

Tray Packing System



Changeover Packet





Changeover Basics

→ Several common components are used in most machine changeovers:



Crank Handle

Scale



Lock Handle



Turn Wheel



Lock Knob

Indicator



Be certain to re-tighten any components that have been loosened - before resuming production.



IMPORTANT: Changeover indicators such as Left/Right, Front/Back, etc. are based on the FLOW of the Blank/Tray/Case through the Machine. Keep in mind the direction of flow when locating Changeover elements.



Location of Changeover Tools



Location of area / section being changed



Mini Matrix

Box # 's →	Tray Format							
	Sm 10 (1)	Sm 20 (2)	Med 10 (3)	Med 20 (4)	Lrg 10 (5)	Lrg 20 (6)	All (7)	
1	Stack Stop Wall	2-5/8	4-1/8	5	7-3/4	7-5/8	10-1/8	11
2	Front Vacuum Caps - LR	4-1/8	4-1/8	5-1/2	5-1/2	7	7	8-1/4
3	Rear Vacuum Caps - FrontBack	6-3/4	6-3/4	13	13	13	13	13-1/2
3	Rear Vacuum Caps - LR	4-1/8	4-1/8	5-1/2	5-1/2	7	7	8-1/4
4	Side Tamper	1-1/2	3-1/4	4-1/2	7-1/8	7	9-3/4	10-7/8
5	Blank Positioner	9-7/8	9	7-1/2	4-3/4	8	3-1/4	1-1/8
6	Box Steps	4-1/2	6	7-3/4	10-3/8	6-3/4	11-1/2	13-3/4
7	Rear Compression	10	10	10	10	10	10	10
8	Front Compression	7-3/8	7-3/8	9-1/4	9-1/4	10-3/4	10-3/4	11-7/8
9	Rear Right Bullet - LR	6-11/16	6-11/16	4-3/4	4-3/4	2	2	1-1/2
9	Rear Right Bullet - FR	Black	Black	Red	Red	Red	Red	Black
10	Rear Right Corner End	Black	Black	Black	Black	Red	Red	Green
11	Rear Left Bullet - LR	6-1/8	6-1/8	4-3/4	4-3/4	2	2	2-1/8
11	Rear Left Bullet - FR	Black	Black	Red	Red	Red	Red	Black
12	Rear Left Corner End	Black	Black	Black	Black	Red	Red	Green
13	Left Compression	5-3/4	5-3/4	7	7	9-3/4	9-3/4	10-1/8
13	Right Compression	4-3/4	4-7/8	6	6	8-3/4	8-3/4	9-11/16
14	Left Outer Rail	7-5/8	9-1/8	10-3/8	12-7/8	12-3/4	15-3/8	16
14	Right Outer Rail	7-7/8	9-3/8	10-3/8	13-1/8	13	15-7/8	17



Mini Matrix

Box #'s →	Toy Format							
	Sm 10 (1)	Sm 20 (2)	Med 10 (3)	Med 20 (4)	Log 10 (5)	Log 20 (6)	All (7)	
15	Front Right Bullet	6-3/4	6-15/16	5	5	2-3/4	2-1/2	2-1/8
15	Front Right Bullet - Angle	Black	Black	Black	Black	Red	Red	Green
16	Front Right Corner End	OFF	OFF	Black	Black	Red	Red	Green
17	Front Left Bullet	6-3/4	6-3/4	5-11/16	5-11/16	2-3/4	2-3/4	2-1/8
17	Front Left Bullet - Angle	Black	Black	Red	Red	Red	Red	Green
18	Front Left Corner End	OFF	OFF	Black	Black	Red	Red	Green
19	Front Side Compression Extension (L and R)	Rebart	Rebart	Rebart	Rebart	Extend	Extend	Extend
20	Change Manual	Small	Small	Med	Med	Log	Log	All
21	Screen Box	1	2	3	4	5	6	7
Pick & Place								
41	Side Wall - Left	2-1/2	2-1/2	3-1/8	3-1/8	6-1/2	6-1/2	6-1/2
41	Side Wall - Right	2-1/2	2-1/2	3-3/4	3-3/4	6-3/4	6-3/4	6-3/4
42	Back Wall	1-5/8	1-5/8	3-3/8	3-3/8	5-3/4	5-3/4	5-3/4
Sachet								
38	Top Outer	2-3/4	4-3/8	4-1/4	6-7/8	4-1/4	6-1/2	7-1/8
40	Front Wall	1-7/8	1-7/8	2-1/2	2-1/2	3-1/4	3-1/4	4
40	Back Wall	1-1/4	1-1/4	2-1/2	2-1/2	3-1/4	3-1/4	4



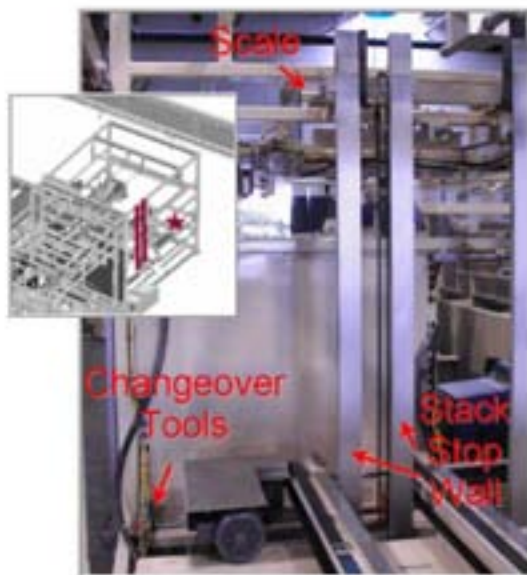
Mini Matrix

	Box #'s →	Sm 10 (1)	Sm 20 (2)	Med 10 (3)	Med 20 (4)	Lrg 10 (5)	Lrg 20 (6)	All (7)
	Changes ↓							
		Tray Index Conveyor						
23	Side Wall	11-3/4	11-3/4	13-3/8	13-3/4	14-7/8	14-7/8	16-1/8
24	Manufacturer's Flip Guide	6-3/4	6-11/8	7-1/2	10-1/2	7-1/2	10-3/8	10-3/4
25	Top Panel Flaw	Black	Black	Black	Blue	Blue	Red	OFF
26	Top Compression	8	6-1/2	7-1/16	4-1/4	7	4-3/8	3-7/8
27	Lid Cover	01159	01159	01869	02932	01202	02768	02403
		Product Conveyor						
28	Side Wall	12-3/4	12-3/4	14-1/2	14-1/2	15-7/8	15-7/8	17-3/8
29	Lead Pocket	97114	97114	97077	97877	99623	99023	99940
		Loader						
30	Extension Wall	12-3/4	12-3/4	15-1/8	15-1/8	15-1/8	15-1/8	16
31	Side Walls	97831	97931	98737	88737	00425	00372	00720
32	Screen Box	1	2	3	4	5	6	7
		Shut-Off						
33	Wheel Guides	NA	NA	NA	NA	NA	NA	NA
34	Side Compression - Right	21	21	22-1/4	22-1/4	25	25	25-1/2
34	Side Compression - Left	21	21	22-1/4	22-1/4	25	25	25-1/2
35	Top Compression - Right	3-1/4	3-1/2	3-1/4	5-3/4	3	6-1/8	6-1/2
35	Top Compression - Left	1-3/4	3-1/2	3	5-3/4	3	6-1/8	6-1/2
36	Top Flows - Right	Up	Up	Down	Down	Down	Down	Down
36	Top Flows - Left	Up	Up	Down	Down	Down	Down	Down
37	Screen Box	1	2	3	4	5	6	7



1

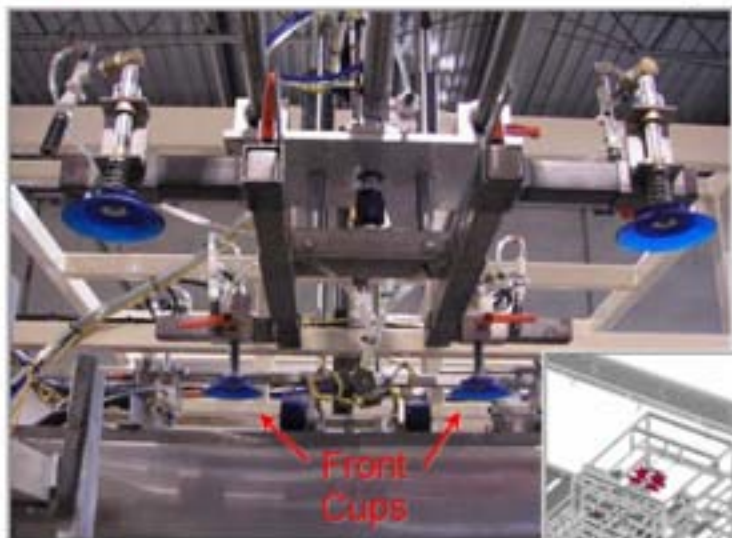
Stack Stop Wall



- This change moves the entire vertical stop wall located in the X-Lift portion of the Trayformer.
- The Stack Stop Wall provides a back wall for blank stacks loading from the Infeed Conveyor.
- Loosen the Lock Handle.
- Using the Crank Handle, adjust the wall to the desired scale setting.
- Re-tighten the Lock Handle.

2

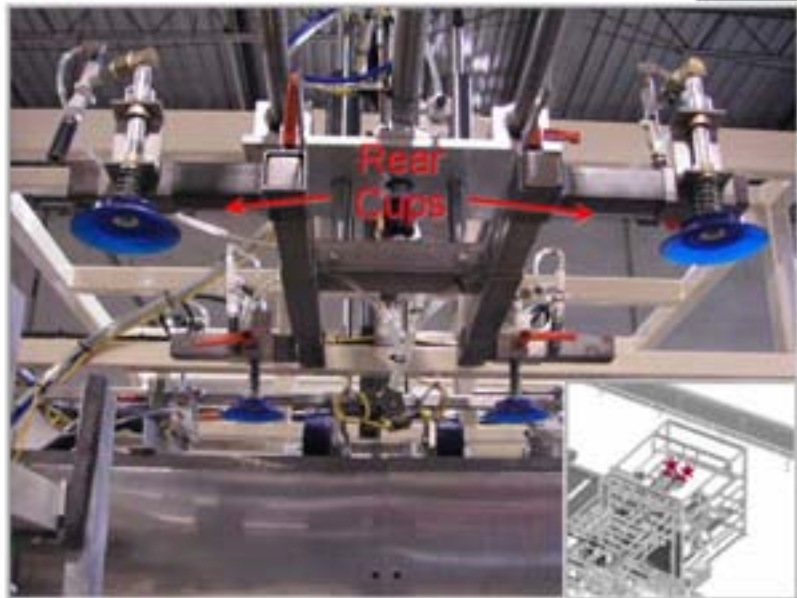
Front Cups



- This change moves the front infeed vacuum cups on the Tray Former.
- The front cups are the set located closest to the Pinch Rollers.
- Loosen the Lock Handles.
- Slide and adjust the wall to the desired scale setting.
- Re-tighten the Lock Handles.

3

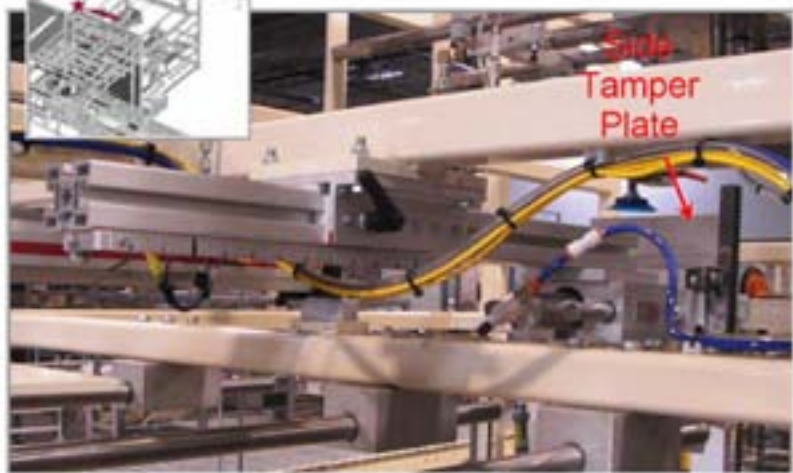
Rear Cups



- The rear cups move in two sets of changes – Back/Forth & Right/Left.
- The rear cups are the set located farthest to the Pinch Rollers.
- Loosen the Lock Handles.
- Slide and adjust the wall to the desired scale setting.
- Re-tighten the Lock Handles.

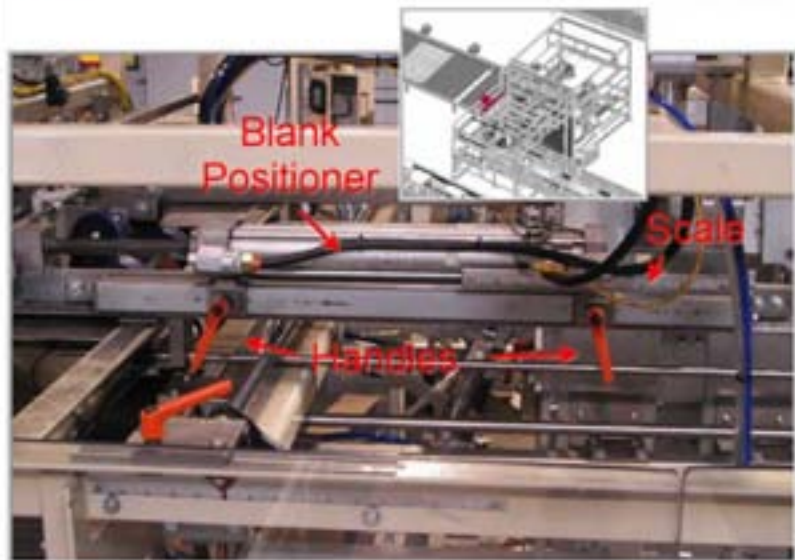
4

Side Tamper



- This change moves the side tamper plate of the Tray Former.
- The Side Tamper Plate provides a side wall to the blank stack awaiting infeed.
- Loosen the Lock Handle.
- Slide and adjust the wall to the desired scale setting.
- Re-tighten the Lock Handle.

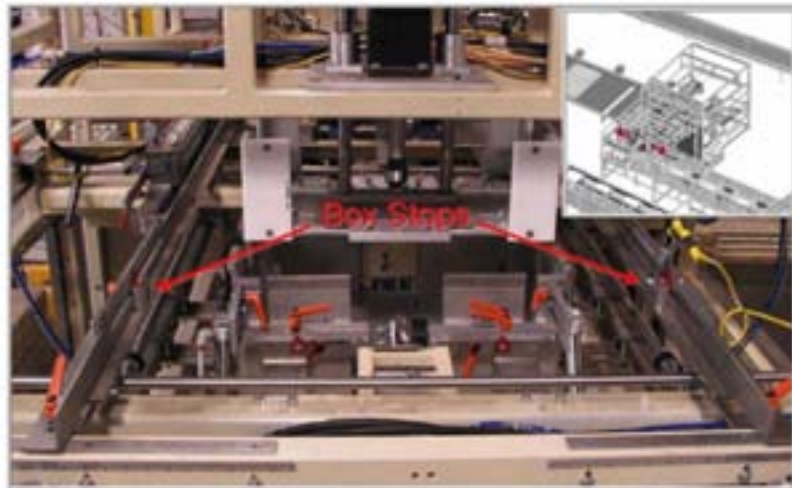
5

Blank Positioner

- This change adjusts the position of the blank positioner in the Tray Former.
- The Blank Positioner helps align the blank before it enters the Mandrel Area of the Tray Former.
- Loosen the Lock Handles.
- Slide and adjust the wall to the desired scale setting.
- Re-tighten the Lock Handles.

6

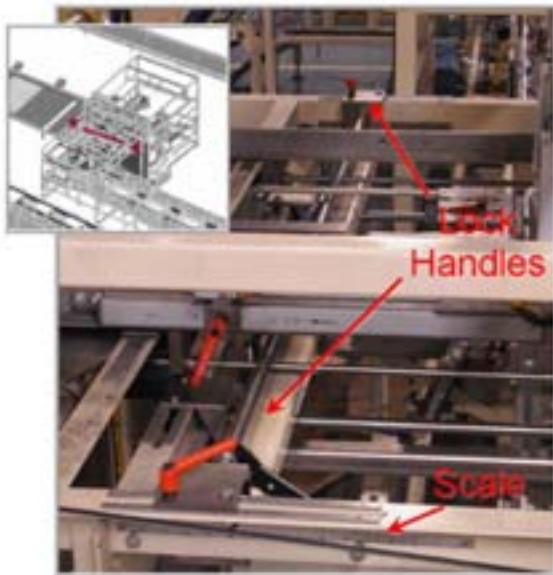
Box Stops



- This change adjusts the position of the box stops in the Tray Former.
- Box Stops provide a stop 'wall' to the blank as it enters the Mandrel Area of the Tray Former. This helps the blank to be aligned in the proper position before the Mandrel begins formation.
- Loosen the Lock Handles.
- Slide and adjust to the desired scale settings.
- Re-tighten the Lock Handles.

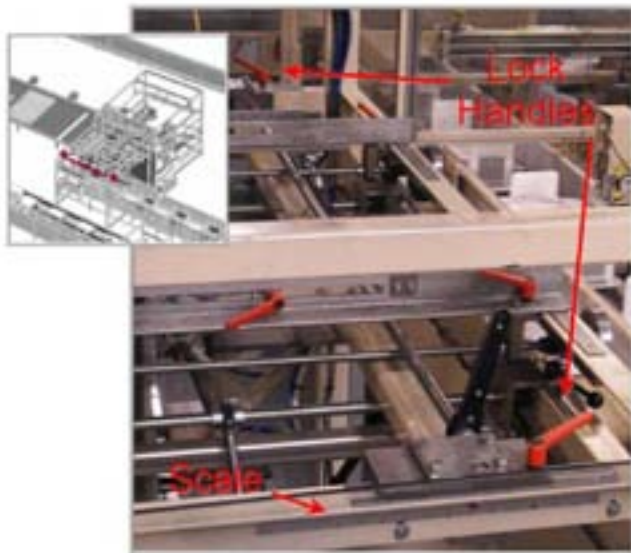
7

Rear Compression



- This change adjusts the rear compression mechanism in the Tray Former.
- The Rear Compression Changeover Tools are on either side of the Tray Former.
- Loosen the Lock Handles.
- Using the Crank Handle, adjust to the desired scale setting.
- Re-tighten the Lock Handles.

8

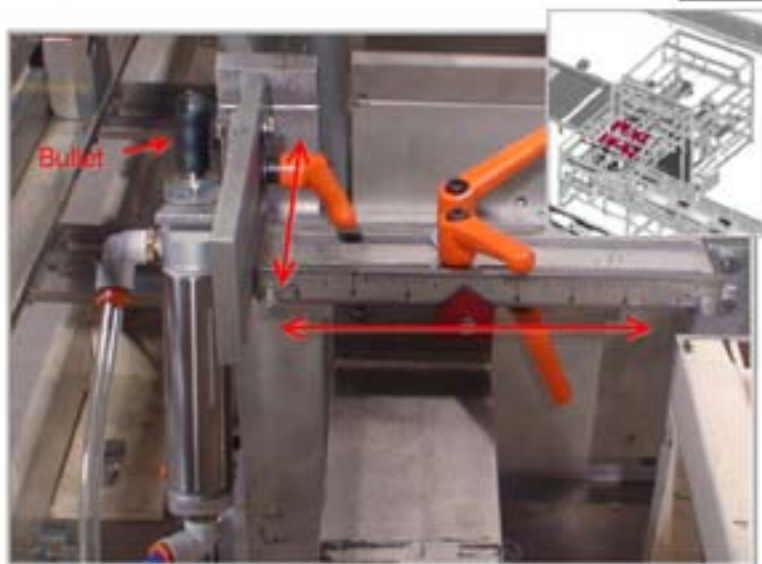
Front Compression

- This change adjusts the front compression mechanism in the Tray Former.
- The Front Compression Changeover Tools are on either side of the Tray Former.
- Loosen the Lock Handles.
- Using the Crank Handle, adjust to the desired scale setting.
- Re-tighten the Lock Handles.

Rear Right Bullet – L/R	6-1/16	6-1/16	4-3/4	4-3/4	2	2	1-1/2
Rear Right Bullet – F/B	Black	Black	Red	Red	Red	Red	Black

9

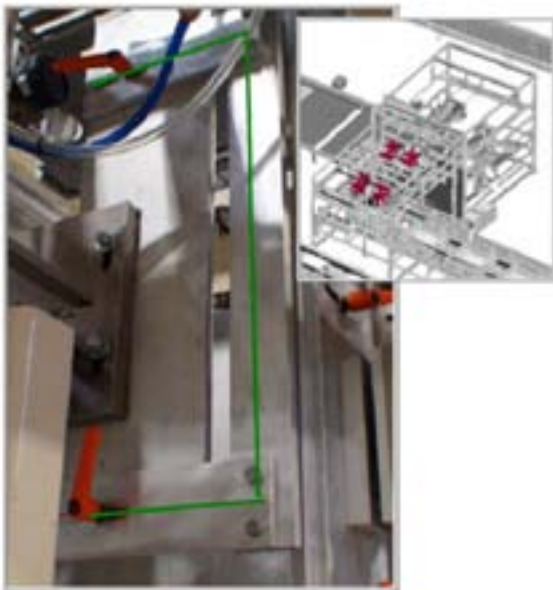
Rear Right Bullet



- Bullets provide Minor Flap folding in the Tray Former Section.
- Each Bullet has a Left/Right and a Front/Back adjustment that will need to be made.
- All 4 sets of Bullets and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired scale setting.
- Re-tighten the Lock Handles.



10 Rear Right Corner Ext.

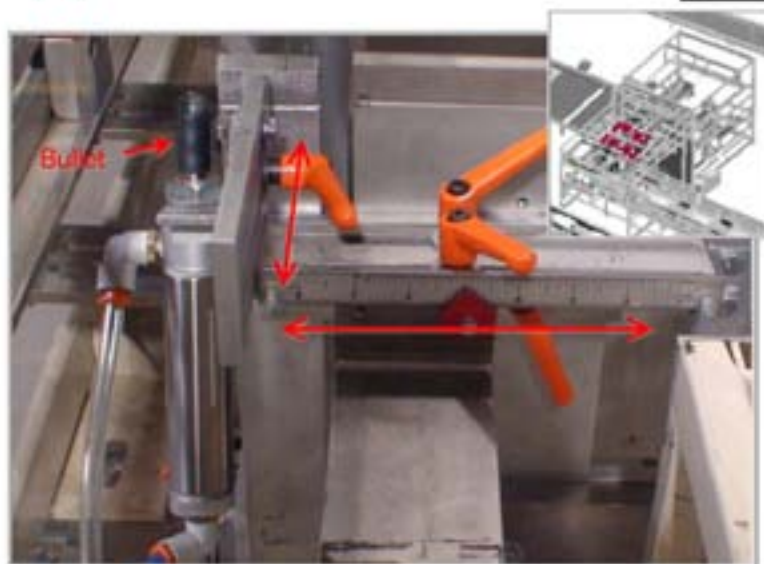


- Corner Extensions help provide support in the Tray Former Section.
- Each Corner Extension will be either OFF or Color Coded if ON.
- All 4 sets of Corner Extensions and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired color setting.
- If necessary, removed or install entirely.
- Re-tighten the Lock Handles.

Rear Left Bullet – LR	6-1/8	6-1/8	4-3/4	4-3/4	2	2	2-1/8
Rear Left Bullet – FB	Black	Black	Red	Red	Red	Red	Black



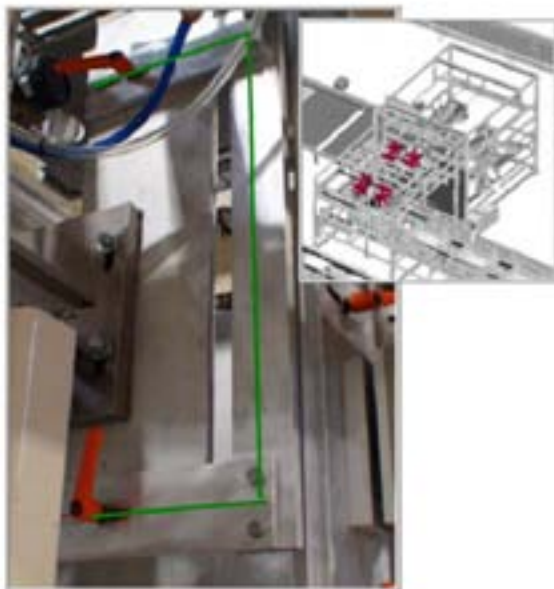
11 Rear Left Bullet



- Bullets provide Minor Flap folding in the Tray Former Section.
- Each Bullet has a Left/Right and a Front/Back adjustment that will need to be made.
- All 4 sets of Bullets and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired scale setting.
- Re-tighten the Lock Handles.



12 Rear Left Corner Ext.

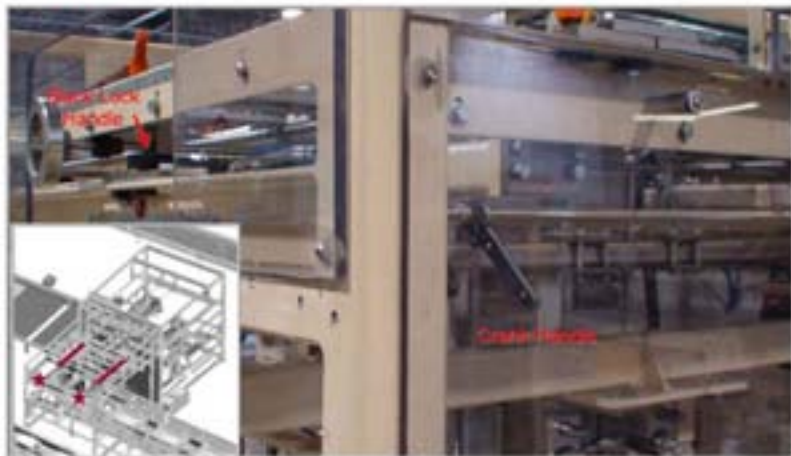


- Corner Extensions help provide support in the Tray Former Section.
- Each Corner Extension will be either OFF or Color Coded if ON.
- All 4 sets of Corner Extensions and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired color setting.
- If necessary, removed or install entirely.
- Re-tighten the Lock Handles.

Left Compression	5-3/4	5-3/4	7	7	9-3/4	9-3/4	10-1/8
Right Compression	4-3/4	4-7/8	6	6	8-3/4	8-3/4	9-11/16



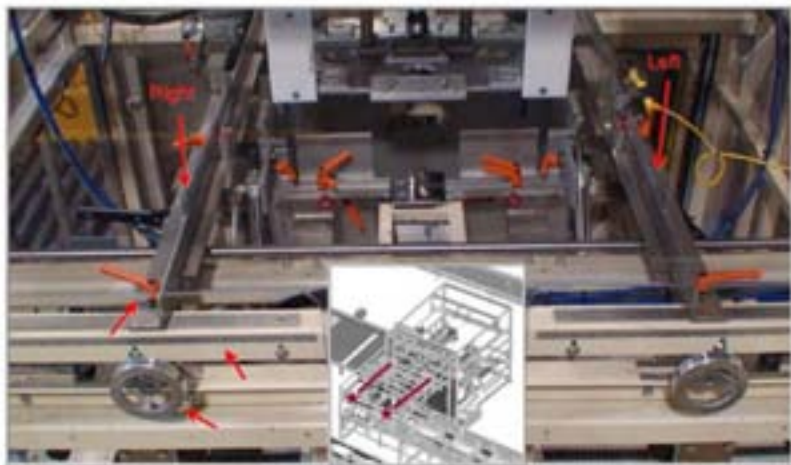
13 Left & Right Compression



- The Compression Changeover adjusts the Left and Right Compression 'walls' of the Tray Former.
- Both the Left & Right sides will require adjustment.
- Both Left & Right elements are shown in the schematic above.
- Loosen the Lock Handle.
- Using the Crank Handle, adjust to the desired Scale setting (located below Lock Handle).
- Re-tighten the Lock Handle.

Left Guide Rail	7-5/8	9-1/8	10-3/16	12-7/8	12-3/4	15-3/8	16
Right Guide Rail	7-7/8	9-3/8	10-3/16	13-1/16	13	15-7/8	17

14 Left & Right Guide Rail

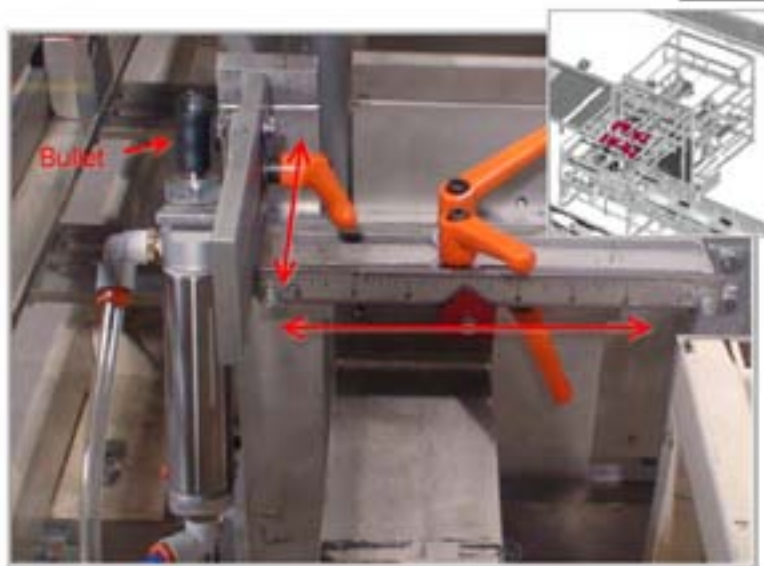


- Guide Rails provide a 'track' for the Blank as it moves into the Tray Former.
- Both the Left & Right sides will require adjustment.
- Both Left & Right elements are shown in the schematic above.
- Loosen the Lock Handle.
- Using the Turn Wheel, adjust to the desired Scale setting (located below Lock Handle).
- Re-tighten the Lock Handle.

Front Right Bullet	6-3/4	6-15/16	5	5	2-3/4	2-1/2	2-1/8
Front Right Bullet - Angle	Black	Black	Black	Black	Red	Red	Green



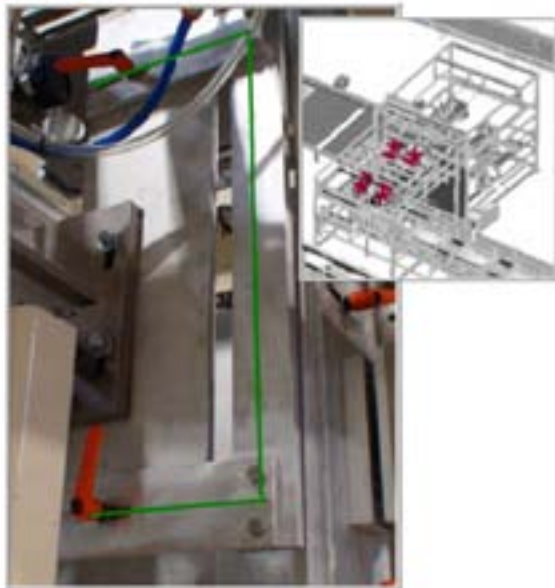
15 Front Right Bullet



- Bullets provide Minor Flap folding in the Tray Former Section.
- Each Bullet has a Left/Right and a Front/Back adjustment that will need to be made.
- All 4 sets of Bullets and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired scale setting.
- Re-tighten the Lock Handles.



16 Front Right Corner Ext.



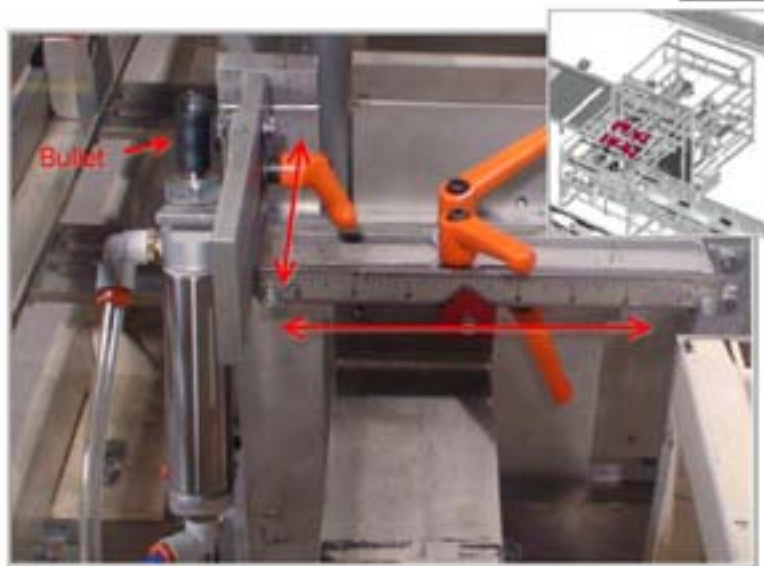
- Corner Extensions help provide support in the Tray Former Section.
- Each Corner Extension will be either OFF or Color Coded if ON.
- All 4 sets of Corner Extensions and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired color setting.
- If necessary, removed or install entirely.
- Re-tighten the Lock Handles.

Front Left Bullet	6-3/4	6-3/4	5-1/16	5-1/16	2-3/4	2-3/4	2-1/8
Front Left Bullet - Angle	Black	Black	Red	Red	Red	Red	Green



17

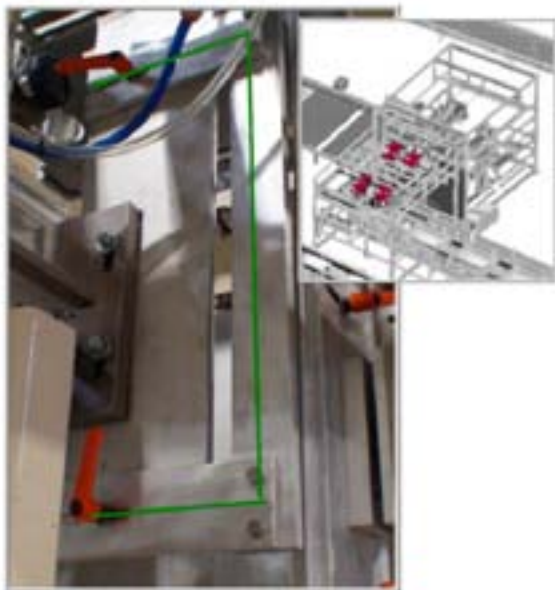
Front Left Bullet



- Bullets provide Minor Flap folding in the Tray Former Section.
- Each Bullet has a Left/Right and a Front/Back adjustment that will need to be made.
- All 4 sets of Bullets and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired scale setting.
- Re-tighten the Lock Handles.

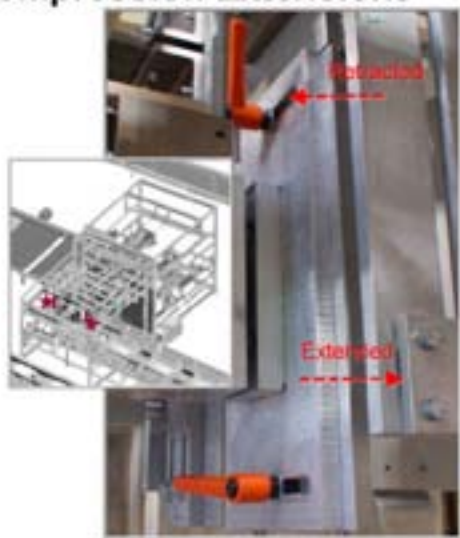


18 Front Left Corner Ext.



- Corner Extensions help provide support in the Tray Former Section.
- Each Corner Extension will be either OFF or Color Coded if ON.
- All 4 sets of Corner Extensions and Changeover Tools are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to the desired color setting.
- If necessary, removed or install entirely.
- Re-tighten the Lock Handles.

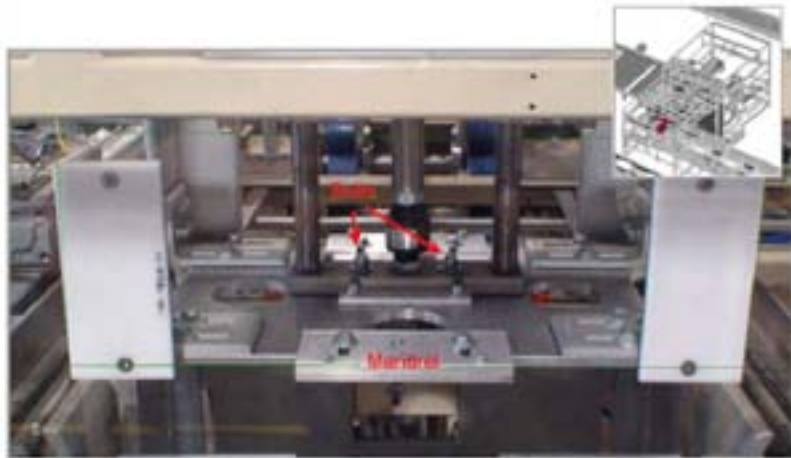
19 Front Side Compression Extensions



- For larger Blank sizes, provides an extension in the Tray Forming section.
- Both Left and Right adjustments need to be made.
- Both Left and Right sets are shown in the schematic above.
- Loosen the Lock Handles.
- Slide and adjust to either the Retracted or Extended position.
- Re-tighten the Lock Handles.

20

Mandrel



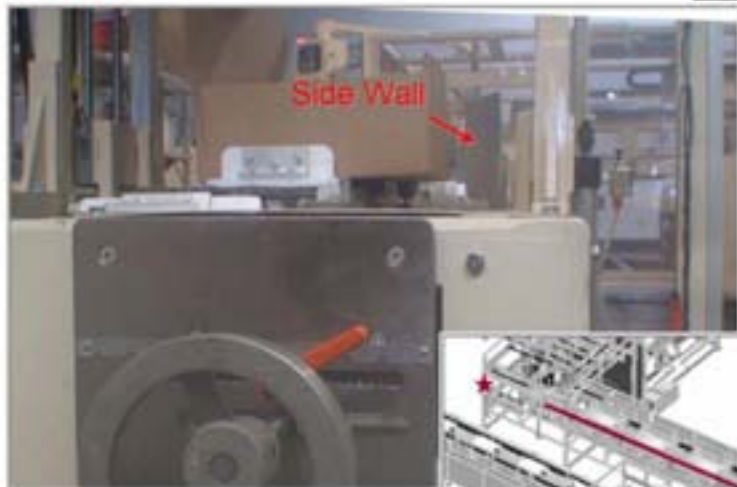
- The Mandrel is the central formation unit of the Tray Former.
- Changeover for the Mandrel is a full change-out process. The entire Mandrel is removed and replaced with the required one.
- Mandrels are stamped with lettering to indicate the proper size
- Loosen and remove the two Nuts at the interior of the Mandrel.
- Remove the Mandrel and replace with the correct one.
- Replace and re-tighten the Nuts.

21**Screen Box**

- This change involves selecting the appropriate box size on the Touch Screen.
- From the Main Menu, select **Box Select**.
- In the center of the screen, select the large, box number button.
- Use the up or down arrows to make the appropriate selection.
- Press **ENT** when finished.
- Press **Back to Control**.

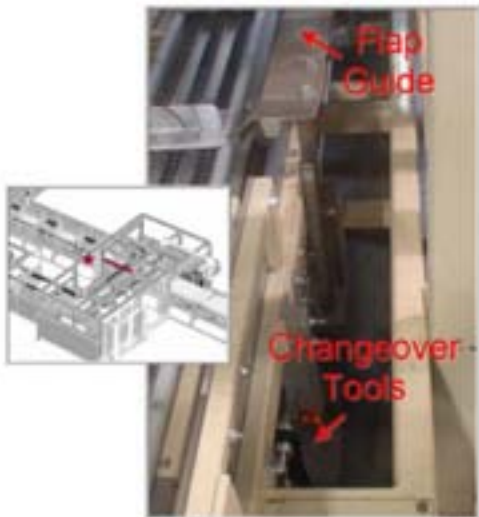
23

Side Wall



- This change moves the entire side wall of the Tray Index Conveyor.
- Loosen the Lock Handle.
- Using the Turn Wheel, slide and adjust the wall to the desired scale setting.
- Re-tighten the Lock Handle.

24 Manufacturer's Flap Guide

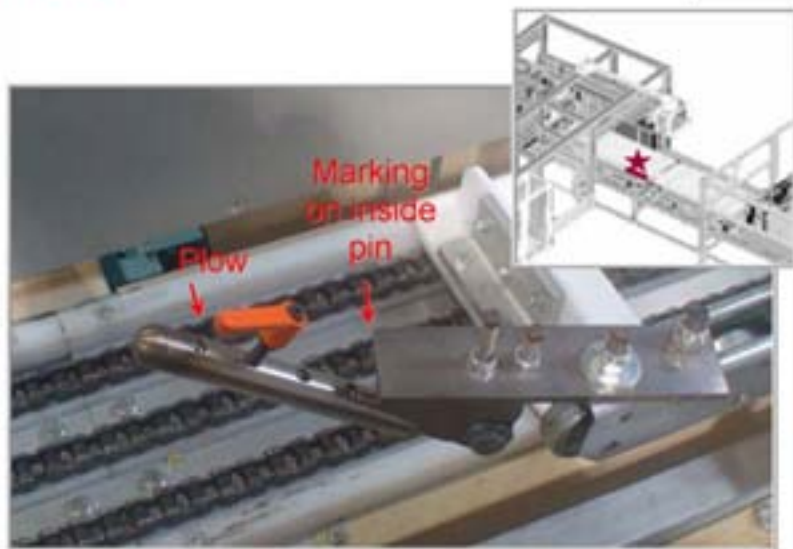


- This change moves the guide that holds the Manufacturer's Flap in place during the loading process.
- Located at the point where the Tray Index Conveyor meets the Loader.
- Loosen the Lock Handle.
- Using the Crank Handle, adjust to the desired scale setting.
- Re-tighten the Lock Handle.



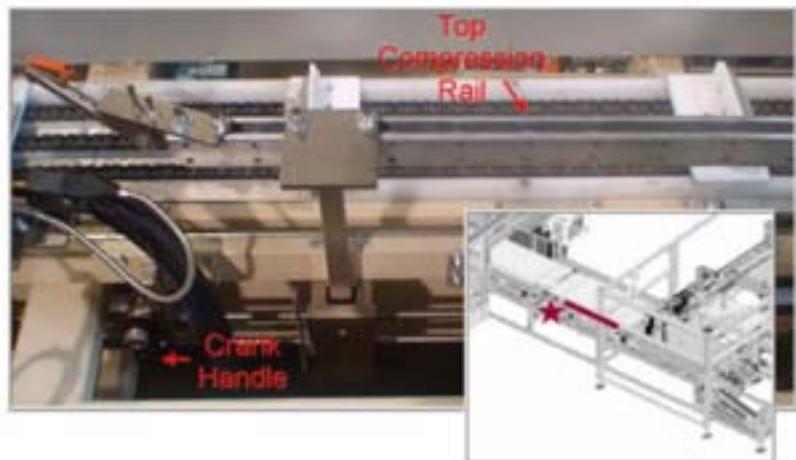
25

Top Panel Plow



- This change involves adjusting the plow that folds the top panel of the box.
- Located on the Tray Index Conveyor – next to the Front Panel Plow.
- Loosen the Lock Handle.
- Adjust the plow to the markings on the inside pin.
- Re-tighten the Lock Handle.

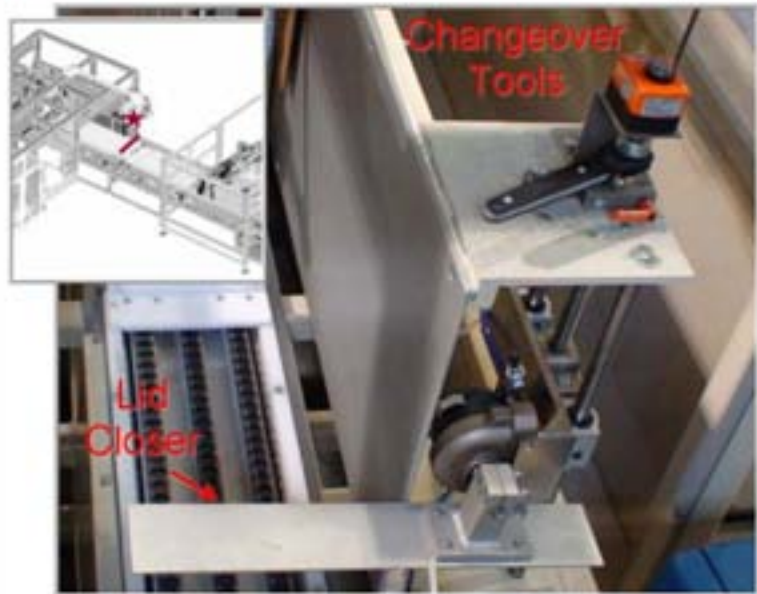
26

Top Compression

- This change involves the top compression rail of the Tray Index Conveyor.
- Located on the Tray Index Conveyor – immediately before the Sealer.
- Using the Crank Handle, adjust to the desired scale setting.

27

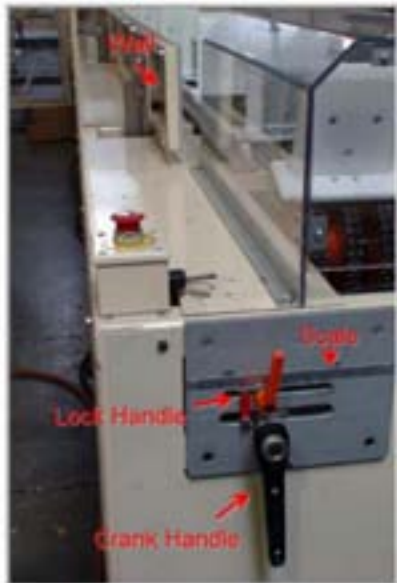
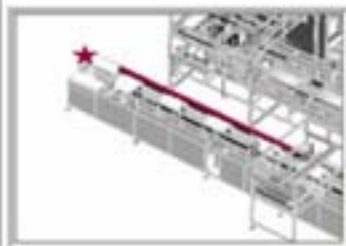
Lid Closer



- This change involves adjusting the lid closer that folds the top lid of the box.
- Located on the Tray Index Conveyor – after exiting the Loader.
- Loosen the Lock Handle.
- Using the Crank Handle, adjust to the desired counter setting.
- Re-tighten the Lock Handle.

28

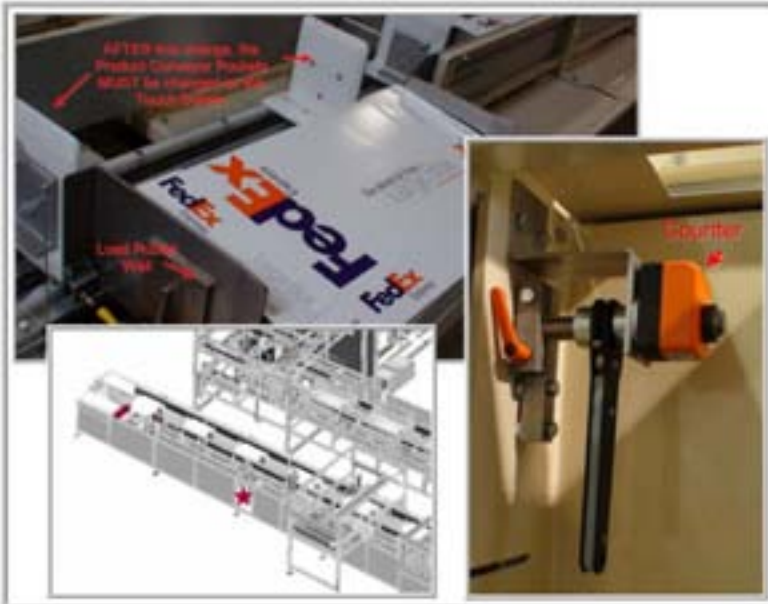
Side Wall



- This change moves the entire conveyor wall, which runs the length of the Product Conveyor.
- Loosen the Lock Handle.
- Using the Crank Handle, adjust the wall to the desired scale setting.
- Re-tighten the Lock Handle.

29

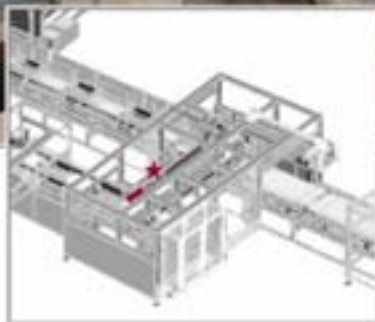
Load Pocket



- This change moves the left-hand pocket wall at the infeed area of the Product Conveyor.
- Loosen the Lock Handle.
- Using the Crank Handle, adjust the pocket wall to the desired counter setting.
- Re-tighten the Lock Handle.

30

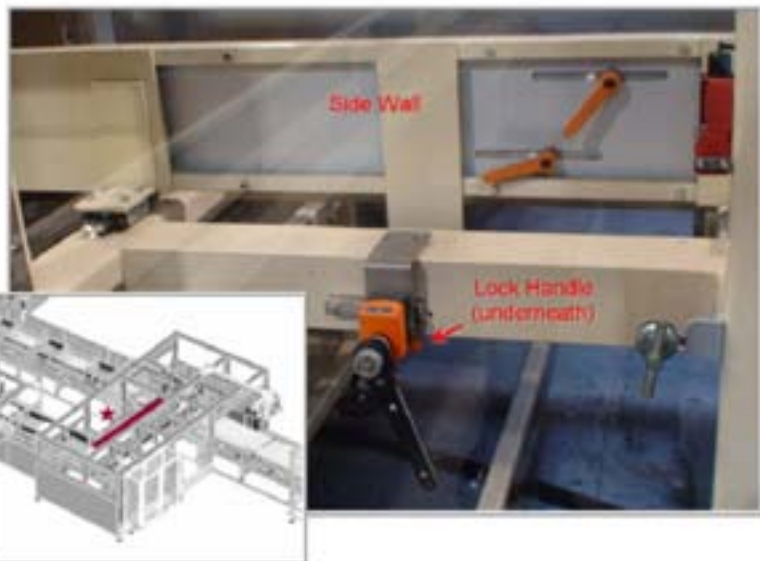
Extension Wall



- This change moves the extension wall located in the Loader.
- Loosen the Lock Handle.
- Slide and adjust the wall to the desired scale setting.
- Re-tighten the Lock Handle.

31

Side Wall



- This change moves the entire side wall of the Loader.
- Loosen the Lock Handle.
- Using the Crank Handle, adjust to the desired counter setting.
- Re-tighten the Lock Handle.

32

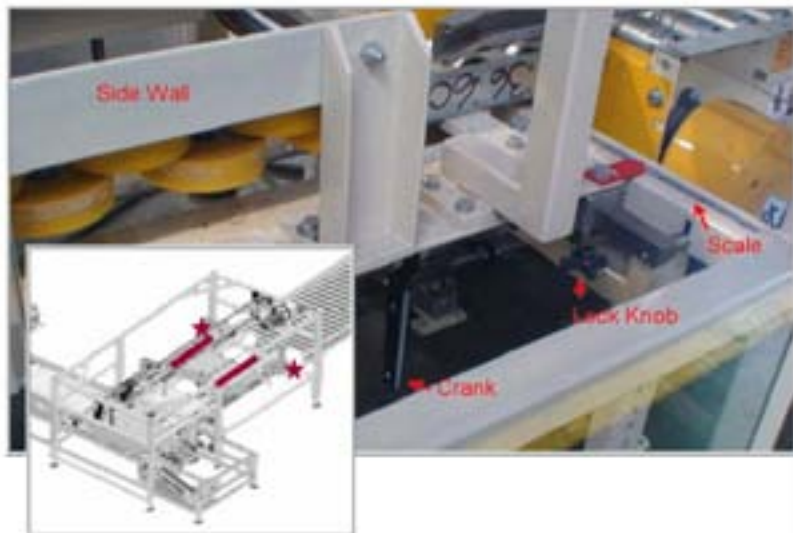
Screen Box



- This change involves selecting the appropriate box size on the Touch Screen.
- From the Main Menu, select Box Select.
- In the center of the screen, select the large, box number button.
- Use the up or down arrows to make the appropriate selection.
- Press ENT when finished.
- Press Back to Control.

Side Compression – Right	21	21	22-1/4	22-1/4	25	25	25-1/2
Side Compression – Left	21	21	22-1/4	22-1/4	25	25	25-1/2

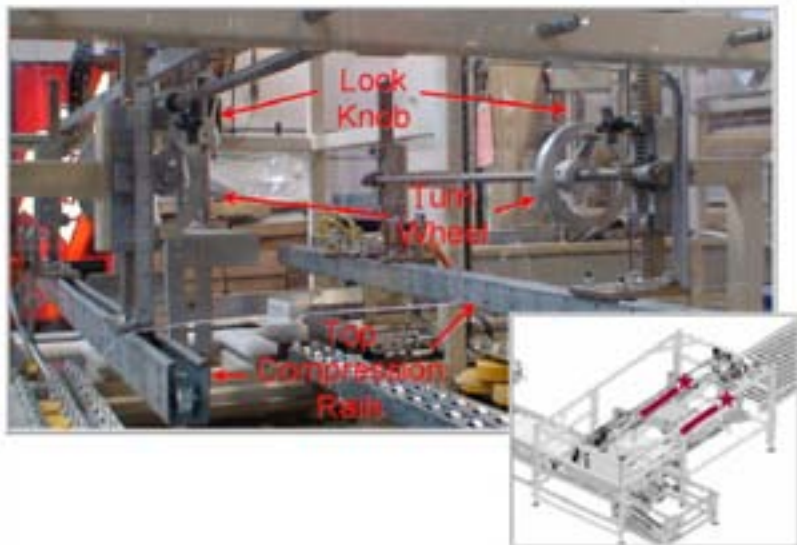
34 Side Compression



- This change moves the entire side wall system of the Sealer – the frame, upper and lower wheel rails, and the yellow wheel rails.
- Changes MUST be done to both the LEFT and RIGHT sides.
- Loosen the Lock Knob.
- Using the Crank Handle, adjust to the desired scale setting.
- Re-tighten the Lock Knob.

Top Compression – Right	2-1/4	3-1/2	3-1/4	5-3/4	3	6-1/8	6-1/2
Top Compression – Left	1-3/4	3-1/2	3	5-3/4	3	6-1/8	6-1/2

35 Top Compression

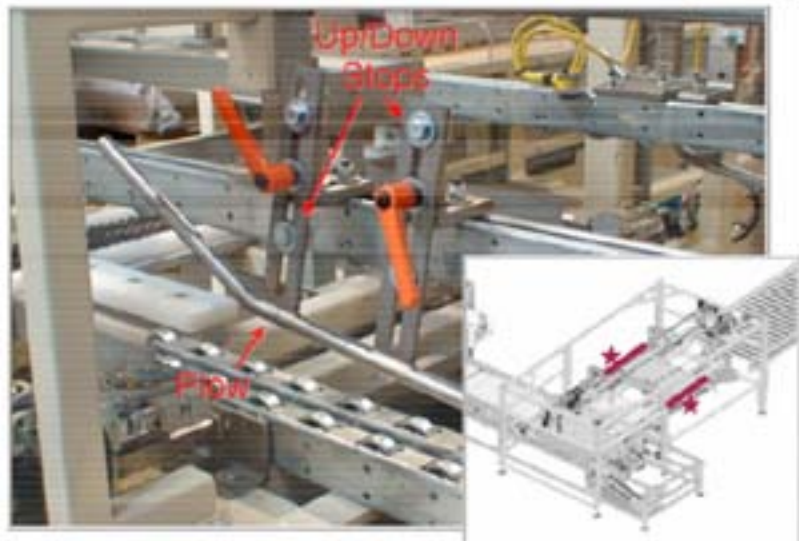


- This change moves the top compression rails of the Sealer up or down.
- Changes MUST be done to both the LEFT and RIGHT sides.
- Loosen the Lock Knob.
- Using the Turn Wheel, adjust to the desired scale setting.
- Re-tighten the Lock Knob.

Top Plows - Right	Up	Up	Down	Down	Down	Down	Down
Top Plows - Left	Up	Up	Down	Down	Down	Down	Down

36

Top Plows



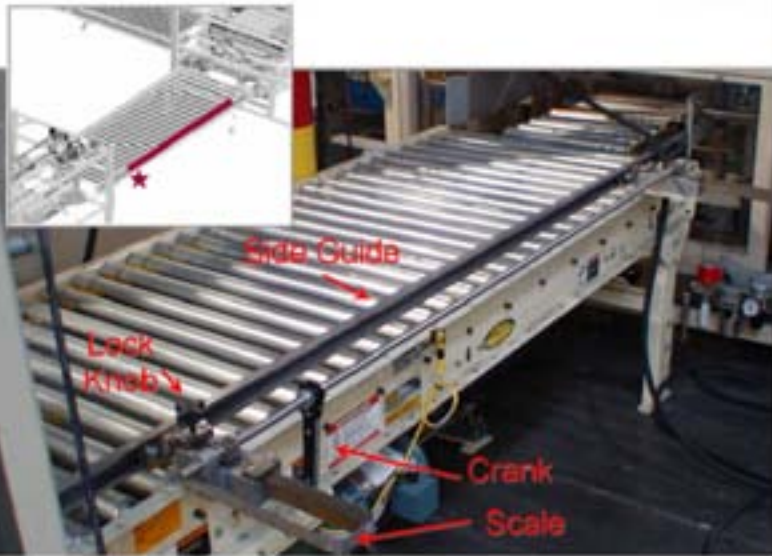
- This change moves the plows on each side of the Sealer up or down.
- Changes MUST be done to both the LEFT and RIGHT sides.
- STOPS are provided to set the UP and DOWN stop points.
- Loosen the Lock Handles.
- Slide to the UP or DOWN position.
- Re-tighten the Lock Handles.

37**Screen Box**

- This change involves selecting the appropriate box size on the Touch Screen.
- From the Main Menu, select Box Select.
- In the center of the screen, select the large, box number button.
- Use the up or down arrows to make the appropriate selection.
- Press ENT when finished.
- Press Back to Control.

38

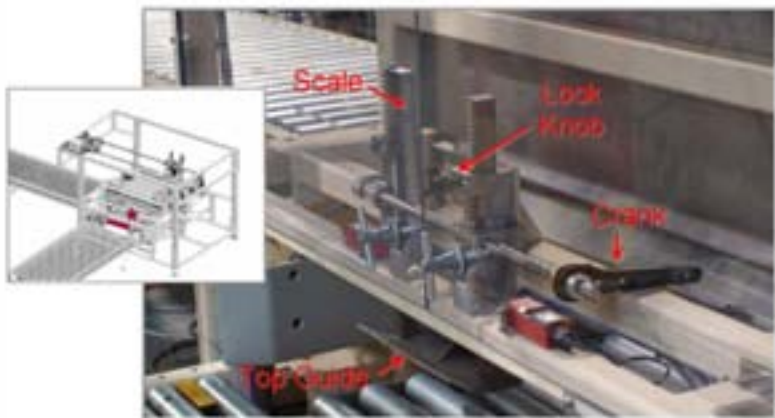
Side Guide



- This change moves the entire side guide rail on the Transfer Conveyor.
- Changes MUST be done to both the LEFT and RIGHT sides.
- Loosen the Lock Knob.
- Using the Crank Handle, adjust to the desired Scale setting.
- Re-tighten the Lock Knob.

39

Top Guide

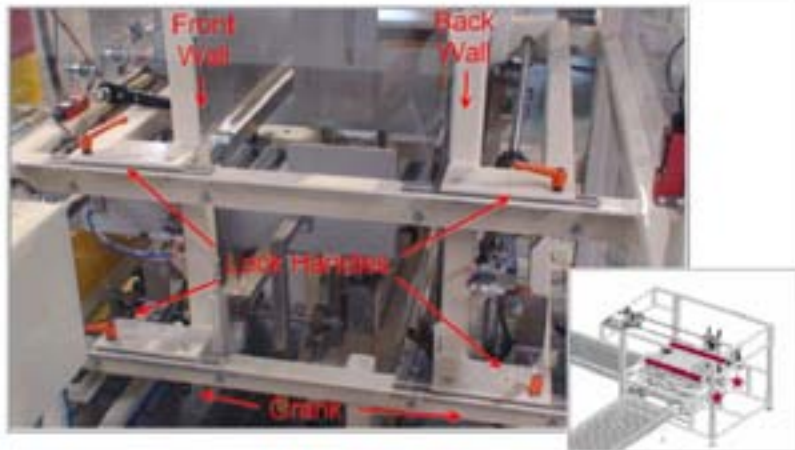


- This change moves the top guide plate of the Stacker.
- The top guide plate helps keep the box down on the conveyor – as it enters the Stacker.
- Loosen the Lock Knob.
- Using the Crank Handle, adjust to the desired Scale setting.
- Re-tighten the Lock Knob.

Front Wall	1-7/8	1-7/8	2-1/2	2-1/2	3-1/4	3-1/4	4
Back Wall	1-1/4	1-1/4	2-1/2	2-1/2	3-1/4	3-1/4	4

40

Front & Back Wall

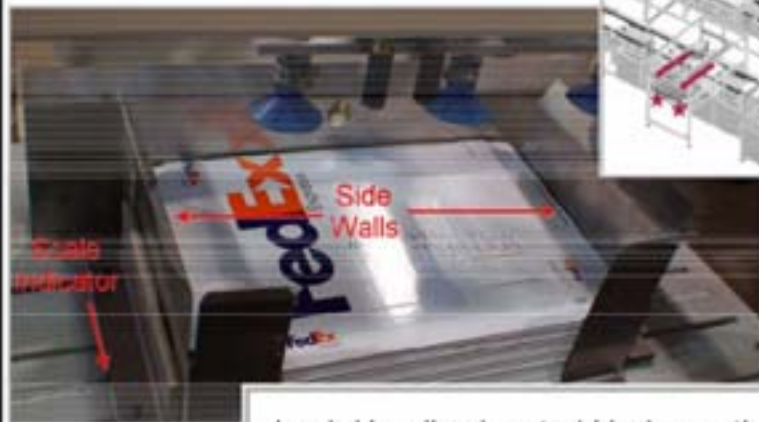


- This change moves the entire vertical Front and Back Walls of the Stacker.
- BOTH Front and Back MUST be adjusted correctly.
- Loosen the Lock Handles.
- Using the Crank Handles, adjust to the desired Scale setting.
- Re-tighten the Lock Handles.

Side Wall – Left	2-1/2	2-1/2	3-1/8	3-1/8	6-1/2	6-1/2	6-1/2
Side Wall – Right	2-1/2	2-1/2	3-3/4	3-3/4	6-3/4	6-3/4	6-3/4

41

Side Wall

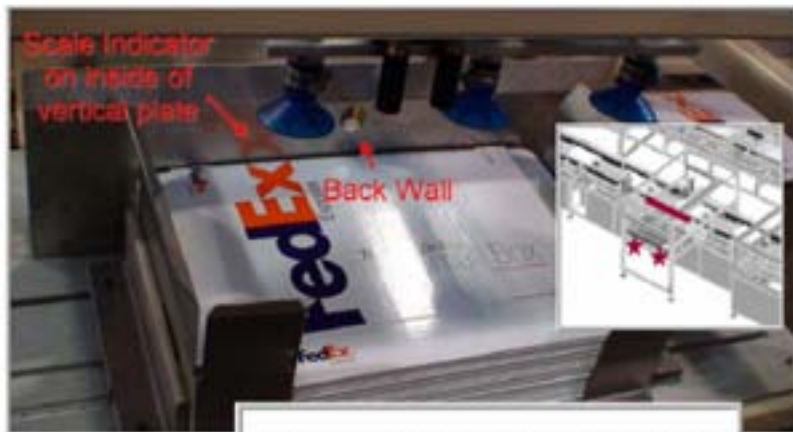


Lock Handles located Underneath

- This change moves the side walls of the Pick & Place Product Holder.
- LEFT and RIGHT walls MUST be adjusted correctly.
- Loosen the Lock Handles.
- Slide and adjust to the desired Scale setting.
- Re-tighten the Lock Handles.

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Back Wall



Lock Handles located Underneath

- This change moves the back wall of the Pick & Place Product Holder.
- Loosen the Lock Handles.
- Slide and adjust to the desired Scale setting.
- Re-tighten the Lock Handles.