



E.C.A.
PROTEUS PLUS
BLUE

Superior Safety Systems



Technical Design Properties

- 24 kW capacity hermetic combi boiler (monothermic)
- Usage ability with Natural Gas and LPG
- 90,6% efficiency
- 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.
- 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
- LCD screen which shows the adjustment buttons and functions on remote control panel which has an ergonomic design.
- Minimal dimensions to fit in (720x400x330 mm)
- Design which provides easy service and maintenance
- Chimney kit types: C12(X), C32(X), C42(X), C52(X)(Hermetic)
- On/Off thermostat and smart thermostat control possibility

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

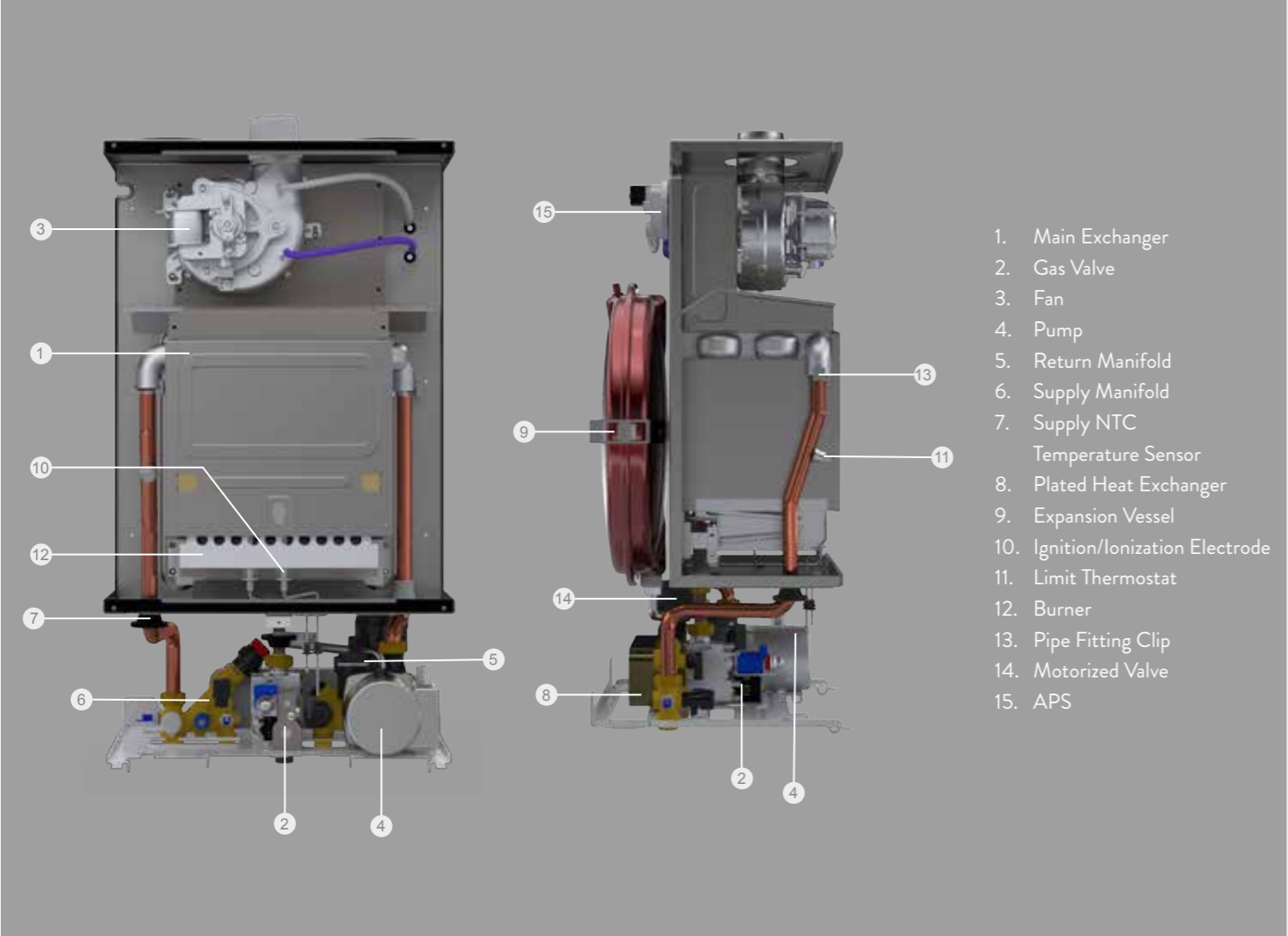
1. High Water Pressure (3 bar) safety unit protects both the central heating system and the combi boiler against overpressure
2. Low Water Pressure (0,8 bar) safety unit switches the combi boiler off when the water pressure is low
3. Hot Water Accumulation safety unit prevents thermal accumulation thanks 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. Over Heating Protection Unit for DHW (71 °C)
13. Over Heating Safety Unit for CH (95 °C)
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.



How to Adjust...



1. Position Selection Button: It enables opening/closing of your device, selection of summer/winter position, and resetting of the device.
2. Central Heating Water Temperature Adjusting Button: While the position selection button is in winter position, you can select a comfort temperature as you like in between 40° C - 80° C by turning the central heating water temperature adjusting button in between min. and max.
3. Domestic Hot Water Temperature Adjusting Button: While the position selection button is in summer or winter position, you can select a running water temperature in between 35°C - 64°C by turning the domestic hot water temperature adjusting button in between min. and max.



Technical Specifications

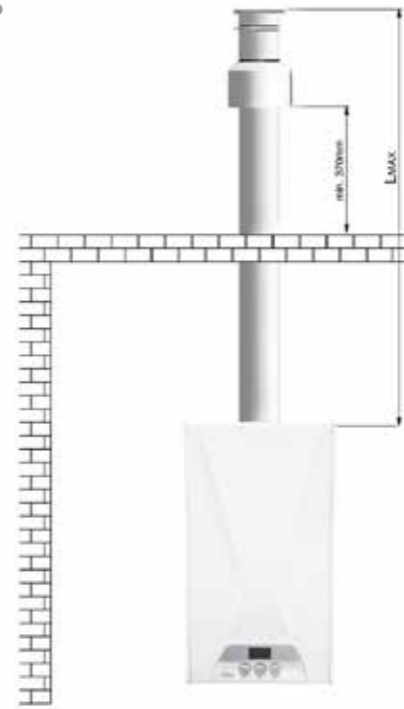
PRODUCT TYPE	UNIT	PROTEUS PLUS BLUE 24 HM
Gas Category	-	I12H3B/P
Flue Types	-	C12(x), C32(x), C42(x), C52(x)
Gas Input Pressure (Natural Gas G20)	mbar	20
Gas Input Pressure (LPG G30-G31)	mbar	30-37
Capacity- Efficiency		
Minimum Heating Power (Pmin)	kW	8,2
Maximum Heating Power (Pmax)	kW	23,3
Minimum Heat Input (Qn)	kW	9,2
Maximum Heat Input (Qn)	kW	25,6
Efficiency	%	90,6
Gas Consumption		
Natural Gas (@Min-Max Capacity)	m³/h	2,67-0,96
LPG	kg/h	2
NOX Class	-	2
Central Heating		
Minimum Water Pressure	bar	0,8
Maximum Water Pressure	bar	3
Maximum Water Temperature	°C	90
Operation Range	°C	40-80
Domestic Hot Water (only valid for HM)		
Minimum Flow Rate	l/min	3
Maximum Flow Rate	l/min	10 (ΔT=33,4°C)
Minimum water pressure	bar	0,3
Maximum water pressure	bar	10
Operation Range	°C	35-64
General		
Electrical Supply	V AC-Hz	230
Electrical Consumption	Watt	95
Protection Class	-	IPx4D
Expansion Vessel Capacity	l	8
Weight (Net)	kg	35
Dimesions (HxWxD)	mm	720x400x330
Pipe Connections		
CH	Inch	3/4
DHW	Inch	1/2
Gas	Inch	3/4

Chimney Applications

Horizontal & Vertical Applications



Horizontal Hermetic Flue Application
 L max. distance with single elbow: 4 m, Ø60/100
 L max. distance with single elbow: 6 m, Ø80/125



Vertical Hermetic Flue Application
 L max. distance without elbow: 5 m, Ø60/100
 L max. distance without elbow: 8 m, Ø80/125

Optional Control Accessories

E.C.A. Smart Combi Room Thermostat

- Compatible for All Combi Boilers
- Mobile Application and Website
- Wireless Connection
- On/Off Model
- Programmable
- Sensitivity: 0,1°C
- Room Control Temperature: 0°C-40°C



E.C.A. Smart Combi Room Thermostat

- Compatible for All Combi Boilers
- Mobile Application and Website
- Wireless Connection
- On/Off Model
- Programmable
- Sensitivity: 0,1°C
- Room Control Temperature: 0°C-40°C



E.C.A. Poly 100 W Room Thermostat

- Compatible for All Combi Boilers
- LCD Display
- Wireless Connection
- On/Off Model
- Sensitivity: 0,1°C
- Room Control Temperature: 5°C-30°C



E.C.A. Wireless Room Thermostat

- Compatible for All Combi Boilers
- LCD Display
- Wireless Connection
- On/Off Model
- Sensitivity: 0,2°C
- Room Control Temperature: 5°C-35°C



Optional Smart Combi Boiler Kit



Smart Combi Boilers or combi-air conditioner room thermostats give you an ability for remote control where you can manage to set your home temperature via your handy phone and to make saving as well as getting a high level of comfort.



E.C.A. Programmable Digital Room Thermostat

- Compatible for All Combi Boilers
- LCD Display
- Cable Connection
- On/Off Model
- Daily, 4 different time frames
- Sensitivity: 0,5°C
- Room Control Temperature: 5°C-35°C



E.C.A. Digital Room Thermostat

- Compatible for All Combi Boilers
- LCD Display
- Cable Connection
- On/Off Model
- Sensitivity: 0,5°C
- Room Control Temperature: 5°C-35°C



E.C.A. Room Thermostat

- Compatible for All Combi Boilers
- LCD Display
- Cable Connection
- On/Off Model
- Sensitivity: 0,2°C
- Room Control Temperature: 5°C-35°C



HEAD OFFICE

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