

ApenGroup®



Industrial Heating and Conditioning

AKN

CONDENSING GAS BOILERS



NEW

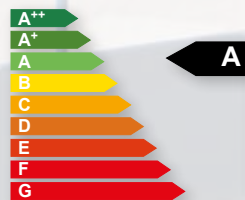
SMART CONTROLS
OPTIONAL



ELECTRONIC
FAN HEATERS



CLASS
A



AKN SYSTEM, OUTDOOR BOILER WITH INDOOR WATER FAN HEATER

The AKN system consists of an outdoor condensing boiler with low NOx burner that can be combined with indoor water fan heaters.

The project was conceived and realised with the aim of obtaining a product of the highest quality in terms of technology, design and ecology.

STANDARD-PROOF HEAT

The AKN system is the ideal solution for heating all environments that fall under the activities regulated by the Ministerial Decree of 16 February 1982, (activities at risk of fire) such as garages, body shops, carpentries, printing houses, textile and paper industries, public and commercial premises.

It does not require fire prevention practice even in systems in which the sum of the power of the appliances installed exceeds 116 kW (activity No. 91 M.D. 16/02/1982).

SECTORS OF USE

- Body shops
- Workshops with all types of processing
- Carpenter's workshops
- Shopping malls
- Facilities
- Sheds
- Public environments
- Barracks
- Meeting and Conference Rooms
- Data Processing Centres
- Theatres and Conference Centres
- Exhibition and Dancing Rooms
- Tanneries
- Pools and Gyms
- Churches and Oratories
- Any other environment with fire-risk activities

A CLASS

High combustion efficiencies of up to 109% ensure significant fuel savings compared to traditional non-condensing systems.

Class A Energy efficiency (according to Reg. 811/2013/EC). Premixed burner in NOx 6 class according to EN15502-1.

CERTIFIED QUALITY

The AquaKond AKN heating system is built to the highest standards in accordance with the UNI, UNICIG, CEI technical standards and is certified by the Kiwa-Gastec approval body in accordance with the Gas Appliances Regulation (EU) 2016/426.

NO NEED FOR THERMAL STATION

The AKN system does not require special technical rooms for positioning.

In fact, in addition to being installed in the room or in a technical compartment, the boilers (IPX5D protection) can be installed outside, avoiding the use of "operating" space inside the room itself.

SYSTEM MODULARITY

The subdivision of the total thermal heat output on several installed appliances, allows to obtain a greater rationalisation of the system: "zone" management of the thermal power supply and the integration of thermal heat output is limited to the installation of new appliances.

COMBINATIONS BETWEEN AKN BOILERS AND AX WATER FAN HEATERS



AKN034



AX050



AKN034



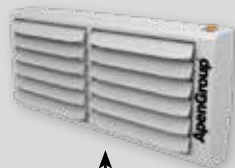
AX030



AX030



AKN050



AX070



AKN050



AX040



AX040



AKN050



AX030



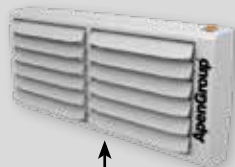
AX030



AX030



AKN070



AX090



AKN070



AX050



AX050



AKN070



AX030

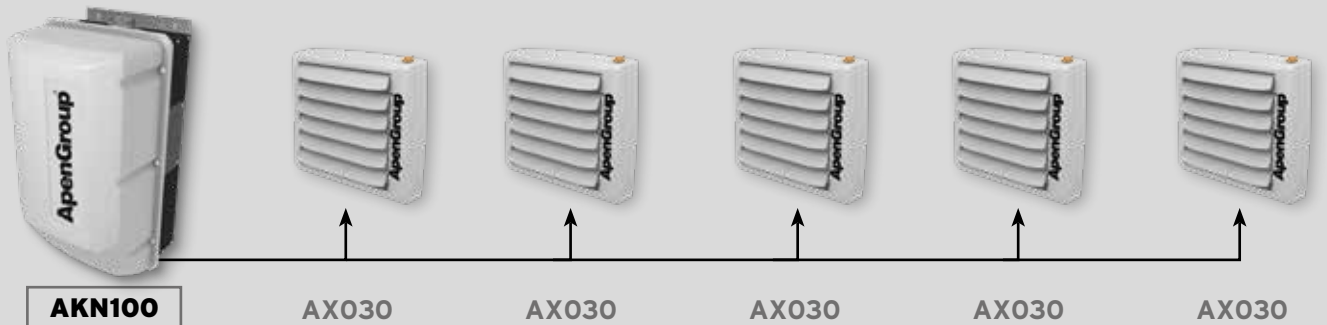
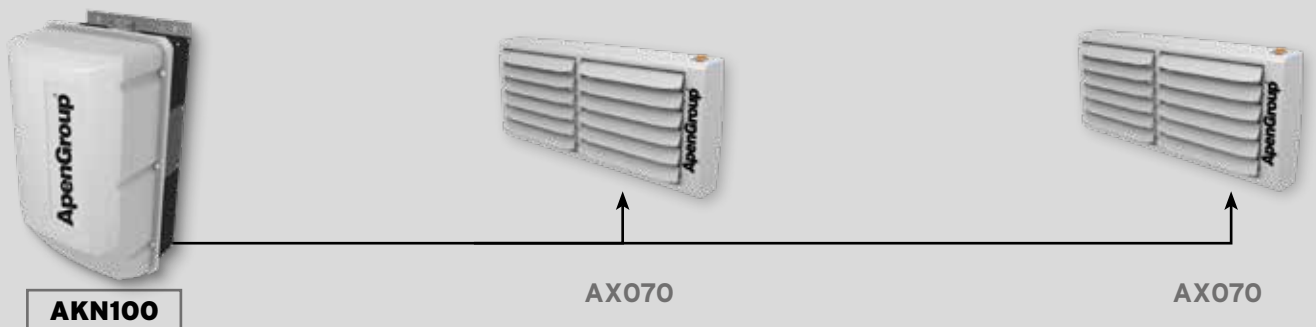
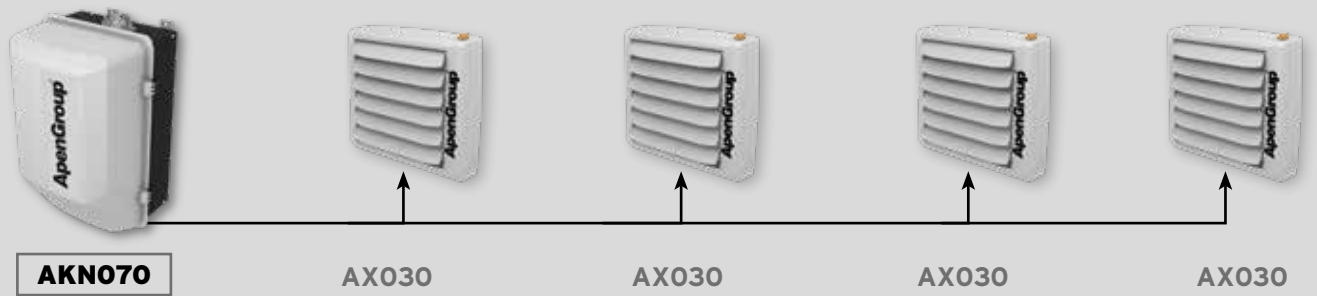


AX030



AX050

COMBINATIONS BETWEEN AKN BOILERS AND AX WATER FAN HEATERS



AKN SERIES BOILERS

TECHNICAL FEATURES

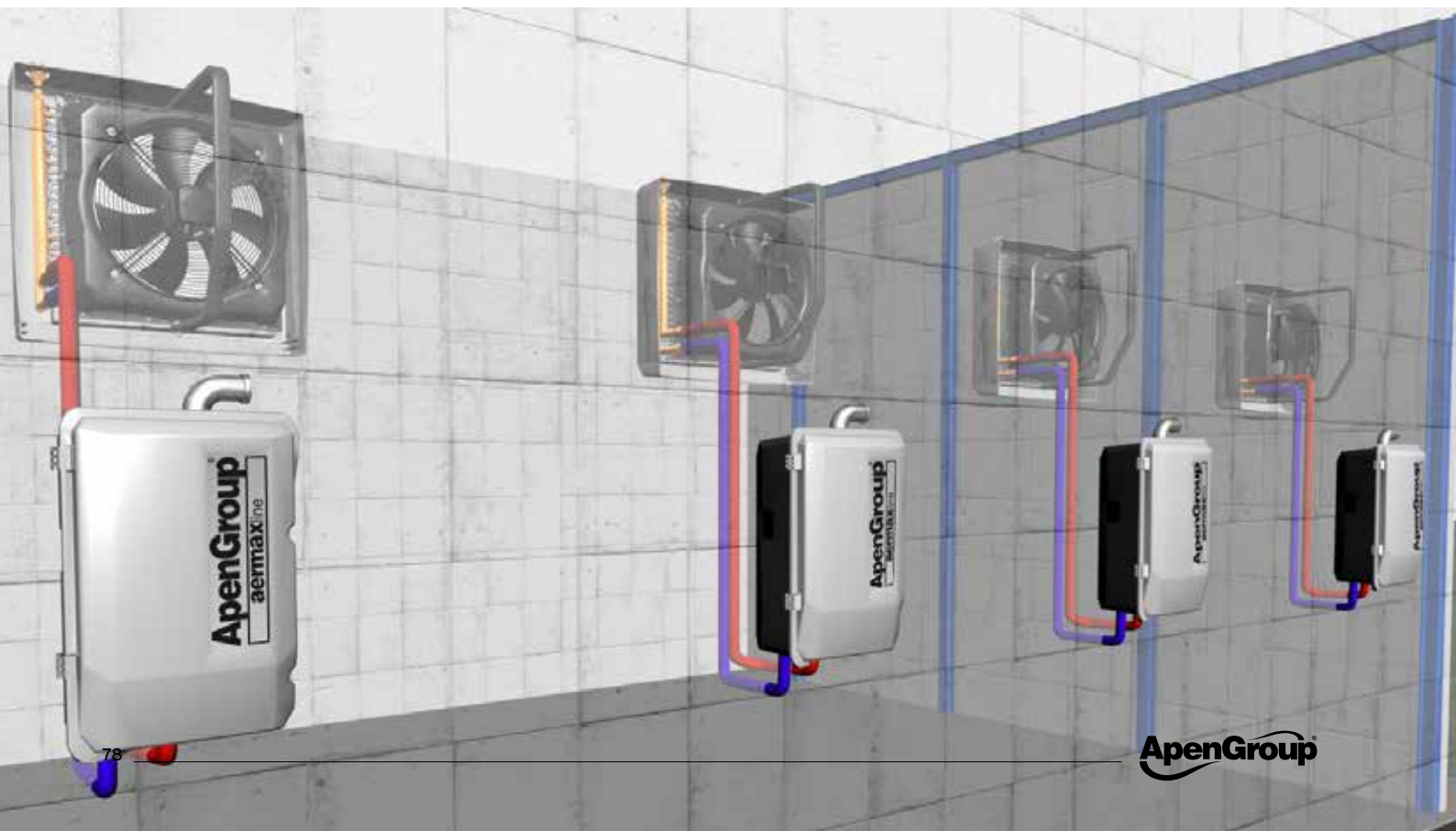
- Casing made of ABS methacrylate.
- Very high useful efficiency up to 108% (Class A Energy efficiency according to Regulation 811/2013/EC)
- Low NOx modulating pre-mixed burner, class 6 in accordance with Regulation EN15502-1
- Modulating air/gas valve
- Stainless steel heat exchanger with low carbon content
- 10-litre expansion tank
- Integrated condensate drain
- Forced flue gas outlet
- Control and safety equipment
- Electronic ignition
- ELECTRONIC high-pressure variable flow rate circulator with automatic air separator (degasser), minimum system pressure sensor, safety valve set at 3bar incorporated - only for AKN034
- Pressure gauge for hydraulic circuit
- NTC probe for boiler water temperature regulation.
- Safety thermostat
- Flow meter to control water circulation in the system
- Heat exchanger temperature control thermal fuse
- Flue gas temperature control thermal fuse
- IPX5D Protection degree
- Microprocessor electronic equipment with self-testing to manage all burner command and control operations
- Multifunctional LCD display for boiler control and diagnostics
- Possibility to set the antifreeze safety on SmartEasy and SmartWeb remote controls
- Possibility of cascade management.

STANDARD ACCESSORIES

- Hydraulic circuit needs to be filled with a mix of water and 30% glycol. It can resist temperatures as low as -15°C (-62°F). If the glycol percentage increases to 40%, it can reach -22°C (-78°F)
AKN is not supplied with a glycol refill, but it's possible to order our glycol can with anti-freeze.
- Gas valve and connections kit.
- Stainless steel flexible pipes for blower-to-boiler connection.
- System filling valve.
- Drilling template.
- Kit for conversion to LPG.

SAFETY, PROTECTION AND CONTROL DEVICES (STANDARD) FOR AKN050, AKN070, AND AKN100

- Certified safety valve
- Min. and max. water circuit safety pressure switch with manual reset
- Flowmeter control for water circulation system
- Thermometer
- Manometer for hydraulic circuit
- Well for control thermostat
- Well for fuel cut-off valve
- Three-way tap with flange for control manometer.



AKN SYSTEM AND NETWORK: MODULATION BOARD

APEN GROUP has designed this innovative modulation board with the main function of ROOM COMPENSATION.

The purpose of the compensation function is to achieve greater comfort with less consumption. When the room temperature approaches the desired temperature, the modulation board varies the rotation speed of the burner motor, decreasing the air flow

and consequently the gas flow. This causes a decrease in the temperature of the water circulating in the water fan heater and consequently in the supply air temperature. By decreasing the air stratification in the room, the heat loss of the building is significantly reduced.



SMARTEASY AND SMARTWEB CONTROL

The Apen Group remote control of the new SmartEasy/SmartWeb 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 32 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.



BASIC REMOTE CONTROL

The simple remote control contains the on/off control and the release button with relative signalling.



SIMPLE INSTALLATION

The particular conformation of the hydraulic circuit of the boiler and fan heaters allows multiple types of installation, both in terms of height and distance, between the indoor units and the outdoor unit. The positioning of the pipe outlet for connection to the fan heater in the lower part of the boiler guarantees:

- Installation of the external boiler at an accessible height, both in terms of positioning and maintenance

- Positioning of the fan heater at the correct height for the room to be heated
- Reduced connection path, between the external boiler and the fan heater, with immediate advantages due to low pressure drops and high water flow rates on the battery

HIGH EFFICIENCY

The Apen Group fan heaters have been suitably sized with a large exchange surface area in order to be able to work with a maximum boiler water temperature of 70°C, allowing the efficiency of 101% to be exceeded even at maximum output.

AKN SERIES / TECHNICAL DATA

Boiler - External Module		AKN034		AKN050		AKN070		AKN100	
Energy efficiency class		A		A		A		A	
NOx class [EN 15502-1]		6		6		6		6	
		Max	Min	Max	Min	Max	Min	Max	Min
Useful heat output	kW	35,4	7,0	50,6	8,5	70,5	12,3	97,6	17,3
Nominal heat input	kW	34,8	6,8	49,9	8,4	69,6	11,8	96,6	16,6
Efficiency		101,8	103,5	101,5	101,7	101,3	104,0	101,0	104,0
Supply voltage	V	230V-50 Hz single phase		230V-50 Hz single phase		230V-50 Hz single phase		230V-50 Hz single phase	
Rated power	W	125	48	177	74	186	7	378	180
Operating Temperatures	°C	da -15°C a +50°C		da -15°C a +50°C		da -15°C a +50°C		da -15°C a +50°C	
Protection Rating	IP	IPX5D		IPX5D		IPX5D		IPX5D	
Operating weight	kg	39		45		51		90	

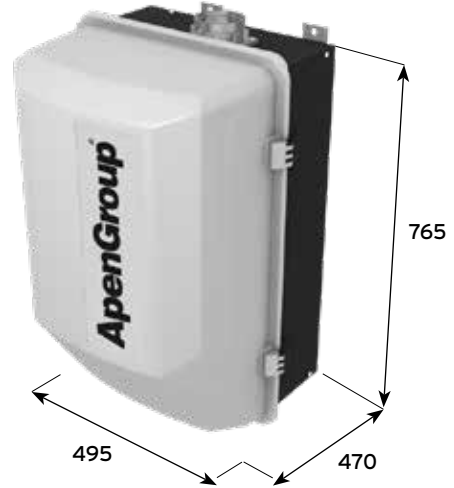


AKN SERIES / DIMENSIONS

AKN034



AKN050



AKN070



AKN100





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Code X01330.01GB ed. 2206
The contents of this catalogue may be edited without prior notification.

