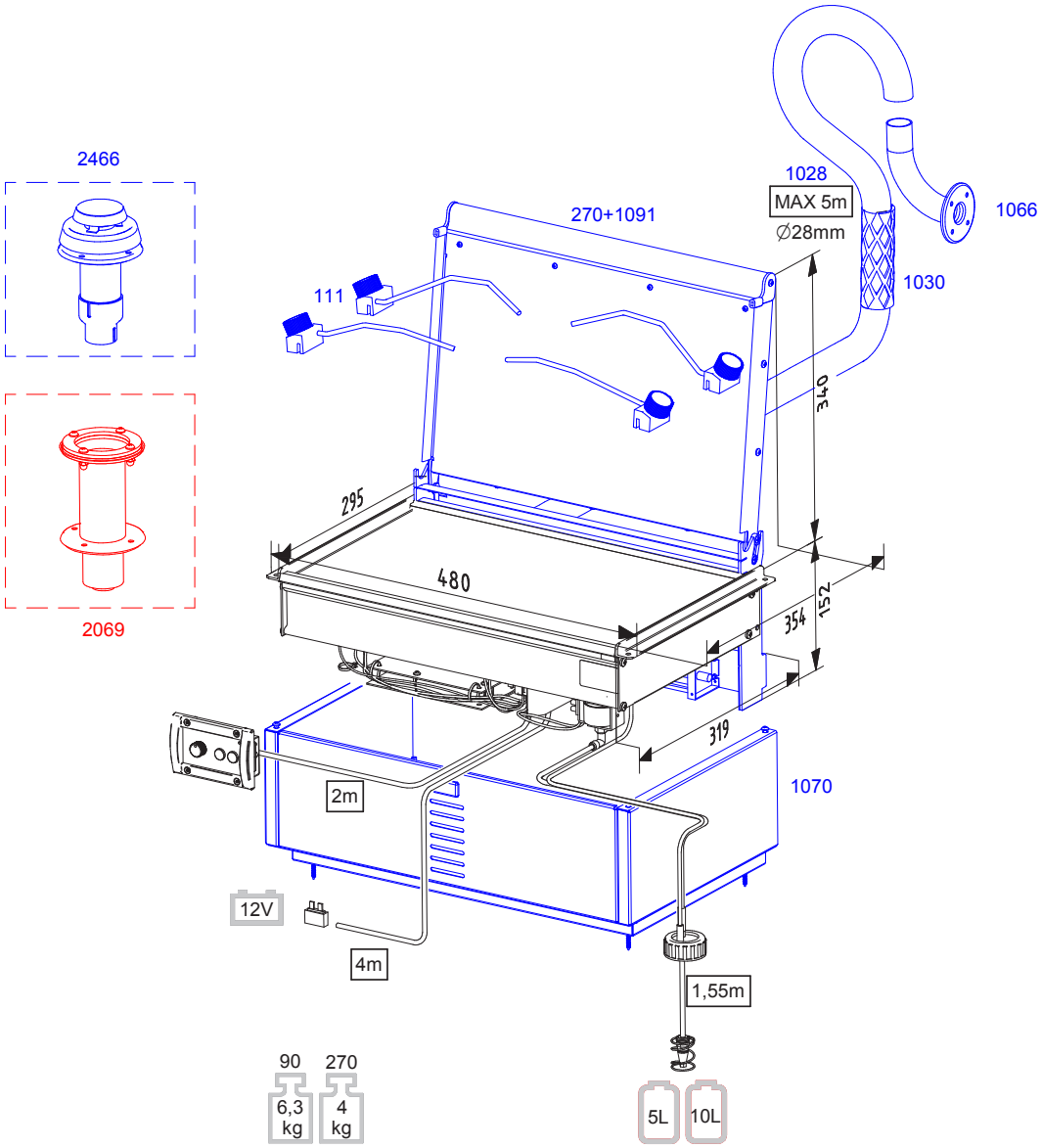
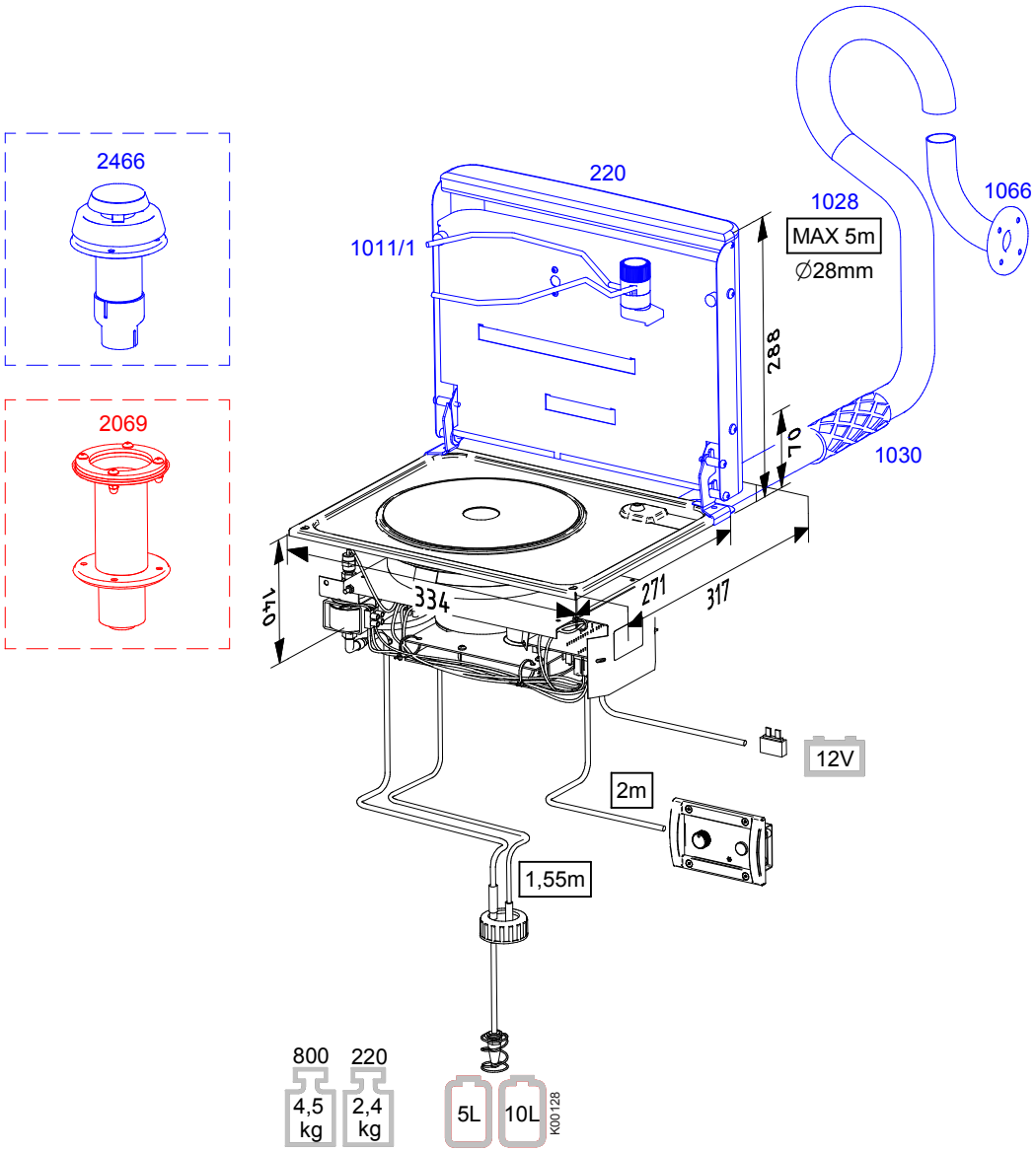


Package contents

90 t			
1 pcs		Stove **90 t** (fuel hose and control panel cable installed)	
1 pcs	①	Power cord with connector (4 m)	
1 pcs	②	Cover list	
1 pcs		Control panel package **361065**	
	1 pcs	③	Control panel
	1 pcs	④	Extension collar
	4 pcs	⑤	Control panel fastening screws 3,5 x 20 mm (black) TX10
	4 pcs	⑥	Control panel fastening screws 3,5 x 40 mm (black) TX10
1 pcs		Accessory bag **17727**	
	4 pcs	⑦	Fastening screw 4,8 x 16
	1pcs	⑧	Hose binder 20 – 32 mm
	1 pcs	⑨	Fuse box
	1 pcs	⑩	Fuse 15 A (blue)
	2 pcs	⑪	Push on contact 6.3 x 0.8 (yellow)
1 pcs		Installation, operation and maintenance instructions	



Package contents

800 t			
1 pcs		Stove **800 t** (fuel hose and control panel cable installed)	
1 pcs	①	Power cord with connector (4 m)	
1 pcs		Control panel package **361065**	
	1 pcs	③	Control panel
	1 pcs	④	Extensin collar
	4 pcs	⑤	Control panel fastening screws 3,5 x 20 mm (black) TX10
	4 pcs	⑥	Control panel fastening screws 3,5 x 40 mm (black) TX10
1 pcs		Accessory bag **17728**	
	4 pcs	⑦	Fastening screw 4 x 25 mm
	1 pcs	⑧	Hose binder 20 – 32 mm
	1 pcs	⑨	Fuse box
	1 pcs	⑩	Fuse 15 A (blue)
	2 pcs	⑪	Push on contact 6.3 x 0.8 (yellow)
1 pcs		Installation, operation and maintenance instructions	

Stove operation

90 t is a safe cooker, equipped with a ceramic top and **800 t** with a nitrated cooking plate, without an open flame. Exhaust gases are lead outside of the cabin with help of a combustion blower. Steam which is a result of the burning process is blown outside in this way. The cooker takes its combustion air from the installation place (about 6 m3/h), drying the air and keeping the cabin ventilated and dry.
The fuel pump in the stove dispenses fuel, and the electronics control the combustion air and the amount of fuel automatically to keep the flame of the burner clean.
When the stove is switched on, the glow plug in the burner ignites the fuel that has been pumped into the burner. The glow time is fixed: it begins and ends automatically.
The heat sensor in the stove detects the heat of the flame and lights the red light to signal that the flame has been ignited.
When the stove is switched off, it cools down automatically. The cooling function ventilates the burner and discharges the flue gases generated during the switch-off outside the boat.

The paraffin is sucked from a separate fuel can below the cooker. As no fuel pressure exists either in the cooker or in the fuel tank there is no explosion risk, either.

The stove lends itself extremely well to cooking and warming up all kinds of foods. It has been manufactured entirely from stainless materials.

Technical information

	90 t	**800 t**
Fuel	Paraffin	
Operating voltage	12 V DC	
Consumption	0,08 - 0,19 l/h	0,07 - 0,13 l/h
Heating power	700 - 1800 W	650 - 1200 W
Power consumption	0,15 A (when ignited ca. 4 min. 10 A)	
Measurements	480 x 295 x 152 mm	334 x 271 x 140 mm
Weight	ca.. 6,3 kg	ca.. 5,7 kg
Max. permissible length of the flue gas pipe	5 m	
Max. permissible length of the fuel hose	8 m	
Minimum size of the replacement air opening	100 cm^2	
Suitable flue gas lead-throughs	**1066** and **2466**	
Accessories	**270** Blower lid (+ mounting set **1091**) **111** Kettle holder set **1070** Table mounting kit **1150** Toasting grill	**220** Blower lid **1011/1** Kettle holder

Heater installation

The country specific regulations shall be followed in the installation.

The warranty of boat products is valid only in boat installations.
The warranty is not valid in installations to vehicles or other spaces.

The device is meant for free time use in pleasure boats. The device is not designed for continuous use for example in live aboard boats. In such use the warranty is not valid.

Things to note when selecting the installation location

The device shall be installed into a dry space in inside location.

When installing the device, bear in mind that the device must be detached for maintenance. Therefore, it is advisable to make the connections easy to open and disconnect.

The stove should be installed level. The inclination must not exceed 5°. While the device might not break if it is temporarily tilted to a steep angle (even for some hours), the burner will not yield optimal performance if it is constantly inclined.

Also consider where you will place the control panel, as the length of the control panel's cable may pose some limitations.

Please note specially the following things:

- Avoid installing the control panel in the immediate vicinity of a water outlet.
- If possible, install the control panel on a vertical surface.
- Moreover, the stove should not be installed on top of a refrigerator. The stove will heat its surroundings and thus decrease the power of the refrigerator.

We recommend that the device be installed by an authorised Wallas service shop.

Things to note when installing pipes, hoses and cables

Power cables and fuel hoses must be protected in locations where they are susceptible to mechanical damage due to sharp edges or heat.

The necessary installation tools








ø 35 / ø 50 mm


ø 2 mm
ø 5 / ø 6 mm

PZ 2
PH 2
TX 10

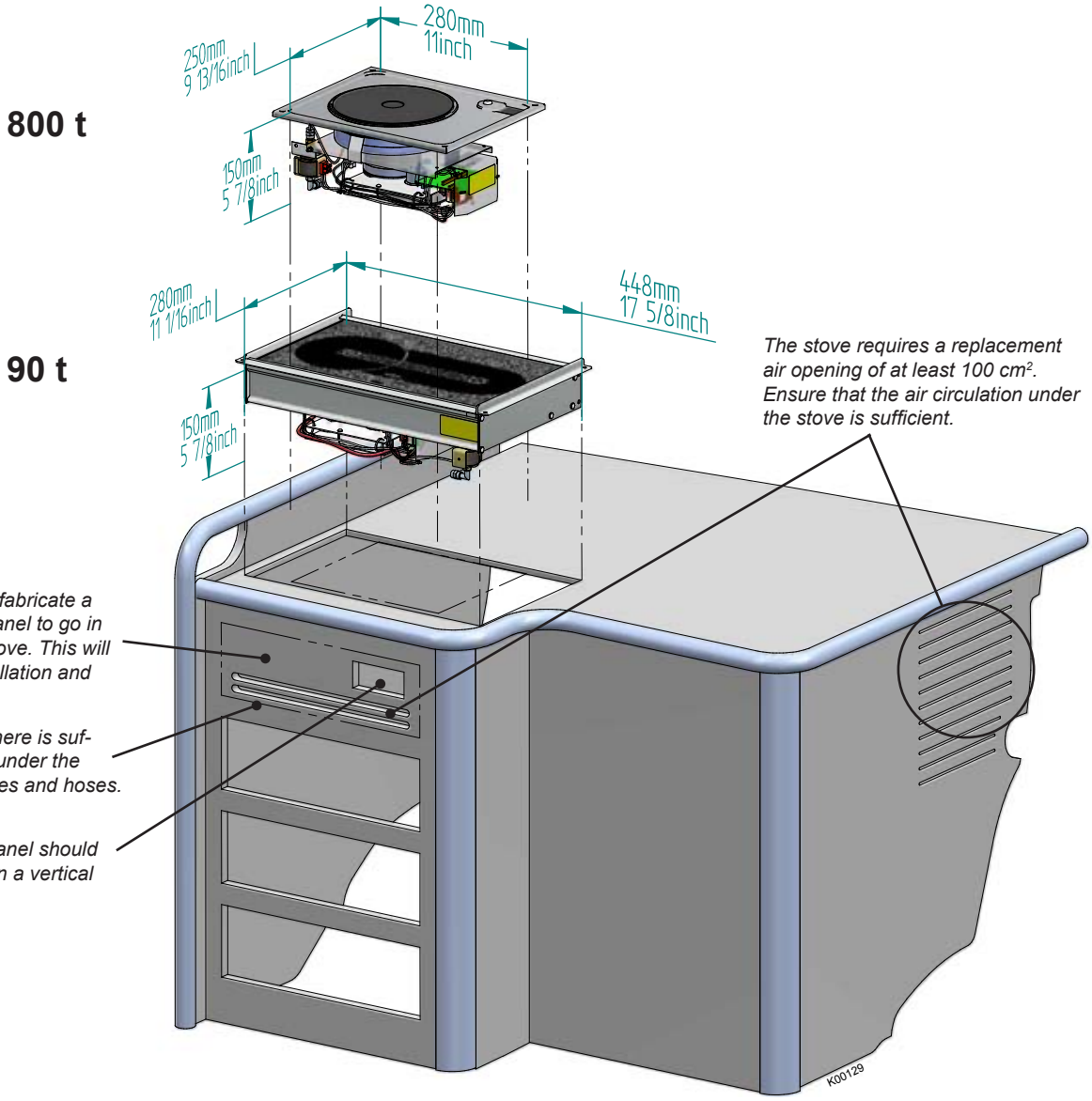
In a metal-hulled boat, you must ensure that the device, the flue gas lead-through, the fuel connection, the control panel, and all other parts are insulated from the boat's hull. This must be done to:

- **prevent electrochemical corrosion**
- **prevent voltage from being transmitted from the hull to the device or vice versa during electrical faults.**

Always use original Wallas accessories and parts with Wallas equipment.

Stove installation

Saw a cut-out (see picture) for the stove and the control panel in your chosen location.
The length of the control panel cable is 2 m.

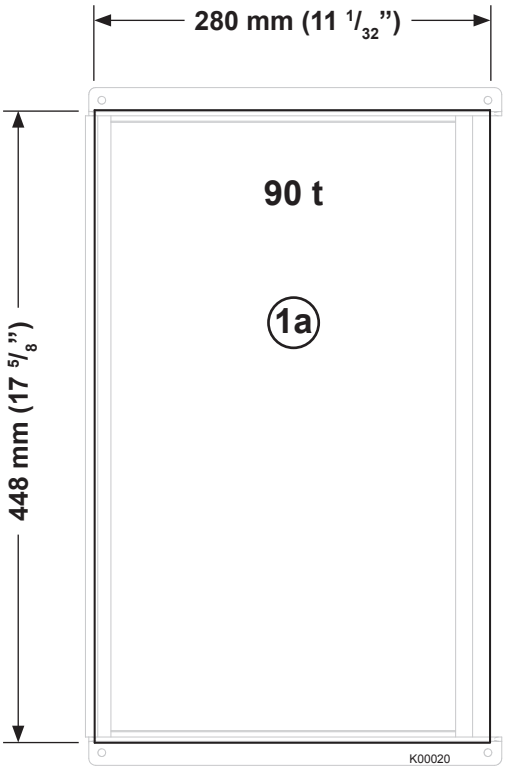


The stove requires a replacement air opening of at least 100 cm². Ensure that the air circulation under the stove is sufficient.

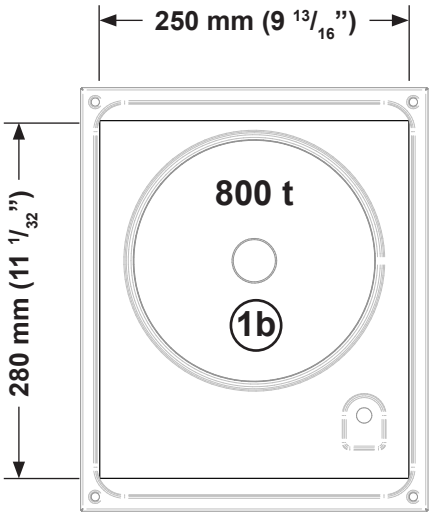
You can also fabricate a detachable panel to go in front of the stove. This will facilitate installation and maintenance.

Ensure that there is sufficient space under the stove for cables and hoses.

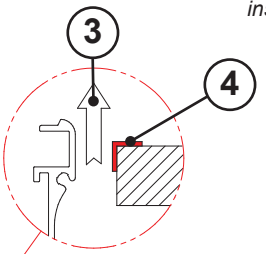
The control panel should be installed on a vertical surface.

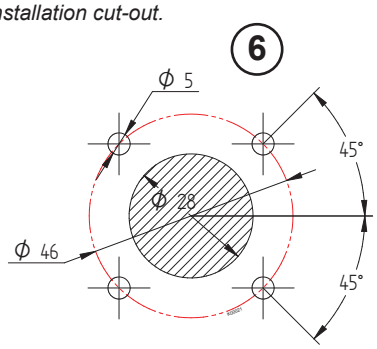


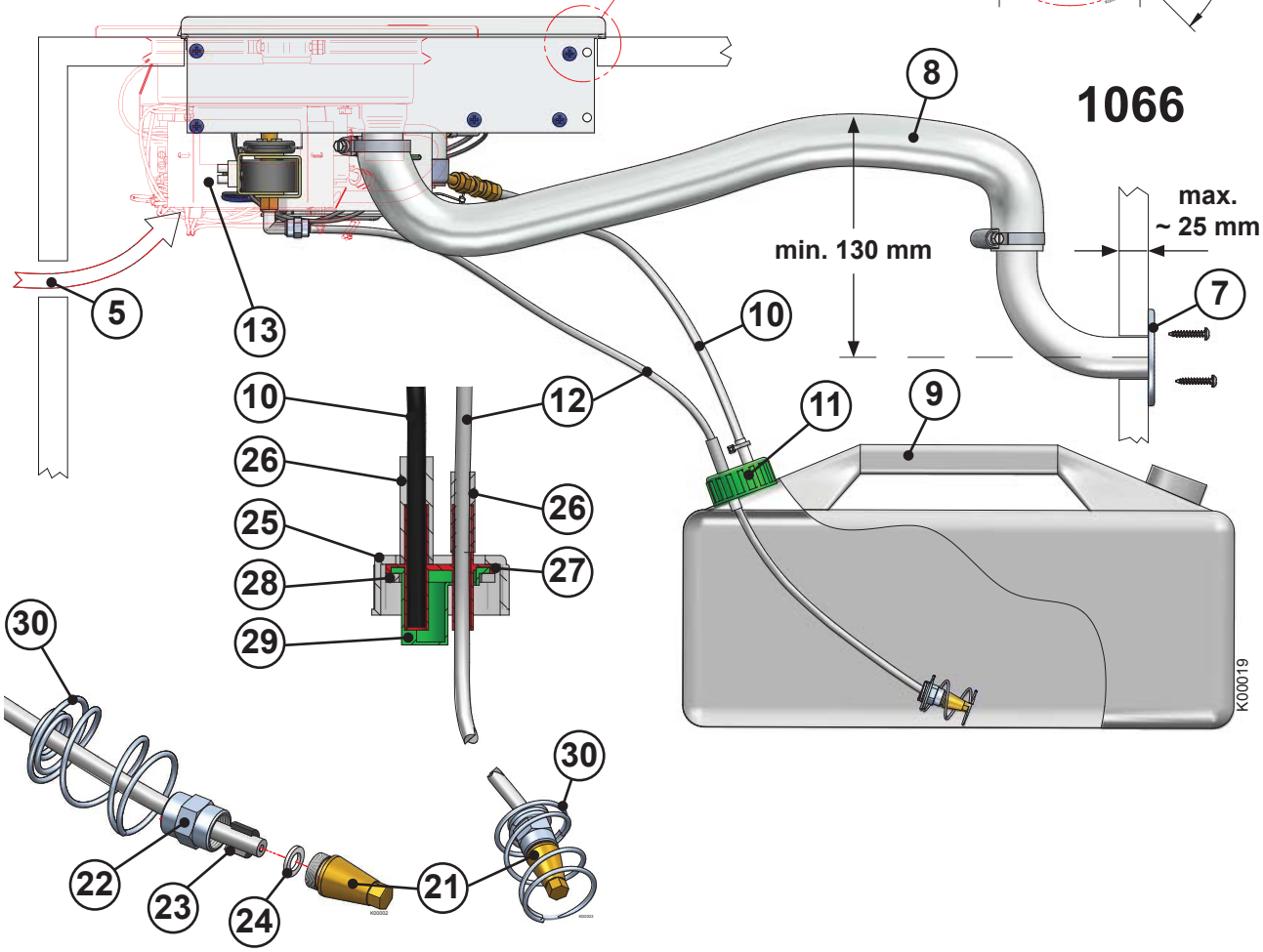
Measurements of the stove installation cut-out.



Measurements of the stove installation cut-out.







Description of the parts and steps of the assembly

(1a) **90 t Flush opening size is 448 x 280 mm (17 $^{5}/_{8}$" x 11 $^{1}/_{32}$").**

(1b) **800 t Flush opening size is 280 x 250 mm (11 $^{1}/_{32}$" x 9 $^{13}/_{16}$").**

(2) **Control panel Flush opening size is 98 x 44,5 mm (3 $^{55}/_{64}$" x 1 $^{3}/_{4}$").**
Control panel (3), 104 x 69 mm (4 $^{3}/_{32}$" x 2 $^{23}/_{32}$").
– Control cable length 2 m.

(3) **90 t The ventilation slot** at rear **must be left open and uncovered.**

(4) **90 t** The cover list (2) is fastened on it's place with a tape inside.

For more information see the other pages of this instruction manual

(5) **The stove requires for it's ventilation to avoid overheating an air intake opening of 100 cm² below the stove.**

(6) Drill a hole for a lead-through.
Template for exhaust head **"take through" drilling.** Use the exhaust head base plate as template.

(7) **Install exhaust head type 1066**.

(8) Exhaust tube no **1028**, Flexible, stainless quality, ø 31/28 mm, max length 5 meters. Taking through constructions must be ventilated, - not closed.

(9) The fuel tank must always, under all circumstances lie below the stove bottom level, secured so it can not tip or come loose.

(10) **The return fuel tube must have continuos fall to fuel tank with no loops upward. All extra length is cut away below the tank adapter. If necessary, cut the hose shorter.**
The end of the return tube must reach the bottom nib.

(11) Install fuel tank adapter no **367204**

(21) Filter head, sinterbronze no **367402**

(22) Filter holder nut

(23) Filter holder nut rubber ring

(24) Filter shield washer ring

(12) Fuel suction line, ø 5/2 mm, transparent, polyamid

(25) Thread lock ring

(26) Rubber sleeves to secure fuel lines

(27) Take through plate

(28) Gasket no **364001**

(29) Fuel steam lock

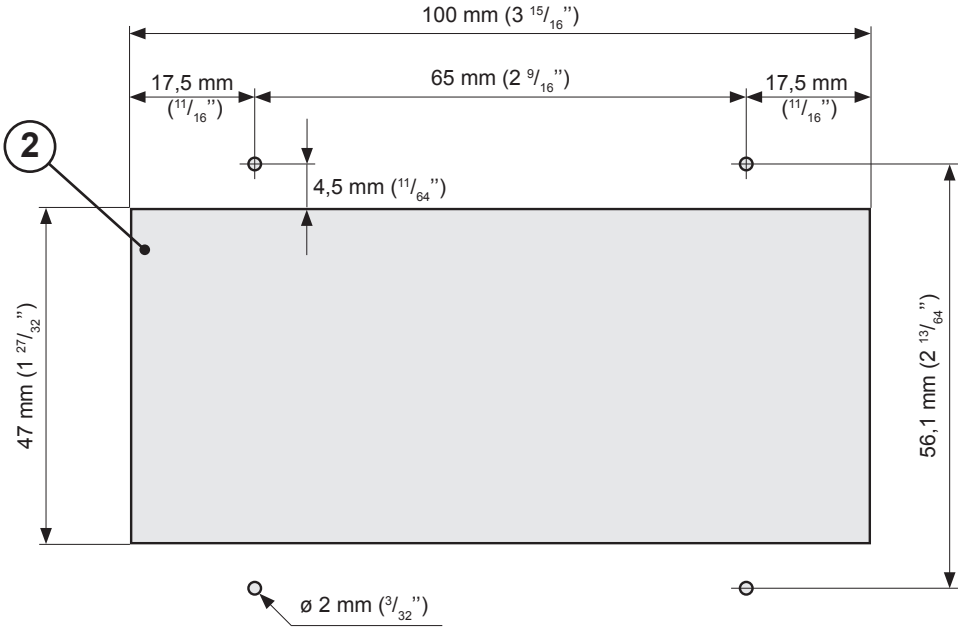
(30) Shield spiral no **367001** hinders water intake by holding the suction end free from tankbottom

If you want to shorten the fuel line, remove the filter from the nut and remove all the parts that are on the hose. Cut the fuel line to the requested length and reassemble the filter.

(13) Connect the power cord (1) to the electronics card.

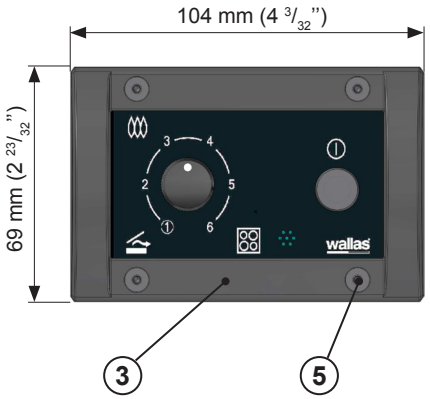
Installation of the operation panel

Cut a hole for the operation panel according to dimensions in the drawing. Try to install the operation panel on some vertical surface and avoid installation in a place where it may be splashed by water.
The thermostat is located in the front panel, install the panel in such a place where you want to adjust the temperature. Do not install the control panel close to any external heat source, door or window. Please note also that direct sunlight may affect the thermostat.
The length of the control panel cable is 2 m.

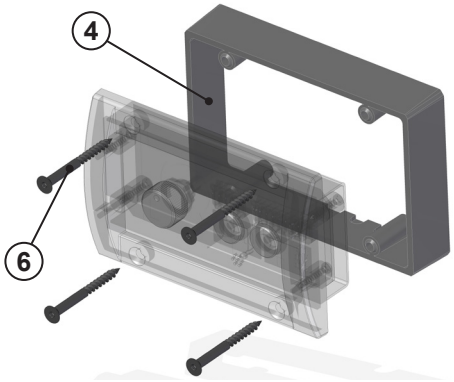


Measurements of the control panel installation cut-out
If necessary, predrill holes for the ø 2 mm (3/32") screws.

When cutting the hole for the operation panel use the cardboard box's model for drawing the hole.



Connect the control panel cable from the device to the control panel (3).
Use the fastening screws to install the control panel to the installation cut-out (5)



When installing the control panel, use a surface mounting collar (4).
4 pcs screws; 3.5 x 40 mm (black) TX10 are included.

Electrical connections

Things to note about the connections

The device uses 12V direct current voltage. To minimise current losses, make the power cable as short as possible and avoid jointing. The cross-sectional area of the cable is dependent on the length of the power cord. See table. The cross-sectional area of the cable must be consistent all the way from the stove to the battery. The maximum length of the power cord is 10 m.

The cross-sectional area of the cable

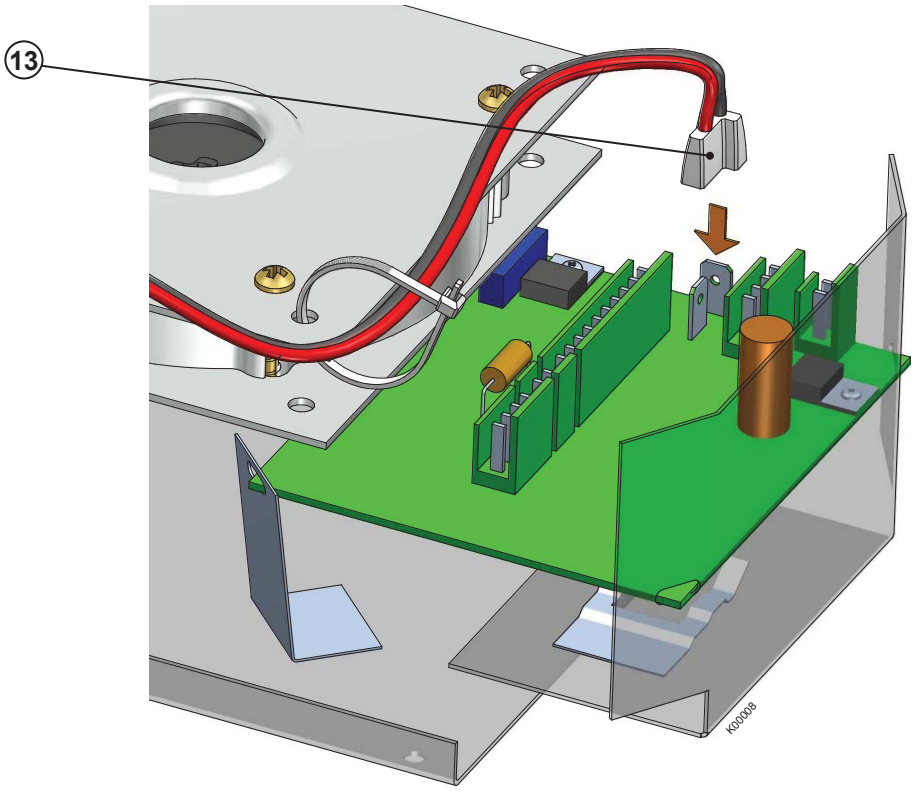
Total length of the power cord (m)	Cross-sectional are of the cable (mm^2)
0 - 4	4
4 - 6	6
6 - 10	10

If a thicker cable is required, make a separate joint in the power cord. See picture on the next page.

Main switch

A main switch must be installed on the device's plus cord. Always cut the power at the main switch, if the device is going to be left unused for a longer period of time.

Never use the main switch to cut the power before the cooling phase, which starts after stove is turned off, is completed.



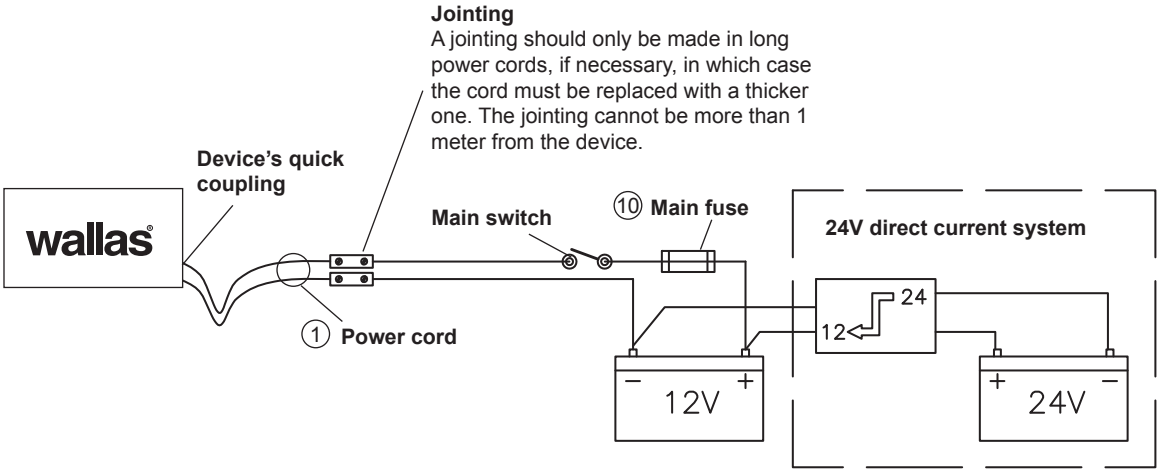
Electrical connections of the device

12V direct current system

Connect the red wire of the power cord to the plus terminal of the battery and the black or blue wire to the minus terminal. A 15 A main fuse must be installed near the battery on the red plus wire of the power cord. See picture.

24V direct current system

If the device is to receive power from a 24V system, always connect a charging voltage reducer and a 12V battery before connecting the device. Without the battery the voltage reducer will not be enough on its own as it cannot generate the large amount of current the glow plug requires. After the 12V battery, the connection is the same as in a 12 V system.



Checking the connection

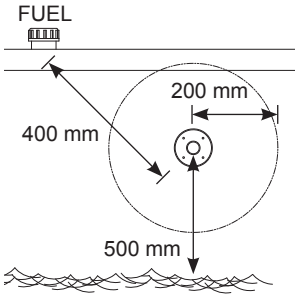
The device consumes most power when it is started up (glowing). At this point voltage losses are also at their highest. During the glowing phase, the voltage must be at least 10.7 V measured at the quick coupling. See picture. If the voltage is lower than this, the device may not start.

Flue gas connections

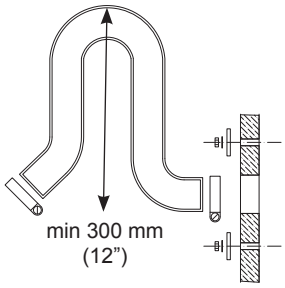
Flue gas lead-throughs

Flue gas lead-throughs **1066** and the closable model **2466** are suitable for this device.
All flue gas lead-throughs are stainless steel. The ø 28 mm lead-throughs fit the flue gas pipe **1028**.

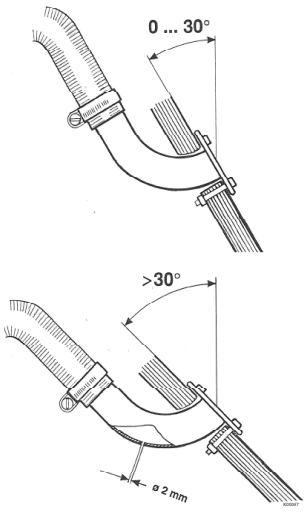
General instructions for flue gas connections



Safety distances



Goose neck



Installation to the stern side

LOCATION
Air must always flow freely past the lead-through. Install the lead-through on a flat surface. Avoid corners or recessions where wind pressure can disturb the functioning of the device.

The minimum distance of the lead-through from the fuel tank's filler hole is 400 mm (16").

The minimum distance of the side lead-through from the surface of the water is 500 mm (20"). Especially in sail boats it should be noted that the lead-through must never be submerged.

It is recommended to place the lead-through in the side as far back as possible or directly in the transom.

INSTALLATION
When preparing the installation cut-out for the lead-through, it is a good idea to use the lead-through as a model for the cut-out; especially if the lead-through is circular. If necessary, seal the installation cut-out with silicone in addition to the lead-through seal. Note! Do not use silicone on a wooden boat.

The side lead-through must always be equipped with a so-called goose neck section.
The goose neck will effectively prevent splash water from getting to the device.
The highest point of the goose neck must always be above the surface of the water.
The device will go out, if the exhaust gas lead through is submerged.

OTHER THINGS TO NOTE
Exhaust gas is hot. Always ensure that there is nothing that is susceptible to heat damage within 200 mm (8") of the effective area of the exhaust gases (e.g. ropes, fenders or the side of another boat).
All lead-throughs raise the temperature of their surroundings. A wooden deck, in particular, may dry due to the heat. Remember that the surface of the lead-through is hot during use.
A exhaust gas tube with a length of more than 2 meters (7') has to be equipped with a drainage lock **602293** (condense water) located to the lowest point of the tube.

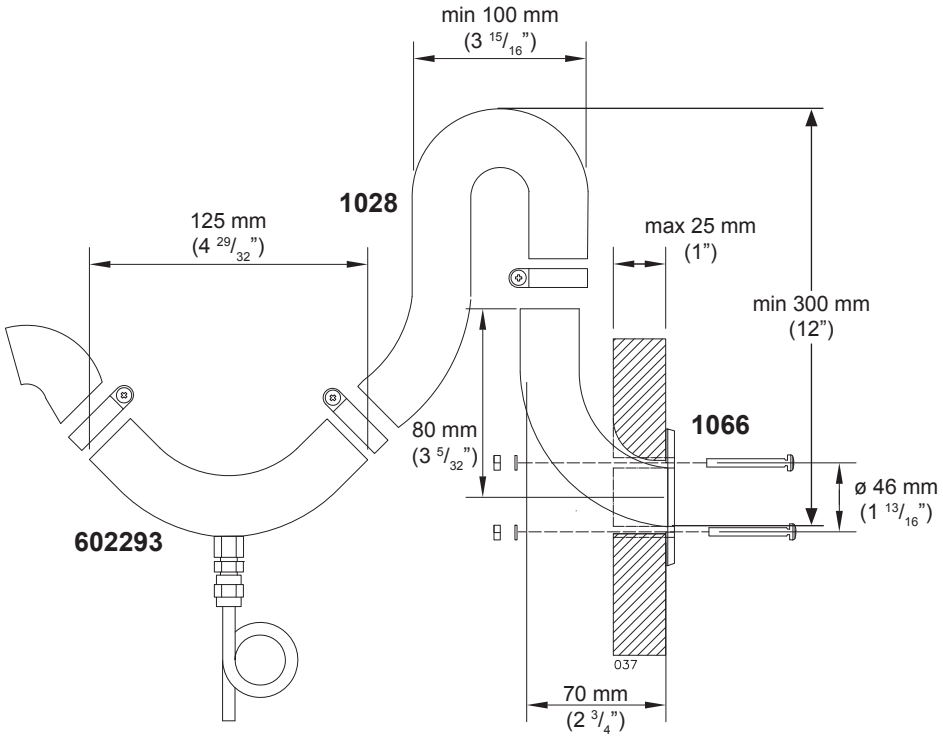
The Exhaust gas pipe must be made of stainless steel.
If necessary, seal the connections between the exhaust gas pipe and the lead-through with heat-resistant silicone.

When installing the lead-through to the stern side or to otherwise leaning position, be sure that the water do not stuck the exhaust. Drill app. 2 mm ($^{3}/_{32}$") hole to the lead-through or to the exhaust pipe.

Specific instructions for individual lead-throughs

Side lead-through 1066

A side lead-through is installed in the side of the boat or in the transom. In sail boats it is recommended to install it in the transom. The installation always requires a so-called swan neck piece.
Make the necessary installation cut-outs and spread a suitable sealing agent on both sides of the seal and on the screw holes. This will ensure that the connection is waterproof.



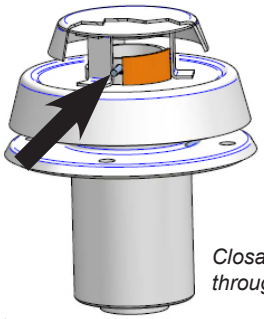
*Side lead-through **1066** installed. The installation cut-out is ø 35 mm and the screw holes are 4 x ø 5 mm.*

The exhaust tube will become extremely hot. Take care that the exhaust tube doesn't touch any materials which are sensitive and secure all lead-throughs. The exhaust tube can be equipped with a special isolation, art. No 1030.

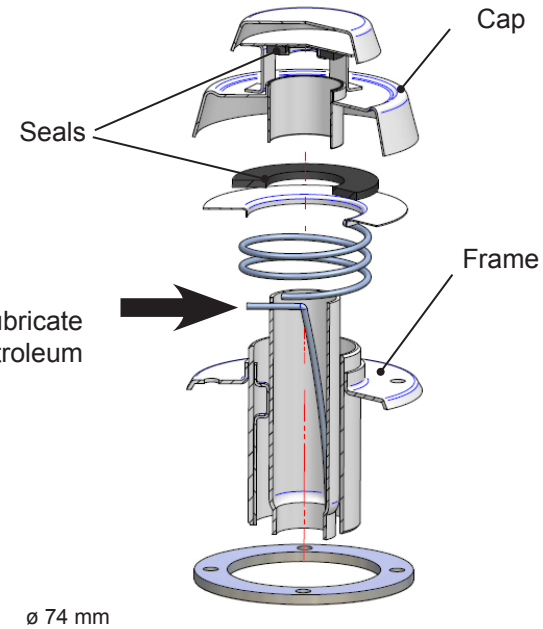
*Side lead-through **1066***

Closable lead-through 2466

The cap of the closable lead-through must be detached for installation and seal maintenance by pressing the spring indicated by the arrow in with, for instance, a screwdriver. Take care not to let the screwdriver slip as the spring is very stiff. Hold the cap with your other hand when pressing in the spring. When the spring is down, pull the cap gently out of the frame. When assembling the lead-through, ensure that the order of the parts is correct. Also make sure that the spring goes in the correct hole in the cap. Otherwise, the lead-through cannot be closed.



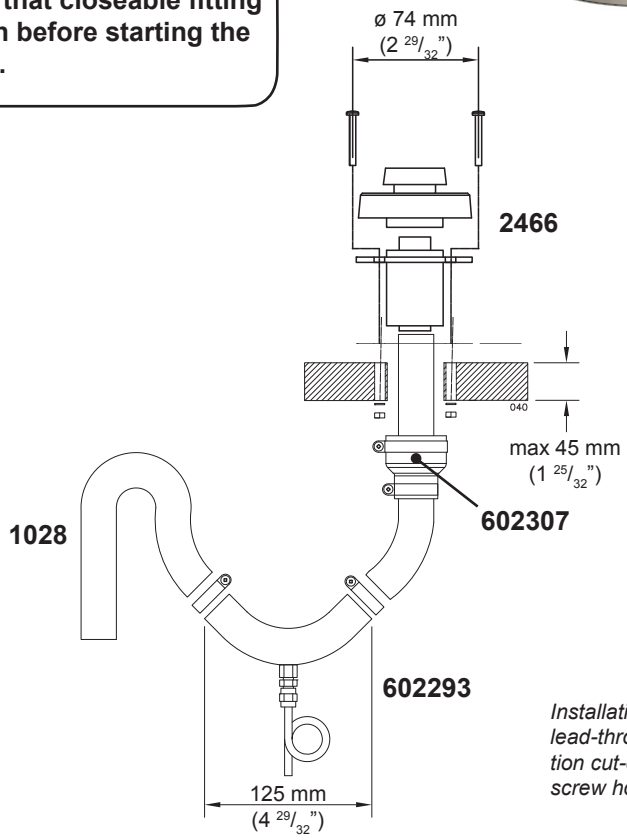
*Closable lead-through **2466***



Maintenance

To keep the seals from hardening, lubricate them yearly with a heat-resistant petroleum jelly.

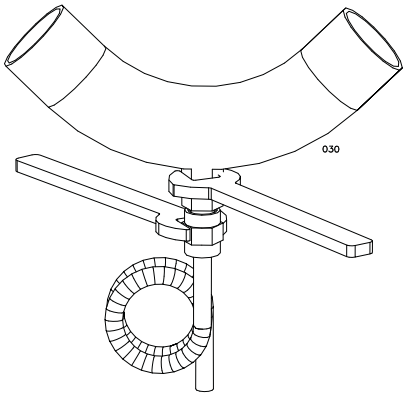
Check that closeable fitting is open before starting the device.



*Installation of the closable deck lead-through **2466**. The installation cut-out is ø 50 mm (2") and the screw holes are 4 x ø 6 mm*

Drainage lock 602293

It is recommended to use drainage lock in deck lead-throughs and in over 2 meter (7') long exhaust gas tubes (ø 28 mm). This is to remove splash water and condense water.
If desired, it is possible to install a drainage lock to the exhaust pipe (ø 28 mm) of a hull lead-through, but then the drainage lock must come after the goose neck.



When washing the boat with a pressure washer, never aim the water jet at the lead-through as the device may get wet.

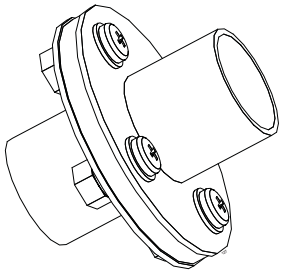
Insulation kits

Insulation kit for a metal-hulled boat

An insulation kit must be used to insulate the lead-through from the boat's metal hull.

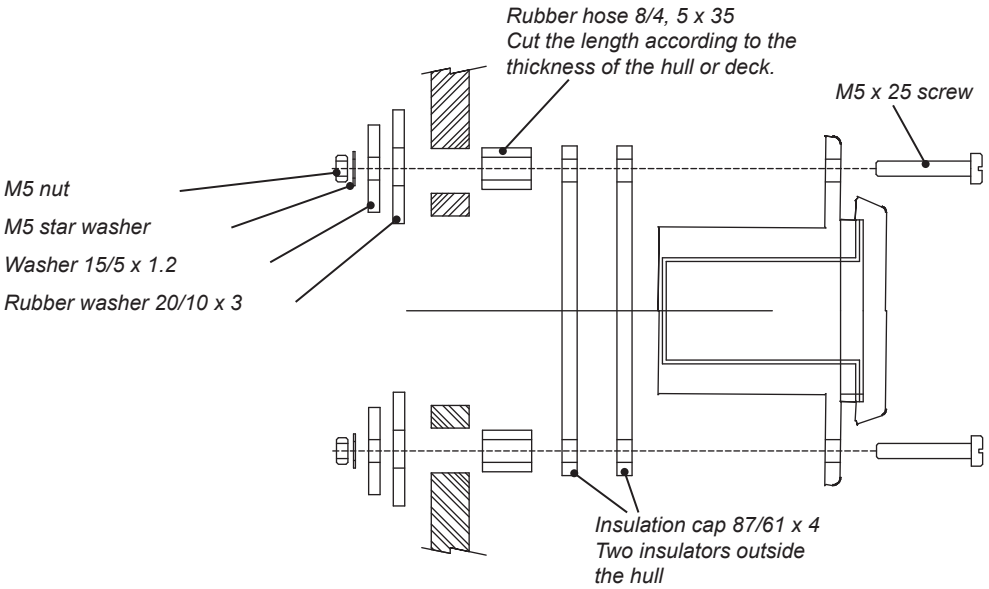
The insulation kit insulates the exhaust gas lead-through and the device from each other.
In fault situations the electric circuit runs between the metal hull and the device. This can result in the oxidation or malfunctioning of the device's circuit board, the circuit board may be damaged.

Insulation kit 602308 for a side lead-through (1066)



The exhaust pipe will be cut and the insulation kit will be fixed with a hose clamp to the ends of the exhaust gas tube.

Insulation kit 2461 for circular coaxial lead-throughs (2466)



Installation and initial start-up

Installation

- ☐ Ensure sufficient air intake, minimum aperture of 100 cm^2.
- ☐ Ensure that the boat is sufficiently ventilated.
- ☐ The exhaust pipe outlet must be at least 400 mm away from the opening for filling fuel or tank breather.
- ☐ We recommend installing the operating switch onto vertical surface where liquids are not able to leak into the switch and it is out of reach of children (cable length 2 m).

Fuel system

- ☐ The hoses must be kept clean during installation.
- ☐ Use only Wallas fuel hoses.
- ☐ Cut the fuel hoses to the appropriate length when installing them.
- ☐ The return fuel tube must have continuos fall to fuel tank with no loops upward. All extra length is cut away below the tank adapter.
- ☐ The end of the return tube must reach the bottom nib.

Electrical installation

- ☐ The nominal voltage of the device is 12 VDC.
- ☐ Current for the device is taken directly from the battery terminals using cables that are as short as possible.
- ☐ Put the main fuse of ca. 15 A on the + cable close to the battery.

Exhaust fumes

- ☐ When choosing the outlet location, note that exhaust fumes are hot.
- ☐ Use a swan-neck to prevent splash water entering the boat from splashing into the outlet.
- ☐ If your boat has a metal hull, the device and outlet must be insulated from the hull to prevent electrochemical corrosion.
- ☐ The exhaust pipe must not come into contact with fire hazardous materials. Insulate the exhaust fume hose, if necessary.

Initial start-up

The device usually does not start the first time after it has been installed. It may take several starts for the fuel hoses to fill up enough for the fuel to reach the burner.

Watch the hoses as they fill up as you start the device.

Watch the hoses fill up with fuel while you start the device.

When the device starts, look for possible leaks in the exhaust and fuel connections.
Run the device for ca. ½ hour to allow possible installation and manufacturing greases to burn off. Make sure there is enough ventilation.

Remember to carefully read the instructions for installing, operating and servicing each device before installation.

To be filled in by the installer

☐ **Test-run performed**

Serial number	
Company	
Installer	
Installation date	
Signed	

Installer must check (x) the sections, then sign her/his signature.

Using the Stove

Ignition

The start-up process and heating is automatic.
The cooker will ignite when the heating switch (3) is pressed continuously for more than 2 seconds. A yellow heating indicator will light, indicating that the heating is on.
A red combustion indicator light (1) will be lit when the burner flame has been ignited and the combustion has stabilised after about five minutes after the ignition. The whole process takes about five minutes; after the ignition phase the unit can be adjusted.

First ignition

After the installation or maintenance the cooker may not start at the first attempt , if the fuel line is empty.

Turn off the cooker. The cooker is shut down by pressing the heating switch (3) continuously for more than 2 seconds. The unit won't start immediately after the shut-down. Wait for about five minutes until the flashing combustion light (5) has gone off before switching the device on.

When the cooling phase is finished, switch the heater on again.

1. *Combustion indicator*
2. *Power control / Temperature adjustment*
3. *Heating switch*
4. *Thermostat indicator (blower lid)*
5. *Thermostat sensor (blower lid)*
6. *Heating indicator*
7. *Power indicator*

Normal Use

The power is adjusted manually. The cooker will always ignite in manual mode.

After the ignition power can be adjusted step-less with the power control (2) knob. Avoid turning the power control knob rapidly back and forth, this may cause the burner to become sooty.

Cooker used as a heater, thermostat use

Requires a heat blower lid (accessory).

Automatic power adjustment, thermostat controlled adjustment.
Is used only with a heat blower lid when the lid is folded over the ceramic top.
The function can be activated/deactivated whenever wanted. Turn the power control knob (2) to positions min-max-min-max when yellow heating indicator (6) is on, to activate the function. As a confirmation of the mode change, the thermostat light (4) will be lit.
When turning again the power control knob (2) min-max-min-max, the thermostat light (4) will go off and the unit returns to manual mode.

1. ~ 5 °C (~ 41 °F)
2. ~ 11 °C (~ 52 °F)
3. ~ 17 °C (~ 63 °F)
4. ~ 23 °C (~ 73 °F)
5. ~ 29 °C (~ 84 °F)
6. ~ 35 °C (~ 95 °F)

After the cooker has passed the ignition phase, the temperature is adjusted by turning the power control knob (2). The power control knob is turned to the required position.
When the thermostat light (4) is bright, the temperature is below the required temperature – the effect is increased. When the thermostat light (4) dims the required temperature is achieved.

The sun-switch shuts down the device automatically, if the temperature rises above the requested temperature, for example, due to sunlight. The temperature must rise by +3 °C above the set value for a half an hour. If the device has been shut down by the sun-switch, an indicator light (4) blinks on the thermostat. The sun-switch can be turned off temporarily, by turning the temperature control (2).
A device that has been shut down can be restarted manually, if necessary.
Conservation temperature: the temperature control (2) is set to minimum ① ,and the room is maintained at a temperature of +2–+8 °C. The sun-switch is not enabled in this mode.

Shutdown

You can shut down the heater by pressing the heating switch (3) continuously for at least 2 seconds. The power indicator light (7) will go out immediately. The red combustion indicator light (1) will continue to blink for about five minutes, while the device is cooling down. You cannot restart the device until the combustion light has stopped blinking.

When adjusting the effect from the regulation knob, the effect adjusts smoothly.

Things to note about the use of the cooking plate

Only use dishes with a smooth bottom so as to not damage the stove top. If you use the cold stove top for other work or chores, be sure to wipe it clean thoroughly after you are done. Even a small crumb, if hard enough, can scratch the surface when a kettle is placed on the stove top. These small scratches, which are to some extent inevitable, will in no way affect the heating power of the stove.
The bottom of the cooking vessel should be slightly concave when cold so that when it expands due to the heat, it will sit evenly on the stove top and the heat energy will be distributed optimally.
The ideal bottom thickness for steel enamel vessels is 2–3 mm and for steel kettles with a sandwich bottom 4–6 mm.

Cleaning and maintaining the stove top

90 t ceramic top

In order to keep the stove top in good condition both aesthetically and performance-wise, it should be cleaned regularly; preferably after each time of use. First scrape of the clearly noticeable dirt and food scraps with a cleaning spatula. Put a few drops of a cleaning agent for ceramic surfaces on the stove top and wipe it with a piece of kitchen paper. Then wipe the stove top with a moist cloth and dry it with another cloth. Do not use abrasive cleaning sponges or agents. Additionally, avoid using chemically strong cleaning agents, such as an oven cleaning spray or stain remover. Calsic stains can removed with acid agents as vinegar or lemon.
Immediately clean off aluminium foil, plastic, sugar or other sugary substances that have melted on the stove top. This prevents the surface from getting damaged. Before cooking particularly sugary foods, the surface should be treated with a protective agent. This prevents possible damage due to the food boiling over.

800 t nitrated steel plate

Steel plates should always be kept clean and dry. Moisture in kettles and pots will gradually rust the plates. A steel plate is nitrated in order to avoid rust. You can also avoid rust by spreading a thin layer of paraffin oil or pork fat and heating the plate for a while.

Observe the general maintenance recommendations for Wallas equipment when servicing the electronic and mechanical parts of the stove.

Never keep the stove on without a kettle or closed blower lid.

When leaving the yacht always check that the cooker has not been left on.

Signal lights

Colour	Blink interval	Function
Yellow		Heating on
Red		Combustion indicator when the combustion has begun normally
Red		Aftercooling

Signal lights when using the heat blower lid

Colour	Blink interval	Function
Orange		Thermostat control, the set temperature exceeds the set value > power is increasing
Orange		Thermostat control, the set temperature is lower than the set value > power is decreasing
Orange		Sun switch has shut down the device

Fault signals

Colour	Blink interval	Fault description
Yellow		Undervoltage
Red		Overheat

If you don’t hear the blowers starting up when you lower the heat blower down, shut down the unit and check/repair the problem.
Note ! The blower motors are controlled by a thermostat, please wait for a while when the heat blower lid is folded down.
Be aware of the hot blower lid.

Maintenance recommendations

Basic maintenance

Maintenance procedure	Maintenance interval	Carried out by
Basic maintenance (change of glow elements, cleaning the burner, adjustment, check of functions)	5 years	Authorised Wallas service shop

Special recommendations

Occasional use of unit will keep the unit functional.

Removal of water from the tank

During the period of use, add isopropyl alcohol-based (not ethyl or methyl based) anti-freeze for petrol vehicles (carburettor spirit) to the fuel. The agent should be added after the tank has been emptied, and refilled, a few times, and always at the beginning and end of an operating season. The anti-freezing agent binds the water in the fuel and prevents the fuel from settling and spoiling during the summer season. For the dosage, observe the recommendations provided by the manufacturer of the agent.

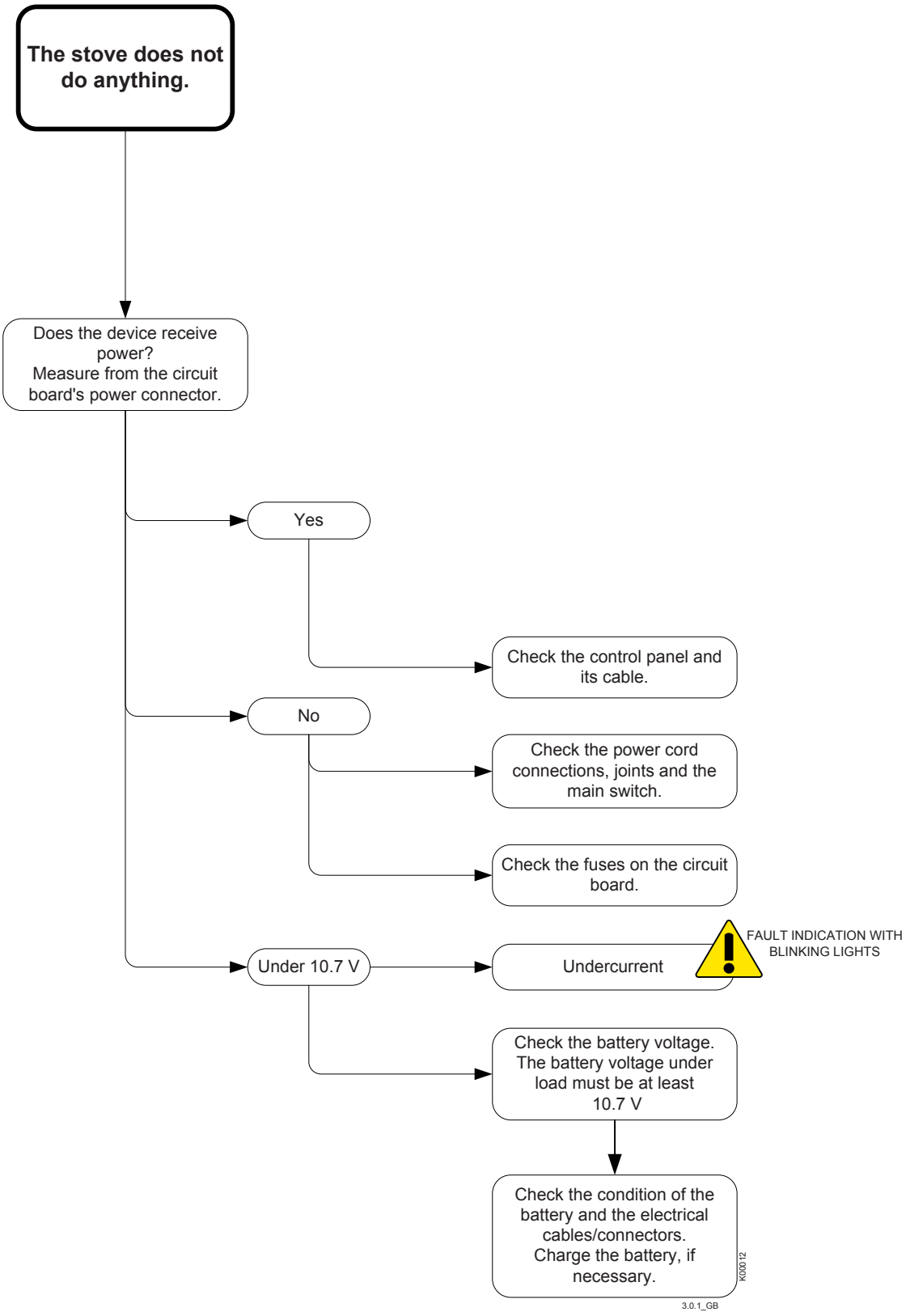
Winter storage

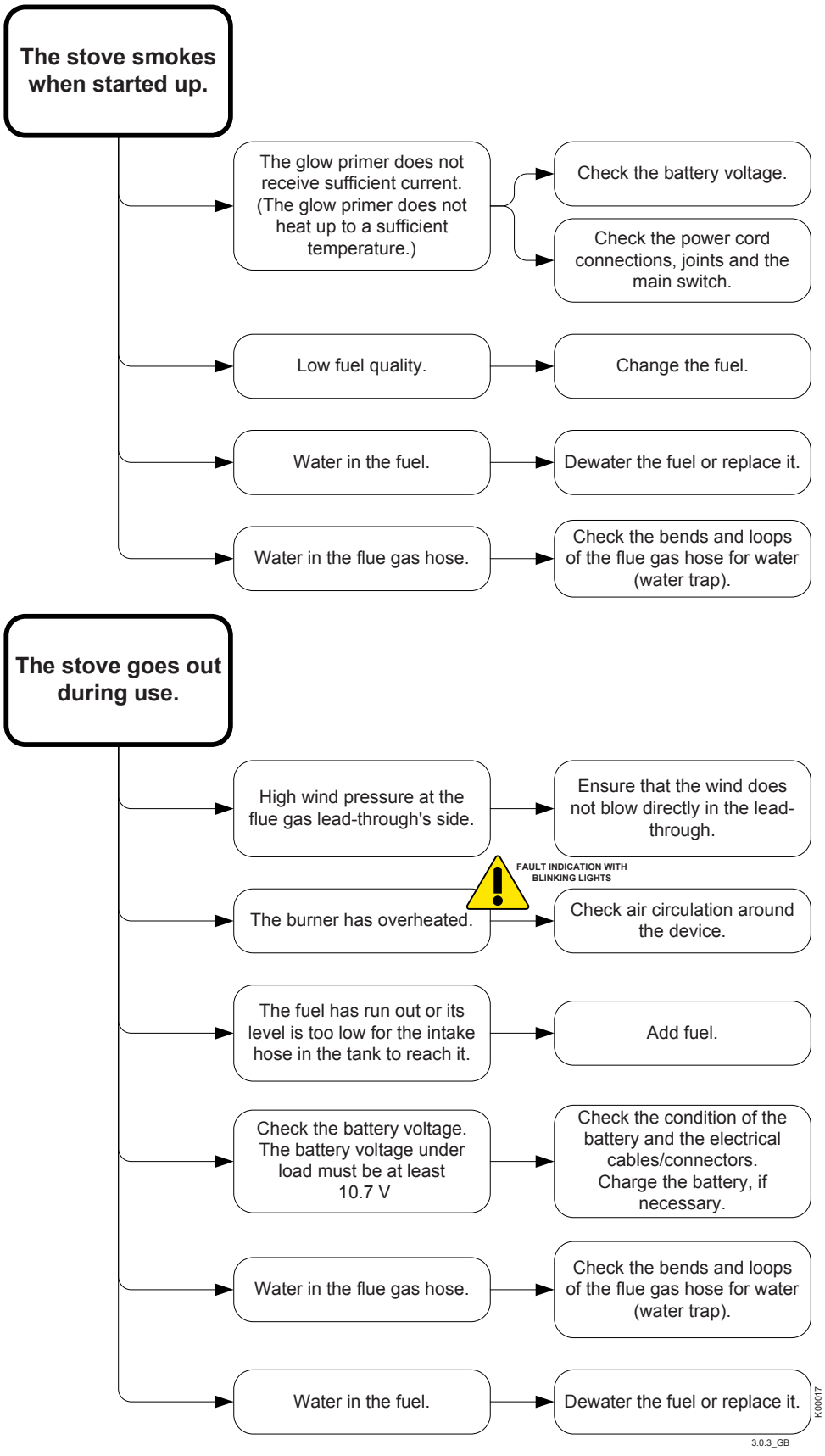
- the fuel tank is emptied in the autumn.
- the fuel tank is cleaned and the fuel tube filter is changed.
- in spring, the fuel tank is filled with new, clean fuel.

The unit doesn’t need any actions.

Spare parts

Spare part catalogue can be downloaded through www.wallas.com


The stove does not do anything.
Does the device receive power? Measure from the circuit board's power connector.
Yes
Check the control panel and its cable.
No
Check the power cord connections, joints and the main switch.
Check the fuses on the circuit board.
Under 10.7 V
Undercurrent
FAULT INDICATION WITH BLINKING LIGHTS
Check the battery voltage. The battery voltage under load must be at least 10.7 V
Check the condition of the battery and the electrical cables/connectors. Charge the battery, if necessary.
K00012
3.0.1_GB


The stove smokes when started up.
The glow primer does not receive sufficient current. (The glow primer does not heat up to a sufficient temperature.)
Check the battery voltage.
Check the power cord connections, joints and the main switch.
Low fuel quality.
Change the fuel.
Water in the fuel.
Dewater the fuel or replace it.
Water in the flue gas hose.
Check the bends and loops of the flue gas hose for water (water trap).
The stove goes out during use.
High wind pressure at the flue gas lead-through's side.
Ensure that the wind does not blow directly in the lead-through.
FAULT INDICATION WITH BLINKING LIGHTS
The burner has overheated.
Check air circulation around the device.
The fuel has run out or its level is too low for the intake hose in the tank to reach it.
Add fuel.
Check the battery voltage. The battery voltage under load must be at least 10.7 V
Check the condition of the battery and the electrical cables/connectors. Charge the battery, if necessary.
Water in the flue gas hose.
Check the bends and loops of the flue gas hose for water (water trap).
Water in the fuel.
Dewater the fuel or replace it.
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Warranty Terms for Recreational Use of Wallas Products

en

Wallas-Marin Oy (the manufacturer) shall be liable for any defects in the raw material or manufacture of the products and items sold by the importer for 24 months from the day of sale on the following conditions.
Warranty can be extended by a further 12 months by registering the product in the website of Wallas-Marin Oy (www.wallas.fi) within three (3) months of the unit being sold to the end customer.

1. In the event of a defect:
   a) Look at the check list on the website or installation / usage manual (www.wallas.fi) to make sure the defect in question is not related to use. A simple problem might not be covered by the warranty ie. water in diesel or unit requires a service.
   b) Notification of the defect must be given in writing immediately, if possible, but no later than two (2) months after the appearance of the defect. After the warranty period ends, a referral back to a notification at the time of the warranty period is not valid unless the notification was made in writing. A valid receipt or another reliable official document of the time of purchase is required for proof of warranty eligibility.
   c) For repairs under warranty, the customer must take the product to the place of purchase (the seller is responsible for handling units with warranty issues), to an authorized repair shop or to Wallas-Marin Oy factory service. Warranty service must be done by authorized Wallas repair personnel. The warranty does not cover costs for the removal and reinstallation of the device or for any damage in transit of a device that has been sent for repair. Warranty does not include any transport costs. (Wallas is a return to base warranty).
   d) The customer must provide the following information in writing for warranty service:
      - Description of the problem.
      - A description of where and how the device was installed (photographs of the installation may help)
      - Product type and serial number, place and date of purchase

2. This warranty is not valid in the following cases when:
   - failure occurs as a result of components, which are not approved by the manufacturer, have been added to the device, and/or, it's structure has been modified without the consent of the manufacturer.
   - the instructions for installation, operation or maintenance have not been followed.
   - storage or transport has been inappropriate.
   - a problem has resulted from an accident or damage, which Wallas has had no control over (force majeure).
   - problems arise from normal wear and tear. Wearing parts include: glow coil/plug, combustion / blower motors (warranty limit 2000 running hours), bottom matt, fuel needle, fuel pump and fuel filter, seals
   - the product has suffered from improper handling, unsuitable fuel, low voltage, excess voltage, damage due to dirt, water penetrating in to the unit or corrosion
   - the device has been opened without the explicit permission of the factory/importer
   - components, other than original Wallas spare parts or components, have been used in the repair of the device.
   - repair by unauthorized service company

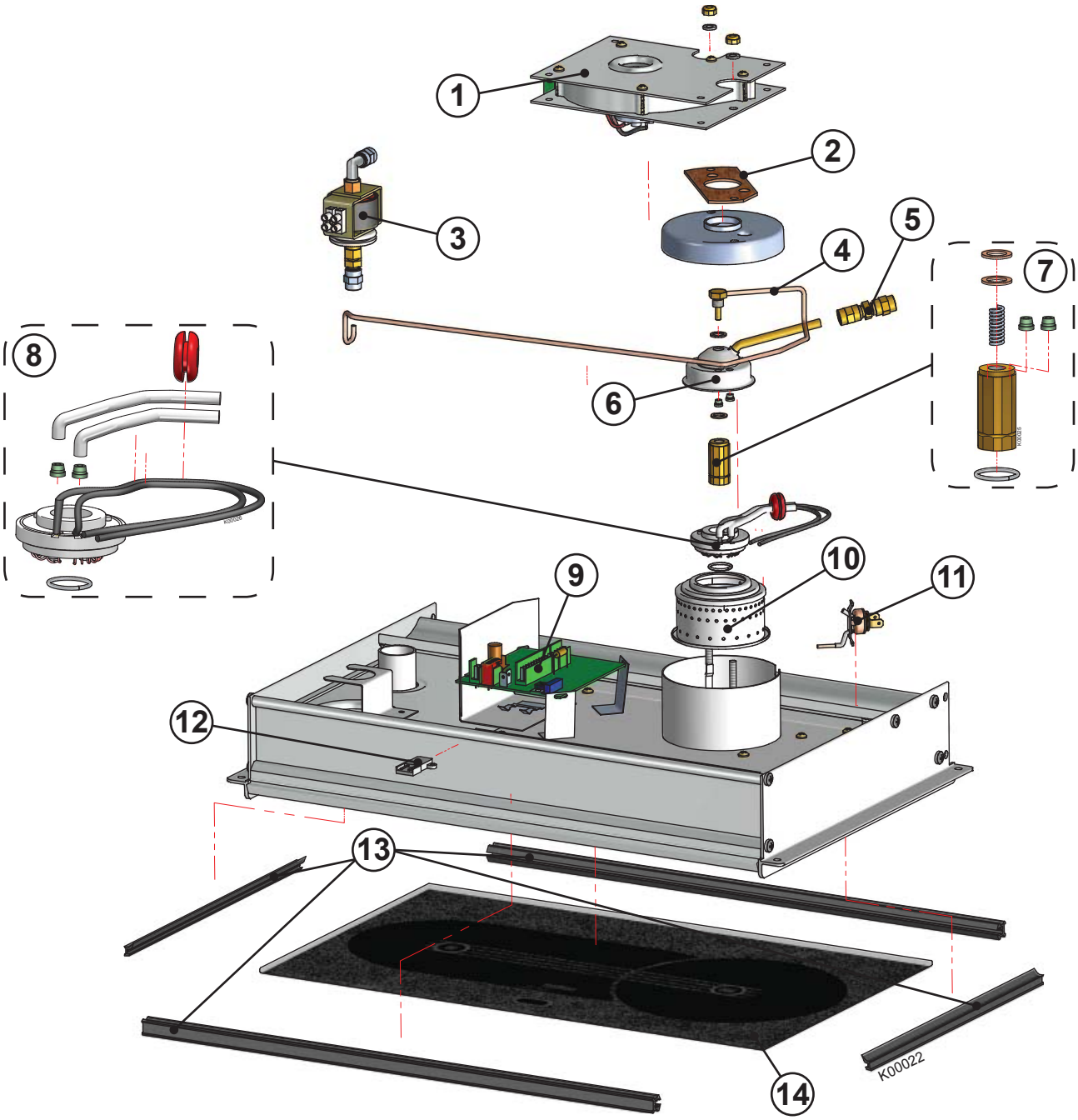
3. Repairs carried out during the warranty period do not renew or alter the original warranty period.

4. Indirect damages arising from a defective product are not covered by this warranty.

5. This warranty is only valid for boat products that have been installed in boats and for cottage products that have been installed in cottages. The warranty does not cover Wallas products installed in vehicles or other areas.

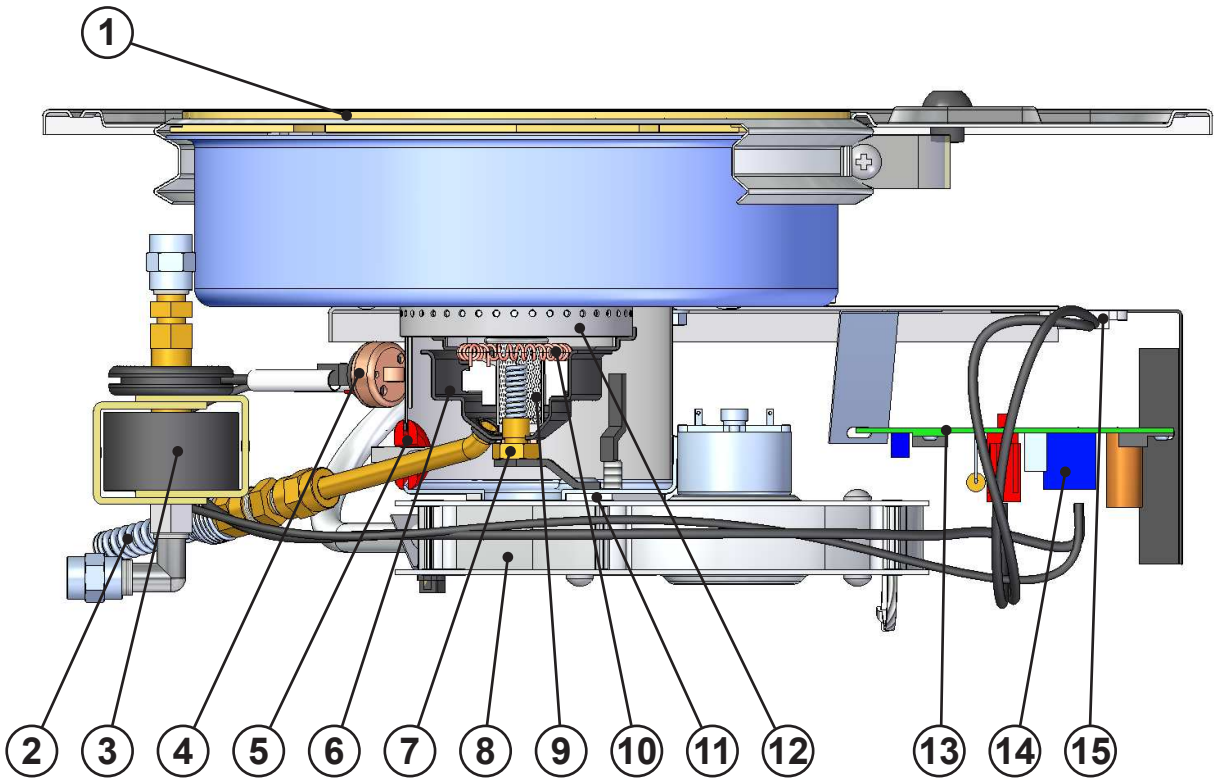
6. This warranty does not limit rights specified in consumer protection legislation.

When making a warranty claim, the customer must provide proof that the maintenance and safety instructions have been thoroughly followed.
This warranty does not apply to defects which have arisen due to carelessness in following installation, operation and maintenance instructions.



		spare part no
1	COMBUSTION BLOWER	**365310**
3	FUEL PUMP, FC 1	**367501**
5	EXTENSION CONNECTOR, 6 MM	**367107**
7	FUEL VAPORIZER	**367003**
9	CONTROL UNIT	**361017**
11	AFTERCOOLING THERMOSTAT 80 °C	**362401**
13	GASKET SET FOR CERAMIC PLATES	**364026**

		spare part no
2	CORK GASKET PLATE	**364004**
4	FUEL FEED. PIPE	**367315**
6	BURNER BOTTOM POT	**369021**
8	GLOW PRIMER	**362503**
10	BURNER CYLINDER	**369019**
12	OVERHEAT THERMOSTAT 120 °C	**362406**
14	CERAMIC PLATE (255 x 435)	**368602**



		spare part no
1	HOTPLATE	**368606**
3	FUEL PUMP, FC1	**367501**
5	RUBBER BUSHING	**364107**
7	FUEL FEED. PIPE / CONNECTOR	**367316**
9	FUEL VAPORIZER	**367003**
11	CORK GASKET PLATE	**364004**
13	CONTROL UNIT	**361017**
15	OVERHEAT THERMOSTAT	**362406**

		spare part no
2	SHIELD SPIRAL	**367002**
4	AFTERCOOLING THERMOSTAT	**362401**
6	BURNER BOTTOM POT	**369021**
8	COMBUSTION BLOWER	**365311**
10	GLOW PRIMER	**362503**
12	BURNER CYLINDER	**369019**
14	RELAY, GLOW	**362804**
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