



## CARBON STEEL PRESSURE JET BOILERS



# RIELLO 3300

### central heating only



Reverse flame horizontal furnace boiler manufactured from carbon steel. These appliances can be fired ( on oil or gas ) with pressure jet burners. Fitted with removable stainless steel turbulators that optimise heat exchange and uniformly distribute the thermal load. Suitable for operation with inside-outside compensation (climate control), with 55°C minimum return temperature for all fuel. Insulated boiler body. Double hinged front door with ceramic insulation and removable rear smoke box cover. These boilers are available in 6 models, with output from 19.1 to 91.5 kW.

The control panel is available as optional.

### PRODUCT ADVANTAGES

High efficiency (>90%) with low operating costs.

Combination available with Domestic Hot Water Calorifier

Thermostatic or climate control

Suitable for operation with temperature modulation (inside out side compensation), with a minimum return temperature of 55°C. Combi

### INSTALLATION/MAINTENANCE ADVANTAGES

Easy to transport: delivered in separate packages.

Easy installation: simple assembly, standardised fittings.

Flexible installation: differentiated boiler management (thermostatic or climate control with room thermostat), available with domestic hot water calorifier as optional (RIELLO 7300)

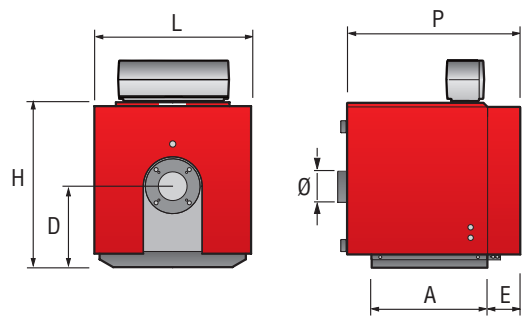
Extremely easy maintenance: complete access to the internal components.

Combination available with Riello 7300 DHW.



| CHARACTERISTICS                  |                 |                   | RIELLO<br>3300.17                   | RIELLO<br>3300.27 | RIELLO<br>3300.36 | RIELLO<br>3300.45 | RIELLO<br>3300.63 | RIELLO<br>3300.80 |
|----------------------------------|-----------------|-------------------|-------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Fuel                             |                 |                   | Gas (Natural Gas or LPG)/ Light oil |                   |                   |                   |                   |                   |
| Input                            | max             | kW                | 21                                  | 34,5              | 45                | 57                | 80                | 100               |
|                                  | max             | Mcal/h            | 18,06                               | 29,67             | 38,7              | 49,02             | 68,8              | 86                |
|                                  | min             | kW                | -                                   | -                 | 32                | 42                | 56                | 80                |
|                                  | min             | Mcal/h            | -                                   | -                 | 27,52             | 36,12             | 48,16             | 68,8              |
| Output                           | max             | kW                | 19,1                                | 31,3              | 40,8              | 52,2              | 73,1              | 91,5              |
|                                  | max             | Mcal/h            | 16,426                              | 26,918            | 35,088            | 44,892            | 62,866            | 78,69             |
|                                  | min             | kW                | -                                   | -                 | 29,5              | 38,9              | 52                | 74,2              |
|                                  | min             | Mcal/h            | -                                   | -                 | 25,37             | 33,454            | 44,72             | 63,812            |
| Efficiency at Maximum Output     |                 | %                 | 90,8                                | 90,8              | 90,7              | 91,5              | 91,4              | 91,5              |
| Efficiency at Minimum Output     |                 | %                 | -                                   | -                 | 92,2              | 92,5              | 92,9              | 92,8              |
| Efficiency at 30% Load           |                 | %                 | 89,6                                | 92,4              | 91,6              | 93,6              | 94,3              | 94,9              |
| Heat losses through flue gas     | burner lock-out | %                 | 0,1                                 | 0,1               | 0,1               | 0,1               | 0,1               | 0,1               |
|                                  | 100 % load      | %                 | 7,5                                 | 7,5               | 7,5               | 7,5               | 7,7               | 7,7               |
| Heat losses through insulation   |                 | %                 | 1,5                                 | 1,8               | 1,8               | 0,9               | 0,9               | 0,8               |
| Flue Gas Temperature             |                 | ~°C               | 150-170                             | 150-170           | 150-170           | 150-170           | 150-170           | 150-170           |
| Flue gas mass flow rate          |                 | kg/sec            | 0,008                               | 0,013             | 0,017             | 0,023             | 0,03              | 0,038             |
| Flue Gas volume                  |                 | dm <sup>3</sup>   | 39,9                                | 49,9              | 62                | 69,9              | 126,8             | 142,4             |
| Combustion chamber volume        |                 | dm <sup>3</sup>   | 24,6                                | 31,2              | 39,8              | 46,4              | 85,1              | 97,3              |
| Volumetric thermal load          |                 | kW/m <sup>3</sup> | 852                                 | 1106              | 1130              | 1220              | 940               | 1020              |
| Combustion Chamber Pressure Drop |                 | mbar              | 0,13                                | 0,21              | 0,42              | 0,59              | 0,54              | 1,1               |
|                                  |                 | Pa                | 13                                  | 21                | 42                | 59                | 54                | 110               |
| Maximum Flow temperature         |                 | °C                | 100                                 | 100               | 100               | 100               | 100               | 100               |
| Minimum Return temperature       |                 | °C                | 55                                  | 55                | 55                | 55                | 55                | 55                |
| Water-side pressure drop         | ΔT 10°C         | mbar              | 12                                  | 20                | 38                | 70                | 20                | 50                |
|                                  |                 | Pa                | 1200                                | 2000              | 3800              | 7000              | 2000              | 5000              |
|                                  | ΔT 20°C         | mbar              | 3                                   | 5                 | 9                 | 16                | 6                 | 15                |
|                                  |                 | Pa                | 300                                 | 500               | 900               | 1600              | 600               | 1500              |
| Capacity:                        |                 | litri             | 32                                  | 42                | 55                | 64                | 97                | 113               |
| Maximum working pressure         |                 | bar               | 5                                   | 5                 | 5                 | 5                 | 5                 | 5                 |
|                                  |                 | KPa               | 500                                 | 500               | 500               | 500               | 500               | 500               |
| Boiler weight with casing        |                 | kg                | 104                                 | 110               | 123               | 138               | 195               | 210               |

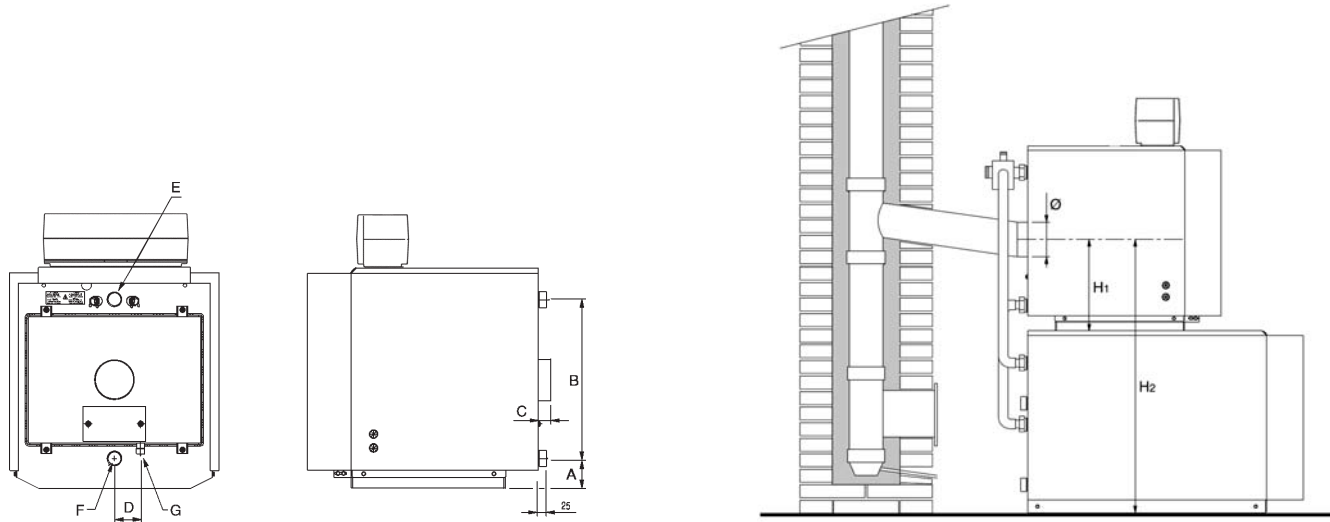
## DIMENSIONS (mm)



| Models 3300                  |    | 17  | 27  | 36  | 45  | 63  | 80   |
|------------------------------|----|-----|-----|-----|-----|-----|------|
| L - Width                    | mm | 600 | 600 | 600 | 600 | 700 | 700  |
| P - Boiler Length            | mm | 565 | 665 | 805 | 905 | 925 | 1025 |
| H - Boiler Height            | mm | 625 | 625 | 625 | 625 | 759 | 759  |
| A - Boiler base Length       | mm | 338 | 442 | 572 | 672 | 672 | 772  |
| D - Burner axis Central Line | mm | 310 | 310 | 310 | 310 | 384 | 394  |
| E - Front panel Length       | mm | 125 | 125 | 125 | 125 | 145 | 145  |
| Ø - Flue Gas outlet          | mm | 120 | 120 | 140 | 140 | 180 | 180  |



## WATER - FLUE CONNECTIONS

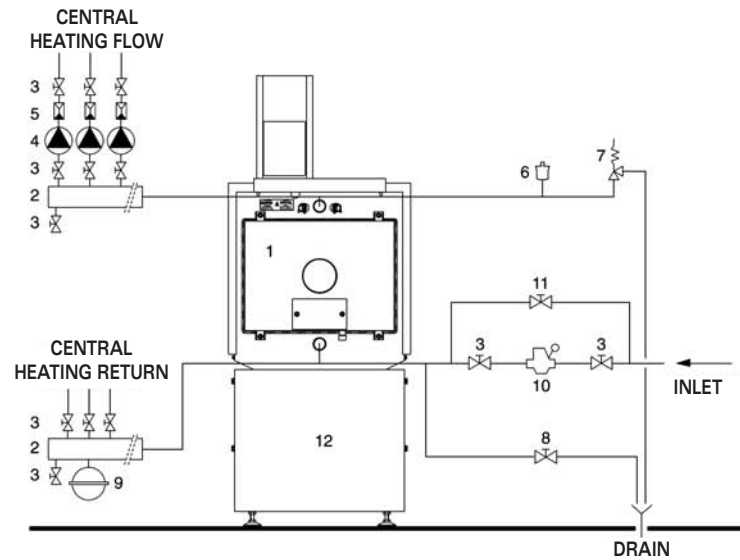


| Models  |    | RIELLO<br>3300.17 | RIELLO<br>3300.27 | RIELLO<br>3300.36 | RIELLO<br>3300.45 | RIELLO<br>3300.63 | RIELLO<br>3300.80 |
|---|----|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| A - Distance  | mm | 85                | 85                | 85                | 85                | 110               | 110               |
| B - Flow/Return Distance                              | mm | 465               | 465               | 465               | 465               | 553               | 553               |
| C - Exhaust outlet protrusion                         | mm | 40                | 440               | 40                | 40                | 50                | 50                |
| D - Dist. between O/R-safety/cond. drain              | mm | 75                | 75                | 75                | 75                | 85                | 85                |
| E - Central heating flow                              | DN | 1"1/4             | 1"1/4             | 1"1/4             | 1"1/4             | 1"1/2             | 1"1/2             |
| F - Central heating Return inlet/boiler drain         | DN | 1"1/4             | 1"1/4             | 1"1/4             | 1"1/4             | 1"1/2             | 1"1/2             |
| G - Flue condensate drain                             | DN | 1/2"              | 1/2"              | 1/2"              | 1/2"              | 1/2"              | 1/2"              |
| Ø - Flue gas diameter                                 | mm | 119               | 119               | 139               | 139               | 179               | 179               |
| H1 - Flue Central Line                                | mm | 310               | 310               | 325               | 325               | 384               | 384               |
| H2 - Flue Fitting Height (with 7300 storage cylinder) | mm | 935               | 935               | 950               | 950               | 1010              | 1010              |



## EXAMPLE OF BOILER CALORIFIER CONNECTION SCHEME

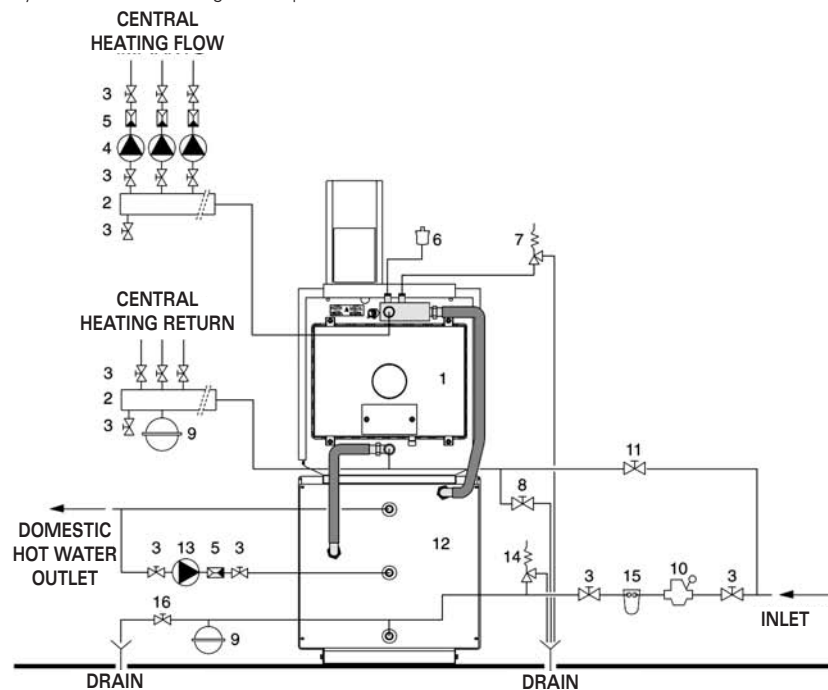
System for central heating only



Key

- 1 Boiler
- 2 CH header
- 3 Isolating valve
- 4 CH pumps
- 5 Non-return valves
- 6 Automatic air vent
- 7 Boiler safety valve
- 8 Boiler drain
- 9 Expansion vessels
- 10 Pressure Reducing Valve
- 11 Manual quick fill valve
- 12 Base/support Stay Support

System for central heating and the production of domestic hot water



Key

- 1 Boiler
- 2 CH manifolds
- 3 Isolating valve
- 4 CH pumps
- 5 Non-return valves
- 6 Automatic air-vent
- 7 Boiler safety valve
- 8 Boiler drain
- 9 Expansion vessels
- 10 Reducing unit
- 11 Manual quick fill valve
- 12 RIELLO 7300 DHW
- 13 DHW circulating pump
- 14 Calorifier safety valve
- 15 Filter
- 16 Calorifier Drain

The choice of system components and the installation are up to the installer. Installers must use their experience to guarantee a proper installation and functioning in compliance with all applicable legislation.

Circuits filled with anti-frost must be fitted with water disconnectors

## INSTALLATION

The boiler must be installed, where possible, raised from the floor in order to minimise / quantity of dust draft going to the burner fan

The Riello 3300 steel boilers can be installed:

- directly on the floor: this solution is possible but not recommended due to the reduced space between the burner and floor; in addition, the boiler room must be very clean;
- on a stay base/support: this is the best solution;
- stacked on DHW calorifier: this solution is ideal for combination systems (central heating and domestic hot water). In this case, the Riello 3300 boilers (from model 17 to 45) are combined with the Riello 7300 storage cylinder, designed and built specifically to support the weight of the boiler.



| <b>BURNERS MATCHING</b> |                   | RIELLO 3300.17 | RIELLO 3300.27 | RIELLO 3300.36 | RIELLO 3300.45 | RIELLO 3300.63 | RIELLO 3300.80 |
|-------------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| BURNERS                 |                   |                |                |                |                |                |                |
| GAS                     | GULLIVER BS 1*    | ●              | ●              | ●              |                |                |                |
|                         | GULLIVER BS 2*    |                |                |                | ●              | ●              |                |
|                         | GULLIVER BS 3*    |                |                |                |                |                | ●              |
|                         | GULLIVER BS 1D*   | ●              | ●              | ●              |                |                |                |
|                         | GULLIVER BS 2D*   |                |                |                | ●              | ●              |                |
|                         | GULLIVER BS 3D*   |                |                |                |                |                | ●              |
|                         | GULLIVER BGK2*    |                |                | ●              |                |                |                |
|                         | GULLIVER BG6D*    |                |                |                |                | ●              |                |
|                         | GULLIVER BG7D*    |                |                |                |                |                | ●              |
| LIHGT OIL               | GULLIVER RG 0.R   | ●              |                | ●              |                |                |                |
|                         | GULLIVER RG 1NR   |                | ●              | ●              |                |                |                |
|                         | GULLIVER RG 2     |                |                |                | ●              | ●              |                |
|                         | GULLIVER RG 3     |                |                |                |                |                | ●              |
|                         | GULLIVER RG 1 RDK | ●              | ●              | ●              |                |                |                |
|                         | GULLIVER RG 2D    |                |                |                | ●              | ●              |                |
|                         | GULLIVER RG 3D    |                |                |                |                |                | ●              |
|                         |                   |                |                |                |                |                |                |

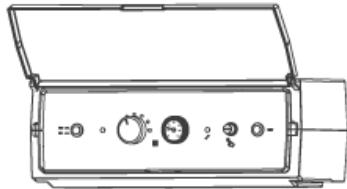
\* Low NOx, low nitrogen oxide emissions. NATURAL GAS: NOx < 80mg/kWh; CO < 60mg/kWh. OIL: NOx < 120mg/kWh; CO < 60mg/kWh

| <b>COMBINATIONS WITH RIELLO 7300</b> |  | RIELLO 3300.17 | RIELLO 3300.27 | RIELLO 3300.36 | RIELLO 3300.45 | RIELLO 3300.63 | RIELLO 3300.80 |
|--------------------------------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
| HOT WATER CALORIFER                  |  |                |                |                |                |                |                |
| 7300.130 H 130 litres                |  | ●              | ●              | ●              | ●              |                |                |
| 7300.170 H 170 litres                |  |                | ●              | ●              | ●              |                |                |
| 7300.220 H 220 litres                |  |                |                | ●              | ●              |                |                |
| 7300.270 H 270 litres                |  |                |                |                |                | ●              | ●              |
| 7300.330 H 330 litres                |  |                |                |                |                | ●              | ●              |



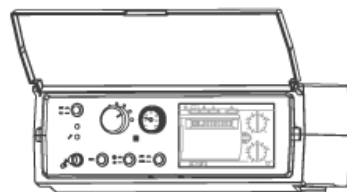
## CONTROL PANELS (ACCESSORY)

The RIELLO 5000 control panels for use with the Riello 3300 carbon steel boilers are described below, and are designed for the different needs of both the central heating system and the various devices used.



**TMR**  
for central heating only, on-off burner

**TMK**  
for central heating and domestic hot water production with RIELLO 7300 calorifier, on-off burner



**BOX**  
control boiler functions control  
with a Riello Esatto series electronic control unit.

## RIELLO 3300

### DESCRIPTION FOR SUMMARY SPECIFICATIONS

Reverse flame floor standing horizontal furnace boiler manufactured from carbon steel.  
Maximum working pressure 5 bar.

### DESCRIPTION FOR SPECIFICATIONS

The hot water boiler is made up of:

- Casing constructed from sheet steel finished in power coating with easy to fit couplings and removable for servicing
  - Insulation with a double layer of high density fibre-glass wool
  - Double hinged front door with ceramic insulation
  - reverse flame horizontal combustion chamber, concentric flue tube battery and adjustable stainless steel turbulators
  - burner mounting flange
  - control panel chosen according to the type of system used
  - maximum working temperature 100°C and maximum working temperature 93°C
  - minimum return temperature 55°C
  - maximum working pressure 5 bar
  - compliant with 90/396/EEC directive (gas) - CE mark
  - compliant with 89/336/EEC directive (electromagnetic compatibility)
  - compliant with 72/23/EEC directive (low voltage)
  - compliant with 92/42/EEC directive (efficiency)
- Combination available with the Riello 7300 series horizontal vitrified calorifier complete with special kit.

### MATERIAL SUPPLIED

- installation, use and maintenance manual
- hydraulic test certificate
- product identification plate

Boiler delivered in two separate packages: boiler body and the casing complete with lagging and assembly accessories

## ACCESSORIES

The following accessories are available separately, upon request.  
 RIELLO 7300 calorifier water connection kit (for 3300 models 17-45)  
 RIELLO 7300 calorifier water connection kit (for 3300 models 63-80)  
 RIELLO 5000 TMR control panel  
 RIELLO 5000 TMK control panel  
 RIELLO 5000 EB/T control panel  
 RIELLO 5000 BOX control panel