



THERMALRITE

ThermalRite

Tabletop Vacuum Sealing Machine

Operation and Care and Maintenance Manual

ThermalRite Specialty Products
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This appliance is for commercial use only.



To avoid electrical shock, this appliance **MUST** be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the national Electrical Code ANSI/ NFPA no. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.



Warning!

This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.

1. This appliance must be installed on a stable and level surface.
2. **DO NOT** install this appliance in any area where it may be affected by any adverse conditions such as steam, grease, dripping water, high temperatures, etc.
3. **DO NOT** store or use any flammable liquids or allow flammable vapors in the vicinity of this appliance or any other appliance.
4. This appliance must be kept free and clear of any combustible materials.
5. This appliance must be kept free and clear of any obstructions blocking access for maintenance or service.



The sealing bar may reach high temperatures during and after the usage process. It is recommended to watch out and avoid direct contact until the cooling process is over.



This machine is designed to be only used indoors



These appliances are heavier than they look and should be moved with proper equipment and personnel.



To reduce the risk of electric shock and injury to persons, unplug from the power supply before servicing.



This appliance must service by qualified service personnel. Failure to properly maintain and service to this appliance can and will cause injury or even death.



This appliance has parts that can cause pinching and injury, please ensure that fingers are kept away from these areas and proper attire is worn.

CHAPTER 1

Operation and Care Manual

The operation and care manual is a document issued by the manufacturing company and is an integral part of the machine. This document is adequately identified for easy tracing and/or subsequent references.

All rights relating to the reproduction and disclosure of the information contained in this handbook and the documentation quoted and/or attached are reserved. This handbook contains the information necessary for the customer and assigned personnel, to ensure the correct installation, use and maintenance of the appliance allowing it to be used safely.

Safety precautions and Manufacturer's liabilities.

Every operations related to the intended use of this appliance and its overall life cycle has been carefully and thoroughly analysed by the manufacturing company during the design phase, construction phase and the writing of the operation and care manual.

It is nevertheless understood that experience, proper training and "common sense" of the personnel operating this appliance are of the utmost importance. It is the responsibility of the operator to observe all safety precautions as outlined in this manual and to operate this appliance accordingly.

The non-observance of the safety precautions or specific warnings indicated in this manual, the use of this appliance by unauthorized personnel, violation of all safety standards regarding the design, construction, and intended use of the machine, will relieve the manufacturer from all liability in the case of damage to personnel or property.

The manufacturing company is therefore in no way responsible for the non-observance on the part of the user of the safety precautions listed in this manual.

Regulatory references

The following manual **CONFORMS TO** ANSI/UL Std. 963 – CERT. TO CAN/CSA Std.C22.2 No. 68 – CONFORMS TO NSF 169

Disposal of this appliance after its useful life.

Electric and electronic appliances contain dangerous substances that may have potentially harmful effects for people and the environment. It is recommended to dispose of it properly, **DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.**



CHAPTER 2

How to use the Operation and Care Manual

This document is an integral part of the machine. Preserve a copy of this operation manual for the entire working life of the appliance even if transferred or sold. Additional copies can be obtained from the manufacturer.

To maintain the operation and care manual in good condition:

1. Use the operation and care manual carefully so as to not to damage its contents. In particular, do not leave the operation and care manual around after use and return it to its proper place immediately after consultation.
2. Do not remove, rip out or rewrite parts of the operation and care manual. Any changes to this manual are to be issued by the manufacturer.
3. Keep the operation and care manual in a safe place, away from environmental elements which could damage it.

CHAPTER 3

WARRANTY

ThermalRite Inc. warrants to the original purchaser only that any original part that is found to be defective in material or workmanship will, at ThermalRite's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part. For all other original parts, twelve (12) months from the date of shipment of appliance. The labor warranty period is twelve (12) months from the shipping date. ThermalRite will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees. To be valid, a warranty claim must be filed during the applicable warranty period. This warranty is not transferable.

1. All machine components normally subject to wear and are considered consumables are not included in the warranty: Teflon sealing bars, rubber gaskets , chamber opening pistons, sealing gaskets ,air filters , oil filters , oil changes, pump blades.
2. If the vacuum pump of an appliance is replaced under warranty because of aspiration problems, the manufacturer has the right to inspect whether any foreign bodies have been aspirated (liquids, solids, sauces, etc.). If this is the case, the repair (part and labor) will not be covered, since the problem is not due to manufacturing defects, but to customer negligence during use.
3. Possible conditions causing electronic controls to fail include incorrect electrical supply, environmental elements, storms, lightning, water damage, could cause damages which cannot be attributed to the manufacturing company and to the manufacture of the product itself.
4. During the warranty period, for any defect in workmanship and material, all parts and labor will be covered. All warranty claims must be submitted to and conform by all statements and policies of the OneSolutionSupport service.
5. During the warranty period, we will pay, not to exceed, one (1) hour travel and fifty (50) miles travel. All warranty service will be performed by an authorized service center certified by the manufacturer. All parts replaced under warranty must be returned to the manufacturer for inspection before any warranty is paid.
6. Any components considered defective (pump, electronic control, etc.) and is determined to be caused by misuse or abuse **during the warranty period** will not be considered under warranty. The end user will be responsible for any repairs or parts for repairs.
7. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.
8. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or consequential or incidental damages of any kind.
9. Equipment damage caused by accident, shipping, improper installation or alteration.
10. This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall ThermalRite be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of ThermalRite Inc. is authorized to modify this warranty or to incur on behalf of ThermalRite any other obligation or liability in connection with ThermalRite equipment.

End User obligations

The end user must immediately inform the manufacturer of any safety system defect and/or any malfunction he or she is aware of.

It is strictly forbidden for the end user and/or any third parties (excluding duly authorized service personnel of the manufacturer) to make modifications of any kind to the appliance, its functions or to this technical publication. In case of malfunctions or defects due to the non-observance of the above, the manufacturing company cannot be held responsible for the consequences.

CHAPTER 4

GENERAL SAFETY PRECAUTIONS

1. Never touch the metal parts of the machine with wet or damp hands;
2. Do not pull on the cord to disconnect the plug from the current outlet.
3. Unqualified or untrained personnel are not allowed to use the machine without supervision.
4. Electrical safety of the machine is ensured by a properly grounded electrical circuit, which consists of a grounded cord and cord cap and a correct electrical outlet.
5. The use of an extension cord is not allowed and may result in injury or death.
6. In the event of damage to the cord, the end user of the appliance must not attempt to replace the part. This must be performed by a qualified service personnel.
7. Always switch off and disconnect the appliance from the power supply before beginning any general cleaning or maintenance operation.
8. Clean appliance coating, panels and controls using soft and dry cloths, or cloths slightly soaked in mild detergent solution.

CHAPTER 5 INSTALLATION

Carefully remove the appliance from the carton or crate. **Note:** Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.

Location

To ensure proper operation of this appliance and its components, this appliance must be installed on a stable and level surface, away from high humidity items and excessive heat producing equipment.



DO NOT store or use any flammable liquids or allow flammable vapors in the vicinity of this appliance or any other appliance.



DO NOT install this appliance in any area where it may be affected by any adverse conditions such as steam, grease, dripping water, high temperatures, etc.



Disconnect the appliance from power before performing any service or maintenance operation which may require parts.



Before connecting the vacuum packaging machine, make sure that the voltage listed on the UL data plate corresponds with the voltage supplied to the appliance.

Controls and inspections

Before starting the appliance, check the oil level through the sight glass located on the motor/pump.

(Fig. 5.1). In order to access the pump, unscrew the back panel of the appliance and remove it.



(Fig. 5.1.) Pump oil level indicators

After checking the oil level and ensuring it is level with the maximum oil level indicator, reinstall the back panel and secure it with the screws you removed. Connect the plug to the proper outlet. If it is not the correct outlet, the outlet must be replaced with the correct one by a qualified electrician, as well as ensuring the fuse or breaker is the correct current capacity for the draw of the appliance. **Do not use adapters, multiple outlets and/or extension cords.** Do not plug in multiple appliances on the same outlet that may exceed current capacity of the outlet.



This appliance must be grounded properly. If the ground prong is broken, do not use the appliance until it has been repaired or serious injury or death may occur.

CHAPTER 6

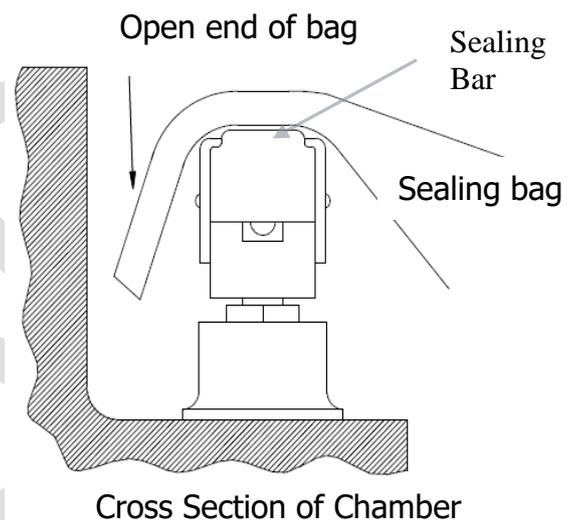
USING THE VACUUM SEALER

Vacuum packaging

1. Plug in the grounded plug to the correct outlet.
2. First turn on the main power switch on the front of the appliance. Next press the ON/OFF button on the control and the LCD display should light up.
3. Set the vacuum time (or percentage) required, the sealing time and the gas

injection time (if the appliance is equipped with this option.).

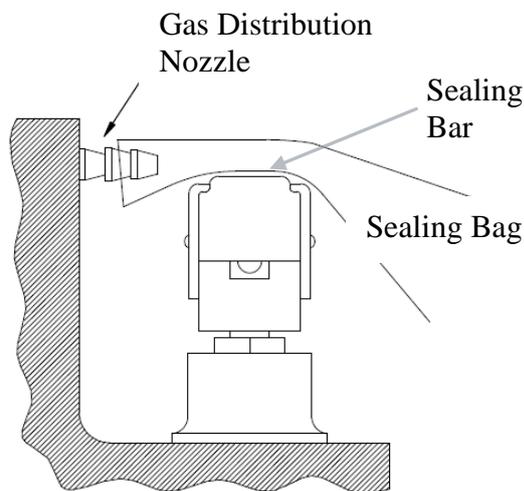
4. Position the bag (or bags) with product in the chamber, the polyethylene shelves can be used inside the vacuum chamber to level the product with the sealing bar and position the bag opening flat on the sealing bar. The polyethylene shelves can be removed depending on necessity. (Fig. 6.1).
5. Lower the clear bell-lid and press firmly on it until it remains closed, thus permitting the sealing cycle to begin.
6. The different cycle phases are automatic and after a pre-set amount of time the clear bell-lid opens thus enabling the product to be removed and subsequent cycles to begin.



(Fig. 6.1) Correct bag placement in chamber

Vacuum-packaging with inert gas injection **OPTIONAL** (ref. table 1)

1. Set the sealing cycle with inert gas injection on the control panel by pre-selecting the relative time.
2. Connect the hose coming from the gas cylinder to the hose connection positioned on the side/rear of the vacuum sealing appliance by means of the relevant clamp, then set the gas cylinder gauge at a pressure value of 1 ATA.
3. Position the bag containing the product inside the vacuum chamber, fitting the gas distribution nozzle inside the bag opening (Fig. 6.2); make sure that there are no folds obstructing the gas flow.



Cross Section Of Chamber

(Fig. 6.2) Positioning of the bag with gas option active.

Vacuum packaging of liquid or semiliquid products

By using the vacuum sealing appliance of the correct size, it is possible to vacuum package liquid or semi-liquid products (soups, sauces, etc.) thus increasing their shelf life, while keeping the freshness and taste unaltered.

When doing so, never fill bags up more than 50% of capacity, making sure that the bag opening is higher than the sealing bar (thus removing the internal shelves)

1. Vacuum cycles are set as described in the chapter Vacuum packaging.
2. The SOFT-VACUUM option allows the packaging of liquid products.
3. All the vacuum packages can be stored in a freezer or cooler.

Cleaning the appliance



Before cleaning the appliance, disconnect the power.

During normal usage of the appliance, no particular cleaning operation of the chamber machine is required. After the end of each

sealing operation, the chamber should be wiped out with a damp cloth. Should it be needed (i.e. bags inner product pours out of the bag), it is recommended to use a damp cloth and mild detergent, rinsing thoroughly.

Table 1. EXAMPLES OF PACKAGING WITH INERT GAS INJECTION OPTION

PRODUCT	OXYGEN % (O2)	CARBON DIOXYDE % (CO2)	NITROGEN % (N2)
Sliced salami	-	20	80
Roast meat	80	20	-
Biscuits and oven products	-	100	100
Coffee	-	100	100
Fresh meat	70/80	30/20	-/-
Dehydrated meat and spices	-	-	100
Minced meat	-	-	100
Chocolate	-	100	-
Fresh cheese / Mozzarella	-/-	20/-	80/100
Mature cheese / Cream / Butter /Margarine	-	-	100
Fresh salad / parsley	-	50	50
Yogurt / Puff pastry	-	100	-
Powdered milk	-	30	70
Baking powder	-	100	100
Apples	2	1	97
Sliced bacon	-	35	65
Sandwich loaf / Bread	-	100	-
French toast / Toasted bread	-	80	20
Pasta	-	-	100
Fresh pasta / tortellini / Lasagne	-	70/100	30
Potatoes / French fries / Snacks	-	0	100
Anchovies, sardines...	-	60	40
Fish	30	40	30
Pizza	-	30	70
Poultry	-	75	25
Tomatoes	4	4	92
Pre-cooked food	-	80	20
Sausages	-	20	80
Escalopes	70	20	10
Fruit juices	-	-	100
Wine / Oil	-	-	100



For the packaging of food with the inert gas injection option, make sure to use food certified gases, not industrial gases.

CHAPTER 7

OPERATION

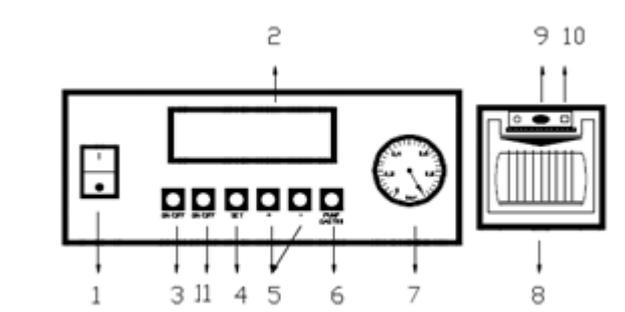
7.1 Control and LCD Display Description.

To start a sealing cycle, push the main power switch on (1). Next push the **ON/OFF** on the display board (3). Next push the **SET** button (4) to enter the program mode, vacuum, seal or gas option, by using the **+** or **-** (5) to select which mode you wish to use, push **SET** (4) to select the program and **+** or **-** (5) to increase or decrease the programs parameters. The cycle starts when the clear chamber bell-lid is closed, which will then activate the vacuum pump. **VAC** will appear on the display together with the countdown (in seconds) of vacuum time down to 0 (zero). Should the gas option be activated, **GAS** will appear during the cycle, as it will be injected inside the chamber. Next, sealing will start as the **SEAL** appears on the display. At the end of this process, the cooling of the sealing bar starts, indicated by the **COOLING** on the display. Finally, **OPENING** will appear on the display and the clear chamber bell-lid will open automatically.

NOTE: Should there be a need to interrupt the cycle for any reason, press the **ON/OFF** button (3) for 3 seconds. The appliance will automatically allow air to enter the chamber and allow the lid open.

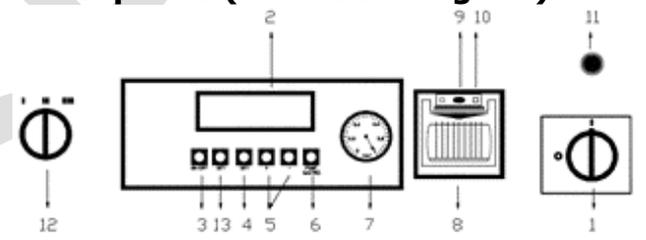
During the normal vacuum cycle, press the button **PUMP GASTRO** (6) for 3 seconds to start heating the sealing bar for manual sealing.

7.1.1 Control and LCD Display 110V



1. Main Power Switch O-I
2. LCD display
3. ON/OFF: to switch on the Control and LCD display.
4. SET: to enter the program mode (vacuum, sealing and gas).
5. + or -: to select the desired program and to increase or decrease the programs parameters.
6. PUMP GASTRO: to activate the functions of vacuum in GN trays, pump cleaning and manual sealing.
7. Vacuum gauge
8. Printer (OPTIONAL)
9. Indicator Lite: indicates power supplied to the printer and that the printer paper needs replacing.
10. Button to scroll the printer paper.

7.1.2 Control and LCD Display Descriptions (double sealing bar)



1. Main Power Switch
2. LCD Display
3. ON/OFF: to switch on the control and LCD display.
4. Set: to enter the program mode (vacuum, sealing and gas).
5. + or -: to select the desired program and to increase or decrease the programs parameters.
6. PUMP GASTRO: to activate the functions of vacuum in GN trays, pump cleaning and manual sealing.
7. Vacuum Gauge.
8. Printer (OPTIONAL)).
9. Indicator Lite: indicates power supplied to the printer and that the printer paper needs replacing.
10. Button to scroll the printer paper
11. Sealing bar selector knob (1 or 2 bars)

7.1.3 User setting menu

To enter the user setting mode, first turn on the main power switch and then push and hold both the **ON/OFF** button and the **SET** button for 5 seconds. The display will show the following;

1. Language Setting (Lang)

Use **+** or **-** buttons to choose the desired language: English, Italian, Spanish, German and French.

Press the **SET** button to confirm the selection and move to the next option.

2. Vacuum Mode Setting (Vac Type)

It is possible to select the percentage of vacuum desired within the chamber or length of time. By using the **+** or **-** buttons to make the selection.

0: time in seconds

1: vacuum percentage

Press the SET button to confirm the selection and move to the next option.

3. Display Setting (Display)

It is possible to set the display mode (PRINTER OPTION). By using the **+** or **-** buttons to make the selection.

0: fixed: hour/date

1: intermittent: hour/date

Press the SET button to confirm the selection and move to the next option.

4. Time/Date Setting

It is possible to set time and date by using the buttons **+** or **-**. Press the **SET** button, to move the cursor to the next segment.

Time is set in 24h format and date is DD/MM/YY i.e. 07th September 2016 appears as 07/09/16.

Press the SET button to confirm the selection and move to the next option.

5. User Name Setting

It is possible to insert the user name by following method:

Press **+** or **-** buttons to choose characters, then press SET to move to the next segment. By pressing the SET button, it is possible to pass over the empty positions and then confirm the set parameters to close this menu. Afterward the user's name will appear.

7.1.4 Program setting

Switch the machine on by pressing the button **ON/OFF**. The following will appear in the screen:

--- Program 1

The number **1** indicates which program is being used. By pushing the **+** or **-** buttons it is possible to change to another program (20 programs).

1. Vacuum time setting

By pressing the **SET** button for 5 seconds in each program, the following will appear:

Vacuum 30

By using the **+** or **-** buttons it is possible to increase or decrease the seconds (between 0 and 50) of vacuum.

By pressing the **SET** button it will confirm the selection and move to the next option.

2. Vacuum Percentage Setting (VACUUM MODE OPTION)

By pressing the **SET** button for 5 seconds in each program, the following will appear:

Vacuum 99%

By using the **+** or **-** buttons it is possible to increase or decrease the percentage (between 0 and 99) of vacuum.

By pressing the **SET** button it will confirm the selection and move to the next option.

3. Intermittent Pump Setting (Liquids and Creams)

SOFT VACUUM OPTION)

This option allows the pump to run intermittently when vacuuming liquids and creamy products.

Vacuum Type 1

By pressing the **+** or **-** buttons it is possible to set the type of vacuum the pump will deliver. When this cycle is selected, the cycle will consist of 4 seconds of vacuum and 7 second

pause, until the time set has elapsed. When set to **0**, the pump will run continuously for the time set.

Vacuum Type 0: standard vacuum.

Vacuum Type 1: soft vacuum with intermittent pump activated.

By pressing the **SET** button it will confirm the selection and move to the next option.

2. Sealing Time Setting

By pressing the **SET** button, the following will appear:

Sealing 2.0

By using the **+ or –** buttons it is possible to increase or decrease the time of sealing (tenths of seconds, between 0 and 4 seconds).

By pressing the **SET** button it will confirm the selection and move to the next option.

3. Gas flush setting

(GAS OPTION)

By pressing the SET button, the following will appear:

Gas 0.0

By using the **+ or –** buttons it is possible to increase or decrease the time of gas injection (tenths of seconds, between 0 and 9.9 seconds).

By pressing the button **SET** it will confirm the selection and move to the next option.



Do not set time of gas flush longer than vacuum time, otherwise the lid open prematurely.



Make sure that the gas pressure entering the chamber is not higher than 14 -21 PSI or (1 – 1.5 bars)

4. Printer Label Settings

(PRINTER OPTION)

By pressing the **SET** button, the following will appear:

Stamp 3/ 1

By using the buttons **+ or –** it is possible to set the first number, indicating the number of product labels to be printed (between 1 and 9). **NOTE:** Setting this number to 0, will cause the printer to not print any labels.

By pressing the **SET** button the cursor will move to the second number, indicating the number of days the product can be held (between 1 and 183). By pressing the **SET** button it will confirm the selection and move to the next option.

5. Product Name and Ingredients Setting.

By pressing the SET button, there will be an empty line on the display:

By using the **+ or -** buttons, it is possible to insert a text of up to 16 lines with 16 characters each allowing the printing on the labels (i.e. food name, ingredients...).

If there are no further options, the display will show the number of the program modified. This means that all parameters are properly set.

7.2 MANUAL SEALING

While running a normal processing cycle, push and hold the **PUMP GASTRO** for 3 seconds you can start the sealing process before the end of the cycle.

CHAPTER 8

MAINTENANCE AND SERVICE



Pump heating

If the ambient temperature is below 60 degrees F, it is advisable to pre-heat the pump in the morning in order to liquefy the oil before it circulates throughout the machine.

When the chamber lid is open press and hold the **PUMP GASTRO** button for 3 seconds and let the pump work for about 15 to 20 seconds, and after that, press **PUMP GASTRO** button to stop the pump.



Do not allow the pump to run continuously for more than 30 seconds or damage will occur, as the pump is not designed for continuous operation.

Pump Cleaning Cycle Warning

When the appliance has run 10,000 cycles, the display will show a warning as follows;

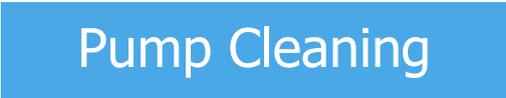


OIL

This shows that it's necessary to do the pump service.

Scheduled pump cleaning cycle

Every 10,000 cycles the pump oil requires cleaning. To start the pump cleaning cycle, push the PUMP GASTRO button and at the same time, lower the clear chamber bell-lid. The display will show the following:



Pump Cleaning

During this cycle, which lasts approximately 10 minutes, the pump will work intermittently.

NOTE: To end the cleaning cycle at any time, push the ON/OFF button for 5 seconds. Once the cleaning cycle is complete, the screen will revert back to showing the number of programs in use.

The pump maintenance is not strictly linked to the 10,000 cycles, but more dependent on the product used (i.e. flour, breadings, liquids, the oil check must be done monthly). Also, for heavy usage of the appliance, pump cleaning must be done every 6 months.

Internal components

Access to the appliances internal components must be performed by a qualified service technician, authorized by the manufacturer. In the case of unauthorized service, doing so will be at he/she own risk and the manufacturer cannot be held liable for possible damage or injury.



To reach any electrical components, it is necessary to remove the appliances casing which are held in place by screws. Before any service is performed, please disconnect the appliance from power and check with an appropriate meter to verify it is safe to service.

Inner chamber maintenance and cleaning

Because food product is being sealed, it is important that the inner chamber be cleaned after every use.

1. Wipe off the sealing bar(s), (Fig 8.1) with a damp cloth and mild detergent daily, making sure to rinse well.



(Fig 8.1) Sealing bar within the chamber

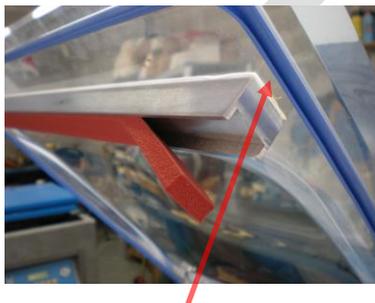
2. Wipe off the silicone sealing bar gasket on the bell-lid (Fig 8.2) every day with a damp cloth and mild detergent.



(Fig 8.2) Silicone Sealing Bar Gasket on the bell-lid

3. **Replacement of the Silicon Sealing Bar Gasket on the Bell-Lid (Fig 8.2).**

Inspect the silicone sealing bar gasket for wear. If it is worn, it will cause the clear chamber bell-lid to pop open on its own, affecting the vacuum sealing of the product and it must be replaced. To replace it, pull it from the gasket retainer and make sure the retainer is clean of debris. Install the new one by pressing in place. Close lid and test for a seal.



(Fig 8.3) Clear Chamber Bell-Lid Gasket

Remove the gasket by carefully pulling out the gasket from the clear chamber bell-lid groove. Ensure the gasket groove is clean and free of debris and press a new one in place. Close lid and test for a seal.

4. **Replacement of the Clear Chamber Bell-Lid Gasket.**
5. **Replacement of Teflon Sealing Bar**

The sealing bar needs to be replaced by a qualified service technician.



Image 8.3. Sealing bar teflon



The silicone gaskets and the Teflon sealing bar should be replaced every 200 working hours, for maximum efficiency.



The check of pump, filters and electro valves must be done every 2000 working hours by authorized personnel only

CHAPTER 9

PROBLEMS SOLVING

AFTER SWITCHING ON THE MAIN POWER SWITCH, THE SWITCH DOES NOT LIGHT UP

1. Check outlet and make sure there is power.
2. Check breaker or fuse to make sure it is not blown.
3. Check to make sure the appliance is plugged in.
4. Check appliance in another known good outlet.
5. Call service.

AFTER SWITCHING ON THE MAIN POWER SWITCH, THE CONTROL WILL NOT POWER UP.

1. Make sure the main power switch lights up.
2. If main power switch lights up but the control will not power up, call service.

THE MAIN SWITCH AND CONTROL POWER UP, BUT APPLIANCE WILL NOT START WHEN THE SEALING BAG IS PLACED IN THE CHAMBER.

1. Make sure there is a program selected.
2. Make sure the clear chamber bell-lid is firmly pushed closed.
3. The micro-switch is either defective or out of adjustment and you need to call service.

THE MACHINE STOPS UNEXPECTEDLY WHILE IT IS RUNNING

1. Make sure you have power, the main power switch is on and the control is lit up.
2. Make sure the clear chamber bell-lid is still pressed down.
3. Call service.

THE MACHINE WORKS PROPERLY BUT THE BAG IS NOT SEALED OR IS NOT SEALED CORRECTLY AT LID OPENING

1. Unplug appliance from power
2. Lift the Teflon sealing bar up to ensure the 2 cables are firmly attached.
3. Verify that the distance between the Teflon sealing bar and the silicone sealing bar gasket is at least .125 inches (4-5mm).
4. Verify that the Teflon sealing bar is dry and there are no creases in the surface.
5. Verify that sealing bar gasket is not worn or damaged.
6. Verify that the sealing time is long enough for a proper seal.
7. Verify that you have the correct bags.

THE MACHINE DOES NOT ATTAIN THE OPTIMUM VACUUM

1. With the control on and a program selected, close the clear chamber bell-lid to start a cycle. Allow the pump to produce a vacuum of at least 70/cm HG. If the pump will not achieved that vacuum, then there is an issue with the pump, blocked, worn, damaged.
2. Watch the needle on the gauge and ensure it stays at that vacuum. If it starts dropping there is a leak.
3. Check the clear chamber bell-lid silicone seal and if damaged, replace it.
4. Check the bad to make sure it is flat on the sealing bar and there are no wrinkles.
5. Verify that the distance between the Teflon sealing bar and the silicone sealing bar gasket is at least .125 inches (4-5mm).
6. Verify that you have the correct amount of vacuum time or percentage for the product you are sealing.
7. Verify that you have the correct pressure if using the Gas Flush.

DO NOT LIFT THE LID ON OR RAISE A LITTLE

1. Verify the proper operation of the clear chamber bell-lid pistons.
2. Call service.

CHAPTER 10

NAME PLATE AND TECHNICAL DETAILS

CONFIGURATION AND CONSUMPTION

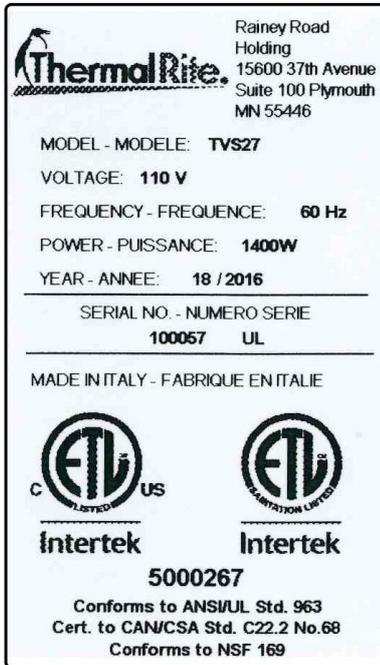


Image 8.5. Name plate example

MODEL	PUMP	POWER CONSUMPTION
TVS 27 4	4 m3	1400W
TVS 27 4 G	4m3	1400W
TVS 27 6	6 m3	1400W
TVS 27 6 G	6 m3	1400W
TVS 32 6	6 m3	1400W
TVS 32 6 G	6 m3	1400W
TVS 32 8	8 m3	1400W
TVS 32 8 G	8 m3	1400W
TVS 42 12	12 m3	1250W
TVS 42 20	20 m3	1250W
TVS 42 12 2B	12 m3	2500W
TVS 42 20 2B	20 m3	2500W
TVS 42 12 G	12 m3	1250W
TVS 42 20 G	20 m3	1250W
TVS 42 12 G 2B	12 m3	2500W
TVS 42 20 G 2B	20 m3	2500W
TVS 52 20	20 m3	1250W
TVS 52 25	25 m3	1500W
TVS 52 20 2B	20 m3	2500W
TVS 52 25 2B	25 m3	2500W
TVS 52 20 G	20 m3	1250W
TVS 52 25 G	25 m3	1500W
TVS 52 20 G 2B	20 m3	2500W
TVS 52 25 G 2B	25 m3	2500W

CHAPTER 11

TSP

Exploded View No. Reference	TVS27	TVS32	TVS42	TVS52	Gas Option	Second Welding Bar	Part Description	Quantity	Part Number
1	X	X	X	X	X	X	Main Switch	1	CUALL000IEINTBIPLUM
1			X	X		X	Rotary Switch	1	CUCDE000IEINT2P
1			X	X		X	Rotary Switch Handle	!	CUCDE000IEMOST4848
1		X	X	X		X	Signal Light	1	CUCDE000IESEGNLUMIN
2	X	X	X	X			Vacuum Gauge	1	CUALL00VUOTOMETROABS
3	X						Side Cover	1	CUA00000STCARCOR
3		X					Side Cover	1	CUB00000STCARCOR
3			X				Side Cover	1	CUC00000SRCARCOR
3				X			Side Cover	1	CUD00000STCARCOR
4	X						Bottom	1	CUA00000CARFON
4		X					Bottom	1	CUB00000CARFON
4			X				Bottom	1	CUC00000CARFON
4				X			Bottom	1	CUD00000CARFON
5	X						Rear Cover	1	CUA00000STCARRET
5		X					Rear Cover	1	CUB00000STCARRET
5			X				Rear Cover	1	CUC00000STCARRET
5				X			Rear Cover	1	CUD00000STCARRET
6	X						Tank	1	CUA00000STVASCA
6		X					Tank	1	CUB00000STVASCA
6			X				Tank	1	CUC00000STVASCA
6				X			Tank	1	CUD00000STVASCA
7	X	X	X	X			Lid Holder	1	CUALL000WWFERMACOP
8	X	X	X	X			Nozzle	1	CUALL000WWUGEASP
9	X						Piston Spring	2	CUA00000WWMOLLA370N
9		X	X				Piston Spring	2	CUBC0000WWMOLLA500N
9				X			Piston Spring	2	CUDE0000WWMOLLA750N

10	X						Lid	1	CUA00000WWCOPERCHIO
10		X					Lid	1	CUB00000WWCOPERCHIO
10			X				Lid	1	CUC00000WWCOPERCHIO
10				X			Lid	1	CUDE00000WWCOPERCHIO
11	X	X	X	X			Gasket	1	CUALL000WWGUACILTORO
12	X						Counter Bar	1	CUA00000WWCONTROB265
12		X					Counter Bar	1	CUB00000WWCONTROB325
12			X			X	Counter Bar	1or2	CUC00000WWCONTROB425
12				X		X	Counter Bar	1or2	CUDE00000WWCONTRO525
12	X	X	X	X		X	Biadhesive Tape	1or2	CUALLADESIVOCONTROB
13		X	X	X		X	Bag Stopper	2or4	CUBCDE00WWFERBUS
14		X	X	X		X	Bag Stopper Rubber	2or4	CUBCDE00WWGOMMFERBUS
15	X	X	X	X		X	Counter-Resistance	1or2	CUALLISTERD21751000
16	X	X					Spacer	2	CUAB000RIPB2633
16			X				Spacer	2	CUC000RIPB43
16			X			X	Spacer	2	CUC0000RIPB432BII
16				X			Spacer	2	CUDE000RIPB53
16				X		X	Spacer	2	CUDE000RIPB532BII
17	X	X	X	X			Spacer Foot	8	CUALLPIEDINOTRASPA
18	X						Assembled Bar Lifting Piston	2	CUA00000BSPISTONL103
18		X	X	X		X	Assembled Bar Lifting Piston	2or4	CUBCDE00BSPISTONL140
19	X						Vacuum Pump	1	CUA000PUMPLC4T150
19		X					Vacuum Pump	1	CUBB00PUMPLB8T150
19			X				Vacuum Pump	1	CUC000PUMPLC20T150
19				X			Vacuum Pump	1	CUDE00PUMPLC25T150
20	X	X	X	X			Oil Drain Cap	1	CUALL000WWTAPPOF144
A1	X	X	X	X			Female Pivot	2	CUALL000WWCARDINEF
A2	X	X	X	X			Fixing Hinge Nut	2	CUALL000WWPERNOM6
A3	X	X					Hinge	2	CUAB00000WWCERN16
A3			X				Hinge	2	CUC00000WWCERN20

A3				X			Hinge	2	CUDE0000WWCERN25
A4	X	X	X	X			Piston Pin	2	CUALL000WWPERNOF16
A4	X	X	X	X			Piston Seeger	4	CUALL000WWSEEGERF16
A5	X	X	X	X			Hinge Pin	2	CUALL000WWWPERNOF18
A5	X	X	X	X			Hinge Seeger	4	CUALL000WWSEEGERF18
A6	X	X	X	X			Bushing	2	CUALL000WWBOCCOLAOTT
A7	X	X	X	X			Spacer Nut	4	CUALL000WWDADOM8
A8	X	X	X	X			OR Head	2	CUALL000WWORFI766178
B1	X	X				X	Lateral Conductor	2or4	CUAB0000BSTESTA90
B1			X	X		X	Lateral Conductor	2or4	CACDE000BSTESTA140
B2	X						Side Profile	2	CUA00000BSPROFLATO
B2		X					Side Profile	2	CUB00000BSPROFLATO
B2			X			X	Side Profile	2or4	CUC00000BSPROFLATO
B2				X		X	Side Profile	2or4	CUDE0000BSPROFLATO
B3	X	X	X	X		X	Resistance Support	1or2	CUALL000W/WBAK5122000
B4	X	X	X	X		X	Resistance	1or2	CUALL000BSNCROMO5
B5	X	X	X	X		X	Resistance Cover	1or2	CUALL000BSTEFLON65
B6	X						Bar Main Body	1	CUA00000BSCORPO27
B6		X					Bar Main Body	1	CUB00000BSCORPO33
B6			X			X	Bar Main Body	1or2	CUC00000BSCORPO43
B6				X		X	Bar Main Body	1or2	CUDE000BSCORPO53
C1	X	X	X	X			Control Board	1	CUALL000SKCOMAND1
C2	X	X	X	X			Power Board	1	CUALL000SKPOTENZA
C4	X	X	X	X			Distance L15	4or8	CUALL000WWDISTONM315
C8	X	X	X	X			Insulating Sheet	1	CUALL000SKFOGLIODIV
D1	X	X					Keyboard Adhesive Lexan	1	CUAB0000LX1RPICCOLO
D1			X	X			Keyboard Adhesive Lexan	1	CUCDE000LX1RGRANDE
D3	X	X					Front Panel	1	CUAB0000FR1RPICCOLO
D3			X	X			Front Panel	1	CUCDE000FR1RGRANDE
D5	X	X	X	X			Rubber Button	5or6	CUALL000SKGOMMINO

E1	X	X	X	X			Safety Timer	1	CUALL000IETEMP242408
E2	X	X	X	X			Fuseholder	1	CUALL000IEXPORTAFUSI
E2	X	X					Fuses	2	CUAB00FUSE10T5A250
E2			X				Fuses	2	CUC000FUSE10T8A250
E2				X			Fuses	2	CUDE00FUSE10T15A250
E3	X	X	X	X			Terminal Suppot	2	CUALL000IESUPTERMIN
E4	X	X	X	X			Microswitch	1	CUALL000IEMSWITCHQV
E5	X	X	X	X			Contactor	1or2	CUALL000IECONTATT20A
E6			X	X		X	Contactor	1	CUCDE000IECONTARR24A
E7	X	X	X	X			Earth Terminal Conductor	1	CUALL000IEMORSST4PE
F1	X	X	X	X			Column	4or5	CUALL000STCOFX5078
G1	X	X	X	X			Piston Valve	1	CUALL00ETVPIST3VIE14
G2	X	X	X				Discharge Valve	1	CUABC00ETVSCAR2VIE14
G2				X			Discharge Valve	1	CUDE000ETVVALV2VIE12
G3	X	X	X	X			Air System Connector	1	CUALL000WWBLOKIMOAIR
G4	X	X	X	X			"L" Fitting	5or9	CUALL00RACLML34F814
G5	X	X	X				Nipple	1	CUABC00RACA2NIP1412
G5			X	X			Nipple	1	CUDE000RACGHISA1212
G6	X	X	X	X			Straight Fitting	2	CUALL00RAMRL1814
G7	X	X	X	X			"T" Fitting	3or11	CUALL00RACTRL22
G8		X	X	X			Nozzle Tank	1	CUBCDE0AIRPORTM1220
G8	X						Nozzle Tank	1	CUA0000RACMRL1C1212
G9		X	X	X			Nozzle Pump	1	CUBCDE0AIRPORTM1220
G9	X						Nozzle Pump	1	CUA0000RACMRL1C838
G10		X	X	X			Intake Tube	Nd	CUBCDE0AIRRIGIDO20
G10	X						Intake Tube	Nd	CUA0000AIRFLEX11908
G11	X	X	X	X			Air Tube	Nd	CUALL00AIRFLEX11906
G12	X	X	X	X	X		Gas Electrovalve	1	CUALL00ETVSCAR2VIE14
Gi3	X	X	X	X	X		Gas Connection	1	CUALL00RACMRL1C814CC
G14	X	X	X	X	X		Gas Nozzle	2	CUALL00AIRPORTM188

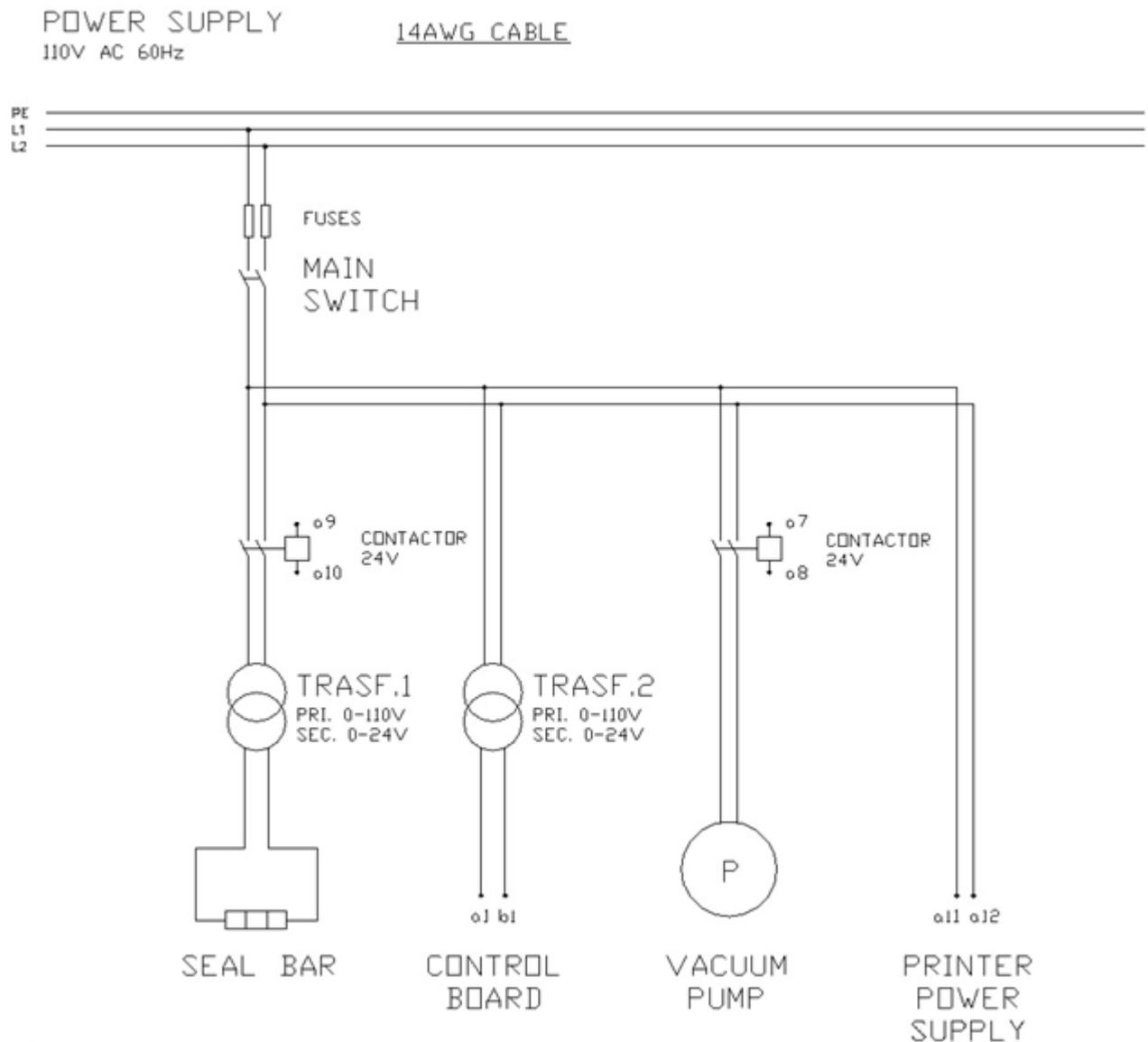
G15	X	X	X	X	X		Gaas "L" Fitting	2	CUALL00RACLFR34818
H1	X	X	X	X			Power Cable	1	CUALL000IESPINA515
H1			X	X		X	Power Cable	1	CUCDE000IESPINA530
H2	X	X	X	X			Cable Gland	1	CUALL000PRCAVPG11
H2			X	X		X	Cable Gland	1	CUCDE000PRVCAVPG21
M1	X	X	X	X			Electronic Board Transformer	1	CUALL0TRAS75VA11024
M2	X	X					Welding Bar Transformer	1	CUAB00TRAS15VA11024
M2	X	X	X				Welding Bar Transformer	1	CUABC0TRAS200VA11024
M2	X	X	X				Welding Bar Transformer	1	CUABC0TRAS300VA11024
M2			X	X			Welding Bar Transformer	1	CUCDE0TRAS400VA11024
M2			X	X	X		Welding Bar Transformer	1	CUCDE0TRAS500VA11024
M2			X	X			Welding Bar Transformer	1	CUCDE0TRAS600VA11024
M2				X			Welding Bar Transformer	1	CUSE0TRAS800VA11024
M2				X			Welding Bar Transformer	1	CUDE00TRAS1000VA11024

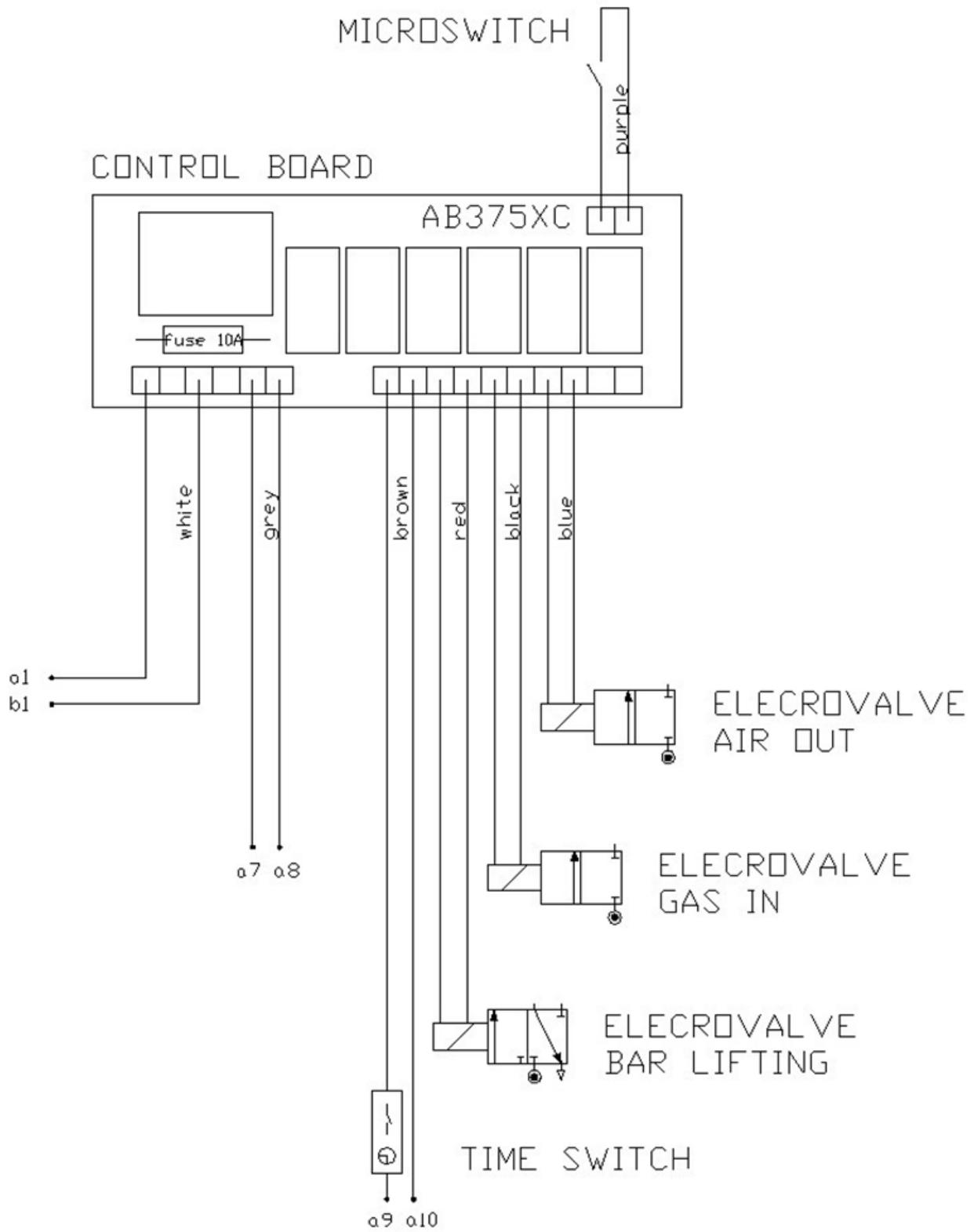


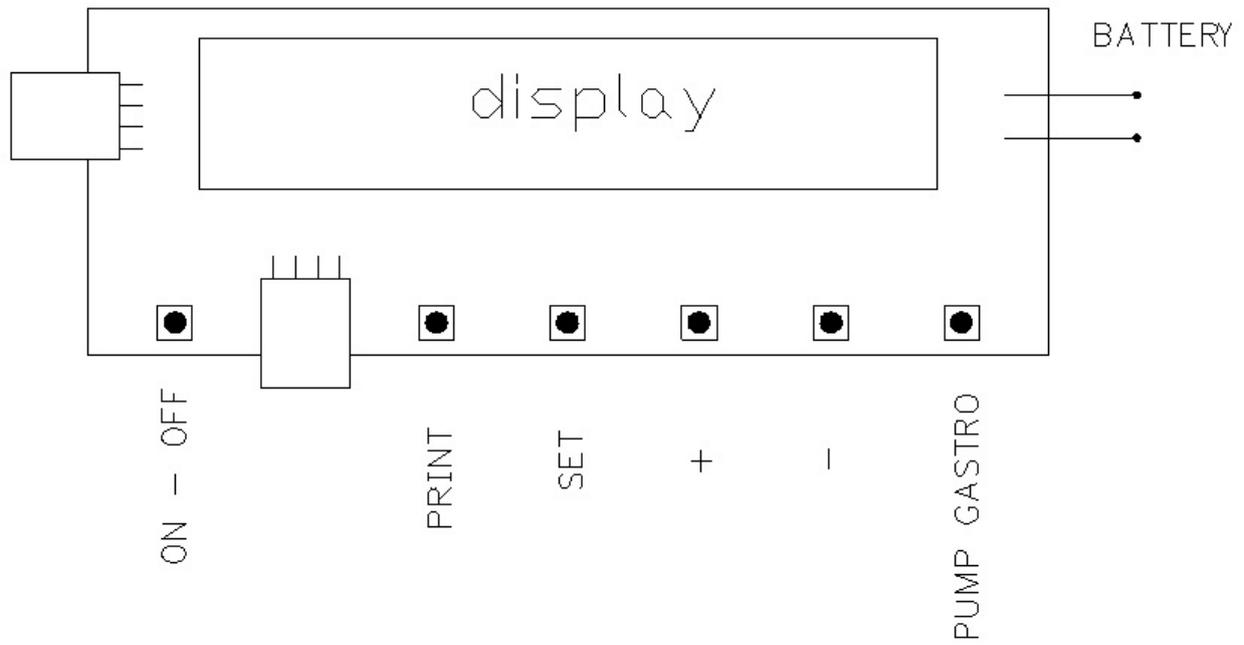
CHAPTER 12

WIRING DIAGRAMS

**TVS27, TVS32, TVS32G, TVS42,
TVS42202BG, TVS5225,
TVS52252BG**







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