

# START

wall-hung condensing boilers

NEW



**RIELLO**  
Energy For Life

A Carrier Company

[www.riello.com](http://www.riello.com)

## START

RIELLO INTRODUCES START, THE NEW RANGE OF CONDENSING BOILERS DESIGNED AROUND THE USER'S COMFORT NEEDS, IN A RENEWED COMBINATION OF TECHNOLOGY AND RESPECT FOR THE ENVIRONMENT.

START marks the beginning of a new generation of condensing boilers, where **technological research is aimed at efficiency and energy saving**, for an increasingly green comfort. Countless are the innovative features of START. The stainless steel condensing exchanger and the optimisation of the DHW plate exchanger ensure **START high performance and comfort in both heating and DHW modes, placing it at the top of its market category**. The modern and linear design, in line with today's aesthetic trends, allow START to perfectly fit into any environment. Thanks to its **extremely compact size and reduced weight**, START can also be

installed recessed into a wall.

The **ease of use and installation**, the common denominator of the range, inherited from years of experience and research by Riello in the heating field, complete the character of START, a candidate to become a reference in its segment. But there's more. START is a product created for today, with an eye on tomorrow.

In fact, **the new range is ready to be used with future distribution systems for blends of natural gas and hydrogen**, which will help reduce the environmental impact and emissions of condensing boilers in the coming years.



### HOT WATER TEMPERATURE STABILITY

Hot water delivery without temperature fluctuations for optimal comfort during withdrawal



### HIGH EFFICIENCY

Maximum comfort and reduced consumption thanks to the high modulation ratio 1 : 8 and to the primary and DHW heat-exchangers developed to offer best-in-class performance in the segment



### LOW NOISE OPERATION

START is a boiler designed to work in very quiet operation conditions, ideal for installation inside homes



### DIGITAL TOUCHPAD INTERFACE

START features a new digital touchpad interface, which retains the simplicity of use that has always characterised Riello products.



### COMPACT DESIGN

Extremely compact product, ideal for installation even in a kitchen cupboard, thanks also to its width of only 400 mm! Can also be installed recessed in-wall and outdoors in partially protected places



### EASE OF REPLACEMENT

Thanks to the wide choice of accessories, designed for installation and integration in small spaces, START makes it even easier to replace old boilers.

**START OFF**  
**ON THE RIGHT FOOT.**



#### THE RANGE

START is available in 3 output sizes, in combi (KIS) and heating only (IS) versions:

- **START 15**
  - IS version
- **START 25**
  - KIS versions (dedicated codes for NG and LPG)
  - IS version
- **START 30**
  - KIS version

According to the model, availability of conversion kits for propane or propane air and for LPG

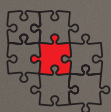


FOR A  
SUSTAINABLE  
FUTURE

## DESIGN AND FLEXIBILITY FOR AN EASY INTEGRATION



UNIVERSAL  
INSTALLATION



EASE OF  
INTEGRATION



EASE OF  
REPLACEMENT

The new START is characterised by a **modern and essential design**, that blends easily into any setting. The compact dimensions and low weight allow the boiler to be **easily installed anywhere, not only inside the house, but also recessed in box or outdoors, in a partially protected space.**

START is therefore also **ideal for the replacement of old boilers, both with DIN or with Riello connection sequence**, thanks to the availability of accessory kits that simplify the conversion.

A **wide range of accessories** complete the offer of START: flues kit, compact water filters (softener and magnetic) and hydraulic connections cover, **allowing an easier installation and harmonising integration in both indoor and outdoor environment.**

hydraulic connection  
cover



# THE WHOLE RIELLO COMFORT IN A SIMPLE TOUCH

The **new digital touchpad interface** is one of the main distinguishing features of START. With its simple and elegant lines, the new design in black plays a strong contrast with the white of the boiler casing, giving START a strong and modern character, in line with current aesthetic standards.

Designed with a special focus on **user-friendliness**, the START control panel allows

intuitive **access to all boiler and system settings and parameters by means of a simple "touch"** on seven points of its surface.

A "buzzer" is generated to confirm the successful operation.

The LCD display has also been designed to simplify communication for the user, using **icons** that allow an easier comprehension than text.

## THE IMMEDIATE LANGUAGE OF ICONS



DHW request ongoing



Generic fault



CH water pressure fault



CH request ongoing



Maintenance - flashing bell icon for operation anomaly



Flame presence or flame block

DOMESTIC HOT WATER temperature setpoint regulation +/-

System pressure display when the boiler is in standby and not in demand



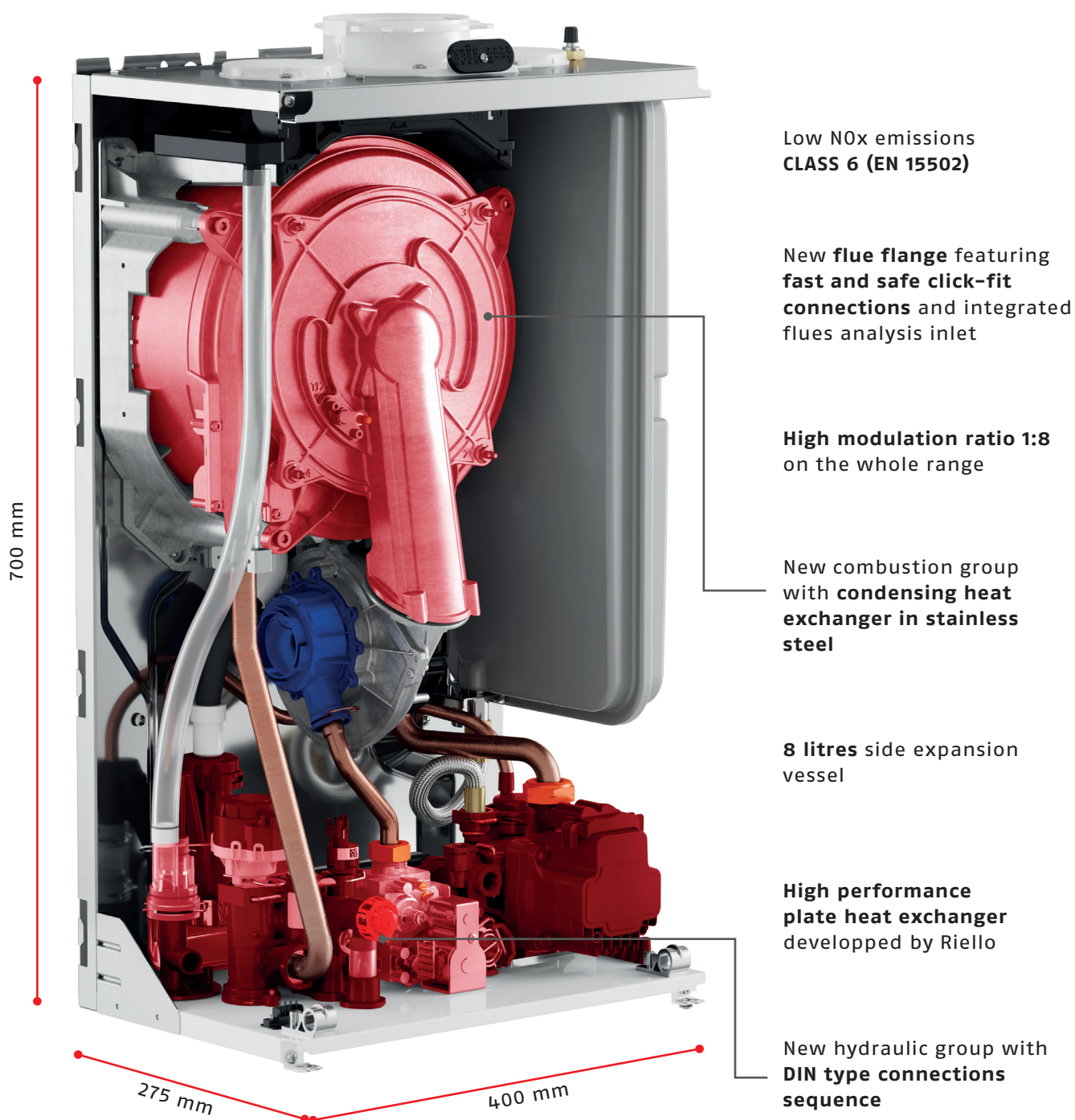
CENTRAL HEATING temperature setpoint regulation +/-

Boiler operation status (OFF/SUMMER/WINTER)

RESET of any alarm status/ Vent cycle interruption

INFO/ ENTER/ Parameters MENU

## TECHNOLOGY FOR COMFORT AND ENERGY SAVING



## STAINLESS STEEL PRIMARY HEAT EXCHANGER

The aim of continuous improvement, which has always characterized Riello research, now leads to the evolution of the START condensing range starting from its main element: the primary heat exchanger. The new condensing heat-exchanger, **compact and robust**, is made of a **coiled smooth tube in stainless steel with a large section**, to ensure the **best efficiency and cleanliness over time**. The **front access** to the exchanger is an additional plus that assists maintenance and cleaning of the combustion chamber.



**STAINLESS-STEEL HEAT EXCHANGER**



**FRONT ACCESS TO CONDENSING HEAT EXCHANGER**

## BEST-IN-CLASS DHW COMFORT

Riello has also optimized the **DHW heat-exchanger, designed in its own Research Laboratories and produced in its own plants**, to obtain the best performance and maximum comfort for the user in terms of temperature stability and waiting times. These pluses, which place **START at the top of its category**, also translate into **environmental respect**, allowing water and energy savings.



**DURABILITY**

### SPECIAL FUNCTIONS

Many functions have been introduced to improve performance and attention to different needs. Among the main ones:

- > The **PRE-HEATING** function and its evolution into **SMART PRE-HEATING** have been conceived in order to further save water and gas consumption. They allow, in fact, to keep the water warm inside the new high efficiency plate heat exchanger, to reduce waiting time.
- > Other functions, like **DHW DELAY, NO-OSCILLATION PERFORMANCE**, and **SMART FAN** allow to upgrade the boiler performance in particularly difficult operation conditions, like f.i. very high temperature inlet water, or very low flow water pressure, avoiding unpleasant temperature fluctuations.
- > The specific functions for **HEATING ONLY (IS)** versions are set up for operation with probe or DHW tank with thermostat and anti-legionella protection function.



**ENERGY SAVING**



**HOT WATER TEMPERATURE STABILITY**



**REDUCED WAITING TIMES**

## LOW NOISE OPERATION

This feature makes START ideal for installation indoor, even for replacement in a kitchen.



**LOW NOISE OPERATION**

## START NOW, FOR A SUSTAINABLE FUTURE



Riello condensing boilers have never been so green. The START range is **designed to operate with a blend of natural gas and hydrogen – up to a maximum of 20%** – in line with the objectives of environmental sustainability and the decarbonisation process launched by the European Union.

START, a new boiler designed today, for the generations of tomorrow.

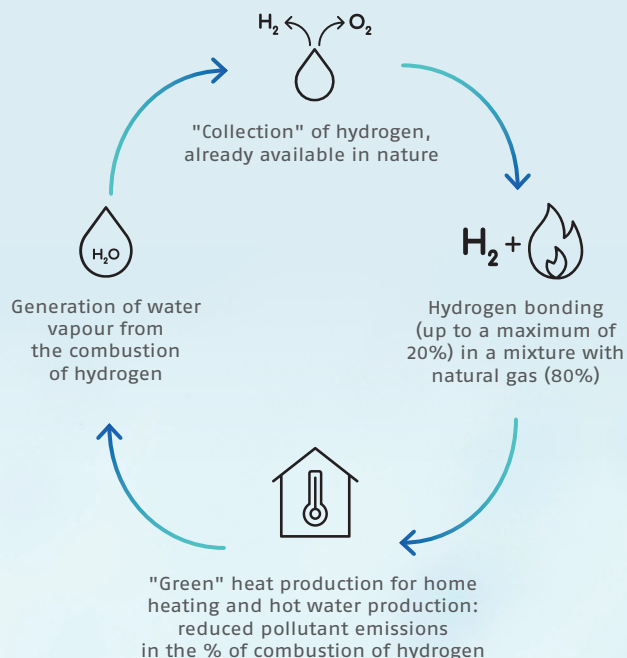
### HYDROGEN, THE ENERGY SOURCE FOR A SUSTAINABLE FUTURE

- Availability in huge quantities
- Production by low-impact and sustainable methods from renewable sources, such as wind, photovoltaics, and biomass energy
- Reduction of pollutant emissions in the percentage of its use
- Real opportunity for change to start the decarbonisation process, fight global climate change, and improve the quality of air and life.

#### THE CYCLE OF HYDROGEN USE

Hydrogen is a safe and clean gas, which is present and available in huge quantities in nature. Mixed with natural gas up to a ratio of 20 to 80%, hydrogen allows to generate heat and hot water, helping to minimise polluting emissions. From the combustion of oxygen and hydrogen, and in the amount of the latter, water vapour is generated: in this way hydrogen turns back to water, its most common source, and reintroduced into nature.

Hydrogen is the energy of the future, sustainable and available in large quantities.



## WITH START, FOR A GREEN LIFESTYLE

**RIELLO HAS ALWAYS DESIGNED PRODUCTS FOR THE WELL-BEING AND COMFORT, WHILE RESPECTING THE ENVIRONMENT**

This mission, in order to respond to the increasingly urgent challenges of environmental sustainability, translates today into the **search for efficiency and an increasingly conscious use of energy resources**. The new START range is the result of this renewed awareness, which is expressed in the development of innovative technologies that reduce energy consumption to ensure increasingly green comfort.



The modern technology of START and its careful control by the user, even remotely, are the key tools for wide-ranging savings. A benefit for the environment that translates into cost savings for the user.



**TECHNOLOGY  
RESPECTING THE  
ENVIRONMENT**



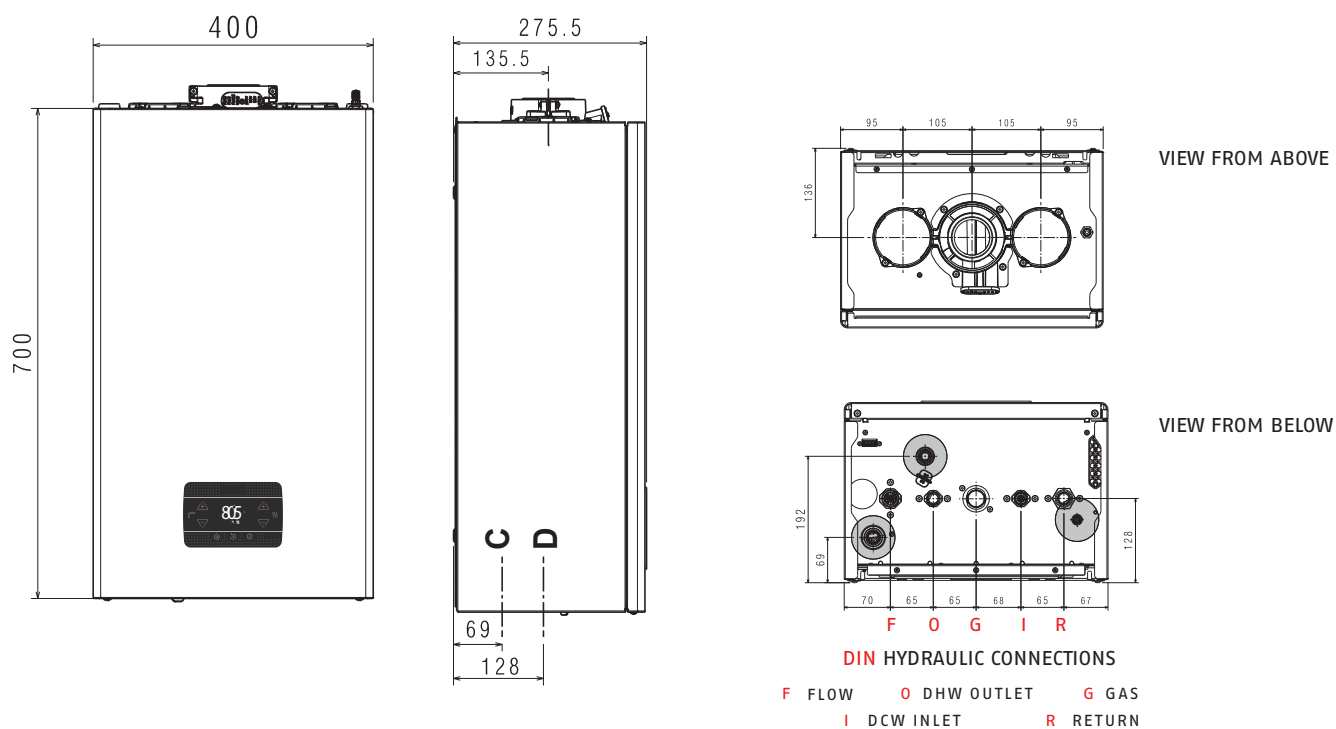
START looks to the future, already being able to process a mixture of natural gas and 20% hydrogen, the 'green' gas that will be the real environmental turning point in the coming years.



**ENERGY  
SAVING**

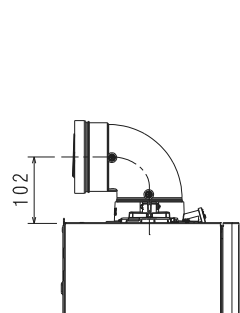


## TECHNICAL DRAWINGS

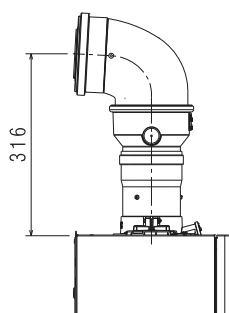


### FLUE OPTIONS

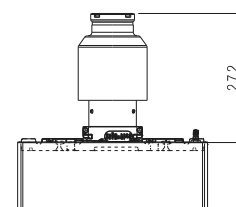
- > FLANGE INSTALLED AS STANDARD
- > QUICK INSTALLATION WITHOUT THE NEED FOR AN EXTERNAL COLLAR
- > BOILER DEPARTURE WITH RIELLO SPECIFIC FLUE OPTIONS



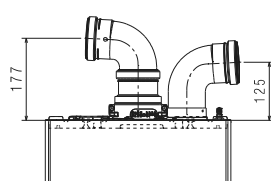
CONCENTRIC FLUE Ø60-100 mm



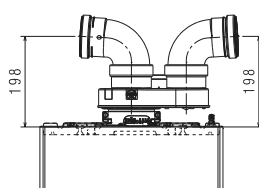
CONCENTRIC FLUE Ø80-125 mm



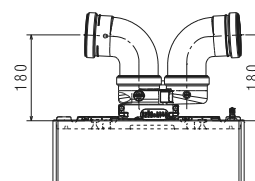
FLUE TYPES B22P- B52P



TWIN FLUE Ø80-80 mm



TWIN FLUE Ø80-80 mm  
with ADAPTER



TWIN FLUE Ø80-80 mm  
with COMPACT ADAPTER **NEW**

# TECHNICAL DATA START

| ENERGY LABELLING SPECIFICATIONS<br>(according to ErP regulations) |          | uom    | 25 C                 | 30 C                 | 15 R(*)              | 25 R(*)              |
|-------------------------------------------------------------------|----------|--------|----------------------|----------------------|----------------------|----------------------|
| Seasonal space heating energy efficiency class                    |          |        | A                    | A                    | A                    | A                    |
| Water heating energy efficiency class                             |          |        | A                    | A                    | -                    | -                    |
| Rated heat output                                                 | pnominal | kW     | 19                   | 24                   | 15                   | 19                   |
| Seasonal space heating energy efficiency                          | ηs       | %      | 93                   | 93                   | 93                   | 93                   |
| USEFUL HEAT OUTPUT                                                |          |        |                      |                      |                      |                      |
| At rated heat output, high-temperature regime (**)                | P4       | kW     | 19,4                 | 24,4                 | 14,5                 | 19,4                 |
| At 30% of rated heat output and low-temperature regime (***)      | P1       | kW     | 6,5                  | 8,2                  | 4,9                  | 6,5                  |
| USEFUL EFFICIENCY                                                 |          |        |                      |                      |                      |                      |
| At rated heat output and high-temperature regime (**)             | η4       | %      | 87,3                 | 87,6                 | 87,1                 | 87,3                 |
| At 30% of rated heat output and low-temperature regime (***)      | η1       | %      | 98,5                 | 98,2                 | 98,7                 | 98,5                 |
| AUXILIARY ELECTRICITY CONSUMPTION                                 |          |        |                      |                      |                      |                      |
| At full load                                                      | elmax    | W      | 32                   | 38                   | 32                   | 32                   |
| At part load                                                      | elmin    | W      | 12                   | 12                   | 12                   | 12                   |
| In Stand-by mode                                                  | PSB      | W      | 3                    | 3                    | 3                    | 3                    |
| OTHER PARAMETERS                                                  |          |        |                      |                      |                      |                      |
| Stand-by heat losses                                              | Pstby    | W      | 30                   | 30                   | 30                   | 30                   |
| Annual energy consumption                                         | QHE      | GJ     | 42                   | 56                   | 42                   | 42                   |
| Sound power level, indoors                                        | LWA      | dB     | 50                   | 53                   | 50                   | 50                   |
| NOx emissions                                                     | NOx      | mg/kWh | 22                   | 22                   | 22                   | 22                   |
| FOR COMBINATION HEATERS                                           |          |        |                      |                      |                      |                      |
| Declared load profile                                             |          |        | XL                   | XL                   | -                    | -                    |
| DHW energy efficiency                                             | ηwh      | %      | 84                   | 84                   | -                    | -                    |
| Daily electricity consumption                                     | Qelec    | kWh    | 0,133                | 0,152                | -                    | -                    |
| Daily fuel consumption                                            | Qfuel    | kWh    | 23,183               | 23,306               | -                    | -                    |
| Annual electricity consumption                                    | AEC      | kWh    | 29                   | 33                   | -                    | -                    |
| Annual fuel consumption                                           | AFC      | GJ     | 18                   | 18                   | -                    | -                    |
| OTHER SPECIFICATIONS                                              |          |        |                      |                      |                      |                      |
| CH heat INPUT (max-min)                                           |          | kW     | 20,0 - 3,1           | 25,0 - 3,95          | 20,0 - 3,1           | 20,0 - 3,1           |
| DHW heat nominal INPUT (max-min)                                  |          | kW     | 25,0 - 3,1           | 30,0 - 3,95          | 25,0 - 3,1           | 25,0 - 3,1           |
| Power supply voltage                                              |          | V-Hz   | 230 - 50             | 230 - 50             | 230 - 50             | 230 - 50             |
| Degree of protection                                              |          | IP     | IPX5D                | IPX5D                | IPX5D                | IPX5D                |
| NOx class                                                         |          |        | 6                    | 6                    | 6                    | 6                    |
| CH                                                                |          |        |                      |                      |                      |                      |
| Max pressure-temperature                                          |          | bar-°C | 3-90                 | 3-90                 | 3-90                 | 3-90                 |
| Pump: max available head (flow rate 1000 l/h)                     |          | mbar   | 408                  | 408                  | 408                  | 408                  |
| Membrane expansion tank                                           |          | l      | 8                    | 8                    | 8                    | 8                    |
| DHW                                                               |          |        |                      |                      |                      |                      |
| Max pressure                                                      |          | bar    | 8                    | 8                    | -                    | -                    |
| DHW production at ΔT = 25°C / 30°C / 35°C                         |          | l/min  | 14,3/11,9/10,2       | 17,2/14,3/12,3       | -                    | -                    |
| DHW minimum flow rate                                             |          | l/min  | 2                    | 2                    | -                    | -                    |
| HYDRAULIC AND GAS CONNECTIONS                                     |          |        |                      |                      |                      |                      |
| Inlet gas pressure (G20-G31)                                      |          | mbar   | 20-37                | 20-37                | 20 -37               | 20 -37               |
| CH Flow - Return / Gas inlet                                      |          | Ø      | 3/4"                 | 3/4"                 | 3/4"                 | 3/4"                 |
| DHW Inlet - Outlet / DHW tank Flow - Return                       |          | Ø      | 1/2"                 | 1/2"                 | 3/4"                 | 1/2"                 |
| DIMENSIONS, WEIGHT                                                |          |        |                      |                      |                      |                      |
| Boiler dimensions (HxWxD)                                         |          | mm     | 700x400x275          | 700x400x275          | 700x400x275          | 700x400x275          |
| Net weight                                                        |          | kg     | 28,5                 | 30                   | 27,5                 | 29                   |
| FLUE OPTIONS AND LENGTHS                                          |          |        |                      |                      |                      |                      |
| Max length for concentric flue (Ø 60 -100mm)                      |          | m      | 5,85                 | 4,85                 | 5,85                 | 5,85                 |
| Max length for twin flue (Ø 80 + 80 mm)                           |          | m      | 33+33 <sup>(A)</sup> | 27+27 <sup>(B)</sup> | 33+33 <sup>(A)</sup> | 33+33 <sup>(A)</sup> |

(\*) The 'Only heating' models are supplied with a three-ways valve. Filling tap is not available.

(\*\*) High-temperature regime means: 60°C Return and 80°C Flow of the boiler.

(\*\*\*) Low temperature regime means for condensing boilers 30°C, for low-temperature boilers 37°C and for other heaters 50°C return temperature (at heater inlet).

(A) Up to 52+52 via twin flue adapter with air inlet swelling position (available as an accessory)

(B) Up to 45+45 via twin flue adapter with air inlet swelling position (available as an accessory)

# RIELLO

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START

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The Company is constantly working to perfect its entire production range, so the design and size characteristics, technical data, equipment and accessories contained in this document may vary.

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