
OPERATING INSTRUCTIONS

BIOLOGICAL PARTS WASHER



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1 INFORMATION

We thank you for acquiring this biological, solvent-free part washer. The parts washer unit combines the action of a neutral pH water-based cleaning solution with tablets of special micro-organisms that biodegrade hydrocarbons and regenerate the cleaning bath.

1.1 GENERAL INFORMATION

For assistance, please contact your commercial agent and with every request specify the serial number glued to the back of the machine

	FS06	SUNSET
SERIAL NO.		
		VAC 115
Conforms to : UL STD 1204 Certified to : CSA STD C22.2 No. 68	AMPS.- FULL LOAD CURRENT	9
	WATTS	1050 HZ. 60 PH. 1

1.2 HANDLING / TRANSPORTING / MOVING THE PARTS WASHER

- For moving or transporting the parts washer, drain it into empty cleaning solution cans (See procedure §5).
- Place the parts washer vertically on a palette (The parts washer should never be transported lying flat).
- Protect the parts washer with an appropriate packaging.
- Film the palette to prevent it from tipping over during transport.

1.3 WARNING

PLEASE READ THIS INSTRUCTION MANUAL CAREFULLY AND COMPLETELY TO ENSURE THAT YOUR NEW BIG CLEAN 100L WILL OPERATE AT ITS MAXIMUM EFFECTIVENESS



WARNING

- 1- The parts washer must ONLY be connected to a 120 Volt supply with a grounded terminal and grounded fault interrupter according to local and national electrical code requirements. The full-load amperage is 9 amperes
- 2- Failure to permanently ground the unit and controls before connecting to electrical power can cause shock, burns or death
- 3- Disconnect and lockout electrical supply before installing or servicing unit.
- 4- Unit must be properly grounded to prevent electric shock hazard. Connect only to three-prong outlet. Should cord become cracked, frayed or damaged in any way, it should be repaired/replaced immediately by a qualified electrician. Never use an extension cord.
- 5- Do not pour any pollutants (solvent, oil, grease, engine oil, diesel fuel or gasoline) directly into the parts washer. Drain parts to be cleaned of any flammable material or combustible material before cleaning. Even small quantities can create a dangerous fire hazard.
- 6- Never add or pour in any products such as solvents, disinfectants, alcohols, halogenated agents,

flammable products, acid, bases, boiling water, esters or toxic products. Pouring these products into the parts washer may damage components and can be dangerous to your health.

- 7- Consult the MSDS for the cleaning solution you are using before filling or using parts washer.
- 8- Always wear the recommended safety gloves and glasses.
- 9- If splashed in the eyes, follow cleaning solution MSDS instructions
- 10- Clean up fluid spills immediately. Cleaning solutions can create a slippery surface and could damage floor coverings or painted surfaces.
- 11- A spill of product on the ground can create a slippery surface. Clean immediately to avoid falls
- 12- Provide adequate ventilation for the machine and work area. This machine can clean materials and chemicals from parts that may contain harmful vapors.
- 13- This is a heated system. Always use caution when first putting hand under liquid stream to prevent injury from heated solution. If the liquid feels uncomfortably hot, discontinue.



CAUTION

- 1- Do not exceed the maximum weight capacity of this machine as defined in the user guide. Do not place parts on the cover. It is not designed to support heavy load
- 2- Do not modify any elements on the parts washer. It has been designed for use with our cleaning solution and our micro-organism tablets.
- 3- Leave the parts washer switched on to maintain the oxygenation and temperature levels required for the hydrocarbon-degrading micro-organisms to develop satisfactorily.
- 4- Low level detection: The parts washer is equipped with an automatic low-level control system. It runs with a liquid level of between 12 and 21 gal, when the level drops below 12 gal, the pump and heater stop automatically. In this case, the level must be topped up with 5 gal can or two 5 gal cans of our ready-to-use degreasing solution and micro-organism tablets.

- 5- When the parts washer is switched on, following a power cut, it will go automatically into safety mode. Press the heating button for the unit to be fully operational.
- 6- Do not dismantle the pump or any other components without disconnecting the parts washer and leaving the liquid a sufficient time to cool down.
- 7- Limit soaking time for all sensitive metals. Never leave a part to soak over-night.
- 8- Use BIG CLEAN 100L only as described in this manual. Use only attachments and parts recommended by MUC OFF
- 9- Unplug equipment from electrical outlet when not in use for an extended period of time. Never use the cord to pull from the outlet. Grasp plug and pull to disconnect.
- 10- Wash your hand after cleaning.

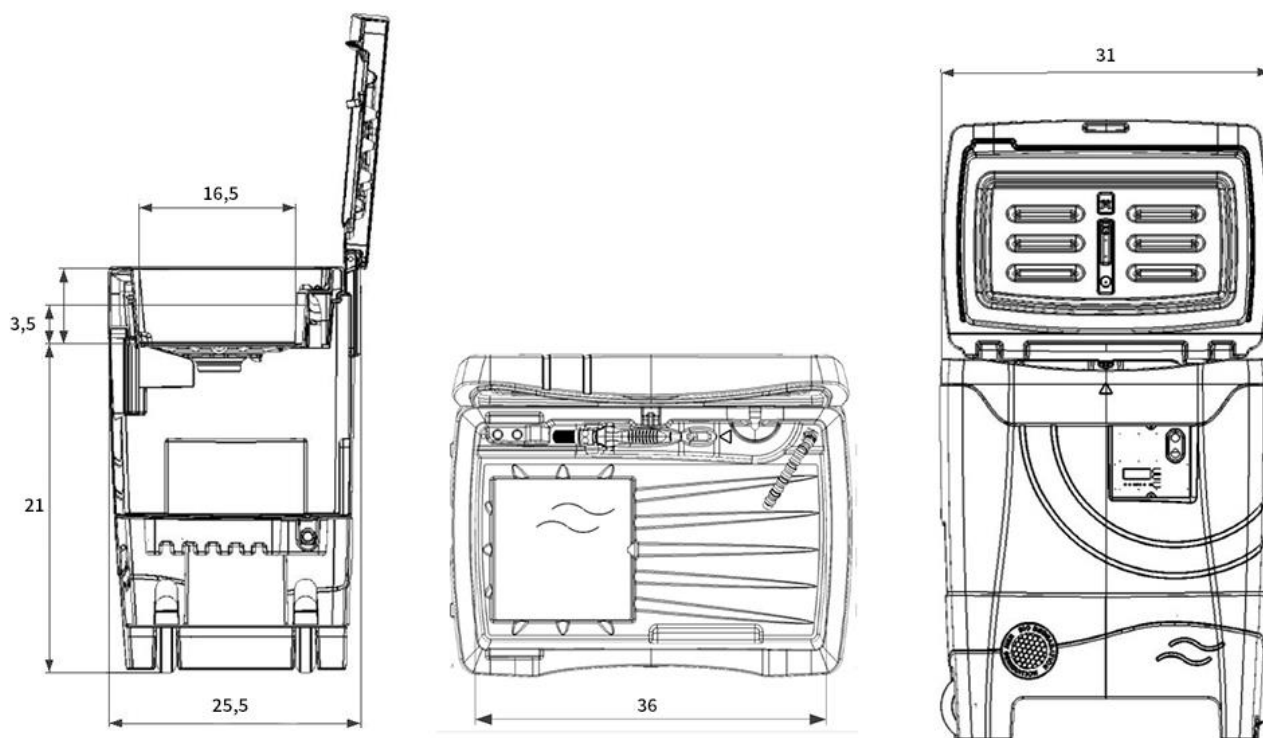
1.4 FEATURES

Maximum power	1050 watts.
Noise level	< 50 dBa.
Weight when empty (without cleaning solution)	88 lb
Payload	220 lb
Tank material	Medium density polyethylene (MDPE)
Power supply	115 V – 1.05 kW
Nominal operating temperature	100°F (38°C) Boost Mode: 109°F (43°C): +50% for cleaning performance
Overall dimensions	L 36" x I 26" x H 44"
Usable cleaning tank dimensions	L 31" x I 16" x H 7"
Filtration	26 mesh (basket filter) + 100 mesh (external filter)
Tank Capacity	26 gal
Soaking area Capacity	8 gal / Soaking Height : 3.5"
Minimum level without soaking	15 gal in the tank.
Minimum level with soaking	23.5 gal (12 gal in the tank + 8 gal in the soak-tank + 0.5 gal of product in the piping).
Tool-holder flow (brush alone)	1 gal / mn (with clean filter)

ELECTRICITY CONSUMPTION *

*MEASUREMENTS MADE OVER 24 HOURS WITH THE BATH AT 100°F AND CONTAINING 16 GAL OF PRODUCT

At an ambient temperature of 65 °F (18°C)	Consumption is 250 w/h with 16 gal of product.
At an ambient temperature of 73 °F (23°C)	Consumption is 200 w/h with 16 gal of product.
With 12 h in ECO mode	Consumption is reduced by 25 % over 24h.



2 PREPARING THE PARTS WASHER

2.1 PREPARATION & INSPECTION

- Remove the two sets from the two cardboards:
 - Set 1: Basis of the parts washer
 - Set 2: Tank, lid and sink.
- Double check that the parts washer has not suffered from any damage during transport and installation.

2.2 PUTTING ELEMENTS INTO POSITION

1. Assemble the tank, lid and sink on the basis.
2. Open the lid and unpack the pump that is on the tank.
3. Take off the pump, the soak tank cover (waves engraved), the soak tray bung and the SS basket filter.
4. Remove the sink unclipping the black hose under the sink and removing the brush hose from its indentation.



5. Make sure the electric kit is fitted in the adapted slide / compartment.



6. Deposit the pump on the bottom of the tank, in the appropriate place (between the 4 cones) and connect its electric cord to the kit (see *appendix 3*).

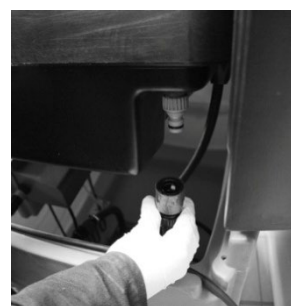
7. Connect the pump to the filter with the quick connector.



8. Place the electric kit hose in the adapted groove.



9. Position the sink to its standard position. Beforehand, re-clip the black hose under the sink and replace the brush hose in its indentation.



10. Place back the SS basket filter, the soak tray bung (indexes should be positioned with ribs to the top) and the soak tank cover (waves engraved).

2.3 FILLING THE PARTS WASHER

- 1- Empty the cans into the tank.

CAUTION

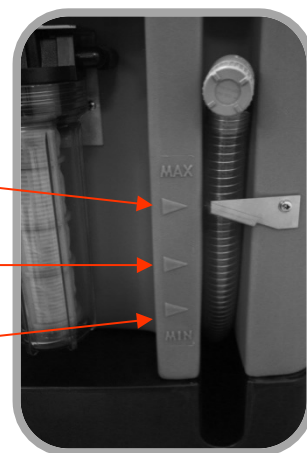
Do not throw the empty cans away. They may be useful for recovering the cleaning solution if ever the unit needs to be drained.



26 gal

21 gal

16 gal

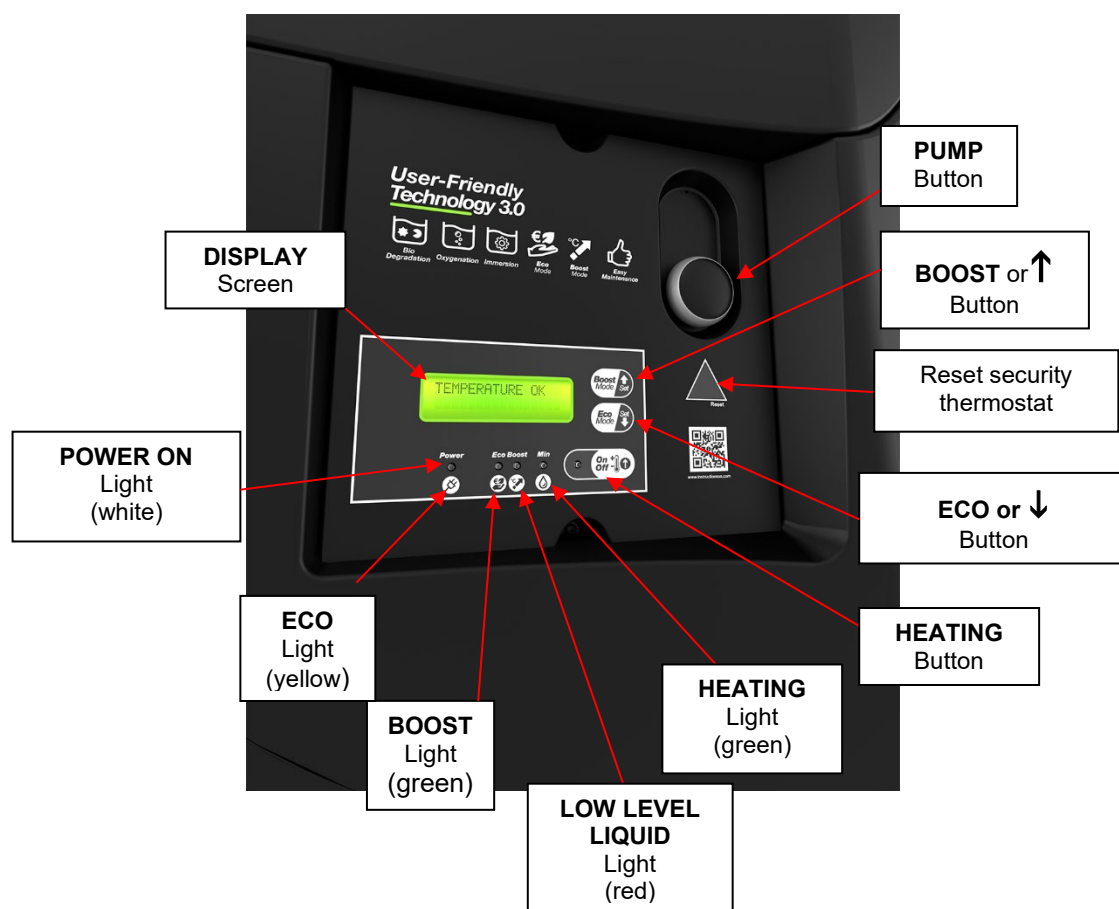


- 2- Insert a micro-organism tablet into the rectangular opening provided for the purpose.



- 3- Note the date on the servicing datasheet.

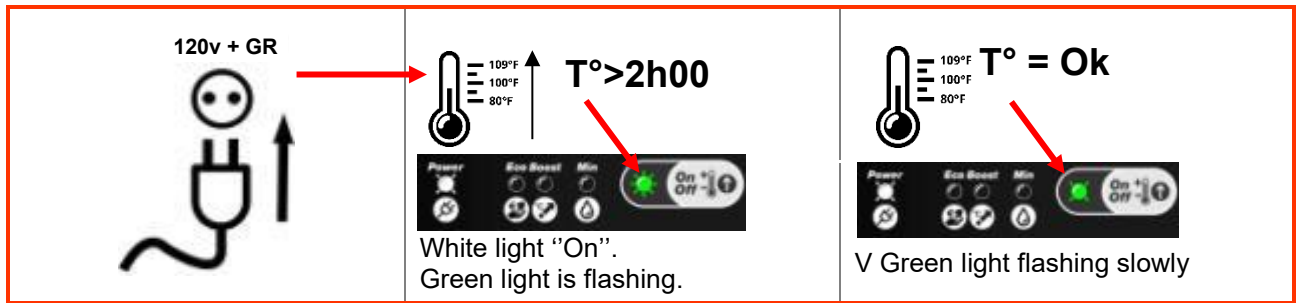
3 CONTROL BOX



4 START-UP

4.1 SWITCHING ON:

After the parts washer has been filled with cleaning solution, switch on the Parts Washer. Then, push the **HEATING** button until the operating temperature has been reached.



4.2 USING THE PARTS WASHER:

Press the pump control button, then clean your parts with the tool-holder and brush.



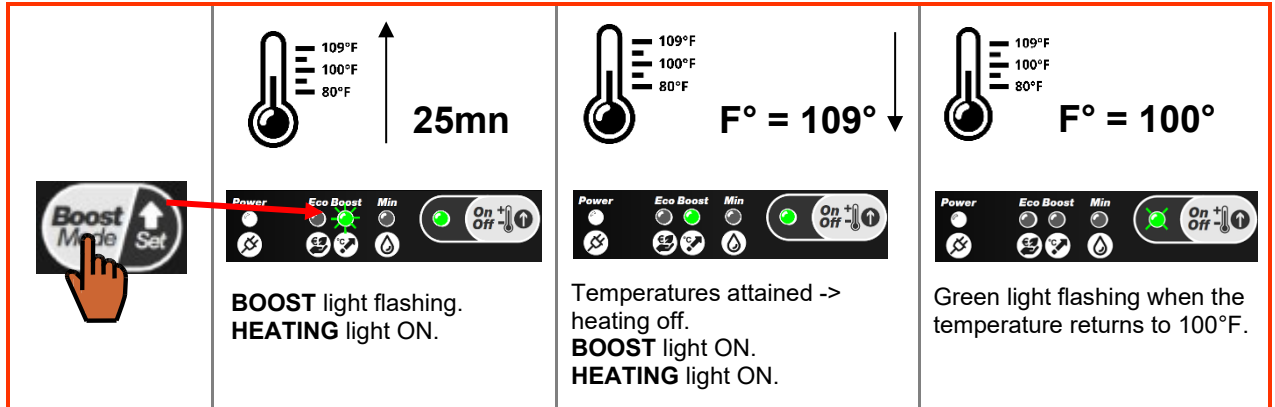
A clip is provided to make it easier to guide the tool-holder hose.

CAUTION

This clip is not designed for attaching the tool-holder !

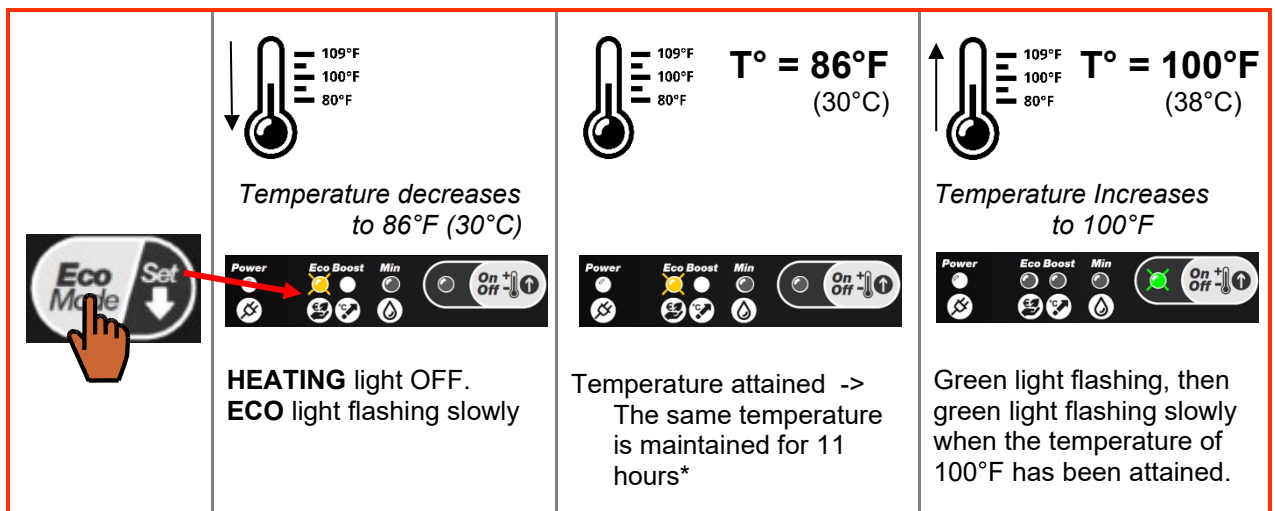
4.3 BOOST MODE (temporary temperature increase of 41°F)

The higher temperature is to be used when severely fouled parts need to be cleaned.



4.4 ECO MODE (TEMPORARY REDUCTION IN TEMPERATURE DOWN TO 86°F)

ECO mode enables the temperature of the bath to be reduced for **reducing electricity** consumption for 11 h* Beyond this time, the temperature will return to its normal operating level.



* time adjustable – see paragraph 7.2

4.5 SOAKING

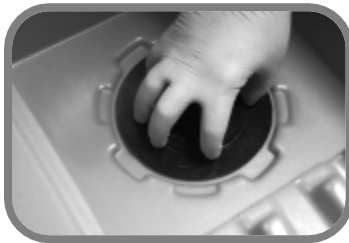
PRECAUTIONS



- Carry out tests for validating the cleaning protocol (compatibility of materials, soaking time, etc.), especially for sensitive metals such as zinc, brass and aluminium alloys (including those containing silicon).
- *Never leave a part to soak over-night.*
- *Limit soaking time to a minimum.*

SOAKING OPERATION:

- 1- Close the soak-tank with the black cap



- 2- Put the part in the tank.
- 3- Press on pump button to fill the tank and leave it in operation so that the solution is maintained at the right level for soaking.
- 4- Open the tap of the semi-rigid hose.

CAUTION



- Check that there is no residue (chips, sand, etc.) in the area where the plug is to be placed. Clean with the brush if necessary.
- Make sure that there is nothing blocking the overflow opening.

5 TANK

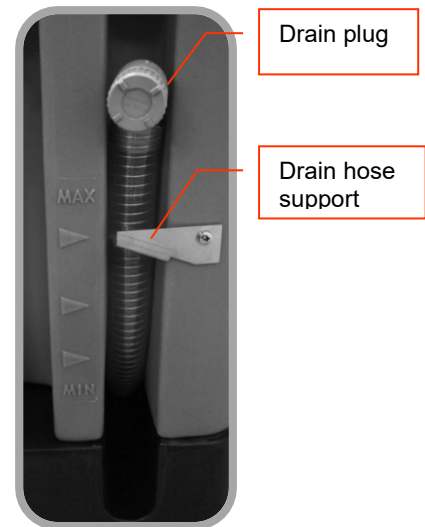
LIQUID LEVELS:

Level-checking: Unscrew the drain plug to let air enter the top of the hose.

- 26 gal: Top filling level (upper arrow).
- 21 gal: filling level (middle arrow).
- 15 gal: Low-level detection level (lower arrow).

CAUTION

There must be 21 gal of liquid in the machine for using the soak function and remaining above the minimum level.



DRAINING:

- 1- Lift the parts washer up (on a pallet, pallet-jack, ...).
- 2- Undo the drain hose support element at the back of the parts washer.
- 3- Put an empty can in position ready for use.
- 4- Remove the plug on the hose and pour the used product into the can(s).
- 5- The product must be recycled as per regulations in force.
- 6- Clean the tank if necessary.

6 MEMO

- Nominal operating temperature: Operating temperature at 100°F +/- 2°F (38°C +/-10°C)
- BOOST temperature: Nominal temperature + 9°F, limited to 113°F (+5°C* limited to 45°C).
- ECO temperature: 86°F (30°C).

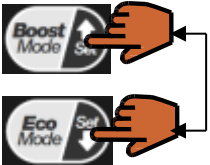
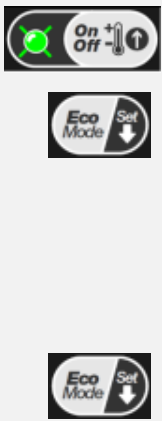
L I G H T S	H E A T I N G		When the green light is OFF, the heating is off.
			When the green light flashes at normal speed, the bath is being heated.
			When the green light is on and flashes at long intervals (ON for 0.1 s, OFF for 2.5 s) this indicates that the bath is being maintained at nominal temperature.
	L E V E L S		When the red light is OFF, there is enough liquid in the system.
			When the red light is ON, the liquid level is low. → Extra product must be added.
	B O O S T		When the green BOOST light is flashing, the temperature is rising above its normal operating level.
			When the green BOOST light is ON and steady and the HEATING light is also ON and steady, the BOOST temperature has been reached and the temperature of the bath is higher than its normal operating temperature..
	E C O		When the orange light flashes slowly, the parts washer is in ECO mode.

B U T T O N S	B O O S T		- BOOST ON/OFF (decreases HEATING temperature by 9°F (5°C)* above the nominal operating temperature). - Increases the value of the parameter (parameter setting mode)
	E C O		- ECO ON/OFF (Decrease the temperature to 86°F – 30°C). - Reduces the value of the parameter (parameter setting mode)
	H E A T I N G		- HEATING ON/OFF - Validates the parameter - Safeguards the parameter - Exits the parameter-setting mode (Press for over 2seconds)

* temperature adjustable – see paragraph 7.2

7 VIEWING & MODIFYING PARAMETERS.

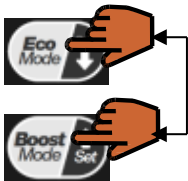
7.1 PARAMETER-VIEWING MODE

	Control		Message on display screen
E N T R Y		To enter the parameter-viewing mode, press sharply on the 2 BOOST and ECO buttons at the same time. The bath temperature and the length of operation in ECO mode will be displayed.	V4.5 xx °C ECO TIME 18H
E V E N T S		The "EVENTS" message will appear by pressing the ON/OFF button Press the  button for viewing the events that have been memorized. → If no events have occurred over the last 48 hours, a "No error" message will be displayed. → If an event has occurred over the last 48 hours, the first event will be displayed. - By pressing the  button a second time, the time since the event will be displayed. - By pressing the  button a third time, the next event will be displayed.	V4.5 xx°C EVENTS V4.5 xx°C No error V4.5 xx°C ADD PRODUCT V4.5 xx°C 01:35:20
L A N G U A G E S		Press the °ON/OFF button for viewing the language.	V4.5 xx°C ITALIAN
E X I T	 2 sec	Press the °ON/OFF button for 2 seconds to exit the viewing mode. → If no buttons are pressed the unit will return to normal mode after 10 s.	

7.2 PARAMETERS MODIFICATIONS

CAUTION

Before entering the parameter-setting mode, HEATING must be switched off (HEATING light OFF).

	Control		Message on display screen
E N T R Y	 2.5 seconds	To enter the parameter-setting mode: Press for 2.5s on the BOOST and ECO buttons at the same time. → The bath temperature and the time of operation in ECO mode will be displayed. → "MODIF" will be displayed as long as the parameter-setting mode is activated.	V4.5 MODIF xx°C ECO TIME 11H
E C O		Modifying ECO time: Press button  or button  for modifying the length of ECO time. If no change is required, press the ON/OFF button.	V4.5 MODIF xx°C ECO TIME 14H
		The parameter for the ECO mode TIME is safeguarded and the EVENT message is displayed by pressing the ON/OFF button. (→ Press the ON/OFF button for 2s to exit the parameter-setting mode).	
E V E N T S	 	Event-viewing: <i>Use identical to the EVENT section in § 7.1</i> The language parameter is displayed by pressing the "ON/OFF" button. (→ Press the ON/OFF button for 2s to exit the parameter-setting mode).	V4.5 MODIF xx°C EVENTS
L A N G U A G E S		Changing languages: The different languages are displayed by pressing the  or  buttons. The "language" parameter is safeguarded by pressing the ON/OFF button. The "ECO TIME" message will be displayed	V4.5 MODIF xx°C ITALIAN V4.5 MODIF xx°C ECO TIME 14H
E X I T		Press the ON/OFF button for 2s to exit the parameter-setting mode. → If no buttons are pressed the unit will return to normal mode after 15 s.	V4.5 xx°C ADD PRODUCT

8 MAINTENANCE

8.1 REGULAR SERVICING

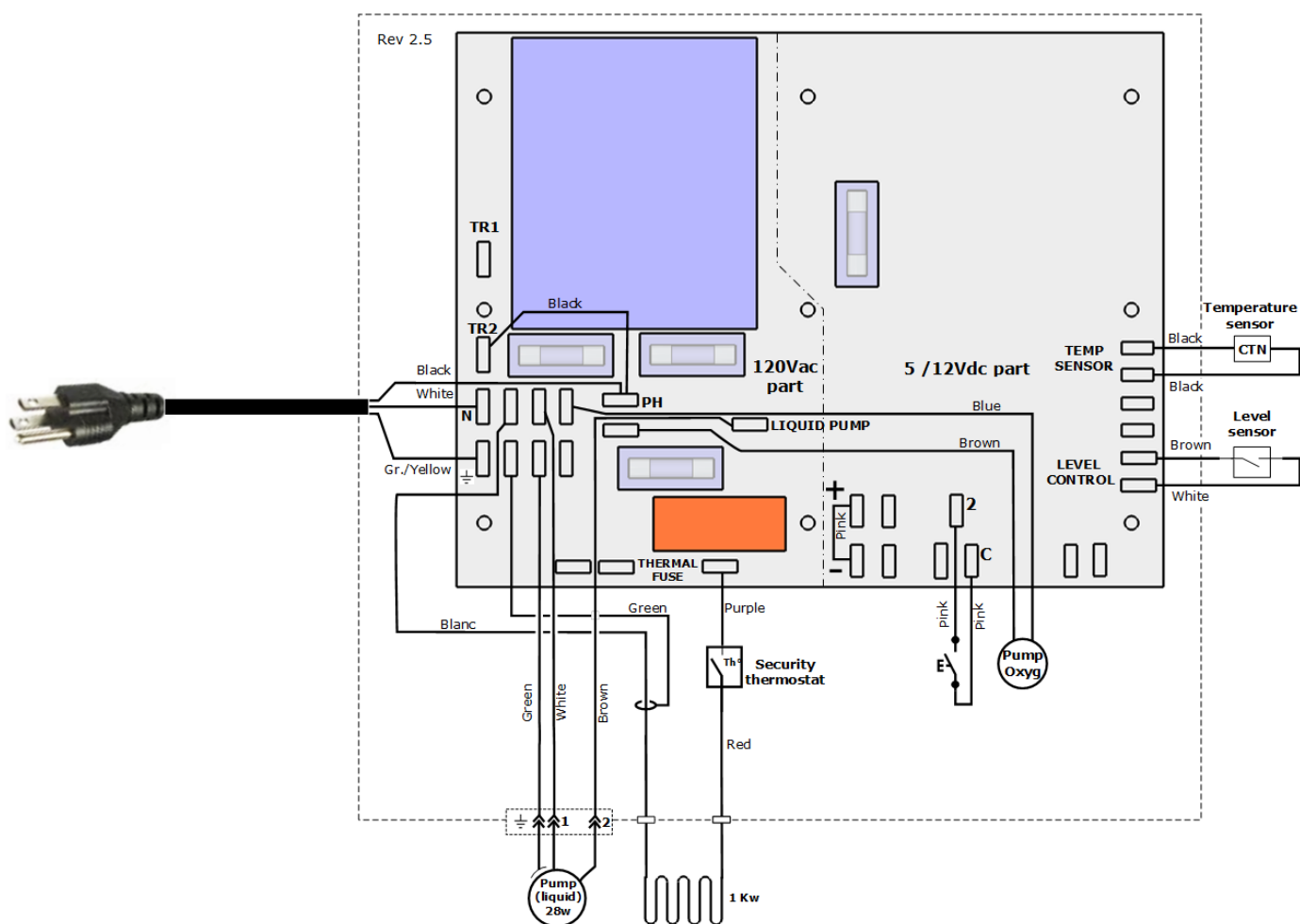
- Clean the filters whenever they are clogged so as to make sure that the product flows into the tank correctly. Filter is located at the right of the parts washer.
- Add micro-organism tablets as per the schedule on the servicing datasheet supplied with the machine.

CAUTION

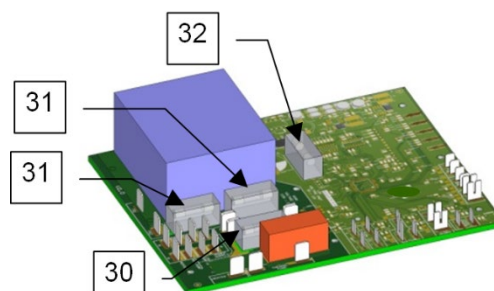
Unplug the power supply for all maintenance actions on this machine: draining, cleaning the pump, intervention on the electrical box....

8.2 ELECTRICAL DIAGRAM

Electrical connections inside the control box

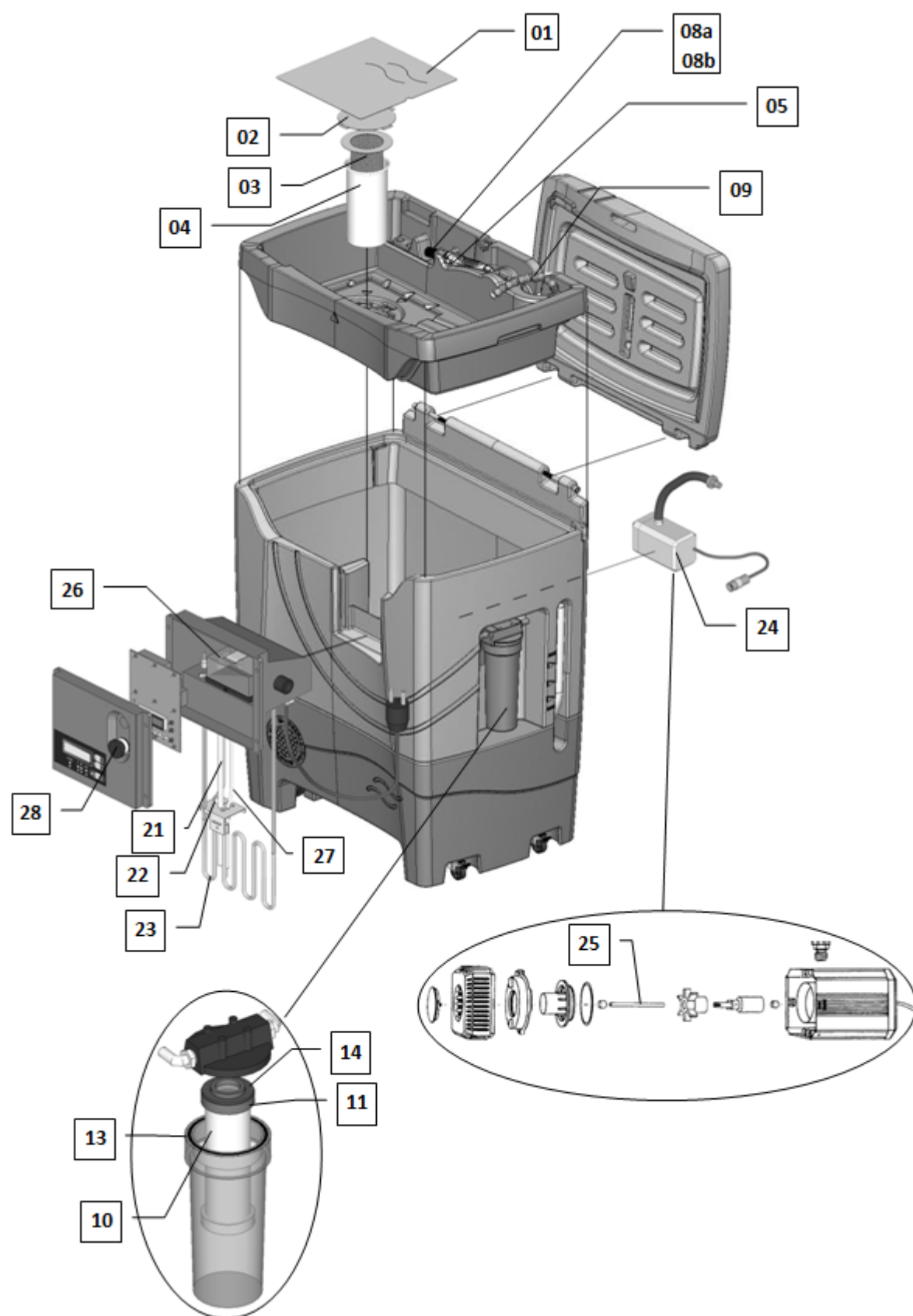


30	4A Fuse – Fast Type
31	250mA Fuse – T Type
32	2A Fuse – F Type



$$30+31+32 = 29$$

8.3 EXPLODED VIEW



8.4 SPARE PARTS LIST

01	Soak tank cover	CSEQFOFC 065-001
02	Soak tray stopper	CSEQFO 000349
03	Basket filter 700µ	CSEQFO 000289
04	Sock filter 50µ	CSEQFO 000125
05	Tool holder set FS06	CSEQFO 000111-4
06	Connector Quick JB	CSEQFO 000103
08a	Screwable brush - Hard Brush FO 5/10e°	CSEQFO 000102-4
08b	Screwable brush - Soft Brush FO 4/10e° (option)	CSEQFO 000102-3
09	LOC-LINE Option (Semi-rigid Hose)	CSEQFO 000437
10	Reusable nylon filter 100µ	CSEQFO 000434
11	Nylon net armour	CSEQFO 000433
12	Removal key for filter	CSEQFO 000537
13	O-ring for filter tank	CSEQFO 000596
15	Strainer for pump 1200 L/h	CSEQFO 000646

20	FS06 Electric Kit without pump 120V - UL	
21	Temperature sensor	CSEQFO 000590-1
22	FS00 Level detector	CSEQFO 000529
23	FS06 Resistance 120V - UL	CSEQFO 000384-2
24	Circulation pump with pipe 120V-UL	CSEQFO 000190-4
25	Pump axel	CSEQFO 000345
26	Air pump – 120V - UL	CSEQFO 000303
27	Air-pump hose	CSEQFO 000282
28	Push button	CSEQFO 000589
29	Fuses kit (250mA T, 2A F, 4A F)	CSEQFO 000011
30	Fuse (4A F)	
31	Fuse (250mA T)	
32	Fuse (2A F)	

8.5 WARRANTY

All parts on the parts washer are guaranteed for 1 year excepting normal wear parts (brush, filters, hoses, etc.) and any parts that may have been damaged by incorrect use, negligence or accident. The guarantee will run as from the parts washer's date of invoice.

The degreasing parts washer has been designed for use as described in the operating instructions. Any modification made to the parts washer will lead to the guarantee being declared null and void. This also applies if any consumables are used other than those indicated in paragraph 1.1.

The manufacturer cannot be held in any way liable for any damage caused by using the parts washer in any way other than the way recommended in the operating instructions, in technical datasheets and in the safety data concerning associated products.

The manufacturer reserves the right to modify the design of his products for improving them at any time.

9 WASTE MANAGEMENT OF THE SOLUTION AND THE UNIT

9.1 WASTE MANAGEMENT OF THE SOLUTION

Solution cannot be directly placed into a traditional waste. User must liaise with waste management companies.

9.2 WASTE MANAGEMENT OF THE UNIT

At the end of life of the unit, user must proceed elimination of the unit in accordance with the regulations. User should take care of the general cleaning elements and separate parts constituting the parts washer: stainless steel parts, rubber parts, electronic card...These parts should then be sent or collected by specialized waste management companies.

APPENDIX 1 : DIAGNOSIS

Problem	Possible causes	Action
Nothing runs. No lights are ON. The air pump does not run (no noise comes from the kit) 	The parts washer is not connected to the mains, or the electrical supply to the workshop is faulty.	Plug in the unit, or call for maintenance staff.
Nothing runs. No lights are ON. The air pump does not run (but noise comes from the kit) 	One of the 2 fuses inside the control box has blown (fuses n° 31).	
The heating does not run. The pump does not run The ON/OFF light is OFF. The red “MIN” light is ON. 	There is not enough product.	Add product Press the heating button.
Heating does not run. The pump runs. The ON/OFF light is OFF. The red “MIN” light is OFF. 	There is not enough product for operating in soaking mode (See § Erreur ! Source du renvoi introuvable.).	Add product Press the heating button.
The pump does not run. The red “MIN” light is OFF. 	The brush is clogged.	Remove the brush and clean the input opening.
	The pump rotor is jammed.	Dismantle the pump rotor. Check the shaft and clean its housing (See Appendix 4 for dismantling the pump)
The air-pump runs. The red LED “MIN is off. The heater does not run. 	The safety thermostat is on.	When the temperature is under 104°, reset the thermostat by pushing the button with a rod through the little hole of the box (see §3).

APPENDIX 2: REMOVING AND REFITTING THE ELECTRIC KIT

Tools required: None

CAUTION



- Unplug the parts washer before the operation.
- **Warning:** Electric connector of the pump to never be in contact with the liquid into the tank.

REMOVING

1 Lift up the sink, unclip the black hose under the semi-rigid hose.



2 Remove the brush hose from its indentation and remove the sink

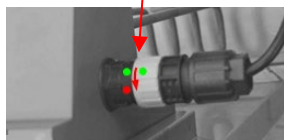
3 Disconnect the pump hose and electric cable.



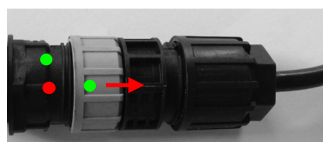
4 Disconnect the pump electric cable.

5 Take off the pump.

1st step



2nd step



6 Slide up the electric kit to take it off.



REFITTING (see §2.2)

1 Fit the electric kit in its adapted slide / compartment.



2 Deposit the pump on the bottom of the tank

3 Connect the pump electric cable to the kit (see appendix 3)

4 Connect the pump to the filter entry hose..



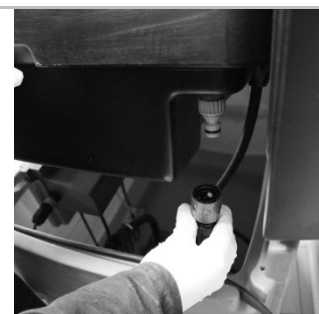
5 Place the power cord in the adapted groove until the bottom of the sink.



6 Clip the black hose under the sink

7 Place back the brush hose in its indentation.

8 Position the sink to its standard position.



APPENDIX 3: DISMANTLING THE PUMP

1 Lift up the sink, unclip the black hose under the semi-rigid hose.

2 Remove the brush hose from its indentation and remove the sink



6 Slide up the electric kit to take it off.



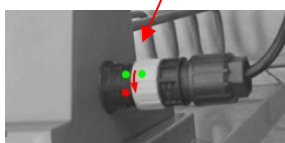
3 Disconnect the pump hose and electric power cable.

4 Disconnect the pump electric cord.

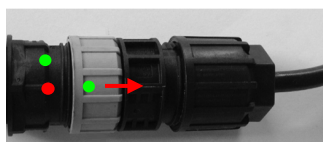
5 Take off the pump.



1st step



2nd step



7 Remove grid 2 on the pump (cut the black plastic collar if necessary)

8 Remove parts 3
Remove the assembly comprising parts 4 to 7 (photo)

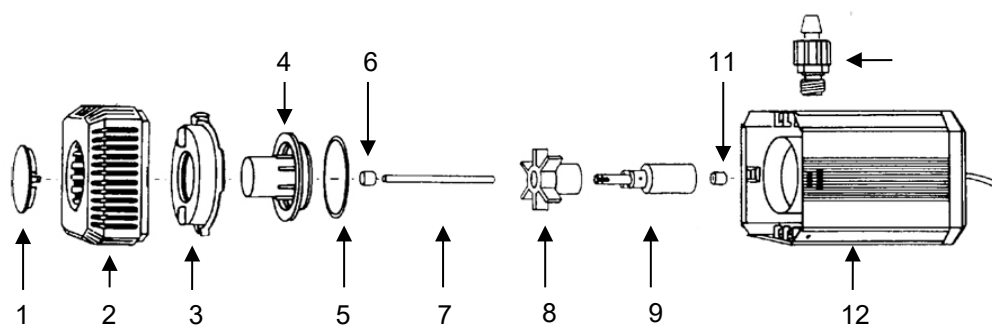
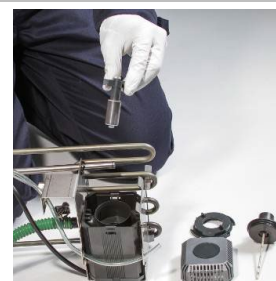


CAUTION: The axel is fragile



9 Remove the rotor assembly parts by pulling on the blade Remove the white axel.

10 For re-fitting, proceed in reverse order.



NOTES :

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