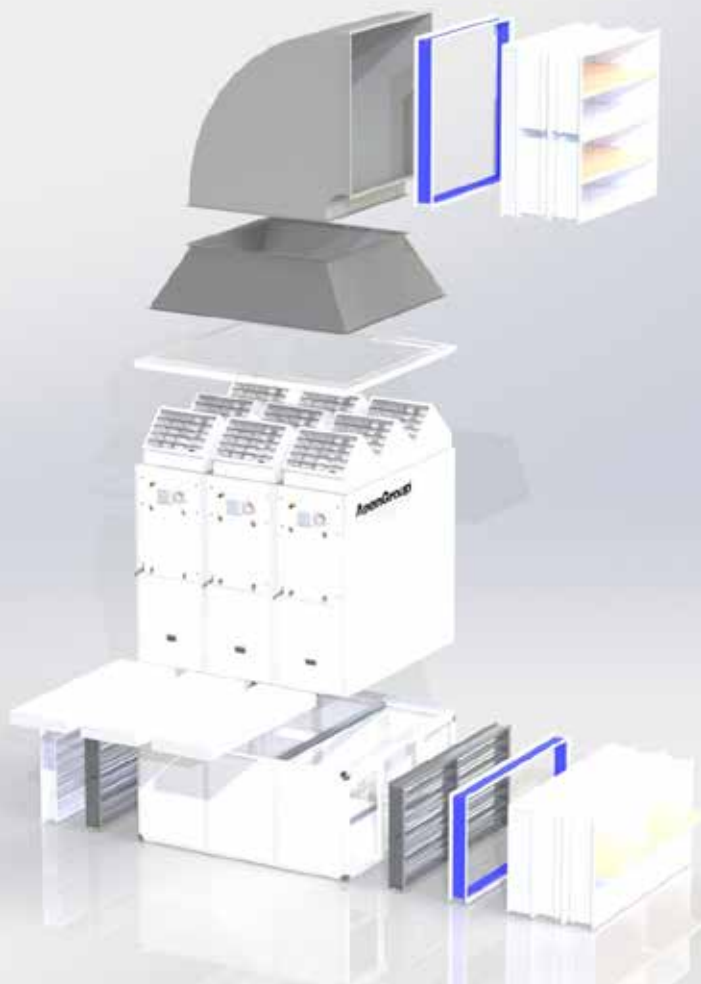




## ACCESSORIES - HORIZONTAL MULTIPLE AH UNIT



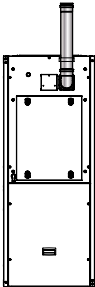
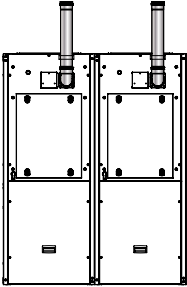
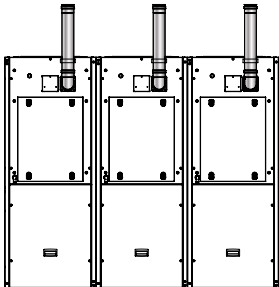
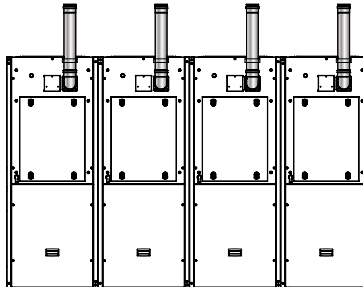
## ACCESSORIES - VERTICAL MULTIPLE AH UNIT



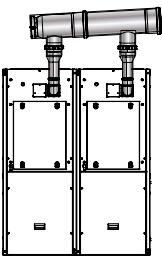
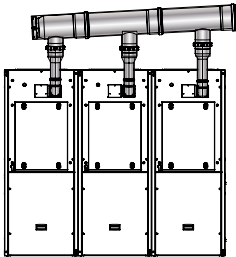
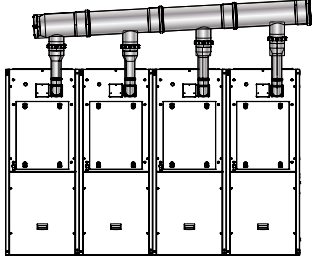
# VERTICAL VERSION AH SERIES / TECHNICAL DATA

Code	Air flow rate m³/h	Available Pressure Pa	Useful Heat Output		Efficiency		Motor kW
			min (kW)	max (kW)	min (%)	max (%)	
AH034IT-01V0	3210	190	8.13	33.56	106.97	96.3	1x 0.8 kW
AH034IT-02V0	3210	560	8.13	33.56	106.97	96.3	1x 2.0 kW
AH065IT-01V0	6010	380	13.4	62.93	108.06	96.82	2x 0.8 kW
AH065IT-02V0	6010	740	13.4	62.93	108.06	96.82	2x 2.0 kW
AH105IT-01V0	7500	100	22.77	97.15	108.4	97.15	2x 0.8 kW
AH105IT-02V0	9280	190	22.77	97.15	108.4	97.15	2x 2.0 kW
AH160IT-01V0	14000	100	2x 17.77	2x 80.03	108.35	97.6	4x 0.8 kW
AH160IT-02V0	15300	355	2x 17.77	2x 80.03	108.35	97.6	4x 2.0 kW
AH210IT-01V0	15000	100	2x 22.77	2x 97.15	108.4	97.15	4x 0.8 kW
AH210IT-02V0	18560	190	2x 22.77	2x 97.15	108.4	97.15	4x 2.0 kW
AH320IT-01V0	22500	100	3x 22.77	3x 97.15	108.4	97.15	6x 0.8 kW
AH320IT-02V0	27840	190	3x 22.77	3x 97.15	108.4	97.15	6x 2.0 kW
AH420IT-01V0	30000	100	4x 22.77	4x 97.15	108.4	97.15	8x 0.8 kW
AH420IT-02V0	37120	190	4x 22.77	4x 97.15	108.4	97.15	8x 2.0 kW

## INDEPENDENT FLUE GAS OUTLET KIT FOR VERTICAL ALUMINIUM VERSIONS

Model	Model	Model	Model	
AH034 / 065 / 105	AH 160 / 210	AH 320	AH 420	
				
Kit code	Description	Diameter	AH unit model	Kit number to order
G18165-105	Independent flue gas outlet kit, for single module	Ø 80 mm	For models 034 / 065 / 105	1 x G18165-105
			For models 160 / 210	2 x G18165-105
			For model 320	3 x G18165-105
			For model 420	4 x G18165-105

## COMMON FLUE GAS OUTLET KIT FOR VERTICAL VERSIONS IN AISI 316L STEEL

Model	Model	Model	
AH 160 / 210	AH 320	AH 420	
			
Kit code	AH unit model	Description	Diameter
G22175-210	For model 160 / 210	Common flue gas outlet kit	Ø 200 mm
G22175-320	For model 320	Common flue gas outlet kit	Ø 200 mm
G22175-420*	For model 420	Common flue gas outlet kit	Ø 250 mm

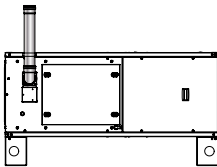
\* The kit includes: concentric adapter (Ø 200/250 mm); extension L 1000 mm (Ø 250 mm), swing check valve for each module, closing cap with siphon.

# HORIZONTAL VERSION AH SERIES / TECHNICAL DATA

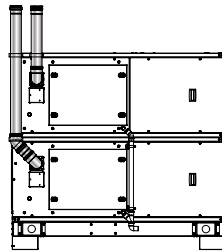
Code	Air flow rate m <sup>3</sup> /h	Available Pressure Pa	Useful Heat Output		Efficiency		Motor kW
			min (kW)	max (kW)	min (%)	max (%)	
AH034IT-01HO	3210	190	8.13	33.56	106.97	96.3	1x 0.8 kW
AH034IT-02HO	3210	560	8.13	33.56	106.97	96.3	1x 2.0 kW
AH065IT-01HO	6010	380	13.4	62.93	108.06	96.82	2x 0.8 kW
AH065IT-02HO	6010	740	13.4	62.93	108.06	96.82	2x 2.0 kW
AH105IT-01HO	7500	100	22.77	97.15	108.4	97.15	2x 0.8 kW
AH105IT-02HO	9280	190	22.77	97.15	108.4	97.15	2x 2.0 kW
AH160IT-01HO	14000	100	2x 17.77	2x 80.03	108.35	97.6	4x 0.8 kW
AH160IT-02HO	15300	355	2x 17.77	2x 80.03	108.35	97.6	4x 2.0 kW
AH210IT-01HO	15000	100	2x 22.77	2x 97.15	108.4	97.15	4x 0.8 kW
AH210IT-02HO	18560	190	2x 22.77	2x 97.15	108.4	97.15	4x 2.0 kW
AH320IT-01HO	22500	100	3x 22.77	3x 97.15	108.4	97.15	6x 0.8 kW
AH320IT-02HO	27840	190	3x 22.77	3x 97.15	108.4	97.15	6x 2.0 kW
AH420IT-01HO	30000	100	4x 22.77	4x 97.15	108.4	97.15	8x 0.8 kW
AH420IT-02HO	37120	190	4x 22.77	4x 97.15	108.4	97.15	8x 2.0 kW

## INDEPENDENT FLUE GAS OUTLET KIT FOR HORIZONTAL ALUMINIUM VERSIONS

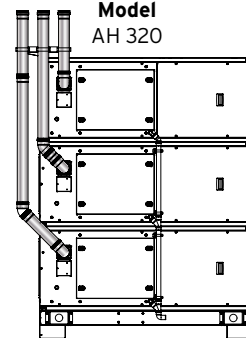
**Model**  
AH 034 / 065 / 105



**Model**  
AH 160 / 210



**Model**  
AH 320



### Kit code

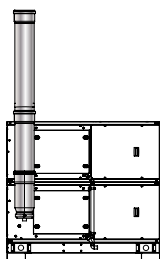
### AH unit model

### Description

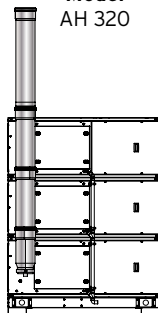
G18165-105	For model 034 / 065 / 105	Independent flue gas outlet kit - Ø 80 mm
G18165-210-P0	For model 160 / 210	Independent flue gas outlet kit - Ø 80 mm
G18165-320-P0	For model 320	Common flue gas outlet kit - Ø 80 mm
	For model 420	NOT INCLUDED

## COMMON FLUE GAS OUTLET KIT FOR HORIZONTAL VERSIONS IN AISI 316L STEEL

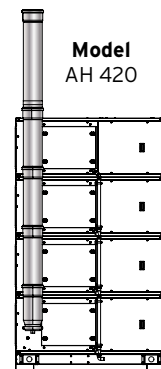
**Model**  
AH 160 / 210



**Model**  
AH 320



**Model**  
AH 420



### Kit code

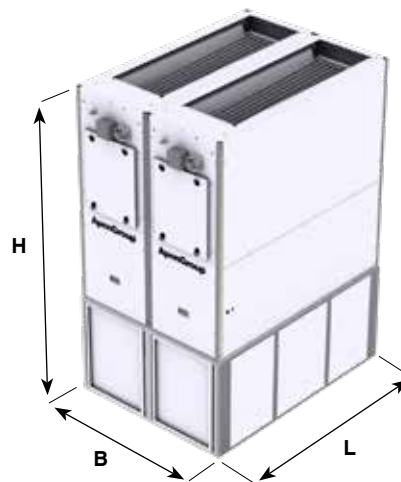
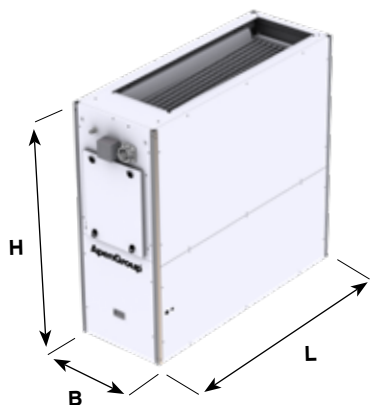
### AH unit model

### Description

G22155-210-P0	For model 160 / 210	Common flue gas outlet kit - Ø 200 mm
G22155-320-P0	For modello320	Common flue gas outlet kit - Ø 200 mm
G22155-420-P0*	For modello420	Common flue gas outlet kit - Ø 250 mm

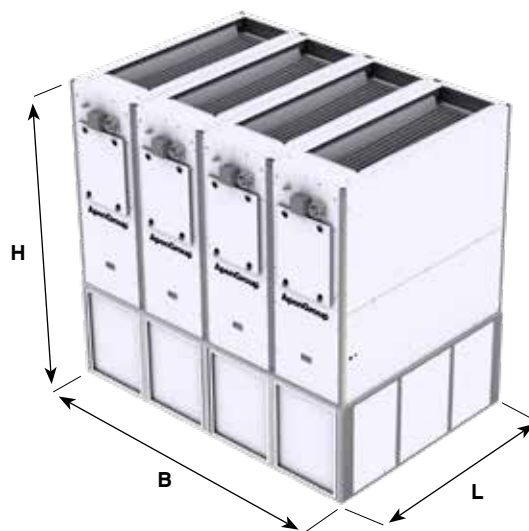
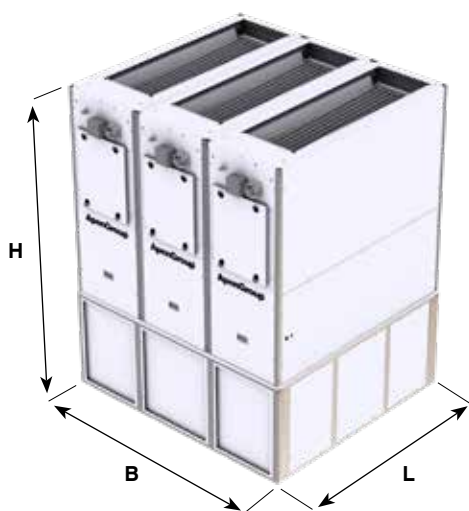
\* The kit includes: concentric adapter (Ø 200/250 mm); curve 90° (Ø 250 mm); extension L 1000 mm (Ø 250 mm), swing check valve for each module, closing cap with siphon.

# VERTICAL AH UNITS / DIMENSIONS



Model	L cm	B cm	H cm	Weight kg
AH034IT-0xV0	977	625	1495	190
AH065IT-0xV0	1277	625	1495	220
AH105IT-0xV0	1698	625	1580	280

Model	L cm	B cm	H cm	Weight kg
AH160IT-0xV0	1698	1250	2330	560
AH210IT-0xV0	1698	1250	2330	560

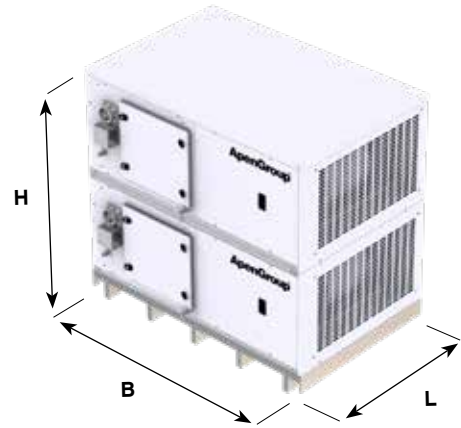
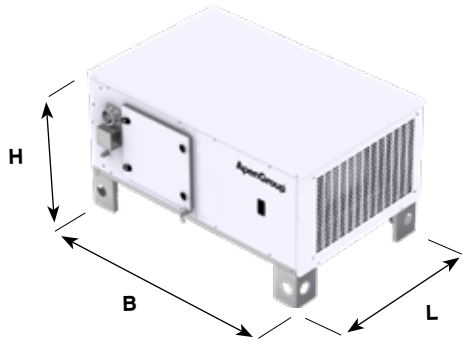


Model	L cm	B cm	H cm	Weight kg
AH320IT-0xV0	1698	1875	2460	840

Model	L cm	B cm	H cm	Weight kg
AH420IT-0xV0	1698	2500	2460	1120

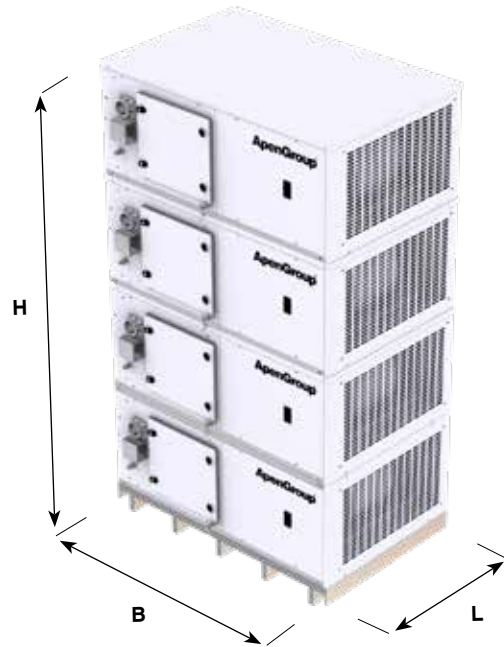
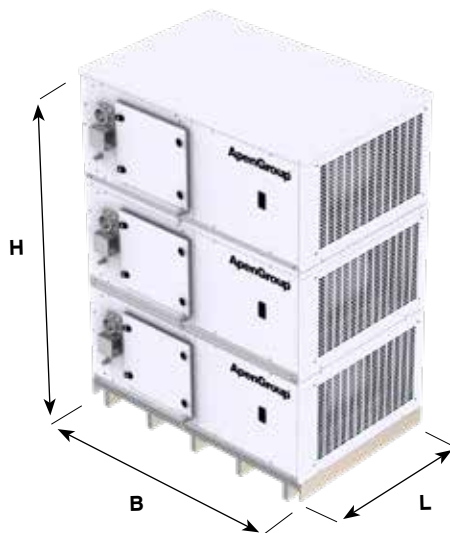


# HORIZONTAL AH UNITS / DIMENSIONS



Model	L cm	B cm	H cm	Weight kg
AH034IT-0xH0	977	1520	840	190
AH065IT-0xH0	1277	1520	840	220
AH105IT-0xH0	1698	1605	840	280

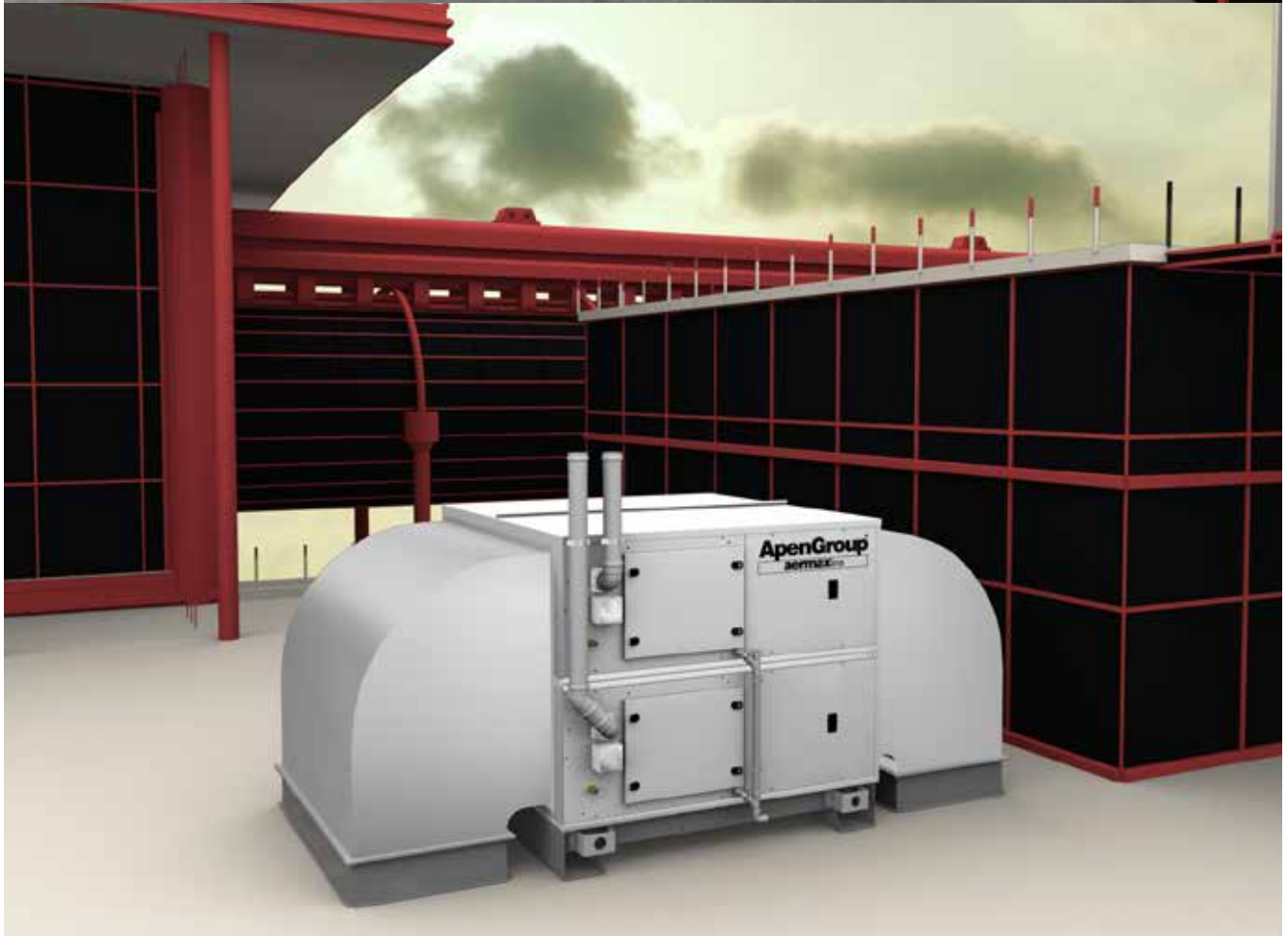
Model	L cm	B cm	H cm	Weight kg
AH160IT-0xH0*	1698	1605	1460	560
AH210IT-0xH0*	1698	1605	1460	560



Model	L cm	B cm	H cm	Weight kg
AH320IT-0xH0*	1698	1605	2085	840

Model	L cm	B cm	H cm	Weight kg
AH420IT-0xH0*	1698	1605	2710	1120

\* Supplied with steel base.



# SMART SYSTEM REMOTE CHRONOTHERMOSTATS

## SMARTEASY AND SMARTWEB CONTROLS

Being touch-screen chronothermostats, the Apen Group SmartEasy and SmartWeb control all Apen Group products, guaranteeing operation with maximum efficiency and minimum energy consumption.

These user-friendly controls allow a wide choice of adjustments and a clear reading of the operating parameters as well as the resolution of any technical interventions.



### GUARANTEED EFFICIENCY



### ADVANCED ELECTRONICS



### HEATING AND VENTILATION UNITS



### SIMPLE INSTALLATION

Connection via 2 power cables and 2 modbus cables is very simple. Installation can be built-in or flush with the wall.

### TOUCH SCREEN TECHNOLOGY

The controls are easy to use thanks to a 4.3" colour TFT display and a very intuitive management menu. The user program is multilingual (9 languages).

### MULTITASKING CONTROL

It acts as a stand-alone chronothermostat and can be used by one to a maximum of 32 machines simultaneously.

### SMARTWEB

With the SmartWeb version (through the connection to an intranet network) it is possible to carry out the complete management of the plant remotely via browser on a computer or via http address.

### CONTROL VERSATILITY

IT is possible to install up to 3 remote probes in addition to the one on board the control.

### FAN MODE

Ventilation mode management for combination of AX-EC water fan heaters with AKY boilers.



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Code X01673GB ed.2204

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