



OPERATING & SERVICE PARTS MANUAL
STANDARD DUTY SHRINK TUNNELS



MODELS:

T2615 / T2622

T3417 / T3422

T4822 / T4832



READ ALL INSTRUCTIONS CAREFULLY BEFORE OPERATING EQUIPMENT

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THE INSTALLATION AND OPERATION OF THIS EQUIPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE ELECTRICAL AND SAFETY STANDARDS. A QUALIFIED ELECTRICIAN MUST CHECK THE ELECTRICAL SUPPLY CIRCUIT TO ASSURE FOR CORRECT VOLTAGE AND CAPACITY. THIS EQUIPMENT IS DESIGNED FOR INDUSTRIAL APPLICATIONS BY QUALIFIED PERSONNEL ONLY.

Heat Seal Shrink Tunnels are Heavy Duty, industrial strength tunnels that have been designed for continuous use and high reliability. They can operate behind a wide range of semi-automatic and automatic sealers and bundlers.

ELECTRICAL REQUIREMENTS

Listed below are the basic electrical requirements for the models included in this manual.

T2615/T2622



T2615:

220V, SINGLE PHASE,
25AMPS, 4,000 W

T2622:

220V, SINGLE PHASE,
31AMPS, 6,000 W

T3417/T3422



T3417/8:

220V, SINGLE PHASE,
25AMPS, 8,000 W

T3417/10:

220V THREE PHASE,
43AMPS, 8,000 W

T3422:

220V, THREE PHASE
51AMPS, 10,000 W

T4822/T4832



T4822:

220V, THREE PHASE,
54AMPS, 18,000 W

T4832:

220V, THREE PHASE,
54AMPS, 18,000 W

INSTALLATION & OPERATION PROCEDURE



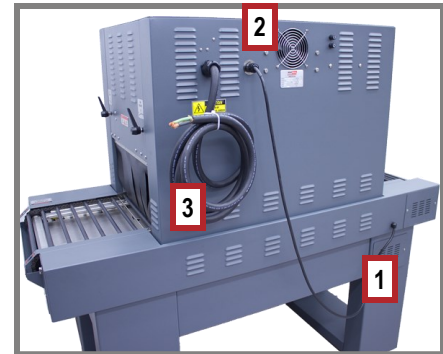
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ELECTRICAL REQUIREMENTS

Please see the machine nameplate for electrical requirements.

UNPACKING THE TUNNEL

- On the back of the conveyor is a power cord (1) with a small twist lock plug (2). Ensure that it is plugged into the matching receptacle on the back of the tunnel.
- The power cord for the unit is shipped without a plug on it (3). The electrician or service technician will have to install the proper plug to match its corresponding receptacle or be hardwired into a wall mounted box to meet local electrical codes.



OPERATING PROCEDURE

Before plugging the tunnel into the wall outlet or turning the main power switch in the box on, be sure that:

- The POWER SWITCH (4) on the front control panel is set in the OFF position .
- The CONVEYOR SPEED (5) dial control is set at "0".

To turn the machine on:

- Turn on the main power switch at the main breaker box or wall box.
- Flip the power switch ON. The blower motors should be running, the conveyor belt will begin to creep and the temperature controller should be lit up and displaying the ambient (room) temperature.
- Set the operating temperature to 300° F (6). The tunnel takes ten to fifteen minutes to reach operating temperature.
- The speed of the conveyor is adjusted by the dial on the control panel.
- Adjust the speed of the conveyor, then adjust the tunnel temperature to achieve your optimal settings.



DIGITAL CONTROLLER DESCRIPTION



TEMPERATURE UNIT
The temperature unit is displayed when the display unit parameter is set to a temperature. Indication is determined by the currently selected "temperature unit" parameter set value. °F When parameter is set for Fahrenheit readings.

OUTPUT ACTIVITY
Number lights 1 & 2 indicate activity of outputs 1 & 2.

ACTUAL TUNNEL TEMP
Displays the actual Tunnel Temperature.

SET VALUE DISPLAY
Displays the numerical set point, manipulated variable or set value (setup) of the parameter.



UP KEY
Increases value displayed in the "Set Value" display. Holding down this key continuously increases values

DOWN KEY
Decreases value displayed in the "Set Value" display. Holding down this key continuously decreases values

SETTING THE CONTROLLER



SET VALUE

- The temperature that the controller operates at is displayed on the controller as SET VALUE. The value is pre-set at the factory to a maximum limit of 400°F.
- The optimal value will vary based on your system application and this temperature value can vary between 0° and 400° Fahrenheit.
- Most applications run at 300° to 325° F.

THE MAXIMUM HIGH LIMIT SETTING IS 400° F.
HIGHER TEMPERATURE
VOIDS EQUIPMENT WARRANTY

ACTUAL TUNNEL TEMP

- The actual temperature that the thermocouple measures on the system. The Actual Tunnel Temp display may fluctuate several degrees depending on your system and your production rate.
- Controller Accuracy: 0.5% of indicated temperature.

SETTING THE CONTROLLER TEMPERATURE

- Depress Up Key (1) to increase Set Value.
- Depress Down Key (2) to decrease Set Value.





LEVELING THE CONVEYOR SECTION

- All shrink tunnels are equipped with levelers (1). It is recommended to adjust the levelers so that the conveyor section matches the output conveyor of the L sealer. This will also keep the conveyor in place during operation of the tunnel.

BELT ADJUSTMENTS

NON-STICK MESH BELTS

- The Non-stick mesh belt is adjusted to provide positive belt tracking and traction for packages weighing up to ten pounds. Packages heavier than ten pounds would require an adjustment of the tension roller which is accessible from the ends of the conveyor section. This can be adjusted by loosening the lock nuts and re-tighten the tension roller shaft bolts (2) uniformly on each side. No other adjustments should be required.

STAINLESS STEEL WIRE & GLASS FILLED NYLON BELTS

- This belt is sprocket driven which provides positive tracking and traction. The belt may stretch from time to time which may require a minor adjustment to remove the slack. This adjustment can be made by loosening the lock nuts and re-tighten the tension roller shaft bolts uniformly on each side (located at the ends of the conveyor).

LIVE/DEAD ROLLER BELTS

- The rollers are set in the live mode at the factory. To deactivate the rollers, tighten the spring loaded screws located under the metal channels beneath the rollers (3) near tunnel opening. To activate the rollers, the screws must be loosened so that the rollers come in contact with the metal channels.
- The chain may stretch after a time and require a minor adjustment to remove slack from the chain. This adjustment can be made by loosening the lock nuts and re-tighten the tension roller shaft bolts (2) uniformly on each side (located at the ends of the conveyor).

AIR VELOCITY CONTROL

- Most tunnels are equipped with mechanical dampers for air velocity control.
- There are two handles (1) on the infeed end of the tunnel labeled LOW, MEDIUM and HIGH to control the air flow into the tunnel. It is recommended to start out at HIGH and make any adjustments necessary for a particular package size.



TUNNEL SHUT DOWN

- The tunnel is equipped with an automatic cool down switch. When the breaker switch on the control panel is set to OFF, the blower motors will continue to run for approximately fifteen minutes to force cool air through the heating element to help them cool down which will help to extend the life of the heating element.

LUBRICATION OF THE TUNNEL BELT

- The chain and sprockets on all Heat Seal shrink tunnels must be maintained to provide for long life and smooth operation. The tunnel chain must be lubricated (2) after every 40 hours of operation with Heat Seal Chain Gel lubricant. (Part No. 5406-006)



TROUBLESHOOTING

- A troubleshooting guide also comes with this manual to explain problems and possible solutions you may come across.



PROBLEM: **FILM SPLITS ALONG CENTER FOLD**
SOLUTION: CHECK FOR DAMAGE TO FILM ROLL.



PROBLEM: **FILM SPLITS AT HOLE PUNCH**
SOLUTION: CHECK HOLE PUNCH FOR PROPER ALIGNMENT.
CHECK THE CONDITION OF THE PUNCHED HOLES.



PROBLEM: **FILM SPLITS AT TOP OF PACKAGE**
SOLUTION: CHECK HOLE PUNCH FOR PROPER ALIGNMENT.
CHECK THE CONDITION OF THE PUNCHED HOLES.
MAKE SURE THE TUNNEL IS FUNCTIONING PROPERLY.
SPEED UP THE TUNNEL CONVEYOR.
DECREASE THE TUNNEL TEMPERATURE.
ADJUST THE AIR FLOW.



PROBLEM: **FILM SMOKES EXCESSIVELY**
SOLUTION: CHECK AND CLEAN WIRE AND WIRE INSULATION.
CHECK AND CLEAN KNIFE BLADE.
CHECK CONDITION OF SEALING PADS.
CHECK CONDITION OF NON-STICK TAPE.
CHECK FOR EVEN ARM AND MAGNET PRESSURE.
CHECK THE MINIMUM SEALING TEMPERATURES.
INCREASE THE SEALING TEMPERATURES.
DECREASE THE DWELL TIME.



PROBLEM: **FILM BUILDUP ON SEALING WIRE**
SOLUTION: CHECK AND CLEAN WIRE, WIRE INSULATION OR KNIFE BLADES.
CHECK THE CONDITION OF THE SEALING PADS.
CHECK THE NON-STICK TAPE.
CHECK FOR EVEN ARM AND MAGNET PRESSURE.
CHECK THE MINIMUM SEALING TEMPERATURES.
INCREASE THE SEALING TEMPERATURES.
CHANGE THE NON-STICK TAPE.



PROBLEM: **CROWS FEET**
SOLUTION: SLOW DOWN TUNNEL CONVEYOR.
INCREASE THE TUNNEL CHAMBER TEMPERATURE.



PROBLEM:

FISH EYES

SOLUTION:

MAKE SURE TUNNEL IS FUNCTIONING PROPERLY.
SLOW DOWN TUNNEL CONVEYOR.
USE LESS FILM AROUND THE PACKAGE.
INCREASE THE TUNNEL TEMPERATURE.



PROBLEM:

ANGEL HAIR

SOLUTION:

CHECK AND CLEAN WIRE, WIRE INSULATION OR KNIFE BLADES.
CHECK CONDITION OF SEALING PADS AND NON-STICK TAPE.
CHECK FOR EVEN ARM AND MAGNET PRESSURE.
CHECK THE MINIMUM SEALING TEMPERATURES.
CHECK THE SEAL CYCLE IS COMPLETE.
MAKE SURE THE MAGNETS RELEASE AT THE SAME TIME.
CHECK THE CONDITION OF THE AIR RELEASE HOLES.
INCREASE THE SEALING TEMPERATURES.
CHANGE THE NON-STICK TAPE.



PROBLEM:

DOG EARS

SOLUTION:

USE LESS FILM AROUND THE PACKAGE.
SLOW DOWN THE TUNNEL CONVEYOR.
CHECK THE CONDITION OF THE AIR RELEASE HOLES.
INCREASE THE TUNNEL TEMPERATURE.



PROBLEM:

BURN HOLES (HOT SPOTS)

SOLUTION:

CHECK THE CONDITION OF THE AIR RELEASE HOLES.
SPEED UP THE TUNNEL CONVEYOR.
DECREASE THE TUNNEL CHAMBER TEMPERATURE.



PROBLEM:

ERRATIC SHRINK

SOLUTION:

MAKE SURE THE TUNNEL IS FUNCTIONING PROPERLY.
SLOW DOWN TUNNEL CONVEYOR.
ADJUST THE TUNNEL AIR FLOW.
INCREASE TUNNEL CHAMBER TEMPERATURE.



PROBLEM:

SEVERE BALLOONING

SOLUTION:

INCREASE THE TUNNEL TEMPERATURE
CHECK CONDITION OF AIR HOLES.

