

# RINNOVA



Wall hung high efficiency  
boilers 24, 28 and 32kW.

Best efficiency in  
compact dimensions.



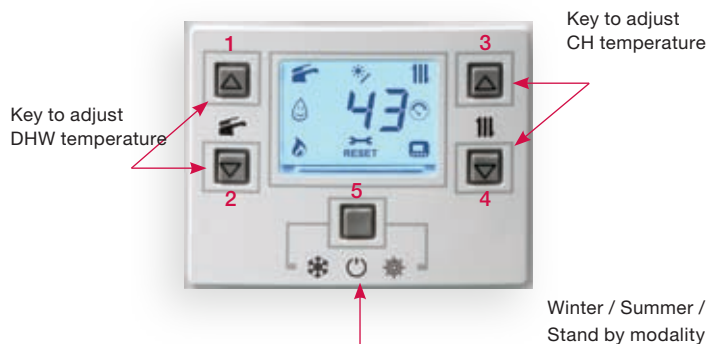
## RINNOVA

RinNOVA is the new BIASI wall hung boiler range for central heating and domestic hot water. It is available open and sealed chamber with a complete range of outputs (24, 28 and 32kW) in order to be suitable either for villas and small apartments.

An innovative digital control panel has been studied to have an easier user interface and a more comprehensive list of information and procedures of programming dedicated to the installer.

The innovative design and the compact dimensions of the whole range make RinNOVA suitable in different locations.

### CONTROL PANEL



### INFO MENU'

By pressing the keys 3 and 5 at the same time, RinNOVA enters the INFO menu, where it is possible to visualize the parameters. To scroll the list press the key 3 or 4. Here follows the list of main parameters in the order they appear:

System pressure	J00 / value
External temperature (With external sensor connected)	J01 / value
K value for thermoregulation	J02 / value
K offset value	J03 / value
Central heating temperature set	J04 / value
CH flow temperature	J05 / value
DHW temperature set	J07 / value

The value of each parameter appears alternatively with the number of parameter it is visualized.

### SYSTEM FILLING

RinNOVA gives the indication when it is better to fill before the boiler locks:

**609** ☀ The pressure is a bit low, the icon ☀ flashes to suggest the filling;

**E04** ☀ The boiler is locked: the system must be filled till the icon ☀ stop flashing.

The right value of pressure is between 1 and 1,5 bar.



By pressing the keys 1 and 2 at the same time: DHW comfort on (★★★ EN 13203)



The system needs to be filled



To visualize the pressure in the system, press the key 3 and 5 together.

**613** ☀ = 1,3 bar



RinNOVA tells to the user when the BIASI solar system is operating.



RinNOVA remembers to the user when periodic maintenance has to be done.

## The new BIASI Italian styling

### EFFICIENCY



Central heating (Dir. Rend.)

RinNOVA is an high efficiency boiler thanks to the eight pipes primary copper

heat exchanger. The modulation of the output ensures a reduction of gas consumption and the best suitability to the different central heating and domestic hot water requests.



EN 13203

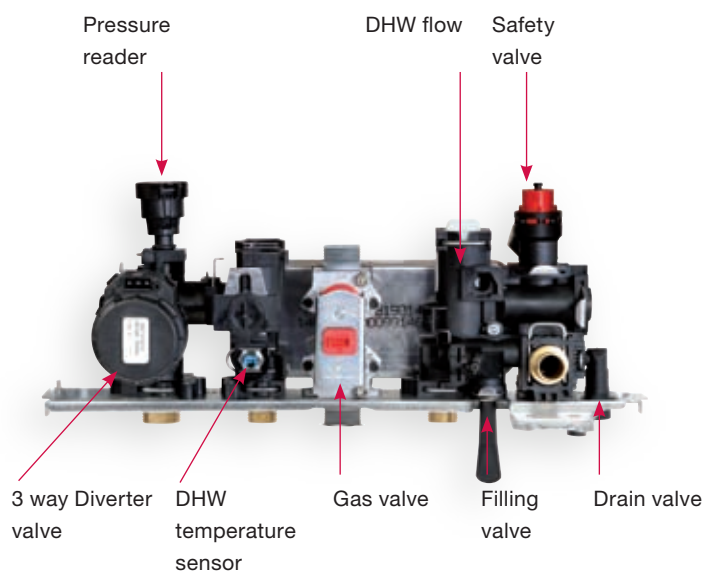
When the icon appears it means that RinNOVA ensures best comfort in DHW production, reducing the waiting time for the availability of DHW and ensuring a stable temperature during a shower.



### DIMENSIONS

RinNOVA has the same compact dimensions 700x400x325mm for the whole range keeps the same dimensions of the previous range in order to make easier the replacement of boilers. The 28 and 32kW keeps the same hydraulic connection of the 24kW model.

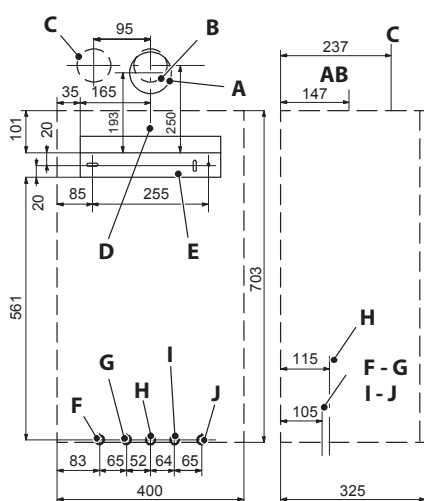
### RELIABILITY AND SAFETY



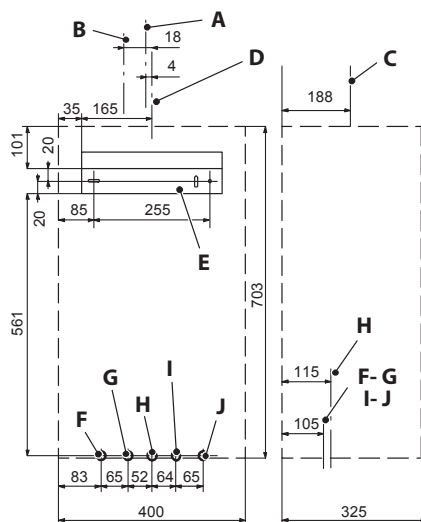
### EQUIPMENT

RinNOVA supplies: a gas cock for the gas connection of the boiler to the system, a paper frame, a bracket for the installation and the cable to connect the boiler to supply line. It is possible to easily connect the BIASI remote control and the external sensor (optional).

### HYDRAULIC AND FLUE CONNECTION



Sealed chamber version



Open chamber version

Sealed chamber	
A	Coaxial flue /air (60 / 100 mm)
B	Twin Flue pipe (80 mm)
C	Twin Air pipe (80 mm)
Open chamber	
A	24 kW flue axis
B	28 kW flue axis
C	Axis boiler
Sealed – Open chamber	
D	Boiler axis
E	Bracket
F	CH flow
G	DHW outlet
H	GAS
I	DHW inlet
J	CH return

# TECHNICAL DATA

Cod. 4823.0323 - 50001011 - Rev. 00 - UNIGRAF snc (VF)

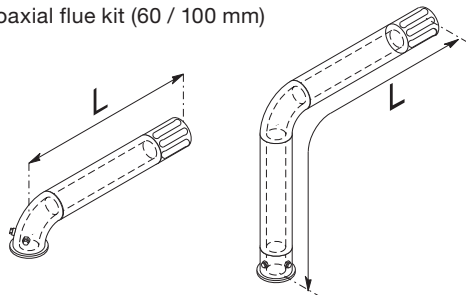
RINNOVA		M290.24CM/M	M290.28CM/M	M290.32CM/M	M290.24BM/M	M290.28BM/M
Nominal heat output	kW	23.7	29.1	30.6	24.1	27.6
Minimum heat output	kW	9.8	11.8	14.0	9.7	11.3
Measured efficiency at nominal heat input/ at 30% load	%	92.8 / 90.7	93.3 / 92.2	93.1 / 90.9	90.6 / 89.6	90.0 / 89.3
Efficiency (Dir. Rend. 92/42CEE)	N°	★★★	★★★	★★★	★★	★★
Central heating Minimum / Maximum temperature	°C	38 / 85	38 / 85	38 / 85	38 / 85	38 / 85
DHW Minimum / Maximum temperature	°C	35 / 60	35 / 60	35 / 60	35 / 60	35 / 60
Minimum / Maximum central heating pressure	bar	0,3 / 3	0,3 / 3	0,3 / 3	0,3 / 3	0,3 / 3
Minimum / Maximum DHW pressure	bar	0,3 / 10	0,3 / 10	0,3 / 10	0,3 / 10	0,3 / 10
Expansion vessel capacity	l	7	7	7	7	7
Useful head at the flow rate of 1000 l/h	bar	2.04	2.10	2.85	2.79	2.85
Max flow rate $\Delta t = 25 \text{ K} / \Delta t = 30 \text{ K}$	l/min	15.2 / 12.3	18.1 / 14.8	20.0 / 16.6	15.3 / 13.0	18.1 / 14.8
Nominal voltage / Power consumption	v / W	230 / 50	230 / 50	230 / 50	230 / 50	230 / 50
Electrical protection degree	IP	X5D	X5D	X5D	X4D	X4D
Weight	kg	32.7	33.4	34.5	28.0	28.7
Maximum $\emptyset$ 60/100 – $\emptyset$ 80/125 coaxial flue length	m	4 / 8.5	4 / 8.5	3 / 6.0	-	-
Losses due to coaxial 90°- 45° elbows ( $\emptyset$ 60/100 and $\emptyset$ 80/125)	m	1 / 0.50	1 / 0.50	1 / 0.50	-	-
Maximum $\emptyset$ 80/80 twin flue length	m	30	30	15	-	-
Losses due to twin 90°- 45° elbows ( $\emptyset$ 80)	m	1.65 / 0.90	1.65 / 0.90	1.65 / 0.90		
Smoke production at nominal / minimum heat input**	kg/s	0.0154 / 0.0172	0.0171 / 0.0180	0.0196 / 0.021	0.0204 / 0.0176	0.0219 / 0.0193
Air consumption at nominal / minimum heat input**	kg/s	0.0149 / 0.0169	0.0165 / 0.0170	0.0190 / 0.0206	0.0198 / 0.0174	0.0212 / 0.0190
Flue temperature at nominal / minimum heat input**	°C	123 / 110	111 / 100	122 / 112	108 / 83	124 / 94
Thermal loss to the ambient through the case with burner on*	%	0.9	1.5	1.0	2.9	2.7
Chimney thermal loss with burner on*	%	6.3	5.2	5.9	6.5	7.3
Chimney thermal loss with burner off*	%	0.2	0.2	0.2	0.2	0.2
Nominal / minimum CO <sub>2</sub> **	%	6.9 / 3.5	7.6 / 3.8	7.2 / 3.9	5.4 / 2.6	5.8 / 2.8
Nominal / minimum O <sub>2</sub> **	%	8.6 / 14.8	7.3	8.1 / 14.0	11.3	10.6

\* Measured figures with 1 m coaxial flue pipe  $\emptyset$  60/100 for sealed chamber boilers and 1 m chimney for open chamber boilers

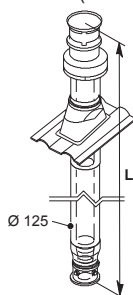
\*\* Measured figures with split pipes  $\emptyset$  80 mm 1 m flue + 1 m air (G20) for sealed chamber boilers and 1 m chimney for open chamber boilers

## FLUE KIT

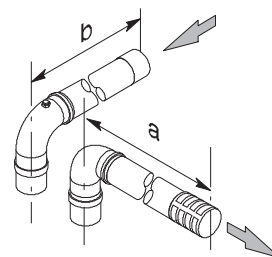
Coaxial flue kit (60 / 100 mm)



Roof kit (80/125mm)



Twin pipes (80/80mm)



For each kit there are available elbows (90°-45°) and extensions. The maximum length for each model and expulsion type are on the table above.

This catalogue replaces the previous one.

Our policy in one of continued improvement in both design and performance of our products BSG Caldaie a Gas S.p.A. therefore reserves the right to alter specifications without prior notice in accordance with product design policy and keeping with market requirements.