



## **PRESS RELEASE**

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### **Unique heat exchanger technology in Ferrol Commercial's new Quadrifoglio boiler set to transform heating system renovation**

- *Huge water content copes with extremely low water pressure*
- *Innovative stainless steel cloverleaf-shaped heat exchanger*
- *Available in three models up to 299kW*
- *Lowest possible NOx and CO<sup>2</sup> emissions*
- *Extremely energy efficient for big fuel cost savings*
- *Innovative design for clean operation and long-term durability*

The compact new Quadrifoglio vertical condensing commercial boiler from Ferrol introduces a new level of flexibility for renovating heating systems with large water flow and low pressure, whilst vastly improving energy efficiency and fuel consumption.

The Quadrifoglio – Italian for four-leaf clover - is the latest result of Ferrol's 50-plus years of experience of innovation in condensing technology design and is set to radically change the way commercial heating systems are renovated and designed.

At the heart of the Quadrifoglio is a unique cloverleaf-shaped spiral stainless steel heat exchanger and condensate tray. This innovative design creates a much higher heat exchange surface to allow a superior heat transmission ratio between flue gases and water and a very low thermal load.

"What this innovation means for the industry is a much greater flexibility when designing heating systems, whilst adhering to increasingly strict controls on reducing emissions and fuel consumption," said Ferrol's commercial sales manager James Porter.

"The low water content of other condensing boilers found in many existing buildings can be a major problem. Because the new Quadrifoglio has such a huge water content it is ideal for replacing these old heat generators in buildings with a large water flow, extremely low pressure and modulating pumps. The result is an

outstanding water flow and return to a maximum of 60°C with water flow rate close to zero.

“It also lends itself perfectly to the improvement of existing installations with multizone heating circuits operating simultaneously in combination with centralized production systems for domestic hot water. Because it is capable of practically unlimited  $\Delta T$  (max 60°C), it can be combined with variable speed pumps, and because it requires pumps with smaller heads and a more economical power input, it offers excellent efficiency improvements to buildings.”

Not only is the Quadrifoglio a high performance appliance, it is also built to be very hard-wearing and has many features that will greatly extend its longevity.

Because it's constructed of stainless steel, the heat exchanger and condensate tray provide a very high degree of strength and durability against acid corrosion. A superior welding process called “speed shortarc” has been used on the weldings between the flue gas pipes and head plates to drastically reduce the common problems of mechanical stress and acid condensate. And because of the clever geometry of the flue gas pipes and vertical layout of the exchanger, condensate and impurities are fully evacuated and high acid stagnation is prevented from building up over time.

The Quadrifoglio is equipped with a combustion unit with total premix and variable speed fan. The precise electronic control of the generator's output allows for a wide modulation range of min/max output ratio of 20%-100%. This increases the efficiency of the heating system as the generator adapts its output according to the request of the heating circuit, reaching the setpoint in a gradual and precise way. By reducing ignitions its average operating life is preserved.

The geometry of the front combustion type burner and the use of an air/gas mix radiant mesh grill ensure a perfect distribution of thermal load along the whole section of the combustion chamber, protecting burner and exchanger from thermal swings.

## **Features & benefits**

- The Quadrifoglio is available in three capacities – model 125 (116kW, 265 litres), model 220 (207kW, 380 litres) and model 320 (299 kW, 530 litres)
- Very low emissions – Class 5 NOx, 40mg/kWh / CO<sup>2</sup> 10mg/kWh
- Small footprint (model 125 – H:1750 x W:660 x D:720mm)
- Operates on natural gas or LPG
- Built-in master-slave cascade operation
- Remote monitoring and adjustment of the boiler's parameters through remote control
- Can be connected to an optional outdoor probe to enable weather compensation

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**Editor's Notes:**

Italian boiler manufacturer Ferroli has been at the leading edge of heating appliance design and development for more than half a century and now operates in 14 countries throughout Europe and Asia. Ferroli's range of domestic and commercial boilers and renewable energy products manufactured in Verona, Italy, are as technologically advanced by today's standards as they were in 1955 when the company was founded and can be relied upon to deliver a cost-effective, energy efficient and dependable source of heat and hot water.

At the company's UK premises in Burton-upon-Trent, Staffordshire, Ferroli offers a comprehensive range of no-cost training courses and skill-set audits for installers and service engineers.

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