E.C.A®

GeliosPlus

GELIOS PLUS 11/13/16/20/24/28 HM
HERMETIC MONOTERMIC COMBI BOILER

INSTALLATION AND USER'S OPERATING INSTRUCTIONS

Product Notation

Notation	Description
GELIOS PLUS 11/13/16/20/24/28 HM	E.C.A. GELIOS PLUS 11/13/16/20/24/28 kW Hermetic Combi Boiler (monothermic model)

Table 1

Technical Features

GELIOS PLUS hermetic combi boilers are under the C Type devices class (TS EN 15502 - 1). C type devices are ones with closed combustion chamber. The fresh air required for combustion is taken from outdoor through flue connection as independent from the environment where the device is assembled, and the arising waste gas is released to outer environment with a different special flue connection.

Technical features for E.C.A. hermetic combi boilers have been provided in Table 2.

	GELIOS PLUS 11, 13, 16, 20, 24, HM					28 HM	Unit
Category	I_{2H}						
Type	$C_{12(X)}$, $C_{32(X)}$, *$C_{42(X)}$, *$C_{52(X)}$						
Gas Type	G20 (natural gas)						mbar
Efficiency	90.6					90.7	%
Power							
P Min. heating power (thermal power)	8,2					9,5	kW
P Max. heating power (thermal power)	11,3	13	16	20	23,3	28	kW
Q Thermal Load (min.)	9,2					10,5	kW
Q Thermal Load (max.)	12,8	14,8	17,9	22,3	25,6	30,5	kW
Gas Consumption							
Natural gas (at full power)	1,38	1,58	1,93	2,41	2,76	3,22	m^3/h
Natural gas (at min. power)	0,96					1,12	m^3/h
Nox Class	2						
Heating Circuit							
Minimum Water Pressure	0,8						bar
Maximum Water Pressure	3						bar
Maximum Water Temperature	90						^0C
Temperature Setting range	30-80						^0C
Hot Running Water							
Min. Flow Rate	3						l/min.
Max. Flow Rate Min.	10 (Δt=33,4)					12(Δt=33,4)	l/min.
Water Pressure	0,3						bar
Max. Water Pressure	10						bar
Hot Water Range	35-64						^0C
General							
Electric Supply	230V AC-50 Hz						VAC -Hz
Electric Consumption	119						watt
Protection Class	IPx4D						
Expansion Tank	6					8	Liter
Dimension (Hx WxD)	720x400x330						mm
Weight (without packaging)	32					33	kg
Nox Class	2						
Pipe Connections							
CH	3/4						Inch
DHW	1/2						Inch
Gas	3/4						Inch

Table 2

In the calculation of gas consumption; for natural gas; Hu = 9,59 kWh/m^3

***** : If the twin chimney outlet is not available as shown in Figure 14, a twin chimney adapter should be used to install these chimney types.

➔Assembly of restriction washer

In order to have an efficient combustion and proper waste gas values due to that, a restriction washer should be assembled at the outlet of fan as per the length of waste gas / fresh air terminal.

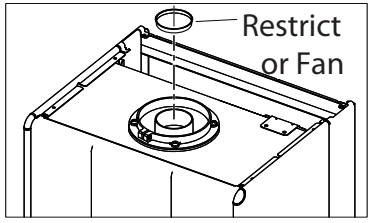
Horizontal (Ø60/100mm) Hermetic Flue Lengths and Restriction Washers

Product Notation	Bend	L (m)	Lmax (m)	Restriction Washer (mm)
GELIOS PLUS 24 , 20 kW	1x90°	≤ 1	4	ø 43
	1x90°	1 < ≤ 2		Restriction washer will not be used
	1x90°	2 < ≤ 3		Restriction washer will not be used
	1x90°	3 < ≤ 4		Restriction washer will not be used
	2x90°	≤ 1	3	Restriction washer will not be used
	2x90°	1 < ≤ 2		Restriction washer will not be used
	2x90°	2 < ≤ 3		Restriction washer will not be used

Product Notation	Bend	L (m)	Lmax (m)	Restriction Washer (mm)
GELIOS PLUS 16 , 13 , 11 kW	1x90°	≤ 1	4	ø 39
	1x90°	1 < ≤ 2		Restriction washer will not be used
	1x90°	2 < ≤ 3		Restriction washer will not be used
	1x90°	3 < ≤ 4		Restriction washer will not be used
	2x90°	≤ 1	3	Restriction washer will not be used
	2x90°	1 < ≤ 2		Restriction washer will not be used
	2x90°	2 < ≤ 3		Restriction washer will not be used

Product Notation	Bend	L (m)	Lmax (m)	Restriction Washer (mm)
GELIOS PLUS 28 kW	1x90°	≤ 1	5	ø 43
	1x90°	1 < ≤ 2		ø 47
	1x90°	2 < ≤ 3		ø 47
	1x90°	3 < ≤ 4		Restriction washer will not be used
	1x90°	4 < ≤ 5		Restriction washer will not be used
	2x90°	≤ 1	4	ø 47
	2x90°	1 < ≤ 2		ø 47
	2x90°	2 < ≤ 3		Restriction washer will not be used
	2x90°	3 < ≤ 4		Restriction washer will not be used

Table 3



Figure

Connection of Vertical Hermetic Flue Set to the Combi Boiler

➔Your combi boiler has the ability to be vertically connected to flat and aslope roofs through the connection accessories as per the status of the environment where it will be assembled. In connections made as straight, it is being reached to an height of 4 meters with (Ø60/100mm) vertical flue set. The lengths in case of use of bend have been shown in Table 5.

Connection elements for vertical flue connection,

1. Vertical flue kit (Ø60/100mm)
2. Vertical flue adaptor (Ø60/100mm) - (with drainage)
3. Extension 500mm / 1000mm (Ø60/100mm)
4. Bend of 45^0 (Ø60/100mm)
5. Bend of 90^0 (Ø60/100mm)
6. Inclined roof adaptor (Ø60/100mm)

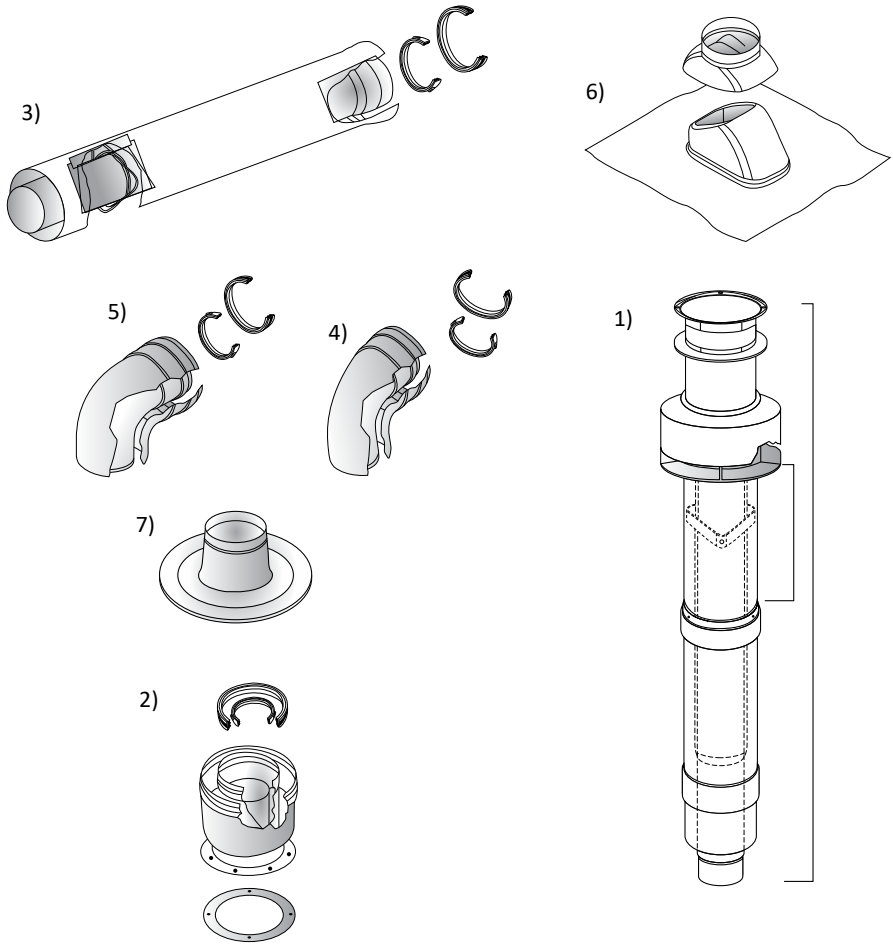


Figure 14

Connections of Gas and Water Pipe

Information Assembly bracket group is optional. You can procure from E.C.A. vendors in case of requirement.

- The water and gas connections in between the assembly bracket fixed on the wall and the combi boiler are made by the pipe group and nipples as seen in the figure (Figure 18).

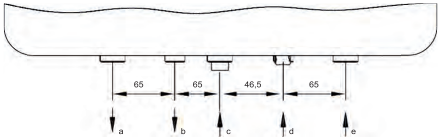


Figure 18a Option 1

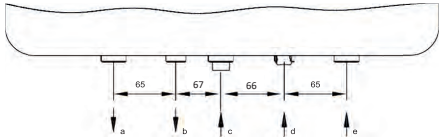


Figure 18b Option 2

a) Central heating pipe 3/4'' outlet line (hot)

b) Domestic hot water pipe 1/2'' outlet line (hot)

c) Gas inlet pipe line 3/4''

d) Domestic hot water pipe 1/2'' inlet line (cold)

e) Central heating pipe 3/4'' return line (cold)

- Valves conforming the diameters of water and gas pipe lines should be placed on such pipe lines. Moreover, strainer should be placed on running water pipe (1/2") inlet and central heating pipe (3/4") return lines.
- The hose coming out of the 3 bar safety cock should be connected to waste water outlet line.
- The connection in between the device and the gas line inside the building should be made by a flexible connector (flexible pipe).

Electrical Connection

DANGER: While making the electrical connection of the device, it should be cared not to have voltage on the electric line.

Connect your device to 230V AC, 50 Hz grounding plug line. If the supply cable is damaged, it should be replaced by E.C.A. authorized services.

The electrical connection cable of the device should be supplied from a grounding plug line that will be able to provide sufficient voltage (230 VAC, 50 Hz). Card malfunctions and damages of device due to voltage fluctuations and lack of grounding are out of the scope of warranty.

CONTROL PANEL

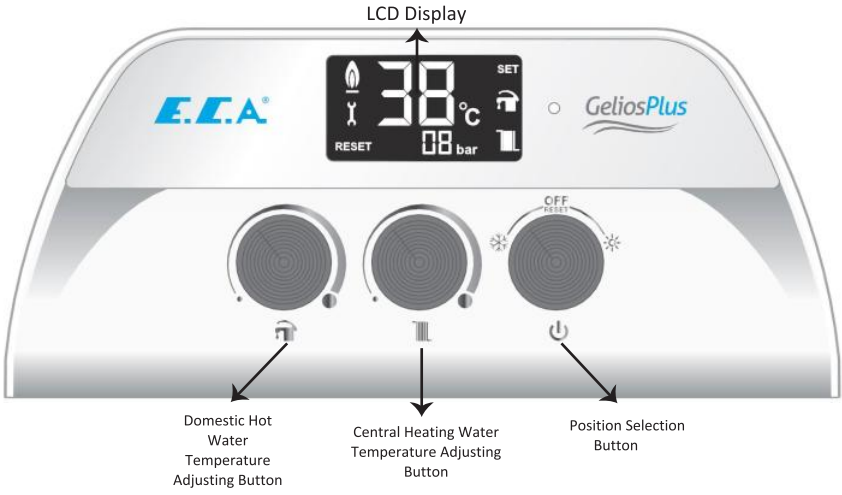


Figure 20

1) Position Selection Button

It enables opening/closing of your device, selection of summer/winter position, and resetting of the device.

❄ **Winter Position:** Turn the position selection button to the left, to the "❄" symbol. In this position, you can enable the heating up of central system and also heating up of the running water.

☼ **Summer Position:** Turn the position selection button to the right, to the "☼" symbol. In this position, you can enable the heating up of only the running water.

• **Closure Position:** Take the position selection button to "• - OFF" position. In this position, the operation of your device will end.

RESET **Reset Position:** When your device breaks down, the malfunction warning LED will start to blink, and reset phrase will appear on the left hand side of the LCD display along with the "RESET" symbol. In this case, take the position selection button to "OFF - Reset" position, and turn to summer or winter position after waiting for 5 seconds. If the malfunction is continuing, repeat this operation for a few times. If the malfunction is still continuing despite resetting, consult to the closest E.C.A. service.

Bar Position Turn the position selection button to the right, to the bar symbol. In this position water pressure will be shown on screen.

If the button is left at bar position, boiler will run in summer mode so, central heating system will not get hot water.

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 30°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.