

Instructions and Parts List

3M-Matic™ a88-I

Type 11100

Adjustable Case Sealer

Serial #: _____
For reference, record machine serial number here.

Important Safety Information

BEFORE INSTALLING OR OPERATING THIS EQUIPMENT
Read, understand and follow all safety and operating instructions.

Spare Parts

It is recommended you immediately order the spare parts listed in the “Spare Parts/Service Information” section. These parts are expected to wear through normal use, and should be kept on hand to minimize production delays.

Replacement Parts and Service Information

To Our Customers:

This is the 3M-Matic™/T8™/Scotch® equipment you ordered.
It has been set up and tested in the factory with Scotch® Tapes.

Included with each machine is an Instructions and Parts List Manual.

Technical Assistance / Replacement Parts and Additional Manuals:

For technical assistance, contact our help line.

Provide the customer support coordinator with the model/machine name,
machine type, and serial number that are located on the identification plate
(For example: Model a88-I - Type 11100 - Serial Number 13282).

Identification Plate

3M Carl-Schurz- Strasse 1 D41453 Neuss, Deutschland	Part Number <input type="text"/>	3M-Matic™ For Commercial Use Only		CE	
Model <input type="text"/>	Serial Number <input type="text"/>	Year <input type="text"/>	Ampere <input type="text"/>	Watt <input type="text"/>	IP <input type="text"/>
Type <input type="text"/>	Electrical Drawing <input type="text"/>	SCCR <input type="text"/>	Volt <input type="text"/>	Hertz <input type="text"/>	Phase <input type="text"/>

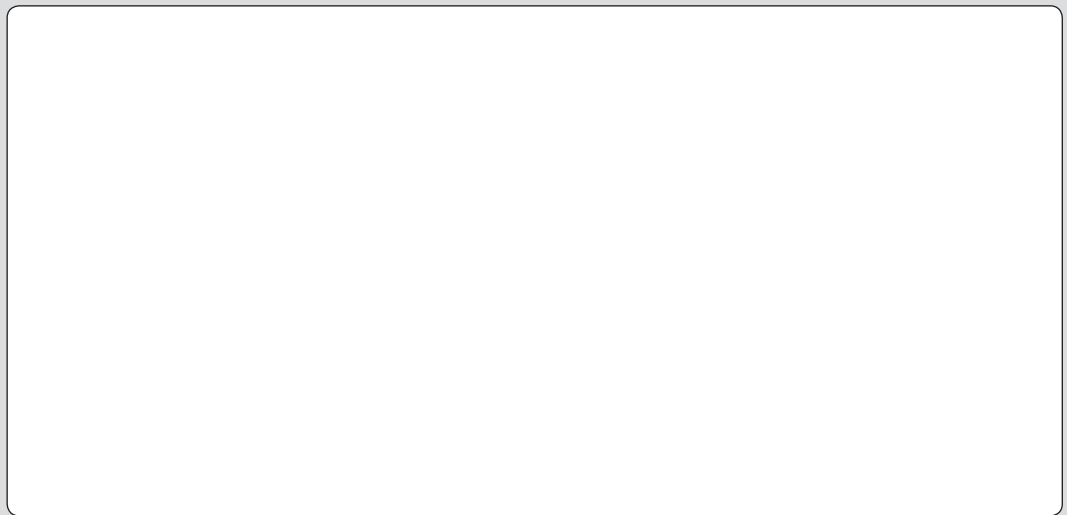
Replacement Parts and Service Information

To Our Customers:

This is the 3M-Matic™/T8™/Scotch® equipment you ordered. It has been set up and tested in the factory with Scotch® tapes. If any problems occur when operating this equipment and you desire a service call or phone consultation, call, write, or fax the appropriate number listed below.

Included with each machine is an Instructions and Parts List Manual.

Service, replacement parts, and additional manuals available direct from:



Order parts by part number, part description, and quantity required. Also, when ordering parts or additional manuals, include model/machine name, machine type, and serial number that are located on the identification plate.

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a88-I Adjustable Case Sealer

(For Taping Head information, see Manual 2: T8 Taping Heads)

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a88-I Adjustable Case Sealer

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TAPING HEAD INFORMATION -
Manual 2: T8 - 2 Inch Upper and Lower Taping Heads
(See Manual 2 for Table of Contents)

Abbreviations and Acronyms

List of Abbreviations/Acronyms

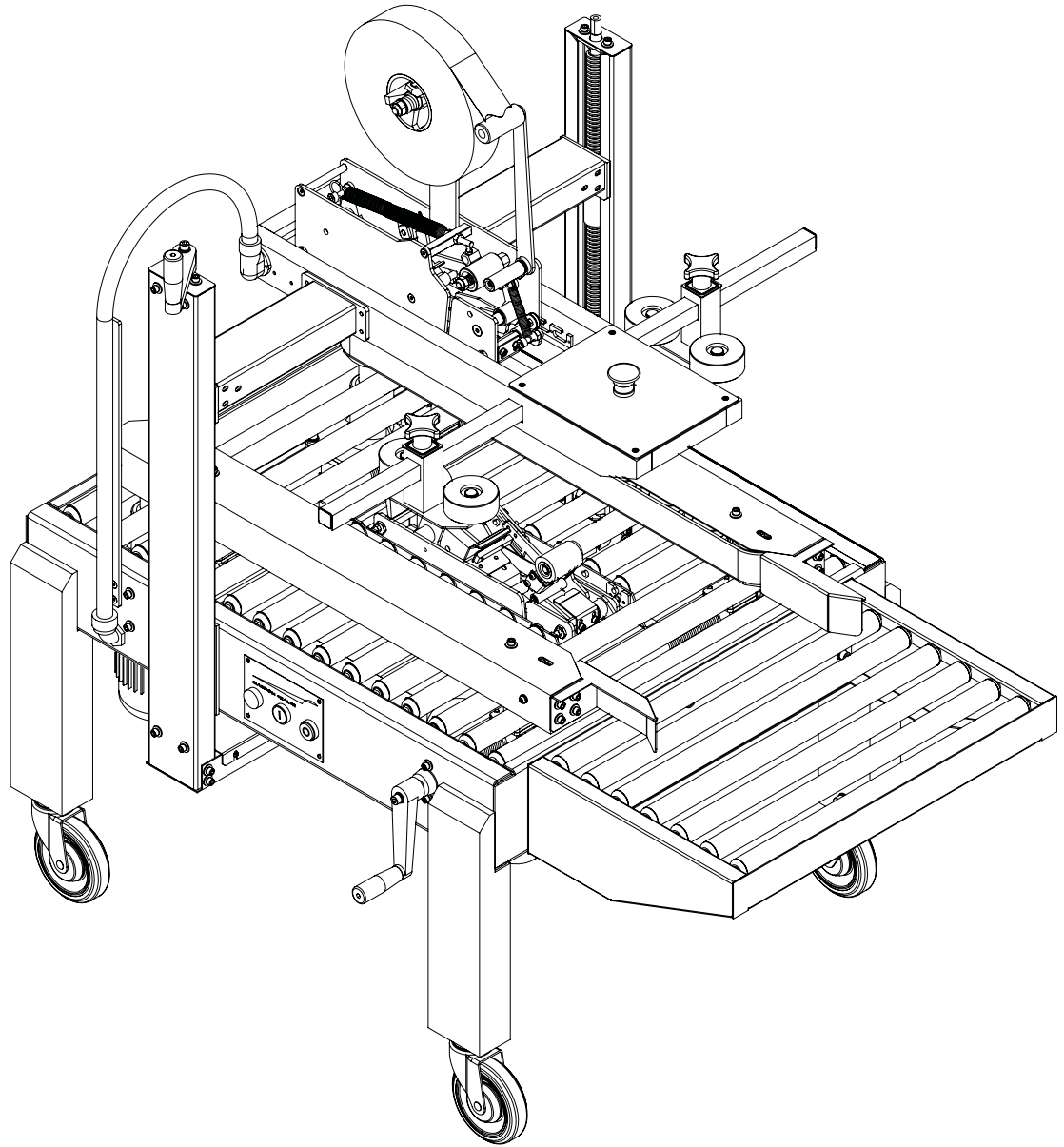
3M-Matic	Trademark of 3M St. Paul, MN 55144-1000
Scotch	Trademark of 3M St. Paul, MN 55144-1000
Drw.	Drawing
Ex.	For Example
Fig.	Exploded View Figure no. (spare parts)
Figure	Illustration
Max.	Maximum
Min.	Minimum
Nr.	Number
N/A.	Not Applicable
OFF.	Machine Not Operating
ON	Machine Operating
PLC.	Programmable Logic Control
PP	Polypropylene
PU/PU Foam	Polyurethane Foam
PTFE	Polytetrafluorethelene
PVC.	Poly-vinyl chloride
W	Width
H	Height
L	Length

1. Introduction

1.1 Manufacturing Specifications / Description / Intended Use

The **3M-Matic™ a88-I Adjustable Case Sealer with T8 Taping Heads** is designed to apply a “C” clip of Scotch® pressure-sensitive film box sealing tape to the top and bottom center seam of regular slotted containers. The **a88-I** is manually adjustable to a wide range of box sizes (see “Specifications Section – Box Weight and Size Capacities”).

The 3M-Matic™ case sealing machines have been designed and manufactured in compliance with the legal requirements at the date of inception.



3M-Matic™ a88-I Adjustable Case Sealer, Type 11100

1. Introduction *(continued)*

1.2 How to Read and Use the Instruction Manual

This instruction manual covers safety aspects, handling and transport, storage, unpacking, preparation, installation, operation, set-up and adjustments, technical and manufacturing specifications, maintenance, troubleshooting, repair work and servicing, electric diagrams, warranty information, disposal (ELV), a definition of symbols, plus a parts list of the 3M-Matic™ a88-I Adjustable Case Sealer.

3M Industrial Adhesives and Tapes Division
3M Center, Bldg. 220-5E-06
St. Paul, MN 55144-1000 (USA)

Edition July 2018 © 3M 2018. All rights reserved.

The manufacturer reserves the right to change the product at any time without notice.

Publication © 3M 2018. 44-0009-2118-7.

1.2.1 Importance of the Manual

The manual is an important part of the machine; all information contained herein is intended to enable the equipment to be maintained in perfect condition and operated safely. Ensure that the manual is available to all operators of this equipment and is kept up to date with all subsequent amendments. Should the equipment be sold or disposed of, please ensure that the manual is passed on. Electrical and pneumatic diagrams are included in the manual. Equipment using PLC controls and/or electronic components will include relevant schematics or programs in the enclosure and in addition, the relevant documentation will be delivered separately.

1.2.2 Manual Maintenance

Keep the manual in a clean and dry place near the machine. Do not remove, tear, or rewrite parts of the manual for any reason. Use the manual without damaging it. In case the manual has been lost or damaged, ask your after sale service for a new copy.

1.2.3 Consulting the Manual

The manual is composed of:

- Pages which identify the document and the machine
- Index of the subjects
- Instructions and notes on the machine
- Enclosures, drawings and diagrams
- Spare parts (last section)

All pages and diagrams are numbered. The spare parts lists are identified by the figure identification number. All the notes on safety measures or possible dangers are identified by the symbol:



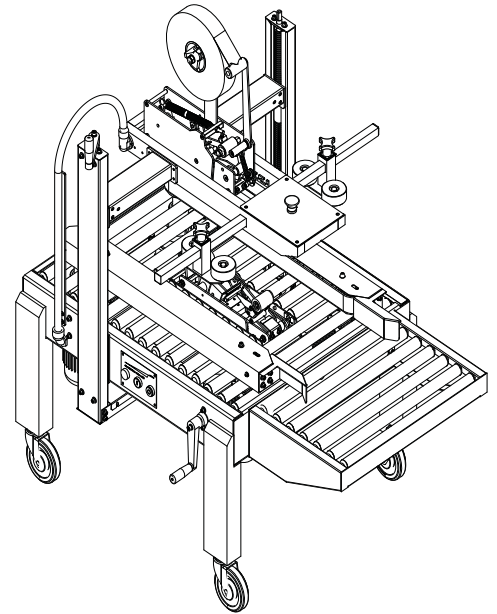
1.2.4 How to Update the Manual in Case of Modifications to the Machine

Modifications to the machine are subject to manufacturer's internal procedures. The user receives a complete and up-to-date copy of the manual together with the machine. Afterwards the user may receive pages or parts of the manual which contain amendments or improvements made after its first publication. The user must use them to update this manual.

2. General Information

2.1 Data Identifying Manufacturer and Machine

<p>3M</p> <p>3M Industrial Adhesives and Tapes</p> <p>3M Center Bldg. 220-5E-06 St. Paul, MN 55144-1000 (USA)</p>



Identification Plate

<p>3M Carl-Schurz- Strasse 1 D41453 Neuss, Deutschland</p>	Part Number	<p>3M-Matic™ For Commercial Use Only</p>					
	<input type="text"/>	Model	Serial Number	Year	Ampere		Watt
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Type	Electrical Drawing	SCCR	Volt	Hertz	Phase
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

2.2 Data for Technical Assistance and Service

<p>Agent/Distributor or Local After Sale Service:</p>
--

2. General Information *(continued)*

2.3 Warranty

Within the limits of what is set out below, Seller agrees to repair or replace without cost to Buyer any defective goods when such defect occurs within a period of twelve (12) months from the date in which Seller's goods have been put into use, but in no event beyond fourteen (14) months from the date of shipment. Expressly excluded from this warranty are those parts subject to normal wear and tear (by way of illustration, but not limitation, such parts as belts, rubber rollers, gaskets, brushes, etc.) and electrical parts. Buyer must immediately notify Seller of any defect, specifying the serial number of the machine. Buyer shall send to Seller the defective item for repair or replacement. Seller will perform the repairs or provide a replacement within a reasonable period of time. Upon effecting such repair or replacement, Seller shall have fulfilled its warranty obligations. In the event the repairs or replacement must be effected at the place where the machine is installed, all expenses for labor, travel and lodging of Seller's personnel shall be sustained by the Buyer. Buyer will be invoiced in conformity with Seller's standard charges for the services rendered. Seller is not responsible for defects resulting from:

- Events which develop subsequently to delivery
- Improper use of the machine
- Lack of proper maintenance
- Tampering with the machine or repairs effected by the Buyer

Seller will not be liable for any injury to persons or things or for the failure of production. With respect to the materials not manufactured by Seller, such as motors and electrical equipment, Seller will grant to Buyer the same warranty Seller receives from its supplier of such materials. Seller does not warrant the compliance of its machines with the laws of non-EEC countries in which the machines may be installed, nor does it warrant compliance with laws or standards relating to the prevention of accidents or pollution. Adaptation of Seller's machines to the aforesaid laws or standards shall be the responsibility of Buyer who assumes all liability therefore. Buyer shall indemnify and hold Seller harmless against any claim by third parties resulting from failure to comply with the aforesaid laws and standards.

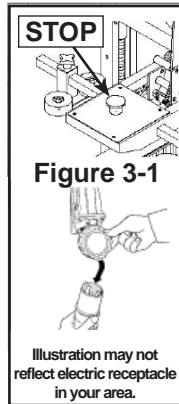
Contents: a88-I Adjustable Case Sealer

- (1) a88-I Adjustable Case Sealer, Type 11100
- (1) Tool and Spare Parts Kit
- (1) Instruction and Parts Manual

3. Safety

3.1 General Safety Information

Read all the instructions carefully before starting work with the machine; please pay particular attention to sections marked by the symbol:



The machine is provided with a LATCHING EMERGENCY STOP BUTTON (Figure 3-1); when this button is pressed, it stops the machine at any point in the working cycle. Maintain clear access to power cord while machine is operating.

Disconnect plug from power source before machine maintenance (Figure 3-1). Also disconnect air if the machine has a pneumatic system.

Keep this manual in a handy place near the machine. This manual contains information that will help you to maintain the machine in a good and safe working condition.

3.2 Explanation of Signal Word and Possible Consequences

This safety alert symbol identifies important messages in this manual. READ AND UNDERSTAND THEM BEFORE INSTALLING OR OPERATING THIS EQUIPMENT.



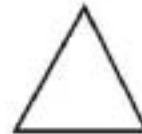
Caution

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury and/or property damage.



Warning

Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury and/or property damage.



Caution



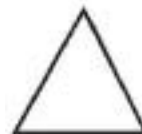
Prohibition



Information



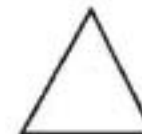
Disconnect electrical power supply before attempting any service work on the machine



Warning!
Sharp knife



Stop
(Latching
Emergency
Stop Button)



Keep hands out of working parts





Shows the point for earth wire connection on the machine frame




3. Safety (continued)

3.3 Table of Warnings

 Warning
<ul style="list-style-type: none">• To reduce the risk associated with mechanical and electrical hazards:<ul style="list-style-type: none">- Read, understand, and follow all safety and operating instructions before operating or servicing the case sealer.- Allow only properly trained and qualified personnel to operate and service this equipment.

 Warning
<ul style="list-style-type: none">• To reduce the risk associated with hazardous voltage:<ul style="list-style-type: none">- Position electrical cord away from foot and vehicle traffic.

 Warning
<ul style="list-style-type: none">• To reduce the risk associated with pinches, entanglement and hazardous voltage:<ul style="list-style-type: none">- Turn electrical supply off and disconnect before performing any adjustments, maintenance or servicing the machine or taping heads.


 Warning
<ul style="list-style-type: none">• To reduce the risk associated with pinches and entanglement hazards:<ul style="list-style-type: none">- Do not leave the machine running while unattended.- Turn the machine off when not in use.- Never attempt to work on any part of the machine, load tape, or remove jammed boxes from the machine while the machine is running.



Figure 3-2

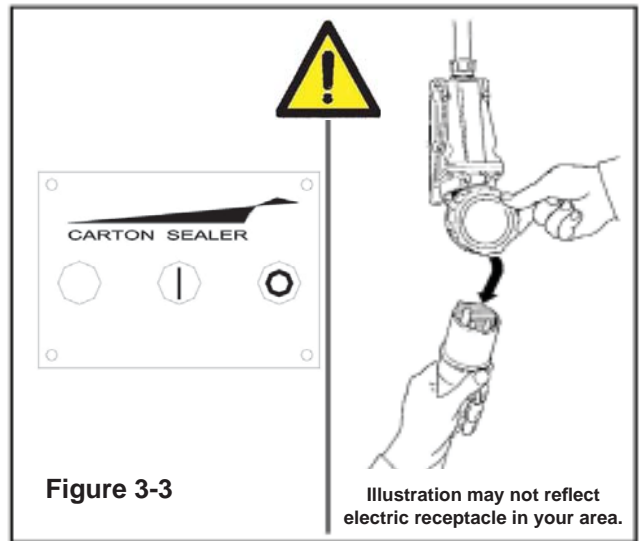


Figure 3-3

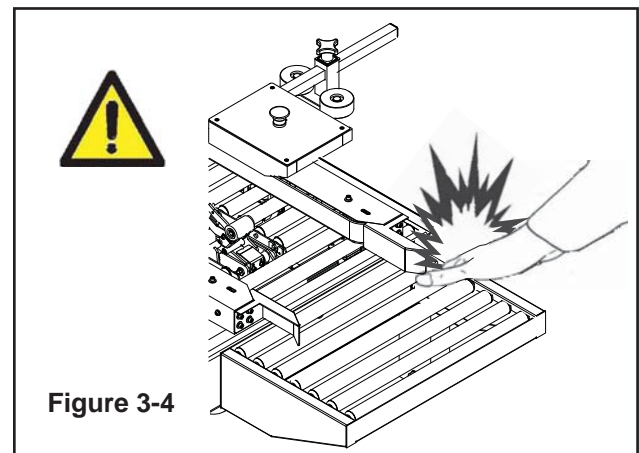


Figure 3-4

Important! Cavity in the conveyor bed. Never put your hands inside any part of the machine while it is working. Serious injury may occur (**Figure 3-4**).

3. Safety (continued)

Warning

- To reduce the risk associated with sharp blade hazards:
 - Keep hands and fingers away from tape cutoff blades under orange blade guards. The blades are extremely sharp.

Important! Tape cutting blade. Never remove safety device which covers blade on top and bottom taping units. Blades are extremely sharp. Any error may cause serious injuries (Figure 3-5).

Warning

- To reduce the risk associated with fire and explosion hazards:
 - Do not operate this equipment in potentially flammable / explosive environments.

Warning

- To reduce the risk associated with muscle strain:
 - Use appropriate rigging and material handling equipment when lifting or repositioning this equipment.
 - Use proper body mechanics when removing or installing taping heads that are moderately heavy or may be considered awkward to lift.

Caution

- To reduce the risk associated with pinch and entanglement hazards:
 - Keep hands clear of the upper head support assembly as boxes are transported through the machine.
 - Keep hands, hair, loose clothing, and jewelry away from box compression rollers and all moving parts.
 - Always feed boxes into the machine by pushing only from the end of box.



Figure 3-5

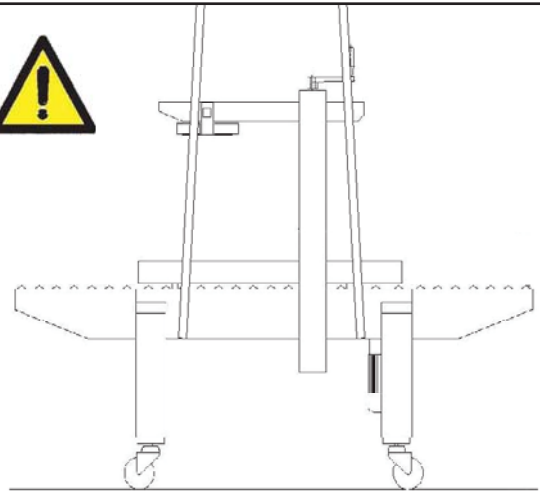


Figure 3-6

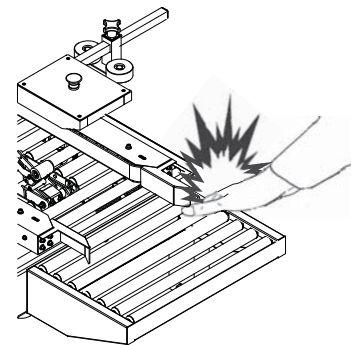


Figure 3-7

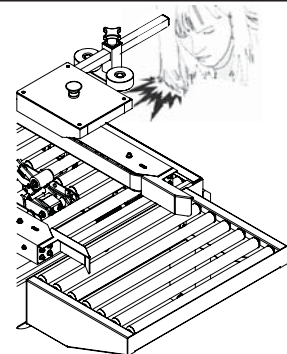


Figure 3-8

3. Safety (continued)

3.4 Operator's Qualifications

- Machine Operator
- Mechanical Maintenance Technician
- Electrical Maintenance Technician
- Manufacturer's Technician/Specialist
(See Section 3)

3.5 Number of Operators

The operations described below have been analyzed by the manufacturer; the recommended number of operators for each operation provides the best and safest work performance.

Note: A smaller or greater number of operators could be unsafe.

3.6 Instructions for a Safe Use of the Machine / Definition of Operator's Qualifications

Only persons who have the skills described in the skill levels section should be allowed to work on the machine. It is the responsibility of the user to appoint the operators having the appropriate skill level and the appropriate training for each category of job.

3.7 Residual Hazards

The case sealer a20 incorporates various safety protections which should never be removed or disabled. It is essential that the operator and service personnel be warned that hazards exist which cannot be eliminated:

3.8 Recommendations and Measures to Prevent Other Hazards which Cannot be Eliminated

- The operator must stay on the working position shown in the Operation Section. He must never touch the running driving belts or put his hands inside any cavity.
- The operator must pay attention to the blades during the tape replacement.

3.9 Personal Safety Measures

Safety glasses, safety gloves, safety helmet, safety shoes, air filters, ear muffs - None is required except when recommended by the user.

3.10 Predictable Actions which are Incorrect and Not Allowed

- Never try to stop/hold the box while being driven by the belts.
- Never remove or disable the safety devices.
- Only authorized personnel should be allowed to carry out the adjustments, repairs or maintenance which require operation with reduced safety protections. During such operations, access to the machine must be restricted. When the work is finished, the safety protections must immediately be reactivated.
- The cleaning and maintenance operations must be performed after disconnecting the electric power.
- Do not modify the machine or any part of it.
- Clean the machine using only dry cloths or light detergents. Do not use solvents, petrols, etc.
- Install the machine following the suggested layouts and drawings.



Warning

- **To reduce the risk associated with mechanical and electrical hazards:**
 - Read, understand, and follow all safety and operating instructions before operating or servicing the case sealer.
 - Allow only properly trained and qualified personnel to operate and service this equipment.

3. Safety (continued)

3.11 Operator's Skill Levels Required to Perform the Main Operations on the Machine

The Table shows the minimum operator's skill for each machine operation.

Important! The factory manager must ensure that the operator has been properly trained on all the machine functions before starting work.

Skill 1: Machine Operator

This operator is trained to use the machine with the machine controls, to feed cases into the machine, make adjustments for different case sizes, to change the tape and to start, stop and restart production.

Skill 2: Mechanical Maintenance Technician

This operator is trained to use the machine as the MACHINE OPERATOR and in addition is able to:

- Work with the safety protection disconnected
- Check and adjust mechanical parts
- Carry out machine maintenance operations/repairs

He is not allowed to work on live electrical components

Skill 2a: Electrical Maintenance Technician

This operator is trained to use the machine as the MACHINE OPERATOR and in addition is able to:

- Work with the safety protection disconnected
- Check and adjust mechanical parts
- Carry out machine maintenance operations / repairs / adjustments / repair electrical components

He is allowed to work on live electrical panels, connector blocks, control equipment, etc.

Skill 3: Specialist from the Manufacturer

Skilled operator sent by the manufacturer or its agent to perform complex repairs or modifications (on agreement with the customer).

Operator's Skill Levels Required to Perform the Main Operations on Machine

Operation	Machine Status	Required Operator Skill	Number of Operators
Machine installation and setup	Running with safety protections disabled	2 and 2a	2
Extraordinary mechanical maintenance		3	1
Extraordinary electrical maintenance		2a	1
Adjusting box size	Stopped by pressing the EMERGENCY STOP button	1	1
Tape replacement		1	1
Blade replacement	Electric power disconnected	2	1
Drive belt replacement		2	1
Ordinary maintenance		2	1

3. Safety (continued)

3.12 Component Locations

Refer to **Figure 3-9** below to acquaint yourself with the various components and controls of the case sealer. Also refer to Manual 2 for taping head components.

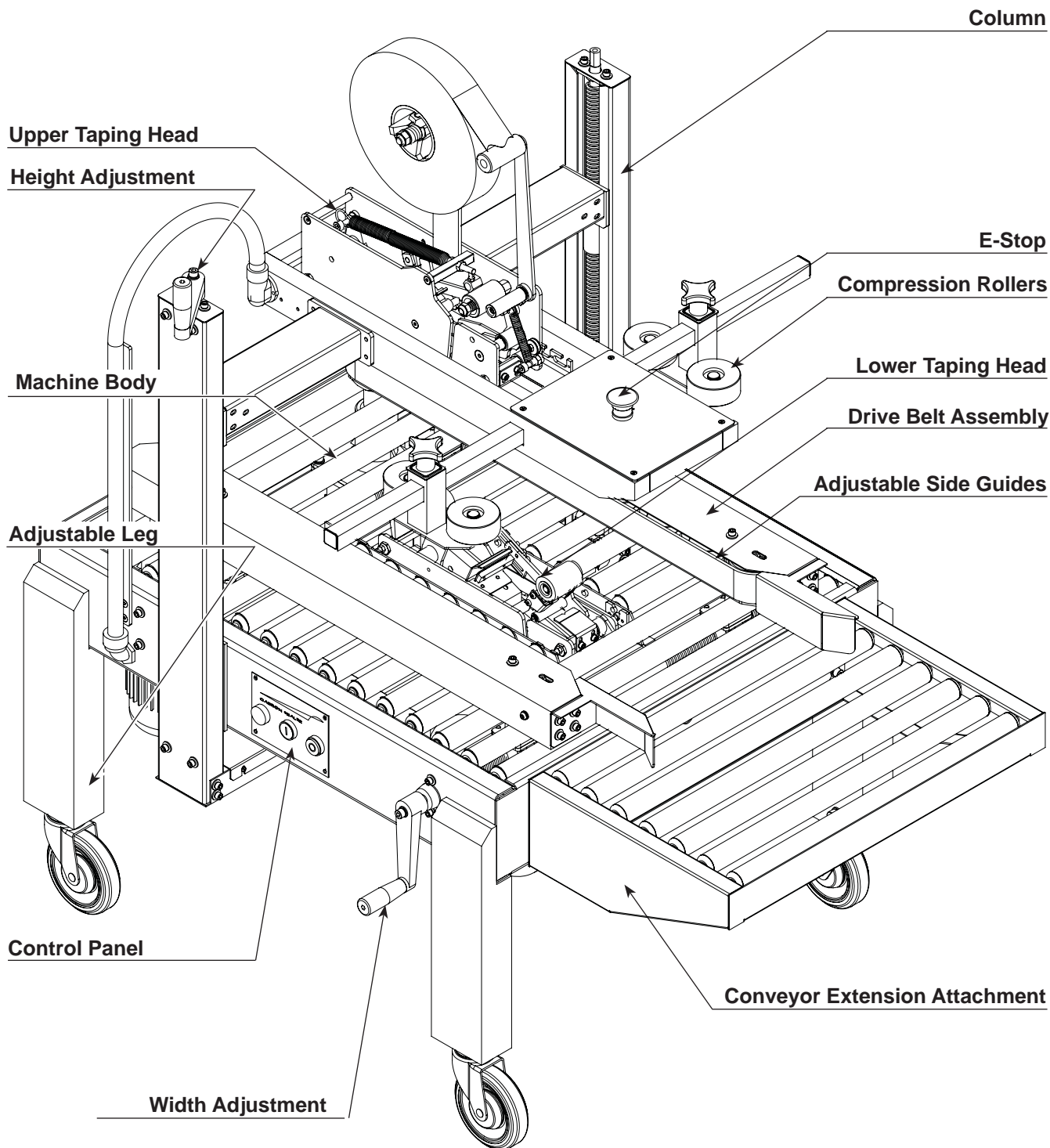


Figure 3-9 a88-I Case Sealer Components (Left Front View)

3. Safety (continued)

3.13 Table of Warnings and Replacements Labels

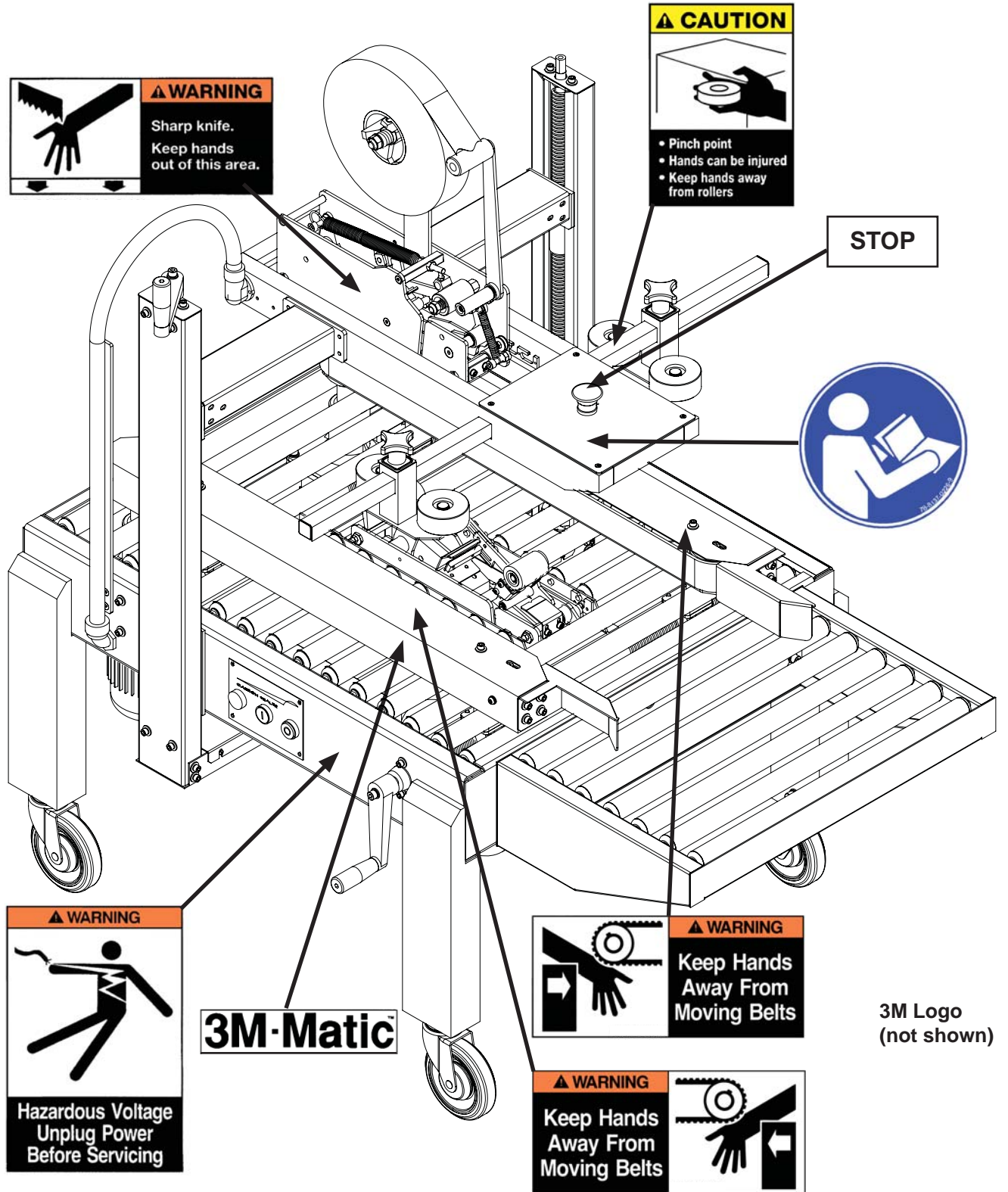


Figure 3-10 Replacement Labels / 3M Part Numbers

4. Specifications

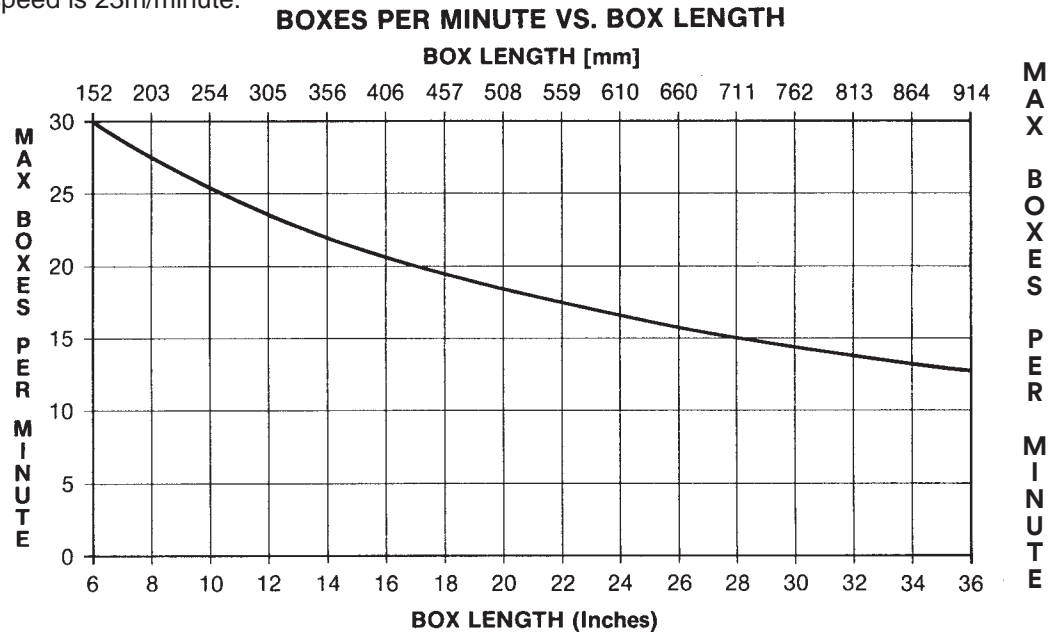
4.1 Power Requirements

- Electrical - 220VAC, 60 Hz, 1 Phase
- Belt Motor - 0.18*2 KVA
- Power Use - 0.4 KVA
- Power Cable - 1.25mm²
- Power Socket - 0.5 KVA

Contact your 3M Representative for power requirements not listed above.

4.2 Operating Rate

Belt speed is 23m/minute.



Actual production rate is dependent on operator's dexterity.
Boxes must be 18 inches (455mm) apart minimum.

4.3 Operating Conditions

Use in dry, relatively clean environments at 0° C to 45° C [32° F to 113° F] with clean, dry boxes.

Note: Machine should not be washed or subjected to conditions causing moisture condensation on components.



Warning

- **To reduce the risk associated with fire and explosion hazards:**
 - Do not operate this equipment in potentially flammable or explosive environments.

4.4 Tape

Scotch® pressure-sensitive film box sealing tapes.

4.5 Tape Width

Minimum – 36mm [1-1/2 inches]

Maximum – 50mm [2 inches]

4. Specifications *(continued)*

Specifications

4.6 Tape Roll Diameter

Up to 356mm [14 inch] maximum on a 76.2mm [3 inch] diameter core.
(Accommodates all system roll lengths of **Scotch®** film tapes)

4.7 Tape Application Leg Length – Standard

2" tape head (tape leg 50±5mm)

3" tape head (tape leg 60±5mm)

Tape Application Leg Length – Standard

2" tape head (tape leg 60±5mm)

4.8 Box Board

Style – regular slotted containers – RSC
125 to 275 P.S.I. bursting test, single wall or double wall B or C flute.
23-44 lbs. per inch of width Edge Crush Test (ECT)

4.9 Box Weight and Size Capacities

A. Box Weight, filled: 0.5 kg – 30 kg [1.1 lbs. – 66.1 lbs.]. Contents must support flaps.

B. Box Size:	Minimum	Maximum
Length:	120mm [4.7 inch]	Unlimited
Width:	110mm [4.3 inch] 140mm [5.5 inch]*	500mm [19.7 inch]
Height:	120mm [4.7 inch]	500mm [19.7 inch]

* 3" Tape Head minimum width.

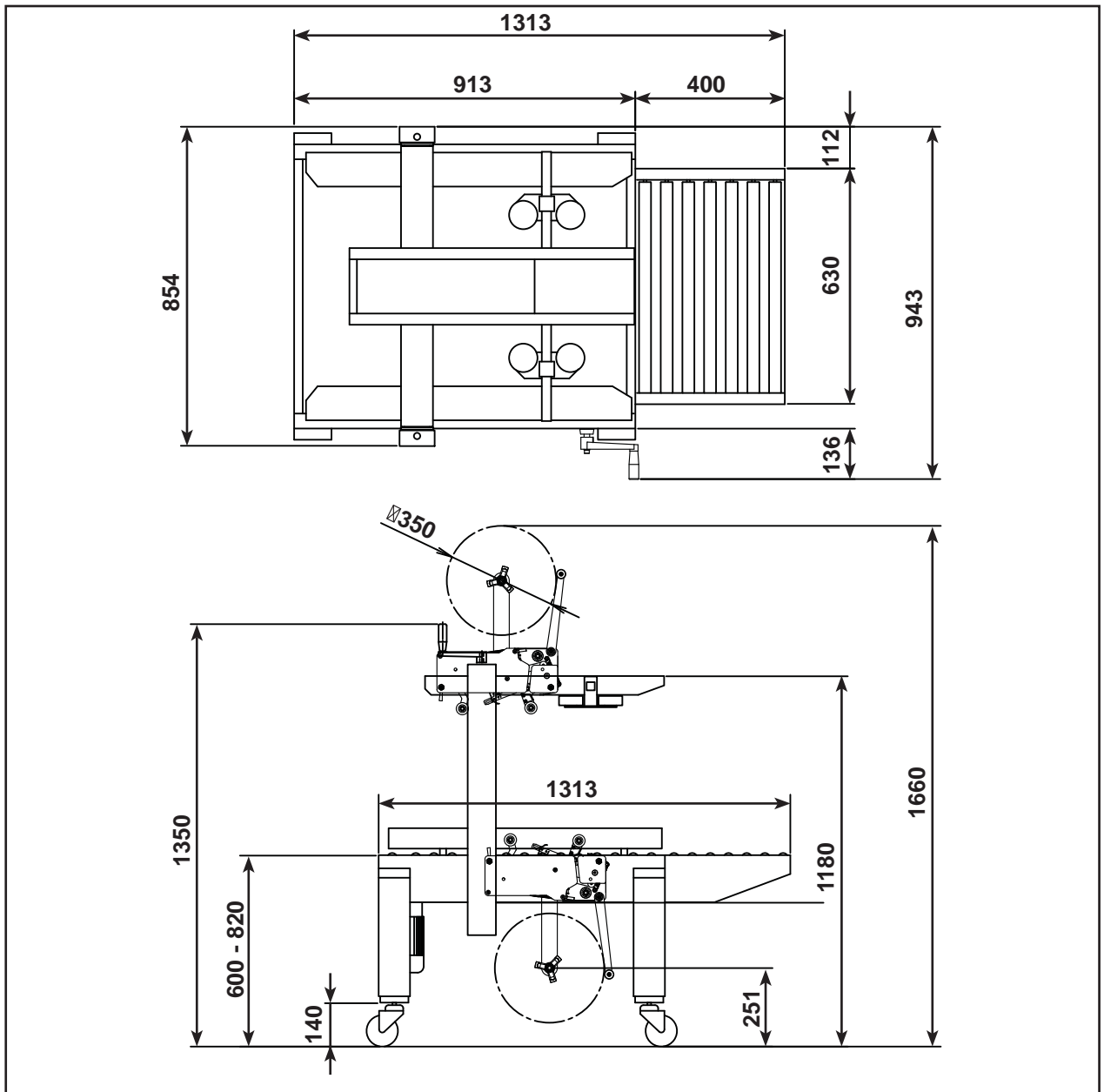
Note: The case sealer can accommodate most boxes within the size range listed above. However, if the box length (in direction of seal) to box height ratio is 0.6 or less, test run several boxes to ensure proper machine performance.

DETERMINE THE BOX LIMITATIONS BY COMPLETING THIS FORMULA:

BOX LENGTH IN DIRECTION OF SEAL = **SHOULD BE GREATER THAN 0.6**
BOX HEIGHT

Any box ratio approaching this limitation should be test run to ensure performance.

4. Specifications *(continued)*



4.10 Machine Dimensions

As indicated in illustration above.

Weight – 160kg [353 lbs] uncrated (approximate)

4.11 Machine Noise Level

Acoustic pressure (measured at a distance of 1m. from machine) using Scotch PVC adhesive tape in operation; 60dB

Acoustic radiation pressure at 1.6m height with Scotch PVC adhesive tape in operation; 60dB
Measurement taken with appropriate instrument: Type SPYRI-MICROPHON 11.

4.12 Set-Up Recommendations

- Machine must be level.
- Customer supplied infeed and exit conveyors (if used) should provide straight and level box entry and exit.
- Exit conveyors (powered or gravity) must convey sealed boxes away from machine.

5. Shipment-Handling-Storage-Transport

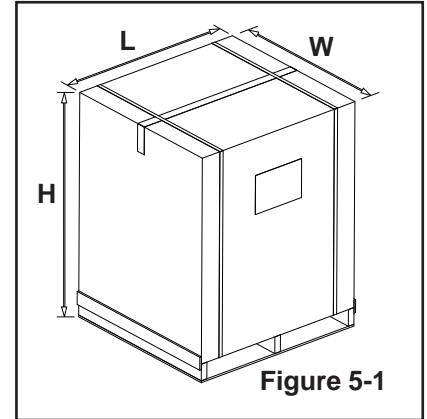
5.1 Shipment and Handling of Packed Machine

- The machine is fixed on the pallet with four (4) bolts and can be lifted by using a fork truck.
- The package is suitable to travel by land and by air.
- Optional sea freight package is available.

Packaging Overall Dimensions (Figure 5-1)

See Specifications.

During the shipment it is possible to stack a maximum of 2 machines (Figure 5-1).



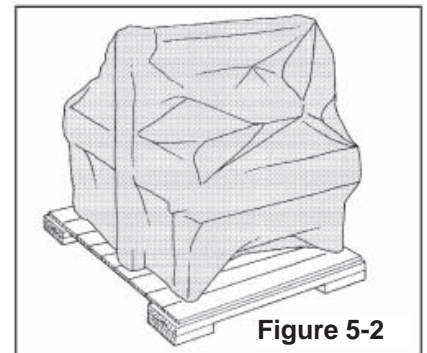
5.2 Packaging for Overseas Shipment (Optional - Figure 5-2)

The machines shipped by sea freight are covered by an aluminum/polyester/polythene bag which contains dehydrating salts.

5.3 Handling and Transportation of Uncrated Machine

The uncrated machine should not be moved except for short distances and indoors ONLY. Without the supporting pallet, the machine is exposed to damage and may cause injuries.

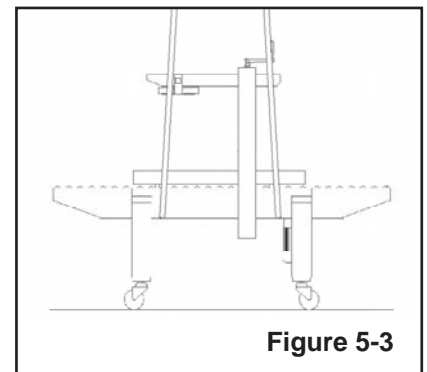
To move the machine use belts or ropes, paying attention to place them in the points indicated using care to not interfere with the lower taping head (Figure 5-3).



5.4 Storage of the Packed or Unpacked Machine

If the machine is not used for a long period, please take the following preCautions:

- Store the machine in a dry and clean place.
- If the machine is unpacked it is necessary to protect it from dust.
- Do not stack anything over the machine.
- It is possible to stack a maximum of 2 machines (if they are in their original packing).



6. Unpacking

6.1 Uncrating

Cut Straps - **A** (Figure 6-1).

After cutting the straps, lift the shipping box in order to clear the machine (Figure 6-2).

Note: Two (2) persons required.

Transport the machine with a fork-lift truck to the operating position. Lift the pallet at the point indicated in Figure 6-3 (weight of machine crated = See Specifications).

Remove the leg height adjustment cap screws and replace with the cap screws from the tool kit. Loosen both cap screws. Remove and replace them one at a time to keep the inner threaded plate in position.

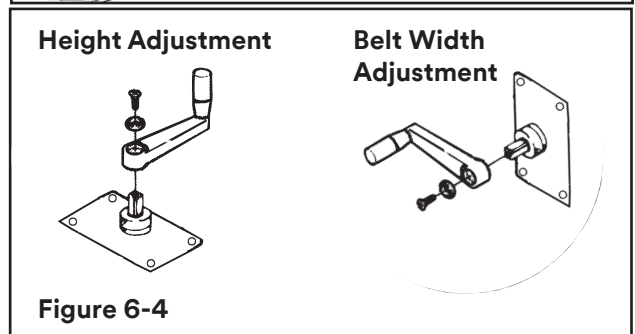
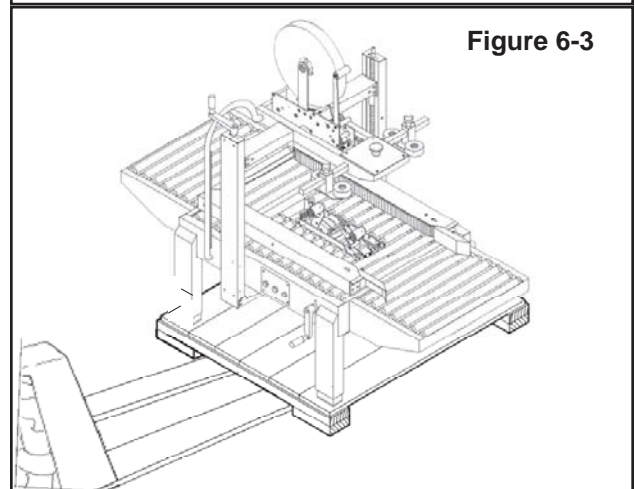
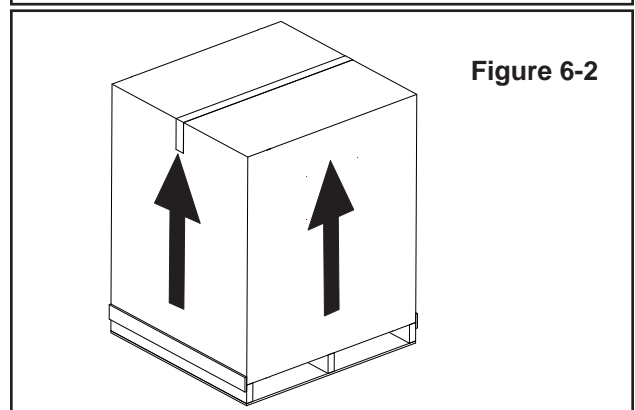
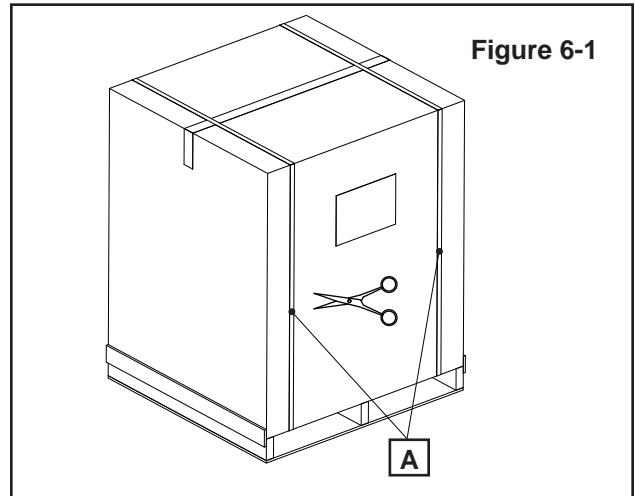
Locate on the machine (or in the spare parts box) the Height Adjustment and Drive Belt Adjustment handles. Install the handles on top of the column and on the side of the machine pointing upward/outward (as shown in Figure 6-4).

6.2 Disposal of Packaging Materials

The a88-I package is composed of:

- Wooden pallet
- Cardboard shipping box
- Wooden supports
- Metal fixing brackets
- PU foam protection
- PP plastic straps
- Dehydrating salts in bag
- Special bag of laminated polyester/aluminium/Polyethylene (sea freight package only)
- Polyethylene protective material

For the disposal of the above materials, please follow the environmental directives or the law in your country.



7. Installation

7.1 Operating Conditions

The machine should operate in a dry and relatively clean environment (See Specifications).

7.2 Space Requirements for Machine Operation and Maintenance Work

Minimum distance from wall (Figure 7-1):

A = 1000mm.

B = 700mm.

Minimum height = 2700mm.

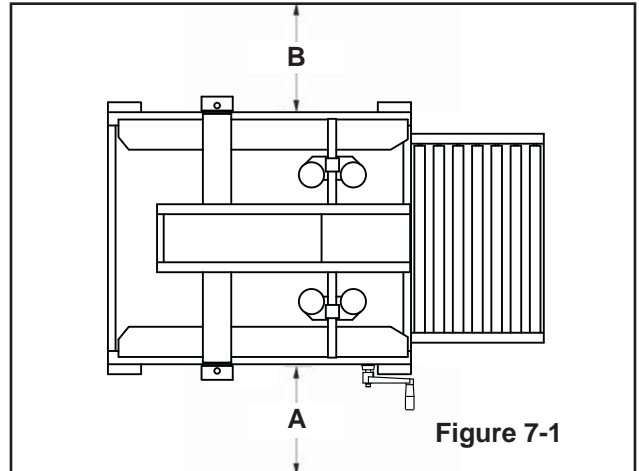


Figure 7-1

7.3 Tool Kit Supplied with Machine

A tool kit containing some tools are supplied with the machine. These tools should be adequate to set-up the machine, however, other tools supplied by the customer will be required for machine maintenance.

7.4 Machine Set-Up / Bed Height

- 1 - Lift the machine with belts or ropes paying attention to place the belts in the points (Figure 7-2).

To set the machine bed height, do the following:

- 2 - Adjust machine bed height. The case sealer is equipped with four (4) adjustable legs that are located at the corners of the machine frame. The legs can be adjusted to obtain different machine bed heights (Figure 7-3).

Also refer to “Specifications”

- 3 - Lock the screws.
- 4 - Repeat the operation for all legs. (It is not necessary to fix or anchor the machine to the floor).

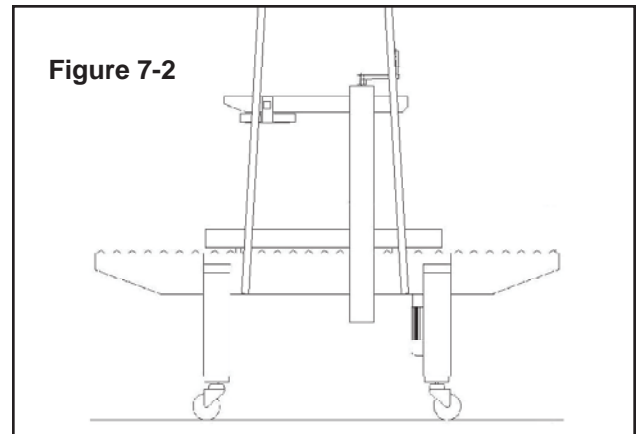


Figure 7-2

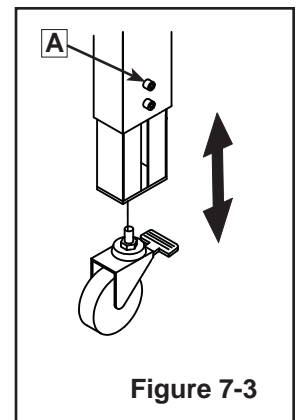


Figure 7-3

7. Installation (continued)

7.5 Removal of Plastic Ties

Cut the plastic which attaches the top head to the frame and remove the polystyrene blocks (Figure 7-4).

7.6 Assembly Completion

- 1) After installing Casters, open Conveyor box and carefully remove contents.
- 2) Attach the roller table to the machine body using hardware provided.
- 3) Be sure Conveyor is even with machine bed and also check to be sure Conveyor and machine are level (Figure 7-4).

7.7 Preliminary Electric Inspection

Before connecting the machine to the mains please carry out the following operations:

7.7.1 Make sure that the socket is provided with an earth protection circuit and that both the mains voltage and the frequency match the specifications on the name plate.

7.7.2 Check that the connection of the machine to the mains meets the safety regulations in your country.

7.7.3 The user will be responsible for testing the short-circuit current in its facility and should check that the short-circuit amperage setting of the machine is compatible with all the components of the mains system.

7.8 Machine Connection to the Mains

Main Power - See Specifications

- Push the LATCHING EMERGENCY STOP BUTTON.
- The main switch is normally turned OFF (O).

Connect the power cord supplied with the machine to a wall socket using a plug.

7.9 Inspection of Phases (For Three-Main Phases Only)

Procedure to be followed in order to correctly connect the position of the phases:

- Release the latching emergency stop button by turning it clockwise (Figure 8-1).
- Push Main Button to ON (I) Position (Figure 8-2).
- Check the rotation direction of the drive belts (Figure 8-3).
- If the drive belts rotate in the wrong direction, correct the rotation direction of the drive belts by reversing 2 phases on the plug.



Warning

- **To reduce the risk associated with mechanical and electrical hazards:**
 - Read, understand, and follow all safety and operating instructions before operating or servicing the case sealer.
- **To reduce the risk associated with hazardous voltage:**
 - Position electrical cord away from foot and vehicle traffic.



Warning

- **To reduce the risk associated with sharp blade hazards:**
 - Keep hands and fingers away from tape cutoff blades under orange blade guards. The blades are extremely sharp.

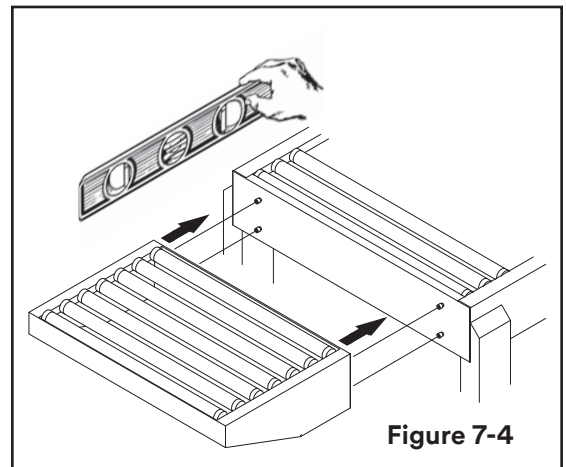


Figure 7-4

8. Theory of Operation

8.1 Description of the Working Cycle

After having closed the top flaps of the carton, the operator pushes it under the top infeed end in order to avoid the opening of the top flaps. Further pushing causes the two top and bottom belts to drive the box through the taping heads which automatically seal the top and bottom seams. The carton is then expelled on the exit conveyor.

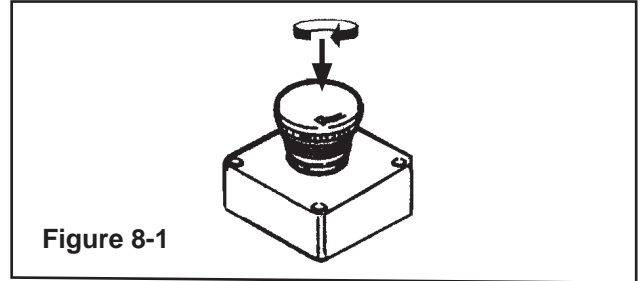


Figure 8-1

8.2 Definition of Running Mode

The case sealer a88-I has only one (automatic) operating mode with:

- The EMERGENCY STOP BUTTON unlocked (Figure 8-1)
- The main On/Off switch "ON" (I) (Figure 8-2)

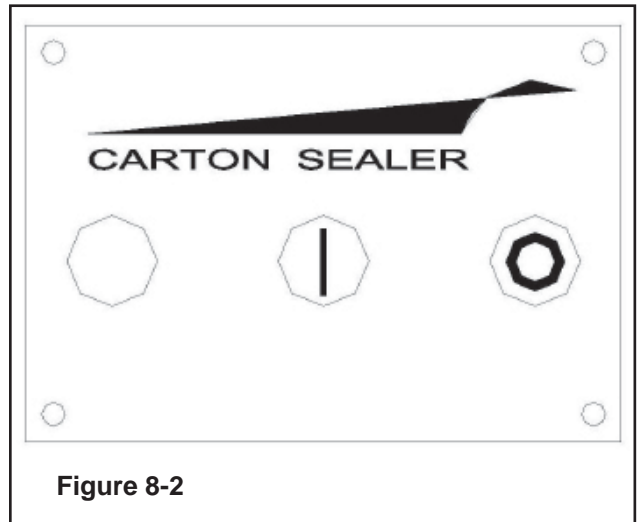


Figure 8-2

8.3.1 Normal Stop Procedure

When the main switch is turned OFF (O), the machine stops immediately at any point of the working cycle. The same thing happens in case of electrical failure or when the machine is disconnected from the mains.

8.3.2 Emergency Stop

The LATCHING EMERGENCY STOP BUTTON is located on the top center of the machine (Figure 8-3).

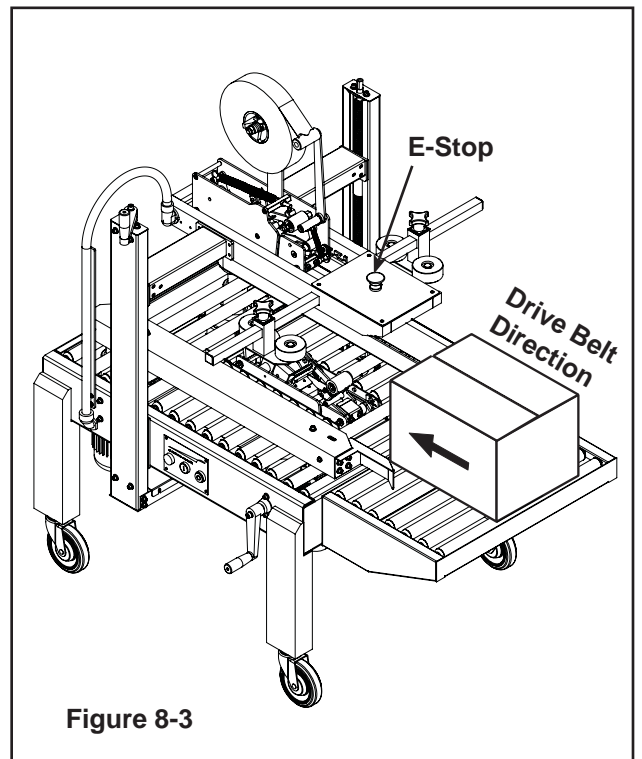
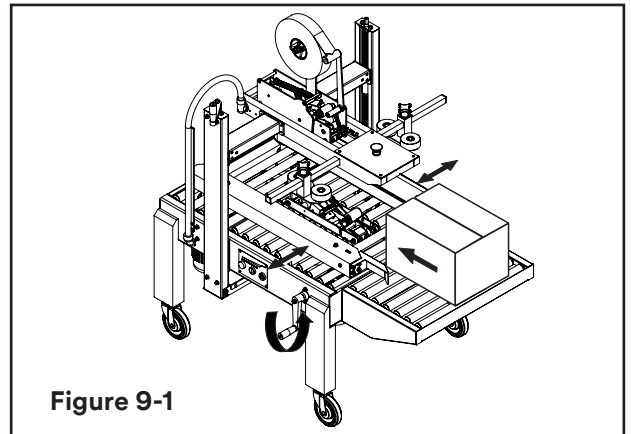


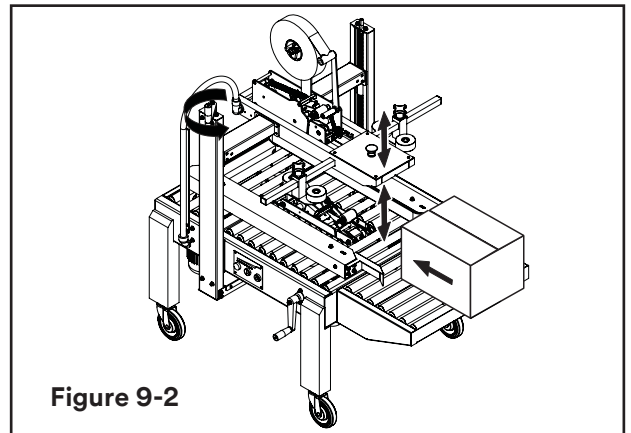
Figure 8-3

9. Controls

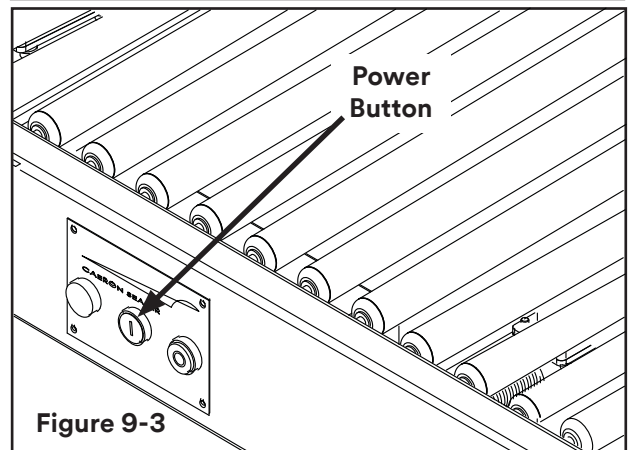
9.1 Box Width/Side Guide Adjusting Knobs



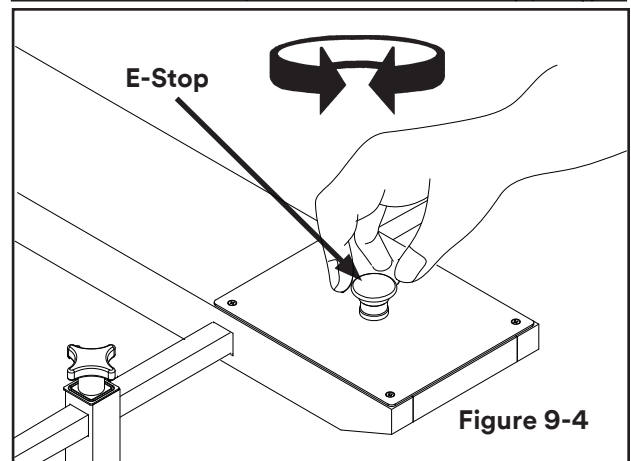
9.2 Box Height Adjusting Crank



9.3 On/Off Switch



9.4 Lockable Emergency Stop Button



10. Safety Devices of the Machine

10.1 Blade Guards

Both top and bottom taping units have a blade guard (See Taping Heads Manual).

10.2 Emergency Stop Button

The box drive belts are turned on and off with the electrical switch on the side of the machine frame.

The machine electrical supply can be turned off by pressing the latching emergency stop switch.

To restart machine, rotate the emergency stop switch clockwise to release the switch latch (Figure 10-1).

Restart machine by turning the On/Off switch to the Off (O) position and then to the On (I) position (Figure 10-2)

10.3 Electric System / Circuit Breaker

The electric system is protected by a ground wire whose continuity has been tested during final inspection. The system is also subject to insulation and dielectric strength tests.

1. Determine cause of overload and correct.
2. Plug in machine.
3. Turn machine switch "On" (I) to resume case sealing

Fuse replacement

- (a) Check power connections/input.
- (b) Release E-stop button.
- (c) Press start button to release overload.
- (d) Check to see if fuses are in good condition. If faulty, replace new fuses as shown in diagrams (See Section 16).
- (e) Reverse steps above and re-start machine.

Important: The use of an extension cord is not recommended. However, if one is needed for temporary use, it must:

- Have wire size 1.5mm dia. [AWG 16]
- Have a max. length 30.5m [100 ft]
- Be properly grounded.

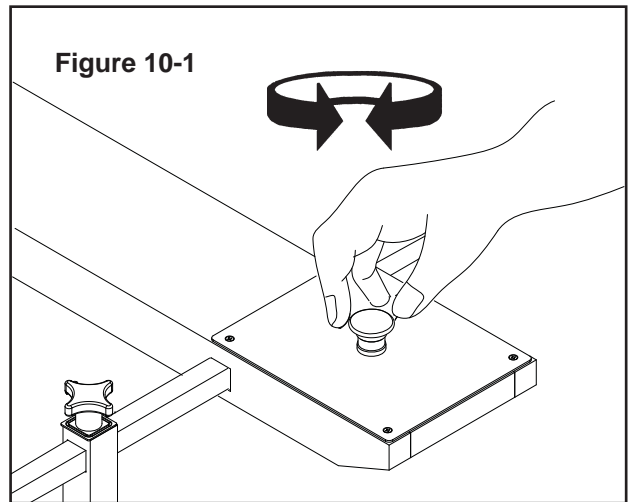


Figure 10-1

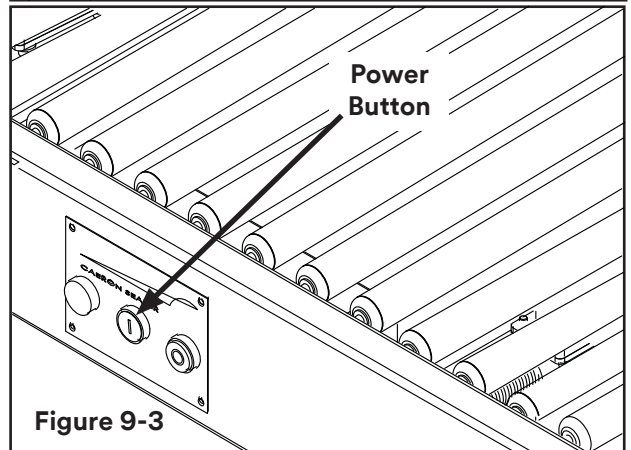


Figure 9-3



Warning

- To reduce the risk associated with sharp blade hazards:
 - Keep hands and fingers away from tape cutoff blades under orange blade guards. The blades are extremely sharp.



Warning

- To reduce the risk associated with hazardous voltage:
 - Position electrical cord away from foot and vehicle traffic.



Warning

- To reduce the risk associated with mechanical and electrical hazards:
 - Allow only properly trained and qualified personnel to operate and service this equipment.

11. Set-Up and Adjustments

11.1 Box Width Adjustment

Place box on infeed end of frame bed and align top flap center seam with arrows on front of upper frame. Move in and lock the side by tightening the appropriate knobs (Figure 11-1).

11.2 Box Height Adjustment

Lower top head by turning the height adjustment crank clockwise until it lightly presses the case (Figure 11-2).

11.3 Adjustment of Top Flap Compression Rollers (Optional)

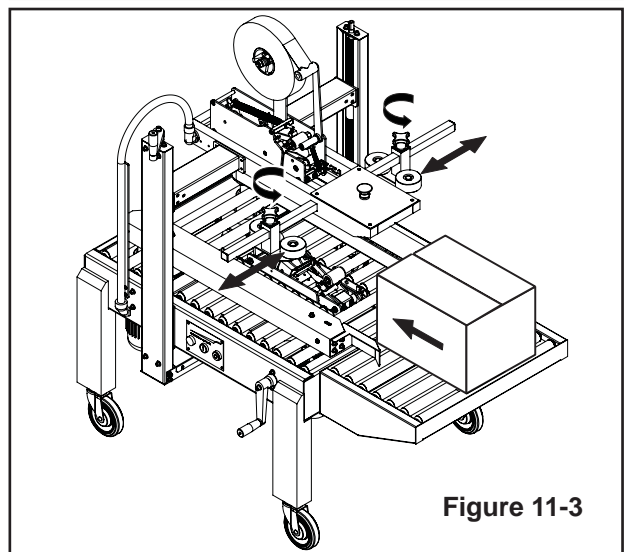
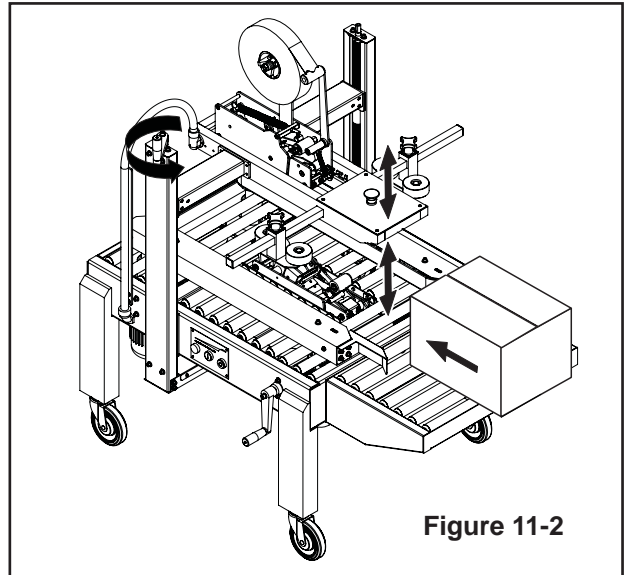
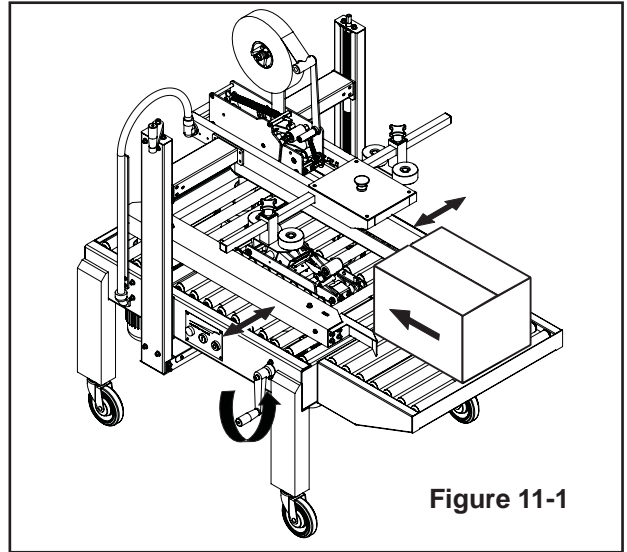
Note: This step applies to machines with the optional box compression rollers.

For machines with the optional box compression rollers, move the top flap compression rollers until they contact sides of the box. Tighten knobs to secure rollers in operating position (Figure 11-3).

11.4 Changing the Tape Leg Length

Taping heads are preset to apply 50mm [2 inches] long tape legs. To change tape leg length refer to Instructions below and also to Manual 2.

1. Remove tape from upper taping head and raise upper assembly to a convenient working height.
2. Loosen the upper taping head clamp thumb screws. Move the clamp away from the taping head (Figure 11-4).
3. Slide head forward and lift upward to remove
4. Raise upper assembly to provide working room around lower taping head and remove tape from taping head.
5. Lift the lower taping head straight up to remove it from the case sealer bed (Figure 11-5).
6. Refer to Manual 2, "Adjustments—Changing Tape Leg Length", for taping head setup.
7. Replace taping heads in the reverse order of disassembly.



11. Set-Up and Adjustments

11.5 Run Boxes to Inspect Adjustment (Figure 11-6)

Turn electrical switch to **On** to start drive belts. Move box forward under upper taping head until it is taken away by the drive belts. Always push at the end of the box. If box is hard to move under head or is crushed, raise the head slightly. If box movement is jerky or stops under upper head, lower the upper head slightly to add more pressure between box and drive belts.

Note – The upper head has a unique feature for overstuffed boxes. The head will raise up to 13mm [0.5 inches] to compensate for this condition.

Important – If drive belts are allowed to slip on box, excessive belt wear will occur.

Refer to **Figure 11-5** and adjust belt tension as follows (for belt replacement and tension specifications - refer to **Section 13 / Maintenance and Repairs**):

1. Loosen belt screw (A) to adjust belt tension screw (B).
2. Re-tighten belt screw (A).

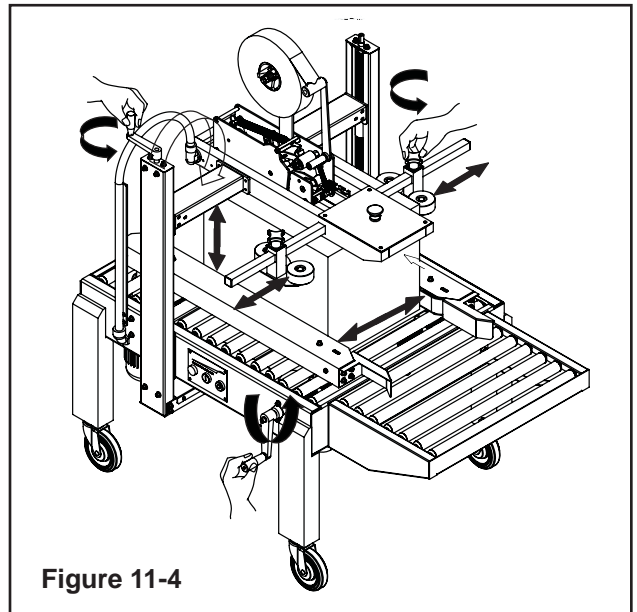


Figure 11-4

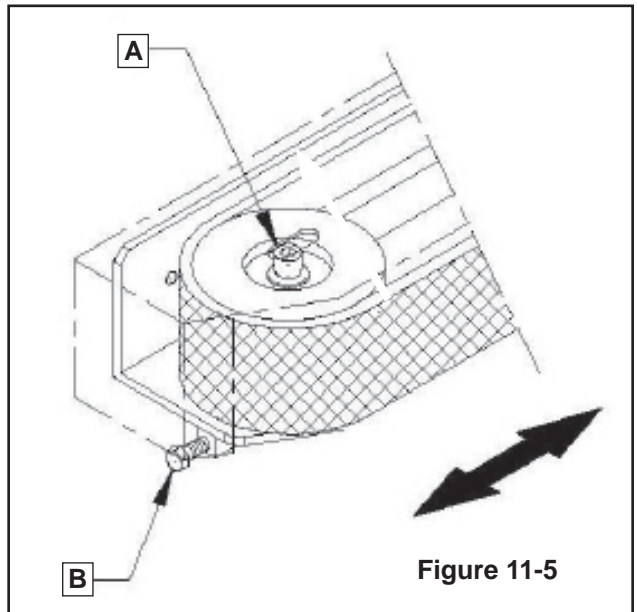


Figure 11-5



Caution

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

12. Operation

12.1 Operator's Correct Working Position and Operational Flow (Figure 12-1).

Once the box has been filled, close its top flaps and push it between the top and bottom drive belts. Always keep hands in position as shown in **Figure 12-2**.

The box will be automatically sealed with adhesive tape on the top and bottom box seams. Then the box will be expelled on the exit conveyor.

12.2 Starting the Machine

Important: Before starting the machine, verify that no tools or other objects are on conveyor bed.

Turn the main switch ON (I) after the EMERGENCY BUTTON is released (**Figure 12-3**).

12.3 Starting Production

After having adjusted the machine according to the box dimensions (height-width), let the machine run without cartons and check its safety devices. Then start the working cycle.

12.4 Tape Replacement and Threading

Skill 1 - Operator

See Manual T8 Taping Heads.

Press the LATCHING EMERGENCY STOP BUTTON.

12.5 Box Size Adjustment

Repeat all operations shown in **Set-Up and Adjustments**.

12.6 Cleaning

Before carrying out any cleaning or maintenance operation, stop the machine by turning OFF (O) switch on the main and disconnect electric power (**Figure 12-3**).

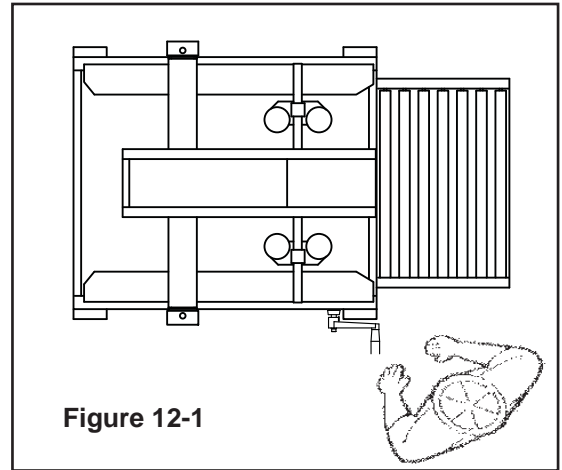


Figure 12-1

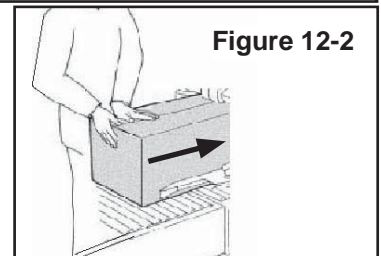


Figure 12-2

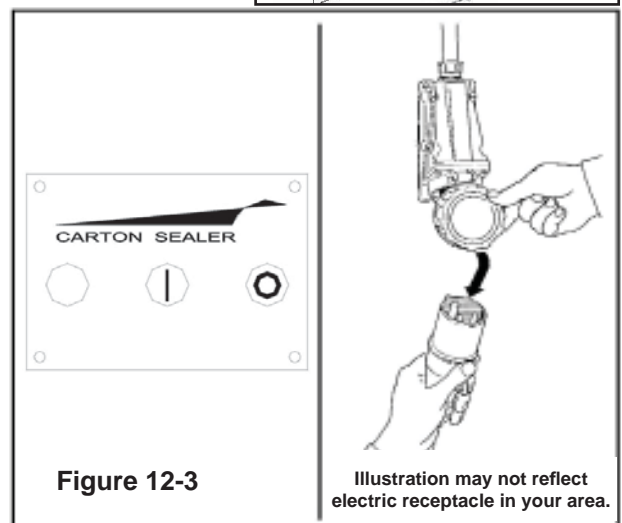


Figure 12-3

Illustration may not reflect electric receptacle in your area.

12.7 Table of Operation Adjustments - Operator Qualifications

1	Tape loading and threading	1
2	Tape web alignment	1
3	Adjustment of one way tension roller	1
4	Adjustment to box size (H and W)	1
5	Top flap compression rollers	1
6	Adjustment of tape applying spring	1
7	Conveyor bed height adjustment	1
8	Special Adjustment-Changing tape leg length	2
9	Special Adjustment-Column re-positioning	2

12.8 Safety Devices Inspection

1. Taping units blade guard
2. Latching emergency stop button
3. STOP (OFF) (O) main switch

12. Operation

12.9 Troubleshooting Guide

PROBLEM	CAUSE	CORRECTION
Drive belts do not convey boxes	Narrow boxes Worn drive belts or friction rings Top taping head does not apply enough pressure Top flap compression roller too tight Taping head applying spring holder missing Taping head applying spring set too high	Check machine specifications. Boxes are narrower than recommended causing slippage and premature belt wear Replace drive belts or friction rings Adjust the box height adjustment using the crank handle Readjust compression rollers Replace spring holder Reduce spring pressure
Drive belts do not turn	Worn or missing friction rings Drive belt tension too low Electrical disconnect Motor not turning Motor capacitor Motor fan cover dented	Replace friction rings Adjust belt tension Check power and electrical plug Evaluate and correct
Upper and lower taping head mechanisms interfere with each other	Machine's minimum height stop does not match tape head leg length setting	Check manual to make sure taping heads match machine setting
Drive belts break	Worn belt Improper setup causing boxes to jam	Replace belt
Light boxes tip back on exit	Upper head assembly down too far	Carefully adjust upper head assembly
Squeaking noise as boxes pass through machine	Dry compression rollers Dry column bearings Defective column bearings	Lubricate compression rollers Lubricate column bearings Replace column bearings


13. Maintenance and Repairs

13.1 Safety Measures (see section 3)

Carrying out maintenance and repairs may imply the necessity to work in dangerous situations. (See Section 3)

13.2 Tools and Spare Parts Supplied with the Machine

See Spare Parts Order Section.



Warning

- **To reduce the risk associated with mechanical and electrical hazards:**
 - Read, understand, and follow all safety and operating instructions before operating or servicing the case sealer.
 - Allow only properly trained and qualified personnel to operate and service this equipment.
- **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 machine or taping heads.

13.3 Recommended Frequency of Inspection and Maintenance Operations

Operation	Frequency	Qualification	Sections
Inspection safety features	daily	1	13.4
Cleaning of machine	weekly	1	13.5
Cleaning of cutter blade	weekly	2	13.6
Oiling of felt pad	weekly	2	13.7
Lubrication	monthly	2	13.7-13.8
Blade replacement	when worn	2	See Manual 2
Drive belt replacement	when worn	2	13.10

13.4 Inspections to be Performed Before and After Every Maintenance Operation

Before every maintenance operation, turn the main rotary switch OFF and disconnect the plug from the control panel. During the maintenance operation only the operator responsible for this duty must work on the machine. At the end of every maintenance operation, check the safety devices.

13.5 Check Efficiency of Safety Features

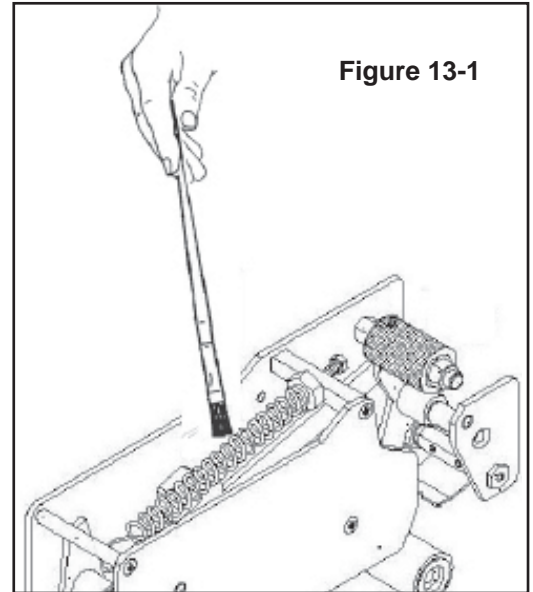
1. Blade guard assembly upper taping head
2. Blade guard assembly lower taping head
3. Latching Emergency stop button with mechanical lock (interrupt supply of electrical power)
4. Turn the main rotary switch STOP/OFF
5. Safety guards - drive belts

13. Maintenance and Repairs

13.6 Cleaning of Machine

Qualification 1

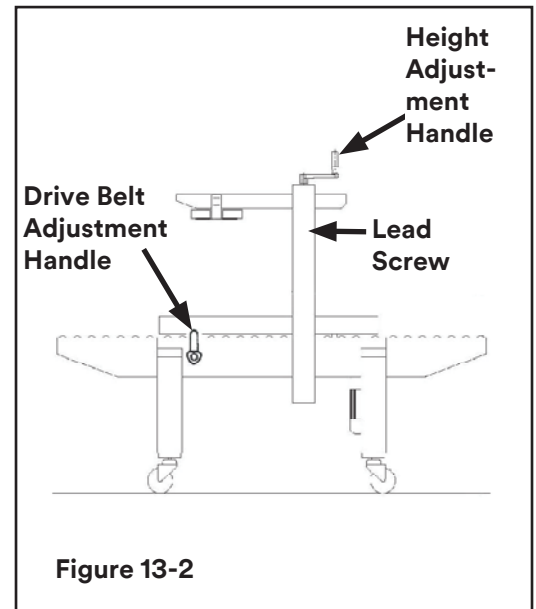
A weekly cleaning with dry rags or diluted detergents is necessary. Cardboard boxes produce a significant quantity of dust and paper chips when processed or handled in case sealing equipment. If this dust is allowed to build up on machine components, it can cause component wear and over-heating of drive motors. The dust build up is best removed from the machine with a vacuum cleaner. Depending on the number of cartons processed, this cleaning should be done weekly. Excessive build-up that cannot be removed by vacuuming should be removed with a damp cloth.



13.7 Cleaning of Cutter Blade

Qualification 2

Should tape adhesive build-up occur, carefully wipe clean with oily cloth or brush. Oil prevents the build-up of tape adhesive (See Manual 2)



Warning

- To reduce the risk associated with sharp blade hazards:
 - Keep hands and fingers away from tape cutoff blades under orange blade guards. The blades are extremely sharp.

13. Maintenance and Repairs

13.8 Drive Belt Replacement

Drive Belts

1. Loosen belt cover screws and remove the belt cover (**Figure 13-3**).
2. Loosen (counter-clockwise) but do not remove the belt screw (**A**) (**Figure 13-4**).
3. Then loosen the belt tension screw (**B**) until all belt tension is removed (**Figure 13-4**).
4. Remove existing belt (**Figure 13-5**).
5. Place new belt over driving roller (rear) and then over idle roller (front).
6. Re-tighten belt tension screw (**B**). While applying adequate tension to belt, re-tighten belt screw (**A**) (**Figure 13-4** - also see **Box Drive Belt Tension Instructions**).

Important: Be sure there is a 2mm gap at the exit end of the Drive Belt which allows the belt to move freely.

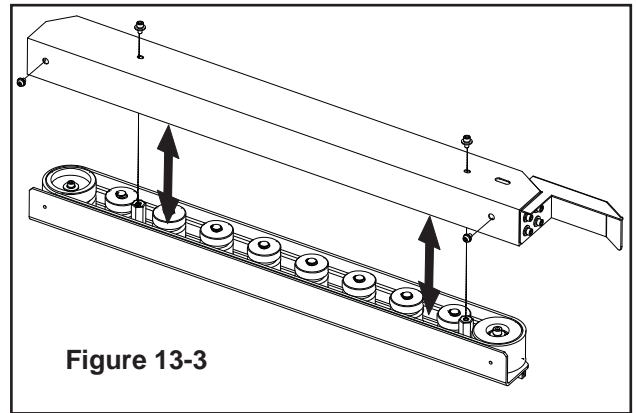


Figure 13-3

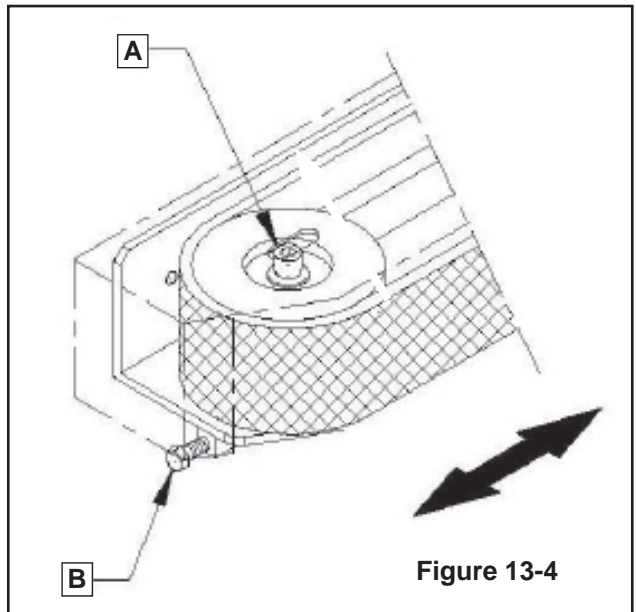


Figure 13-4

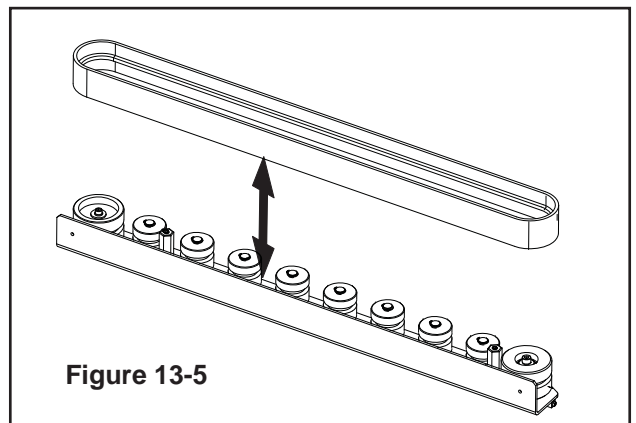


Figure 13-5



Warning

- To reduce the risk associated with mechanical and electrical hazards:
 - Allow only properly trained and qualified personnel to operate and service this equipment.

13. Maintenance and Repairs

13.9 Drive Belt Tension

Tension adjustment of the drive belts may be required during normal operation. Belt tension must be adequate to positively move the box through the machine and they should run fully on the surface of the pulleys at each end of the frame. The idler pulleys on the infeed end are adjusted in or out to provide proper belt tension. Each belt is adjusted separately.

Belt tension is obtained by tightening the adjustment screw so that a moderate pulling force of 3.5 kg [7 lbs] applied at the mid span, as shown in **Figure 13-4**, will deflect the belt 25mm [1 inch]. This will assure positive contact between the belt and the drive pulley on the discharge end of the taping head.



Warning

- **To reduce the risk associated with mechanical and electrical hazards:**
 - Turn electrical supply off and disconnect before performing any adjustments, maintenance or servicing the machine or taping heads.

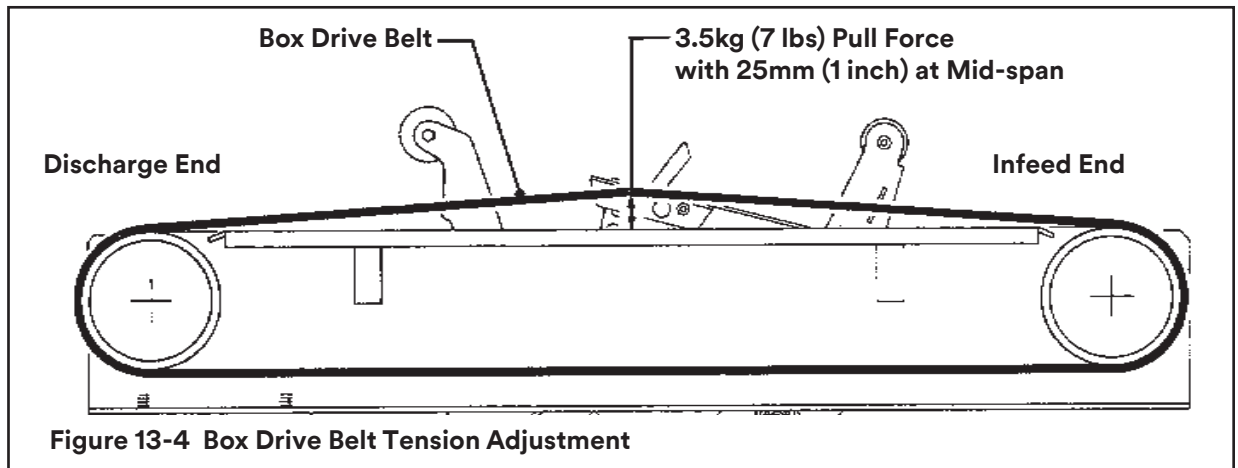


Figure 13-4 Box Drive Belt Tension Adjustment

14. Additional Instructions

14.1 Information for Disposal of Machine (ELV)

The machine is composed of the following materials:

- Steel structure
- Nylon rollers
- Drive belts in PVC
- Nylon pulleys

For machine disposal, follow the regulations published in each country.

14.2 Emergency Procedures

In case of danger/fire:
Disconnect plug of power cable from power supply (**Figure 14-1**).

IN CASE OF FIRE

Use a fire extinguisher that is rated for electrical fires - (**Figure 14-2**).

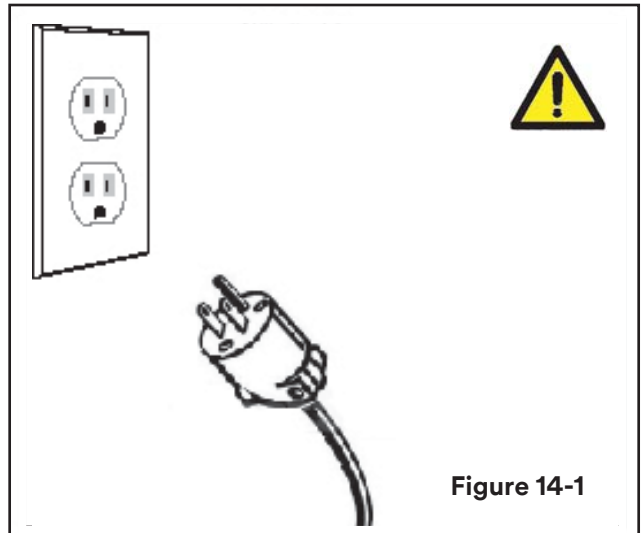


Figure 14-1

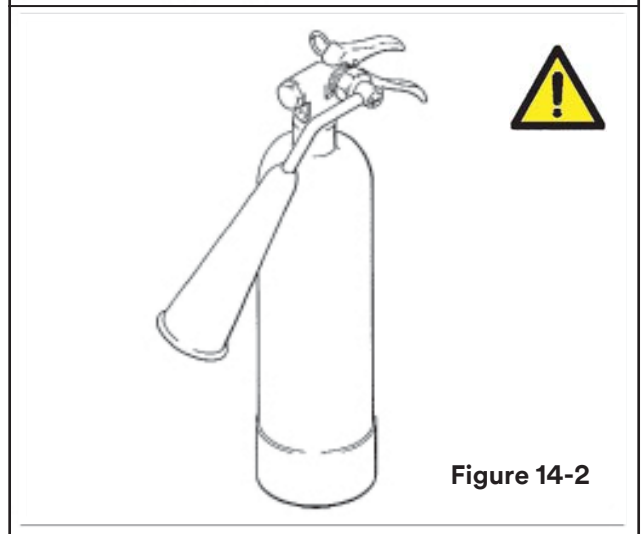


Figure 14-2

15. Additional Information

15.1 Statement of Conformity

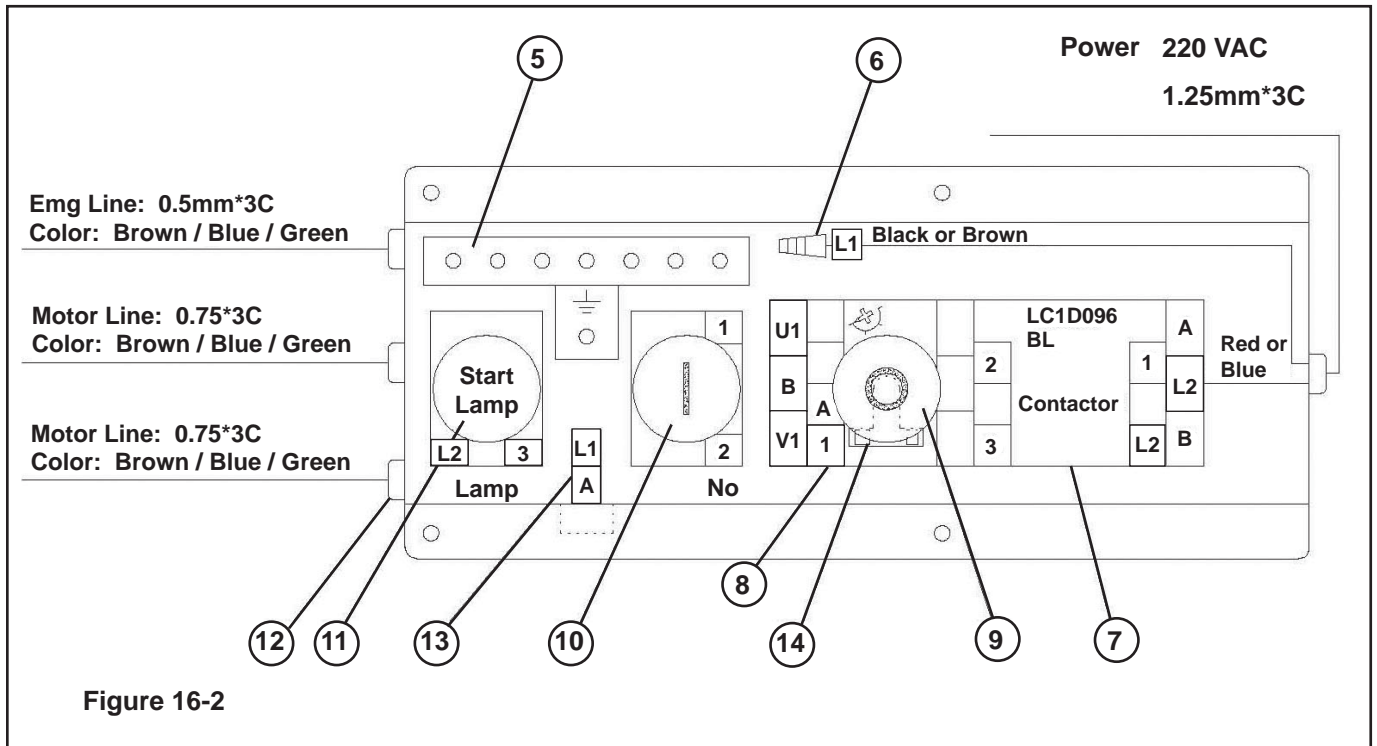
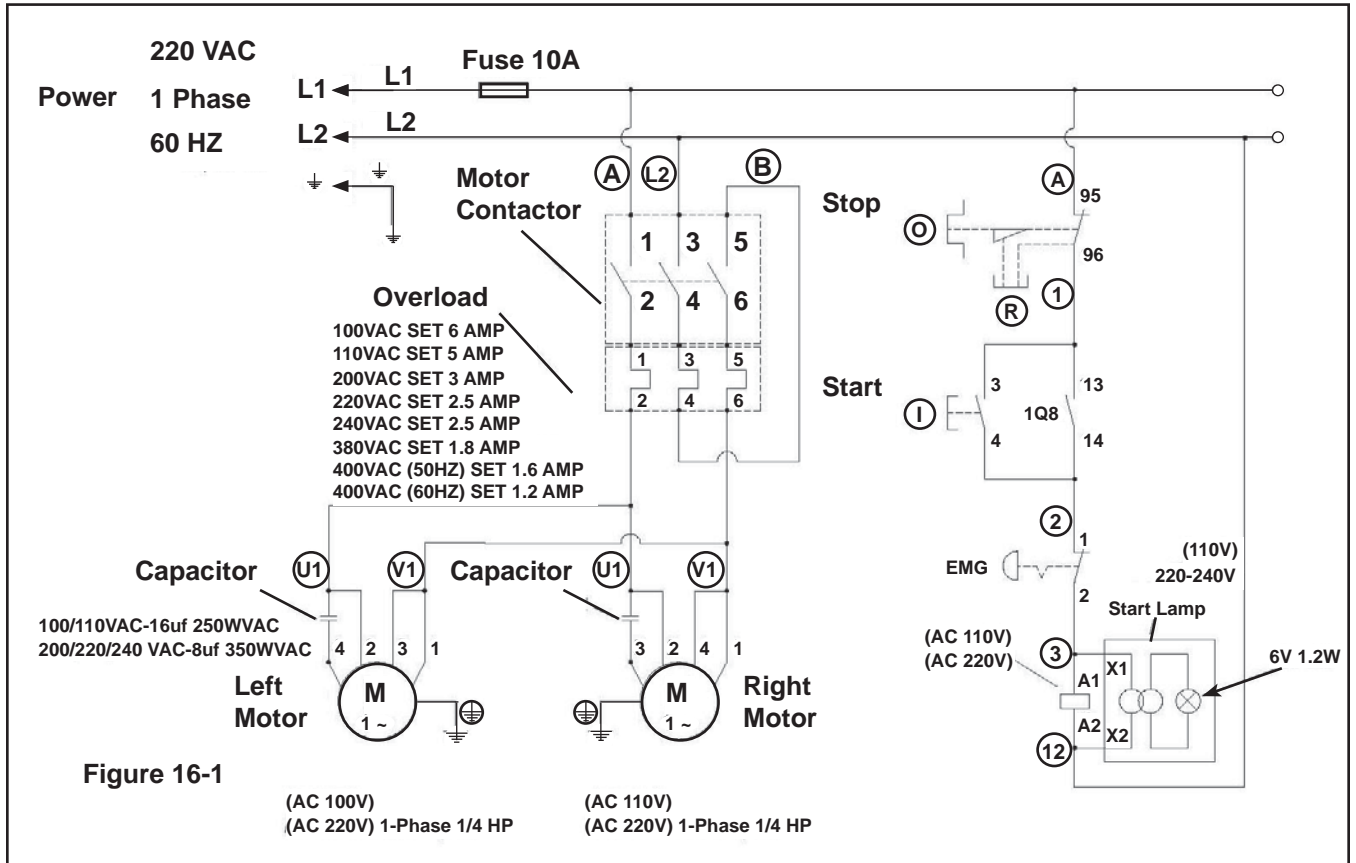
N/A

15.2 Emission of Hazardous Substances

Nothing to report

16. Technical Documentation and Information

16.1 Electric Diagram/Box:



16. Technical Documentation and Information

16.2 Electric Parts Location and Parts List (continued)

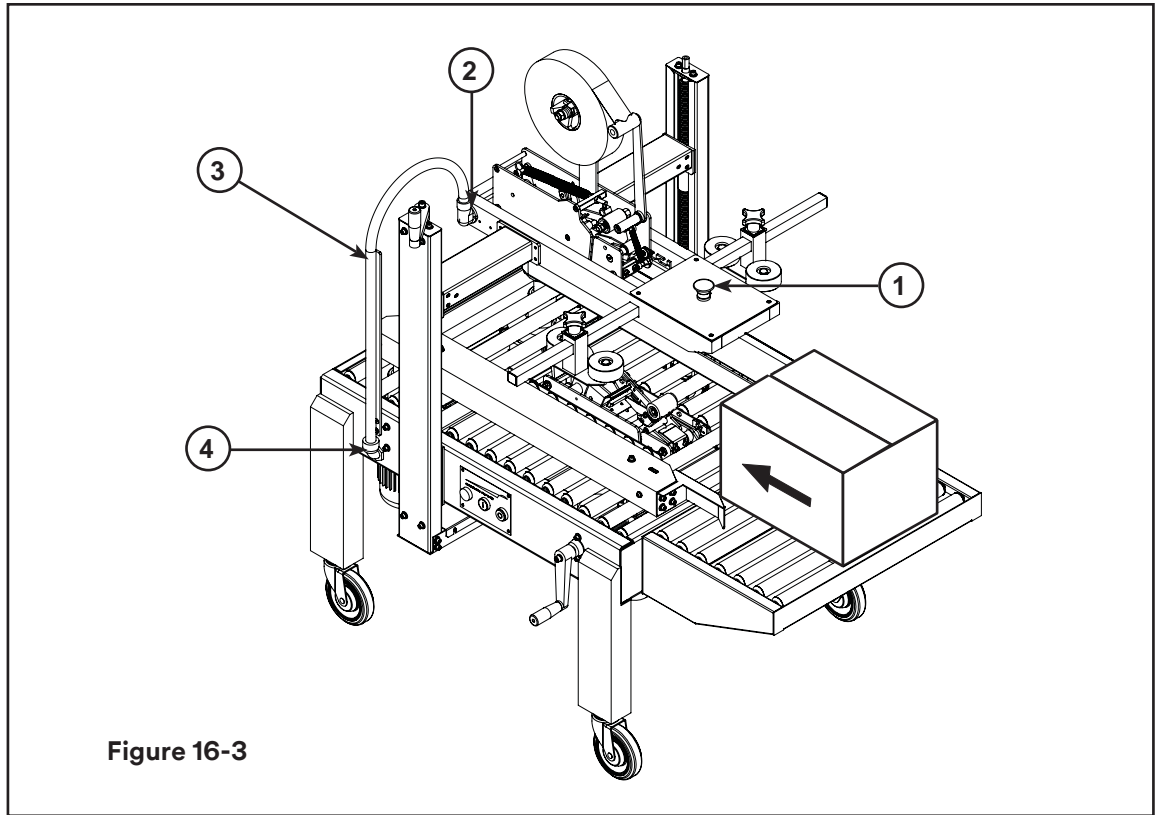


Figure 16-3

Electric Parts (Figures 16-2 and 16-3)

Ref. No.	Part No.	Description
1	7155BC20	Emergency. Switch
	7158BZ12	Button Seat Contactor NCx1
2	7066P001	1/2" Connector
3	7065C062	1/2" Protect Tube
4	7066C064-1	1/2" 90° Connector
5	70560601	Terminal Blocks TB6P
6	7032SW01	Connector
7	71570003-01	Breaker LC1-D09M7 220V
8	71570003-02	Overload Protector LR3-D086(2.5-4A)(220V)
9	7155AL01	Button
10	7155AA03	Button
	7158AZ01	Contact NOX1
11	7151AV01	Power Lamp 220V
	7150AV01	Blanking Plug
12	7025AG16	Fixed Seat
13	72561003	Fuse (if applicable)
	7250FH01	Fuse Seat (if applicable)
14	7155AL01-1	Enclosure

16. Technical Documentation and Information *(continued)*

16.2 Spare Parts Order

Replacement Parts Ordering Information and Service

Refer to the first page of this instruction manual "Replacement Parts and Service Information".

Order parts by quoting the following information:

(Refer to the Identification Plate on the Machine)

- Machine Model
- Serial Number
- Figure Number
- Position
- 3M Part Number (11 Digits)
- Description
- Quantity

Refer to Manual 2 for recommended taping head spare parts.

Important!

The machine is constantly revised and improved by our designers. The spare parts catalogue is also periodically updated. It is very important that all the orders of spare parts make reference to the serial number of the machine (located on the identification plate on the machine).

The manufacturer reserves the right to modify the machine at any time without notice.

Spare Parts – a88-I Adjustable Case Sealer

It is suggested that the following spare parts be ordered and kept on hand: *(continued)*

a88-I

Qty.	3M-Part Number	Description
2	CA302700	Belt, Drive
2	72561003	Fuse (if applicable)

Label Kit

In the event that any labels are damaged or destroyed, they must be replaced to ensure operator safety.

Tool Kit

A tool kit, part number 78-8060-8476-6, is supplied with the machine as a stock item. The kit contains the necessary open end and hex socket wrenches for use with the metric fasteners on the case sealer. The threading tool, part number 78-8076-4726-4 contained in above kit is also available as a replacement stock item.

Replacement Parts Ordering Information and Service

Refer to the first page of this instruction manual "Replacement Parts and Service Information".

16. Technical Documentation and Information *(continued)*

a88-I Adjustable Case Sealer, Type 11000 Frame Assemblies

To Order Parts:

1. Refer to first illustration, Frame Assemblies, for the Figure Number that identifies a specific portion of the machine.
2. Refer to the appropriate Figure or Figures to determine the parts required and the parts reference number.
3. The Parts List that follows each illustration, includes the Reference Number, Part Number and Part Description for the parts on that illustration.

Note – The complete description has been included for standard fasteners and some commercially available components. This has been done to allow obtaining these standard parts locally, if desired.

4. Order parts by Part Number, Part Description and Quantity required. Also include the model/machine name, machine type, and serial number that are located on the identification plate.
5. Refer to the first page of this instruction manual “**Replacement Parts and Service Information**” for replacement parts ordering information.

Important – Not all the parts listed are normally stocked items. Some parts or assemblies shown are available only on special order.

Contact 3M/Tape
Dispenser Parts to
confirm item
availability

Options and Accessories

For additional information on the options and accessories listed below - contact your 3M Representative.

Part Number	Option / Accessory
	T8 - 2 Inch Standard Taping Head - 50mm Tape Leg, Type 11100
	T8 - 2 Inch Optional Taping Head - 60mm Tape Leg, Type 11100
	Tool and Parts Kit

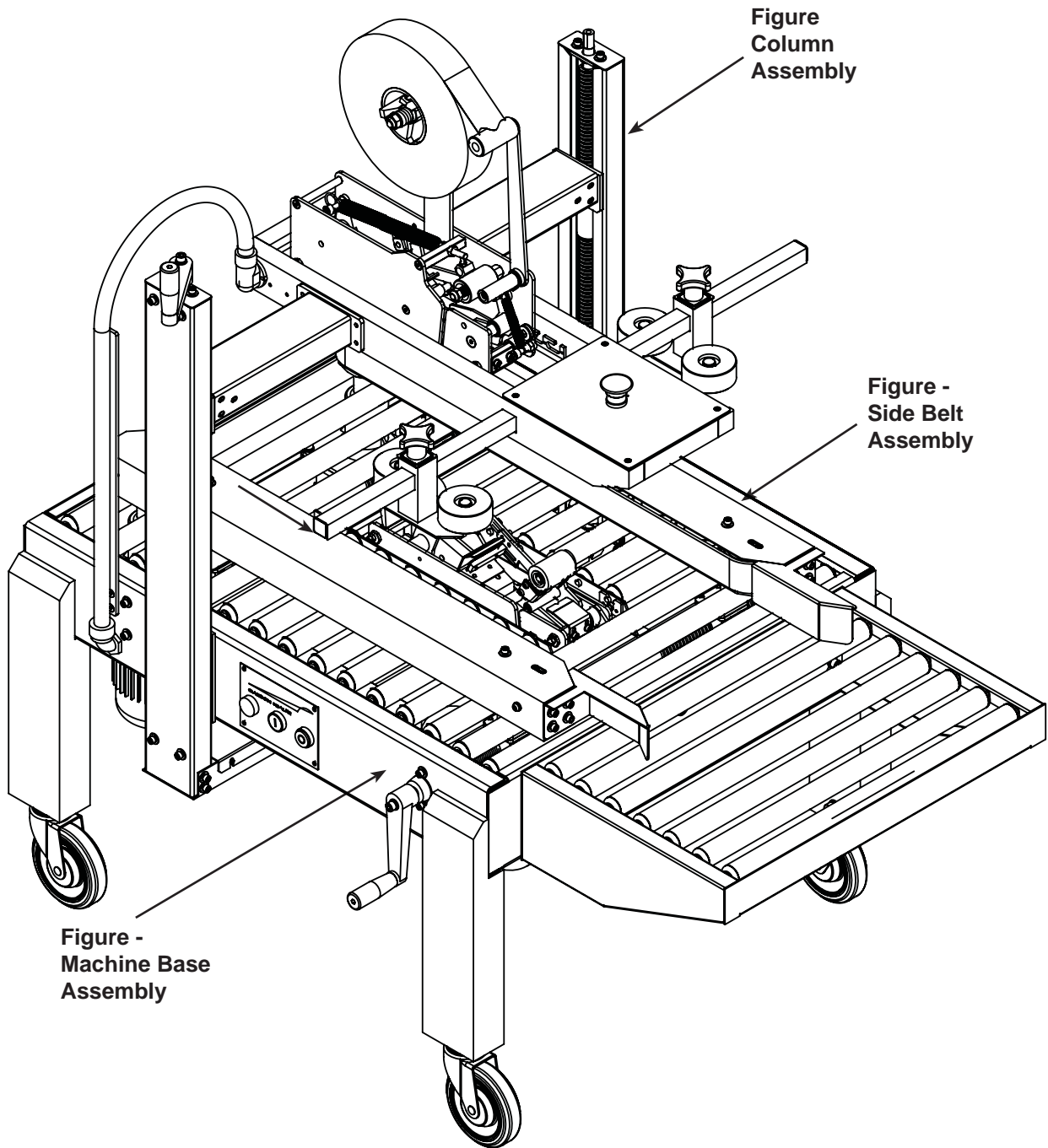


Figure
Column
Assembly

Figure -
Side Belt
Assembly

Figure -
Machine Base
Assembly

Frame
Assemblies

(Note - See Section 16 for Electrical Information)

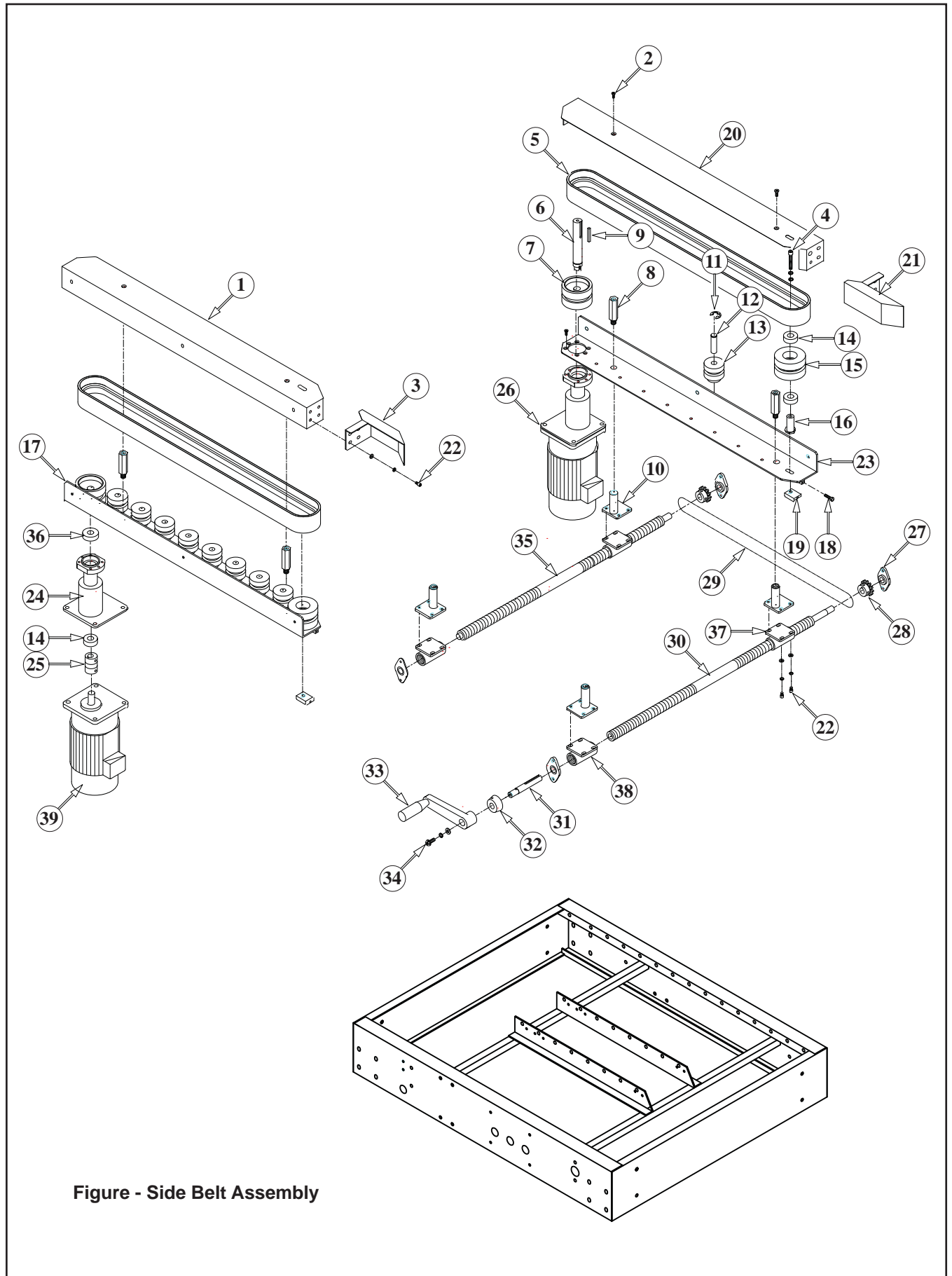


Figure - Side Belt Assembly

Figure - Side Belt Assembly

Ref. No.	Part No.	Description
SB-1	KA111138/L0	Side Belt Cover - Left
SB-2	10170610	Screw M6*10L & Spring Washer & Washer
SB-3	CA3010L0	Guide Plate
SB-4	10100870	Screw M8*70L & Washer
SB-5	CA302700	Belt
SB-6	CA30250A	Motor Shaft
SB-7	CA301900	Pulley Driver
SB-8	CA301700	Special Screw
SB-9	10920540	Key 5*5*40
SB-10	CA301600	Support Shaft
SB-11	11301200	Ring STW-12
SB-12	CA301400	Pulley Shaft
SB-13	CA301300	Plastic Pulley
SB-14	30300030	Bearing 6003ZZ
SB-15	CA301100	Pulley Follower
SB-16	CA301200	Pulley Shaft
SB-17	CA3005L0	Support Column
SB-18	10130545	Screw M5*45L
SB-19	CA301800	Adjustment Block
SB-20	KA111138/R0	Side Belt Cover - Right
SB-21	CA3010/R0	Guide Plate
SB-22	10100612	Screw M6*12L & Spring Washer & Washer
SB-23	CA3005/R0	Support Column
SB-24	CA302900	Motor Seat
SB-25	CA303000	Universal Joint
SB-26	745111R1	Motor 110V/60HZ,T18:1
	745122R	Motor 220V/60HZ,T18:1
	745122R2	Motor 220V/50HZ,T15:1
	745124R2	Motor 240V/50HZ,T15:1
	745138R	Motor 380V/50HZ,T15:1
	745140R1	Motor 400V/50HZ,T15:1
SB-27	CA302000	Shaft Seat
SB-28	CA302200	Chain Sprocket
SB-29	3240S355	Chain
SB-30	CA300700	Spindle Width Adjustment
SB-31	CA300900	Shaft
SB-32	CA303200	Handle Ring
SB-33	CA201800	Handle Crank Arm
SB-34	10250820	Screw M8*20L & Spring Washer & Washer
SB-35	CA300800	Spindle Width Adjustment
SB-36	30302031	Bearing 6203ZZ
SB-37	CA3015/R0	Spindle Support
SB-38	CA3015/L0	Spindle Support
SB-39	745111L1	Motor 110V/60HZ,T18:1
	745122L	Motor 220V/60HZ,T18:1
	745122L2	Motor 220V/50HZ,T15:1
	745124L2	Motor 240V/50HZ,T15:1
	745138L1	Motor 380V/50HZ,T15:1
	745140L1	Motor 400V/50HZ,T15:1

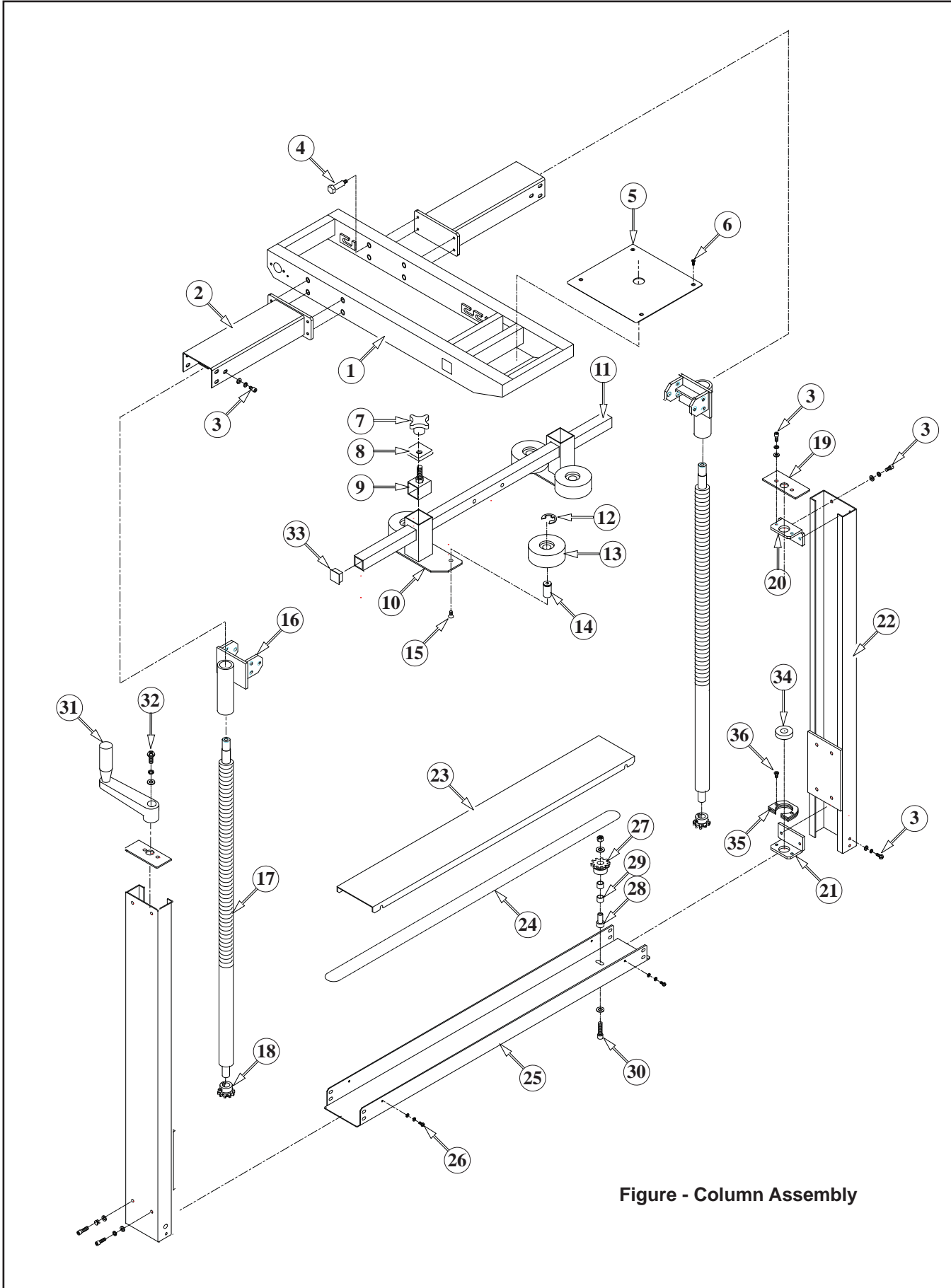


Figure - Column Assembly

Figure - Column Assembly

Ref. No.	Part No.	Description
CA-1	KA11130200	Taping Set Support
CA-2	CA10110A	Support Set
CA-3	10100612	Screw M6*12L & Spring Washer & Washer
CA-4	CA101500	Lining - Special
CA-5	CA10040A	Cover Plate
CA-6	10140406	Screw M4*6L
CA-7	CA101600	Handle Knob
CA-8	CA100900	Locking Bracket
CA-9	CA100800	Screw Knob
CA-10	CA100500	Compression Roller Seat
CA-11	CA101000	Support Bar
CA-12	11301700	Ring STW-17
CA-13	CA100600	Compression Roller
CA-14	CA100700	Compression Roller Shaft
CA-15	10140610	Screw M6*10L
CA-16	CA200900	Spindle Support
CA-17	CA200700	Height Adjustment Spindle
CA-18	CA200800	Chain Wheel
CA-19	CA20040A	Cover Plate
CA-20	CA200200	Set Plate
CA-21	CA200300	Set Plate
CA-22	CA20010A	Column
CA-23	CA201800	Chain Plate
CA-24	3240S356	Chain
CA-25	CA201800	Chain Cover
CA-26	10190410	Screw M4*10L & Spring Washer & Washer
CA-27	CA201800	Chain Wheel
CA-28	CA201700	Chain Wheel Shaft
CA-29	CT212100	Bush Ø10 x Ø12 x 10L
CA-30	10100635	Screw M6*35L & Spring Washer & Nut
CA-31	CA201800	Handle Crank Arm
CA-32	10250820	Screw M8*20L & S.W & Washer
CA-33	91350001	Rubber Plug
CA-34	30302020	Bearing 6202ZZ
CA-35	CA304500	Bearing Seat
CA-36	10140616	Screw M6*16L

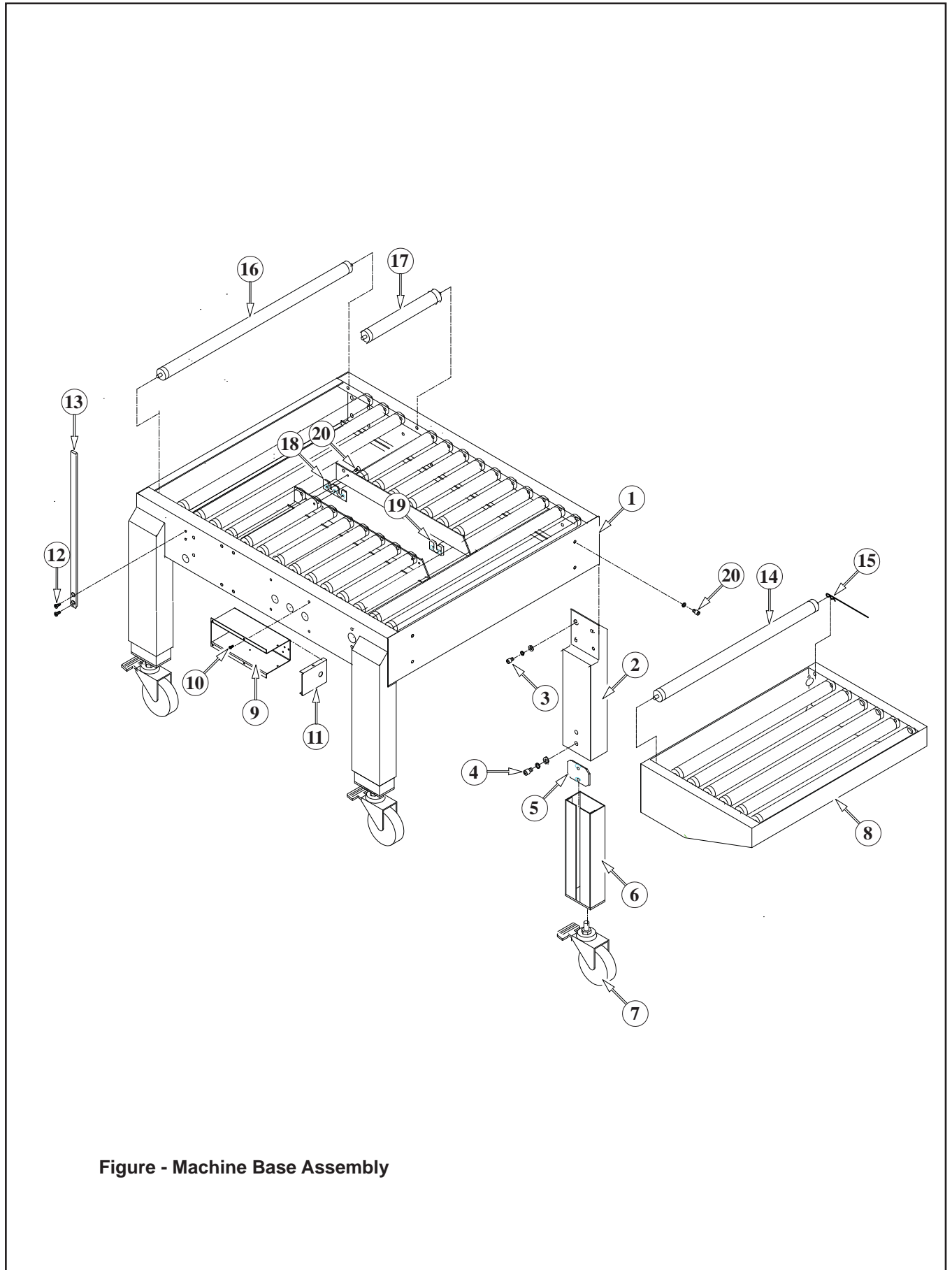


Figure - Machine Base Assembly

Figure - Machine Base Assembly

Ref. No.	Part No.	Description
MB-1	KA11130300	Machine Frame
MB-2	CA300200	Machine Leg
MB-3	10100816	Screw M8*16L & Spring Washer & Washer
MB-4	10101016	Screw M10*16L & Spring Washer & Washer
MB-5	CA30040A	Clamp - Plate
MB-6	CA30030A	Adjustable Leg
MB-7	9201L501	Caster
MB-8	CA400100	Roller Seat
MB-9	CA30280A	Electrical Box
MB-10	10170510	Screw M5*10L
MB-11	CA304300	Electrical L Cover
MB-12	10140612	Screw M6*12L
MB-13	CA101400	Fixed Seat
MB-14	CA400200	Roller
MB-15	10750001	Pin
MB-16	CA302400	Roller (Long)
MB-17	CA302300	Roller (Short)
MB-18	CA33070A	B-Plate
MB-19	CA33060A	A-Plate
MB-20	10100812	Screw M8*12L & Spring Washer & Washer

