Operation Manual

T-275 Operation Manual, Ver 2

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Model T-275 Automatic Table-Top Bagger/Sealer

Setup, Operation and Parts Manual, Version 2

Advanced Poly-Packaging, Inc.

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Acknowledgments

Manual written by: Stuart Baker

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Limited Warranty & Disclaimer

Warranty period is 12 months or 1,000,000 cycles whichever comes first. The warranty commences on the date of delivery of the equipment to the Purchaser.

APPI warrants to the Purchaser that the equipment is free from defects in workmanship or material under normal use and service. During the warranty period, APPI agrees to repair or replace, at its sole option, without charge to Purchaser, any defective component part of the equipment. To obtain service, Purchaser must return the equipment or component to APPI or an authorized APPI distributor or service representative in an adequate container for shipping. Any shipping charges, insurance, or other fees must be paid by Purchaser and all risk for the equipment shall remain with Purchaser until such time as APPI takes receipt of the equipment. Upon receipt, APPI, the authorized distributor or service representative will promptly repair or replace the defective component and then return the equipment or component to Purchaser, shipping charges, insurance and additional fees prepaid. APPI may use reconditioned or like new parts or units, at its sole option, when repairing any component or equipment. Repaired products shall carry the same amount of outstanding warranty as from original purchase. Any claim under the warranty must include a dated proof of delivery. In any event, APPI's liability for defective components or equipment is limited to repairing or replacing the components.

This warranty is contingent upon proper use of the equipment by Purchaser and does not cover: expendable component part such as PTFE, rollers, bushings, and the like; or if damage is due to accident, unusual physical, electrical or electromechanical stress, neglect, misuse, failure of electric power, improper environmental conditions, transportation, tampering with or altering of the equipment, packaging of corrosive or contaminating products or other products damaging to components, and equipment or components not owned or in the possession of original Purchaser.

APPI will not be liable for loss of production, profits, lost savings, special, incidental, consequential, indirect or other similar damages arising from breach of warranty, breach of contract, negligence, or their legal action even if APPI or its agent has been advised of the possibility of such damages or for any claim brought against the Purchaser by another party.

This warranty allocates risks of equipment failure between Purchaser and APPI. APPI's pricing reflects this allocation of risk and the limitations of liability contained in this warranty. The warranty set forth above is in lieu of all other express warranties, whether oral or written. The agents, employees, distributors and dealers of APPI are not authorized to make modifications to this warranty, or additional warranties binding on APPI. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by APPI and should not be relied upon.

Warranty on equipment is considered void when outstanding balances become delinquent (over 30 days late - 60 days after ship date).

Equipment Integration to other Equipment: APPI assumes no responsibility for the integration of its products to other products or within a system unless APPI performs the integration, testing and provides the results of the tests to the purchaser in writing. Furthermore, APPI assumes no responsibility for bag sizing whether suggested or recommended.

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Chapter 1

Introduction

Welcome / Overview
Using This Manual
Special Features
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1.1 Welcome

Thank you for selecting the Model T-275 Automatic Table Top Bagger / Sealer. The T-275 is easy to operate and quick to set up, making it ideal for long or short packaging runs. Where labor reduction and fast changeover is important, the Advanced Poly Model T-275 uses Advanced Poly-Bags™ (Pre-opened Bags on Rolls), manufactured by Advanced Poly-Packaging, Inc.

1.2 Overview

The T-275 is designed to package various industrial, medical, molded and food products. With a wide range of bag sizes (2" x 2" to 11" x 16") and mil thickness (1.5 mil to 5 mil), the T-275 will demonstrate to be a versatile bagger.

The T-275 is designed to lower your packaging costs with increased speeds, versatility, reliability, and simplicity. Instead of sealing with a conventional jaw sealer whereas an operator is required to pull an individual bag from a carton, then open the bag first even before reaching for the components to be inserted, the pre-opened bag "pops" open immediately after automatically indexing into position. The seal position can easily be raised or lowered on the bag. Once loaded, the bag can be sealed without having to first separate the bag at the perforation. Touch screen controls make setups a snap.

1.3 Using This Manual

The following manual conventions are frequently used to assist in understanding important information, alerting the operator of potentially dangerous or damaging practices, and the normal functions of the T-275.

Text normal text

Italics Used for emphasis

BOLDFACE Used to identify heading names

Caution! Warning messages. To avoid physical harm, damage to equipment or damage to the product. Be sure to read these messages carefully.

1.4 Special Features of the T-275

The T-275 has been designed with simplicity of operation and ease of maintenance in mind.

Threading is easy with a lift and thread operation. There are no rollers to thread around so the chance of misthreading is eliminated.

A user friendly touch screen provides quick setting adjustments and job saves.

A totalizing counter and preset counter is provided to keep track of total bags per shift, day or job and allows for halting operation to changes boxes or part numbers.

Patented design seal assembly (PTFE Shield™) - PTFE is only in contact with hot wire during sealing and is then stripped away from the heater bar immediately after sealing; reduces contamination buildup, increases PTFE life and improves seal integrity.

Patented Anti-Jam Device - During the loading and sealing operation, this device detects obstructions and automatically reverses the pressure bar, discontinuing the cycle operation.

1.5 Available Options

Although the T-275 is equipped with many standard features, additional available options are recommended to improve up-time, production or safety.

Spare Parts Kit: Additional PTFE, heater wire, valve and other components make this kit a must.

Special funnels: Send us your product and we will evaluate the loading to determine the best funnel design.

Bag deflator: Quickly mounts to the sealer bar squeezing the air from the bag while sealing.

Compartment seal option: After "product 1" is inserted in the bag and sealed, "product" two can be inserted into the same bag. The bag is then sealed a second time above product 2 to provide a two compartment bag. This option is useful when protecting surfaces of each product.

CF-10 Counting Funnel: Counts parts as they pass through the funnel for automatic cycle operation.

LC-10 Light Safety Curtain: Safe sealing operation when funnels are removed.

Caution! Advanced Poly highly recommends this safety option when funnels are removed.

Note: Additional options may have been added since publication of this manual. Contact APPI sales or customer service for more information.

1.6 Special Note on Safety

Although many safety features have been included in the mechanical, electronic and pneumatic systems, improper use, improper adjustments or neglect of preventative maintenance may result in serious personal injury. This operation manual highlights safety practices throughout the manual and must be strictly adhered to.

General topics regarding safety:

- ✓ Never operate the machine with covers, guards or funnels removed.
- ✓ Do not reach under the lexan guard or into the seal area
- ✓ Only certified maintenance or electrical personnel should perform maintenance procedures.
- ✓ Standard tag/lockout procedures include disconnecting air and electric when performing maintenance tasks.
- ✓ Do not attempt to reprogram machine.
- ✓ Use only Advanced Poly approved parts / replacement components.
- ✓ Do not modify or otherwise alter machine operation, components or design

Potential injuries:

- Cuts or minor abrasions from sharp objects, including but not limited to sheet metal fingers, screws, edges
- Crush injuries from pinch points, including but not limited to bag roll shaft, pinch rollers, funnel assembly or seal area
- Back, arm, leg or other muscle strain from lifting rolls of bags, boxes of bags or product.
- Muscle strain from loading bags, separating bags or other repetitive functions
- Electrical shock if unit is not turned off and unplugged prior to removing guards or covers
- Minor burns from exposure to heater bar
- Eye injury from not wearing eye protection during loading of product or sealing of bags

1.7 Specifications

Weight: 65 lbs.
Air: 60-70 PSI
Electric: 117V/60Hz or 220V/50Hz
Bag sizes: 2 x 2 up to 11 x 16
Product pass through area: approx. 2.75”

1.8 Unpacking & Setup

The T-275 is shipped completely assembled and in a carton or crate. Remove all tape, banding or packing materials that secure the machine. To ensure the highest production possible, consider product flow to the bagger and packaged product flow away from the bagger when positioning the bagger into your packaging areas.

1.9 Operating Environment

When you choose a location for installation, make sure the area is free of excess dust, dirt and moisture.

1.10 Warranty Registration

(This section must be completed and returned to Advanced Poly Packaging, Inc. to register the T-275 for Warranty Protection)

T-275 Serial Number: _____
(Serial Number located on the back panel)

Company Name & Address	Contact Name(s) / Title(s) / Phone Number
_____ _____ _____	_____ _____ _____

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Chapter 2

Air & Power Hookup
Roll Mounting and Bag Threading
Main Power
Operation Tests Prior to Production
Air Pressure
Air Pulse / Blower Setting
Funnel Position
Cycle Operation: Foot Switch, Guard Switch or Touch Screen
Load Shelf Adjustment
Note on Seal Quality

2.1 Air & Power Hookup

The T-275 is equipment with an internal regulator and the air supply should be fed to the bagger with ¼ min. inch O.D. poly tubing. Make the connection at the rear of the sealer. Set the air pressure on the T-275 between 50 and 70 PSI. Use the lowest possible pressure setting to achieve consistent seals. See Fig. 2-1.

Caution! Do not use higher than the minimum and no higher than 70 PSI. Higher pressures may cause further injury to fingers in seal area. To avoid injury, do not reach into the seal area.

2.2 Roll mounting and threading

Remove the roll shaft from the rear of the machine. Loosen one of the knobs located on the chuck which secures the roll into position. Mount the roll of bags onto the bag roll shaft and secure the bag roll into position with the chuck. With the loose web of bags falling over the rear of the roll, insert the web into the slot above the stainless rear cover and below the top cover. With the web of bags positioned under the top cover, raise the top cover of the T-275 by lifting the funnel mounting rods. Pull the web forward through the cover while lowering the top cover. When the top cover is lowered, the first bag should open by the airflow. The roll shaft is fixed into position with a pin and will not spin. The roll should freely turn on the shaft. However, tension can be added to the web of bags by loosening one knob, squeezing the roll of bags with the two chucks and tightening the knob. Do not apply too much tension or the web of bags may prematurely break as they are feeding through the machine. See Fig. 2-2.

Caution! Be careful when reaching into roller area; roller "fingers" may be sharp and can cause injury.

2.3 Main Power

The power switch is located on the rear right lower side. In the ON or "up" position, the switch is illuminated indicating that power is supplied to the unit.

Caution! A certified electrician should ensure the incoming power is the correct voltage and is grounded before connecting the T-275.

Caution! Do not remove cover or attempt to operate with covers removed or wires exposes.

2.4 Operation / Component Tests Prior to Production

A patented anti jam circuit is provided as a standard feature of the T-275. When properly set, this feature provides some degree of safety to the product and equipment.

Caution! The anti jam feature, however, should not be considered a safety feature since improper adjustment or malfunction could cause injury.

Prior to beginning production, the anti-jam mechanism should be tested as follows:
Test 1: With air applied and the power on, position an object over 1/4" in thickness (a pen or pencil for example) on the far left side of the seal bar with the object in contact with the PTFE Shield, but not pressing in the spring-loaded "U" channel PTFE Shield. Then press the foot switch. The Anti-jam circuit is working properly if the pressure bar retracts. If the pressure bar does not immediately retract, do not begin production and refer to Chapter 4 (Section 4.7) for instructions on Anti-jam Adjustments.

Test 2: With air applied and the power on, position an object over 1/4" in thickness (a pen or pencil for example) on the far left side of the seal bar with the object pushing inward on the PTFE Shield. Ensure that you are pressing in the spring-loaded "U" channel PTFE Shield and then press the foot switch. The Anti-jam circuit is working properly if the pressure bar does NOT move inward. If the pressure moves inward, do not begin production and refer to Chapter 4 (Section 4.7) for instructions on Anti-jam Adjustments. Continue these test procedures with the object being moved along the entire seal area length from the left to the right side of the seal area.

Fig 2-1

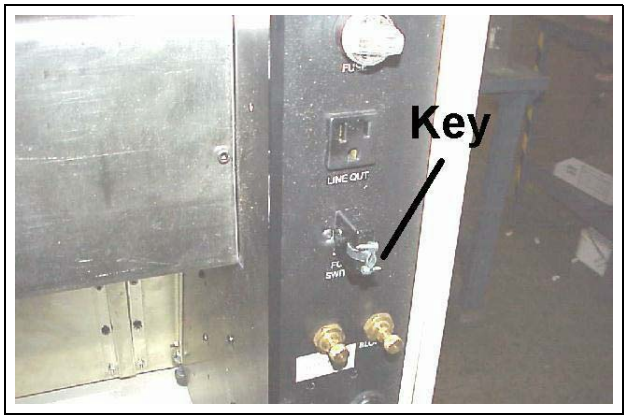

Fig 2-9

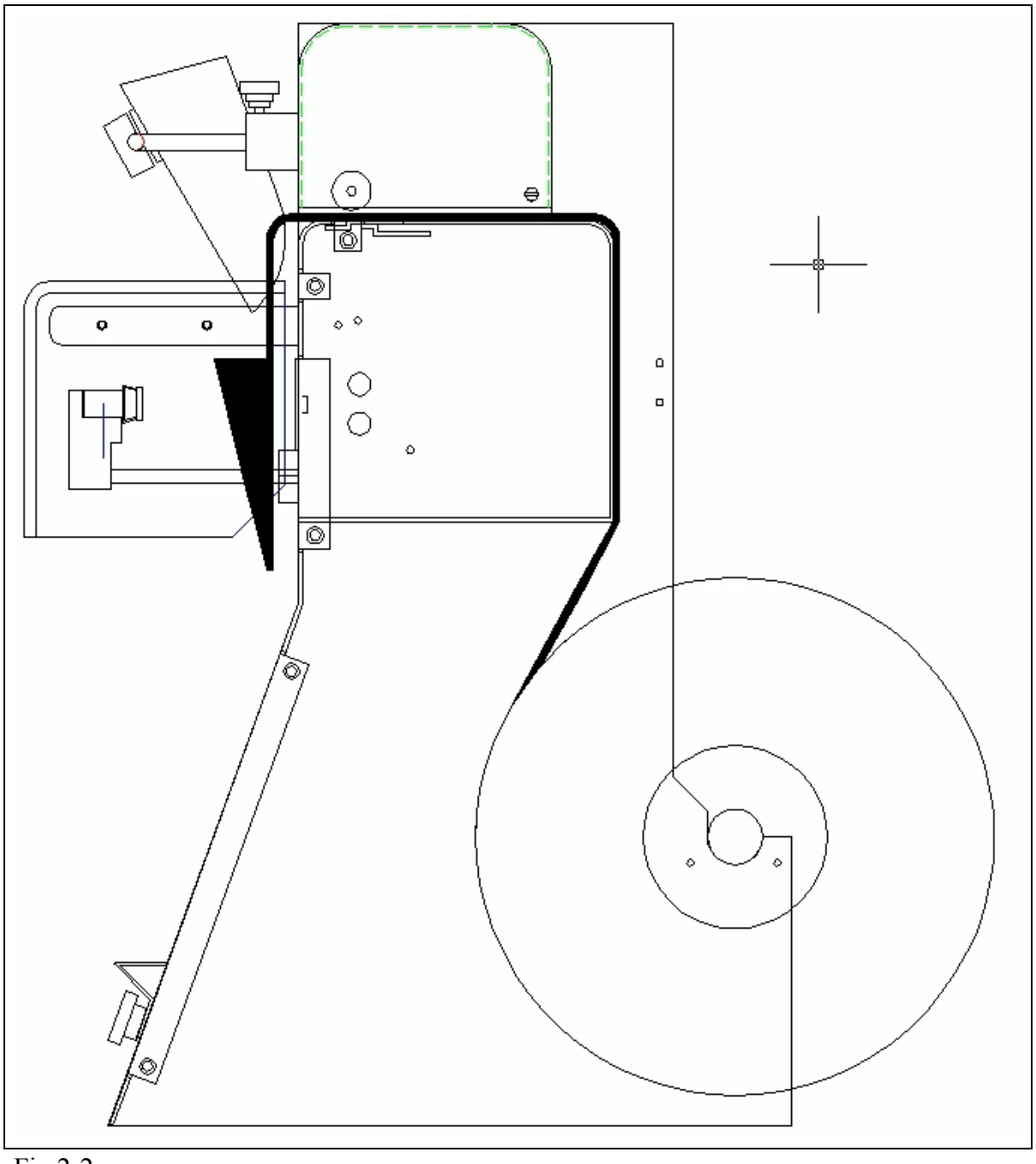

Fig 2-2

Caution! To avoid injury or damage to components, do not operate the T-275 if the anti-jam is out of adjustment or is malfunctioning.

2.5 Air / Seal Pressure Adjustments

To obtain good consistent seals, air pressure must be adjusted. The pressure valve is located on the rear of the unit. Typically, the air pressure is set to a constant pressure of 60 to 70 psi. To increase the pressure, pull the black knob upward and turn clockwise. Then, push the knob inward to lock into position. To decrease pressure, pull the knob upward, turn counter clock wise and press to lock.

2.6 Air Pulse / Blower Adjustment

The T-275 is equipped with a 6" wide air knife and flow control valve to ensure that the bags blow open quickly and consistently. Since the air knife speeds up air, compressed air is conserved. Adjust the volume of air with the blower flow control valve located on the rear of the unit (bronze knob). To slow down or reduce the volume of air, turn the knob counterclockwise; to increase the air flow, turn the knob clockwise. Begin by turning the blower all the way down and increase slightly until the bags blow open continuously and consistently. Once adjusted, there is a locking nut to prohibit the knob from loosening.

Note: Excessive air flow will cause the bag to move around and product to possibly spill from the bag.

Caution! If the blower is set to high, light product may be blown out of bag causing eye injury. Eye protection should be worn to prevent injury.

2.7 Funnel Position

The funnel can be tilted in or out and adjusted closer or further from the bag opening. Typically, the bottom of the funnel is positioned approximately ½" from top of the bag opening. The funnel bracket assembly can be pushed inward, closer to the bag dependent upon production dimensions.

Note: If the funnel is too close to the front plate, air flow may be blocked causing the bag not to blow open.

Caution! To avoid personal injury, do not operate the T-275 without guards, covers and funnel in the proper position. Funnel should be positioned to prevent an operator from reaching in the seal area. To prevent injury from the seal bar, do not reach under the guard or into the seal area.

2.8 Cycle Operation: Foot Switch, Guard Switch or Touch Screen

There are four methods to start the seal operation: 1) foot switch operation, 2) guard switch operation, 3) manual button on touch screen and 4) automatic button on touch screen, described as follows:

1) Foot switch operation. When the foot switch is plugged into the back of the bagger, pressing the foot switch will begin the operation of the sealer mechanism. The guard switch is disabled when the foot switch is plugged in. Note: The touch screen must be toggled to Run. See Chapter 3 for information regarding the touch screen operation.

2) Guard Switch operation. To operate the seal mechanism using the guard switch, the foot switch must be unplugged and a "key" must be inserted into the foot switch plug located at the rear of the unit. When the key is plugged in, the guard switch may be used to cycle the machine. With the key in position and the product is in the bag and the bag is in the desired seal position, press downward on the front center of the guard to begin the seal operation. The guard is spring-loaded with a micro switch mounted inside the panel (See Fig. 2-9)

3) Manual cycle operation. Read Chapter 3 thoroughly before beginning production.
4) Automatic cycle operation. Read Chapter 3 thoroughly before beginning production.

Caution! Ensure your fingers are not in the seal area when pressing the foot switch or guard switch or your fingers may be pinched or burned by the closing seal bar.

2.9 Adjustable Shelf

The T-275 is equipped with an adjustable support shelf which supports heavier products when dropped into the bag. The shelf can be adjusted up and down by loosening both thumb screws and sliding the shelf up and down, ensuring the shelf is level.

2.10 Note on Seal Quality

After sealing the first bag and allowing the seal to cool, test the seal for strength by attempting to pull the layers apart. Heat, dwell time and pressure affect the quality of seals. If the seal separates, increase the seal time. Additionally, check the air pressure and increase the pressure in small increments. After initial startup and after sealing several bags, you may decrease the seal time slightly. Refer to Chapter 3 for seal temperature and seal time settings.

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Chapter 3

Touch Screen Operation

Specifications
Screen Colors
Introduction Screen
Main Menu
Settings Screens
Seal Settings Screen
Options Screen
Counters Screen
Job Save Screen
Technical Assistance Screen
Warning / Information Screens

3.1 Touch Screen Specifications

The following are specifications for the Touch Screen:

Screen	3"
Resolution	128 x 64 pixels
LCD	Green, Red, Orange
Backlight	No Backlight (LED is used)
Memory	384KB
Communication	RS232C
Touch Key Res.	Free, Analog
Languages	
Dimension	110 x 72 x 28mm (W, H, D)
Power	5Vdc, 0.20A
Display	Green, Orange or Red

3.2 Touch Screen Program

The Touch Screen Program is a "user-friendly" menu-driven setup and operation program. Popup windows are incorporated for quick and easy setting adjustments. Each time a setting is changed, the settings are saved to a "default" job so that if power is lost, the "job" will be recalled without the need for setting adjustments. Three colors may be displayed which indicate the operation status of the bagger, as follows:

Green: Normal Operation
Red: Warning / Stop Mode
Orange: Information / Pause

3.3 Introductory Screen

When the machine power is turned on, the first screen that is displayed is an introductory screen that provides Menu buttons to provide information on the machine. See Fig. 3-1

Press the Contact Info button to display the manufacturers information. See Fig. 3-4.

Press the Maintenance button to display the program versions installed on the machine and the total cycles run on the machine. See Fig. 3-3.

Press the PLC I/O Screen to display inputs and outputs status. See Figures 3-17 through 3-20.

Press the Main Menu button to go to the Main Menu which displays buttons used for the normal operation and settings of the machine. See Fig. 3-2.

3.4 Main Menu

From the Main Menu, all main screens that affect the operation of the machine can be accessed. See Fig. 3-2.

The top three buttons: WAITING or READY, STOP/START and MANL/AUTO are position at the top of the screen and other operation screens.

WAITING / READY: If the machine is heating or otherwise cannot run, the WAITING message will be displayed. Once the heater bar is with 10% of the set temperature, the READY message will be displayed.

STOP / RUN: The machine must be in the RUN mode to operate. The machine always powers up into the STOP mode and also goes to the STOP mode if a Warning message is displayed.

Fig 3-1

Fig 3-2

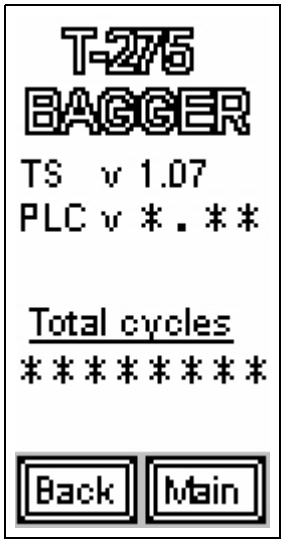


Fig 3-3

Fig 3-4

Fig 3-5

Fig 3-6

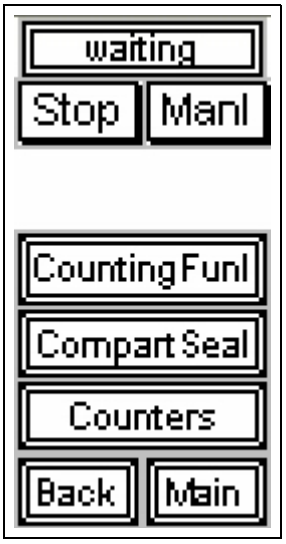


Fig 3-7

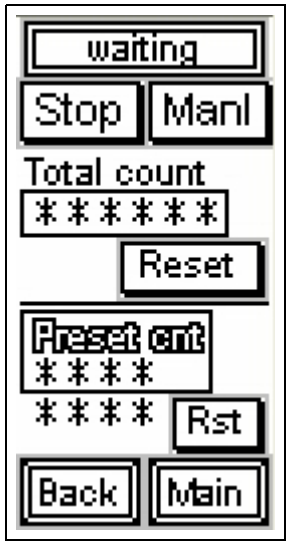


Fig 3-8

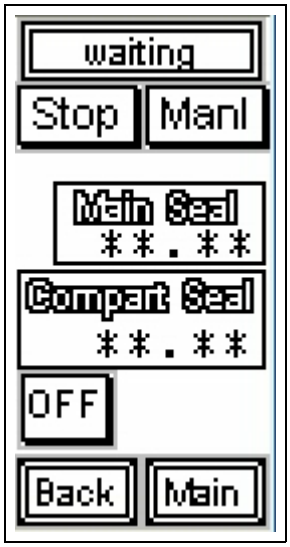


Fig 3-9

MANL / AUTO: In the MANL (Manual) mode, the footswitch, guardswitch or other cycle method must be used to initiate the cycle operation of the machine. In the AUTO mode, the machine will cycle automatically.

SETTINGS menu option displays the settings for Fill Time, Air Pulse and Blow Off timers.

SEAL SETTINGS displays the settings for Seal Time and Seal Point timers and Heater Temp. setting.

OPTIONS menu displays options setup screens for Counters, Compartment Seal and Counting Funnel options.

3.5 Settings Screen

From the Settings Screen, several timers that affect the bag cycle operation can be adjusted. See Fig. 3-5.

Fill Time: In an AUTO mode operation, the Fill Time setting adjust the time the operator has to load the bag before the seal operation begins. In this "paced operation", increasing the fill time decreases the cycles per minute, allowing more time for filling.

Caution! To avoid personal injury, do not operate the T-275 in AUTO mode when funnels or guards are removed. Funnels should not be removed unless a light curtain or palm buttons or other approved safety device is installed. Guards should never be removed in an operation status.

Air Pulse: When the bag stops in the loading position, an air pulse is generated that assists in opening the bag. The Air Pulse setting adjusts the length of time that the air blows from the blow tubes. For larger/wider bags or thicker bags, additional air pulse time may be required. Typically, the setpoint is .1 to .3 seconds.

Blow Off: To decrease the possibility of bags sticking to the PTFE, a blow off tube is provided as a standard feature. The blower tube is located in the center, immediately below the seal bar. Typically, the blow off time is set to .02 to .15 seconds.

3.6 Seal Settings Screen

From the Seal Settings Screen, timers and heat adjustments that affect the seal quality can be adjusted. See Fig. 3-6.

Seal Time: Seal time is the amount of time that the pressure bar is pressed against the heater bar. Combined with temperature and pressure, seal time is a critical adjustment to obtain good quality seals. For thicker bags, additional seal time is required. Typically, the Seal Time is set to .2 to .5 seconds, depending on bag thickness.

Seal Point: Adjusting the position that the bag stops in the loading position changes the seal location. Feeding the bar further out of the machine causes the seal point to increase, closer to the top/opening of the bag. Seal point setting is based upon the bag size and the thickness of the product. Longer bags and thicker product causes the bag to be sealed further down from the top of the bag. Typically, the bag is sealed 1/2" to 2" from the opening. Settings to accomplish this range from .65 to .4.

Seal Temperature (heater): A heater cartridge is mounted inside of a solid heater bar. Temperature is maintained by the controller at a constant temperature, but can be adjusted for thicker or thinner bags. Typically, the seal temperature is set between 300 and 400 degrees F. Both the current temperature and the set temperature are displayed. An LED to the left of the setpoint, when lit, indicates that current is being sent to the heater bar. Note: Excessive seal time can cause burns in the PTFE and the bag and decrease the life of the heater cartridge.

Caution! To avoid injury, do not place fingers in the seal area.

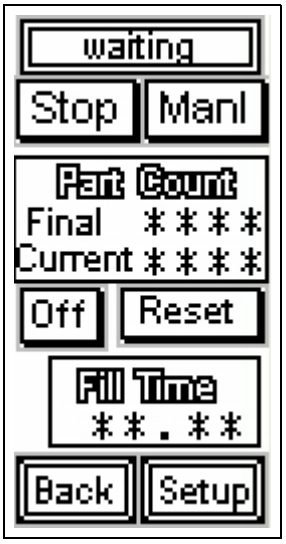


Fig 3-10

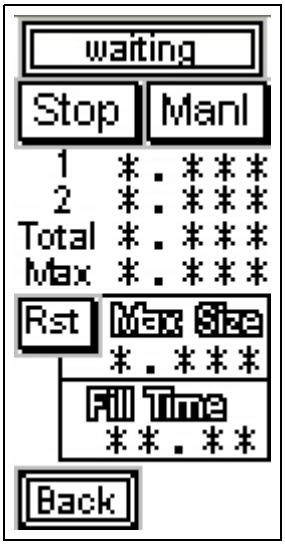


Fig 3-11

Fig 3-12

Fig 3-13

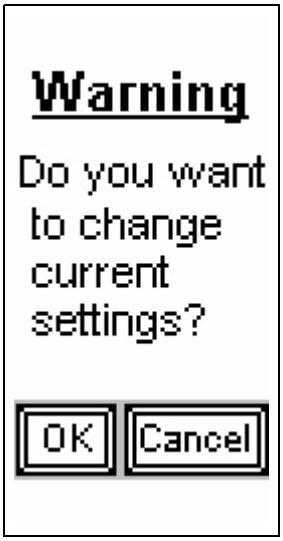


Fig 3-14

Fig 3-15

Fig 3-16

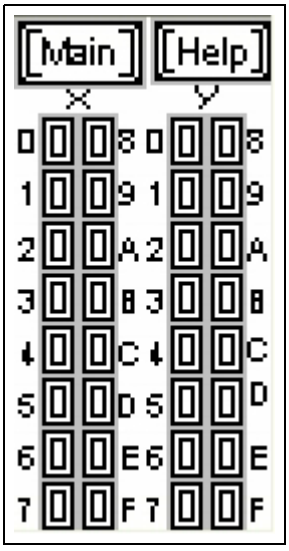


Fig 3-17

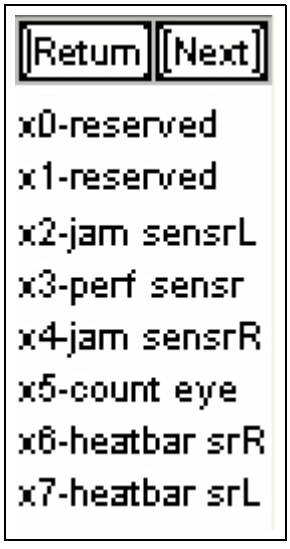


Fig 3-18

3.7 Options Screen

The T-275 is equipped with several options, but other option can be added to the machine to increase throughput, efficiency or safety. See Fig. 3-7.

Counters:

The unit is equipped with two internal cycle counters. See Fig. 3-8.
Totalizing Counter - total cycles of equipment, counts from 0 to 99,999. Reset button zeros this counter.
Preset or Predetermined Counter - counts down from a preset number. When the count reaches zero, the machine operation stops and a message is displayed indicating that the count has been reached. Reset button resets the count to the preset value.

Compartment Seal Option:

trapping product in two compartment on the bag. This option is provided for packages whereas one product may damage the other, separating the two products. See Fig. 3-9.

To use this option, toggle the OFF/ON button to ON. Two seal timers are provided to adjust both the first seal and then the second seal. The compartment size of the top compartment may be limited by the amount bag that is fed from the machine before the opening is still inside the machine. Adjust the Main Seal point and Compartment Seal point to adjust the compartment sizes. Several attempts may be required before the optimum setting is achieved.

Counting Funnel Option:

efficiency, production or accuracy of counts of parts entering the bag. Components, including photo eyes and cables are required. This option also automatically cycles the machine when the part count has been reached. To start using this option, toggle the OFF/ON switch to ON. See Fig. 3-10.

Fill Time Setting: This timer delays the seal cycle operation after the final count has been reached. If the count is set to one, the Eye Delay setting should be set to a value to allow the product to completely pass through the seal area, to the bottom of the bag, before the seal bar engages. If the seal bar engages before the part is all the way in the bag, possibly sealing on the bag, then increase the Fill Time.

Setup button/Screen: To ensure that one part is only counted as one, a Max Size delay timer is provided. The setup / test screen is provided to assist the operator in determining the amount of time that the product is passing through the eye and then set the Max Size setting to a value that causes the unit to count parts correctly. See Fig. 3-11.

To use the Test Screen, first press the reset button. Then, drop one part through the photo eye. A value will be displayed to the right of number 1 on this screen. If a number is displayed to the right of the 1 and 2, then the part was counted as two. This problem can be corrected by setting the Max Size to a value GREATER than the tested values. See Fig. 3-11.

The values to the right of the 1 and 2 will automatically reset to zero allowing for continued testing. Continue to drop parts until the MAX value does not increase. Then, set the Max Size to a value greater than the Max displayed value.

Press the Back button to test the Max Size settings to ensure that one product is counted only once.

3.8 Job Save Function / Screen

As a standard feature, the Job Save Screen is provided to save the various "recipes" of settings. Sixteen jobs can be saved to include all timer settings and options settings that affect the operation of the machine. See Figs 3-12 through 3-16.

Once the settings are correct and the machine is functioning properly, press the Save button to the right of the Job Number.

Note: Ensure that you don't overwrite setting of previously saved jobs. Use the following chart to write your reference information regarding the job saves. See Fig. 3-12 through 3-13.

Job#	Part Number:	Description:
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

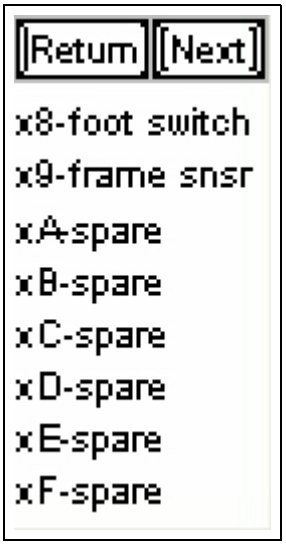


Fig 3-19

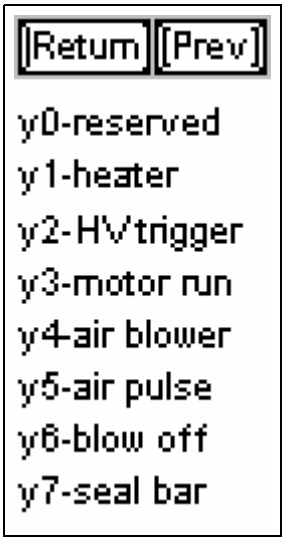


Fig 3-20

Fig 3-21

Fig 3-22

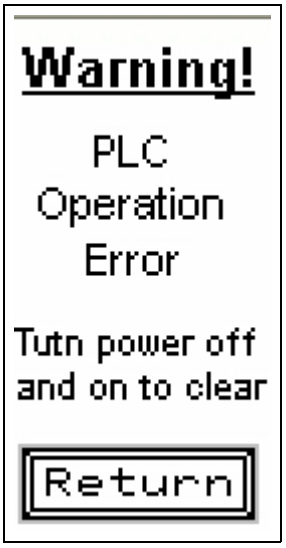


Fig 3-23

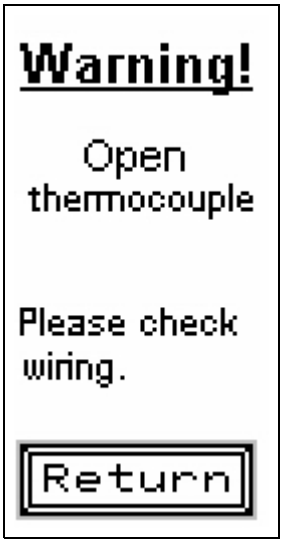


Fig 3-24

Fig 3-25

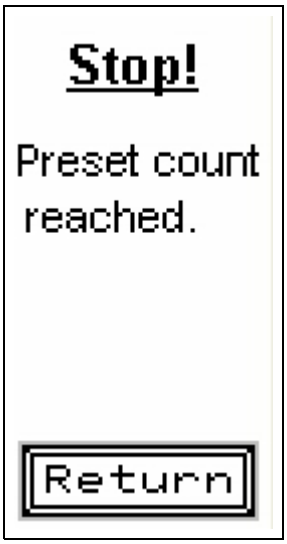


Fig 3-26

Fig 3-27

3.9 Tech Assist Screen

From this screen, technical assistance contact information, maintenance/troubleshooting screens and PLC IO information can be accessed. See Fig. 3-1.

Contact Info: Displays the manufacturers name and contact information. See Fig. 3-4.

Maintenance: This screen displays the Touch Screen (TS) and Programmable Logic Controller (PLC) program versions. Before calling Advanced Poly Technical Support, note this program version. The program version on your machine may be different from Fig. 3-3. This

PLC IO: From this screen, a maintenance person can troubleshoot the unit by examining the status of inputs and outputs of signals to components on the unit. Typically, this screen is used to provide phone assistance to maintenance personnel. See Figures 3-17 through 3-20.

3.10 Message Screens / Information Screens

Whenever an unusual condition occurs, a Message screen is displayed. If the condition causes the machine to stop the cycle operation, the screen is typically Red. These conditions cause the machine to revert to the Stop condition. For other conditions, an Orange screen is displayed. Once these messages are cleared, the cycle operation can continue. See Figures 3-21 through 3-29 for examples of Message / Information screens.

Fig 3-28

Fig 3-29

4.1 Adding PTFE to Rubber Strip & Cleaning

New rubber is often sticky when initially used causing bags to cling to the rubber when sealed. But after a short period, the rubber will become slick and not cling to the bag material. Self adhesive PTFE strips may be added to the rubber pressure strip if the product continually sticks to the rubber strip or to improve seal integrity. Periodically clean the rubber strip with alcohol to remove contaminants and plastic buildup.

4.2 Rubber Strip Replacement

Through normal use, the rubber strip will wear causing seal quality problems. The rubber will also wear prematurely if contacting the product during the seal operation. When the wear affects the seal quality, replace the rubber strip by following these procedures:

1. Remove air from the unit, turn the T-275 power "OFF" and unplug the power cord.
2. Remove the worn rubber pad by pulling from the end corner of the rubber strip. Once started, the rubber will easily slide out from the metal pressure strip housing. See Figure 4-1.
3. Clean out the metal slot with alcohol and a cloth or brush.
4. Slide the extruded rubber into the metal housing slot starting at one end and continuing to work the rubber along the length of the slot. When into position, the rubber strip should be loose in the slot.

Caution! Metal housing for rubber strip has sharp corners and sharp edges. When rubber is removed, carefully clean slot with a thick cloth not allowing contact with fingers or hands.

4.3 PTFE Advancement

PTFE will wear with continued use and prematurely tear if contacting the product when sealing. If the PTFE wears or tears affecting the seals, the PTFE can be advanced to bring new PTFE in the seal area. To advance the PTFE, insert a small flathead (common) screwdriver into the bottom 1/4" hole located on the right side panel of the unit. When you feel the screwdriver enter into the slot of the PTFE rod, turn the screwdriver counterclockwise to advance new PTFE into position.

After turning new PTFE into position, turn the rod clockwise slightly so that there is very little tension on the PTFE sheet.

Note: If the PTFE is too tight (too much tension), the PTFE may tear during the seal operation.

Caution! the following maintenance procedures should only be performed by trained and qualified maintenance technicians.

4.4 PTFE Sheet Replacement

When the PTFE sheet has been exhausted, it will become loose from the upper PTFE rod and will require replacement. To replace the PTFE, follow these procedures: (See Figures 4-2 through 4-5)

1. Remove air from the unit, turn the T-275 power "OFF" and unplug the power cord.
2. Lift the funnel assembly and top cover upward.
3. Remove four screws from the guard assembly and remove the lexan guard.
4. Allow the sealer mechanism to cool for at least 15 minutes.
5. Remove the two screws located on the right and left side of the seal bar which hold the seal assembly mechanism in place.
6. You will have to take shoulder bolt out of pressure bar assembly to get heater bar out
7. Pull one side (right or left side) of the seal assembly out from the front plate. Since the seal assembly is tight, some maneuvering may be required to remove the assembly from the machine. To avoid damage to components or wiring, do not force the assembly.
8. Disconnect the two wire connectors and remove the complete assembly.

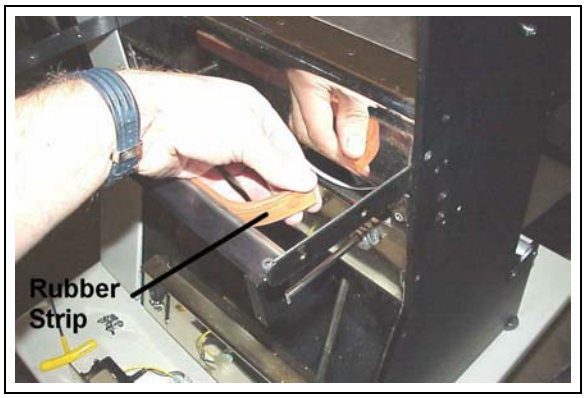


Fig 4-1

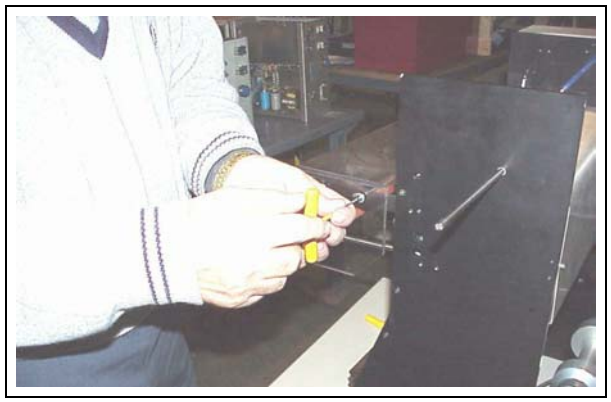


Fig 4-2

Fig 4-3

Fig 4-4

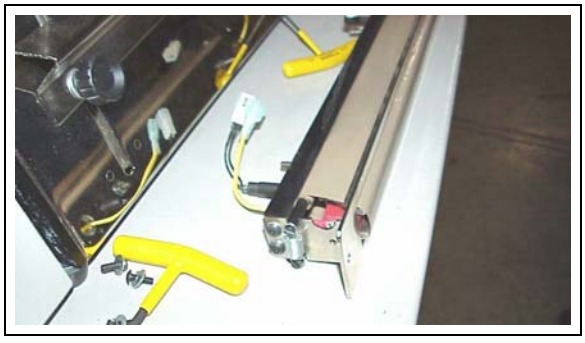


Fig 4-5

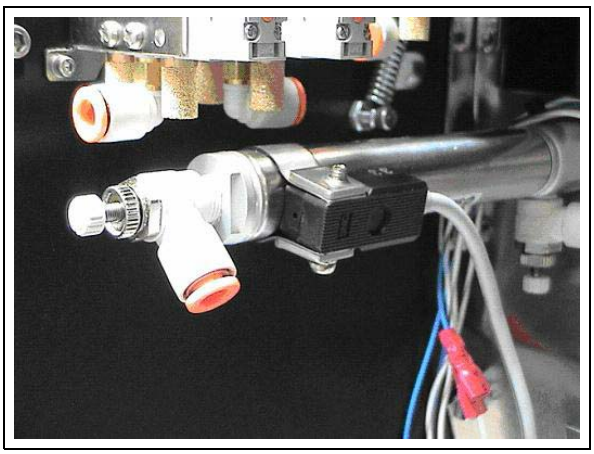


Fig 4-6

9. Unclip the springs from the rods and remove the upper rod.
10. Attach a new sheet of PTFE to the upper rod so that the sheet end is parallel. Wind the PTFE onto the upper rod ensuring that it is evenly and tightly wound.
11. Reinstall the upper rod and thread the PTFE ensuring that the PTFE wraps around the spring loaded "U" channel.
12. Reattach the PTFE to the lower rod and install the springs in the grooves on the rods.
13. Turn the PTFE at least two wraps onto the bottom rod.
14. Reconnect the wire connectors and install the heater bar ensuring that the full PTFE rod is positioned

4.5 Heater Cartridge Replacement

Since the heater element is a normal wear item, it will require replacement when burned out. Heater element and heater bar life span may be increased by timely adjustment of PTFE. If the heater bar does not come to temperature fully or does not heat whatsoever, the heater cartridge must be replaced. Follow these procedures to replace the element:

1. Remove air from the unit, turn the T-275 power "OFF" and unplug the power cord.
2. Lift the funnel assembly and top cover upward.
3. Remove four screws from the guard assembly and remove the lexan guard.
4. Allow the sealer mechanism to cool for at least 20 minutes.
5. Remove the two screws located on the right and left side of the seal bar which hold the seal assembly mechanism in place.
6. Pull one side (right or left side) of the seal assembly out from the front plate. Since the seal assembly is tight, some maneuvering may be required to remove the assembly from the machine. To avoid damage to components or wiring, do not force the assembly.
7. Disconnect the two wire connectors and remove the complete assembly.
8. Wind all of the PTFE onto the upper rod and disconnect the PTFE from the lower rod.
9. Unclip the springs from the rods and remove both rods.
10. Loosen the screws that hold the heater bar top and bottom plate together.
11. Slide the heater cartridge from the assembly.
12. If the heater cartridge does not break loose, remove the screws entirely and dismantle the heater bar.
13. Install the new heater cartridge, and reassemble the heater bar.
14. Reattach the heater bar to the front plate assembly with four screws.
15. Reinstall the PTFE rods and re-thread the PTFE around the spring loaded "U" PTFE shield and reattach the PTFE sheet to the upper rod so that the sheet end is parallel. Wind the PTFE onto the upper rod ensuring that it is evenly and tightly wound.
16. Reattach the springs in the grooves on the rods.
17. Turn the PTFE at least two wraps onto the bottom rod.
18. Reconnect the wire connectors and install the heater bar ensuring that the full PTFE rod is positioned

4.6 Description of Anti-jam Circuit

The anti-jam mechanism decreases the possibility of damage to the T-275 if product or other objects are in the seal area. The operation of the anti-jam circuit should be tested prior to production on a daily basis.

Although the anti-jam unit may also prevent or decrease the opportunity for injuries during the sealing or heating operation, the anti-jam is not designed as a safety device. If not adjusted properly, damage may result from obstructions in the seal area or personal injury may result from fingers or hands being in the seal area when sealing.

If properly adjusted, a jam is detected when: 1) the rubber pressure strip does not contact the PTFE at one or both sides of the PTFE shield or 2) the spring-loaded PTFE shield is pressed prior to the rubber pressure strip contacting the PTFE shield.

If either of these conditions exist, the pressure seal bar will retract.

4.7 Anti-jam Adjustments / Testing

The anti-jam mechanism consists of: 1) two cylinder magnetic switches which detects the cylinder position and 2) two photo sensors that detect the spring-loaded PTFE Shield "U" channel position.

If the anti-jam circuit is not functioning properly, follow these procedures to test and/or adjust the anti-jam components:

Test 1: With air applied and the power on, position an object over 1/4" in thickness on the far left side of the seal bar with the object in contact with the PTFE Shield, but not pressing in the spring-loaded "U" channel PTFE Shield. Then press the foot switch. If the pressure bar retracts, the anti-jam circuit is working properly.

If the pressure bar does not retract when an obstruction of at least 1/4" in thickness is present anywhere in the seal area, follow these procedures to adjust and test the circuit:

1. Remove air from the unit, turn the T-275 power "OFF" and unplug the power cord.
2. Remove the back (stainless) cover and side (painted) cover.
3. Locate the two magnetic sensors which are clamped on the end of each seal bar cylinder. See Fig. 4-6.
4. Reach under the lexan guard and manually push the pressure bar inward until rubber strip slightly *touches* the PTFE Shield evenly across the pressure bar but does not press in the springs.
5. Turn the power ON and press the Tech Assist button, then PLC IO button on the touch screen to display the Inputs/Outputs. Locate X2 and X4 input LEDs on the touch screen.
6. By manually pulling out and pushing in the pressure bar, keeping it parallel to the PTFE, X2 and X4 should come ON at the same time, before the spring loaded "U" channel moves. It is important that the inputs come on at the same time and that when they do, the pressure bar rubber is close to the PTFE.
7. To adjust the sensitivity of the sensors, loosen the retaining claim by turning the screw located on the black magnetic sensor, positioned at the end of the cylinders. Then, slide the sensor along the cylinder to achieve the correct input results.
8. Test the circuit by manually pushing in the pressure bar. Again, the magnetic cylinder sensors in the proper position if the X2 and X4 inputs come on at the same time and when they come on, the pressure bar rubber is near the PTFE.
9. Turn of the power OFF, replace all covers, apply air and power and test cycle the machine, further testing the anti jam circuit.

Test 2: With air applied and the power on, position a stiff object of at least 1/4" in thickness on the far left side of the seal bar. Then, push the spring loaded "U" channel that holds the PTFE with the object so that it moves inward. While pressing in the spring-loaded "U" channel, attempt to cycle the machine by pressing the foot switch or guard switch. If the pressure bar does NOT move inward, the Anti-jam circuit is working properly.

Also, at the moment the "U" channel moves inward the touch screen should display a Warning message. See Fig. 4-6.

If the pressure bar begins to move inward when the spring loaded "U" channel is pressed inward, follow these procedures to adjust and test the circuit:

1. Remove air from the unit, turn the T-275 power "OFF" and unplug the power cord and wait until the heater bar is fully cooled down.
2. Remove the back (stainless) cover and side (painted) cover.
4. Remove the Heater Bar Assembly from the machine by first removing the lexan guard, lifting up the funnel assembly/hood out of the way, removing the screws that hold the heater bar assembly into position.
5. Disconnect the heater cartridge wire, but leave the sensor wires connected.

6. Locate and inspect the two photo sensor boards and ensure that the two rectangular black and white photo components are flat and parallel to each other. If not, carefully reposition the sensors. See Fig. 4-10.
7. While holding onto the heater assembly, turn the power ON and locate the two photo sensor printed circuit boards. See Fig. 4-10. You should notice that a threaded rod extends through the photo eyes. The threaded rods move inward and outward with the movement of the spring loaded "U" channel. Additionally, when the threaded rod enters the photo sensor, X7 (left sensor input) and X6 (right sensor input) are lit on the PLC.
8. Turn the power ON and test the X7 and X6 inputs by pressing inward on the spring loaded "U" channel. You will notice also, that the touch screen displays a message for both the left and right photo sensors. See Figures 4-8 through 4-9.
9. When the spring loaded "U" channel is not pressed (home position), the X6 and X7 inputs should be off and the touch screen should display a normal operation. However, when the spring loaded "U" channel is pressed slightly inward, the inputs should come on and the Warning message displayed. You will notice that the Warning message is displayed when the rod passes through the photo sensors. See Fig. 4-7 and 4-11.
10. To adjust the sensitivity of the spring loaded "U" channel, loosen the nut on the left rod. With the spring loaded "U" channel in the HOME position, turn the threaded rod with a flat head screwdriver, so that the spring loaded "U" channel when slightly pressed, causes the X7 to come on. Repeat this step for the right photo sensor. Again, the X6 and X7 inputs should only come ON when the spring loaded "U" channel is pressed inward.
11. Secure locking nuts on threaded rods when properly adjusted.
12. Replace the heater bar assembly, attach all wire connectors, install the guard, covers and lower the funnel/hood assembly with a bag in the sealing position. Apply air and power and test cycle the unit.

4.8 Electrical & Pneumatic Drawing

Refer to Dwg #T3-00164 for the Pneumatics diagram.
Refer to Dwg #T275Elec-0 for the Wiring Diagram

4.9 Preventative Maintenance

The following maintenance items should be performed by the operator or maintenance personnel to prolong the life of the equipment. Failure to perform these tasks may result in premature wear, personal injury or equipment damage.

Item:	Description:	Frequency:
Anti-jam	Test anti-jam prior to production	Daily
Pressure	Check air pressure to ensure 60-70 PSI	Daily
PTFE	Inspect for wear / holes, turn 1/4" if required	Daily
Rollers	Clean with Isopropyl Alcohol	Daily
Perf Sensor	Clean with Isopropyl Alcohol	Daily
Rubber Strip	Clean rubber strip with Isopropyl Alcohol	Weekly
Pressure Bar	Remove air and push in manually to ensure free movement with no binding	Weekly
Springs	Inspect for cracks in springs, ensure free movement	Monthly
Wiring	Ensure no loose contacts or worn shielding	Monthly
Fasteners	Tighten mounting bolts and fasteners	Monthly
Blower filter	Clean/replace if air flow decreases	Monthly
Electronics	Remove covers and blow out compartments	Monthly

Fig 4-7

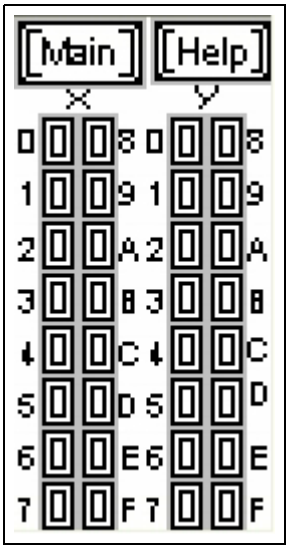


Fig 4-8

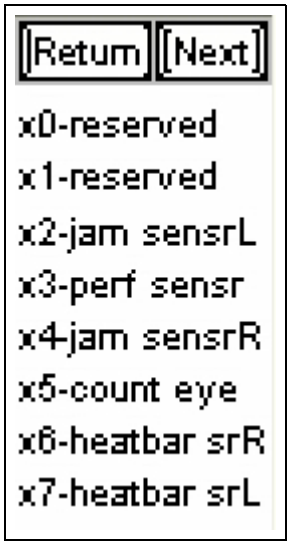


Fig 4-9

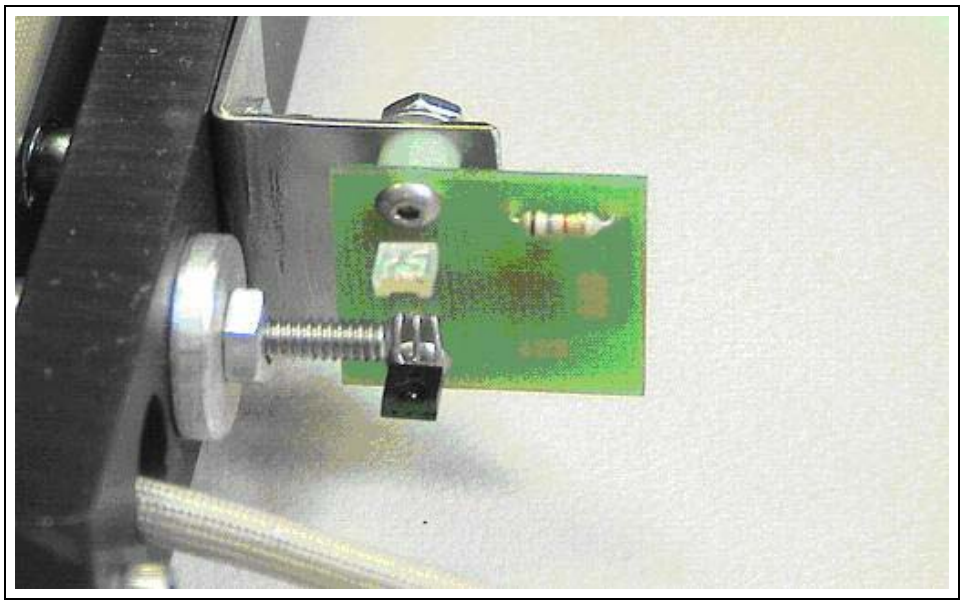


Fig 4-10

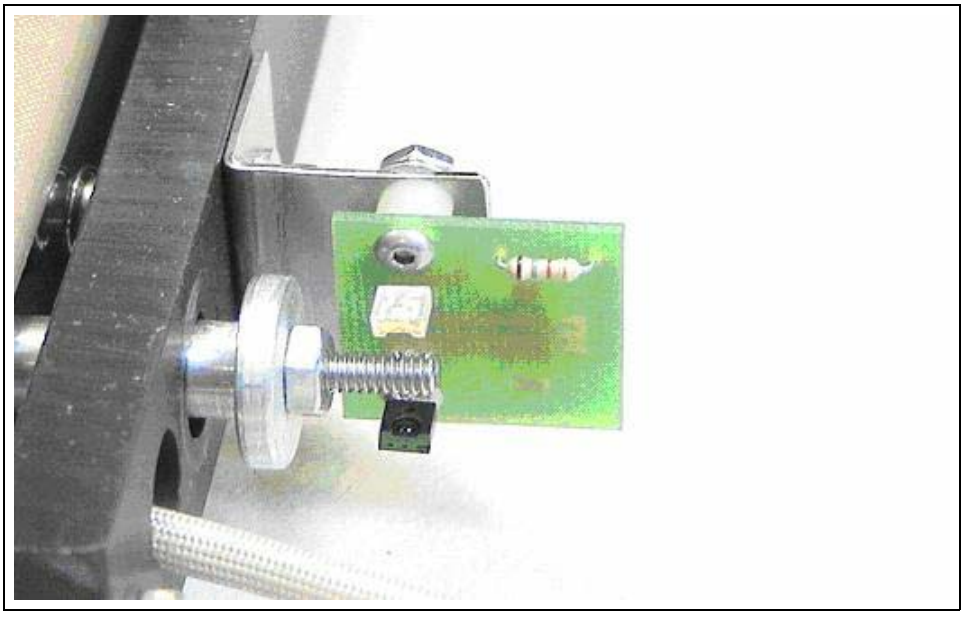
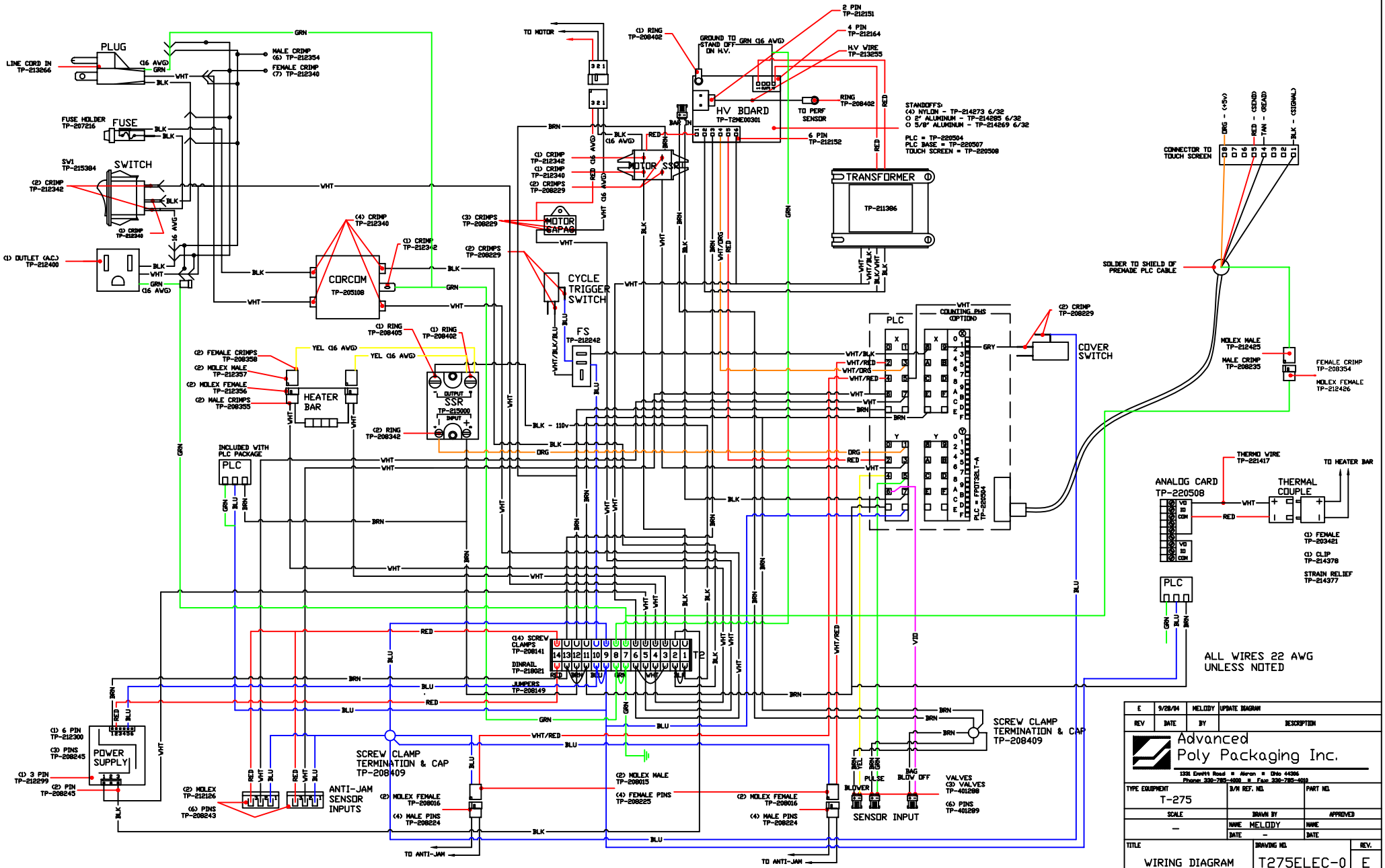


Fig 4-11



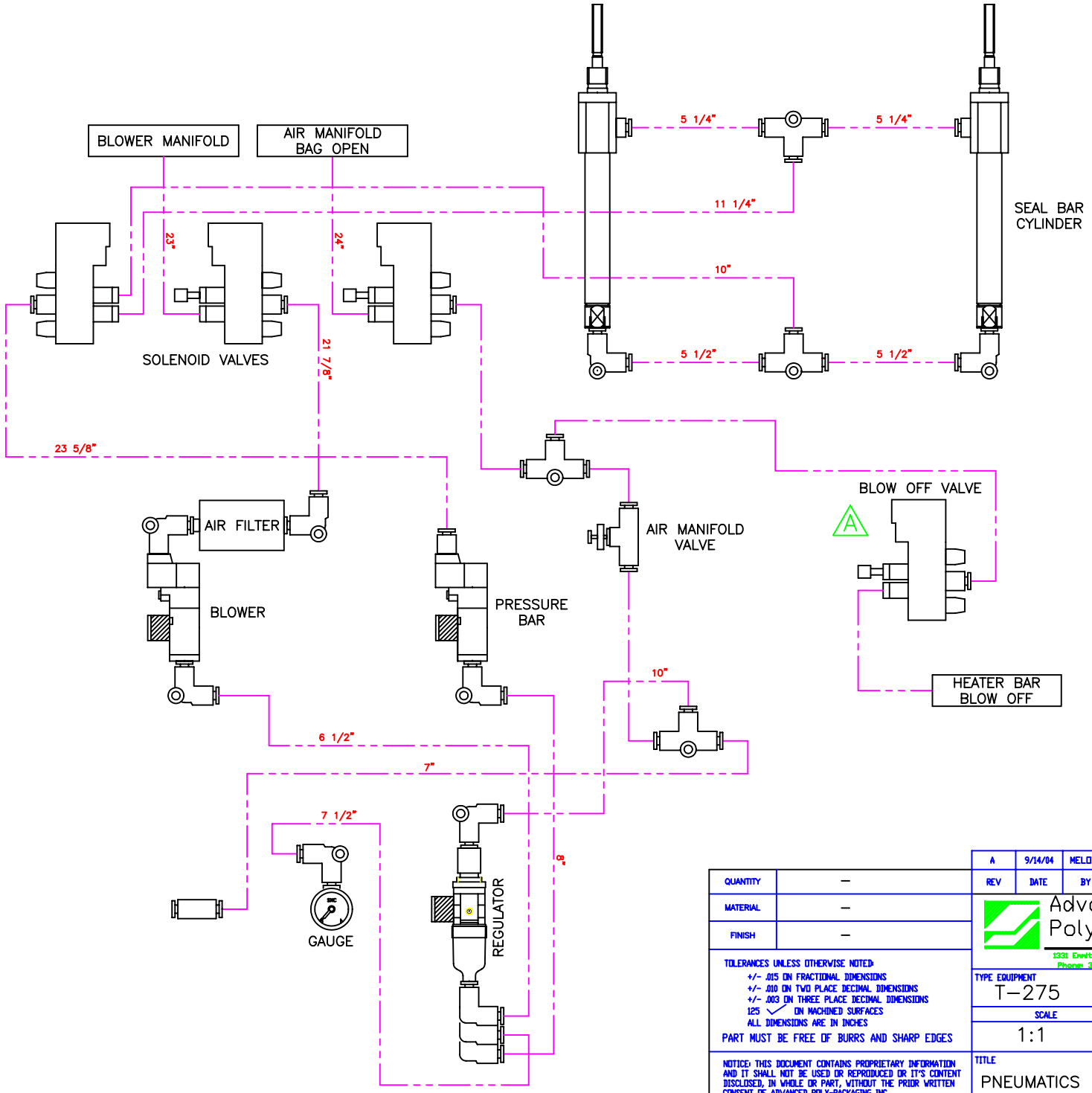
REV	DATE	BY	DESCRIPTION
E	9/28/04	MELODY	UPDATE DIAGRAM

Advanced Poly Packaging Inc.

1331 Eyrie Road • Akron • Ohio 44306
Phone: 330-785-4900 • Fax 330-785-4910

TYPE EQUIPMENT	D/W REF. NO.	PART NO.
T-275		
SCALE	DRAWN BY	APPROVED
–	NAME MELODY	NAME
	DATE –	DATE

TITLE	DRAWING NO.	REV.
WIRING DIAGRAM	T275ELEC-0	E



QUANTITY	–
MATERIAL	–
FINISH	–

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES

PART MUST BE FREE OF BURRS AND SHARP EDGES

REV	DATE	BY	DESCRIPTION
A	9/14/04	MELODY	ADDED A TEE AND A BLOW OFF VALVE

Advanced Poly Packaging Inc.
1331 Emmitt Road ■ Akron ■ Ohio 44306
Phone: 330-785-4000 ■ Fax: 330-785-4010

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-275		–
SCALE	DRAWN BY	APPROVED
1:1	NAME MELODY	NAME
	DATE 1/16/02	DATE

TITLE	DRAWING NO.	REV.
PNEUMATICS	T3-00164	A

Chapter 4

Maintenance, Adjustments, Preventative Maint.

Adding PTFE to Rubber Rubber
Strip Replacement PTFE
Advance
PTFE Sheet Replacement Heater
Cartridge Replacement
Description of Anti-jam Circuit
Anti-jam Adjustments
Electrical / Pneumatic Drawings
Preventative Maintenance
Recommended Spare Parts Kit

4.10 Recommended Spare Parts List

The following spare parts are recommended for your inventory which include components which can easily be replaced. These items are either wear items or other components which may fail during the day to day operation of the machine.

TO-T8-SP30 T-275 Spare Parts Kit (Level 1)

Part Number	Description	Qty
TP-T8MA00140	Seal Bar Rubber Strip	1
TP-T8MA00130	PTFE Sheet	2
TP-207732	Fuse 6 amp	1
TP-217117	Heater Cartridge (400W)	1
TP-221416	Thermocouple Wire	1
TP-404628	1/4" blue tubing	5
TP-406181	4 Micron Filter	1
TP-112300	Rubber Feet	4
TP-402255	Valve	1
TP-108157	Ext. Spring Dancer brake strap	2
TP-403008	Cylinder	1
TP-503102	Belt Motor	1

Chapter 5

Parts Identification

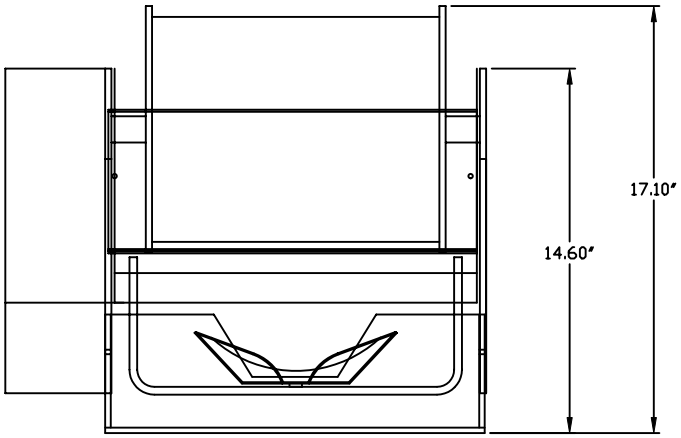
Parts Listings and Drawings

5.1 Parts / Component Identification

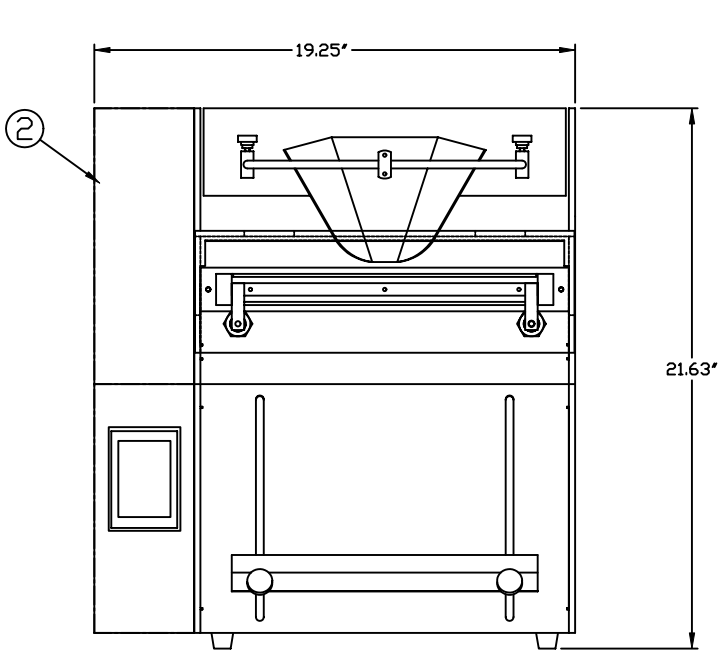
This section includes assembly drawings of the T-275. Please use APPI part numbers whenever possible to order replacement parts. You can also refer to Drawing Numbers and Corresponding Item Numbers on the drawings to assist in determining the required components.

Assembly => T-T275 Autofeed Tabletop Bagger
(See Drawing No. T-T275)

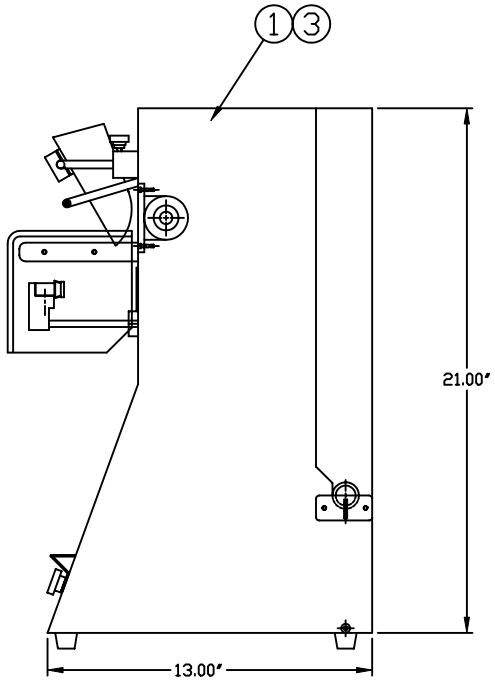
Item	Item No.	Description
1	TA-T80950	Mechanical Assembly
2	TA-T80104	Heater Bar Assembly
3	TA-T80900	Electronic Assembly



TOP VIEW



FRONT VIEW



SIDE VIEW

QUANTITY	-
MATERIAL	-
FINISH	-

TOLERANCES UNLESS OTHERWISE NOTED
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 √ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

REV	DATE	BY	DESCRIPTION

Advanced
Poly Packaging Inc.
1336 Everett Road ▪ Akron ▪ Ohio 44306
Phone: 330-785-4000 ▪ Fax: 330-785-4010

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-T275		
SCALE	DRAWN BY	APPROVED
N.T.S.	NAME MELODY	NAME
	DATE 10/29/03	DATE

TITLE	DRAWING NO.	REV.
AUTOFEED TABLETOP BAGGER	T-T275	-

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 11/4/2004
(see Drawing No. TA-T80950)

Assembly --> TA-T80950 T-T275 Mechanical Assy

Item	Item No.	Description
1	TA-T80104	Heater Bar Assy,T-200 and T-275
2	TP-T8MA00103	Electronic Panel
3	TP-T8MA00108	Cover Hanger
4	TP-T8MA00109	Rubber Strip Holder
5	TP-T8MA00110	Holder
6	TP-T8MA00115	Cover Standoff
7	TP-T8MA00118	Sealer Block
8	TP-T8MA00126	Load Shelf
9	TP-T8MA00127	Bag Roll Shaft
10	TP-T8MA00128	Guard Mount
11	TP-T8MA00129	Lexan Guard
12	TP-T8MA00131	Cover Mount
13	TP-T8MA00132	Roller Stop
14	TP-T8MA00135	Funnel Mount Block
15	TP-T8MA00136	Funnel Mount Bar
16	TP-T8MA00137	Funnel
17	TP-T8MA00138	Rod Mounts
18	TP-T8MA00139	Regulator Mount
19	TP-T8MA00140	Seal Bar Rubber Strip
20	TP-T8MA00174	Side Plate, Left
21	TP-T8MA00175	Side Plate, Right
22	TP-T8MA00176	Bearing Keeper
23	TP-T8MA00177	Front Plate T-275
24	TP-T8MA00178	Exit Plate T-275
25	TP-T8MA00179	Finger Plate T-275
26	TP-T8MA00180	Blower Housing T-275
27	TP-T8MA00182	Back-Up Roller,Steel T-275
28	TP-T8MA00183	Driven Roll,Rubber T-275
29	TP-T8MA00184	Cover
30	TP-T8MA00185	Pulley,Roll
31	TP-T8MA00186	Lower Brace
32	TP-T8MA00187	Mounting Plate
33	TP-T8MA00190	Shaft,Back-Up Roll
34	TP-T8MA00191	Mounting Bracket,Transformer
35	TP-T8MA00192	Side Cover T-275
36	TP-T8MA00194	Pulley,Motor
37	TP-T8MA00201	Pivot Shaft
38	TP-T8MA00204	Latch Body
39	TP-T8MA00205	Side Plate,Backup Roll
40	TP-T8MA00207	Cross Brace
41	TP-T8MA00208	Air Pulse Tube Manifold
42	TP-T8MA00209	Cover Bracket, HV Board
43	TP-T1MA00049	Film Tension Hub (2/Unit)
44	TP-T1MC00083	Insulator,High Volt Sensor
45	TA-T100124-1	High Voltage Sensor
46	TP-101138	Nut,Zinc Pltd 1/4-20 SQ
47	TP-102142	Washer, 1/4" SAE Flat
48	TP-103316	Screw, Sock Shldr 3/16x 1/4Lg x8-32
49	TP-106126	Springs Pins,SS 1/8 x 1-1/2
50	TP-107340	Bearing,Thrust 1/2ID x3/4OD x1/16LG
51	TP-107341	Bearing,Sleeve 3/8ID x1/2OD x1/4LG
52	TP-107342	Bearing,Thrust 3/8ID x3/4OD x1/8LG
53	TP-108117	Spring, Zinc Pltd. MW
54	TP-108220	Spring Plunger, w/Locking Element
55	TP-109152	Knob,Fluted 1/4-20 x 1/2
56	TP-109212	Knob,Torque 1/4-20 x 1
57	TP-109213	Knob,Torque 10-32 x 1/2
58	TP-109215	Knob,Fluted Grip 8-32 x 3/4
59	TP-112240	Strain Relief Large, 5/8" Hole Dia.
60	TP-112300	Bumper,Rubber Tapered 7/8" x 5/8"

Item	Item No.	Description
61	TP-401134	Hex Plug, 1/8" x 3/4" Brass
62	TP-401222	Nipple, 1/4 NPT Quick Connect
63	TP-401253	Connector, Bulkhead
64	TP-401254	Union Tee Fitting, 1/4" Tube
65	TP-401257	Elbow, 1/4" Tube x 1/8 NPT
66	TP-401258	Straight, 1/4" Tube x 1/8 NPT
67	TP-401277	Elbow, 1/4 tube x 10/32 Thread
68	TP-401278	Plug, 1/4" Tube
69	TP-401291	Elbow, 1/4" Tube X 1/4" Tube
70	TP-401292	Straight 1/4 poly x 1/4 npt
71	TP-401297	3-Way Fitting
72	TP-402105	Flow Control, In Line
73	TP-402107	Flow Control Valve (panel mount)
74	TP-402173	Bracket, SX3000-16-2A
75	TP-402187	Flow Control (Flat Seal & Tear Off)
76	TP-402255	Valve, SY3120-5MNZ-N7
77	TP-403148	Cylinder, NCDMB075-0300C-B64S
78	TP-404263	Muffler
79	TP-404268	Tubing, 1/4" Dia Blue (20M Roll)
80	TP-405268	Air Knife (Venturi) 6"
81	TP-406012	Gauge, 10-32 Thread
82	TP-406181	Filter, 4 micron (air knife)
83	TP-406258	Mini Regulator
84	TP-501162	Motor
85	TP-501163	Gear Box
86	TP-503102	Belt,Brake
87	TP-504107	Bearing, Nice 1616
88	TP-504114	Bearing, 7608 DLG
89	TP-215022	Limit Switch
90	TP-220356	TouchScreen, T-275
91	TP-220356-1	Cable, T-275 Touch Screen

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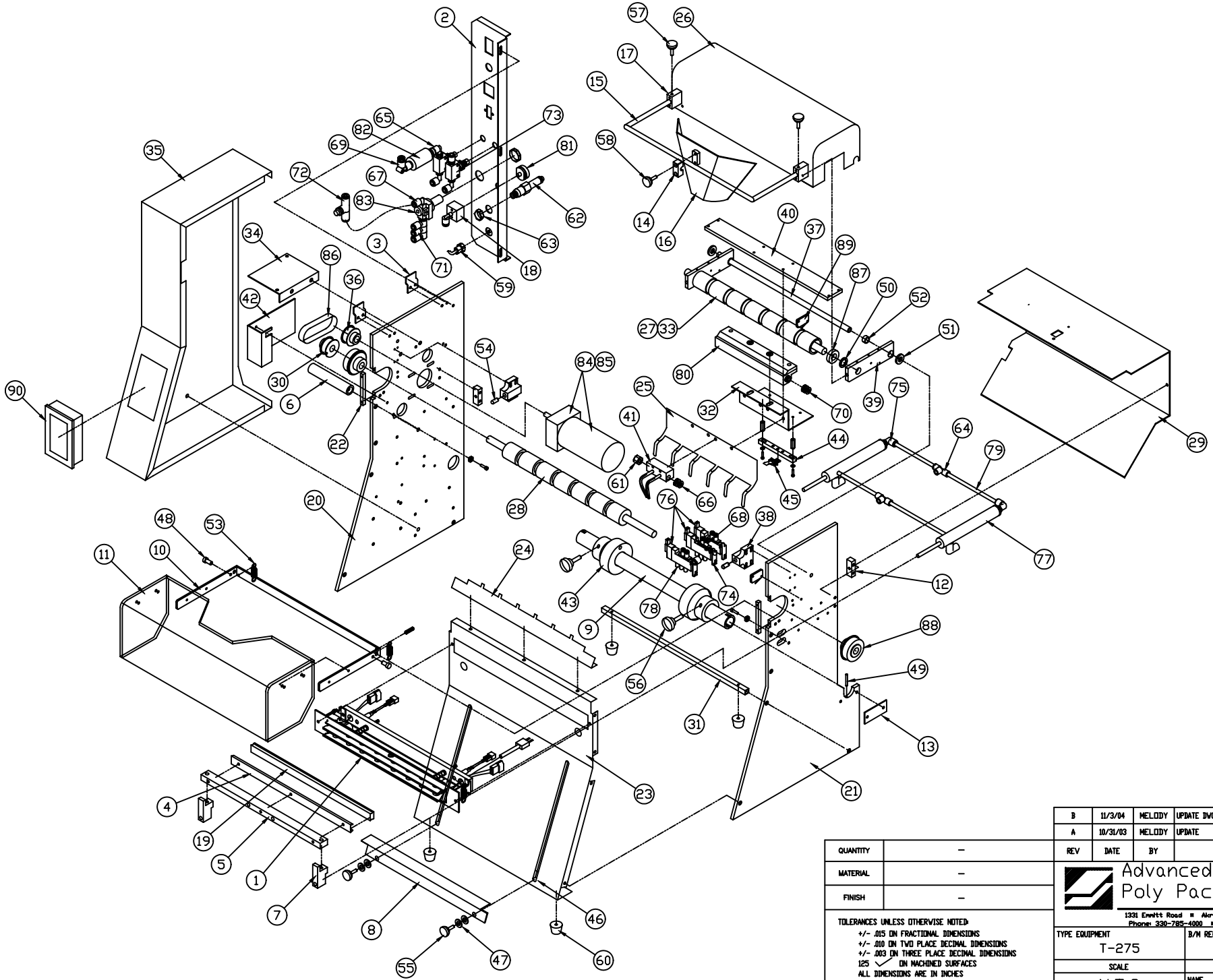


REV	DATE	BY	DESCRIPTION
B	11/3/04	MELODY	UPDATE DWG. TO REFLECT BOM
A	10/31/03	MELODY	UPDATE

QUANTITY	–
MATERIAL	–
FINISH	–

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 ✓ ON MACHINED SURFACES
ALL DIMENSIONS ARE IN INCHES
PART MUST BE FREE OF BURRS AND SHARP EDGES

Advanced
Poly Packaging Inc.
1331 Emmitt Road ■ Akron ■ Ohio 44306
Phone: 330-785-4000 ■ Fax: 330-785-4010

TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-275		
SCALE	DRAWN BY	APPROVED
N.T.S	NAME MELODY	NAME
	DATE 12/13/01	DATE

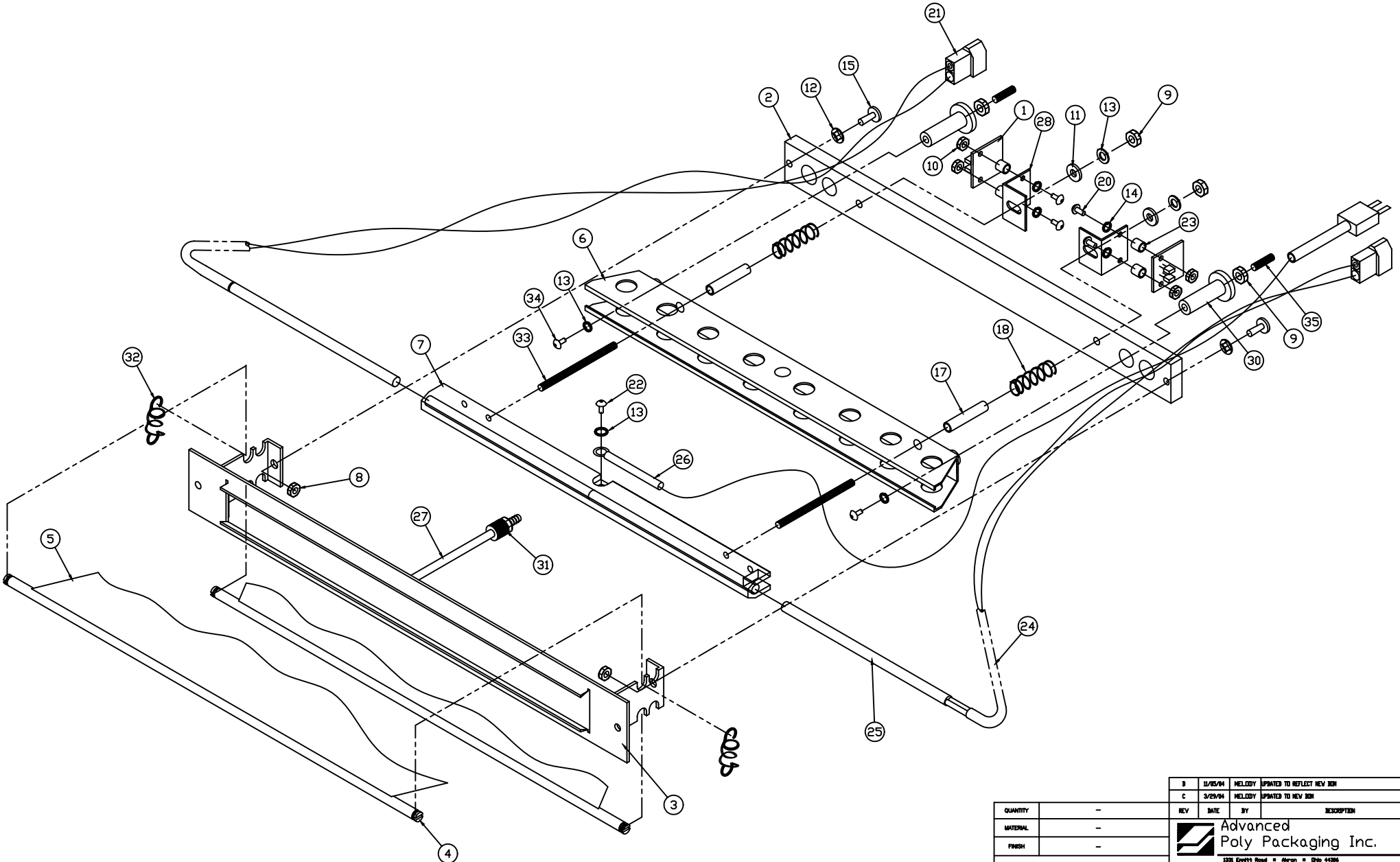
TITLE	DRAWING NO.	REV.
T-275 AUTOFEED TABLE TOP BAGGER ASSEMBLY	TA-T80950	B

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 11/8/2004
(see Drawing No. TA-T80104)

Assembly --> TA-T80104 Heater Bar Assy,T-200 and T-275

Item	Item No.	Description
1	TA-T20052	Head Down Sensor Board
2	TP-T8MA00112-1	Brace
3	TP-T8MA00121-5	Heater Plate & Bracket Assy PTFE
4	TP-T8MA00124	Shaft
5	TP-T8MA00130	PTFE Sheet, T-200/T-275
6	TP-T8MA00199	Anti-Jam
7	TP-T8MA00202	Seal Bar
8	TP-101103	Nut,8-32 Hex Mach Screw Pltd Zinc
9	TP-101105	Nut, 10-32 Hex Mach Screw
10	TP-101101	Nut, 4-40 Hex Mach Screw
11	TP-102134	Washer,#10 SAE Flat Zinc
12	TP-102153	Washer, #8 Med Split Lock
13	TP-102154	Washer, 10 Med Split Lock
14	TP-102151	Washer, Med Split Lock Zinc #4
15	TP-103213	Screw, BHCS 8-32 x 3/4
16	TP-103210	Screw, BHCS 8-32 x 1/4
17	TP-104118	Spacer,Round Unthreaded (#8 Screw)
18	TP-108099	Compression Spring,Guide Rollers,MW
19	TP-103494	Screw, Socket Set 8-32 x 5/8
20	TP-103204	Screw, BHCS 4-40 x 1/2"
21	TP-208355	Crimp Terminal, M, .125" 16-18 awg
22	TP-103116	Screw, SHCS 8-32 x 1/2"
23	TP-104125	Spacer,#8 x 1/4" Nylon
24	TP-213004	Braided Fiberglass Sleeving 100'/Rl
25	TP-217117	Cartridge, Heater 400W/120V
26	TP-221416	Thermocouple Wire w/ Connector Blow
27	TP-T8MA00225	Off Tube
28	TP-T8MA00226	Brkt, Antijam Sensor, T-275
29	T-N/A	This Part on Drwg. not on bill
30	TP-T8MA00227	Heater bar slide
31	TP-401283	Hose fitting barb 1/8"
32	TP-108153	Extension Spring,.36"x.037"MWx.75"L
33	TP-106090	Stud,10-32 All-Thread 2.500 LG Screw,
34	TP-103129	SHCS 10-32 x 1/2"
35	TP-103495	Screw, Socket Set 10-32 x 3/4



B	11/05/04	MELODY	UPDATED TO REFLECT NEW BOM	
C	3/29/04	MELODY	UPDATED TO NEW BOM	
REV	DATE	BY	DESCRIPTION	

QUANTITY	–
MATERIAL	–
FINISH	–

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
+/- .010 ON TWO PLACE DECIMAL DIMENSIONS
+/- .003 ON THREE PLACE DECIMAL DIMENSIONS
125 √ ON MACHINED SURFACES
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PART MUST BE FREE OF BURRS AND SHARP EDGES

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TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-250/T-275		
SCALE	DRAWN BY	APPROVED
1:4	NAME MELODY	NAME
	DATE 12/6/01	DATE

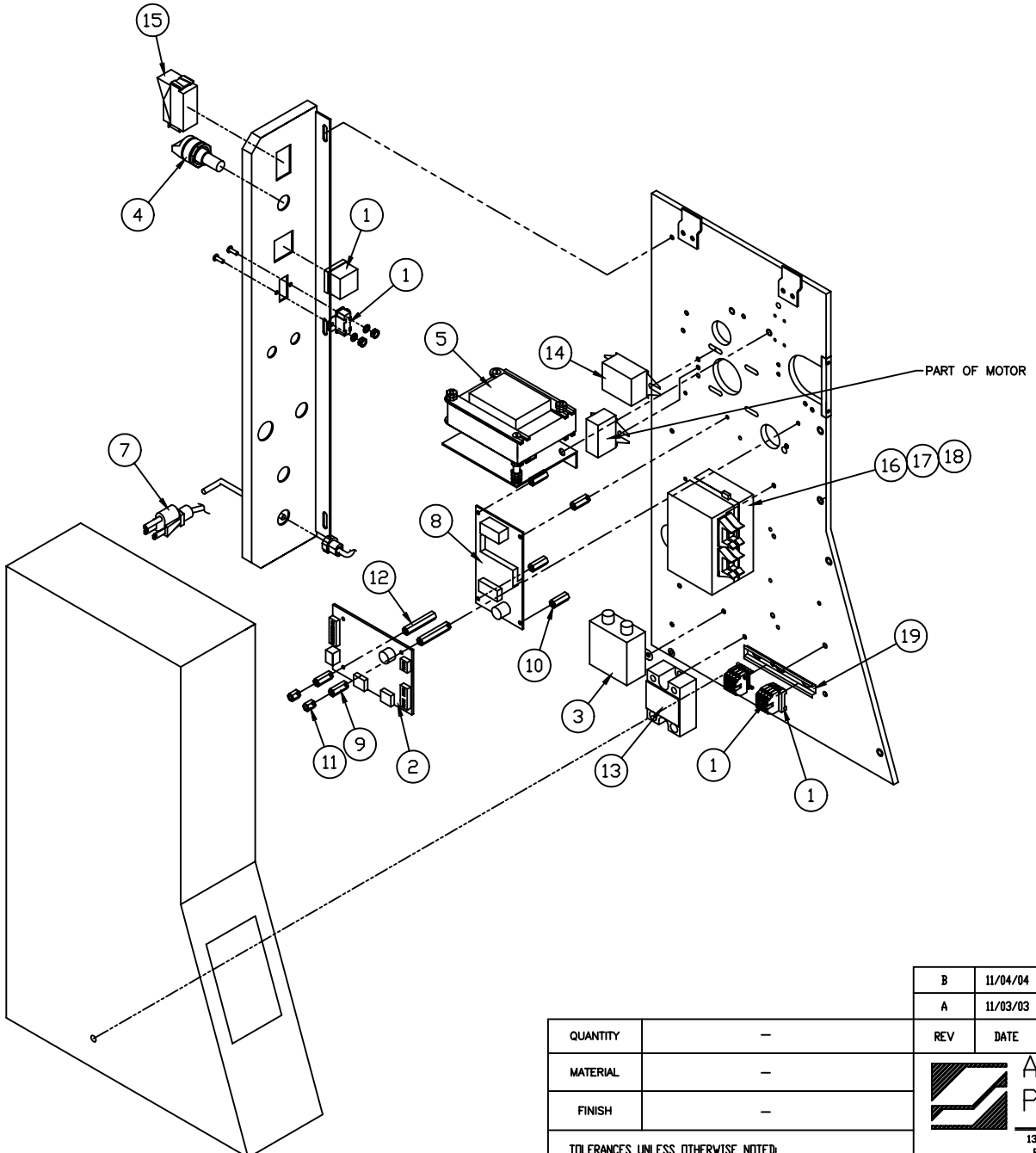
TITLE	DRAWING NO.	REV.
HEATER BAR ASSEMBLY	TA-T80104	D

Advanced Poly-Packaging, Inc.

Bill of Materials Top Level Report for 11/5/2004
(see Drawing No. TA-T80900)

Assembly --> TA-T80900 Electronic Componets,T-275

Item	Item No.	Description
1	TA-T80910	T-275 Wiring Harness
2	TP-T1ME00301	PCB, High Voltage Board Finished
3	TP-205108	Filter,120/250VAC 50/60 HZ,K Series
4	TP-207216	Fuse Holder(110v/220v)
5	TP-211386	Transformer, Dual Voltage
6	TP-212356	2 pin .125" power connector (plug)
7	TP-213266	Cable, Power Supply Cord 12'Long
8	TP-213358	Power Supply,25W 4.00"x2.50"x0.860"
9	TP-214269	Standoff, (TI) Hex M/F 5/8"x 6/32
10	TP-214273	Standoff,Nylon Hex Threaded(3/4")
11	TP-214278	Standoff,Hex 6-32X3/8 BRASS M/F
12	TP-214285	Standoff,Hex,1-1/2,6/32 Thrd Alum.
13	TP-215000	Relay,Solid State 10A G-Series
14	TP-215003	Relay, Solid State 140VAC/6A
15	TP-215384	Switch, Rocker SPST 250V @ 10A
16	TP-220504	PLC, T-1000 (Touch Screen Ver.)
17	TP-220507	PLC Base
18	TP-220508	PLC Anolog Module, FPO-A21-A
19	TP-218021	Rail (1m) Long



REV	DATE	BY	DESCRIPTION
B	11/04/04	MELODY	UPDATE DWG. TO REFLECT BOM
A	11/03/03	MELODY	UPDATE

QUANTITY	–
MATERIAL	–
FINISH	–

TOLERANCES UNLESS OTHERWISE NOTED:
+/- .015 ON FRACTIONAL DIMENSIONS
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TYPE EQUIPMENT	B/M REF. NO.	PART NO.
T-275		
SCALE	**DRAWN BY**	**APPROVED**
N.T.S.	NAME MELODY	NAME
	DATE 12/19/01	DATE

TITLE	DRAWING NO.	REV.
ELECTRONIC COMPONENTS	TA-T80900	B