CiMa-Pak Corp.
CiMotion Gas Flush sealing machine

INSTALLATION,
OPERATION AND MAINTENANCE MANUAL
June 27, 2023

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Chapter 1. INTRODUCTION

1.1 Preface

You have bought a machine with exceptional features and performance and we wish to thank you for your confidence.
The CiMotion Gas Flush Tray Sealer system is unique, well-established, and backed by the validity of its technological concepts. Moreover, the quality of the components and materials used in its production and testing process provides the best guarantee for reliable and proper operation over time.

This instruction manual refers to the CiMotion sealing machine and provides the installation instructions and operating guide.

The machines are used to seal food containers.

This packaging solution makes transport and preservation more practical; the packaging also protects the preserved foods against external contact and prevents liquids leaks.

Aluminium moulds are used and can be produced for many of our standard trays.

WARNING:

In the interest of the machine user, this manual shall be carefully read by:
- the person in charge of maintenance (before installing)
- the qualified operator(s) (before operating the machine).

1.2 INSTALLATION

Installation, assembly and troubleshooting must only be performed by skilled personnel strictly in accordance with the following instructions :

- Remove the machine from the packing.
- Remove the protection film from the equipment and hold down straps from the machine.
- Keep a minimum distance of 10 cm. all around the machine in order to allow adequate cooling.
- Make sure the machine is placed on a flat, level surface. Improper leveling of the machine could affect the performance during running.
- The amperage rating is indicated on the side of the machine. Check that the available power and voltage matches the one printed on the rating plate. A dedicated circuit should be used.
- During running of the machine the voltage must be within +/- 10% of the correct rating.
- The machine must be fed with clean, dry compressed air. A minimum pressure of 90 P.S.I. with an air flow rate of at least 1.5 SCFM. must be supplied.
- If packaging gas is being used, regulate the gas pressure to between 30 to 40 P.S.I.

LEGAL REGULATIONS, TECHNICAL RULES AND DIRECTIVES

A few, simple rules should be followed for **a safe** use of the machine.
Carefully read the instructions before use..

Connect the machine to a power supply socket provided with earthing and protected by a magneto-thermal differential switch or by 10-A (minimum) fuses.

The machine is fitted with fixed guards for pneumatic and electrical parts.

Some moving components that take part in the processing cannot be protected with guards due to their shape (i.e. film rewind shaft).

Safety is however guaranteed by the characteristics of the machine.

In case of any difficulties do not attempt to resolve any damage caused. Contact CiMa-Pak Corporation service centre or your supplier.
CiMa-Pak Corporation declines all responsibility for damages to persons or property arising from the operations performed by the operator.

Please note that loads exceeding 30 pounds (15 kg) must be handled by two persons and that fire regulations must be strictly **observed**.

Never carry out any operation on the machine before turning it off, disconnecting the power supply and waiting until the sealing plate cools down.

Do not operate the machine if the guards are not properly installed.

Where the CLIENT installs the machine or attaches accessories to it - which are not supplied by CiMa-Pak Corporation safety regulations laid down in the Machinery Directive must be adhered to.

Since this machine is intended for use in the agricultural and food industries, the health and cleanliness standards laid down in the hygiene standards must be respected.

The machine must be installed and work repaired from atmospheric agents and at temperature between 5 and 40°C, horizontally positioned.

No safety device must be removed or bypassed. Arbitrary adaptations or modifications to the machine are forbidden for safety reasons.

Packing inflammable or explosive materials, pressure cylinders, loose or volatile powders (flour, sugar, etc.) is strictly forbidden.

Do not touch the sealing plates while they are hot.

The sealing is made through heat and pressure on tray's edge. The maximum permissible temperature is 200°C. It is under the user responsibility to verify with the supplier that trays and film materials are compatible and suitable for sealing and that no toxic materials are contained.

Keep the instruction manual with the machine. The information therein will ensure a good machine efficiency and safe operating conditions.

During the installation the following rules and regulations must to be observed :

- Legal regulations in force (to be defined Country by Country)
- Accident protection requirements and laws in force (to be defined Country by Country).

ELECTRICAL CONNECTION
This machine requires a power supply of 120 volts AC. The amperage required is 10 amps but we recommend a separate or dedicated 15 AMP circuit.
The machine is supplied with cable and plug.

The machine can only be started after having checked that all these safety precautions have been carefully observed.

1.3 Meaning and use of the pictograms

General danger: It shows a danger involving the risk of a serious accident for the user.

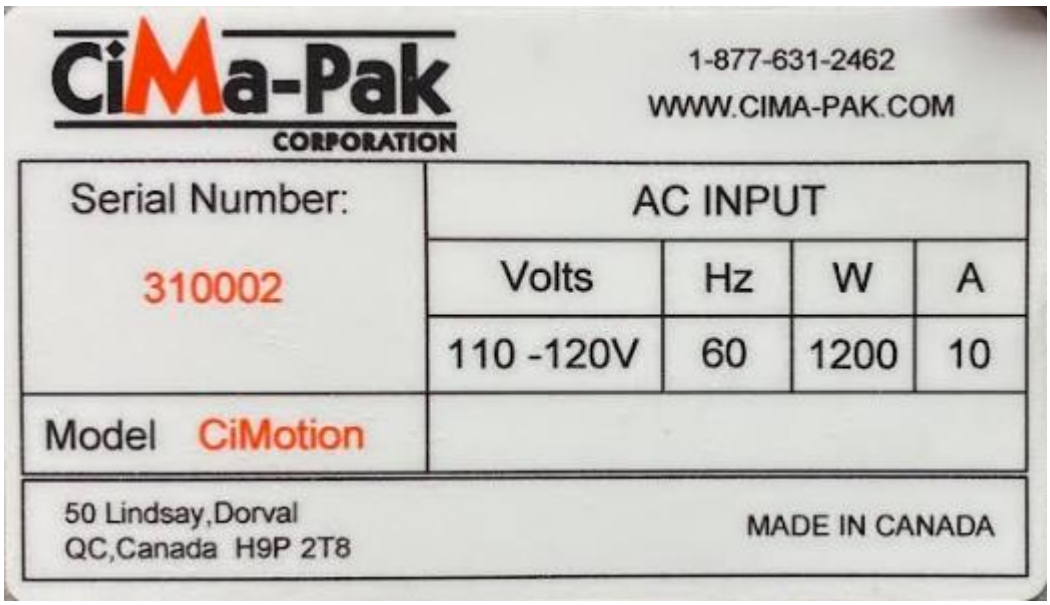
Burn Hazard, hot surface

Disconnect power supply before servicing.

1.4 Identification of the machine

In any communication with the manufacturer, always specify the machine model and serial number which may be found on the label applied on the right hand side of the machine when looking from the front.

Figure 1



The machine's specifications plate is applied on the side of the machine with all the information required for installation, e.g.: model, power supply voltage, etc.

Chapter 2. DESCRIPTION AND TECHNICAL DATA

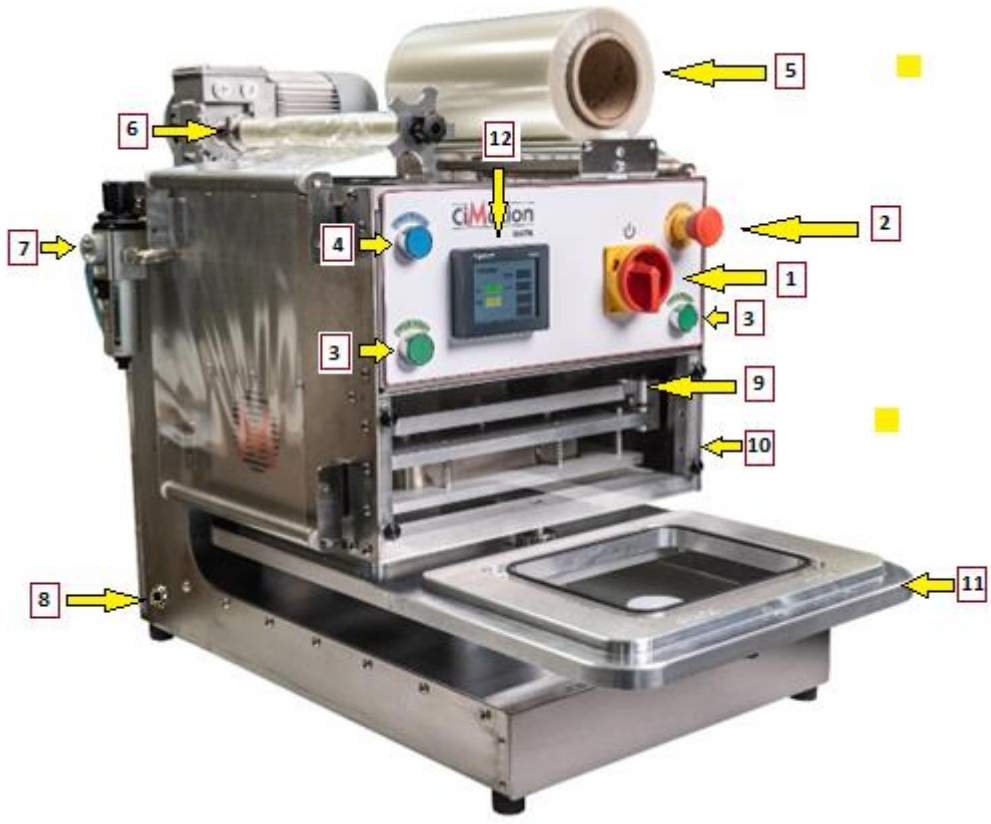
2.1 Description of the machine

"CiMotion Gas Flush is a semi-automatic table-top tray sealer. It may be used by inserting the filled trays manually into the lower mould which can be rotated into the machine. Once the tray is in the sealing area, depressing the two green buttons marked 'Cycle Start" will cause the machine to commence the cycle. (Always be careful around any production equipment).

Legend Figure 2

1 Main switch
2 Emergency Stop (push to stop, twist to reset)
3 Start Cycle Buttons (both must be depressed at the same time to start the cycle)
4 Film Rewind Button
5 Film Roll
6 Rewind motor and shaft
7 Compressed Air Inlet
8 Packaging Gas Inlet
9 Upper Mould Assembly
10 Clear Plastic Access Panel
11 Rotating lower mould assembly or table

Figure 2



2.2 TECHNICAL DATA

Model	Width	Width to Operate	Depth	Height	Maximum Mould Dimensions	Voltage	Power	Weight
CiMotion	20”	25”	27.5	27” (including film roll)	11.5” X 7.5”	120/60 AC	7.5 AMPS	200 lbs

Chapter 3. SAFETY RULES

3.1 General precautions

Before acting on the machine to adjust, service and repair it:

- put the machine into a safe condition by pressing the “emergency” button located on the operator panel Figure 2;
- power off the machine by turning the main switch to “0” Figure 1;
- remove the electrical plug.

Only the personnel who have been properly trained and informed may service this equipment.

- The removal of covers, front clear access panel, may cause the operator and/or maintenance person to come into contact with moving parts, hot parts, cutting knives and live devices.

- If safety devices are either removed or tampered with by the user, this will relieve the supplier of any civil and criminal liability.

- The same conditions will apply if any protection which may be fastened by the screws is removed without having stopped the machine in advance.

3.2 Specific precautions

The CiMotion Gas Flush is built with OPERATOR SAFETY COVERS.
NEVER OPERATE THE MACHINE WITH COVERS REMOVED!!!

The upper mould assembly can reach a high temperature and should be considered as dangerous. Never touch the upper mould assembly when hot. Pay great attention when you are working in the proximity of the upper mould assembly since there is the potential risk of accidentally coming into contact with **very hot parts (200°C !!!).**

- It is recommended to use protective gloves.

There are film cutting blades present. Operating the equipment with the clear front cover removed can result in a potential risk of serious consequence. **NEVER OPERATE THE CiMotion Gas Flush WITH COVER REMOVED!!!**

Chapter 4. INSTALLATION

4.1 Transportation and handling

Weight of the machine: Approximately 200 lbs..

The machine is best handled manually. Lift the machine from the bottom. **DO NOT LIFT THE MACHINE USING THE ROTATING LOWER MOULD ASSEMBLY (TABLE)**
As an alternative provide for slinging by placing slings under the base of the machine. Use a hoist complete with ropes which are properly dimensioned and equipped with hooks at their end.
Lift the machine with the greatest care.

Careful consideration should be given to the machine installation site. The area you choose should have solid footing and have proper lighting. Position the machine so that it is accessible from all sides for proper operation, service and maintenance.

Permitted conditions in the rooms where the machine is placed:
- temperature from: +36°F (+2°C) to +85°F (+30°C)
- humidity from 30% to 90% without any condensate.

4.2 Final inspection before Start Up

Transportation of equipment may result in machine parts coming loose or out of alignment. It is always advisable to do a visual inspection and check tightness of the screws, nuts, bolts on the system

If, at any time during the start-up or in production, you hear an unusual noise it is advisable that the system be immediately stopped and the source of the noise be investigated. Not doing so may result in the warranty being voided.

4.3 Connections

Electric energy
Before plugging in the CiMotion Gas Flush, make sure the main voltage will correspond to the voltage specified on the label of the machine and that grounding will comply with the safety rules in force. This machine should be supplied with 120 volt A.C. In case of doubt about the main voltage, contact the local electric energy supplier.

Compressed air
Connect the compressed air connection **(Item 7 - Fig. 2)** located in the left side of the control panel. Use an air tube having a diameter of 1/4" O.D (outside diameter) which is supplied with the machine. A male quick connect fitting is supplied.

GAS connection.
If packaging gas will be used, it should be connected to the gas inlet. **(Item 8 – Fig 2)** and adjusted to between 30 to 40 p.s.i.

Chapter 5. OPERATING INSTRUCTIONS

5.1 Power the equipment on

The power switch **(1 -Fig.2)** turns the power ON or OFF to the tray sealer. When the switch is in the "ON" position, all functions of the machine are operational.

If a situation occurs that requires the machine to be stopped, depress the red Emergency stop Button **(2-Fig.2).** To reset the Emergency Stop button, rotate the red button and it will pop out.

If the Emergency Stop is pushed, the screen will show an Emergency Stop image. If at any time the machine is in the Emergency stop mode, a small red 'X' will appear on the upper left hand corner of the screen of the HMI to indicate that the machine is in the stopped mode.

5.2 Machine Controller HMI (12 -Fig.2)

The HMI (Human-Machine Interface) allows the operator and maintenance personnel to select options and adjust certain settings. Just touch the screen where the button appears, and you can select or alter parameters.

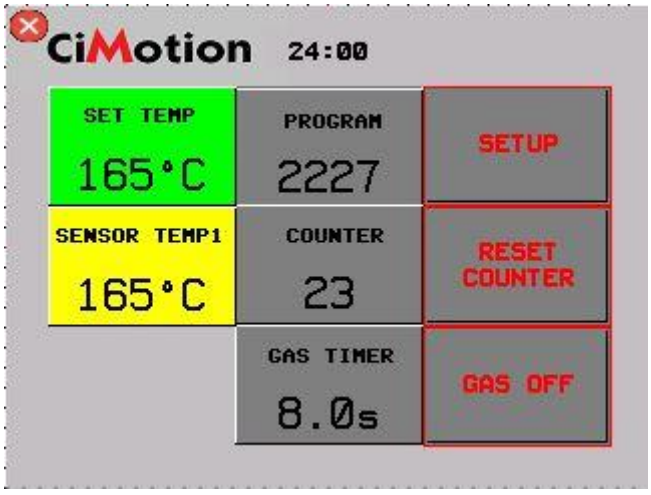


FIGURE 3

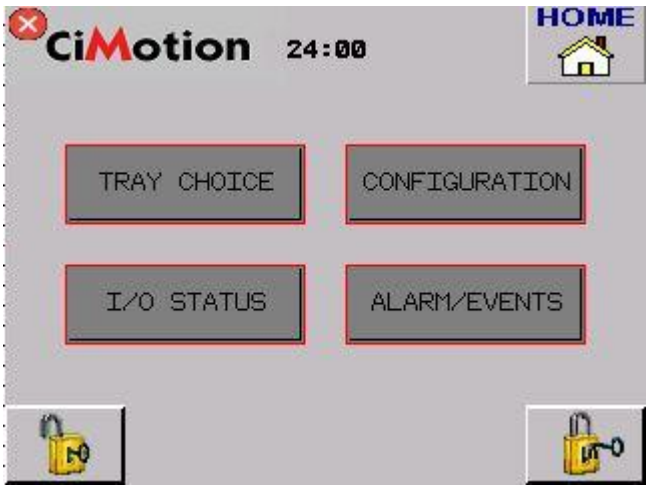


FIGURE 4

5.3 General Setup

These are the steps generally used to operate the machine:

"SETUP'. Pushing this button gives access to several choices (Figure 3) Choose the 'TRAY CHOICE' button, to select the tray model you are sealing. (Underneath the packaging tray is a number that starts with 4 digits. These four digits correspond to the choices available.)

Choose the number that corresponds to your tray. i.e. If you are using a 2227-1E tray, your tray selection will be 2227. (Figure 4)

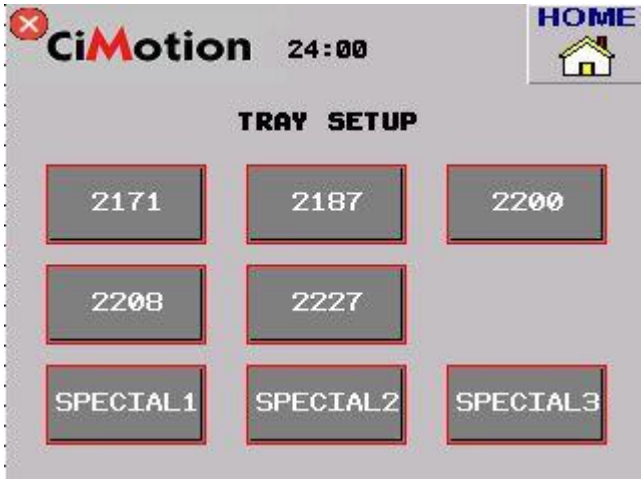


Figure 4

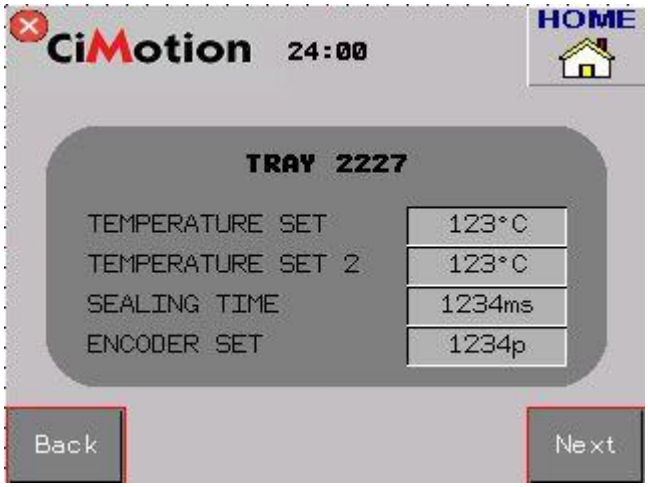


Figure 5

5.4 Tray choice parameters
There are preset parameters for each tray choice. If you decide to alter these choices, just touch the tray button, and adjust the temperature setting, seal duration, scrap film rewind length (encoder set)
(Figure 5)
Push the 'Back" button to return to the main menu.

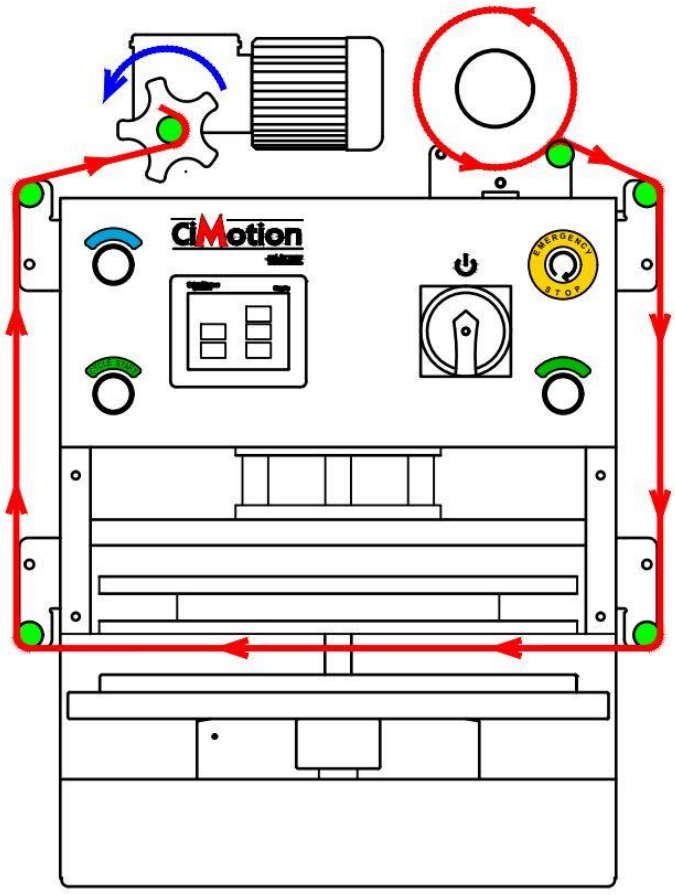
5.5 Temperature display. The HMI displays the 'set temperature' and 'sensor temperature' (actual temperature) in Celsius..
(Figure 3) When powering up the machine, wait until the sensor temperature (actual temperature) reaches the 'set temperature' to insure a proper seal.
If your mould is capable of sealing 1 tray at a time, one 'sensor temperature' is shown, but if your mould is capable of sealing 2 trays at a time, 2 'sensor temperatures' will be shown.

5.6 Gas flush option. If you choose to use the gas flush option, depress the 'Gas" button. The writing will turn from red to green. To the left of this button, you will see the time that the gas will flow in seconds. This can be altered by touching the time button. Generally a time of 8 seconds or longer is suggested.

5.7 Film Loading. Place the roll of film between the two rollers on top of the machine, unwinding from the bottom of the film roll. Adjust the white plastic roll guides to center the film roll on the holder rolls.
When threading the film, be careful not to touch the upper mould as it will be hot.
Follow the pictogram below to properly load the film.
*n.b. Rotate the table to its mid position to facilitate easy film threading.

Once the film is fed through the machine, wrap the end of the film counter clockwise on the film take-up rod. While holding the film, push the scrap rewind button to start the rewind.

Feeding the film:



5.8 Removing scrap film.

To remove the scrap film from the film rewinder **(Item 6 – Fig. 2)** loosen the black knob on the end of the rewind shaft and pull the knob and bar assembly straight out. Once the bar is removed, the film should slide off of the rewind shaft easily.

To replace the rod, align the bar to the groove on the rewind shaft and tighten the black knob.

Chapter 6. USE OF THE MACHINE

6.1 Start up

These are the procedures to follow in order to put the CiMotion Gas Flush into operation:

a. Ensure that the air supply is turned on and connected **(item 7- Fig.2)**
b. Turn “ON” main power switch **(1- Fig.2)**.
c. Check that the tray selection is correct and that the temperature setting is as needed. This is usually between 110 degrees C (for compostable trays) and 175 degrees C (for CPET trays). Allow the machine to reach operating temperature.
d. Thread film into machine. Be careful no to touch the upper mould as it will be hot.
e. Load trays into rotating table and rotate the table.
f. Push the 2 ‘start cycle’ buttons at the same time. While the machine is working, remove the already sealed tray and place a new tray in the rotating table.

6.2 Shut Down

The following procedure should be followed when turning off the CiMotion Gas Flush:

a. Remove all trays from the machine..
b. Turn off the main power switch.
c. Allow the machine to cool down for 30 minutes before turning off the compressed air.

6.3 Troubleshooting and Possible Remedies

Problem	Symptom	Check
Machine Does Not Turn on	When the Power Switch is Turned ON the HMI and controller does not initialize or nothing turns on.	• Machine is not plugged in • Check that the Emergency Button is not engaged • There is no compressed air present • Check that the clear front access panel is installed. • Check Fuses
Machine will not seal a tray	When the machine is on, the mould does not seal the tray.	• Check steps above • Verify that both 'start cycle' buttons are being depressed at the same time and held long enough to lower the upper mould all the way down.
Film does not seal to tray	Film is installed backwards	• Remove and reverse film roll
	Pressure is not set high enough	• Increase compressed air pressure at the regulator. Suggested 90 p.s.i.
	Tray is dirty or soiled	• Clean tray edge
	Drum does not get hot	• Temperature controller set too low • Temperature controller defective • Temperature relay defective • Check fuses • Mould heater defective • Defective thermocouple
Film Melts or the trays become distorted	Sealing temperature is too high	• Check that the temperature is correctly set. • Sealing time is too long. Lower time setting.
Material Problems	Film does not lie flat on tray	• Film is wrinkled on the infeed side. • Silicone damaged on pallets • Product in trays extends above tray sealing flange

Chapter 7. REPLACING OR REMOVING MOULDS

7.1 Removing or Replacing the moulds

To **remove** the moulds for regular cleaning or to replace the moulds, obey the following instructions.

1) Remove the clear plastic front cover **(Item 10 – Fig. 2)** to expose the upper mould.

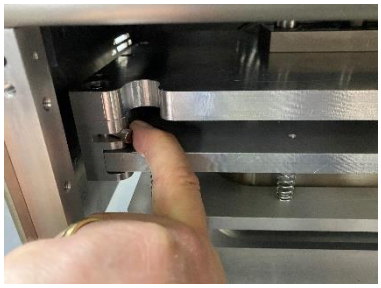
NOTE: The machine should have compressed air supplied to it as the mould cannot be removed if the compressed air is off.

When the clear plastic front cover is removed, the machine goes into the Emergency Stop mode and the machine will not run if the clear plastic front cover is not re-installed.

Caution: proceeding past this point…take note. The mould may be very hot and caution should be exercised if working around the upper mould. It is best if the mould is allowed to cool before removing.

** N.B. Use gloves to protect you hands from the cutting blades in the mould.
**If the mould is hot, use heat resistant gloves to remove the upper mould.

2) Rotate the 2 locking mechanisms on each side of the mould.



3) Pull the upper mould towards you to slide it out of the machine. Be careful not to drop the mould as the Teflon covered heating plate and the knives could be damaged.

4) Set the mould down on a protective surface so as not to damage the knives.
**If the mould is hot, be sure the protective surface can withstand the heat.

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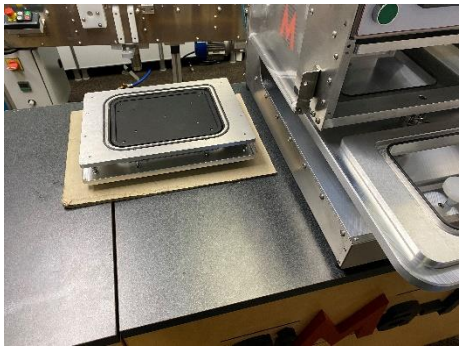
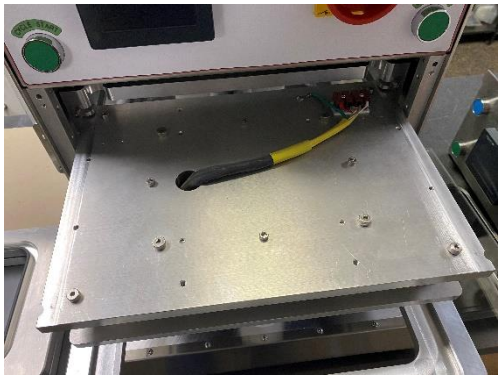


5) Remove the two lower moulds in the rotating table by removing the socket-head cap screws using 3/16” Allen key.

7.2 Mould installation

To **replace** the moulds, obey the following instructions.

1) Insert the two lower moulds in the rotating table and install the socket-head cap screws using 3/16" Allen key.
2) Insert the mould into the machine with the brown, electrical connector towards the rear of the mould. Push the mould as far back as it can go.



3) Rotate the 2 locking mechanisms on each side of the mould to lock the mould in place.
4) Replace the clear plastic front cover **(Item 10 – Fig. 2)** to protect the upper mould.

** Always double check that the upper and lower moulds are the same type. If wrong sets are installed, the upper mould could be permanently damaged if the machine is operated.

Note that the sealing plate has sharp cutting blades. Therefore, protect your hands with gloves that are suited to protect against cuts and abrasions.

Chapter 8. MAINTENANCE

8.1 Precautions for maintenance operations

WARNING:

The Food and Drug Administration (FDA) has issued directives prohibiting the use of oil and lubricants containing polychlorinated biphenyls (PCB) in, around or on food processing equipment.

Before servicing the machine, turn OFF the main switch and remove the plug. Before removing the front clear plastic cover **(Item 10 - Fig. 2)** do not forget the following: if the machine was powered off at least 1 hour ago, the upper mould may still be hot enough to represent a burning danger.

8.2 Cleaning of Moulds

It is not normal to have to clean the Upper or lower moulds. There should always be a tray between the CiMatic and any food. However, in the unlikely event that the moulds get soiled it is possible to wipe off this with a damp non-abrasive cloth.

In worse case scenario it is possible to remove the Sealing Pallets from the CiMatic and clean in a commercial dishwasher.

8.3 Certificate of Guarantee

The Guarantee runs for 12 months after the installation date under the conditions set forth in the instruction manual.

8.4 Guarantee conditions

The guarantee runs for 12 months and goes into force on the installation date of the machine. The guarantee covers free replacement or repair of any parts due to defects arising from faulty material. The repairs or replacement are usually carried out at the manufacturers, with transport or workmanship at buyer's charge. If the repair or replacement is carried out at the buyer's place, he shall bear the travelling, transfer and workmanship charges. Work under guarantee can be carried out exclusively by the manufacturer or by an authorized dealer. In order to be entitled to repairs under the guarantee, the faulty part must be sent for repair or replacement to the manufacturer or his authorized dealer. The return of such repaired or replaced part will be considered to be the performance of the guarantee.

The guarantee is voided:

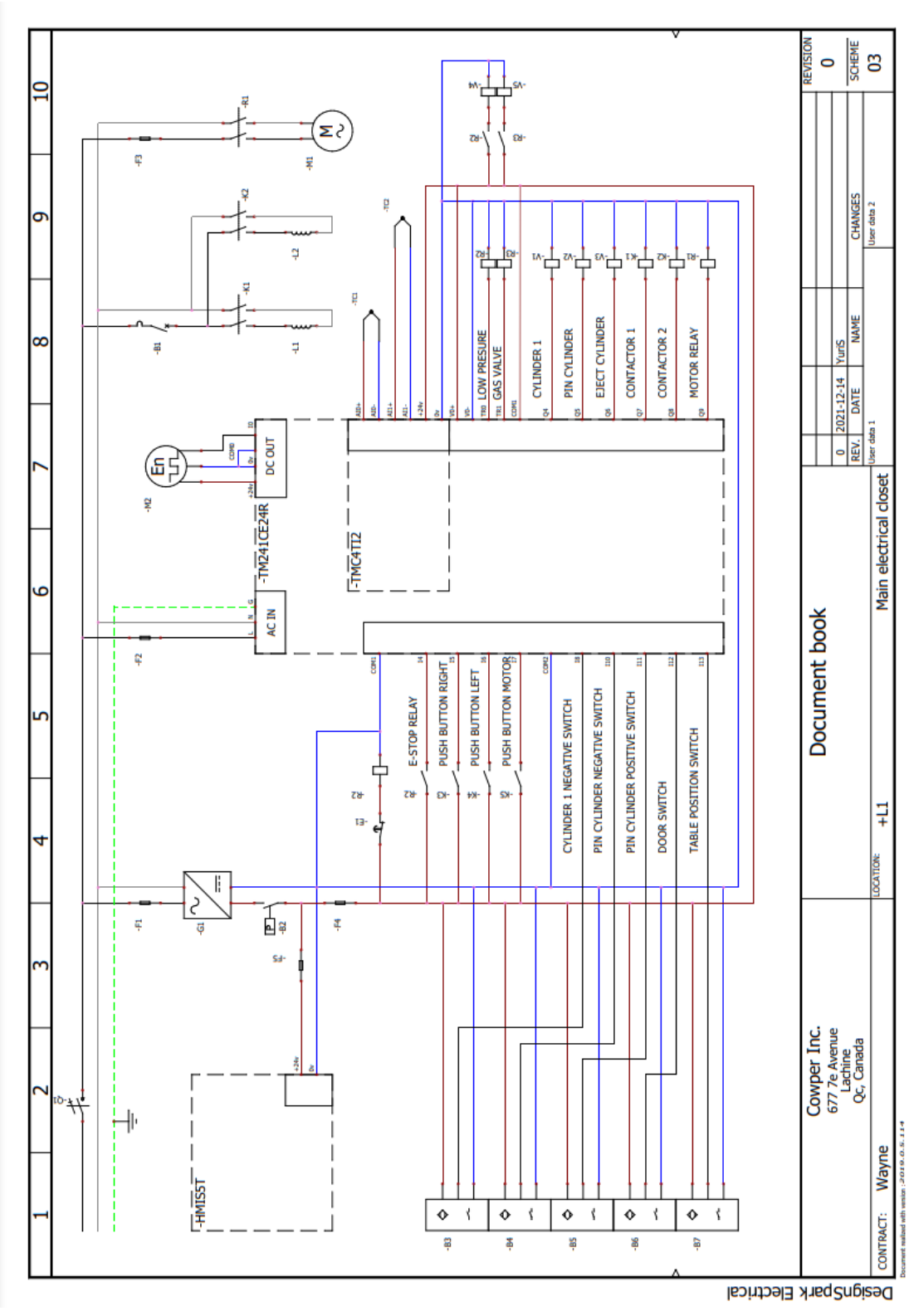
1. in case of inappropriate installation, power supply, misuse and mishandling by unauthorized persons;
2. in case of changes made to the machine without prior agreement in writing by the manufacturers;
3. if the machine is no longer the property of the first buyer.

CiMa-Pak Corporation is legally entitled to decline any responsibility for damage to persons or things in case of inappropriate installation or connection to the power mains or omission of connection to earth or in case of any mishandling of the machine. The manufacturers undertake to carry out any variations and changes made necessary by technical and operating requirements.

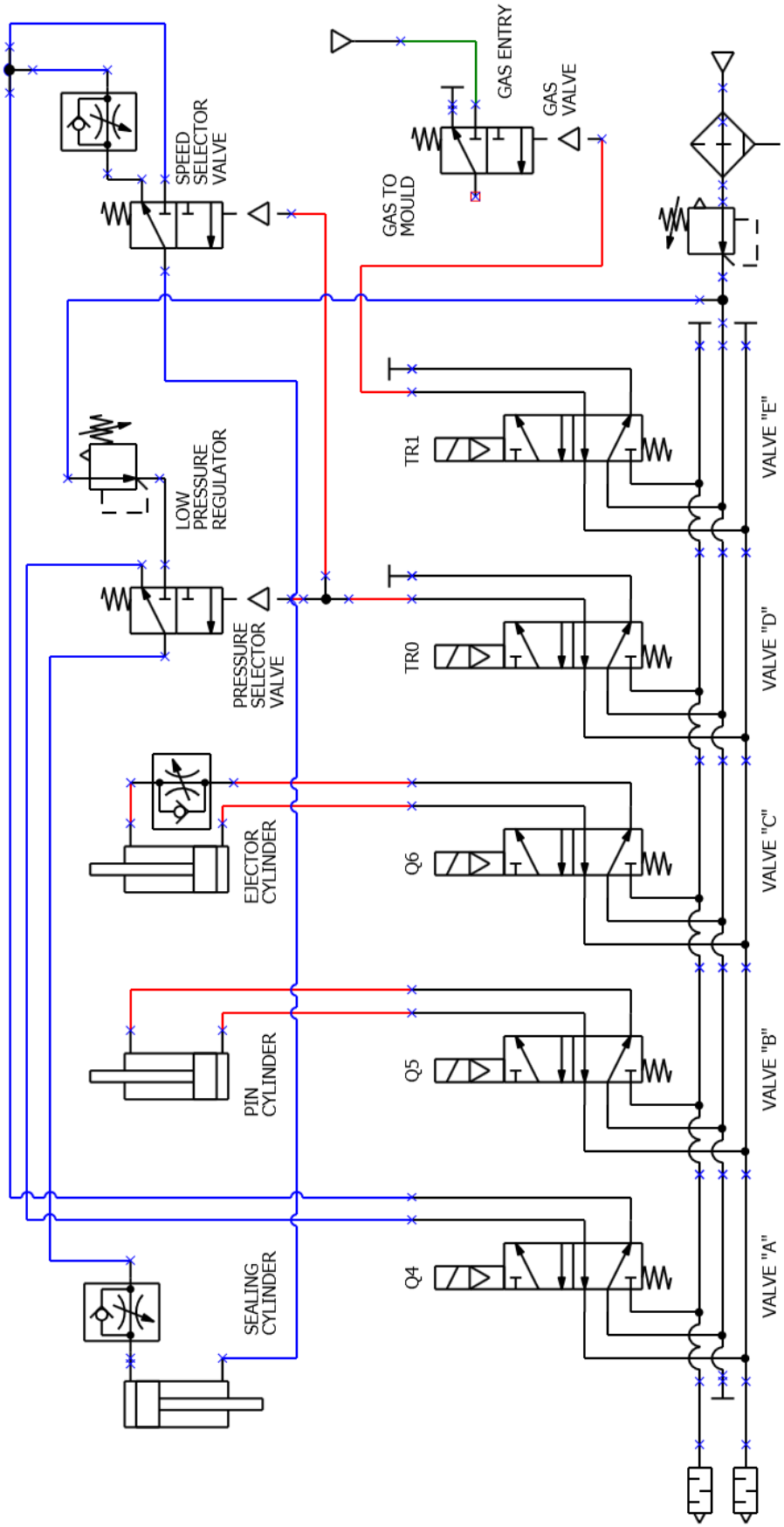
Such guarantee does not apply to wearable or disposable items such as but not limited to heating elements, cutting knives, bearings and other such items.

LIMITATION: In no event shall the MANUFACTURER have any liability for direct damages in excess of the contract price of the goods in respect of which claim is made, and further in no event shall the MANUFACTURER Have any liability for loss of use, loss of profits or for any indirect, incidental or consequential damages of any kind.

8.5 Electrical Schematic



8.6 Pneumatic Schematic



Chapter 9. ENVIRONMENTAL RULES

9.1 Waste and residuals

Disposal of all lubricating oils and greases which are replaced at regular intervals (oil for reduction units, hydraulic oil, surplus grease, etc.). Procedure: according to the rules in force in the country where the machine is installed by charging the “Body for the disposal of exhausted lubricating oils and greases” with the disposal.

9.2 Machine dismantling

General considerations: The machinery shall be dismantled in compliance with the rules in force for environmental protection. Procedure To dismantle the machinery, “disassemble” it and group its components by type of product. Dismantling is carried out according to the manufacturing criteria of every single group of components. We may define a first subdivision of the machinery according to the category of components: - electric, pneumatic, hydraulic, constructive / mechanical

Classification in consideration of the wide range of components used for manufacturing the machinery, it is necessary to take into account some fundamental concepts for the selection and disposal of every single element. The first essential concept consists in subdividing all pieces and components made of steel, aluminium, etc. and in transporting them to the “collection centres” where they are either recycled or remelted, where possible. Select whatever may be made of plastics, plastic fibres and by-products. Provide for the collection of any lubrication oil which may have been used for the operation of the machine. Collection shall occur by type of oil. Mixing the products is not allowed. Transport what has been selected to the “collection centres” which will provide for their disposal. N.B. It is absolutely forbidden to provide for the disposal of any oil which may have been used for the industry in the environment or in the sewerage system. This rule shall be observed as a normal behavioural rule for environmental protection. It is generally possible to recycle electric / electronic equipment, motors, reduction units, etc., provided that a reliability check / test is duly carried out on its components and that they comply with the electromagnetic compatibility rules in force. If one of the requirements above should not be fulfilled, act as specified by the previous points.

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