



E.C.A. PROTEUS PLUS BLUE

Combi Boilers

Technical Design Properties

- 23,3 kW Hermetic mono thermal combi boiler
- Usage with Natural gas-LPG and being able to convert
- Between 35%-100% power modulation and capability of adjusting between 8,2-23,3 kW
- High efficiency with a copper heat exchanger which is designed in a way to prevent thermal shock, which is long lasting and which doesn't hold lime.
- Plate heat exchanger to be able to obtain hot water with comfort
- High burning efficiency with stainless burner, low exhaust gas emission
- To be able to get water with a stable heat with feed forward and turbine systems
- Feature of protecting both the combi boiler and the plumbing with an automatic by-pass system
- Being suitable for every place and consuming less energy with a 3 stages circulation pump with an automatic air vent valve.
- Being able to put a room thermostat and an outdoor heat sensor (optional)
- "Pump over -run" feature which prevents thermal expansion (After radiator circuit heating and hot water usage need is over, circulation pump continues to work and prevents thermal expansion? thanks to this feature)
- Easy to install on plaster walls with plumbing installation kit which is offered optionally.
- LCD screen which shows the adjustment buttons and functions on remote control panel which has an ergonomic design.
- Using up less space with minimal sizes of 720x400x330 mm
- Design which provides easy service and maintenance
- An isolated burning room which ensures high efficiency and low exhaust gas emission and which is also designed to be compatible with the burner and heat exchanger.
- Saving fuel and minimum noise level thanks to being compatible



CAPACITY	24 kW
MODELS	Combi Boiler (HM)
FLUE TYPE	C Types
GAS TYPE	Natural Gas/LPG

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SUPERIOR
SAFETY
SYSTEMS



1. High Water Pressure (3 bars) safety unit protects both the central heating system and the combi boiler against overpressure
2. Low Water Pressure (0,8 bar) safety unit switches the combi boiler off when the water pressure is low
3. Hot Water Accumulation safety unit prevents thermal accumulation thanks to the by-pass and pump over-run systems
4. Expansion Tank (8 l) compensates expansion of the hot water circulating within the central heating system
5. EMC Filter removes electromagnetic interferences and ensures safety for the ignition process
6. Flame Loss Protection
7. Pump Blockage unit protects the pump against blockage risk after it remains idle for a long time
8. 3-Way Blockage Protection unit for monothermic models
9. 2-Stage Frost Safety Unit automatically operates depending on the water temperature values measured by the temperature sensors for central heating water and domestic water (only when the combi boiler is on stand-by mode)
10. Automatic Air Purger for the pump, Manual Air Purger for the expansion tank
11. Differential air pressure switch for flue gas exhaust safety
12. Overheating Protection Unit (71°C) for DHW.
13. Overheating Safety Unit (90°C) for CH.
14. Limit Thermostat to limit the temperature of the water outgoing from the exchanger at 105°C and to switch the combi boiler off
15. Low Voltage Safety Unit (160 VAC)
16. High Voltage Safety Unit (260 VAC)
17. Drain tap which enables discharging radiator circuit water in the combi boiler.



Technical Specifications

Product type	PROTEUS PLUS Blue 24 HM	Unit
Category	II _{2H3B/P}	
Type	C _{12(X)} , C _{32(X)} , C _{42(X)} , C _{52(X)}	
Gas pressure (natural gas G20)	20	mbar
Gas pressure (LPG G30-31)	30-37	mbar
Power		
Pmin Minimum heating power	8,2	kW
Pmax Maximum heating power	23,3	kW
Qmin Minimum thermal load	9,2	kW
Qmax Maximum thermal load	25,6	kW
Gas consumption		
Natural gas (on max.power)	2,67	m ³ /h
Natural gas (on min.power)	0,96	m ³ /h
LPG	2	m ³ /h
NOx class	2	
Heating circuit		
Minimum water pressure	0,8	bar
Maximum water pressure	3	bar
Temperature adjustment gap	40-80	°C
Domestic water circuit		
Minimum flow rate	3	l/min
Maximum flow rate	10 (ΔT=33,4 °C)	l/min
Minimum water pressure	0,3	bar
Maximum water pressure	10	bar
Temperature adjustment gap	35-64	°C
General		
Electric feeding	230 V AC-Hz	V AC-Hz
Electric consumption	95	Watt
Protection class	IPx4D	IPx4D
Expansion tank	8	lt
Weight (without package)	35	kg/h
Size (H*W*V)	720x400x330	mm

In the calculation of gas consumption;
For natural gas; Hu=9,59 kWh/m, LPG için;12,793 kWh/kg



1 Domestic water heat adjustment button

Hot domestic water circuit can be adjusted between 35-64° C

2 Radiator circuit heat adjustment button

Radiator water circuit can be adjusted between 40-80° C

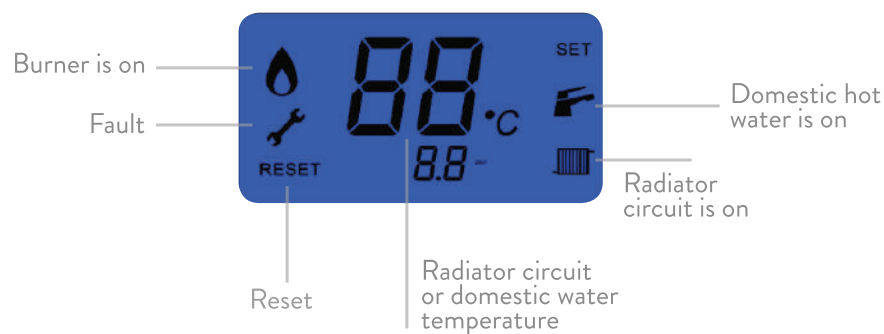
3 Mode adjustment button

Summer or winter mode of the appliance can be adjusted. In winter mode, the appliance self-activates according to the need for the radiator circuit and hot domestic water while in summer mode, it only provides hot domestic water.

4 LCD screen indicator panel

When the combi boiler is on summer mode, only domestic water sign is visible on the screen and when there's a need for domestic water the sign winks.

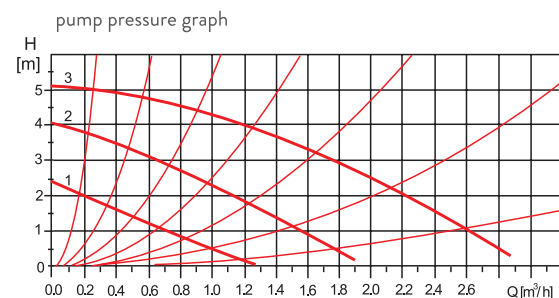
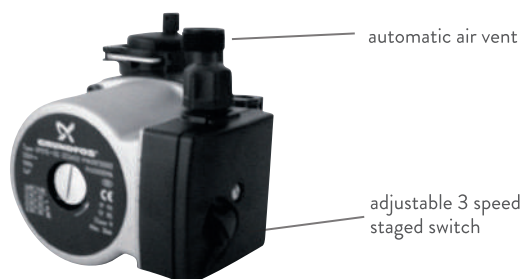
When the combi boiler is on winter mode, both radiator sign and domestic water sign are visible on the screen. When the radiator circuit is active radiator sign winks and when there's need for domestic water need faucet sign winks.



Perfection is Hidden in Details

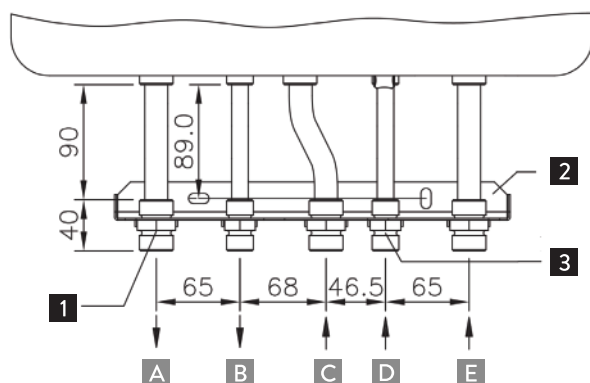
Circulation Pump & Pressure Graphics

The circulation pump can be adjusted for the needs of your plumbing with 3 speed stages thus saving electricity. An expansion tank and a place for a manometre is available on the pump and there's also an automatic air vent.



Optional Plumbing Installation Kit

It's installed as it is shown in the figure with water and gas connection pipe group which is between the combi boiler an installation bracket which is attached on the Wall and nipples.



1 Nipple (3/4")

2 Mountain bracket

3 Nipple (1/2")

A Central heating flow 3/4" (hot)

B Domestic hot water outlet 1/2" (hot)

C Gas inlet 3/4"

D Domestic hot water inlet 1/2" (cold)

E Central heating return 3/4" (cold)

Optional Smart Combi Boiler Kit

E.C.A. smart combi boiler kit which is compatible with PROTEUS PLUS Blue combi boiler provides 30% natural gas consumption saving by making it possible to adjust the temperature of your home through your mobile phone and with its smart features. Thanks to its Wi-Fi connection, installing it is quite simple. E.C.A. smart combi boiler enables you to see the temperature of your home and to learn when and how much your combi boiler has been working. With E.C.A. mobile and web applications you can adjust the temperature in your home without touching the combi boiler even if you aren't at home and provide the comfort you need.



Optional Control Accessories



E.C.A. digital room thermostat
which can be programmed.
CM 707



E.C.A. on/off room thermostat
T6360



E.C.A. on/off wireless
with wire room thermostat



E.C.A. digital
room thermostat



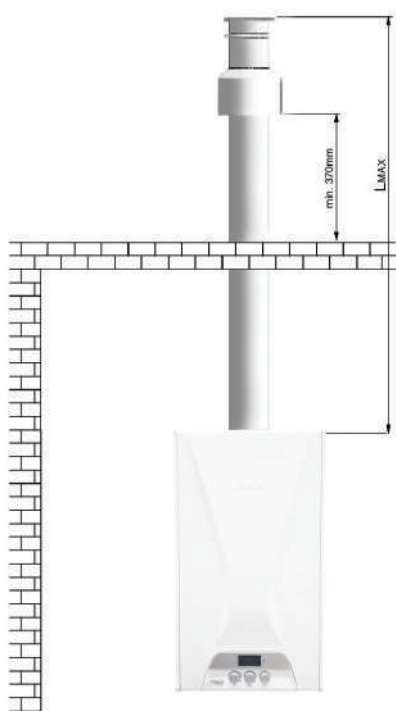
E.C.A. digital room thermostat
wireless can be programmed
CM 727

Chimney Applications

Horizontal & Vertical Flue Applications



Horizontal Hermetic Flue Application
(Lmax distance with one elbow: 4 m, Ø60/100)
(Lmax distance with one elbow: 6 m, Ø80/125)



Vertical Hermetic Flue Application
(Lmax distance without an elbow: 4 m, Ø60/100)
(Lmax distance without an elbow: 8 m, Ø80/125)



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