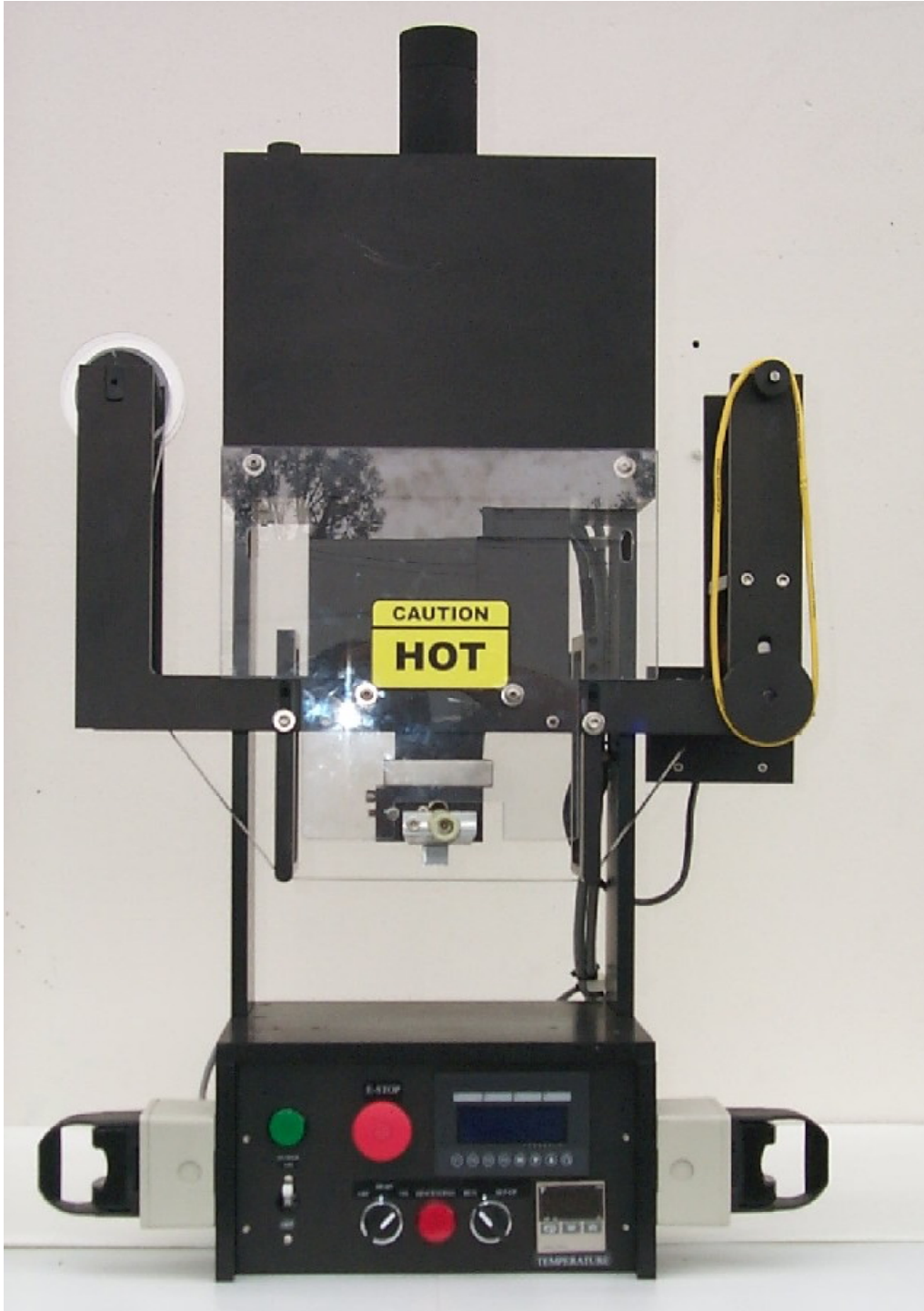


MINI STAMPER Model 12 Operations Manual



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SAFETY PRECAUTIONS READ BEFORE INSTALLING OR USING EQUIPMENT

This system has been designed to assure maximum operator safety. However, no design can completely protect against improper usage. For maximum safety and equipment protection, observe the following warnings at all times and read the instruction manually carefully before you attempt to operate the equipment.

- High voltage is present in the equipment. Disconnect the line cord before removing the cover or servicing.
- Make sure the equipment is properly grounded with a 3-prong plug. Before plugging in the equipment, test the electrical outlet for proper earth grounding.

IMPORTANT SERVICE LITERATURE

Please read carefully before operating the equipment, then forward to your service department.

The equipment supplied with this instruction manual is constructed of the finest material and the workmanship meets the highest manufacturing standards. It has been thoroughly tested and inspected before leaving the factory and when used in accordance with the procedures outlined in this manual, will provide you with many years of safe and dependable service.

Change Information Manual

We continually strive to keep up with the latest electronic developments by adding circuit and component improvements to our equipment as soon as they are developed and tested.

Sometimes, due to printing and shipping requirements, we cannot incorporate these changes immediately into printed manuals. Hence, your manual may contain new change information.

We reserve the right to make any changes in the design or construction of our equipment at any time, without incurring any obligation to make any change whatsoever in units previously delivered.

The technical data and schematics in the manual are for informational purposes only and may not reflect the current configuration being shipped from our factory. Upon formal request, complete and up to date information can be provided from the factory free of charge.

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DESCRIPTION

Introduction

This instruction manual provides descriptive information and principles of Hot Stamping. Hot Stamping uses heat, pressure and time to transfer a hot stamp foil onto a plastic part. This process is called Hot Stamping. The Hot Stamping machine consists of six components: the heating system, pneumatic system, timing control, foil feed, hot stamp die, and the nest.

1. *The heating system*

The heating system supplies heat to the hot stamp die for printing. The normal range of temperature used is between 200° F to 500° F. The temperature required per job is determined by the plastic part to be printed, the type of hot stamp die used, and the type of hot stamp foil used.

2. *The pneumatic system*

The pneumatic system produces the pressure required for hot stamping. The pneumatic pressure can be adjusted by means of the pressure regulator. The amount of pressure required for printing is determined by the size of the print, the type of die used, the temperature used, and the depth of the impression required.

3. *The timing control*

The timing controls the amount of time the plastic part is clamped for printing. The amount of time required for printing is determined by the die temperature, the amount of pressure used, the depth of impression required and type of hot stamp foil used.

4. *The foil feed assembly* (Fig 1.1)

The foil feed system feeds the hot stamp foil in the correct amount to print the plastic part.

5. *The hot stamp die* (Fig 1.1)

The hot stamp die is engraved with the imprint, which is to be printed. Hot stamp dies are made of a variety of materials depending on the hot stamping application. Some die materials are made of steel, aluminum, magnesium, and rubber.

6. *The nest* (Fig 1.1)

The nest supports and locates the plastic part for hot stamping. The nest can be made of any material as long as it can take the pressure produced by the pneumatic system and can locate the part to be printed accurately.

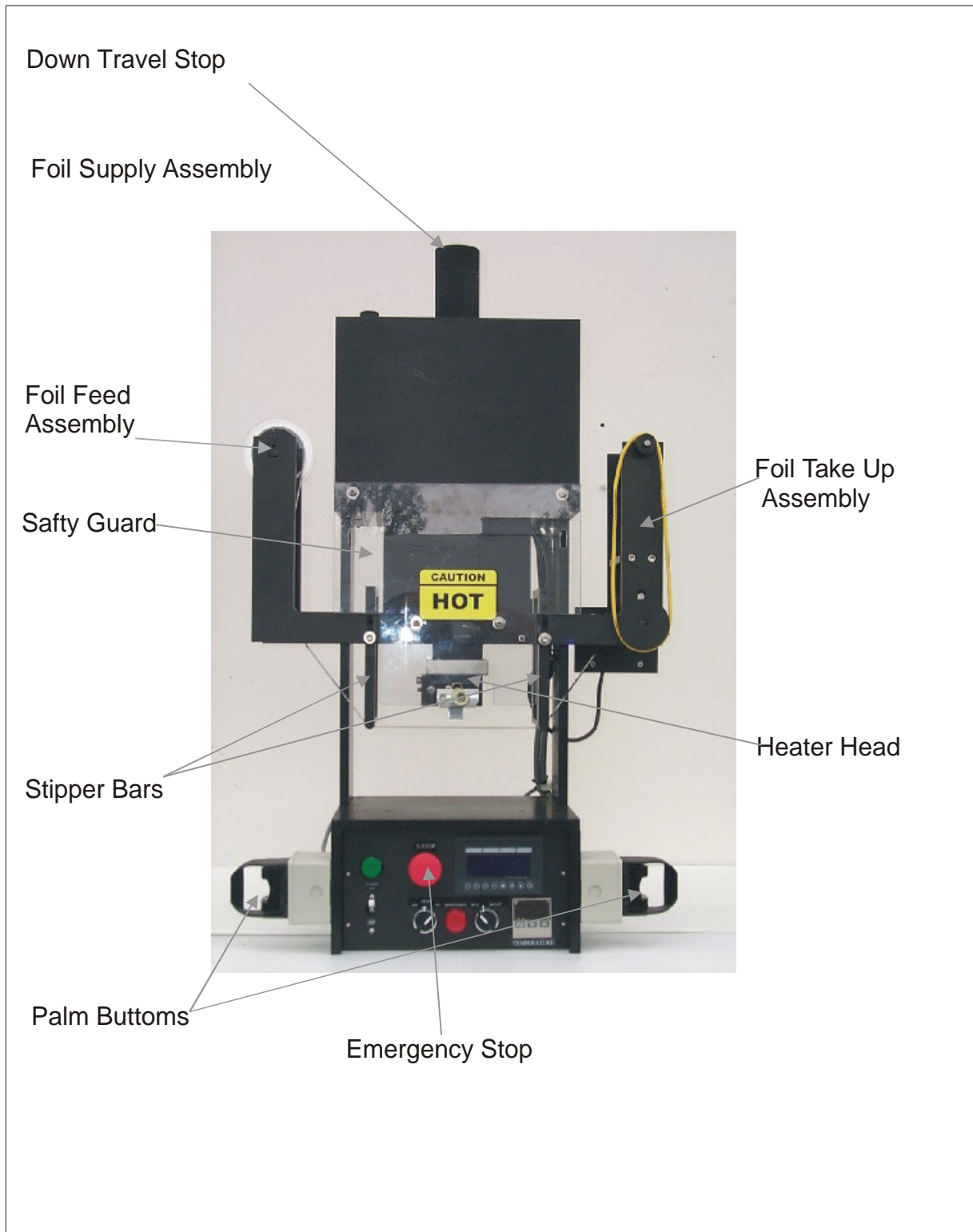


Fig 1.1

INSTALLATION SECTION 2

Inspection

After unpacking the Mini Stamper, perform a thorough visual inspection for any evidence of damage that may have occurred during shipment. Check the packing material carefully for small items before disposing of the material.

Claims for Loss or Damage

The Mini Stamper was thoroughly inspected and carefully packed before leaving the factory. The carrier, upon acceptance of the shipment, assumes responsibility for its safe delivery. Claims for loss or damage in transit must be made to the carrier, as follows:

- *Concealed Loss or Damage*
Concealed loss or damage is loss or damage that does not become apparent until the equipment has been unpacked. The contents might have been damaged in transit due to rough handling even though the shipping container may not show any external damage. When damage is discovered upon unpacking, make a written request for inspection within 48 hours of the delivery date. Then, file a claim with the carrier since the damage is the responsibility of the carrier. Do not destroy packing materials or move material from one location to another before the carrier makes his inspection.
- *Visible loss or Damage*
Any external evidence or loss or damage must be noted on the freight bill or express receipt and is signed by the carrier's agent. Failure to adequately describe such external damage may result in the carrier's refusal to honor a damage claim. The form required to file a claim will be supplied by the carrier.

damaged equipment without waiting for the claim against the carrier to be settled,

provided that a new purchase order is received to cover the repair or replacement costs. Should any damage, shortage, or discrepancy exist, please notify us immediately.

Electrical Power Requirements

The Mini Stamper requires a fused, single-phase, standard 3-terminal grounding type receptacle. Input voltage and current capability requirements are 120 VAC 50/60 Hz, single-phase, 4 amp.



The line cord of the Mini Stamper is equipped with a 3-prong, grounding plug. Do not, under any circumstances, remove the ground plug. The plug must be plugged into a mating 3-prong, grounding type outlet.

Installation Site Requirements

The mini hot stamper is a freestanding assembly. It should be installed in a clear, uncluttered location that is free from excessive dirt, dust, corrosive fumes, and temperature and humidity extremes. The selected installation site should be near the electrical power source and pneumatic source, and away from equipment that generates abnormally high electrical transients. Observe the following additional instructions when installing the equipment:

- Equipment should be placed on a surface (table) strong enough to withstand 100 lbs. and irregular movement

- Allow at least 6 inches distance between the front edge of the table and the front of the equipment.
- Position the Mini Stamper so that the front panel controls are visible and readily accessible.
- The Mini Stamper is air-cooled; allow sufficient space around the assembly to ensure adequate ventilation. If the Mini Stamper must be housed in a confined space, forced air-cooling may be necessary to keep surrounding air within acceptable ambient limits.

Making Electrical Connections



When making electrical connections, be careful not to strain or kink the cables. When going around corners, make as wide a bend as possible.

PROGRAMMING AND SETUP SECTION 3

Functions of Controls and Indicators



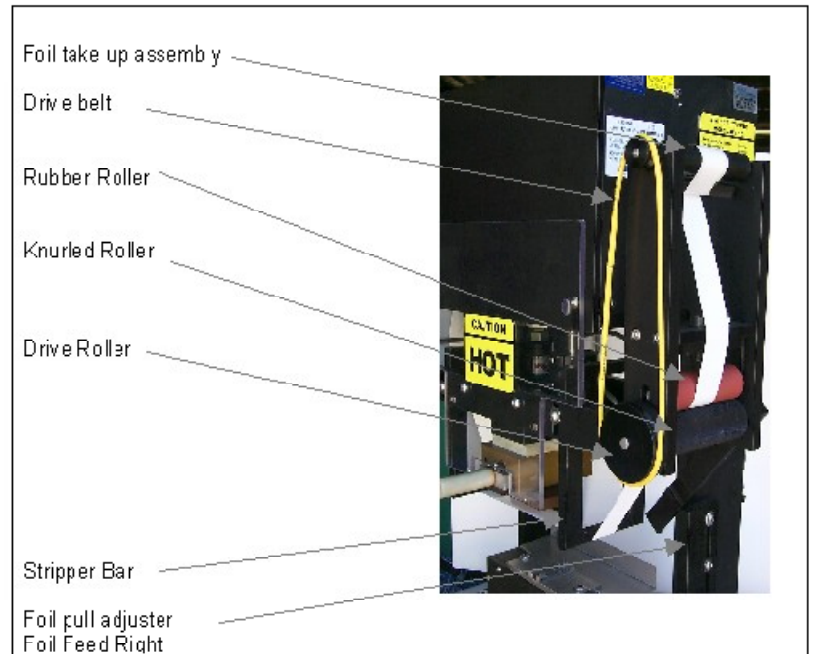
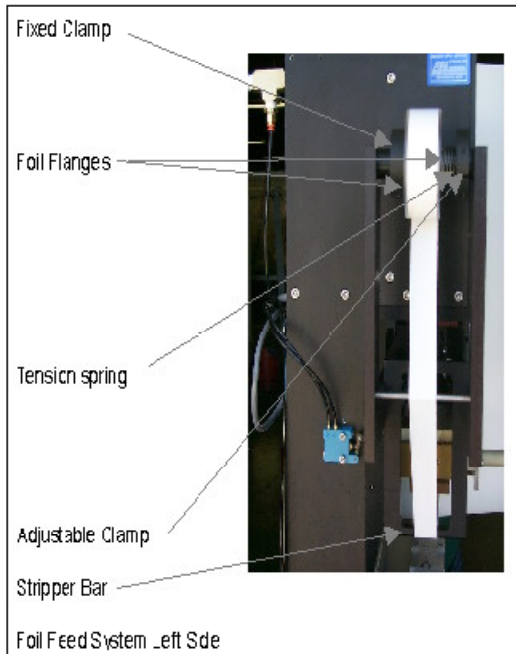
- **Power switch/ circuit breaker:** Turns on/off all power to the Mini Stamper.
- **Power Indicator light:** When lit, indicates power is ON.
- **Emergency Stop button:** When depressed, removes all power to the control.



The Emergency Stop button does not remove power from the heater system

- **Head ON/OFF switch:** When on OFF mode, removes power from the head pneumatic system. This disables the pneumatic system. The head switch should always be turned OFF when clearing obstructions and during setup when changing dies or nest.
- **Head Descending Indicator light:** When lit, indicates power applied to the pneumatic system and instructs the head to descend. The Descending indicator is a trouble-shooting device. If the Head Descending light is NOT moving down, the air pressure to the machine is too low or the pneumatic valve is stuck.
- **Mode Control switch:** When the Mode Control is in the RUN mode, the Mini Stamper will run as normal. When the Mode Control is in the SETUP mode, the head will move down and stay until the mode switch is switched to RUN mode. RUN mode is used to set up the Mini Stamper.
- **Temperature Control device:** Controls the hot stamp die temperature (see pg.11)
- **Touch Screen:** Controls the time the plastic part is clamped for printing. (see pg.10)

PROGRAMMING AND SETUP

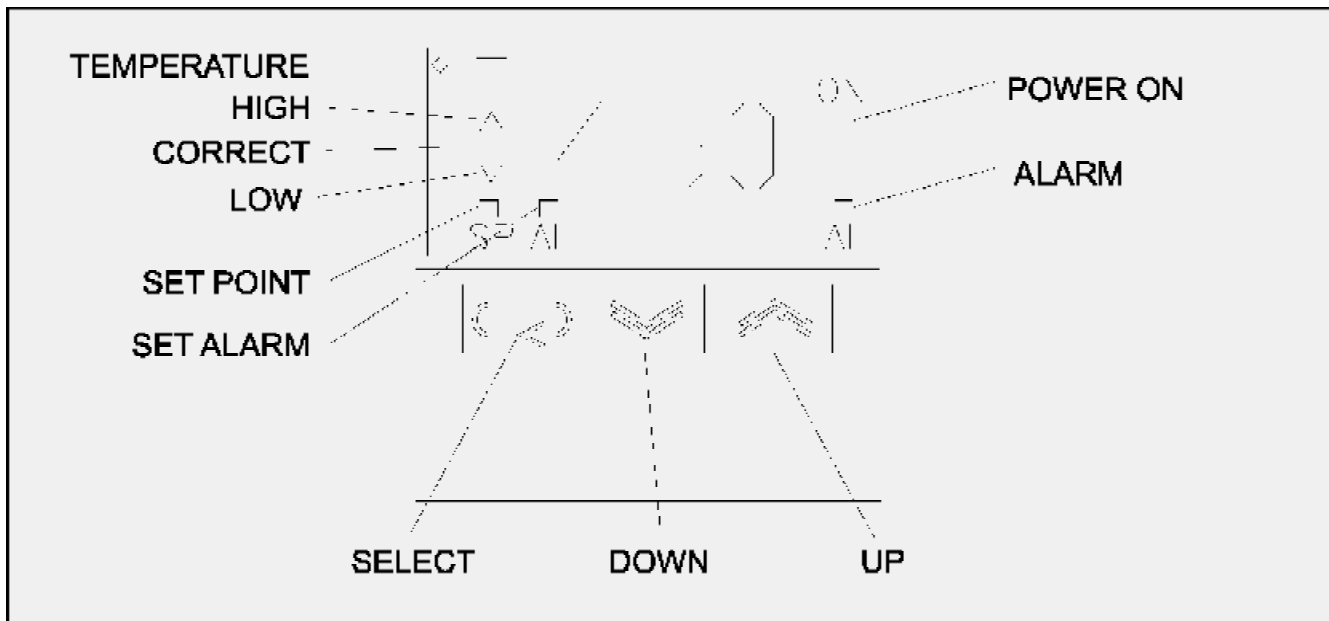


Changing Foil

1. Remove Foil Take Up Assembly from machine and remove used foil.
2. Remove Foil Supply Assembly (fig 1.1)
3. Remove Adjustable Clamp, Tension Spring and one Foil Flange.
4. Remove used foil core.
5. Put a new roll of foil on the Foil Supply Assembly. Make sure the foil is placed on correctly. The fixed clamp should be facing away from the operator, and the tail of the foil should be to the right of the operator
6. Pull the foil through the machine under the stripper bars.
7. Thread the foil through the pinch rollers as shown in fig 3.3 by turning the Drive Roller in the clockwise direction. To advance foil with motor press F1 in the touch screen.
8. Replace the Foil Take-Up Assembly and place the drive belt on between the Drive Roller and the Foil Take-Up Assembly
9. Start the foil on the Foil Take-Up Assembly by placing the tail of the foil into the Take-Up Assembly and then turning the Drive Roller until the tape takes hold.

PROGRAMMING AND SETUP

Setting Head Temperature



- TEMPERATURE HIGH** light: Indicates the machine temperature is above set temperature.
- TEMPERATURE CORRECT** light: Indicates the machine temperature is the same as the set temperature.
- TEMPERATURE LOW** light: Indicates the machine temperature is the same as the set temperature.
- SET POINT** light: Indicates the temperature controller is in the set point mode.
- SET ALARM** light: Indicates the temperature controller is in the set alarm mode.
- SELECT** button: When pressed, allows you to cycle through the options listed in the temperature controller (read temperature, set temperature, and set alarm modes).
- DOWN** button: When pressed, the display begins to count down.
- UP** button: When pressed, the display begins to count up.
- ON** light: Indicates the temperature controller has turned on the heaters.
- ALARM** light: Indicates the machine temperature is at the set temperature + or – the alarm set temperature.

NOTE: The machine head will not operate if the ALARM light is off.

PROGRAMMING AND SETUP

Reading machine temperature

Press the SELECT button until both the SET POINT and SET ALARM lights are off. The display will read the current machine temperature.

NOTE: Temperature controller should be left in the READ TEMPERATURE mode when running the machine.

Set machine temperature

Press the SELECT button until the SET POINT light is on. Use the UP and DOWN buttons to set the display to the temperature you require.

Set ALARM

Press the SELECT button until the SET ALARM light is on. Use the UP and DOWN buttons to set the display to the alarm setting you require.

CHECKOUT PROCEDURE SECTION 4

DAILY CHECKOUT

To be performed at every power-up, shift change and machine setup change

- A. Make sure all point-of-operation guards are in place
- B. Confirm two-hand control device operation
- C. Verify true dwell switch operation

NOTE: A designated person appointed and identified in writing by the employer must perform daily checkouts. A copy of test results should be kept on or near the machine.

MONTHLY CHECKOUT

To be performed at one-month intervals

- A. Make sure all point-of-operation guards are in place
- B. Confirm two-hand control device operation
- C. Verify true dwell switch operation
- D. Validate head switch operation
- E. Verify emergency stop switch operation
- F. Verify temperature alarm operation

B. Two-Hand Control Device Operation

1. Turn the power switch ON and allow it to heat to temperature.
2. Turn the head switch to ON.
3. Pull the emergency stop switch out.
4. Place your left index finger into the left optical touch button.
5. Wait one or two seconds, then place your right index finger into the right optical touch button. The HEAD DESCENDING light should not turn on and the machine should not cycle.
6. Remove both hands from the optical touch buttons.
7. Place your index finger of your right hand into the right optical touch button.
8. Wait one or two seconds, then place your left index finger into the left optical touch

CHECKOUT PROCEDURE

button. The HEAD DESCENDING light should not come on and the machine should not cycle.

9. Place your left index finger on the left optical touch button and your right index finger on the right optical touch button at the same time. The HEAD DESCENDING light should turn on and the head should lower.

NOTE: If any of the above tests fail as described **DO NOT** operate the machine. Notify the person designated by your employer that the machine needs service.

C. True Dwell Operation

1. Turn power switch ON and allow it to heat to temperature
2. Turn head switch ON
3. Pull emergency stop switch out
4. Place your left index finger into the left optical touch button and your right index finger into right optical touch button **at the same time**. The HEAD DESCENDING light should come on and the head should start descending.
5. Before the head lowers completely remove your right index finger from the right optical touch button. The HEAD DESCENDING light should turn off and the head should rise up.
6. Place your left index finger into the left optical touch button and your right index finger into right optical touch button at the same time. The HEAD DESCENDING light should come on and the head should begin lowering.
7. Before the head lowers completely remove your left index finger from the left optical touch button. The HEAD DESCENDING light should turn off and the head should rise up.
8. Place your left index finger into the left optical touch button and your right index finger into right optical touch button at the same time. The HEAD DESCENDING light should turn on and the head should start lowering.
9. Hold both fingers on the buttons until the head is completely lowered. Watch the HEAD TIMER. When the HEAD TIMER begins counting down remove both fingers. The Head should remain lowered until the HEAD TIMER counts to zero.

NOTE: If any of the above tests fail as described **DO NOT** operate the machine. Notify the person designated by your employer that the machine needs service.

D. Head Switch Operation

1. Turn the power switch ON and allow it to heat to temperature.
2. Turn the head switch to OFF.
3. Pull the emergency switch out.

CHECKOUT PROCEDURE

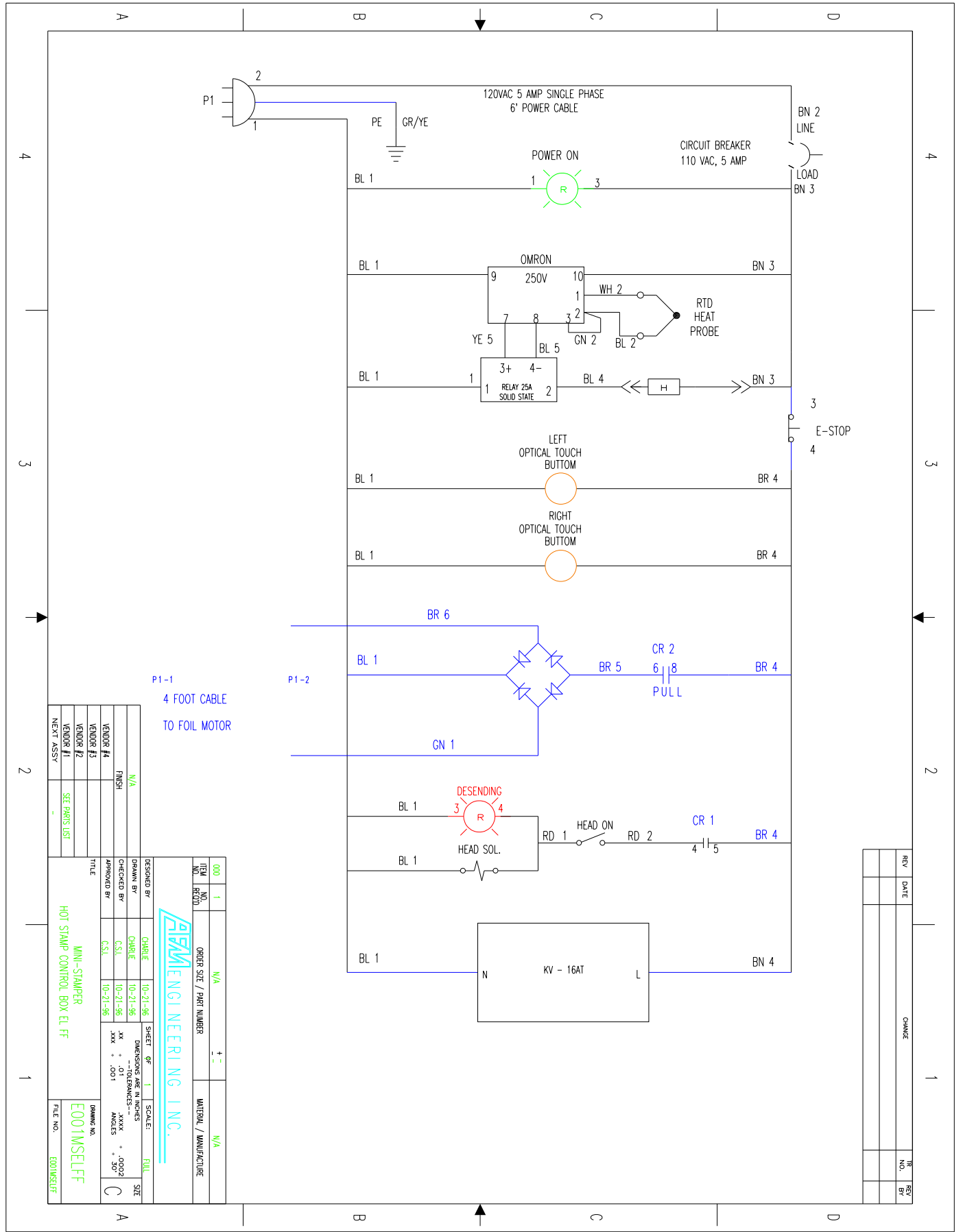
4. Place your left index finger into the left optical touch button and your right index finger into the right optical touch button **at the same time**. The HEAD DESCENDING light should not turn on and the head should not begin lowering.
5. Turn Head Switch to ON.
6. Put your left index finger into the left optical touch button and your right index finger into the right optical touch button **at the same time**. The HEAD DESCENDING light should turn on and the head should begin lowering.

NOTE: If any of the above tests fail as described **DO NOT** operate the machine. Notify the person designated by your employer that the machine needs service.

E. Emergency Stop Switch Operation

1. Turn the power switch ON and allow it to heat to temperature.
2. Turn the head switch to ON.
3. Push emergency stop switch in.
4. Place your left index finger into the left optical touch button and your right index finger into right optical touch button at the same time. The HEAD DESCENDING light should not come on and the head should not begin lowering.
5. Set head timer to 5 seconds (See Setting Timer).
6. Pull the emergency stop switch OUT.
7. Place your left index finger into the left Optical Touch Button and your right index finger into right optical touch button at the same time. The HEAD DESCENDING light should turn on and the head should begin lowering.
8. When the head lowers completely and the head timer begins counting down, remove both index fingers from the optical touch buttons and push the emergency stop switch in.

CHECKOUT PROCEDURE



VENDOR #1	SEE PARTS LIST
VENDOR #2	
VENDOR #3	
VENDOR #4	
FINISH	N/A
NEXT ASSY	

DESIGNED BY	CHARGE	10-21-96	SHEET	01	SCALE:	FULL	SIZE
CHECKED BY	CHARGE	10-21-96	DIMENSIONS ARE IN INCHES				
APPROVED BY	CSL	10-21-96	TOLERANCES--				
			.XX + .01				.XXXX + .0002
			.XXX + .001				ANGLES + .50°
TITLE	MINI-STAMPER HOT STAMP CONTROL BOX EI FF						
DRWG. NO.	E001MSELF						
FILE NO.	E001MSELF						

ITEM NO.	000	1
REV. DATE		
ORDER SIZE / PART NUMBER	N/A	
MATERIAL / MANUFACTURE	N/A	

REV.	DATE	CHANGE	REV. NO.	REV. BY