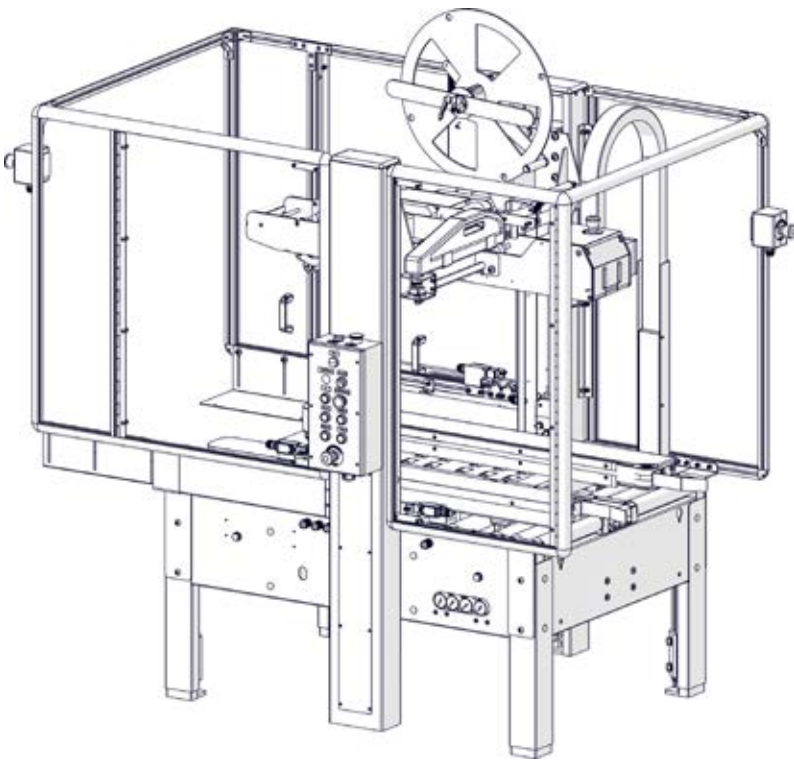




USER MANUAL RSA 2024-WAT TOP ONLY



For Serial Numbers:
TM914 XX X XXX



www.itape.com
800-474-8273



www.itape.com
800-474-8273



USER NOTES

For all IPG product manuals please visit www.itape.com/systems-manual or use this QR code



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TECHNICAL ASSISTANCE

This is the Interpack Model **AUTO H2O Random Semi-Automatic-Water Activated Tape (RSA 2024-WAT TOP ONLY)** Side-Belt Case Sealer you ordered. It has been set up and tested in our factory with IPG manufactured Water Activated Tape. If any problems occur when setting up or operating this equipment, please contact the authorized distributor from where you purchased this item.

If contact with the authorized distributor is not possible, **IPG Machinery Support** is available. Should the need to contact **IPG Machinery Support** arise, **please have the equipment model and serial number available prior to contact**. This information can be found on the nameplate of the tape head as well as on the machine, both sets of information may be necessary to assist. A section at the bottom of this page is available to write this information down. **IPG Machinery Support** is available during normal business hours (M-F 8am-7pm) Eastern Time.

Phone: 813-345-3070

Email: machsupp@itape.com

Replacement Parts

A breakdown of parts, including part numbers, can be found in the appendix of this manual. If you know the part number that you require please contact your authorized distributor or IPG Customer Service 877-447-4832 Option 3

Please use this area to enter the detailed information on your Case Sealer and Tape Heads. This should be filled out at the time of install. This information can be found on the nameplate of the machine, typically on the side the operator controls are on. On the WAT Tape Heads serial information can be found near the air intake of the head.

Machine

Tape Head Top

Model

Model

Serial

Serial

Tape Head Bottom

Model

Serial

Distributor

Date of Purchase

Name

Date of Install

Phone/Email

FIELD SERVICE ASSISTANCE

Your Interpack Case Sealer and Tape Heads are designed to provide years of trouble free operation. This is not without proper preventative maintenance, a recommended schedule can be located in the maintenance section of this manual, performed by then end user of the equipment. If any problems arise with this machine during the normal course of operation, your properly trained and qualified internal service personnel should be able to repair any issues after consulting the troubleshooting section of this manual in conjunction with phone and/or email support from IPG Machinery Support.

Field Service Support is available from your IPG Authorized Distributor at additional cost if the problem cannot be remedied after consulting the troubleshooting section of this manual.

IPG offers comprehensive programs that help keep your equipment up and running.

Proactive maintenance efforts help to prevent equipment failures and costly emergency repairs. Keeping your machine in optimal working condition also enhances employee safety, reduces facility downtime and efficiently allocates internal resources.

Please contact your IPG Representative to discuss the best options for your IPG equipment.

Refurbishment of WAT Tape Heads

IPG offers a factory repair and refurbishment program. This program will allow end users of IPG WAT Case Sealers to ship their Water Activated Tape Heads back to the factory where trained Factory Technicians will service and repair the tape heads to as close to factory new as possible. To learn more about this program contact your Authorized IPG Representative.

WARRANTY INFORMATION

EQUIPMENT WARRANTY AND LIMITED REMEDY: The following warranty is made in lieu of all other warranties, express or implied, including, but not limited to, the implied warranty of merchantability, the implied warranty of fitness for a particular purpose, and any implied warranty arising out of a course of dealing, a custom or RSAge of trade:

Intertape sells its Interpack Tape Heads, Case Tapers and Case Erectors with the following warranties:

1. The IPG Pressure Sensitive Tape Heads' knife blades, springs and wipe down rollers will be free from all defects for a period of ninety (90) days.
2. All other IPG Pressure Sensitive Tape Head parts will be free from all defects for one (1) year after delivery.
3. Water Activated Tape Heads' blades will be free from defects for ninety (90) days after delivery.
4. Drive Belts will be free from defects for ninety (90) days after delivery
5. The Gear Motors will be free from defects for one (1) year after delivery.
6. All other components for Case Tapers and Case Erectors will be free from defects for one (1) year after delivery.

If any part is proven defective within its warranty period, then the exclusive remedy and Intertape's and the seller's sole obligation shall be, at Intertape's option, to repair or replace the part, provided the defective part is returned immediately to Intertape's factory or an authorized service station designated by Intertape.

A part will be presumed to have become defective after its warranty period unless the part is received or Intertape is notified of the problem no later than five (5) calendar days after the warranty period.

If Intertape is unable to repair or replace the part within a reasonable time, then Intertape, at its option, will replace the equipment or refund the purchase price. Intertape shall have no obligation to install the repaired or replacement part.

Intertape shall have no obligation to provide or pay for the labor required to install the repaired or replacement part.

Intertape shall have no obligation to repair or replace (1) those parts failing due to: operator misuse, carelessness, or due to any accidental cause other than equipment failure, or (2) parts

1. Failure or damage is due to misapplication, lack of proper maintenance, abuse, improper installation or abnormal conditions such as temperature, moisture, dirt or corrosive matter, etc.
2. Failure due to inadequate cleaning, improper operating environment, improper utilities or operator error.
3. Failure due to operations above the rated capacities, or in any other improper manner, either intentional or otherwise.
4. Failure is due to equipment, which has been altered by anyone other than an authorized representative of Intertape Polymer Group.
5. Failure is due to an attempt by the purchaser to correct alleged defective equipment. In this event the purchaser is responsible for all expenses incurred.

LIMITATION OF LIABILITY: Intertape and seller shall not be liable for direct, indirect, special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability or any other legal theory.

The foregoing Equipment Warranty and Limited Remedy and Limitation of Liability may be changed only by written agreement signed by authorized officers of Intertape and seller.

GENERAL INFORMATION

Description of RSA 2024-WAT TOP ONLY

This machine is designed to provide years of trouble free operation. If any problems arise with this machine during the normal course of operation, your properly trained and qualified internal service personnel should be able to repair any issues after consulting the [Troubleshooting](#) section of this manual.

The **RSA 2024-WAT TOP ONLY** Case Sealer is designed to apply IPG brand water activated tape (WAT) to the top center seam of regular slotted corrugated cartons. The **RSA 2024-WAT TOP ONLY** Case Sealer automatically adjusts to a variety of case sizes.

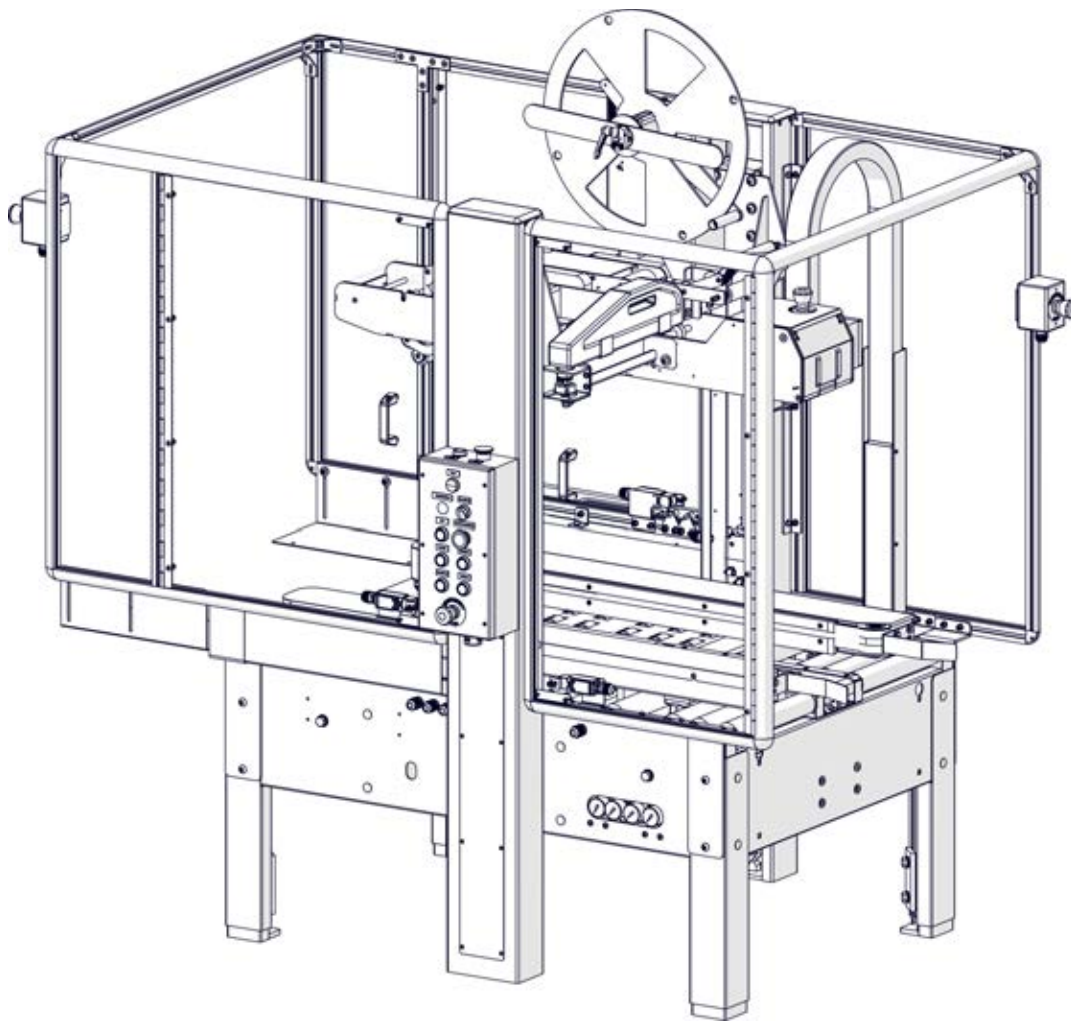


Figure 1: RSA 2024-WAT TOP ONLY

Definitions

Common terms that will be used throughout this manual.

Tape Head – This will refer to the WAT Top tape heads for the remainder of this manual

Case Sealer – Refers to IPG manufactured Case Sealers

Machine System – Refers to the fully assembled Case Sealer with the Tape Head(s) installed

User/Operator – The individual who has been trained on the daily use of the Machine System

Maintenance Champion – The individual(s) who work for the end user of the Machine System who are responsible for conducting general and preventative maintenance

OPTIONAL EQUIPMENT

The **RSA 2024-WAT TOP ONLY** can be outfitted with a variety of optional equipment. The below list is **not** standard and should be discussed with your distributor or authorized IPG representative if you would like them to be added to your machine.

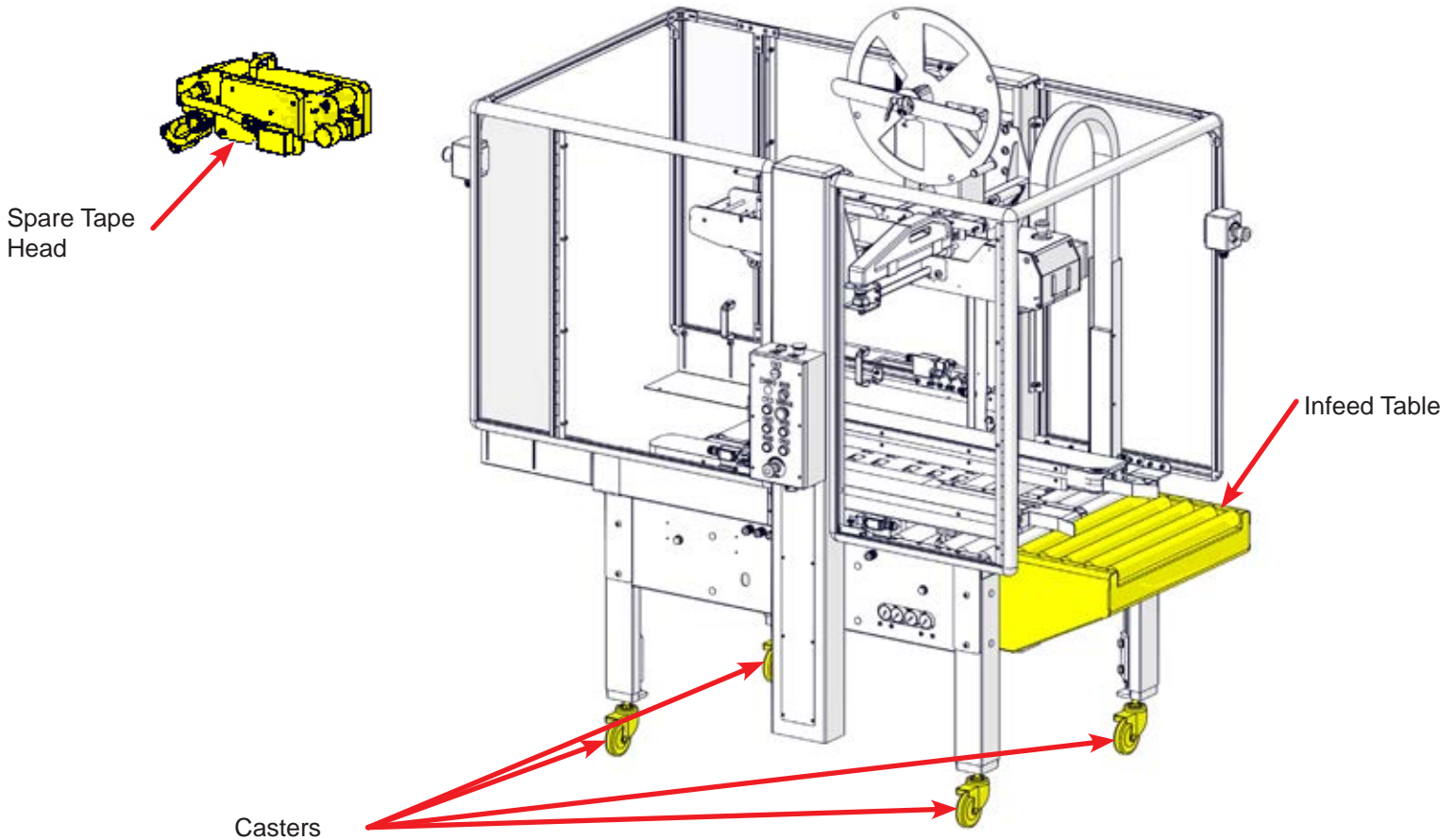


Figure 2: Optional Equipment

Additional Tape Heads

It is recommended to keep a spare top tape head in the event any failure or malfunction causes the machine to stop production. This is to help reduce any possible downtime.

Can be installed on site

Description	Item Number	Quantity Per Machine
Infeed Table .4M (16")	UM894T	1
Infeed Table .6M (24")	UM998T	1
Infeed Table .9M (36")	UM898T	1
Casters	UM841	1 set of 4 (36" Feed Table will require 2 additional casters)

Description	Item Number
Top WAT Head	UH126TW
Refurbished Top WAT Head	UH126TWR

Cannot be installed on site

The reversal of the electrical cabinet and operator controls is possible but is only recommended to be done at the factory prior to shipment. Additional Emergency-Stop buttons can also be added by the factory prior to shipment.

IMPORTANT SAFEGUARDS

There are a number of safety labels used on the **RSA 2024-WAT TOP ONLY** Case Sealer. These labels are placed at different locations on the machine to warn operators and service personnel of possible dangers (refer to Figure 3). Please read the labels on the machine and the following safety precautions before using the machine.

Read this manual for other important safety operating and service information.

Only trained personnel are to operate machine.

Only fully qualified technicians are to service this machine.

Wear safety glasses.

Shut off power to machine before adjusting machine or loading & threading Tape Heads.

Disconnect electrical power and compressed air (where applicable) before servicing.

Follow Lock Out / Tag Out Procedures BEFORE servicing any machinery.

All factory installed covers and guards must be in place before operating.

Stay clear of moving parts which can shear and cut.

Should any of the safety labels on the Case Sealer be damaged or destroyed, replacements can be ordered through your distributor.

LABEL PLACEMENT

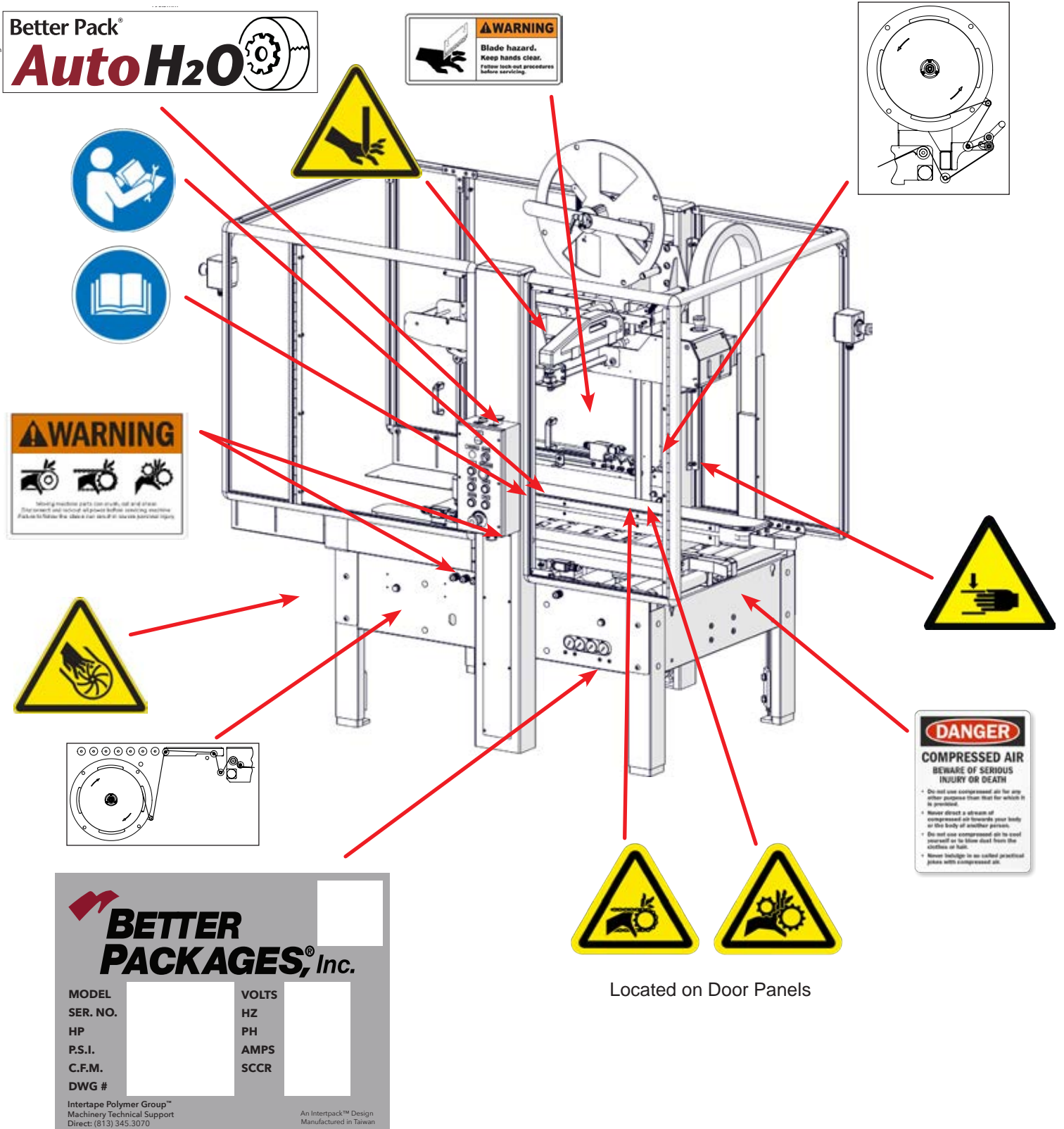


Figure 3: Label Placement 1

LABEL PLACEMENT

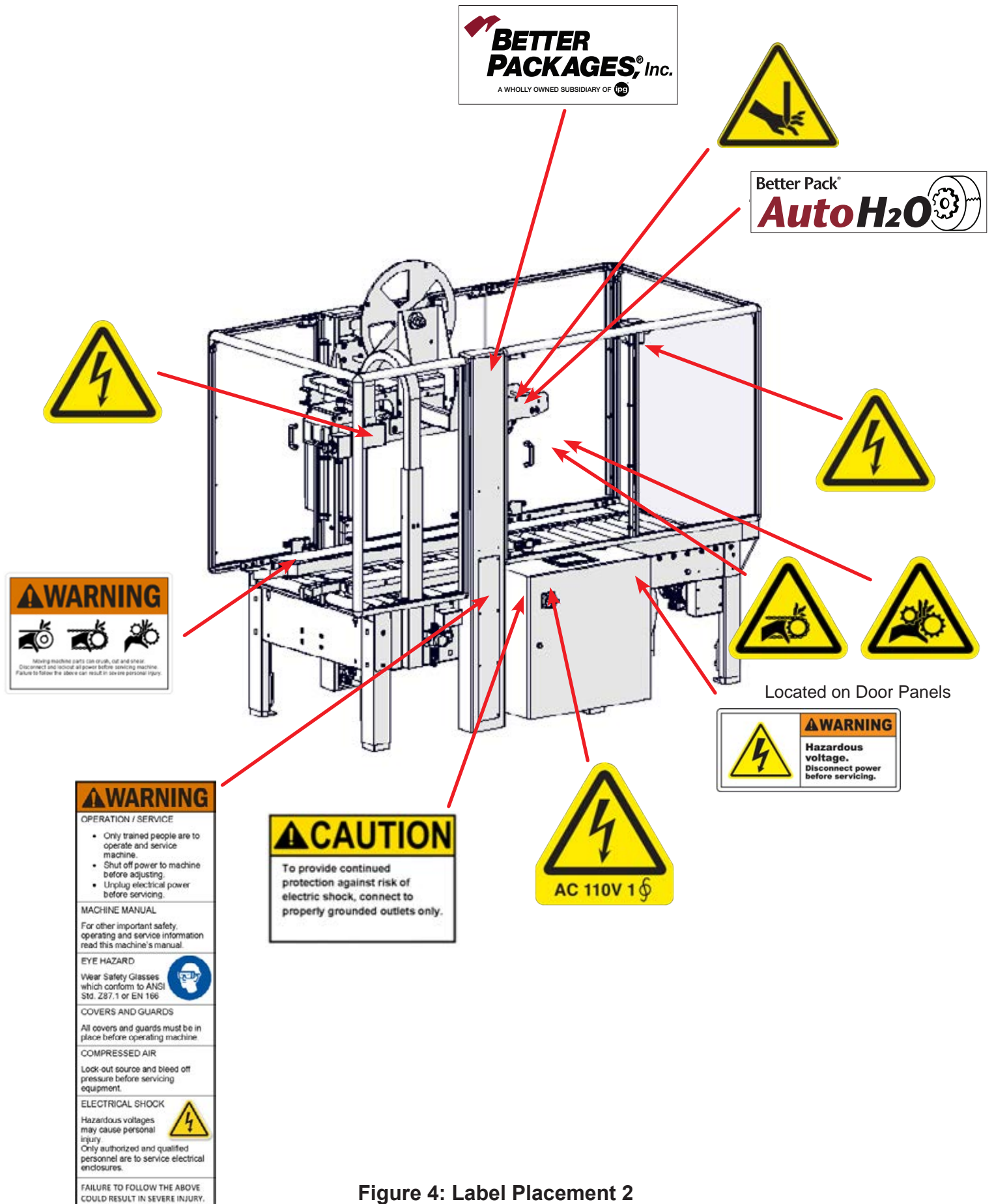








Figure 4: Label Placement 2

SAFETY LABEL DESCRIPTIONS

<p>The labels shown is affixed to the upper tape head.</p> <p>It warns operators and service personnel of the presence of the cutting blade that may not be visible. Caution should be exercised when approaching this area.</p> <p>Replacement number: UPM174</p>	 <p>Figure 5: Blade Hazard</p>
<p>The labels shown is affixed to both sides of the bridge frame nearest to the tape head.</p> <p>It warns operators and service personnel of the presence of the cutting blade that may not be visible. Caution should be exercised when approaching this area.</p> <p>Replacement number: UPM8205</p>	 <p>Figure 6: Blade Hazard</p>
<p>The label shown is affixed to the upper tape head assembly on either side of the machine.</p> <p>It warns operators and service personnel of a potential crush hazard when cases are moving through the case sealer.</p> <p>Replacement number: UPM8206</p>	 <p>Figure 7: Crush Hazard</p>
<p>The label shown is located on the in-feed and exit ends of the machine belt drives and on the powered outfeed table.</p> <p>The label warns the operators and service personnel of the pinch points at each end of the belt drives.</p> <p>Replacement number: UPM2020</p>	 <p>Figure 8: Drive Base Hazard</p>
<p>The label shown is affixed to the electrical control box.</p> <p>The label advises service personnel of live electrical current when the machine is plugged in.</p> <p>Replacement number: UPM2011</p>	 <p>Figure 9: Hazardous Voltage</p>
<p>The label shown is affixed to the electrical control box, and all area where live electrical current is present when the machine is in operation.</p> <p>The label advises service personnel of live electrical current when the machine is plugged in.</p> <p>Replacement number: UPM8207</p>	 <p>Figure 10: Hazardous Voltage</p>

Should any of the safety labels on the Case Sealer be damaged or destroyed, replacements can be ordered through your distributor.

SAFETY LABEL DESCRIPTIONS CONTINUED

The label shown is located on the side of the column.

This label provides convenient safety instructions for the operator and service personnel in the operation of the IPG Case Sealing Equipment.

Replacement number: UPM2012



Figure 11: Safety Instructions

The label shown is located on the in-feed end of the machine. The label advises personnel about the dangers of the machine due to compressed air used in the system. Be aware of warnings and proper procedures when running and/or servicing the machine.





Replacement number: UPM8208



Figure 12: Compressed Air

Should any of the safety labels on the Case Sealer be damaged or destroyed, replacements can be ordered through your distributor.

SAFETY LABEL DESCRIPTIONS CONTINUED

<p>The label shown is located on the in-feed and exit ends of the machine belt drives.</p> <p>The label advises operators to keep their hands clear of moving chain components.</p> <p>Replacement number: UPM8209</p>	 <p>Figure 13: Chain Hazard</p>
<p>The label shown is located on the in-feed and exit ends of the machine belt drives.</p> <p>The label advises operators to keep their hands clear of moving gear components.</p> <p>Replacement number: UPM8210</p>	 <p>Figure 14: Gear Hazard</p>
<p>The label shown is located on the left machine column above the operator control box.</p> <p>The label advises service personnel to read the maintenance instructions thoroughly before conducting any work.</p> <p>Replacement number: UPM8211</p>	 <p>Figure 15: Read Service Manual</p>
<p>The label shown is located on the left machine column above the operator control box.</p> <p>The label advises operators to read the user manual thoroughly before operating the machinery.</p> <p>Replacement number: UPM8212</p>	 <p>Figure 16: Read Operator Manual</p>

Should any of the safety labels on the Case Sealer be damaged or destroyed, replacements can be ordered through your distributor.

LABEL DESCRIPTIONS

The labels shown is affixed to electrical cabinet. It alerts the operators to always plug the equipment into a properly grounded outlet.

Replacement number: UPM8222



Figure 17: Ground Connection

The labels shown is affixed to electrical cabinet. It alerts the operators that the equipment is rated for 110V AC single phase power.

Replacement number: UPM8219



Figure 18: AC Voltage Label

The labels shown is affixed to the side of the bridge. This shows the operator the tape threading path for the top tape.

Replacement number: UPM8218

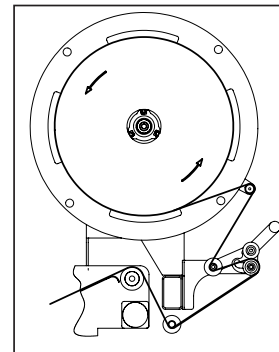



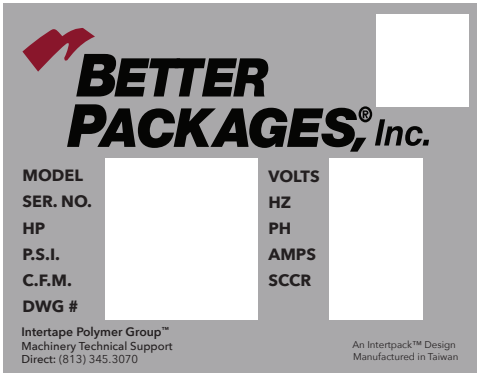


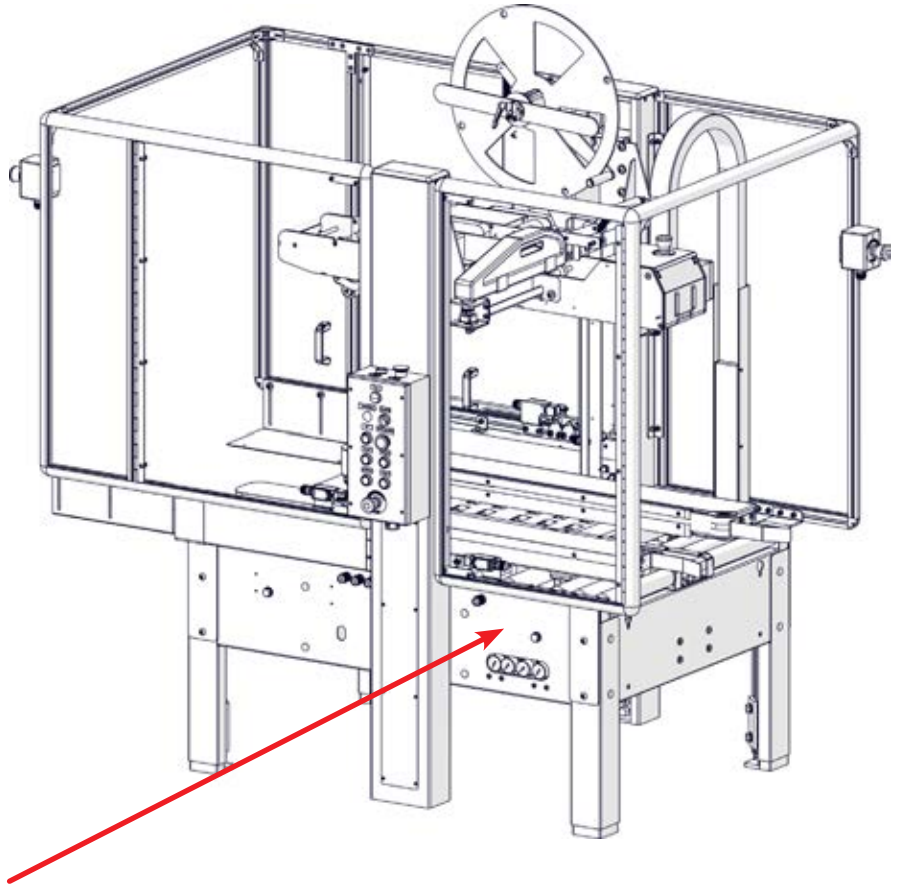
Figure 19: RSA Top Tape Thread Path

Should any of the safety labels on the Case Sealer be damaged or destroyed, replacements can be ordered through your distributor.

LABEL DESCRIPTIONS

<p>The labels shown is affixed to both sides of the bridge frame nearest to the tape head.</p> <p>It is the Better Pack Auto H2O logo.</p> <p>Replacement number: UPM8213</p>	 <p>Better Pack® Auto H2O</p> <p>Figure 20: Auto H2O Logo</p>																								
<p>The labels shown is affixed to the top of both of the columns.</p> <p>It is the Better Packages logo.</p> <p>Replacement number: UPM8214</p>	 <p>BETTER PACKAGES®, Inc. A WHOLLY OWNED SUBSIDIARY OF ipg</p> <p>Figure 21: Better Packages Logo</p>																								
<p>The labels shown is affixed to the top of the tape head. This is a smaller version of the logo on that is on the machine columns.</p> <p>It is the Better Packages logo.</p> <p>Replacement number: UPM8215</p>	 <p>BETTER PACKAGES®, Inc. A WHOLLY OWNED SUBSIDIARY OF ipg</p> <p>Figure 22: Better Packages Logo (tapehead)</p>																								
<p>The labels shown is affixed to the left side frame of the machine on the infeed side of the operator control box.</p> <p>It is the Better Packages nameplate for the Auto H2O line of machinery.</p> <p>Replacement number: UPM8216</p>	 <p>BETTER PACKAGES®, Inc.</p> <table border="1"> <tr> <td>MODEL</td> <td></td> <td>VOLTS</td> <td></td> </tr> <tr> <td>SER. NO.</td> <td></td> <td>HZ</td> <td></td> </tr> <tr> <td>HP</td> <td></td> <td>PH</td> <td></td> </tr> <tr> <td>P.S.I.</td> <td></td> <td>AMPS</td> <td></td> </tr> <tr> <td>C.F.M.</td> <td></td> <td>SCCR</td> <td></td> </tr> <tr> <td>DWG #</td> <td></td> <td></td> <td></td> </tr> </table> <p>Intertape Polymer Group™ Machinery Technical Support Direct: (813) 345.3070</p> <p>An Intertape™ Design Manufactured in Taiwan</p> <p>Figure 23: Machine Nameplate</p>	MODEL		VOLTS		SER. NO.		HZ		HP		PH		P.S.I.		AMPS		C.F.M.		SCCR		DWG #			
MODEL		VOLTS																							
SER. NO.		HZ																							
HP		PH																							
P.S.I.		AMPS																							
C.F.M.		SCCR																							
DWG #																									

MACHINE NAMEPLATE



Machine Identification and Motor Power

Machine Pneumatic Requirements if applicable

Applicable Machine Drawing Number

Manufacturer Details

Machine Electrical Requirements

BETTER PACKAGES, Inc.

MODEL	RSA 2024-WAT TO	VOLTS	110
SER. NO.	TM91024A001	HZ	60
HP	2x 1/3HP	PH	1
P.S.I.	75 PSI	AMPS	7.6
C.F.M.	9	SCCR	
DWG #			

Intertape Polymer Group™
Machinery Technical Support
Direct: (813) 345.3070

An Intertape™ Design
Manufactured in Taiwan

Figure 24: Machine Nameplate

Reading Intertape Serial Numbers

Model Identifier

Year and Month of Manufacture

Machine Production Number

TM910 24A 001

IMPORTANT SAFEGUARDS

Explanation of Signal Word Consequences



WARNING: INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH IF NOT AVOIDED COULD RESULT IN DEATH OR SERIOUS INJURY OR PROPERTY DAMAGE



CAUTION: INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH IF NOT AVOIDED COULD RESULT IN MINOR OR MODERATE INJURY OR PROPERTY DAMAGE



WARNING

- 1. To reduce the risk associated with mechanical, pneumatic, and electrical hazards:**
 - Read, understand, and follow all safety and operating instructions before operating or servicing the Case Sealer and/or Tape Head(s)
 - Allow only properly trained and qualified personnel to operate and service this equipment
- 2. To reduce the risk associated with pinches, entanglement, and hazardous voltage:**
 - Turn electrical supply off and disconnect before performing any adjustments, maintenance, or servicing the Case Sealer or Tape Head
- 3. To reduce the risk associated with pinches and entanglement hazards:**
 - Do not leave the Case Sealer running while unattended
 - Turn the Case Sealer off when not in use
 - Never attempt to work on any part of the Case Sealer, Tape Head, load tape, or remove jammed boxes from the Case Sealer while the machine is running
- 4. To reduce the risk associated with hazardous voltage**
 - Position electrical cord away from foot traffic and vehicle traffic
 - Do not operate the Case Sealer with a damaged power cord
- 5. To reduce the risk associated with sharp blades hazards:**
 - Keep hand and fingers away from the tape cutoff blades, the blades are very sharp
- 6. To reduce the risk associated with fire and explosion hazards:**
 - Do not operate this equipment in potentially flammable and/or explosive environments
- 7. To reduce the risk associated with muscle strain:**
 - Use the appropriate rigging and material handling equipment when lifting or repositioning this equipment
 - Use proper body mechanics when removing or installing Tape Heads that are moderately heavy or may be considered awkward to lift
- 8. To reduce the risk associated with mechanical, pneumatic, and electrical hazards:**
 - Allow only properly trained and qualified personnel to operate and service this equipment



CAUTION

- 1. To reduce the risk associated with pinch hazards:**
 - Keep hands clear of the upper head support assembly as boxes are transported through the Case Sealer
 - Keep hands, hair, loose clothing, and jewelry away from box compression rollers, moving belts, and Tape Heads
 - Always feed boxes into the Case Sealer by pushing only from the end of the box

IMPORTANT SAFEGUARDS

Operator Skill Level Descriptions

These descriptions and levels are uniform across all IPG Case Sealers

Skill “A” Machine Operator

This operator is trained to use the Case Sealer with the machine controls, to feed cases into the machine, make adjustments for different case sizes (RSA series machines), to change tape, to start, stop, and restart production, and to clear jams and perform basic troubleshooting.

Important: The end user area supervisor must ensure that the operator has been properly trained on all machine functions before operating the machine.

Skill “B” Mechanical Maintenance Technician

Also referred to as the Maintenance Champion, this technician, is trained to use the Case Sealer as the Operator is able and in addition is able to work with the safety protection disconnected to check and adjust mechanical components, to perform maintenance operations and repair the Case Sealer. A skill “B” operator is not allowed to work on live electrical components.

Skill “C” Electrical Maintenance Technician

This technician is trained to use the Case Sealer as the Operator is able and in addition is able to work with the safety protection disconnected, to check and adjust mechanical components, to perform maintenance operations and repair the Case Sealer. A skill “C” operator is allowed to work on live electrical panels, terminal blocks, and control equipment.

Skill “D” Manufacturer Technician

Skilled technician sent by the manufacturer or its agent (distributors) to perform complex repairs of modifications, when agreed with the customer.

Operators skill level required to perform the following tasks on the Machine System

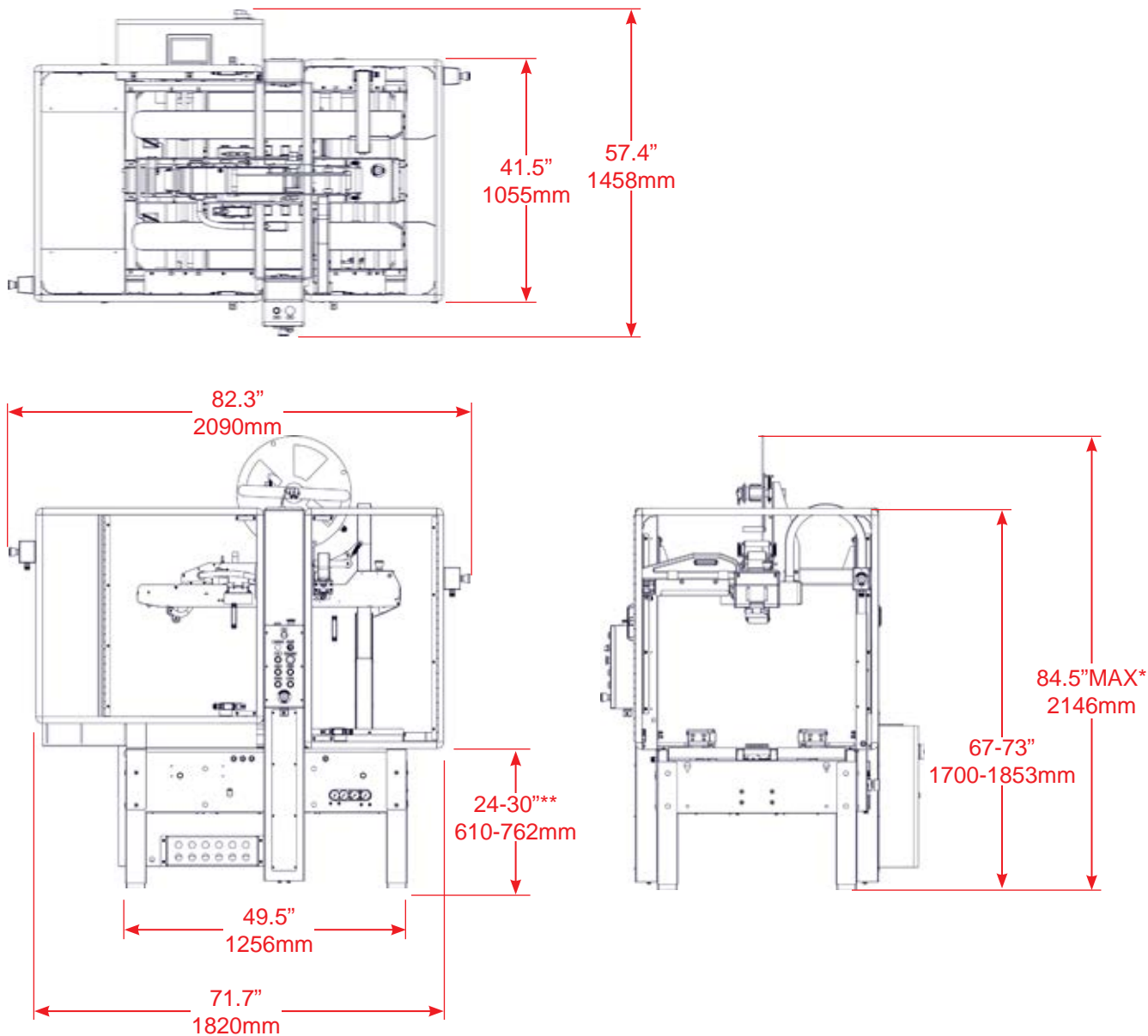
OPERATION	MACHINE CONDITION	OPERATOR SKILL LEVEL	NUMBER OF OPERATORS
Tape Roll Replacement	Stopped by pressing the Emergency Stop Button	A	1
Blade Replacement	Electrical Power Disconnected	B	1
Ordinary Maintenance and Preventative Maintenance	Electrical Power Disconnected	B	1
Extraordinary Electrical Maintenance	Running with Safety Protections Disabled	C	1
Extraordinary Mechanical Maintenance	Running with Safety Protections Disabled	D	1
Drive Belt Replacement	Electrical Power Disconnected	B	1
Machine Installation & Set-Up	Running with Safety Protections Disabled	B & D	2

Proper Electrical Disconnect is achieved when the machine is unplugged from the electrical socket.

SPECIFICATIONS

RSA 2024-WAT TOP ONLY Dimensions

Machine Weight: 950 lbs. (431kg)



* Height notated is with standard legs. If a different range is necessary please contact your Authorized IPG Representative for additional conveyor height options. If optional casters are added they will add 4" (102mm) to the conveyor height.

** Height noted is conveyor height. If a different conveyor height is necessary please consult your IPG Representative.

Figure 25: Machine Dimensions

SPECIFICATIONS

Machine Components

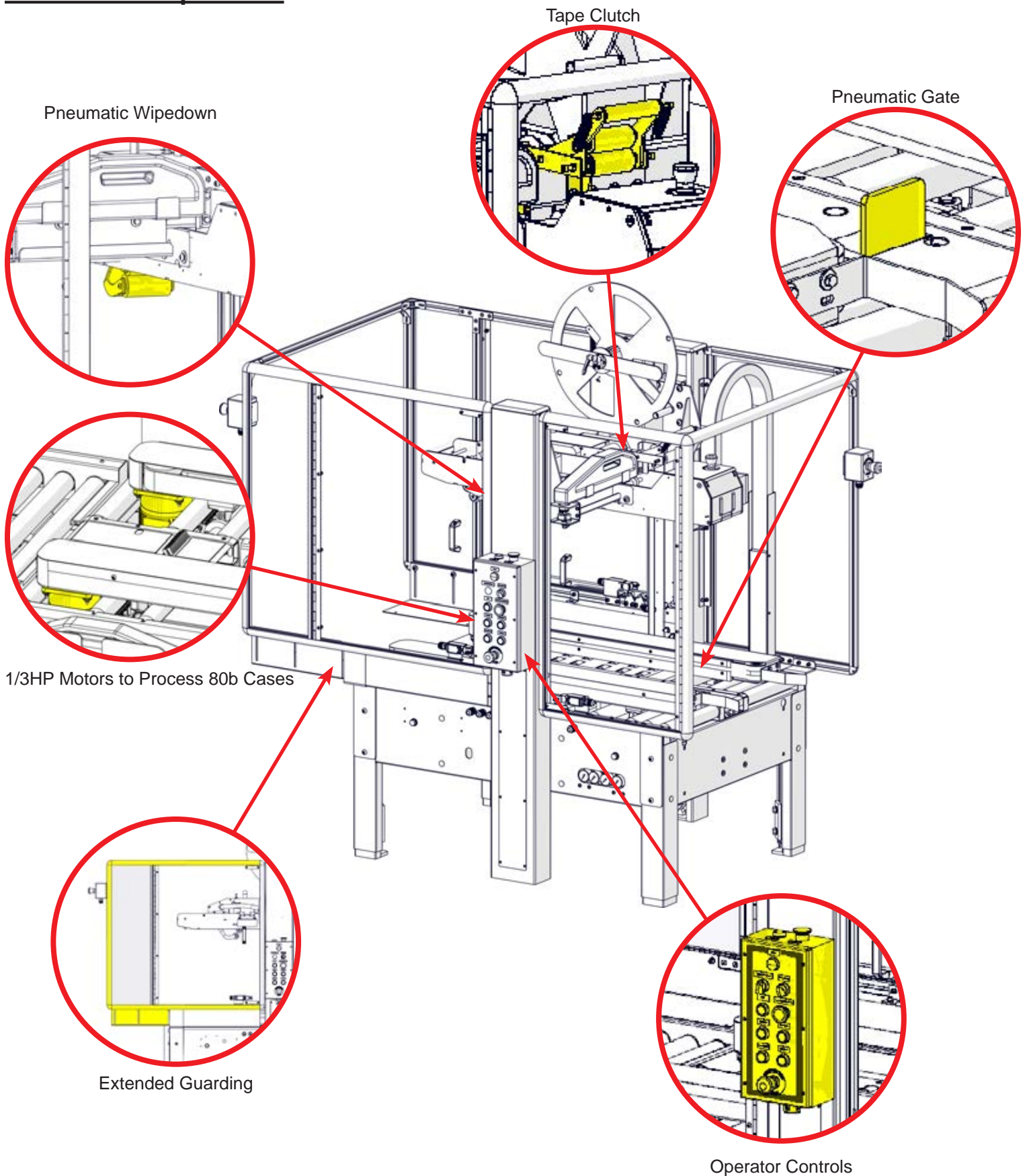


Figure 26: Machine Components

SPECIFICATIONS

Power Requirements

Electrical: **110v, 60HZ, 15A (1650 Watts)**

This machine comes standard with three gear motors, one on each drive base and one powered outfeed conveyor, an electrical box, and a control box.

The electrical box contains a HMI for machine adjustments. The control box contains the **Clear** button, **Power Lamp**, a **Manual/Auto** switch, a **Tape Threading/Stop** button, a **Tape Cut** button, a **Tape Feed** button, an **Emergency Stop** switch, a **Start** button, and a **Reset** button.

A 12 ft. (3.6 m) standard, three-conductor power cord with plug is provided for **110V, 60HZ, 15A** service. The receptacle providing this service **must** be properly grounded and installed by a licensed electrician.

Pneumatic Requirements

Compressed Air Supply: 9CFM at 90 PSI (28.3 Liter/min at 620.5 kPa)

This machine comes standard with one main regulator and four sub regulators. This main regulator should be set to a maximum of 75 PSI (512.1 kPa). The sub regulators should be set to UP: 65psi, DOWN: 35psi, OPEN: 30psi, CLOSE: 30psi.

Air must be clean and dry. If moisture enters the system valves can begin to degrade and lines slowly clog. This can cause reduced flow resulting in undesired machine behavior. If moisture is detected in the air lines an in-line air dryer may be used. IPG does not supply in-line air dryers.

Operating Speed

Belt speed is 82 ft./min (24.9 m/min). Boxes must be separated by 14 in. (356mm).

SPECIFICATIONS

Tape Specifications

Use only **IPG Water-Activated Tape**. The machine can accommodate tape widths of 3 in. (70 - 75mm).

A maximum tape roll length of 4500 ft. (1371.6m) can be installed on the tape heads. This machine can accommodate all IPG brand, water-activated tape within listed specifications.

The standard tape leg length of 3 in. (75mm) is factory set. The standard tape leg length may vary up to ¼ in. (6mm) based on tape tension and line speed.

The standard tape leg length is adjustable via the HMI on the electrical box. The minimum tape leg length recommended is 2 in. (48mm) and the maximum recommended is 3 in. (75mm).

Operating Conditions

Use in a dry, relatively clean environment at 40° to 105° F (5° to 40° C) with clean dry cartons. Maximum sound pressure level is less than 70dBA.



CAUTION: MACHINE SHOULD NOT BE WASHED DOWN OR SUBJECTED TO CONDITIONS CAUSING CONDENSATION ON COMPONENTS. FOLLOW CLEANING INSTRUCTIONS.



CAUTION: TO PREVENT INJURY KEEP AN AREA WITH A MINIMUM OF 36 IN. (915MM) OF SPACE CLEAR, CLEAN, AND DRY ON THE OPERATOR AND CONTROL BOX SIDES OF THE MACHINE.

Carton Specifications

Type

- Regular Slotted Containers (RSC)
- Other styles may be processed. Consult factory.

Material

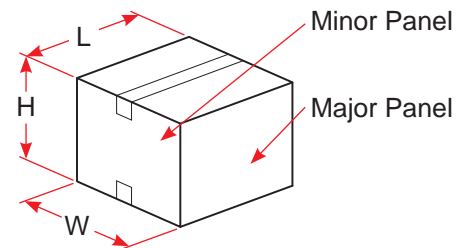
- 125 to 175 PSI bursting test, single or double wall, B or C flutes
- Other styles may be processed. Consult factory.

Weight

- 0 to 38.5 kg (0 to 85 lbs.) Max

Size

Carton Size	Length	Width	Height
Minimum	6" (152mm)*	6.5" (165mm)*	5" (127mm)
Maximum	Infinite	20" (508mm)	24" (610mm)



However, if the box length (in the direction of the seal) to box height ratio is 0.75 or less, several boxes should be test run to assure proper machine performance. The formula is as follows:

$$\frac{\text{Carton Length in direction of seal}}{\text{Carton Height}} > 0.75$$

SET-UP PROCEDURE

Receiving and Handling

The Interpack **RSA 2024-WAT TOP ONLY** is shipped to the customer in a box and fixed to a pallet. The machine is enclosed with either a corrugated sleeve and cap or an HSC corrugated box. The sequence below is step by step instructions to remove all packing materials.

PRIOR TO SIGNING FOR THE MACHINE INSPECT IT FOR ANY DAMAGE THAT MAY HAVE OCCURRED DURING SHIPPING

1. Remove the strapping and/or staples at the bottom of the box
2. Lift the box cover off of the machine, use caution and team lift
3. Remove any bubble wrap or protective wrapping
4. Inspect the machine for any damage that may have occurred during shipping
5. Remove the mounting bolts and nuts that secure the machine to the pallet
6. Using a forklift or other lifting device, lift the machine off the pallet
 - Install any optional casters at this point as well as adjusting leg height for desired conveyor height
7. Position the machine in its desired location
8. Remove any remaining tie wraps and shipping materials
9. Install the included Carton Retainers
10. Install any optionally ordered equipment

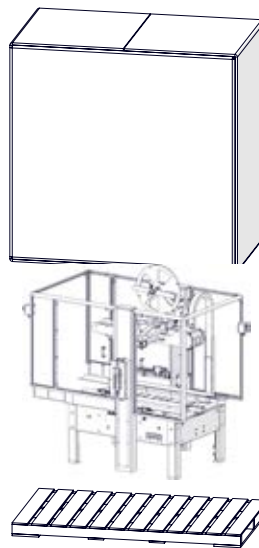


Figure 27: Unboxing

After unpacking the Case Sealer, look for any damage that may have occurred during shipping. Should the Case Sealer be damaged, file a claim with the transport company and notify your IPG representative as soon as possible.

Set up

The Case Sealer must be installed on a near level ground. Use the adjustable legs to ensure the machine is level and firmly planted on the ground (no rocking). Adjust the leg height with the six (6) telescopic adjustment legs to accommodate conveyor heights from 24 in. to 30 in. Consult with the factory for any other conveyor heights that may be required. Optional Casters add 4 in. to the conveyor height. If noted in the purchase order the case sealer can be shipped pre-configured for the desired conveyor height.

To adjust the Case Sealer height, jack up the machine to give ample room to extend the legs. Using a 19mm box end wrench, loosen the eight (8) M12mm hex bolts. Adjust the legs to the desired conveyor height and tighten the bolts. Etched lines on the legs ease leveling. The machine must be properly supported prior to any leg adjustment.

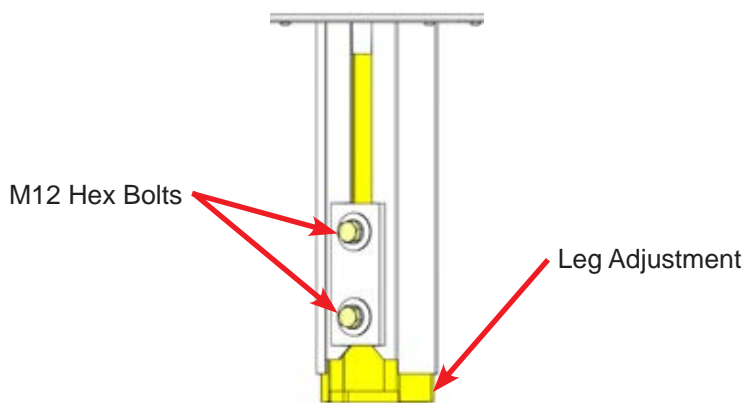


Figure 28: Leg Adjustment

Customer supplied exit conveyor (if used) should be straight and declined no more than 1 in./yard (5 cm/meter) away from the Case Sealer to convey the sealed cartons away from the machine.

SET-UP PROCEDURE

Optional Equipment: Caster Installation



WARNING: CASTER INSTALLATION REQUIRES RAISING THE MACHINE TO ACCESS THE BOTTOM OF EACH LEG. FOLLOW ALL POSSIBLE SAFETY PROCEDURES PRIOR TO AND DURING THIS PROCESS.

Be advised there are several ways to install the casters on IPG Case Sealers. Consult your company's safety practices after reading through the below directions. Take all precautions necessary.

1. Raise the machine to allow access to the bottom of each leg.
2. By hand, screw the caster into each leg.
3. Using a wrench, verify each caster is firmly seated to the bottom of the legs.
4. Lower the machine back down until it is resting on the casters.
5. Adjust the legs as necessary to achieve proper level of the machine.



CAUTION: DO NOT ADJUST THE HEIGHT USING THE CASTERS. HEIGHT CHANGES ARE TO ONLY BE MADE BY ADJUSTING THE LEG EXTENSIONS.

6. Position the machine in its desired location.
7. Lock the casters.

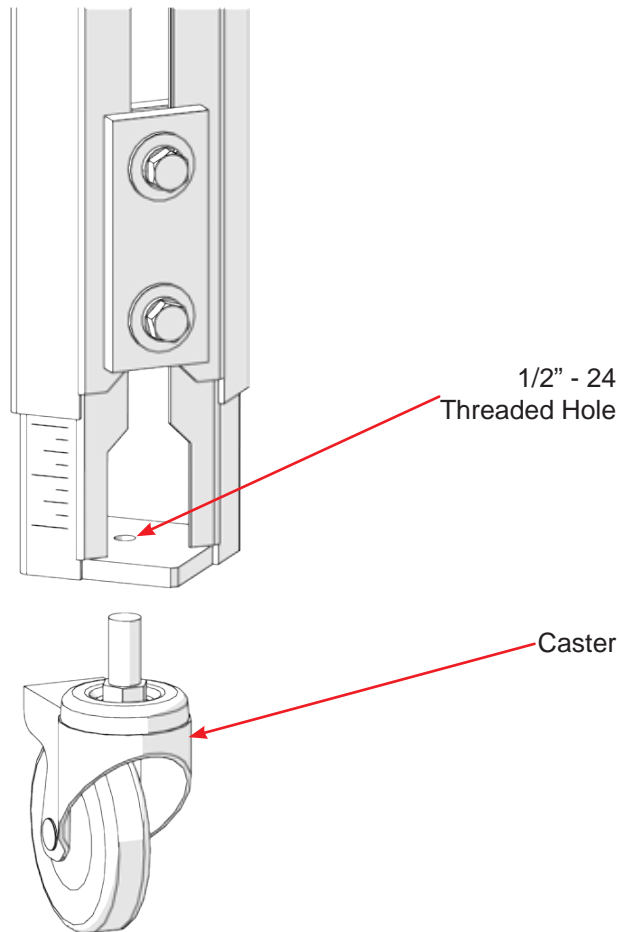


Figure 29: Caster Installation

SET-UP PROCEDURE

Optional Equipment: Infeed Table Installation

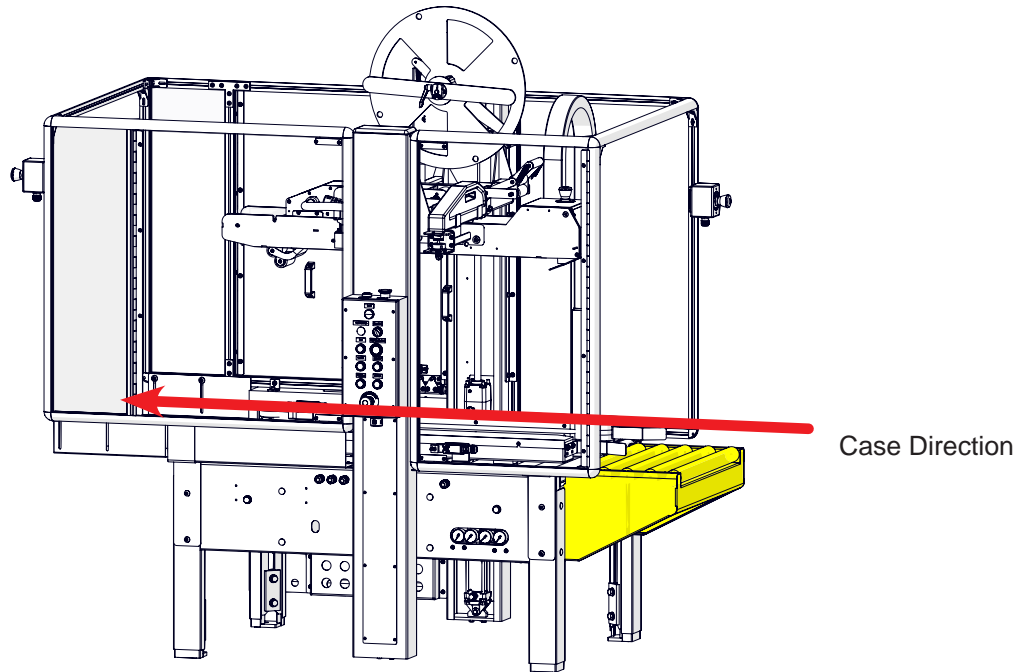


Figure 30: Case Direction

The RSA 2024-WAT TOP ONLY can only accept an Infeed Table. Where a traditional Outfeed Table would be mounted a powered outfeed table comes standard.

IPG Case Sealers come with the necessary mounting points for in-feed tables. The optional in-feed tables will come with all necessary hardware to mount to the machine. The case sealers can accept a variety of table sizes. Please consult with the factory on the best size table for your application.

1. Loosely install two carriage bolts into top two mounting holes on roller table with hardware included.

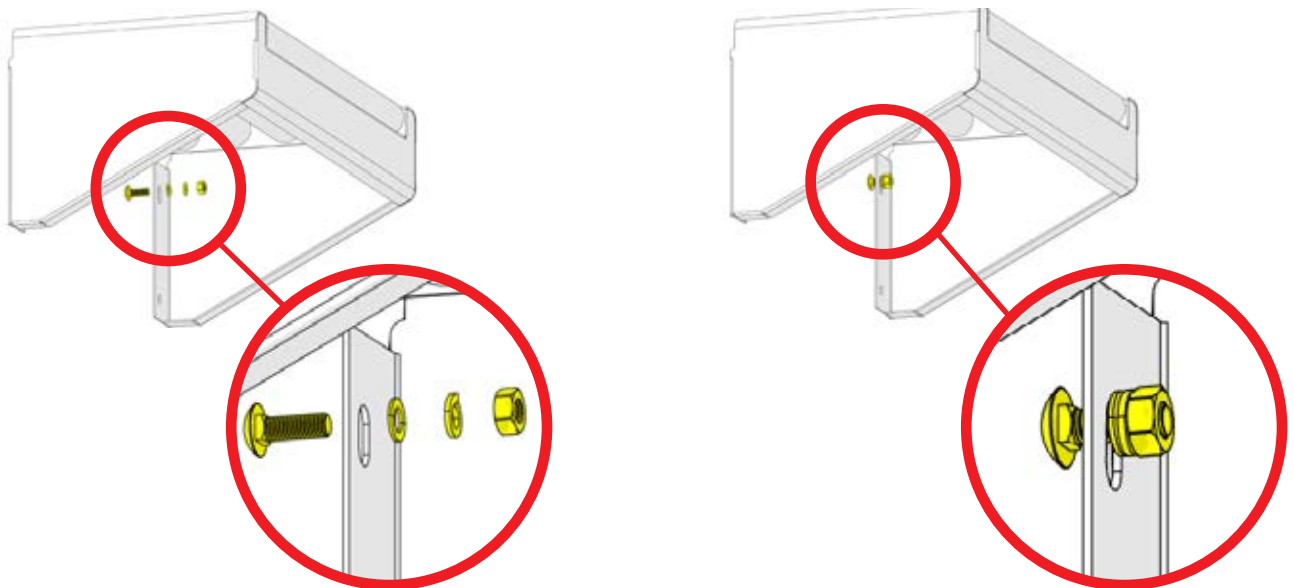


Figure 31: Carriage Bolt Assembly

SET-UP PROCEDURE

Optional Equipment: In-feed Table Installation (Continued)

1. Utilizing the slots on the machine base, attach roller table to machine base by locating carriage bolts in slots on machine base and push down to lock in place. Make sure carriage bolts are properly aligned into the slot when pushed down to lock in place before proceeding.

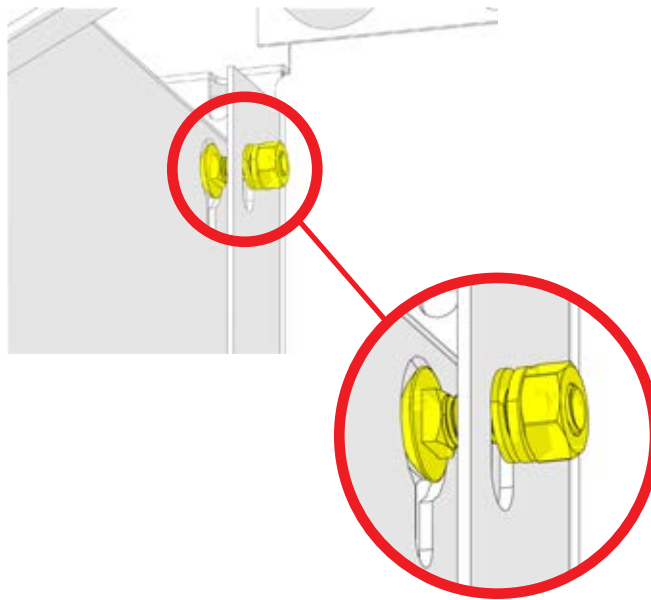


Figure 32: Table to Machine Base Installation

2. Once roller table is attached to the machine base using the two carriage bolts, install remaining two carriage bolts with hardware included through the bottom two holes on the machine base and roller table.
3. After all four mounting studs and included hardware have been installed, tighten all hardware to avoid roller table instability then install rollers on table.

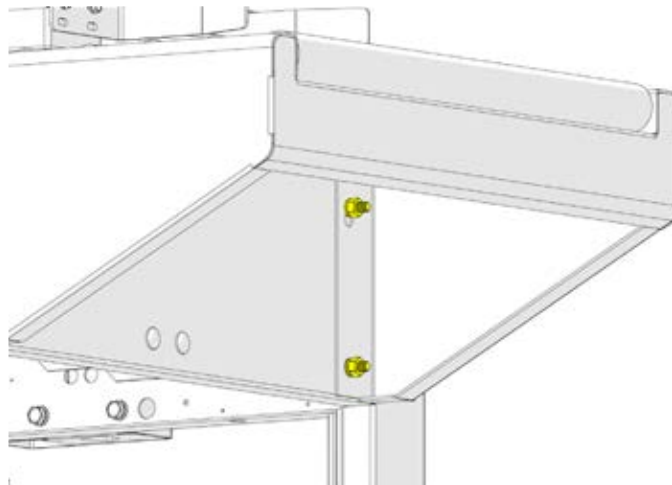


Figure 33: Remaining Carriage Bolt Installation

SET-UP PROCEDURE

Optional Equipment: Installation of External In-feed and Exit Conveyors

IPG does not supply conveyors. All conveyors are to be customer supplied.

1. Customer supplied gravity exit conveyor (if used) should be straight and declined no more than 1 in./yard (5 cm/meter) away from the machine to convey the sealed cartons away from the machine.
2. Customer supplied powered exit conveyor should be straight and level to convey the sealed cartons away from the machine.

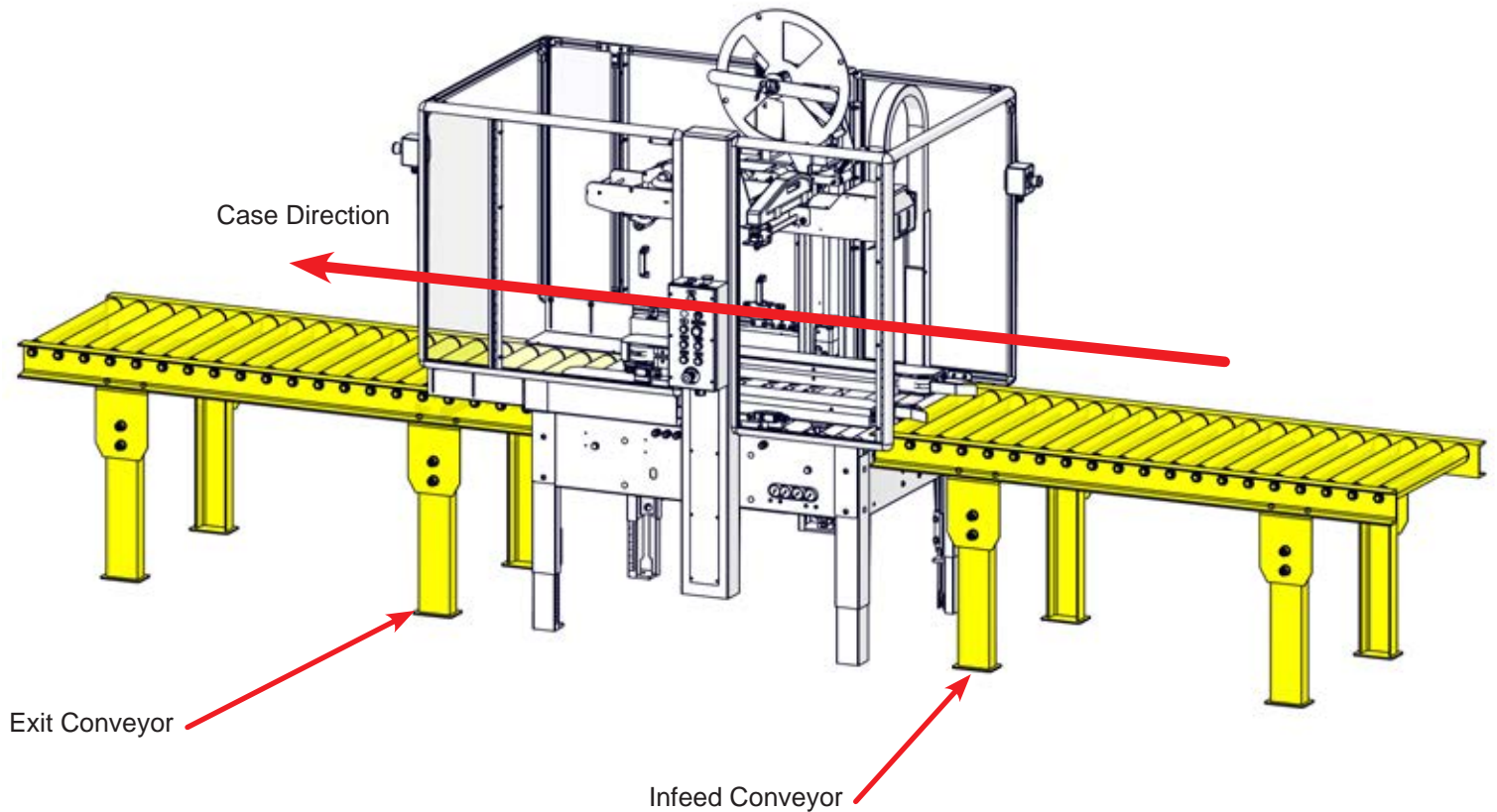


Figure 34: Installing Conveyors

CONNECTING UTILITIES

Electrical Utilities

A 12 ft. (3.6m) standard three-conductor power cord with plug is provided for **110V, 60HZ, 15A** electric service. The receptacle must be properly grounded. Before the machine is plugged into the receptacle, ensure that all materials are removed from the machine. The electrical control is protected with an automatic circuit breaker with resettable overload and fuses. Do not use an extension cord or power-strip.

The electrical box is located on one side of the **RSA 2024-WAT TOP ONLY** Case Sealer. It also contains the HMI that is used for some basic controls and altering machine settings.

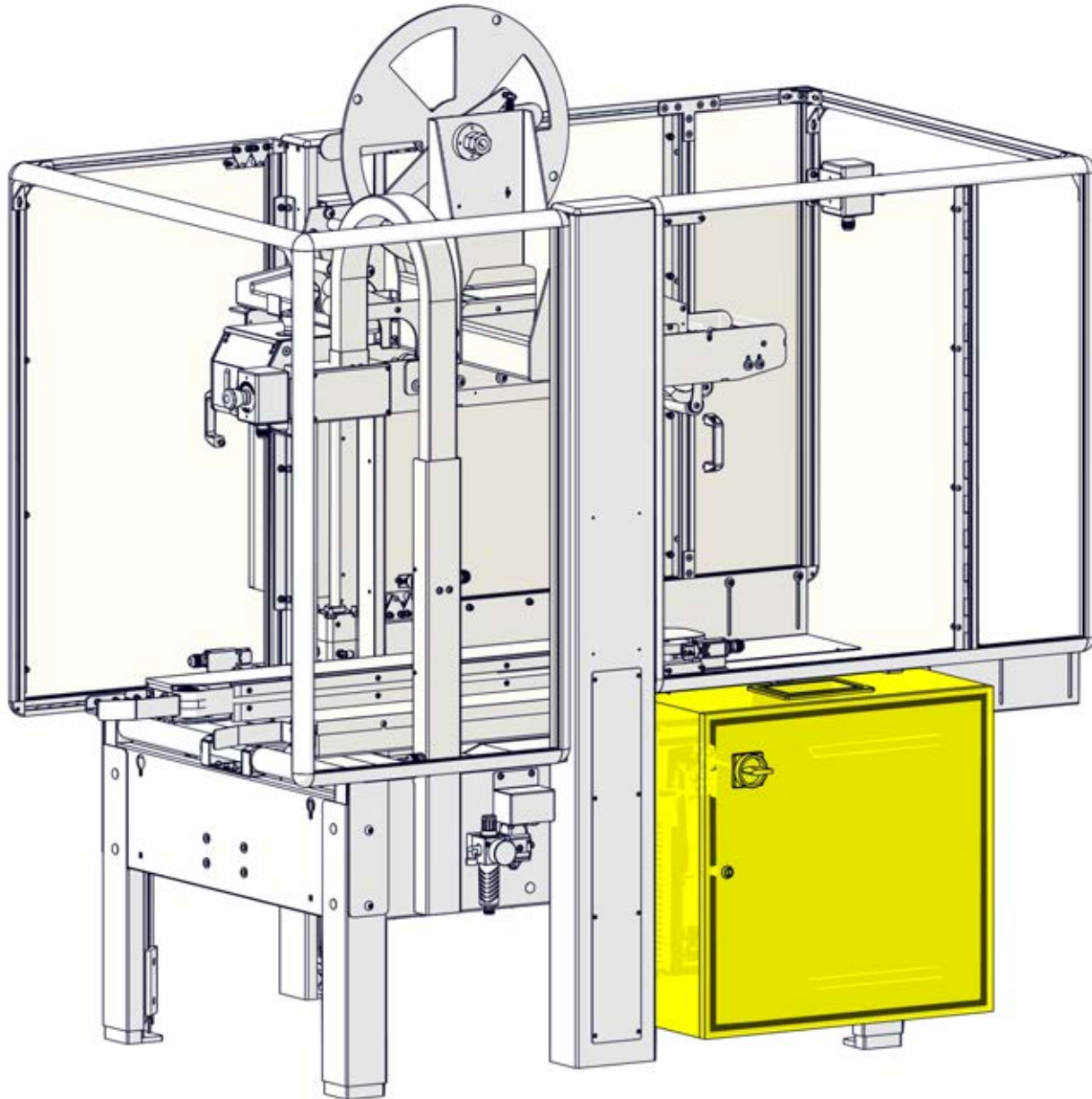


Figure 35: Electrical Utilities

The electrical box and pneumatic input can be reversed but this is recommended to be done at the factory.

CONNECTING UTILITIES

Pneumatic Utilities

The pressure setting for the main air regulator is factory set. The values will need to be adjusted as needed by customer supplied pressure and volume.

The main air regulator has a male quick disconnect adapter. Connect clean dry compressed air to this adapter. The **RSA 2024-WAT TOP ONLY** Case Sealer requires a minimum of **9 CFM at 90 PSI** (28.3 Liter/min at 689 kPa). It is connected to an electronic dump valve prior to any connection into the machine.

To regulate the main air pressure, pull on the knob located on the top of the main air regulator. Turn the knob clockwise for more pressure and counterclockwise for less. When the air pressure is at 75 PSI, push back down on the button until a “click” is felt to lock it in position. The thread size is 3/8 in NPT.

Should the supplied airline or pressure be unplugged, cut, or pressure drop for any reason, tape will not feed and rollers will not be activated if box is processed.

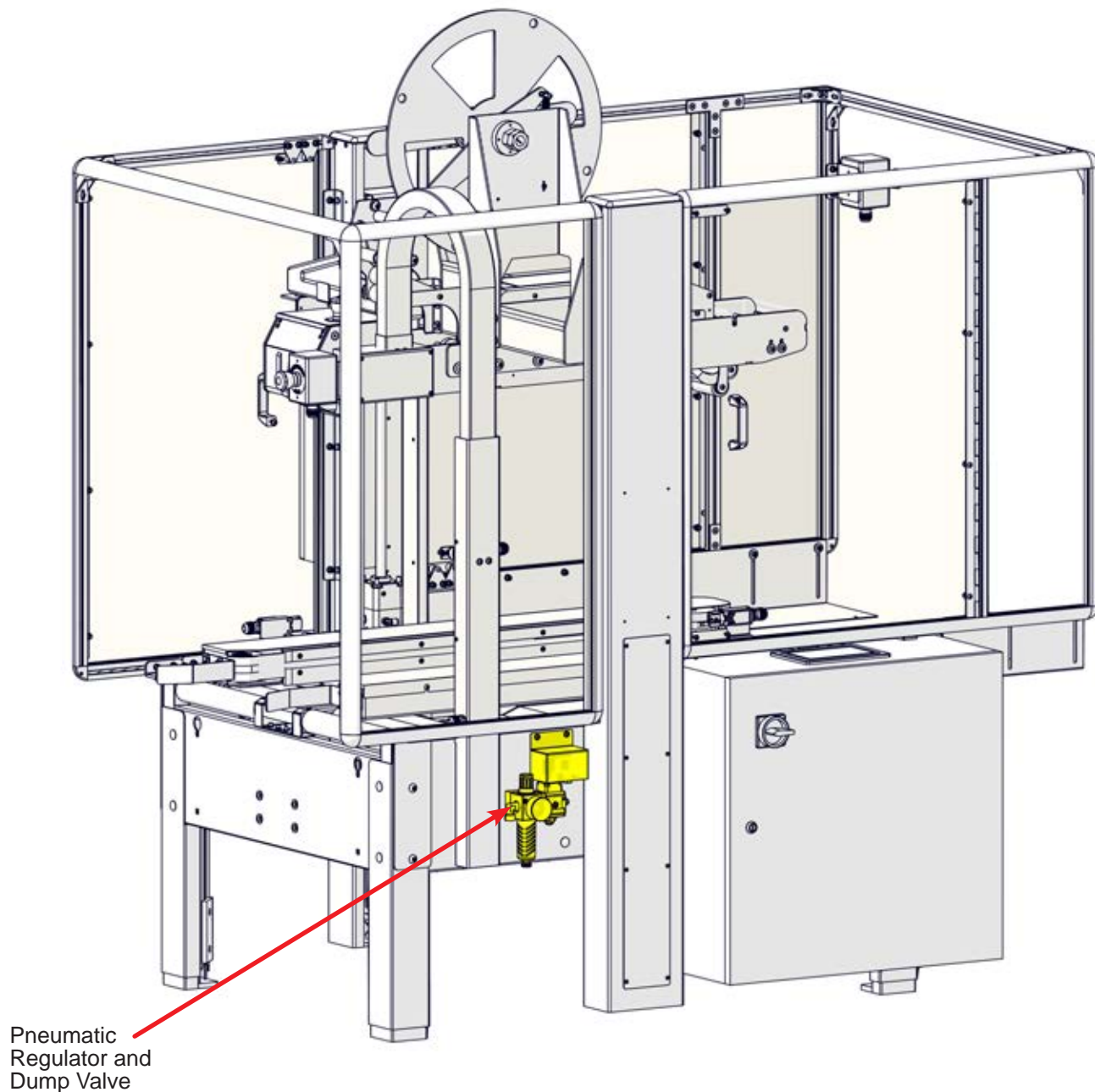
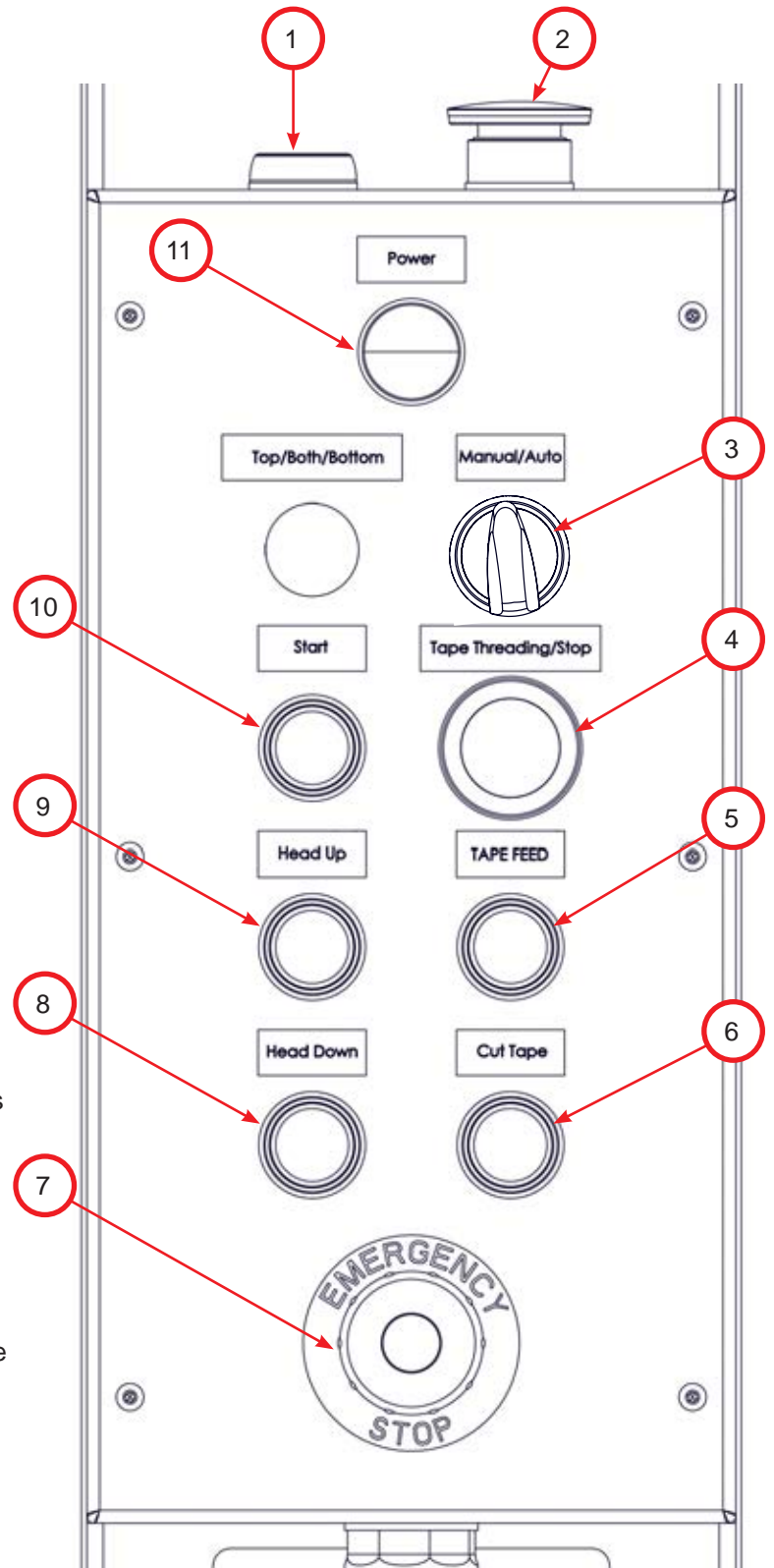


Figure 36: Pneumatic Utilities

OPERATOR CONTROLS

Make sure machine is connected to air supply of at least 90 PSI (660.5 kPa) and machine regulator is set at 75 PSI. The following describes the use of control box buttons:

1. **Reset button** - Used to reset machine after power up or to reset after all E-Stops have been cleared.
2. **Clear button** (Operational in Auto Mode only). This button is used to simplify clearing a jam during production. When pressed down, belt drive motors stop, belts open, the bridge raises, air supply is dumped, and cutting mechanism is engaged if tape was dispensed.
3. **Manual/Auto switch**
 - Auto mode is for normal machine operation.
 - Manual mode is for tape threading/troubleshooting.
4. **Tape Threading/Stop button**
 - In Auto Mode, stops machine operation.
 - In Manual Mode, engages/disengages pinch roller which drives the tape.
5. **Tape Feed button**
 - No function in Auto Mode.
 - In Manual Mode, feeds a length of tape and cuts it.
6. **Tape Cut button**
 - No function in Auto Mode.
 - In Manual Mode, engages cutting mechanism in tape head to cut tape.
7. **Emergency Stop button**
 - In Auto Mode, de-energizes machine.
 - In Manual Mode, de-energizes machine.
8. **Head Down button**
 - No function on Auto mode.
 - In Manual mode, press and hold to lower the bridge.
9. **Head Up button**
 - No function on Auto mode.
 - In Manual mode, press and hold to raise the bridge
10. **Start button**
 - In Auto mode this will start normal operation of the machine as long as all prerequisite conditions are satisfied.
 - No function in Manual mode.
11. **Power Lamp** - Illuminated when power is being delivered throughout the machine.



Where the Top/Bottom/Both switch would normally be on the standard RSA 2024-WAT there is a 22mm plug as the machine is permanently in top only mode.

Figure 37: Operator Controls

TOP TAPE HEAD LOADING/THREADING

Direction of Top Tape Unwind

As shown in the diagram below, tape should be mounted with a counterclockwise, unwind direction. The adhesive side of tape will be facing up as it goes around the peel-off roller.

Top Tape Path

The diagram below shows the threaded tape path using the red line/arrow as the tape. For proper threading of tape use the steps in the following section. The order in which the tape passes the rollers starts at the peel-off roller, travels under the center roller, through the clutch roller, under the third roller, over the tape head powered roller, finally under the tape head pinch roller.

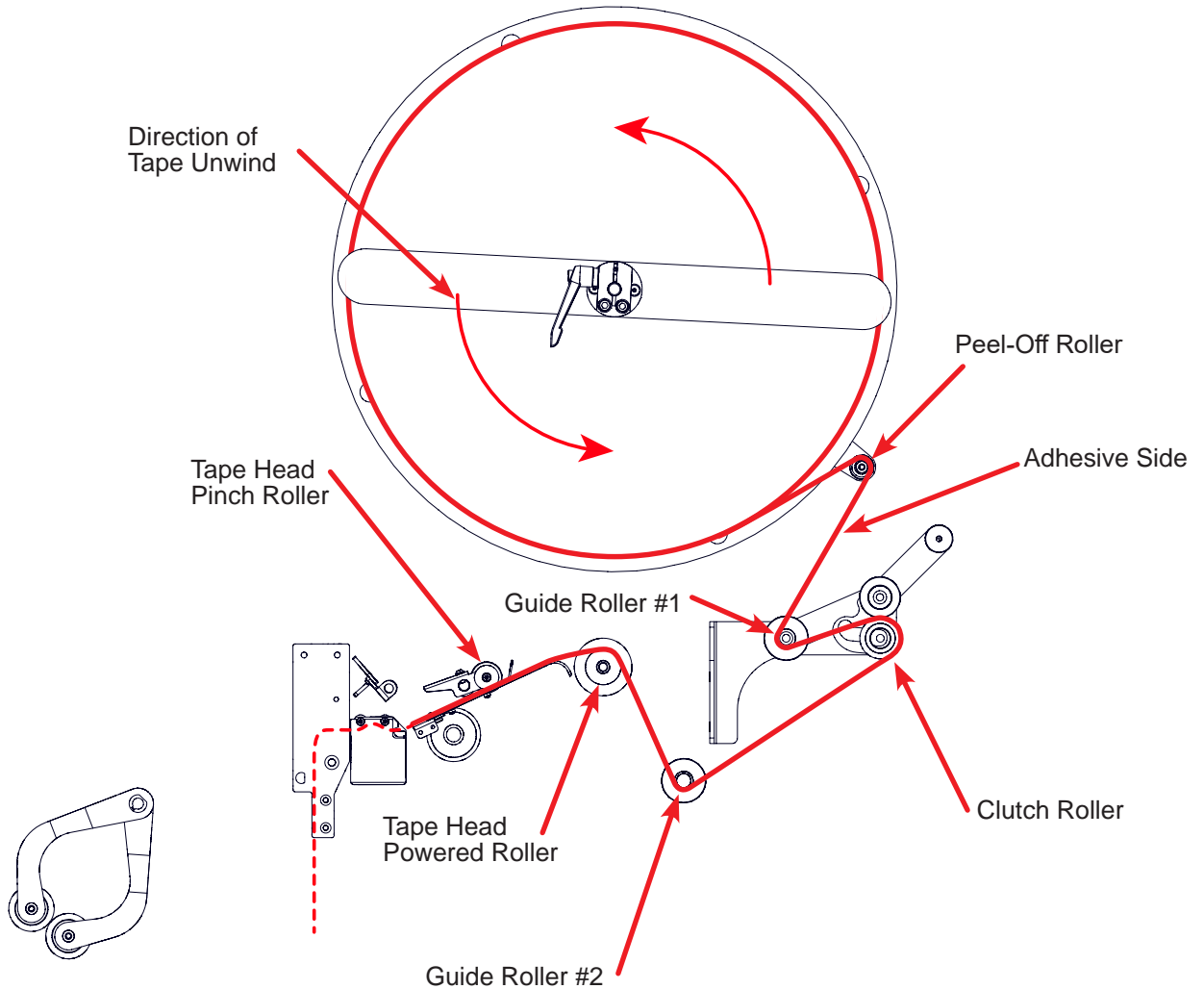


Figure 38: Top Tape Path

TOP TAPE HEAD LOADING/THREADING

Top Tape Loading/Threading Instructions

The instructions below will assist in threading tape on the top tape head.

1. Put machine in Manual Mode using Manual/Auto selector switch (Item 1).
2. Install tape roll on to mandrel (Item 2) making sure the unwind direction is counterclockwise.
3. Pull tape around the top of the peel-off roller and towards the rear of the machine, under the tape roll (Item 3).
4. Bring tape under Guide Roller #1 (Item 4) followed by opening the clutch then bringing the tape through the clutch roller (Item 5). Once through the clutch close the clutch.
5. Pass the tape under the bridge support beam and Idle Roller #2 (Item 6) before pulling the tape upward into the tape head.
6. Bring the tape over the powered drive roller (Item 7) and towards pinch roller (Item 8).
7. Thread tape under guide plate until it reaches the pinch roller. During this process, make sure pinch roller is not engaged. To engage/disengage the pinch roller, use the Tape Threading/Stop button (Item 9) located on the control box.
8. Once tape has been passed under the pinch roller, engage pinch roller using Tape Threading/Stop button (Item 9).
9. Press down the Tape Feed button (Item 10) to allow machine to pass tape through tape shoe and feed out of the tape head.
10. If tape passes with no jams, remove tape from tape shoe guide. Flip the Manual/Auto switch (Item 1) to Auto and press Start button (Item 11) to begin machine operation. If you encounter a jam, see Clear Mode (Clear Jam).

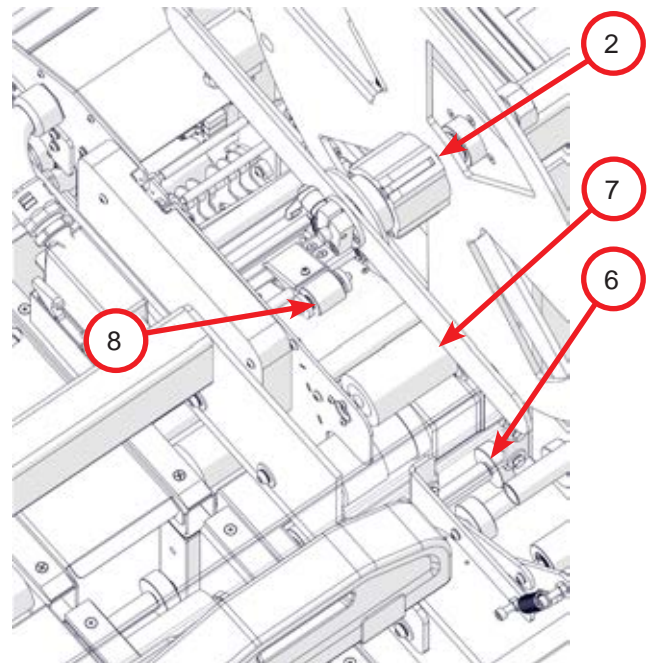
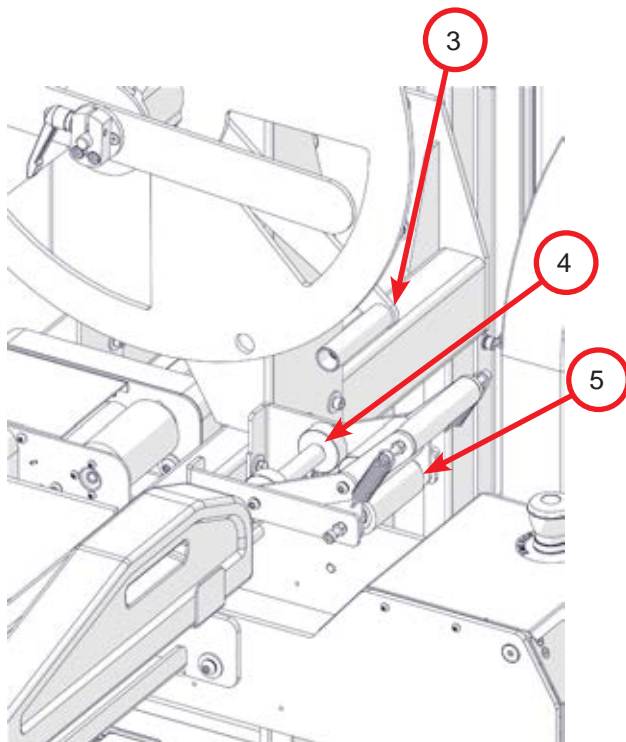
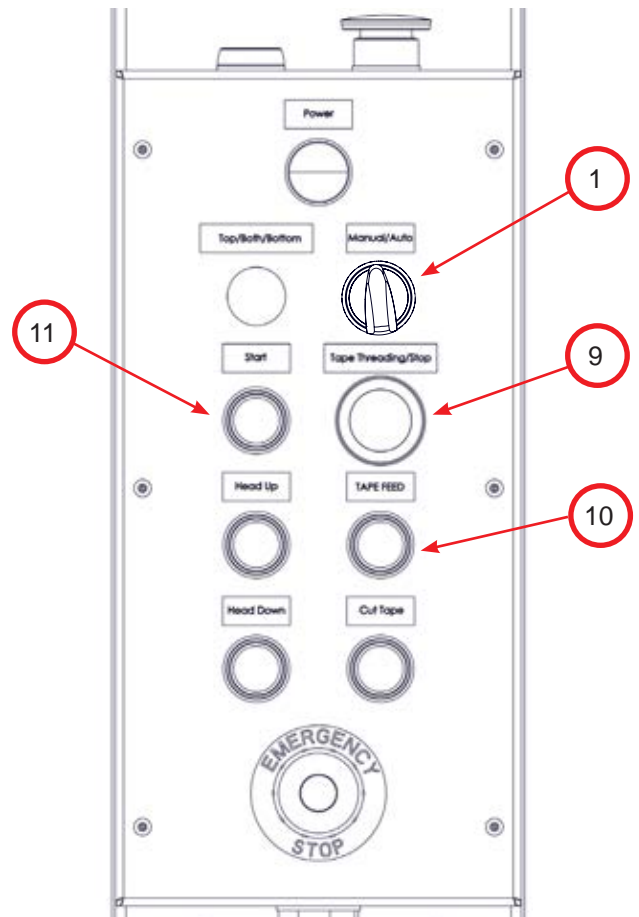


Figure 39: Top Tape Loading Procedure

REMOVING/REPLACING THE TOP TAPE HEAD

The tape head is 36lbs (16kg). Use proper lifting techniques to reduce the risk of strain.

1. Switch the machine into Manual Mode.

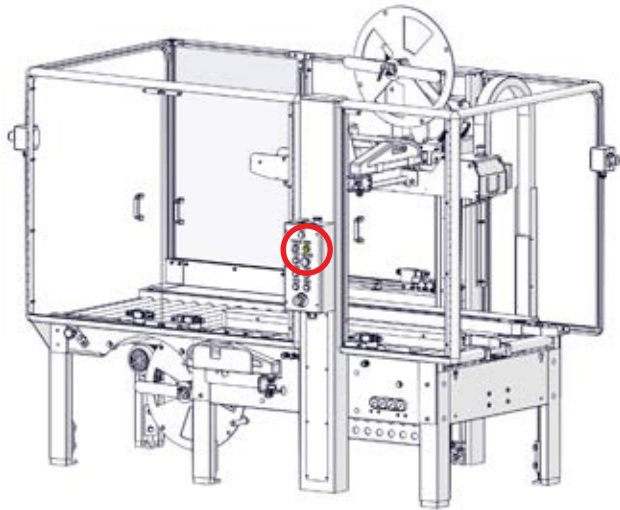


Figure 40: Top Tape Head Removal 1

2. Press and hold the “Head Down” button to lower the bridge as low as it will go.

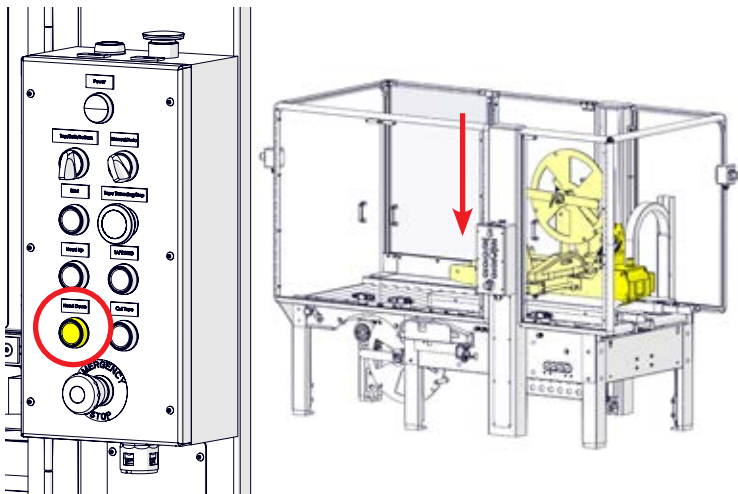


Figure 41: Top Tape Head Removal 2

3. Open the machine doors to access the tape head.

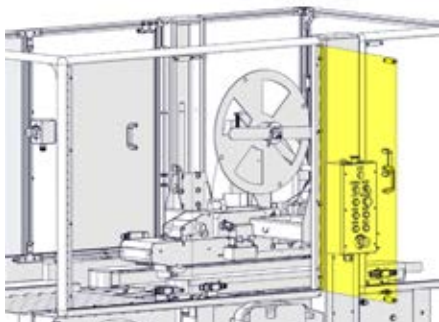


Figure 42: Top Tape Head Removal 3

4. Disconnect the industrial power connector.

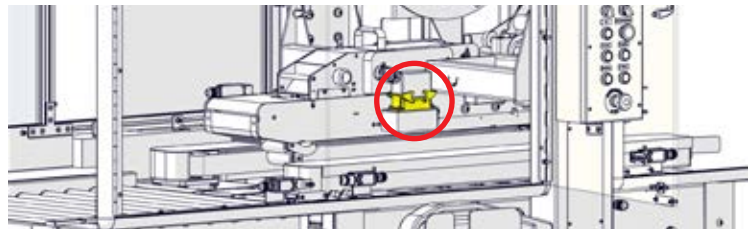


Figure 43: Top Tape Head Removal 4

5. Turn the valve on the water pot to stop the flow.
6. Disconnect the water line and remove the water pot.
7. Disconnect the air line.

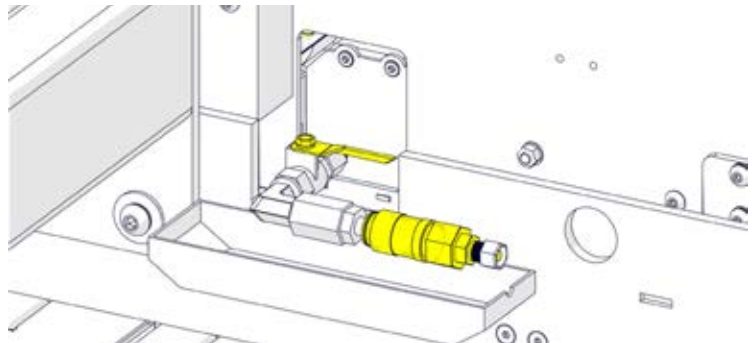


Figure 44: Top Tape Head Removal 5

8. Lift the tape head locking plate. You may need to push the tape head toward the front of the machine.

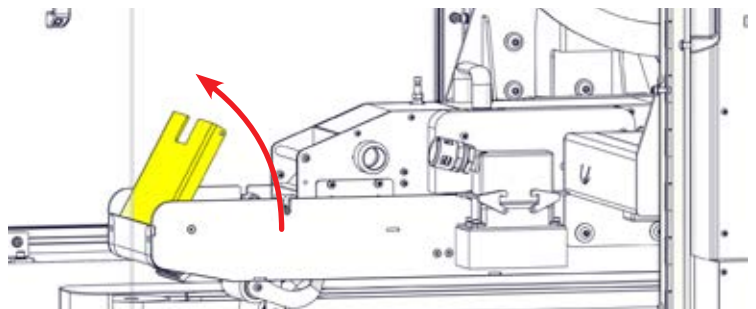


Figure 45: Top Tape Head Removal 6

9. Remove any tape that is threaded into the tape head.
10. Lift the tape head out of the tape cavity.

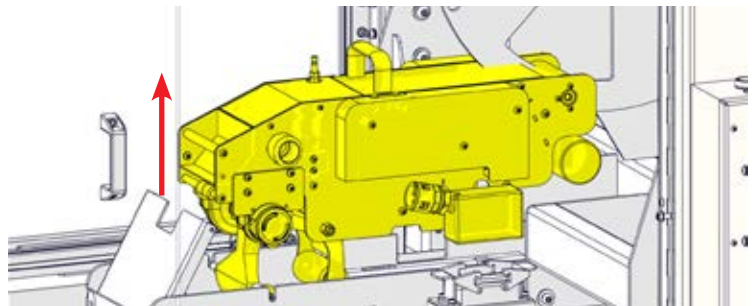


Figure 46: Top Tape Head Removal 7

ADDING WATER TO THE SYSTEM

The **RSA 2024-WAT TOP ONLY** comes equipped with one 64oz water bottle to supply the tape head with water.

1. Remove the water bottle by pulling them straight up from support bracket.
2. Turn the bottles over so the water will not spill.
3. Unscrew the water bottle cap.
4. Fill the bottle with warm water, distilled or filtered water is preferred when tap water contains excess minerals.
5. Replace the water cap.
6. Install the water bottle by inserting it over the water cup post and into the support bracket on the side of the machine.

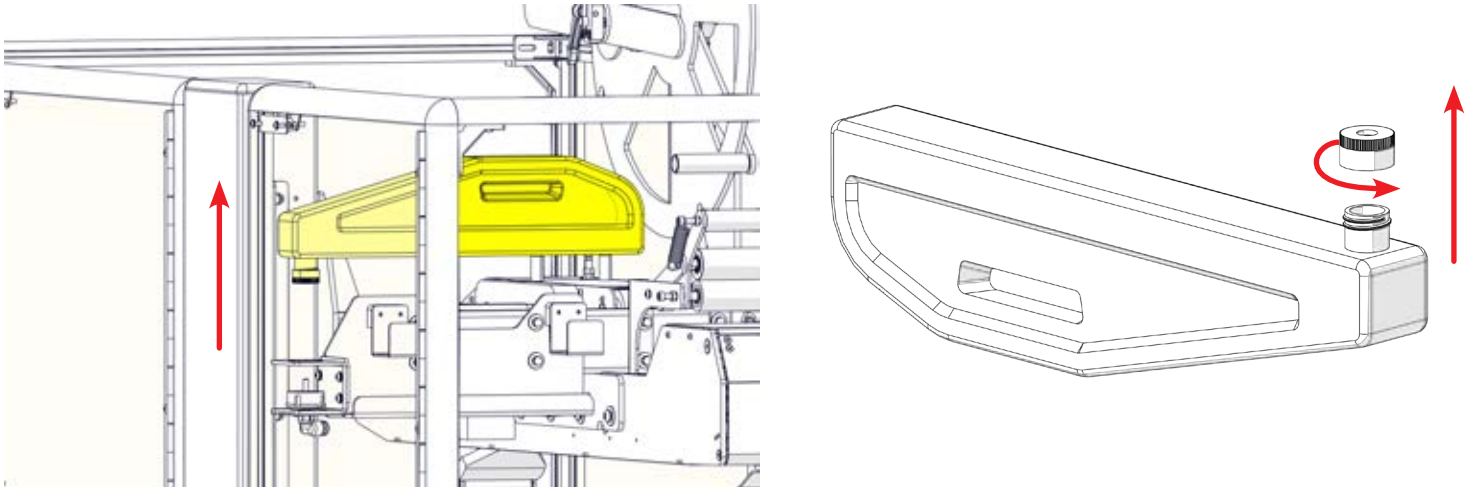


Figure 47: Adding Water to the System

ADJUSTING THE WATER LEVEL

Depending on volume of cartons that are being processed through the RSA 2024-WAT TOP ONLY the water level may need to be adjusted. Water is transported into the water pot through a gravity fed line. The water level is controlled by raising and lowering the water bottle assemblies.

Adjusting the top water level

1. Remove the top water bottle.
2. To adjust the water level on the top loosen the four (4) 10mm bolts on the water bottle retainer.

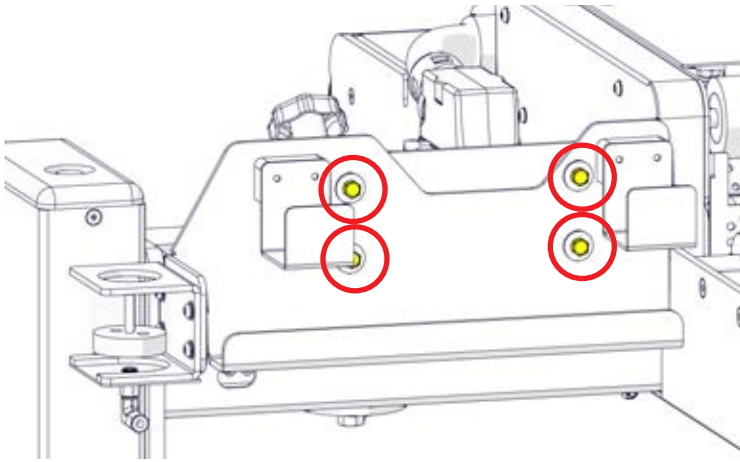


Figure 48: Top Water Level Adjustment 1

3. The water bottle retainer has slotted holes allowing for it to slide.
4. Shift the water bottle retainer up to raise the water level in the water pot.
 - If the water level is raised all the way up some splashing may occur and can cause water to drip into the lower part of the machine.
5. Shift the water bottle retainer down to lower the water level in the water pot.

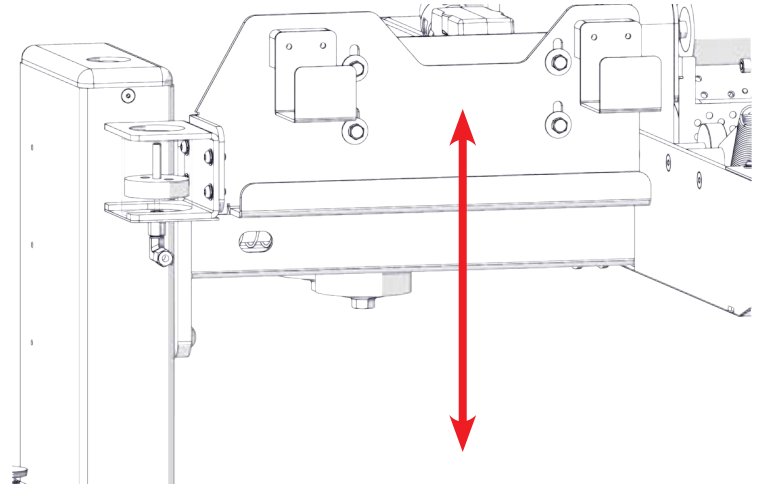


Figure 49: Top Water Level Adjustment 2

CASE PROCESSING PROCEDURE

Processing a case on the **RSA 2024-WAT TOP ONLY** is simple and easy as the machine does not require any manual actions to process a case. The machine will move automatically to each case.



WARNING: ENSURE THAT THE OPERATOR'S HANDS ARE AWAY FROM THE CONTACT AREA BETWEEN THE BOTTOM OF THE CARTON AND THE MOVING BELTS. OPERATORS SHOULD GRIP THE CASE AT THE REAR AND LET GO ONCE THE MACHINE HAS TAKEN THE CASE. IMPROPER HANDLING CAN LEAD TO INJURY.

WARNING: KEEP HANDS, HAIR, LOOSE CLOTHING, AND JEWELRY AWAY FROM MOVING BELTS, AND TAPE HEADS

WARNING: KEEP HANDS AND OTHER BODY PARTS CLEAR OF THE BOTTOM OF THE MACHINE BRIDGE. THIS MAY POSE A MINOR CRUSH HAZARD.



WARNING: DO NOT ATTEMPT TO REMOVE ANY JAMMED CASE FROM A CASE SEALER THAT IS CURRENTLY ON. DO NOT ATTEMPT TO PUSH A JAMMED CASE THROUGH THE MACHINE. THE MACHINE HAS COMPONENTS UNDER PNEUMATIC PRESSURE. NOT FOLLOWING THE PROPER CASE JAM CLEARING METHODS CAN RESULT IN INJURY.

1. Connect air supply and power.
2. The operator will close all flaps of the carton they wish to process.
3. The operator will present the case up to the gate of case sealer.
 - If the bridge is positioned lower than the top of the box the operator will need to press the case into the front paddle to raise the bridge.

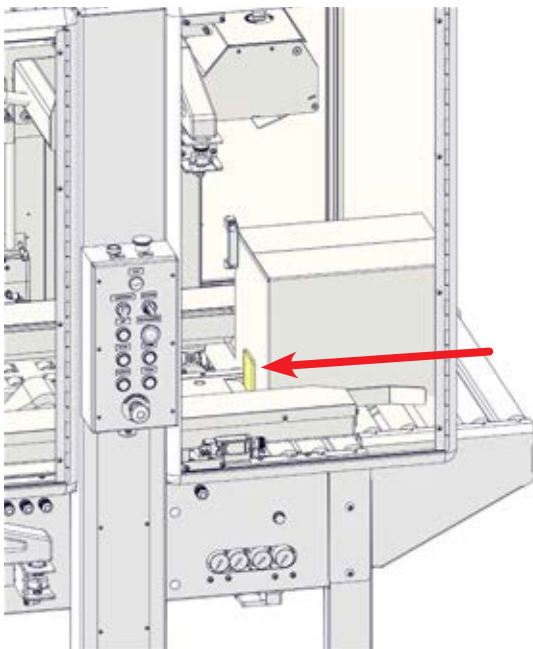


Figure 50: Place Carton in Machine

4. The bridge will automatically drop onto the top of the carton. It will stop when the bottom paddle is tripped.
5. At this time the operator can let go of the carton.
6. Once the sensor in the bridge sees the carton the belts will begin to move in until they grip the carton.

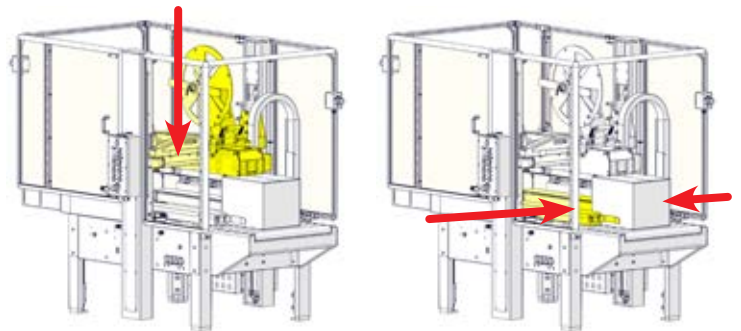


Figure 51: Automatic Machine Adjustment

7. The case sealer will take the carton and apply a single strip of Water Activated Tape to the top center seam.
8. When the case has finished processing the belts will automatically open and the bridge will raise a small amount to release the case.
9. The powered outfeed table will move the processed carton out of the machine.

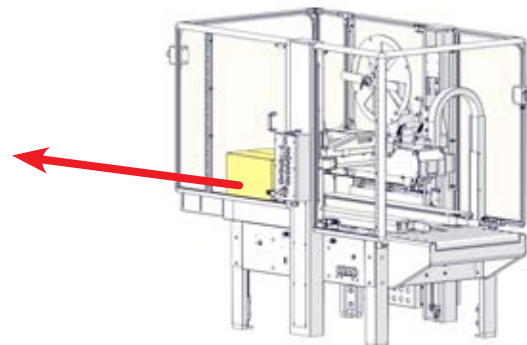


Figure 52: Case Leaving Machine

OPERATING INSTRUCTIONS

The following instructions are presented in the order recommended for processing cases through the **RSA 2024-WAT TOP ONLY** Case Sealer.

1. Install and thread tape on the tape head(s) (refer to the tape threading section).
2. Supply or connect the machine to 110V Electrical Supply (refer to [Electrical Utilities](#)).
3. Supply or connect the machine to Pneumatic Supply (refer to Pneumatic Utilities).
4. Verify that all Emergency-Stops are disengaged.
5. If not done so, press the Reset Button (if engaged the Reset Button will be illuminated solid, otherwise it will be blinking).
6. Verify the machine is in Auto Mode.
7. Press the Green Start button to begin machine operation.
8. The operator will need to manually fold all the carton's flaps.
9. The operator should present the carton to the up to the machine's gate as centered as possible, holding the top rear of the carton. If the bridge is too low press the case into the front paddle to raise the bridge.
10. Once the carton is up to the gate the bridge will lower onto the top of the carton.
11. When the bridge is close to the carton the belts will automatically close.
12. When the belts grip the case the operator should allow the machine to take the carton. It is not necessary for the operators hands to be near the moving components.
13. The pneumatic gate will raise preventing the next carton from entering until the machine is ready.



WARNING: ENSURE THAT THE OPERATOR'S HANDS ARE AWAY FROM THE CONTACT AREA BETWEEN THE BOTTOM OF THE CARTON AND THE MOVING BELTS. OPERATORS SHOULD GRIP THE CASE AT THE REAR AND LET GO ONCE THE MACHINE HAS TAKEN THE CASE. IMPROPER HANDLING CAN LEAD TO INJURY.



WARNING: KEEP HANDS, HAIR, LOOSE CLOTHING, AND JEWELRY AWAY FROM MOVING BELTS, AND TAPE HEADS



WARNING: KEEP HANDS AND OTHER BODY PARTS CLEAR OF THE BOTTOM OF THE MACHINE BRIDGE. THIS MAY POSE A MINOR CRUSH HAZARD.

When feeding cartons into the Case Sealer all flaps must be closed prior to entering the belts. Be sure that all cases are fed squarely and straightly into the Case Sealer, feeding cases crooked can result in poor seals or case jams.

In the event of a case jam follow the below procedure. Do not attempt to clear a jam while the case sealer is on. Press the Emergency Stop button before proceeding.



WARNING: DO NOT ATTEMPT TO REMOVE ANY JAMMED CASE FROM A CASE SEALER THAT IS CURRENTLY ON. DO NOT ATTEMPT TO PUSH A JAMMED CASE THROUGH THE MACHINE. THE MACHINE HAS COMPONENTS UNDER PNEUMATIC PRESSURE. NOT FOLLOWING THE PROPER CASE JAM CLEARING METHODS CAN RESULT IN INJURY.

Carton Jam Clearing

1. Keeping hands clear of moving components the operator should press the "Clear" button.
2. Pressing this button will cause the bridge to raise up all the way and the belts to automatically open.
3. If tape has been dispensed it will automatically be cut.
4. Once the machine has stopped moving on its own it will dump air.
5. The operator can open any necessary doors to remove the case in a safe manner.
6. With the case removed from the machine clean any debris that was cause by the jam.
7. The operator can close the door at this time. Verify the interlock latch is fully seated in the safety interlock.
8. Press the blue "Reset" button to re-energize the machine, both electrically and pneumatically.
9. Press the "Tape Feed" button to prime the tape heads and verify there is no obstruction in the tape path.
10. Remove the dispensed tape.
11. Pressing the "Start" button will return the RSA 2024-WAT TOP ONLY to normal operations.

HMI WINDOWS AND EXPLANATIONS

Main Menu

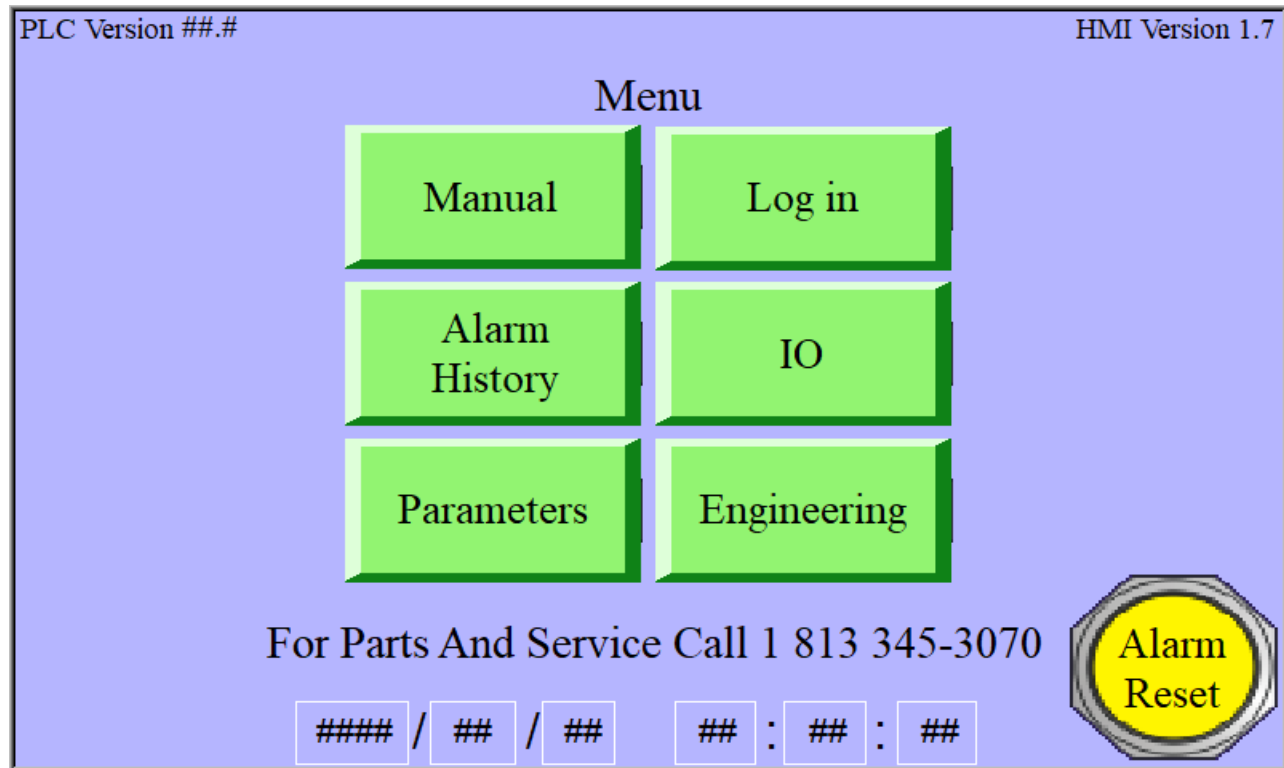


Figure 53: Main Menu

Item	Description
PLC Version	This number will display the current version of code installed on the PLC.
HMI Version	This number will display the current version of code installed on the HMI.
Manual	The operator can press this button to navigate to the manual screens for manual functionality.
Log in	The operator can press this button to navigate to the screen where a higher level operator can log in.
Alarm History	The operator can press this button to navigate to the alarm history page.
IO	The operator can press this button to navigate to the IO screens and cycle/error counts where an operator can view all input/outputs and cycle/error counts.
Parameters	A higher level operator can press this button to navigate to the parameters screens.
Engineering	An engineering level operator can press this button to navigate to the engineering screens.
Alarm Reset	The operator can press this button to silence the current alarm.

HMI WINDOWS AND EXPLANATIONS

Manual - Top Tape Head

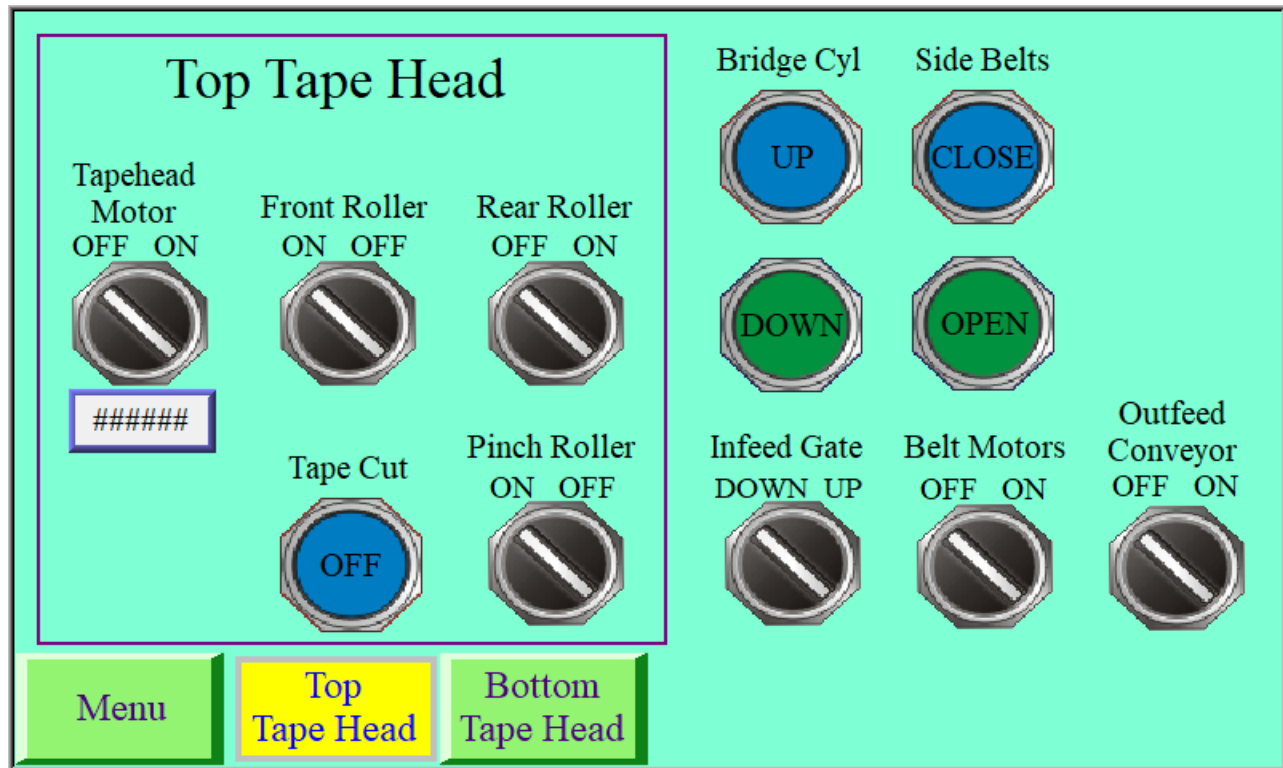


Figure 54: Manual Top Tape Head

Item	Description
Tapehead Motor	When in Manual Mode this toggle will turn on/off the tape head motor.
Front Roller	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the front roller.
Rear Roller	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the rear roller.
Tape Cut	When in Manual Mode this toggle will turn on/off the actuator for the tape cutting mechanism.
Pinch Roller	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the pinch roller.
Bridge Cyl	When in Manual Mode this pair of buttons, when pressed and held, will raise or lower the machine bridge.
Side Belts	When in Manual Mode this pair of buttons, when pressed and held, will open or close the machine belts.
Infeed Gate	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the infeed gate.
Belt Motors	When in Manual Mode this toggle will turn on/off the machine's pair of drive belts.
Outfeed Conveyor	When in Manual Mode this toggle will turn on/off the machine's pair of drive belts.
Menu	Pressing this button will return the operator to the main menu.
Bottom Tape Head	Pressing this button will take the operator to the manual control of the bottom tape head.

HMI WINDOWS AND EXPLANATIONS

Manual - Bottom Tape Head

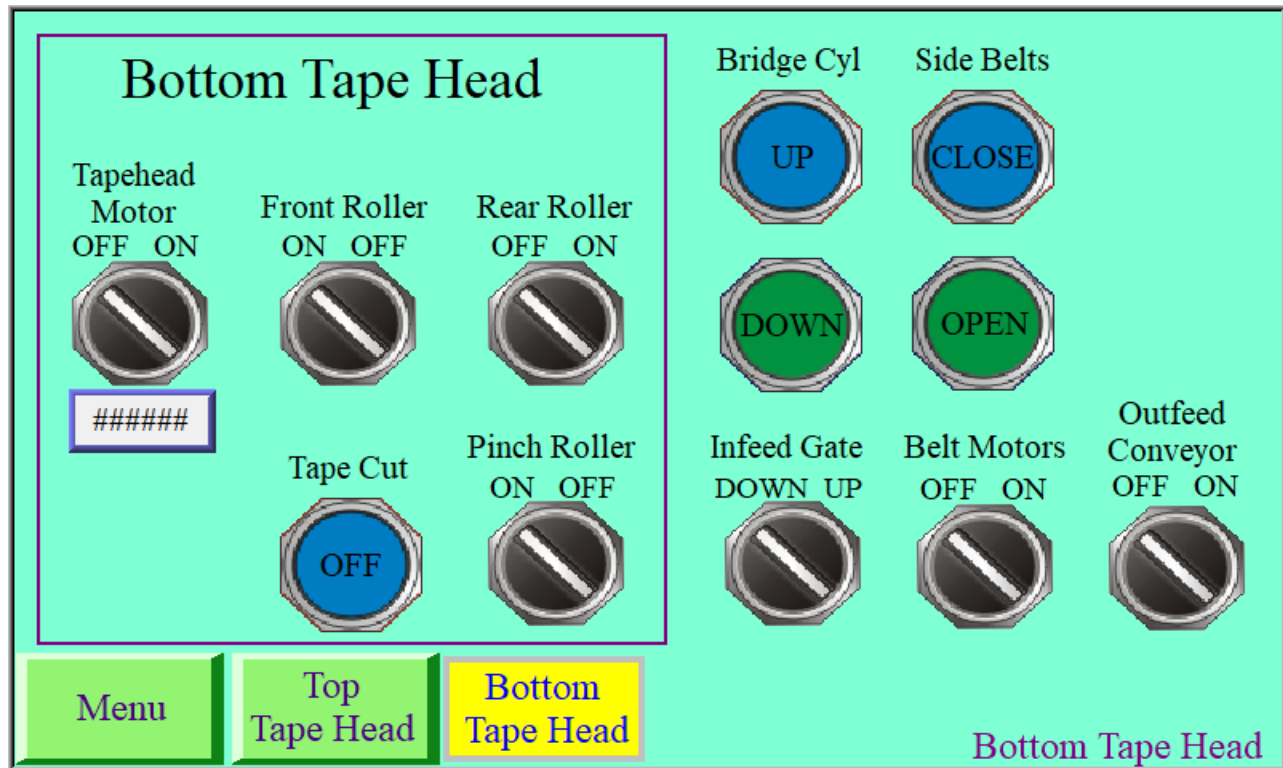


Figure 55: Manual Bottom Tape Head

Item	Description
Tapehead Motor	When in Manual Mode this toggle will turn on/off the tape head motor.
Front Roller	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the front roller.
Rear Roller	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the rear roller.
Tape Cut	When in Manual Mode this toggle will turn on/off the actuator for the tape cutting mechanism.
Pinch Roller	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the pinch roller.
Bridge Cyl	When in Manual Mode this pair of buttons, when pressed and held, will raise or lower the machine bridge.
Side Belts	When in Manual Mode this pair of buttons, when pressed and held, will open or close the machine belts.
Infeed Gate	When in Manual Mode this toggle will turn on/off the pneumatic actuator for the infeed gate.
Belt Motors	When in Manual Mode this toggle will turn on/off the machine's pair of drive belts.
Outfeed Conveyor	When in Manual Mode this toggle will turn on/off the machine's pair of drive belts.
Menu	Pressing this button will return the operator to the main menu.
Top Tape Head	Pressing this button will take the operator to the manual control of the top tape head.

HMI WINDOWS AND EXPLANATIONS

Login Screen

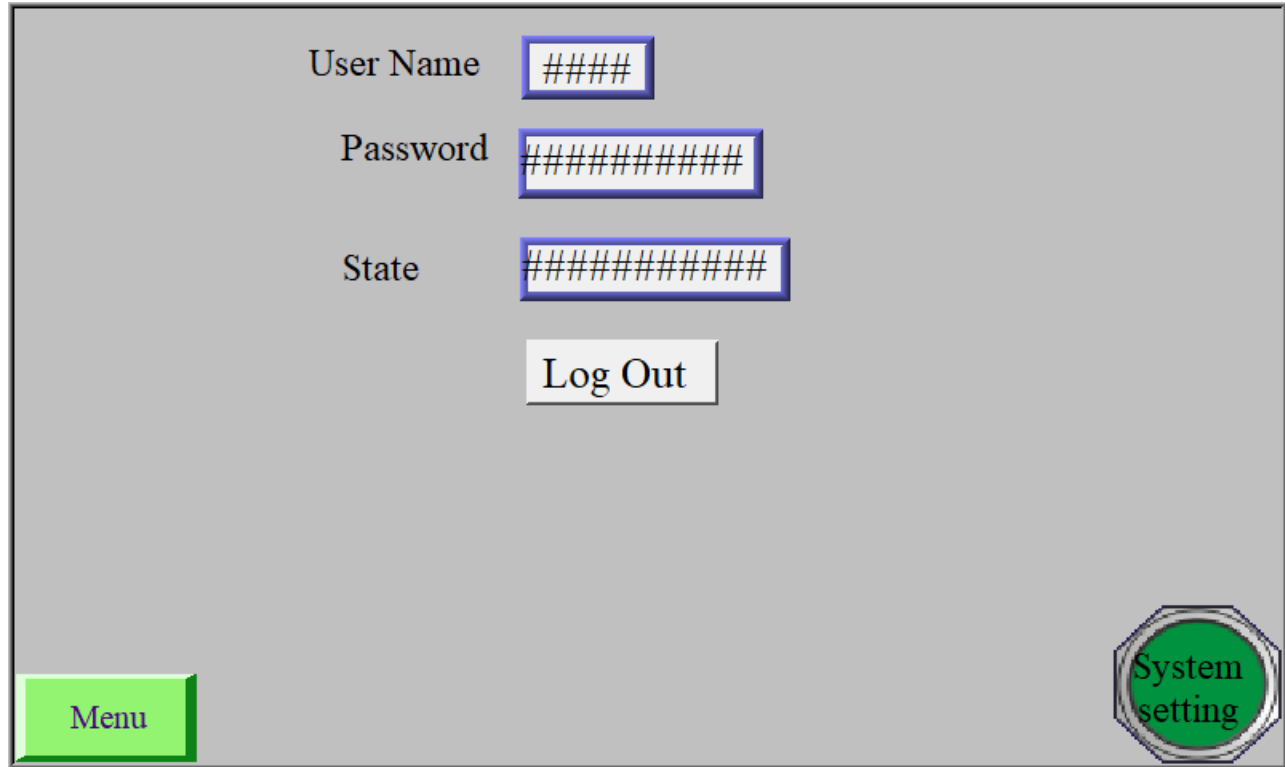


Figure 56: Login Screen

Item	Description
User Name	In this field a user can enter the advanced level they wish to log into.
Password	In this field the user can enter the password for the user level they wish to log into.
State	Displays the current state of the user that is logged in.
Log Out	Any logged in user that presses this button will be logged out and returned to the base level user.
Menu	Pressing this will take the user to the main menu.
System Setting	Pressing this will take a user to the system settings.

HMI WINDOWS AND EXPLANATIONS

Alarm History

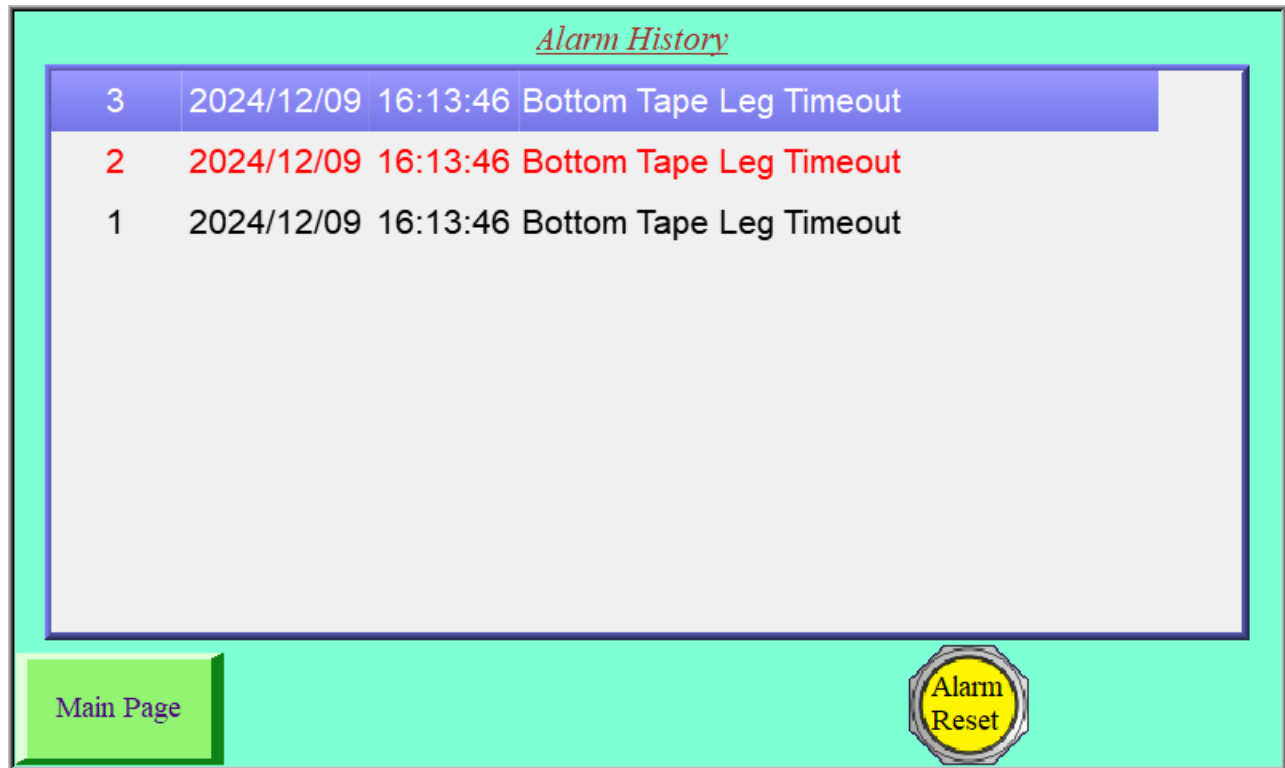


Figure 57: Alarm History

Item	Description
Alarm History	This window will display a log of the alarms and time stamps of when they occurred.
Main Page	This will take the operator to the main menu.
Alarm Reset	Pressing this will silence any current alarms.

HMI WINDOWS AND EXPLANATIONS

IO - Inputs

IO - Inputs

<ul style="list-style-type: none"> ■ X00 - Top Tapehead Counter ■ X01 - Bottom Tapehead Counter ■ X02 - Top Tapehead Connected ■ X03 - Bottom Tapehead Connected ■ X04 - Start Button ■ X05 - Stop Button ■ X06 - Auto (On) / Manual (Off) Switch ■ X07 - Head Down Button ■ X10 - Tape Feed Button ■ X11 - Head Up Button ■ X12 - Top/Both/Bottom Switch - Top ■ X13 - Top/Both/Bottom Switch - Bottom ■ X14 - E-Stop Reset 	<ul style="list-style-type: none"> ■ X15 - Bottom Box Entry Photoeye ■ X16 - Bottom Timing Photoeye ■ X17 - Top Timing Photoeye ■ X20 - Tape Motor Overload ■ X21 - Tape Cut Button ■ X22 - AC Motor Overload ■ X23 - Top Box Entry Photoeye ■ X24 - Top Box Limit Switch ■ X25 - Front Paddle Sensor ■ X26 - Exit Photoeye ■ X27 - Clear Button ■ X34 - Bottom Tape Roll Not Home ■ X36 - Foot Switch
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Menu

IO
Inputs

IO
Outputs

Cycle
Counts

Error
Counts

Figure 58: IO Inputs

Item	Description
IO Inputs	This will display the current state of all inputs on the PLC, inactive inputs will display as red, active inputs will display as green.
Menu	Pressing this will take the operator to the Main Menu.
IO Outputs	Pressing this will take the operator to the IO Outputs page.
Cycle Counts	Pressing this will take the operator to the Cycle Counts page.
Error Counts	Pressing this will take the operator to the Error Counts page.

HMI WINDOWS AND EXPLANATIONS

IO - Outputs

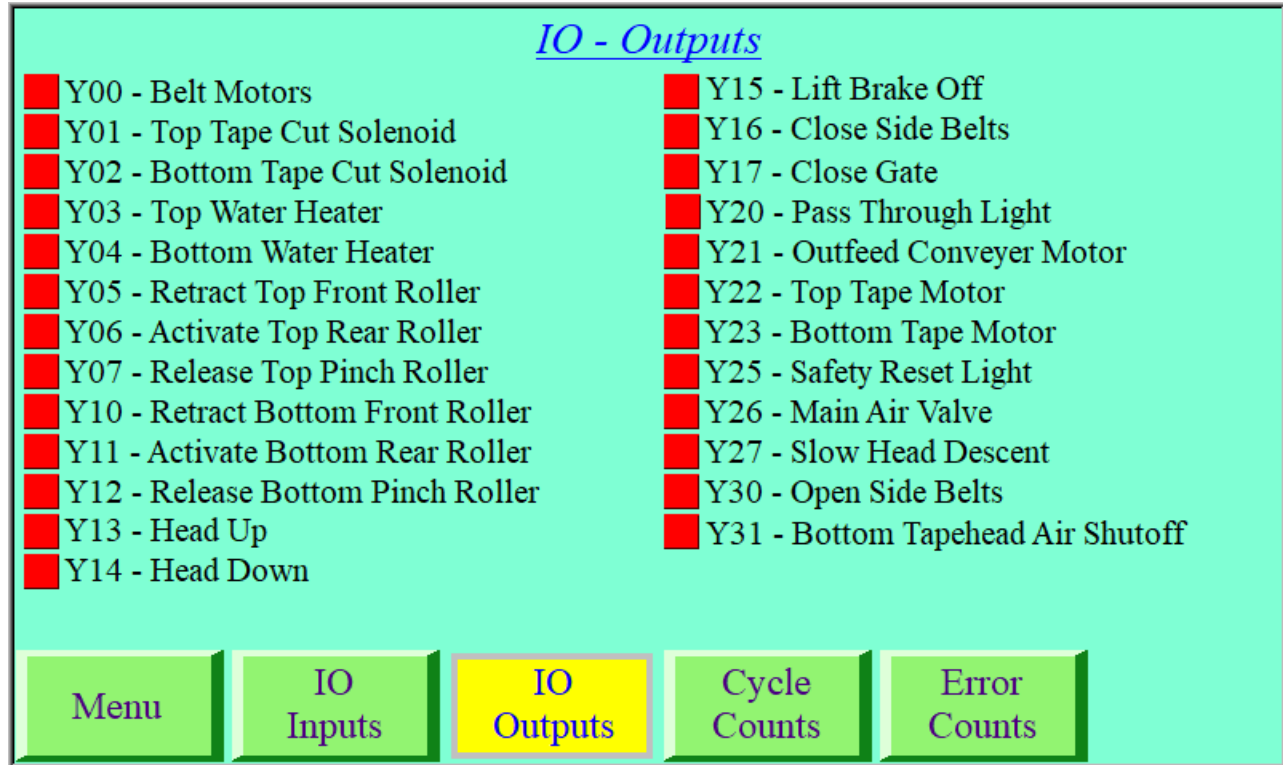


Figure 59: IO Outputs

Item	Description
IO Outputs	This will display the current state of all outputs on the PLC, inactive outputs will display as red, active outputs will display as green.
Menu	Pressing this will take the operator to the Main Menu.
IO Inputs	Pressing this will take the operator to the IO Inputs page.
Cycle Counts	Pressing this will take the operator to the Cycle Counts page.
Error Counts	Pressing this will take the operator to the Error Counts page.

HMI WINDOWS AND EXPLANATIONS

IO - Inputs

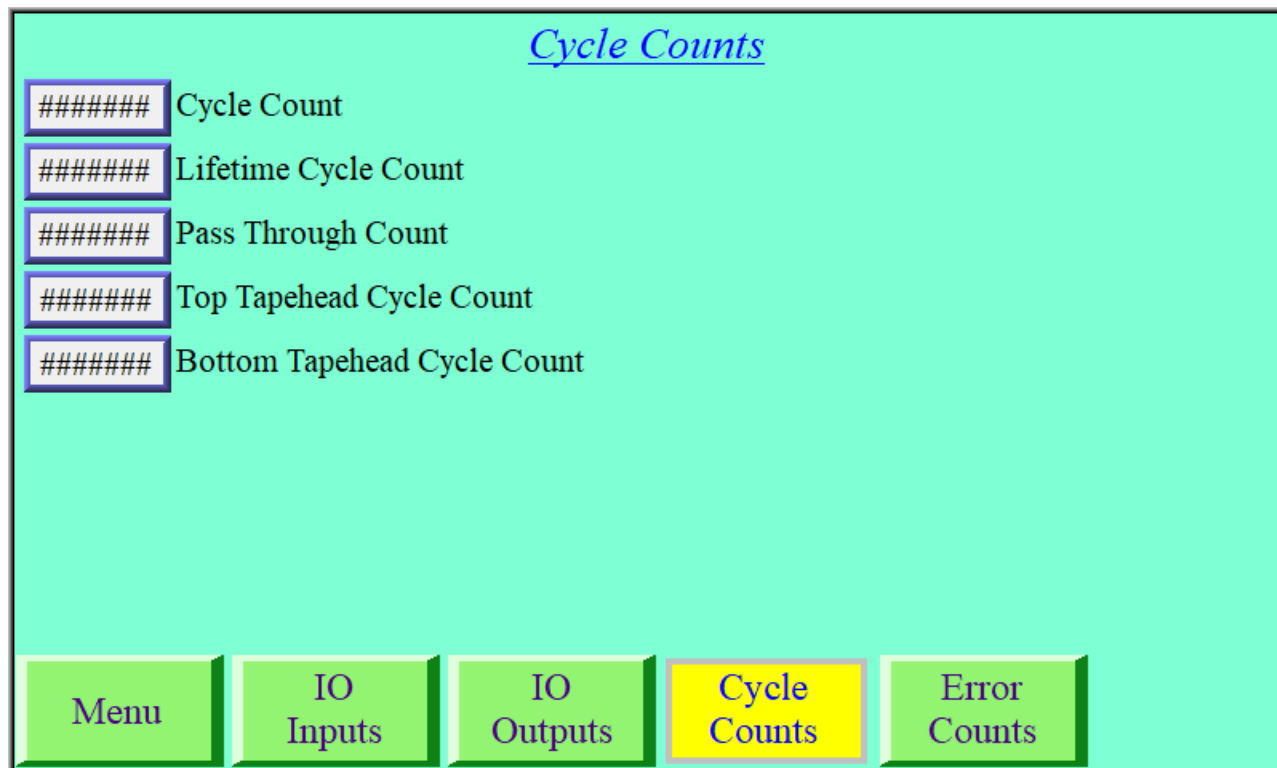


Figure 60: Cycle Counts

Item	Description
Cycle Counts	This will display the current number of cycles on the case sealer.
Menu	Pressing this will take the operator to the Main Menu.
IO Inputs	Pressing this will take the operator to the IO Inputs page.
IO Outputs	Pressing this will take the operator to the IO Outputs page.
Error Counts	Pressing this will take the operator to the Error Counts page.

HMI WINDOWS AND EXPLANATIONS

IO - Outputs

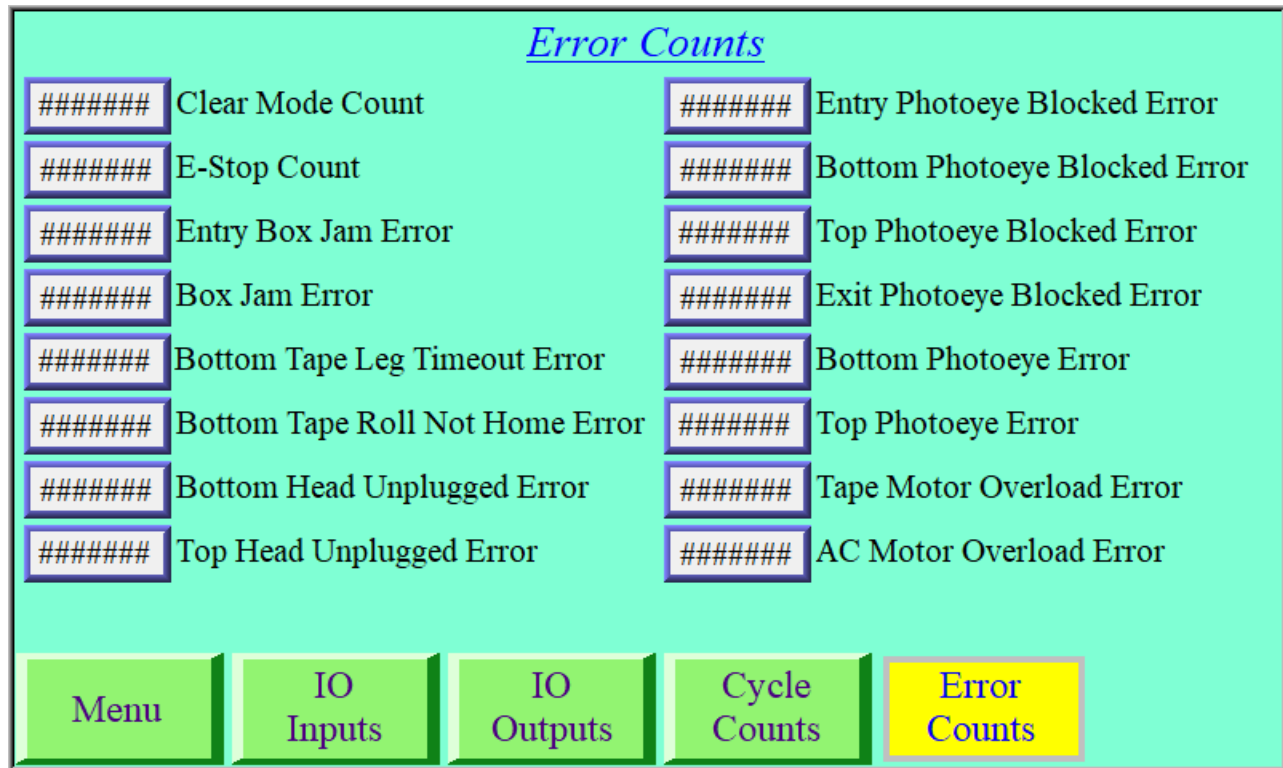


Figure 61: Error Counts

Item	Description
Error Counts	This will display the current total number of errors the case sealer has experienced.
Menu	Pressing this will take the operator to the Main Menu.
IO Inputs	Pressing this will take the operator to the IO Inputs page.
IO Outputs	Pressing this will take the operator to the IO Outputs page.
Cycle Counts	Pressing this will take the operator to the Cycle Counts page.

HMI WINDOWS AND EXPLANATIONS

Top Tape Head Parameters

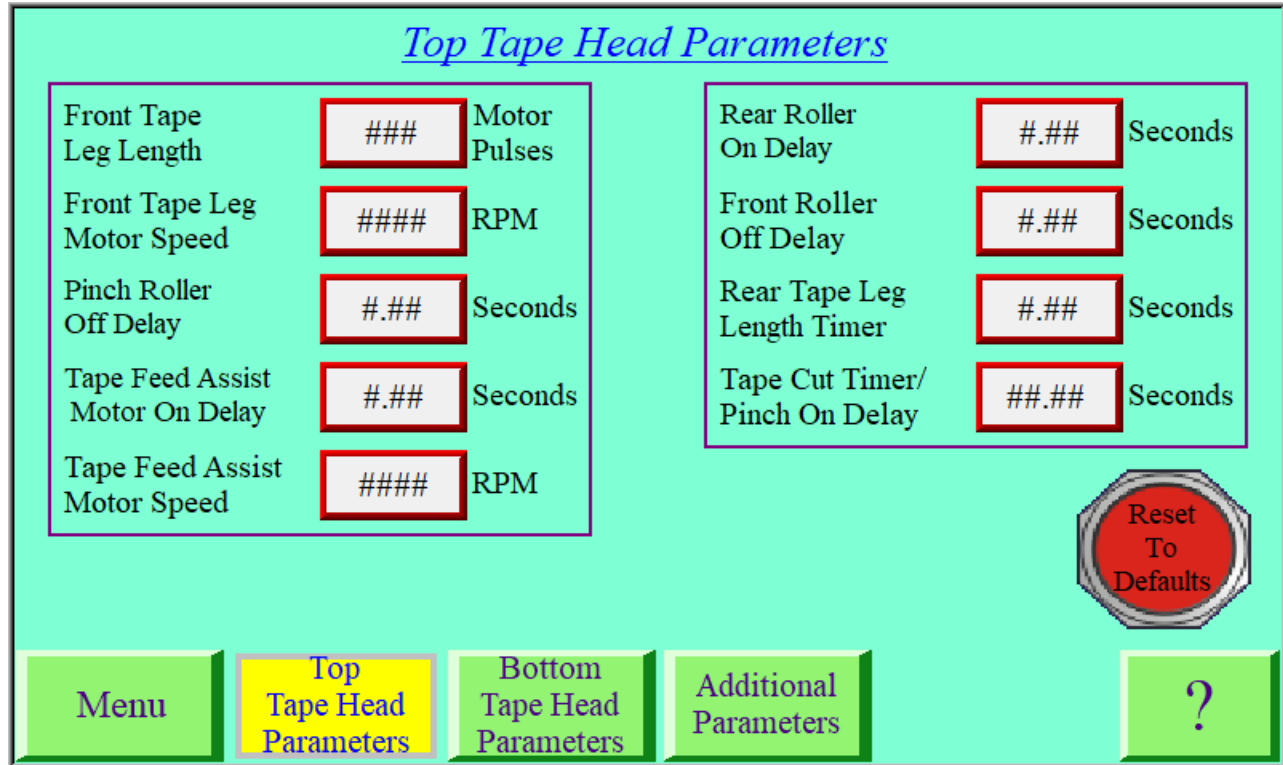


Figure 62: Top Tape Head Parameters

Item	Description
Front Tape Leg Length	The length of tape on the front of the box based on the number of pulses output from the tape head motor. Measure in motor pulses.
Front Tape Leg Motor Speed	Speed setting of the tape head motor while it is dispensing the front tape leg. This is also the speed setting when in manual mode. Measured in RPM.
Pinch Roller Off Delay	Time delay before the pinch roller releases the tape, starting when the front tape leg is finished dispensing. Measured in Seconds.
Tape Feed Assist Motor On Delay	Time delay before the tape head motor turns on to assist feeding tape. Timer starts after the front edge of the box trips the top timing photoeye. Measured in Seconds.
Tape Feed Assist Motor Speed	Speed setting of the tape head motor while it is turning to assist in the tape feeding process. Measured in RPM.
Rear Roller On Delay	Time delay before the rear wipedown roller is pressed against the box. Timing starts after the front edge of the box trips the top timing photoeye. Measured in Seconds.
Front Roller Off Delay	Time delay before the front wipedown roller retracts from the box. Timing starts after the rear edge of the box passes the top timing photoeye. Measured in Seconds.
Rear Tape Leg Length Timer	Timer that sets the length of the tape on the rear of the box. Tape is cut when the timer is done. Timing starts when the rear edge of the box passes the top timing photoeye. Measured in Seconds.
Tape Cut Timer/Pinch On Delay	The length of time the tape cut is on and also the time from the start of the tape cut until the pinch roller closes. Measured in Seconds.
Reset To Defaults	Pressing this button will set all adjustable elements to those set in the engineering menu.
Menu	Pressing this button will return the operator to the main menu.
Bottom Tape Head Parameters	Pressing this button will take the operator to the bottom tape head parameters.
Additional Parameters	Pressing this button will take the operator to additional machine parameters.
"?"	Pressing this button will take the operator to screens explaining the different options.

HMI WINDOWS AND EXPLANATIONS

Bottom Tape Head Parameters

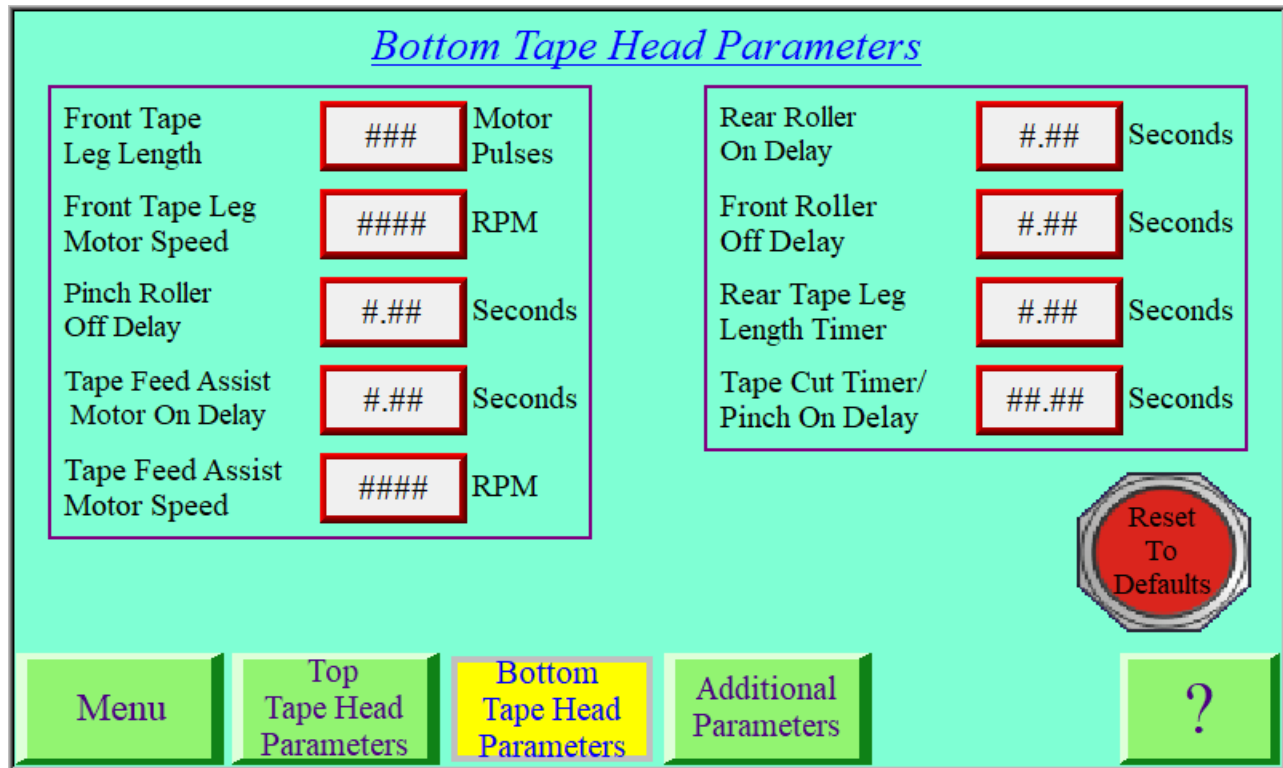


Figure 63: Bottom Tape Head Parameters

Item	Description
Front Tape Leg Length	The length of tape on the front of the box based on the number of pulses output from the tape head motor. Measure in motor pulses.
Front Tape Leg Motor Speed	Speed setting of the tape head motor while it is dispensing the front tape leg. This is also the speed setting when in manual mode. Measured in RPM.
Pinch Roller Off Delay	Time delay before the pinch roller releases the tape, starting when the front tape leg is finished dispensing. Measured in Seconds.
Tape Feed Assist Motor On Delay	Time delay before the tape head motor turns on to assist feeding tape. Timer starts after the front edge of the box trips the bottom timing photoeye. Measured in Seconds.
Tape Feed Assist Motor Speed	Speed setting of the tape head motor while it is turning to assist in the tape feeding process. Measured in RPM.
Rear Roller On Delay	Time delay before the rear wipedown roller is pressed against the box. Timing starts after the front edge of the box trips the bottom timing photoeye. Measured in Seconds.
Front Roller Off Delay	Time delay before the front wipedown roller retracts from the box. Timing starts after the rear edge of the box passes the bottom timing photoeye. Measured in Seconds.
Rear Tape Leg Length Timer	Timer that sets the length of the tape on the rear of the box. Tape is cut when the timer is done. Timing starts when the rear edge of the box passes the bottom timing photoeye. Measured in Seconds.
Tape Cut Timer/Pinch On Delay	The length of time the tape cut is on and also the time from the start of the tape cut until the pinch roller closes. Measured in Seconds.
Reset To Defaults	Pressing this button will set all adjustable elements to those set in the engineering menu.
Menu	Pressing this button will return the operator to the main menu.
Top Tape Head Parameters	Pressing this button will take the operator to the top tape head parameters.
Additional Parameters	Pressing this button will take the operator to additional machine parameters.
"?"	Pressing this button will take the operator to screens explaining the different options.

HMI WINDOWS AND EXPLANATIONS

Additional Parameters

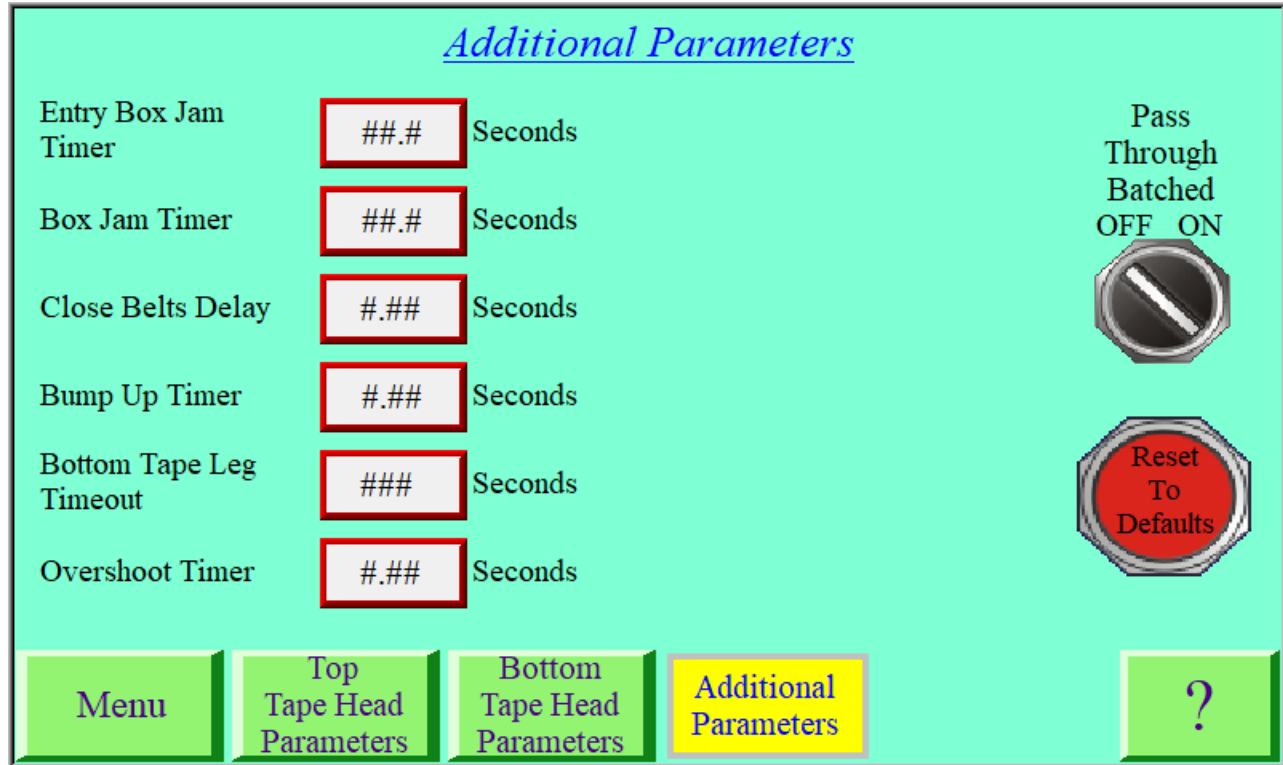


Figure 64: Additional Parameters

Item	Description
Entry Box Jam Timer	Sets the time limit for the box to reach the bottom box timing photoeye. Timer starts when the paddle under the bridge is pressed. If the timer finishes an Entry Box Jam Error will stop the machine. Not used in bottom only mode. Measured in Seconds.
Box Jam Timer	Sets the time limit to process a box. If the timer finishes a Box Jam Error will stop the machine. Measured in Seconds.
Close Belts Delay	Time delay before the side belts close. This timer starts when the top box entry photoeye detects the box. Belts will close when the timer finishes or the Top Box Limit Switch trips. Use this setting if shorter boxes move past the bottom entry photoeye before the Top Box Limit Switch trips. Measure in Seconds.
Bump Up Timer	Determines how high the head will rise up after a box exits. Note: The actual height will also depend on the up and down pressure settings. Measured in Seconds.
Bottom Tape Leg Timeout	Sets the time limit that the bottom tape leg will sit after being dispensed. This timer starts when the tape finishes dispensing and box enters the machine. When the timer runs out the machine will stop and display the Bottom Tape Leg Timeout error. Measured in Seconds. Set this to "0" to disable this function.
Overshoot Timer	Increases the amount of time the bridge will move up after the front paddle is released. Default is 0.2 and Max is 0.3 Seconds.
Pass Through Batched	When the optional foot switch is pressed and this setting is on Pass Through Mode will remain active until the foot switch is pressed a second time.
Reset To Defaults	Pressing this button will set all adjustable elements to those set in the engineering menu.
Menu	Pressing this button will return the operator to the main menu.
Top Tape Head Parameters	Pressing this button will take the operator to the top tape head parameters.
Bottom Tape Head Parameters	Pressing this button will take the operator to the bottom tape head parameters.
"?"	Pressing this button will take the operator to screens explaining the different options.

HMI WINDOWS AND EXPLANATIONS

Engineering Home

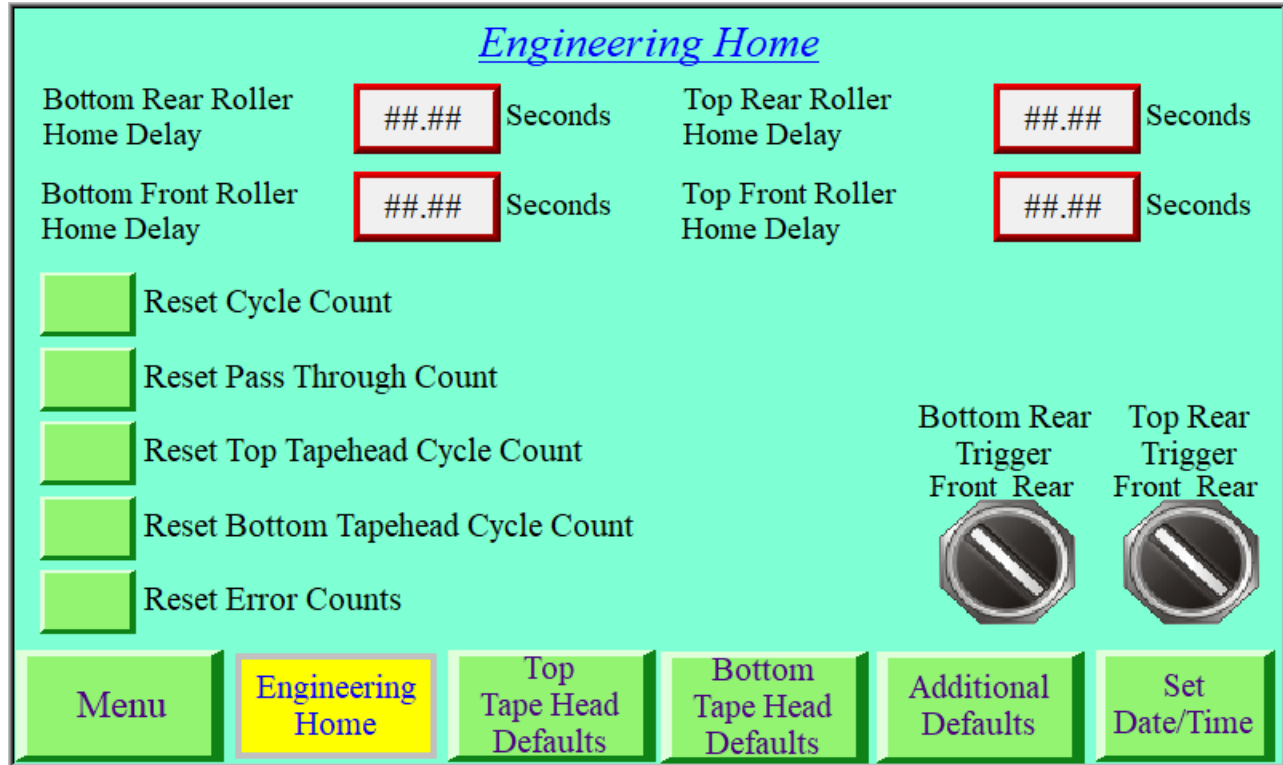


Figure 65: Engineering Home

Item	Description
Bottom Rear Roller Home Delay	Sets the time delay when the rear of the box passes the bottom/top timing photoeye. Measured in Seconds.
Bottom Front Roller Home Delay	Sets the time delay after the rear roller starts moving home. Measured in Seconds.
Top Rear Roller Home Delay	Sets the time delay when the rear of the box passes the bottom/top timing photoeye. Measured in Seconds.
Top Front Roller Home Delay	Sets the time delay after the rear roller starts moving home. Measured in Seconds.
Reset Cycle Count	When an Engineering user presses this it will reset the machine's cycle count to 0.
Reset Pass Through Count	When an Engineering user presses this it will reset the machine's pass through count to 0.
Reset Top Tape Head Cycle Count	When an Engineering user presses this it will reset the machine's top tape head cycle count to 0.
Reset Bottom Tape Head Cycle Count	When an Engineering user presses this it will reset the machine's bottom tape head cycle count to 0.
Reset Error Counts	When an Engineering user presses this it will reset the machine's error counts to 0.
Bottom Rear Trigger	When an Engineering user flips this toggle to on it will switch the bottom tape timing for the rear wipedown rollers, all others stay the same to act off of the rear of the box.
Top Rear Trigger	When an Engineering user flips this toggle to on it will switch the top tape timing for the rear wipedown rollers, all others stay the same to act off of the rear of the box.
Menu	Pressing this will return the operator to the main menu.
Top Tape Head Defaults	Pressing this will take the operator to the top tape head defaults page.
Bottom Tape Head Defaults	Pressing this will take the operator to the bottom tape head defaults page.
Additional Defaults	Pressing this will take the operator to the additional settings defaults page.
"?"	Pressing this button will take the operator to screens explaining the different options.

HMI WINDOWS AND EXPLANATIONS

Top Tape Head Parameters - Defaults

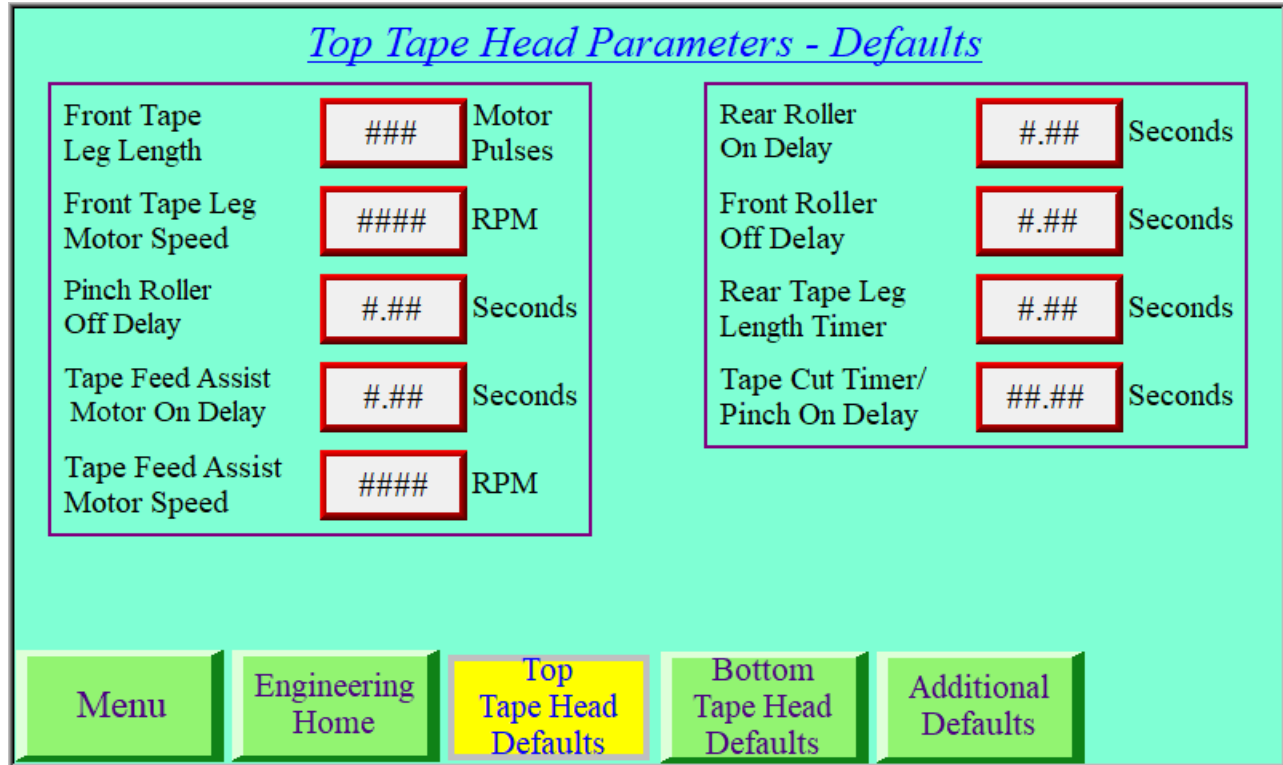


Figure 66: Top Tape Head Parameters - Defaults

Item	Description
Front Tape Leg Length	The length of tape on the front of the box based on the number of pulses output from the tape head motor. Measure in motor pulses. This option sets the system default.
Front Tape Leg Motor Speed	Speed setting of the tape head motor while it is dispensing the front tape leg. This is also the speed setting when in manual mode. Measured in RPM. This option sets the system default.
Pinch Roller Off Delay	Time delay before the pinch roller releases the tape, starting when the front tape leg is finished dispensing. Measured in Seconds. This option sets the system default.
Tape Feed Assist Motor On Delay	Time delay before the tape head motor turns on to assist feeding tape. Timer starts after the front edge of the box trips the top timing photoeye. Measured in Seconds. This option sets the system default.
Tape Feed Assist Motor Speed	Speed setting of the tape head motor while it is turning to assist in the tape feeding process. Measured in RPM. This option sets the system default.
Rear Roller On Delay	Time delay before the rear wipedown roller is pressed against the box. Timing starts after the front edge of the box trips the top timing photoeye. Measured in Seconds. This option sets the system default.
Front Roller Off Delay	Time delay before the front wipedown roller retracts from the box. Timing starts after the rear edge of the box passes the top timing photoeye. Measured in Seconds. This option sets the system default.
Rear Tape Leg Length Timer	Timer that sets the length of the tape on the rear of the box. Tape is cut when the timer is done. Timing starts when the rear edge of the box passes the top timing photoeye. Measured in Seconds. This option sets the system default.
Tape Cut Timer/Pinch On Delay	The length of time the tape cut is on and also the time from the start of the tape cut until the pinch roller closes. Measured in Seconds. This option sets the system default.
Menu	Pressing this button will return the operator to the main menu.
Engineering Home	Pressing this button will return the operator to the engineering menu.
Bottom Tape Head Defaults	Pressing this button will take the operator to the bottom tape head defaults.
Additional Defaults	Pressing this button will take the operator to the additional defaults.

HMI WINDOWS AND EXPLANATIONS

Bottom Tape Head Parameters - Defaults

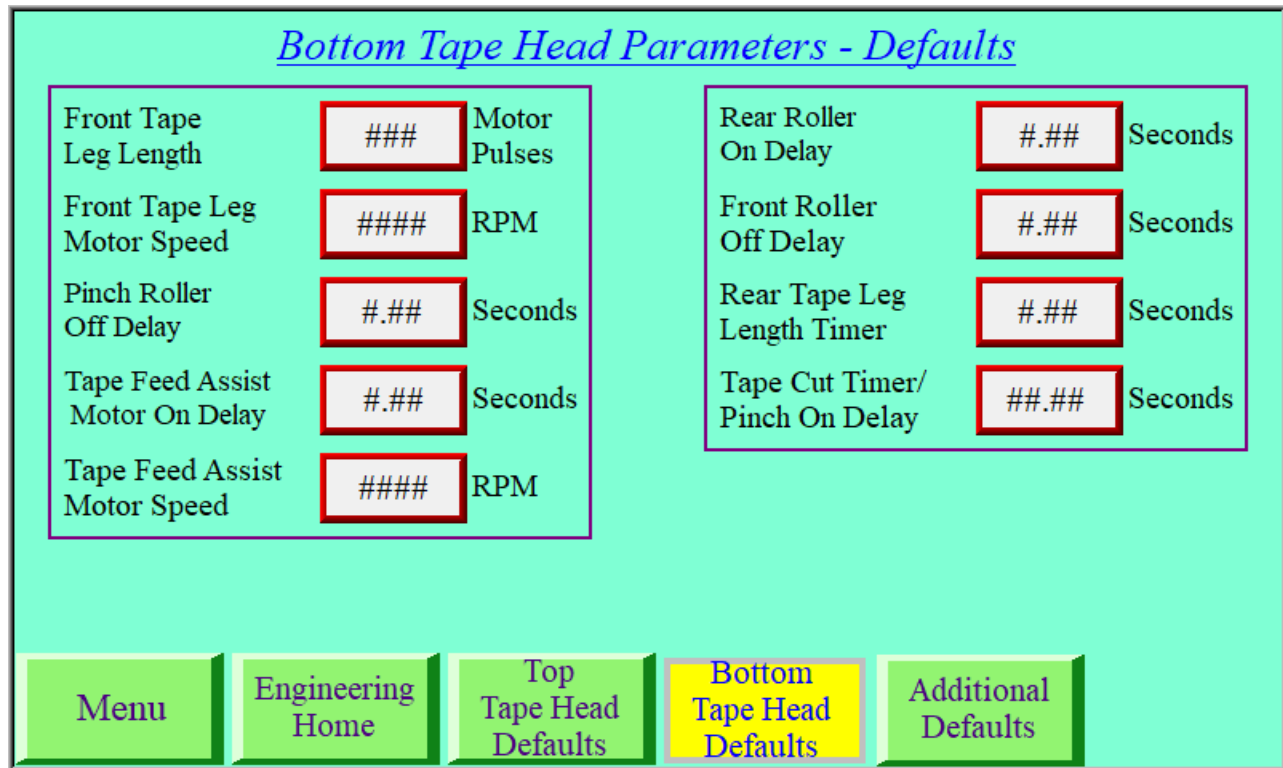


Figure 67: Bottom Tape Head Parameters - Defaults

Item	Description
Front Tape Leg Length	The length of tape on the front of the box based on the number of pulses output from the tape head motor. Measure in motor pulses. This option sets the system default.
Front Tape Leg Motor Speed	Speed setting of the tape head motor while it is dispensing the front tape leg. This is also the speed setting when in manual mode. Measured in RPM. This option sets the system default.
Pinch Roller Off Delay	Time delay before the pinch roller releases the tape, starting when the front tape leg is finished dispensing. Measured in Seconds. This option sets the system default.
Tape Feed Assist Motor On Delay	Time delay before the tape head motor turns on to assist feeding tape. Timer starts after the front edge of the box trips the bottom timing photoeye. Measured in Seconds. This option sets the system default.
Tape Feed Assist Motor Speed	Speed setting of the tape head motor while it is turning to assist in the tape feeding process. Measured in RPM. This option sets the system default.
Rear Roller On Delay	Time delay before the rear wipedown roller is pressed against the box. Timing starts after the front edge of the box trips the bottom timing photoeye. Measured in Seconds. This option sets the system default.
Front Roller Off Delay	Time delay before the front wipedown roller retracts from the box. Timing starts after the rear edge of the box passes the bottom timing photoeye. Measured in Seconds. This option sets the system default.
Rear Tape Leg Length Timer	Timer that sets the length of the tape on the rear of the box. Tape is cut when the timer is done. Timing starts when the rear edge of the box passes the bottom timing photoeye. Measured in Seconds. This option sets the system default.
Tape Cut Timer/Pinch On Delay	The length of time the tape cut is on and also the time from the start of the tape cut until the pinch roller closes. Measured in Seconds. This option sets the system default.
Menu	Pressing this button will return the operator to the main menu.
Engineering Home	Pressing this button will return the operator to the engineering menu.
Top Tape Head Defaults	Pressing this button will take the operator to the top tape head defaults.
Additional Defaults	Pressing this button will take the operator to the additional defaults.

HMI WINDOWS AND EXPLANATIONS

Top Tape Head Parameters - Defaults

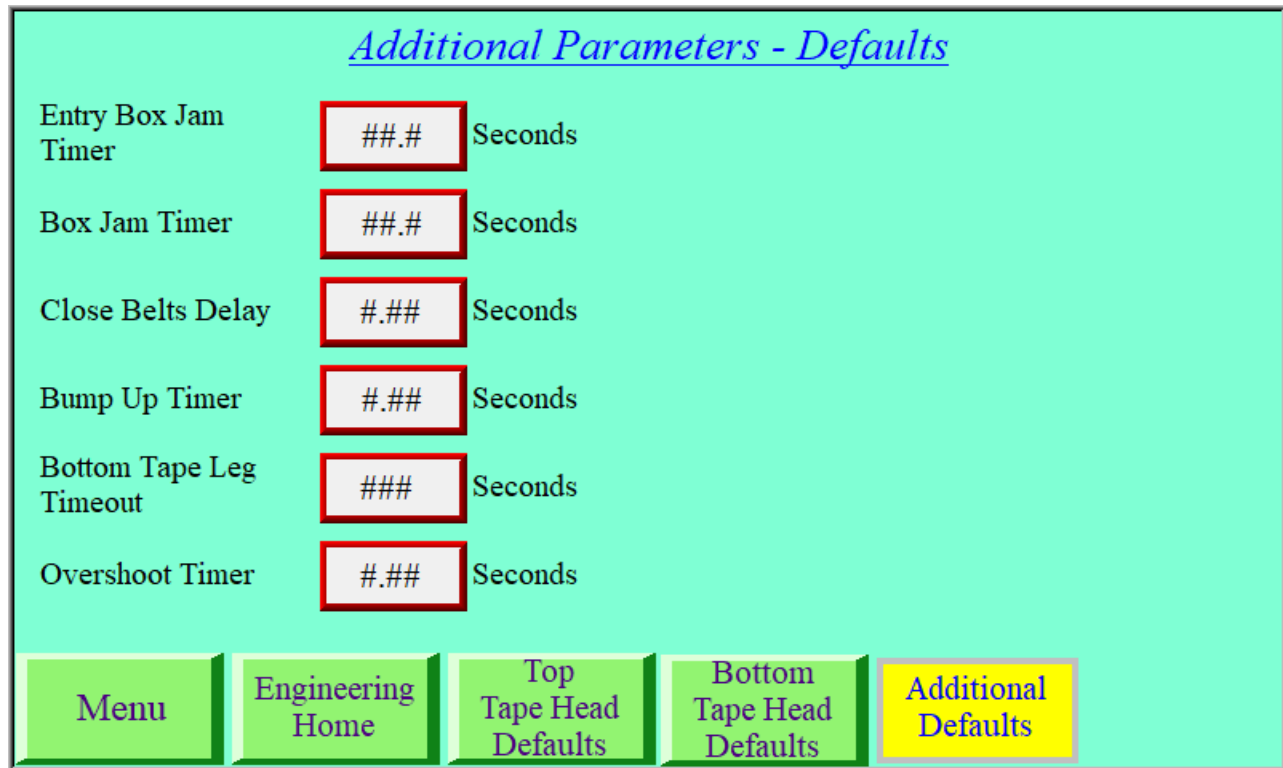


Figure 68: Additional Parameters - Defaults

Item	Description
Entry Box Jam Timer	Sets the time limit for the box to reach the bottom box timing photoeye. Timer starts when the paddle under the bridge is pressed. If the timer finishes an Entry Box Jam Error will stop the machine. Not used in bottom only mode. Measured in Seconds. This option sets the system default.
Box Jam Timer	Sets the time limit to process a box. If the timer finishes a Box Jam Error will stop the machine. Measured in Seconds. This option sets the system default.
Close Belts Delay	Time delay before the side belts close. This timer starts when the top box entry photoeye detects the box. Belts will close when the timer finishes or the Top Box Limit Switch trips. Use this setting if shorter boxes move past the bottom entry photoeye before the Top Box Limit Switch trips. Measure in Seconds. This option sets the system default.
Bump Up Timer	Determines how high the head will rise up after a box exits. Note: The actual height will also depend on the up and down pressure settings. Measured in Seconds. This option sets the system default.
Bottom Tape Leg Timeout	Sets the time limit that the bottom tape leg will sit after being dispensed. This timer starts when the tape finishes dispensing and box enters the machine. When the timer runs out the machine will stop and display the Bottom Tape Leg Timeout error. Measured in Seconds. Set this to "0" to disable this function.
Overshoot Timer	Increases the amount the bridge will move up from pressing the front paddle. Default is 0.2 and Max is 0.3 Seconds. This option sets the system default.
Menu	Pressing this button will return the operator to the main menu.
Engineering Home	Pressing this button will return the operator to the Engineering Menu.
Top Tape Head Defaults	Pressing this button will take the operator to the top tape head defaults.
Bottom Tape Head Defaults	Pressing this button will take the operator to the bottom tape head defaults.

HMI WINDOWS AND EXPLANATIONS

Set Date/Time

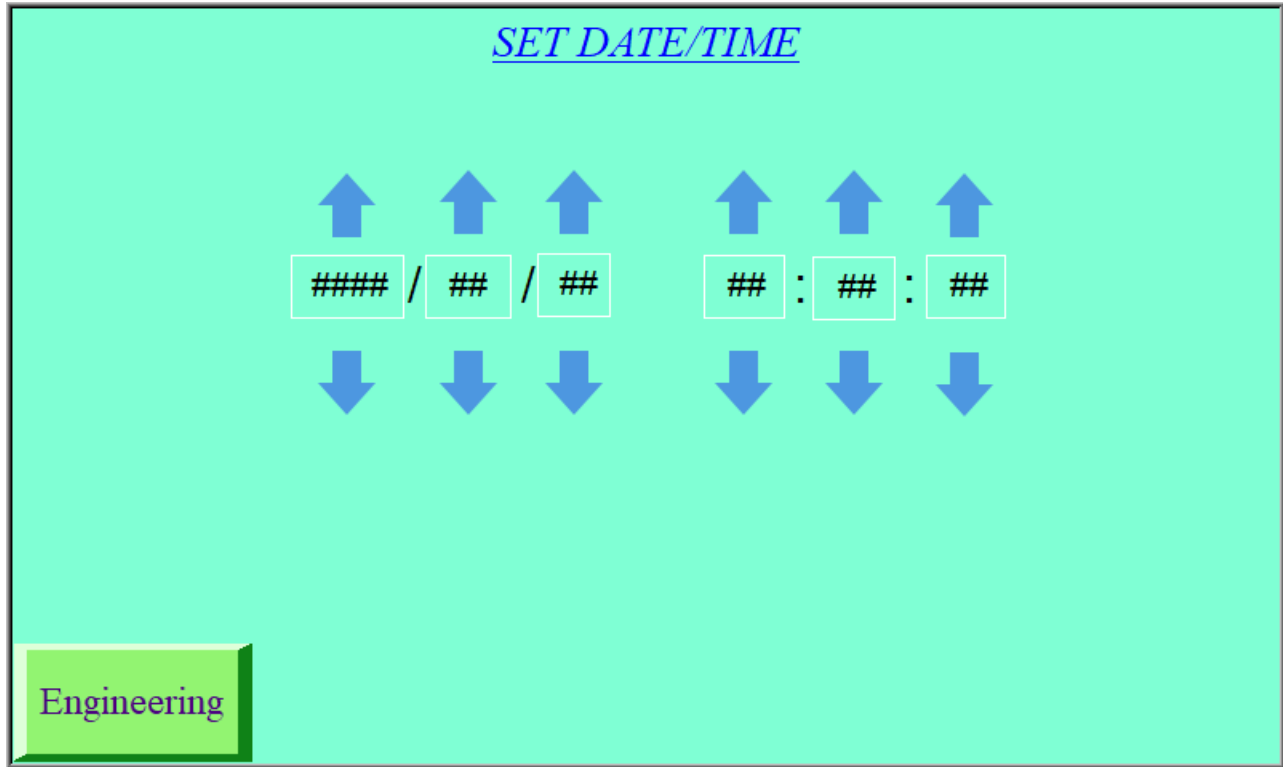


Figure 69: Set Date/Time

Item	Description
Engineering	Pressing this will take the operator to the engineering menu.
Set Date/Time	Using the arrows the operator can set the system date and time. This should be set to the local time zone of the facility the case sealer is installed into.

PREPARING CASES TO BE PROCESSED CONTINUED

Flap Folding

The **RSA 2024-WAT TOP ONLY** is a top sealer that will apply a single strip of IPG brand water activated tape to the center seams of a regular slotted carton (RSC). Cartons processed through the **RSA 2024-WAT TOP ONLY** will need to have all of the flaps closed for proper processing. If flaps are not closed there is a high likelihood that there will be a case jam or tape application error.

1. Fold minor flaps inward as shown in Figure 38
2. Fold major flaps inward, as shown in Figure 39

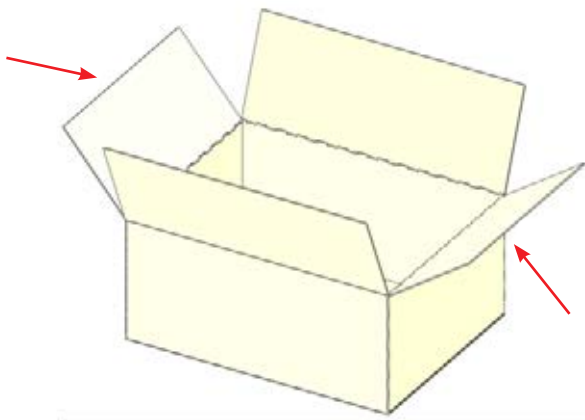


Figure 70: Folding the Minor Flaps

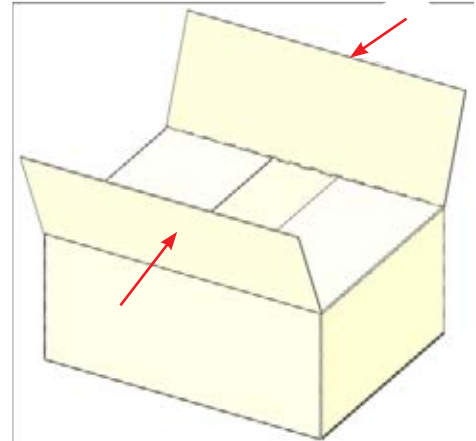


Figure 71: Folding the Major Flaps

Over Filled and Void Filled Cartons

Care should be taken when processing over filled and void filled cartons. Both pose different challenges that may require some adjustments to the case sealer and/or tape heads.

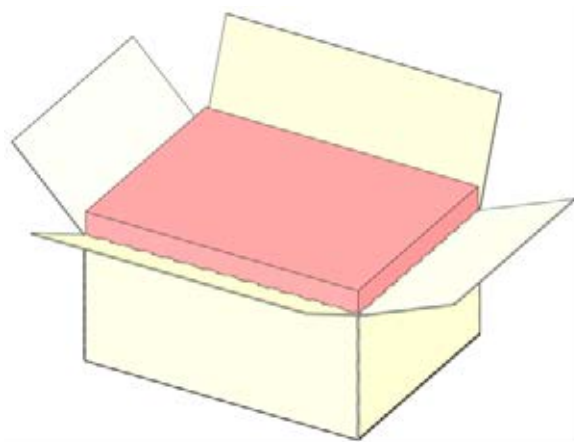


Figure 72: Over Filled Carton

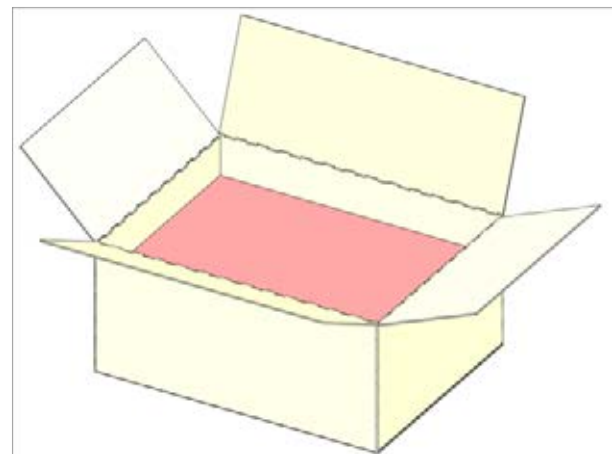


Figure 73: Void Filled Carton

OPERATION MODES

Control Box

The **RSA 2024-WAT TOP ONLY** Case Sealer has four operating modes. The operator selects these modes, using the 2-position switch, push button on the Control Box, and the optional foot switch.

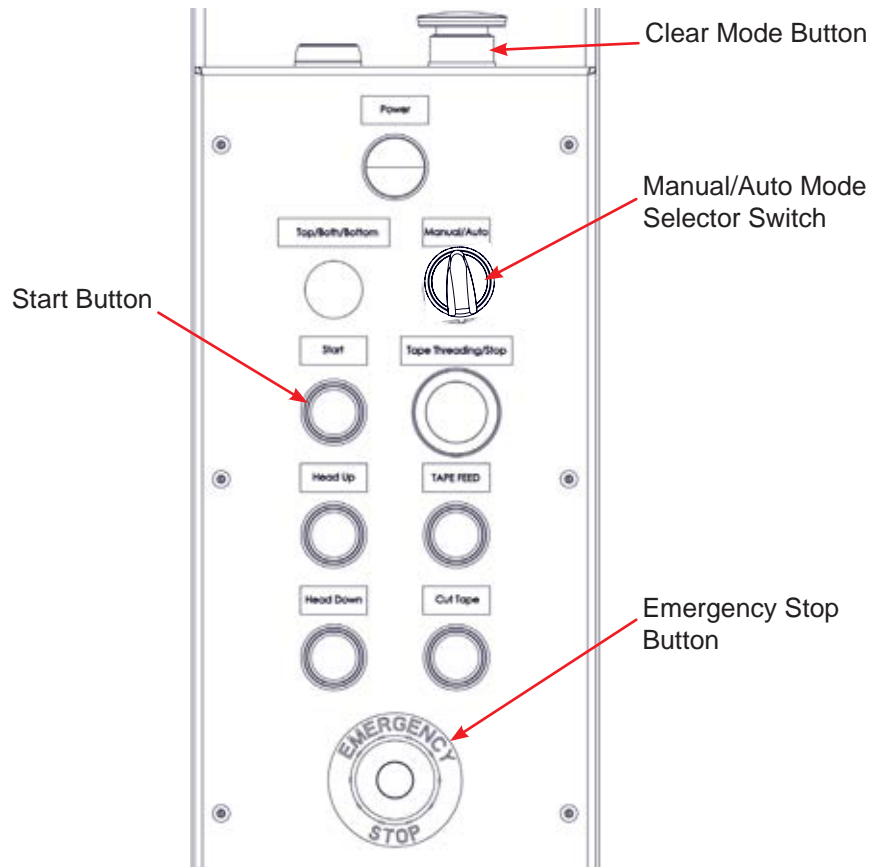


Figure 74: Operator Controls

Manual Mode

This mode is used for troubleshooting and loading tape on to machine. Manual Mode is entered when the operator flips the “Manual/Auto” Switch to Manual. This will stop the belts and if a case was being processed it will stop the sealing procedure.

In Manual Mode an operator can actuate any of the machine’s pneumatic and/or electric movements through selectable options on the Manual Screens of the HMI. For a list of all the functions on the Manual Screen please see the HMI Window Explanations section of this manual.

1. Ensure that the compressed air is plugged in and pressure regulator set at 75 PSI.
2. Turn the control selector to Manual mode.
3. Once set to Manual, buttons on control box can be used for troubleshooting or loading tape.
4. See Operator Control Box, for an explanation of buttons.

OPERATION MODES

Auto Mode

This is the standard operating mode of the machine. In this mode, the belt motors will be active. The bridge will remain in place. When a case is presented to the machine, if it is taller than the current position of the bridge, the operator will need to push the case against the front paddle to raise the bridge. When the case is placed up to the machine's gate the bridge will lower and belts will close automatically. Once the belts make contact with the case it will pull it through the machine to process, applying a single strip of IPG brand water activated tape to the top and/or bottom center seam.

1. Ensure that the compressed air is plugged and pressure regulator set to 75 PSI.
2. Press the Reset button if it is blinking.
3. On the Operator Control Box, press the green Start button, the drive belts will turn on.
4. Introduce a case to the infeed of the case sealer. Grasping the case from the top rear. Do not place hands in front of case or on the sides.
5. Push the case into the case sealer.
6. The case sealer will then take and process the case.

Clear Mode

Clear Mode is accessed by pressing the blue mushroom button labeled "Clear" on the top of the operator control box. Clear mode is used primarily when there is a case jam. When pressing the Clear button the case sealer's bridge and belts will open to their maximum positions and will cut the tape if it was dispensed.



WARNING: ENSURE THAT THE OPERATOR'S HANDS ARE AWAY FROM THE CONTACT AREA BETWEEN THE BOTTOM OF THE CARTON AND THE MOVING BELTS. OPERATORS SHOULD GRIP THE CASE AT THE REAR AND LET GO ONCE THE MACHINE HAS TAKEN THE CASE. IMPROPER HANDLING CAN LEAD TO INJURY.



WARNING: KEEP HANDS, HAIR, LOOSE CLOTHING, AND JEWELRY AWAY FROM MOVING BELTS, AND TAPE HEADS



WARNING: KEEP HANDS AND OTHER BODY PARTS CLEAR OF THE BOTTOM OF THE MACHINE BRIDGE. THIS MAY POSE A MINOR CRUSH HAZARD.



WARNING: DO NOT ATTEMPT TO REMOVE ANY JAMMED CASE FROM A CASE SEALER THAT IS CURRENTLY ON. DO NOT ATTEMPT TO PUSH A JAMMED CASE THROUGH THE MACHINE. THE MACHINE HAS COMPONENTS UNDER PNEUMATIC PRESSURE. NOT FOLLOWING THE PROPER CASE JAM CLEARING METHODS CAN RESULT IN INJURY.

OPERATION MODES

Pass Through Mode

Pass Through Mode is activated when an operator presses the optional foot switch. This mode will allow for material to process through the case sealer without being taped. There are several variations on Pass Through Mode that are selectable through the settings in the HMI. These may be adjusted at any time by a supervisor with access to the case sealer's setting.

There are two primary methods of setting up Pass Through Mode: Batch and Single.

Pass Through Batch Mode

When the Batch Mode is turned on in the case sealer's settings, the operator will enter Pass Through Mode by a single press of the supplied foot switch. This will allow for items to be sent through the case sealer without tape being applied. The case sealer will remain in Pass Through Mode processing every item presented to it without applying tape until the operator presses the foot switch for a second time. On the second press the case sealer will return to Auto Mode and apply tape to the cases presented to it.

Pass Through Single Mode

When Batch Mode is turned off in the case sealer's settings, the operator will enter Pass Through Mode by a single press of the supplied foot switch. This will allow for a single item to be sent through the case sealer without tape being applied. Once the item has exited the case sealer it will return to Auto Mode and apply to the cases presented to it.

If an operator holds down the foot switch while in Pass Through Single Mode the case sealer will not apply tape to any item presented to it. The operator will need to release the foot switch to return to Auto Mode.

TROUBLESHOOTING

The **RSA 2024-WAT TOP ONLY** Case Sealer is fabricated with high quality components that provide trouble-free operation for a long period of time. However, should a problem occur, we recommend that you consult the following pages. If the problem you encounter is not discussed in these pages, call IPG Machinery Support at 813-345-3070 or at machsupp@itape.com.

Electrical Box Components

The below diagram calls out all components within the electrical cabinet of the RSA 2024-SB. If you believe access to the electrical cabinet is necessary please contact IPG Machinery Support at 813-345-3070 or machsupp@itape.com.



WARNING: ONLY QUALIFIED PERSONNEL SHOULD ACCESS THE ELECTRICAL CABINET. UNDER NO CIRCUMSTANCE SHOULD THE OPERATOR OPEN THE ELECTRICAL CABINET.

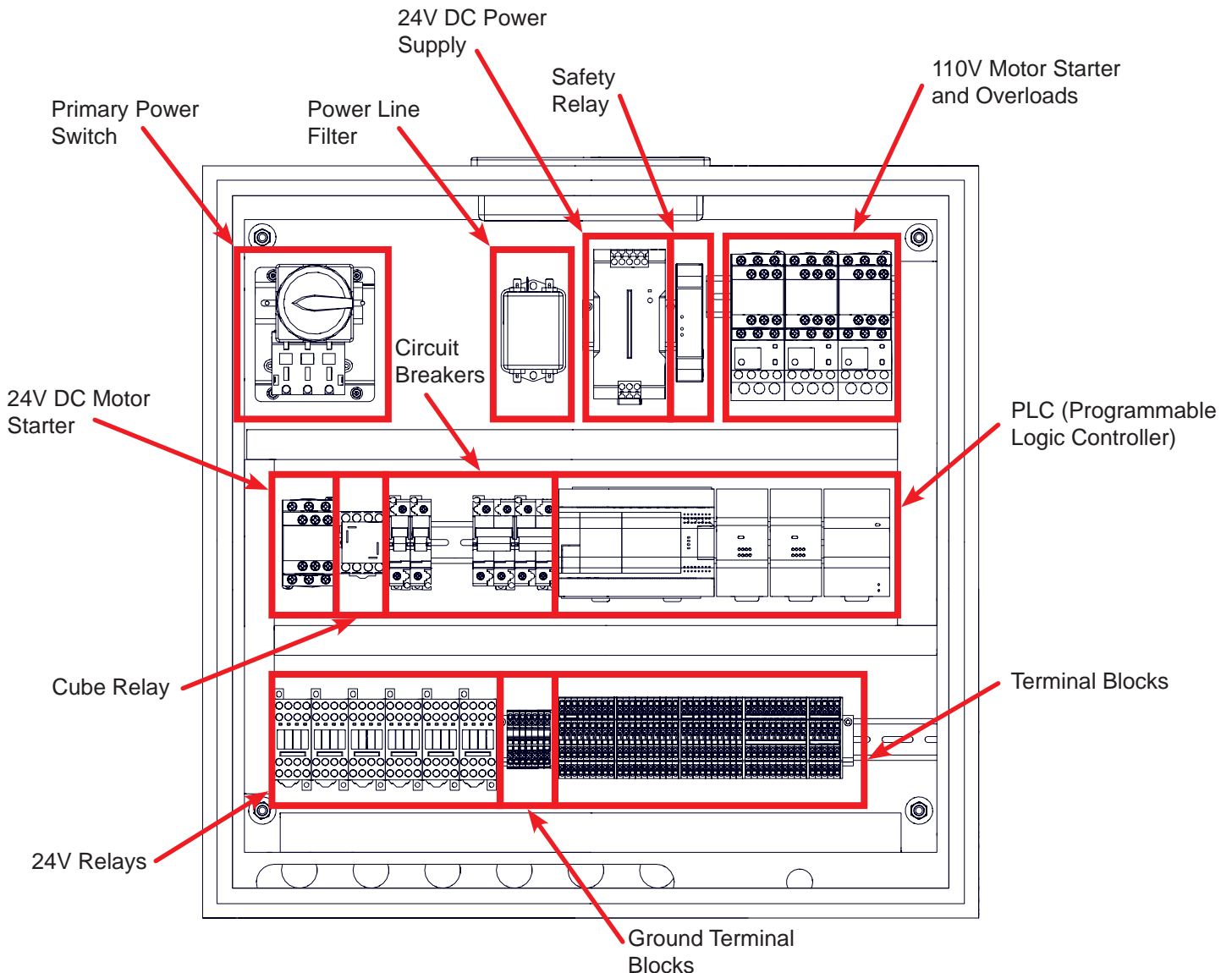


Figure 75: Electrical Cabinet Components

TROUBLESHOOTING

Motor Overload



WARNING: MAKING ADJUSTMENTS TO MOTOR OVERLOADS OR ANYTHING IN THE ELECTRICAL CABINET SHOULD ONLY BE PERFORMED BY TECHNICIANS WHO HAVE BEEN APPROVED BY AN AUTHORIZED IPG REPRESENTATIVE. RISK OF ELECTRICAL SHOCK AND/OR EXPOSURE TO HIGH VOLTAGE COMPONENTS CAN OCCUR.

In the event the Start button is pressed, and the machine is in automatic mode, the motors do not start it is recommended to check the motor overloads in the electrical cabinet.

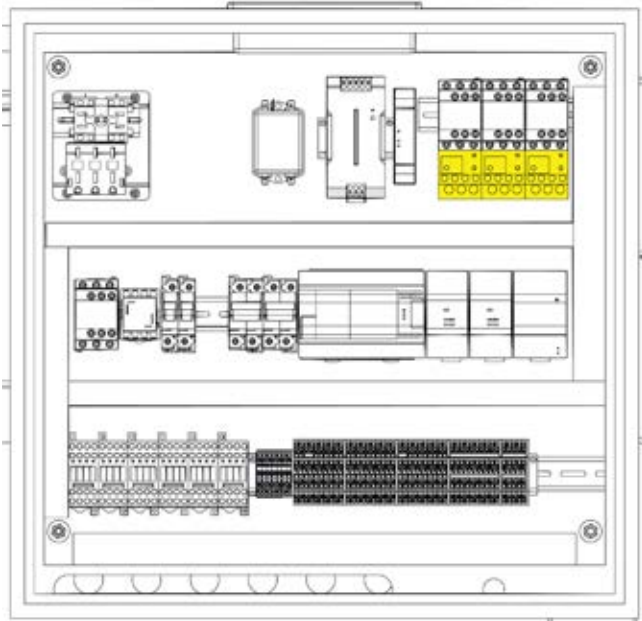


Figure 76: Motor Overload

The electric motors are protected with an automatic re-settable overload. Push on the top blue button to reset. The current setting should be set at 110% of the FLA (Full Load Amps) of a single motor.

In the event the motor continues to trip the overload the adjustable scale may be increased a small amount. On the Thermal Overload, protected by the hinged cover, is the adjustable dial.

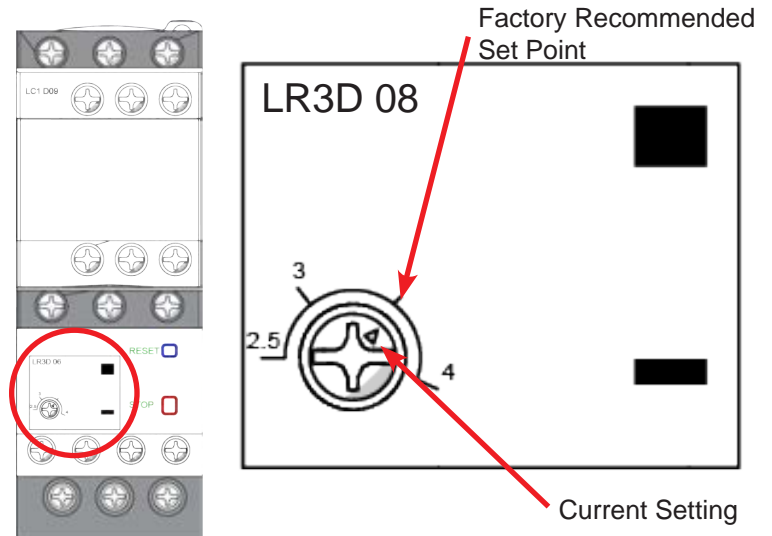


Figure 77: Overload Adjustment

From the factory this dial should be set with the arrow pointing towards the shown point above.

In some cases this dial may be set too low resulting in false overloads. This will most likely be noticed when processing cases near the maximum weight limits of the case sealer.

TROUBLESHOOTING

Q & A

The following is a short set of brief questions and answers for some mild troubleshooting in WAT case sealers. More in-depth troubleshooting can be found in this section.

Q: How long is the tape good for once it gets wet?

It is recommended to process a case within 45 seconds of the initial tape leg being dispensed. Any longer the adhesive will begin to dry and will not stick to the case. Case sealers running the newest software package will have a time out system that will automatically cut the tape and turn off the belts in the event this happens.

Q: Are the top and bottom tape heads interchangeable?

IPG Water Activated Tape Heads are manufactured in a top or bottom configuration and are not interchangeable. A top Water Activated Tape Head from one IPG manufactured case sealer can be transferred to another in the top position and the same with the bottom.

IPG manufacturers a 24v version of the WAT heads for adaptation into other equipment. Do not attempt to install a 24v tape head into a machine that is not wired correctly for it.



CAUTION: BE SURE TO NOT INSTALL 24V TAPE HEADS INTO EQUIPMENT THEY ARE NOT RATED FOR. THIS WILL CAUSE DAMAGE TO THE TAPE HEAD AND MAY RESULT IN INJURY.

Q: Can pressure sensitive tape heads replace WAT ones?

Due to manufacturing differences there is not a way to drop in replace the WAT heads with pressure sensitive counterparts.

Q: What is the best way to clean the tape heads?

It is recommended to clean the tape path with a mild detergent and water solution. Do not use any harsh industrial cleaners as they can deteriorate parts quickly. Do not use excessive amounts of water and dry the tape head soon after washing. Be sure the tape path is dry before reinstalling the tape head or rethreading tape.

Q: Can we reverse the side the tape is loaded on?

On WAT case sealers it is a special order to reverse the top tape mandrel to allow for it to be loaded from the reverse side. The bottom tape carriage cannot be reversed.

Q: Can I use a mobile compressor to operate the case sealer?

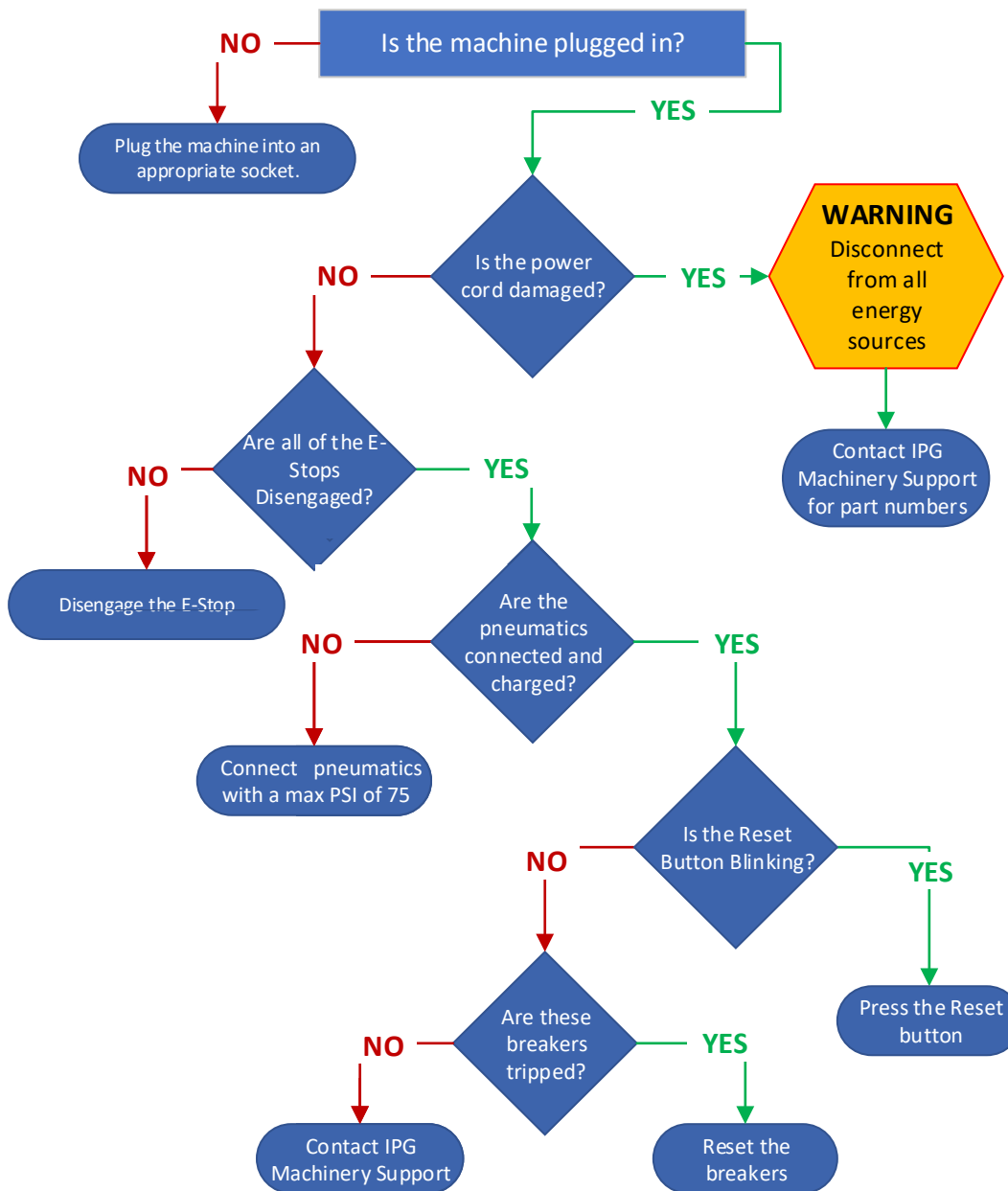
It is recommended to use a large compressor capable of producing a sustained 9 CFM at 90 PSI. If a compressor is used that is below this level it is possible to have unintended action, poor taping, or even a lack of pneumatic movement entirely. Smaller compressors are also more likely to introduce moisture into the air lines which can cause a degradation of internal components on the case sealer and tape head(s). Use only clean dry air with IPG manufactured equipment.

Q: Can I change machine settings?

While IPG WAT Case Sealers can have their settings adjusted through a password protected portion of the HMI screen it is recommended to contact IPG Machine Support prior to making any changes. The machine should have been set up by an Authorized IPG Representative and any alterations that would need to have been made on site for your specific box suite would have been saved. Making changes to the settings could result in poor tape application, unintended movement, or potentially damage the equipment.

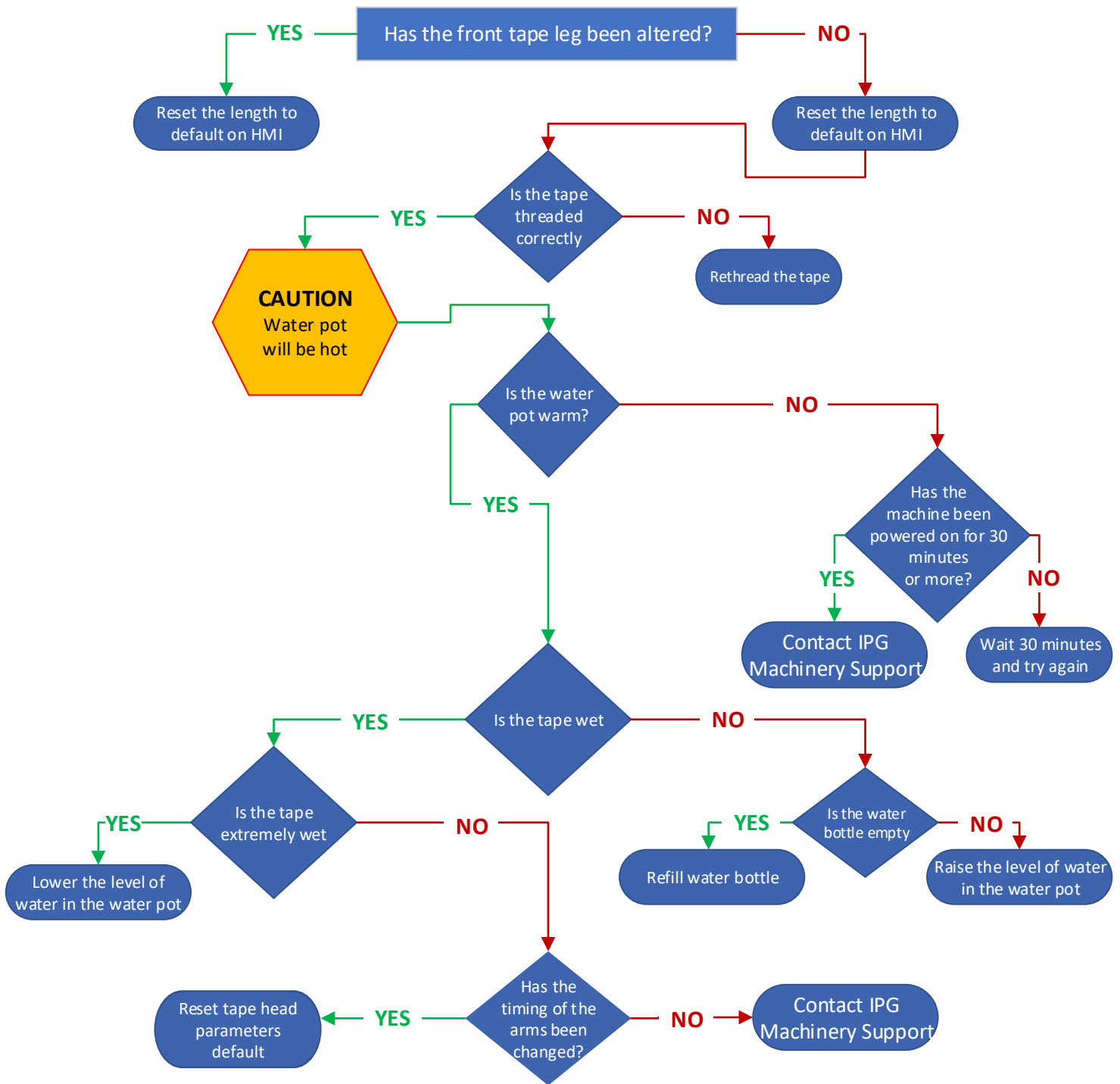
TROUBLESHOOTING

The Machine is Turned on and Nothing Happens



IPG Machinery Support
877-447-4832 Option 4

Front Tape Leg Not Sticking

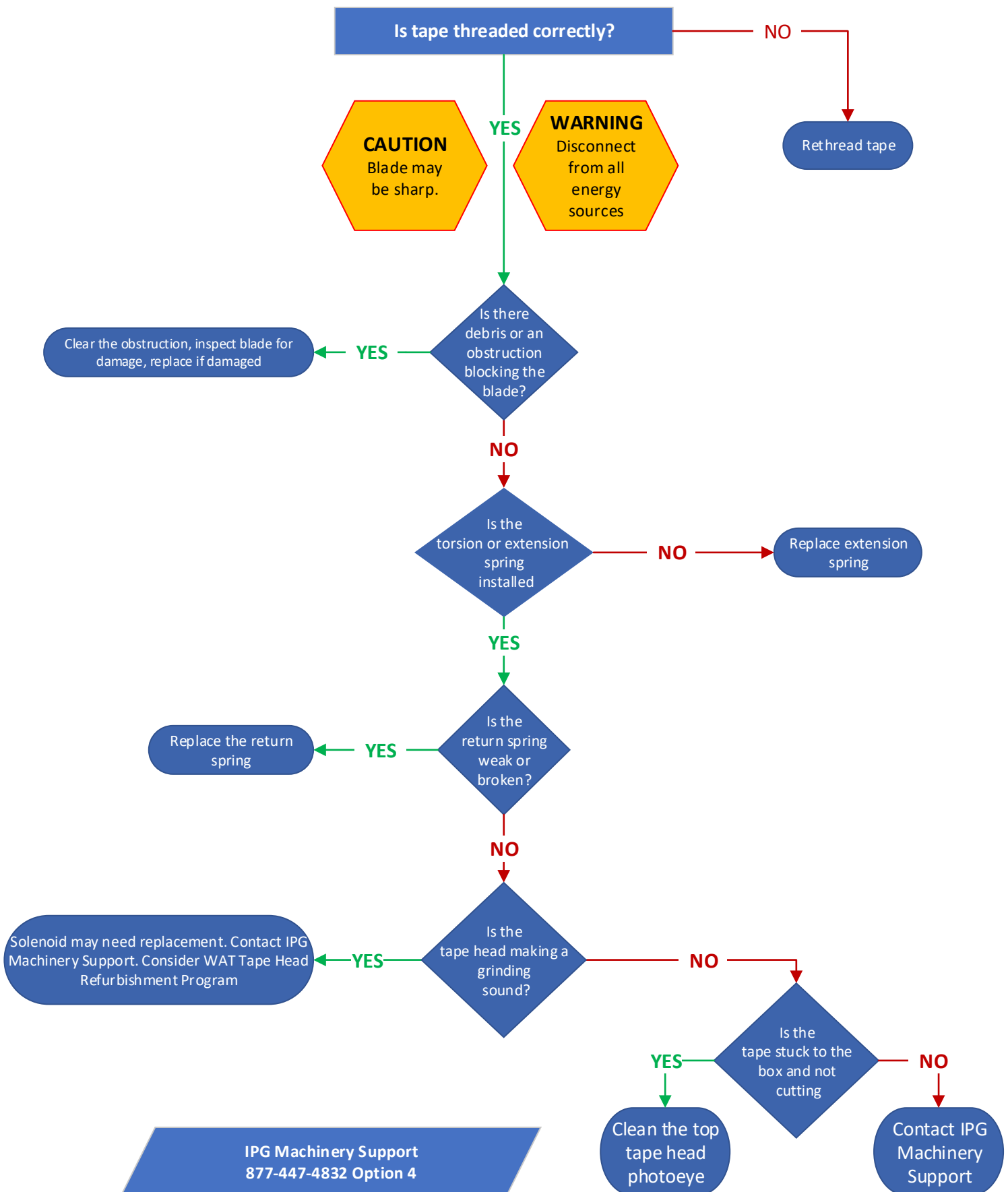


IPG Machinery Support
877-447-4832 Option 4

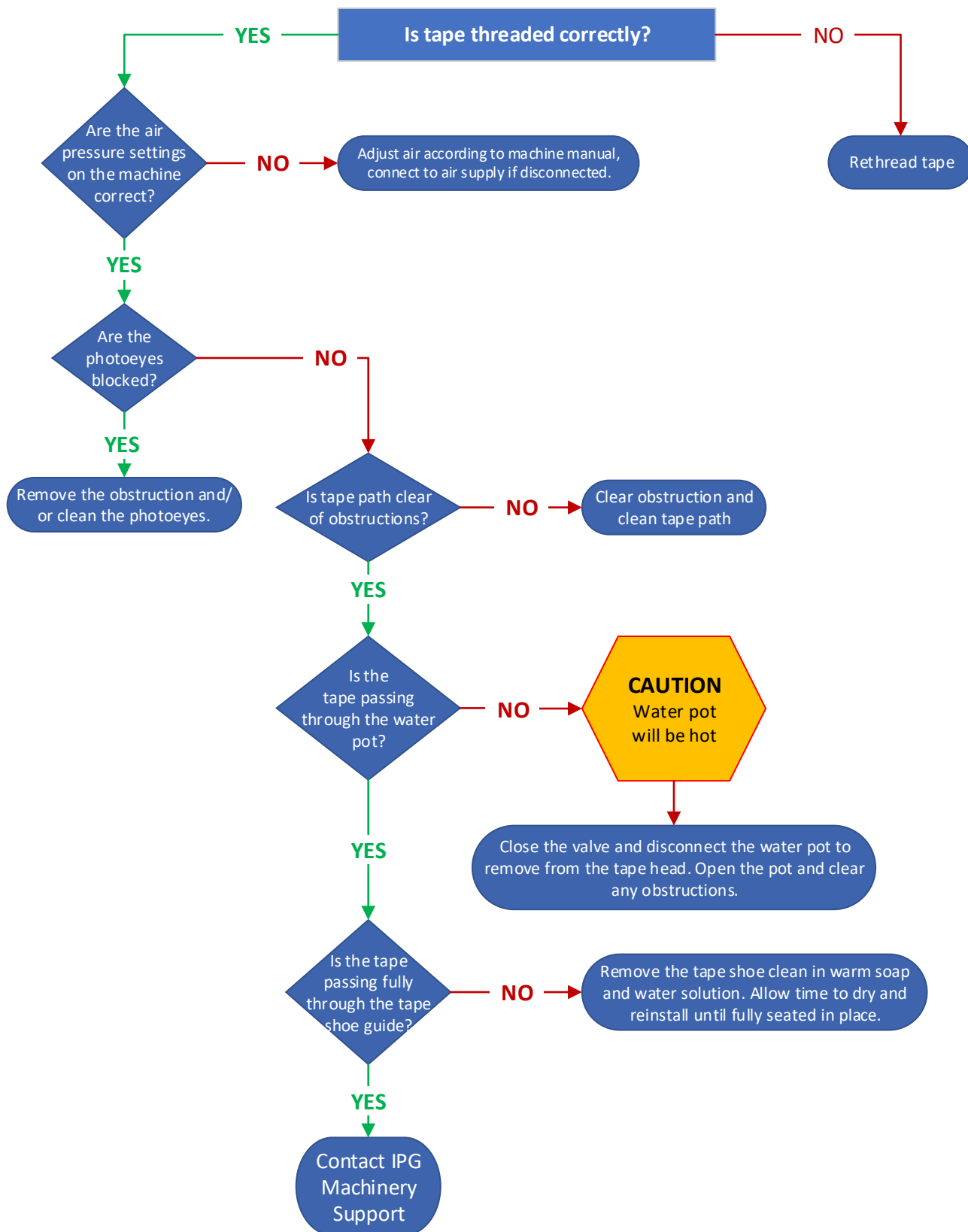
Rear Tape Leg Not Sticking



Tape Does Not Cut

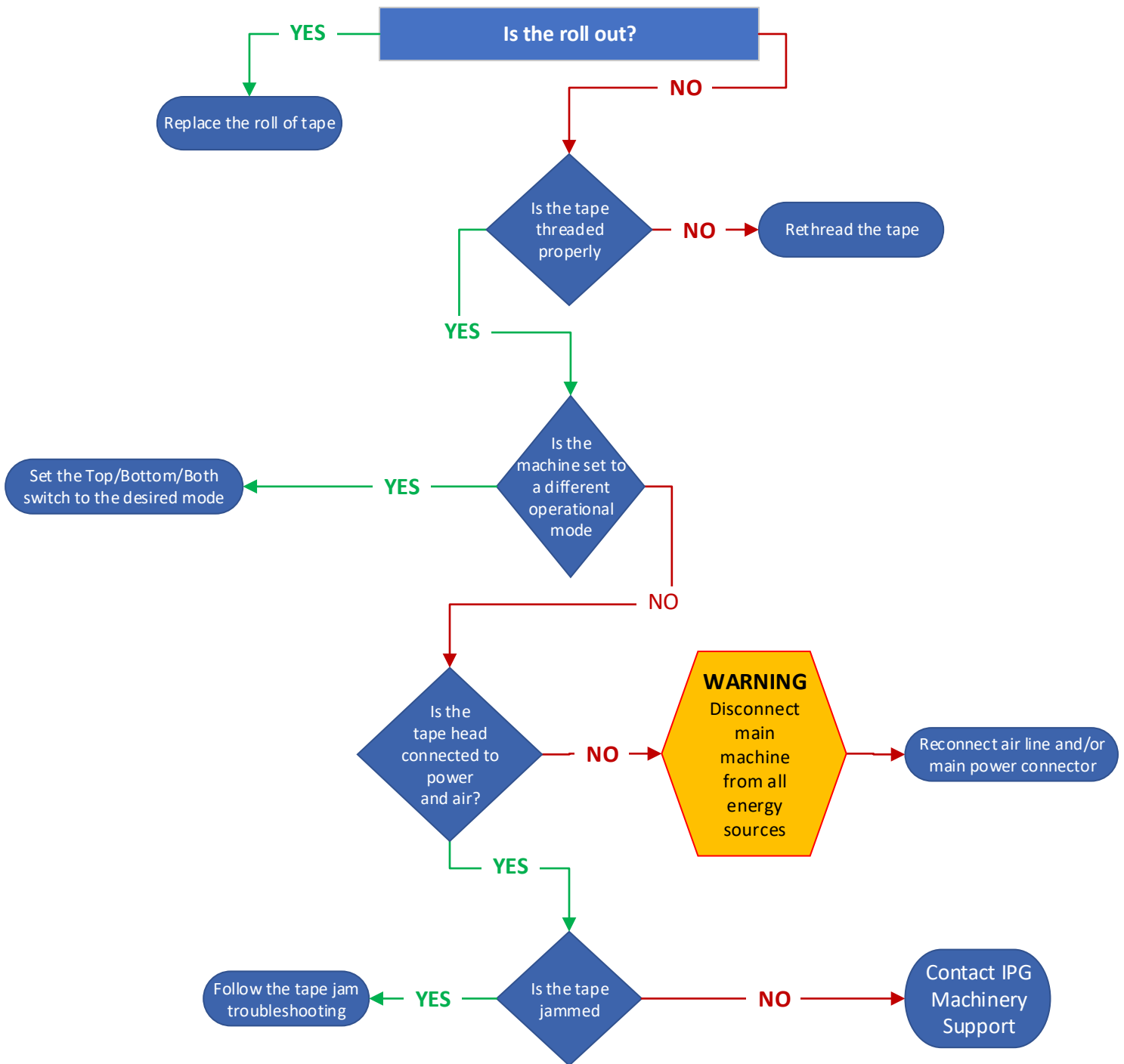


Tape Jam



IPG Machinery Support
877-447-4832 Option 4

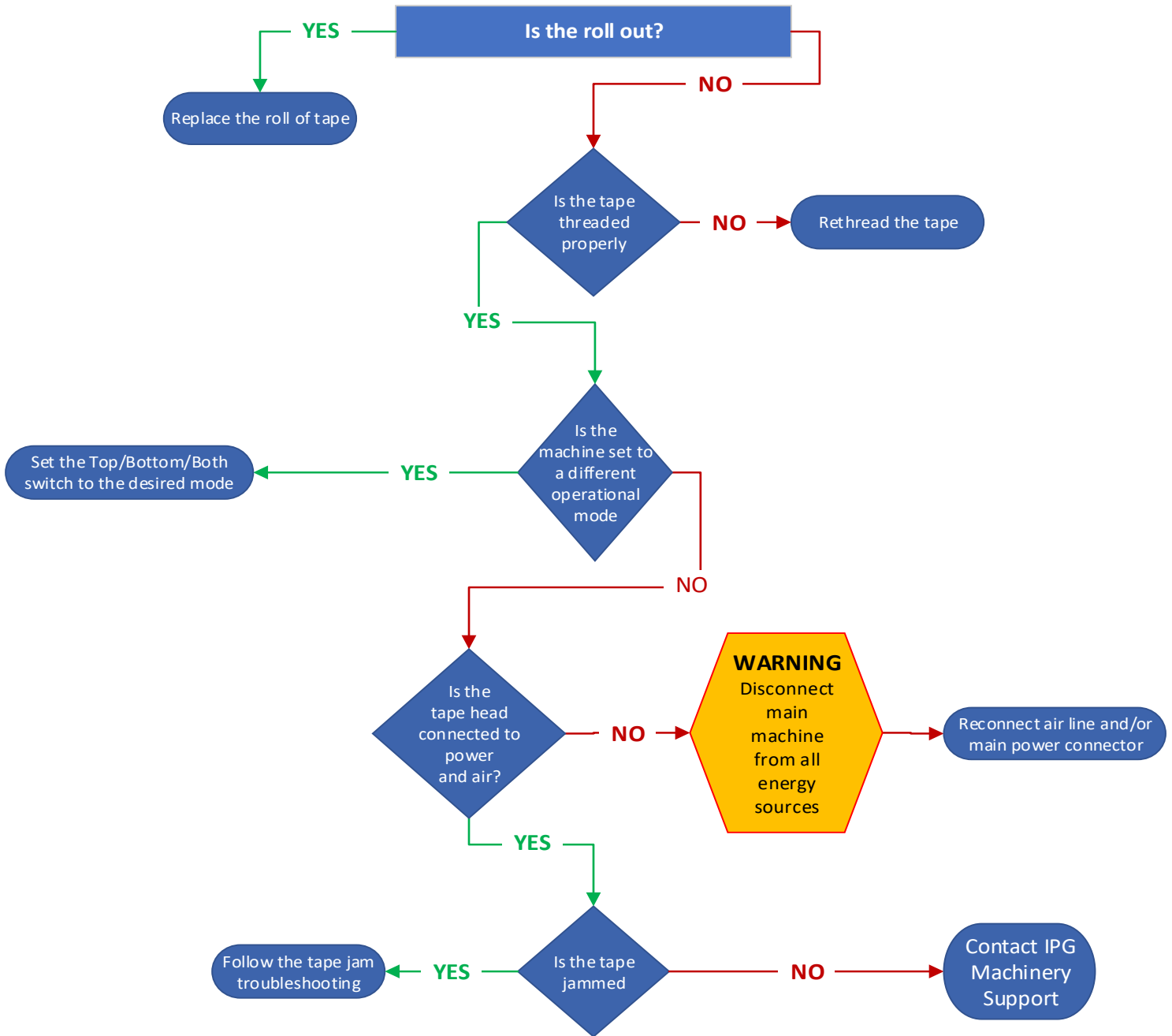
Wrinkles in the Tape



IPG Machinery Support
877-447-4832 Option 4

TROUBLESHOOTING

Tape Not Dispensed



IPG Machinery Support
877-447-4832 Option 4

MAINTENANCE

The **RSA 2024-WAT TOP ONLY** Case Sealer has been designed and manufactured with the finest components to provide long, trouble-free performance. General preventive maintenance will improve performance and prolong the life of the case sealer. Review the illustrations and chart below for information regarding machine maintenance.



WARNING: TURN OFF ALL ENERGY SOURCES AND LOCK OUT THE ELECTRICAL SUPPLY BEFORE CLEANING OR MAINTENANCE. IF POWER CORDS AND PNEUMATIC CONNECTIONS ARE NOT DISCONNECTED, SEVERE INJURY TO PERSONNEL COULD RESULT.

Lubrication:

Spray centering guide shafts and compression guide shafts once a month with a silicone based dry film lubricant. This will not attract dust or lint from the surroundings.

Apply chain lube on the drive and centering guide chain once a month.

No other lubrication is necessary to operate the machine.

Cleaning:

Cartons produce a sizable amount of dust and paper chips when processed or handled. If this dust is allowed to build up in the machine, it may cause component wear and overheating of motors. Remove the accumulated dust with a shop vacuum. Avoid using compressed air to remove the dust as this may cause the dust to penetrate into components.

Item	Action Required	Material	Frequency		
			Weekly	Monthly	Quarterly
Carton Dust In/On Machine	Vacuum off machine externally and internally, pay attention to drive base centering chain	Vacuum	X		
Hardware	Re-tighten any loose hardware, replace any missing hardware			X	
Cross Shafts	Lubricate	Dry PTFE		X	
Centering Chain	Lubricate	Chain Lubricant		X	
Air Regulator Filter	Clean filter	Water, Mild Detergent		X	
Tape Path	Clean to remove adhesive	Water, Mild Detergent	X		
Water Pot/Reservoir	Rinse out thoroughly	Water, Mild Detergent		X	
Wetting Roller	Clean roller	Water, Mild Detergent			
Wipe Down Drive Rollers	Remove dust	Water, Mild Detergent	X		
Tape Head Assist Roller	Clean roller	Water, Mild Detergent	X		

Recommended Spare Parts:

It is recommended to keep a small supply of spare parts on hand in order to reduce any potential down time for maintenance. The table of parts to the right is the recommended list of spare parts. Different applications of machinery may require some amendments to this list, please consult IPG Machinery Support for any additional recommended material.

Description	Item Number	QTY
Peel off Spring	UPH1289	1
Emergency Stop Button	UPM4816	1
Driving Belts	UPM4884	2
Water Pot Roller	WET0071	1
WAT Tape Head Roller	WET0144	2
Striker Plate	WPT0044	1
Cutter Blade	WPT0050	1
Extension Spring	WPT0053	1

MAINTENANCE

Changing the Air Regulator Filter

The filter on the air regulator removes dirt and moisture from supplied air before it enters the carton sealer.

1. To remove metal protective guard, press down on locking tab located towards the top of the guard, rotate guard and pull down.
2. The clear reservoir has a threaded top, which is used to attach it to the main regulator assembly. To remove the reservoir, rotate it until unfastened.
3. The air regulator filter is held in place using a threaded cap fastened on to the main assembly. To remove the filter, unfasten the cap and pull down on filter.

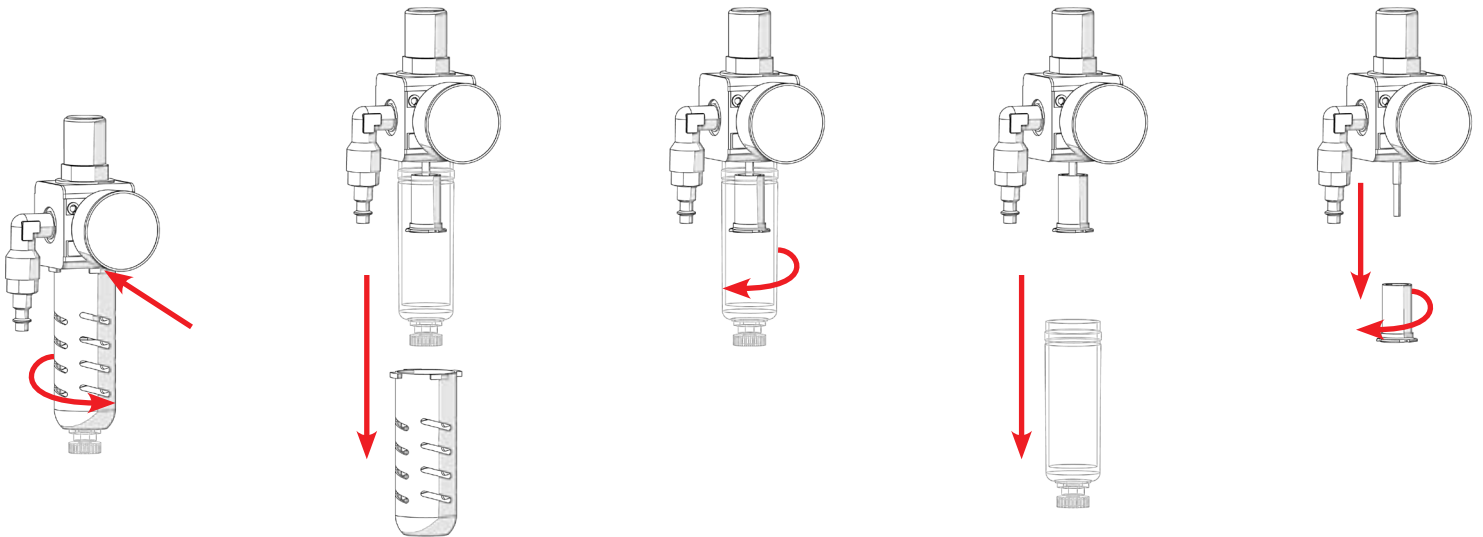


Figure 78: Air Filter Regulator

MAINTENANCE

Drive Belt Replacement

1. Using a 4mm Allen key, remove two screws and remove drive base cover.

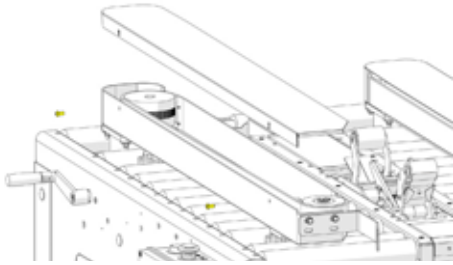


Figure 79: Drive Base Cover

2. Using appropriate Allen key and wrench, loosen belt tensioning bolts.

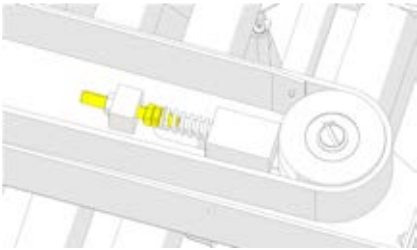


Figure 80: Loosen Belt Tension Bolt

3. Remove worn belt and replace with new belt.

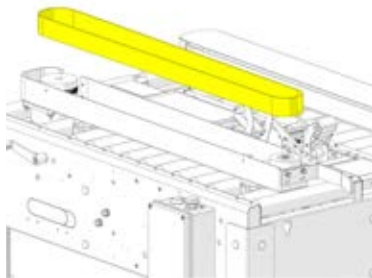


Figure 81: Replace Belt

4. Using appropriate Allen key and wrench, tighten belt tensioning bolts. Be sure to equally adjust tensioning bolts for both drive belts.

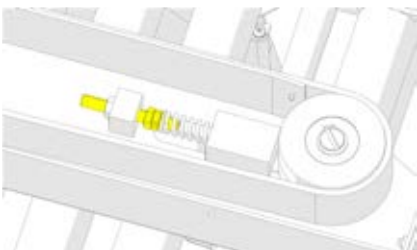


Figure 82: Tighten Belt Tension Bolt

5. Proper belt tension is achieved when a 5-pound pull force is used to create a 25mm (1 in.) gap, as shown in the middle of the drive base.



Figure 83: Proper Belt Tension

6. Using a 4mm Allen key, replace drive base cover, as shown.

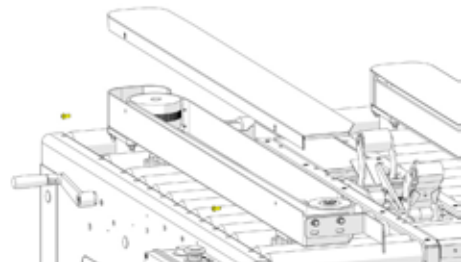


Figure 84: Drive Base Cover

MAINTENANCE

Drive Belt Adjustment

1. Using a 4mm Allen key, remove two screws and remove drive base cover.

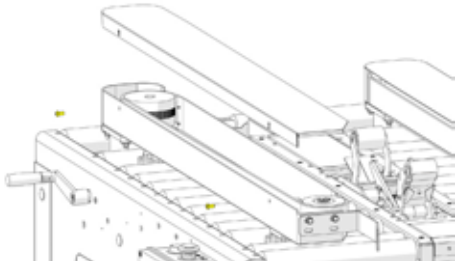


Figure 85: Drive Base Cover

4. Using a 4mm Allen key, replace drive base cover, as shown.

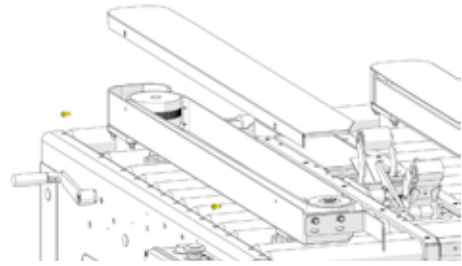


Figure 88: Drive Base Cover

2. Using appropriate Allen key and wrench, tighten belt tensioning bolts. Be sure to equally adjust tensioning bolts for both drive belts.

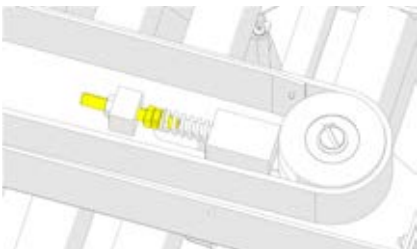


Figure 86: Tighten Belt Tension Bolt

3. Proper belt tension is achieved when a 5-pound pull force is used to create a 25mm (1 in.) gap, as shown in the middle of the drive base.

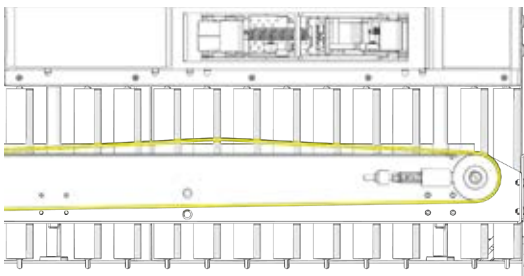
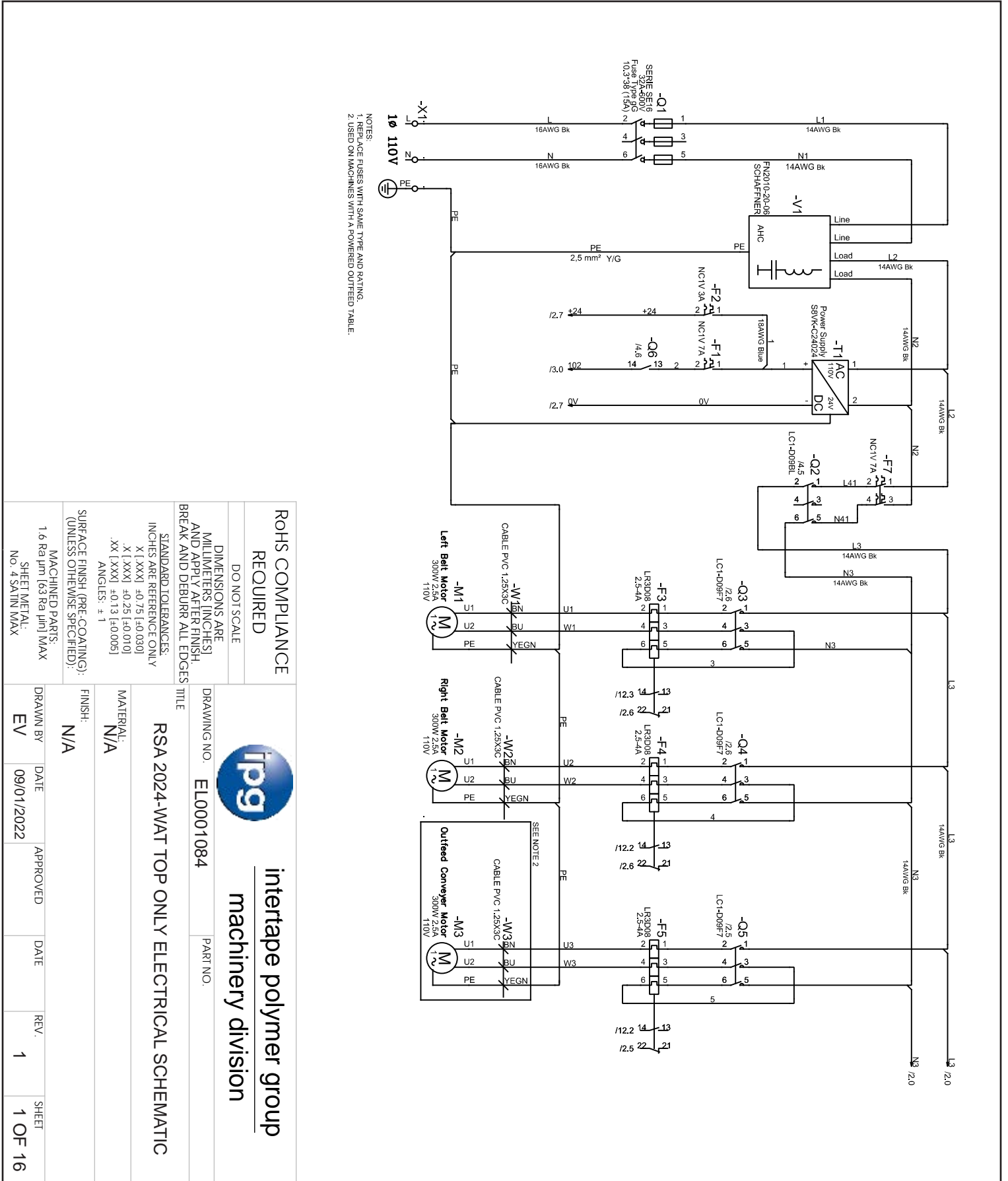


Figure 87: Proper Belt Tension

APPENDIX A

Electrical Drawing



ROHS COMPLIANCE REQUIRED

DO NOT SCALE

DIMENSIONS ARE MILLIMETERS (INCHES) AND APPLY AFTER FINISH BREAK AND DEBURR ALL EDGES

STANDARD TOLERANCES:

X [.XXX] ± 0.75 [± 0.030]
 X [.XXX] ± 0.25 [± 0.010]
 XX [.XXX] ± 0.13 [± 0.005]
 ANGLES: ± 1

SURFACE FINISH (PRE-COATING):
 (UNLESS OTHERWISE SPECIFIED):

MACHINED PARTS:
 1.6 Ra µm [63 Ra µin] MAX
 SHEET METAL:
 No. 4 SATIN MAX



intertape polymer group
 machinery division

DRAWING NO. EL0001084

PART NO.

TITLE
 RSA 2024-WAT TOP ONLY ELECTRICAL SCHEMATIC

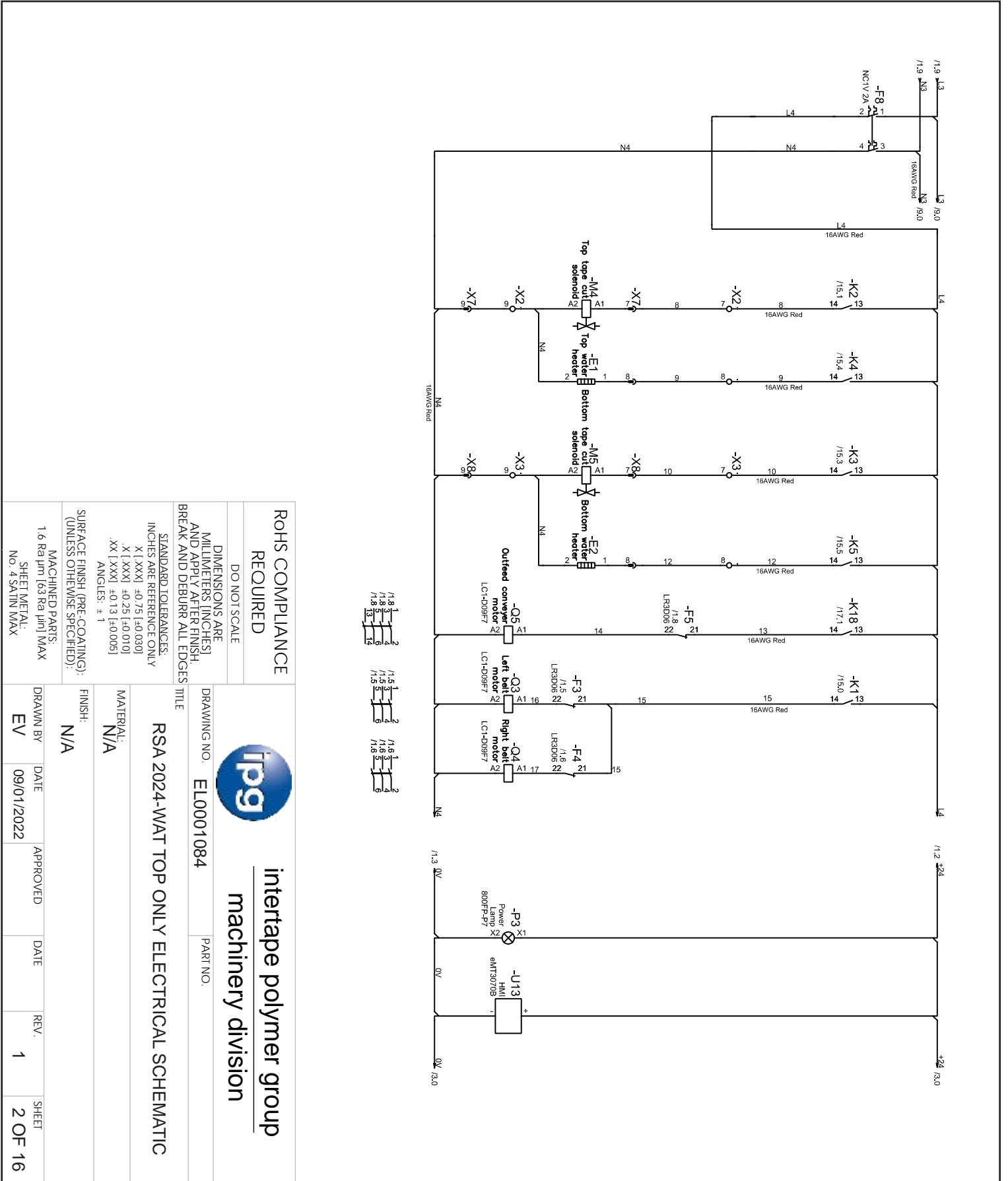
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FINISH:
 N/A

DRAWN BY	DATE	APPROVED	DATE	REV.	SHEET
EV	09/01/2022			1	1 OF 16

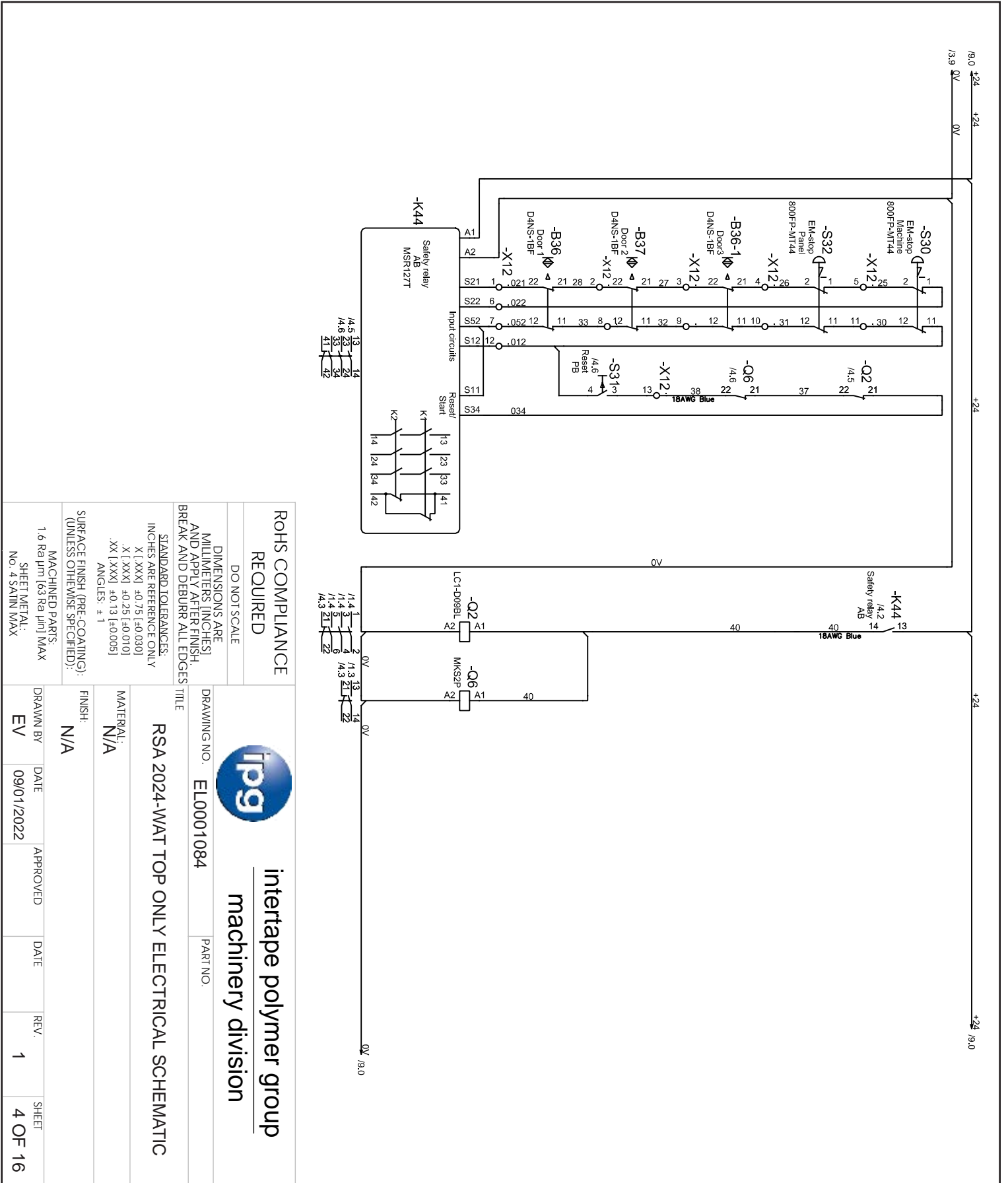
APPENDIX A

Electrical Drawing



APPENDIX A

Electrical Drawing



ROHS COMPLIANCE
REQUIRED

DO NOT SCALE

DIMENSIONS ARE
MILLIMETERS (INCHES)
AND APPLY AFTER FINISH,
BREAK AND DEBURR ALL EDGES

STANDARD TOLERANCES:
INCHES ARE REFERENCE ONLY
X [.XXX] ±0.75 [.030]
X [.XXX] ±0.25 [.010]
.XX [.XXX] ±0.13 [.0005]
ANGLES: ±1

SURFACE FINISH (PRE-COATING):
(UNLESS OTHERWISE SPECIFIED):

MACHINED PARTS:
1.6 Ra μm [.63 Ra μin] MAX
SHEET METAL:
NO. 4 SATIN MAX



intertape polymer group
machinery division

DRAWING NO. EL0001084

PART NO.

RSA 2024-WAT TOP ONLY ELECTRICAL SCHEMATIC

MATERIAL:
N/A

FINISH:
N/A

DRAWN BY
EV

DATE
09/01/2022

APPROVED

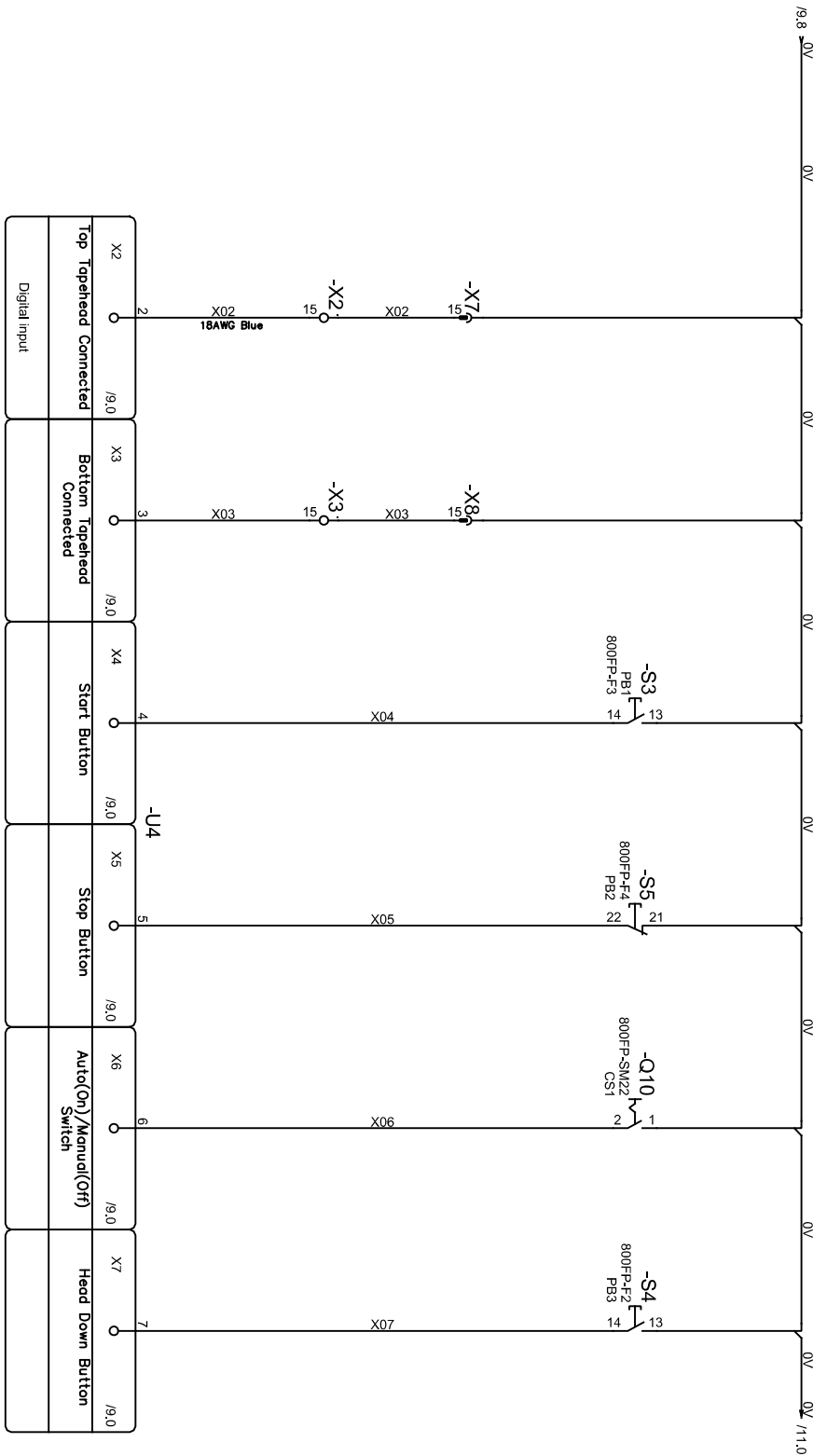
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SHEET
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APPENDIX A

Electrical Drawing



X2	/9.0	X3	/9.0	X4	/9.0	X5	/9.0	X6	/9.0	X7	/9.0
Top Tapehead Connected		Bottom Tapehead Connected		Start Button		Stop Button		Auto(On)/Manual(Off) Switch		Head Down Button	
Digital Input											

ROHS COMPLIANCE REQUIRED

DO NOT SCALE

DIMENSIONS ARE MILLIMETERS (INCHES) AND APPLY AFTER FINISH, BREAK AND DEBURR ALL EDGES

STANDARD TOLERANCES:
 INCHES ARE REFERENCE ONLY
 X [XXX] ±0.75 [-0.030]
 X [XXX] ±0.25 [-0.010]
 XX [XXX] ±0.13 [-0.005]
 ANGLES: ±1

SURFACE FINISH (PRE-COATING):
 (UNLESS OTHERWISE SPECIFIED):
 MACHINED PARTS:
 1.6 Ra µm (63 Ra µin) MAX
 SHEET METAL:
 NO. 4 SATIN MAX

ipg intertape polymer group
 machinery division

DRAWING NO. EL0001084 PART NO.

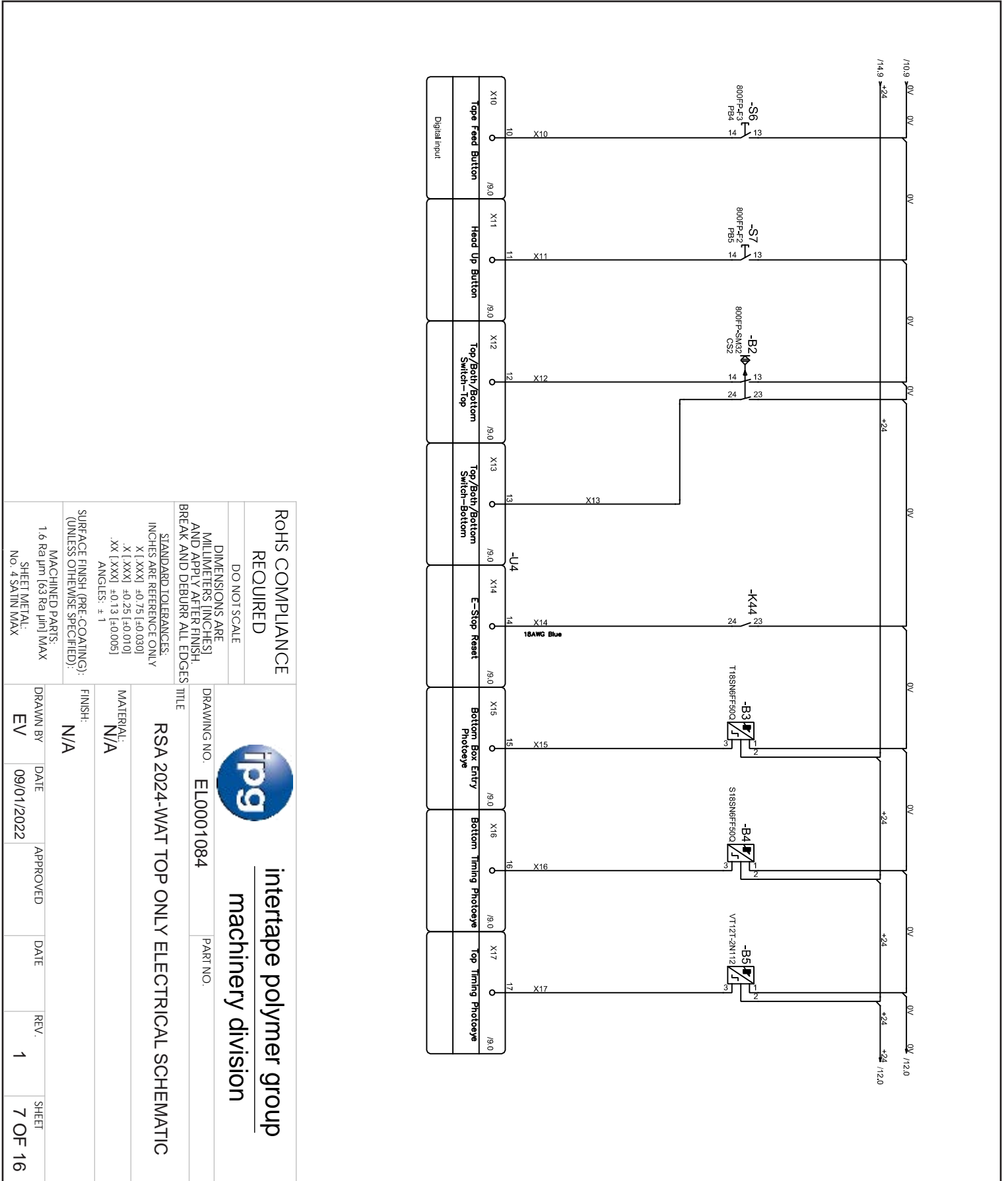
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MATERIAL: N/A
 FINISH: N/A

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EV	09/01/2022			1	6 OF 16

APPENDIX A

Electrical Drawing



ROHS COMPLIANCE
REQUIRED



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machinery division

DO NOT SCALE
DIMENSIONS ARE
MILLIMETERS (INCHES)
AND APPLY AFTER FINISH
BREAK AND DEBURR ALL EDGES

DRAWING NO. E10001084

PART NO.

STANDARD TOLERANCES:
INCHES ARE REFERENCE ONLY

TITLE
RSA 2024-WAT TOP ONLY ELECTRICAL SCHEMATIC

X [.XXX] ±0.75 [-0.030]
X [.XXX] ±0.25 [-0.010]
.XX [.XXX] ±0.13 [-0.005]
ANGLES: ± 1

MATERIAL:
N/A

SURFACE FINISH (PRE-COATING):
(UNLESS OTHERWISE SPECIFIED):

FINISH:
N/A

MACHINED PARTS:
1.6 Ra um [63 Ra um] MAX
SHEET METAL:
No. 4 SATIN MAX

DRAWN BY
EV

DATE
09/01/2022

APPROVED

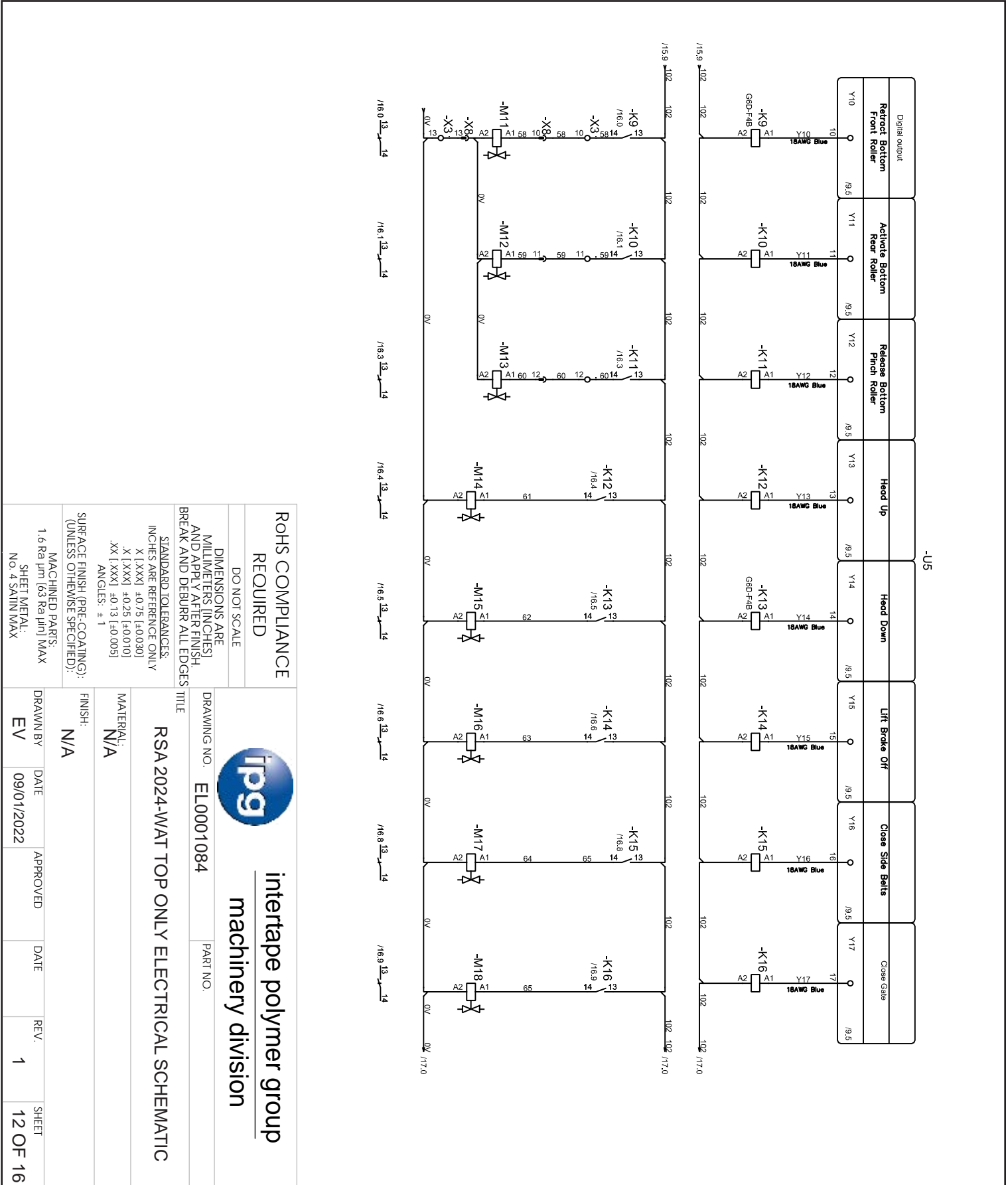
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APPENDIX A

Electrical Drawing

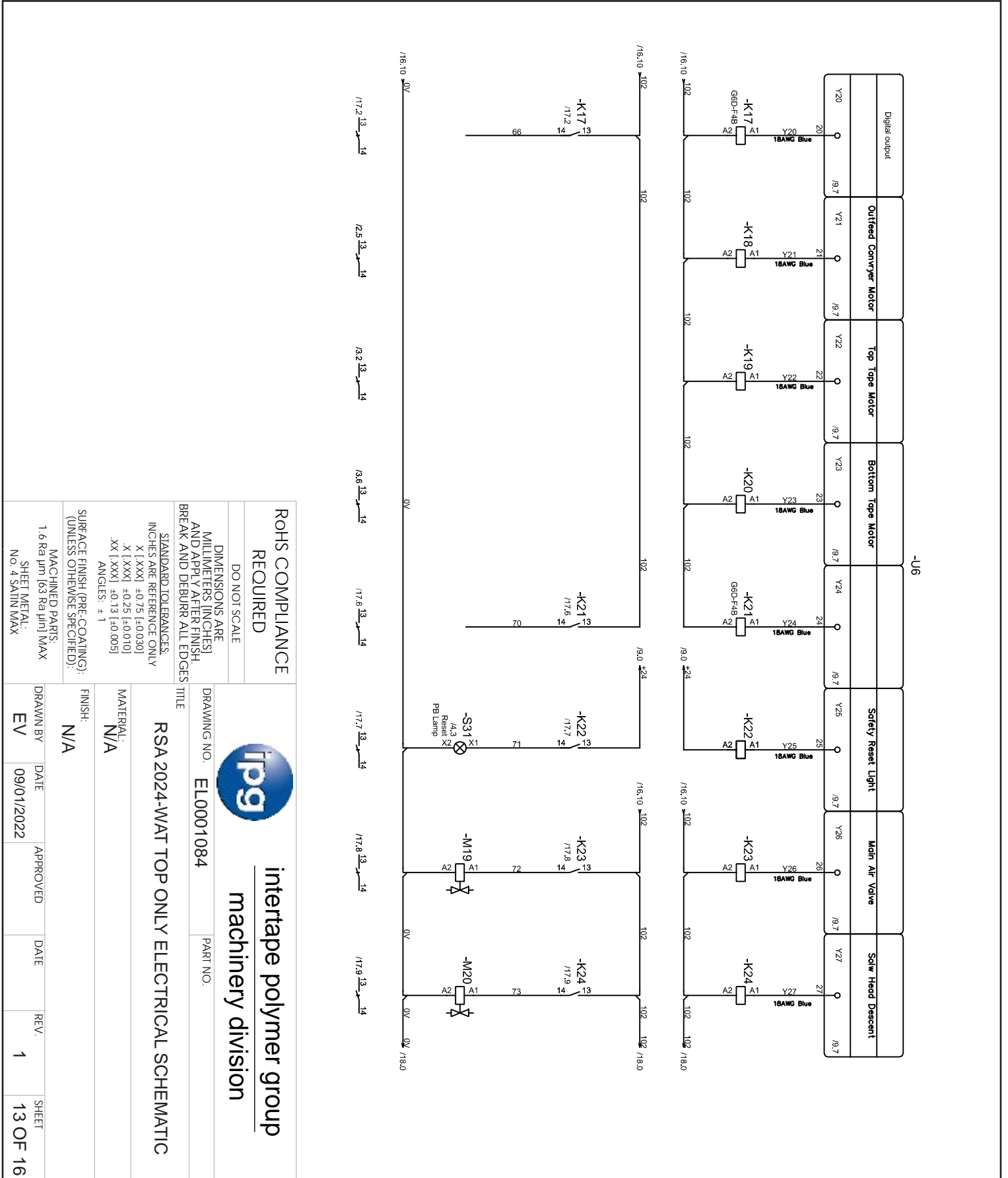


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ROHS COMPLIANCE REQUIRED DO NOT SCALE DIMENSIONS ARE MILLIMETERS (INCHES) AND APPLY AFTER FINISH BREAK AND DEBURR ALL EDGES STANDARD TOLERANCES: INCHES ARE REFERENCE ONLY X [XXX] ±0.75 [±0.030] X [XXX] ±0.25 [±0.010] XX [XXX] ±0.13 [±0.005] ANGLES: ± 1 SURFACE FINISH (PRE-COATING) (UNLESS OTHERWISE SPECIFIED): MACHINED PARTS: 1.6 Ra µm [63 Ra µin] MAX SHEET METAL: No. 4 SATIN MAX		intertape polymer group machinery division	
DRAWING NO. EL0001084		PART NO.	
TITLE RSA 2024-WAT TOP ONLY ELECTRICAL SCHEMATIC			
FINISH: N/A		MATERIAL: N/A	
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REV. 1		SHEET 12 OF 16	

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Electrical Drawing

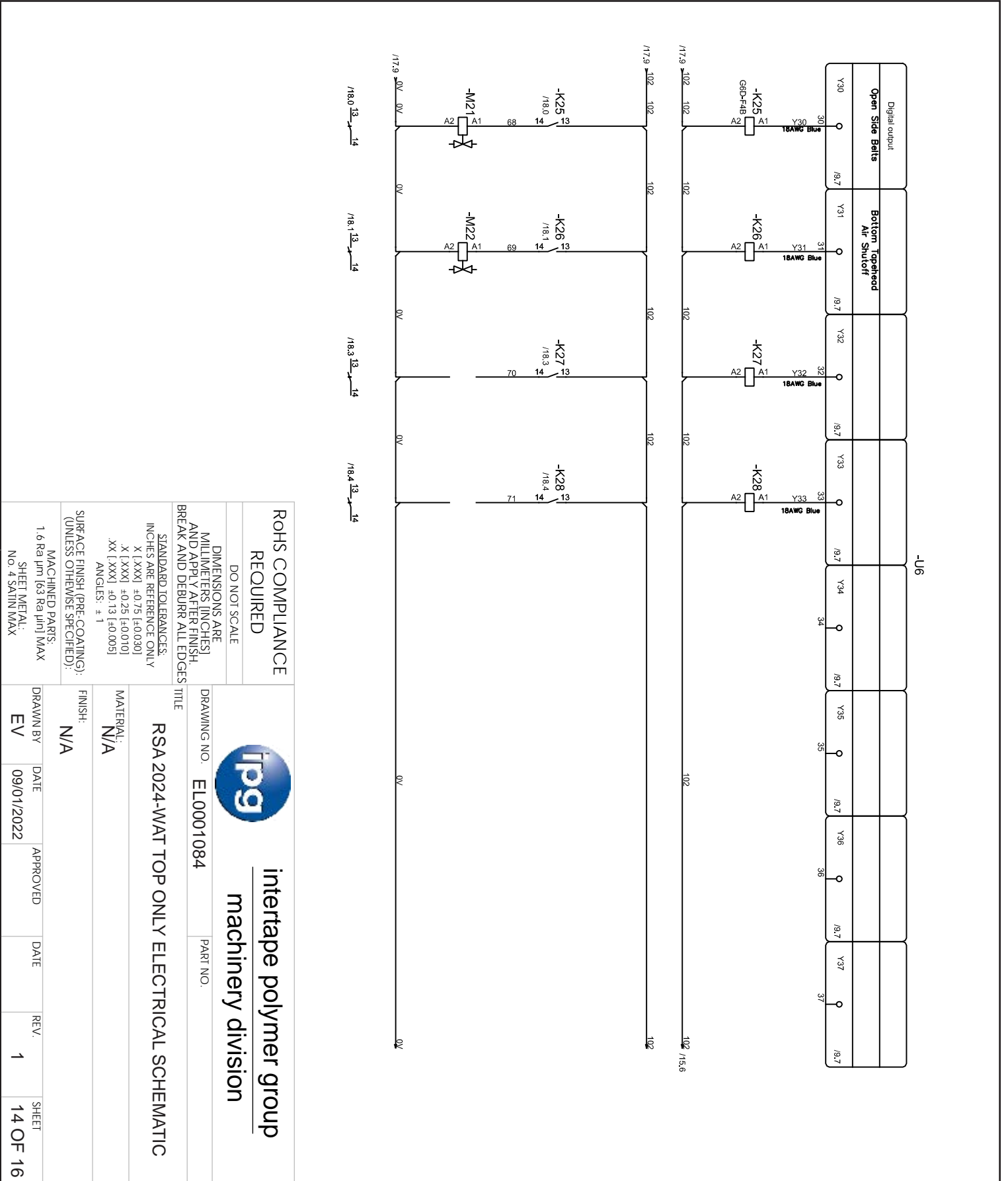


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ROHS COMPLIANCE REQUIRED DO NOT SCALE DIMENSIONS ARE MILLIMETERS (INCHES) AND APPLY AFTER FINISH BREAK AND DEBURR ALL EDGES		 intertape polymer group machinery division	
STANDARD TOLERANCES: X [XXX] ±0.75 [±0.030] X [XXX] ±0.25 [±0.010] XX [XXX] ±0.13 [±0.005] ANGLES: ± 1		DRAWING NO. EL0001084 PART NO.	
SURFACE FINISH (PRE-COATING) (UNLESS OTHERWISE SPECIFIED): MACHINED PARTS: 1.6 Ra µm [63 Ra µin] MAX SHEET METAL: No. 4 SA MIN MAX		TITLE RSA 2024-WAT TOP ONLY ELECTRICAL SCHEMATIC	
FINISH: N/A		DRAWN BY: EV DATE: 09/01/2022 APPROVED: DATE: REV. 1 SHEET 13 OF 16	

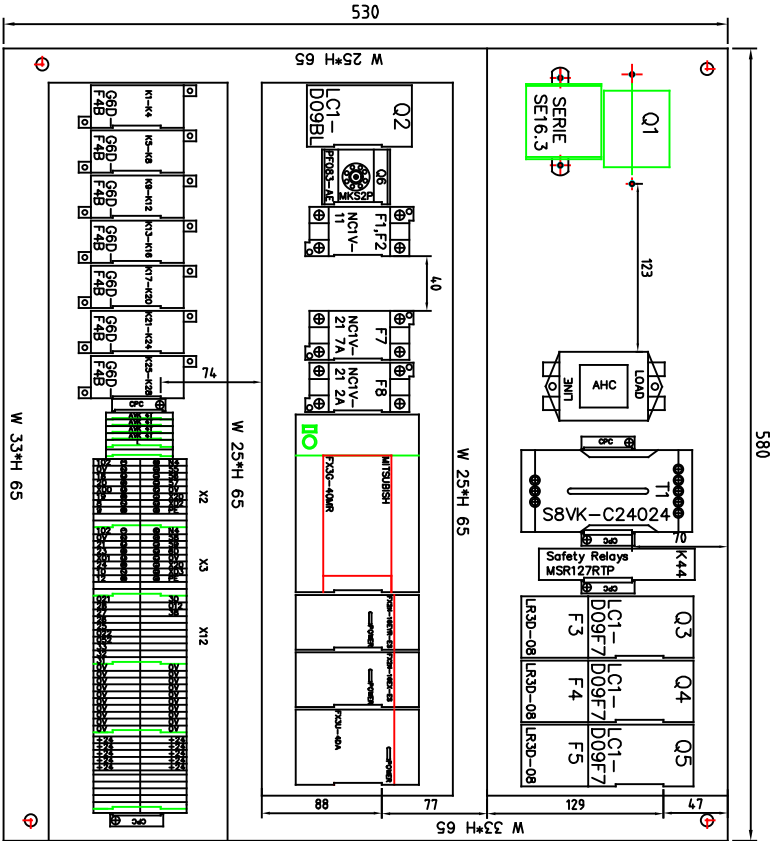
APPENDIX A

Electrical Drawing



APPENDIX A

Electrical Drawing



TAG	DESCRIPTION	PART NUMBER	SUPPLIER
Q1	Power source breaker	SE163003B + COD.TF323	GIOVENZANA
F1	Fuse	10*38 (10A)	DEMEX
F2	Electromagnetic contactor	NC1V-1100 7A	Idec
F3	Electromagnetic contactor	NC1V-1100 3A	Idec
F4	Electromagnetic contactor	NC1V-2100 2A	Idec
F5	Electromagnetic contactor	NC1V-2100 7A	Idec
U4,U5	PLC Host	FX3G-40MR	OMRON
U6	PLC Expansion module	FX2N-16EX	OMRON
U7	PLC Expansion module	FX2N-16EXR	OMRON
U2	PLC Analog module	FX3U-4DA	OMRON
T1	Power supplier	S8VK-C24024	OMRON
AHC	Filter	FN2010-20-06	YUNPEN
K1-K28	RELAY	G6D-F4B	OMRON
K44	Security module	MSR127RTP	AB
Q2	Electromagnetic contactor	LC1-D09BL DC24V	TE
Q3-Q5	Electromagnetic contactor	LC1-D09F7 AC110V	TE
Q6	Relay	MKS2P DC24V	OMRON
F3-F5	Relay fixed sect	PF083-AE	TEND
	Overload relay	LR3D-08 2.5-4A	TE
	Double layer TB	PT 2.5 32 10 567	PHOENIX CONTACT
	Grounded TB	PT 2.5 32 09 536	PHOENIX CONTACT

ROHS COMPLIANCE REQUIRED

DO NOT SCALE

DIMENSIONS ARE MILLIMETERS (INCHES) AND APPLY AFTER FINISH BREAK AND DEBURR ALL EDGES

STANDARD TOLERANCES:
INCHES ARE REFERENCE ONLY
X [XXX] ±0.75 [-0.030]
X [XXX] ±0.25 [-0.010]
XX [XXX] ±0.13 [-0.005]
ANGLES: ±1

SURFACE FINISH (PRE-COATING):
(UNLESS OTHERWISE SPECIFIED):

MACHINED PARTS:
SHEET METAL:
1.6 Ra µm (63 Ra µin) MAX
NO. 4 SATIN MAX



intertape polymer group
machinery division

DRAWING NO. EL0001084

PART NO.

RSA 2024-WAT TOP ONLY ELECTRICAL SCHEMATIC

MATERIAL:
N/A

FINISH:
N/A

DRAWN BY: EV
DATE: 09/01/2022

APPROVED

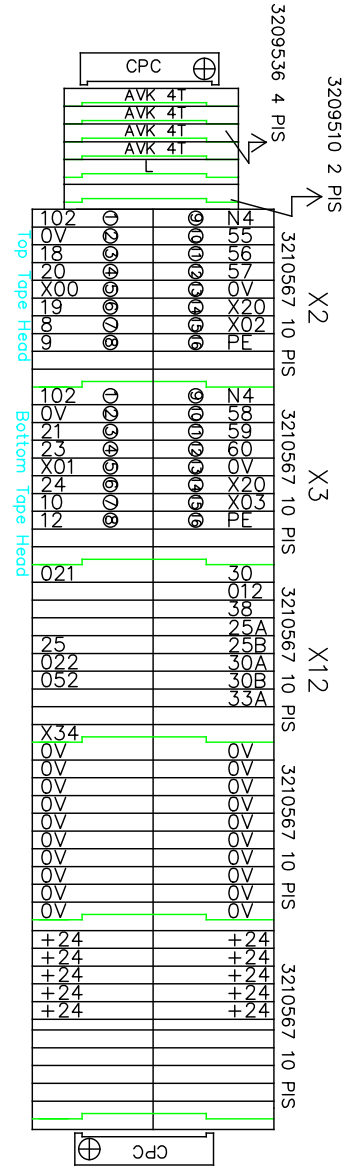
DATE

REV. 1

SHEET 15 OF 16

APPENDIX A

Electrical Drawing



16	PF	16	Blue (X02)	16	PF
15	Blue (X02)	15	Blue (X20)	15	Blue (X02)
14	Blue (X20)	14	Blue (0V)	14	Blue (X20)
13	Blue (0V)	13	White (N4)	13	White (0V)
12	Blue (57, Pinch Roller)	12	White (57, Pinch Roller)	12	White (0V)
11	Blue (56, Rear Roller)	11	White (56, Rear Roller)	11	White (57, Pinch Roller)
10	Blue(55, Front Roller)	10	White (55, Front Roller)	10	White (56, Rear Roller)
9	Red (N4)	9	White (N4)	9	White (55, Front Roller)
8	Red (9, Heater)	8	White (9, Heater)	8	White (N4)
7	Red (8, Tape Cut)	7	White (8, Tape Cut)	7	White (9, Heater)
6	Blue (19)	6	White (19)	6	White (8, Tape Cut)
5	Blue (X00)	5	White (X00)	5	White (19)
4	White (20)	4	White (20)	4	White (X00)
3	White (18)	3	White (18)	3	White (20)
2	Blue (0V)	2	Blue (0V)	2	White (18)
1	Blue (102)	1	Blue (102)	1	Blue (0V)

ROHS COMPLIANCE REQUIRED

DO NOT SCALE

DIMENSIONS ARE MILLIMETERS (INCHES) AND APPLY AFTER FINISH BREAK AND DEBURR ALL EDGES

STANDARD TOLERANCES: INCHES ARE REFERENCE ONLY

X [XXX] ±0.75 [-0.030]

X [XXX] ±0.25 [-0.010]

XX [XXX] ±0.13 [-0.005]

ANGLES: ±1

SURFACE FINISH (PRE-COATING): (UNLESS OTHERWISE SPECIFIED):

MACHINED PARTS: 1.6 Ra µm [63 Ra µin] MAX

SHEET METAL: NO. 4 SATIN MAX

ipg

intertape polymer group
 machinery division

DRAWING NO. EL0001084 PART NO.

TITLE
 RSA 2024-WAT TOP ONLY ELECTRICAL SCHEMATIC

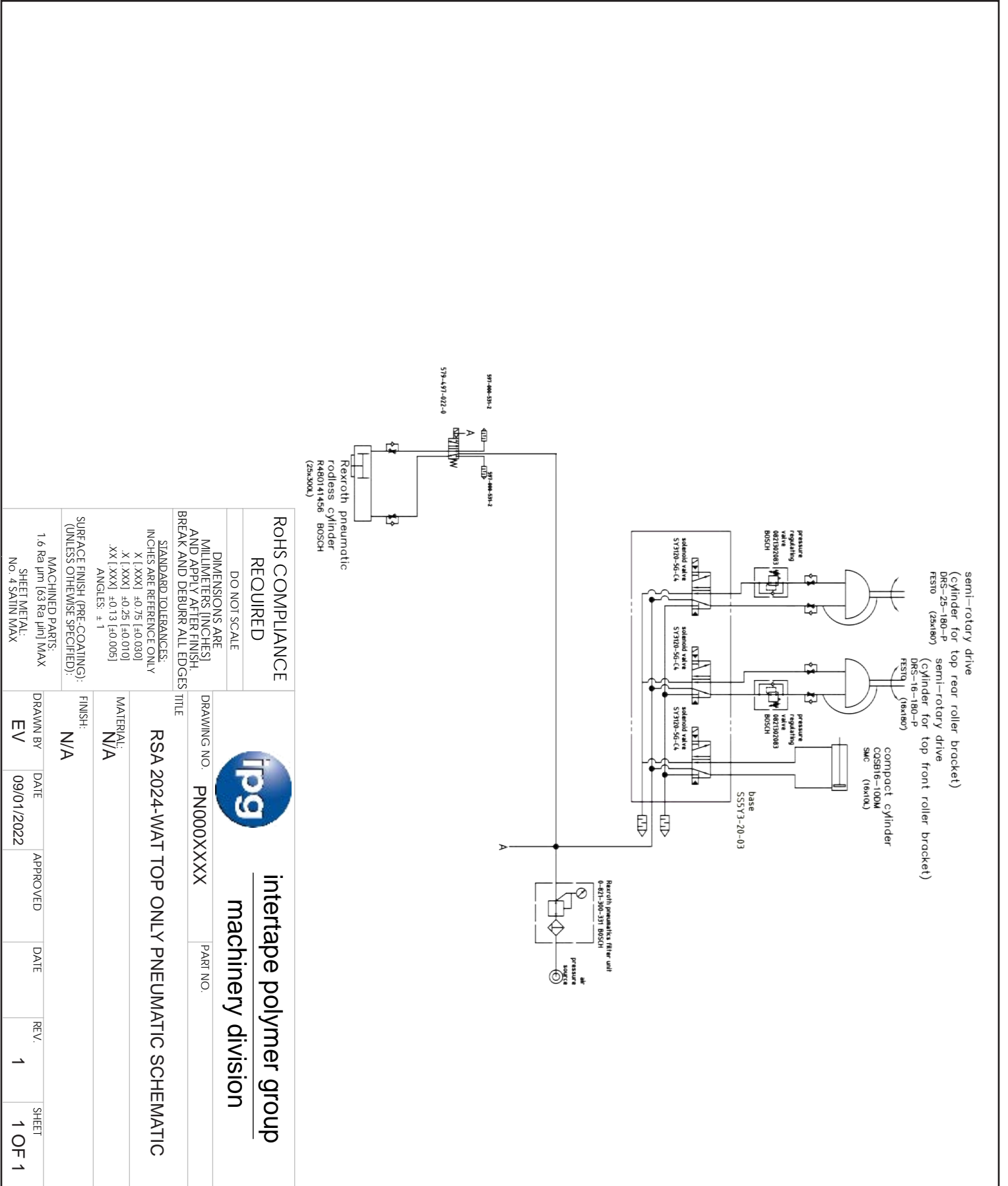
MATERIAL: N/A

FINISH: N/A

DRAWN BY: EV DATE: 09/01/2022 APPROVED: DATE: REV. 1 SHEET 16 OF 16

APPENDIX A

Pneumatic Drawing

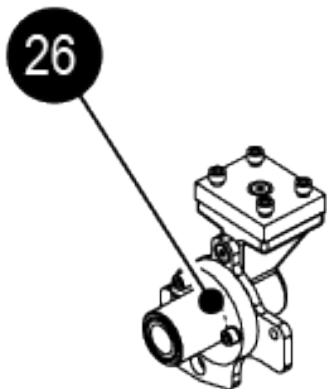


APPENDIX B

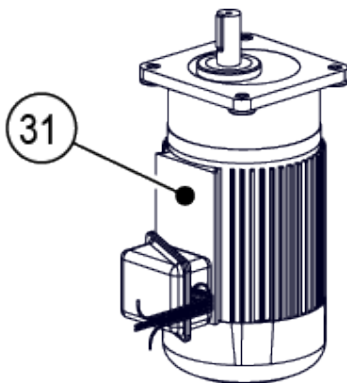
Parts Listing

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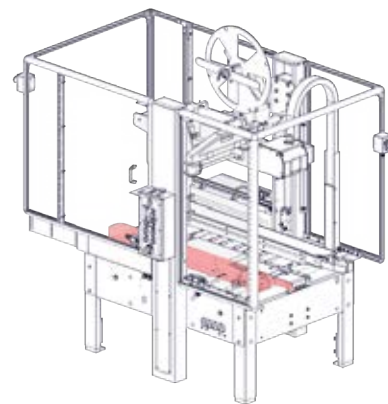
Items with black balloon call outs are assemblies (made of more than one individual part).



Items with white balloon call outs are single parts.



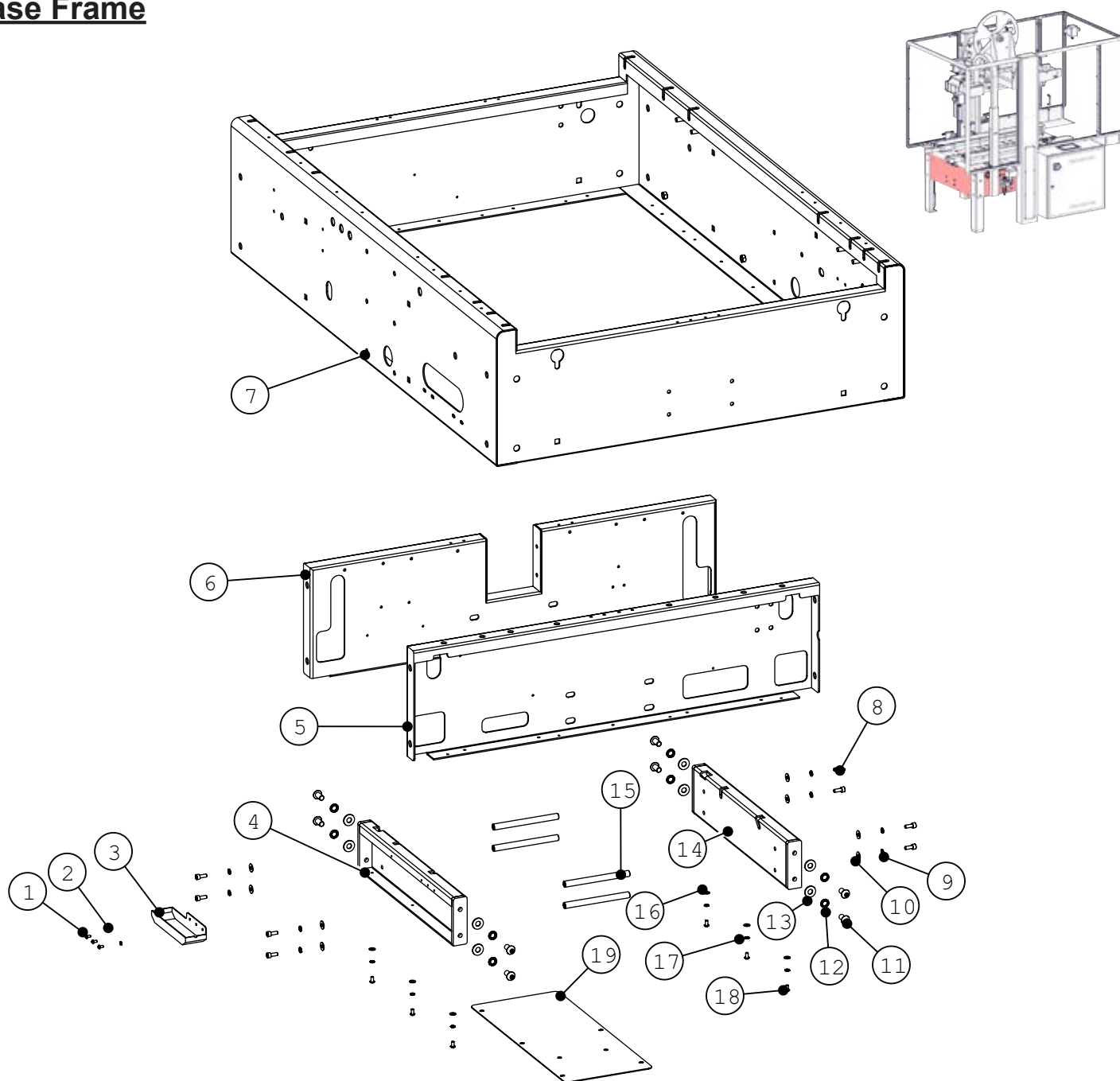
The top right of each page with a parts breakdown will show a red highlighted section of the machine that is being broken out into more detail.



Not all assemblies are sold as assemblies please consult IPG Machine Support for details.

APPENDIX B

Base Frame

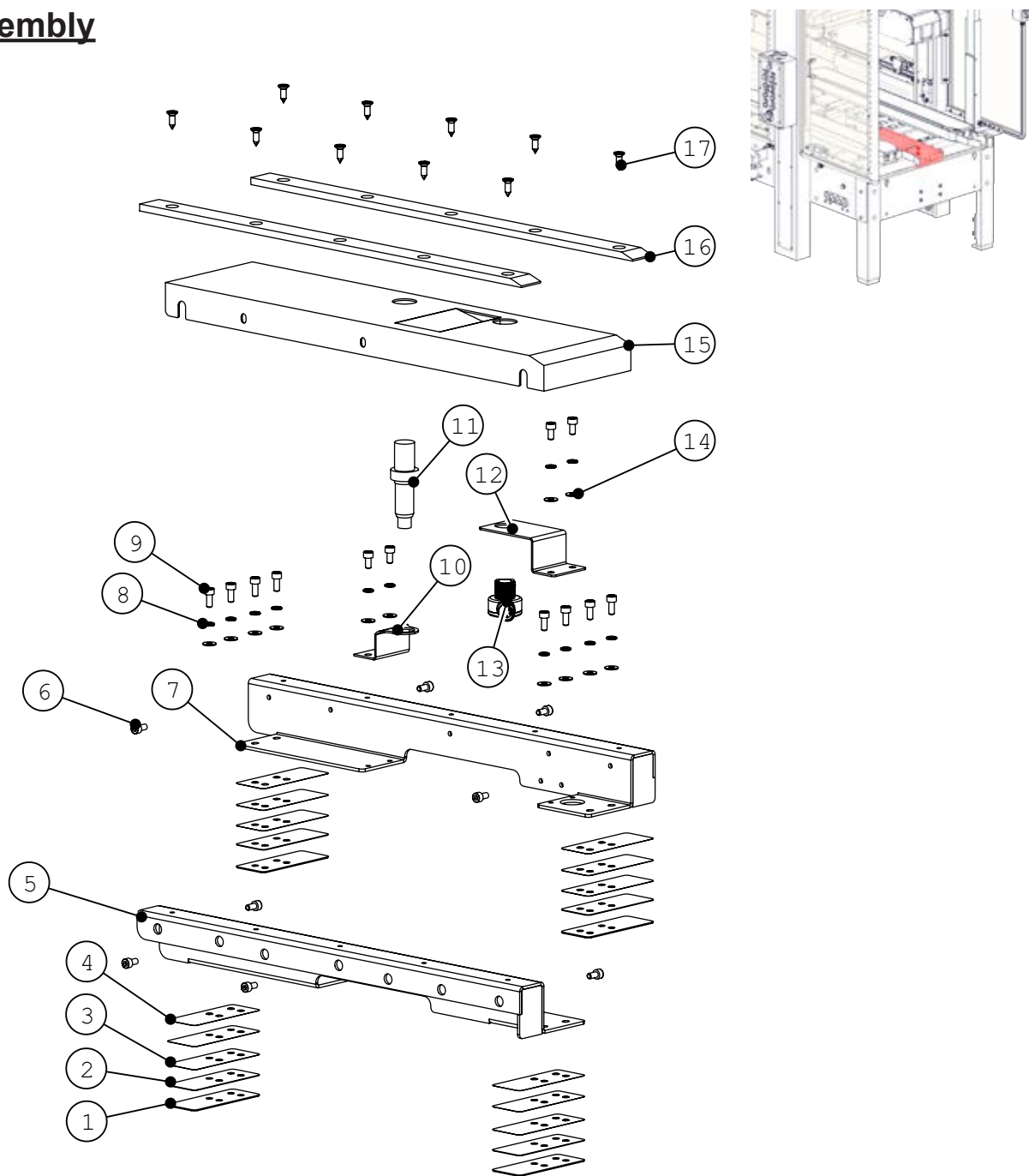


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF7009	BHCS M4-0.7x8mm	6
2	UF3749	LW M4	3
3	UPM4952	OVER FLOW TRAY	1
4	UPM6147	LOWER HOST BASE LH	1
5	UPM6340	FRONT SUPPORT	1
6	UPM6341	REAR SUPPORT	1
7	UPM6339	BASE WELDMENT	1
8	UF3187	SHCS M6-1.0x16mm	8
9	UF6363	M6 LW	8
10	UF1828	M6 FW	8

ITEM	PART NUMBER	DESCRIPTION	QTY
11	UF4252	BHCS M10-1.5x20mm	8
12	UF3743	M10 LW	8
13	UF3680	M10 FW	8
14	UPM6148	LOWER HOST BASE RH	1
15	UPM6252	SHAFT 140L	4
16	UF1827	M5 FW	6
17	UF7021	M5 LW	6
18	UF3686	BHCS M5-0.8x10mm	6
19	UPM5970	LOWER HOST COVER	1

APPENDIX B

Entry Plate Assembly

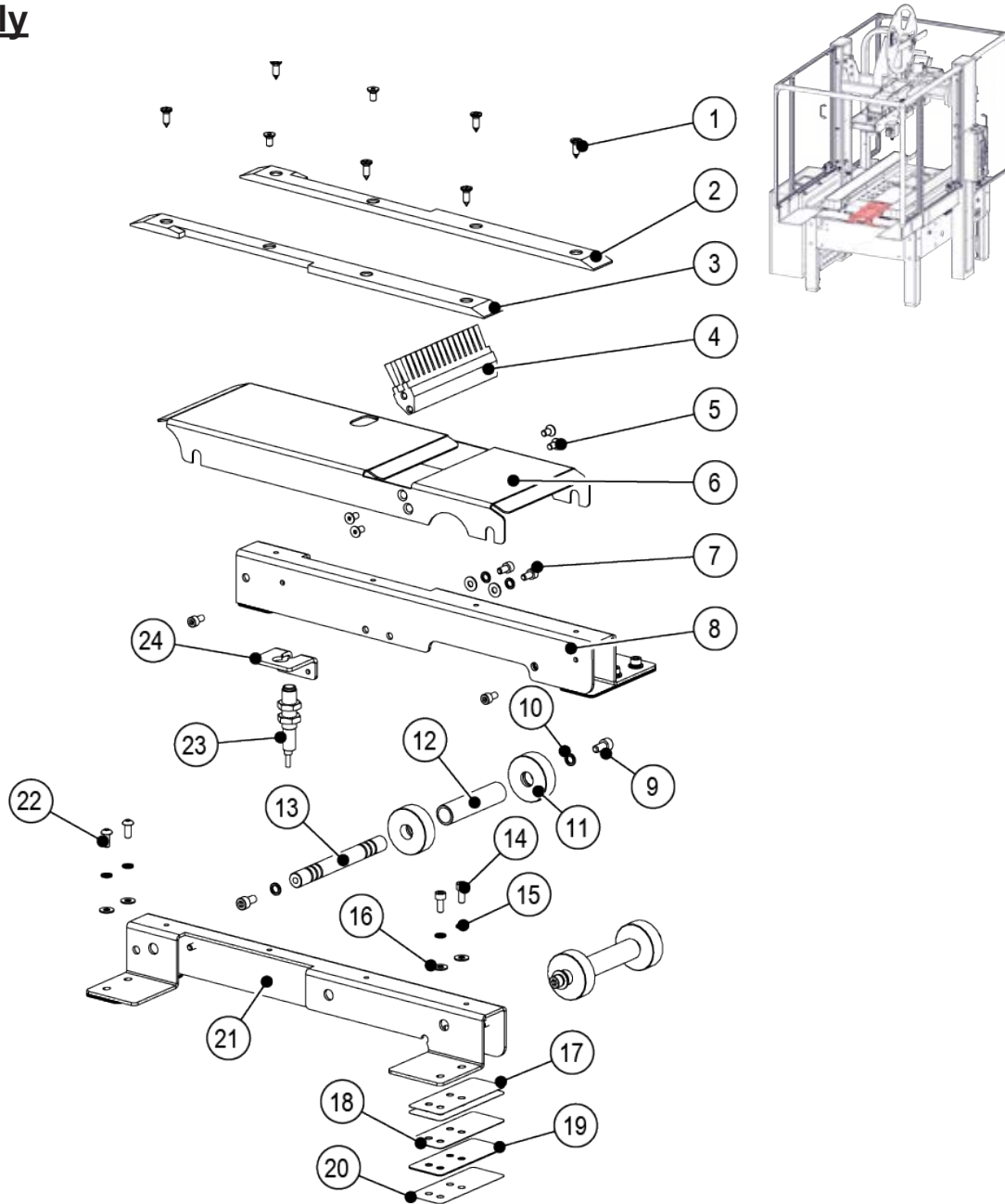


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM5953	SHIM 1.0mm	4
2	UPM6265	SHIM 0.5mm	4
3	UPM6255	SHIM 0.2mm	4
4	UPM6254	SHIM 0.1mm	8
5	UPM5951	FRONT SEAT LH	1
6	UF0039	SHCS M5-0.8 x 10mm	11
7	UPM5952	FRONT SEAT RH	1
8	UF7021	LW M5	12
9	UF7003	SHCS M5-0.8 x 12mm	8

ITEM	PART NUMBER	DESCRIPTION	QTY
10	UPM3248	SENSOR SUPPORT	1
11	UPM0317	SENSOR	1
12	UPM5956	FRONT SENSOR SUPPORT	1
13	UPM6384	SENSOR	1
14	UF6340	FW M5	12
15	UPM5954	COVER PLATE	1
16	UPM4954	SLIDING PAD	2
17	UF3741	SELF TAPPING SCREW M5	10

APPENDIX B

Exit Plate Assembly

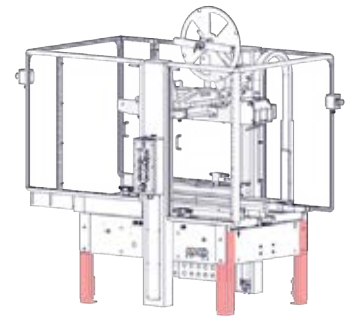
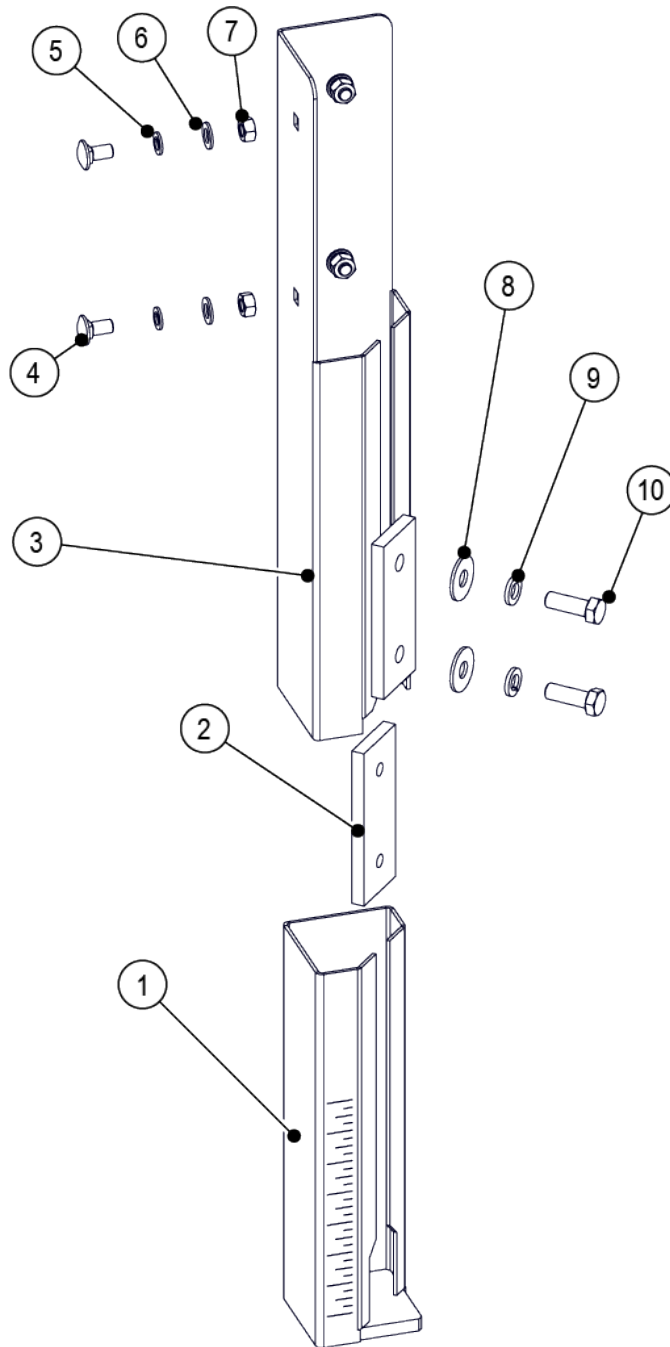


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF0075	M5-0.8-SELF TAPPING	8
2	UPM5962	SLIP PAD, R.H.	1
3	UPM5961	SLIP PAD, L.H.	1
4	UPY0023	BRUSH	1
5	UF6305	FHCS M5-0.8 x 10mm	4
6	UPM5964	COVER	1
7	UF0039	SHCS M5-0.8 x 10mm	6
8	UPM5960	REAR SUPPORT SEAT, R.H.	1
9	UF0038	SHCS M6-1.0 x 12mm	4
10	UF6363	M6 LW	4
11	UPM4934	GUIDE ROLLER, 400D	4
12	UPM4933	ROLLER, dia 17, 72L, BLACK	2
13	UPM6228	SHAFT, 115L, GROOVED	2

ITEM	PART NUMBER	DESCRIPTION	QTY
14	UF7003	SHCS M5-0.8 x 12mm	4
15	UF7021	M5 LW	10
16	UF1827	M5 FW	10
17	UPM6255	SHIM 0.2mm*	8
18	UPM6265	SHIM 0.5mm*	4
19	UPM5953	SHIM 1.0mm*	4
20	UPM6254	SHIM 0.1mm*	4
21	UPM5959	REAR SUPPORT SEAT, L.H.	1
22	UF3687	BHCS M5-0.8 x 12mm	4
23	UPM5969	PHOTOELECTRIC SENSOR	1
24	UPM5963	SENSOR BRACKET	1

APPENDIX B

Main Leg Assemblies

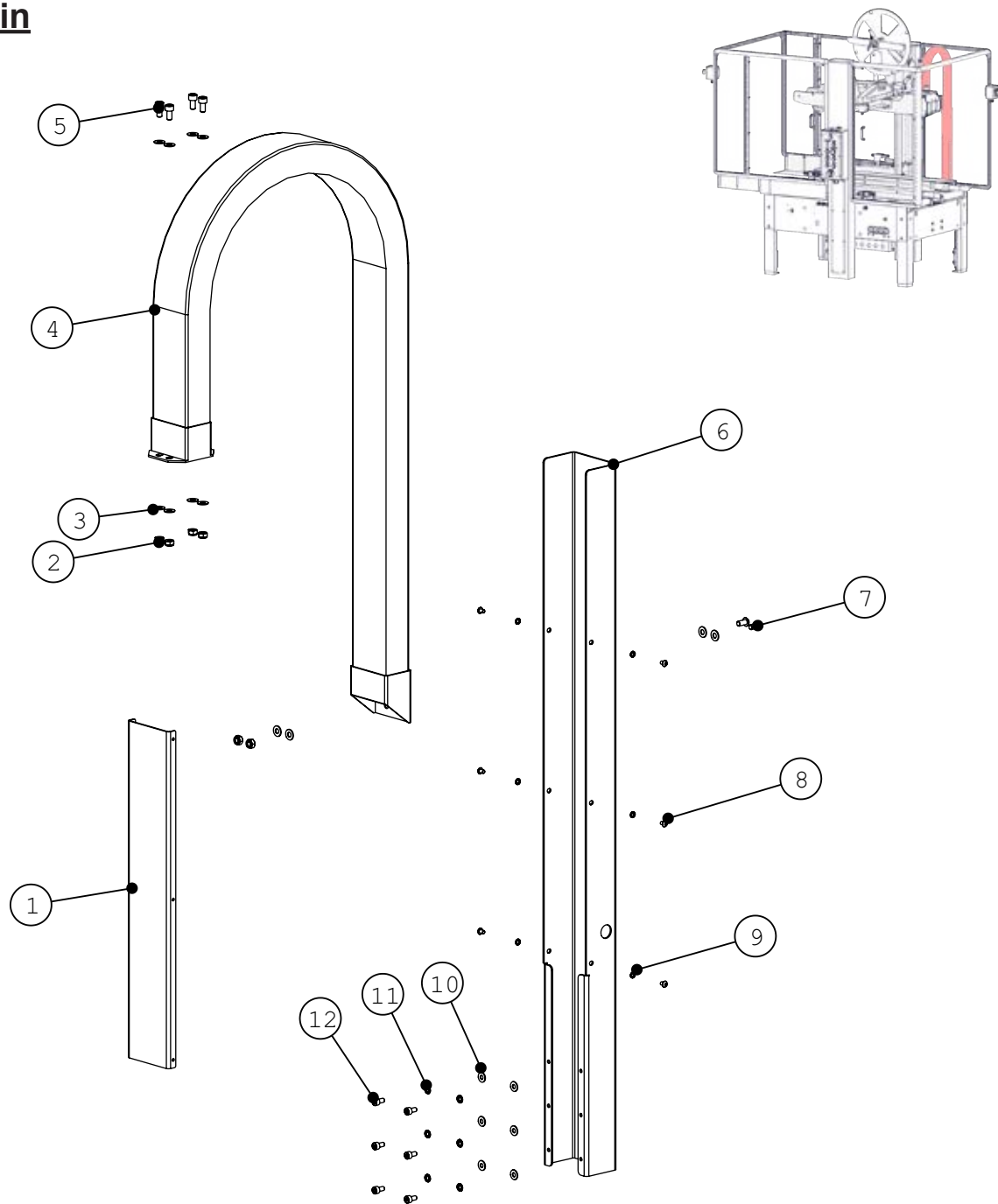


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UMP7641	M1273 item 1	1
2	UPM7642	M1274	1
3	UPM7640	M1272 item 1	1
4	UF4229	M10-1.5 x 20-CARRIAGE BOLT	4
5	UF6371	M10 LW	4
6	UF3680	M10 FW	4

ITEM	PART NUMBER	DESCRIPTION	QTY
7	UF6314	M10-1.5 HNR	4
8	UF4231	M12 FW	2
9	UF4230	M12 LW	2
10	UF6393	M12-1.75 x 35 HHCS	2

APPENDIX B

Electric Drag Chain

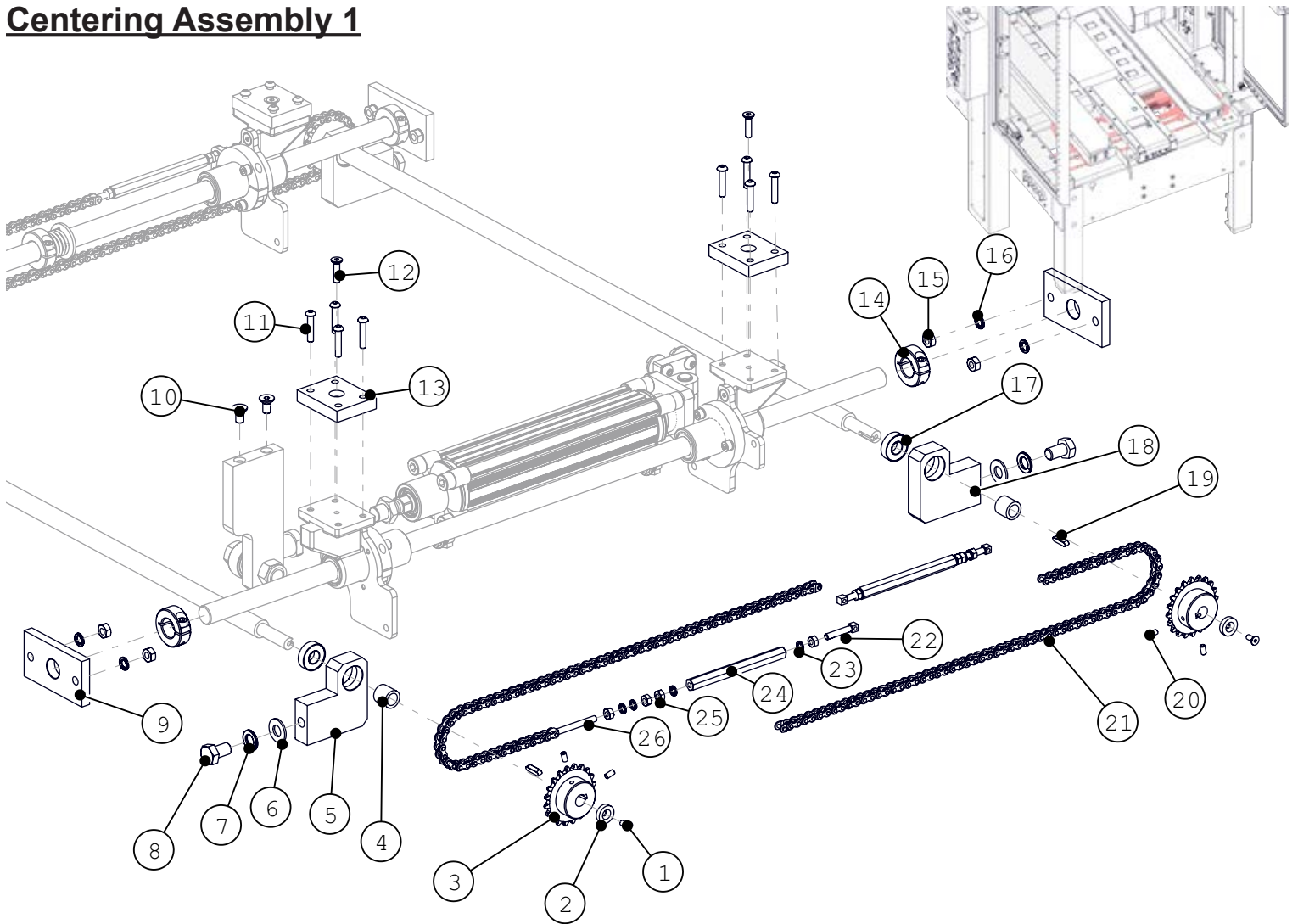


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM4932	COVER PLATE	1
2	UF3391	M6 LOCK-NUT	6
3	UF1828	FW M6	12
4	UPM4937	DRAG CHAIN	1
5	UF3183	SHCS M6-1.0x12mm	4
6	UPM4931	WIRING COVER	1
7	UF1216	BHCS M6-1.0x12mm	2

ITEM	PART NUMBER	DESCRIPTION	QTY
8	UF7008	BHCS M4-0.7x6mm	6
9	UF3749	LW M4	6
10	UF1827	FW M5	6
11	UF7021	LW M5	6
12	UF3147	SHCS M5-0.8x10mm	6

APPENDIX B

Centering Assembly 1

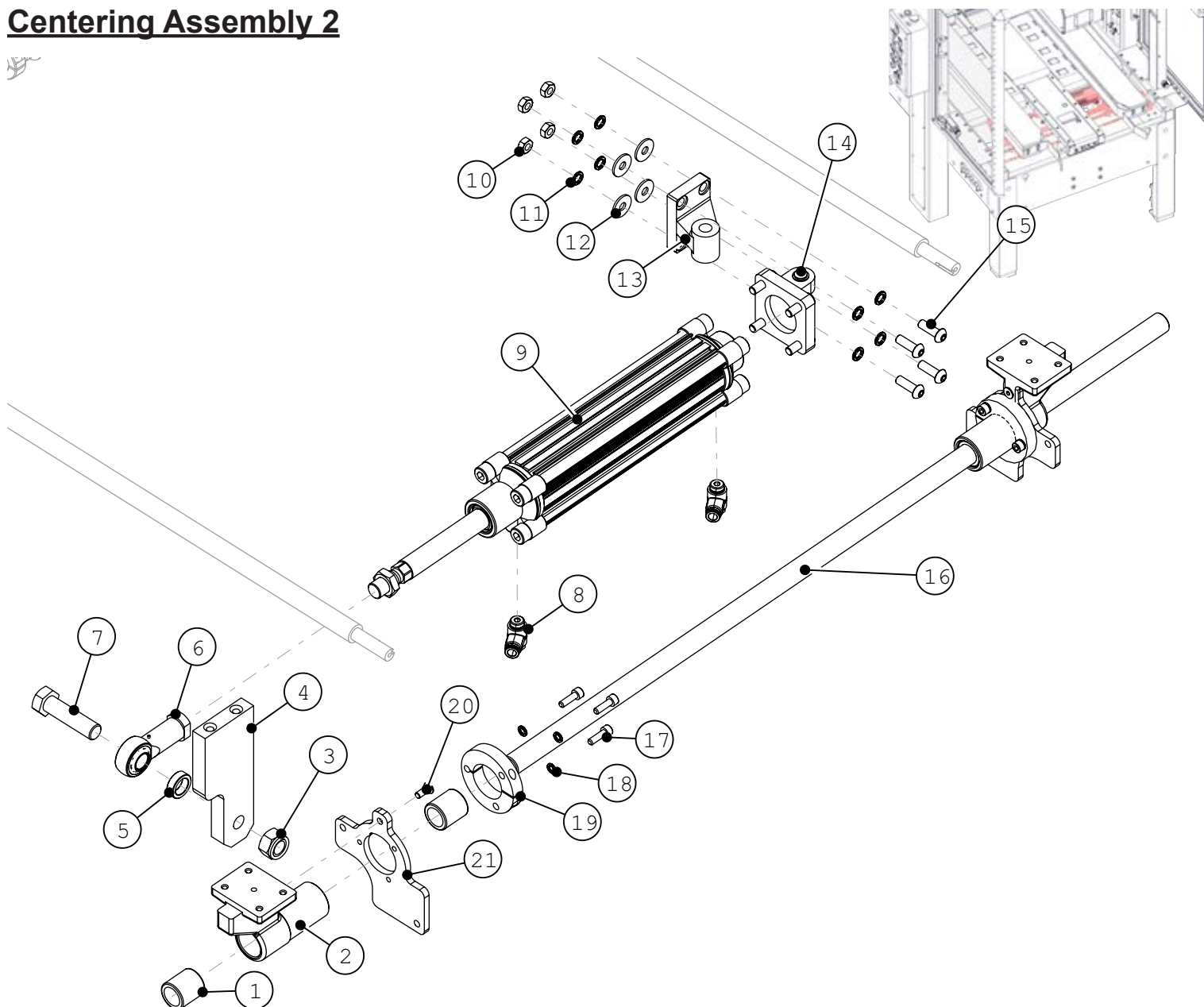


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF3282	FHCS M5-0.8 x 12mm	2
2	UPM0150	SPROCKET SHAFT WASHER	2
3	UPM0028	SPROCKET	2
4	UPM1646	SPROCKET SHAFT SPACER	2
5	UPM3275	SHAFT BEARING HOUSING RH	1
6	UF6343	FW M12	2
7	UF3733	LW M12	2
8	UF3754	HHCS M12-1.75 x 25mm	2
9	UPM3250	SHAFT ANCHOR PLATE	2
10	UF3684	FHCS M8-1.25 x 16mm	2
11	UF3752	BHCS M6-1.0 x 30mm	8
12	UF3275	FHCS M6-1.0 x 25mm	2
13	UPM3242	DRIVE SUPPORT SPACER	2
14	UPM3330	COLLAR 20mm	2

ITEM	PART NUMBER	DESCRIPTION	QTY
15	UF3735	HNR M8-1.25	4
16	UF3640	LW M8	4
17	UPM1637	BEARING	2
18	UPM3262	SHAFT BEARING HOUSING RH	1
19	UF6420	KEY 5x5x20mm	2
20	UF3716	SSS M5-0.8 x 10mm	4
21	UPM5166	CHAIN #35, 35 PITCH	2
22	UPM3259EV	CHAIN THREADED LINK LH	2
23	UF6411	LW M6	8
24	UPM3255EV	TURNBUCLKE	2
25	UF3361	JAM NUT M6	8
26	UPM3260EV	CHAIN THREADED LINK RH	2

APPENDIX B

Centering Assembly 2

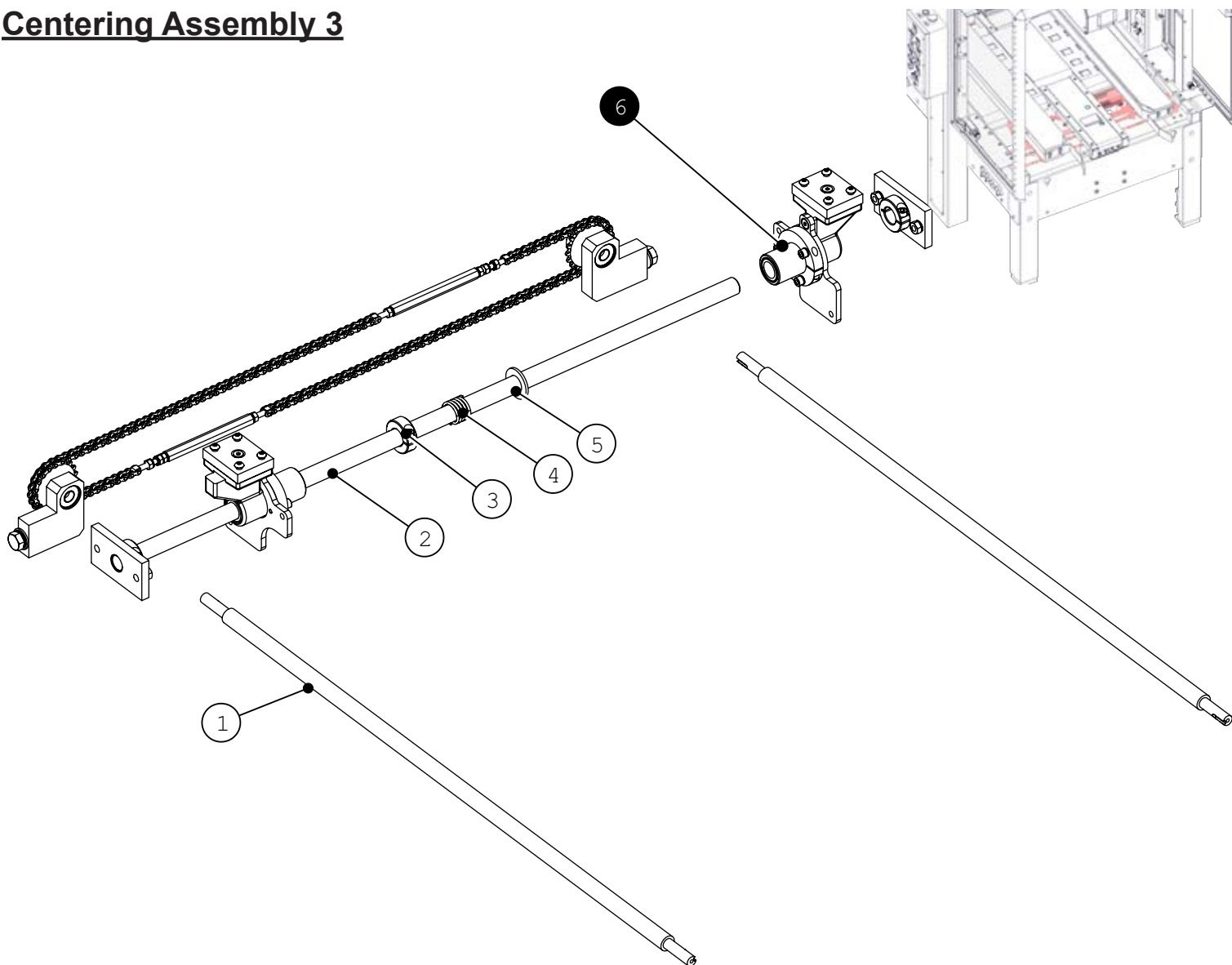


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM3303	LINEAR BEARING 20mm	4
2	UPM3243	CASTING FOR DRIVE SUPPORT RSA	2
3	UF3814	M18 - 2.5 HNR	1
4	UPM4967	DRIVE BASE ANCHOR PLATE	1
5	UPM4971	SPACER	1
6	UPM4970	HINGE EYE	1
7	UF3738	HHCS M16-2.0 x 40mm	1
8	UPM3787	90 DEG CONNECTOR	2
9	UPH4914	PNEUMATIC CYLINDER	1
10	UF3735	HNR M8-1.25	4
11	UF3640	LW M8	8

ITEM	PART NUMBER	DESCRIPTION	QTY
12	UF3643	FW M8	4
13	UPH4915	CYLINDER MOUNT	1
14	UPH4916	CLEVIS	1
15	UF0865	SHCS M8-1.25 X 25mm	4
16	UPM3251	SHAFT, dia 20mm	1
17	UF0811	SHCS M6-1.0 x 20mm	6
18	UF6363	LW M6	6
19	UPM3266	SPLIT COLLAR	2
20	UF3216	FHCS M6-1.0 x 16mm	2
21	UPM3237	ANCHOR PLATE	2

APPENDIX B

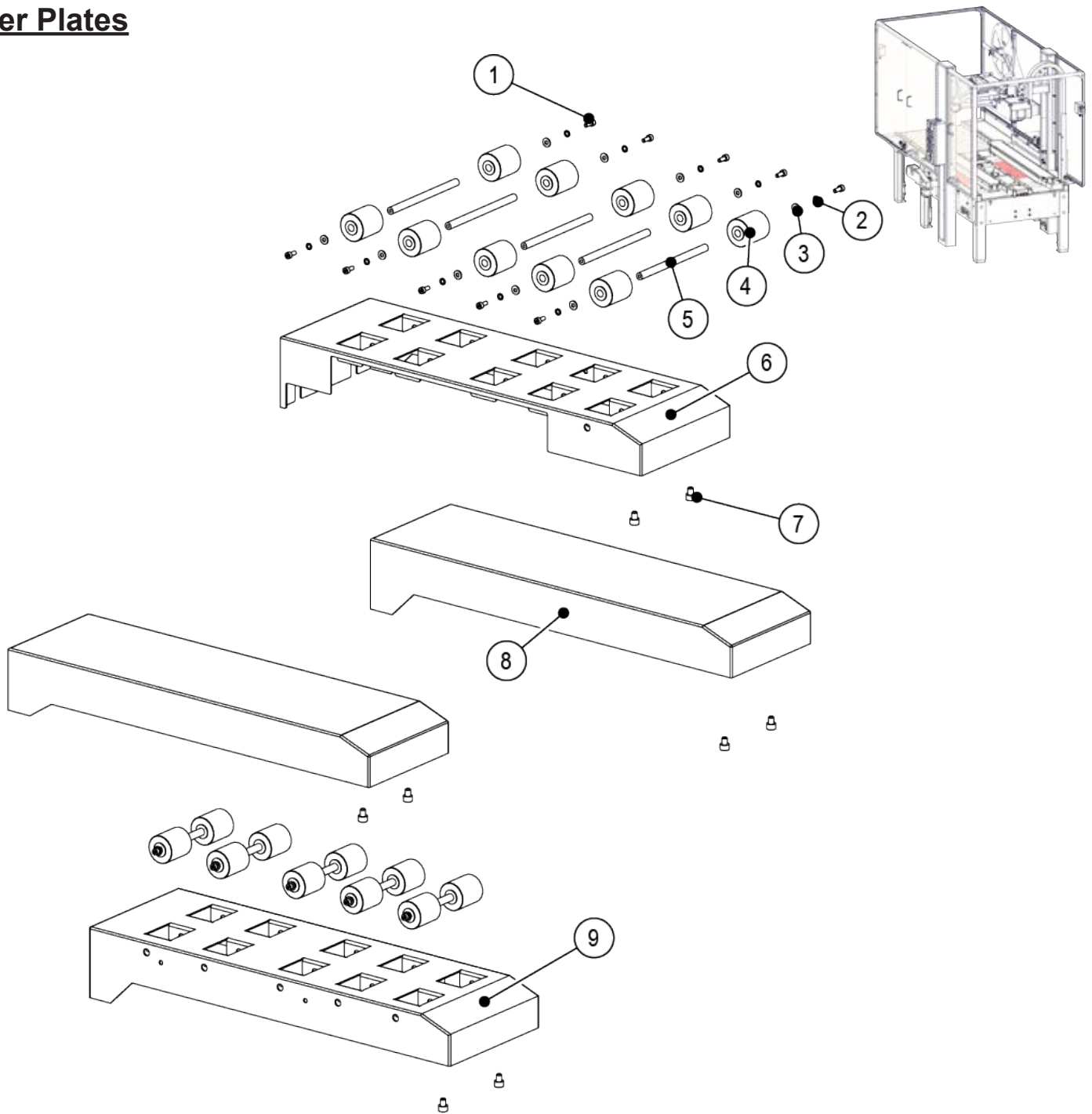
Centering Assembly 3



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM4966	SHAFT, dia 19mm	2
2	UPM3251	SHAFT, dia 20mm	1
3	UPM3330	COLLAR 20mm	2
4	UPM3401	SPRING	1
5	UF3736	FW M20	1
6	UAM0141	DRIVE SUPPORT ASSY	1

APPENDIX B

Cover Plates

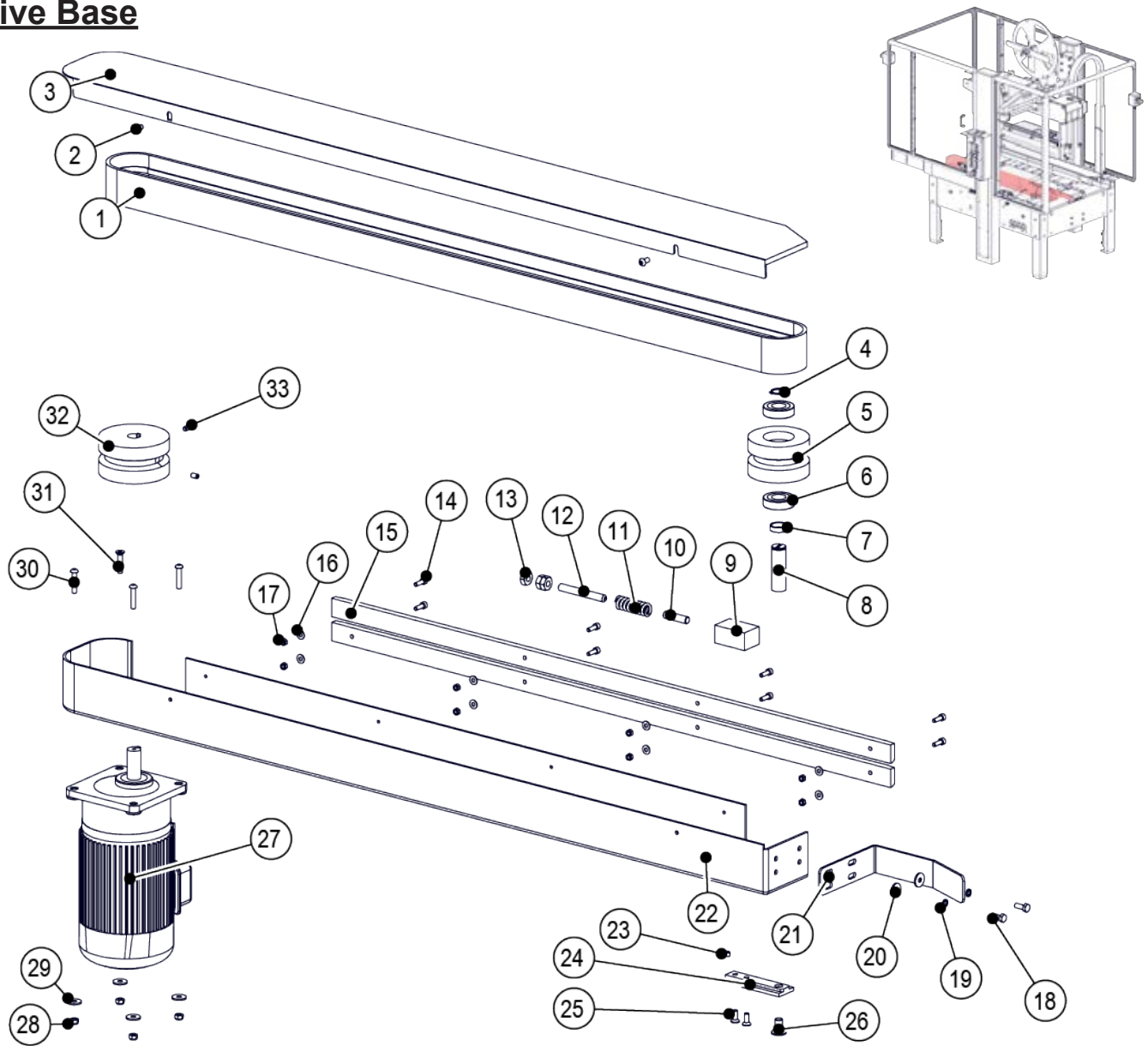


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF9148	SHCS M4-0.7 x 10mm	20
2	UF3749	M4 LW	20
3	UF3710	M4 FW	20
4	UPM4941	ROLLER	20
5	UPM4942	ROLLER SHAFT	10

ITEM	PART NUMBER	DESCRIPTION	QTY
6	UPM5958	ROLLER PLATE RH	1
7	UF3170	SHCS M6-1.0 x 8mm	8
8	UPM4930	SIDE COVER,	2
9	UPM5957	ROLLER PLATE LH	1

APPENDIX B

Left Drive Base

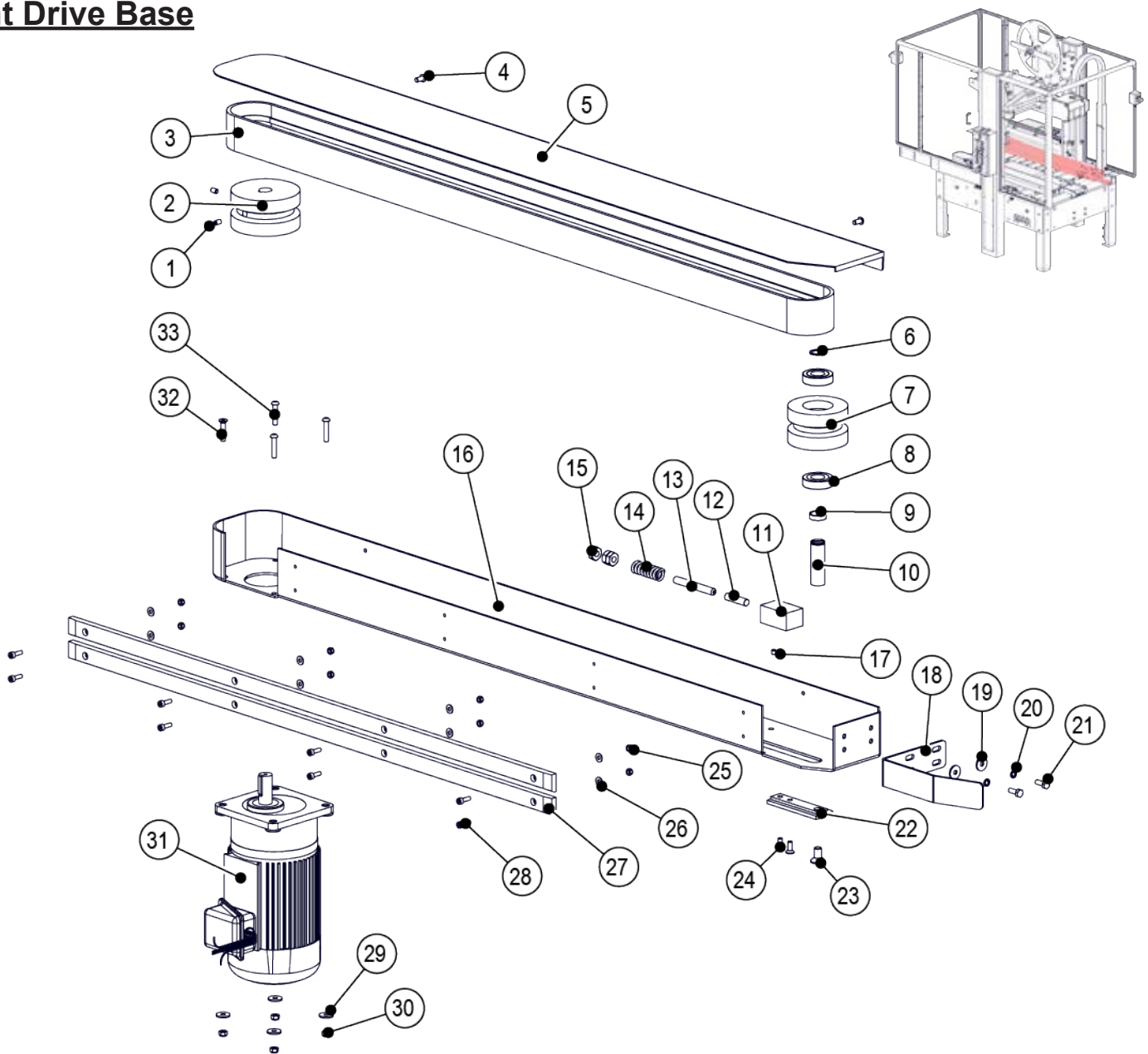


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM4884	DRIVING BELT 50 x 2360L	1
2	UF5600	BHCS M6-1.0 x 12mm	2
3	UPM4975	COVER LEFT SIDE	1
4	UF0017	Ø12MM SNAP RING	1
5	UPM4885	IDLER PULLEY	1
6	UPM0324	BEARING PULLEY	2
7	UPM0109	IDLER PULLEY SPACER	1
8	UPM1233EV	IDLER PULLEY SHAFT	1
9	UPM0101	TENSIONER BACKING PLATE	1
10	UPM0112	SPRING LOCATOR PIN	1
11	UPM0038	DIE SPRING	1
12	UF1400	SSS HK 3/8-16 X 3"	1
13	UF3377	3/8"-16-HNR	3
14	UF3169	SHCS M5-0.8 x 16mm	8
15	UPM4974	BELT PAD	2
16	UF1827	M5 FW	8
17	UF3393	M5 LOCK-NUT	8

ITEM	PART NUMBER	DESCRIPTION	QTY
18	UF0454	HHCS M6-1.0 x 16mm	2
19	UF6363	M6 LW	2
20	UF0103	M6 FW	2
21	UPM0647	CARTON RETAINER	1
22	UPM6163	DRIVE WELDMENT, L.H	1
23	UF1411	SSS M6-1.0 x 6mm	1
24	UPM2156	TENSIONER ALIGNMENT PLATE	1
25	UF1192	FHCS M6-1.0 16mm	2
26	UF3748	FHCS M10-1.5 x 20mm	1
27	UPM3327	MOTOR 1/3HP 25:1	1
28	UF5900	M6 LOCK-NUT	4
29	UF0103	M6 FW	4
30	UF3752	BHCS M6-1.0 x 30mm	3
31	UF3712	FHCS M6-1.0 x 30mm	1
32	UPM4883	DRIVE PULLEY	1
33	UF3683	SSS M6-1.0 10mm	2

APPENDIX B

Right Drive Base

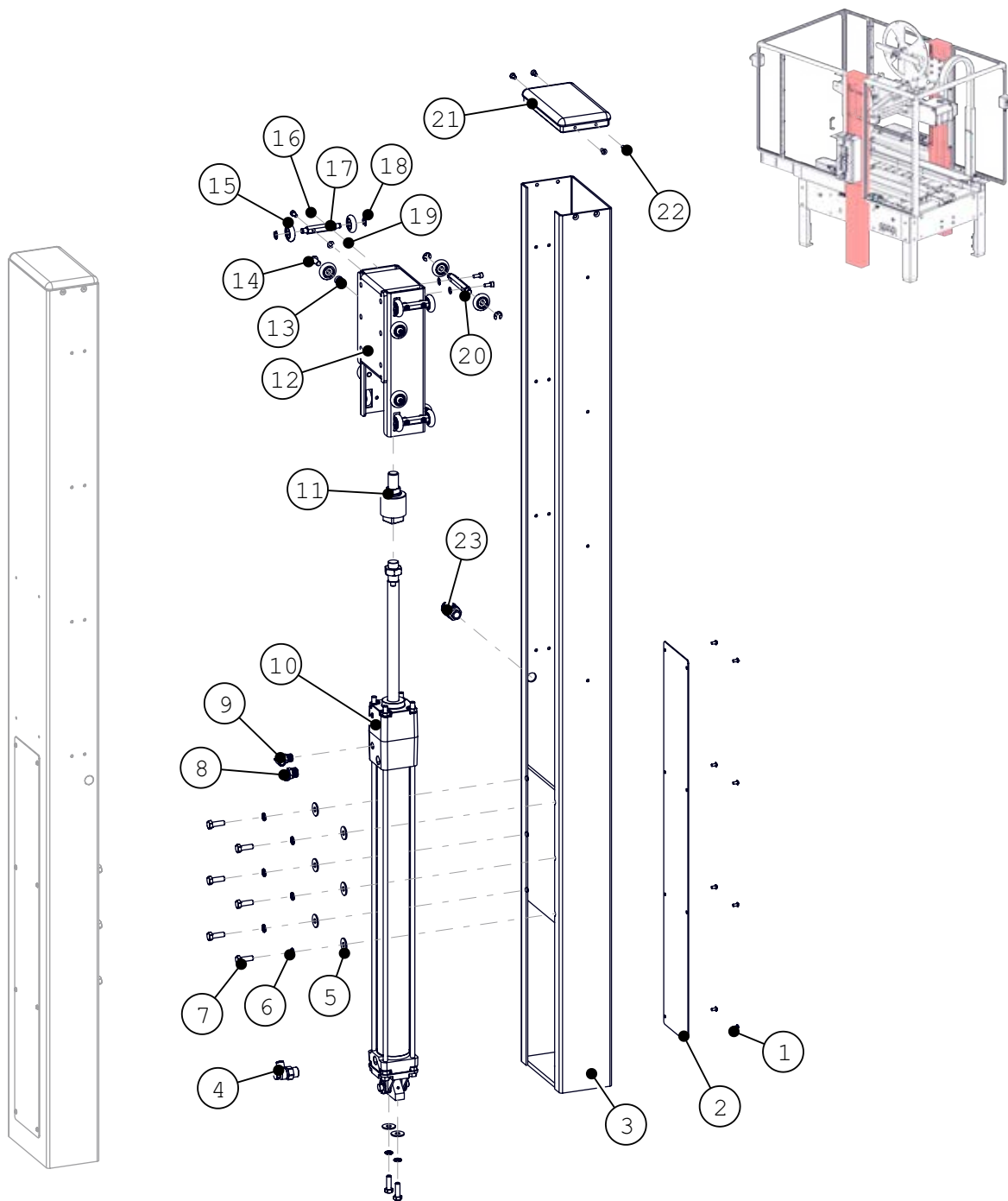


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF3683	SSS M6-1.0 x 10mm	2
2	UPM4883	DRIVE PULLEY	1
3	UPM4884	DRIVING BELT 50 x 2360L	1
4	UF5600	BHCS M6-1.0 x 12mm	2
5	UPM4973	COVER RIGHT SIDE	1
6	UF0017	Ø12MM SNAP RING	1
7	UPM4885	IDLER PULLEY	1
8	UPM0324	BEARING PULLEY	2
9	UPM0109	IDLER PULLEY SPACER	1
10	UPM1233EV	IDLER PULLEY SHAFT	1
11	UPM0101	TENSIONER BACKING PLATE	1
12	UPM0112	SPRING LOCATOR PIN	1
13	UF1400	SSS HK 3/8-16 X 3"	1
14	UPM0038	DIE SPRING	1
15	UF3377	3/8"-16-HNR	3
16	UPM6164	DRIVE WELDMENT, R.H	1
17	UF1411	SSS M6-1.0 x 6mm	1

ITEM	PART NUMBER	DESCRIPTION	QTY
18	UPM0647	CARTON RETAINER	1
19	UF0103	M6 FW	2
20	UF6363	M6 LW	2
21	UF0454	HHCS M6-1.0 x 16mm	2
22	UPM2156	TENSIONER ALIGNMENT PLATE	1
23	UF3748	FHCS M10-1.5 x 20mm	1
24	UF1192	FHCS M6-1.0 x 16mm	2
25	UF3393	M5 LOCK-NUT	8
26	UF1827	M5 FW	8
27	UPM4974	BELT PAD	2
28	UF3169	SHCS M5-0.8 x 16mm	8
29	UF0103	M6 FW	4
30	UF5900	M6 LOCK-NUT	4
31	UPM3327	MOTOR 1/3HP 25:1	1
32	UF3712	FHCS M6-1.0 x 30mm	1
33	UF3752	BHCS M6-1.0 x 30mm	3

APPENDIX B

Columns

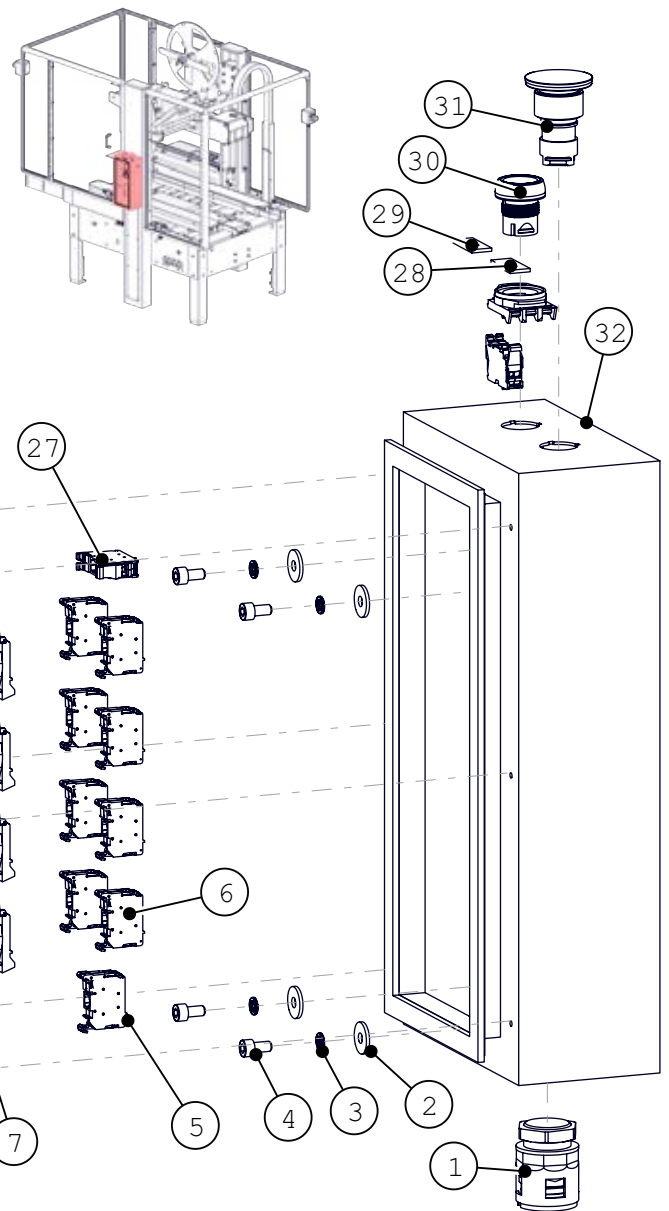


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF7009	BHCS M4-0.7 x 8mm	8
2	UPM4963	COLUMN ACCESS PANEL	1
3	UPM8223	WAT RSA COLUMN WELDMENT	1
4	UPM6345	AIR CYLINDER PNEUMATIC COUPLER	1
5	UF0105	FW M8	8
6	UF3640	LW M8	8
7	UF3774	HHCS M8-1.25 x 25mm	8
8	UPM6343	AIR CYLINDER PNEUMATIC COUPLER	1
9	UPM6344	AIR CYLINDER PNEUMATIC COUPLER	1
10	UPM9147	LOCKING CYLINDER	1
11	UPM5145	FLEXIBLE COUPLING	1
12	UPM4958	COLUMN BLOCK	1

ITEM	PART NUMBER	DESCRIPTION	QTY
13	UPM4961	SPACER	4
14	UF3802	BHCS M8-1.25 x 20mm	4
15	UPM4962	ROLLER WHEEL	16
16	UF7003	SHCS M5-0.8 x 12mm	12
17	UPM4965	SHAFT, dia 8, 74 L	4
18	UF3818	RETAINING RING 8mm	12
19	UF7030	BRASS WASHER	12
20	UPM4964	SHAFT, dia 8, 92 L	2
21	UPM4960	COLUMN CAP	1
22	UF3282	FHCS M5-0.8 x 12mm	4
23	UPM5873	CABLE GLAND	1

APPENDIX B

Operator Control Box

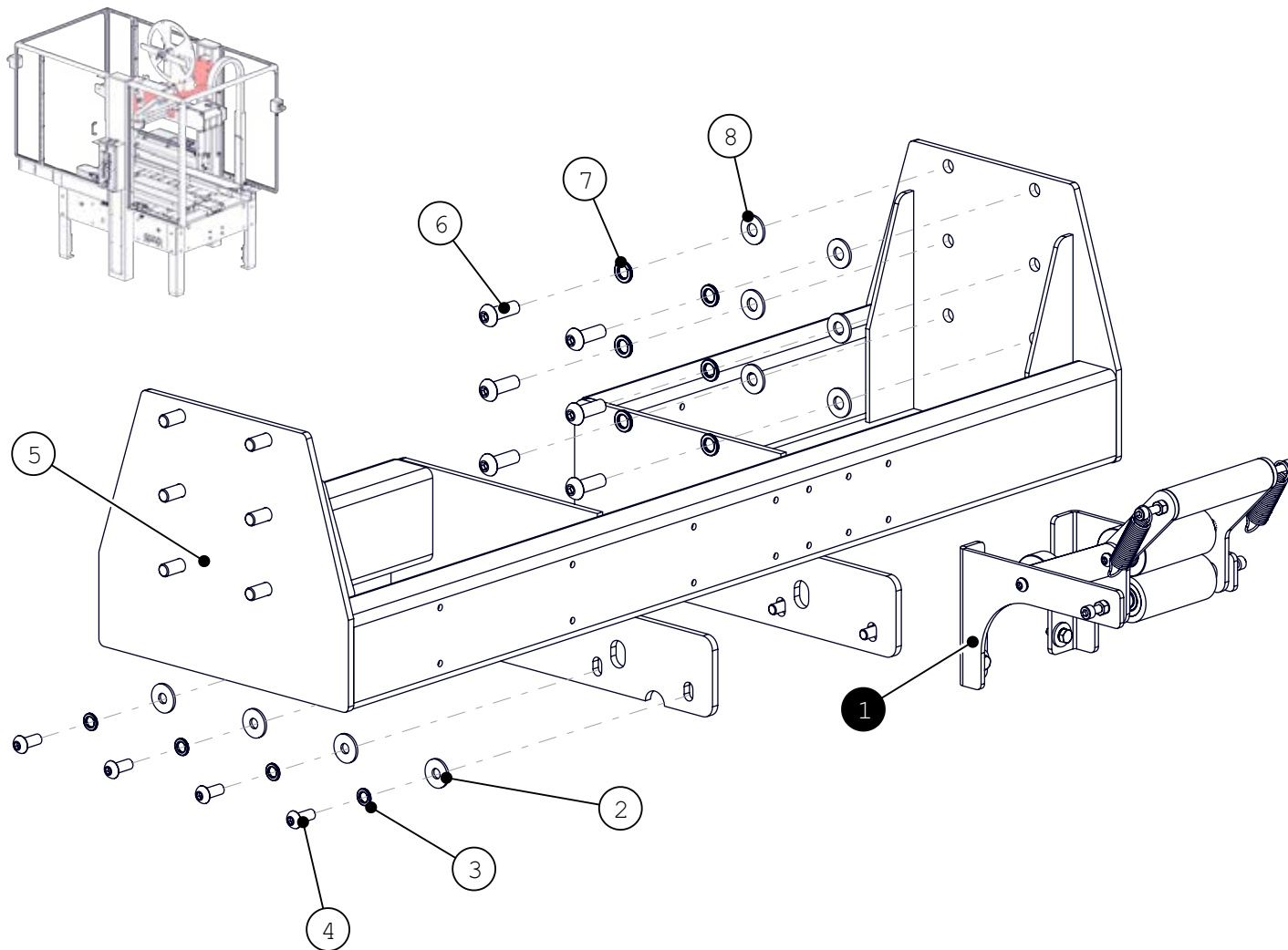


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM4905	CORD GRIP	1
2	UF0103	M10-23-1.0	4
3	UF6363	LW M6	4
4	UF0038	SHCS M6-1.0 x 12mm	4
5	UPM4720	NC CONTACT	2
6	UPM7631	NO CONTACT	8
7	UPM7630	LATCH	11
8	UPM6168	OPERATION BOX COVER	1
9	UPM6045	E-STOP LABEL	1
10	UPM4900	LEGENDE PLATE "CUT TAPE"	1
11	UPM4899	LEGEND PLATE "HEAD DOWN"	1
12	UPM5082	LEGEND PLATE "TAPE FEED"	1
13	UPM4897	LEGEND PLATE "HEAD UP"	1
14	UPM4896	LEGEND PLATE "TAPE THREADING/STOP"	1
15	UPM4895	LEGEND PLATE "START"	1
16	UPM4893	LEGEND PLATE "MANUAL/AUTO"	1
17	UPM4898	LEGEND PLATE "TOP/BOTH/BOTTOM"	1

ITEM	PART NUMBER	DESCRIPTION	QTY
18	UPM4816	EMERGENCY STOP BUTTON	1
19	UF0069	BHCS M4-0.7 x 25mm	6
20	UPM5157	PUSH BUTTON BLACK	4
21	UPM6140	MUSHROOM BUTTON RED	1
22	UPM5734	PUSH BUTTON GREEN	1
23	UMP6049	2 POS SELECTOR SWITCH	1
24	UPM6139	3 POS SELECTOR SWITCH	1
25	UPM6048	POWER LAMP	1
26	UPM4894	LEGEND PLATE "POWER LAMP"	1
27	UPM0415	PILOT LAMP	1
28	UPM4903	LEGEND PLATE "CLEAR"	1
29	UPM6141	LEGEND PLATE "RESET"	1
30	UPM6047	PUSH BUTTON BLUE	1
31	UPM4926	ILLUMINATED PB, MUSHROOM, BLUE	1
32	UPM6273	CONTROL BOX FRAME	1

APPENDIX B

Bridge Support

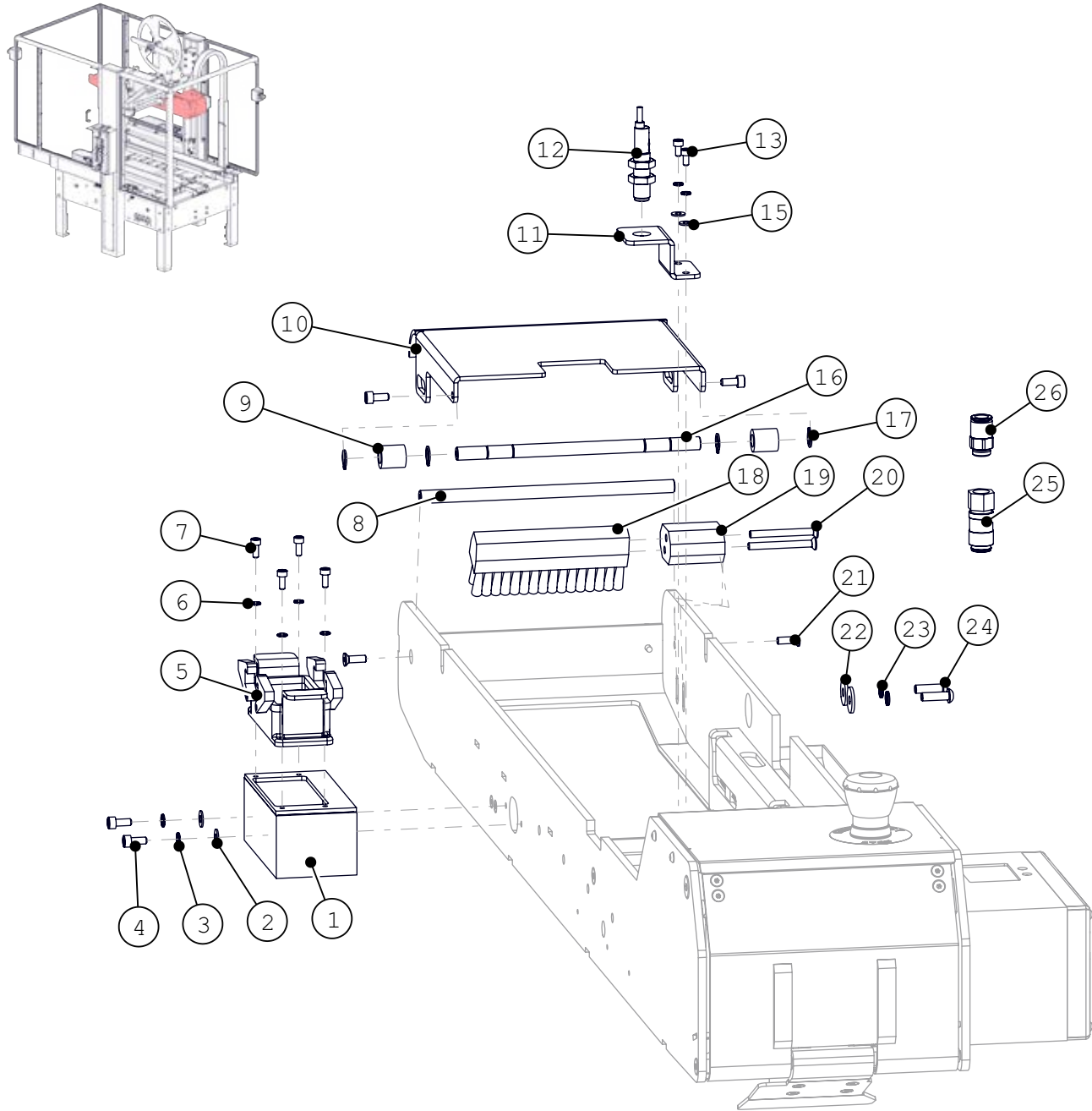


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UAM0025	CLUTCH MECHANISM RSA	1
2	UF6342	FW M8	8
3	UF3640	LW M8	8
4	UF3329	BHCS M8-1.25 x 20mm	8
5	UPM4977	BRIDGE WELDMENT	1

ITEM	PART NUMBER	DESCRIPTION	QTY
6	UF4310	BHCS M10-1.5 x 30mm	12
7	UF3743	LW M10	12
8	UF7015	FW M10	12

APPENDIX B

Bridge Assembly 1

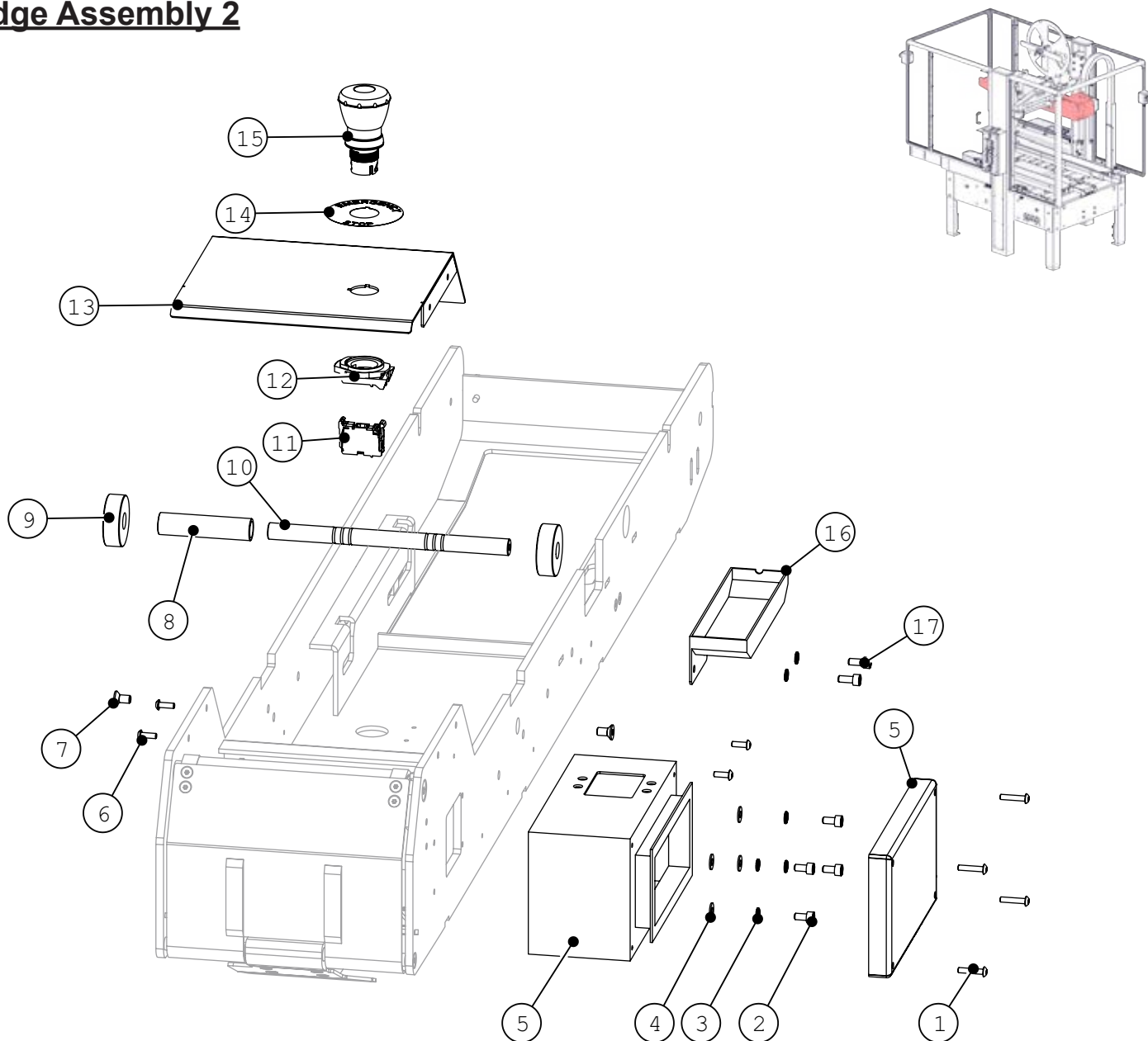


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM4980	ELECTRICAL RECEPTACLE BASE	1
2	UF6340	FW M5	2
3	UF7021	LW M5	2
4	UF7003	SHCS M5-0.8 x 12mm	4
5	UPM4938	RECEPTACLE CONNECTION	1
6	UF3749	LW M4	6
7	UF3759	SHCS M4-0.7 x 10mm	4
8	UPM5102	SHAFT, dia 9.5	1
9	UPM4992	SPACER, 18L	2
10	UPM4989	TOP COVER	1
11	UPM4997	BRACKET	1
12	UPM5137	SENSOR	1
13	UF3072	SHCS M4-0.7 x 8mm	2

ITEM	PART NUMBER	DESCRIPTION	QTY
15	UF6339	FW M4	2
16	UPM4991	SHAFT, dia 9.5, 181L	1
17	UPM6145	RETAINING RING S10	4
18	UPH4004	BRUSH 4" TH	1
19	UPM4968	BRUSH ADAPTOR	1
20	UF0074	FHCS M5-0.8 x 50mm	2
21	UF3277	FHCS M5-0.8 x 16mm	2
22	UF6341	FW M6	2
23	UF6411	LW M6	2
24	UF6325	BHCS M6-1.0 x 20mm	2
25	UPH4922	DISCONNECT COUPLING AIR	1
26	UPM5543	10mm TUBE X 1/4G STR FITTING	1

APPENDIX B

Bridge Assembly 2

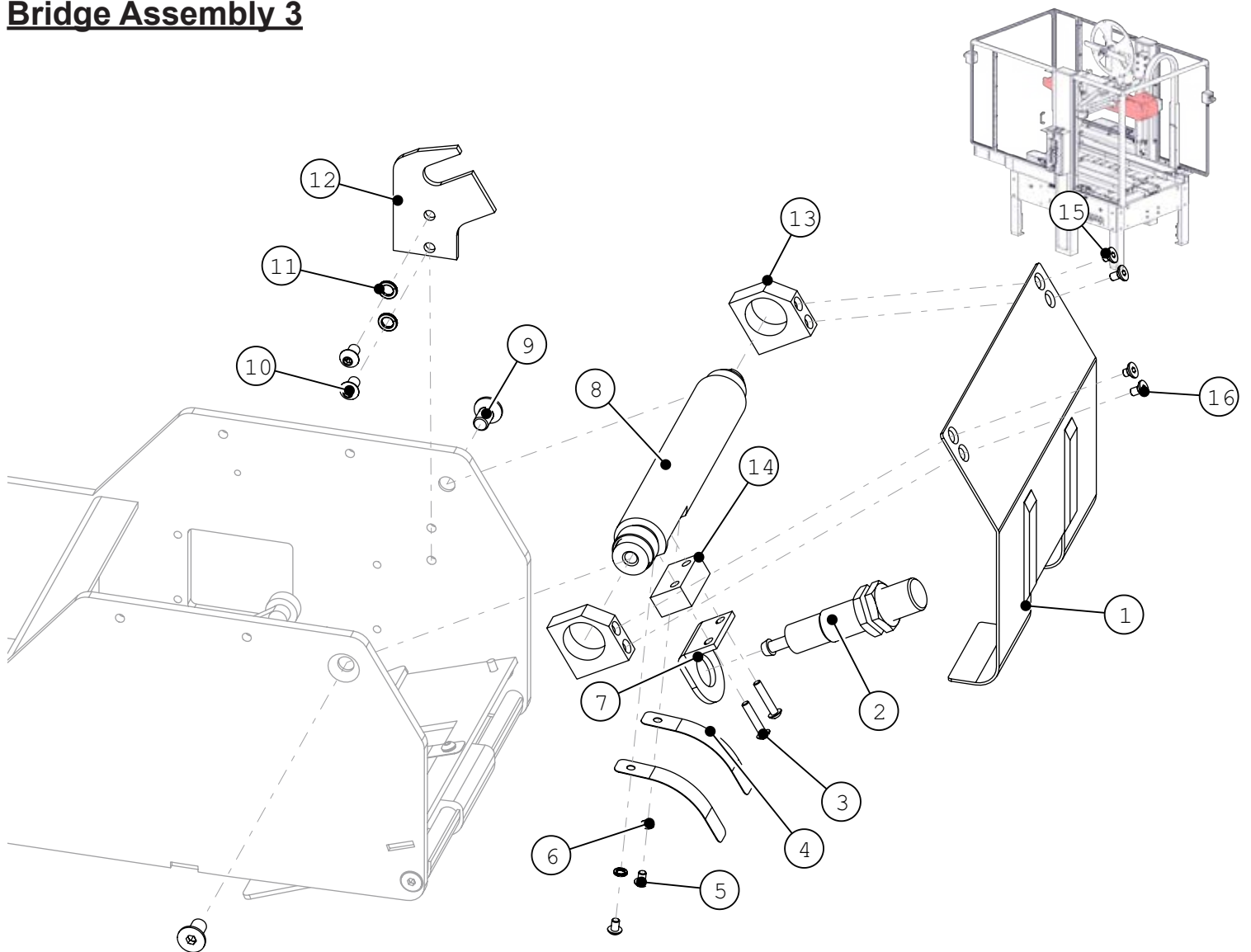


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF4323	BHCS M4-0.7 x 20mm	4
2	UF3147	SHCS M5-0.8 x 10mm	4
3	UF7021	LW M5	6
4	UF6340	FW M5	4
5	UPM4988	COVER	1
6	UF4325	BHCS M4-0.7 x 12mm	4
7	UF6353	FHCS M6-1.0 x 12mm	2
8	UPM4933	ROLLER, dia 17, 72L	1
9	UPM5967	GUIDE ROLLER, 40OD	2

ITEM	PART NUMBER	DESCRIPTION	QTY
10	UPM4993	SHAFT, dia 12.7, 189L	1
11	UPM4720	NC LATCH	1
12	UPM7630	LATCH	1
13	UPM4978	ELECTRICAL SWITCH COVER	1
14	UPM6045	E-STOP LABEL	1
15	UPM4816	EMERGENCY STOP BUTTON	1
16	UPM4990	OVER FLOW TRAY	1
17	UF7003	SHCS M5-0.8 x 12mm	2

APPENDIX B

Bridge Assembly 3

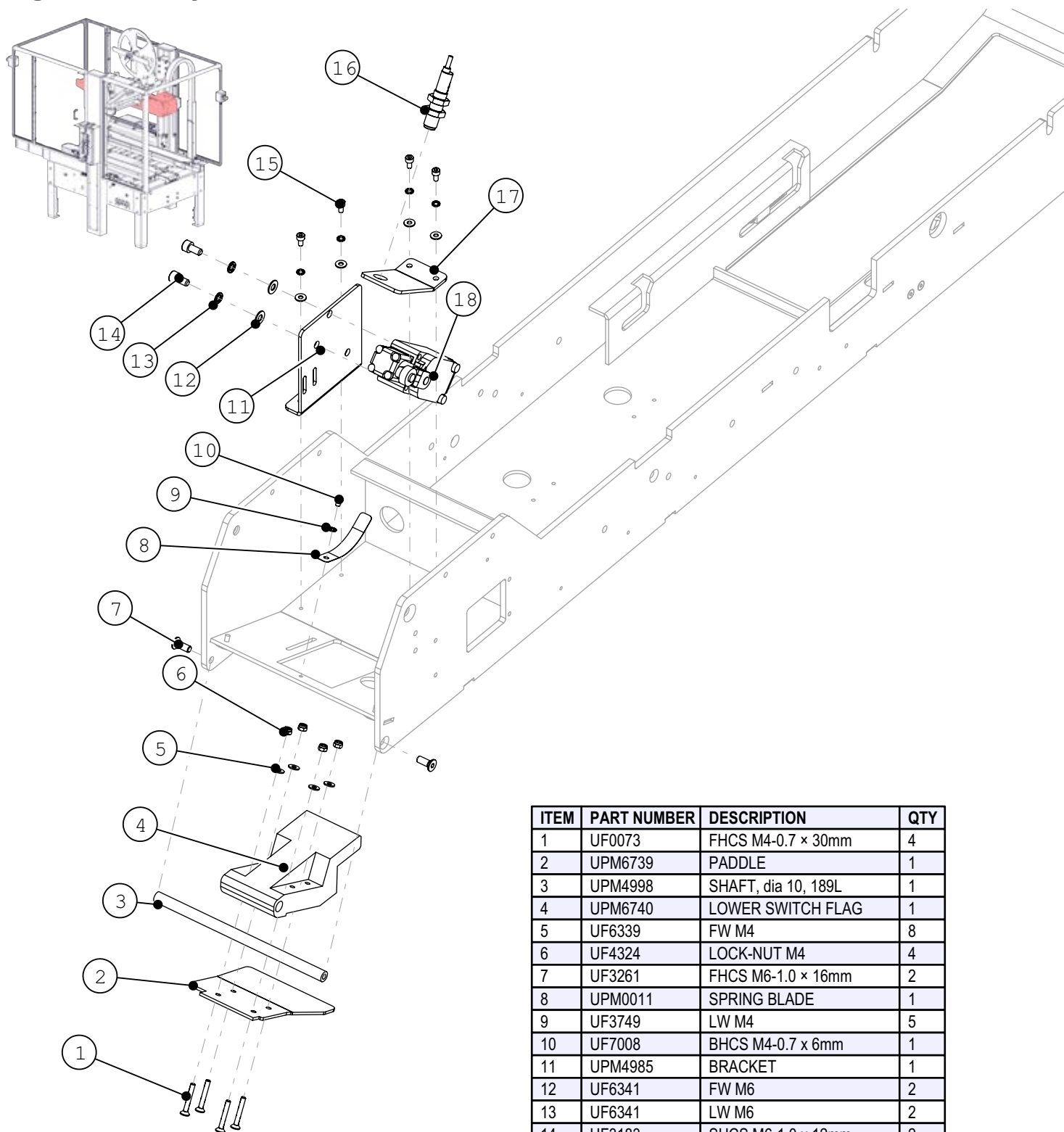


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM5101	SENSING PADDLE	1
2	UPM0014	FRONT PADDLE SENSOR	1
3	UF4323	BHCS M4-0.7 x 20mm	2
4	UPM0011	SPRING BLADE	2
5	UF6374	BHCS M4-0.7 x 6mm	2
6	UF3749	LW M4	2
7	UPM0733	MOUNTING BRACKET	1
8	UPM4999	FRONT SUPPORT SHAFT	1
9	UF3684	FHCS M8-1.25 x 16mm	2

ITEM	PART NUMBER	DESCRIPTION	QTY
10	UF3263	BHCS M6-1.0 x 10mm	2
11	UF6411	LW M6	2
12	UPM5100	HOLDING BRACKET	1
13	UPM2129	SENSOR PIVOTBLCK	2
14	UPM3238	SPACER	1
15	UF4323	FHCS M4-0.7 x 6mm	2
16	UF5401	FHCS M4-0.7 x 8mm	2

APPENDIX B

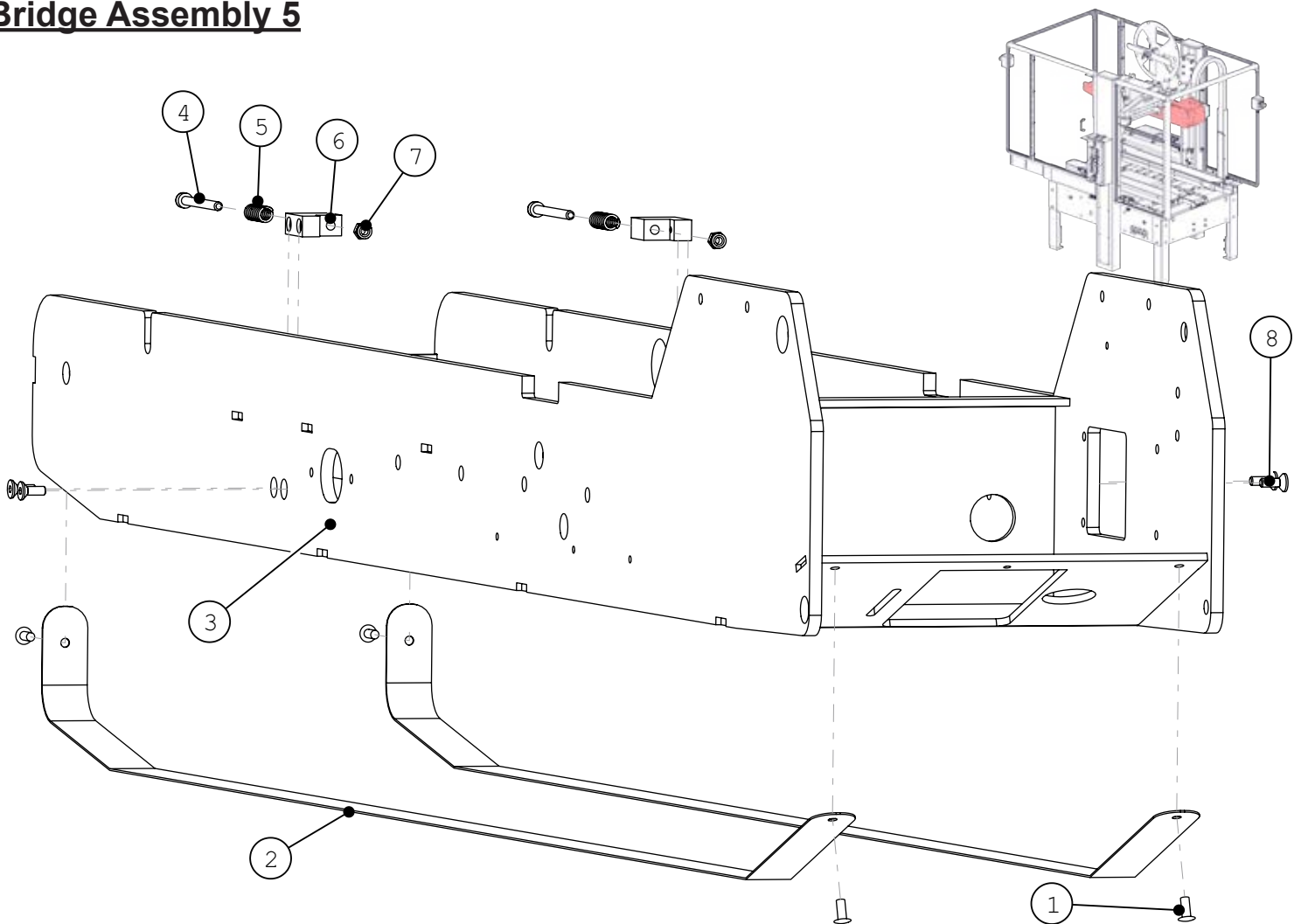
Bridge Assembly 4



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF0073	FHCS M4-0.7 × 30mm	4
2	UPM6739	PADDLE	1
3	UPM4998	SHAFT, dia 10, 189L	1
4	UPM6740	LOWER SWITCH FLAG	1
5	UF6339	FW M4	8
6	UF4324	LOCK-NUT M4	4
7	UF3261	FHCS M6-1.0 × 16mm	2
8	UPM0011	SPRING BLADE	1
9	UF3749	LW M4	5
10	UF7008	BHCS M4-0.7 x 6mm	1
11	UPM4985	BRACKET	1
12	UF6341	FW M6	2
13	UF6341	LW M6	2
14	UF3183	SHCS M6-1.0 x 12mm	2
15	UF0869	SHCS M4-0.7 x 8mm	4
16	UPM5137	PHOTO SENSOR	1
17	UPM6357	PHOTO SENSOR BRACKET	1
18	UPM4887	LIMIT SWITCH	1

APPENDIX B

Bridge Assembly 5

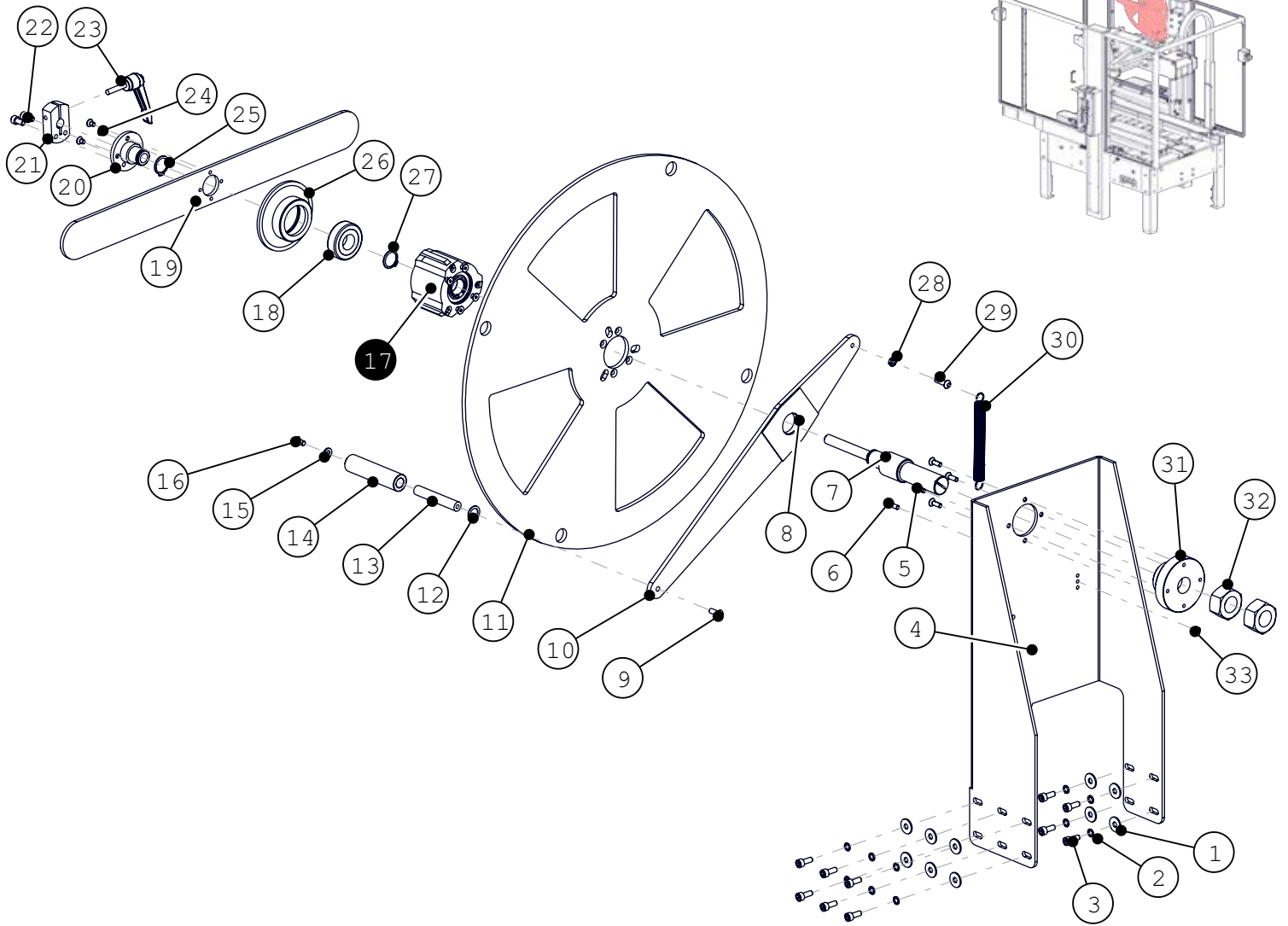


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF3691	POP RIVET	4
2	UPM0029	UHMW STRIP 1220mm	2
3	UPM4886	TOP TAPE HEAD WELDMENT	1
4	UF3107EV	SHCS M4-0.7 × 50mm	2
5	UPM1068	COMPRESSION SPRING	2

ITEM	PART NUMBER	DESCRIPTION	QTY
6	UPM7806	SPRING SUPPORT M4	2
7	UF4324	LOCK-NUT M4	2
8	UF3761	FHCS M4-0.7 × 12mm	4

APPENDIX B

Top Tape Mandrel Support

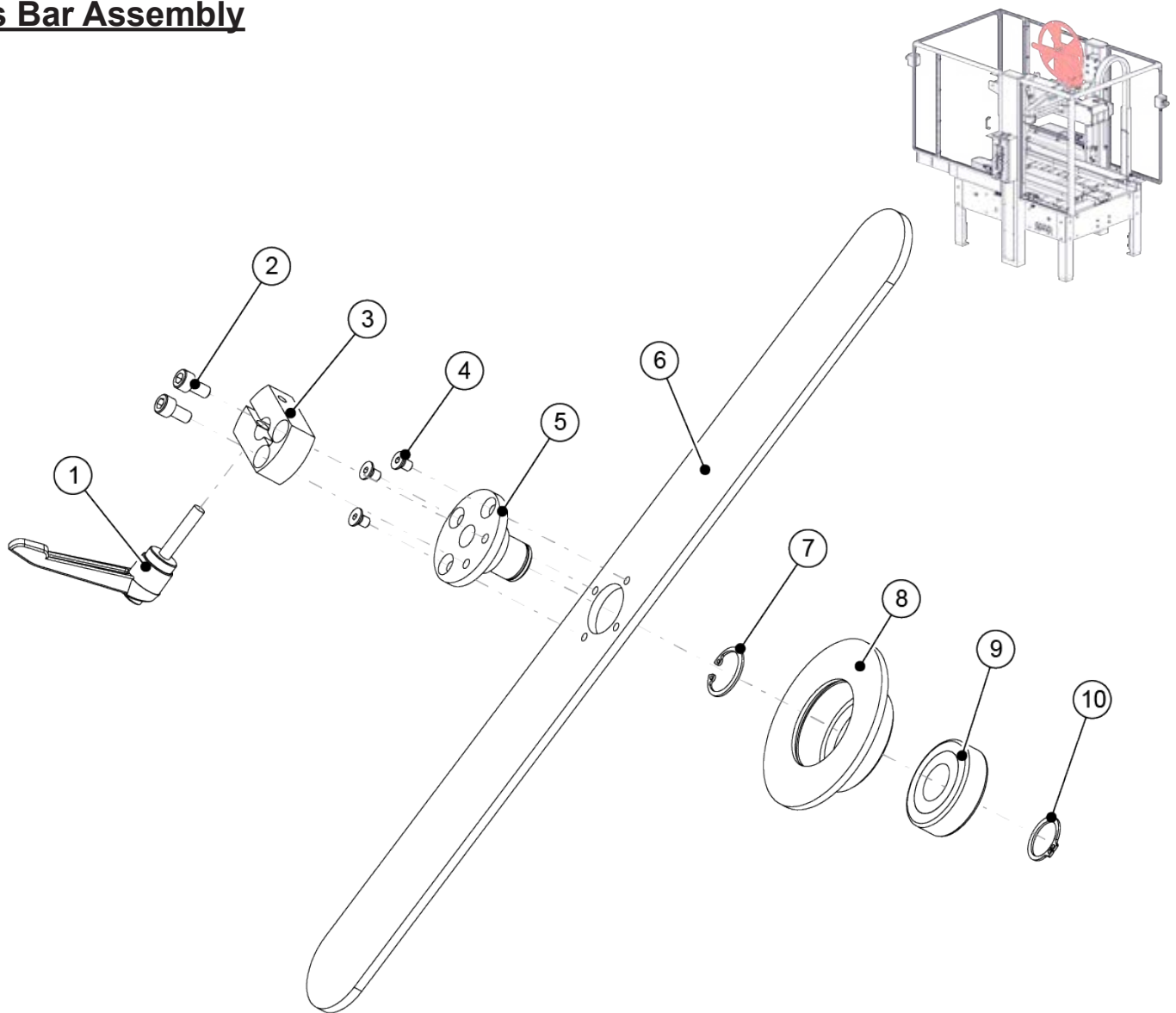


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF1890	FLAT WASHER 1/4 x 3/4 x 1/16	10
2	UF6411	LW M6	10
3	UF3187	SHCS M6-1 x 16mm	10
4	UPM4979	MANDREL BRACKET	1
5	UF5404	FHCS M5-0.8 x 16mm	4
6	UF9172	BHCS M5-0.8 x 20mm	1
7	UPM5109	STEPPED SHAFT	1
8	UPM9802	BREAK PAD	1
9	UF6414	BHCS M6-1 x 16mm	1
10	UPM6238	PIVOT ARM	1
11	UPM5111	PANCAKE	1
12	UF6336	FW PTFE, 13 x 19 x 1mm	1
13	UPH0949	GUIDE ROLLER SHAFT	1
14	UPH9059	PEEL OFF ROLLER	1
15	UF6341	FW M6	1
16	UF3278	BHCS M6-1 x 12mm	1
17	UAM0195	MANDREL HUB	1

ITEM	PART NUMBER	DESCRIPTION	QTY
18	UPM4888	BALL BEARING	1
19	UPM5108	CROSS BAR	1
20	UPM5106	RETAINER	1
21	UPM5107	CLAMP	1
22	UF3183	SHCS M6-1 x 12mm	2
23	UPM4889	HANDLE	1
24	UF7024	FHCS M5-0.8 x 8mm	3
25	UF3815	RET'G RING, ID 10	1
26	UPM5104	FLANGE MANDREL	1
27	UF3815	RET'G RING, ID 10	1
28	UF3361	JAM NUT M6	1
29	UF6325	BHCS M6-1 x 20mm	1
30	UPM4498	EXTENSION SPRING	1
31	UPM5114	HUB	1
32	UF3816	HEX NUT M24-1.5	2
33	UF6307	HEX NUT M5	1

APPENDIX B

Cross Bar Assembly

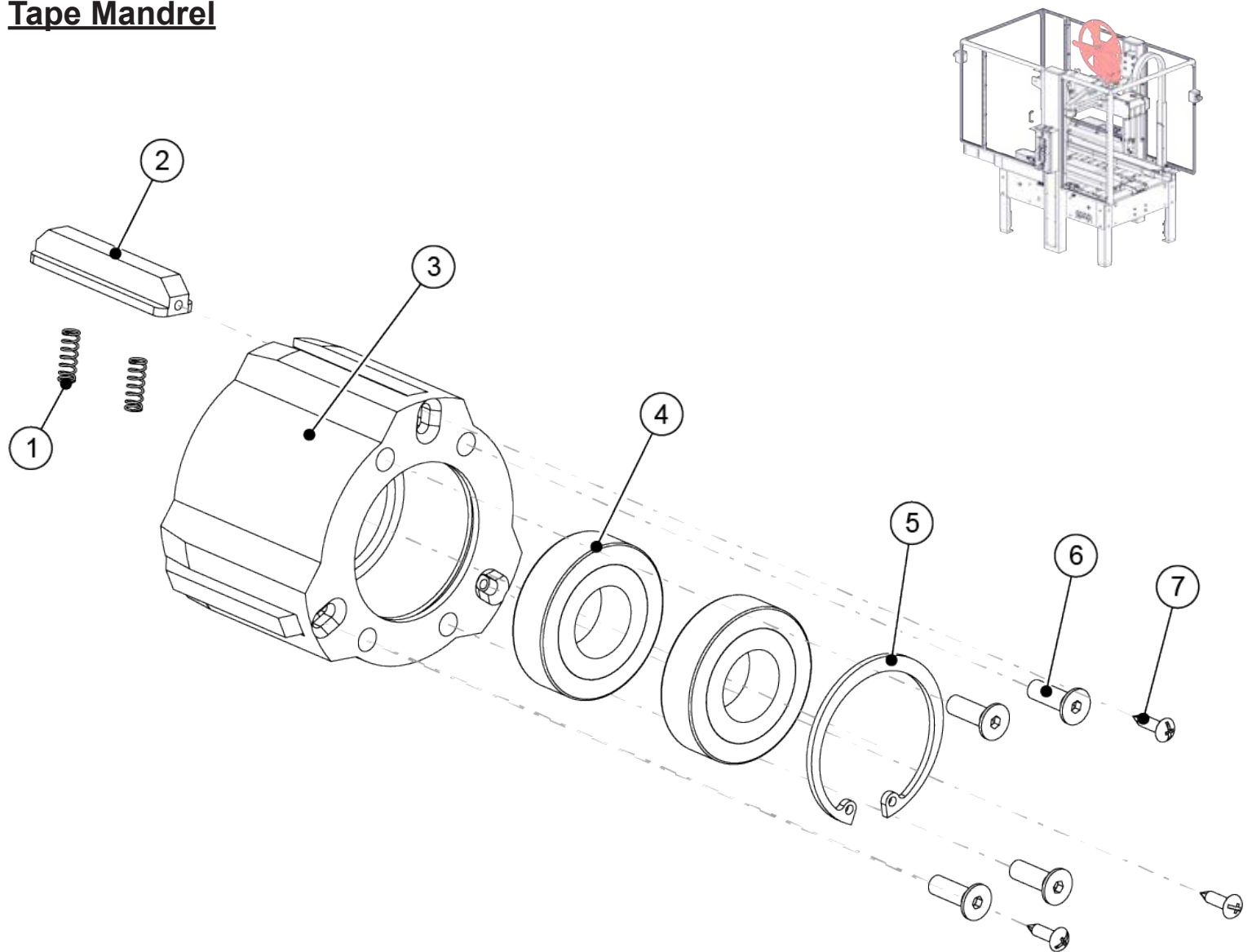


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM4889	HANDLE	1
2	UF3183	SHCS M6-1 x 12mm	2
3	UPM5107	CLAMPING	1
4	UF7024	FHCS M5-0.8 x 8 mm	3
5	UPM5106	RETAINER	1
6	UPM5108	CROSS BAR	1

ITEM	PART NUMBER	DESCRIPTION	QTY
7	UF3814	INTERNAL RET' RING	1
8	UPM5104	FLANGE MANDREL	1
9	UPM4888	BALL BEARING	1
10	UF3815	RET'G RING, ID 10	1

APPENDIX B

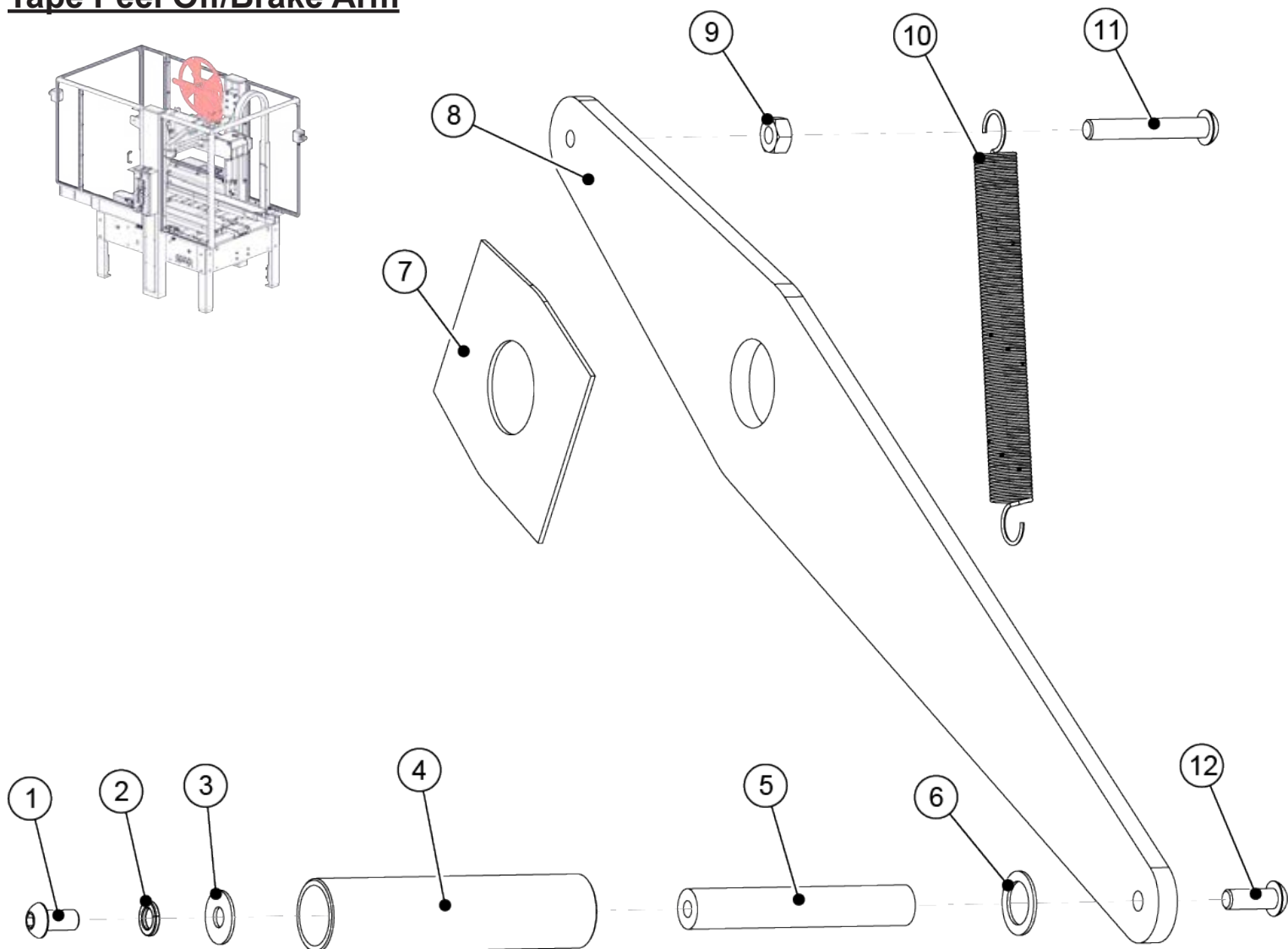
Tape Mandrel



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPH1468	COMPRESSION SPRING	6
2	UPM5074	SPRAG	3
3	UPM5073	MANDREL HUB	1
4	UPM0324	BEARING	2
5	UF0101	INTERNAL RETAINING RING, 42mm	1
6	UF5404	FHCS M5-0.8x16mm	4
7	UF3820	BHCS M3-0.5 SELF TAPPING	3

APPENDIX B

Tape Peel Off/Brake Arm

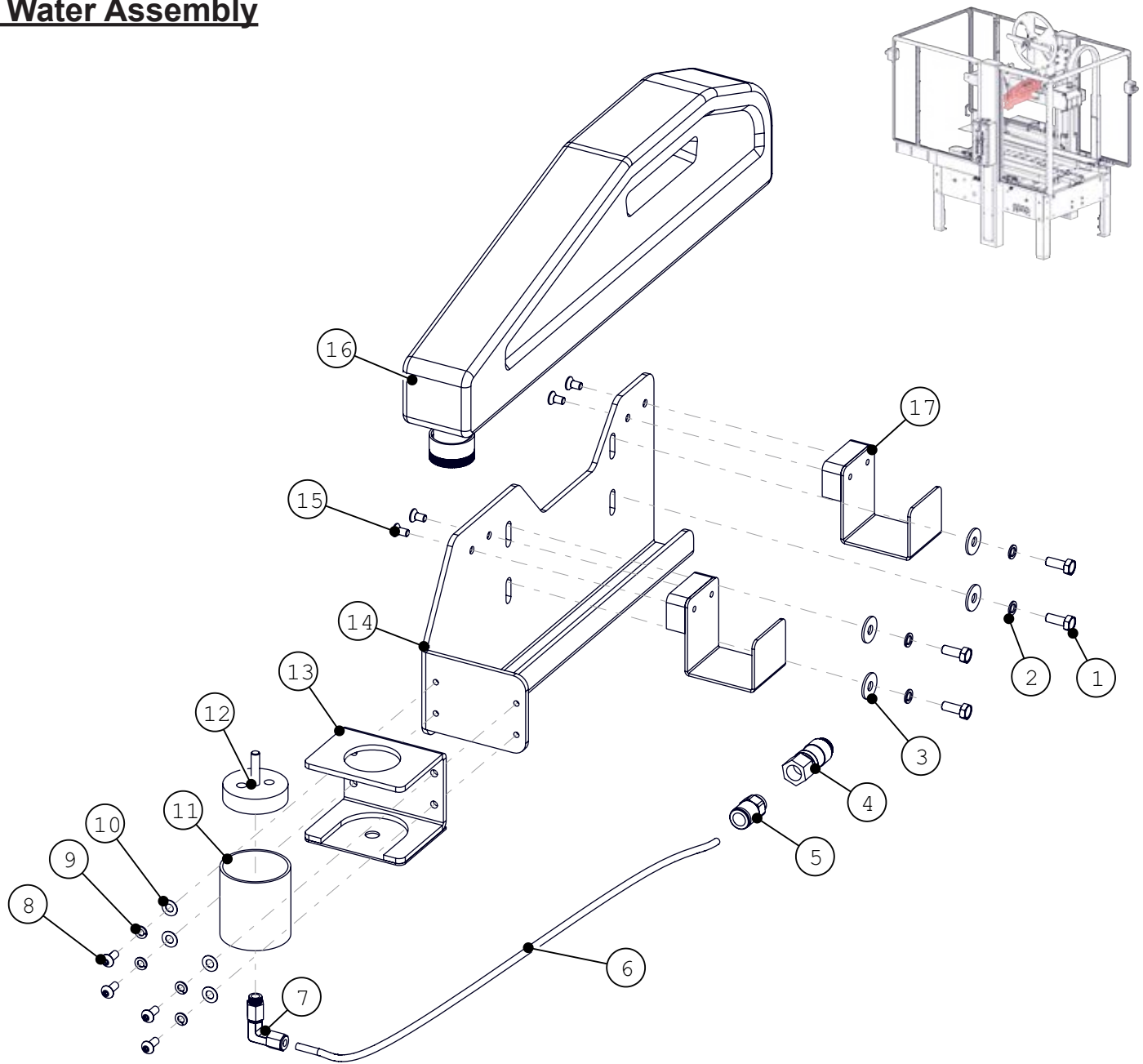


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF5600	BHCS M6-1.0×12mm	1
2	UF6363	M6 LW	1
3	UF1828	M6 FW	1
4	UPH9059	PEEL OFF ROLLER	1
5	UPH0949	GUIDE ROLLER SHAFT	1
6	UF6336	F.W. PTFE, 13 x 19 x 1 mm	1
7	UPM9802	BREAK PAD	1

ITEM	PART NUMBER	DESCRIPTION	QTY
8	UPM6238	PIVOT ARM	1
9	UF3361	M6-1.0-HNR	1
10	UPM4498	EXTENSION SPRING	1
11	UF4503	BHCS M6-1.0×40mm	1
12	UF1250EV	BHCS M6-1.0×16mm	1

APPENDIX B

Top Water Assembly

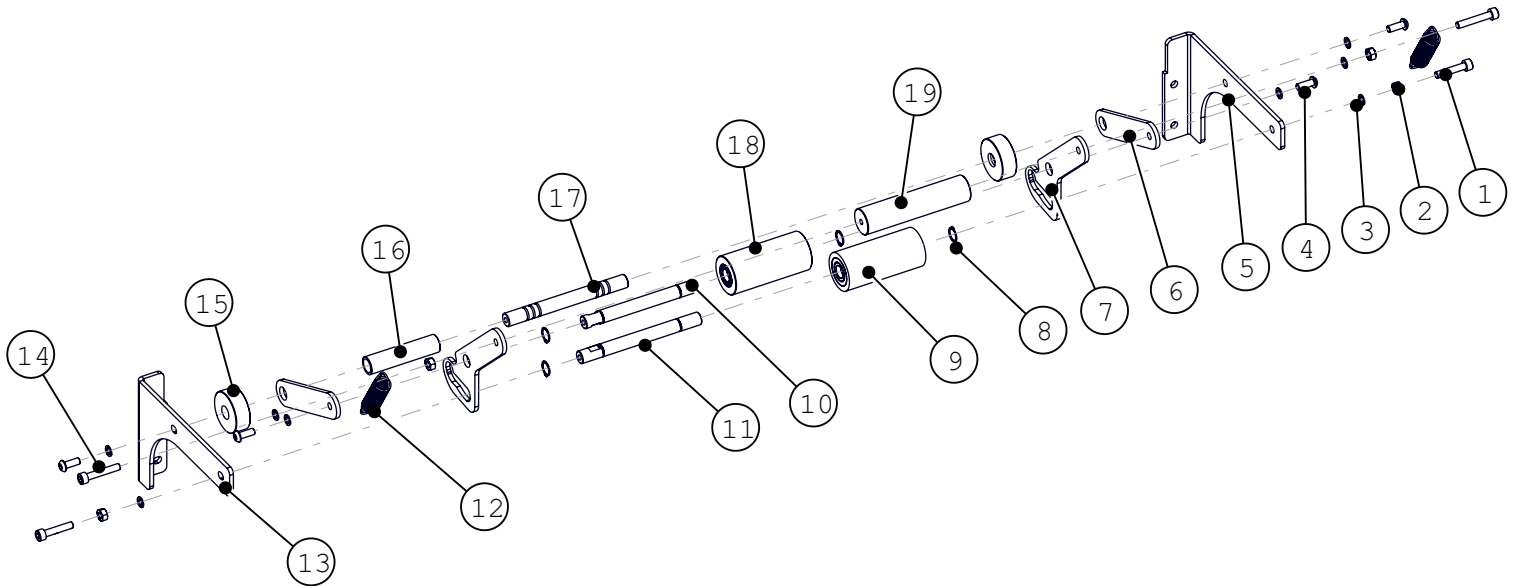
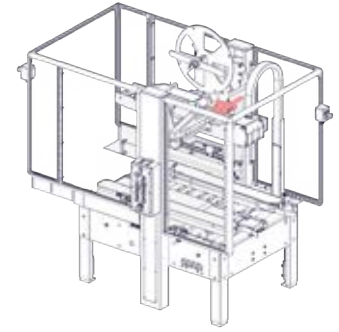


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF3751	HHCS M6-1.0 x 16mm	4
2	UF6411	LW M6	4
3	UF1890	FW M6	4
4	UPH4921	DISCONNECT COUPLING H20	1
5	UPM5543	10mm TUBE X 1/4G STR FITTING	1
6	UPM5541	TUBE	1
7	UPM5151	ELBOW FITTING	1
8	UF7011	BHCS M5-0.8 x 12mm	4
9	UF7021	LW M5	4

ITEM	PART NUMBER	DESCRIPTION	QTY
10	UF4071	FW M5	4
11	UPM4946	RESERVOIR CUP	1
12	UPM5901	PLUNGER	1
13	UPM4945	CUP HOLDER	1
14	UPM5116	FRAME	1
15	UF3262	FHCS M5-0.8 x 10 mm	4
16	WST1014	WATER BOTTLE & CAP	1
17	UPM5120	WT BOTTLE HOLDER	2

APPENDIX B

Top Tape Clutch

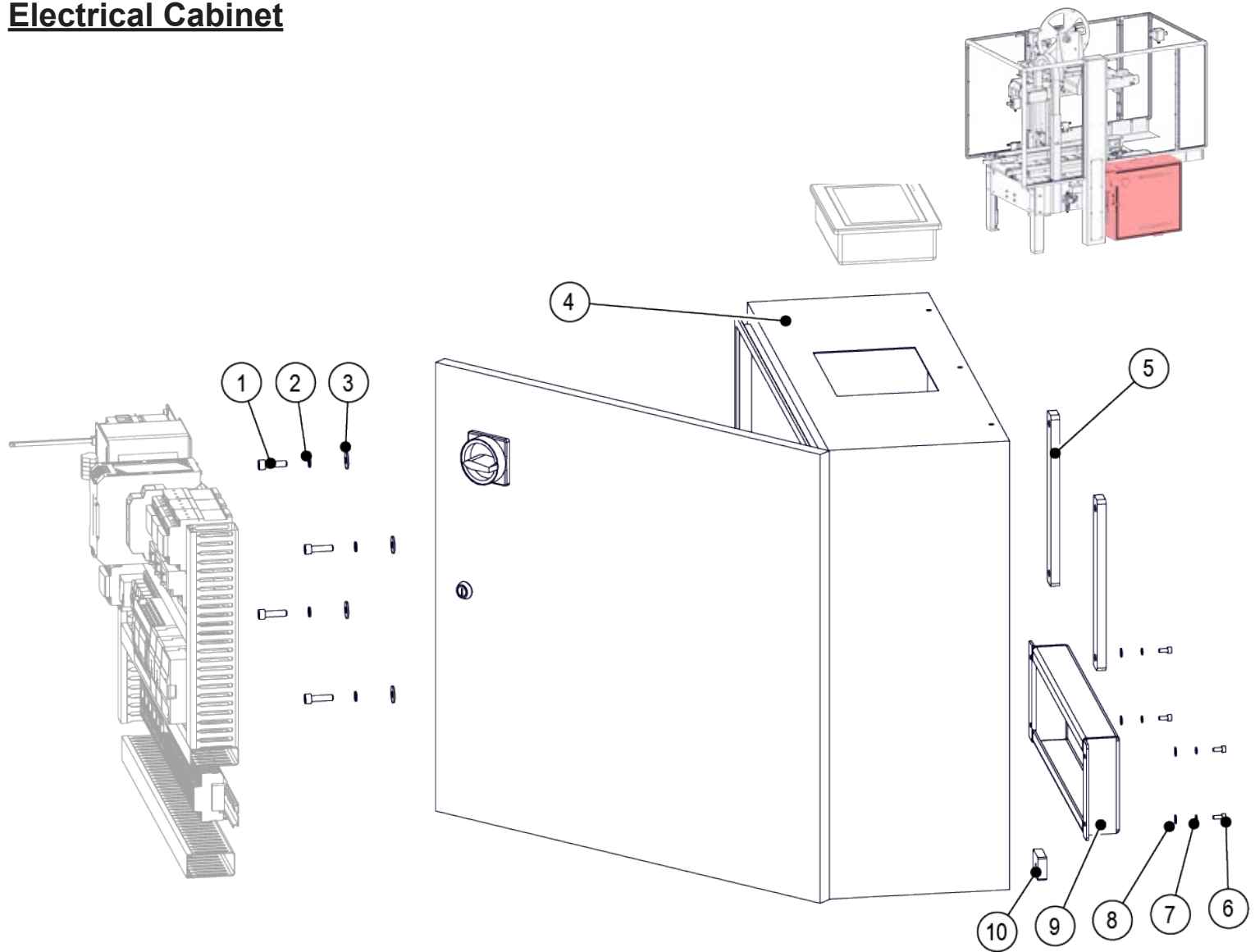


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF3739	SHCS M6-1 x 30mm	2
2	UF3637	HNR M6-1.0	4
3	UF6363	LW M6	8
4	UF6414	BHCS M6-1 x 16mm	4
5	UPM5904	RIGHT MOUNT BRACKET	1
6	UPM5908	PIVOT ARM	2
7	UPM5910	CLAMP ARM	2
8	UF3558	RETAINING RING 12mm	4
9	UAM0033	CLUTCH ROLLER ASSEM	1
10	UPM5907	PINCH ROLLER SHAFT	1

ITEM	PART NUMBER	DESCRIPTION	QTY
11	UPM5906	CLUTCH ROLLER SHAFT RSA	1
12	UPM5999	SPRING	2
13	UPM5905	LEFT MOUNT BRACKET	1
14	UF0850	SHCS BB M6-1 m 35mm	2
15	UPM2485	ADJUSTMENT RING	2
16	UPM4667	IDLER ROLLER	1
17	UPM5903	PIVOT SHAFT RSA	1
18	UAM0034	PINCH ROLLER ASSEM	1
19	UPM5909	CLAMP ARM HANDLE	1

APPENDIX B

Electrical Cabinet

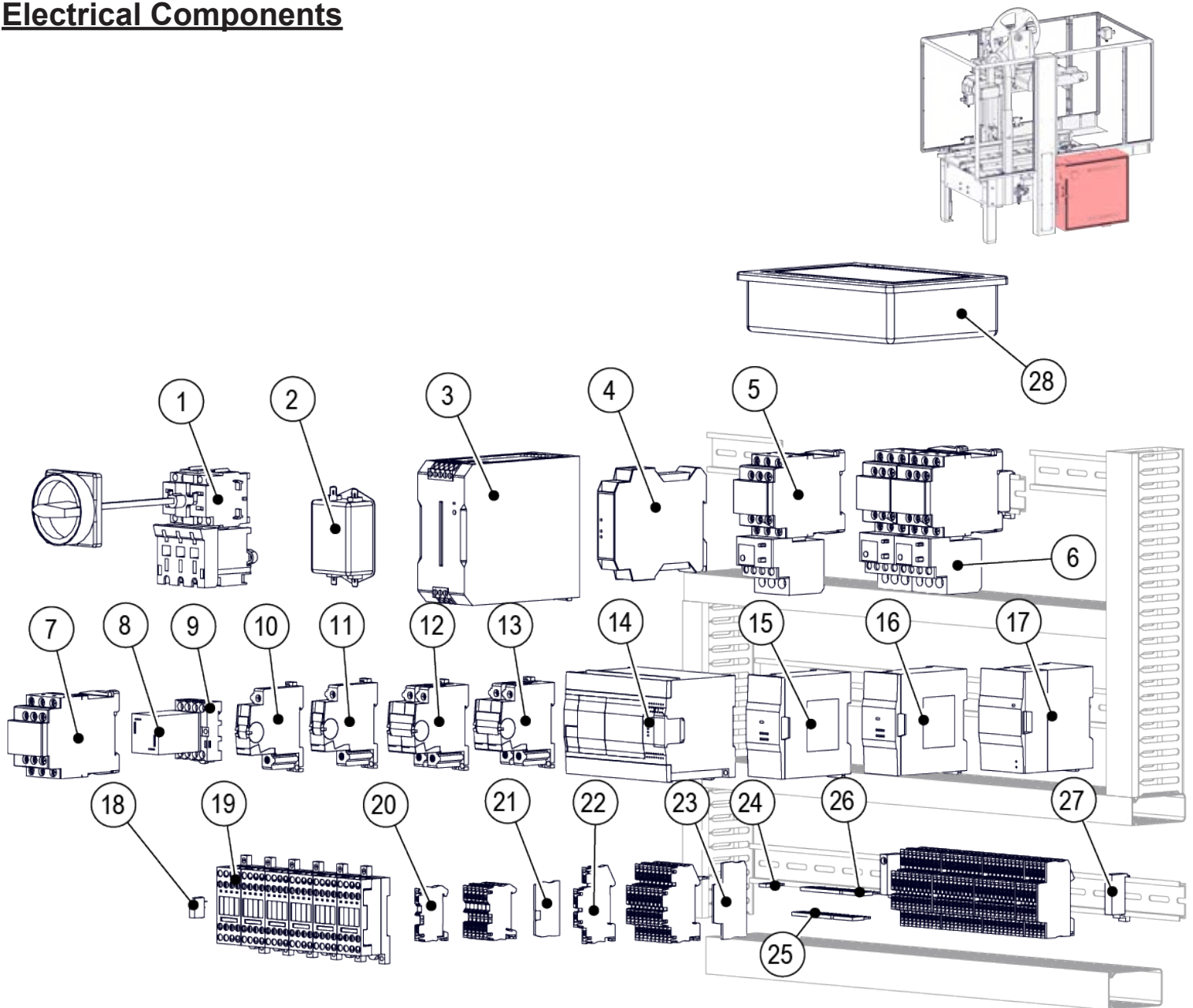


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF0099	SHCS M8-1.25 x 30mm	4
2	UF3640	M8 LW	4
3	UF0113	M8 FW	4
4	UPM6173	ELECTRICAL CABINET	1
5	UPM6174	ELEC. CAB. MOUNT BAR	2
6	UF7003	SHCS M5-0.8 x 12mm	4

ITEM	PART NUMBER	DESCRIPTION	QTY
7	UF7021	M5 LW	4
8	UF1827	M5 FW	4
9	UPM6175	ELEC. CAB. COVER	1
10	UPM6176	ELEC. CAB. GROUND BLOCK	1

APPENDIX B

Electrical Components

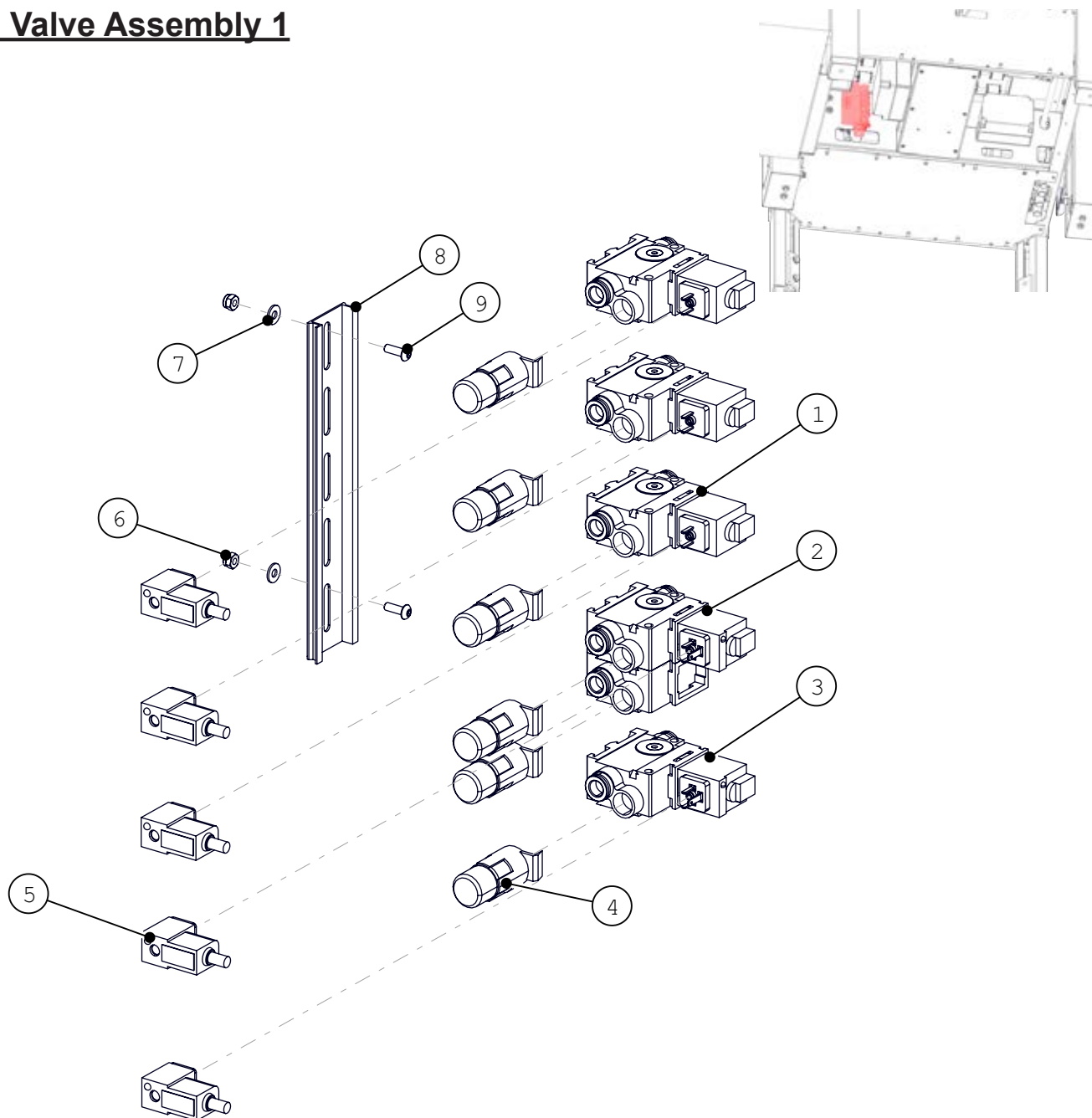


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM6178	POWER SWITCH	1
2	UPM6186	FILTER	1
3	UPM4912	POWER SUPPLY 24V	1
4	UPM6187	SAFETY MODULE	1
5	UPM6189	ELECTROMAGNETIC CONTACTOR (AC110V)	3
6	UPM4914	MOTOR OVERLOAD RELAYS	3
7	UPM6188	ELECTROMAGNETIC CONTACTOR (DC24V)	1
8	UPM6190	AC120 RELAY, MECHANICAL INDICATOR	1
9	UPM6191	RELAY SOCKET, DIN RAIL, 8 PIN	1
10	UPM4911	MINIATURE CIRCUIT BREAKER 2A	1
11	UPM4910	MINIATURE CIRCUIT BREAKER 4A	1
12	UPM7635	MINIATURE CIRCUIT BREAKER 2p, 7A	1
13	UPM7766	MINIATURE CIRCUIT BREAKER 2p, 3A	1
14	UPM4909	PLC	1
15	UPM6183	PLC EXPANSION MODULE	1

ITEM	PART NUMBER	DESCRIPTION	QTY
16	UPM6184	PLC EXPANSION MODULE	1
17	UPM4907	PLC ANALOG OUTPUT ADD-ON CARD	1
18	UPM4915	PCB POWER RELAYS	24
19	UPM4922	RELAY OUTPUT TERMINAL BLOCK	6
20	UPM6194	TERMINAL BLOCK, GROUND	7
21	UPM6196	END COVER	1
22	UPM6193	DOUBLE LEVEL TERMINAL BLOCK	45
23	UPM6195	END COVER	5
24	UPM6197	2 PIN BRIDGE	1
25	UPM6199	10 PIN BRIDGE	2
26	UPM6198	5 PIN BRIDGE	2
27	UPM7440EV	DIN RAIL ANCHOR	4
28	UPM6177	HMI, SCREEN	1

APPENDIX B

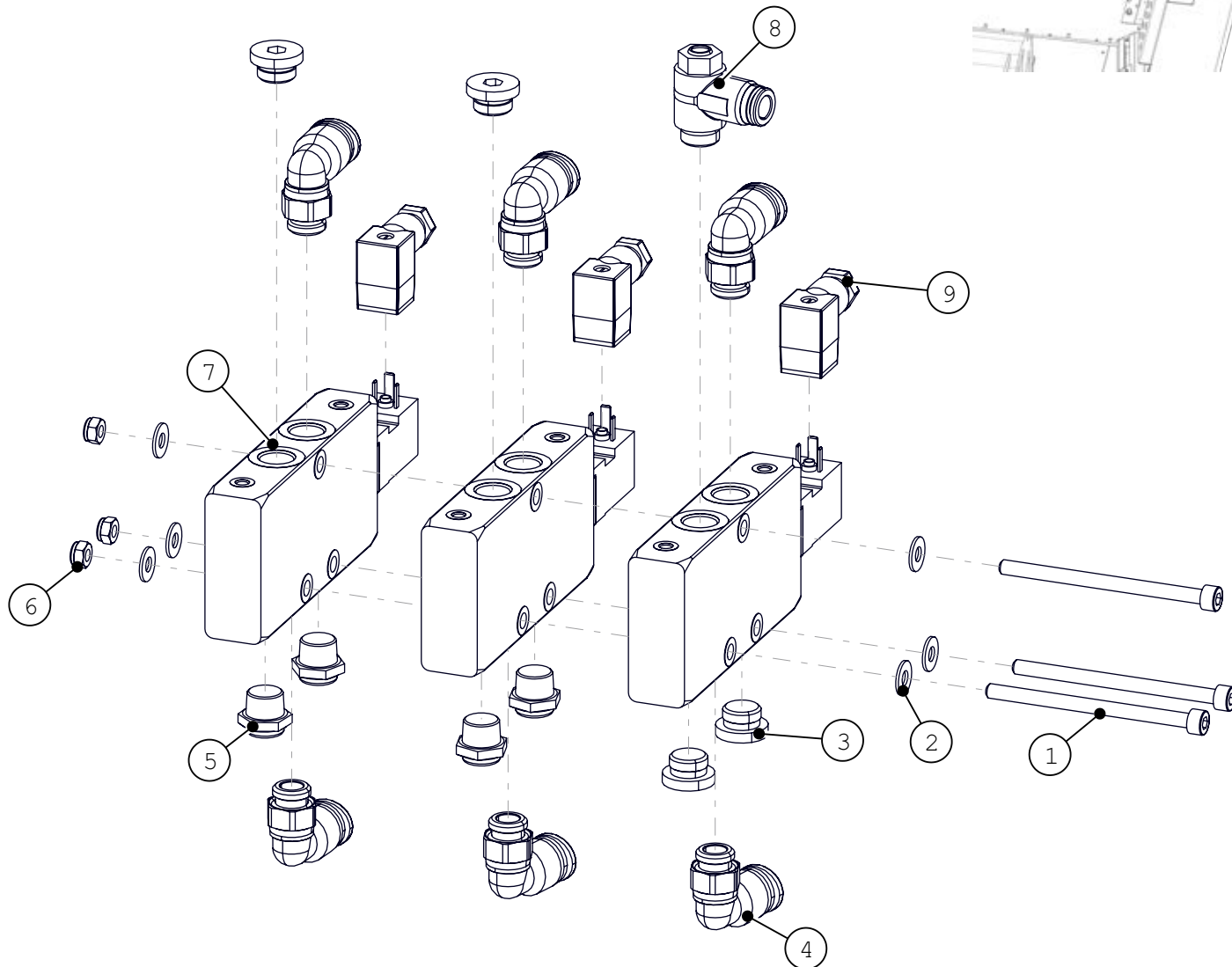
Pneumatic Valve Assembly 1



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM3395	VALVE 579 3/2-NC 24VDC	3
2	UPM3394	VALVE 579 5/2 MONOSTABLE 24 VDC	1
3	UPM3393	VALVE 579 3/2-NO 24 VDC	1
4	UPM3391	SILENCER 579 VALVE	6
5	UPM3392	ELECT. CONN WITH LED 579 VALVE	5
6	UF4324	LOCK-NUT M4	2
7	UF6339	FW M4	2
8	UPM8080	DIN RAIL 185mm	1
9	UF4325	BHCS M4-0.7 x 12mm	2

APPENDIX B

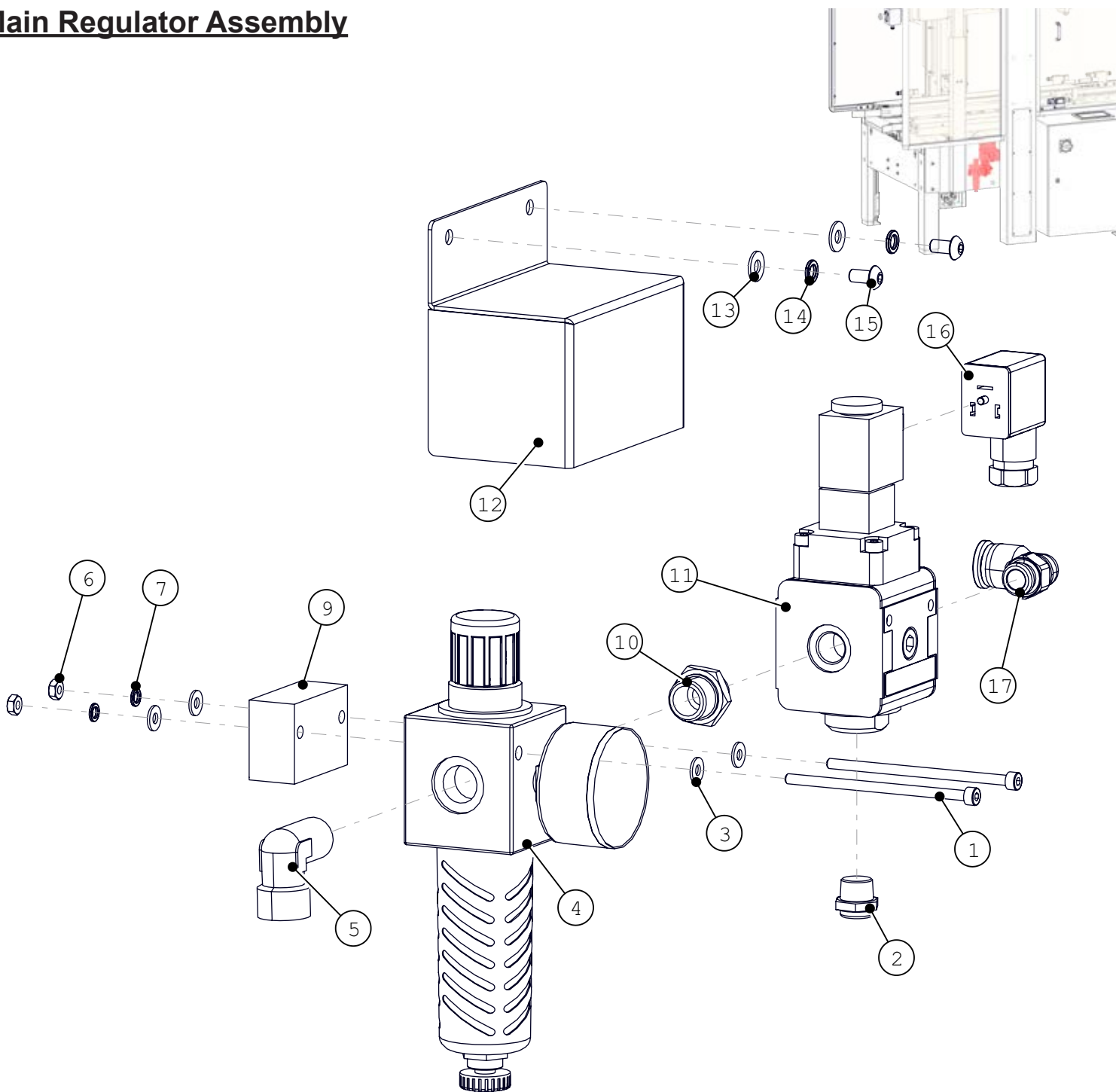
Pneumatic Valve Assembly 2



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF0044	SHCS M5-0.8 x 75mm	3
2	UF6340	FW M5	6
3	UPM3133	PLUG	4
4	UPM5151	ELBOW FITTING, 10 ID	6
5	UPM5146	SILENCER	4
6	UF3393	LOCK-NUT M5	3
7	UPM6375	PNEUMATIC VALVE	3
8	UPM5150	CHECK VALVE	1
9	UPM6376	PNEUMATIC 90 DEG QUICK CONNECT	3

APPENDIX B

Main Regulator Assembly

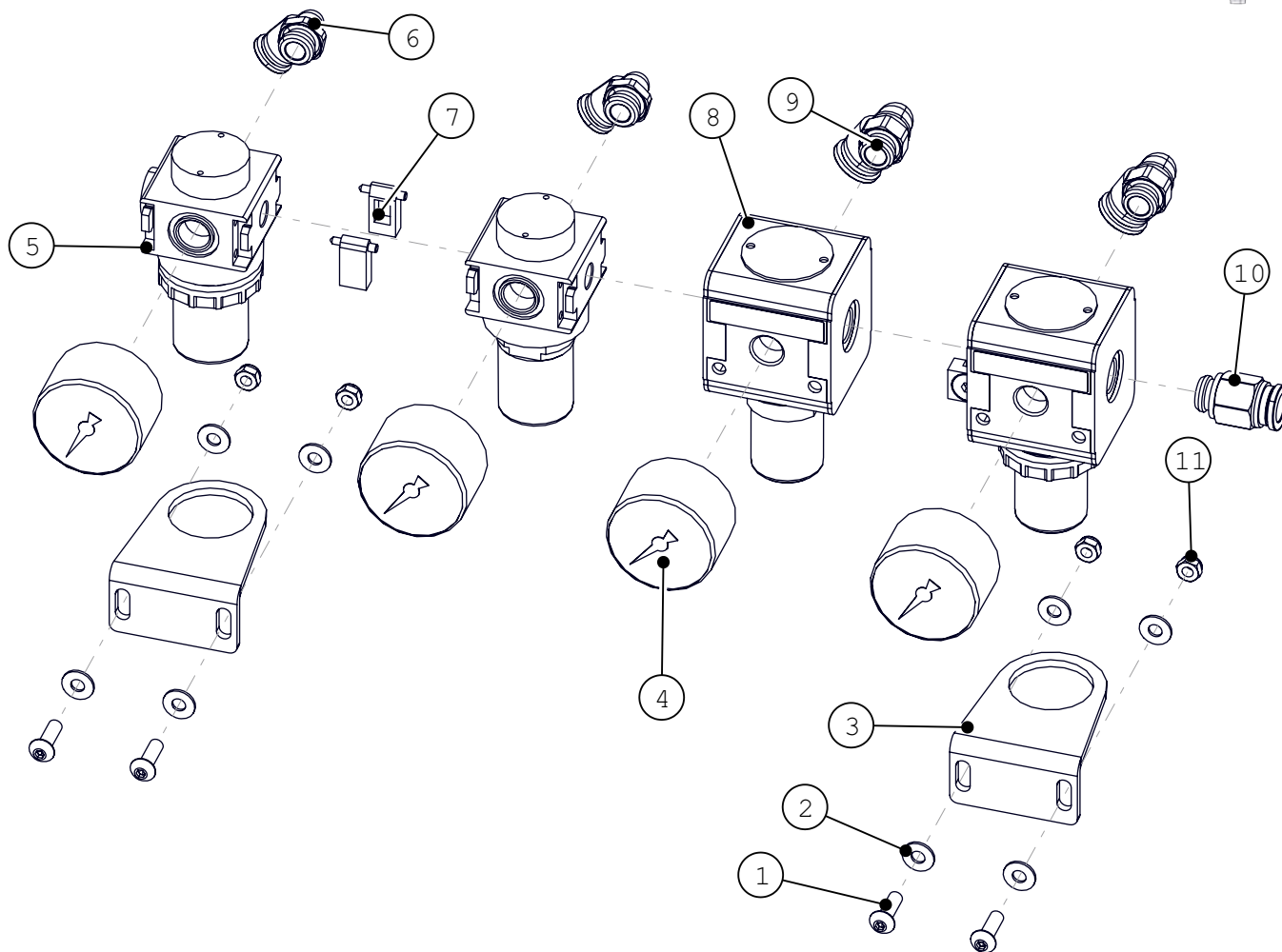
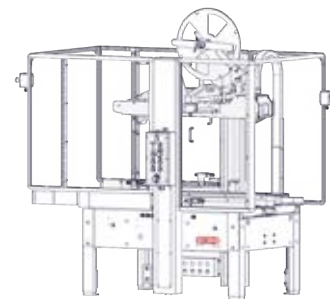


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF3694	SHCS M4-0.7 x 80mm	2
2	UPM6171	SILENCER	1
3	UF3710	FW M4	4
4	UPM5977	REGULATOR	1
5	UPM5982	90° ELBOW	1
6	UF6376	M4 LOCK NUT	2
7	UF3749	LW M4	2
9	UPM5976	SPACER	1
10	UPM5983	CONNECTOR, STRAIGHT	1

ITEM	PART NUMBER	DESCRIPTION	QTY
11	UPM5978	ELECTRONIC DUMP VALVE	1
12	UPM5975	COIL CONNECTOR COVER	1
13	UF1827	FW M5	2
14	UF7021	LW M5	2
15	UF3686	BHCS M5-0.8 x 10mm	2
16	UPM5979	ELECTRIC CONNECTOR	1
17	UPM5984	90° QUICK CONNECTOR	1

APPENDIX B

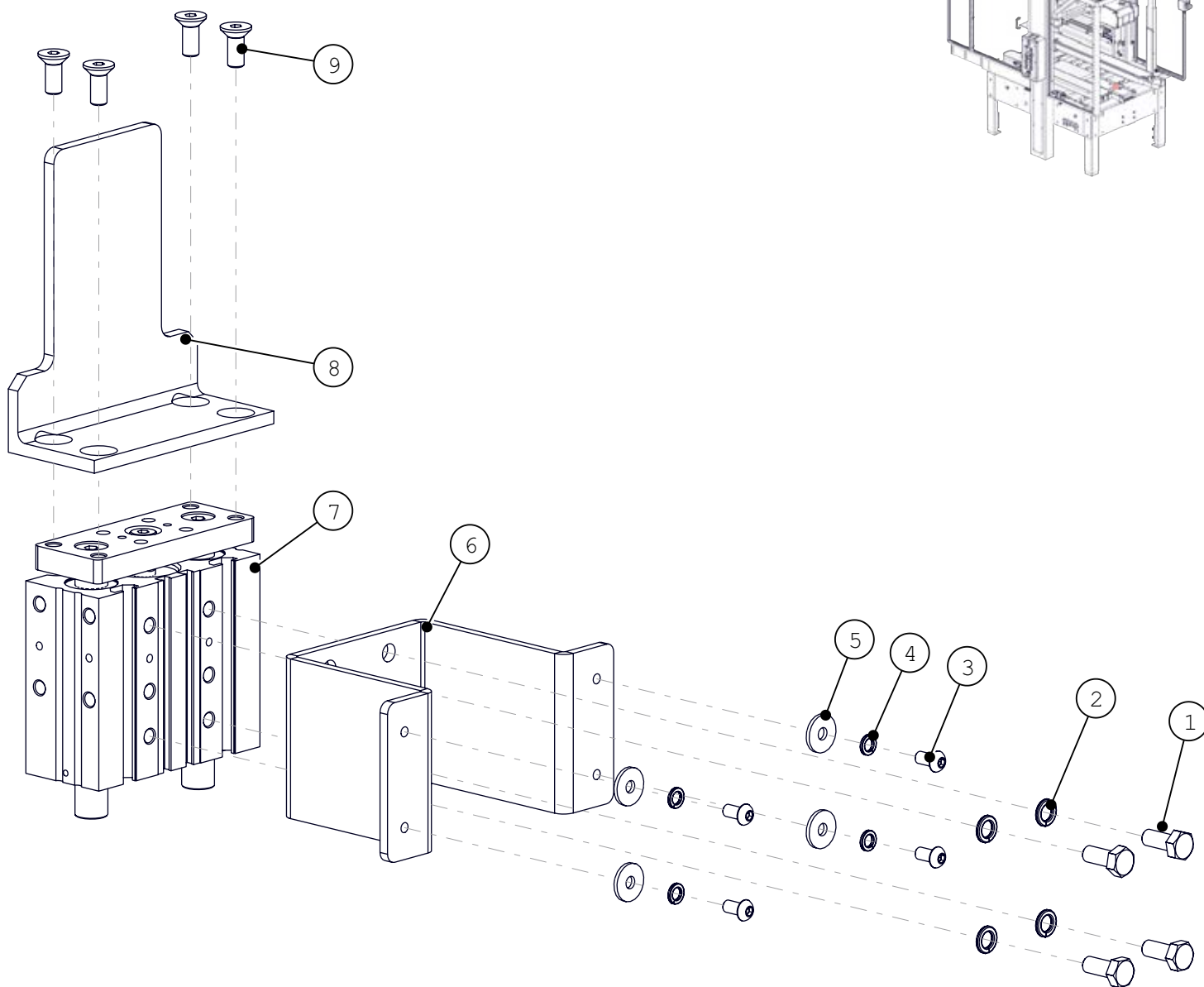
Sub Regulator Assembly



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF7035	BHCS M5-0.8 x 16mm	4
2	UF6340	FW M5	8
3	UPM3271	REGULATOR BRACKET	2
4	UPM3273	PRESSURE GAUGE G1/8 - 6 BAR	4
5	UPM3268	PRESSURE REGULATOR SMALL	2
6	UPM3124	90 DEG QUICK CONNECT	2
7	UPM3270	BLOCK ASSEMBLY KIT	1
8	UPM4880	PRESSURE REGULATOR	2
9	UPM5151	ELBOW FITTING, 10 ID	2
10	UPM0350	FITTING STRAIGHT	1
11	UF3394	LOCK-NUT M5	4

APPENDIX B

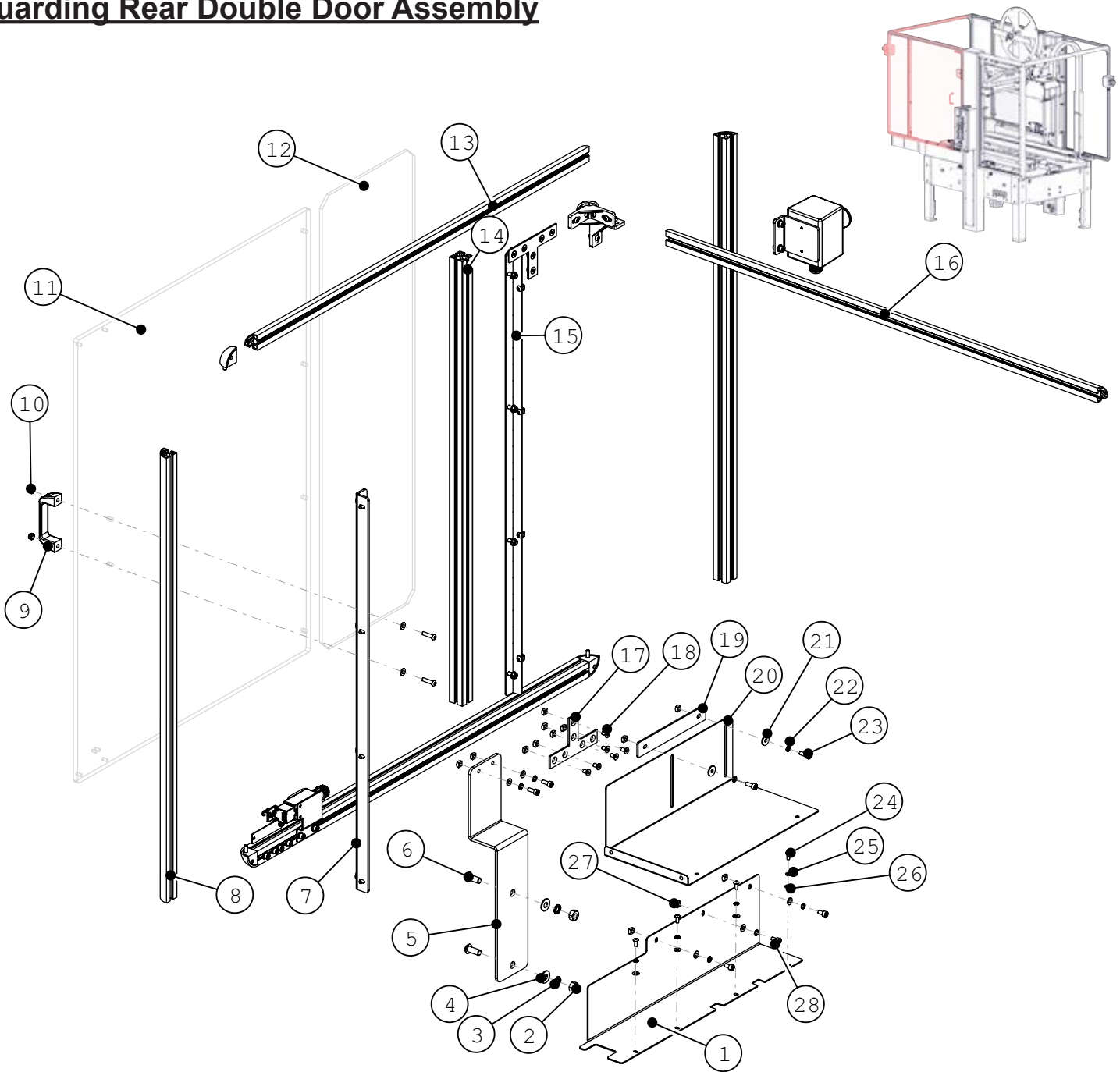
Gate Assembly



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF6309	HHCS M8-1.25 × 20mm	4
2	UF3640	LW M8	4
3	UF3278	BHCS M6-1.0 x 12mm	4
4	UF6411	LW M6	4
5	UF0216	FW M6	4
6	UPM5971	STOP BRACKET	1
7	UPM3804	GPC GUIDE CYLINDER	1
8	UPM7513	GATE FOR BOSCH GUIDED CYL	1
9	UF3264	FHCS M8-1.25 × 20mm	4

APPENDIX B

Guarding Rear Double Door Assembly

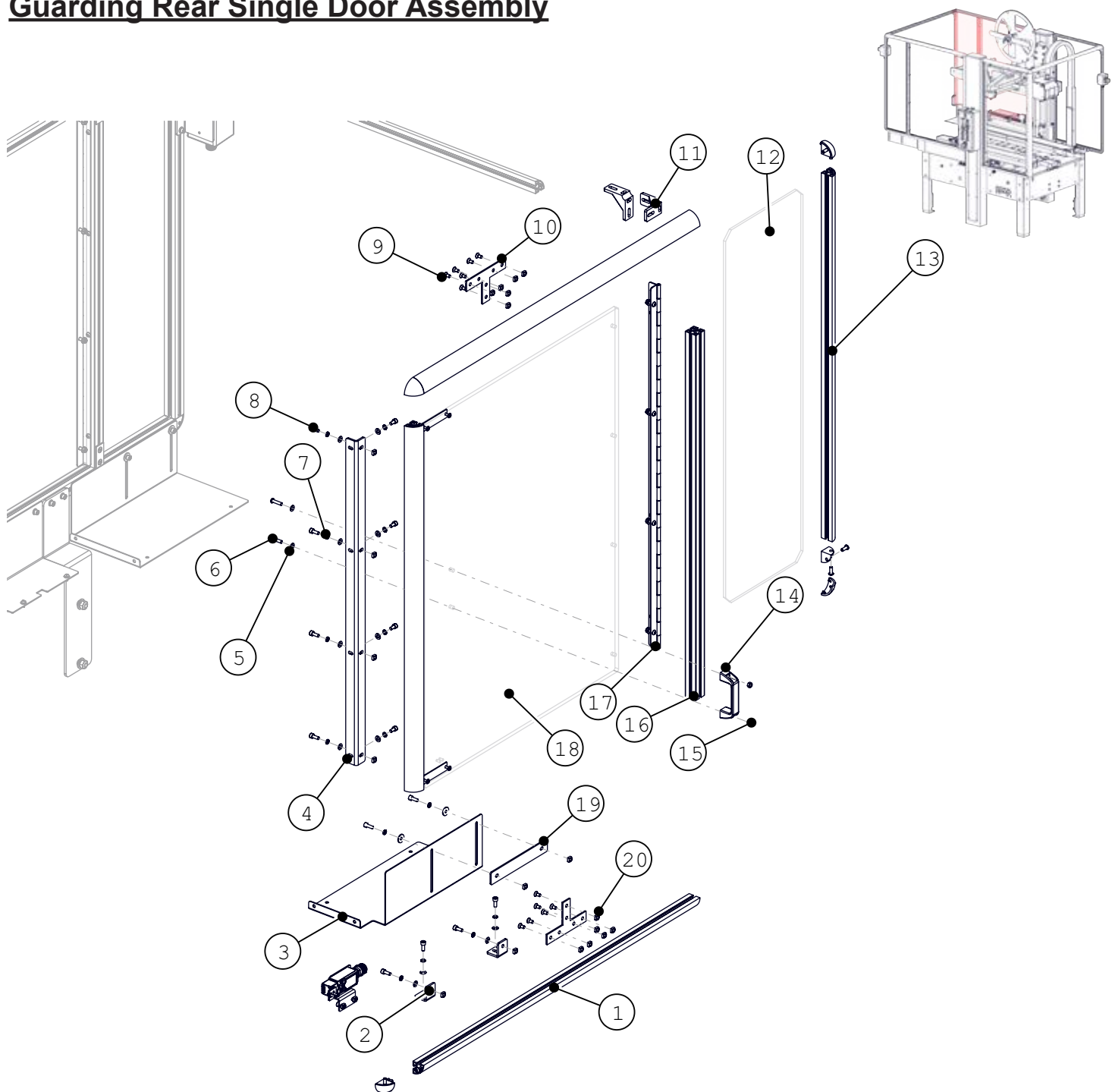


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM8242	DOOR GUARDING BTM L PLATE TO	1
2	UF3709	NUT M10	2
3	UF3743	LW M10	2
4	UF3680	FW M10	2
5	UPM6289	DOOR GUARDING LOWER MOUNT LG	1
6	UF3757	BHCS M10-1.5 x 25mm	2
7	UPM6285	DOOR GUARDING VERTICAL MOUNT	1
8	UPM6285	DOOR GUARDING FRAME 901Lmm	2
9	UPM0794EV	HANDLE	1
10	UF3391	LOCK-NUT M6	2
11	UPM6278	GUARDING DOOR PANEL	1
12	UPM8240	DOOR GUARDING TO PANEL	1
13	UPM8238	DOOR GUARDING FRAME 957mm	2
14	UPM8235	CENTER BEAM CONNECTOR 901mm	1
15	UPM6279	DOOR HINGE	1

ITEM	PART NUMBER	DESCRIPTION	QTY
16	UPM8226	DOOR GUARDING FRAME 1021L	1
17	UPM6809	DOOR GUARDING T BRACKET	2
18	UF6353	FHCS M6-1.0 x 12mm	12
19	UPM8241	GUARDING SPACER PLATE	1
20	UPM8243	DOOR GUARDING BTM LR PLATE TO	1
21	UF6341	FW M6	9
22	UF6411	LW M6	7
23	UF3187	SHCS M6-1.0 x 16mm	4
24	UF3687	BHCS M5-0.8 x 12mm	4
25	UF7021	LW M5	4
26	UF1827	FW M5	4
27	UPM0687EV	DROP IN T-NUT M6	13
28	UF3183	SHCS M6-1.0 x 12mm	3

APPENDIX B

Guarding Rear Single Door Assembly

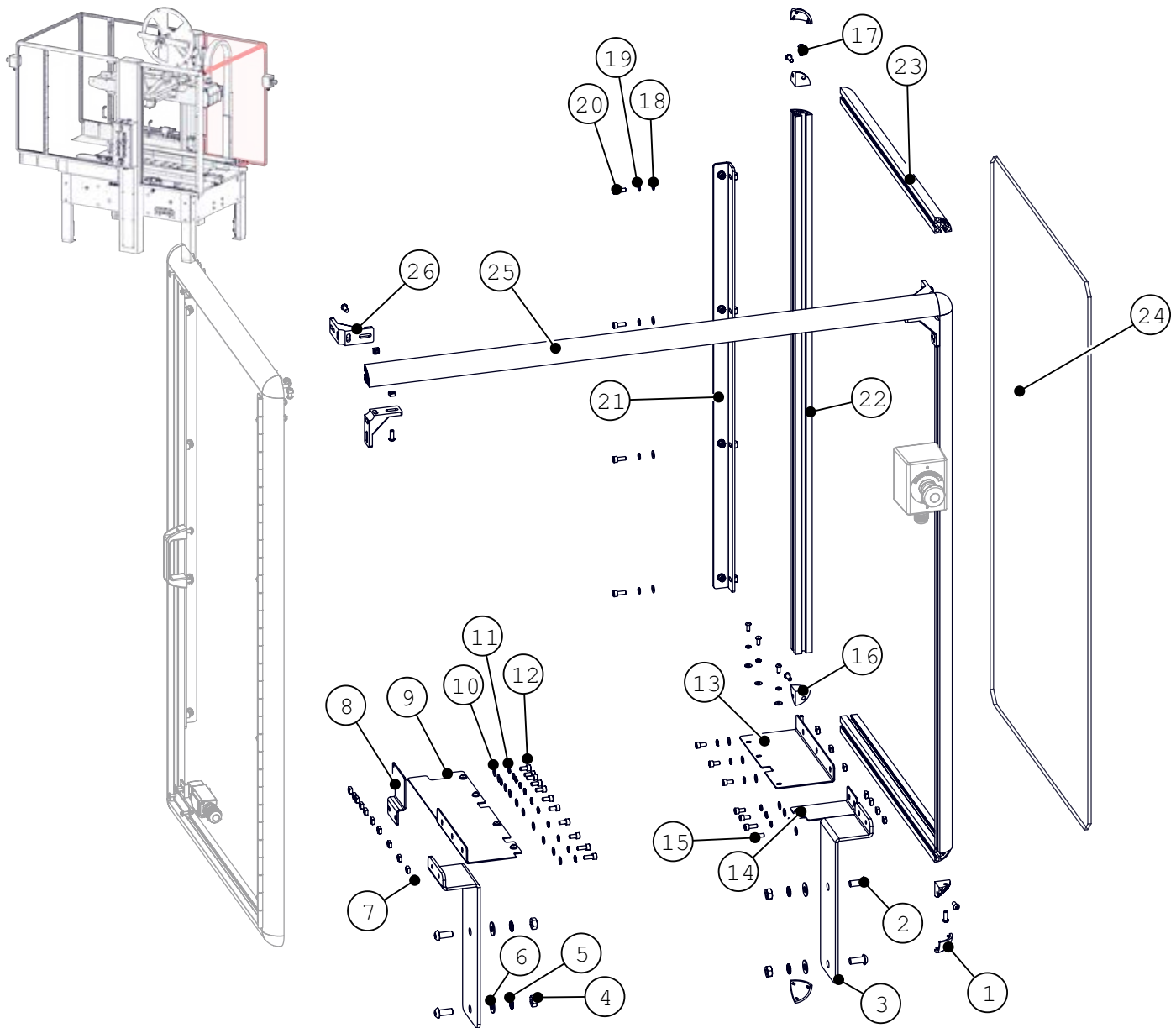


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM8238	DOOR GUARDING FRAME 957mm	2
2	UPM8232	DOOR GUARDING LWR BRACKET SM	2
3	UPM8239	DOOR GUARDING BTM PLATE TO	1
4	UPM6285	DOOR GUARDING VERTICAL MOUNT	1
5	UF6341	FW M6	16
6	UF1212	BHCS M6-1.0 x 25mm	2
7	UF6411	LW M6	14
8	UF0830	SHCS M6-1.0 x 16mm	10
9	UF6353	FHCS M6-1.0 x 12mm	12
10	UPM6809	DOOR GUARDING T BRACKET	2
11	UPM4398EV	INSIDE CORNER	2

ITEM	PART NUMBER	DESCRIPTION	QTY
12	UPM8240	DOOR GUARDING TO PANEL	1
13	UPM8234	DOOR GUARDING FRAME 901mm	2
14	UPM0794EV	HANDLE	1
15	UF3391	LOCK-NUT M6	2
16	UPM8235	CENTER BEAM CONNECTOR 901mm	1
17	UPM6279	DOOR HINGE	1
18	UPM8233	DOOR GUARDING DOOR PANEL	1
19	UPM8241	GUARDING SPACER PLATE	1
20	UPM0687EV	DROP IN T-NUT M6	20

APPENDIX B

Guarding Front Fixed Assembly

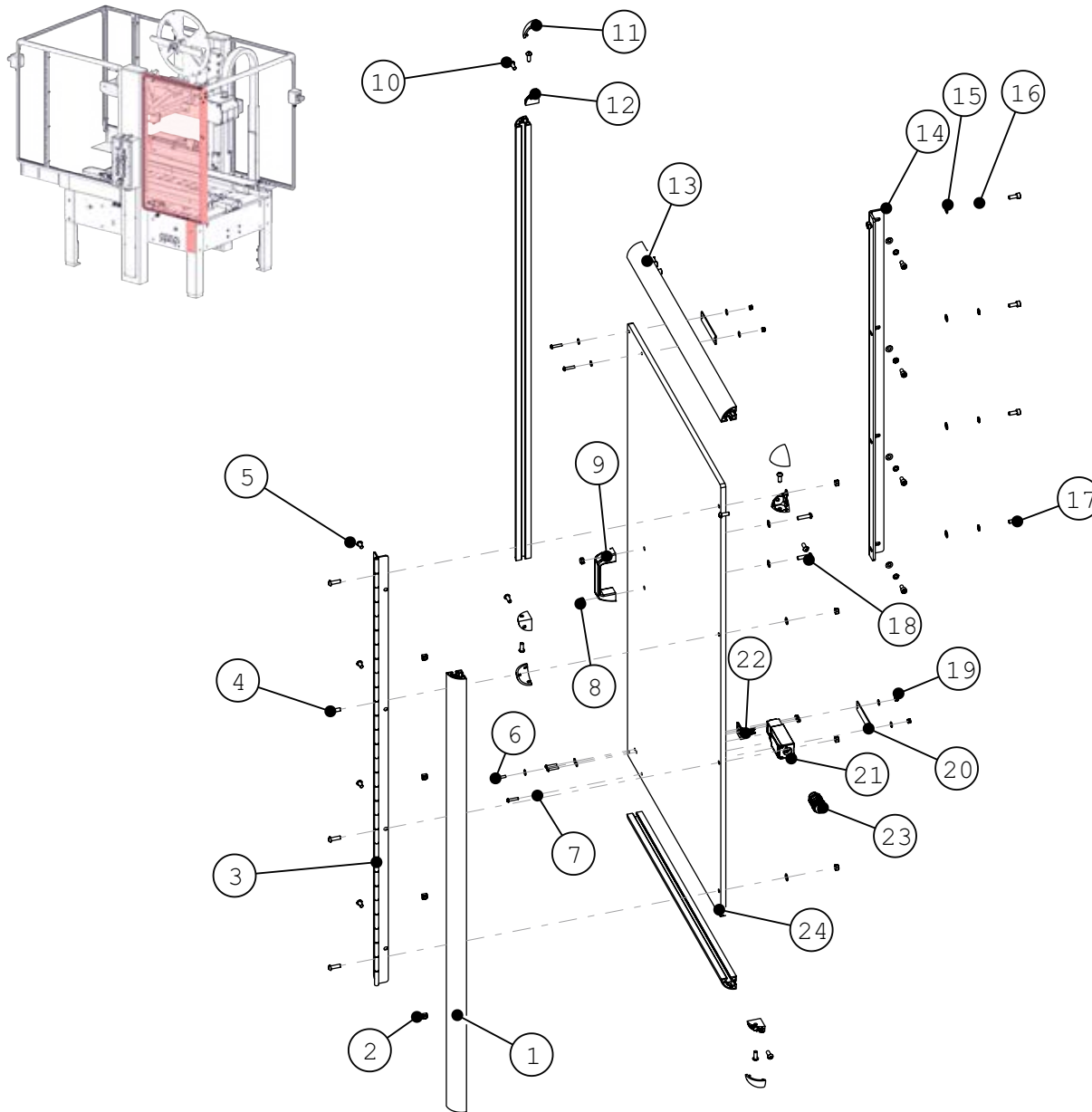


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM2922EV	CORNER CAP FINISHING	4
2	UF3757	BHCS M10-1.5 x 25mm	4
3	UPM6289	DOOR GUARDING LOWER MOUNT LG	2
4	UF3709	NUT M10	4
5	UF3743	LW M10	4
6	UF3680	FW M10	4
7	UPM0687EV	M6 INSERT NUT	30
8	UPM8228	DOOR GUARDING LOWER MOUNT SM-L	1
9	UPM6287	DOOR GUARDING LOWER BRACKET	1
10	UF6341	FW M6	22
11	UF6411	LW M6	18
12	UF3183	SHCS M6-1.0 X 12mm	14
13	UPM6295	DOOR GUARDING LOWER BRACKET LG	1
14	UPM6294	DOOR GUARDING LOWER BRACKET SM	1

ITEM	PART NUMBER	DESCRIPTION	QTY
15	UF3187	SHCS M6-1.0 x 16mm	4
16	UPM2922EV	CORNER BLOCK	4
17	UF6414	BHCS M6-1.0 x 16mm	8
18	UF6340	FW M5	7
19	UF6411	LW M6	8
20	UF3187	SHCS M6-1.0 x 16mm	8
21	UPM6285	DOOR GUARDING VERTICAL MOUNT	1
22	UPM6285	DOOR GUARDING VERTICAL MOUNT	2
23	UPM8225	DOOR GUARDING FRAME 560L	2
24	UPM8227	FRONT PANEL FIXED RSA	1
25	UPM8226	DOOR GUARDING FRAME 1021L	1
26	UPM4398EV	INSIDE CORNER	4

APPENDIX B

Guarding Front Door Assembly

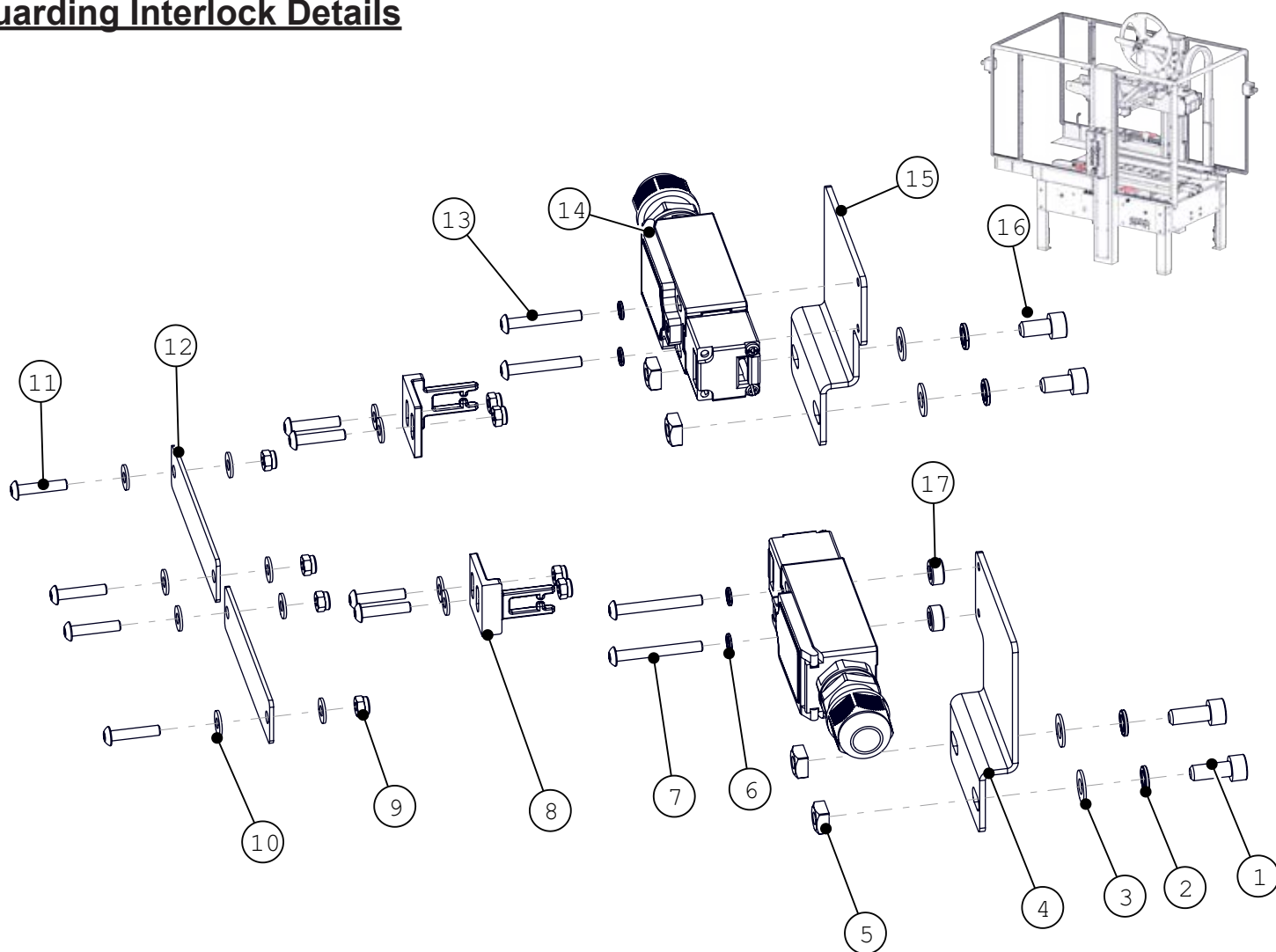


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM6815	DOOR GUARDING FRAME 1014mm	2
2	UPM0687EV	DROP IN T-NUT M6	4
3	UPM6279	DOOR HINGE	1
4	UF6325	BHCS M6-1.0 x 20mm	4
5	UF3278	BHCS M6-1.0 x 12mm	4
6	UF4323	BHCS M4-0.7 x 20mm	6
7	UF6339	FW M4	10
8	UF3391	LOCK-NUT M6	6
9	UPM0794EV	HANDLE	1
10	UF6414	BHCS M6-1.0 x 16mm	9
11	UPM2922EV	CORNER CAP FINISHING	4
12	UPM0614EV	CORNER BLOCK	4
13	UPM6813	DOOR GUARDING FRAME 560mm	2

ITEM	PART NUMBER	DESCRIPTION	QTY
14	UPM6277	DOOR GUARDING VERTICAL MOUNT	1
15	UF6314	FW M6	13
16	UF6411	LW M6	8
17	UF3187	SHCS M6-1.0 x 16mm	8
18	UF1212	BHCS M6-1.0 x 25mm	2
19	UF4324	LOCK-NUT M4	6
20	UPM4400EV	MAGNET PLATE	2
21	UPM6286	DOOR SAFETY INTERLOCK	1
22	UPM6283	DOOR INTERLOCK KEY	1
23	UPM5873	CABLE GLAND	1
24	UPM6278	GUARDING DOOR PANEL	1

APPENDIX B

Guarding Interlock Details

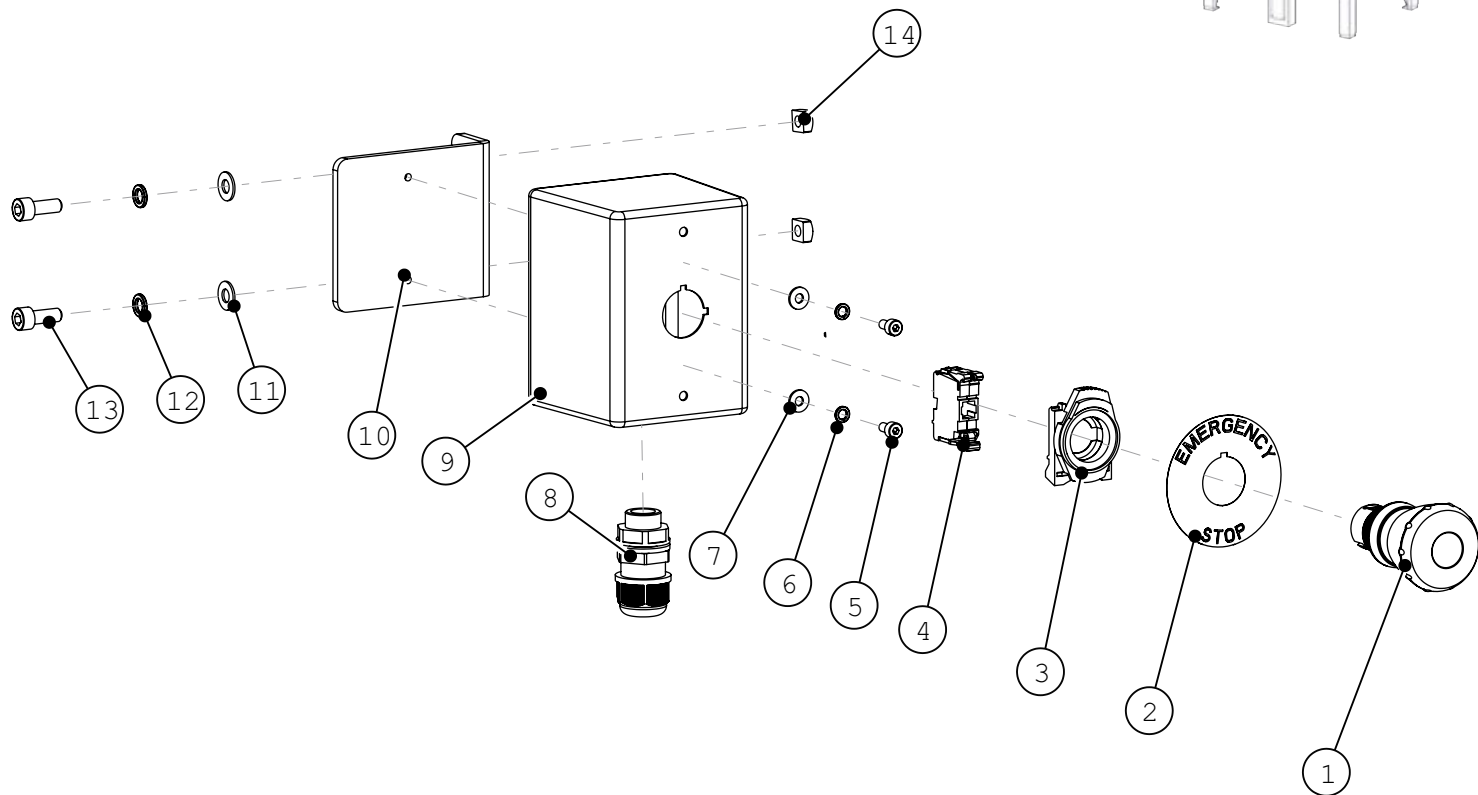
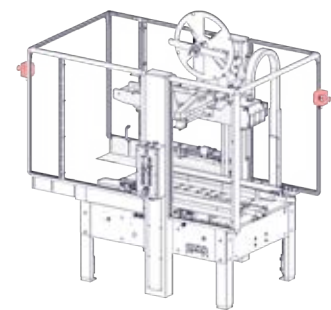


ITEM	PART NUMBER	DESCRIPTION	QTY
1	UF3187	SHCS M6-1.0 x 16mm	2
2	UF6411	LW M6	4
3	UF6341	FW M6	4
4	UPM8045	INTERLOCK BRACKET LEFT	1
5	UPM0687EV	DROP IN T-NUT M6	4
6	UF3749	LW M4	4
7	UF3652	BHCS M4-0.7 x 35mm	2
8	UPM6283	DOOR INTERLOCK LATCH	2
9	UF4324	LOCK-NUT M4	8

ITEM	PART NUMBER	DESCRIPTION	QTY
10	UF6339	FW M4	12
11	UF4323	BHCS M4-0.7 x 20mm	8
12	UPM4400EV	MAGNET PLATE	2
13	UF1213	BHCS M4-0.7 x 30mm	2
14	UPM6286	DOOR SAFETY INTERLOCK	2
15	UPM8046	INTERLOCK BRACKET RIGHT	1
16	UF3183	SHCS M6-1.0 x 12mm	2
17	UPM8237	SPACER	2

APPENDIX B

Guarding Emergency Stop Boxes



ITEM	PART NUMBER	DESCRIPTION	QTY
1	UPM4816	EMERGENCY STOP BUTTON	1
2	UPM6045	E-STOP LABEL	1
3	UPM7630	LATCH	1
4	UPM4720	NC CONTACT	1
5	UF3072	SHCS M4-0.7 x 8mm	2
6	UF3749	LW M4	2
7	UF6339	FW M4	2
8	UPM5873	CABLE GLAND	1

ITEM	PART NUMBER	DESCRIPTION	QTY
9	UPM6170	Buton Box	1
10	UPM6293	GUARDING E-STOP MOUNT	1
11	UF6341	FW M6	2
12	UF6411	LW M6	2
13	UF0830	SHCS M6-1.0 x 16mm	2
14	UPM0687EV	DROP IN T-NUT M6	2

