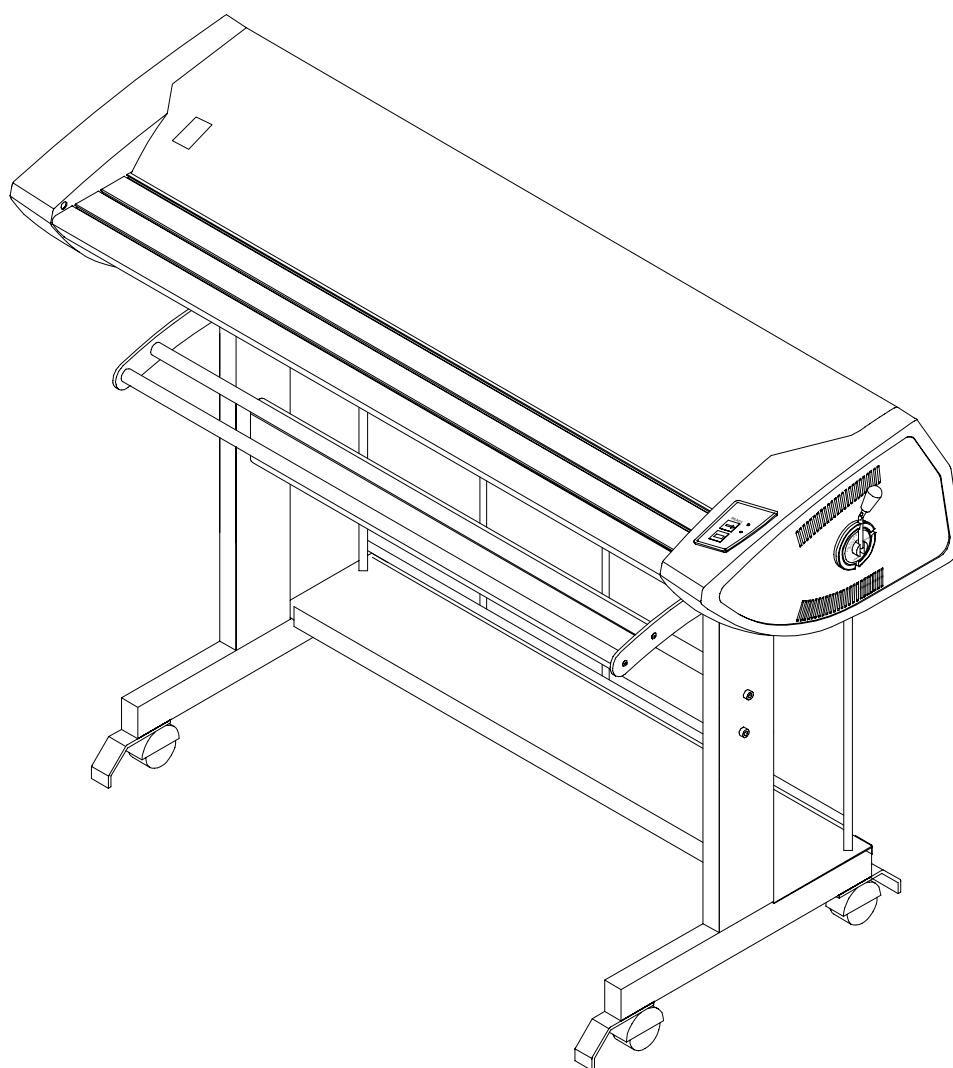

SPARTAN LAMINATOR OPERATION & MAINTENANCE MANUAL

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1.0 Safety



CAUTION: Do not attempt to operate your SPARTAN Laminator until you completely read and understand this Operations and Maintenance Manual.

Your safety, as well as the safety of others, is important to General Binding Corporation (GBC). This section contains important safety information which must be adhered to while operating, cleaning and performing basic maintenance in and around the machine.

1.1 Explanation of symbols



INFORMATION: *[This symbol is used prior to, during and/ or after a step. Following this symbol is important information pertaining to current subject.]*



CAUTION: *[This symbol is used prior to a step. The information following this symbol is to inform you of how to avoid harm to you, others around you or to the equipment.]*



WARNING: *[This symbol is used prior to a step. The information following this symbol is to inform you of how to avoid a dangerous situation.]*



ELECTRICAL HAZARD: *[This symbol is used prior to a step. The information following this symbol is to prevent an electrical shock condition that may be caused by an operator's action or machine function..]*

1.2 General rules of safety



ELECTRICAL HAZARD: Do not operate the laminator if power cord is damaged or frayed. You can be severely shocked, electrocuted or cause a fire.



WARNING: Do not operate this machine if your are not physically, psychologically or emotionally fit. Do not operate this machine until you have been trained and have read this manual in its entirety.



WARNING: Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.



WARNING: Never tamper with the safety devices to increase the laminator's production capacity. In the event a safety device should fail, never attempt to bypass it for operation. Consult a service representative immediately.

1.3 Primary function



WARNING: Never use this machine for any other purpose than its intended design and function.

The Spartan laminator is to be used only as a mounting and laminating machine. Only use acceptable materials when mounting and laminating with this machine.

All acceptable materials may be purchased from GBC. For your convenience, acceptable materials are listed below with product code numbers for fast and easy ordering.

Pouches (25 per box)

- Sign 3745595 clear 5 mil (W)18.5 x (L)24.5
- Poster 3745596 clear 5 mil (W) 25 x (L) 37
- Display 3745597 clear 5 mil (W) 37 x (L) 49

Mounting Boards (10 per box)

- Poster (white) 3745571 (W) 25 x (L) 37
- Poster (black) 3745575 (W) 25 x (L) 37
- Display (white) 3745572 (W) 37 x (L) 49
- Display (black) 3745576 (W) 37 x (L) 49

Pouchboards - clear (10 per box)

- Poster (white) 3745579 (W) 25 x (L) 37
- Poster (black) 3745583 (W) 25 x (L) 37
- Display (white) 3745580 (W) 37 x (L) 49
- Display (black) 3745584 (W) 37 x (L) 49

Pouchboards - sand (10 per box)

- Poster (white) 3745587 (W) 25 x (L) 37
- Poster (black) 3745591 (W) 25 x (L) 37
- Display (white) 3745588 (W) 37 x (L) 49
- Display (black) 3745592 (W) 37 x (L) 49



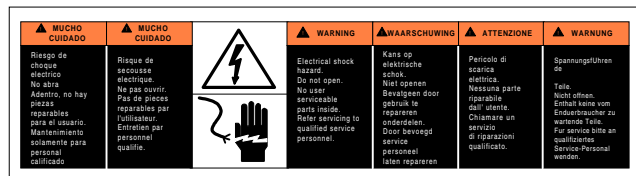
INFORMATION: If similar products are used, results may differ since temperature and speed is set for optimal results using GBC products.

1.4 Safety decals

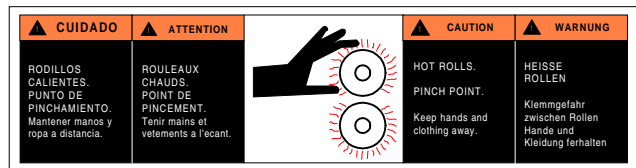


INFORMATION: Always observe all warning labels placed at various points on the laminator. If you do not completely understand a label, consult your manager for assistance.

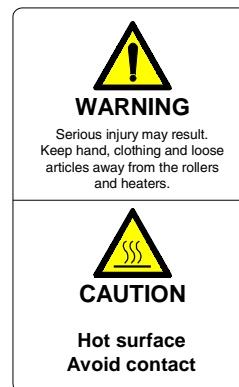
– **Electrical Shock:** Electrical shock hazard. Electrical voltage behind panel.



– **Roller Pinch Point:** Keep hands and fingers away. You may be crushed and or burned.

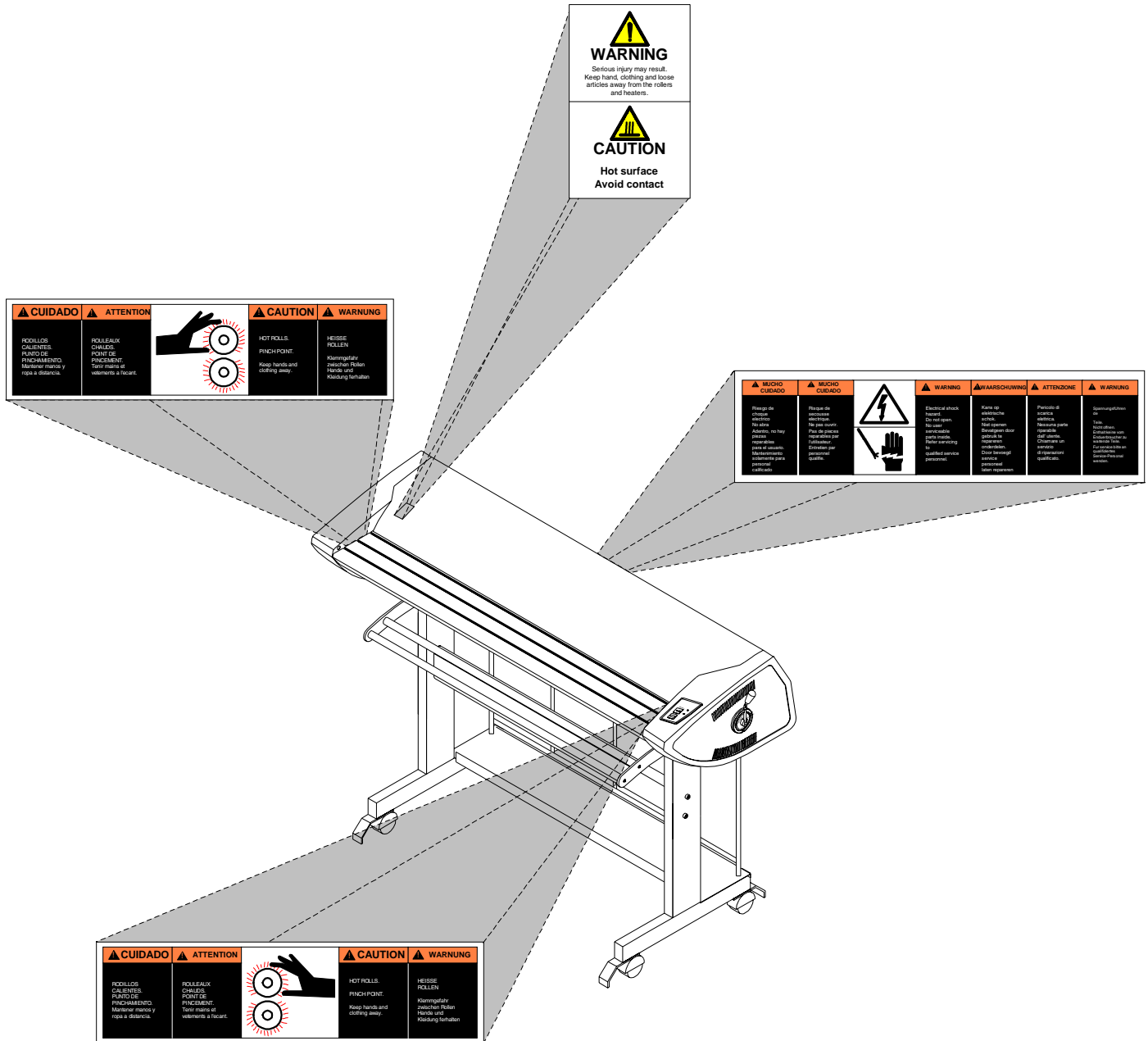


– **Keep clear/ Hot Surface:** Keep hands and fingers away. You may be crushed and or burned.



Refer to Figure 1.4.1 Safety Label Placement

Figure 1.4.1 Safety Label Placement



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2.0 Warranty

GBC Films Group warrants the equipment to be free from defects in material and workmanship for a period of **90 days for parts and labor** from the date of installation. This warranty is the only warranty made by GBC Films Group and cannot be modified or amended.

GBC Films Group's sole and exclusive liability and the customer's sole and exclusive remedy under this warranty shall be, at GBC Films Group's option, to repair or replace any such defective part or product. These remedies are only available if GBC Films Group's examination of the product discloses to GBC Films Group's satisfaction that such defects actually exist and were not caused by misuse, neglect, attempt to repair, unauthorized alteration or modification, incorrect line voltage, fire, accident, flood or other hazard.

2.1 Limited Warranty

This warranty specifically does not cover damage to the laminating rollers caused by knives, razor blades, other sharp objects, failure caused by adhesives or improper use of the machine. Warranty repair or replacement does not extend the warranty beyond the initial 90 day period from the date of installation.



CAUTION: Unauthorized customer alterations will void this warranty.

THE WARRANTY MADE HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. GBC FILMS GROUP WILL NOT BE LIABLE FOR PROPERTY

DAMAGE OR PERSONAL INJURY (UNLESS PRIMARILY CAUSED BY ITS NEGLIGENCE), LOSS OF PROFIT OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE EQUIPMENT.

2.2 Exclusions to the Warranty

This warranty specifically does not cover;

- 1.** Damage to the laminating rolls caused by knives, razor blades, other sharp objects or failure caused by adhesives.
- 2.** Damage to the machine caused by lifting, tilting and/or any attempt to position the machine other than rolling on the installed castors on even surfaces.
- 3.** Improper use of the machine.
- 4.** Damage due from unqualified person(s) servicing the machine.

Qualified;

- Any engineer that has experience with electrical and mechanical design of lamination equipment. The engineer should be fully aware of all aspects of safety with regards to lamination equipment.

- Any commissioning or service engineer must be of competent nature, trained and qualified to GBC Films Group standards to fulfill that job. This person will have completed and passed the full service training course from GBC Films Group.

- Any GBC Technician, GBC Specialist, and / or GBC Films Group Technician that has been through the GBC Films Group service training course.

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3.0 Specifications

Description:

Entry level laminator for encapsulation and mounting of poster size prints. The Spartan is a self standing laminating unit.

Features:

Simple one touch operation

Applications:

Mounting of poster size prints
Encapsulation of poster size prints

3.1 Consumable

Material Types:

Thermal mount boards
Thermal pouch boards
Thermal pouches

Material Widths:

38" maximum

3.2 Function

Speed:

Preset for GBC materials

Motor:

DC gear motor

Heating:

Preset for GBC materials

Controls:

Operations control panel

Roll Design:

High release silicone

3.3 Electrical

Requirements:

230-240 VAC, 60 Hz, single phase 20 amps.

BTU Output:

7200 BTU/Hour

Heater Wattages:

2100 watts

Amperage Draw:

Drive motor: 1 amp

Heaters: 9 amps

DC voltage used:

36 VDC motor voltage

AC voltage used:

230 VAC (minimum)

3.4 Dimensions and weight

Weight:

Out of box: 250 lbs. (114 kg.)

boxed: 260 lbs. (118 kg.)

Dimensions:

Refer to Figure 3.4.1 Dimensions

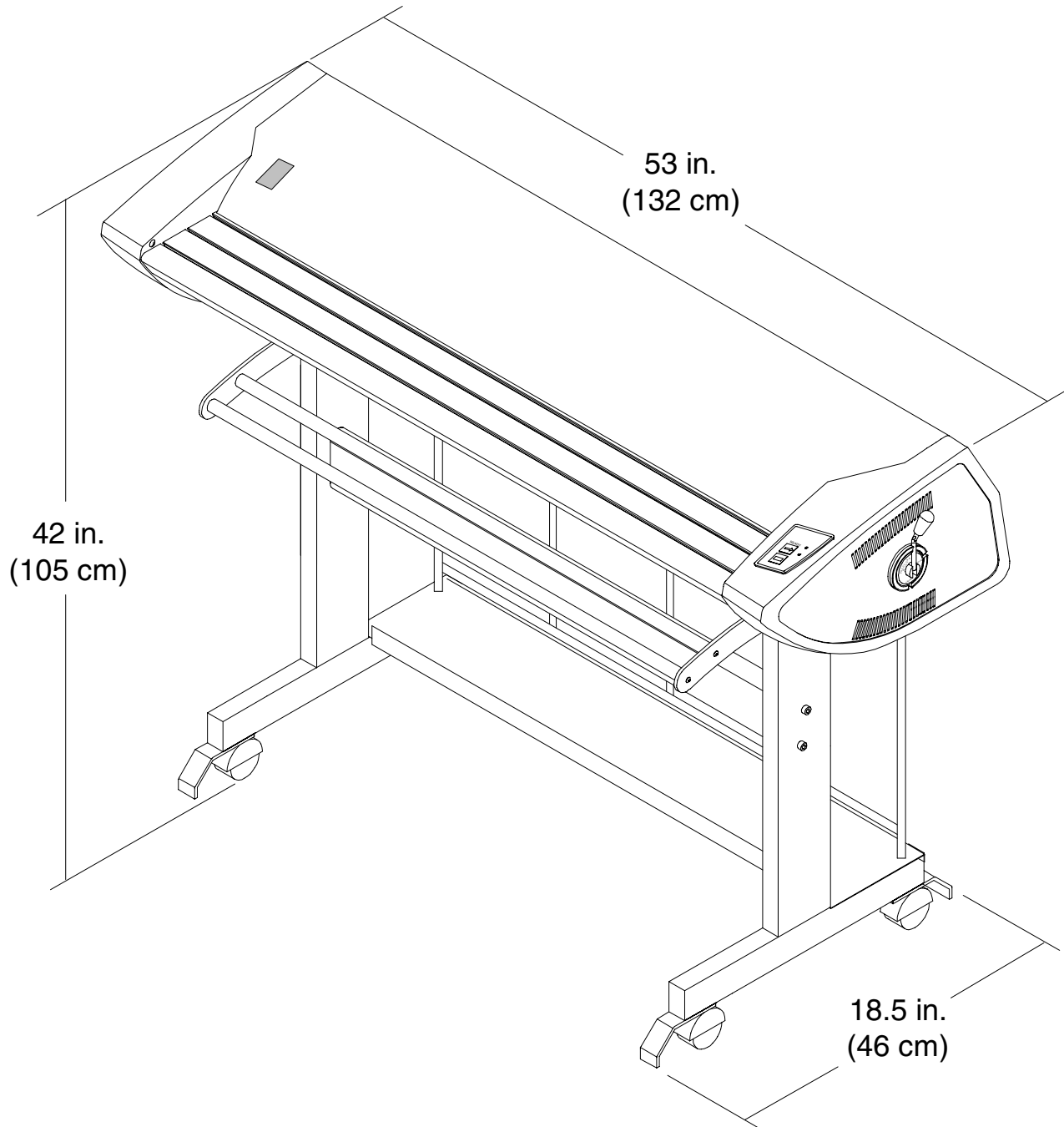
assembled: 42 in. (H) x 53 in. (W) x 18.5 in. (D)
105 cm (H) x 132 cm (W) x 46 cm (D)

boxed: 18 in. (H) x 60 in. (W) x 25 in. (D)
45 cm (H) x 150 cm (W) x 62.5 cm (D)

Nip Height:

37.75" (96 cm)

Figure 3.4.1 Dimensions



4.0 Installation

GBC Films Group is committed to a program of ongoing product improvement. As a result, we are providing these instructions so that you can insure that your new Spartan Laminator is properly and securely unpacked, moved and installed.

Before a Spartan Laminator can be installed, there are a few requirements that must be met. Make certain that each of the requirements listed in the following pre-installation checklist are met before beginning installation.



CAUTION: Failure to follow the pre-installation check list can result in damage to the laminator.

4.1 Pre-installation

- Are the doorways and hallways wide enough for the laminator to be moved to the installation site?
- Is there ample room for the laminator?
- A work area must be established that allows for unrestricted movement around the laminator and provides space for efficient material flow. Figure 4.1.4 and Figure 4.1.5 illustrates a typical machine area layout.
- Is the environment appropriate for the laminator?
- The laminator requires a clean, dust and vapor free environment to operate properly. It must not be located where there is air blowing directly on the machine.
- Have you contacted a certified electrician to install a receptacle for the laminator ensuring that adequate power is being supplied and correct circuit breaker?



WARNING: The operating environment must be free of dust, flammable liquids and vapors. You can be injured by inhaling chemical vapors.



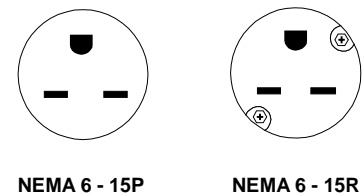
WARNING: Vapor build up or stored flammable liquids can cause a fire. Excessive dust can damage the laminator.



CAUTION: Do not locate the laminator where air can blow directly on the machine. The air flow can cool the rollers unevenly and result in poor quality output.

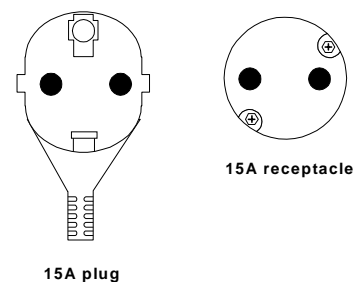
- US and Canada: The laminator requires 230-240 vac, 60 Hz, 15 amps, single phase

Figure 4.1.1 Connections-Spartan US



- Europe: The laminator requires 230-240, 50 Hz 15 amps, single phase

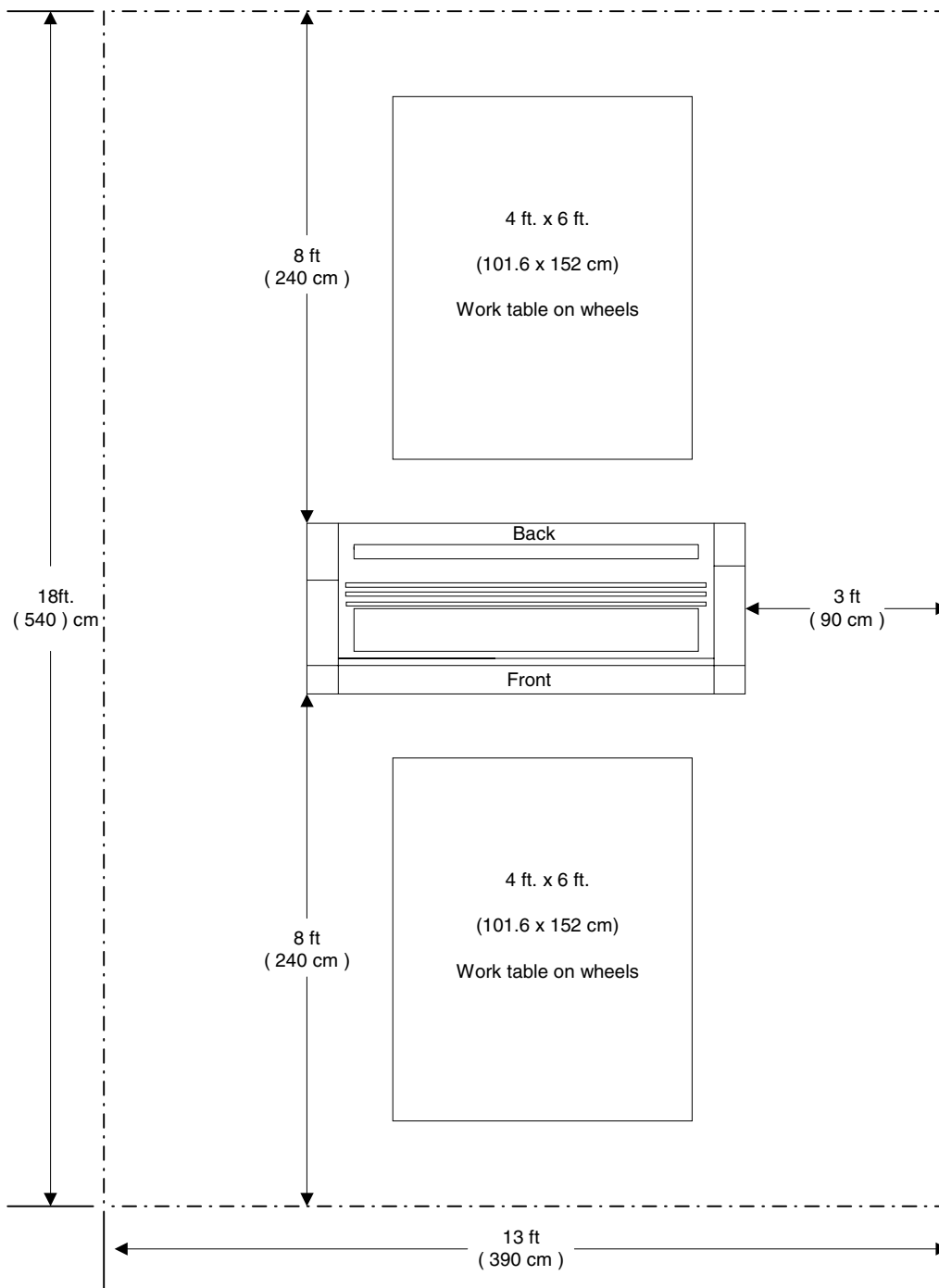
Figure 4.1.2 Connections-Spartan Europe



4.2 Suggested floor layout

A safe work area constitutes enough room to work with the materials at hand while being free to move around the laminator without interference from the laminator. Refer to the figure below for a suggested floor layout example.

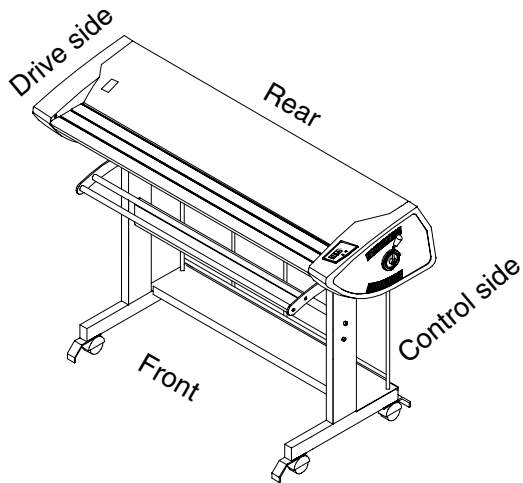
Figure 4.2.1 Suggest floor layout example



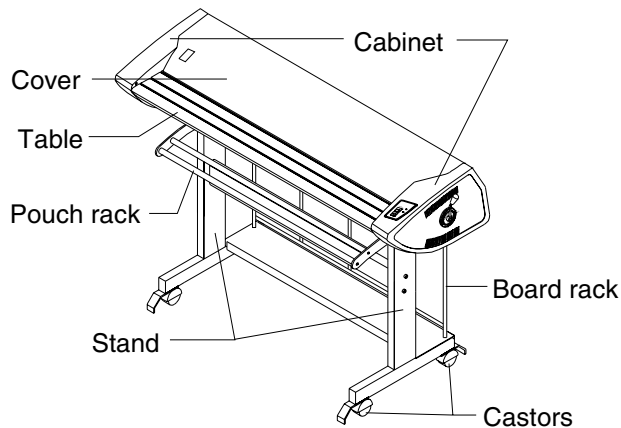
4.3 Know your laminator

Before performing any procedure within this manual, it is recommended that you take time to know your laminator.

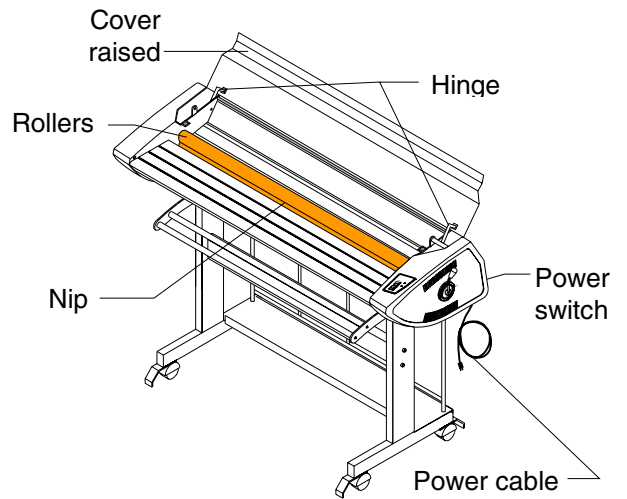
Sides of the laminator



Parts on the laminator



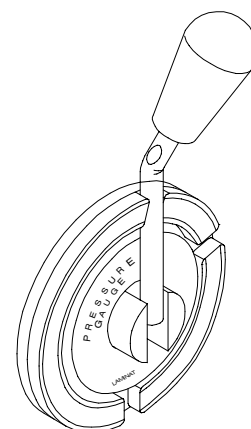
Under the cover



Control Panel



Roller pressure control



4.4 Unpacking



INFORMATION: All shipments are ex-works. At our docks, title passes to the buyer. Please review your insurance coverage prior to shipment, as you are responsible for all subsequent freight charges and risks.



INFORMATION: Before signing the Bill of Lading, be sure to inspect the crate, box and/ or pallet for signs of damage or missing items. If applicable, make note of this on the Bill of lading.

1. Inspect the machine for any obvious shipping damages upon receipt.
2. Carefully unwrap the shrink wrap from around the laminator.



CAUTION: Do not use a knife or other sharp object to remove any shrink wrap from around the laminator. You can cause irreparable damage to the rollers!

3. With another person, carefully remove the contents and assemble the laminator as described in the assembly procedure included with the laminator.
4. With assistance, carefully move the laminator to the desired location.



WARNING: Do not attempt to move the laminator across anything other than a flat level surface without trained and qualified riggers. You can be crushed or seriously injured.



WARNING: Do not turn the laminator sideways, up side down or vertical when moving. This will disrupt the alignment of internal moving parts.

5.0 Operations



WARNING: Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

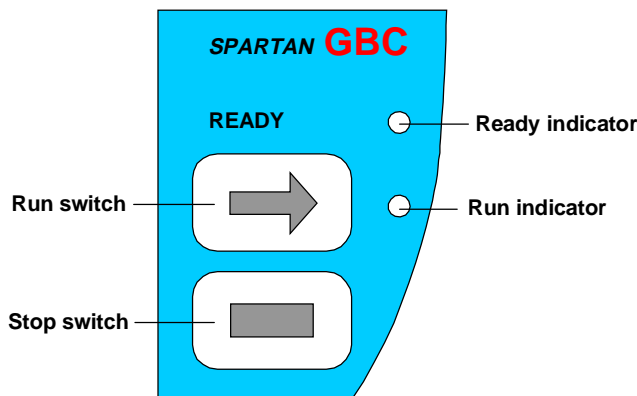



INFORMATION: The laminator will only run when the roller cover is in the down position.

5.1 Control Panel

The control panel is located on the right hand side from the front operating position of the laminator. From the control panel, the operator is able to control the motor run and motor stop function.


Figure 5.1.1 Control panel




 **RUN** – When pressed, engages the motor that drives the rollers.




INFORMATION: The laminator only operates in one direction, forward. There is no reverse function on this machine. Stop the roller and release roller pressure to manually move the product backwards.

 **STOP** – When pressed, stops the roller by removing power to the motor.

 **READY** – When illuminated, represents the rollers are up to operating temperature.



INFORMATION: Do not run material until **READY** is illuminated. Attempting to run prior to this will result in poor output quality.

 **RUN** – when illuminated, represents the motor engaged and the rollers are turning.



INFORMATION: The motor will only engage if the cover is in the lowered position.



WARNING: Never attempt to bypass the cover safety switch to operate the laminator. This can result in serious injury to you or others.

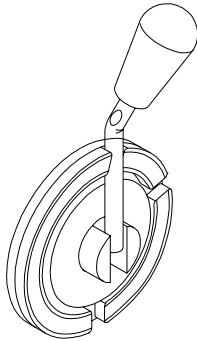
5.2 Roller pressure handle

The roller pressure handle sets the roller nip opening for the desired application with the material being used.



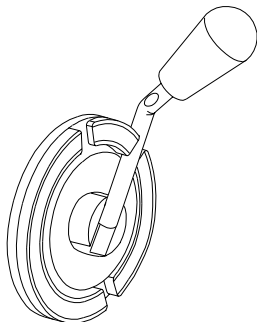
INFORMATION: Never attempt to alter the factory preset settings for the nip opening or speed. Contact your local service representative if you feel the roller pressure handle requires calibrating.

Roller release position



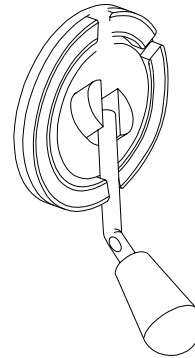
– Use this position when the laminator is not in use or no nip pressure is required. This is the maximum nip opening position.

Foam pouch position



– Use this position when using board type materials through the laminator. This nip opening and speed is preset for GBC materials.

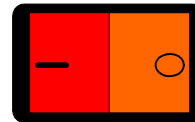
Laminating position



– Use this position when running film pouch type materials. This is the minimum nip opening position. This nip opening and speed is preset for GBC materials.

5.3 ON/ OFF power switch

The power ON/ OFF turns your laminator on. When the laminator is on, the rollers begin heating automatically.



(-) This is the **ON** position for the laminator.

(O) This is the **OFF** position for the laminator.



CAUTION: During long periods of no use, 30 minutes or greater, you should turn power off to the laminator. This will prevent hot spots from forming on the rollers.

6.0 Applications

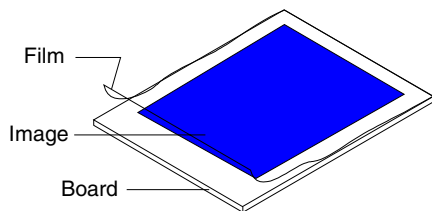
The Spartan laminator will accommodate GBC mounting boards and lamination pouches. This section will describe how each process is run on the laminator.



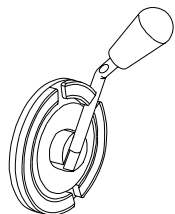
INFORMATION: The leading edge will always be the edge which is sealed. The opposite edge is referred to as the trailing edge.

6.1 Pouch boards

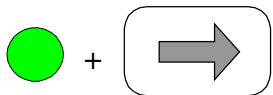
1. Turn the laminator on.
2. Center the image on the board under the film.



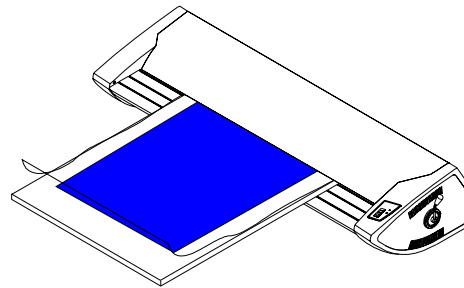
3. Set the pressure handle to the foam pouch position.



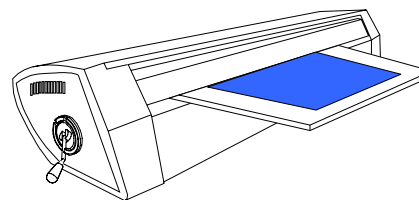
4. Wait for **READY** to illuminate.
5. Press **RUN**.



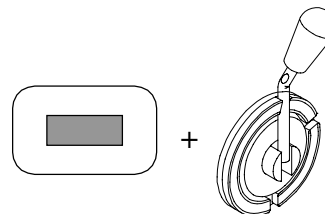
6. Align the leading edge of the pouch board with the center of the table.



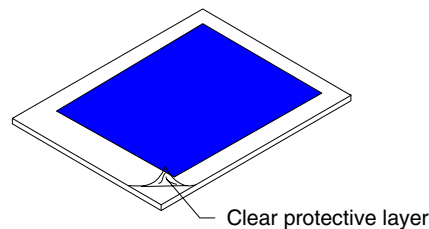
7. Gently slide the pouch board into the roller nip until you feel the rollers catch the board.
8. Support the board as it exits the rear of the laminator.



9. Press **STOP** and set the pressure handle to the roller release position.



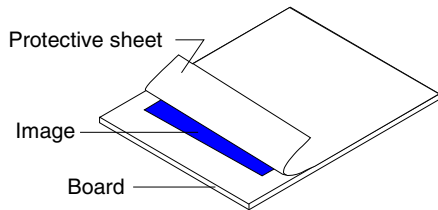
10. Peel the clear protective layer off the board and trim to desired size.



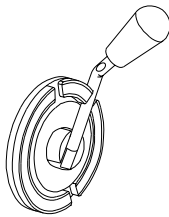
6.2 Mounting boards

1. Turn the laminator on.

2. Center the image on the board under the protective sheet.

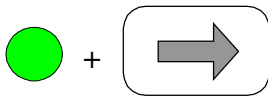


3. Set the pressure handle to the foam pouch position.

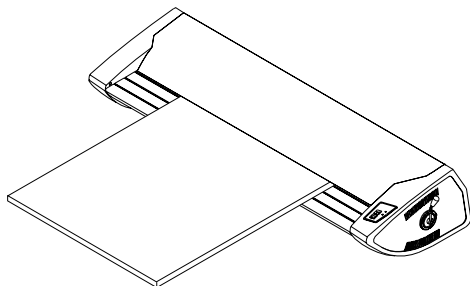


4. Wait for **READY** to illuminate.

5. Press **RUN**.

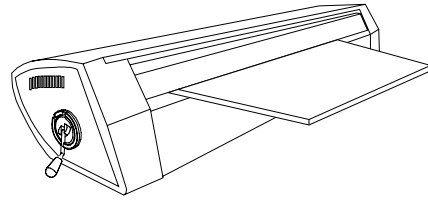


6. Align the leading edge of the mounting board with the center of the table.

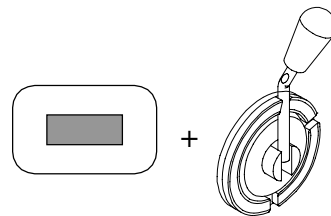


7. Gently slide the mounting board into the roller nip until you feel the rollers catch the board.

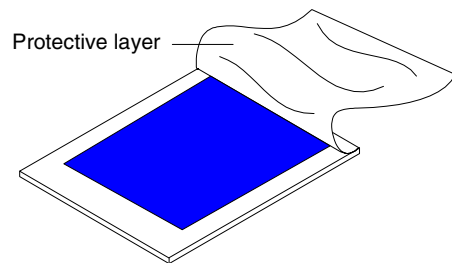
8. Support the board as it exits the rear of the laminator.



9. Press **STOP** and set the pressure handle to the roller release position.



10. Pull the protective layer off the board and trim to desired size.

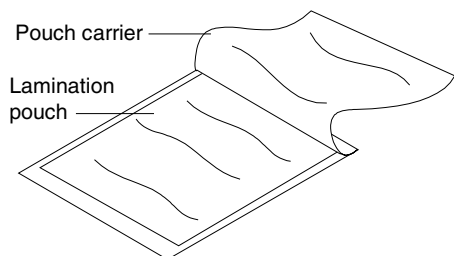


6.3 Lamination pouches

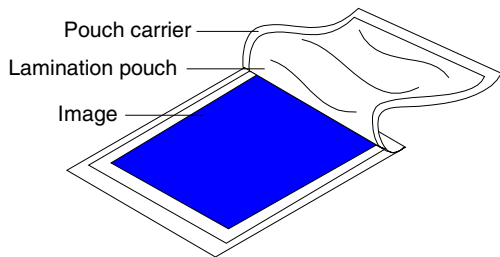


INFORMATION: Treat the pouch carriers carefully as they may be reused until you see wrinkles in the lamination.

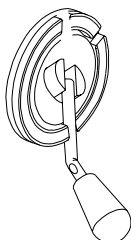
1. Turn the laminator on.
2. Center the lamination pouch between the two sheets of the pouch carrier.



3. Fold the top sheet of the pouch carrier and the lamination pouch over.
4. Center the image on the lamination pouch and carefully lay the top sheets back over the image.

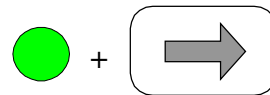


5. Set the pressure handle to the lamination position.

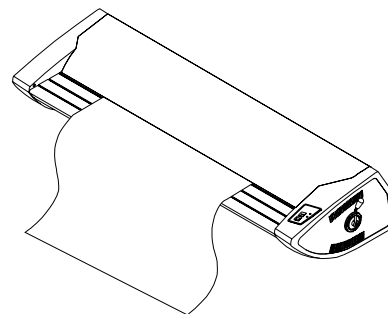


6. Wait for **READY** to illuminate.

7. Press **RUN**.

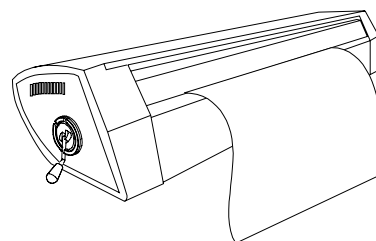


8. Align the leading edge of the pouch carrier containing the lamination pouch and image with the center of the table.

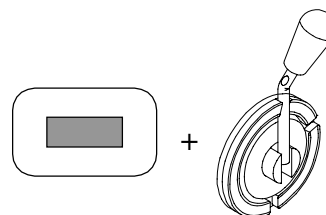


9. Gently slide the pouch carrier into the roller nip until you feel the rollers catch the pouch carrier.

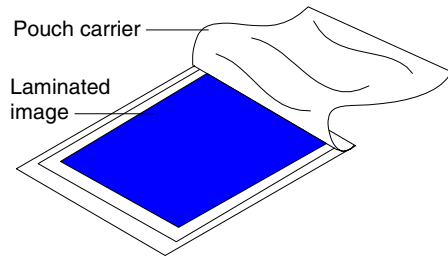
10. As the pouch carrier nears its end, be prepared to catch the pouch carrier as it exits the rear of the laminator.



11. Press **STOP** and set the pressure handle to the roller release position.



12. Remove the laminated image from the pouch carrier and trim to desired size.



7.0 Maintenance

GBC Films Group laminators require minimal maintenance. However, regular maintenance is essential to keep any piece of precision machinery at peak performance. A maintenance schedule and a section of procedures are included in this section.



WARNING: Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.



INFORMATION: Improper maintenance can result in poor output quality.

GBC offers Cleaning kits (P/N 1711515) as well as Extended Maintenance Agreements.

The only maintenance required by the operator is to maintain clean and adhesive free nip rollers and overall cleanliness of the laminator itself.



ELECTRICAL HAZARD: Do not use liquid or aerosol cleaners on the laminator. Do not spill liquid of any kind on the laminator. You can be severely shocked, killed or cause a fire. Use only a damp cloth for cleaning unless other wise specified.

7.1 Cabinets, cover and stand



ELECTRICAL HAZARD: Remove power from the laminator before cleaning. You can be severely shocked, killed or cause a fire.

1. Use a damp (use water only to dampen the cloth) white terry cloth towel to wipe dust from the cabinets, cover and stand.

7.2 Rollers



CAUTION: Never clean the rollers with sharp or pointed objects. You may put irreparable cuts into the rollers.



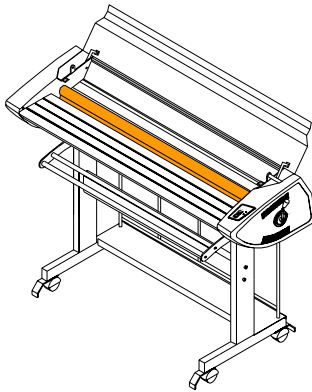
INFORMATION: Power is required to rotate the rollers which means heat will be present as well.

7.2.1 Stains/ dust on rollers



CAUTION: The following procedure is performed while the laminator is HOT! Use extreme caution!

1. Set the pressure handle to the roller release position and raise the cover.



2. Use a damp (use water only to dampen the cloth) white terry cloth towel to wipe dust from the upper roller.
3. For the lower roller, close the cover, press **RUN** to rotate the lower roller to a new area to clean.
4. Repeat the steps above until the lower roller is cleaned

7.2.2 Adhesive on rollers



CAUTION: Hardened adhesive deposits on the rollers can cause damage to the rollers.

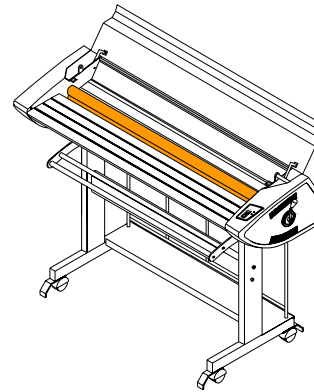


CAUTION: Do NOT pick or pull heat activated adhesive off the rolls when they are cold. You can cause irreparable damage to the laminating rolls.



CAUTION: The following procedure is performed while the laminator is **HOT!** Use extreme caution!

1. Set the pressure handle to the roller release position and raise the cover.



2. With a rubber cement eraser or Scotch Brite™ gently rub the adhesive on the roller.



CAUTION: Excessive pressure can destroy the silicone layer by pressing too hard or scrubbing too long in one spot.

3. Use a damp (water only) white terry cloth towel to wipe adhesive beads off the roller.
4. For the lower roller, close the cover, press **RUN** to rotate the lower roller to a new area to clean.
5. Repeat the steps above until the lower roller is cleaned

8.0 Recommended Spares

8.1 Spare parts list

Part #	Item Description	Quantity
601230123	Power panel	1
703020230	Knob	2
607040514	Heat roller	2
6090202	DC Geared motor	1
610010210	Transformer	1
701090103	Tension spring	4
704031123	Cord plug	1
704090102	Power switch, ON/ OFF	1
703020241	Switch panel	1
704090421	Micro switch	2
704091046	Circuit breaker	1
701130502	Castor	2
701020210	Needle Bearing	2
704150109	Thermostat	2
706011031	Main PCB assembly	1
706011032	Display PCB assembly	1
705200201	Infrared Sensor	1
706025064	Infrared heater assembly	2

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9.0 Parts Information

The parts list is in numeric order. The parts illustrations are in assembly order. If a part you require does not exist in the parts list or in the parts illustration section, contact your local service representative for assistance.

9.1 Parts list

DWG #	Part #	Item Description
1	6090202	MOTOR (DM010)
1,2	601211157	BACK COVER SUPPORT
4	601230123	POWER PANEL
2	601230493	ROLLER HOOK (L)
3	601230494	ROLLER HOOK (R)
2,3	601230511	HEAT ROLLER SUPPORT
2,3	601230521	INFRARED HEATER SUPPORT
2	601230537	ECCENTRIC HOOK (L)
3	601230538	ECCENTRIC HOOK (R)
1	601230751	BOTTOM PLATE
1	601230752	SIDE PLATE (L)
1	601230753	SIDE PLATE (R)
1,4,5	601230754	MAGNET PLATE
4	601230755	SAFETY COVER (R)
5	601230756	SAFETY COVER (L)
1	601230757	PCB SUPPORT
8	601230758	TOP COVER BRACKET (R)
8	601230759	TOP COVER BRACKET (L)
6	601230760	GUIDE PLATE (UP)
6	601230761	GUIDE PLATE (LOW)
8	601230762	HEAT INSULATOR
11	601230763	STAND BRIDGE
11	601230764	STAND ROD (R)
11	601230765	FILM TRAY BRACKET
11	601230767	BOARD GUIDE PLATE
11	601230768	STAND ROD (L)
1	601230769	SENSOR BRACKET
7	604020327	SIDE COVER (L)
7	604020328	SIDE COVER (R)
9	604036051	FRONT COVER
6,8	604036052	TOP COVER
7,9	604036053	FRONT TABLE
1	604036054	REAR TABLE
6	604036055	REAR COVER
6	604036056	BACK COVER
4,5	604620101	MAGNET
1	607040514	HEAT ROLLER
1	610010210	TRANSFORMER
3	613011005	ROLL ECCENTRIC LEVER STOPPER
2,3	613011011	ECCENTRIC BUSHING

DWG #	Part #	Item Description
7	613011012	ECCENTRIC LEVER
11	613020501	FILM TRAY PIPE
11	613020502	BOARD GUIDE
1	613030304	HEAT ROLL BUSHING
1	613030411	ECCENTRIC SHAFT
2	613030544	IDLER PIN
2,3	701020210	NEEDLE ROLL BEARING
2	701050243	BUSHING #1510
1	701050265	BUSHING #3015
2	701070127	CHAIN #25
1	701080173	STEEL SPUR GEAR
2	701080248	STEEL 1/4CHAIN GEAR
2	701080320	STEEL SPUR + CHAIN GEAR
2	701080605	STEEL SPUR + SPUR GEAR
2,3	701090103	ROLLER SPRING
2,3	701090714	SNAP RING #22
2,3	701090716	SNAP RING #40
11	701130502	CASTER
1	703010103	RUBBER FOOT
4	703010211	RING
2,3	703010332	SILICON SPACER
10	703020230	KNOB
10	703020241	SWITCH PANEL
7	703021051	TENSION LEVER HANDLE
4	704031123	CORD PLUG, 250V (USA)
4	704090102	POWER SWITCH
3	704090421	LIMIT SWITCH
4	704091046	CIRCUIT BREAKER
4	704140406	STRAIN RELIEF
2	704150109	THERMOSTAT (105°C)
1	705200201	INFRARED SENSOR
1	706011031	PCB ASS'Y SPARTAN MAIN
10	706011032	PCB ASS'Y SPARTAN DISPLAY
3	706025064	SPARTAN INFRARED HEATER ASS'Y
7	802040325	NAME STICKER/SPARTAN
10	802105034	SWITCH PANEL STICKER/SPARTAN
7	803030389	GBC RATING PLATE
6	803040323	WARNING STICKER
11	803040327	WARNING STICKER
7	803040353	SPARTAN TENSION STICKER

9.2 Parts Illustrations

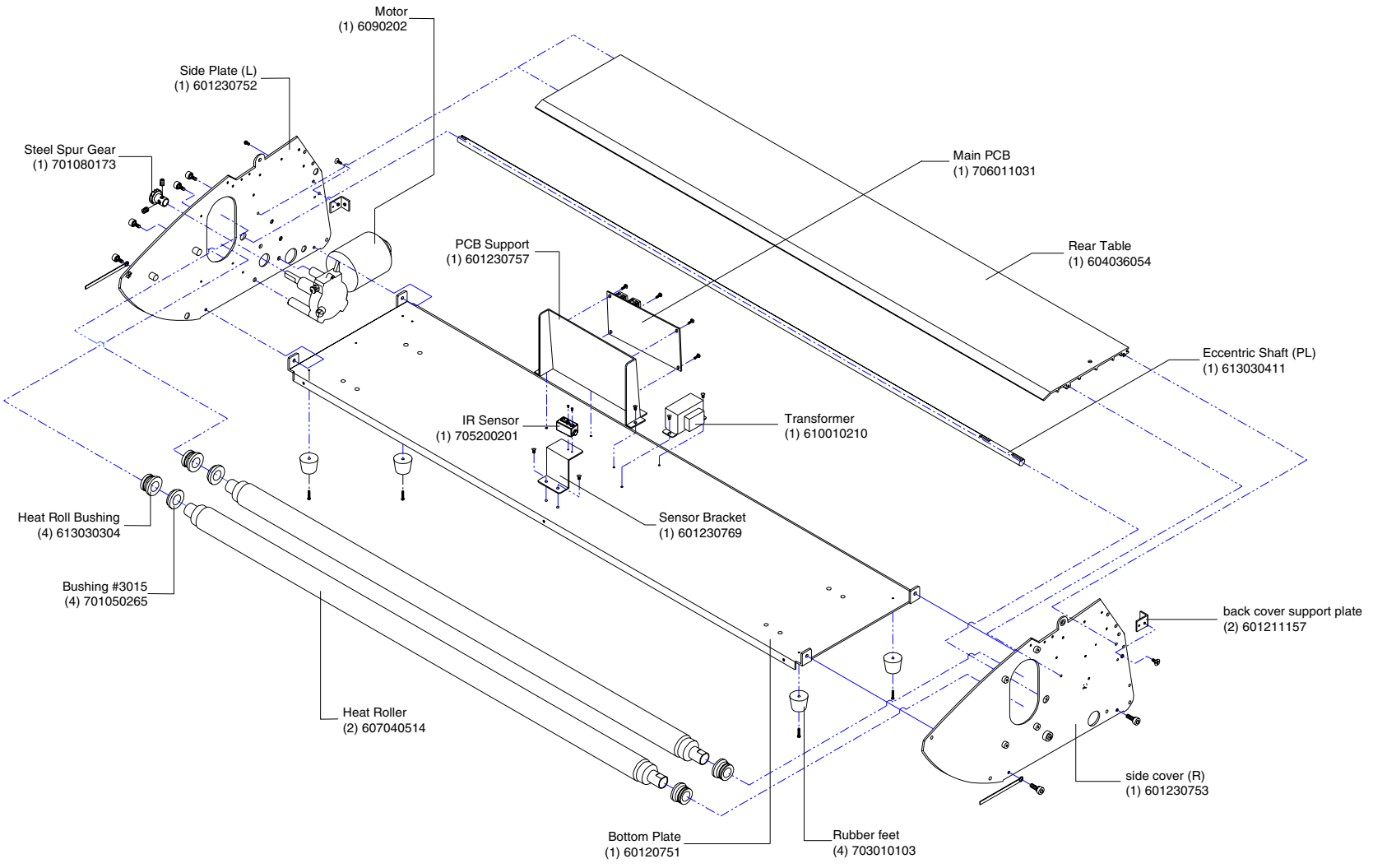


WARNING: Illustrated parts drawings are to be used only for ordering parts. They should not be used to perform repair work yourself. Contact your local service representative for service.



INFORMATION: The numeric value in the (), represent quantity per machine, not per assembly.

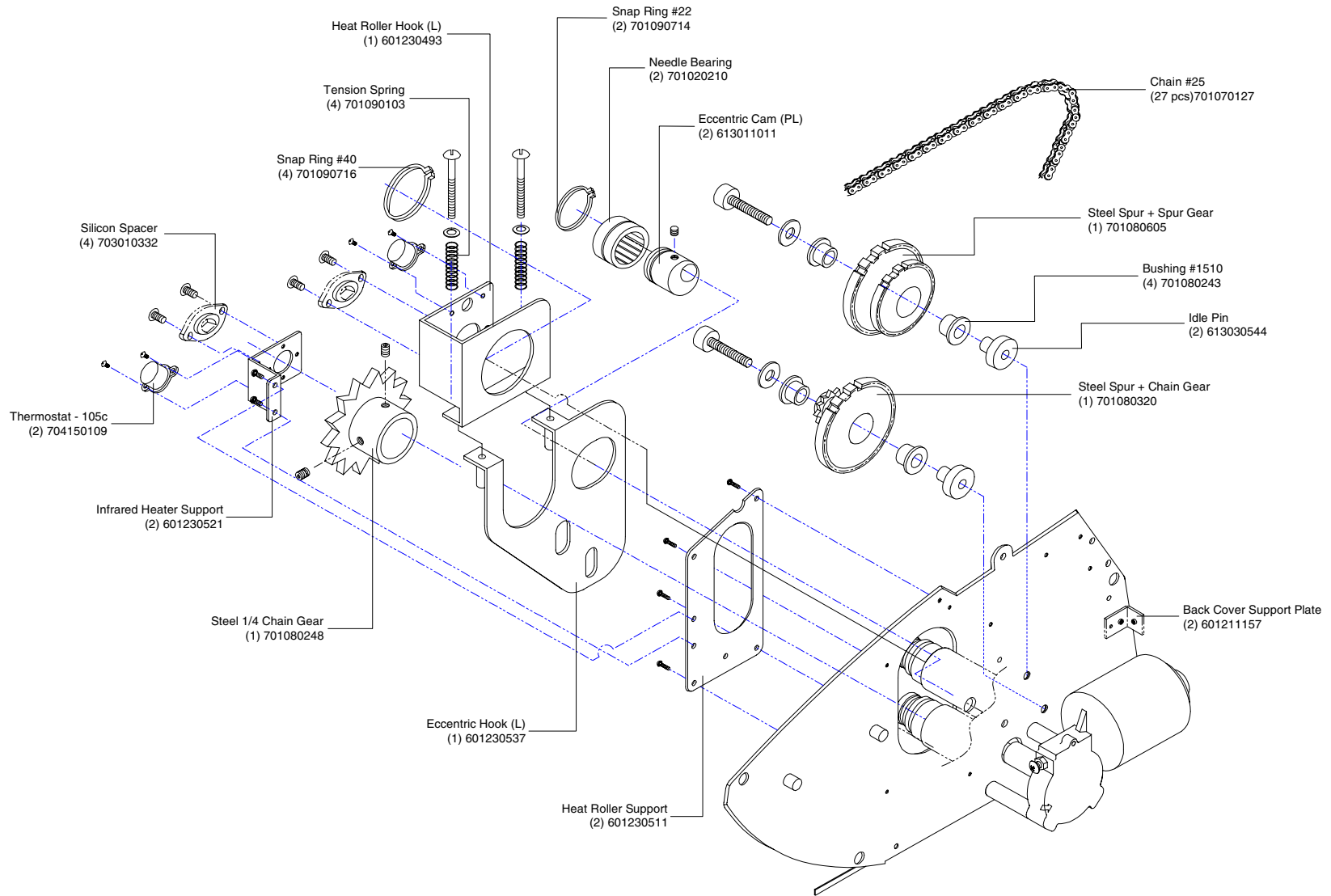
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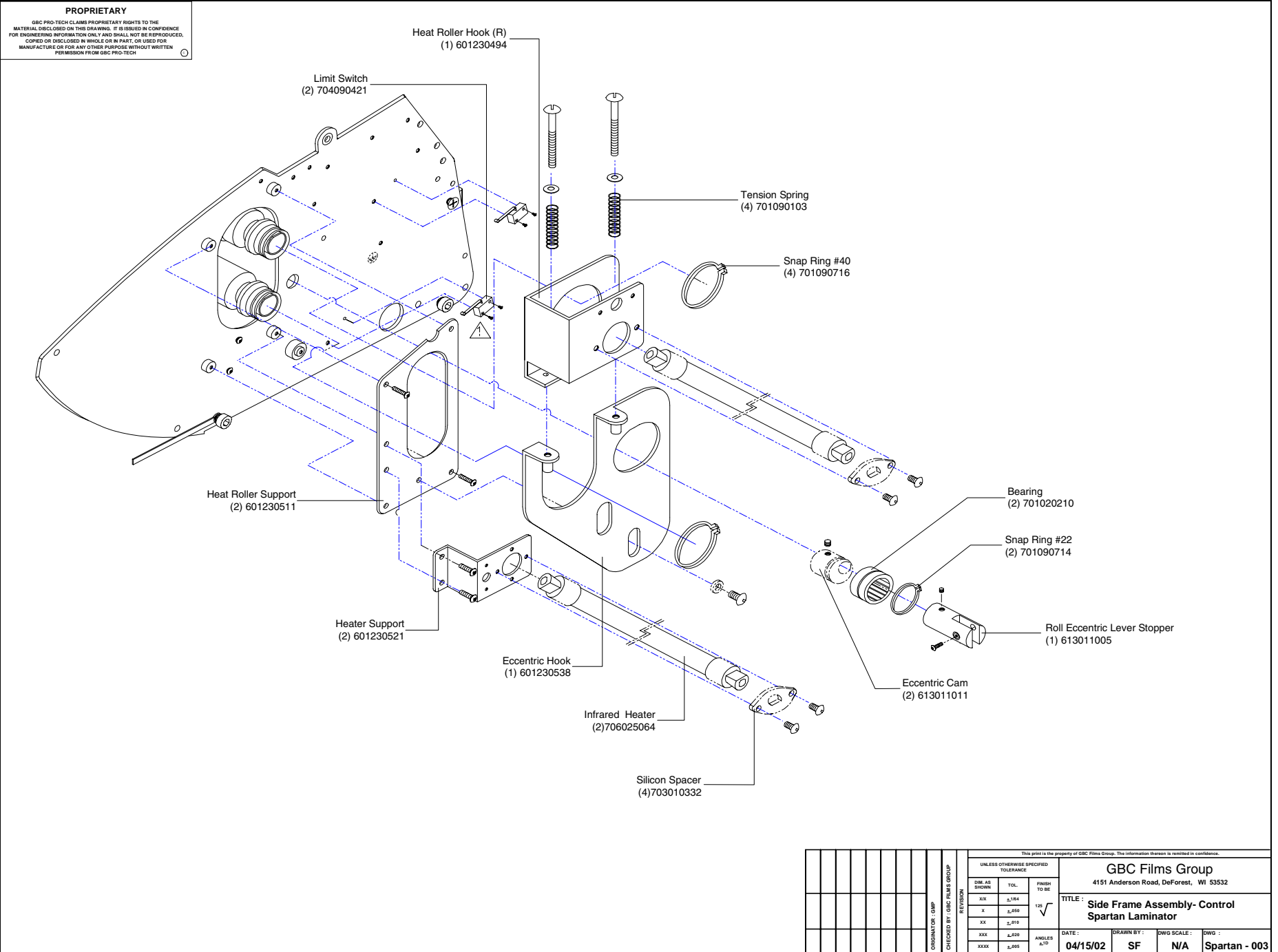
UNLESS OTHERWISE SPECIFIED TOLERANCE				GBC Films Group 4151 Anderson Road, DeForest, WI 53532			
DIM. AS SHOWN	TOL.	FINISH TO BE	1/2	TITLE : Frame Assembly Spartan Laminator DATE : 04/15/02 DRAWN BY : SF DWG SCALE : N/A DWG : Spartan-001			
XX	±.184						
X	±.090						
XX	±.010						
XXX	±.020	ANGLES					
XXXX	±.005	±.0°					
REVISION	CHECKED BY : GBC FILMS GROUP	ORIGINATOR OR CAMP					

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UNLESS OTHERWISE SPECIFIED TOLERANCE			GBC Films Group 4151 Anderson Road, DeForest, WI 53532			
Dim. As Shown	TOL.	FINISH TO BE	TITLE: Side Frame Assembly - Drive Spartan Laminator			
XX	±.184	12R	DATE:	DRAWN BY:	DWG SCALE:	DWG:
X	±.050		04/15/02	SF	N/A	Spartan-002
XX	±.010					
XXX	±.009	ANGLES ±.010				
XXXX	±.005					

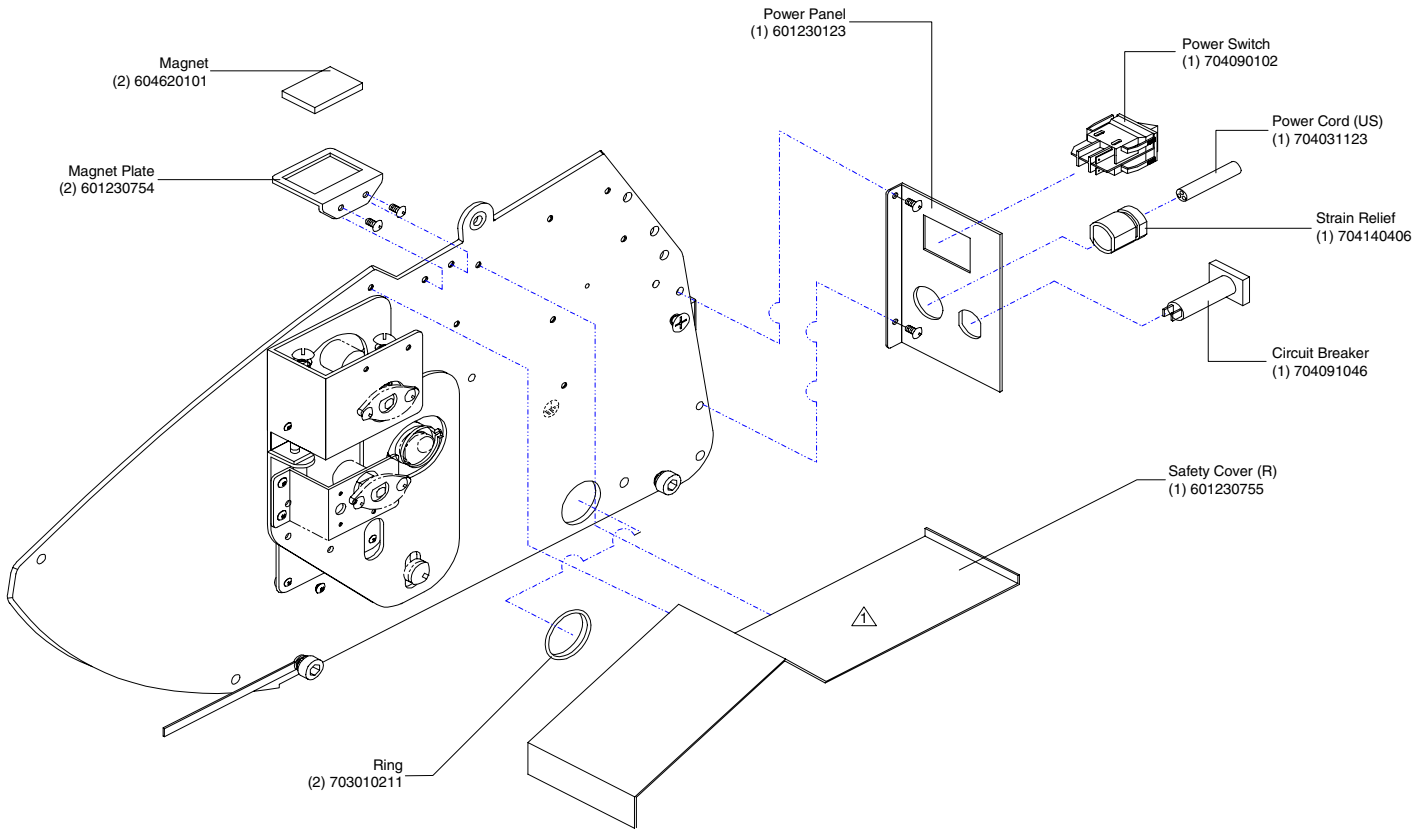


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UNLESS OTHERWISE SPECIFIED TOLERANCE		FINISH TO BE		GBC Films Group 4151 Anderson Road, DeForest, WI 53532			
DIM. AS SHOWN	TOL.	125 √		TITLE : Side Frame Assembly- Control Spartan Laminator			
XIX	±.194			DATE: 04/15/02 DRAWN BY: SF DWG SCALE: N/A DWG: Spartan - 003			
X	±.050						
XX	±.010						
XXX	±.005						
XXXX	±.005	ANGLES ±.5°					

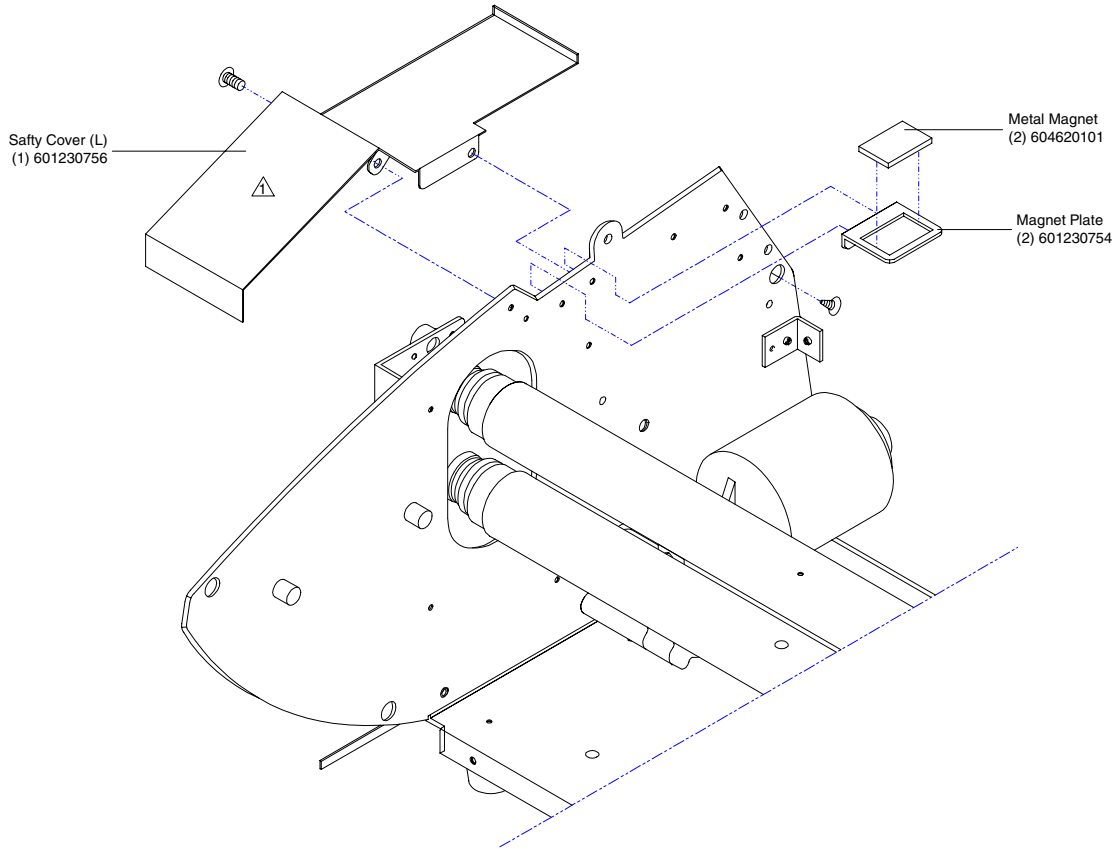
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UNLESS OTHERWISE SPECIFIED: TOLERANCE		GBC Films Group 4151 Anderson Road, DeForest, WI 53532	
DIM. AS SHOWN	TOL.	FINISH TO BE	TITLE : Power Assembly Spartan Laminator DATE : 04/16/020 DRAWN BY : SF DWG SCALE : N/A DWG : Spartan - 004
X/2	±.164	125	
X	±.050	√	
XX	±.010		
XXX	±.020	ANGLES ±.0	
XXXX	±.005		
OPERATOR: CMP	CHECKED BY: GBC FILMS OR GUP	REVISION	

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UNLESS OTHERWISE SPECIFIED TOLERANCE		GBC Films Group 4151 Anderson Road, DeForest, WI 53532	
DIM. AS SHOWN	TOL.	FINISH TO BE	TITLE : Magnet Assembly - Drive Spartan Laminator DATE : 04/16/02 DRAWN BY : SF DWG SCALE : N/A DWG : Spartan - 005
XX	±.184	125	
X	±.050	√	
XX	±.010		
XXX	±.020	ANGLES ±.1°	
XXXX	±.005		

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Warning Shock Hazard Decal
(1) 803040323

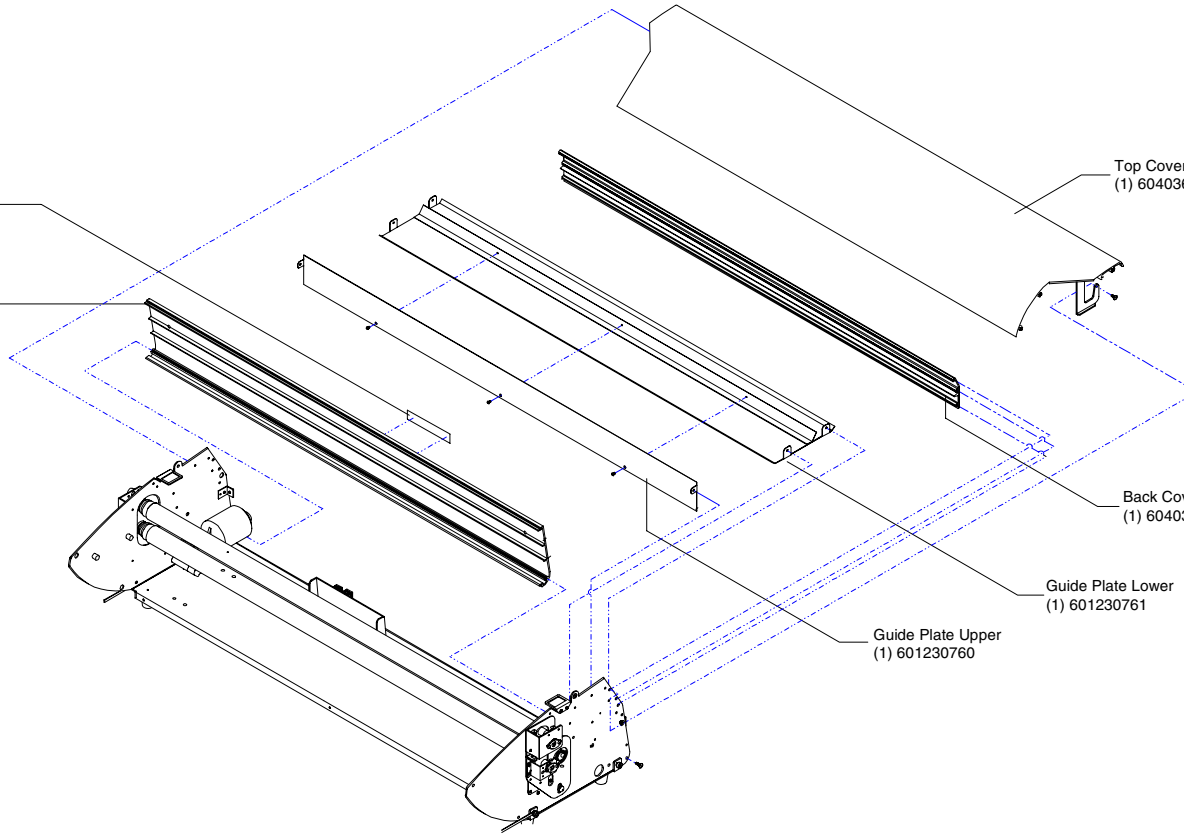
Rear Cover
(1) 604036055

Top Cover
(1) 604036052

Back Cover
(1) 604036056

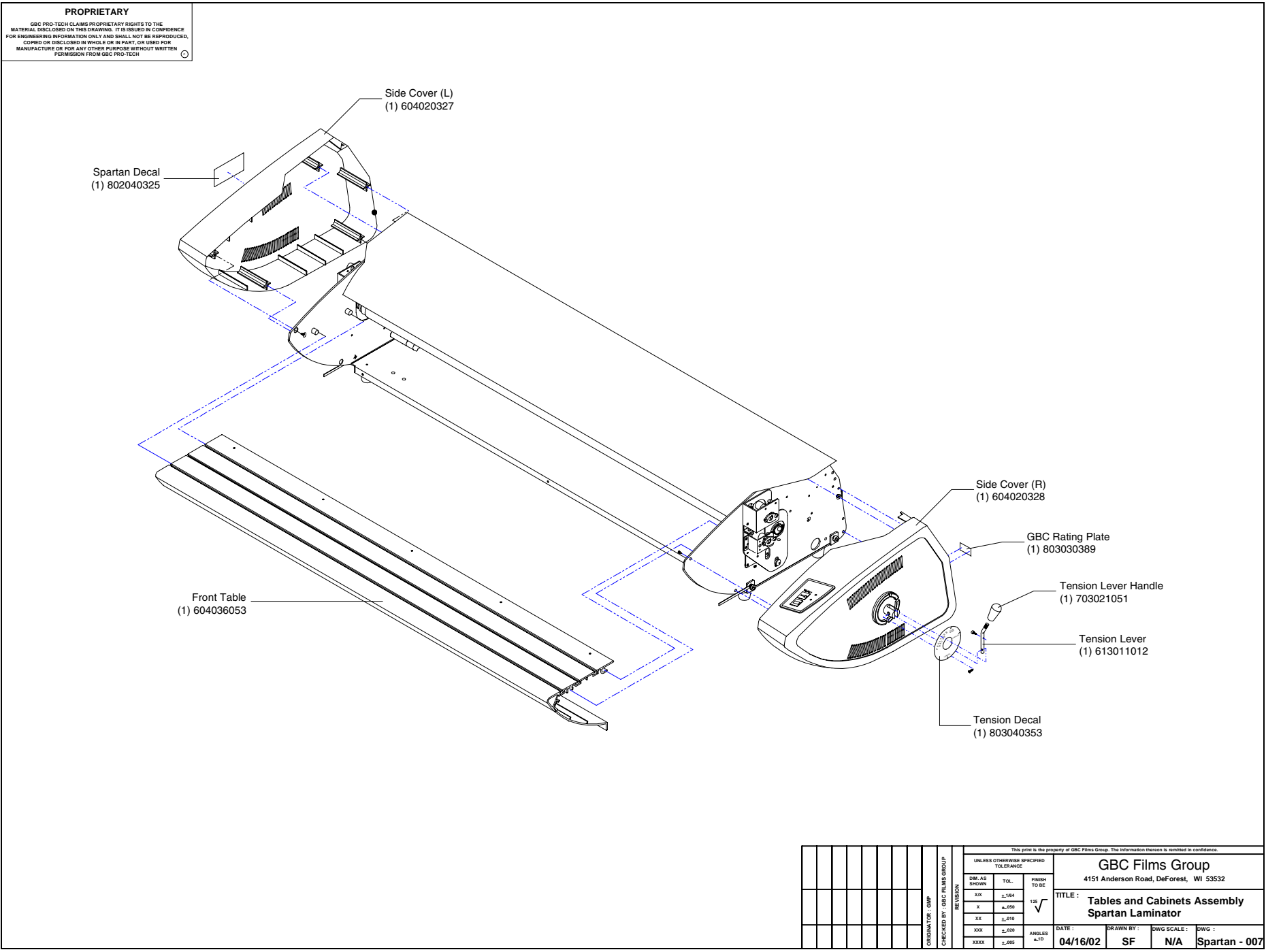
Guide Plate Lower
(1) 601230761

Guide Plate Upper
(1) 601230760



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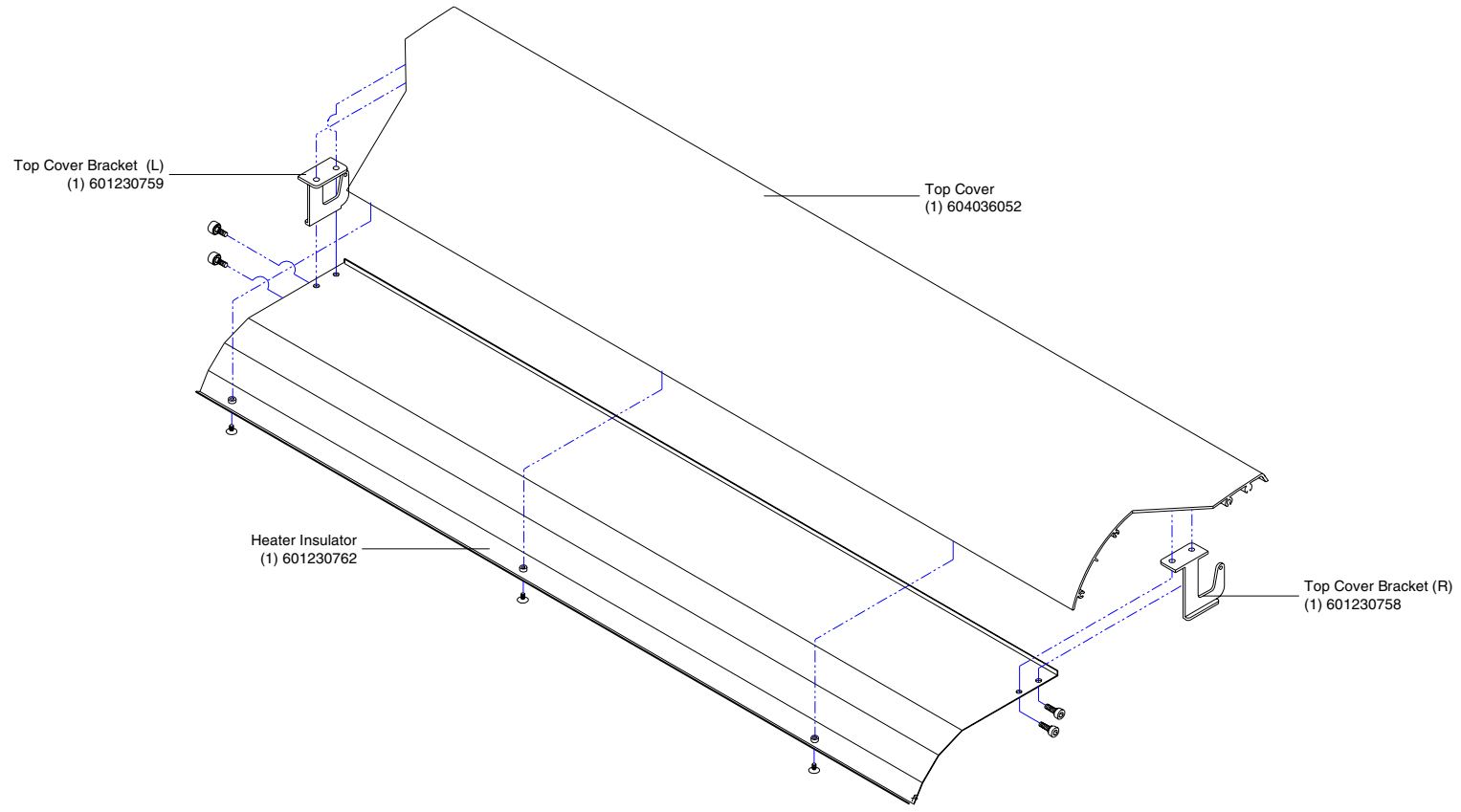
UNLESS OTHERWISE SPECIFIED TOLERANCE		GBC Films Group 4151 Anderson Road, DeForest, WI 53532	
DIM. AS SHOWN	TOL.	FINISH TO BE	TITLE : Plates and Covers Assembly Spartan Laminator
XX	±.154	1.25 √	DATE : 04/16/02
X	±.050		DRAWN BY : SF
XX	±.010	ANGLES 3.75	DWG SCALE : N/A
XXX	±.020		DWG : Spartan - 006
XXXX	±.005		



UNLESS OTHERWISE SPECIFIED TOLERANCE				GBC Films Group 4151 Anderson Road, DeForest, WI 53532			
DM. AS SHOWN	TOL.	FINISH TO BE	1/2 √	TITLE : Tables and Cabinets Assembly Spartan Laminator			
XX	±.184						
X	±.059						
XX	±.010						
XXX	±.020						
XXXX	±.005	ANGLES ±.10		DATE : 04/16/02	DRAWN BY : SF	DWG SCALE : N/A	DWG : Spartan - 007

PROPRIETARY

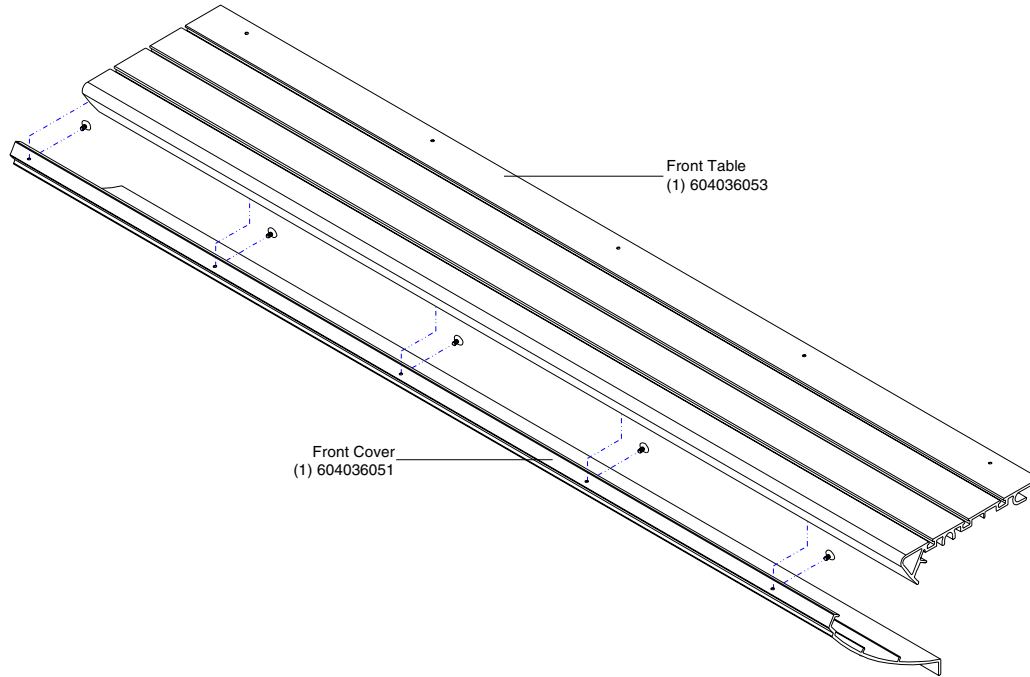
GBC PRO-TECH CLAIMS PROPRIETARY RIGHTS TO THE MATERIAL DISCLOSED ON THIS DRAWING. IT IS ISSUED IN CONFIDENCE FOR ENGINEERING INFORMATION ONLY AND SHALL NOT BE REPRODUCED, COPIED OR DISCLOSED IN WHOLE OR IN PART, OR USED FOR MANUFACTURE OR FOR ANY OTHER PURPOSE WITHOUT WRITTEN PERMISSION FROM GBC PRO-TECH



This print is the property of GBC Films Group. The information thereon is furnished in confidence.			
		UNLESS OTHERWISE SPECIFIED TOLERANCE	
DIM. AS SHOWN	TOL.	FINISH TO BE	
XX	±.154	√	
X	±.050		
XX	±.010		
XXX	±.020	ANGLES	
XXXX	±.005	±.70	
GBC FILMS GROUP		GBC Films Group 4151 Anderson Road, DeForest, WI 53532	
TITLE : Cover Assembly Spartan Laminator		DATE : 04/16/02	DRAWN BY : SF
OPERATOR : GMP		DWG SCALE : N/A	DWG : Spartan - 008

PROPRIETARY

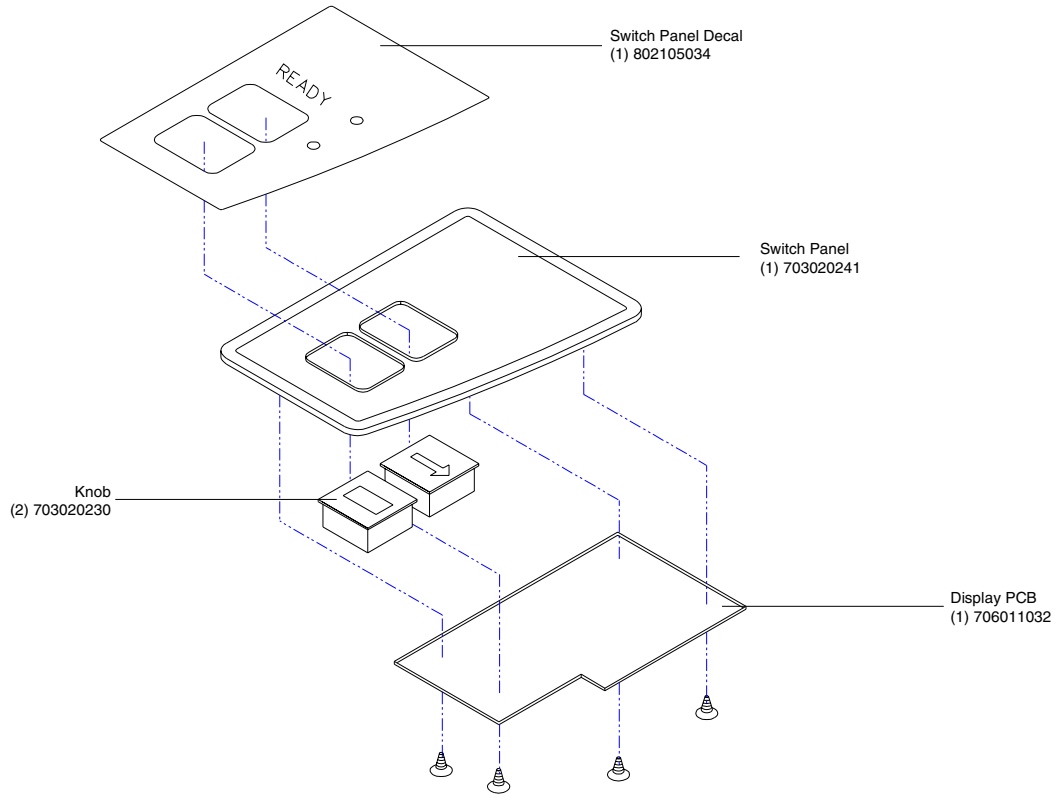
GBC PRO-TECH CLAIMS PROPRIETARY RIGHTS TO THE MATERIAL DISCLOSED ON THIS DRAWING. IT IS ISSUED IN CONFIDENCE FOR ENGINEERING INFORMATION ONLY AND SHALL NOT BE REPRODUCED, COPIED OR DISCLOSED IN WHOLE OR IN PART, OR USED FOR MANUFACTURE OR FOR ANY OTHER PURPOSE WITHOUT WRITTEN PERMISSION FROM GBC PRO-TECH



UNLESS OTHERWISE SPECIFIED TOLERANCE				GBC Films Group 4151 Anderson Road, DeForest, WI 53532			
DM. AS SHOWN	TOL.	FINISH TO BE	1/2 √	TITLE : Table Assembly Spartan Laminator			
XX	±.184			DATE :	DRAWN BY :	DWG SCALE :	DWG :
X	±.059			04/16/02	SF	N/A	Spartan - 009
XX	±.010						
XXX	±.020	ANGLES					
XXXX	±.005	±.10					
REVISION							
CHECKED BY : GBC FILMS GROUP							
DRAWN BY : GBC							

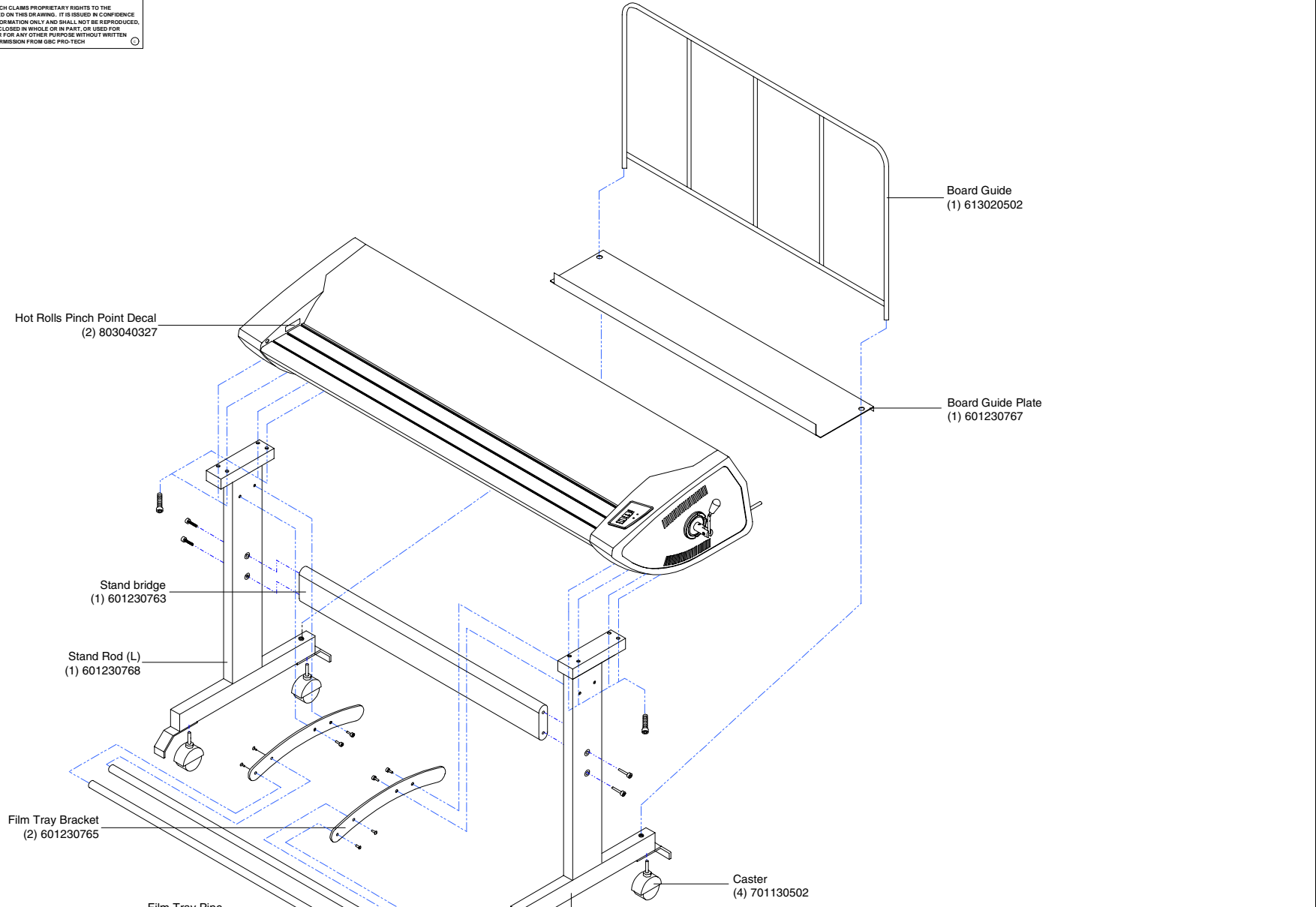
PROPRIETARY

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UNLESS OTHERWISE SPECIFIED		TOLERANCE	
DIM. AS SHOWN	TOL.	FINISH TO BE	
XX	±.124	125 √	
X	±.000		
XX	±.010		
XXX	±.000		
XXXX	±.005		ANGLES ±.10°
GBC FILMS GROUP		GBC Films Group	
4151 Anderson Road, DeForest, WI 53532		4151 Anderson Road, DeForest, WI 53532	
TITLE: Control Panel Assembly Spartan Laminator			
DATE: 04/16/02	DRAWN BY: SF	DWG SCALE: N/A	DWG: Spartan -010

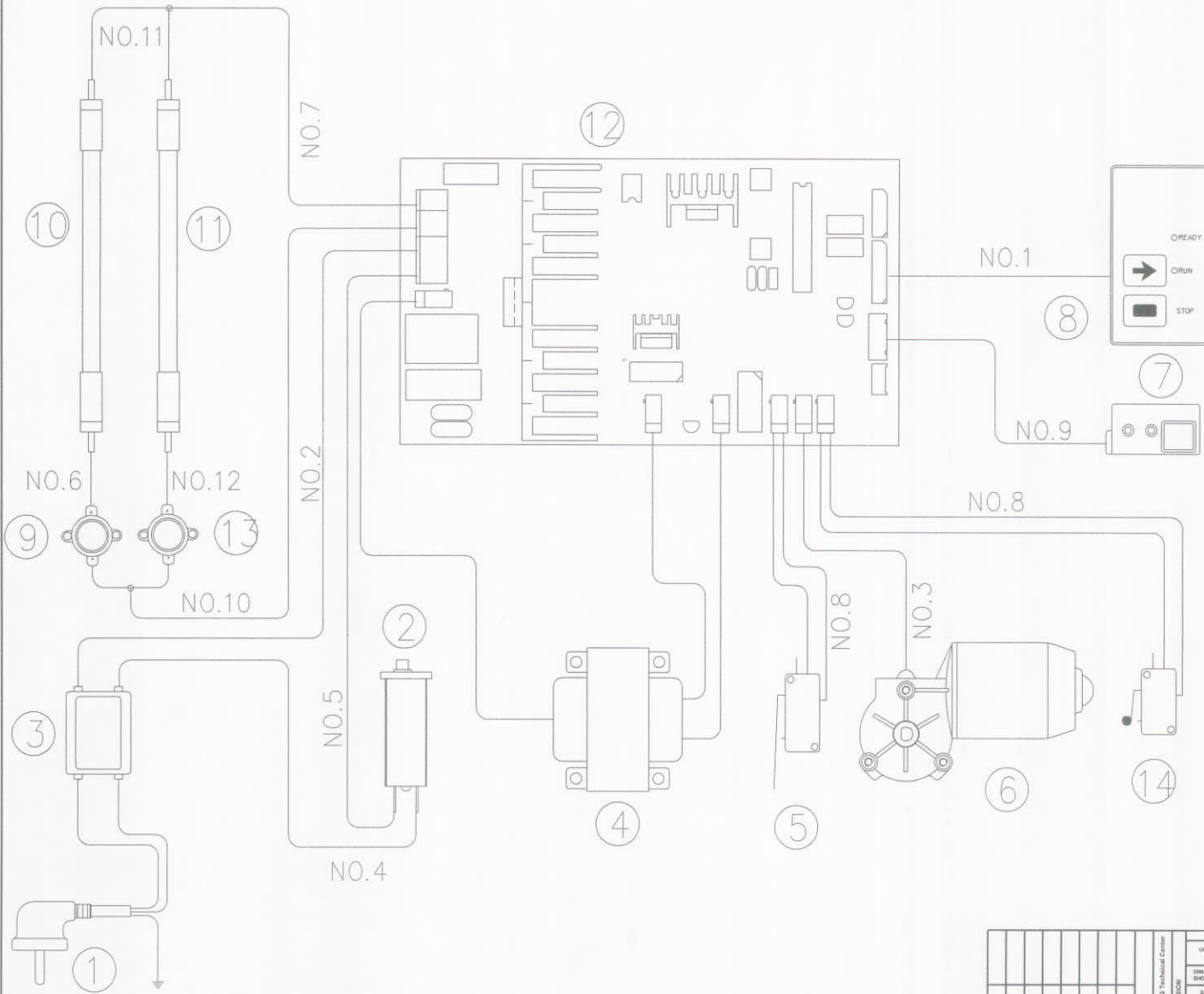
PROPRIETARY
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UNLESS OTHERWISE SPECIFIED TOLERANCE				GBC Films Group 4151 Anderson Road, DeForest, WI 53532	
DM. AS SHOWN	TOL.	FINISH TO BE	TITLE: Machine Assembly Spartan Laminator		
XX	±.184	125	DATE: 04/16/02		
X	±.050		DRAWN BY: SF		
XX	±.010	ANGLES ±.5°	DWG SCALE: N/A		
XXX	±.005		DWG: Spartan - 011		
XXXX	±.005				

PROPRIETARY

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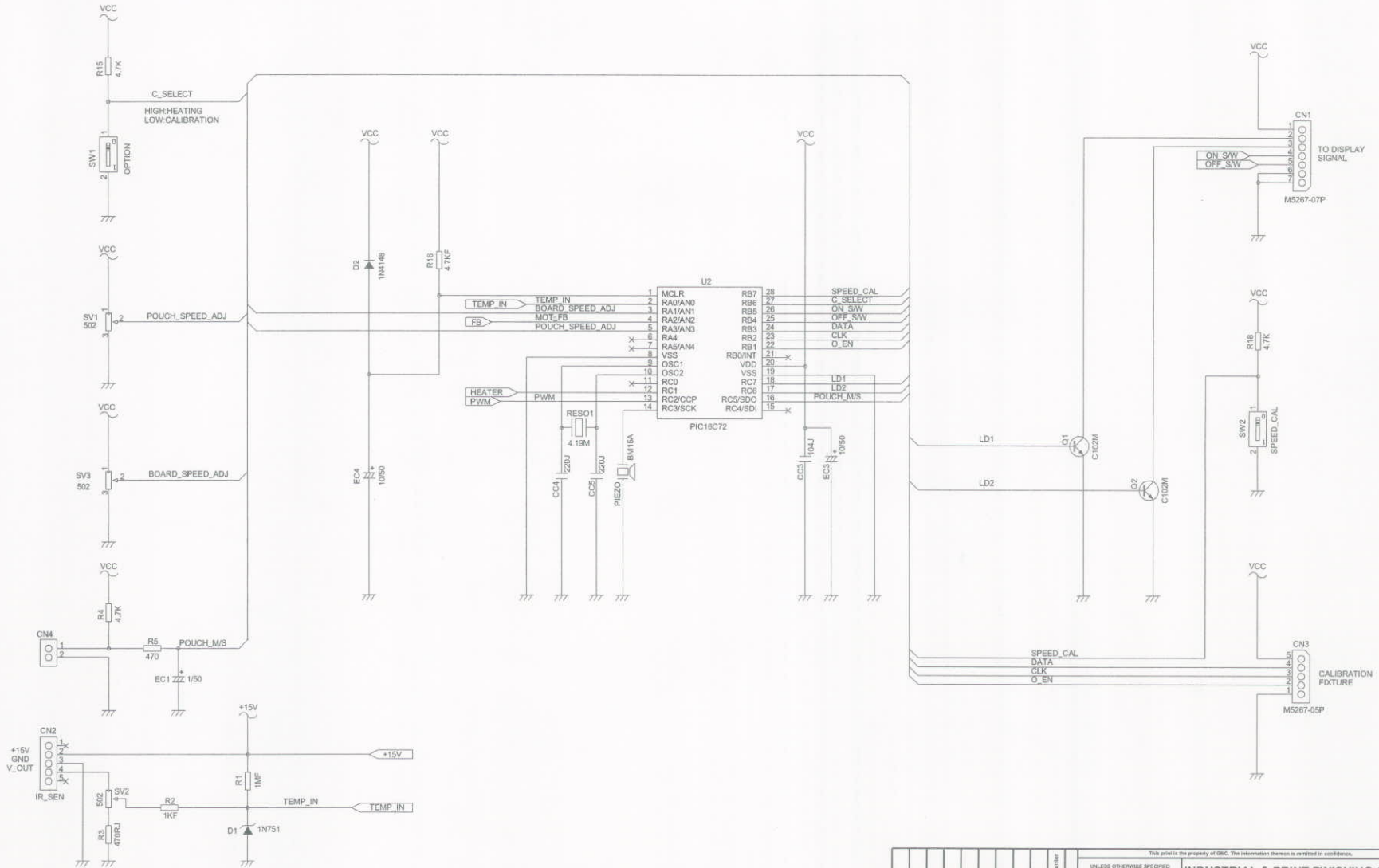


COMPONENT NAME	
①	POWER CORD
②	CIRCUIT BREAKER - 15 AMPARE
③	POWER SWITCH
④	GM6635A-234 TRANSFORMER
⑤	SAFETY MICRO S/W
⑥	DM010 ROLLING MOTOR
⑦	INFRARED TEMP SENSOR
⑧	DISPLAY PCB
⑨	UPPER HATER THERMOSTAT
⑩	UPPER HEATER
⑪	LOWER HEATER
⑫	MAIN PCB
⑬	LOWER HEATER THERMOSTAT
⑭	FILM SELECT M/S SW

UNLESS OTHERWISE SPECIFIED TOLERANCE			INDUSTRIAL & PRINT FINISHING GROUP 4151 Anderson Road, DeForest, WI 53532		
DWG AS SHOWN	TOL.	FURSH TO BE	DATE:	DRAWN BY:	DWG SCALE:
XX	±.004	SEE	01/20/03	N/A	N/A
X	±.008				
XX	±.010				
XXX	±.015				
XXXX	±.020				
CHECKED BY: IFPD Technical Center			DWG: Spartan - 012		

PROPRIETARY

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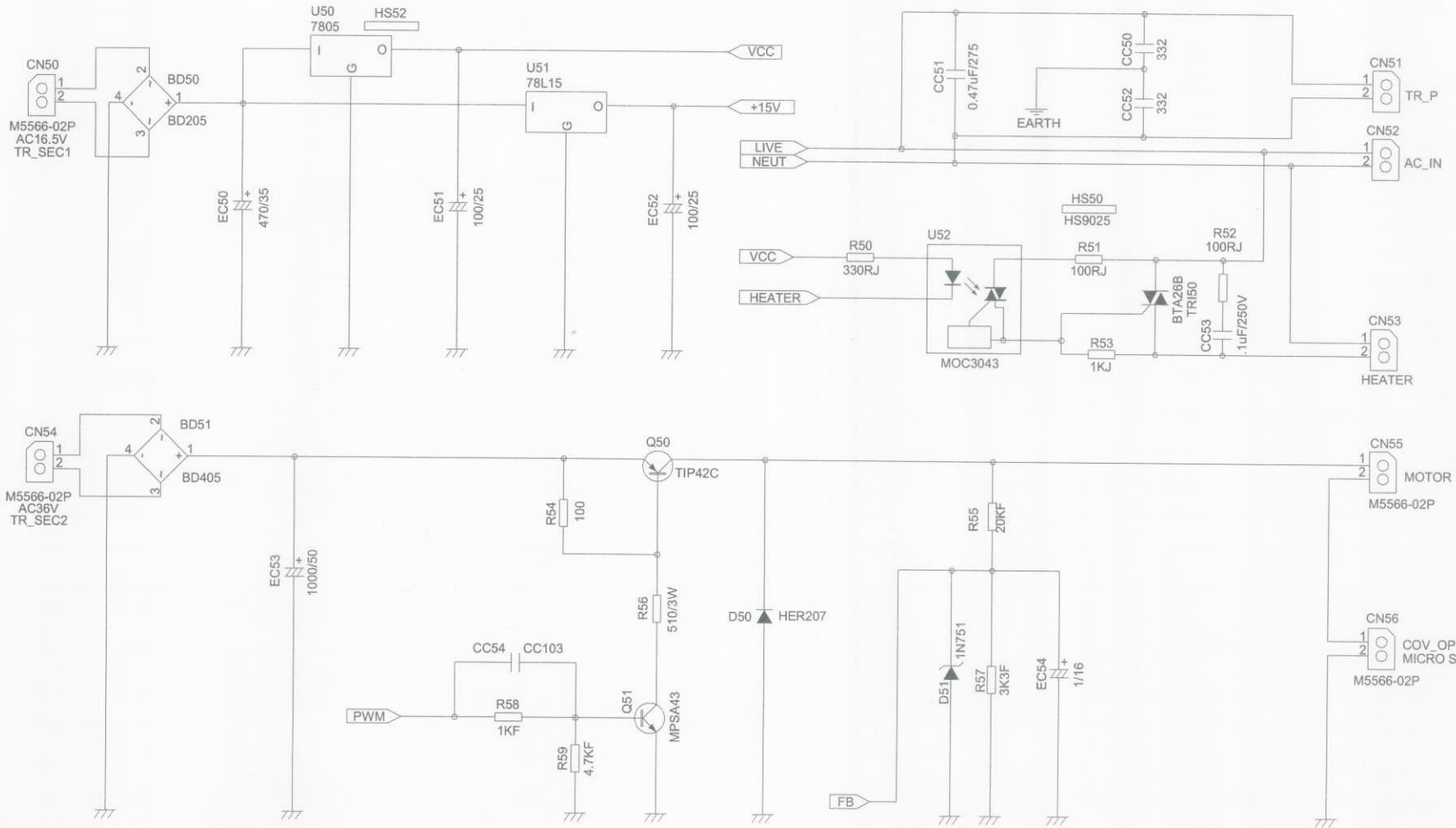
UNLESS OTHERWISE SPECIFIED TOLERANCE			
DRW AS SHOWN	TOL.	FINISH TO BE	
XX	±.004	✓	
X	±.005		
XX	±.010		
XXX	±.020	ANGLES	
XXXX	±.005	3.75	

133

INDUSTRIAL & PRINT FINISHING GROUP			
4151 Anderson Road, DeForest, WI 53532			
TITLE: Main Schematic			
GBC Spartan Laminator			
DATE:	DRAWN BY:	DWG SCALE:	DWG:
01/20/03	N/A	N/A	Spartan - 013

PROPRIETARY

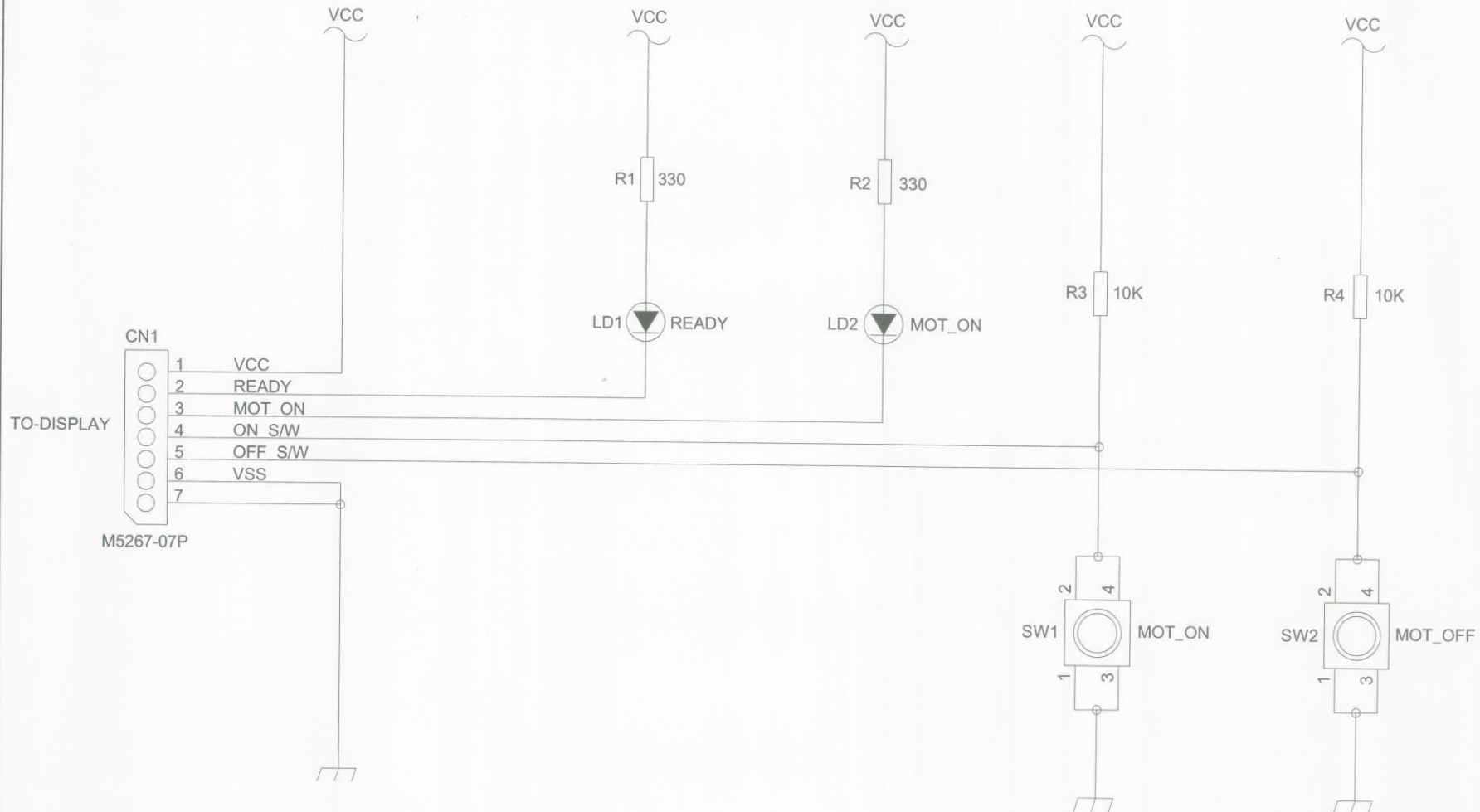
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UNLESS OTHERWISE SPECIFIED TOLERANCE			INDUSTRIAL & PRINT FINISHING GROUP 4151 Anderson Road, DeForest, WI 53532		
DIM. AS SHOWN	TOL.	FRACTION TO USE	TITLE: Power & Motor Drive Schematic GBC Spartan Laminator		
.XX	±.154	1/16	DATE:	DRAWN BY:	DWG. SCALE:
.X	±.060		01/20/03	N/A	N/A
.XX	±.010				
.XXX	±.005	ANGLES > 90°			
.XXXX	±.002				

PROPRIETARY

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UNLESS OTHERWISE SPECIFIED TOLERANCE			INDUSTRIAL & PRINT FINISHING GROUP 4151 Anderson Road, DeForest, WI 53532	
DIW AS SHOWN	TOL.	FINISH TO BE	TITLE: Display Schematic GBC Spartan Laminator	
XX	±.004	125	DATE: 01/20/03	
X	±.000		DRAWN BY: N/A	DWG SCALE: N/A
XX	±.010	ANGLES 5/10	DWG: Spartan - 015	
XXX	±.020			
XXXX	±.063			



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