

OPERATING INSTRUCTIONS

VALUELAM 4500



READ BEFORE OPERATING



CAUTION...

**TO AVOID ANY DAMAGE,
PLEASE**

**DO NOT USE RAZORS OR
SHARP**

OBJECTS NEAR THE ROLLERS.

**DO NOT LEAVE MACHINE ON
WHEN NOT IN USE OR YOU WILL
DAMAGE YOUR ROLLERS!**

Table of Contents

I.	For Your Safety.....	4
II.	Electrical Safeguards	4-5
III.	Specifications.....	5
IV.	Set-up	5-8
	Inspection.....	5
	Appropriate Location.....	5
	Loading Film onto Mandrels.....	6
	Film Tension	6-7
	Threading the Film	7-8
V.	Thermal Laminating	9-10
VI.	Coating Mount Board	10
VII.	Mounting & Laminating	10-11
VIII.	Maintenance/Service	11
	Cleaning Rubber Rollers.....	11-12
	Removing Wrap-arounds	12
IX.	Trouble-shooting.....	13
X.	Laminating & Mounting Do's & Don'ts ..	14
XI.	Warranty & Return Policy.....	14
XII.	Parts List	15-16

OPERATING INSTRUCTIONS

VALUELAM 4500

I. For your safety...

- ◆ Do not connect the laminator to electrical power or attempt to operate it until you have read these instructions completely. Keep these instructions in a convenient location for future reference.
- ◆ Read all safety messages located in this instruction manual and on the laminator very carefully.
- ◆ Always lower the safety shield before operating your laminator.
- ◆ Removing feed table exposes hot and moving parts. This means that you can be harmed if you remove the feed table. When the table is in the proper position the risk of injury to the operator is reduced.
- ◆ Do not operate this laminator without all detachable units installed correctly. This means that there is risk of injury if this product is operated without all of its parts in their proper positions.
- ◆ Keep hands and clothing away from rollers. The rollers are pinch points that can trap body parts or clothing and cause serious injury.
- ◆ Do not touch the rollers while the laminator heater power is on. Turn rollers off and allow to cool.
- ◆ Do not use the laminator for other than its intended purpose.

II. Electrical Safeguards...

- ◆ Never override or attempt to defeat electrical or mechanical safety interlock devices.
- ◆ The machine has been manufactured with a plug on the machine designed to operate on a 110volt, 20 Ampere circuit.
- ◆ Disconnect power supply before servicing your laminator.
- ◆ The laminator should only be operated from the type of power source indicated in these OPERATING INSTRUCTIONS and on the serial label located on the rear panel of the unit.

- ◆ Do not leave the laminator power on for extended periods while not in use. Unplug the machine at the end of the day as a precaution against a possible fire hazard.
- ◆ Do not operate the laminator with a damaged power supply cord or plug.
- ◆ Replace fuses only with same type rated 20, 250V and 1A, 250V fuses. Contact your dealer for replacement fuses.
- ◆ There are two (2) EMERGENCY STOP buttons on the laminator, one on each side. Depressing one of these buttons will stop the rollers.



III. Specifications...

Operating Speed:	Adjustable to 5 fpm (2.54cm/sec.)
Power Requirements Voltage:	108-125 VAC, 50/60 hz
Warm Up Time:	25-30 minutes
Power Fuse:	20 A
Motor fuse:	1A
Maximum Laminating Dimensions Thickness:	¼" (6.35mm)
Width Capacity:	45" (1143mm)
Net Weight:	183 lbs
Shipping Weight:	383 lbs



IV. Set-up...

Inspection:

Upon receipt of your ValueLam 4500, inspect the crate, the machine and all other contents of the crate for shipping damage. Damage should be brought to the immediate attention of the delivering carrier.

Power Requirements:

The ValueLam 4500 is designed to operate on a 110 Volt, 20 Ampere circuit. It will plug into a standard 110 volt wall receptacle. You must ensure that the circuit is protected by a 20 Amp circuit breaker.

Appropriate Location:

The laminator must be placed on a sturdy table or stand in a clean, well lit area with ample space on all four sides of the laminator.

Loading Film onto Mandrels:

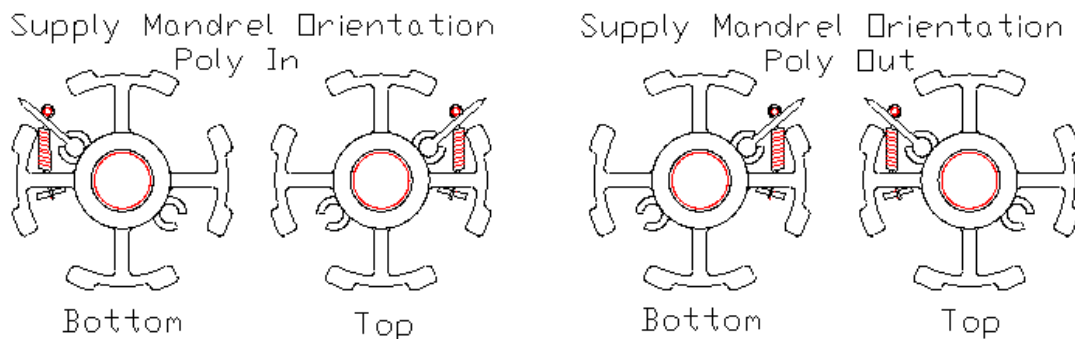
When the film is loaded properly the core gripper blade will prevent the film from turning on the supply mandrel. With the gripper spring away from you, pull the core gripper blade toward you and place the roll of film onto the mandrel. Turn the roll on the mandrel to lock the core gripper blade into the cardboard film core.

Supply Mandrel Orientation:

The supply mandrels must be placed on the machine in the proper orientation to achieve film tension. (Note the position of the core grippers in the illustration as viewed from the right hand end).

Top Roll, Poly (adhesive) In: With the gripper spring away from you, pull the core gripper blade toward you and place the roll of film onto the mandrel so that the film unwinds towards you from the bottom of the roll. Turn the roll on the mandrel to lock the core gripper blade into the cardboard film core.

Bottom Roll, Poly (adhesive) In: With the gripper spring towards you, push the core gripper blade away from you and place the roll of film onto the mandrel so that the film unwinds away from you from the bottom of the roll. Turn the roll on the mandrel to lock the core gripper blade into the cardboard film core.



The core gripper blades on the top and bottom mandrels spring back in opposite directions. The blade should spring back in the direction that the core will rotate when laminating. When the film is loaded properly the core gripper blade will prevent the film from turning on the mandrel. When using poly-in rolls the top roll of film should unwind from the bottom of the roll and the bottom of the roll should also unwind from the bottom of the roll. With Poly-out rolls the top roll will unwind from the top and the bottom roll will also unwind from the top of the roll. Once the film is properly loaded onto the mandrels, replace the mandrels onto the laminator.

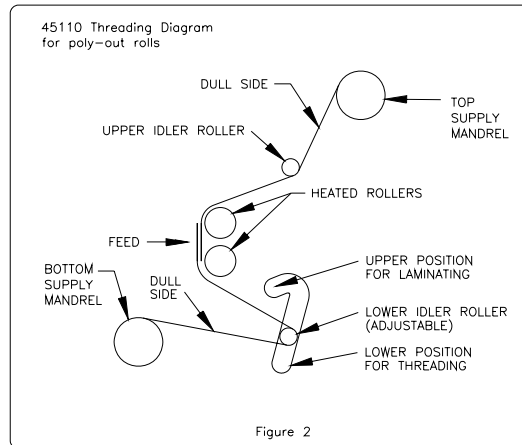
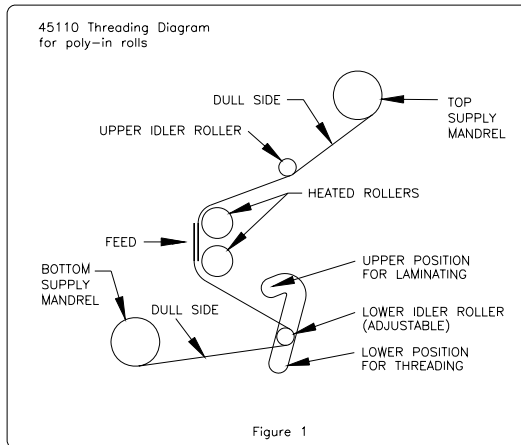
Film Tension:

Film tension must be set correctly to ensure good lamination quality. At each end of the film supply roll mandrels there is a split Delrin® brake bushing. When the supply mandrel is placed into the holders, the split of the brake bushing must be up. To adjust film tension, turn the

thumb screws in the mandrel holders. Turn clockwise to increase tension. This action clamps the brake on the mandrel axle creating tension necessary to achieve good results.

Threading the Film:

Your ValueLam 4500 was delivered with sample rolls of film. When changing film rolls, thread the film according to the instructions.



1. Remove the feed table and raise the safety shield.
2. Feed the film from the top roll under the upper idler roller, over the top roller and behind the safety shield, and pull it down below both rollers. Be sure that the adhesive side of the film is facing out and the non-adhesive side is against the roller
3. To thread the lower roll, first drop the lower idler roll down.
4. Pull about 3 feet of film from the bottom roll. Feed the film from the bottom roll under and behind the lower idler roller. Now raise the lower idler roller to the lamination position. Align the edges of top and bottom rolls so there is no side to side overlap. This will prevent transferring adhesive to the roller.
5. Lay the film from the lower roll over the film from the top roll and both rollers, again ensuring the adhesive side is away from the rollers. If you are cold loading, it will be necessary to tape the bottom film to the top film. If you are hot loading, the bottom film will adhere to the top film where they overlap at the rollers.
6. Have a large piece of poster board or cardboard ready to use as a feed card to thread the film between the rollers. A piece 6-8 inches wide and the full width of the film will help prevent wrinkles when loading hot.
7. Replace the feed table, lower the safety shield and move the roller pressure arm to the "MOUNT" position and install the pins (see Roller Position/Pressure). Place the board on the feed table and push it forward to the roller.

8. Turn the SPEED CONTROL knob far enough to allow the rollers to sufficiently pull the poster board or cardboard into the laminator. Keep in mind that varying media and temperatures will require different speeds.

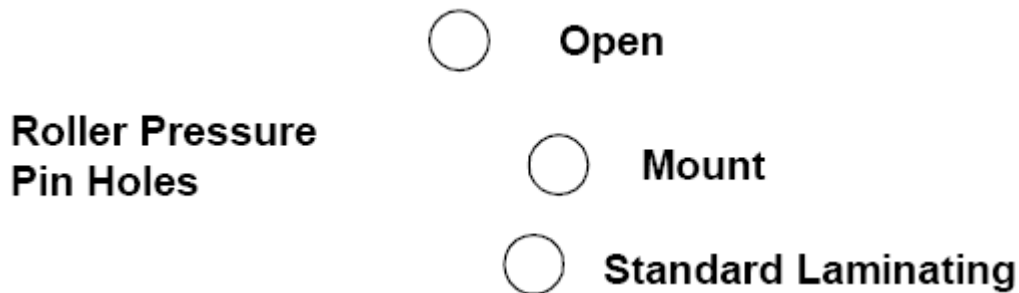
9. Feed the poster board or cardboard between the rollers.

10. If you are loading cold, allow the poster board or cardboard to continue through completely with the ends of both films. You may now raise the rollers to the open position to facilitate aligning the film and remove any wrinkles.

11. If you are hot loading, stop the motor after the poster board or cardboard has traveled one or two inches through the rollers. Move the roller pressure adjustment arm to the "STD Lam" position and install the pins. Now apply tension to the film and run the motor slowly. This procedure will help prevent the formation of wrinkles. After the board has passed through the rollers and there are no wrinkles, reduce the film tension to the minimum amount needed.

Roller Position/Pressure:

The roller position and pressure is determined by placement of pins into the red roller pressure adjustment arm through the proper holes in the side plate. These three holes and pins are located at the rear of the machine below the rear run off table. When the pins are installed properly, the red roller pressure adjustment arm cannot be raised or lowered.

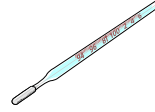


Open - The top hole is the "OPEN" position. When both side pins are removed, lift the red roller pressure adjustment arm to the "OPEN" position as indicated on the cover label and insert the pins into the top hole. The pins must be removed from both sides before attempting to move the roller to the OPEN position.

Mount - When both side pins are removed, the roller falls to the "MOUNT" position and the red roller pressure adjustment arm aligns with "MOUNT" on the label. When mounting onto 3/16" or 1/4" board, the pins should be placed in the middle, "Mount" hole.

Standard Laminating - All regular lamination should be done with the pins in the "STD Lam" position. When both side pins are removed, press down on the pressure adjustment arm and align with "STD Lam" on the label. The pins should now be placed in the bottom hole.

V. Thermal Laminating...



1. Be sure all laminator parts (i.e. safety shield, feed table, etc.) are in their proper positions and the laminating film is loaded correctly.

2. Set the temperatures according to the film manufacturer's recommendations for the film you have chosen. A low-melt film is recommended for inkjet prints. Keep in mind that the temperature at which you will laminate will vary with different medias and laminating speeds. See the chart below for approximate temperature ranges. The laminator will take approximately 25-30 minutes to reach operating temperature. The temperatures will be indicated on the LCD display.

3 mil DIGIKOTE™	190°-210°F
5 mil DIGIKOTE™	220°-230°F
10 mil DIGIKOTE™	225°-235°F

3. Your new ValueLam 4500 has a digital heat controller. Users can easily adjust the set temperature to achieve the best quality lamination. The controller has been calibrated to accurately display the roller temperature in the laminating range.

The heater switch on the right side frame activates the controller. When the switch is turned on the controller will flash a two letter code and then display the current roller temperature. When cold, the temperature displayed on the controllers may be different than the actual ambient temperature to account for correction in the higher temperature range. When the heater switch is turned on the controller will send power to the heaters, provided the set temperature is higher than ambient temperature.

When power is being sent to the heaters the controller will illuminate a small red indicator light in the lower right hand corner of the display. The light goes out when the set temperature is reached. Power to the heaters cycles on and off when the roller temperature falls below set temperature during lamination.

4. To determine the set temperature, with the heater switch activated and the current temperature displayed, press and hold down either the up or down arrow for 3-4 seconds. The display will change and flash the set temperature and "SU" alternately. After 10 seconds the display will return to the current roller temperature.

To change the set temperature, depress and hold either arrow down for 3-4 seconds until the set temperature and "SU" flash. Depress and hold the appropriate arrow to raise or lower the setting. The digits will change slowly initially but will increase speed when held down longer for large changes. When the desired setting has been reached, depress both arrows simultaneously to save the Set Temperature.

Each time the machine is turned on it will heat up to the last set temperature. It is advisable to verify the set temperature when starting to warm up the machine each day.

5. Turn the MOTOR switch ON and perform a test lamination to ensure proper settings for successful lamination. Watch film as it exits the rollers so it doesn't wrap around the rollers. It might be helpful to hold the film at first when starting a lamination run. If any adjustments are necessary make them now and run another test. Repeat this step until you obtain desired results.

6. Allow the ValueLam 4500 to run a small amount of film before feeding the print into the laminator to avoid a dwell line across your print. Feed the print slowly and evenly, smoothing it as the rollers pull it through.
7. You may laminate subsequent prints now, leaving ample space between each print for trimming.
8. Once your last print has completely exited the laminator, turn the MOTOR switch OFF.
9. When you have finished laminating, turn heat switch off and pull out the roller pressure pins to release the pressure on the rollers. This will eliminate the chance of “flat spotting” the rollers.

VI. Coating Mount Board...

The ValueLam 4500 is capable of applying an adhesive coating to mount board that has not previously been coated.

1. Load a roll of adhesive, with the liner wound to the outside, onto the top mandrel in the same manner as with laminating film.
2. Load a roll of paper on the bottom mandrel or use adhesive the same width as the mount board to keep the adhesive from accumulating on the rollers.
3. Set the temperature to approximately 125°F. The ValueLam 4500 will take approximately 10-15 minutes to reach operating temperature. The roller temperatures are indicated on the LCD displays.
4. Feed the uncoated mount board into the laminator behind a small leader board. The leader board will prevent the compression of the leading edge of your mount board.
5. You may coat subsequent boards now, one directly behind the other, so that the board in front becomes the leader board. We recommend that you coat a sufficient supply of mount board in one session so you'll have it ready for future use.

VII. Mounting & Laminating...

1. Be sure all laminator parts (i.e. safety shield, feed table, etc.) are in their proper positions and the laminating film is loaded correctly.
2. Place mounting pins in proper “mount” holes.
3. Turn the TEMPERATURE CONTROL switch to the ON position.
4. Set the temperatures according to the film manufacturer's recommendations for the film you have chosen. The ValueLam 4500 will take approximately 10-15 minutes to reach operating temperature. The temperatures of the heated rollers are indicated on the LCD display.

5. Turn the MOTOR switch ON and perform a test mount to ensure proper settings for successful mounting. If any adjustments are necessary make them now and run another test. Repeat this step until you obtain desired results.
6. Position the print to be mounted on a section of mount board up to ¼” thick behind a leader board. The leader board will prevent compression of the leading edge of your mount board.
7. Peel the release liner from the board back about ¼” thick behind a leader board if necessary unless your mount board is larger than your print and you will be trimming your board afterwards. A leader board will prevent compression on the leading edge of your mount board.
8. Feed the print and mount board into the laminator behind the leader board slowly and evenly. ***Be sure to pull back the release liner before it enters the rollers.***
9. You may mount subsequent prints now, one directly behind the other so that the board in front becomes the leader board.
10. Once your last print has completely exited the laminator, turn the MOTOR switch OFF and use a razor to remove the mounted and laminated prints.

VIII. Maintenance/Service...

Always use caution when servicing your laminator.

Precautions:



Disconnect the power supply and open the panel breaker before attempting to service or repair the laminator.



Any maintenance or service should be performed only by those having appropriate technical training and experience. Contact Banner American Products at 800 572-2144 for technical assistance.



Adjust only those controls that are specified in these operating instructions.

Cleaning Rubber Rollers:

Excessive build-up of adhesive on the rollers may cause poor lamination quality and erratic film movement. Use the following procedure to remove any adhesive from the laminating rollers.

1. Turn the HEATED ROLLERS off and ***allow the laminator to cool.***
2. Cut the film where it comes off the top and bottom supply rolls. Pull any film out of the laminator and away from the rollers.
3. Carefully remove the feed table to access the rollers. The feed table exposes hot and moving parts.
4. Disconnect the power supply.
5. Clean the exposed section of the rollers with a soft cloth dampened with an appropriate cleaning solution such as denatured alcohol.
6. Reconnect the power supply and turn the FORWARD/REVERSE switch to the FORWARD position. Turn the MOTOR switch to the ON position momentarily to expose a new section of the rollers.
7. Repeat steps 3-5 until the rollers are thoroughly clean.
8. Allow the rollers to dry completely before rethreading the laminating film.

Removing Wrap-A-Rounds:

Build-up on the rollers may cause a film wrap-around, especially when using thin film gauges. Follow the procedure below to remove wrap-a-rounds.

1. Turn the HEATED ROLLERS OFF. Allow the laminator to cool.
2. Cut the film where it comes off the top and bottom supply rolls.
3. Raise the roller pressure adjustment arms to the open position and insert pins on the side of the laminator and pull the film out of the unit that has become wrapped around the rollers.
4. If you have a severe wrap-around, it may be necessary to use the REVERSE feature to back the film out. Be sure to pull the film away from the laminator.

If there is a wrap-around on the lower roller, or if there is a run-away heat condition; please check the sensor on the bottom roller to ensure it is touching the roller. Incorrect positioning of the sensor can result in a false roller temperature reading and subsequent roller damage.

IX. Trouble-shooting...

<u>Symptom Action</u>	<u>Possible Cause</u>	<u>Corrective</u>
LCD does not show display when heat switches are on.	No power to laminator Blown fuse	Close panel breaker Disconnect power and replace fuse
Film is not bonding to the print slightly	Laminator not set to optimal laminating temperature Ink on print is wet	Adjust temperature upward. Allow ink to dry thoroughly
paper	Paper is too slick	Use a more matte
Laminated item curls side (bottom) film is curling toward.	Top or bottom film tension is too high.	Loosen tension on (top or
Laminated item is wrinkled that	Mandrel tension too loose	Increase mandrel tension on side (top or bottom) has wrinkles
area	Temperature too high Moisture in paper being Laminated.	Reduce temperature Store paper in dry
Laminated item is blistered	Temperature too high	Reduce temperature
Mandrel tension does not remain constant	Brake screw improperly adjusted	Tighten screw
the to lock	Core gripper blade is not preventing the core from spinning on the mandrel	Rotate film core while holding mandrel firm the blade into the core
Too much heat with a lower Indicated heat readout on LCD core.	Bottom roller sensor not touching	Ensure bottom roller sensor is touching

X. Do's and Don'ts...

- Read the instruction manual before operating your laminator.
- Always run test samples before laminating valuable items.
- Feed the print through slowly and evenly, smoothing it as it is pulled into the laminator.
- Operate the laminator with two rolls of the same width laminating film to avoid excessive adhesive transfer to the rollers.
- If laminator is not in current use, lower the heat setting or turn unit off.
- Never feed abrasive materials or metal objects such as staples, paper clips, or glitter through the laminator. Keep sharp objects like scissors and rulers away from the rollers at all times.
- Once an item has been fed between the rollers do not attempt to alter its position as this can damage the print.
- Do not stop the laminator before the item has completely exited from the rear to avoid a "dwell line" across the print.
- Do not clean or service the laminator before disconnecting the power supply.

XI. Warranty & Return Policy...

Warranty:

Your ValueLam 4500 is warranted to be free of defects in material and workmanship for a period of 1 year from the date of original purchase. In the event of a defect in materials or workmanship, Banner American Products, Inc. will, at their option, repair or replace the laminator.

Banner American Products, Inc. makes no other warranty stated or implied except as stated above. This warranty does not cover damage to the machine that occurs as a result of misuse or improper handling, or damage to prints.

Return Policy:

If your laminator is not operating properly, first review the Operating Instructions and the troubleshooting guide. If the malfunction cannot be corrected, contact Banner American for instructions. Be sure to have your machine serial number and date of purchase handy.

If the laminator must be returned to the dealer, it is your responsibility to ensure that it is packaged properly. Shipping damage as a result of improper packaging is not covered under the terms of this warranty.

XII. Parts List

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	645003	Roller, Silicone, 35-40	2
2	645033	Top Idler Roller Rod	1
3	645032	Top Idler Roller Tube	1
4	645034	Housing, Rod 45110	1
5	11125	Rod, Lower Idler	1
6	11126	Rod, Lower Idler	1
7	645026	Run-Off Table, Back 45110	1
8	645027	Run-Off Table, Front	1
9	645048	Bar, Thermostat	1
10	645004	Bar, Roller Pressure	2
11	645005	Block, Bearing, Left	1
12	645006	Block, Bearing, Right	1
13	645007	Bar, Pressure Adjustment	2
14	645008	Holder, Heater 45110	4
15	645009	Standoff, Holder, Heater	4
16	645010	Holder, Mandrel Left	2
17	645011	Holder, Mandrel Right	2
18	645012	Plate, Left Side 45110	1
19	645013	Plate, Right Side 45110	1
20	645014	Cover, Side, Left 45110	1
21	645015	Cover, Side, Right 45110	1
22	645016	Sprocket, Roller 45110	2
23	645017	Sprocket, Idler, 45110	1
24	645018	Sprocket, Motor 45110	1
25	645019	Mandrel, Supply 45110	2
26	643557	Brake for EN45	4
27	645047	Core Gripper, Mandrel	2
28	645020	Bracket, Safety Shield	1
29	645021	Safety Shield, Plastic	1
30	645022	Mount, Idler Sprocket	2
31	645023	Tie Bar, 45110	2
32	645024	Mount, Bar, Pressure Adj.	2
33	645025	Heater, 110V 45110	2
34	11111	Table, Feed, Black	1
35	645030	Cord, Power, 45110 12/3	1
36	645031	Fuse Holder, 45110	1
37	2369	Bushing, Idler for RL43	4
38	11187	Collar, Shaft, 5/8"	2
39	4268	Collar, Set, 1.25 I.D.	2
40	8149	Thermocouple, Sensor	1
41	8381	Bearing, Ball, Shielded	4
42	2870	Retaining Ring, External	4
43	8274	Spring, Mandrel Gripper	2
44	1170	Feet, Rubber, Large	4
45	10124	Control, Heat, Finishers	1
46	LCD48	Digital Read Out (New)	1
47	8288	Relay, Solid State 25A DC	1
48	541	Terminal Block, 6 Station	2
49	2351	Switch, Toggle, RL40	1
50	2775	Switch, Forward/Reverse	1

51	6546	Switch, Emergency Stop	2
52	10085	Motor, EZII, 80mm	1
53	11045	Variable Speed Control	1
54	10398	Chain, #35 Bulk	2
55	2325	Chain, Link, #35 Master	1
56	1172	Fuse Holder, HTB-34I	1
57	11480	On/Off Switch 25A DP 43	1
58	645040	Pin, Roller Adjustment	2
59	645039	Spring, Roller Pressure	2
60	645041	Lift Bar 45110	2
61	11559	3/16-24 X 1" Lg Eyebolt	2
62	11560	Thumb Screw, 10-24 X	2
63	11561	Shim, Roller, 1 ¼ ID X	4
64	11571	Plug, Power, 15A 125V Ace	1
65	645046	Washer, Phenolic #10 Flat	4
66	2777	Switch, Journal	2
67	645042	wm1329-nd Plug	1
68	645043	wm1336-nd Receptacle	1
69	11579	Crate, Wide Format	1
70	SR43-5	43" x 50' 5 mil ValueLam 4500	2
71	2664	Power connector, male	1
72	2665	Power connector, female	1
73	11586	Fuse, 20 amp FNQ-20	1
74	7310	Fuse, 1A (MDL)	1