NEW ELITE
Wall hung gas fired boilers with micro-storage heater for indoor installation
FERROLI, in line with its position as a comfort multinational, one of the major players at a world level, permanently carries out research and trials on new products, so as to respond to the continuously evolving expectations of the users and the market.

Exceptional comfort, avantgarde technology, elegant design, reliability, quality and absolute safety: these are the objectives that the FERROLI Research and Development department focused on when designing the NEW ELITE.

Consequently, the NEW ELITE on one hand confirms FERROLI’s solid experience and tradition in the heating sector, while on the other brings advanced design concepts to fruition. Furthermore, it offers comfort and functions combined with an original style, in line with the latest architectural trends: the attractive appearance and the futuristic control panel mean that the appliances can be installed in any environment, even in those where, as well as practicality, the user places emphasis on the aesthetics of the furnishing.

The NEW ELITE boilers therefore represent the top of the FERROLI range of traditional wall-hung appliances, and are therefore especially designed for and dedicated to those who wish to stand out.

The FERROLI history and tradition in the heating sector, along with its quality, certified in compliance with the UNI EN ISO 9001:2000 standards, for the user mean guarantees, quality and safety.

The NEW ELITE series features four models, all with automatic electronic ignition and instant production of domestic hot water; two of the models have natural draught and open flues (C 24 E and C 30 E) and two have forced draught and are room sealed (F 24 E and F 30 E); all the models are factory fitted for operation on natural gas, or alternatively LPG.

Main advantages

THE STRUCTURE
The entire structure of the boiler and in particular the support frame is made from very thick metal plate, making it particularly sturdy.

MICRO-STORAGE
The boiler is fitted with a micro-storage heater (3 litres) on the DHW circuit, virtually eliminating the waiting time for the delivery of domestic hot water.

WATER AND GAS CONNECTIONS
The water and gas fittings are positioned so as to assist the installation operations.

FILLING THE SYSTEM
The boiler is fitted with a solenoid valve for filling the central heating circuit.

CONTROL PANEL
The boiler features a newly-designed digital control panel, with complete, user-friendly display.

DUAL HEAT EXCHANGER
The boiler is fitted with the highly efficient and comprehensively tested FERROLI dual copper heat exchanger.

COMBUSTION CHAMBER
Insulated with ecological fibre.

AUTOMATIC BYPASS
Standard.

MICROPROCESSORS
The boiler’s electronic board features two microprocessors.
THE MICRO-STORAGE HEATER
So as to achieve maximum comfort in the DHW circuit, a 3-litre micro-storage heater, complete with self-regulating electric heater, is installed downstream of the dual heat exchanger; the user can enable/disable this feature at any time. When the heater is on (COMFORT rather that ECO mode), the waiting times for the delivery of domestic hot water at the desired temperature are reduced to the minimum, and practically eliminated.

THE DUAL HEAT EXCHANGER
The NEW ELITE boilers are fitted with the highly efficient and comprehensively tested FERROLI dual heat exchanger, made from finned and braze welded copper pipes, and featuring an ecological aluminium-based enamel coating. This exchanger has for the last two decades been a synonym of high efficiency - both in central heating and in DHW production - and constant performance over time.

THE MICROPROCESSORS
All of the NEW ELITE models feature two notoriously very fast and precise microprocessors: one supervises the management and control of the various functions of the boiler, while the other controls the ignition (electronic), flame detection, the attempts at automatic re-ignition if the flame is extinguished, as well as the definitive lock out of the boiler (requiring manual reset).

THE FILLING SYSTEMS
The NEW ELITE boilers are fitted with a system filling device - solenoid valve - that can be set for automatic or semiautomatic operation. The appliances are factory set for semiautomatic mode, however the user can switch to automatic mode using the special button on the control panel.
In addition, if the system needs to be filled to the required pressure (the recommended pressure is 1 bar), and the boiler is disconnected from the mains power supply, it can be filled completely manually (this mode is recommended for the first filling).
CONTINUOUS FLAME MODULATION
All models feature PID (that is, Proportional, Integral, Derivative) flame modulation, commonly known as the most evolved and technologically most advanced control system, which ensures maximum comfort in both central heating operation - and, above all - for the production of domestic hot water, as users now demand the maximum in terms of constant temperature throughout the delivery of hot water. In this regard, flame modulation in DHW production is based on two measurements: the temperature (using an electronic sensor) and flow-rate (using the flow meter).

"TEMPERATURE SCROLLING" AND CLIMATE CONTROL
The NEW ELITE boilers are pre-fitted for "temperature scrolling" operation; that is, they are able to keep the outlet temperature at a minimum value, depending on the outside temperature. This operating mode can be activated by simply connecting the boiler to a special outside probe (optional). The automatic correlation between the two temperatures, outlet and outside, is the so-called "compensation curve". The user can choose, from the ten compensation curves available, the one that best suits the characteristics of the building and the radiators used, in order to achieve the maximum comfort with minimum fuel consumption.

EASE OF INSTALLATION
The distance from the axis of the fittings to the wall the boiler is fastened to is, for all models, 190 mm: this makes the connection of the boiler to the system much easier for the installer.

REMO: THE REMOTE TIMER CONTROL
The NEW ELITE boilers can connected to any type of room thermostat or timer-thermostat; if required, a modulating remote timer control (optional) can be used, with two-wire connection for remote control and daily/weekly room temperature settings.
KEY
11 DHW temperature display
12 DHW operation
13 Central heating or DHW request
14 Air pressure switch enabling signal (during ignition)
15 Boiler igniting
16 Burner on
17 Operation in central heating mode
18 Central heating temperature display
19 Remote timer control connected
20 Summer/winter display
21 Pump on
22 Operation in anti-freeze mode
23 Central heating request
24 Wait after central heating operation
25 Wait after DHW operation
26 DHW operation request
27 DHW operation
28 COMFORT/ECO mode display
30 System pressure display
33 Fault signal
34 Operation in TEST mode (at maximum output)
35 Parameter and fault display
36 Outside probe connected
37 Outside temperature display (only with probe connected)
F models room sealed

KEY
5 Room sealed
7 Gas inlet
8 Domestic hot water outlet
9 Domestic hot water inlet
10 Central heating flow outlet
11 Central heating return inlet
14 Safety valve
16 Fan
20 Burner assembly
27 Heat exchanger
29 Flue gas outlet collar
32 Pump
34 Central heating temperature sensor
42 DHW temperature sensor
43 Air pressure switch
44 Gas valve
49 Safety thermostat
56 Expansion vessel
81 Ignition electrode
82 Detection electrode
114 Water pressure transducer
126 Flue gas thermostat
136 Flow meter
187 Flue gas diaphragm
238 Micro-storage heater
239 Electric heater
240 System fill solenoid valve
241 Automatic bypass
246 Water pressure transducer

Diagrams to determine the discharge head available to the system

Models C 24 E - F 24 E

Models C 30 E - F 30 E

Key
1 Circulator speed
2 Boiler pressure drop
NEW ELITE dimensions

**NEW ELITE C 24 E**

**NEW ELITE F 24 E**

**KEY**
1. Central heating flow outlet, dia. 3/4"
2. Domestic hot water outlet, dia. 1/2"
3. Gas inlet, dia. 1/2"
4. Domestic hot water inlet, dia. 1/2"
5. Central heating return inlet, dia. 3/4"

**NEW ELITE C 30 E**

**NEW ELITE F 30 E**

**KEY**
1. Central heating flow outlet, dia. 3/4"
2. Domestic hot water outlet, dia. 1/2"
3. Gas inlet, dia. 1/2"
4. Domestic hot water inlet, dia. 1/2"
5. Central heating return inlet, dia. 3/4"
### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>NEW ELITE</th>
<th>C 24 E</th>
<th>F 24 E</th>
<th>C 30 E</th>
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<tbody>
<tr>
<td><strong>Output</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat input (Net Heat Value $H_i$) kW</td>
<td>25.8</td>
<td>11.5</td>
<td>25.8</td>
<td>11.5</td>
</tr>
<tr>
<td>Useful heat output 80°C/60°C kW</td>
<td>23.8</td>
<td>9.7</td>
<td>23.8</td>
<td>9.7</td>
</tr>
<tr>
<td>kcal/h</td>
<td>20.000</td>
<td>8.300</td>
<td>20.400</td>
<td>8.300</td>
</tr>
<tr>
<td>DHW heat output kW</td>
<td>23.8</td>
<td>9.7</td>
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| **Efficiency** |        |        |        |        |
| At the rated output (80°C/60°C) % | 90,3 | 92,2 | 90,5 | 90,5 |
| At reduced load (30% of $P_n$) % | 88,6 | 89,4 | 87,3 | 87,3 |

| **Gas supply** |        |        |        |        |
| Main nozzles, natural gas (G20) mm | 12 x 1,30 | 12 x 1,30 | 16 x 1,25 | 16 x 1,25 |
| Natural gas (G20) supply pressure mbar | 20,0 | 20,0 | 20,0 | 20,0 |
| Natural gas (G20) burner pressure mbar | 11,8 | 2,5 | 13,0 | 2,5 | 13,0 | 2,5 |
| Natural gas rate (G20) mm$/\text{m}^3$/h | 2,73 | 1,22 | 3,50 | 1,53 | 3,50 | 1,53 |
| Main nozzles, LPG (G31) mm | 12 x 0,77 | 12 x 0,77 | 16 x 0,75 | 16 x 0,75 |
| LPG (G31) supply pressure mbar | 37,0 | 37,0 | 37,0 | 37,0 |
| LPG (G31) burner pressure mbar | 36,0 | 7,8 | 35,5 | 7,0 | 35,5 | 7,0 |
| LPG rate (G31) mm$/\text{m}^3$/h | 2,00 | 0,89 | 2,00 | 0,89 | 2,00 | 0,89 |

| **Central heating** |        |        |        |        |
| Maximum operating temperature °C | 90 | 90 | 90 | 90 |
| Maximum operating pressure bar | 3 | 3 | 3 | 3 |
| Safety valve | 3 | 3 | 3 | 3 |
| Minimum operating pressure bar | 0,8 | 0,8 | 0,8 | 0,8 |
| Expansion vessel capacity litres | 10 | 10 | 10 | 10 |
| Expansion vessel pre-fill pressure bar | 1 | 1 | 1 | 1 |
| Boiler water capacity litres | 0,8 | 0,8 | 1,1 | 1,1 |

| **Domestic hot water** |        |        |        |        |
| Maximum production $\Delta 25^\circ C$ l$/\text{min}$ | 13 | 13,6 | 17,2 | 17,2 |
| Maximum production $\Delta 30^\circ C$ l$/\text{min}$ | 11 | 11,3 | 14,3 | 14,3 |
| Maximum operating pressure bar | 9 | 9 | 9 | 9 |
| Minimum operating pressure bar | 0,25 | 0,25 | 0,25 | 0,25 |
| Minimum delivery l$/\text{min}$ | 2,0 | 2,0 | 2,0 | 2,0 |
| Circuit water capacity litres | 3,0 | 3,0 | 3,3 | 3,3 |

| **Dimensions, weights, fittings** |        |        |        |        |
| Height mm | 780 | 780 | 780 | 780 |
| Width mm | 480 | 480 | 480 | 480 |
| Depth mm | 368 | 368 | 368 | 368 |
| Weight with packaging kg | 41 | 46,5 | 43 | 49 |
| Gas system fitting inches | 1/2" | 1/2" | 1/2" | 1/2" |
| Central heating system fittings inches | 3/4" | 3/4" | 3/4" | 3/4" |
| DHW circuit fittings inches | 1/2" | 1/2" | 1/2" | 1/2" |

| **Power supply** |        |        |        |        |
| Maximum power input W | 135 | 175 | 135 | 185 |
| Power supply voltage/frequency V/Hz | 230/50 | 230/50 | 230/50 | 230/50 |
| Electrical index of protection IP | X5D | X5D | X5D | X5D |