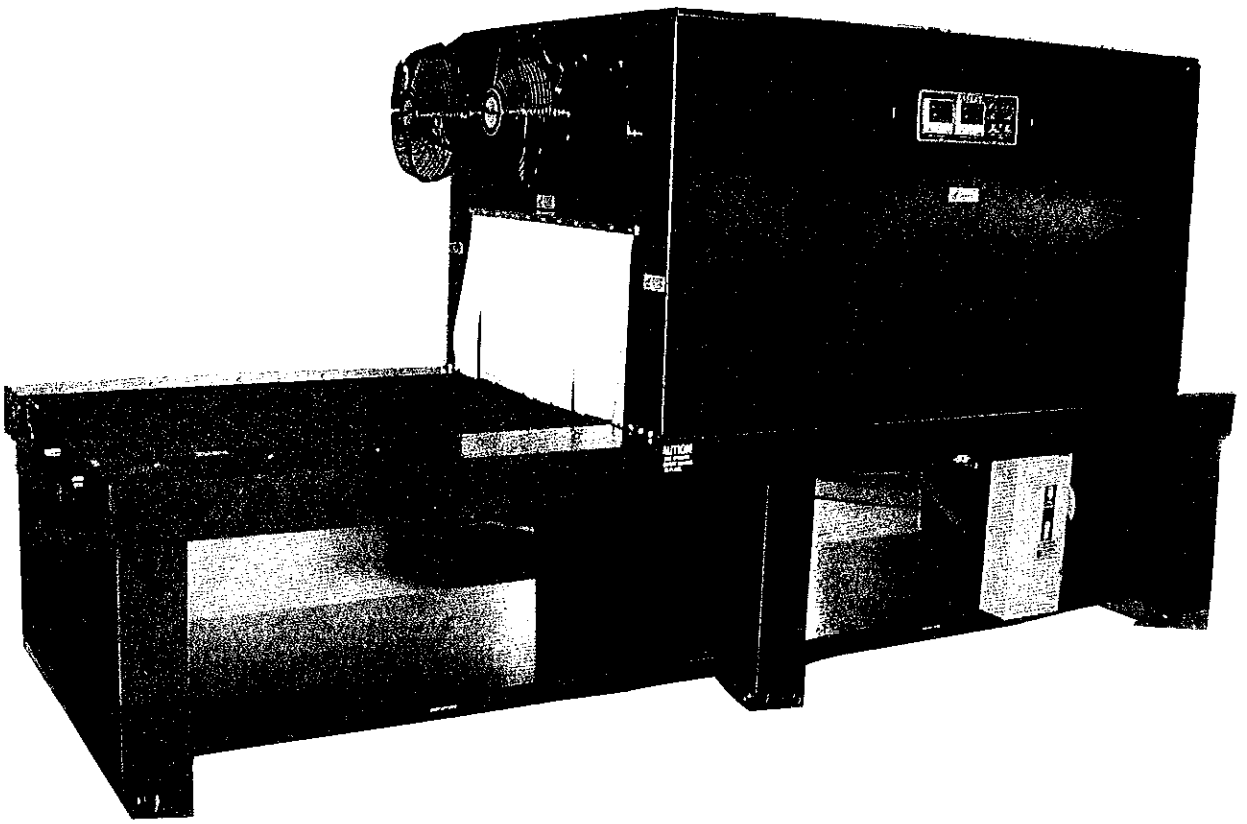
"EASTEY' BUNDLING SHRINK TUNNEL



MODEL ET24I6BU SHOWN

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INTRODUCTION OF "EASTEY" BUNDLING SHRINK TUNNELS

GENERAL DESCRIPTION OF BUNDLING SHRINK TUNNELS:

ET24XX 78BU
ET36XX 78BU
ET48XX 78BU
ET56XX 78BU
ET70XX 78BU

E = Indicates that it is an Eastey

T = Indicates that it is an Eastey Shrink Tunnel

24, 36, 48, 56, 70, = Indicates that it has a 24",35" 48", 56" or 70" wide conveyor

MODEL DESCRIPTION

Models: ET24BU, ET36BU, ET48BU, ET56BU, & ET70BU

A simple yet reliable and extremely durable shrink tunnel. The strength and durability of this model are its' greatest features. Straightforward, easy manual operation is employed. Operator training should at the ultimate extreme be less than one work shift.

JEFF EASTEY ENTERPRISES, INC.
THE OPERATING AND MAINTENANCE MANUAL

This operating and maintenance manual has been prepared to provide the user information on installation, operation and maintenance of Eastey Shrink Packaging Equipment.

Please read this manual carefully and refer to it for information on the care and use of your Eastey Shrink Packaging Equipment. It is recommended that additional copies be ordered for use by production, maintenance, and supervisory personnel. Although the design of the Eastey Shrink Packaging Equipment incorporates safe-guards to protect personnel, extreme care must be used in operating, adjusting and servicing the shrink packaging equipment.

Your attention is directed to the limited warranty, which accompanies Eastey Shrink Packaging Equipment. The terms and conditions of the limited warranty apply only to unmodified units. Any unauthorized modifications to the equipment or misuse of the equipment automatically invalidates the limited warranty.

EASTEY®

LIMITED WARRANTY
EFFECTIVE JANUARY 1, 2009

JEFF EASTEY ENTERPRISES, INC. ("EASTEY") warrants each new product it manufactures to be free from defects in material and workmanship for a period of two (2) years from the date of shipment by Eastey.

Defective parts under warranty must be returned to EASTEY, freight prepaid. EASTEY's sole obligation and purchaser's sole remedy in the event of a breach of this warranty shall be, at EASTEY's option, to repair or provide replacement parts for the product or refund the purchase price paid to EASTEY for the product.

THIS WARRANTY SHALL NOT APPLY IF ANY MODIFICATION, ALTERATION OR ADDITION IS MADE TO THE PRODUCT WITHOUT EASTEY's PRIOR WRITTEN APPROVAL. FURTHERMORE, THIS WARRANTY DOES NOT APPLY TO PRODUCT DEFECTS DUE TO MISUSE, ABUSE, NEGLECT, OR FAILURE TO FOLLOW RECOMMENDED PROCEDURES. ANY PRODUCT REPAIRED OR ALTERED BY PERSONS OTHER THAN AUTHORIZED EASTEY REPRESENTATIVES WILL NOT BE COVERED BY THIS WARRANTY. THIS WARRANTY DOES NOT APPLY TO CONSUMABLE ITEMS. (SEE FOLLOWING PAGES FOR FURTHER DETAIL)

EXCEPT AS EXPRESSLY PROVIDED IN THIS WARRANTY, EASTEY MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCT, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OR ANY OTHER MATTER.

EASTEY SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES OF ANY DESCRIPTION WHETHER ARISING OUT OF WARRANTY OR OTHER CONTRACT, NEGLIGENCE OR OTHER TORT, OR OTHERWISE. NO AGENT, EMPLOYEE, OFFICER OR OTHER REPRESENTATIVE OF EASTEY ENTERPRISES, INC. HAS AUTHORITY TO BIND EASTEY TO ANY REPRESENTATION OR WARRANTY EXCEPT AS STATED HEREIN. UNDER NO CIRCUMSTANCES SHALL EASTEY'S LIABILITY HEREUNDER, FOR ANY REASON OR CAUSE EXCEED THE PRICE PAID TO EASTEY FOR THE PRODUCT.

EASTEY reserves the right to make changes, additions or improvements to the product with no obligation to make such changes in any previously shipped product covered by this warranty.

LIMITED WARRANTY - THE MINI BY EASTEY The following parts are an exception to the warranty listed on the previous page. Each part listed below shall carry a 30 day warranty unless designated otherwise:

1. End Curtains
2. Conveyor Belt
3. Knurled Nuts

The following parts are considered to be consumable items and not under warranty: .

1. Fuses
2. 114" x 314" Sponge Rubber
3. Copper Heat Sinks
4. .036 Nichrome Wire
5. 3/4" Teflon Tape
6. 112" Teflon Tape

LIMITED WARRANTY - ECONOMY SEALERS ET1622MJT and EMI636M/T
The following parts are an exception to the warranty listed on the previous page. Each Part listed below shall carry a 30 day warranty unless designated otherwise:

1. Conveyor Belt
2. Knurled Nuts

The following parts are considered to be consumable items and not under warranty:

1. Fuses
2. 114" x 3/4" Sponge Rubber
3. .036 Nichrome Wire
4. 314" Teflon Tape
5. 112" Teflon Tape

LIMITED WARRANTY- SEALERS w/HOT WIRE
The following parts are an exception to the warranty listed on the previous page. Each part listed below shall carry a 30 day warranty unless designated otherwise:

1. Termination Post
2. Conveyor Belt
3. Hole Punches - Ball and Die
4. Knurled Nut

The following parts are considered to be consumable items and not under warranty:

1. Fuses
2. 114" x 314" Sponge Rubber
3. Copper Heat Sinks
4. .036 Nichrome Wire
5. 314" Teflon Tape
6. 1/2" Teflon Tape

LIMITED WARRANTY - SEALERS, SLEEVEWRAPPERS/ BUNDLERS w/DUO SEAL®, & **AUTOMATIC** SEALERS
The following parts are an exception to the warranty listed on the previous page. Each part listed below shall carry a 30 day warranty unless designated otherwise:

1. Felt Pad
2. Conveyor Belt

The following parts are considered to be consumable items and not under warranty:

1. Coated Seal Bars, (Mushrooms Inserts, poly inserts, arrow inserts, pancake inserts, . and cutting rules) if they have been scratched.
2. Fuses
3. 114" x 314" Sponge Rubber
4. 3/4" Teflon Tape
5. 112" Teflon Tape

LIMITED WARRANTY - ECONOMY TUNNEL ET1608 AND EET2010
The following parts are an exception to the warranty listed on the previous page. Each part listed below shall carry a 30 day warranty unless designated otherwise:

1. Silicone Tubing (Roller Covering)
2. End Curtains

LIMITED WARRANTY - **SMALL TUNNEL** ET1610-36 **and ET1610-48**
The following parts are an exception to the warranty on the previous page. Each part listed below shall carry a 30 day warranty unless designated otherwise:

1. Silicone Tubing (Roller Covering)
2. End Curtains

The following parts are considered to be consumable items and not under warranty:

1. Fuses

LIMITED **WARRANTY**- ALL **OTHER TUNNELS**
The following parts are an exception to the warranty listed on the previous page. Each part listed below shall carry a 30 day warranty unless designated otherwise:

1. Silicone Tubing (Roller Covering)
2. End Curtains

The following parts are considered to be consumable items and not under warranty:

1. Fuses

WARNING

EVERY EFFORT HAS BEEN TAKEN TO INSURE SAFETY WHILE OPERATING THIS MACHINE, HOWEVER, THERE STILL REMAINS CERTAIN RISKS. DO NOT ALLOW THIS MACHINE TO BE OPERATED BEFORE INFORMING ALL PERSONNEL OF THE ATTACHED WARNINGS.

WARNING...

Do not tamper with electrical wiring. Use only licensed electrician's for maintenance. Always disconnect electrical power before attempting maintenance to any electrical or moving parts.

WARNING...

In order to prevent injury to machinery and/or personnel **DO NOT INCREASE SETTINGS ON EITHER ELECTRICAL OR MECHANICAL OVERLOAD SAFETY DEVICES.**

WARNING...

KEEP HANDS AWAY FROM **MOVING CONVEYORS** AND **ASSEMBLIES.** Conveyor belts that have become worn or frayed can be hazardous and should be replaced promptly.

WARNING...

NEVER OPERATE THIS OR ANY **MOVING EQUIPMENT WITHOUT** ALL **COVERS** AND **GUARDS** IN PLACE. The internal mechanism of most packaging machinery contains numerous shear, pinch, and in-running nip points, many of which are capable of causing severe injury and permanent disfiguration.

WARNING...

TO MINIMIZE POTENTIAL FOR PERSONAL INJURY, ALWAYS BE SURE THAT MACHINE OPERATORS AND OTHERS WORKING ON MACHINERY ARE PROPERLY TRAINED IN THE CORRECT USAGE OF THE EQUIPMENT AND PROPERLY INSTRUCTED REGARDING THE SAFETY PROCEDURES FOR OPERATION.

WARNING...

Heat sealing arms and jaws on **packaging** machinery **can** become very **warm after a period** of **use. KEEP HANDS AWAY WHILE IN OPERATION AND USE CAUTION IF THE MACHINE HAS BEEN RUNNING RECENTLY.**

WARNING...

DO NOT MAKE ANY MODIFICATIONS TO **EITHER THE** ELECTRICAL **CIRCUITRY** OR **THE MECHANICAL ASSEMBLIES** OF **THIS MACHINERY.** Such modifications may introduce hazards that would not otherwise be associated with this machinery. EASTEY CORPORATION will not be responsible for any consequence resulting from such unauthorized modification.

WARNING...

The use of certain types of plastic films in sealing and/or shrinking equipment may result in the release of **HAZARDOUS FUMES** due to the degradation of the film at high temperatures. Before using any plastic film in this equipment, the manufacturer or supplier of the film should be contacted for specific information concerning the potential release of hazardous fumes. **ADEQUATE VENTILATION SHOULD BE PROVIDED** AT ALL TIMES.

WARNING...

KEEP COMBUSTIBLE MATERIALS AWAY FROM THIS EQUIPMENT. THE EQUIPMENT MAY BE A SOURCE OF IGNITION.

UNPACKING

Thoroughly inspect immediately upon arrival!

Carefully remove the protective wrapper. Inspect machine for any damage that may have occurred during transit. If goods are received short or damaged condition, it is important that you notify the carrier's driver "before they leave your company" and insist on a notation of the loss or damage across the face of the freight bill of lading; otherwise no claim can be enforced against the transportation company. Please note this same piece of paper is attached to the outside of every crate.

If concealed loss or damage is discovered, notify your carries at once and request *INSIST* on an inspection. This is absolutely necessary. A concealed damage report must be made within 10 days of delivery of shipment.

Unless you do this the carrier will not entertain any claim for loss or damage. The agent will make an inspection and grant a concealed damage notation. If you give the transportation company a clear receipt for the goods that have been damaged or lost in transit, you do so at your own risk and expense.

All claims must be filled within FIVE months of delivery date or carrier will not accept them.

We are willing to assist you in every possible manner to help you collect claims for loss or damage, but this willingness on EASTEY'S part does not make EASTEY responsible for collection of claims or replacement of equipment.

WEIGHT, POWER REQUIREMENTS, DIMENSIONS

EASTEY SHRINK TUNNEL MODELS	MACHINE DIMENSIONS (in) W x H x L	MACHINE DIMENSIONS (cm) W x H x L	STANDARD POWER VOLTS	AMPS	PHASE	WEIGHT (lbs)	(kg)	CRATED SHIP WEIGHT (lbs)	(kg)
ET24BU	43 x 68-72 x 149	109.22 x 172.72-182.88 x 378.40	220	50	3	1500	681	1900	862
ET36BU	55 x 68-72 x 149	139.70 x 172.72-182.88 x 378.40	220	80	3	1800	817	2200	999
ET48BU	67 x 68-72 x 149	170.18 x 172-72-182.88 x 378.40	220	100	3	2300	1044	2700	1226
ET56BU	75 x 68-72 x 149	190.50 x 172.72-182.88 x 378.40	220	100	3	2500	1138	2900	1320
ET70BU	89 x 68-72 x 149	226.06 x 172.72-182-88 x 378.40	220	100	3	2800	1274	3200	1456

TUNNEL CHAMBER, ROLLER AND CONVEYOR DIMENSIONS

MODELS	CHAMBER DIMENSIONS (in) W x H x L	CHAMBER DIMENSIONS (cm) W x H x L	CONVEYOR LENGTH (in)	(cm)
ET24BU	24 x 4-20 x 78	60.96 x 10.16-50.80 x 198.12	147	373.38
ET36BU	36 x 4-20 x 78	91.44 x 10.16-50.80 x 198.12	147	373.38
ET48BU	48 x 4-20 x 78	121.92 x 10.16-50.80 x 198.12	147	373.38
ET56BU	56 x 4-20 x 78	142.24 x 10.16-50.80 x 198.12	147	373.38
ET70BU	70 x 4-20 x 78	177.80 x 10.16-50.80 x 198.12	147	373.38

DESCRIPTION

Eastey presents a bundling shrink tunnel that is a conveyorized heat shrinking device employing electric heating combined with a recirculating air system, and a complete range of adjustments. The main components are the blower, the heater bank, the shrink chamber, and the package conveyor. Curtains cover the entrance and exit of the heat chamber to minimize heat loss as packages travel through the tunnel. Our standard bundling tunnel uses a high temp glass flled nylon conveyor belt.

INSTALLATION - BASIC SET UP

IMPORTANT

Read this manual carefully, and make it available to everyone connected with the supervision, maintenance or production of this machine. Additional copies are available upon request - call 888-212-7715. Be very careful when operating, adjusting or servicing this equipment. If in doubt, stop and obtain qualified help before proceeding.

INSTALLATION OF ET - BU BUNDLING TUNNELS

Place the tunnel in the desired position with the required electrical power source available, (see power requirements for each model). Make sure electric wiring is adequate to guard against low voltage. If the voltage is too low, the equipment will not perform.

Adjust the leveling feet to level the tunnel at the height needed to match other conveyors.

Finding the proper location is a most important function of the initial set up. One must take several factors into consideration:

1). Adequate power source
2). Relationship to source of product
3). Relationship to sealer and any conveyors necessary to remove finished products
4). Convenience of operator
5). Avoid drafty areas as heat may be unintentionally drawn from the tunnel and reduce its efficiency.

An electrician should install a main power cord with a plug on the end.

If there is any doubt, get qualified assistance to do your initial installation, do not take chances.

Do not attempt to install, adjust, or operate this machine without first reading the contents of this manual. Although the design of this equipment incorporates safeguards to protect operating and maintenance personnel, care should be used in operating, adjusting and servicing.

SEQUENCE OF OPERATION

A. Turn the tunnel on by switching the power on/off switch/disconnect to on, (temperature will be displayed on temperature control at this time).

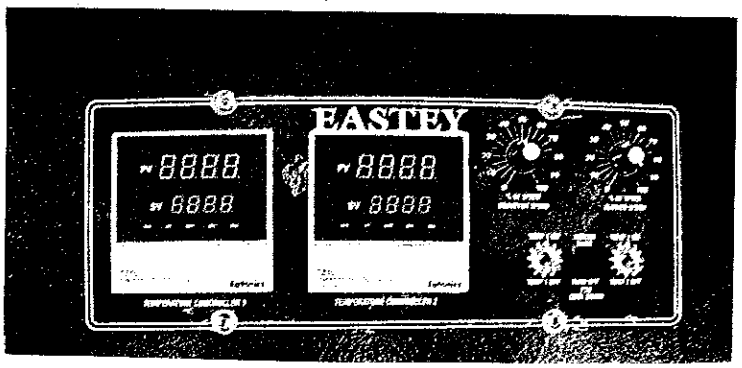
B. Turn heater bank switches to on position, (this switch also controls all motors).

C. Set the conveyor speed control to about mid-range until the exact desired conveyor speed is determined later (based on package size and sealer speed).

D. Set the temperature controller at the temp you believe will shrink your product. This temperature may need to be adjusted higher and lower until you have achieved the shrink you're happy with. As long as you are running the same product, this temperature should not have to be adjusted again.

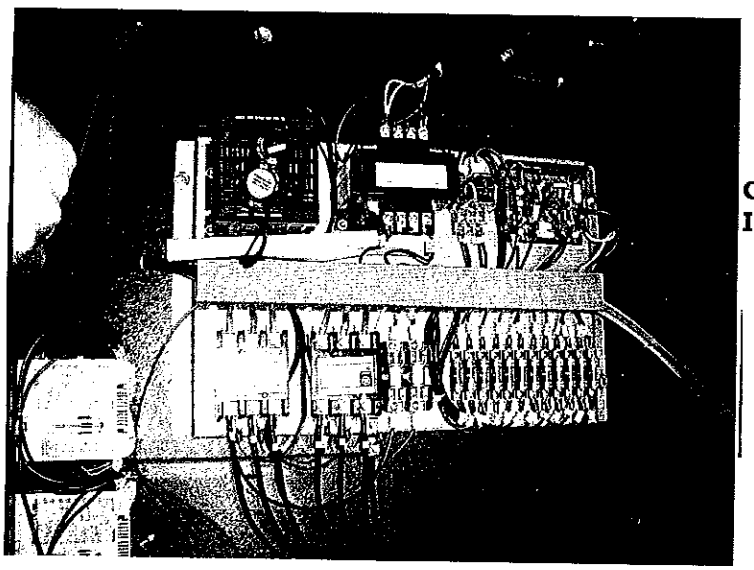
E. Turn product cooling fans on. There is a 3-speed selector switch on the cooling fans. Adjust the cooling fan speed to help shrink the film. Polyethylene shrinks as it cools.

F. CAUTION: When shutting down the tunnel, be sure to turn heater bank switch to off. The tunnel will automatically shut off refer to page 20 for setting cool down temperature. (Temperature will be displayed on temperature controller at this time). Turn off power switch / disconnect.



LOCATION OF CONTROLS ON ET-BU TUNNEL.

1. Conveyor Speed,
2. Heater Bank ON-OFF Switch,
3. Power ON-OFF Switch.
4. Thermostat Control,



COMPONENT LOCATIONS INSIDE BUNDLING TUNNEL.

MAINTENANCE

To aid in maintaining the high reliability of these bundling shrink tunnels, the following maintenance should be provided. Disconnect electrical before making any repairs. If unsure of anything contact a qualified service man.

CAUTION: When replacing motors, if tunnel chamber is below 160 degrees, heater bank switch may have to be turned on to apply power to motors for testing.

1. **Check conveyor belt tension.** Belt should touch the lower rails about 11" in from the outside edge of leg.

A. The adjustment of package conveyor belt tension should be checked occasionally to insure that it is not excessive, as this would cause unnecessary wear of the sprockets. To check or adjust tension, shut off power to the tunnel, remove the drive end caps, o n the drive end of the conveyor loosen two adjuster jam nuts. Adjust threaded bolts as needed for correct belt tension as stated above. If there is no more adjustment a link can be taken out, to remove a link loosen the belt, by removing two (2) SS pins, (remove plastic keeper tab on end of pin). Eliminate 1 row of links. Pull conveyor belt together. Reinsert one (1) SS pin. A new plastic keeper must be used to hold SS pin in place. The old plastic keeper should not be reused.

B. Replacement of idler roller shaft, bearings or sprockets. Refer to 1-A of this section and disconnect the conveyor belt by removing SS pins - separating the conveyor belt. Loosen jam nuts on adjuster bolts on the drive end. Remove idler end caps loosen four (4) idler bearing set screws. Remove the four (4) - 1/4-20 bolts for bearings. Slide shaft right or left. Then the shaft and sprockets will come off. Repair and replace in the same manner you disassembled in and reassemble. Perform 1-D of this section for sprocket alignment.

C. Drive shaft, bearings or sprockets replacement. Refer to 1-A of this section - remove drive end caps. Disconnect the conveyor belt by removing the removing plastic keeper and SS pin. Loosen four (4) bearing setscrews. Slide shaft right or left. The shaft sprockets must be adjusted for position. Replace and reassemble, see and do 1-A of this section and 1 - D. Note: All sprockets are screwed to the shafts.

D. Refer to Page 17 for proper placement of sprockets.

2. **Conveyor motor replacement.** Shut off power to machine. Remove drive end cap, disconnect two (2) electrical wires from drive motor, disconnect the motor from the drive chain by removing four (4) bolts that hold the drive motor. Remove sprocket from old motor and place on new drive motor and reassemble in the manner you disassembled. For hook up refer to electrical schematic.

3. **Heater bank replacement.** Shut off power to machine. Remove side panel cover. Pull insulation out. With a 3/8" nut driver remove wires on the heater bank. Mark wire positions and set wires off to side. Then remove heater bank, (note how far heater bank is in. so it can be replaced to the same position). Reassemble in the same manner as you disassembled.

4. **Temperature controller replacement.** Shut off power to machine. Open main panel door on side of machine. Disconnect wires 8, 9, 33 and 13 and the thermocouple wires from temp controller. Loosen the hold down screws on side of controller itself, pull controller out of the front of the panel. Replace with new one and refer to electrical schematic for placement of wires 8, 9, 33 and 13 and thermocouple wires. Warning - if no control over heat, interchange thermocouple wires. Caution: do not exceed 500 degrees.

5. **Blower motor replacement.** Shut off power to machine. Remove top lid on hood of tunnel, disconnect wires on the blower motor/s, (note there may be more than one blower motor). Next remove four (4) - 5/1618 bolts on motor mount/s. Once blower housing is on bench, next there are 2 set screws holding the blower wheel in place, loosen them and remove blower wheel, (if force is necessary apply it between the motor and blower wheel hub). Now remove the motor mount bolts and remove/replace motor. Rotation on blower motor needs to be counter clockwise looking from the electrical inlet and hub side, Reassemble new motor and blower wheel housing. Reassemble in the same manner as disassembled. Note: do not rest blower housing on blower wheel. Blower wheel will not work if bent or out of balance.

6. **Blower wheel replacement.** Shut off power to machine. Refer to 5 (above) in this section.

7. **Replacement of upper teflon wear rails.** Shut power off to the machine, move the conveyor by hand to get access. Remove 10/32 screw on idler end, replace in the same manner you disassembled.

8. **Chamber cooling fan motor replacement.** Shut off power to machine. Remove top lid of hood, discon nect wires and remove four (4) - 1/4-20 bolts which hold cooling fan motor in place. Take motor out of machine and replace with new and reassemble.

9. **Intake screen cleaning and replacement.** Shut off power to machine. Intake screen is located on drive end of machine inside the roof of heating chamber. This screen should be checked for debris. To remove intake screen remove four (4) - 1/4-20 bolts and pull out screen, clean thoroughly, reinstall or replace and reassemble in the same manner you disassembled.

If unsure of anything contact a qualified service man. Double-check all of your work before turning machine power on and starting the machine.

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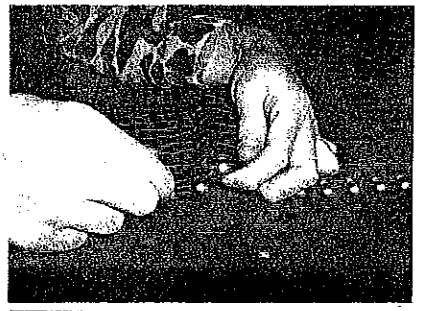

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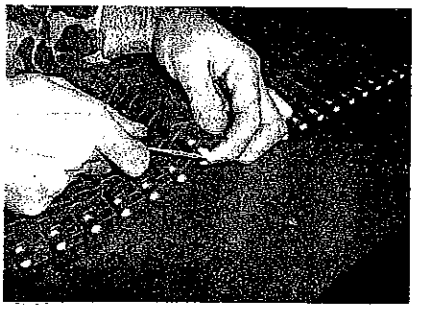

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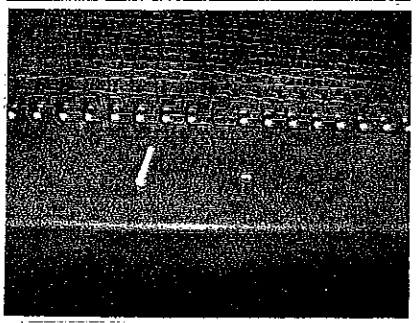

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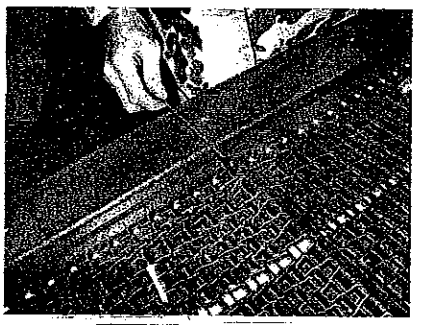

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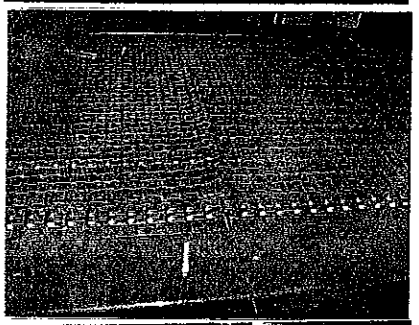

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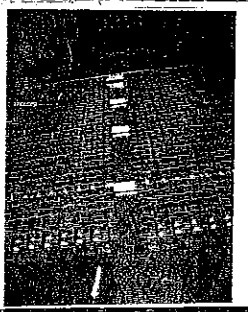

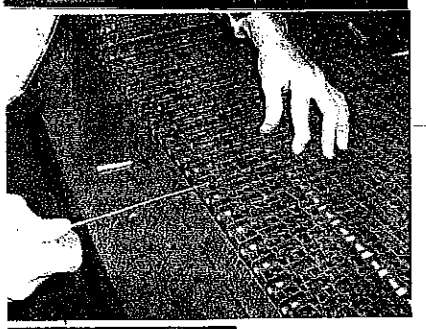

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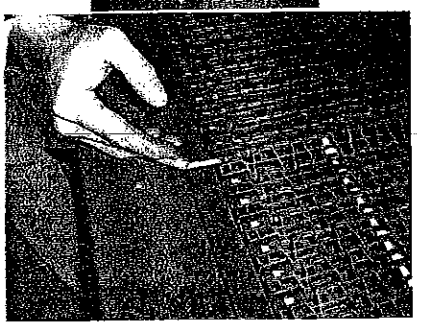

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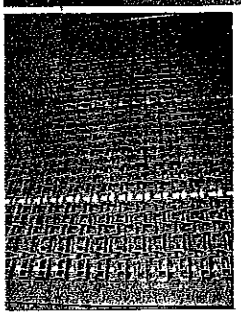


1. Locate white module link on side of belt.
2. Using a flat screw driver, pop out the module link, do both sides of belt
3. Shows module link out of belt.
4. & 5. Using an extra rod (sent with belt) push the rod that is in the belt out with the extra rod and then pull out the extra rod.
6. Belt will now separate.
7. & 8. Lay new belt piece into place and insert rod through the two pieces. When rod is almost through insert module link until it snaps into place on one side of the beltand push the rod tight and then insert the module link on the other side of the belt.
9. Shows belt as one piece.

SERIES 50 WITH S.S. PINS

Make sure that when you join the belt, the joining pin is locked in with a "plastic tab". Put in the bent tab from the top of the belt, hold with a screwdriver and hammer in. Cut the extra flush with the belt. To take out, turn the belt upside down and dislodge the tab by hammering on the screw driver.

PREVENTIVE MAINTENANCE OF MODULAR PLASTIC CONVEYOR, BELTS

Modular plastic conveyor belts do not require day to day maintenance and are usually trouble free when installed and operated properly, however, there are some things that can be done to obtain the maximum life of the belt and avoid down time.

Some of the areas where preventive maintenance can be performed on plastic belts are:

A) The tension on the belt should be checked on a routine basis to ensure proper drive, adjust screw take-up if necessary. On belts operating with catenary sag the amount of sag should be set at .5" per foot of unsupported belt between rollers.

B) Sprocket alignment should be checked before installing the belt to ensure that all the teeth are on line (a misaligned sprocket can cause the belt to break or mistrack), on round bore sprockets it is a good practice to check the key ways and tighten the set screws.

C) If a small section of the belt or a module breaks it is important to replace it as soon as possible, failure to do so may incur further damage to the belt. Try to determine what caused the belt to break before restarting, to avoid from happening again.

D) If the belt operates outdoors it is a good practice to remove it during the off season and store it indoors. Prolonged exposure to the elements may reduce the belt life.

E) Belts can be steam cleaned or pressure washed. Belts may experience some thermal expansion when washed with hot water; on belts operating without catenary sag the installation of a spring take-up is recommended to keep the proper belt tension at all times.

F) When performing repairs to the conveyor it is important to remove or protect the belt to avoid damage from welding sparks or other tools.

Avoid using the belt for other than what it was specified for. If you need to utilize the belt on a different application, consult the factory first.

TROUBLE SHOOTING CHART

The following trouble shooting chart is provided to aid in determining the source of any problems that may occur during the operation of the tunnel. While performing the tests that follow, carefully check for any loose components, broken or loose wires, poor electrical connections, etc. when inspecting the various switches, controls, relays, and transformers. Use a voltage meter when testing for electrical problems.

NO'1E: When trouble shooting requires checking the voltage level, use caution to avoid the danger of an electrical shock. When electrical power is not required to facilitate your troubleshooting, always disconnect the electricity to the machine..

An electrical components placement sheet and an electrical schematic diagrams is provided to assist you in your trouble shooting efforts. Remember to disconnect the electricity before making any repairs. Refer to the electrical board layout and the electrical schematic for location of electrical components.

PROBLEM	PROCEDURE
Conveyor not moving	* Look for jammed product on the conveyor belt. * Do not ever over fuse conveyor motor. * Have you oiled the conveyor motor drive chain lately? * Open main panel and check fuses Fl, F2 & F3. * Check for 220 volts on terminals A+ and A-. * Check 1 1/2 amp fuses on DC controller. * Check output DC power on wires 21 & 22. * Check terminal block next to motor for DC power (115 Volts). * Refer to solid state DC motor control manual. * Refer to electrical schematic for hook up of motor. * Replace motor if all above works. See section F in maintenance.
No airflow	* Make sure air velocity shaft is pushed out for full airflow. * Check to see if intake screen (in hood on drive end of tunnel mounted on chamber) is clogged. * Open main electrical end panel. Check power at fuses F3 and F4. * Check fuses themselves. * Check main power at Fl, F2 & F3 * Open main electrical end panel. Check power at fuses F5 and F4. * Check fuses themselves. * Check main blower motor and replace.
No heat No check	* is the machine power on and the temperature controller display on? No, check power switch. Is the heater bank switch on. No -turn on. * Check thermocouple wires on temp controller terminal numbers 2 & 3, about 4 ohms. If none, replace thermocouple. * Check for power on heater bank wires 1, 2 & 3 if no power, check main fuses (Fl, F2 & F3) for replacement. If there is power, check for power on heater bank wires while CR-2 is pulling in under your set temperature. If there is power check heater bank for replacement. If no power check coil of CR-1 & CR-2 for power (when under set temperature). If no power, check terminals at 13 & 14 on temp controller: If power is at temp controller and none at coil of CR-1 & CR-2 replace temp controller. If there is power at temp controller check fuses F5 & F4. * If no control over heat, interchange thermocouple wires. If still no control, check for replacement of CR-1 or temp controller.

Over temperature adjustment.

Over temperature is factory set at 500°

PV = process value = actual temperature in machine.

PV & SV will mentioned in this procedure, however PV & SV will only be displayed at the beginning of this procedure and in #14 below.

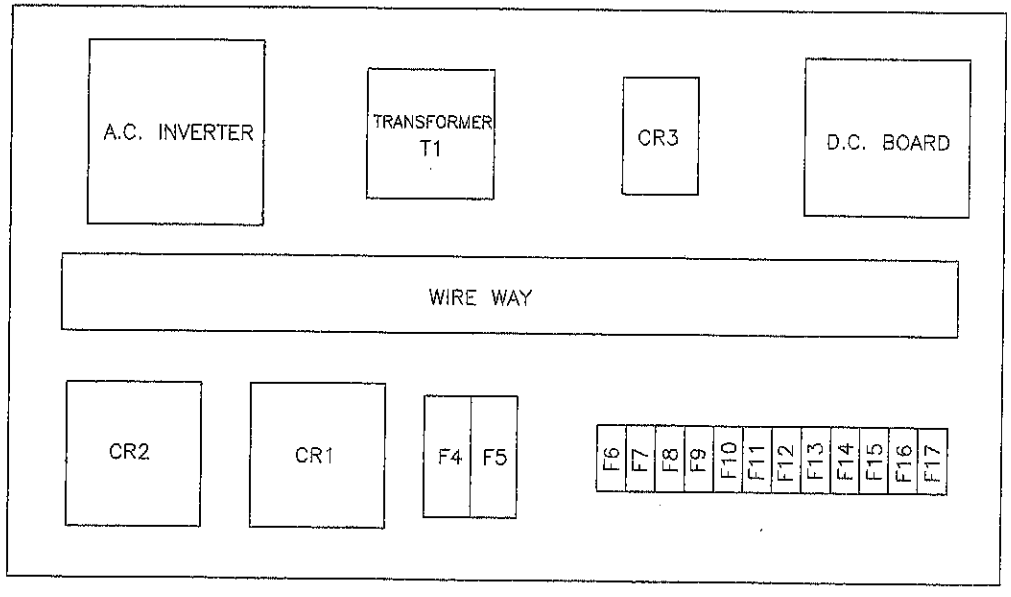
1. Push and hold MD button until SU-2 is displayed.
2. Push MD button (don't hold) and scroll thru the menu until LOC is displayed.
3. Push left arrow key. (The ON will start flashing).
4. Push the down arrow key (ON will turn to OFF and OFF will be flashing).
5. Push MD button (OFF will stop flashing).
6. Push MD button (this should take you back to SU-2).
7. Push MD button until AL1 is displayed.
8. AL1 is set at 500 degrees.

To set AL1 so the tunnel overtemp will maintain desired degrees.

Push left arrow key and the right digit will flash. Use up/down arrow key to change the digit. Push left arrow key to change the next digit. Push left arrow key again to change the next digit. Push MD button to lock setting in.

9. Push MD and scroll thru the menu until LOC is displayed.
10. Push left arrow key (the OFF will start flashing).
11. Push the up arrow key (the OFF will change to ON and ON will be flashing).
12. Push MD button (the ON will stop flashing).
13. Push and hold the MD key until PV and SV temperatures are displayed.

REVISIONS			
REV	DESCRIPTION	DATE	APPRVED



EASTEY ENTERPRISES	Title: ELECT. PANEL LAYOUT NEW BUND TUNNEL	
Tolerance: ±.010 (UNLESS SPECIFIED)	Scale: 1:1	Material: N/A
Drafter: TROY S.	Part Numbers: BUNDLAYONEW	
CHK By	Date: 12-16-08	Part size: 0.000 x 0.000

ET - BU
EASTEY BUNDLING SHRINK TUNNEL
230 VOLT 60 - 100 AMPS 3 PH

ITEM	EASTEY PART #	DESCRIPTION
ON/OFF	ETC00305	CONVEYOR COOL DOWN SWITCH
Ml & M2	ETL00109	BLOWER 3/4 HP VARIABLE SPEED
M3	ETC00304	BLOW COOLING MOTOR 230 VOLT 3000 RPM
CR1, CR2	ETL00101	CONTACTOR 60 AMP
TT1	ET00011	TEMP CONTROLLER
F4 & F5	ETL00200	FUSE 10 AMP 250 VOLT
H.B.	ETL00312	HEATER BANK 18KW
H.B.	72000012	HEATER BANK 15KW (ET36BU ONLY)
SC	EAST0315-1	SPEED CONTROL & SPEED POT
SC	EAST0315A	DIAL KIT
ON/OFF	ETC00309	POWER SWITCH
F8 – F13	ET000204	FUSE 4 AMP SLOW BLOW
F14 – F15	EAST0210	FUSE 1 AMP
	ESC00650	TRANSFORMER 300 VOLT AMP
	ETC00021	THERMOCOUPLE
	ETC00021	THERMOCOUPLE
	ETC00125	FUSE BLOCK 30 AMP 250 VOLT
	ESC00609	TRANSFORMER 200 VOLT AMP
	ECOS0054	KNOB FOR SPEED POT
	ET820233	DISCONNECT 100 AMP 250 VOLT
	ETC00541	14" PRODUCT COOLING FAN
	ETC00228	CONVEYOR MOTOR (HEAVY DUTY)
ON/OFF	ETC00311	DELAY COOL DOWN SWITCH 3 POLE
F1, F2, F3	ET820234	FUSE 80 AMP
F16, F17	ET000185	FUSE 2.5 AMP
	EAST0349	AC SPEED CONTROL

Eastey Bundling Tunnel Replacement Parts List

Eastey Enterprises, Inc
21480 147th Ave. No.
Rogers, MN 55374

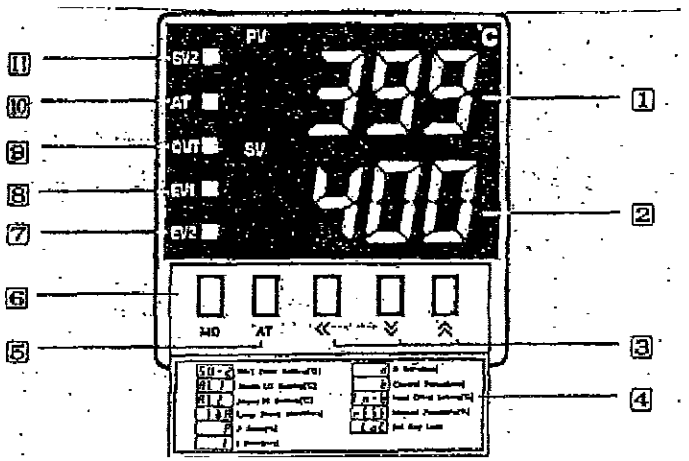
Phone: (763) 428-4846
Fax: (763) 428-8361
Toll Free: (800) 835-9344

OUR ITEM #	*ITEM NAME (Prices subject to change without notice)*
ESC00561	BEARING W/SETSCREW & GREASE FITTING, 1" CONVEYOR
ESC00574	BEARING - 1" BORE, FLANGED
ET000187	MOTOR, 1 1/2 HP BLOWER - USED ON ET20, ET24, & ET36
ET820232	MOTOR, 3/4 HP BLOWER
ETL00202	BLOWER WHEEL (USED ON LARGE TUNNEL & TUBE TUNNEL)
EAST0044	CASTER, 3" X 1 3/4"
ETC00109	CHAIN - #40 MASTER LINK
ETC00096	CHAIN - #40 RIVETED - MOTOR TO DRIVE SHAFT
ESC00282	CHANNEL FOR TEFLON, 110" SS
EAST0031	CONTACTOR - 2 POLE, 40 AMP, 220 VOLT
ETL00101	CONTACTOR - 3 POLE, 60 AMP, 220 VOLT - ET20, ET24, & ET36
ET200218	CONVEYOR BELT, HIGH TEMP NYLON - 20" WIDE
ET240218	CONVEYOR BELT, HIGH TEMP NYLON - 24" WIDE
ET350218	CONVEYOR BELT, HIGH TEMP NYLON - 36" WIDE
ET480218	CONVEYOR BELT, HIGH TEMP NYLON - 48" WIDE
ET560218	CONVEYOR BELT, HIGH TEMP NYLON - 56" WIDE
ET900218	CONVEYOR BELT, HIGH TEMP NYLON - 90" WIDE
ETL00228	MOTOR, CONVEYOR - SPECIAL, HEAVY DUTY, LOW RPM
ETC00304	MOTOR, COOLING - FOR BLOWER
ETC00313	CURTAIN MATERIAL, WHITE
SUB00142	CURTAIN MATERIAL, ET20, EET2010
SUB00143	CURTAIN MATERIAL, ET24
SUB00144	CURTAIN MATERIAL, ET36
ETC00229	SWITCH, DELAY COOL DOWN
ET820002	DISCONNECT BOX - 30 AMP, 3 POLE, 230 VOLT - ET2082
ET000134	DISCONNECT BOX - 60 AMP, 2 POLE (COMBO UNIT)
TC000512	DISCONNECT BOX - 60 AMP, 3 POLE, 240 VOLT
ET820006	DISCONNECT BOX - 60 AMP, 3 POLE, 480 VOLT - ET2082
ET000066	SHAFT, 5/8" RD CONVEYOR DRIVE - LIVE ROLLER (ET1610-36, 48 & ECONO)
ET000140	SHAFT, 5/8" RD CONVEYOR DRIVE - SS MESHBELT(ET1610-36, 48 & ECONO)
SUB00078	ELECTRICAL BOARD CONVERSION KIT - 3PHASE TO 1PHASE, 220V (ETL &TUBE)
SUB00108	ELECTRICAL CONVERSION KIT - 220V TO 480V (LARGE TUNNELS)
ETC00210	KNOB, ELECTRICAL PANEL

OUR ITEM #	*ITEM NAME (Prices subject to change without notice)*
SUB00084	SWITCH, EMERGENCY STOP
ETL06152L	END CAP - CONVEYOR (EXIT) LEFT SIDE
ETL06152R	END CAP - CONVEYOR (EXIT) RIGHT SIDE
EAST0210	FUSE - 1 AMP, 250 VOLT
ET000185	FUSE - 2.5 AMP, 250 VOLT
ET000186	FUSE - 5 AMP, 250 VOLT (ALL TUNNELS & POWER FILM UNWINDS)
ET820018	FUSE - 6 AMP, 250 VOLT, FOR MAIN BLOWER ON SMALL TUNNEL
ET000301	FUSE - 10 AMP, 250 VOLT
ETL00240	FUSE - 15 AMP, 250 VOLT, CERAMIC - MAIN BLOWER MOTOR
ETL00200	FUSE - 15 AMP, 250 VOLT
ET000135	FUSE - 40 AMP, 250 VOLT (ET1610-36, ECONO TUNNEL, EET2010)
ETL00235	FUSE - 50 AMP, 250 VOLT, (ET1610-48 & LARGE TUNNEL)
ETL00102	FUSE - 60 AMP, 250 VOLT (COMBO UNIT, ET20, ET24, & ET36)
ETC00125	FUSE BLOCK - 30 AMP, 2 POLE, 250 VOLT
ET000215	FUSE BLOCK - 60 AMP, 2 POLE, 250 VOLT (ET1610-36 & 48, ECONO, EET2010)
ETL00234	FUSE BLOCK - 60 AMP, 3 POLE, 250 VOLT
72000012	HEATER BANK - 15 KW, 230 VOLT, 3 PHASE
ETL00314	HEATER BANK - 15 KW, 440 VOLT, 3 PHASE - ET20, ET24, & ET36
ESC00625	HEATER BANK - 15 KW, 460 VOLT (BUNDLING & SW COMBO)
ETL00316	HEATER BANK - 18 KW, 208 VOLT, 3 PHASE - LARGE TUNNEL
ETL00312	HEATER BANK - 18 KW, 230 VOLT, 3 PHASE - LARGE TUNNEL
ETL00313	HEATER BANK - 18 KW, 480 VOLT, 3 PHASE - LARGE TUNNEL
ETC00305	SWITCH, ON/OFF (HEATER BANK)
ETC00303	LUGS, HI TEMP
ETC00302	WIRE, HIGH TEMP
ETC00237	HOLE PLUG BUTTONS, 3/8" - ZINC
ETL00220	HOLE PLUG BUTTONS, 1/2" - NICKEL (LARGE TUNNEL)
EH000501	RELAY, SOLID STATE
ETC00002	KNOB, VELOCITY CONTROL
ETC00310	MICRO SWITCH <ON/OFF> FACE PLATE
65000085AP	PAINT, BLACK EPOXY PART A - PINT
65000085BP	PAINT, BLACK EPOXY PART B - PINT
ETC00309	SWITCH, ON/OFF POWER
65000056	PRIZM - CHAIN LUBRICANT
EAST0315	SPEED CONTROL - W/O DIAL KIT - DC CONTROL
EAST0315A	SPEED CONTROL DIAL KIT
ESC00562	SPROCKET, 40B18 - 1" BORE
ETC00217	SPROCKET, UHMW - 1" BORE (USE WITH FALCON BELT CONVEYOR)

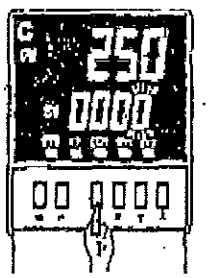
OUR ITEM #	*ITEM NAME (Prices subject to change without notice)*
ETC00009	SPROCKET W/2 SET SCREWS, 40B18 - 5/8" BORE
ETC00301	SPROCKET W/O BUSHING, DRIVE MOTOR - 5/8" BORE
ESC00609	TRANSFORMER, STEPDOWN - 220V TO 110V
ETC00097	TEMPERATURE CONTROLLER PROBE HOLDER
ETC00021	TEMPERATURE CONTROLLER THERMOCOUPLE "PROBE", TYPE J
ETC00011	TEMPERATURE CONTROLLER - TENOR
SUB00488	TRANSITION CHUTE - TRANSFER BETWEEN SEALER & TUNNEL
SUB00301	TRANSITION ROLLER KIT, INFEED (ET1610-36 AND ET1610-48)
SUB00300	TRANSITION ROLLER BETWEEN SEALER & TUNNEL - COMBO
SUB00158	TRANSITION ROLLER, 16" (FOR INFEED AND EXIT OF 16" WIDE TUNNELS)
ET700218	CONVEYOR BELT, HIGH TEMP NYLON - 70" WIDE
SUB01271	CURTAIN MATERIAL, ET48
SUB00258	TRANSITION ROLLER FOR INFEED AND EXIT OF 20" WIDE TUNNELS, 20"
ETC00312	CURTAIN MATERIAL, WHITE - APPROX. .015 THICK
ESC00560	BEARING FRAME HOLDER
ET206652	SHAFT, CONVEYOR DRIVE (ET20BU)
ET206752	SHAFT, CONVEYOR IDLER (ET20BU)
ES350028	SHAFT, CONVEYOR DRIVE (FOR ET24BU)
ES350026	SHAFT, CONVEYOR IDLER (FOR ET24BU)
ES350027	SHAFT, CONVEYOR IDLER (FOR ET36BU)
ES350029	SHAFT, CONVEYOR DRIVE (FOR ET36BU)
ES500027	SHAFT, CONVEYOR IDLER (ET48BU)
ETL56198	BLOWER MOTOR MOUNT (MOTOR FRAME 56)
ETC00218	SPROCKET, UHMW - 5/8" BORE (USE WITH FALCON BELT CONVEYOR)
ET820233	DISCONNECT BOX - 100 AMP, 3 POLE, 240 VOLT - ET2082
ET500029	SHAFT, 1" RD CONVEYOR DRIVE - KEYED FOR FALCON BELT (ET48)
ETC00203	LUGS, GROUND
ETC00309	SWITCH, ON/OFF (COOLING FAN)
ESC00541	FAN, 12" PRODUCT COOLING
ES500029	SHAFT, CONVEYOR DRIVE (ET48BU)
ETC00150	KEY FOR SPROCKET
SUB01257	CONVEYOR KIT, 20" - HIGH TEMP NYLON (ET20)
SUB01258	CONVEYOR KIT, 24" - HIGH TEMP NYLON (ET24)
SUB01261	CONVEYOR KIT, 35" - HIGH TEMP NYLON (ET36)
SUB01263	CONVEYOR KIT, 48" - HIGH TEMP NYLON (ET48)
SUB01264	CONVEYOR KIT, 56" - HIGH TEMP NYLON (ET56)
ETL00324	WEAR RAIL, 5/16" X 1/2" TEFLON
ESC00507	LEVELING FEET, 1"

INSTALLATION INSTRUCTIONS
TZ4 TEMPERATURE CONTROLLERS

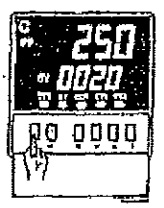


1. PV: Processing value indicator (Red color)
2. SV: Setting value indicator (Green color)
3. ◄ : Key shifting the display
   ▲▼ : Up/Down key
4. Information for operation mode:
5. AT Key: The mode key to execute Auto tuning function.
6. MD Key: The mode "key to change the items to be set,
   such as alarm value, etc.
7. EV2: EVENT2 Output signal lamp.
8. EVI: EVENTI Output signal lamp.
9. OUT: Output signal lamp
10. AT: Flashing signal lamp while Auto tuning is being executed.
11. SV2: Signal lamp for SV2 setting value

TO CHANGE SET VALUE



1. In case of changing the set value at status of RUN push ◄ key.
2. Push ◄ or ► key, and then the digit will be shifted step by step.
3. Push ▼ or ▲ at the flashing digit and then change the set value.



4 Push MD key after setting the set value to be changed and then flashing of the digit stops and the re-set value is applied at status of RUN.

TABLE 5. MINIMUM SUPPLY WIRE SIZE REQUIREMENTS

MAX: MOTOR AMPS (DC AMPS)	MAX. MOTOR HP 90V	MAX. MOTOR HP 180V	MINIMUM WIRE SIZE (AMR Cu Only	
			MAX. 50 FOOT RUN	MAX. 100 FOOT RUN
6.0		1	16	14
12.0	1	2	14	12'
16.0	11i*	3	12	12

'Maximum recommended wire size.

CONNECTION DIAGRAMS

Fig. 3a. Basic KBMM Connection Diagram .. **'For 220 Volta Wire. F+ To L2**

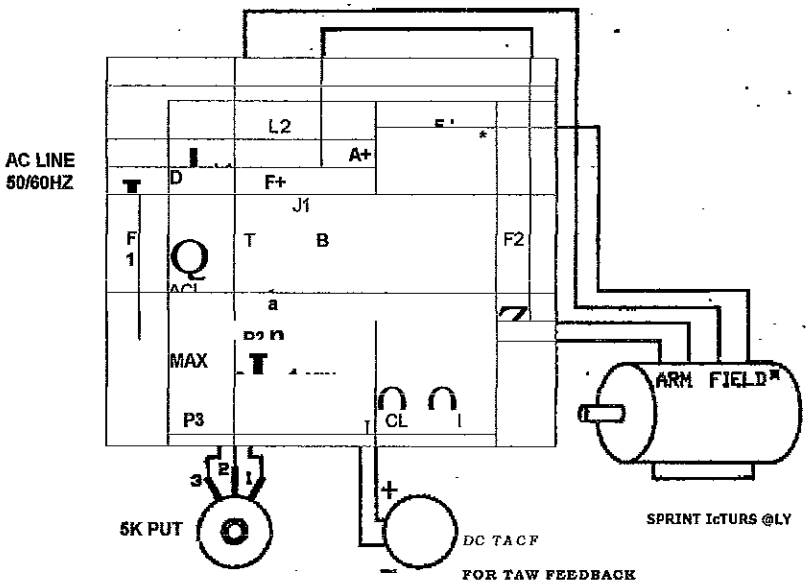
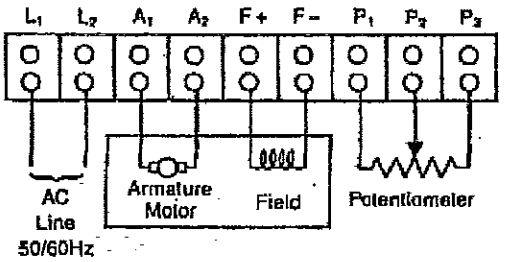
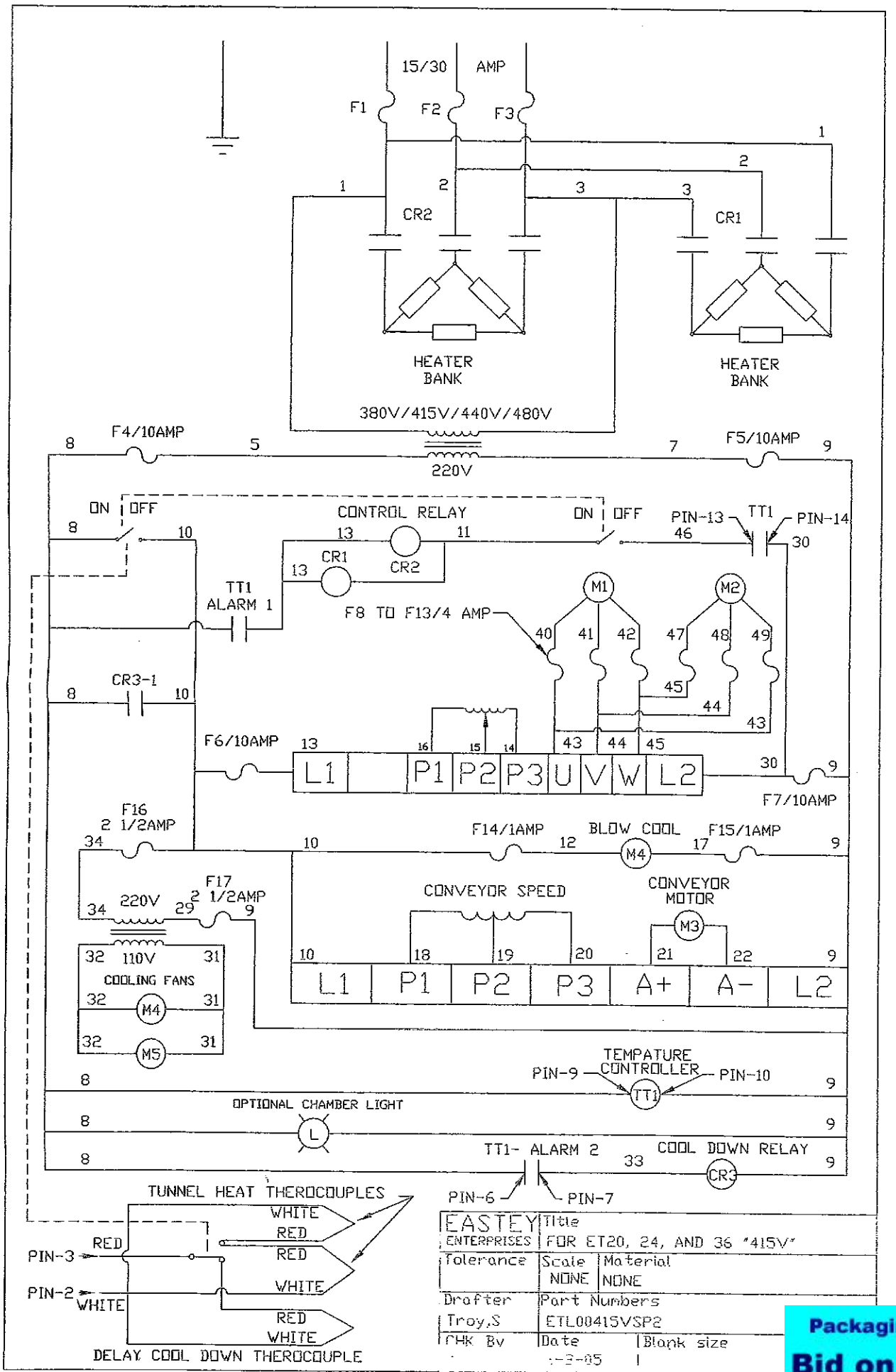


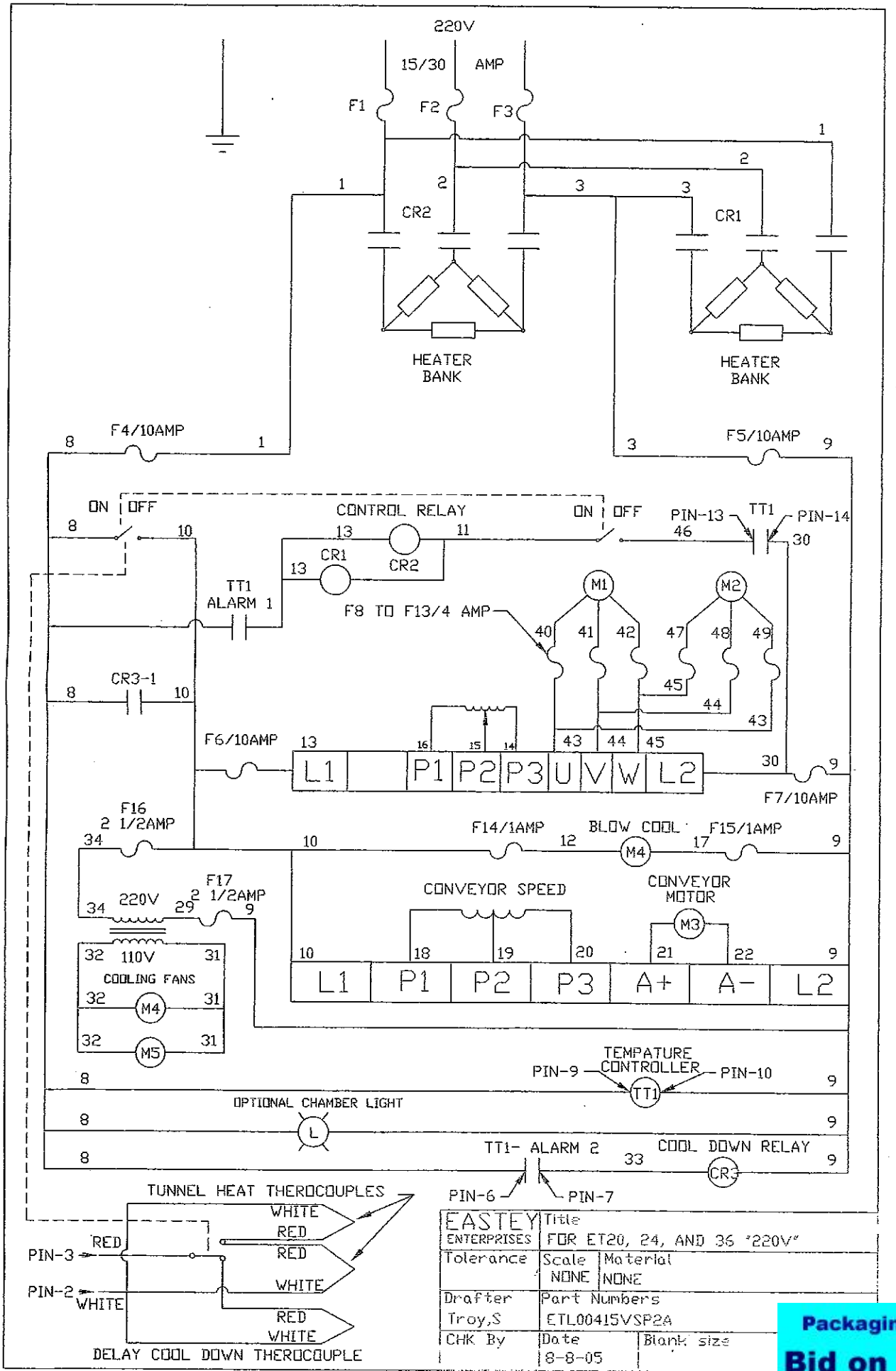
Fig. 3b. KBMM wlBarrier Terminal Kit



R

* For More Information Refer To Manual





EASTEY ENTERPRISES	Title: FOR ET20, 24, AND 36 "220V"	
Tolerance	Scale: NONE	Material: NONE
Drafter: Troy,S	Part Numbers: ETL00415VSP2A	
CHK By	Date: 8-8-05	Blank size

HEATER BANKS USED ON EASTEY TUNNELS

				EASTEY PART #
RT1606	5.0 KW	1 PH	SM FRAME	RM000042
ET1608 (ECONO)	7.5 KW	1 PH	SM FRAME	ET000306
EET2010	7.5 KW	1 PH	SM FRAME	ET000306
ET1610-36	7.5 KW	1 PH	SM FRAME	ET000306
ET1610-48	10.0 KW	1 PH	SM FRAME	ET000308
ET2004-ET2012	14.0 KW	3 PH	LG FRAME	ETL00310
ET2016-ET2020	16.0 KW	3 PH	LG FRAME	ETL00311
ET2404-ET2408	14.0 KW	3 PH	LG FRAME	ETL00310
ET2412-ET2420	16.0 KW	3 PH	LG FRAME	ETL00311
ET3604-ET3608	16.0 KW	3 PH	LG FRAME	ETL00311
ET3612-ET3620	18.0 KW	3 PH	LG FRAME	ETL00312
ETT2008-ETT2012	16.0 KW	3 PH	LG FRAME	ETL00310
ETT3604-ETT3612	16.0 KW	3 PH	LG FRAME	ETL00311
ETTH2008-ETTH2012	(2) 9 KW	3 PH	LG FRAME	TC000507
ET20BU	(2) 14 KW	3 PH	LG FRAME	ETL00312
ET24BU	(2) 14 KW	3 PH	LG FRAME	ETL00312
ET36BU	(2) 16 KW	3 PH		72000012
ET48BU	(2) 18 KW	3 PH	LG FRAME	ETL00312
ET56BU	(2) 18 KW	3 PH	LG FRAME	ETL00312
ET70BU	(2) 18 KW	3 PH	LG FRAME	ETL00312
EH2210E	(2) 7.5 KW	3 PH	LG FRAME	EH000500
ER1610-48SS	12.0 KW	3 PH	MED FRAME	ET000312
EH2210C	(2) 7.5 KW	3 PH	LG FRAME	EH000500
TM1319TTMB 110V	2 KW		SM FRAME	TM000503
TM1319TTMB 220V	2.5 KW		SM FRAME	TM130303

	220V	380V	415V	480V
ELN3608	(1) 16 KW 3 PH	(1) 16 KW 3 PH	(1) 15 KW 3 PH	(1) 15 KW 3 PH
ELN4808	(2) 16 KW 3 PH	(2) 16 KW 3 PH	(2) 15 KW 3 PH	(2) 15 KW 3 PH

MACHINE	CONVEYOR CHAIN LENGTH	SS MESH LENGTH	SS MESH WIDTH	DRIVE CHAIN	ROLLER SIZE	QUANTITY OF ROLLER
ET1608 (ECONO)	79 ¾"	80"	16"	25 ¾	16"	54
RT1606	79 3/4"	80"	16"	25 3/4"	16"	54
EET2010	97 ¾"	98"	20"	26 ¾	16"	66
ET1610-36	98 ¾"	98"	16"	36 ¾"	16"	66
ET1610-48	122 ¾"	121"	16"	36 ¾"	16"	82
ET1610-48 EXTENDED	158 ¾"	159"	16"	36 ¾"	16"	106
ET1610-48SS		121"	16"	36 ¾"	16"	
ET20	146 ¾"	144 ½"	20"	37 ¾"	20"	98
ET24	146 ¾"	144 ½"	24"	37 ¾"	24"	98
ET36	146 ½"	144 ½"	36"	37 ¾"	36"	98
ET48	146 ½"	144 ½"	48"	37 ¾"	48"	98
ET56	146 ½"	144 ½"	56"	37 ¾"	56"	98
ET70	146 ½"	144 ½"	70"	37 ¾"	70"	98
ET20-BU	HIGH TEMP PLASTIC BELT 292"			37 ¾"		
ET24-BU	HIGH TEMP PLASTIC BELT 292"			37 ¾"		
ET36-BU	HIGH TEMP PLASTIC BELT 292"			37 ¾ "		
ET48-BU	HIGH TEMP PLASTIC BELT 292"			37 ¾ "		
ET56-BU	HIGH TEMP PLASTIC BELT 292"			37 ¾ "		
ET70-BU	HIGH TEMP PLASTIC BELT 292"					
ELN3608	201 3/4"			38 3/4"		
ELN4808	201 3/4"			38 3/4"		
ETT20	163 ¾"	164"	20"	31 ¾"	20"	110
ETT36	163 ¾"	164"	36"	31 ¾"	36"	110
ETTH 20	206 ¾"	206"	20"	33 ¾"	20"	136
EH2210E	172 3/4"	172"	20"	27 3/4"	20"	116
EH2210C	172 3/4"	172"	20"	27 3/4	20"	116
7112	70 5/8" HOLLOW				16"	47
7121	144" HOLLOW				16"	96
7221	141 ¾"(41)				20"	95
7141	181"				16"	121
7300	133 ½"(41)				20"	89
TM1216 SEALER	¼" SPACING	34 ¼"	10"	14 ½" (35)		
TM1216 TUNNEL	¼" SPACING	59"	12"	22 ¾" (40)		
TM1319 SEALER	¼" SPACING	34 ¼"	12"	14 ½" (35)		
TM1319 TUNNEL	¼" SPACING	59"	12"	22 ¾" (40)		
COMBO TUNNEL	98 ¾	98"	16"	22 ½"	16"	66
**********						
COMBO TUNNEL LIFT MECH.	103 ½"(41)					
EM1622 LIFT MECH.	58 ¼"(35)	52"		14" (35)		
EM1636 LIFT MECH.	86"	80"		14" (35)		
EM3040 LIFT MECH.	110 3/4"					
EM3050 LIFT MECH.	127"					
EM4040 LIFT MECH.	143"					

EASTEY

Shrink Packaging Equipment

PREVENTATIVE MAINTENANCE ALL TUNNELS

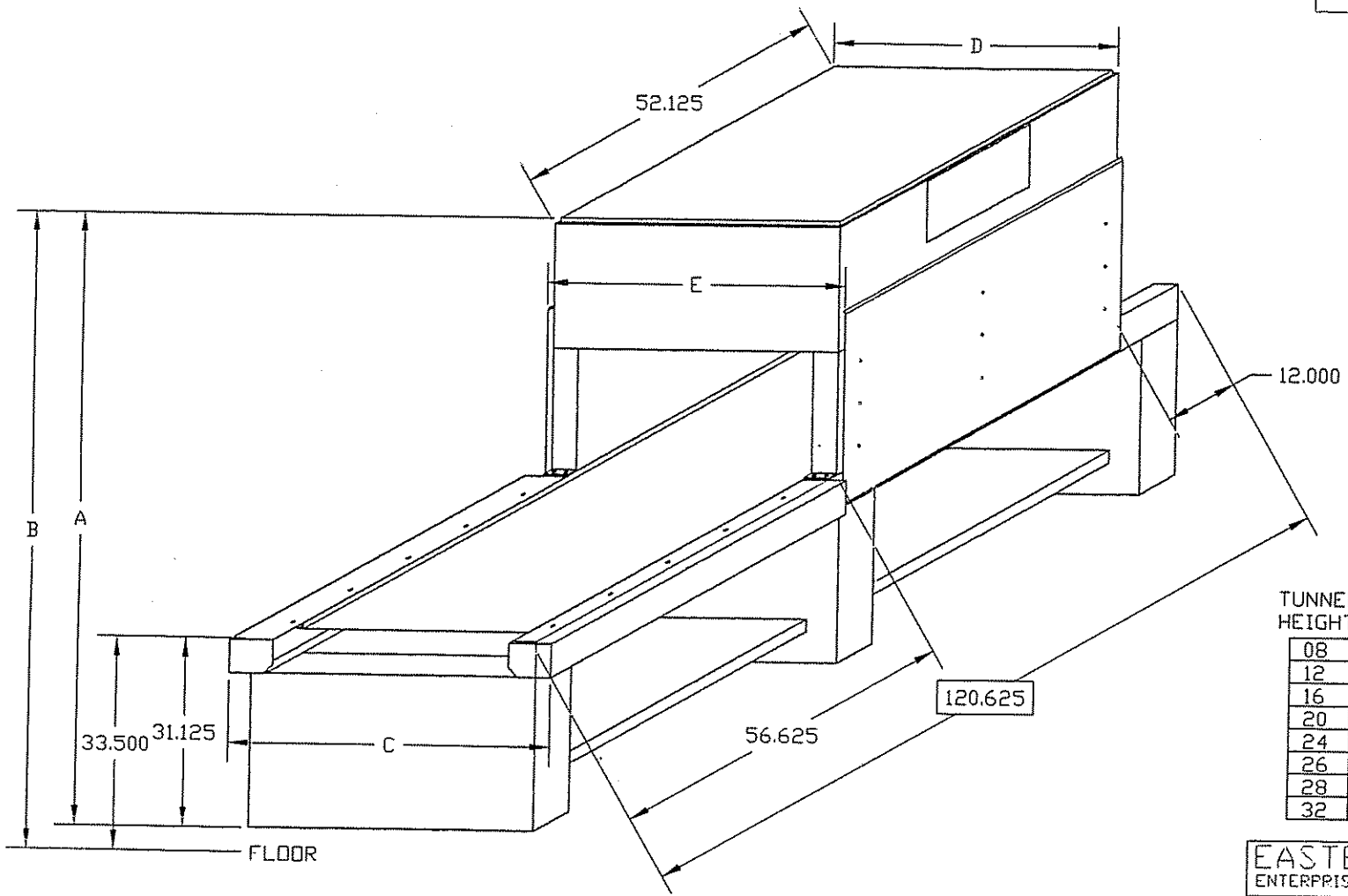
Once a month:

1. Check and clean the intake screens.
2. On live roller Tunnels clean and lubricate the conveyor chains, check the chains for the correct tension, adjust as needed.
3. Check the condition of the silicone covering on the rollers, repair/replace as necessary.
4. On mesh belt conveyors check the S.S. mesh for material stuck in or on the belt, check and adjust the belt tension as needed.
5. Check and clean the motor to conveyor drive chain, adjust tension as needed.
6. Check for loose fasteners tighten as necessary.
7. Check the condition of the power cord for wear (if it's exposed to traffic).
8. Check that the tunnel is able to maintain the set temperature, if not refer to your owners manual for instruction.
9. Check that you are able to vary the conveyor speed, if not refer to your owners manual.
10. Check for overall wear on live roller guide rails, and starter rails, repair as needed.
11. On meshbelt conveyors check the condition of the teflon wear rails, replace as needed.
12. Check the condition of all warning and instruction labels, replace as necessary.

21480 147th Avenue North • Rogers, MN 55374 • (763) 428-4846 • Fax (763) 428-8361 • (800) 835-9344
e-mail –eastey@eastey.com www.eastey.com

REVISIONS

REV	DESCRIPTION	DATE	APPI



TUNNEL HEIGHT	DIM A	DIM B
08	60.375	63.188
12	64.375	67.188
16	68.375	71.188
20	72.375	75.188
24	76.375	79.188
26	78.375	81.188
28	80.375	83.188
32	84.375	87.188

TUNNEL WIDTH	DIM C	DIM D	DIM E
20	36.500	30.500	32.500
24	40.500	34.500	36.500
36	52.500	46.500	48.500
48	64.500	58.500	60.500
56	72.500	66.500	68.500
70	86.500	80.500	82.500

EASTEY ENTERPPISES	Title: BUNDLING TUNNEL LAYOUT	
Tolerance	Scale: 1:8:1	Material
Drafter: TROY,S	Part Numbers: WIRBUNDTUNS	
CHK By	Date: 6-11-03	Part size: 0.000 x 0.000