Lamborghini
CALORECLIMA

FL D Condens LN

Atmospheric condensation wall-mounted boilers, with instant domestic hot water production

THE SIMPLEST SOLUTION FOR A CONDENSING BOILER

FL D CONDENS LN is the generator of condensation heat for traditional heating systems.

Proven Lamborghini CaloreClima technology in the field of traditional wall-mounted boilers has been enhanced by increasing product performance in the simplest way – using a robust recovery unit that preheats the primary circuit using the residual heat of the exhaust fumes and a new cooled burner with low NOx emissions.

THE RANGE

FL D CONDENS LN comes in a unique model for heating and instantaneous production of domestic hot water

BOILER WIT H FORCED DRAUGHT AND SEALED CHAMBER

mod. F 24

MAXIMUM HEAT FLOW RATE 25.0 KW

THE PRODUCT IN BRIEF

CLASS 6

Minimum polluting emissions **(class 6 according to EN 15502-1)** in line with that required by Directive ErP of 26.09.2018 (NOx emissions < 56mg/kWh)

ANTIFROST

Automatic function that **eliminates the risk of frost** on the primary heating circuit in boiler stand-by conditions and with regular gas and electricity supply

PUMP

The boiler is equipped with a **very highly efficient circulation pump** in compliance with the new ERP regulations

CLIMATIC

Device operates with **climatic regulation** and sliding system temperature (optional external temperature probe)

COMFORT

This function keeps the exchanger that produces domestic hot water hot for **fast and immediate delivery**

HIGH TEMPERATURE SYSTEMS

The device is suitable to be combined with traditional **high temperature** systems; it cannot be combined or installed with direct delivery to systems with low temperature radiant panels

DOMESTIC

Maximum **domestic comfort** certified with 3 stars (EN 13203)

EASY CONTROL

Remote control of boiler parameters via remote control

FROST SHIELD

-5°C

Operation in a **partially protected place** with a minimum temperature of **-5°C, as standard**

FUNCTION

SUN EASY

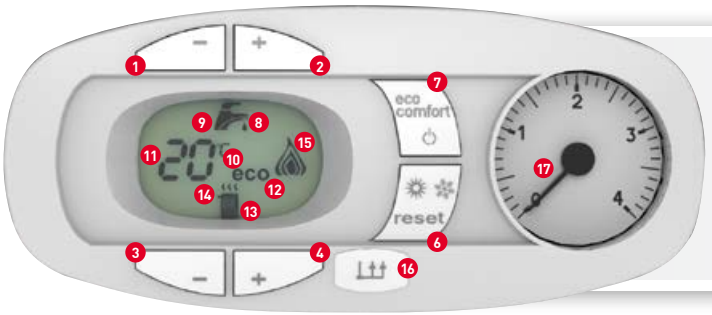
Appliance can be combined with **preheating** systems for the **domestic hot water**

CHARACTERISTICS
PRODUCT BENEFITS

- Condensing boiler to heat **high temperature systems** and for domestic hot water production. It is not suitable to be combined with direct delivery to systems with low temperature radiant panels
- **Primary heat exchanger** with a compact shape
- **Instantaneous production** of domestic hot water with a **dedicated plate exchanger**
- **Post-recovery unit** of the latent condensation heat, according to the pre-heating of the primary circuit
- Boiler with a watertight chamber with forced draught, with a water-cooled **atmospheric burner** with low NOx emissions
- Standard hydraulic automatic **by-pass**
- Minimum polluting emissions **(class 6 according to EN 15502-1)**
- **High efficiency and low consumption circulator** (ErP - Class A) with anti-blocking system by being activated for a few seconds every 24 hours of inactivity
- Can be combined with the **modulating** remote **control timer**
- Simple and complete control panel, user interface with **display** and setting **keys**
- **Robust post-condenser** supplied by the closed circuit of the primary. The heat exchange with the fumes takes place inside large diameter water passages.
- Generator of **simple and rational operation**
- **ECO** function in domestic mode for more **savings** when hot water is not really used
- **Solar system set up:** set up for the production of domestic hot water combined with solar panel systems
- **Place of installation:** also for outdoor use in a partially protected place that is up to -5°C, as standard
- **Certified operation even with propane air** (50% air - 50% G31) via relative transformation to be requested from the Authorised Service Centre
- **Operation even with LPG** by using a special conversion kit to be requested from the Authorised Service Centre

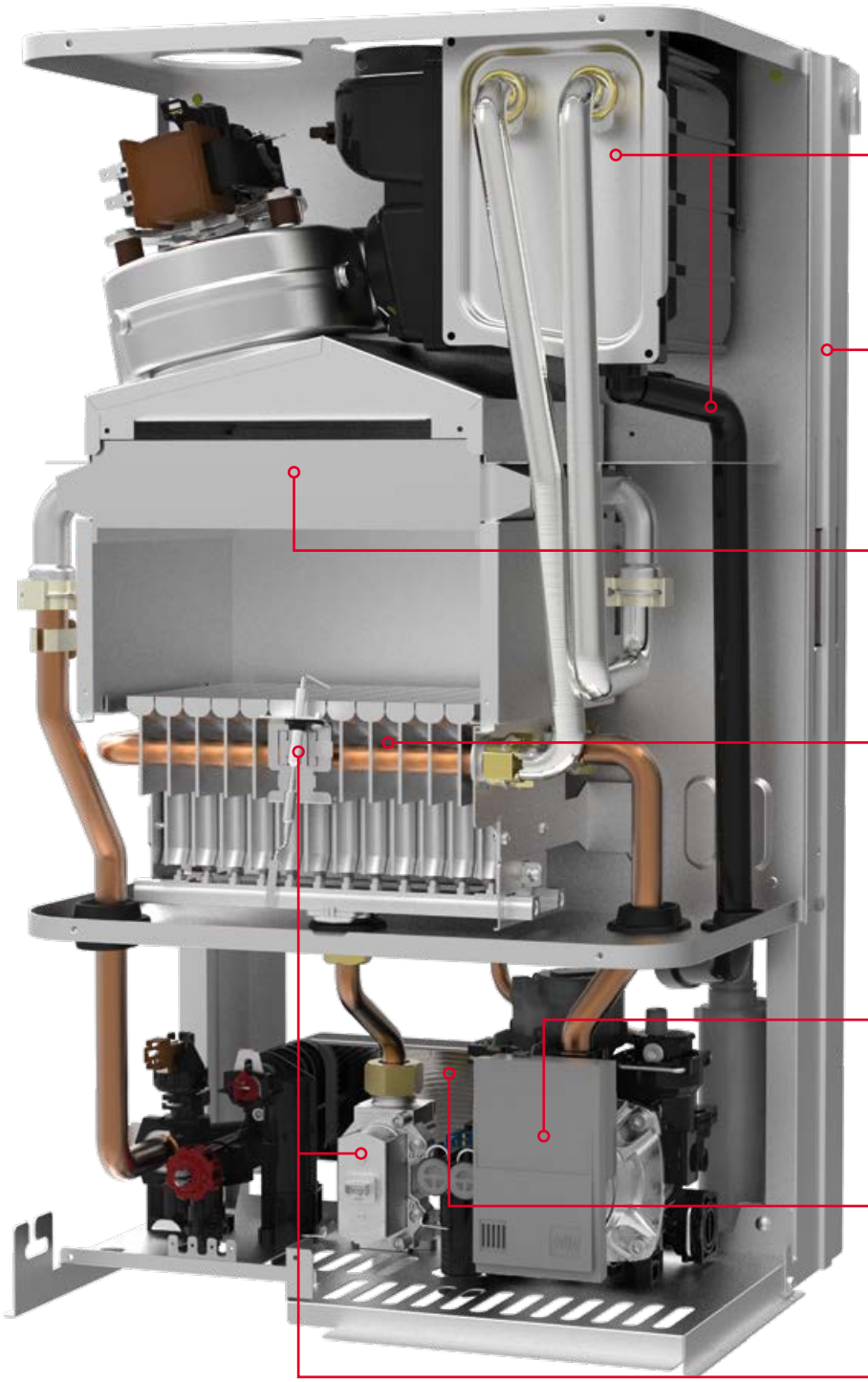
BOILER CONTROL

The FL D CONDENS LN control unit consists of an easy-to-use interface with a backlit display.
The buttons allow you to easily adjust the heating delivery temperature and the domestic hot water setpoint, switch the generator on/off or activate the comfort function, while monitoring the boiler status. The control panel is complete with a traditional pressure gauge that can control the system pressure at any time.



1-2 Domestic hot water temperature regulation **3-4** Heating system temperature regulation **6** Reset Key - summer/ winter selection - "Sliding temperature" menu **7** Economy/ comfort and OFF mode selection key **8** DOMESTIC hot water **9** Enabled DOMESTIC mode **10** Summer mode **11** Multifunction indicator **12** ECO mode (Economy) **13** Enabled HEATING mode **14** HEATING hot water **15** Burner power and switch on **16** Service Tool connection **17** Hydrometer

FROM HEAT GENERATION...
MAIN COMPONENTS



HEAT RECOVERY UNIT

Post-condenser with recovery of latent heat from the combustion fumes and condensate discharge

STEEL FRAME

Made with high precision automated processes. Incorporates an 8-litre expansion vessel

EXCHANGER

Central heating primary heat exchanger, protected by a non-toxic aluminium coating

LOW NOx BURNER

Of water-cooled low temperature micro flame type. Minimum NOx emissions (Class 6 according to EN 15502-1)

CIRCULATOR

High efficiency, for heating and exchange with the DHW circuit

DHW EXCHANGER

Made of stainless steel, with copper brazing

ECS-EVOLVED COMBUSTION SYSTEM

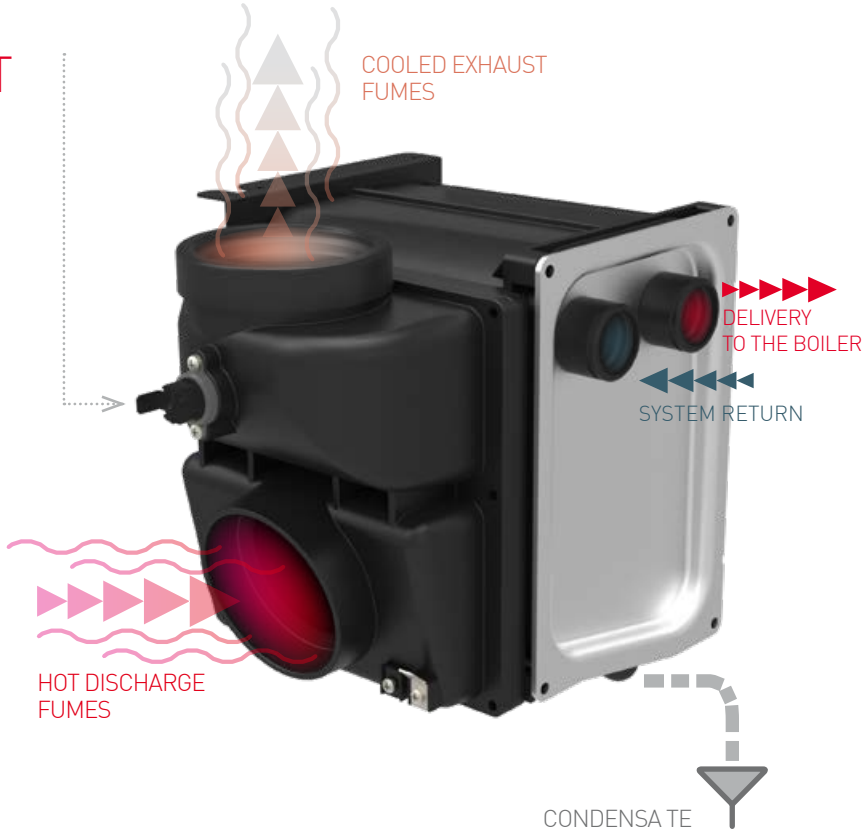
Innovative combustion control that ensures optimal operation at various heat load conditions and chimney types

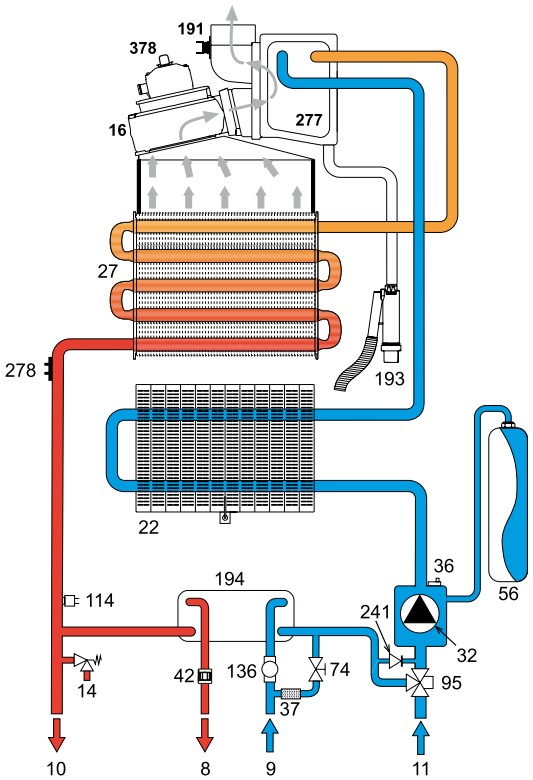
... AND RECOVERY, TO DISTRIBUTION

RECOVERY UNIT / HYDRAULIC DIAGRAMS

FUMES THERMOSTAT

Safety device for the evacuation system





KEY

- **8** DHW water outlet - Ø 1/2"
- **9** DHW water inlet - Ø 1/2"
- **10** System delivery - Ø 3/4"
- **11** System return - Ø 3/4"
- **14** Safety valve
- **16** Fan
- **22** Burner
- **27** Copper heat exchanger for heating and domestic
- **32** Heating circulator
- **36** Automatic air vent
- **37** Cold water inlet filter
- **42** DHW temperature sensor
- **56** Expansion vessel
- **74** System filling valve
- **95** Diverter valve
- **114** Water pressure switch
- **136** Flow meter
- **191** Contact fume thermostat
- **193** Siphon
- **194** DHW heat exchanger
- **241** Automatic bypass
- **277** Fume recovery unit
- **278** Double sensor (Safety + heating)
- **378** "Hall" sensor

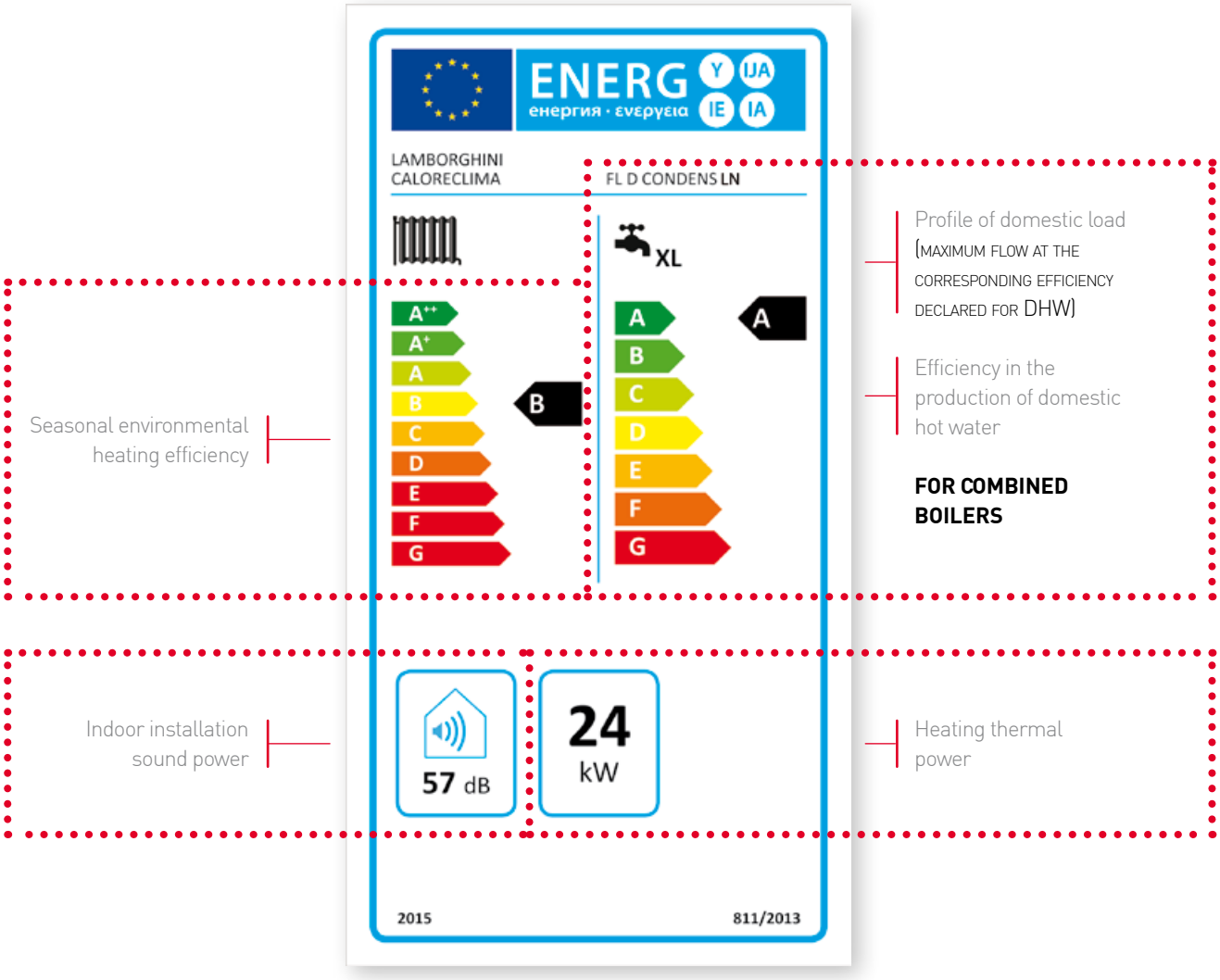
PERFORMANCE
ENERGY CLASSIFICATION

The **"climate-energy 20/20/20"** package includes ambitious targets for reducing greenhouse gas emissions, energy consumption and increasing the use of renewable energy, corresponding to a percentage of 20%, which is to be achieved by 2020. In this context, the European **ErP** (Energy Related Products) regulation introduces an energy classification also for hot water generators for environmental heating and domestic hot water.

This classification translates into an **energy label** that must necessarily accompany all products affected by the Regulation, introduced on the market from 26 September 2015.
Labelling is an easy guide for the consumer, who can choose the most efficient product through standardised and objective indications. In this way, the choice will be the most economical in terms of consumption, which benefits the user, but also the best in terms of energy balances and consequently, the environment.

The most significant parameters indicated on the label are the seasonal efficiency index in heating and efficiency in possible domestic hot water production, according to a scale which, in the case of the single boiler product, is attested from A to G*. Furthermore, a load profile is indicated for the combined boilers, corresponding to the DHW flow of the device measured in a series of standard samples, guaranteeing at least the declared DHW efficiency. This index is identified by a letter/"size" (S, M ... XXL).

* Higher indexes can be achieved by combinations of boiler and renewable energy products.



MAXIMISING COMFORT AND SAVINGS

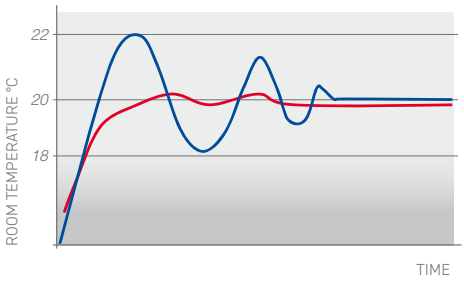
CRM N REMOTE CONTROL

CRM N remote control enables monitoring and setting of boiler functions directly from the room where it is installed. Comfort planning is possible on weekly basis, including also holiday function.

CRM N FUNCTIONS

- Setting of central heating and DHW temperature
- Monitoring of boiler operating status
- Displaying of room temperature
- Planning weekly room comfort conditions
- Boiler's switch on/off using a phone dialer (optional

INDOOR TEMP. COMPENSATION FUNCTION



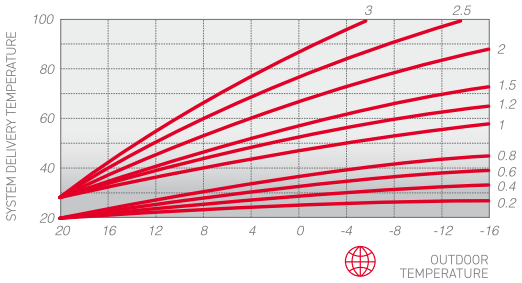
SMART REMOTE CONTROL CONNECT

- Remote control supplied with the A+ product kit to **manage comfort in the home also from Smartphone**
- It can mange **until 8 zones** by additional control units
- **Connection to the home Wi-Fi network** through the supplied RF/WiFi receiver
- CONNECT APP available for switching the boiler on and off and **managing home comfort** for heating/DHW via remote control from Smartphone (iOS and Android)
- **Maximisation of ambient comfort** with modulating regulation of the flow temperature through the **Ambient Climatic Compensation (ACC) differentiated for each zone and Outdoor Climatic Compensation (OCC)** through **outdoor temperature detected directly from the Internet** (or from an optional outdoor probe)
- **Improves ambient heating medium seasonal efficiency by +4%**
- **Weekly hourly programming in 30-minute intervals** via APP CONNECT
- **Operating mode:** Off, Holiday, Automatic, Manual
- **Three modifiable temperature levels**: Comfort, Economy, Antifrost

Control

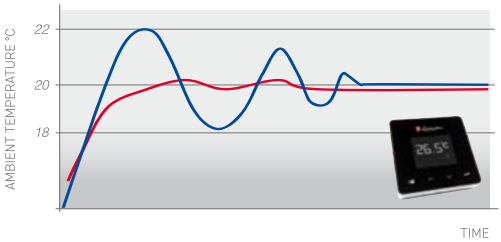
RF/Wi-Fi receiver

CLIMATIC COMPENSATION



OCC | WEB | OUTDOOR AIR CLIMATIC COMPENSATION

By reading the outdoor temperature directly from the Internet (or from the optional outdoor probe), the system can change the temperature based on the outdoor temperature measured according to the climatic curves set, thus ensuring maximum user ambient comfort as the outdoor climate conditions change.



ACC | AMBIENT CLIMATIC COMPENSATION

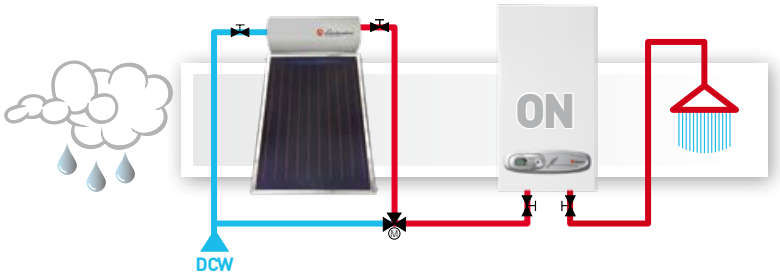
The modulating function of CONNECT allows the boiler's **power to be modulated** as the **value of the set room temperature** is reached. This improves the quality of comfort by eliminating heat peaks with consequent energy savings.

WITH CONNECT REMOTE CONTROL TIMER

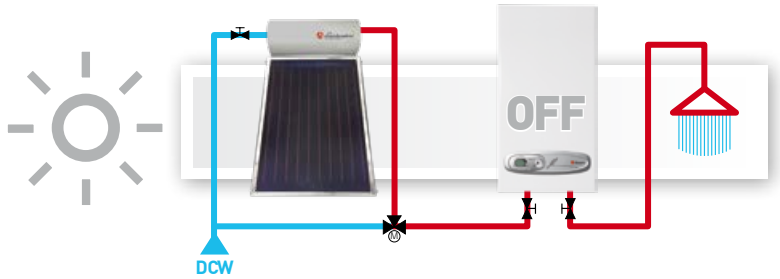
WITH NON-MODULATING AMBIENT THERMOSTAT

SOLAR CIRCUIT INTEGRATION
SUN EASY FUNCTION

FL D CONDENS LN boasts electronics that simplify integration with solar thermal systems, both with natural and forced circulation. The microprocessor controls the temperature of the water coming from the solar circuit through the domestic hot water sensor and switches the burner on only if necessary.



In case of insufficient irradiation and therefore the domestic hot water being modestly pre-heated, the boiler will contribute with the necessary heat to reach the required setpoint temperature.



If the sun and the solar system fulfil their "duty", no integration from the boiler will be necessary; the hot water will be conveyed to the tap, without additional devices being required, with the mixing of the thermostatic valves.

For the desired temperature to be reached, SUN EASY allows for significant savings even during the colder seasons, exploiting and integrating even the smallest solar contribution, which is otherwise lost.

SAFETY AND COMFORT
FUNCTIONS

ANTIFREEZE
If the boiler temperature drops to 5°C, the burner automatically goes on and the circulator is activated in order to preserve the device from damage caused by frost. This function is active with the boiler supplied by the gas circuit and live.

POST-CIRCULATION
This function allows all the heat supplied by thermal inertia of the exchanger to be recovered and then transferred to the heating system, and consequently to the rooms to be heated. This is a timer function (with custom duration) and is active after the burner goes off in heating mode.

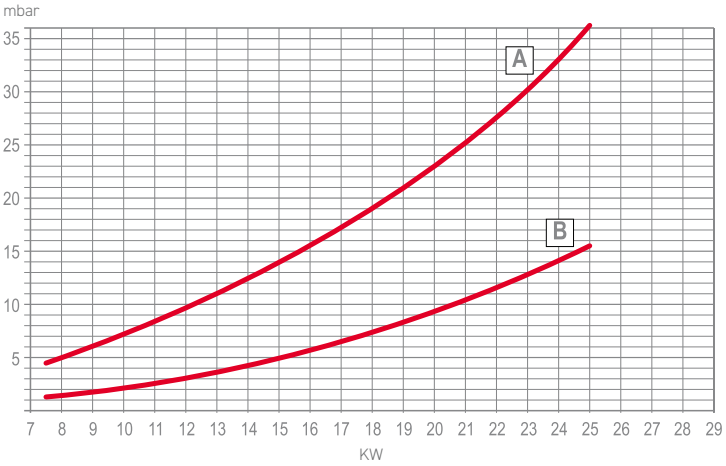
TEMPERATURE COMPENSATION OPERATION
With the "External probe" kit being installed, the boiler can operate in sliding temperature mode. This means that the boiler will self-adjust according to the variations in the outside temperatures, without using the system temperature adjustment keys. All this translates into energy savings while ensuring maximum user comfort.

EASY CONTROL
The FL D CONDENS LN electronic card adopts Opentherm protocol. It allows other peripheral units to be integrated, such as the CRM N an CONNECT remote control timer. In fact, the Opentherm standard has been specifically designed to share boiler logic and operating algorithms with other additional control units. As a digital protocol, it allows total integration between the boiler and satellite, with full control of the functions from the boiler and similarly, from its satellite.

FEATURES
HIGH EFFICIENCY CIRCULATOR

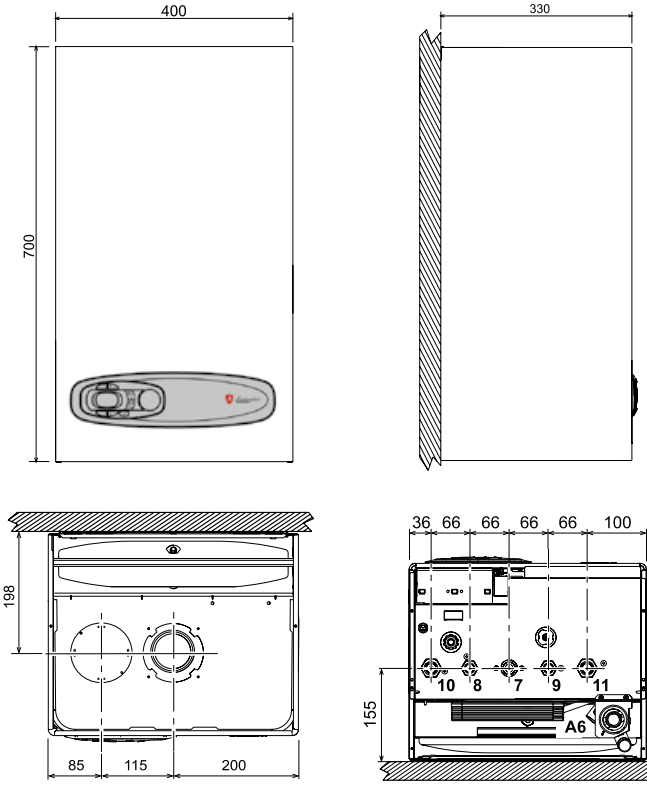
EU regulation 622/2012 establishes that all boilers introduced on the market since 1 August 2015 must be fitted with a high efficiency circulator (technically speaking, with an EEI, energy efficiency index ≤0.23). This decision was taken as a result of the very high energy consumption of all the pumps and circulators installed in different applications in Europe. In practice, a high efficiency circulator -incorporated in the boiler- reduces up to **30%** of the total electrical consumption of the boiler itself.

PRESSURE / FLOW DIAGRAMS



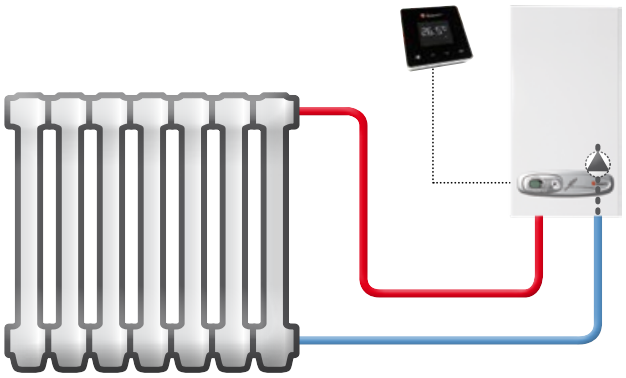
A LPG - **B** Natural gas

TECHNICAL DATA
DIMENSIONS

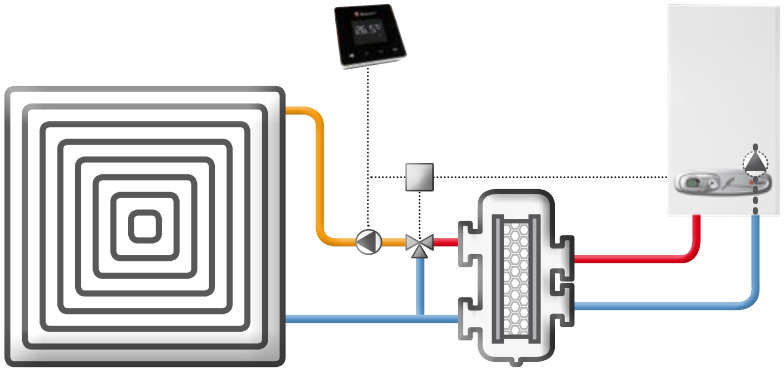


KEY
7 Gas inlet - Ø 3/4"
8 DHW outlet - Ø 1/2"
9 Cold water inlet - Ø 1/2"
10 System delivery - Ø 3/4"
11 System return - Ø 3/4"
A6 Condensate discharge connection

INSTALLATION
EXAMPLES



The boiler must be connected directly to a medium-high temperature system (radiators/fan coil)



A low temperature system can be served, provided that there is a reduction in the temperature between the boiler and the system.

TECHNICAL DATA
SUMMARY TABLE

MODELLO				24
ERP Class		(Class G - A++)		B
	XL	(Class G - A)		A
Thermal flow		Min Max Heating	kW kW	7,5 25,0
Thermal power	80°C - 60°C 50°C - 30°C	Min Max Heating Min Max Heating	kW kW kW kW	7,2 24,2 7,7 26,2
Useful thermal efficiency	80°C - 60°C 50°C - 30°C 30% reduced load		Pmax % Pmin % Pmax % Pmin % Pmax %	96,9 96,0 104,0 102,4 105,3
NOx Emissions			class	6
Domestic hot water production		Δt 25°C Δt 30°C	l/min l/min	13,9 11,6
Heating working pressure		Max Min	bar bar	3 0,8
Domestic working pressure		Max	bar	9
Weight when empty			kg	35
Dimensions		LxHxP	mm	400x700x330

NOTES

The illustrations and data provided are indicative. Lamborghini CaloreClima reserves the right to make any changes deemed to be most appropriate for the improvement of the product or of the service offered without being obliged to give prior notice.

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