unisource®

# Automatic Case Erector

## Installation, Operation & Service Manual

P/N 100003.UCE100RH

Revision: A, May 20, 2011

# Introduction

# 3

## 3.1 Introduction

This manual provides installation, operation and service information for the Unisource Automatic Case Erector. This manual also includes an illustrated parts list for the machine.

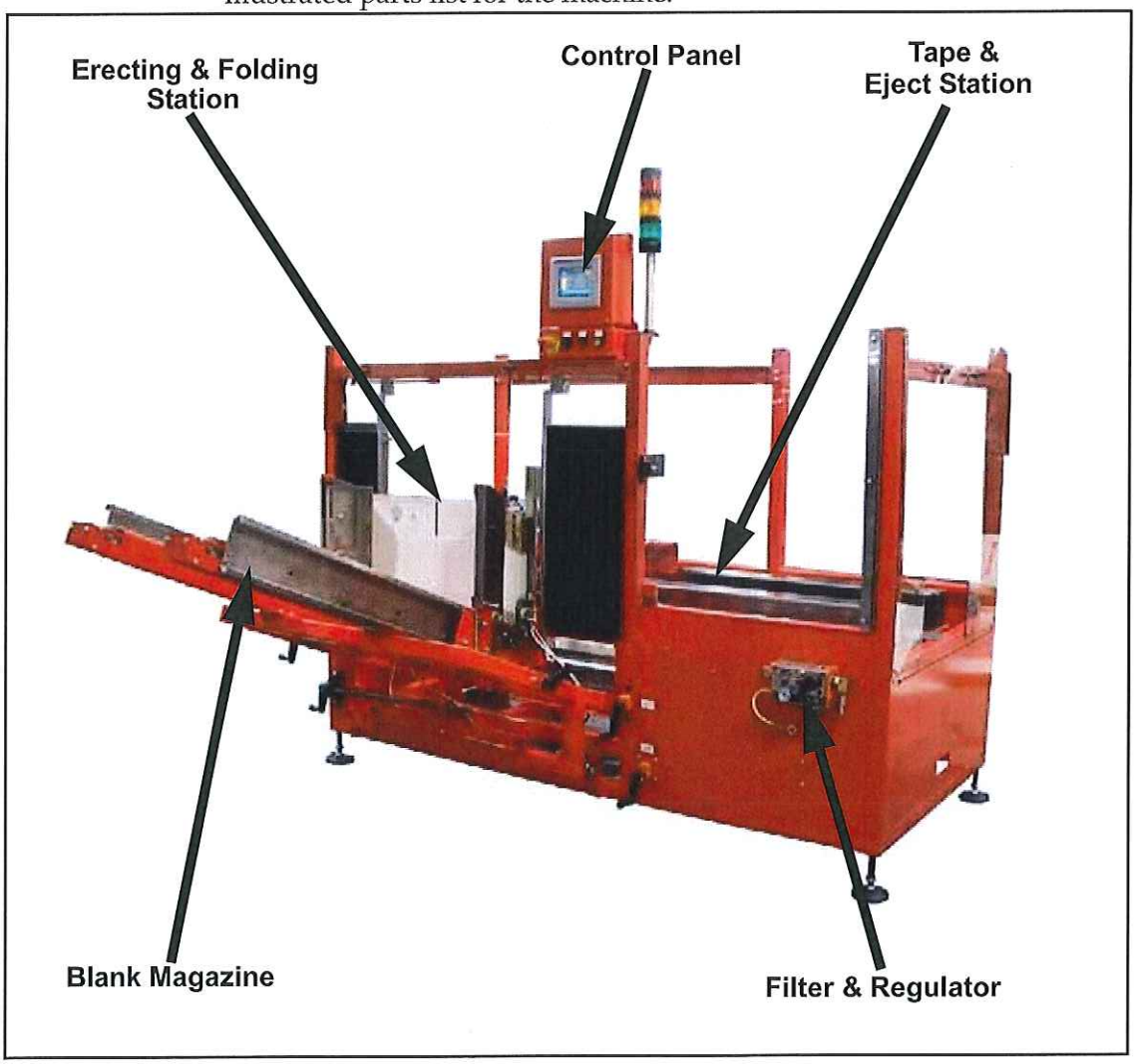



*Figure 3-1. Unisource Automatic Case Erector*

# 3.2 Machine Features

The MCE-3400 Series is an automatic high speed case erector and bottom flap taper for assembling corrugated cases. This system automatically selects, erects, and tapes the bottom flaps of RSC and HSC cases at speeds up to 10 cases per minute. The machine also has the following features:

## 3.2.1 Standard Features

- Heavy-duty rugged construction designed for high durability and around-the-clock operation
- Laser cut and CNC machined components for maximum precision
- Easy load blank hopper
- Quick size changeover
- Electrical control panel with Allen-Bradley® PLC and operator interface
- Clear Lexan guard doors with interlocking safety system for operator protection and easy access
- Emergency stop on the control panel

## 3.2.2 Optional Features

- Stainless steel construction
- Machines can be customized to handle case sizes outside standard specifications
- Additional e-stops can be added upon request
- Stack light provides visual indication of machine operating status
- Casters for machine portability
- Spare parts kit
- Preventive maintenance contracts

# 3.3 Dimensions

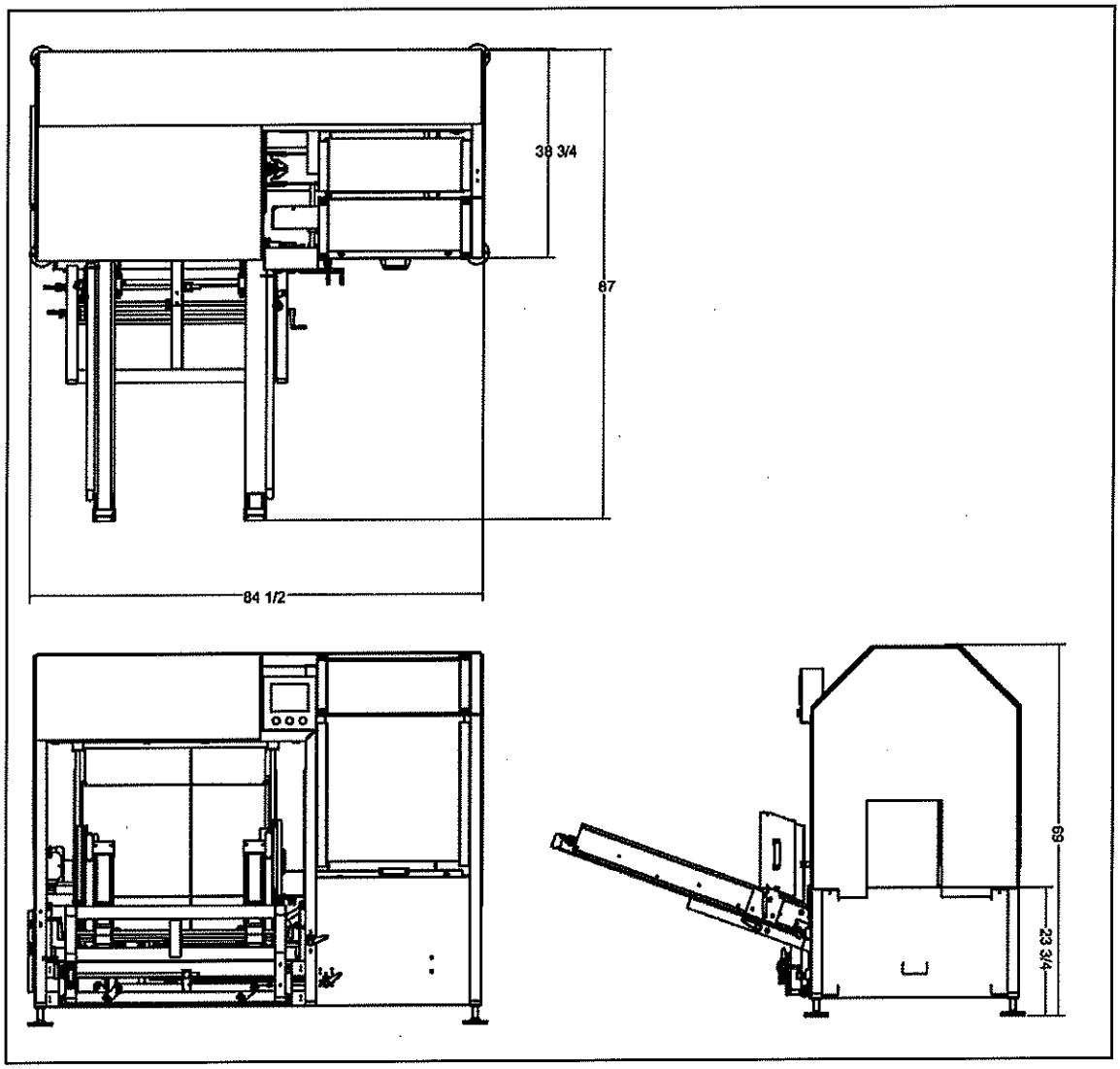



*Figure 3-2. Dimensions*

# 3.4 Specifications

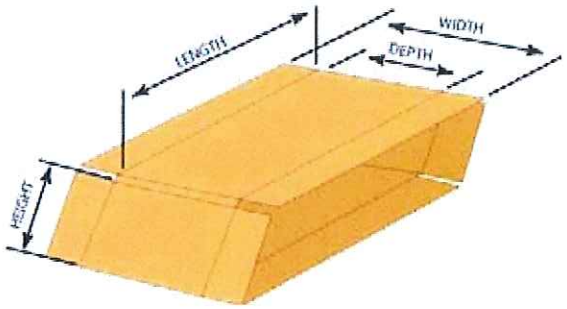
| Specifications | |
|---|---|
| Voltage | 230 VAC (Other voltages available upon request) |
| Current | 8 Amps |
| Frequency | 60 Hz, Three Phase |
| Pneumatic Requirements | 80 PSI, 16 SCFM |
| Speed | Up to 10 Cycles Per Minute |
| Tray Sizes*<br><br>- Depth 3-7/8" - 20-3/4"<br>- Length 7-7/8" - 19-3/4"<br>- Width 5-7/8" - 13-3/4"<br><br>*Other sizes available on request. Not all values can be combined. Contact factory with blank samples for evaluation and quotation. |  |
| Ambient Operating Temperature | 32° F-131°F |
| Storage Temperature | -13° F-158°F |
| Relative Humidity Limits | Transit/Storage<br>10% to 100%<br>Operating<br>10%-80% Non-Condensing |

*Table 3-1: Specifications*

# 3.5 Abbreviations

| | |
|---|---|
| % | Percent |
| ° C | Degree Celsius |
| cm | Centimeter |
| ° F | Degree Fahrenheit |
| M | Meter |
| max. | Maximum |
| min. | Minimum |
| mm | Millimeter |
| SCFM | Standard Cubic Feet Per Minute |

## 3.6 Sequence of Operation

This section gives a brief overview of the machine's subassemblies.

1 The blanks are fed into the machine on two conveyor belts as shown below.

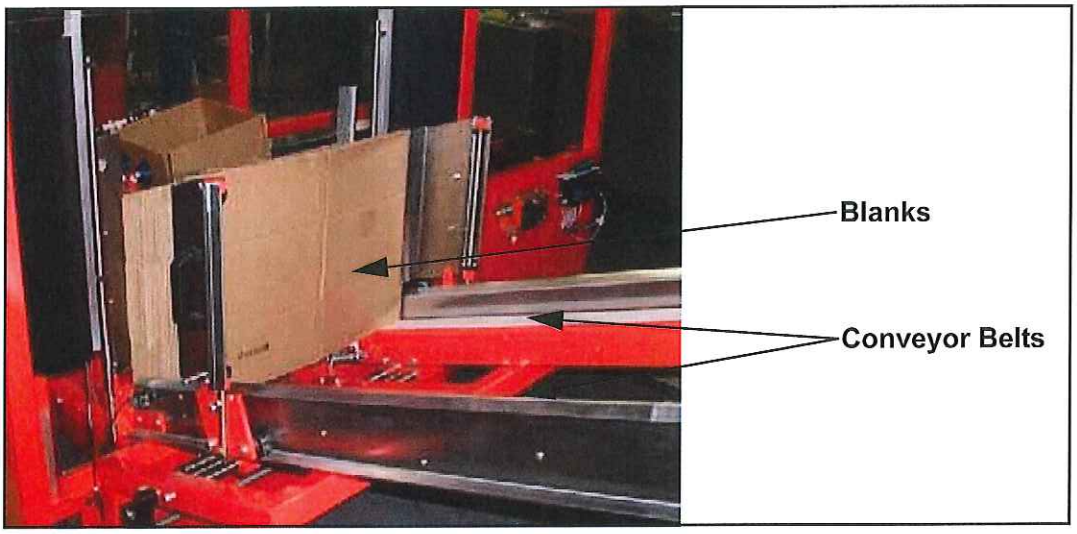



*Figure 3-3. Blank Magazine*

2 The erector arm suction cups engage the first blank and begin to pull back on the blank.

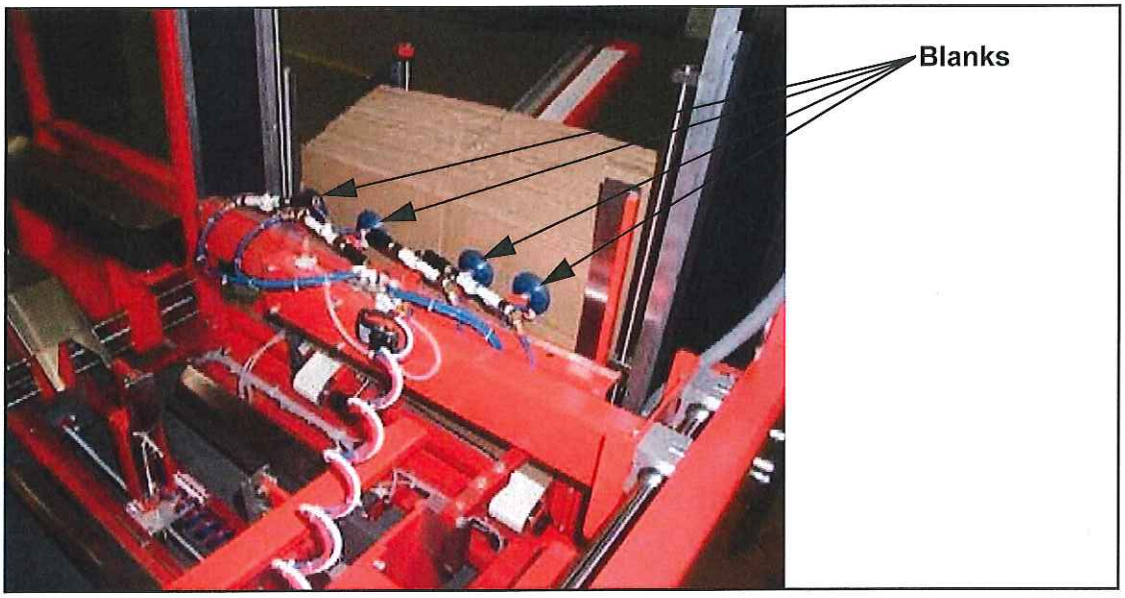



*Figure 3-4. Erector Engagement*

3 As the blank is pulled back, it is released from the magazine by the magazine gates.

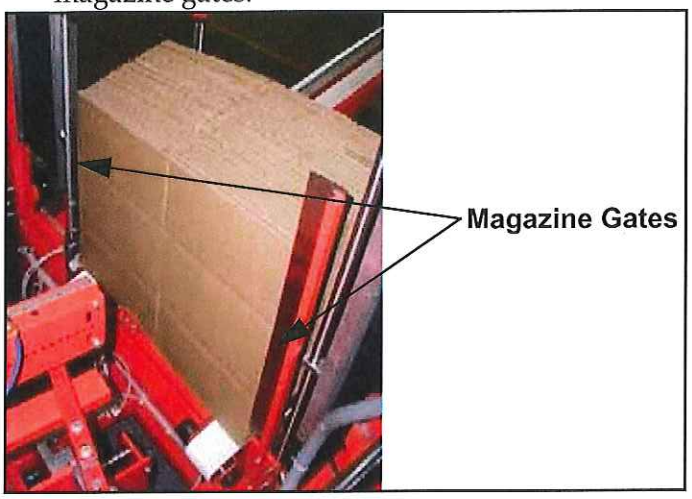



*Figure 3-5. Magazine Release Gates*

4 The blank is then indexed back 90° to form the outline of the box.

*Figure 3-6. Box Erection*

5 The flapper and tucker assemblies then engage under the box and close the bottom flaps of the box.

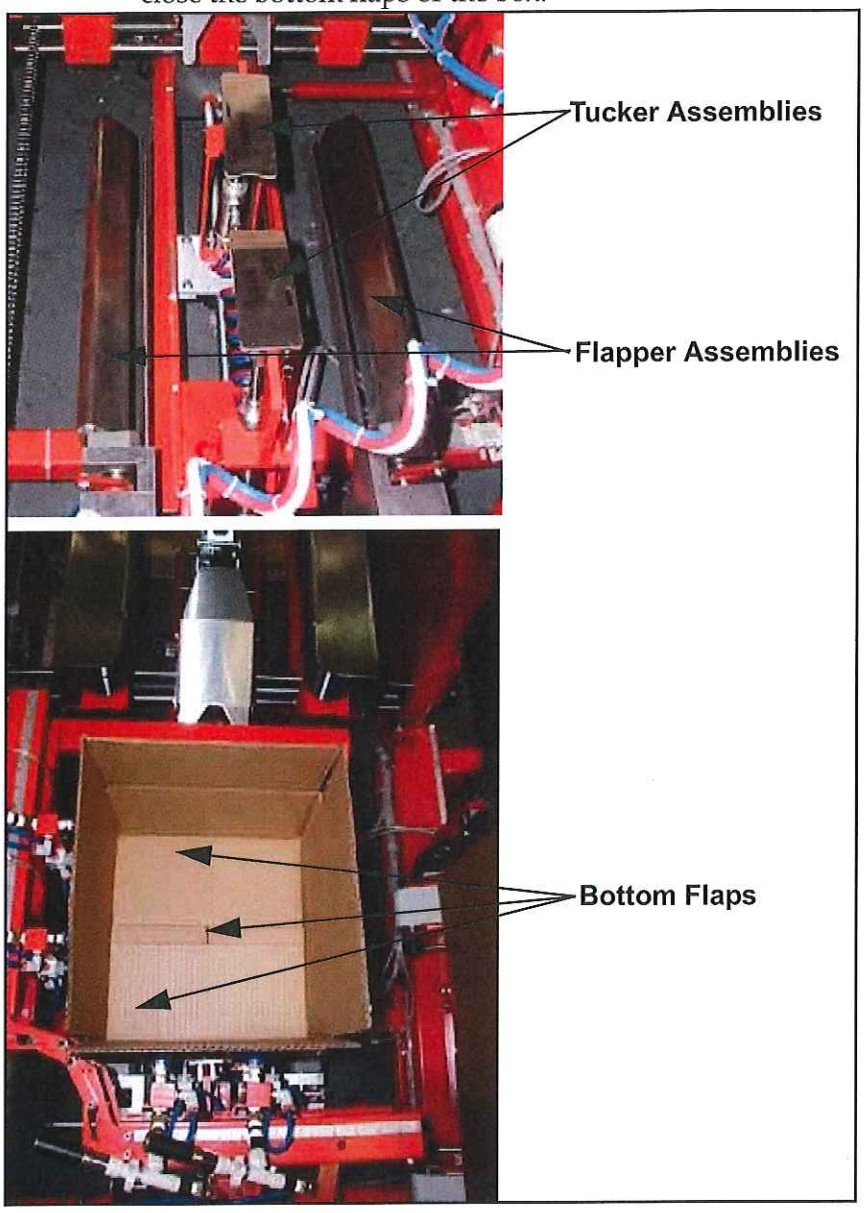



*Figure 3-7. Bottom Flapper and Tucker Assemblies*

6 The suction cups then disengage from the formed box and the ejector bar pushes the box onto the exit conveyor.

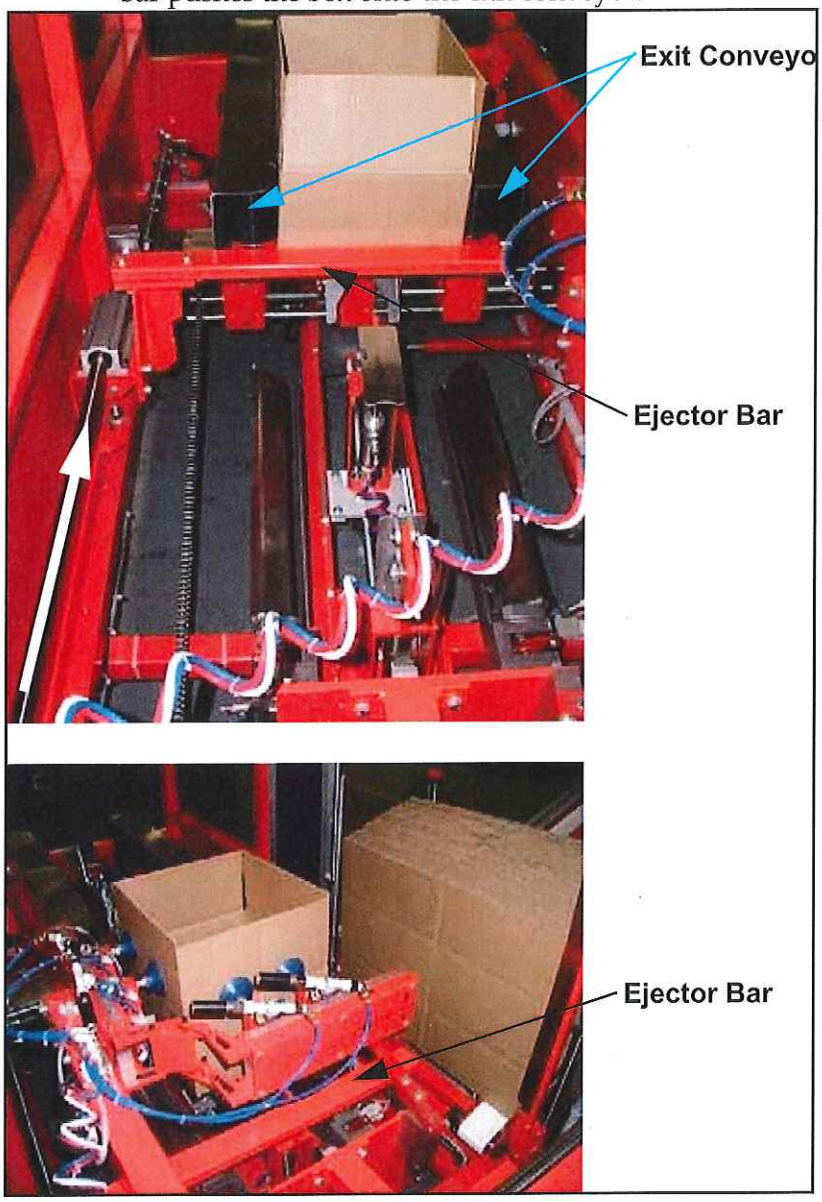



*Figure 3-8. Ejector Bar*

7 The exit conveyor then carries the box over the tape station where the flaps are taped together and the tape is automatically cut.

8 The exit conveyor then carries the finished box out of the machine.

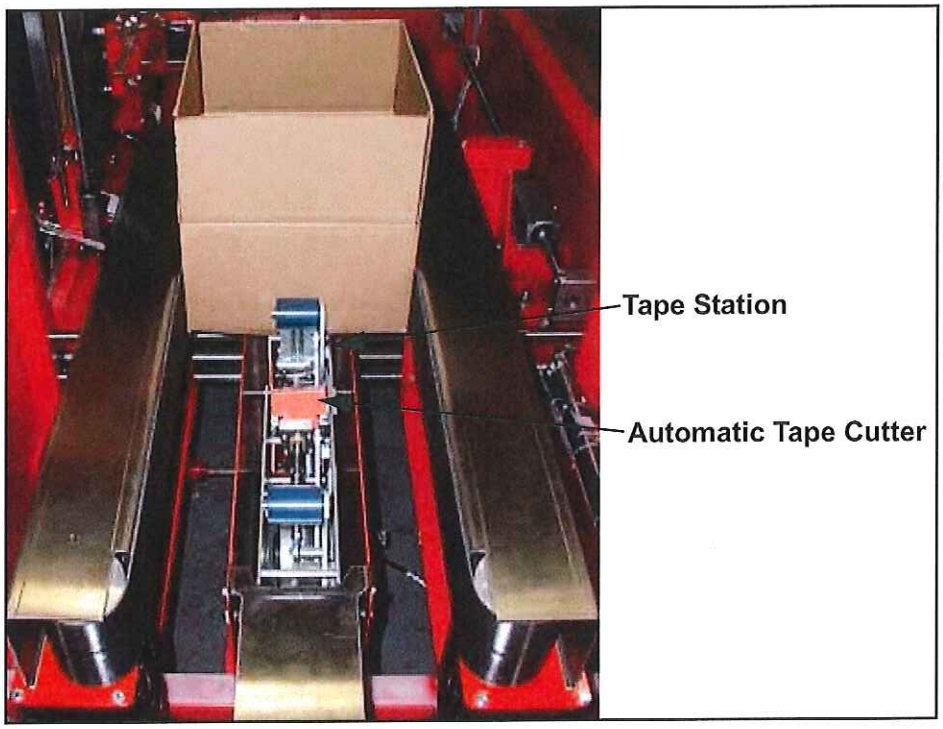



*Figure 3-9. Tape Station and Exit Conveyor*