



Installation and Maintenance

PLASMA HOODS PDHC20 - PDHC16 - PDHC12



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1. General Information



These operating and maintenance instructions are part of this product.

ggm gastro is not responsible for any injury or damage that can occur in the case of not observance of the rules of this instruction manual.

- Please read these operating instructions carefully before starting to work with the solution
- Keep the operation manual for the entire life of the solution
- Keep the operation manual accessible to the authorized staff at all times

These operating instructions apply only to the solutions indicated on the front page and are intended for qualified authorized staff only.

1.1 Symbols

The following symbols refer to a particular hazard or give advice for safe operation:



Attention! Danger! Security tips.



Danger due to suspended load. Risk of serious physical injury or death.



Attention UV rays! Risk of serious physical injury.



Attention electrical voltage! Risk of serious physical injury or death.

1.2 Safety



GGM Gastro has manufactured its solutions according to the latest technical standards and the quality assurance program includes material and function tests. This guarantees a product of high quality and durability.

However, these devices can be dangerous if not used and installed correctly, according to these operating instructions.

- Use only solutions in perfect working condition, considering safety and risk awareness in accordance with these operating instructions.
- Arrange for an immediate repair of any defects that could compromise safety.
- The device must be installed and operated in accordance with these operating instructions, the warnings and information available on the device, any other relevant installation and operating instructions, and applicable national and regional regulations, primarily relating to health, safety and accident prevention.

1.2.1 Safety devices



- Use appropriate protections to avoid contact with fragile parts (Photoplasma lamp etc.)
- After installation and maintenance of the solution, immediately reinstall any guards removed during installation
- Wear appropriate UV protection goggles
- Wear protective gloves for safe installation of the device

1.2.2 Professional Staff



- **The installation of the solution and any work on it must be carried out by qualified personnel only in relation to these operating instructions and applicable regulations.**
- **Handle the solution correctly on the construction site, avoiding damage to the solution, to people and surrounding things**

1.2.3 Specific Risks



- Prolonged exposure to UV-C rays over time: it is essential to protect yourself with adequate safety tools to prevent health risks, especially for the eyes and skin. Among the most common effects of exposure to this type of rays, we talk about erythema and conjunctival irritation, problems that usually disappear after 24 or 48 hours. In general, the damage caused is of a transitory nature.
- Attention to electrical voltage, before installation and maintenance check that you have disconnected the electrical voltage from the control panel of hood or from the general control panel of the kitchen.
- Attention! UV-C lamps produce ozone - O₃. Long exposure to ozone involves risks to health and to the breath system.

1.2.4 Structural modifications and spare parts



- Unauthorized structural changes cannot be made to the solution without the consent of ggm gastro. ggm gastro assumes no responsibility for any damage resulting from unauthorized modifications. Use only original spare parts supplied by ggm gastro.

2. Information

Check the label data on the solution before installation

Type PLASMA HOODS	
Control panel UV-C BOX	UV-C Lamp Life 9000 h
Vac: 230 V - f: 50 Hz - Iac: 0,9 A - Pin: 200 W	
Led – Class 2 Power Transformer:	
Input: Vac = 100-240 Vac - f: 50/ 60 Hz - Iac: 1,2 A	1 Year Warranty
Output: Vdc=24V - Idc=2.5A	
Led Power Consumption: P= 35 W	
Nominal Air Flow: Q = 1500 m ³ /h	

3. Technical specifications

3.1 Technical description of the components



The Plasma Hoods PDHC12 Kg 46 – PDHC16 Kg 55 – PDHC20 di Kg 65 is composed of a metal structure in AISI 304 stainless steel sheet, assembled by spot welding and TIG welding completely, which contains a mechanical labyrinth filtration system and an OGR disinfection and odor reduction system with Photoplasma UV -C lamps.



The Plasma hoods is a hood for professional use.

The Plasma Hoods is equipped with two safety systems for Photoplasma UV-C lamps:

- the first one is installed on the safety bar (see figure 2 point N°6) which stops the operation of the lamps when the indicated bar is removed.



- the second one installed is a pressure switch placed above the hood which interrupts the operation of the lamps when a filter is accidentally removed. The pressure switch positioned on the hood roof must indicate and be calibrated at 20 Pa. This is supplied already pre-set at 20Pa. Check this parameter during the installation of the hood and during subsequent periodic maintenance.

- In addition, the pressure switch turns off the Photoplasma UV-C lamps when the ventilation unit and system is turned off.



Attention! Important, before carrying out maintenance on the hood, turn off the hood control panel or disconnect the power from the general kitchen control panel.



Attention! The hood is equipped with a drain cock and a perimeter condense collection channel. Check before to use if they are intact and functioning.



The installation of the Plasma Hoods must be carried out by qualified personnel.

Hood structure specifications PDHC12	
Dimension [mm]	1200x500x700
Materials	AISI 304 stainless steel
M3/H	900 m ³ /h
Operating range	700 m ³ /h ÷ 1100 m ³ /h

Hood structure specifications PDHC16	
Dimension [mm]	1600x500x700
Materials	AISI 304 stainless steel
M3/H	1200 m ³ /h
Operating range	1000 m ³ /h ÷ 1400 m ³ /h

Hood structure specifications PDHC20	
Dimension [mm]	2000x500x700
Materials	AISI 304 stainless steel
M3/H	1500 m ³ /h
Operating range	1300 m ³ /h ÷ 1700 m ³ /h

Technical specification UV-C control panel	
Control panel dimension [mm]	300x400x150
Lenght lamp [mm]	700 - 1000
Lenght cable [m]	5m
Plug	//
Alimentation	230Vac 50/60Hz
Absorbed power [W] lamp of 700 mm	160
Electric current intensity [A] lamp of 700 mm	0.72
Absorbed power [W] lamp of 1000 mm	200
Electric current intensity [A] lamp of 1000 mm	0.89
Working temperature	-20°C /+40°C
Humidity	0-90% RH without condensation
Lamp life	9000h

Led Specification	
Adapter	24Vdc 2.5A
Power Supply	100-240Vac 50/60Hz
Absorbed power [W] led 70/120	20
Electric current intensity [A] led 70/120	0.19
Absorbed power [W] led 70/160	25
Electric current intensity [A] led 70/160	0.25
Absorbed power [W] led 70/200	35
Electric current intensity [A] led 70/200	0.32

Labyrinth filter specification	A
Dimension [mm]	400hx500x25
Materials	AISI 304 stainless steel
Regenerable	Yes
Working Max. temperature	70 °C
Humidity Max working	90 %
Nominal air flow	600 m ³ /h
Initial pressure drop	80 Pa

3.2 Components

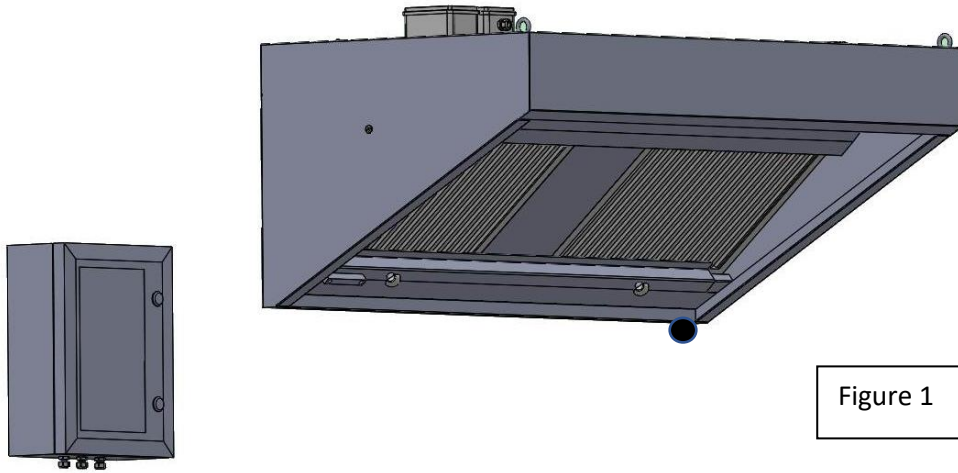


Figure 1

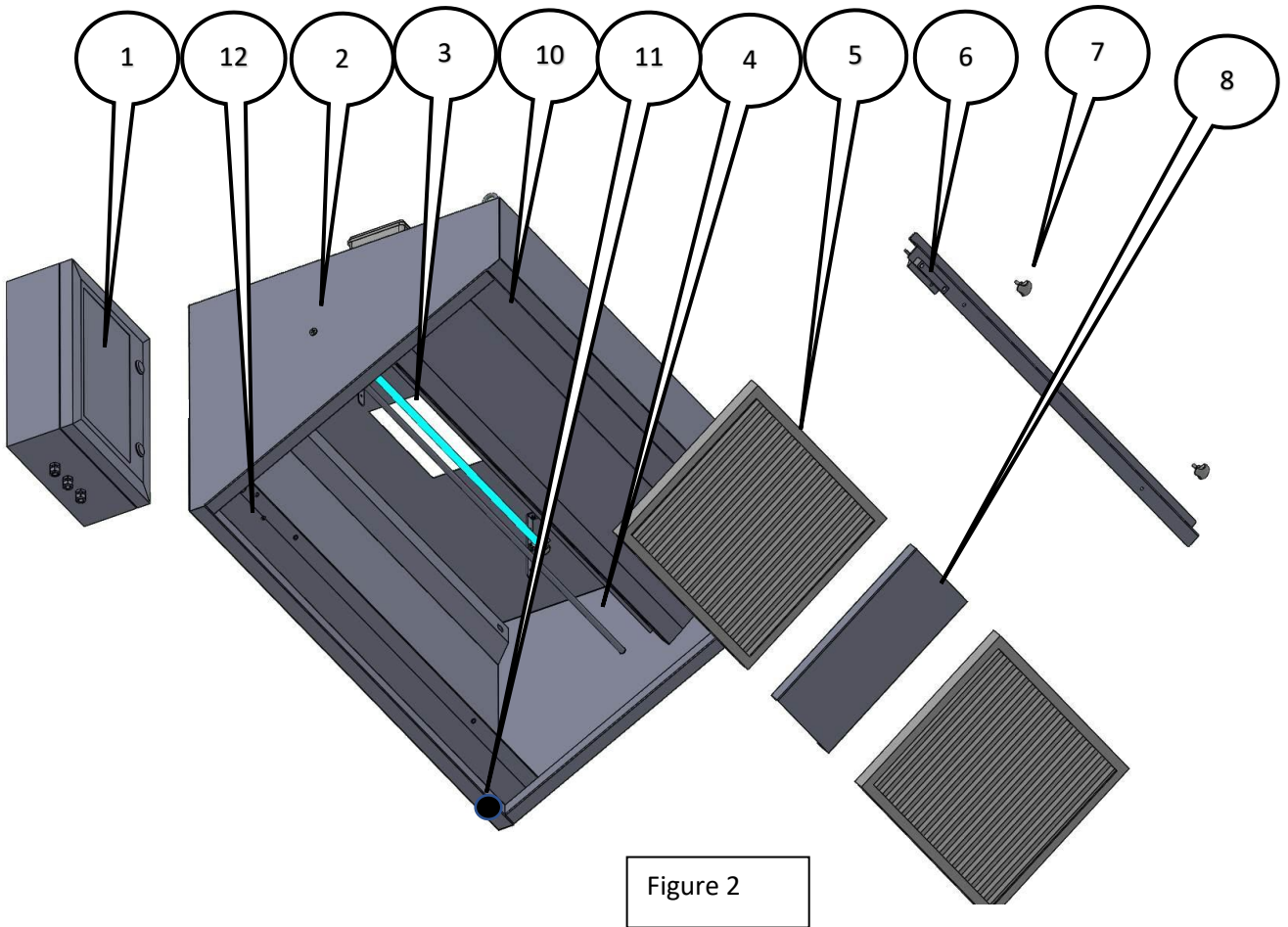


Figure 2

Components

- 1) Control panel
- 2) Hood structure
- 3) UV-C Photoplasma Lamp
- 4) Lamp Protection
- 5) Labyrinth filter
- 6) Safety bar for hand filter removal
- 7) Secure Safety bar
- 8) Filter Separator
- 9) UV-C lamp safety pressure switch
- 10) Led Light
- 11) Condensate drain cock
- 12) Perimeter condense collection duct

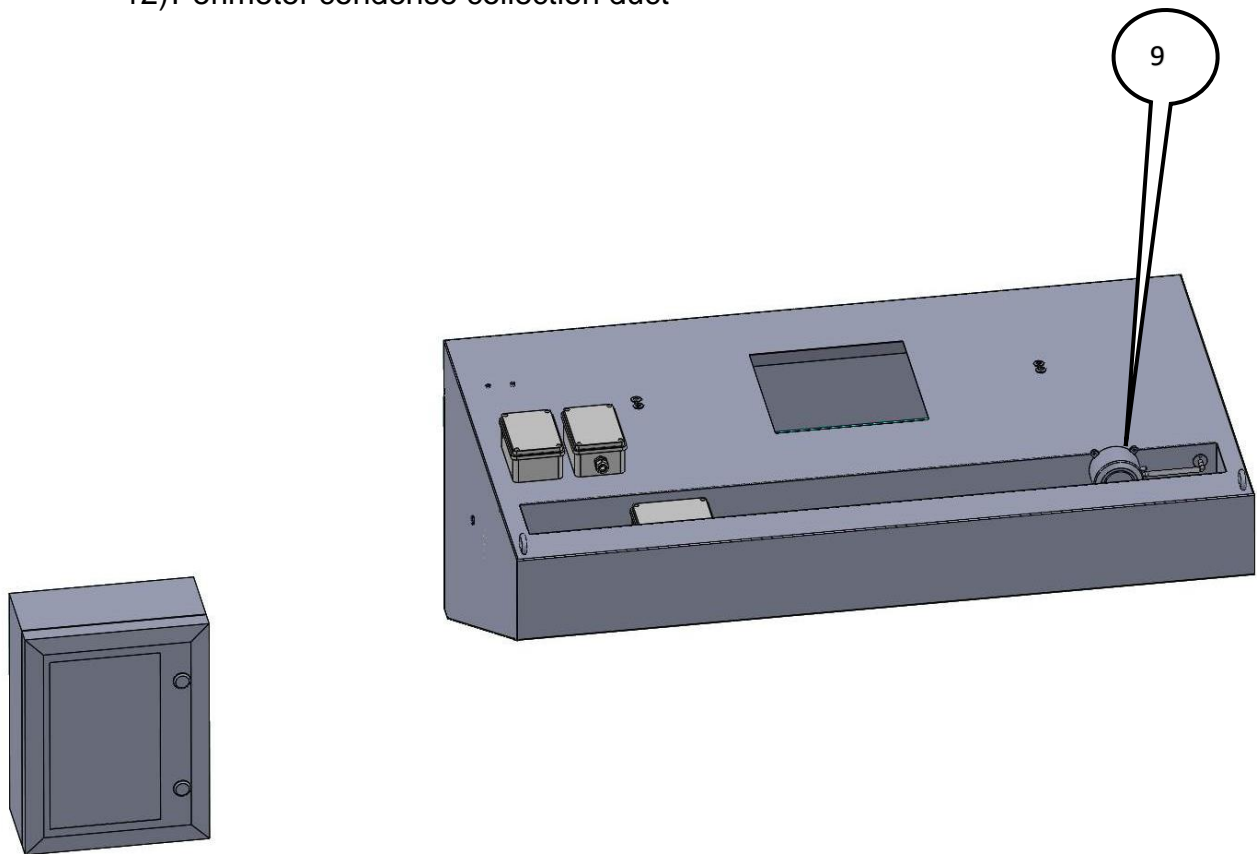


Figure 3

4. Installation and Maintenance



The Plasma Hoods is a solution for professional kitchens above the cooking fire. These operations must be carried out by qualified and specialized personnel. For the installation of the Plasma hoods it is necessary to use the eyebolts on the upper side and the slots on the back.



For the correct function of the hood is necessary to connect the suction system pipes to the hole above the hood. Pay particular attention to sealing all the interstices during the installation of the suction duct with the hood. the flow of air sucked by the hood must be sent outdoors and not indoors to avoid the release of ozone into the workplace.



After connecting the hood to the suction system, clean the inside of the hood, removing probable residues and / or waste material from the installation of the suction system. Cleaning of residues and scraps must restore the hood to its original conditions.



After installing the hood on the wall and connecting the extraction system, please place the control panel of the UV-C Photoplasma lamps in a protected and accessible position. The power supply of the control panel is 230V at 50Hz. To protect the cables, it is recommended that the cables of the hood control panel are inserted in special conduits to protect them in order to avoid any tearing, erosion and fraying.



Attention! Before installing or replacing the lamps, make sure that the power supply socket of the hood control panel is disconnected or that the main switch of the kitchen control panel is turned down. Install the UV-C lamp avoiding touching the glass (see Figure 4).



The insertion into the lamp holder is carried out by unscrewing the external sealing nut and joining the ends, paying particular attention to the unique direction joints.



Position the lamps by inserting the white ends into the retaining clips. Tighten, with clips or suitable bands, fastening clips to prevent the lamp from sliding (see Figure 5). The life of the lamp is 9000h. Insert the metal clamp at the end of the lamp on the opposite side to its attachment. Tighten the clamp

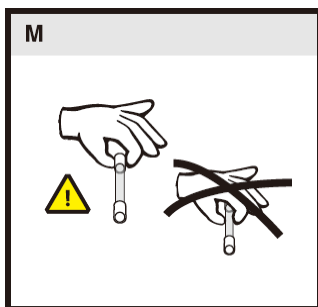


Figure 4

adequately avoiding breaking or damaging the ceramic part. After 9000h, please replace the lamps to ensure perfect operation and deodorization action and destruction of oils and fats. When replacing the lamps, the hour counter located in the control panel must be reset (see Image 1). First of all, the electrical power supply to the panel must be disconnected by extracting the socket, then the panel is opened with the appropriate key and the cover fixed with 4 screws is removed. On the back of the cover you will find the hour counter and a faston with a purple cable. To reset the hour counter, the faston must be connected to the free terminal , for a few seconds, until the hour counter display is reset. Subsequently, reassemble the control panel by following the above instructions backwards.

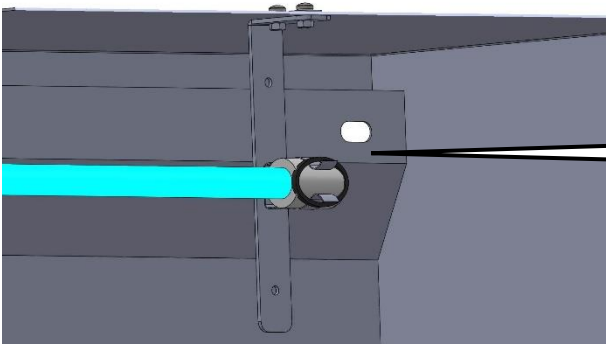
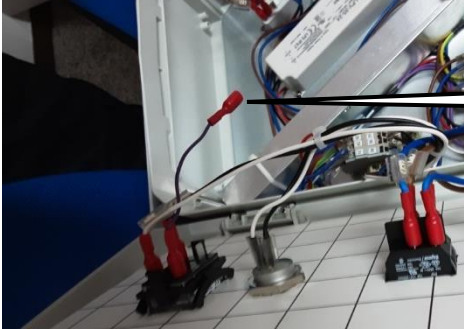


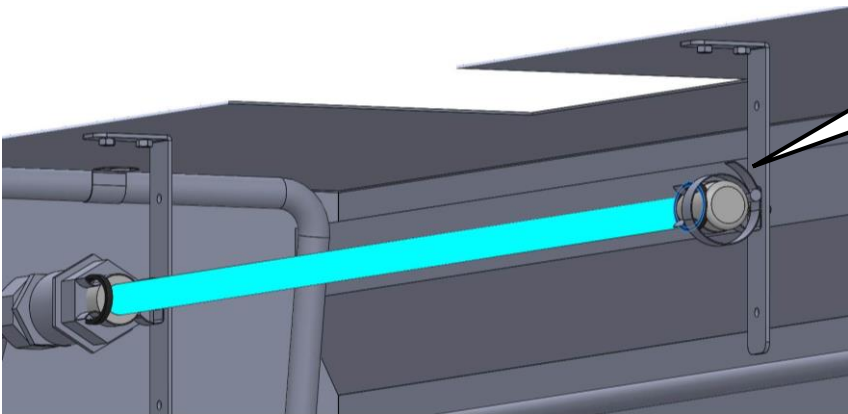
Figure 5

cable ties



hour counter and Faston

Image 1



Fascetta metallica fine corsa.

Figure 6



Place the labyrinth filters and dividers in the appropriate rails.
Fit the filter extraction safety bar see figure 7, tightening all the fixing handwheels well.

Figure 7

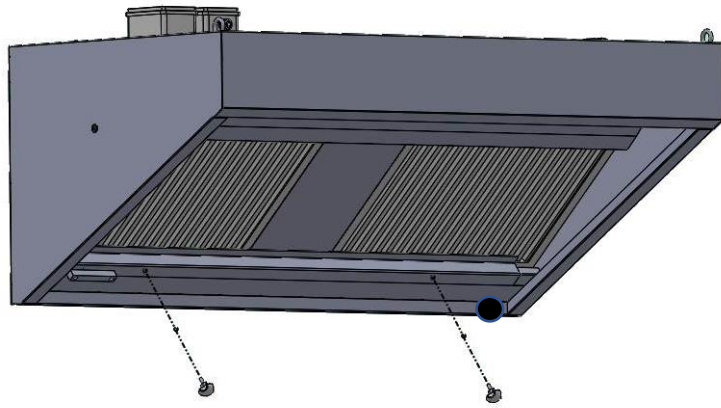
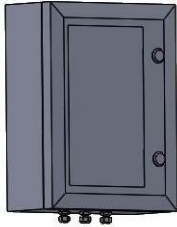


Figure 8

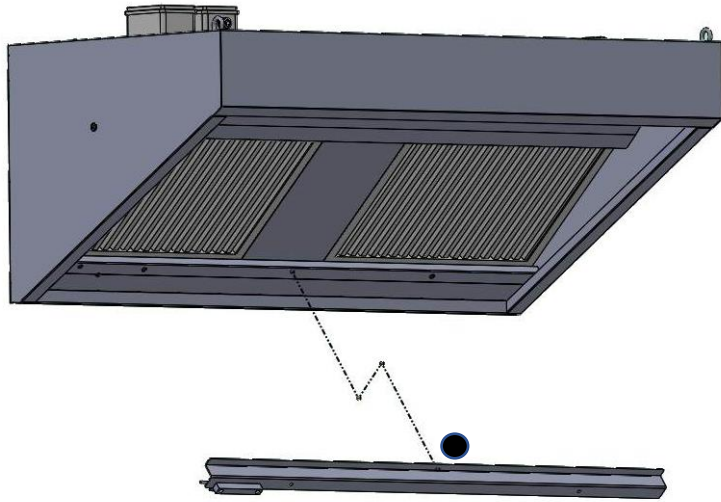
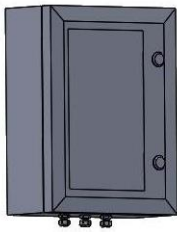
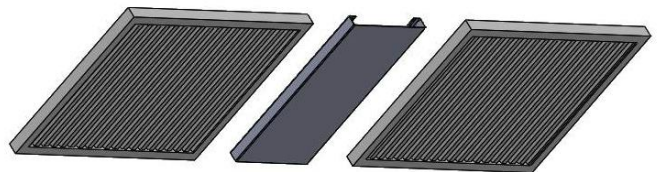
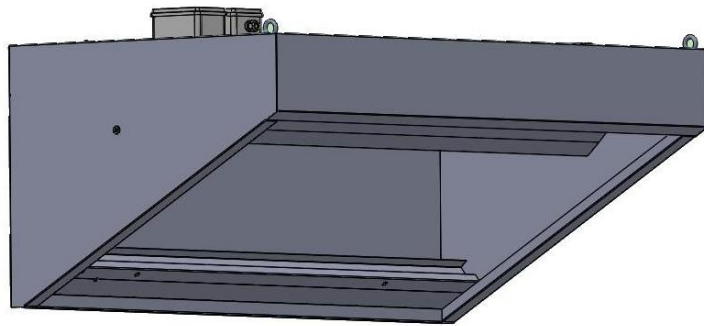
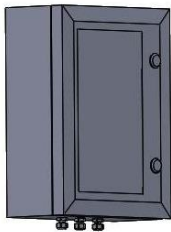


Figure 9





Periodically the filters must be washed and restored.



Before removing the filters or dividers, request that the power supply socket of the hood control panel be disconnected or the main switch of the electrical panel.



Wash the filters with water and detergents suitable for treating cooking grease. Cleaning can be done directly in the dishwasher at high temperatures or alternatively they can be washed with products suitable for the elimination of grease. Do not use products containing chlorides, in particular hydrochloric acid.

The filter washing must be done cyclically with a frequency depending on the intensity of use. If you observe the indications above, the labyrinth filters have an unlimited duration.

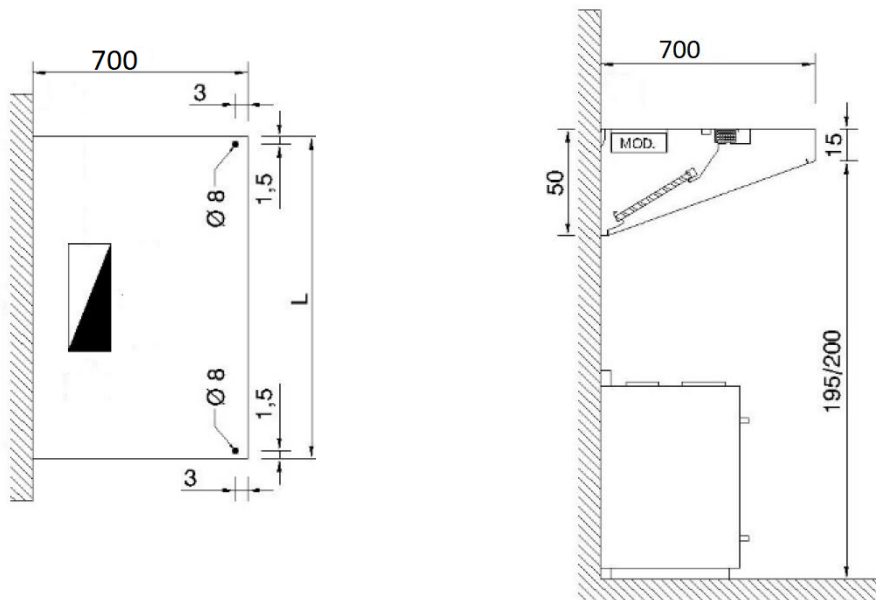
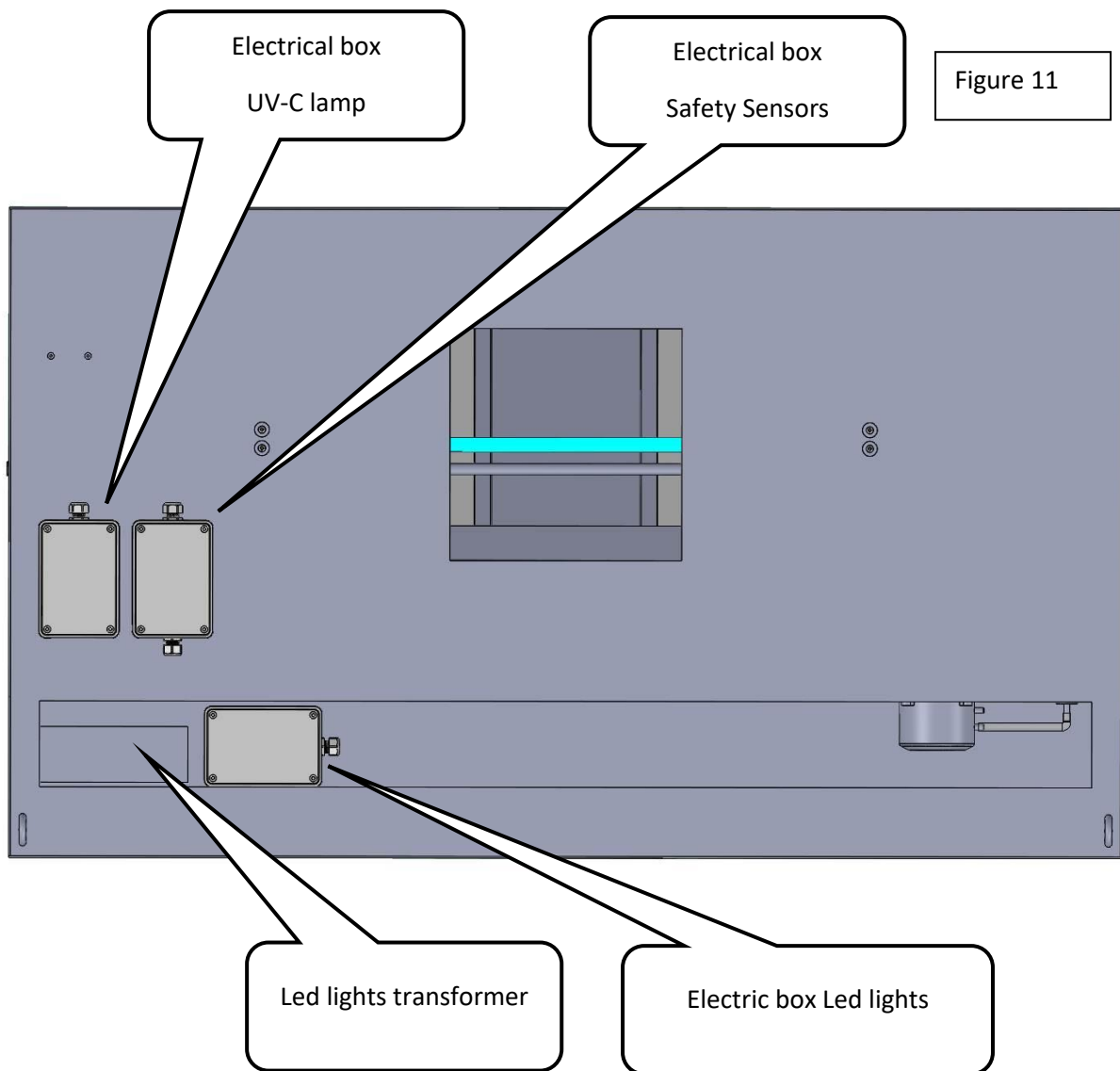



Figure 10

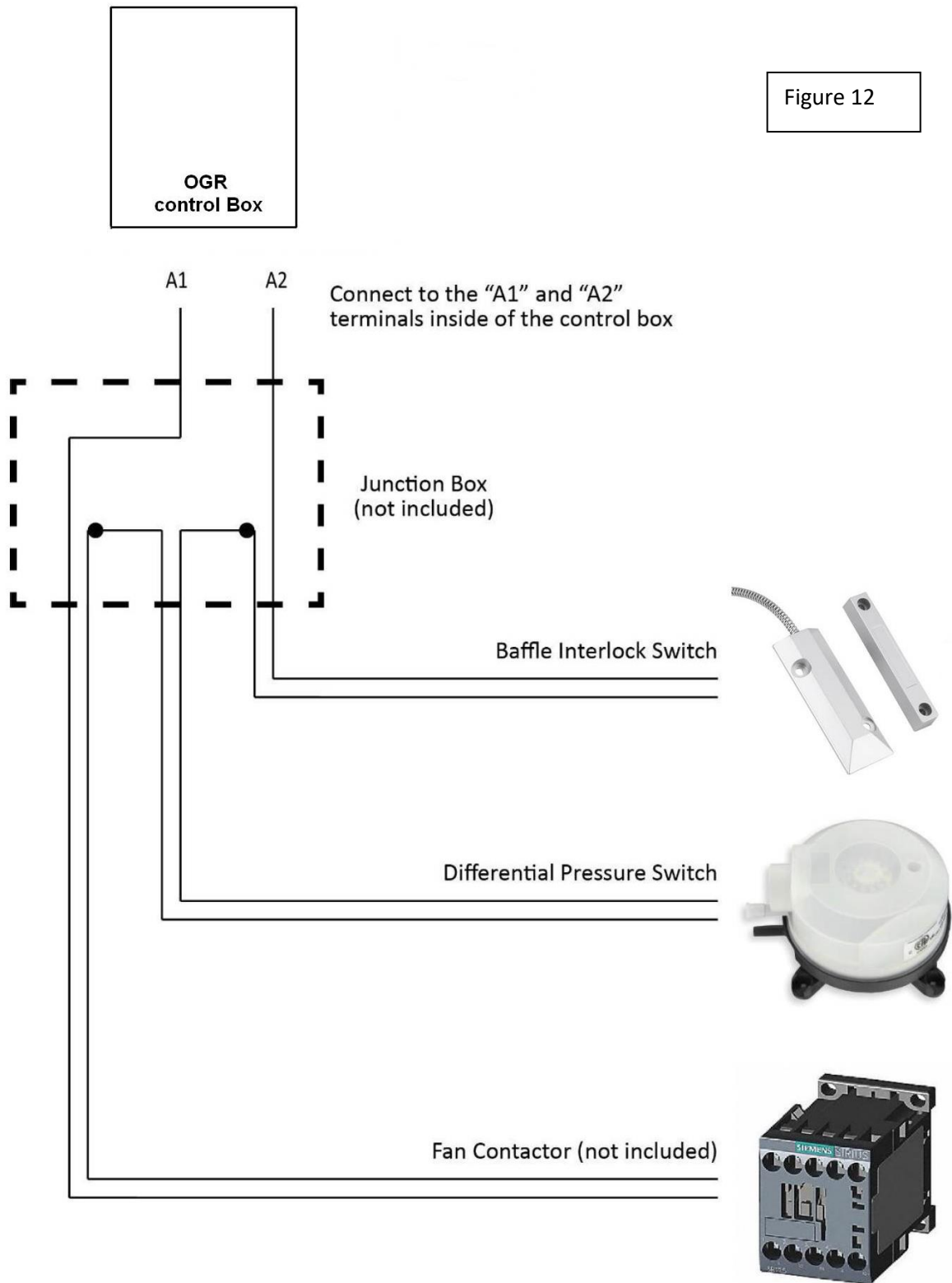


Inside the electrical boxes, there are the related wiring diagrams.

The electrical box of the safety sensors is prepared with a free terminal for the installation of the Photoplasma UV-C lamps on and off command simultaneously with the ventilation unit. See figure 12.

 The yellow/green of the hood must be carried out through a special connection in the electrical box of the LED lights.

Auxiliary Diagram - Safety Switches



4.1 Working mode



For the first activation of the UV-C lamps it is necessary to work on the control panel.

Before activating the control panel, make sure that the UV-C lamps have been correctly installed and that the filters and filter separators with safety bar and relative handwheels have been installed correctly (see figure 2 points n ° 6 and n ° 7).

Open the control panel with the special key supplied.

Activate the protection switch (PROTECTION) by switching from 0 to 1.

Activate the red ON-OFF switch from OFF to ON.

When the power switch is turned on, it lights up red. To understand if the UV-C lamp installed in the hood is on, a blue light (LAMP ON) lights up on the panel.

When the lamp is on, an hour counter is activated in the control panel to display the time that the UV-C lamp has been active (LAMP HOUR METER).



Control Panel

Image 2

5. Service, spare parts, options and accessories



It is recommended to use only original spare parts supplied by ggm gastro. The use of spare parts supplied by other manufacturers could compromise the correct operation of the unit and the safety of the installation site.

The use of spare parts supplied by other manufacturers instantly voids the warranty of ggm gastro.

ggm gastro no accepts liability or provides any warranty coverage for damage resulting from the use of spare parts supplied by other manufacturers.