



CARBON STEEL PRESSURE JET PACKAGED BOILERS



Insieme 29

Light oil fired, with 95 litre DHW calorifier

RIELLO INSIEME 29 G	open flue
RIELLO INSIEME 29 G BF	room sealed

Boiler body manufactured from carbon steel and lagged with an insulating and sound-proofing material. Flue gas tubes complete with stainless steel turbulators. Domestic hot water is produced in a 95 litres calorifier, manufactured from mild steel with vitreous enamel lining, lagged with a thick polyurethane foam jacket. All the pipe works are separate and complete with all relevant accessories. All models are supplied with a thermostatic control panel. Their compact size, low noise and emissions enable these boilers to be installed conveniently even inside the home.. The range includes 3 models with output power ranging from 24.3 to 30.3 kW.

PRODUCT ADVANTAGES

- High overall seasonal efficiency (>91%) with low operating costs.
- DHW calorifier vitreous enamel lining, lagged with a thick polyurethane foam jacket.
- Low noise and emissions.
- Compact size for easy installation.
- Control panel with provision for installation of a RIELLO ESATTO temperature control unit.

INSTALLATION/MAINTENANCE ADVANTAGES

Easy and flexible installation. Boiler completely assembled, set up and tested at the factory, with all the accessories and safety devices. Easy maintenance and servicing. The combustion chamber, exhaust battery, control panel and water fittings are all easily accessible.



CHARACTERISTICS		INSIEME 29G	INSIEME 29 G BF
Fuel		light Oil	light Oil
Input	kW	33,2	33,2
	Mcal/h	28,5	28,5
Output	kW	30,3	30,3
	Mcal/h	26	26
Efficiency at max output	%	91,3	91,3
Efficiency at power 30% output	%	93,1	93,1
Heat losses through flue gas burner lock-out	%	0,1	0,1
Heat losses through flue gas 100 % load	%	7,7	7,7
Heat losses through insulation	%	1	1
Flue gas temperature (Δt)	$^{\circ}C$	~ 170	~ 170
Flue gas mass flow rate	kg/s	0,013	0,013
CO ₂	%	12,5	12,5
CO (*)	mg/kWh	~ 30	~ 30
NOx (*)	mg/kWh	< 190	< 190
Combustion chamber Pressure drop	mbar	0,08	0,08
	Pa	8	8
Maximum working pressure	$^{\circ}C$	82	82
Minimum return temperature	$^{\circ}C$	50	50
Boiler capacity	l	26	26
Central heating expansion vessel capacity	l	12	12
Maximum working pressure	bar	3	3
	kPa	300	300
DHW power input	kW	28,5	28,5
Domestic hot water capacity	l	95	95
DHW expansion vessel water capacity	l	2	2
Coil water capacity	l	4,2	4,2
DHW production @ $\Delta T 35^{\circ}C$	l/h	700	700
DHW output in 10 minutes with calorifier at $48^{\circ}C$ (**)	l	135	135
DHW output in 10 minutes with calorifier at $60^{\circ}C$ (**)	l	180	180
Recovery time $\Delta T 35^{\circ}C$	min	12	12
Calorifier maximum working pressure	bar	6	6
	kPa	600	600
Power supply	V/50 Hz	230	230
Maximum power input	W	280	210
Index of protection	IP	XOD(40)	XOD(40)
Weight	kg	205	205

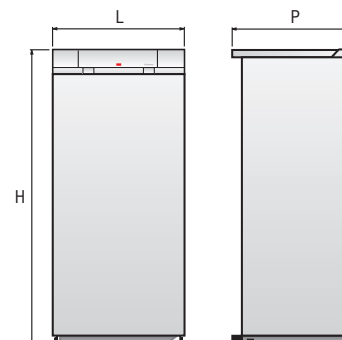
(*) Parameters refer to 0% residual O₂ in the exhaust gases atmospheric pressure at sea level..

(**) Inlet water temperature 13°C; average outlet temperature 43°C.

Performance obtained with fill pump at maximum speed.

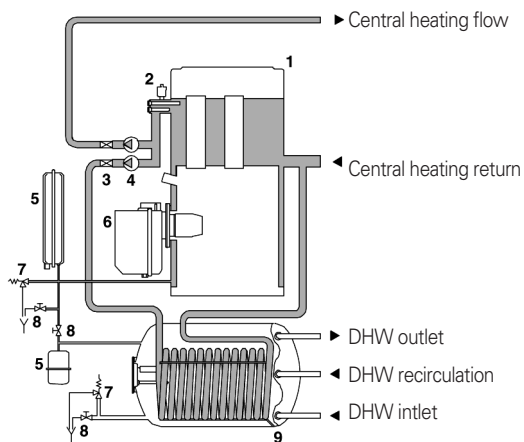
DIMENSIONS (mm)

Models		29 G	29 G BF
L - Width	mm	600	600
P - Length	mm	725	725
H - Boiler height	mm	1350	1350





WATER CIRCUIT

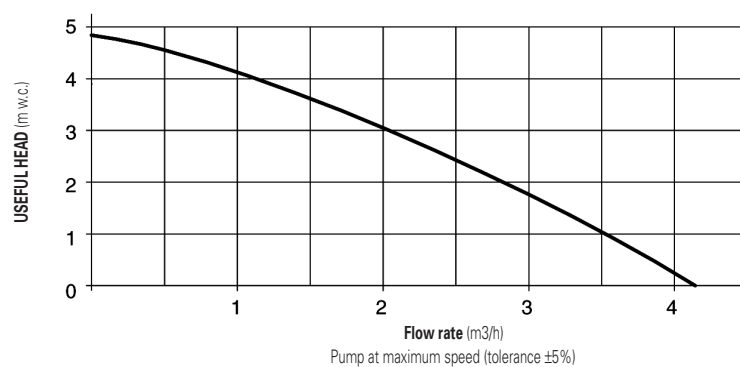


Key

- 1 Boiler body
- 2 Automatic air vent
- 3 Non-return valves
- 4 Pumps
- 5 Expansion vessels
- 6 Burner
- 7 Safety valves
- 8 on-off valves
- 9 DHW calorifier

PUMP

Riello Insieme boilers are supplied with a central heating pump already installed and connected (electrically and to the water circuit). The following diagrams show the pump's maximum flow/head curve to size pipe systems and installations



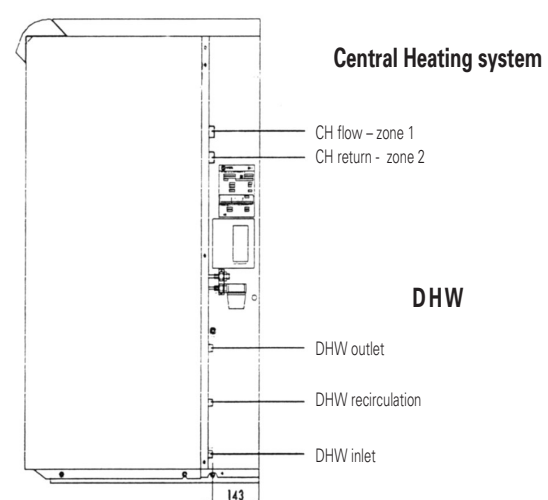
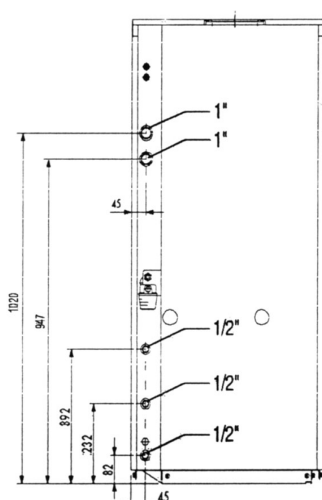
WATER CONNECTIONS

Boilers are manufactured for combination (domestic hot water and central heating) use.

The boiler safety valve must be connected to a suitable collection and drain system.

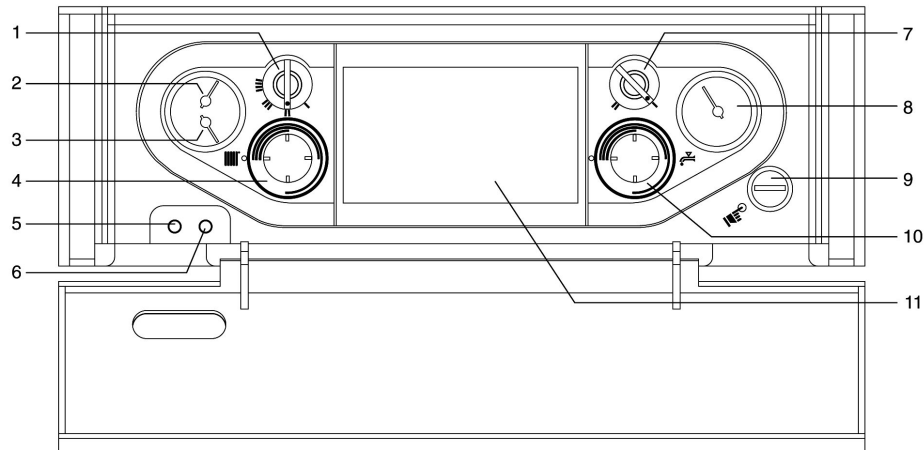
Circuits filled with anti-frost must be fitted with water disconnectors.

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.





CONTROL PANEL



Key

- | | | | |
|-----|--|----|------------------------------------|
| 1 | Function selector | 4 | Boiler thermostat |
| I | Off | 5 | Electrical power indicator |
| II | On | 6 | Burner lockout indicator |
| III | On | 7 | Summer (I) / Winter (II) selector |
| IV | Automatic mode
(only active with temperature control kit installed) | 8 | Calorifier temperature gauge |
| 2 | Boiler temperature gauge | 9 | Manual reset for safety thermostat |
| 3 | Boiler pressure gauge | 10 | Calorifier cylinder thermostat |
| | | 11 | Function indicators |

RIELLO INSIEME 29 G

DESCRIPTION FOR SUMMARY SPECIFICATIONS

Packaged open steel floor standing boiler fired with pressure jet oil burner.

The boiler serves the central heating system and produces domestic hot water in an enamelled steel storage cylinder. Maximum working pressure for the central heating system is 3 bar, while that for the DHW system is 6 bar.

DESCRIPTION FOR SPECIFICATIONS

Boiler complete with:

- light grey external casing manufactured from mild steel, with a large front door for easy access
- thermal insulation in glass wool
- vertical, steel, pressurised combustion chamber with exhaust battery with adjustable stainless steel turbulators
- oil fired pressure jet burner complete with filter and connection leads
- A 95 litres calorifier, manufactured from mild steel with vitreous enamel lining, lagged with a thick polyurethane foam jacket connected to water circuit and complete with pump
- switch to select winter (domestic hot water and central heating) summer (domestic hot water) mode
- easily accessible internal electric control panel with all necessary boiler controls and main on-off switch.
- filter and magnet protection against radio frequency interference
- boiler control thermostat and boiler safety thermostat with manual reset
- anti condensate function: minimum temperature is monitored and pump operation enabled only when a preset safety temperature is reached
- boiler water temperature gauge
- calorifier control thermostat and water temperature gauge
- CH drain cock
- 12 litre expansion vessel
- 2 litre expansion vessel for DHW circuit
- non-return valve
- CH circuit safety valve, calibrated to 3 bar
- storage cylinder safety valve
- automatic air vent valve
- manual vent valve
- central heating circuit pressure gauge
- central heating pump complete with air vent
- storage cylinder pump complete with air vent
- CH system fill cock
- maximum working pressure 3 bar
- maximum working pressure of calorifier 6 bar
- compliant with CEI standards
- index of protection IP40
- compliant with 89/336/EEC directive (electromagnetic compatibility)
- compliant with 72/23/EEC directive (low voltage)
- compliant with 92/42/EEC directive (efficiency)

MATERIAL SUPPLIED

- installation, operation and maintenance manual
- water test certificate
- product identification plate



RIELLO INSIEME 29 G BF

DESCRIPTION FOR SUMMARY SPECIFICATIONS

Packaged room sealed steel floor standing boiler fired with pressure jet oil burner.

Domestic hot water is produced in a 95 litres calorifier, manufactured from mild steel with vitreous enamel lining, lagged with a thick polyurethane foam jacket.

Maximum working pressure for the central heating system is 3 bar, while that for the DHW system is 6 bar.

DESCRIPTION FOR SPECIFICATIONS

These boilers comprise:

- light grey external casing manufactured from mild steel
- thermal insulation in wool lagging
- vertical, steel, pressurised combustion chamber with exhaust battery with adjustable stainless steel turbulators
- pressure jet oil fired burner with switch to select winter (domestic hot water and central heating) summer (domestic hot water) mode
- easily accessible internal electric control panel with all necessary boiler controls and total shutdown function
- filter and magnet protection against radio frequency interference
- boiler control thermostat and boiler high limit thermostat with manual reset
- anti condensate function: minimum temperature is monitored and pump operation enabled only when a preset safety temperature is reached
- boiler water temperature gauge
- calorifier control thermostat and water temperature gauge
- CH drain cock
- 12 litre expansion vessel
- 2 litre expansion vessel for DHW circuit
- non-return valve
- central heating circuit safety valve
- calorifier safety valve
- automatic air vent
- manual air vent
- central heating circuit pressure gauge
- central heating pump complete with air separator
- calorifier pump complete with air separator
- CH system fill cock
- maximum working pressure 3 bar
- maximum working pressure of calorifier 6 bar
- compliant with CEI standards
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ACCESSORIES

The following accessories are available, to be ordered separately.

- Pump replacement sleeve kit
- Temperature control interface kit
- Multi-zone electrical kit

