



AQUAPUMP HYBRID Outdoor monobloc unit

ApenGroup®

RESEARCH, ECOLOGY AND ENERGY SAVING

OVERVIEW

APEN GROUP S.p.A. is a leading manufacturer of heating systems, and offers a wide range of products: condensing boilers, condensing heat exchangers, suspended warm air heaters, and floor standing condensing warm air heaters.

Apem Group has always been an innovation leader thanks to constant product and process development, and continuous research of advanced solutions in technology.

OUR VISION

We consider 'caring for the environment' (environment, persons, relationships, cooperation) our way towards the excellence.

OUR MISSION

Designing, manufacturing and marketing of HVAC products that stand out for their quality and for their compliance with environmental standards. Our R&D staff is deeply committed to the setup of products that assure low polluting emissions, high efficiency and minimum consumption, thereby assuring optimum heating and conditioning, from small residential spaces to large industrial buildings.

A LEADING COMPANY

Our modern facility is built on an area of 30,000 sqm, 11,000 of which encompass headquarters, manufacturing and research facilities. Easy and timely intercompany communication is provided through an IBM AS400 server with a fully integrated Server Windows NT PC network.

The website www.apengroup.com and e-mail apen@apengroup.com, allow to communicate easily with all entities outside the company (eg. Customers, suppliers, associations).

CUSTOMER SERVICE

To be truly customer-oriented, a service must satisfy custom's requests from the clients.

APEN GROUP can meet any project need by developing custom products. Its flexibility in the manufacturing process and the availability of state-of-the-art machinery for metal sheet processing guarantee cost effective products.

Cost effectiveness is another basic characteristic of APEN GROUP products, besides a high potential for technology, commercial and industrial development.

TECHNOLOGY EXCELLENCE

A qualified team of engineers and researchers, these committees for the development of standards UNICIG, researches and develops products using CAD computer systems, translating into production the best that you obtained from the research, studying cutting-edge technical and manufacturing solutions.

ENVIRONMENT

Environment protection is essential for present and next generations' quality of life.

Apem Group's challenge is investing in research and development activities which grant the design and the production of environment friendly products.

Such a concern is well resumed in the current slogan "Apem Group caring for environment" and it involves all the company organization: from research of suppliers and partners who share this same goal, to staff personnel, natural source optimization and definition of any prevention control and correction so to respect the fixed quality goals and environment deference.

MANUFACTURING EXCELLENCE

Each product is tested, checked, and commissioned to guarantee that combustion parameters, efficiency levels, and component reliability fully comply with quality standards required for user comfort and satisfaction.

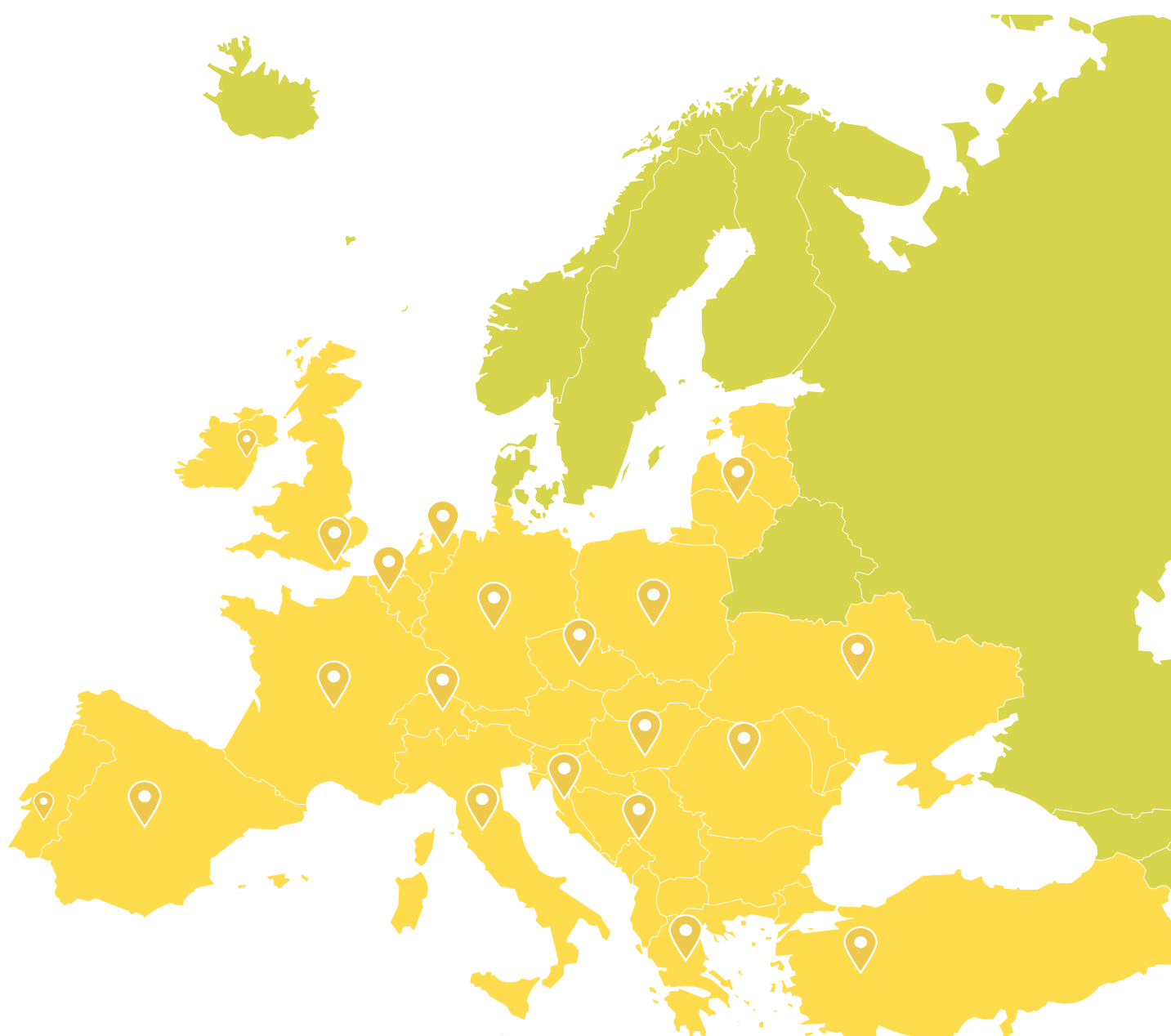
The manufacturing of our products takes advantage of ultimate, state-of-the-art planning and organization methods, which include: Digital control equipment. Welding robots. Forming robots. Computer assisted test lines. Advanced automation assures top-quality products as well as manufacturing flexibility and timely deliveries. Innovation, reliability, and originality are built-in features of each of our products.


SALES EFFICIENCY

Apem Group operates nationally and internationally: it is present in Italy thanks to an efficient and well distributed organization: professional agents, consultants, engineers and designers are ready to match the demands of customers always and everywhere.

Abroad, distributors, dealers, joint ventures with foreign partners, share with the company the principles of distribution of highly qualified equipment in relation to the needs of different countries.

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 ApenGroup has an international presence. Contact us at **export@apengroup.it** to get our distributor's name in your country, or to become our partner.

HISTORY

1967

THE ORIGINS: THERMOVÜR

The company - founded under the name Thermovür - began its great adventure with the production and sale of oil and gas burners. The founding partners are two brothers-in-law having the same name - Angelo Rigamonti - with the assistance and great professionalism of their father/father-in-law Emilio Rigamonti.

1973

AERMAX

Thermovür is supported by the company AERMAX for the marketing of floor-standing warm air heaters and burners, particularly for the foreign market.

1980'S

EXPERIENCE AND KNOW-HOW

The heating sector is evolving rapidly, the building boom and the need to keep everyone warm leads to the need for new and different products: floor-standing boilers, wall-hung boilers, gas burners, gas-fired wall-mounted warm air heaters, gas radiators.

1991

APEN GROUP IS BORN

The two companies create a single company, which will benefit from the wealth of knowledge of the two brands and the know-how now internalised by the company: APEN GROUP SPA is born, a group of companies for new energies. Apen Group today.

2000'S

NEW PROJECTS, NEW PRODUCTS

In 2008, confirmation of the company's technical capabilities in the field of air conditioning was confirmed by the introduction on the market of the Kondensa product (condensing warm air heater), air handling units and RoofTop monobloc machines with built-in condensing heat exchanger.

2017

50 YEARS OF LOVE FOR THE CLIMATE!

We are proud to have celebrated our first 50 years in business. In the book "La storia siamo Noi" (We are history), we have recounted the main events that have marked the most important milestones which have made us grow in terms of competence and technological know-how in the heating sector. A continuous evolution, because progress is a never ending process.



ApenGroup

2025

RESEARCH, INNOVATION AND ECOLOGY

We are always evolving. The market, the experiences, the difficulties have made us stronger and more committed to facing new challenges, new technologies, new countries. We want to defend the values we believe in to be able to improve environmental comfort, attention to people and the use of energy. We also want our company to contribute to a better future!

CERTIFIED QUALITY

APEN GROUP S.p.A. ranges among the first Italian companies to be certified by an industry- wide acknowledging system at European level. We have been audited and certified to be in compliance with the quality standards defined in UNI EN ISO 9001:2015 protocol.

Certification has been obtained for the design, manufacturing, marketing and service of hybrid systems, of warm air heaters, condensation heaters and exchangers, condensing boilers, water fan units, air destratifiers, air handling central units, and burners. The commitment to quality took by the company dates back to the beginning of our history, and it is confirmed by the following milestones:

In 1988 APEN GROUP was certified by DVGW Deutscher Verein Des Gas Und Wasserfaches E.V. and it was approved as a trading partner for suspended heaters in Germany. Then approvals for the sale of these heaters in other markets followed, such as France, Switzerland, the Netherlands, and Belgium.

In 1995 all the gas-fired appliances we manufacture were certified according to EC Directives.

In 1991 we were the first Italian company in the HVAC industry to be registered in accordance with UNI EN ISO 9003 requirements. In 1993 the auditing was extended to include compliance with UNI EN ISO 9002 standards.

In 2003, we were acknowledged to be compliant with UNI EN ISO 9001:2000, and the registration was confirmed in 2006.

In 2013 the Board of Directors has adopted the organizational model 231.

In 2017 we obtained the certification in compliance with the UNI EN ISO 9001:2015.

INTERNATIONAL CERTIFICATES

Apén Group's products have been tested and certified by Gastec-Kiwa CERMET, the famous Dutch Notified Body, with test labs accredited by the EC.



AQUAPUMP HYBRID

OUTDOOR MONOBLOC UNIT
ELECTRIC HEAT PUMP + GAS BOILER



**NEW:
GAS R32**

**SMART X EASY
OR SMART X WEB**



**ELECTRONIC
WATER FAN HEATERS**



CLASS A++



AQUAPUMP HYBRID, INTEGRATED HEAT PUMP AND CONDENSING BOILER

AquaPump Hybrid is an outdoor monobloc unit designed to produce hot and cold water using renewable energy. It is a hybrid system in one product, the only one on the market in a one-package configuration.

Particular attention has been paid to:

- The environment, guaranteeing very low polluting emissions.
- Savings thanks to high efficiency and low energy consumption.
- Design, where originality and reliability become product standards.

It always ensures optimal heating and air conditioning standards in any type of environment.

RENEWABLE ENERGIES AND ENERGY SAVING

The key factor in the development of the AquaPump Hybrid project was the study of an integrated control system capable of independently managing the operation of the heat pump or the boiler, as stand-alone units, or both at the same time in order to generate energy savings and cost-effectiveness, maximising the use of renewable energy. The system adjustment flexibility allows using this technology both for high temperature and medium or low temperature systems.

FIELDS OF APPLICATION

- Labs
- Public buildings
- Offices
- Supermarkets
- Restaurants
- Bar
- Shopping malls
- Shops and Showrooms
- Gyms

AQUAPUMP HYBRID

Outdoor monobloc unit
electronic heat pump + gas boiler

A++ CLASS

The A++ energy class, as per 811/2013 ECOLABEL EU regulation, derives from the sum of the efficiencies of the latest generation condensing boiler, the heat pump with inverter and the SMART X WEB intelligent control. The final label highlights the overall performance of the system.

HYBRID SYSTEM AND ELECTRONIC FAN HEATER

In case of high temperature systems, an AB fan heater has been designed to be matched with a Hybrid system characterised by high exchange surfaces with high efficiency batteries, double fan with automatic speed control, direct current brushless motor and condensate collection tray for use in cooling operation.

SMART OPERATION WITH INTELLIGENT CONTROL

The system, condensing boiler and hydronic heat pump with inverter (already assembled electrically and hydraulically with refrigerant circuit R32, closed and tested), is managed by SMART X EASY or SMART X WEB control. The touch-screen controls act as a stand-alone chronothermostat.

SMALL DIMENSIONS FOR HIGH POWER

The entire monobloc system (boiler + heat pump) has the same dimensions as a heat pump, the inverter technology and the new generation of compressors and fans, the result of the latest research of the global manufacturers of these components, allows to reach new levels of noiselessness.

PLUG AND PLAY INSTALLATION

The AquaPump Hybrid is a plug and play product with integrated regulation. The installer is aided in his installation work by a system that is already assembled, adjusted and with the values already set.

All that is required is the hydraulic connection of the water supply and return to the system, the connection of the gas line and that of the power supply. And then you can plug it in.



AQUAPUMP HYBRID

TECHNICAL FEATURES

CONDENSING BOILER

- Premixed burner with low NO_x polluting emissions, class 6 according to EN15502-1.
- Low carbon stainless steel heat exchanger.
- Electronic equipment and microprocessor with self-testing that manages all burner control and verification operations.
- CE approval in accordance with product directives.

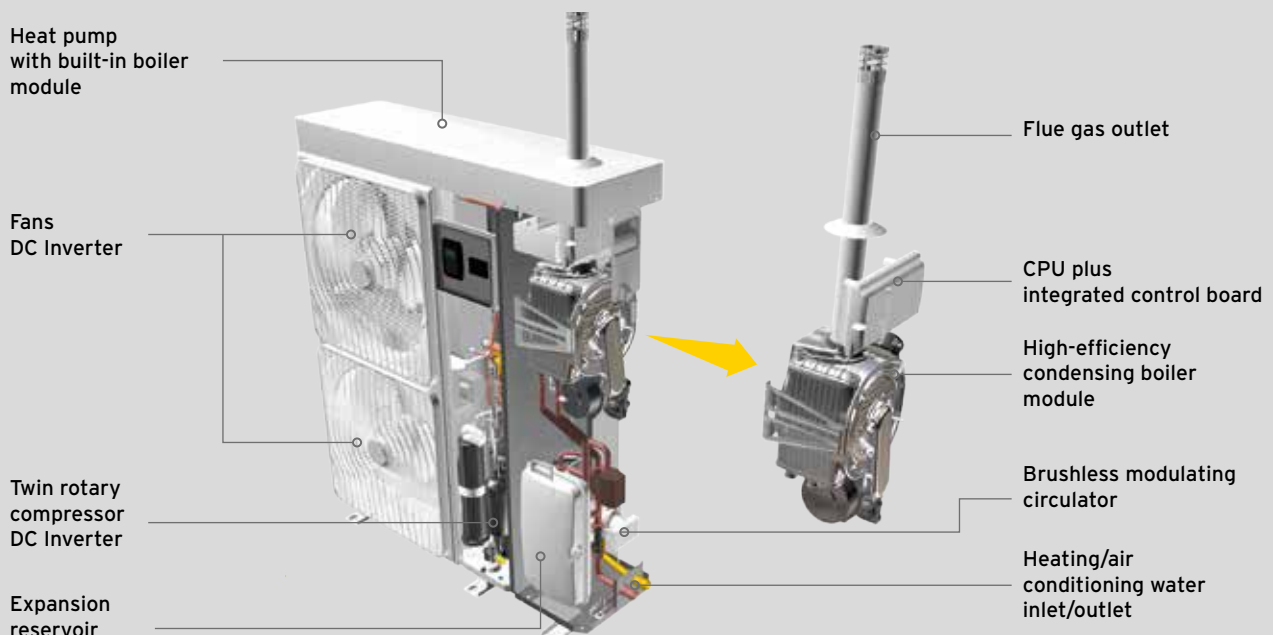
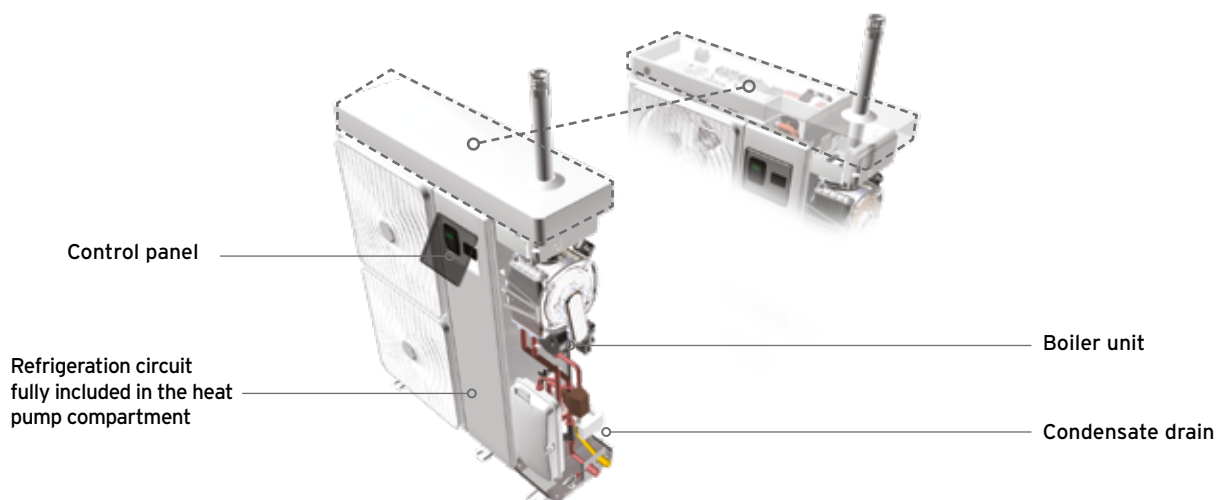
INVERTER HEAT PUMP:

- DC inverter fan motor.
- Twin Rotary DC inverter compressor with permanent magnets.
- R32 Refrigerant gas.
- Source heat exchanger with finned battery with copper tubes and aluminium fins with hydrophilic treatment.

HYDRAULIC CIRCUIT:

- Pressure gauge and probe to control the system pressure.
- NTC probes for water regulation.
- Hydraulic circuit temperature control thermometer.
- Flow meter for measuring the system water flow rate.

- Brushless circulator with DC motor with variable flow rate and built-in automatic air separator (degasser).
- 90°C Safety thermostat.
- 3 bar system safety valve.
- IPX5D Protection degree.
- 10-litre expansion reservoir.



SMART X EASY AND SMART X WEB CONTROL

The Apen Group remote control of the new SMART X EASY or SMART X WEB series acts as a stand-alone chronothermostat and can be used in a system that controls a zone in which one up to a maximum of 15 machines can be installed at the same time. 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 3 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.



HEAT PUMP OR BOILER?

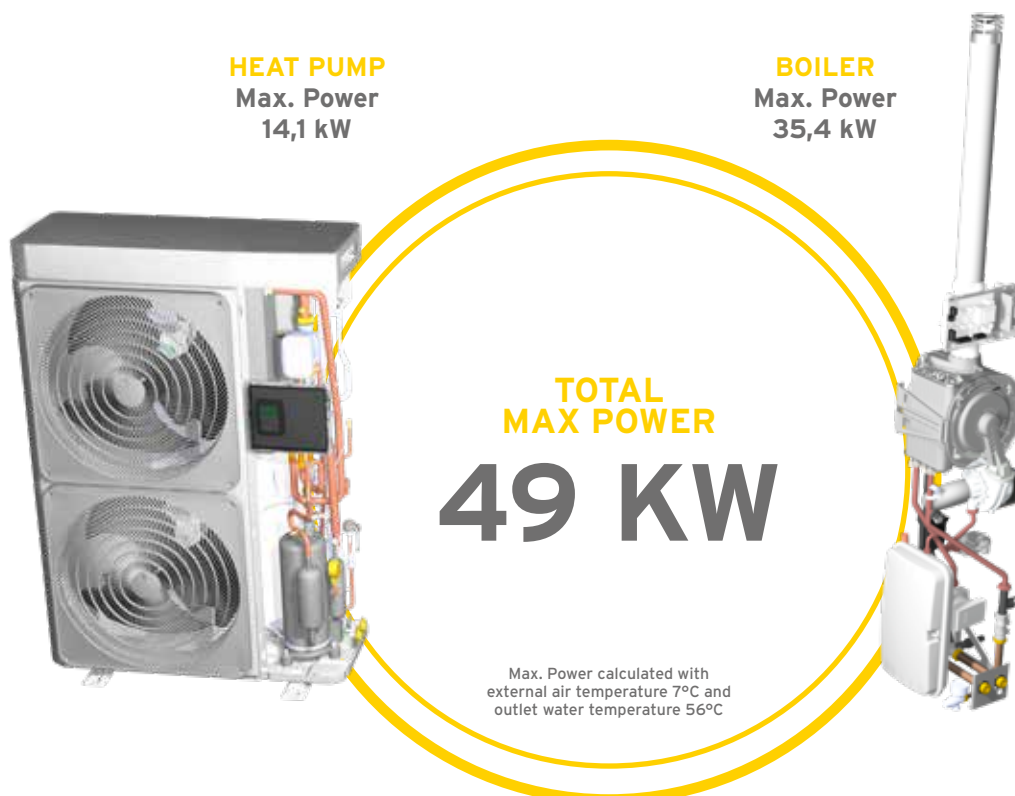
The single system, condensing boiler and hydronic heat pump with inverter (already assembled electrically and hydraulically with R32 refrigerant circuit, closed and tested), is managed by SMART X EASY or SMART X WEB control. These controls give priority to air-water heat pump operation. The condensing boiler starts operating automatically only when the temperature

conditions around the system do not guarantee the possibility of making the best use of renewable energy, or when the power required from the system is greater than the power supplied by the heat pump. The modulation of the operating power of both technologies is regulated in such a way as to always favour heat pump operation; each system operates with a dedicated regulation curve and

with different delivery set-points that work according to the chosen mode of operation.

In order to optimise the heat pump performance, it is possible to choose to work with the optimum economy, by setting an external temperature limit (for example +3°C) below which heat pump operation is deactivated.

For systems with availability of electrical energy from renewable sources (photovoltaic), the heat pump can be set to operate with colder external temperatures, even below 0°C, already equipped as standard with an antifreeze kit.



ELECTRONIC FAN HEATERS

TECHNICAL FEATURES

- High-efficiency three-row finned exchange battery.
- Electronic fans with integrated inverter.
- Automatic air vent valve.
- Louvres with adjustable horizontal blades.
- IP25B Protection degree.

STANDARD ACCESSORIES

- Rotatable wall mounting shelf and paper template for drilling.
- Stainless steel hoses with Ø 1" for connecting the fan heater to the boiler, length 500mm.
- Condensate collection tray for use in cooling mode.

In winter operation, the ventilation speed is adjusted automatically according to the inlet water temperature.

In air-conditioning operation, the ventilation speed is fixed and programmable.

ROTATABLE SHELF AS STANDARD

The fan heaters are fitted as standard with a rotatable shelf. Thanks to its particular conformation, this shelf allows to satisfy the multiple requirements of installation.

- Easy and quick fixing on: walls, pillars, beams or other suitable supporting structures.

- Possibility of orienting the indoor unit and the relative air flow, according to the characteristics of the environment to be heated and the user's needs.

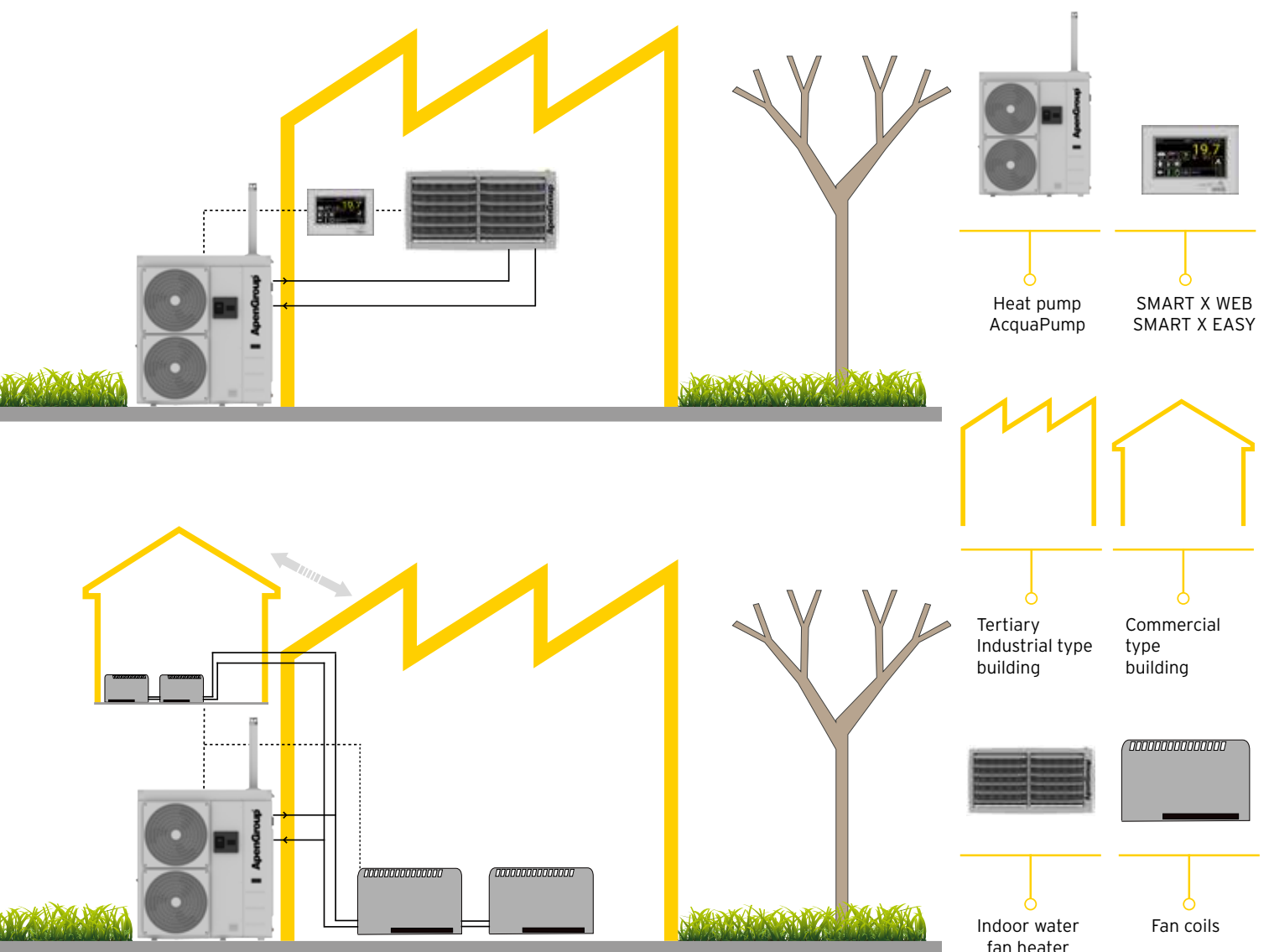


FAN HEATERS IN COOLING MODE

The fan heaters are designed to house a condensate collection tray, which can be fitted at any time, even after wall installation.



AQUAPUMP HYBRID



AQUAPUMP HYBRID / TECHNICAL DATA

		HYN432IT		HYN532IT
Heat Pump	Heating	Output power (MIN-MAX) ¹	kW	15,2
		COP ¹	W/W	4,85
		Output power ²	kW	14,6
		COP ²	W/W	3,82
	Conditioning	Output power ³	kW	14,7
		EER ³	W/W	5,4
		Output power (MIN-MAX) ⁴	kW	12,1
		EER ⁴	W/W	3,25
Boiler	Furnace output power [MIN-MAX]		kW	6,8 - 34,8
	Output power ⁵ [min-max]		kW	7,2 - 36,5
	Efficiency ⁵		%	105,8 - 104,8
	Output power ⁶ [min-max]		kW	8,5 - 36,2
	Efficiency ⁶		%	106,3 - 103,9
	Power rating [min-max]		W	90 - 130
General Data	Power supply		V/F/Hz	230V/1F+N+T/50Hz 400V/3F+N+T/50Hz
	Power input		kW	6,7
	Absorbed max current		A	29,2 9,7
	Gas supply fitting		Ø	G 3/4" M
	Hydraulic system fitting		Ø	G 1" M
	Sound pressure ⁷		dbA	57,5
	Weight		kg	170

1. Outdoor air temp. 7°C D.B.T. /6°C W.B.T.; water temp. in/out 30/35°C;

2. Outdoor air temp. 7°C D.B.T. /6°C W.B.T.; water temp. in/out 40/45°C;

3. Outdoor air temp. 35°C temp. water in/out 23/18°C;

4. Outdoor air temp. 35°C temp. water in/out 12/7°C;

5. Calculated on LHV with water at 50/30°C;

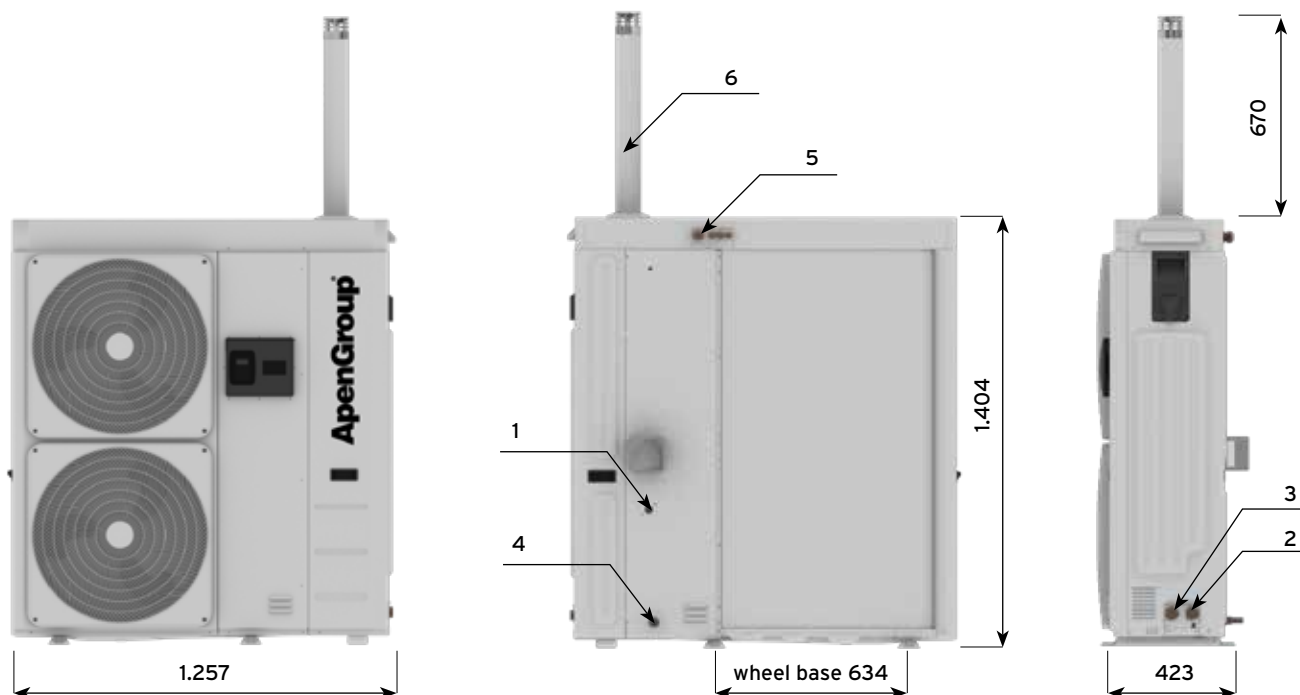
6. Calculated on LHV with water at 60/35°C;

7. Average sound pressure level in free field at 1 m from appliance according to ISO 3744.

ELECTRONIC FAN HEATERS / TECHNICAL DATA

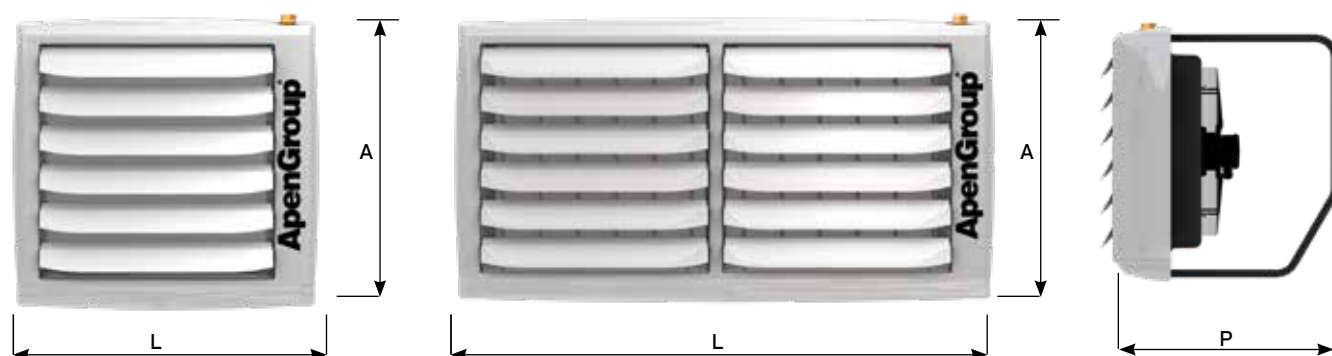
		AB018IT-HY		AB034IT-HY
HEATING RATED PERFORMANCE	Max heat output	kW	17,0	34,0
	Max air flow rate	(m³/h)	3.000	7.000
	Water heat drop	C°	60-35	60-35
	Water flow rate	l/h	600	650
COOLING RATED PERFORMANCE	Max heat output	kW	8,8	13,0
	Max air flow rate	(m³/h)	1.600	4.050
	Water heat drop	C°	7-12	7-12
GENERAL DATA	Sound pressure level (5 m) [max. flow rate]	dB(A)	55,7	63,2
	Sound pressure level (5 m) [min. flow rate]	dB(A)	42,3	47,2
	Supply voltage	V/Hz	230V/1/50 Hz	230V/1/50 Hz
	Weight	Kg	28	45

AQUAPUMP HYBRID / DIMENSIONS



Description	Dimensions
1 Gas supply	G3/4"
2 Water recirculation	G1"
3 Water delivery	G1"
4 Condensate drain	Ø19 mm
5 Electrical connections	PG09 x 2 + PG13 x 1
6 Flue exhaust chimney	Ø 80 mm

ELECTRONIC FAN HEATERS / DIMENSIONS



Model	Width	Height	Depth
	mm	mm	mm
AB018IT-HY	765	730	595
AB034IT-HY	1,390	730	595

SMART X SYSTEM

REMOTE CHRONOTHERMOSTATS



ADVANCED
ELECTRONICS



WATER FAN
HEATERS



AIR
DESTRATIFIERS



GUARANTEED
EFFICIENCY



GAS CONDENSING
BOILERS



WALL-MOUNTED
HEATERS



SMART X SYSTEM

Remote chronothermostats

SMART X EASY AND SMART X WEB CONTROLS

Being touch-screen chronothermostats, the Apen Group SMART X EASY and SMART X WEB 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.

PRODUCT CONTROL

- AKN gas condensing boilers.
- AQUAPUMP HYBRID system, hybrid heat pump with gas boiler.
- AX-EC electronic water fan heaters.
- QUEEN-EC Air destratifiers.
- LKH hybrid warm air heater.
- LK and LKN wall-mounted condensing warm air heaters.
- LRP and LRN wall-mounted warm air heaters.
- AH and AH-SPORT modular heating units.
- PK and PK-SPORT floor standing warm air heaters.

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 15 machines simultaneously.

SMART X WEB

With the SMART X WEB 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.

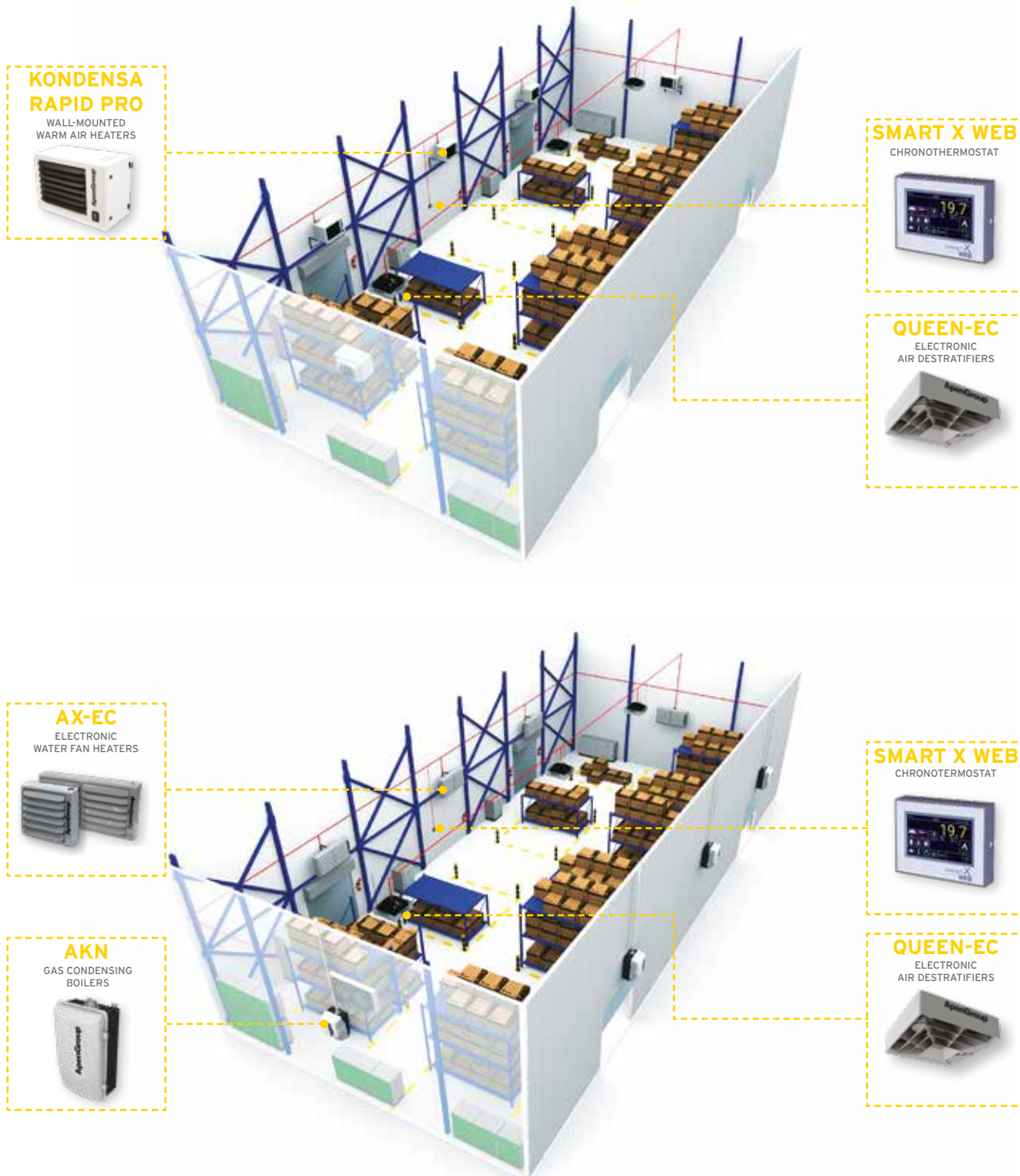
FAN MODE

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

SMART X SYSTEM

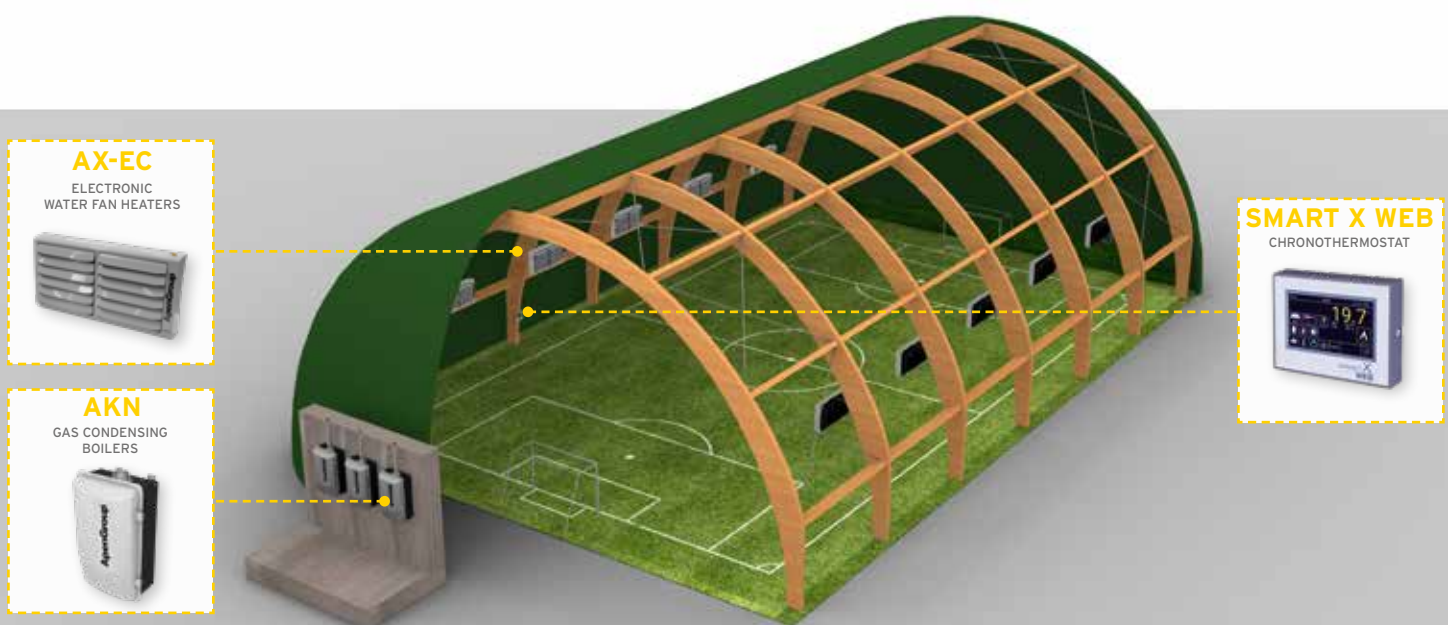
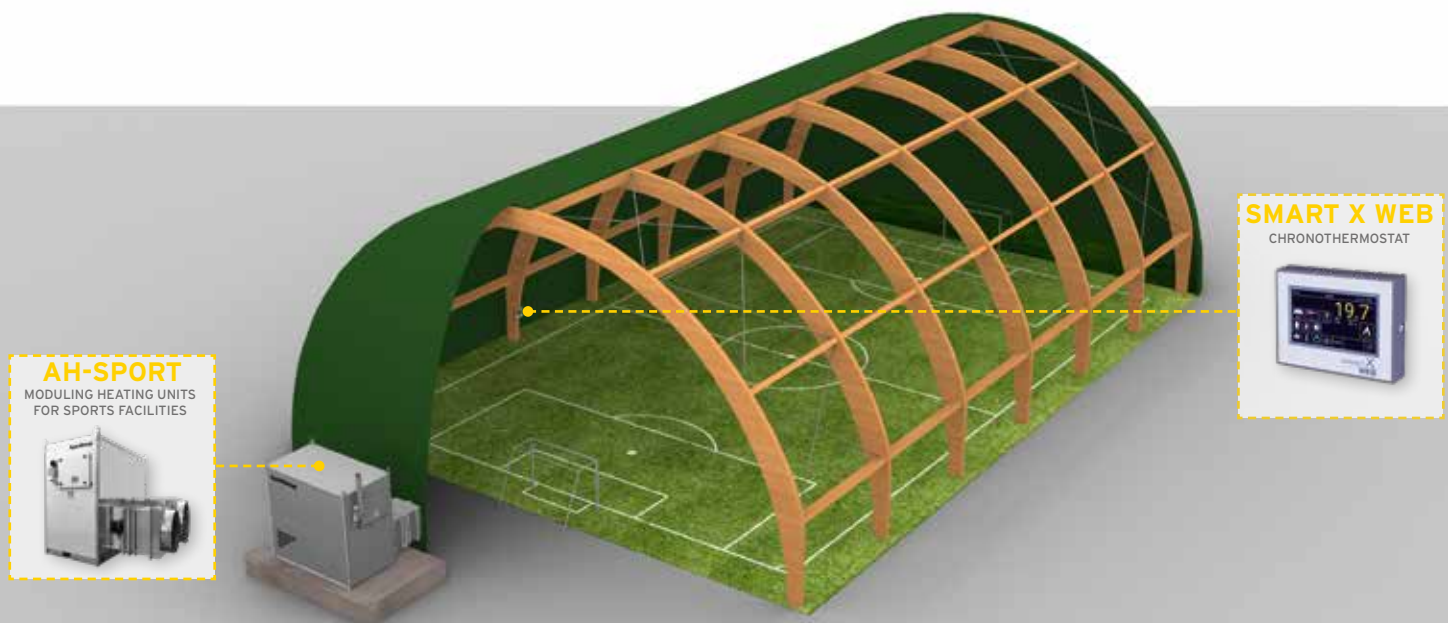
THERMOSTAT CONFIGURATION FOR CONTROL OF:

- AKN Gas condensing boilers.
- AX-EC Electronic water fan heaters.
- QUEEN-EC Electronic air destratifiers.
- KONDESA LKH hybrid warm air heater.
- KONDESA LK-LKN Wall-mounted condensing warm air heaters.
- RAPID PRO LRP-LRN Wall-mounted warm air heaters.



THERMOSTAT CONFIGURATION FOR CONTROL OF:

- AH-SPORT Moduling heating units.
- AKN Gas condensing boilers.
- AX-EC Electronic water fan heaters.





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