

RINNOVA ADAPTIVE 25 S
RINNOVA ADAPTIVE 30 S
RINNOVA ADAPTIVE 35 S

RINNOVA ADAPTIVE 16 SV
RINNOVA ADAPTIVE 20 SV
RINNOVA ADAPTIVE 30 SV

RinNova Adaptive

High efficiency
CONDENSING BOILERS,
sealed chamber | 2021

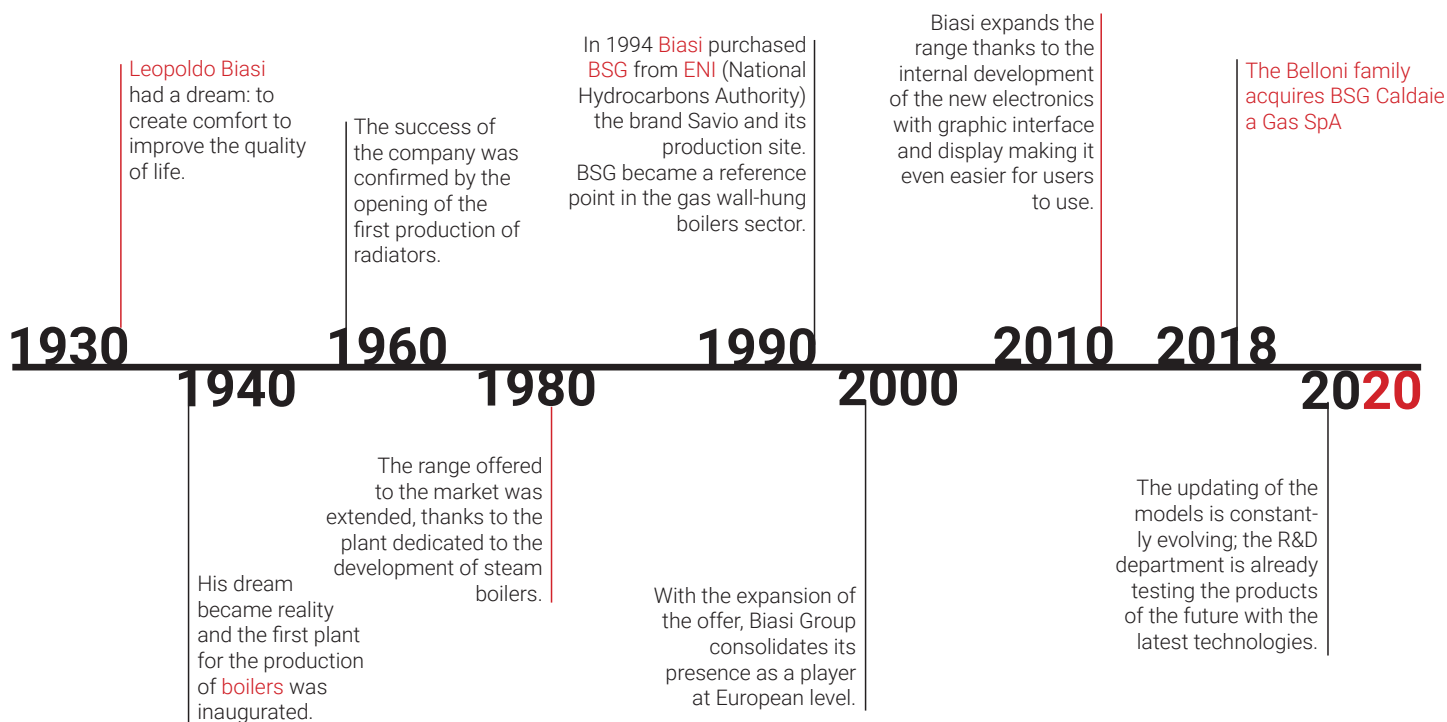


OUR COMPANY

Biasi engages the experience, skills, organization and patents of a company history that started in the 1930s and developed to become an industry professional. For over 80 years we have been operating in the heating industry, investing in Italy and abroad looking for solutions for comfort in the domestic and professional industries. Today our offer covers all market segments: from wall-hung to floor-standing condensing boilers, water heaters, a wide range of integrated systems with solar based on high energy efficiency. It also supplies new complete systems with heat pumps and hybrids, which can be integrated with radiant solutions, operating at low temperatures.



OUR HISTORY



QUALITY

TECNOLOGY AND RELIABILITY

RESEARCH AND INNOVATION

ITALIAN DESIGN

COSTUMER CARE

FLEXIBILITY

STRUCTURED LOGISTIC

We constantly design and improve our products. We assemble them in our assembly lines, we check the quality at each step of the process. **The value of Made in Italy is in every detail.**



Our wall hung boilers' factory is equipped to:

- produce up to 160,000 boilers per year;
- produce 500 different part numbers;
- produce more than 16 product ranges,

OUR PRODUCTS

RESIDENTIAL

Condensing boilers

Traditional boilers

Hybrid systems

Heat pumps

Water heaters

Air conditioning

Solar panels

Boilers

Integrated systems with solar

PROFESSIONAL

Boilers for centralized systems

SPARE PARTS

The comfort solution

RINNOVA ADAPTIVE

High-efficiency condensing boilers, sealed chamber | 2021

+ ECO **+ TECH** **- EMISSIONS**
and plastic free



The RinNova Adaptive condensing boiler, differently to the traditional boilers, allows conventional boilers, recovers energy by condensing the water vapour contained in the flue gases, i.e., for the same amount of heat produced, it consumes less gas and in addition the flue gases contain less substances harmful to the environment.

The materials used and the control systems with which it is equipped offer you safety, high comfort and energy savings so that you can enjoy the advantages of independent heating.



WHAT'S NEW IN RINNOVA ADAPTIVE:



Gas Adaptive Technology

less consumption, less efficiency, less emissions

The innovative Adaptive Gas technology, which all Rinnova all models in the Rinnova range are equipped with boilers to different types and qualities of gas. 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 Adaptive gas system makes the boiler ready for operation with any type of gas without any transformations.



A+ class option, with iControl System (Available from March 2022)

energy efficiency at the highest level

All models in the Rinnova Adaptive range are also available in the comprehensive "iControl" option, the climate control which modulates the water temperature according to the room and external temperature, which thanks to the Wi-Fi system and the Biasi Connect App makes it possible to manage remotely with a smartphone the heating system, optimising consumption, raising the energy class of the boiler to A+.



iControl system



A Plastic-FREE production

for a sustainable environment

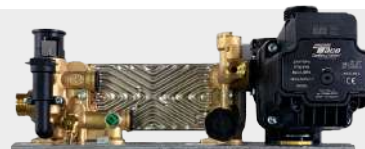
An important element that has managed the entire design phase of the new Rinnova Adaptive boiler is a strong focus on the circular economy. This is why we used components with a higher recycling

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 boiler shells are made of cardboard instead of polystyrene.

#PLASTIC-FREE!



100% polystyrene paper packaging

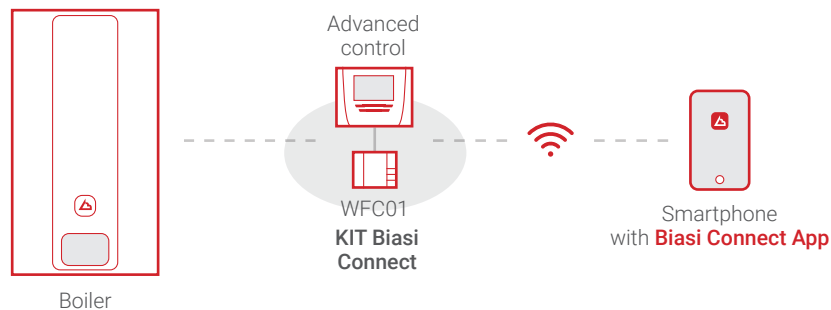


Brass plastic hydraulic unit

Remote temperature control



Comfort at your fingertips
with the "Biasi Connect" KIT and App



Biasi Connect

Thanks to the BIASI Connect App, it is possible to control the boiler remotely. To use it is necessary to have the Biasi Connect KIT in addition to the advanced remote control. The evolved control (class V) allows modulating the water flow temperature of the system according to the room temperature and the outside temperature.

What are the advantages?

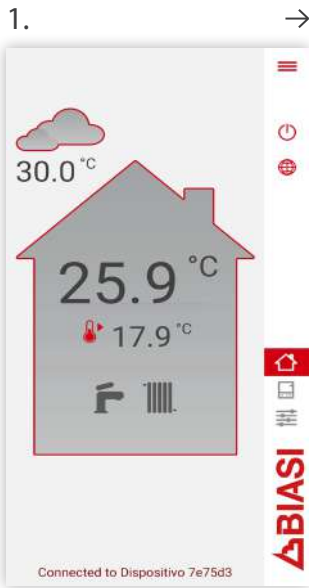
- Reduction of consumption, energy saving and extreme flexibility: the control is flexible according to one's needs

and daily habits. Needs and daily habits. You can also regulate with a click the temperature of the hot water.

- Awareness of your installation: you can always Real-time monitoring of the correct operation of the Operation of the heat generator.
- Safety: You can see in real time any anomalies can be seen in real time, together with the corresponding error code. Thus, you can intervene immediately and when possible remotely.

The "BIASI Connect" Kit is a WiFi "Connection Device" which, operating in the domestic WLAN network, allows the control of the room thermoregulation and of the boiler operation, both locally and remotely, through our dedicated APP.





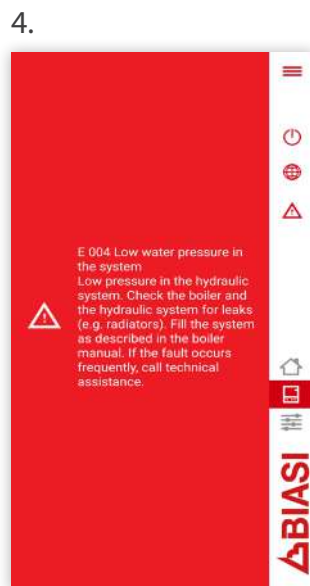
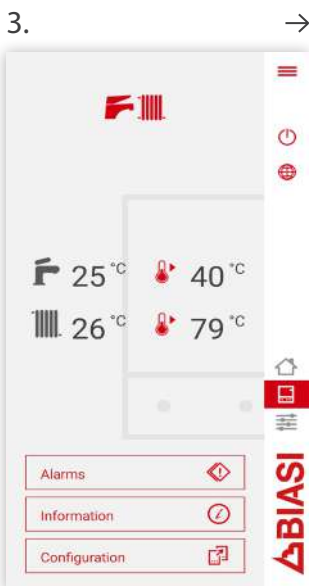
SIMPLICITY OF INSTALLATION AND USE

1. The "home" screen shows the room temperature and system status. On the right the menu side status.

2. The Timing allows you to set a time period of time for which we can vary the status of the system and temperatures.

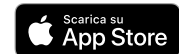
3. The "Boiler" screen displays the status of the temperatures and other information about the boiler.

4. Example of an error reported by the App, with explanatory text.



For the installation of the "BIASI Connect" kit and for the configuration and use of the the use of the App, please consult the instruction, installation and use of "Biasi Connect".

The App can be downloaded from the store of your device:



Combustion electronic control



RinNova Adaptive

- ↑ ↓ MODULATION 1:9
- ⚡ 25 kW - 30 kW - 35 kW
- 🔥 HEATING WATER
- 🚰 DOMESTIC WATER
- 🔥 12,8 - 15,2 - 17,0 L/min
Domestic hot water production
- 🔥 NATURAL GAS / LPG
the same model is suitable for both types
- ⚡ GAS ADAPTIVE
- ⬆️⬆️ A+ ENERGY CLASS
with iControl system



NOx 6
CLASS



WI-FI
READY



PLASTIC
FREE



APP
BIASI
CONNECT

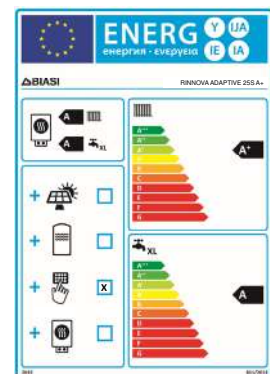
RinNova Adaptive

RinNova Adaptive is the new range of BIASI wall-mounted condensing boilers.

High performance due to its innovative **heat exchanger** designed to provide high efficiencies that last over time.

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

It is available in the combined versions for heating and DHW production (**S models**) and only for heating (**SV models** - but predisposed to sanitary with external boiler) RinNova Adaptive has a complete heat output range, 25, 30 and 35 kW S models and 16, 20, and 30 kW SV models, both with very compact dimensions: 700x400x300 mm.





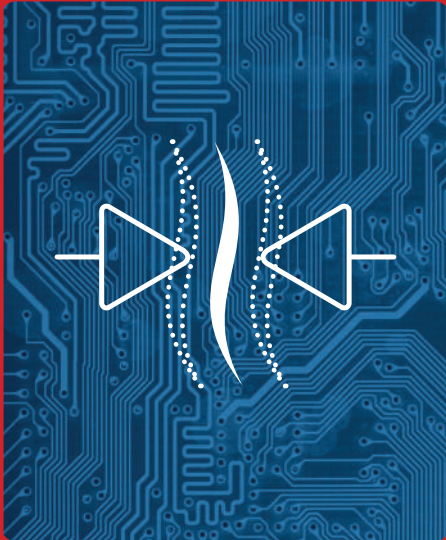
Gas-Adaptive main features

Automatic gas regulation

Adaptation to gas quality change

Clean combustion

Only one model suitable for natural gas and LPG, that allows to optimize the warehouse



Electronic control of gas and air supply.

In traditional boilers the combustion values are detected and adjusted only when undergoing a maintenance. Moreover, the composition of mains gas is not always constant, and it can cause inefficiencies in the operation of the boilers that have no combustion control devices, undermining the reliability, the savings and the quality of emissions.

Thanks to the Gas-Adaptive system, the new BTP condensing boilers control the combustion electronically, which allows them to best manage the gas and air supply at any time by automatically adjusting 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 recommended filling and filling guide

Display of annual maintenance expiry

Enabling sanitary pre-heating

The display works in the following modes:

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

- Sanitary/heating temperatures choose by the user;
- Flue gas temperatures;
- Domestic water flow rate;
- Fan speed;
- Months remaining before maintenance;
- Percentages of pump modulation;
- Outdoor temperature (in case of connected outdoor probe);
- Value of K (in case of connected external probe).

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

• BOILER PARAMETERS

Modification of boiler parameters;

• HAMMER SWEEP

Possibility of setting 4 levels of boiler operation for combustion checks ;

• CALIBRATION

Automatic boiler calibration;

• HYDRAULIC CIRCUIT DEAERATION

Facilitation for deaeration of the system in the installation phase;

• HISTORY

List of errors recorded by the boiler during operation operation.

Technical features

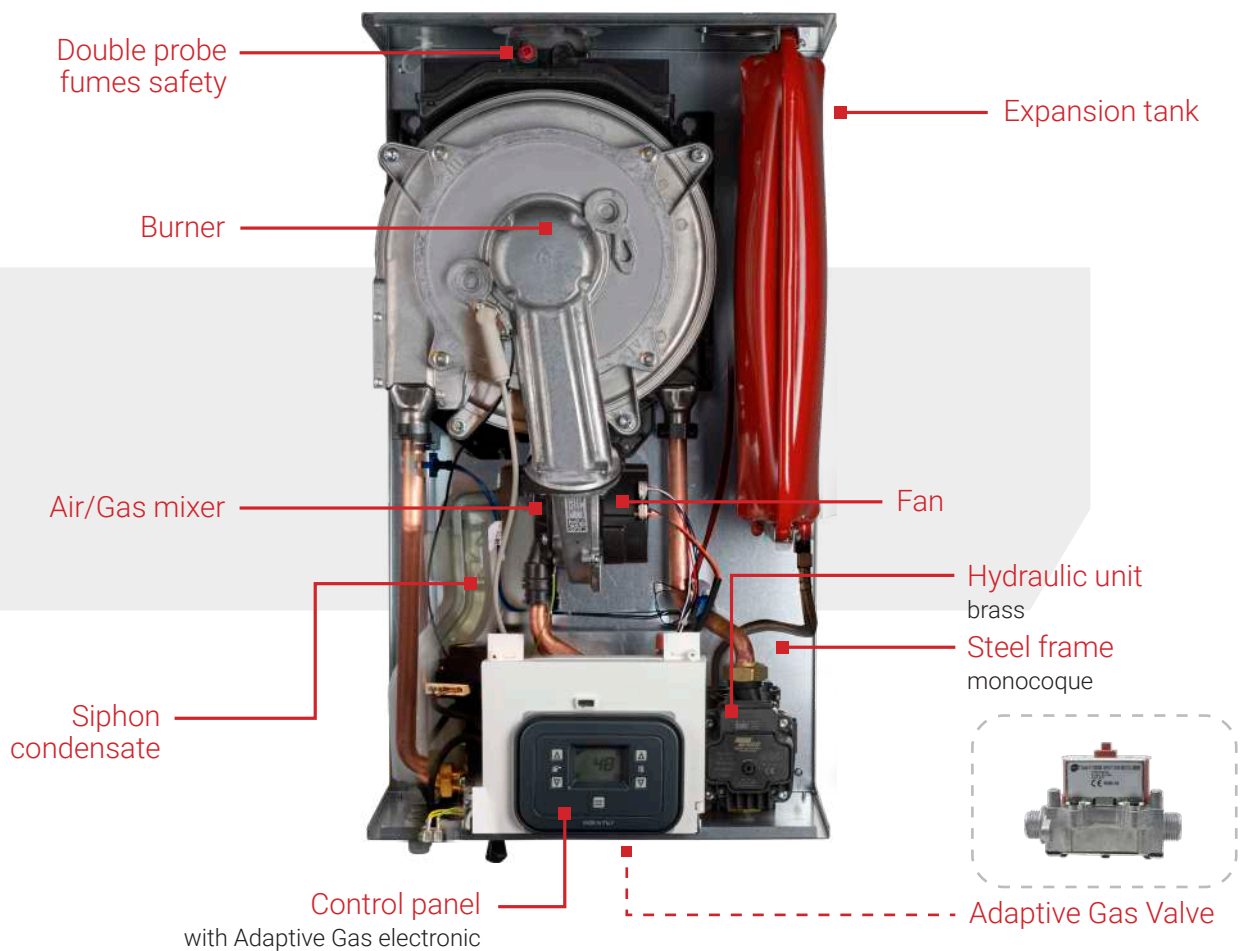
Plus

Boiler with single-circuit stainless steel primary exchanger with no junctions and/or welds that maintains high efficiency even on older systems.

- New combustion system with patented gas-adaptive technology (Advanced Adaptive Gas Combustion Control A²GC²).

The electronics continuously analyze the combustion (CO₂) through the flame signal by acting on the gas valve and the fan, to ensure correct combustion in all conditions of use.

The electronics allow the boiler to be easily adapted to the various types of gas without having to operate with



mechanical transformation kits;

- Instant production of sanitary hot water with dedicated plate exchanger;
- Sanitary pre-heating function: faster hot water delivery
- User interface with display and multi-function keys for adjustment and parameter setting;
- By-pass as standard, easy to inspect;

- Chimney protection system: electronic management of flue gas overtemperatures, guaranteeing maximum chimney protection.

Intubation on flues: particularly suitable for operation in flues requiring intubation with high pressure drops;

- Minimum polluting emissions (class VI - EN 15502-1);
- Sliding temperature operation optional external probe;



- Low consumption modulating heating circulator (ErP Ready - Class A);
- Digital flame control with three reignition attempts in case of blocked operation due to lack of flame detection (methane configuration);
- Three-piece removable casing for easier maintenance or

inspection;

For SV versions: possibility of setting the maximum power that can be delivered to the external tank.

High circulation, mono spiral primary heat exchanger

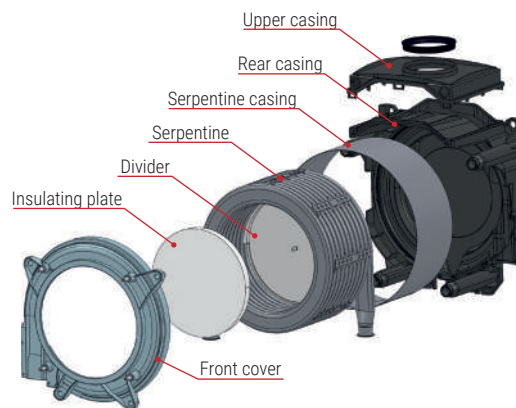
Biasi has introduced in 2017 the new stainless-steel heat exchanger for condensing boilers to the market: Round. Round is a compact **monothermal heat exchanger** based on a stainless-steel coil with an oval cross-section.

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 input/output connections, 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 the entire service life of the product
- Reduction in the head losses with optimised circuit

The 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 an old system in the case of a substitution.

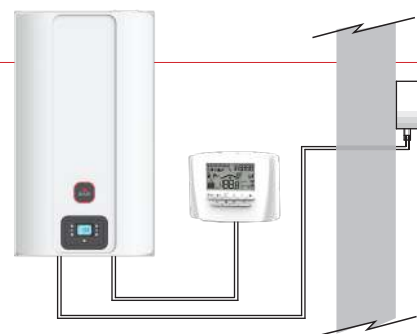
Round integrates the **round flow function** in which the water produces a centrifugal effect for cleaning the internal walls of the mono spiral. The fact that there are no parallel circuits ensures easy "washing" operations of the heat exchanger and the elimination of any air present in the installation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



Thermoregulation

Climatic adjustment (with optional external probe) and (remote) room adjustment to allow proper management of the water temperature in order to reduce consumption and consequently a reduction in emissions.

The use of climate regulation also produces a rise in the regulation efficiency, increasing the value of your home.



Technical data

Technical data		RinNova Adaptive - S MODELS		
		25 S	30 S	35 S
Nominal heating d.h.w. heat input	kW	21,0 / 26,0	26,0 / 31,0	31,0 / 34,7
Minimum heat input for heating/d.h.w	kW	3,0 / 3,0	3,8 / 3,8	3,8 / 3,8
Maximum useful heating/sanitary power 60°/80°C *	kW	20,7 / 25,6	25,6 / 30,6	30,6 / 34,1
Minimum useful heating/heating power 60°/80°C *	kW	2,8 / 2,8	3,6 / 3,6	3,6 / 3,6
Maximum useful heating/sanitary power 30°/50°C **	kW	22,8 / 28,2	28,3 / 33,7	33,6 / 37,7
Minimum useful heating/sanitary power 30°/50°C **	kW	3,2 / 3,2	4,0 / 4,0	4,0 / 4,0
Quantity of condensate at Q.nom. 30°/50°C (in heating mode) **	l/h	4,2	5	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 *	%	98,4	98,6	98,8
Min. efficiency 60°/80°C *	%	94,0	94,5	94,5
Nom. efficiency 30°/50°C **	%	108,6	108,7	108,5
Min. efficiency 30°/50°C **	%	105,2	105,8	105,8
Efficiency at 30 % load **	%	109,8	109,7	109,9
Energy efficiency η_s	%	94	94	94
Thermal losses at the chimney with burner in operation	Pf (%)	1,3	1,2	1,0
Thermal losses at the chimney with off turned burner ΔT 50°C	Pfbs (%)	0,2	0,2	0,2
Thermal losses to the environment through the casing with the burner in operation	Pd (%)	0,3	0,2	0,2
NOx class	n°	6	6	6
Weighted NOx [Hs] ***	mg/kWh	44	34	28
Minimum/maximum heating temperature ****	°C	25 / 80	25 / 80	25 / 80
Minimum/maximum heating pressure	bar	0,3 / 3	0,3 / 3	0,3 / 3
Available heating head (at 1000 l/h)	mbar	340	320	320
Expansion tank capacity (total/useful)	l	7	7	7
Minimum/maximum d.h.w temperature	°C	35 / 55	35 / 55	35 / 55
Minimum/maximum d.h.w pressure	bar	0,3 / 10	0,3 / 10	0,3 / 10
Maximum flow rate ($\Delta t = 25$ K) / ($\Delta t = 35$ K)	l/min	15,4 / 10,7	18,3 / 12,8	20,5 / 14,3
Specific d.h.w flow ($\Delta t = 30$ K) *****	l/min	12,8	15,2	17,0
Voltage / electric power at nominal heat input	V~/ W	230 / 100	230 / 96	230 / 116
Electric power at minimum heat input	W	12	11	11
Electric power in stand-by	W	3	3	3
Electric degree of protection	n°	IPX5D	IPX5D	IPX5D
Minimum/maximum flue gas temperature#	°C	38 / 78	44 / 78	50 / 78
Minimum/Maximum flue gas mass flow rate #	kg/s	0,0014 / 0,0121	0,0044 / 0,0144	0,0044 / 0,0209
Minimum/maximum air mass flow rate #	kg/s	0,0013 / 0,0116	0,0044 / 0,0139	0,0044 / 0,0203
Max. length of coaxial smoke outlet (\varnothing 60/100 mm / \varnothing 80/125 mm)	m	10 / 12	10 / 12	10 / 12
Max length of split 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 content of the boiler	l	2,0	2,0	2,0



Technical data

RinNova Adaptive - SV MODELS

		RinNova Adaptive - SV MODELS		
		16 SV	20 SV	30 SV
Nominal heating d.h.w. heat input	kW	17 / 17	21,0 / 26,0	31,0 / 34,7
Minimum heat input for heating/d.h.w	kW	3,0 / 3,0	3,0 / 3,0	3,8 / 3,8
Maximum useful heating/sanitary power 60°/80°C *	kW	16,7 / 16,7	20,7 / 25,6	30,6 / 34,1
Minimum useful heating/heating power 60°/80°C *	kW	2,8 / 2,8	2,8 / 2,8	3,6 / 3,6
Maximum useful heating/sanitary power 30°/50°C **	kW	18,4 / 18,4	22,8 / 28,2	33,6 / 37,7
Minimum useful heating/sanitary power 30°/50°C **	kW	3,2 / 3,2	3,2 / 3,2	4,0 / 4,0
Quantity of condensate at Q.nom. 30°/50°C (in heating mode) **	l/h	2,7	4,2	5,6
Quantity of condensate at Q.nom. 30°/50°C (in heating mode) **	l/h	0,5	0,5	0,6
Condensate pH		4,0	4,0	4,0
Nom. efficiency 60°/80°C *	%	98,1	98,4	98,8
Min. efficiency 60°/80°C *	%	94,0	94,0	94,5
Nom. efficiency 30°/50°C **	%	108,4	108,6	108,5
Min. efficiency 30°/50°C **	%	105,2	105,2	105,8
Efficiency at 30 % load **	%	109,7	109,8	109,9
Energy efficiency ηs	%	93	94	94
Thermal losses at the chimney with burner in operation	Pf (%)	1,5	1,3	1,0
Thermal losses at the chimney with off turned burner ΔT 50°C	Pfbs (%)	0,2	0,2	0,2
Thermal losses to the environment through the casing with the burner in operation	Pd (%)	0,4	0,3	0,2
NOx class	n°	6	6	6
Weighted NOx [Hs] ***	mg/kWh	40	44	28
Minimum/maximum heating temperature ****	°C	25 / 80	25 / 80	25 / 80
Minimum/maximum heating pressure	bar	0,3 / 3	0,3 / 3	0,3 / 3
Available heating head (at 1000 l/h)	mbar	340	340	320
Expansion tank capacity (total/useful)	l	7	7	7
Minimum/maximum d.h.w temperature	°C	35 / 55	35 / 55	35 / 55
Minimum/maximum d.h.w pressure	bar	-	-	-
Maximum flow rate (Δt = 25 K) / (Δt = 35 K)	l/min	-	-	-
Specific d.h.w flow (Δt = 30 K) *****	l/min	-	-	-
Voltage / electric power at nominal heat input	V~/ W	230 / 80	230 / 100	230 / 116
Electric power at minimum heat input	W	12	12	11
Electric power in stand-by	W	3	3	3
Electric degree of protection	n°	IPX5D	IPX5D	IPX5D
Minimum/maximum flue gas temperature#	°C	38 / 75	38 / 78	50 / 78
Minimum/Maximum flue gas mass flow rate #	kg/s	0,0014 / 0,0079	0,0014 / 0,0121	0,0044 / 0,0209
Minimum/maximum air mass flow rate #	kg/s	0,0013 / 0,0076	0,0013 / 0,0116	0,0044 / 0,0203
Max. length of coaxial smoke outlet (Ø 60/100 mm / Ø 80/125 mm)	m	10 / 12	10 / 12	10 / 12
Max length of split flue exhaust (Ø 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	31	35,5
Water content of the boiler	l	2,0	2,0	2,0

* 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 METHANE G20 gas. **** At minimum useful power. ***** Referred to EN 625 standard.

Values referred to tests with 80 mm 1 + 1 split flue and methane gas G20.



A large area of the page is filled with horizontal red lines, serving as a template for technical specifications or notes.



Cod. 4823.0720.00

BSG
CALDAIE A GAS

Headquarters and Production

Legal office: Via Pravolton, 1/b - 33170 Pordenone (Italy)
Tel. +39 0434 238311 - Fax +39 0434 238312



www.biasi.it

BIASI
COMFORT MADE IN ITALY