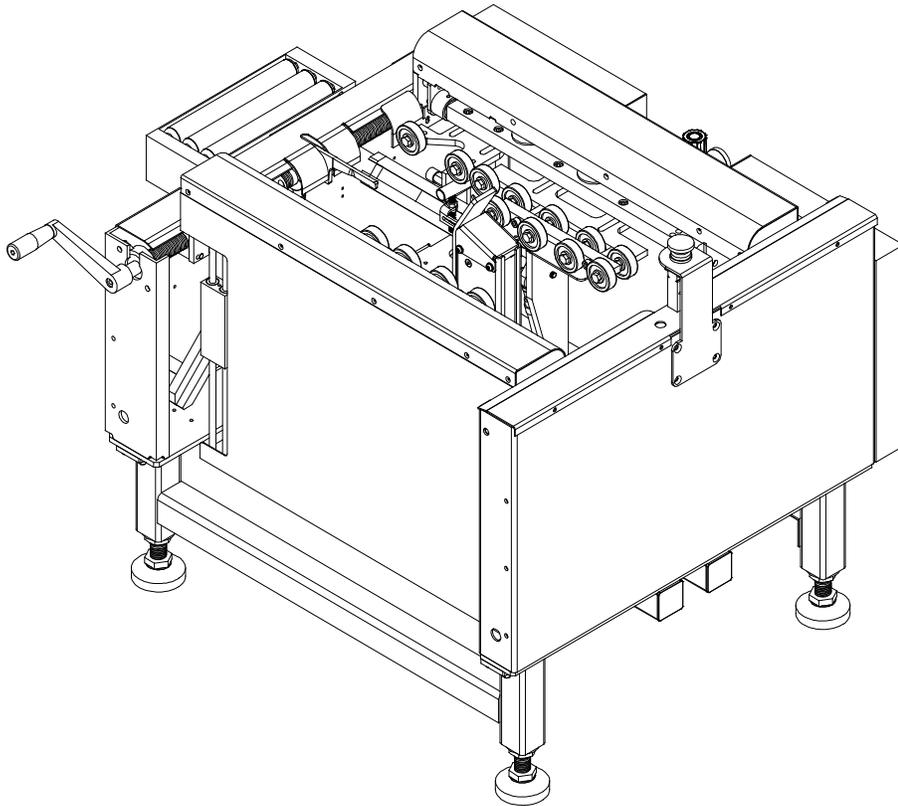


EX-CF

**Industrial
Semi-Automatic Case Former**

User Guide



EASTLEY®

EX-CF

Industrial Semi-Automatic Case Former

User Guide

Revised 01/13/2022

P/N EXCF1000 Rev. C1

Copyright and Trademarks

Copyright ©2012-2022 Engage Technologies Corporation
All rights reserved. All trademarks and brand names
are the property of their respective owners.

Eastey
7041 Boone Ave. N.
Brooklyn Park, MN 55428

Phone: (763) 428-4846; Fax (763) 795-8867; 1-800-835-9344

www.eastey.com

Contents

- Safety 7**
- Introduction 9**
 - Semi-Automatic Case Former Overview 9
 - Specifications 10
- Installation 11**
 - Location Requirements 11
- Adjustments 13**
 - Case Width..... 13
 - Case Length..... 14
 - Major Flap Folder Plates 14
- Operation 15**
 - Starting the EX-CF Case Former 15
 - Erecting a Case..... 15
 - EX-CF Operating Cycle..... 16
- Troubleshooting 18**
- Parts List..... 19**
 - Pneumatic Parts..... 19
 - Frame, Front Assembly 21
 - Slide Spindle Unit..... 23
 - RH Fold Assembly 25
 - LH Fold Assembly 26
 - Frame, Left Side Assembly 27
 - Frame, Right Side Assembly..... 29
- Appendix A: Air Diagram 31**
 - Pneumatic Schematic 31
- Warranty Statement 33**
- Customer Support..... 35**

Safety

Safety Precautions

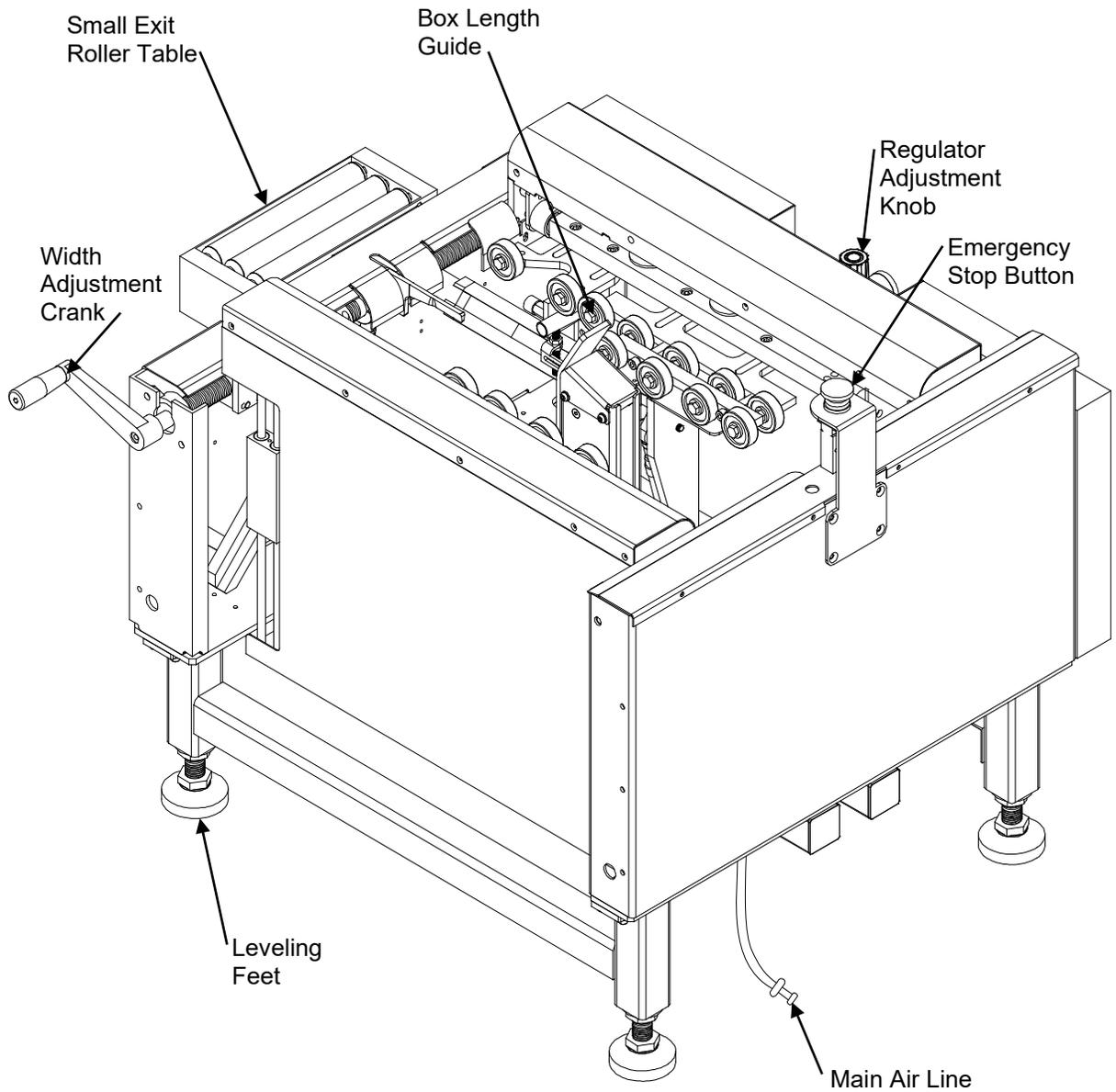
Before installing, operating or servicing this equipment, please read the following precautions carefully:

- This machine is equipped with moving parts. Do not place hands near the rear of this unit when the flap folders are moving as fingers may be pinched where belts enter the frame.
- Do not by-pass any factory-designed safety features such as, interlocks and/or switches, etc.
- Never provide service or clear a box jam when machine is running. Activate the red emergency stop button by pressing it down then shut off and disconnect the air supply and make sure the machine is secure before attempting to clear a jam or perform any adjustment or maintenance.
- Do not place hands or body inside the confines of the machine.
- Do not wear loose clothing such as ties, scarves, jewelry etc. Long hair should be pulled back and/or covered while operating this machine.

Introduction

Semi-Automatic Case Former Overview

The Easteley Semi-Automatic Case Former is very easy to set up and operate. The EX-CF uses air pressure for operation. There are no electrical components on the EX-CF Case Former.

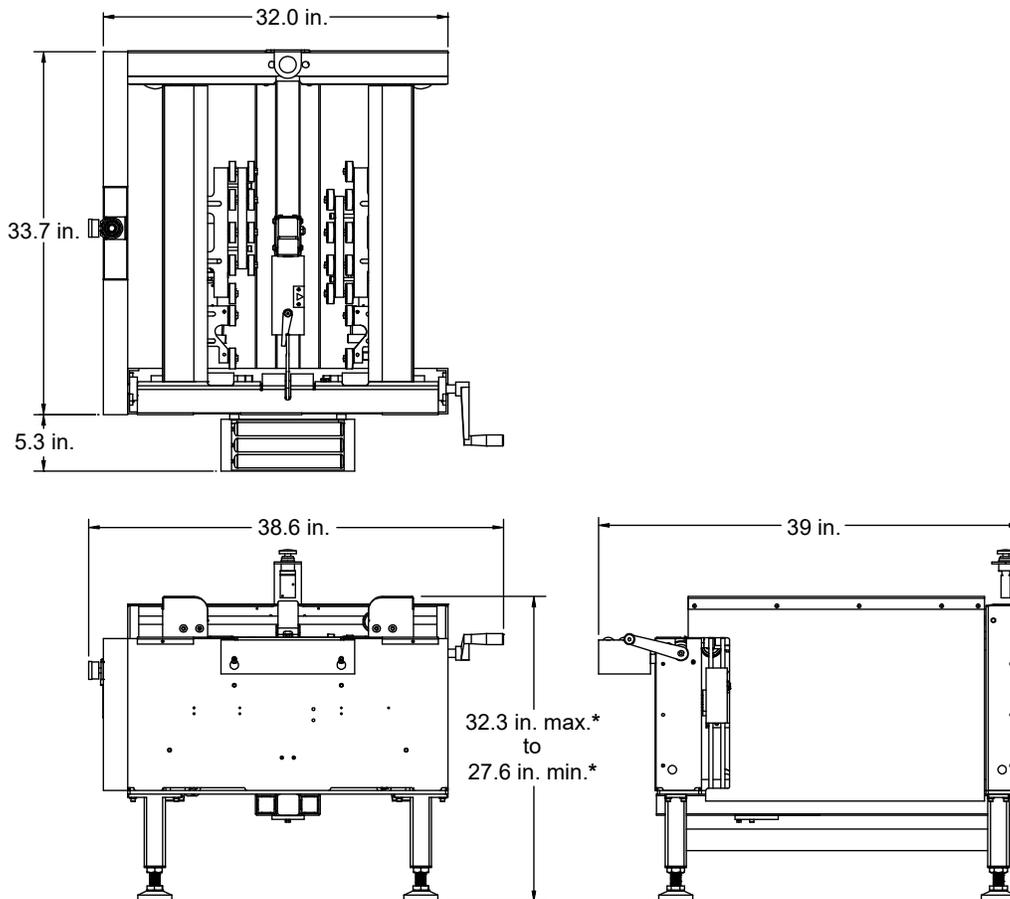


Specifications

Model	EX-CF Semi-Automatic Case Former
Case Size Capacity	(L) 7.9in – 25.6in (200mm - 650mm) (W) 5.5in – 19.6in (140mm - 500mm) (H) 3.0in Unlimited (75mm – unlimited)
Air Requirements	30 L/min (6kg/cm ² , 80psi)
Machine Dimensions	(L) 41.6in (1056mm) (W) 37.4in (950mm) (H) 32.3in (820mm)
Machine Net Weight	285lbs (129kg)

Dimensions

All dimensions are shown in inches.



***Note:** Height dimension values are shown with leveling legs. Optional casters add 3.5 inches to maximum and minimum height.

Installation

Location Requirements

When installing the EX-CF Case Former please be aware of the following considerations:

1. The mounting surface is flat and level.
2. Adjoining equipment height.
3. Alignment with packaging line.
4. Adequate clean air supply nearby at required CFM and PSI pressure. Supply must be clean factory air and will be lubricated by the FRL (Filter Regulator Lubricator) unit on the machine.

When the EX-CF Case Former is positioned in the operating location you will need access to:

1. The emergency stop switch.
2. Height and width adjustments.

The machine should be placed on a flat, level floor so that it does not rock or move. We recommend that the machine be securely locked in place when used.

Carefully unpack the outer container. Avoid damaging the machine body.

Remove the shipping bolts that secure the EX-CF Case Former to the shipping pallet.

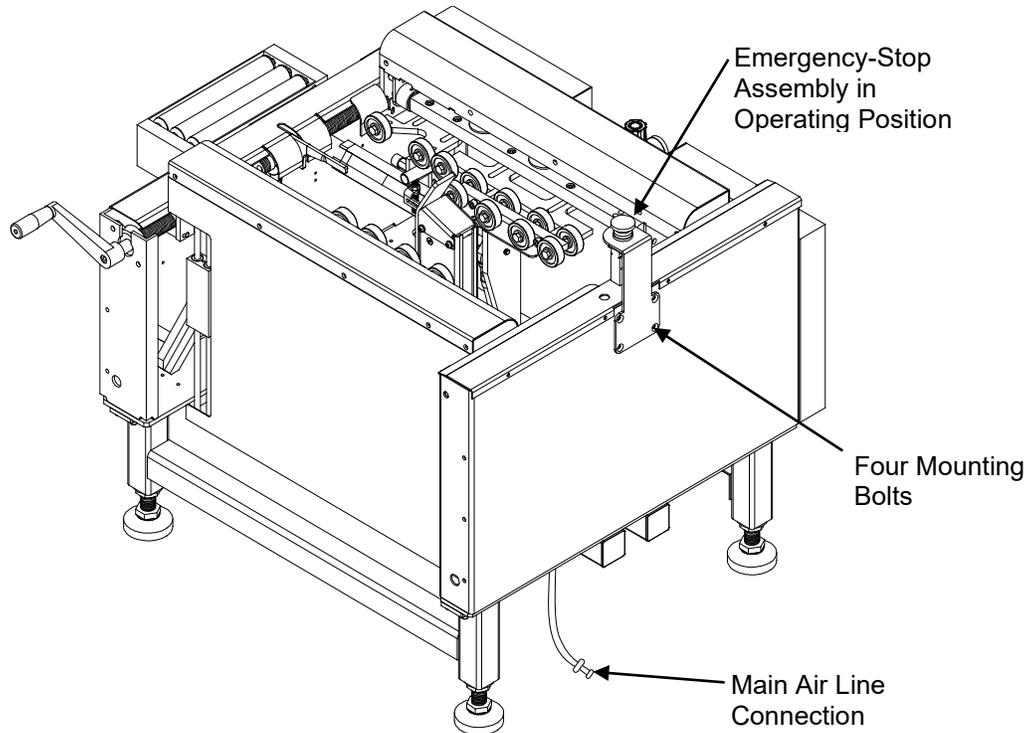
Lift the Case Former off the pallet.

Attention! The EX-CF Case Former is a very heavy piece of equipment and will require a forklift or several people to move safely off the shipping pallet.

To avoid damage the EX-CF is shipped with the Emergency Stop button bolted to the inside of the frame.

Attention! Do not connect the main air-supply to the case former while installing and connecting the E-Stop assembly.

Remove the E-Stop button assembly from the shipping position and install it in the operating position on the outside of the frame.



After the E-Stop button has been mounted in the operating position, making sure the red emergency e-stop button is pressed down (off), connect the two air-lines to the E-Stop assembly.

Air pressure should be set to 80 PSI (6 kg/cm²) for most applications, with a minimum setting of 65 PSI (4.5 kg/cm²) and a maximum of 100 PSI (7 kg/cm²).

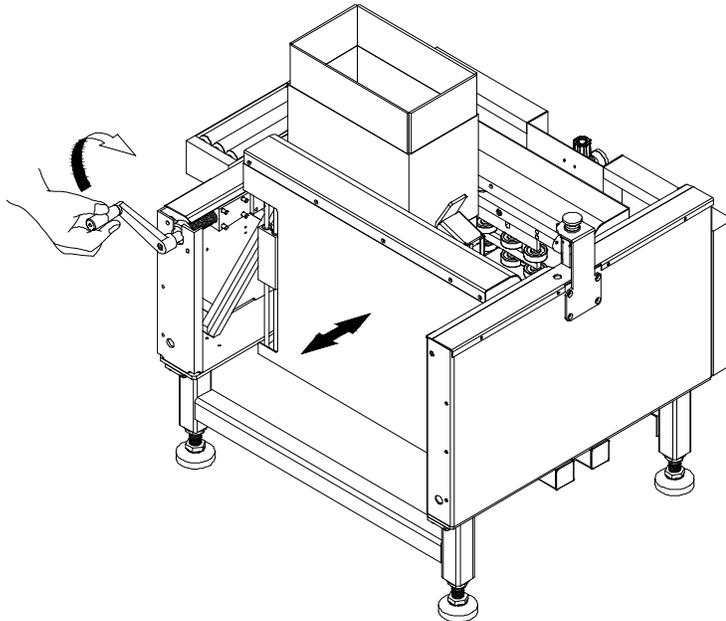
Adjustments

There are two major adjustments when setting up the EX-CF Case Former, width adjustment and a length adjustment. There is also an adjustment for the major (long) flap folding plates. After the initial set up the major flap folder plates need only be readjusted if there is a large change in box size.

Caution! Disconnect the main air supply before making any adjustments or changes. Ensure that the emergency stop button is pushed down in the off position.

Case Width

Attach the supplied hand crank to the square shaft on either side of the machine.

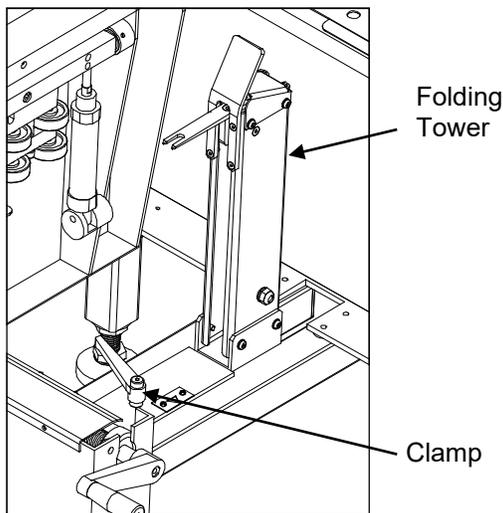


Adjust the width to be wider than the case.

Open a case from a blank flat and insert it into the machine.

Crank in the width adjustment until the red case hold-down rollers are lightly gripping the sides of the case. It should be easy to insert and remove a case but the case should still be maintaining contact with the body switch roller until the case leaves the machine.

Case Length



Remove the case and loosen the clamp that is located at the base of and in front of the minor (short) flap folding tower.

Reinsert the case into the machine and position it $\frac{1}{2}$ " back from the minor flap folder at the exit end of the machine.

Push the tower forward until it just contacts the back of the case.

Remove the case and tighten the "tower" clamp.

Major Flap Folder Plates

The major flap folding plates and wheels may need to be extended to provide additional support for wide heavy cases or retracted for narrow ones.

Note: Sliding the plates in towards the machine center increases the case bottom support but limits the minimum width adjustment when the major flap folder wheels contact the minor folder tower. Also, extended folder plates in the down position will wedge against the bottom control valve/flap opener bracket as the machine is adjusted for minimum width. If forced, either of these conditions can damage machine components.

There are two major folder plates on each side of the machine, one small and one large that are adjusted independently.

Loosen the four socket-head cap screws on each side that hold the major folder roller plates in place. Slide the front [large] folder to the desired position and retighten the screws.

Adjust the rear [small] major folder plate. Make sure that the plate will not contact the "floor" switch valve arm as it moves through its arc. For wide cases, the small folder plate will not be able to be extended as far as the large plate and has a separate adjustment for this reason.

Operation

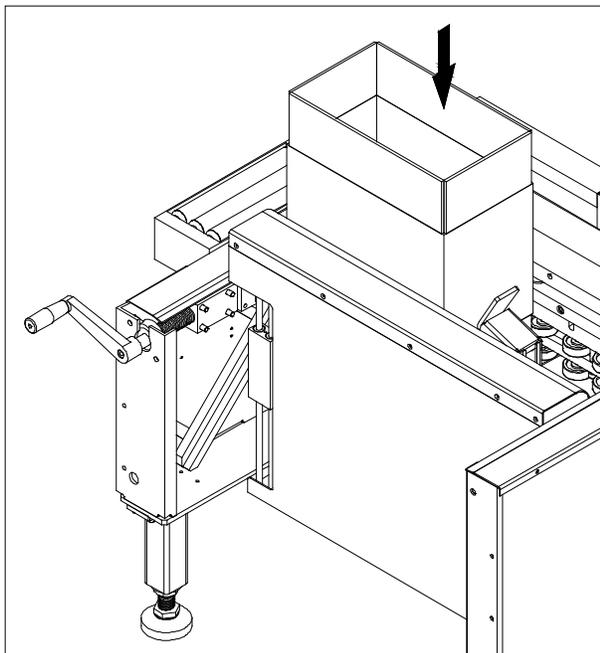
Starting the EX-CF Case Former

Before starting, hand swing all moving part to check adjustment and for any mechanical interference.

Caution: Make sure the main air supply valve is shut off and the red Emergency Stop button is pushed down before connecting the main air supply to the machine.

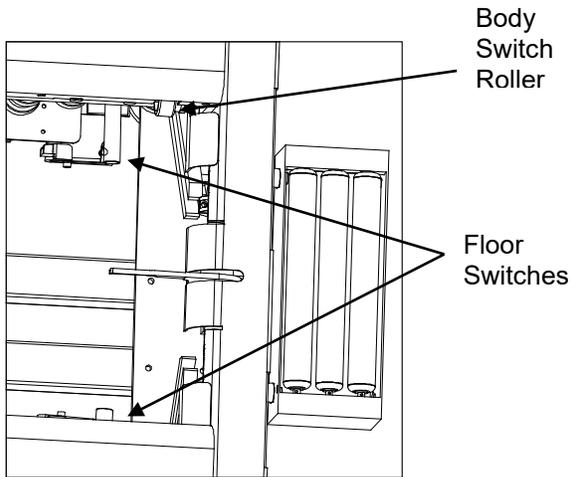
Connect the air supply line to the EX-CF case former and turn on the main supply valve keeping hands clear of all moving parts.

Erecting a Case

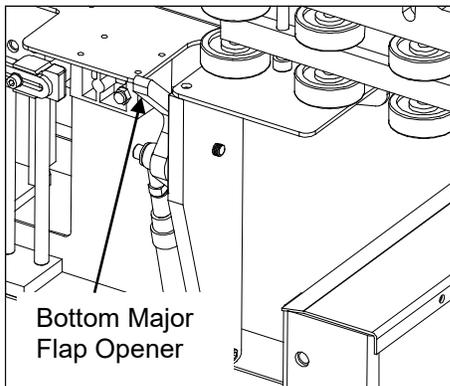


1. Open a case so that it is fairly square.
2. Place the open bottom into the EX-CF, pushing the case all the way down to depress the floor switches.
3. The machine will first fold the front and rear end minor flaps, then the two side major flaps. The case is held in place and is ready to fill if desired.
4. When filled, or if the case is just erected for filling downstream, push it out of the packing station to the next operation.
5. As the end of the case breaks contact with the “switch roller”, the EX-CF will automatically reset ready for the next case.

EX-CF Operating Cycle

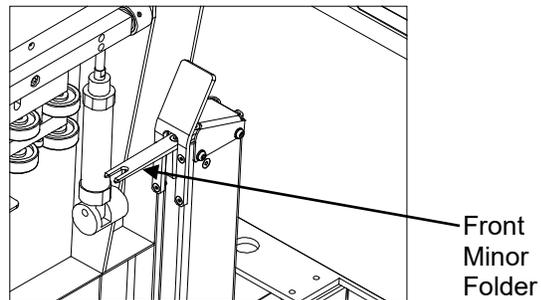
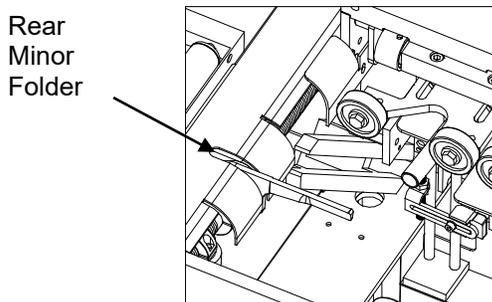


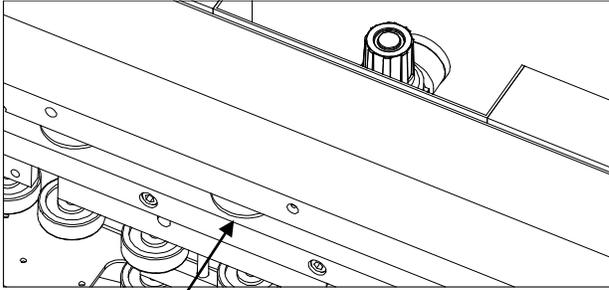
1. The bottom edges of the major flaps depress the actuators of the two "floor" switch valves and the side of the case depresses the wheeled body switch valve. All three switches must be actuated for the machine cycle to start.



2. The two small levers of the major (side) flap opener momentarily open the bottom major flaps wider to clear the minor (end) flaps.

3. The minor flap folds up both end flaps on the box bottom. The rear [case exit end] folder retracts immediately, the front [tower] folder remains extended until the case exits the machine to help support the end of the case.





Major Folder (Right Hand Shown)

4. The major flap folders then fold up both side flaps of the bottom and stay in position to support the box for packing.

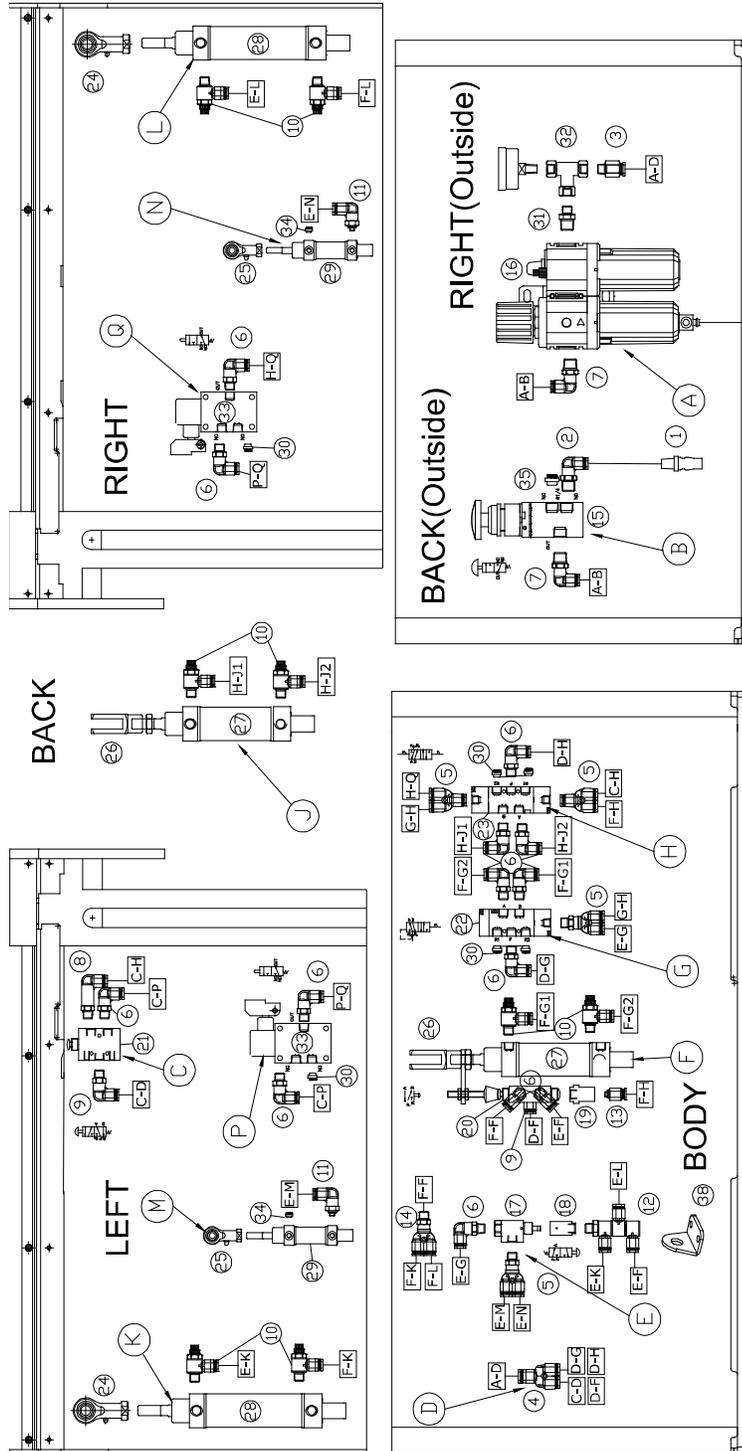
5. Pushing the box out of the machine breaks contact with the body switch inside the packing station. The machine then resets, ready for the next case.

Troubleshooting

Problem	Solution
Case releases, all flaps drop, during folding or packing cycle.	<p>Check that width adjustment is correct. If it is too wide, the wheeled “switch roller” that contacts the side of the case will reset and cause the machine to return to the start position.</p> <p>Shaking the box to level the contents can cause the body switch to reset.</p> <p>Check that the body switch is correctly adjusted and secured in the frame for proper box contact and that the contact wheel is firmly attached.</p>
Minor flaps fail to fold fully and return to home position and may try to fold again.	<p>Check that the actuator arms attached to the floor switches (mounted on floor plates) are not out of position or loose. Both of them should be in a position to be pushed down fully by the bottom flaps of the open box.</p>
Major flaps have difficulty folding and cause inner edges of minor flaps to be folded over.	<p>Check that the air pressure is adequate and that the air pressure does not drop during the cycle.</p> <p>Check that the flow controls on the small major flap opening cylinders are set so that they will momentarily open the major flaps wider and allow the minor flaps to clear the inside of the major flaps before releasing.</p>
Back or front case collapses inward during minor flap folding.	<p>Be sure that the case width setting does not hold the box too tightly.</p> <p>Check the air pressure and volume.</p> <p>Check that the scoring on the box is adequate and promotes folding.</p> <p>Check that the flow controls on the minor flap folding cylinders are set for a fast enough speed of the minor flap folders. Excessive speed, however, can cause damage of the folder arms.</p>
Packed case fails to transfer smoothly from packing station into case sealer.	<p>Check the height of the rollers at the out feed end of the packing station and that the box clears the machine frame.</p> <p>Check that the machines are aligned accurately, i.e. that the belt surfaces line up with the insides of the packing station when in the vertical position. Use a long straight-edge to check the alignment.</p>

Parts List

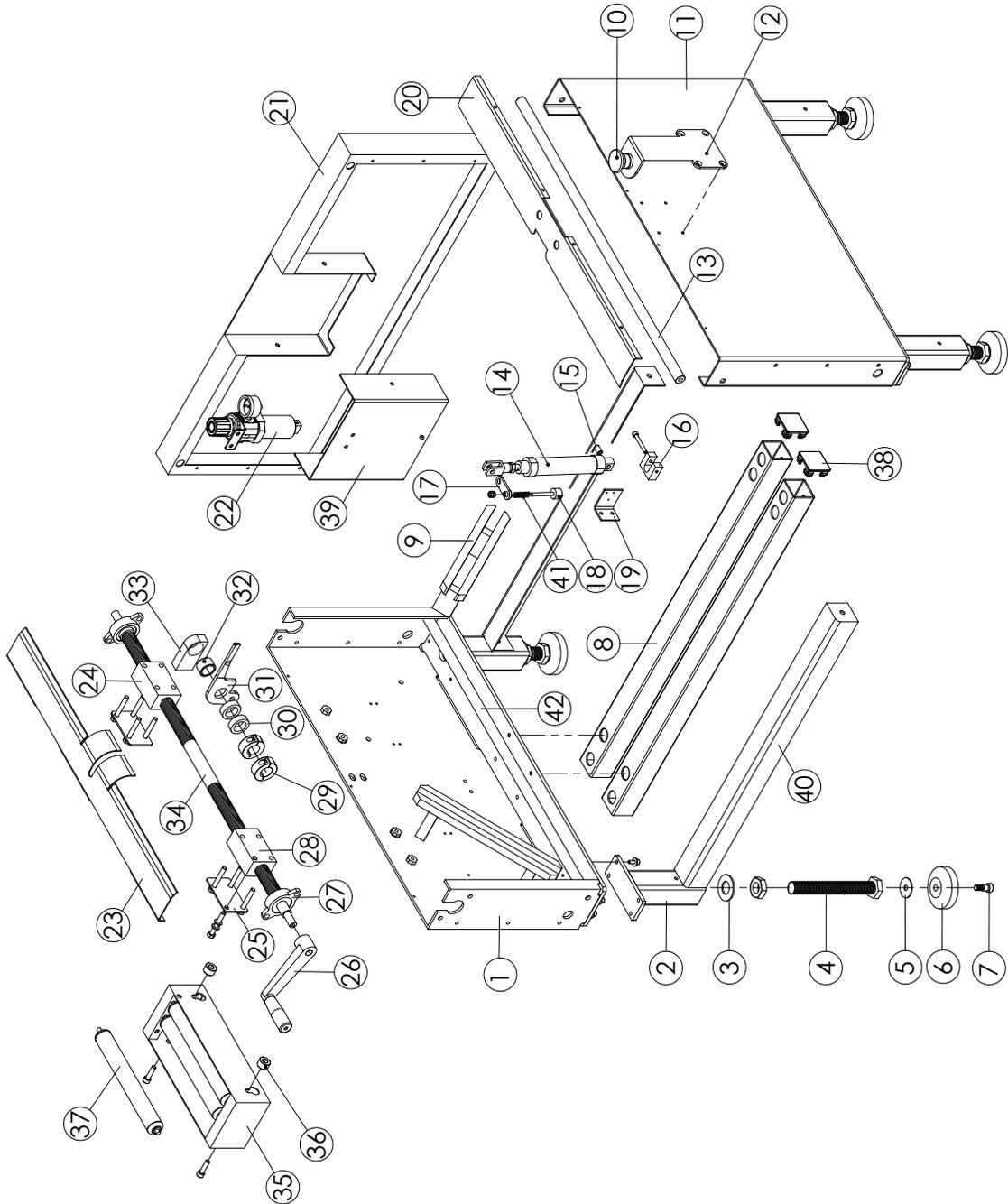
Pneumatic Parts



20 Illustrated Parts List

KEY NO	PART NO.	DESCRIPTION	Q'TY
1	81060104	Air Tube Connector PP-20	1
2	81060105	Elbow, Male PL8-02	1
3	81060113	Connector Male PC8-1	1
4	81060115	Air Valve port PRG8-6	1
5	81060116	Air Valve port PX6-01	4
6	81060106	Elbow Connector PL6-01	14
7	81060107	Elbow Connector PL6-02	2
8	81060108	Elbow Connector PLL6-01	1
9	81060110	Elbow Connector PL6-01M	2
10	81060102	Flow Control JSC6-01A	8
11	81060109	Elbow Connector PL6-M5	2
12	81060111	Three way Connector PHT6-01	1
13	81060112	Adaptor PC6-M5	1
14	81060114	Two way Connector PY-6	1
15	81091001	Air Valve MVMC-210-3EB25-8A-25(Red)	1
16	81110001	FRL System MAFR300-8A-D	1
17	81091002	Air Valve MVHF-3P-NO	1
18	81094001	Adaptor MVHF-AP6A	1
19	81095001	Adaptor MVHA-34A	1
20	81092001	Valve MVHA-41PP	1
21	81092002	Valve MVHA-41P	1
22	81093001	Valve	1
23	81093002	Valve MVAA-180-4A2	1
24	81060001	Eye Rod Link PHS-10 (M10*1.25)	2
25	81060005	Eye Rod Link PHS-6 (M6*1.0)	2
26	81070007	Clevis Y-MCMA 32 (M10)	2
27	81010106	Cylinder MCMA-11-32-50	2
28	81010107	Cylinder MCMA-11-32-75	2
29	81010108	Cylinder MCMA-15-16-25	2
30	81100101	1/8"MSL-S-01	6
31	81060202	Bushing 1/4'T*1/8"TCBN-0201	1
32	81060203	Tee Forged Male Branch 1/8"*1/8"* 1/8"BTF-001	1
33	81091003	Air Valve VM830-01-13	2
34	81100103	M5MSL-S-M5	2
35	81100104	1/4"MSL-S-02	1
36			
37			
38	81091002-1	L Mount MVHF-LB	1

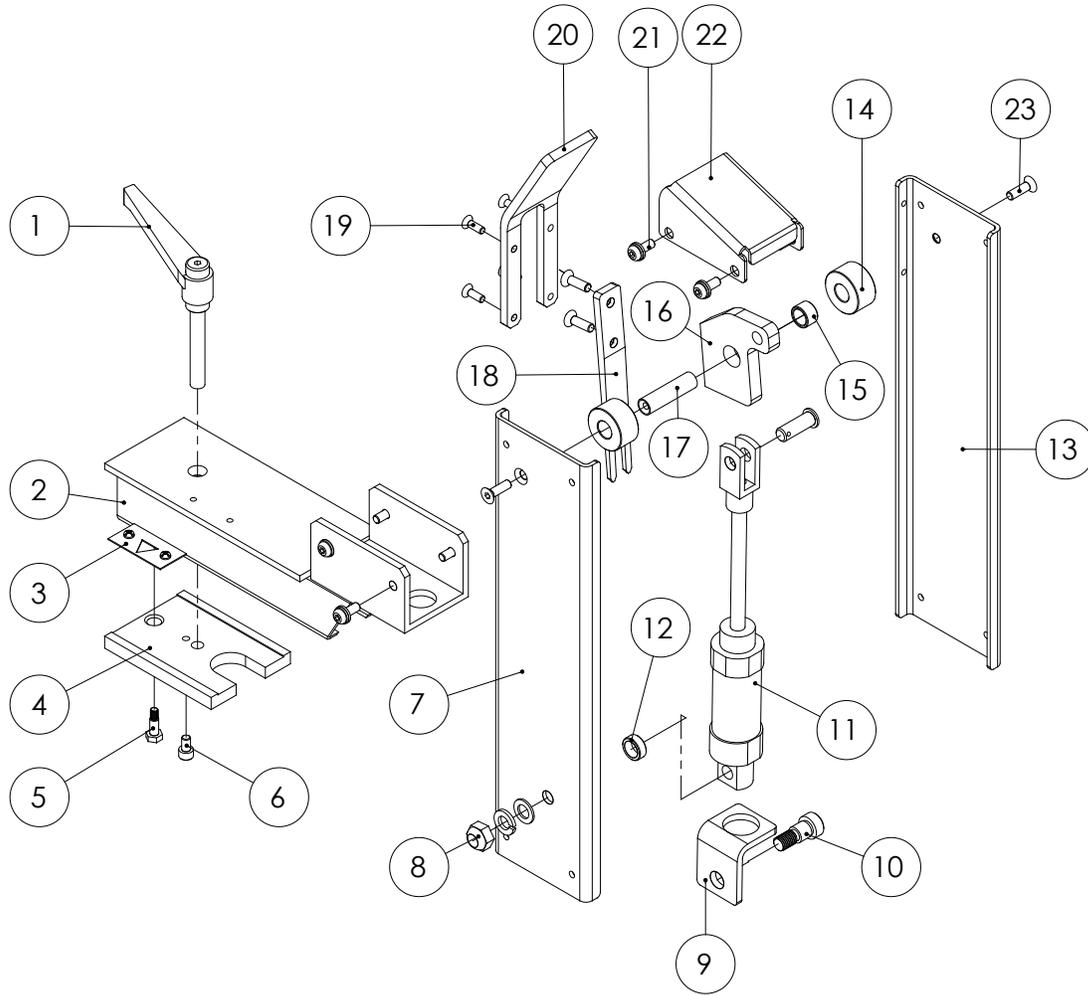
Frame, Front Assembly



22 Illustrated Parts List

KEY NO	PART NO.	DESCRIPTION	Q'TY
1	KA1103540	Front Frame	1
2	KA1100810	Frame Supporter	4
3	KA1100800	Washer	4
4	KA0300660	Supporting Spindle	4
5	KA1100960	Washer	4
6	KA0300670	Supporting Cup	4
7	KA0300410	Bolt	4
8	KA1103550	Bottom Frame	2
9	KA0300240	Guide Assembly	2
10	81091002	EMG Stop/ Start Switch	1
11	KA1103690	Rear Frame	1
12	KA1103700	Start/Stop Base Frame	1
13	KA0302240	Rear Guide Spindle	1
14	81010106	Cylinder	1
14	81070007	Cylinder connector	1
15	KA0301580	Spacer	1
16	KA0300250	Cylinder Mount	1
17	KA1100490A	Connecting Plate	1
18	KA3000210A	Spindle	1
19	KA1100480	Valve mount base	1
20	KA1103740A	Rear Frame Cover Plate	1
21	KA1103710A	Outer Frame (RH)	1
22	81110002	Air F.R.L. MAFR300-8A-D	1
23	KA1100460	Front Frame Cover plate	1
24	KA0300270	Nut. Acem screw L.H.	1
25	KA1100790	Plate with Nuts	2
26	KA0400370	Handle	1
27	30382044	Bearing UFL004	2
28	KA0300260	Nut Acme Screw (R.H)	1
29	CA150500	Lock Collar	2
30	KA0300310	Spacer	2
31	KA1100470	Rear Kicker	1
32	KA0300290	Copper Ring	1
33	KA0300280	Guide Spindle supporter	1
34	KA0300320	Front Guide Spindle	1

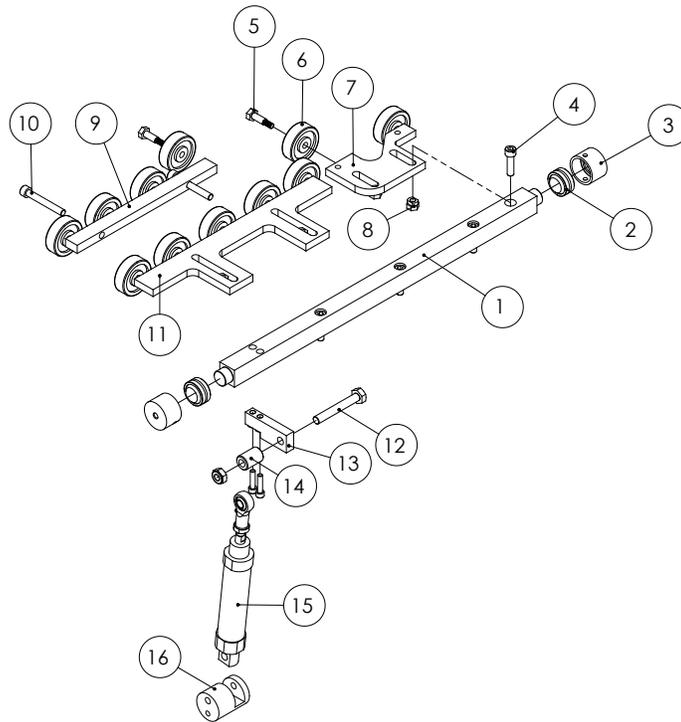
Slide Spindle Unit



24 Illustrated Parts List

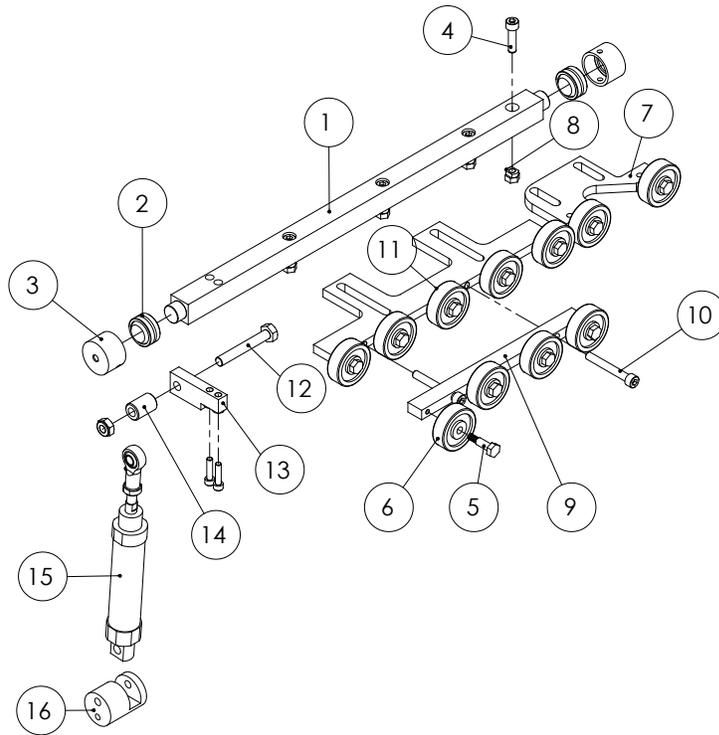
KEY NO	PART NO.	DESCRIPTION	Q'TY
1	KA0400120	Handle (M10*P1.5)	1
2	KA1100500	Tower Sliding Base	1
3	KA1102180	Length Pointer	1
4	KA0300350	Sliding Bottom Mount	1
5	KA0301560	Bolt	1
6	10100610	Screw M6*10L	1
7	KA1100540	Tower Plate LH	1
8	10331000	Nylock Nut	1
9	KA1100550	Cylinder Mount	1
10	KA0300410	bolt	1
11	81010106	Cylinder	1
	81070007	Clevis	1
12	KA0300650	Cylinder Spacer	1
13	KA1100530	Tower Plate RH	1
14	KA0300370	Spacer	2
15	KA0300400	Bushing	1
16	KA1100560	Kicker Base Plate	1
17	KA0300380	Center rod	1
18	KA1100580	Kicker plate (rear)	1
19	10140512	Screw M5x12L	4
20	KA0300390	Top Guiding plate	1
21	10250616	Screw M6*16L	4
22	KA1100570	Tower top cover	1
23	10140620	Screw M6x20L	1

RH Fold Assembly



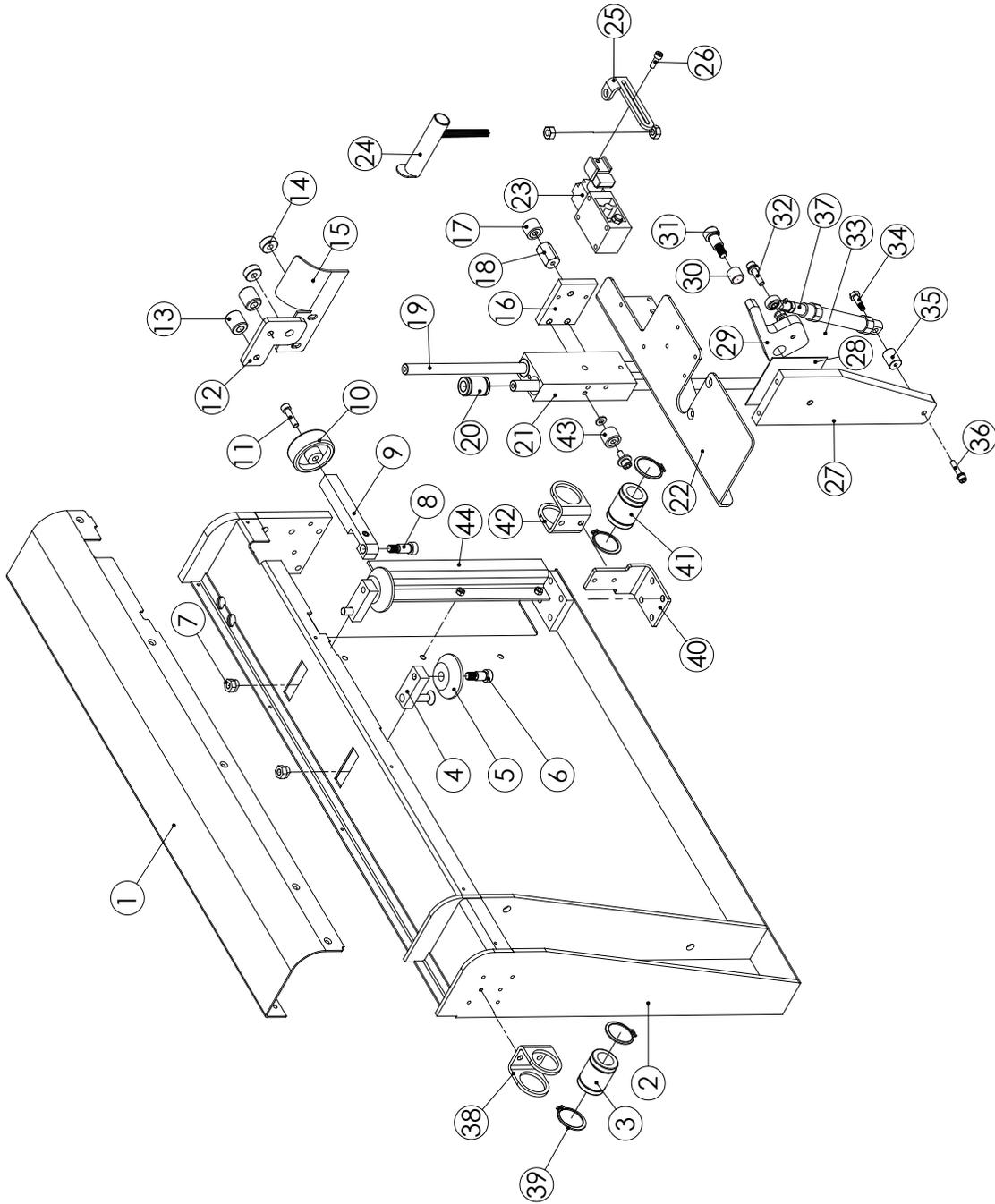
KEY NO	PART NO.	DESCRIPTION	Q'TY
1	KA0300530	Caster Arm	1
2	3035SB20	Ball Bearing	2
3	KA0300580	Bearing Housing	2
4	10100830	Screw M8*30L	4
5	KA0300930	Screw	11
6	KA0400050	Wheel	11
7	KA0300570	Caster Plate (small)	1
8	KA0301570	Nut	2
9	KA0300920	Ext. Caster plate	1
10	10100860	Screw M8*60L	2
11	KA0300560	Caster Plate (Large)	1
12	10111070	Hex Screw M10x70L	1
13	KA0300540	Cylinder Lever Bar	1
14	KA0300550	Spacer	1
15	81010107	Cylinder	1
15	81060001	Eye Rod Link PHS10 M10x1.25	1
16	KA0300420	Cylinder Mount	1

LH Fold Assembly



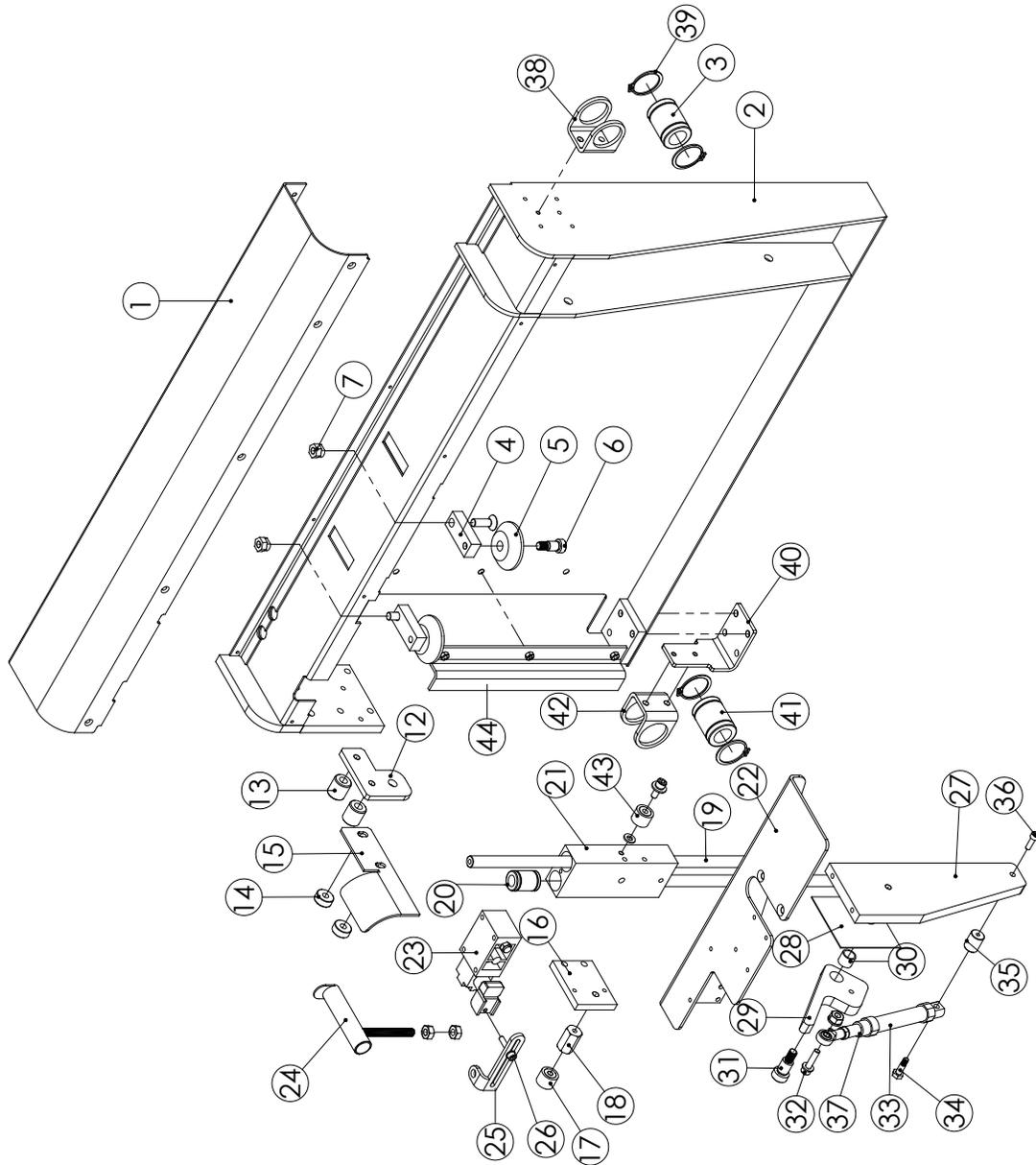
KEY NO	PART NO.	DESCRIPTION	Q'TY
1	KA0300530	Caster Arm	1
2	3035SB20	Ball Bearing	2
3	KA0300580	Bearing Housing	2
4	10100830	Screw M8*30L	4
5	KA0300930	Screw	11
6	KA0400050	Wheel	11
7	KA0300570	Caster Plate (small)	1
8	KA0301570	Nut	2
9	KA0300920	Ext. Caster plate	1
10	10100860	Screw M8*60L	2
11	KA0300560	Caster Plate (Large)	1
12	10111070	Hex Screw M10x70L	1
13	KA0300540	Cylinder Lever Bar	1
14	KA0300550	Spacer	1
15	81010107	Cylinder	1
15	81060001	Eye Rod Link PHS10 M10x1.25	1
16	KA0300420	Cylinder Mount	1

Frame, Left Side Assembly



KEY NO	PART NO.	DESCRIPTION	Q'TY
1	KA1103670	Left side Frame Cover	1
2	KA1103560	Left side Frame	1
3	3110LM20	Linear Bearing LM-20UU	1
4	KA0300620	Mount Base	2
5	KA0300630	Roller	2
6	KA0300940	Screw	2
7	KA0301570	Bolt	2
8	KA0300610	Bolt	1
9	KA0300600	Switch lever	1
10	KA0300590	Switch Roller	1
11	10100625	Screw M6*25L	1
12	KA1100630	Mount	1
13	KA0300430	Spacer	2
14	KA0300450	Spacer	2
15	KA1100650	Case Guide (LH)	1
16	KA1100720	Mount	1
17	KA0400010	Rolelr	1
18	KA0300500	Spacer	1
19	KA0302190A	Spindle	2
20	3110LM12	Linear Bearing LM-12UU	4
21	KA0302230A	Slide Plate	1
22	KA1100670A	Left Mount Plate	1
23	81091003	Valve Assy. L.H.	1
24	KA1100780	Active Lever	1
25	KA1100760	Control Leverl (LH)	1
26	10100520	Screw M5*20L	1
27	KA1100690	LH Flap Opener Mount	1
28	KA0300460	Sheet	1
29	KA1100700	Flap Opener Lever	1
30	KA0300640	Spacer	1
31	KA0300470	Bushing	1
32	10100625	Screw M6*25L	1
33	81010108	Cylinder	1
33	81060005	Eye rod Link	1
34	KA0301560	bolt	1

Frame, Right Side Assembly

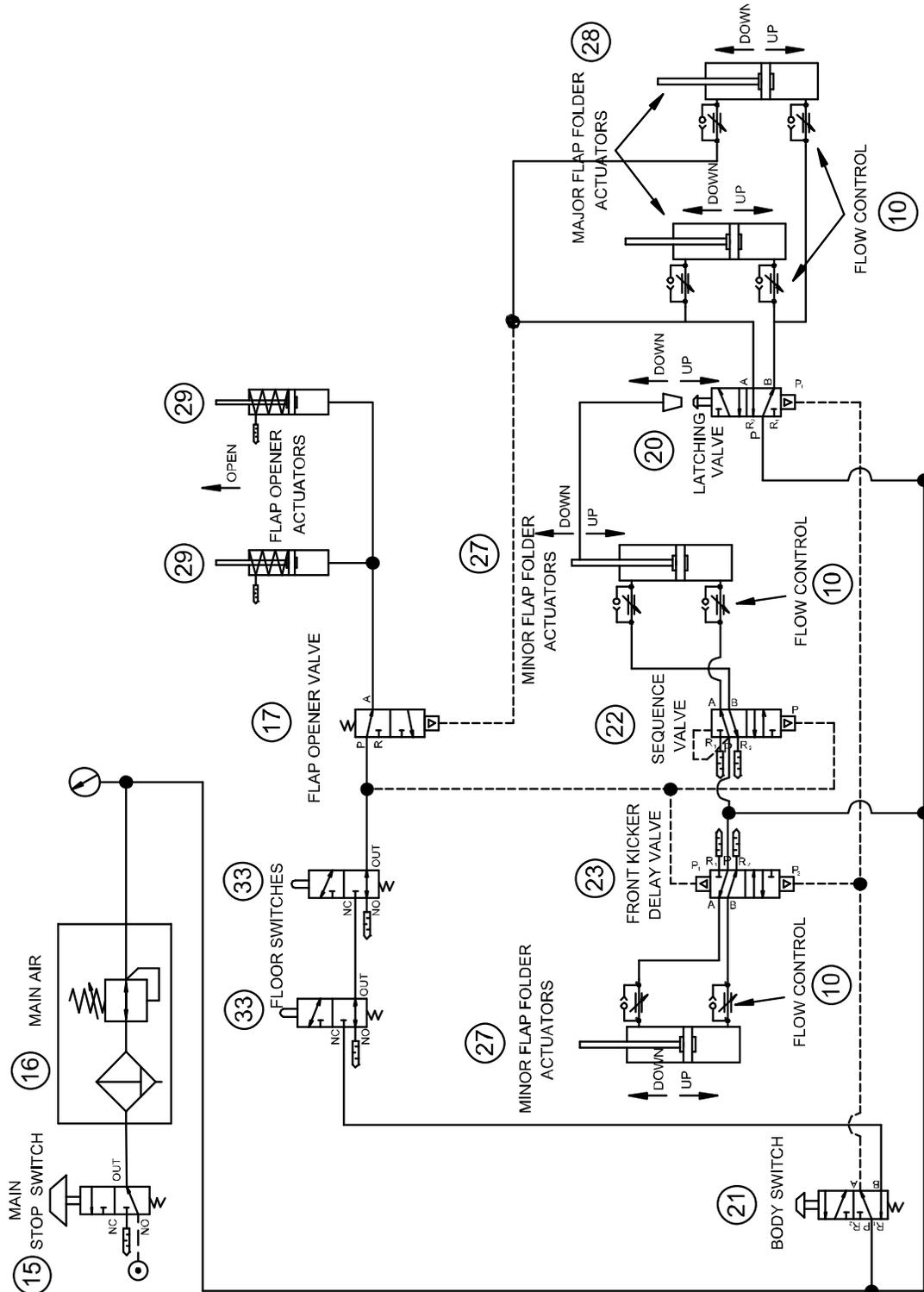


30 Illustrated Parts List

KEY NO	PART NO.	DESCRIPTION	Q'TY
1	KA1103680	Right side Frame Cover	1
2	KA1103570	Rigth Side Frame	1
3	3110LM20	Linear Bearing LM-20UU	1
4	KA0300620	Mount Base	2
5	KA0300630	Roller	2
6	KA0300940	Screw	2
7	KA0301570	Bolt	2
8			
9			
10			
11			
12	KA1100630	Mount	1
13	KA0300430	Spacer	2
14	KA0300450	Spacer	2
15	KA1100660	Case Guide (RH)	1
16	KA1100720	Mount	1
17	KA0400010	Roller	1
18	KA0300500	Spacer	1
19	KA0302190A	Spindle	2
20	3110LM12	Linear Bearing LM-12UU	4
21	KA0302230A	Slider plate	1
22	KA1100680A	Right Mount Plate	1
23	81091003	Valve Assy.	1
24	KA1100780	Active Lever	1
25	KA1100770	Control Lever (RH)	1
26	10100520	Screw M5*20L	1
27	KA1100690	RH flap opener mount	1
28	KA0300460	Sheet	1
29	KA1100700	Flap Opener Lever	1
30	KA0300640	Spacer	1
31	KA0300470	Bushing	1
32	10100625	Screw M6*25L	1
33	81010108	Cylinder	1
33	81060005	Eye Rod Link	1
34	KA0301560	Bolt	1

Appendix A: Air Diagram

Pneumatic Schematic



Warranty Statement

EX-CF Case Former

Warranty Statement

Eastey warrants that all of the products it ships will be in good working order and free from defects in material and workmanship and will conform to the published specifications for that product.

Warranty Period

1 year (Except for moving parts which are subject to normal wear, tear and replacement which are warranted to be free from defects in material and workmanship.)

Case Forming Quality

Case-forming quality achieved in a given application is dependent on the installation, the material handling, and the maintenance provided. Eastey makes no warranty that the case forming quality achieved in an application will be the same as that achieved on a test piece in our demo facility.

Shipping Policy

Customer pays all incoming shipping. If the item is defective and under warranty, Eastey pays return shipping charges for least costly method. If expedited shipping is desired, customer must furnish his shipping account and shipping fees will be charged to that account.

Warranty Verification

If you conclude that a product may be defective and may be covered by warranty, obtain a Return Material Authorization number by calling our technical support number (toll free at 1-800-835-9344, or 763-428-4846 or Fax: 763-795-8867 or e-mail: info@eastey.com). Once an RMA number has been obtained, return the defective item to Eastey. Eastey will analyze the item and, if found to be defective, we will, at our option replace or repair the item. If the item is found to not be eligible for warranty, you will be notified and may decide on disposition. Defective items will be replaced or repaired as promptly as possible.

Warranty Eligibility

The warranty provided by Eastey is only to the original buyer.

Limited Warranty

THE ABOVE WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

Disclaimer of Damages

REGARDLESS OF WHETHER ANY REMEDY SET FORTH HEREIN FAILS OF ITS ESSENTIAL PURPOSE, IN NO EVENT WILL EASTEY. BE LIABLE FOR ANY

SPECIAL, CONSEQUENTIAL, INDIRECT OR SIMILAR DAMAGES, INCLUDING LOST PROFIT OR LOST OPPORTUNITIES OF ANY TYPE ARISING OUT OF THE USE OR INABILITY TO USE THESE PRODUCTS EVEN IF EASTEY ENTERPRISES, INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Customer Support

Eastey Technical Service

For help setting up or operating the EX-CF Semi-Automatic Case Former, please contact Eastey Technical Service at one of the numbers listed below.

Toll-Free Phone	800-835-9344
Phone	763-428-4846
Fax	763-795-8867
E-mail	info@eastey.com
Web	www.eastey.com

Thank you again for your purchase of Eastey products. We are pleased to be a part of your packaging needs.



EASTEY®