CiMatic II Tray Sealer

Operator's Manual

Carefully read this booklet before installing and using the machine

CiMa-Pak

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1.1 Preface

You have bought a machine with exceptional features and performance and we wish to thank you for your confidence.
The CiMatic II Tray Sealer system is unique and well-established and the validity of the technological concepts as well as the quality of the components and materials used in the production and test process are the best guarantee for proper operation and reliability over time.

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 Meaning and use of the pictograms

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

Mind your hands

Moving parts can crush or cut

Pinch Points Present

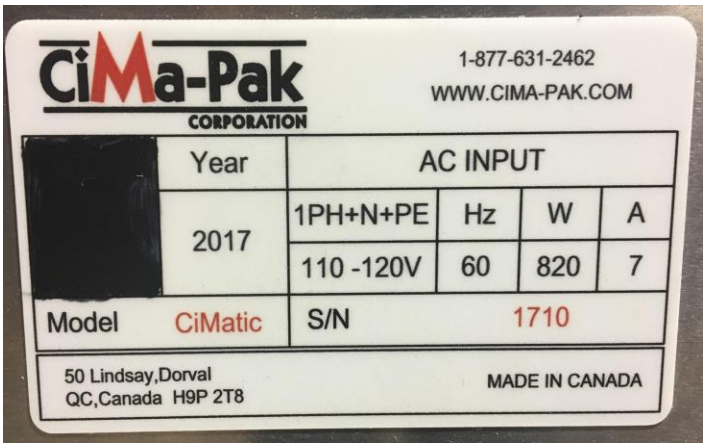
Pinch Point, keep hands clear during operation

Heated/Hot Surface Present

1.3 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 at the back-left side of the machine when looking from the front.

Figure 1



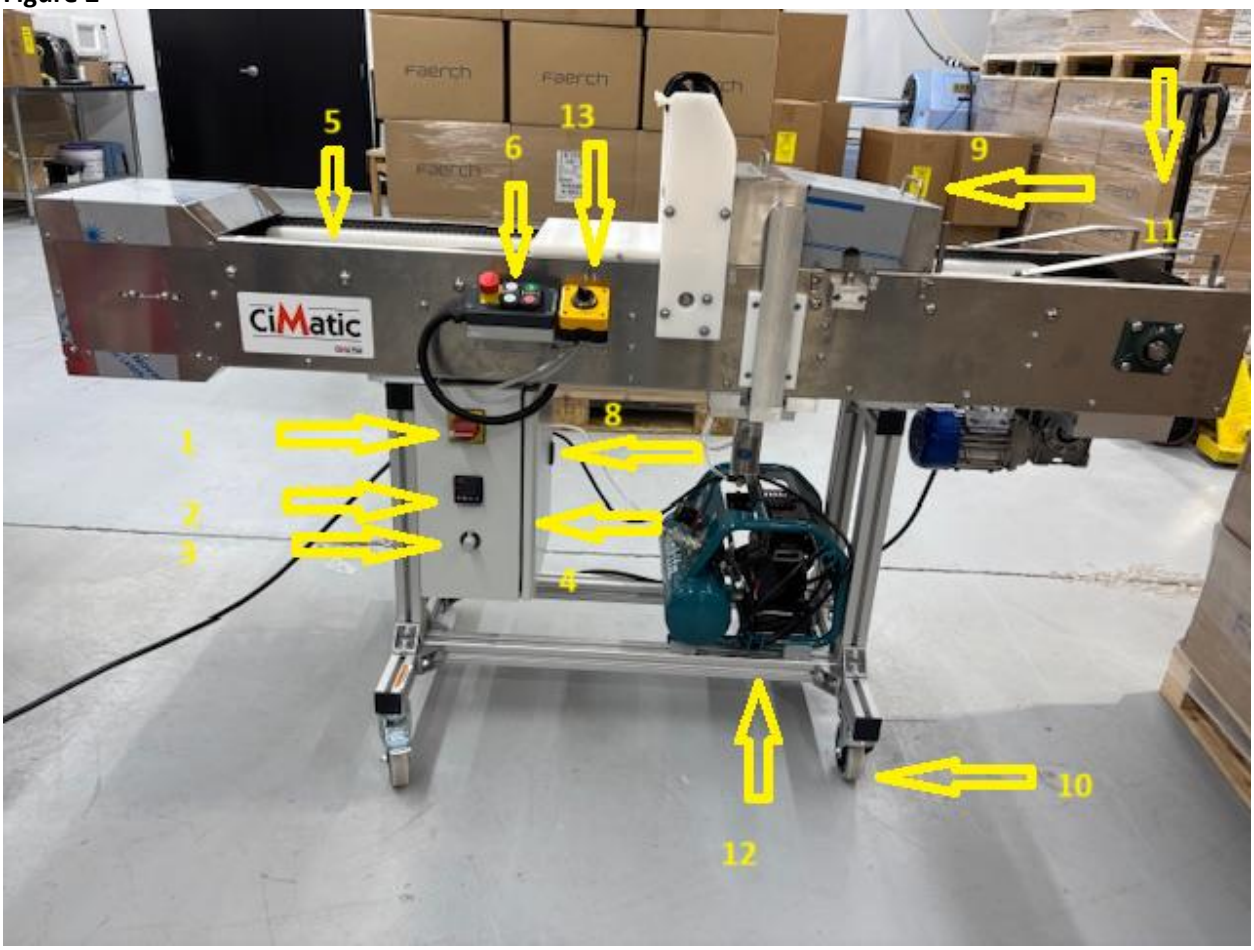
2.1 Description of the machine

"CiMatic II" is an automatic horizontal tray sealer. It may be used by inserting the filled trays manually into the pallets which proceeds to move the trays under the seal roller and through the cutting system (Always be careful around any production equipment).

Legend Figure 2

1 Main switch
2 Temperature controller for rotary sealer
3 Speed controller for conveyor
4 Control panel
5 Tray pallets
6 Operator panel (See insert)
7 Unwind film area
8 Air Connection
9 Cover - Rotary Sealer and cutter
10 Locking casters
11 Exit plate: If the plate was placed on the top of the machine for transport, please mount it to the end of the machine where the trays exit. Plexi glass cover
12 Compressor
13 Gas Switch

Figure 2



Chapter 2. DESCRIPTION AND TECHNICAL DATA

Legend Figure 3

12 Emergency STOP

13 Direction – Forward/Backwards

14 Run/Stop

15 Gas

Figure 3

Operation cycle (Figure 1 and 2)

The filled trays are placed into the pallets, the run button is pushed and then the conveyor will introduce the trays into the rotary sealer, through the cutter as well as unload them through the opening at the exit of the machine.

2.2 Technical data

- Voltage and frequency: 110-120V / 60 Hz
- Installed power: 820 watt
- Input: 7-9 Amps (with optional air compressor)
- Air consumption: 2 CFM at 45 PSI
- Maximum production: 30-35 pieces (2171 Series)
- Size of the trays to be sealed: minimum 2171 Series, maximum 2227 Series
- Maximum reel width: 9.5” (245 mm)
- Size of the machine: 82” x 24” x 48” (2,082 x 610 x 1,220 mm)

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 cases, doors or walls in unsafe conditions may cause the operator maintenance person to come into contact with moving members, hot parts 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 CiMatic II is built with several OPERATOR SAFETY COVERS AND DOORS. **NEVER OPERATE THE CIMATIC II WITH COVERS REMOVED OR DOOR(S) LEFT OPEN!!!**

The rotary sealing head can reach a high temperature and should be considered as dangerous. Never touch the rotary sealing head when hot. Pay great attention when you are working in the proximity of the rotary sealing head 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 is a film cutting blade present. Operating the equipment with the protective cover removed can result in a potential risk of serious consequence. **NEVER OPERATE THE CIMATIC II WITH COVER REMOVED!!!**

4.1 Transportation and handling

Weight of the machine: Approximately 200 lbs..

To lift the machine, use a lift truck having an adequate capacity (make sure the machine is properly balanced and pay attention to the screws/bolts protruding from the lower part of the body). As an alternative provide for slinging and use a hoist complete with ropes which are properly dimensioned and equipped with hooks at their end.

Tension the ropes slowly. Make sure they will cause no damage. Lift the machine with the greatest care. When placing it, make sure it is levelled on the floor and installed in a dry room free of any inflammable material, gas or explosive.

The machine is supplied with locking casters. Never use the CiMatic II without first locking the wheels. To do so may cause damage.

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. There is a toolbox provided with this system in order to facilitate this check.

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 CiMatic II, make sure the main voltage will correspond to the voltage specified by the label on the machine and that grounding will comply with the safety rules in force. In case of doubt about the main voltage, contact the local electric energy supplier.

Compressed air
Connect the compressed air connection **(Item 8 - Fig. 2)** located in the left side of the control panel. Use an air hose having a minimum diameter of 1/4” with the proper quick connection fitting.

Gas
Connect the gas connection **(Item 8 - Fig. 2)** located on the left side of the control panel labelled Gas in. Use an air hose having a minimum diameter of 1/4” with the proper quick connection fitting. Then connect gas out **(Item 8 - Fig. 2)** to the gas plate using the same size air hose and fitting.

Chapter 5. OPERATING INSTRUCTIONS

5.1 Locking Caster

Once you have located the CiMatic II in its operating location lock the casters before operating **(10 - Fig. 2)**

5.2 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.

5.3 Temperature Controller

The temperature of the sealing drum is controlled by the temperature controller **(2-Fig. 2)**. There is a thermocouple internally mounted that accurately maintains the temperature of the seal drum. To change the temperature setting:

1) Press
2) Press the or button to the desired temperature (factory preset is 160 degrees C).
3) Press to register the temperature value.

At start-up, seal drum will reach the correct operating temperature in about 20-30 minutes.
The CiMatic II will not operate if the temperature is below the low preset temperature.

5.4 Drive System

The Directional buttons (**Fig.3**) " indicates the direction of the conveyor. When the directional button is pushed backwards " " the conveyor will move backwards. However, the conveyor will stop the moment the button is released.

When the directional button is pushed forward " " the conveyor will start at the predetermined speed. The speed is set through the potentiometer.

5.5 Speed Controller

The conveyor speed is adjusted through the speed controller (**3 -Fig.2**). Clockwise increases the speed while counter clockwise decreases speed. Remember, that if you increase the speed you may need to increase the temperature to compensate for the time that the tray remains under the sealing head.

5.6 Master Roll

To install a new roll please follow these instructions:

1) Lift unwind roll, with black plastic roll caps, from the chucks
2) Unscrew the collar from **one** side
3) Remove the black plastic roll caps and insert them in the new roll. Checking to make sure that the film is unwinding in the correct direction. The inside of the roll is normally the sealing side.
4) Lower the unwind roll back into the chuck
5) Once placed inside the chucks, tighten the white plastic bolts to the appropriate tension desired
6) Roll out film and place it directly inside a frame then push the gas plate over it. This will lock it in place then advance the frame which will pull the film forward.
   If you have done the above correctly the film should line up correctly with the trays. If not, loosen the collars and recenter the film.

5.7 Film loading

The film should be threaded as shown in **Figure 4** below:

Figure 4.

- You can also adjust the tension by tightening or loosening the two plastic thumbscrews Located on top of each roll holder.

6.1 Start up

These are the procedures to follow in order to put the CiMatic II into operation:

a. Turn “ON” main power switch **(Fig.2)**.
b. Ensure that the air supply is turned on and connected **(8- Fig.2)**
c. Check that the seal drum temperature is properly set **(2- Fig.2)**
d. Allow seal drum to reach operating temperature. **CiMatic will not run if temperature is not equal to pre-set temperature**
e. Thread film into machine **(Fig.4)**. Pass the film between the film idler roll and underneath the gas plate with the film wedged inside a frame to get it started.
f. Turn gas on using main gas switch **(Figure 3)**
g. Jog conveyor forward **(Fig.3)** until the film is “roughly” located under the sealing head.
h. Load trays into the pallets **(5- Fig.2)**
i. Push the start button **(Fig.3)**
j. After a few trays the film will run without wrinkles.
k. Continue feeding trays into the pallets

6.2 Shut Down

The following procedure should be followed when turning off the CiMatic II:

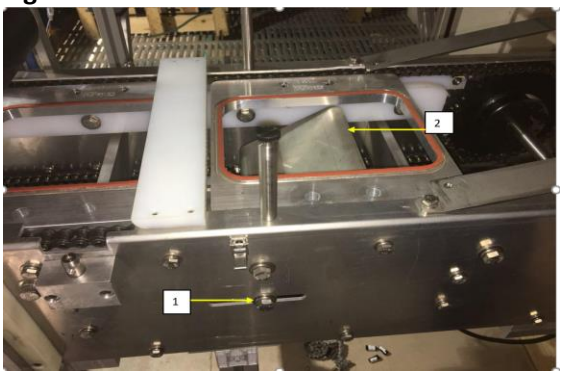
a. Stop placing trays into tray holders.
b. Let machine cycle until the last tray is ejected onto the discharge rails.
c. Press stop button **(Fig.3)**
d. Turn main power switch to “OFF” **(1- Fig.2)**.

6.3 Tray Discharge

The exit ramp can be adjusted to smoothly lift the trays out of the pallet and transferred to the upper ramps. Changing from one tray style to another may necessitate the exit ramp be modified. The trays will line up on the upper ramps and must be removed by the operator.

After loosening the bolt **(1 - Fig.5)** you then can adjust the exit ramp **(2 - Fig.5)**

Figure 5.



6.4 Changing Pallet Styles:

To change the pallet style (This should only be done by a factory trained operator) you need to follow the steps below:

1) Stop the CiMatic.

2) Remove the cover **(9-Fig.2)** by unlatching 4 clasps on both sides of the cover.

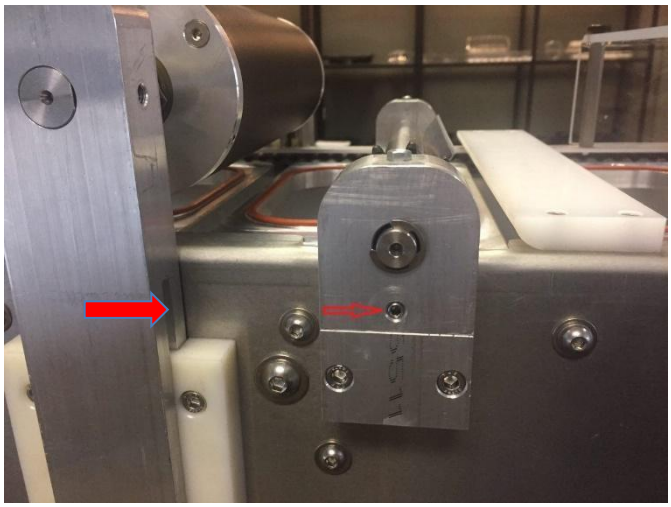
3) Remove the knife set integrated with the current pallet style.

CAUTION:

Great care should be taken when handling the knives as they are **extremely sharp**.

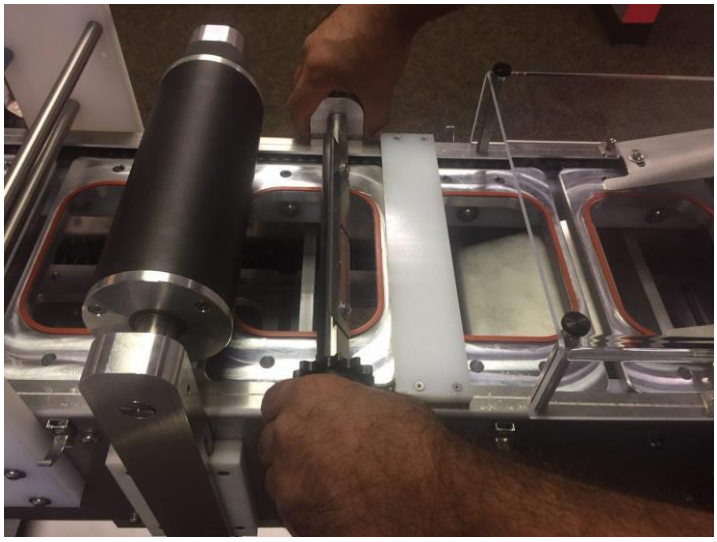
Handle knives with leather gloves or use similar protection for the hands.

- Completely loosen the setscrews located on each knife bearing (use 3mm size hex key in your toolbox) one setscrew per side.



6.4 Changing Pallet Styles: continued

- Pull knife module straight up as shown below (pull each side at the same time).

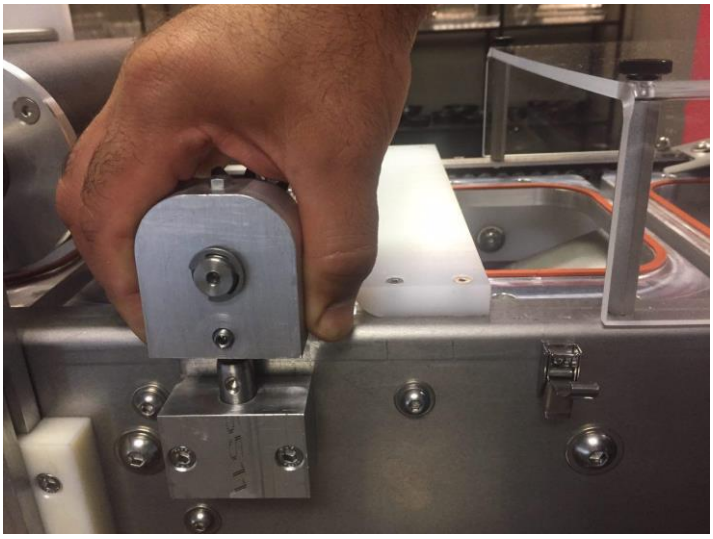


4) Remove the pallets as described in Chapter 6.6 which follows.

5) Place the new pallet set as described in Chapter 6.6 which follows.

6) The new knife set is positioned as follows:

- Slowly lower the knife set into guides. It is imperative that the blade lays in the space between two pallets. Damage to the knife or the pallets can happen if the knife sprocket tooth does not mesh with the chain.
- You can jog the machine at the lowest speed to make sure the knife doesn't hit the plates when it's rotating forward and backward. Also, make sure the knife bearings have sat well on the blocks with the locating pin.
- Tighten the set screw on both side of the new knife set bearings. (use 3mm hex socket key)



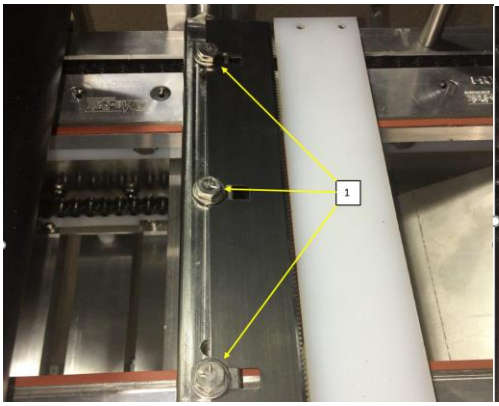
6.5 Replacing the Knife Blade:

1) Follow all instructions on preparing the CiMatic II for service which can be found in Section 3.1 General Precautions above
2) The knife has to be removed first as follows:

> **CAUTION:**
>
> Great care should be taken when handling the knives as they are **extremely sharp**.
>
> Handle knives with leather gloves or use similar protection for the hands.

a. Remove the cover **(9-Fig.2)** by unlatching 4 clasps on both sides of the cover.
b. Jog the pallets and stop when the knife blade is horizontally permitting you to easily loosen the 3 bolts (7/16ths) **(1-Fig 6)** holding the knife. The bolts do not need to be unscrewed completely.
c. Replace the knife with the new one, make sure to put the new knife the same direction and distance as the old one was.
d. Tighten the bolts.
e. Now jog **(12-Fig.3)** the CiMatic II to make sure that the blade fits properly between the pallets **(1-Fig 7)**
f. Replace cover

Figure 6 **Figure 7**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6.6 Removing the Pallets:

From time to time it may become necessary to remove the pallets. Normally this is not a requirement unless silicone needs to be replaced.

It is imperative that the pallets be returned to the exact position it was removed from otherwise, damage to the knife or the pallets can happen.

The pallet can be removed as follows:

a. Jog (**12 - Fig.3**) to the pallet unloading sector (**Figure 8**)
b. Lift pallet and pull it towards the front of the CiMatic II (**Figure 9**) so that the two pins (**Figure 10**) at the rear of the pallet clear the chain. You may have to push the rear chain a little with your thumb
c. Angle the pallet up from the rear and then remove from the front chain
d. Replacement is the opposite of the above remembering that the space between the front and back pallets has to be the same.
e. The last check is to make sure that the chain is sitting properly on the white plastic guides (front and back)

Figure 8

Figure 9

Figure 10

6.7 Pressure Setting Rotary Sealing Head and Gas pressure

Pressure can be applied to the Rotary Sealing Head by increasing the value on the air regulator which is located on the left side of the control panel (**8 - Fig.2**).

However, increase the pressure carefully as the Rotary Sealing head is a Teflon coated part and can be damaged if there is too much pressure. Maximum pressure should be no more than 45 PSI.

The gas pressure can only be set on the gas tank regulator which is completely separate from the Cimatic. Depending on the item being packaged please keep the gas pressure between 20-40 PSI.

6.8 Troubleshooting and Possible Remedies

Problem	Symptom	Check
Machine Does Not Turn on	When the Power Switch is Turned ON the temperature controller does not initialize.	● Machine is not plugged in ● Check that the Emergency Button is not engaged ● Check Fuses
Machine will not Run	When the Run Button is pushed the CiMatic II does not run	● Check step above ● The temperature has not been reached ● There is no compressed air present ● Speed dial is set too low ● Drive chain is broken or off of the drive sprocket ● Chain is jammed ● The Rotary Heat Seal drum is jammed down ● Motor drive shows an error (OLF)
Film does not seal to tray	Film is installed backwards	● Remove and reverse film roll
	Pressure is not set high enough	● Increase pressure at the regulator
	Speed is too high	● Turn down the speed
	Drum does not get hot	● Temperature controller set too low ● Temperature controller defective ● Temperature relay defective ● Check fuses ● Drum heater defective ● Defective thermocouple
Film Melts or the trays become distorted	Sealing temperature is too high	● Check that the temperature is correctly set. ● Check that the conveyor speed is not set too low ● Too much film tension
Material Problems	Film does not lie flat on tray	● Too much pressure on Rotary Sealing Head. Pressure should never exceed 45 PSI ● Rotary Sealing Head not being allowed to lower properly. Check and clean out possible debris ● Silicone damaged on pallets

		● Product in trays extends above tray sealing flange

6.8 Troubleshooting and Possible Remedies

		● Dirty seal drum surface, clean as described in Maintenance section ● Film is wrinkled on film roll ● film tension correctly set
	Poor quality seals	● Film and tray material not compatible. The CiMatic II has been engineered to use the CiMa-Pak Trays in conjunction with the CiMa-Pak film. ● Reduce machine speed

7.1 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 cover **(9 - Fig. 2)** do not forget the following: if the machine was powered off at least 1 hour ago, the rotary sealing head may still be hot enough to represent a burning danger.

7.2 Chain Tension and Regular Maintenance

Check as follows at regular intervals: - the tension of the conveyor chain off of the white plastic chain guides should be no more than 0.500” - 0.750” at the middle of the CiMatic II

To tension the chain follow these instructions:

- Remove end cover (1- Fig. 11)
- Loosen up the two carriage bracket screws (2 - Fig. 11) on each side of the machine
- Loosen two locking nuts (1 - Fig. 12) and turn the nut (2 - Fig. 12) clockwise to tension the chain. It is imperative that both sides are done the same amount. Measure to be sure…..
- Tighten the two locking nuts (1 - Fig. 12)
- Tighten the two carriage bracket screws (2 - Fig. 11) on each side of the machine
- Replace cover

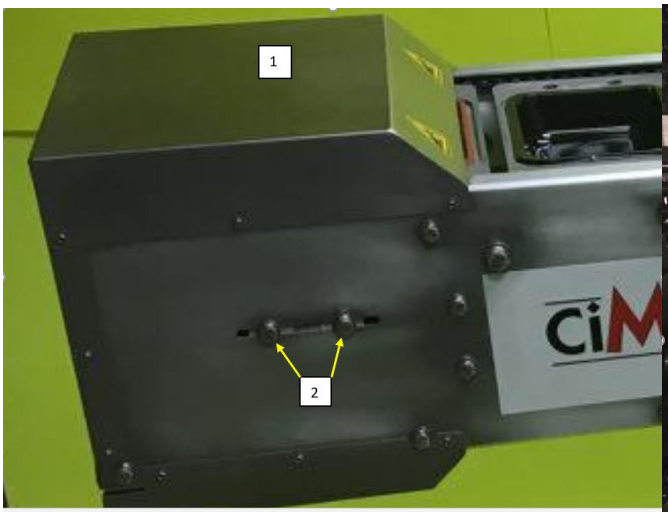


Figure 11

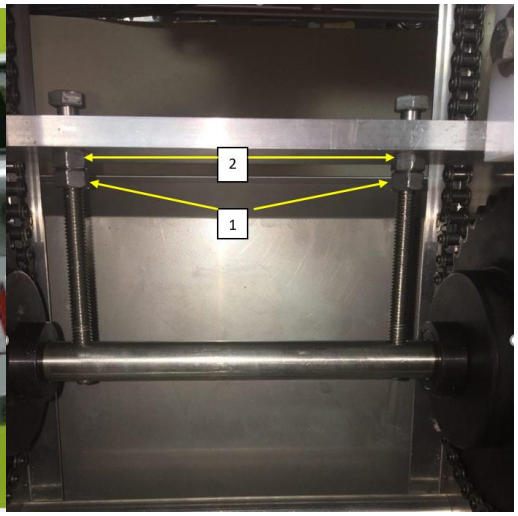


Figure 12

7.2 Chain tension and regular maintenance

Do the following maintenance at the intervals shown. It has been proven that by maintaining your equipment on a regular schedule you will reduce production downtime as well as lower service expenditures. This equipment is not considered a washdown system nor at any time should there be direct contact between food and the CiMatic. There should always be a tray and film located between any food and this system.

On a **daily** basis:

- Use a cloth and an approved mild cleaner to remove any residual food which may have fallen onto the system
- Inspect the silicone on the pallets for damage
- Remove any debris
- Check overall function of system

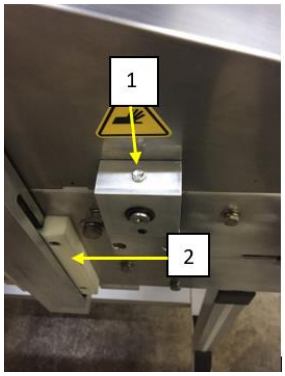
Every 40 hours (**weekly**) of operation:

- Lubricate the two drive bearings on either side of frame **(Figure 13)**
- Lubricate the rotary heat drum bearings **(Figure 14)** with the recommended grease which is a high temperature food grade lubricant.
- Lubricate the cut-off knife bearing **(1 - Fig. 15)**
- Lubricate the two heater support slides **(2 - Fig. 15)**

Figure 13

Figure 14

Figure 15



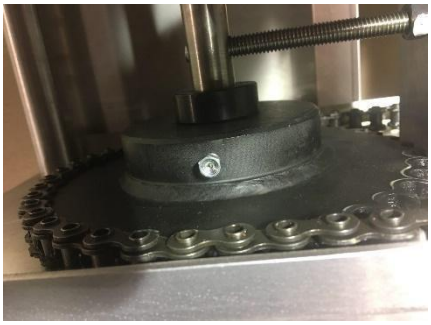
7.2 Chain tension and regular maintenance

Every two weeks:

- Lubricate the two pallet chains while system is running **(Figure 16)**
- Lubricate the bushings on the infeed end of the CiMatic II **(Figure 17)**

Figure 16

Figure 17



CAUTION:

DO NOT USE OILS OR LUBRICANTS
CONTAINING POLYCHLORINATED BIPHENYL

Recommended Lubricants:

Everywhere except the chain:

Chain lubricate:

7.3 Cleaning of Rotary Sealing Head:

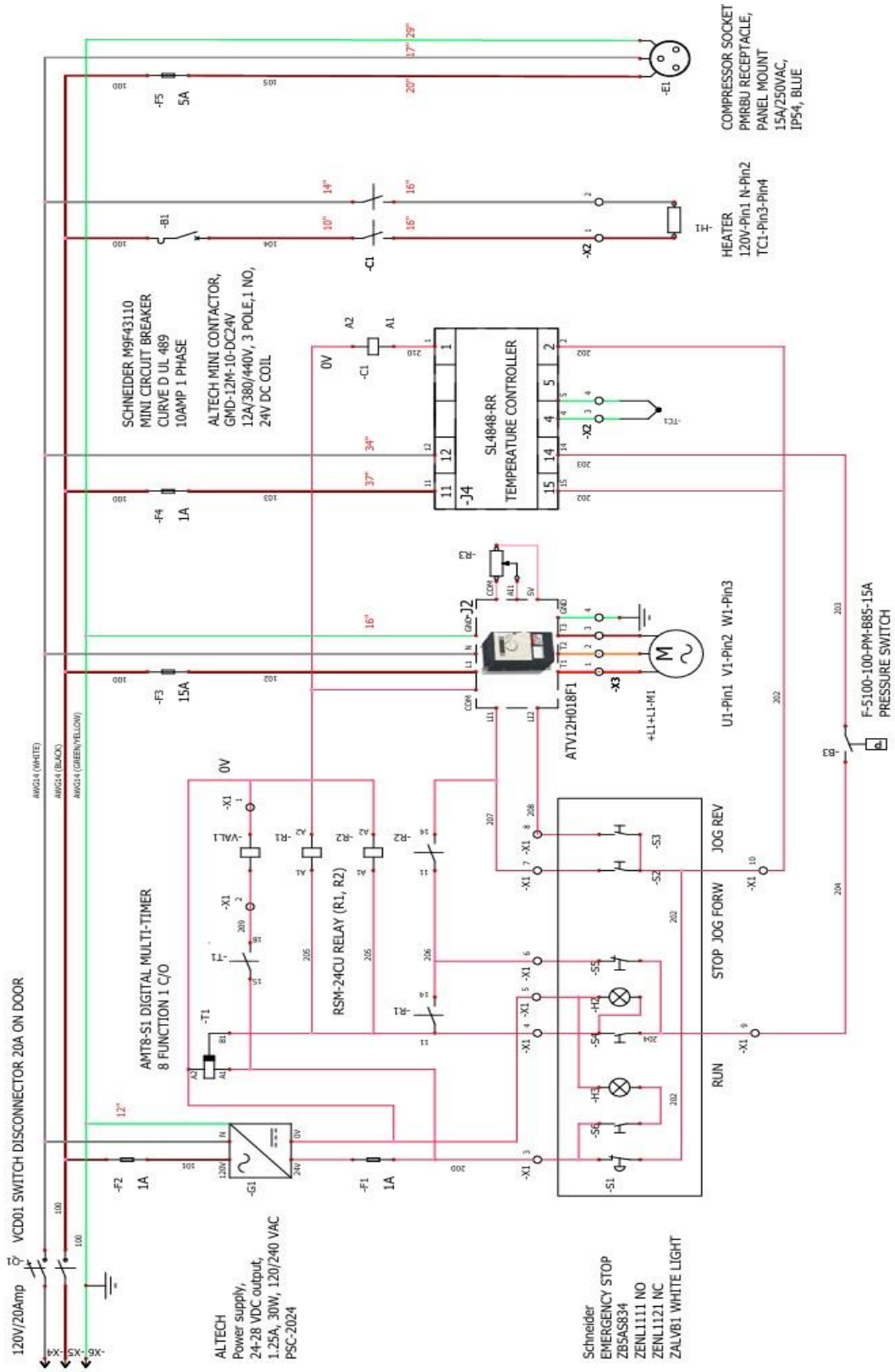
It is not normal to have to clean the Teflon Rotary Sealing Head. However, in the event that the head does get dirty it is important **NOT** to use an abrasive or any metal (razor, rough materials) when cleaning. In most instances once the Teflon Rotary Sealing Head has cooled any dirty should easily be wiped off with a damp non-abrasive cloth.

7.4 Cleaning of Sealing Pallets:

It is not normal to have to clean the Sealing Pallets. There should always be a tray between the CiMatic and any food. However, in the unlikely event that the pallets 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.

7.5 Electrical Schematic:



7.6 Fuses and Circuit Breakers:

Identification	Description	Value	Fuse type
F1	Emergency stop	1 A	CC Fuses
F2	24 V Power Supply	1.5 A	CC Fuses
F3	Motor drive	15 A	CC Fuses
F4	Temperature controller	1 A	CC Fuses
F5	Compressor Socket	5 A	CC Fuses
B1	Heater	10 A	Circuit breaker

7.7 Certificate of Guarantee

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

7.8 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.

8.1 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.

8.2 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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