

Ferrolì

NEW ELITE

Wall hung gas fired boilers with
micro-storage heater for indoor installation



NEW ELITE introduction

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 the objectives that the **FERROLI Research and Development** department focused on when designing the **NEW ELITE**.

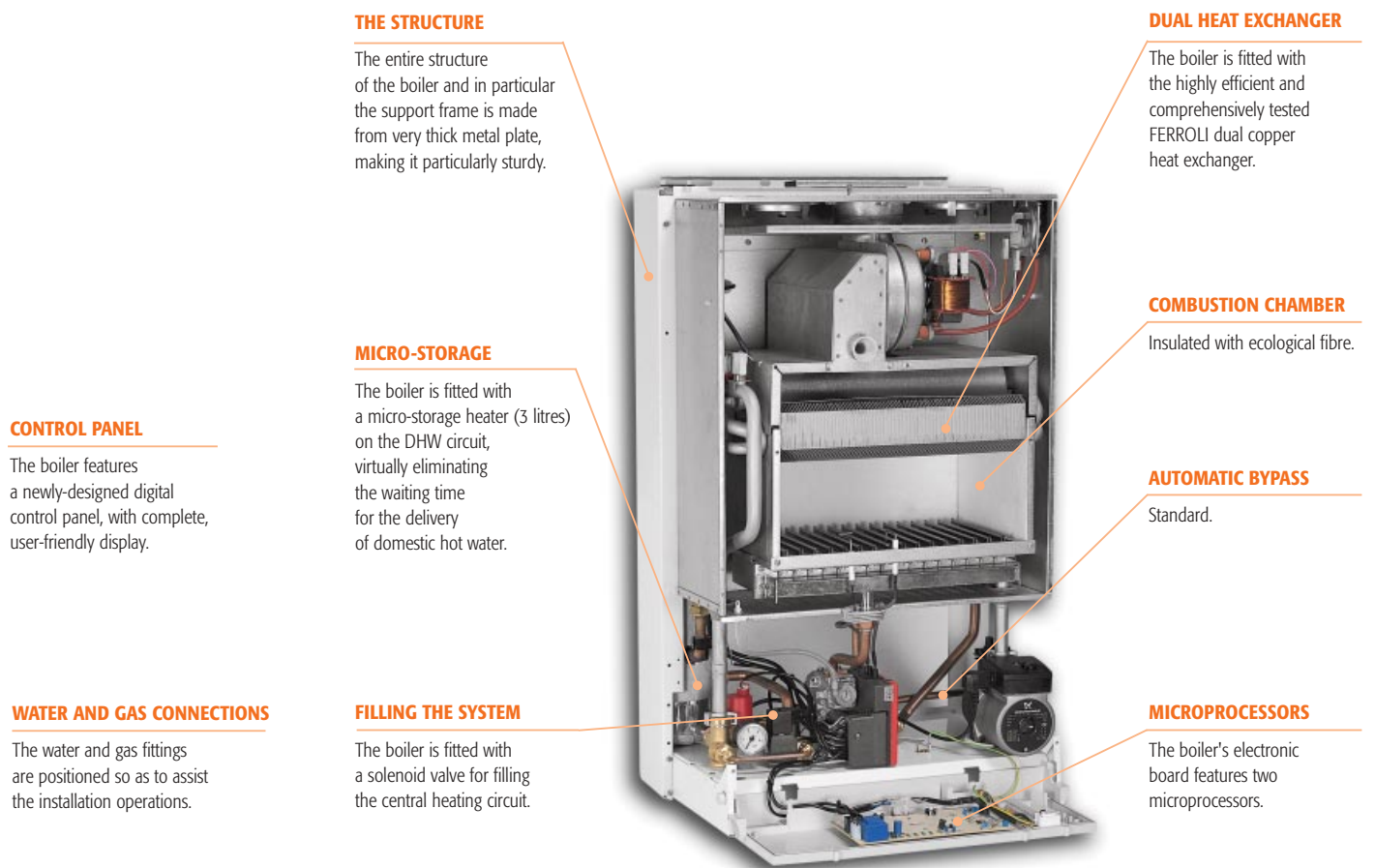
Consequently, the **NEW ELITE** on one hand confirms **FERROLI's solid experience and tradition in the heating sector**, while on the other **brings advanced design concepts to fruition**. Furthermore, it offers **comfort and functions** combined with an **original style**, in line with the latest architectural 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.

DUAL HEAT EXCHANGER

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

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.

COMBUSTION CHAMBER

Insulated with ecological fibre.

CONTROL PANEL

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

AUTOMATIC BYPASS

Standard.

WATER AND GAS CONNECTIONS

The water and gas fittings are positioned so as to assist the installation operations.

FILLING THE SYSTEM

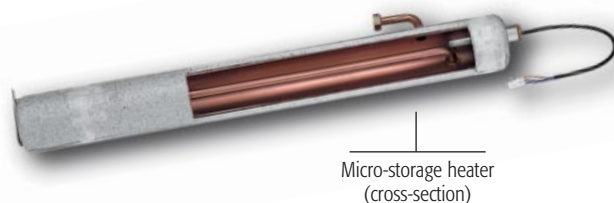
The boiler is fitted with a solenoid valve for filling the central heating circuit.

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 than ECO mode), **the waiting times for the delivery of domestic hot water at the desired temperature are reduced to the minimum**, and practically eliminated.



Micro-storage heater
(cross-section)



Micro-storage heater



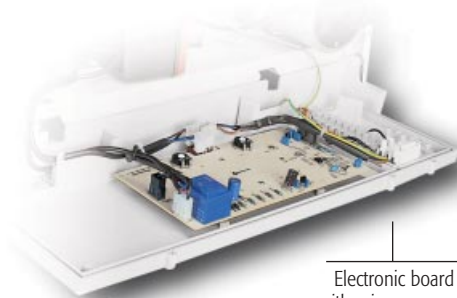
Dual heat exchanger

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 **micro-processors**: 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).

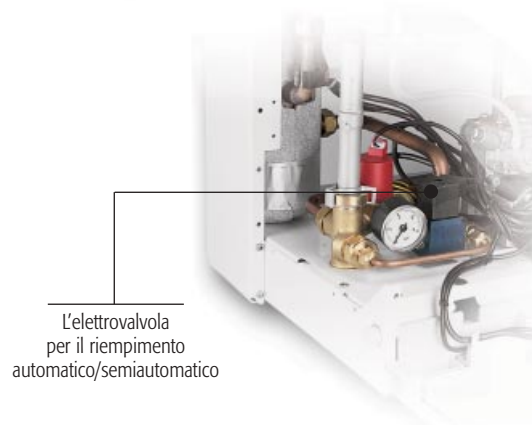


Electronic board
with microprocessor

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).



L'elettrovalvola
per il riempimento
automatico/semiautomatico

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).

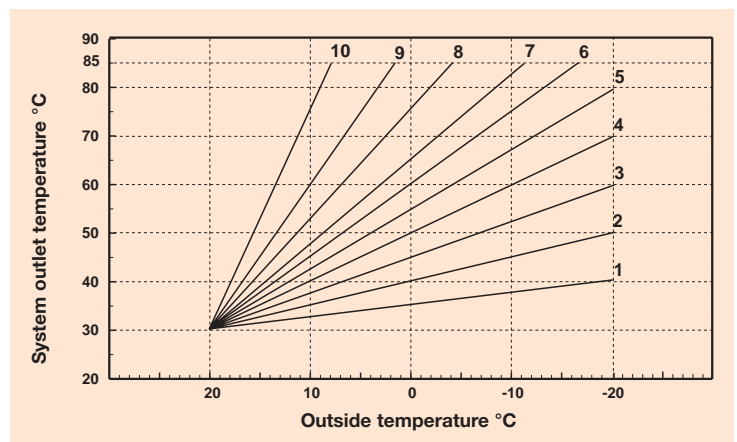


Outside probe

"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**.

COMPENSATION CURVE DIAGRAM



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.

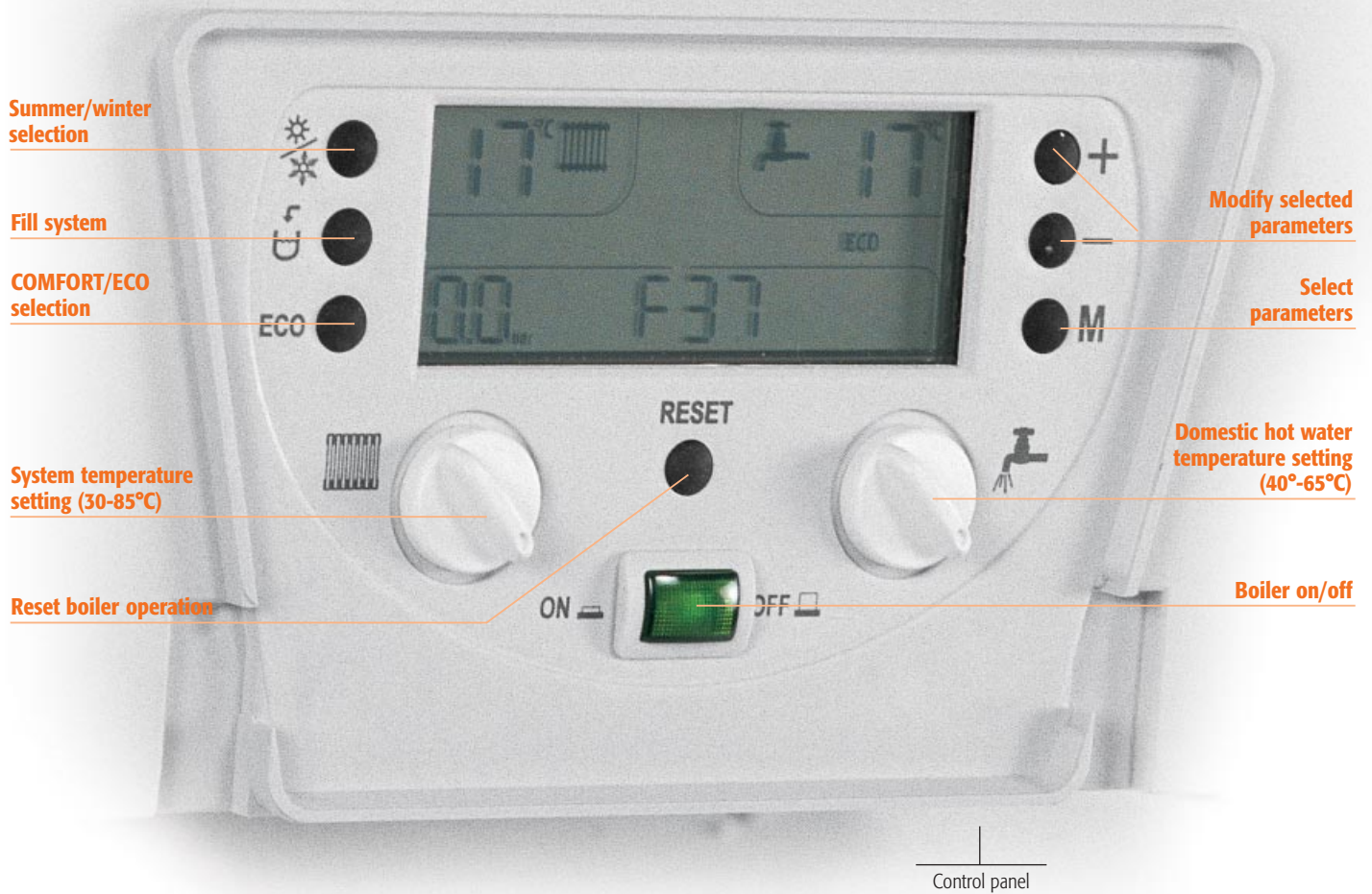
REMO: THE REMOTE TIMER CONTROL

The **NEW ELITE** boilers can be 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.



REMO remote timer control

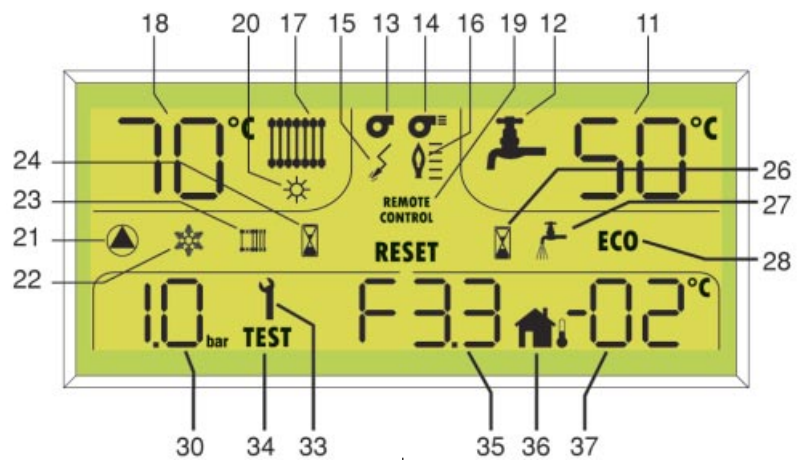




Control panel

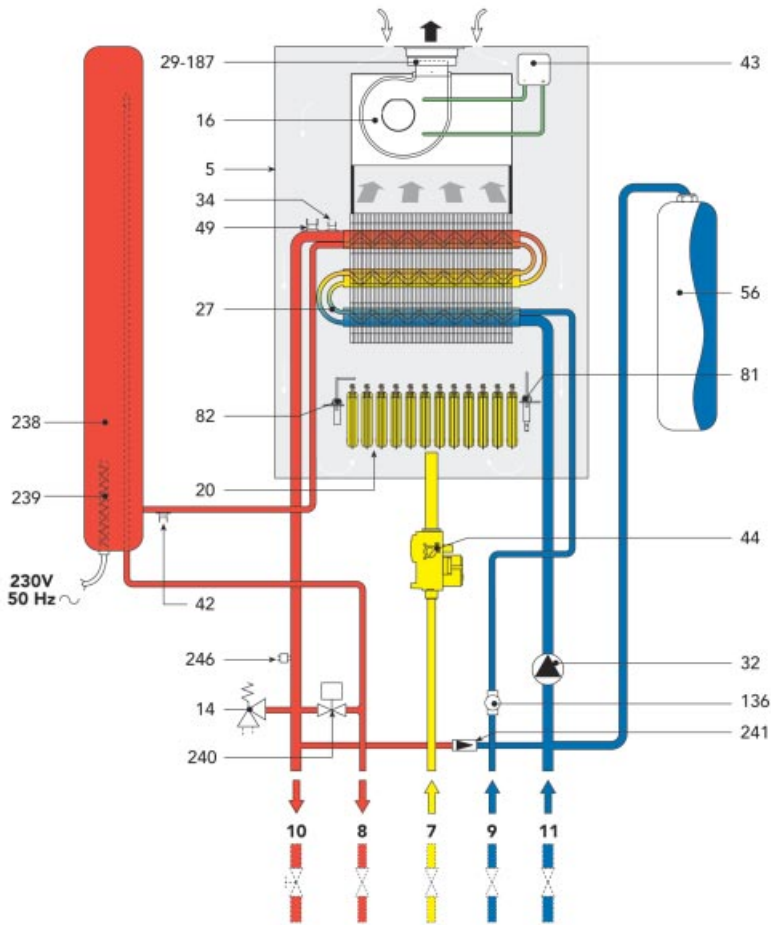
KEY

- 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
- 26 Wait after DHW operation
- 27 DHW operation request
- 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)



Display on the F models (graphic simulation)

F models room sealed



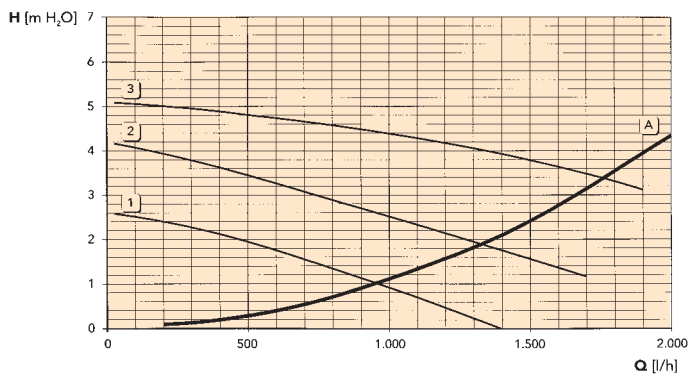
KEY

- 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

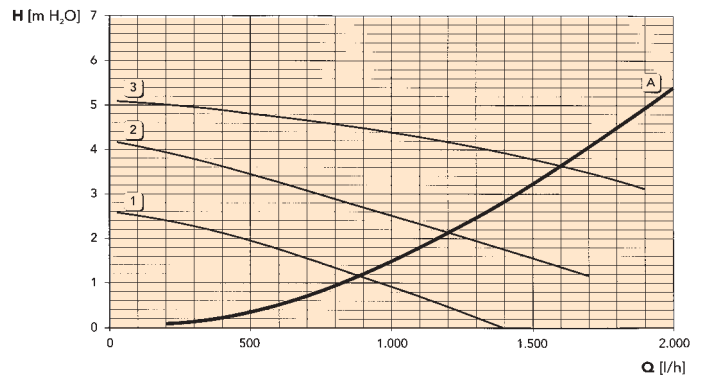
Diagrams

to determine the discharge head available to the system

Models C 24 E - F 24 E

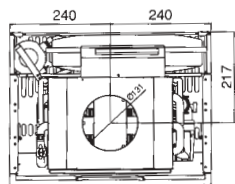
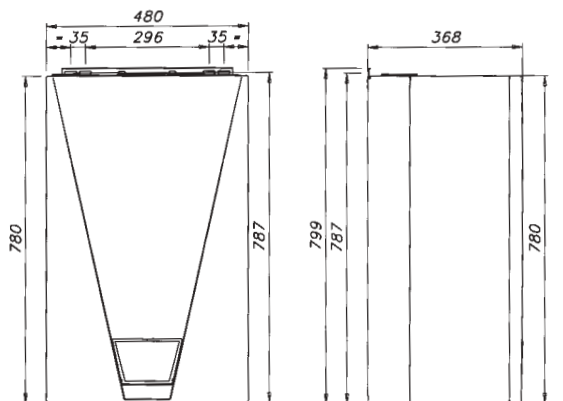


Models C 30 E - F 30 E

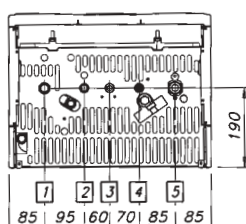


Key
 ①②③ Circulator speed
 Ⓐ Boiler pressure drop

NEW ELITE C 24 E



TOP VIEW

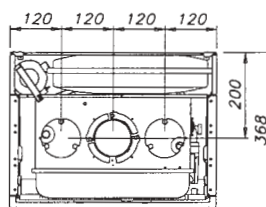
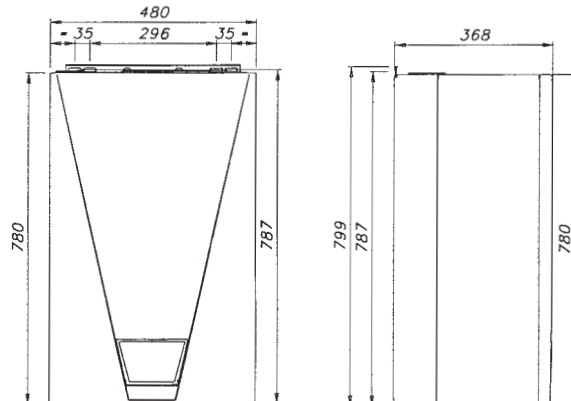


BOTTOM VIEW

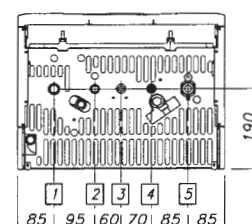
KEY

- 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 F 24 E

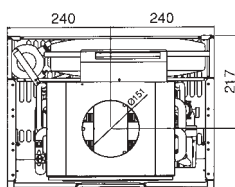
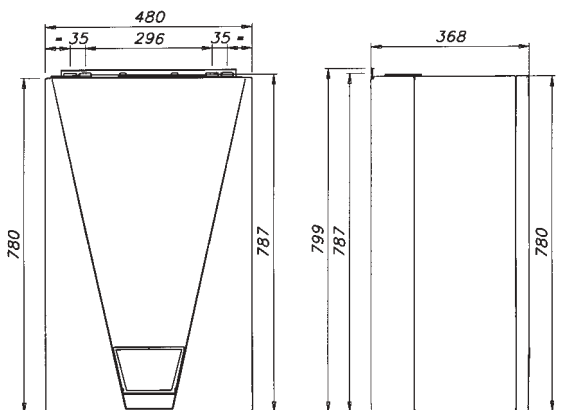


TOP VIEW

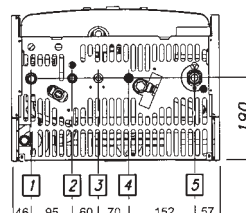


BOTTOM VIEW

NEW ELITE C 30 E



TOP VIEW

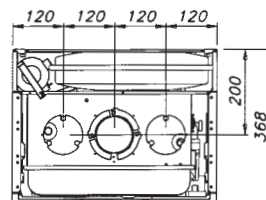
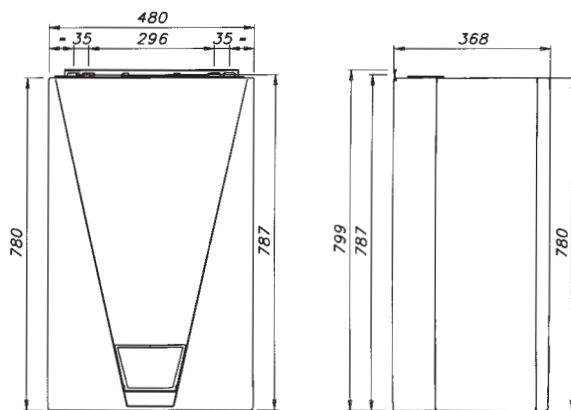


BOTTOM VIEW

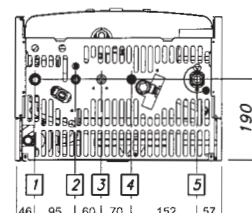
KEY

- 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 F 30 E



TOP VIEW



BOTTOM VIEW

TECHNICAL SPECIFICATIONS

NEW ELITE			C 24 E		F 24 E		C 30 E		F 30 E	
Output			Pmax	Pmin	Pmax	Pmin	Pmax	Pmin	Pmax	Pmin
Heat input (Net Heat Value Hi)	kW		25,8	11,5	25,8	11,5	33,1	14,5	33,1	14,5
	kcal/h		22.200	9.900	22.200	9.900	28.500	12.500	28.500	12.500
Useful heat output 80°/60°C	kW		23,3	9,7	23,8	9,7	30,0	12,7	30,0	12,7
	kcal/h		20.000	8.300	20.400	8.300	25.800	10.900	25.800	10.900
DHW heat output	kW		23,3	9,7	23,8	9,7	30,0	12,7	30,0	12,7
	kcal/h		20.000	8.300	20.400	8.300	25.800	10.900	25.800	10.900
Efficiency										
At the rated output (80°/60°C)	%		90,3		92,2		90,5		90,5	
At reduced load (30% of Pn)	%		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	11,8	2,5	13,0	2,5	13,0	2,5
Natural gas rate (G20)	nm ³ /h		2,73	1,22	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	36,0	7,8	35,5	7,0	35,5	7,0
LPG rate (G31)	nm ³ /h		2,00	0,89	2,00	0,89	2,6	0,89	2,6	0,89
Central heating										
Maximum operating temperature	°C		90		90		90		90	
Maximum operating pressure	bar		3		3		3		3	
Safety valve	bar		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	Δt 25°C	l/min	13		13,6		17,2		17,2	
Maximum production	Δt 30°C	l/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/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	