



ANTARES 25 S
ANTARES 30 S
ANTARES 35 S

Antares

High efficiency
CONDENSING BOILERS,
sealed chamber

The comfort solution

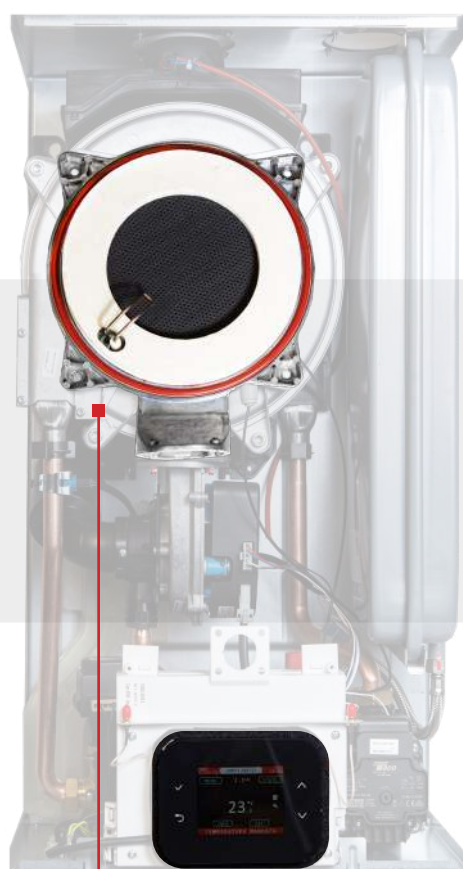
ANTARES

High-efficiency condensing boilers, sealed chamber | 2022

+ SMART + ADVANCED + QUIET
Top of the Range



INNOVATIVE DESIGN



**EXCLUSIVE
CERAMIC FIBRE
BURNER**

The Antares condensing boiler, unlike traditional boilers, recovers heat by condensing the water vapour contained in the flue gases; this means, for the same amount of heat produced, it consumes less gas and the fumes also contain less environmentally hazardous substances. The materials used and the control systems with which

it is equipped offer you safety, high levels of comfort and energy savings, so that you can enjoy the advantages of independent heating.



ANTARES ADVANTAGES:



eGarc Combustion Solution heat engine technology
lower consumption, greater efficiency, lower emissions

The innovative CERAMAT® ceramic fibre burner guarantees combustion in a completely electronic manner. The new eGarc Combustion Solution technology, which all models in the Antares range are equipped with, allows the boilers to adapt to different types and qualities of gas in a completely automatic manner. As well as detecting the flame, the electrode also detects

the characteristics of the gas and automatically adapts the combustion parameters to maintain maximum efficiency, with a consequent reduction in consumption and emissions compared to traditional control systems. The eGarc Combustion Solution system makes the boiler ready for operation with any type of gas without any modifications.



Innovative ceramic fibre burner
combustion like you've never seen before

Ceramat is made from a high-performance conductive ceramic fibre material with a cutting-edge ceramic coating process which offers unique advantages, permitting the optimisation of existing combustion systems and the development of more efficient solutions. The ceramic properties of the fibre, along with an innovative process, create an electrically conductive, self-supporting and tough burner with high porosity, allowing it to offer a number of advantages over existing solutions available on the market.



BENEFITS:

• Long lifetime

Ceramat fibres can withstand temperatures of over 1,000°C, due to which corrosion in Ceramat burners is practically non-existent over time and does not affect the application's performance throughout its service life.

• Very quiet operation

The fibre structure and porosity combined with flame-pattern customisation possibilities offers reductions in both high- and low-frequency noises.

• Modulation

Takes system modulation another step forward, even for gas adaptive solutions.

• Flame stability

Highly stable combustion in all working conditions with all gas families, including hydrogen.

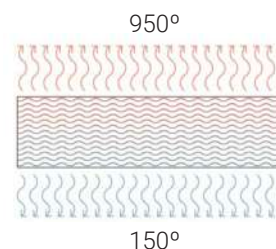
• Low emissions

The flexibility of adaptation of the combustion surfaces makes it possible to optimise the burners to achieve extremely low CO and NOx values, increasing performance and reducing the environmental impact.

• Light weight and reduced dimensions

• Thermal insulation

Surface temperatures of over 1,000°C are not transmitted to the inner layers, minimising the risk of flashback and increasing gasket lifetime by reducing the temperature of the burner casing.



The comfort solution



Plastic-FREE manufacturing for environmental sustainability

An important characteristic element of the entire design phase of the new Antares boiler is a strong focus on the circular economy.

This is why we have used components with a higher recycling rate, eliminating the use of plastic as much as possible. The plastic assembly, for example, has been

replaced with a brass assembly, which is fully recyclable. The protective packaging inserts are made of cardboard instead of polystyrene.

#PLASTIC-FREE!



~~100% polystyrene cardboard packaging~~

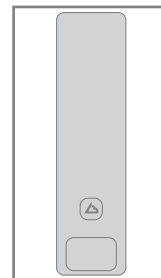


~~Brass plastic hydraulic unit~~



Advanced connectivity of ANTARES for environmental comfort management

Thanks to the advanced connectivity supplied as standard with Antares, the end user will be able to manage through Biasi App the room temperature, sanitary, weekly programming and the functioning status of the boiler. The WI-FI connectivity will allow the end user to interact with the boiler through voice assistants (Google Home, Alexa etc.) and through smartphone (Siri and Bixby).



Boiler



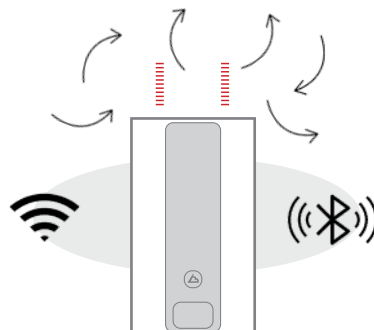
App





CONNECTIVITY PLUSES:

- Reduced consumption, energy savings and extreme flexibility: flexible control to meet individuals' needs and daily habits. You can also adjust the hot water temperature with a simple click.
- Awareness of your system: you can always check correct operation of the boiler in real time.
- Safety: Any faults can be seen in real time, together with the corresponding error code. This allows for immediate intervention, even remotely where possible.



For the best transmission and reception of the signals, two antennas must be installed on the boiler (one for WiFi and one for RF), connected with MTC.

In the event that the boiler is installed in an external recess or niche, in a plant room or on another floor such as in a cellar, the boiler will be hard-wired (RS485) to a complete MTC (RF & WiFi) installed on the wall inside the main residence.

The 868 MHz RF module allows MTC to communicate wirelessly with the other components of the system, for **single zone and multi-zone management** (such as wireless room probe, wireless thermostatic valves, wireless zone managers, etc.).



Antares the red heart boiler

The BIASI red heart boiler is born, which, like the hottest and brightest star in the constellation of Scorpio, achieves unparalleled performance thanks to its innovative ceramic burner CERAMAT®, the heart of our top of the range.



- ↑ ↓ 1:10 MODULATION
- ⚡ 25 kW - 30 kW - 35 kW
- 🔥 HEATING FLUID
- 🚰 SANITARY DHW
- 🔥 12.9 - 17.2 L/min
Sanitary DHW production
- 🔥 NATURAL GAS / LPG
- ↔️ GAS ADAPTIVE
- 🌐 MULTI-ZONE MANAGEMENT WITH RF / MODBUS KIT
- 🏠 A ENERGY CLASS



NOx 6
CLASS



WI-FI
READY



PLASTIC
FREE



APP
BIASI
APP

Antares

Available in **combination versions** for heating and DHW production, Antares has a complete heat output range – **25, 30 and 30 kW** models – all with very compact dimensions.

High performance due to its innovative CERAMAT® ceramic fibre heat exchanger, designed to provide high efficiency without degradation over time.

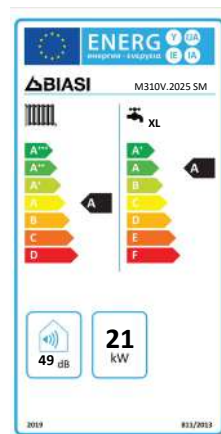
Easy to use thanks to the digital control panel with a large display, designed to communicate with the user in an easy and convenient manner.

Dimensions

700 x 400 x 300 mm

Tax credits and incentives

Antares is an **energy class A** and **energy class A+**, in other words the highest energy efficiency level achievable with a boiler.





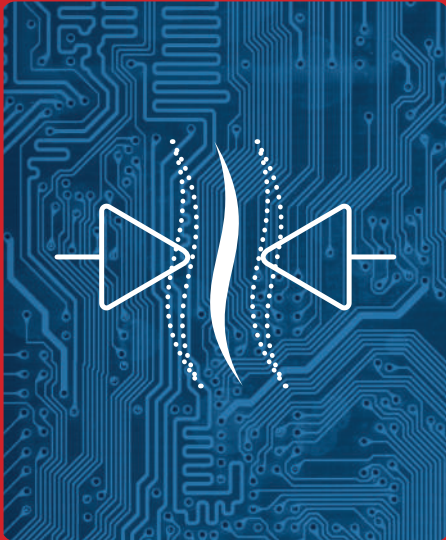
Main features / Gas-Adaptive

Automatic gas regulation

Adaptation to changes in gas quality

Clean combustion

One single model suitable for natural gas and LPG, allowing for warehouse optimisation



Electronic control of gas and air supply

In traditional boilers, the combustion values are measured and regulated only during servicing. The composition of the mains gas supply is not always constant, and can create operational inefficiencies in boilers without combustion regulation devices, compromising their reliability, savings and emissions quality.

Thanks to the **eGarc Combustion Solution**, the new condensing boilers **control the combustion electronically**, which allows them to best manage the **gas and air supply** at any time, automatically adapting the CO₂ level.



Control panel

Winter/Summer/Off selector

Heating temperature regulator

DHW temperature regulator

Digital pressure reading

Screen display of DHW and heating temperature

Display of fault diagnostics, lockout conditions and fault log

Display of annual servicing expiry

DHW pre-heating enablement

The display works in the following modes:

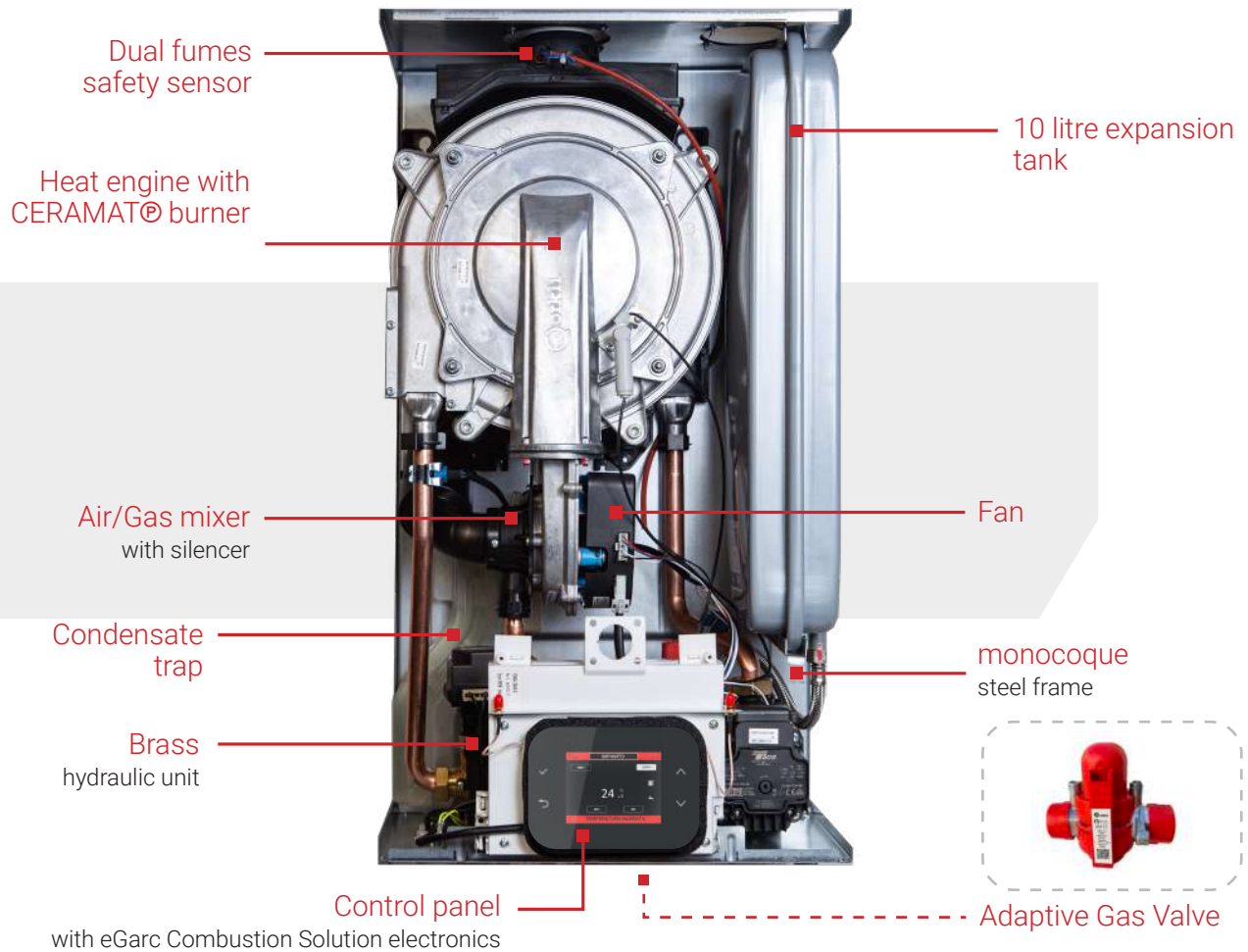
1. INFO (Info mode displays the following information):

- DHW/heating temperatures
- Flue gas temperatures
- DHW flow rate
- Fan speed
- Months remaining until service
- Pump modulation percentages
- Outdoor temperature (with connected outdoor probe)

2. PROGRAMMING (the programming mode allows you to modify the boiler parameters):

- BOILER PARAMETERS
Modification of boiler parameters
- FLUE CLEANING
Possibility to set 4 levels of boiler operation for combustion checks
- CALIBRATION
Automatic boiler calibration
- HEATING CIRCUIT DEAERATION
Facilitation for deaeration of the system in the installation phase
- HISTORY
List of errors recorded by the boiler during operation
- Transfer of combustion parameters to spare board without need for recalibration
- K value (with external probe connected)

Technical features



Heat engine

The **ORKLI group**, an internationally active company thanks to its technological and industrial components, has created various centres of excellence for R&D on innovative technologies to equip gas combustion heat generators.

Synergies have been created between the research centres for combustion (Ceramat ceramic fibre burners

and Modulo electronic gas valves), with Valmex for Circond steel heat exchangers, and the Giordano Controls electronics centre of excellence, with the LISA Cloud-connected automatic combustion control system for remote comfort control and predictive maintenance. The combustion system made up of these exclusive components is known as the "HEAT ENGINE" and has been developed, tested and refined with the incorporation



of these different technologies, all drawn from within the group.

The HEAT ENGINE allows boilers to achieve higher performance than versions currently on the market.

The boiler can be fed with different gases, thanks to the **AUTO-ADAPTIVE GAS** function.

The installation time is significantly reduced, and the commitment and responsibility of the installer is reduced thanks to the automatic adaptation which eliminates the need to make mechanical settings on the boiler (gas valve).

Above all, performance in terms of controlled emissions

and efficiency make this new boiler fit in with the growing awareness of the need for ecological and energy saving technologies.

These are the **Technologies Inside** which bring BSG boilers to the cutting edge of new domestic and environmental comfort systems and make them amongst the most innovative and eco-friendly.



Advantages

- Instantaneous sanitary DHW production with larger plate heat exchanger
- DHW preheat function: faster supply of sanitary domestic hot water
- User interface with touchscreen display and multifunction buttons for regulation and setting of parameters
- Easily inspectable bypass as standard
- Flue protection system: electronic management of flue gas overheating, ensuring maximum protection for the

boiler

- Minimised pollutant emissions (class VI - EN 15502-1)
- Rolling temperature operation via optional external probe
- High-efficiency modulating heating circulation pump (ErP Ready - Class A)
- Digital flame control with three restart attempts in the event of operational stoppage due to lack of flame detection (natural gas configuration)
- Three-piece removable casing for simplified inspection or maintenance

High circulation, mono spiral primary heat exchanger

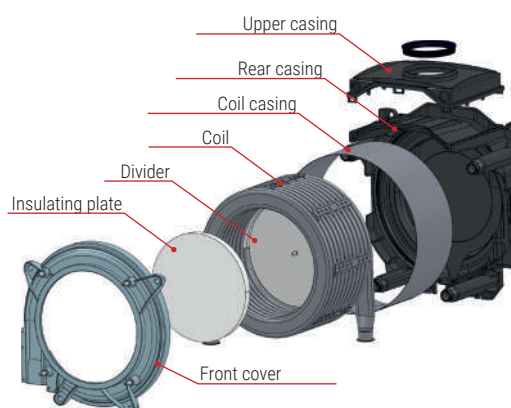
Biasi introduced the Round heat exchanger in 2017. With its high level of reliability proven, it was adopted in the Antares. Round is a compact **monothermal heat exchanger** based on a stainless-steel coil with an oval cross-section

The heat exchanger consists of a combustion chamber, condensing zone and an insulated metal disc protected with silicon glass fibres separating the two areas. The use of a single stainless-steel belt to produce the coil, including the inlet/outlet fittings, provides the following advantages:

- Accumulation of dirt and debris is prevented
- Water flow rate is distributed evenly and ensures a uniform thermal exchange
- The water flow rate is constant for a longer product service life
- Reduction in head losses with optimised circuit

Their **robustness**, and **ease** with which these heat exchangers can be cleaned, are just two of the strengths of the product given that it can be used on **new installations** as well as on **old systems in the case of a swap-over**.

Round incorporates the **round flow function** in which the water produces a centrifugal effect for cleaning the internal walls of the mono spiral. The fact that there are **no parallel circuits** ensures easy "washing" operations of the heat exchanger and the elimination of any air present in the installation circuit.



Technical features

Temperature Regulation

By using the **external probe** and the **remote control** (optional) directly connected to the boiler, it is possible to use **climatic control**. Antares **will adjust the water temperature** in the system to external climatic conditions, ensuring the desired ambient temperature is reached without any wastage and **optimising consumption**. The use of climate regulation also produces a rise in the regulation efficiency, **increasing the value of your home**.



Zone management

In the case of multi-zone high-temperature systems, one zone can be managed by remote control and the other zones can be managed by timer thermostats. This allows

each zone to be managed with its temperature regulation curve and the corresponding ambient probe.





Technical data		Antares		
		25 S	30 S	35 S
Nominal heating/DHW heat input	kW	21.0 / 26.0	26.0 / 31.0	31.0 / 34.9
Minimum heat input for heating/DHW	kW	2.6 / 2.6	3.5 / 3.5	3.5 / 3.5
Maximum usable heating/DHW power 60°/80°C *	kW	20.7 / 25.6	25.7 / 30.7	30.7 / 34.4
Minimum usable heating/DHW power 60°/80°C *	kW	2.5 / 2.5	3.3 / 3.3	3.3 / 3.3
Maximum usable heating/DHW power 30°/50°C **	kW	22.8 / 28.2	28.2 / 33.7	33.7 / 37.9
Minimum usable heating/DHW power 30°/50°C **	kW	2.7 / 2.7	3.7 / 3.7	3.7 / 3.7
Quantity of condensate at Q.nom. 30°/50°C (in heating mode) **	l/h	4.2	5.0	5.6
Quantity of condensate at Q.nom. 30°/50°C (in heating mode) **	l/h	0.5	0.6	0.6
Condensate pH		4.0	4.0	4.0
Nom. efficiency 60°/80°C *	%	98.5	98.8	98.9
Min. efficiency 60°/80°C *	%	94.7	95.1	95.1
Nom. efficiency 30°/50°C **	%	108.7	108.8	108.6
Min. efficiency 30°/50°C **	%	105.3	105.9	105.9
Efficiency at 30 % load **	%	109.9	109.8	109.8
Energy efficiency η_s	%	94	94	94
Thermal losses at the flue with burner in operation	Pf (%)	1.3	1.0	0.9
Thermal losses at the flue with burner turned off ΔT 50°C	Pfbs (%)	0.2	0.2	0.2
Thermal losses to the environment through the casing with the burner in operation	Pd (%)	0.7	0.9	0.9
NOx class	no.	6	6	6
Weighted NOx [Hs] ***	mg/kWh	42	35	32
Minimum/maximum heating temperature ****	°C	25 / 85	25 / 85	25 / 85
Minimum/maximum heating pressure	bar	0.3 / 3.0	0.3 / 3.0	0.3 / 3.0
Available heating head (at 1000 l/h)	mbar	350	330	330
Expansion tank capacity (total/usable)	l	10	10	10
Minimum/maximum DHW temperature	°C	30 / 60	30 / 60	30 / 60
Minimum/maximum DHW pressure	bar	0.5 / 10.0	0.5 / 10.0	0.5 / 10.0
Maximum flow rate ($\Delta t = 25$ K) / ($\Delta t = 35$ K)	l/min	15.4 / 10.7	18.4 / 12.9	20.6 / 14.4
Specific DHW flow ($\Delta t = 30$ K) *****	l/min	12.9	15.4	17.2
Voltage / power draw at nominal heat input	V~/W	230 / 94	230 / 98	230 / 110
Power draw at minimum heat input	W	54	56	56
Power draw in stand-by	W	4	4	4
Ingress protection rating	no.	IPX5D	IPX5D	IPX5D
Minimum/maximum flue gas temperature#	°C	41 / 80	41 / 82	41 / 84
Minimum/Maximum flue gas mass flow rate #	kg/s	0.0013 / 0.0120	0.0017 / 0.0144	0.0017 / 0.0162
Minimum/maximum air mass flow rate #	kg/s	0.0012 / 0.0115	0.0016 / 0.0139	0.0016 / 0.0156
Max. length of coaxial flue outlet (\varnothing 60/100 mm / \varnothing 80/125 mm)	m	10 / 12	10 / 12	10 / 12
Max length of twin flue exhaust (\varnothing 80+80 mm)	m	40	40	40
Height x Width x Depth	mm	700 x 400 x 300	700 x 400 x 300	700 x 400 x 300
Weight	kg	31.5	36	36
Water contents of the boiler	l	2.0	2.5	2.5

* With return water temperatures that do not allow condensation. ** With return water temperatures that allow condensation.
 *** With coaxial flue outlet 60/100 L 0.9 m and G20 natural gas. **** At minimum usable power. ***** With reference to EN 625.
 # Values relate to tests with 80 mm 1 + 1 twin flue and G20 natural gas.



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