



Manual Installation System Flexco® XP™ Staple Fastener



Safety, Operation, and Maintenance Manual



WARNING

Improper use of this tool can result in serious bodily injury! This manual contains important information about product function and safety. Please read and understand this manual BEFORE operating the tool. Please keep this manual available for other users and owners before they use the tool. This manual should be stored in a safe place.

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Limited Warranty

Flexco warrants to the original purchaser that this product is free from defects in material and workmanship, and agrees to repair or replace, at Flexco's option, any defective product within 1 year from the date of purchase. This warranty is not transferable. It only covers damage resulting from defects in material or workmanship, and it does not cover conditions or malfunctions resulting from normal wear, neglect, abuse, accident or repairs attempted or made by other than our regional repair center or authorized warranty service center.

To obtain warranty service, return the product at your expense together with proof of purchase to Flexco or a Flexco authorized distributor.

Introduction

Role of Applicator

The Manual Staple Applicator is designed to be used with Flexco® XP™ Staple Fasteners.

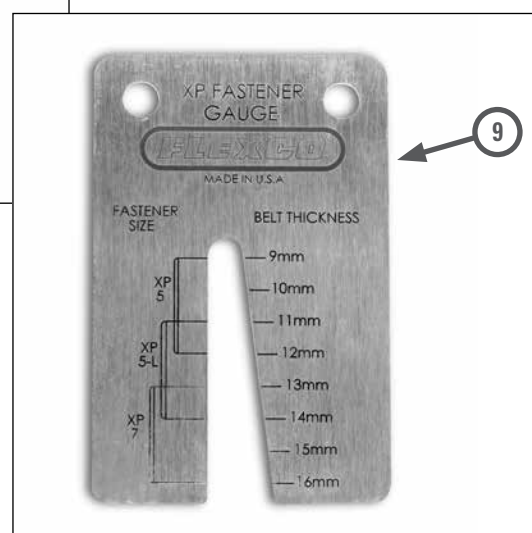
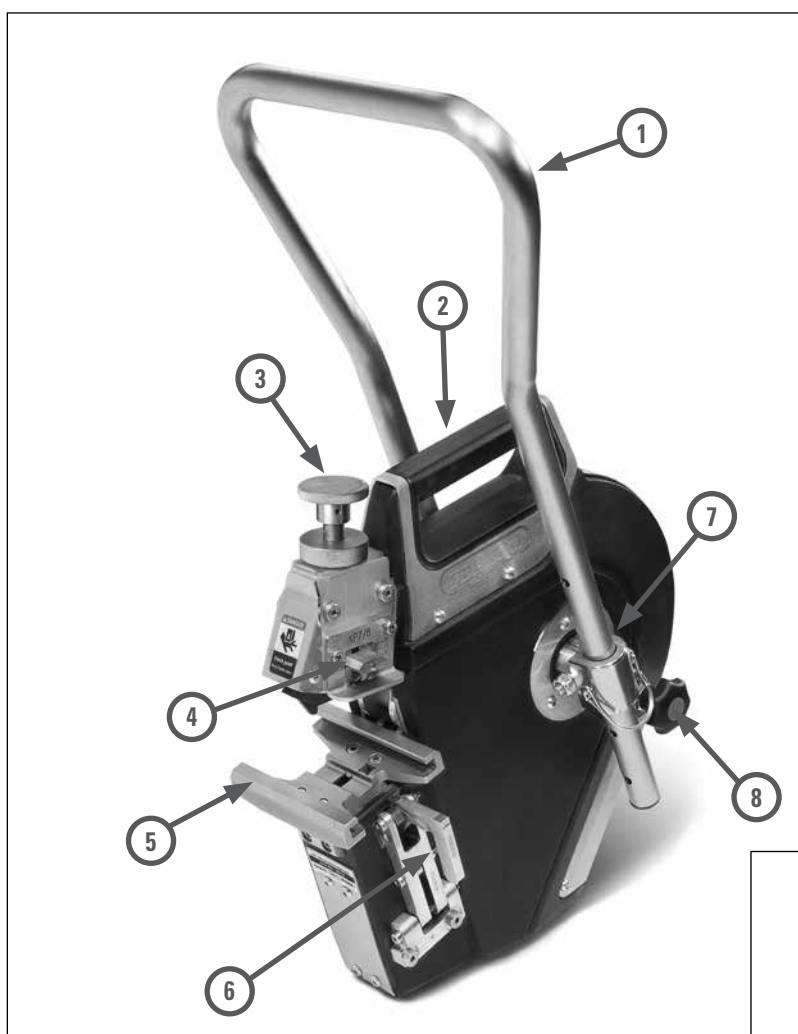
Precision Built

Flexco tools are precision-built tools designed for precise, high volume installation. These tools will deliver efficient, dependable service when used correctly and with care. As with any tool, for best performance, the manufacturer's instructions must be followed. Please study this manual before operating the tool and understand the safety warnings and cautions. The instructions on installation, operation, and maintenance should be read carefully, and the manual kept for reference.



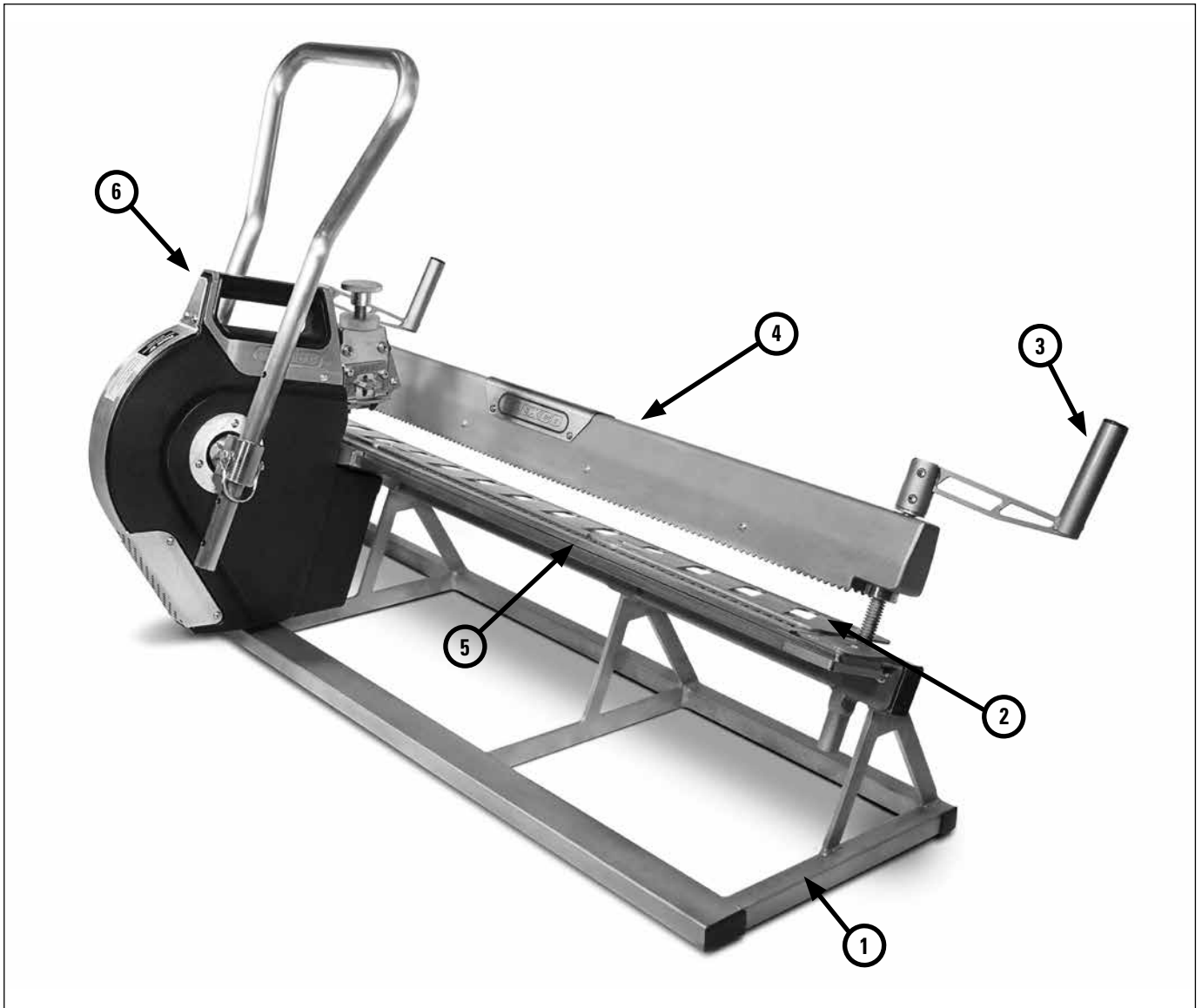
System Components

Flexco® XP™ Manual Staple Applicator	
1. Advance/setting handle	6. Advance mechanism lever
2. Carrying handle	7. Handle length adjustment pin
3. Fastener compression adjustment knob and lock	8. Handle lock
4. Integrated belt thickness gauge	9. Stand-alone belt thickness gauge
5. Mounting bracket	



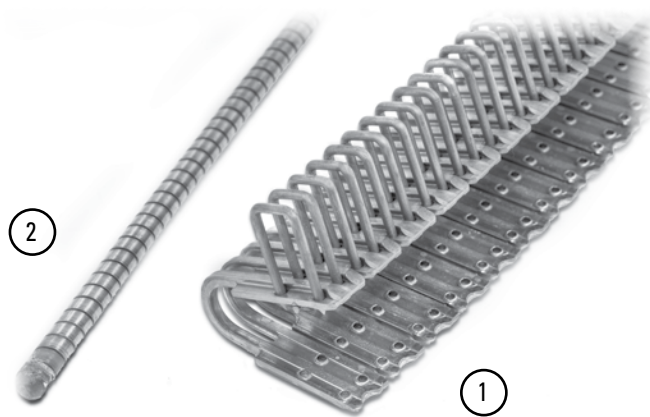
System Components

Flexco® XP™ Staple Tool Frame	
1. Frame	4. Clamp bar
2. Belt guide plate	5. Bed
3. Clamp bar handle	6. Manual staple applicator

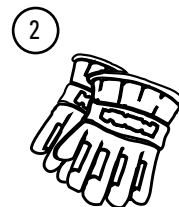
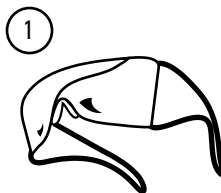


System Components

Flexco® XP™ Staple Fasteners
1. Fastener Strips
2. Hinge Pin



Protective Equipment
1. Safety Glasses
2. Gloves
3. Hearing Protection
4. Safety Shoes



General Safety Rules – Save These Instructions

Signal words

“DANGER” indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury. The signal word is limited to the most extreme situations.

“WARNING” indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

“CAUTION” indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices.

International Safety Symbol



This international safety symbol is used to identify and call attention to specific safety matters.

Safety Information

To Avoid Severe Personal Injury or Property Damage, read carefully and understand the following Safety Precautions.

1. WORK AREA SAFETY

DANGER

Never repair conveyors before applying OSHA Lock-Out/Tag-Out protocols, see 29 CFR 1910.147(a)(1) (i).

Do not allow bystander, visitor, or children in work area during tool operation.

WARNING

Store tools outside the reach of children and untrained persons. Tools are dangerous in the hands of unskilled users.

CAUTION

Keep work area clean and well lit. Clutter and dark areas invite accidents.

2. PERSONAL PROTECTIVE EQUIPMENT

WARNING

EYE PROTECTION which conforms to ANSI specifications and provides protection against flying particles both from the FRONT and SIDE should ALWAYS be worn by the operator and others in the work area. Eye protection is required to guard against flying debris, which could cause severe eye injury.

The employer and/or user must ensure that proper eye protection is worn. Eye protection equipment must conform to the requirements of the American National Standards Institute, ANSI Z87.1 and provide both frontal and side protection. NOTE: Non-side shielded spectacles and face shields alone do not provide adequate protection.

CAUTION

HEARING PROTECTION will be required in some environments. For example, the working area may include exposure to noise level which can lead to hearing damage. The employer and user must ensure that any necessary hearing protection is provided and used by the operator and others in the work area.



General Safety Rules

CAUTION

HEAD PROTECTION – Some environments will require the use of head protection equipment. When required, the employer and user must ensure that head protection conforming to ANSI Z89.1 is issued.

FOOT PROTECTION – Safety footwear should always be worn. Operators must be protected against falling tools, stepping on nails, and slippery conditions.

HAND PROTECTION – Safety gloves should always be worn against hot surfaces and other sharp objects.

3. PERSONAL SAFETY

WARNING

Do not use in explosive environments as this may result in serious personal injury.

Always handle the tool with care: 1.) Never engage in horseplay; 2.) Never pull the advance/setting handle unless the applicator is loaded onto the bed/frame base; 3.) Keep others a safe distance from the tool while tool is in operation as accidental actuation may occur, possibly causing injury; 4.) Never place a hand or any part of body in the downward path of the head applicator.

Do not operate the equipment if you are:

1.) Taking medication, feeling drowsy, feeling unwell or feeling tired; 2.) Under the influence of drugs or alcohol; 3.) Experiencing pain in hands, feet, lower back, or other parts of your body hurt or are injured. Failure to observe this precaution can result serious injury or even death.

When using the machine to perform work-related activities, you may experience discomfort in the hands, arms, shoulders, neck, or other parts of the body: 1) Adopt a comfortable posture while maintaining secure footing and avoid awkward off-balanced postures; 2) Changing posture during extended tasks may help avoid discomfort and fatigue; 3) In case of persistent or recurring symptoms, consult a qualified health professional.

When lending someone the equipment, make sure the safety instructions have been thoroughly read and fully understood by the person who is going to use the equipment.

4. INITIAL EQUIPMENT STATUS

DANGER

This manual tool is only designed to be used to install Flexco® XP™ staple fasteners. Do not operate manual applicator unless it is loaded onto the bed/frame base.

WARNING

At the beginning of each shift, conduct a TOOL OPERATION CHECK: 1) Remove all fasteners from tool before performing tool operation check; 2.) Do not use if there is damage to the tool.

At the end of operation, secure the tool to prevent unauthorized use. Never assume you will find the equipment in the same condition in which you left it.

CAUTION

Always carry the tool by the carrying handle. Lock advance/setting handle during transit.

Do not alter or modify this tool from the original design or function without approval from FLEXCO.

Always be aware that misuse and improper handling of this tool can cause injury to yourself and others.

5. MAINTENANCE SAFETY

CAUTION

REPLACEMENT PARTS – FLEXCO replacement parts are recommended. Do not use modified parts or parts which will not give equivalent performance to the original equipment.

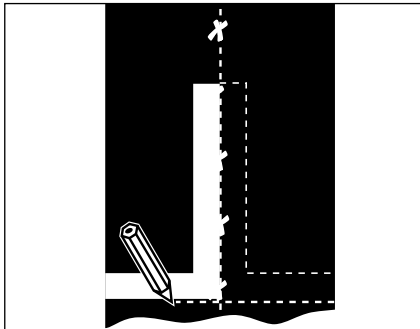
Operational Instructions

Tool Inspection

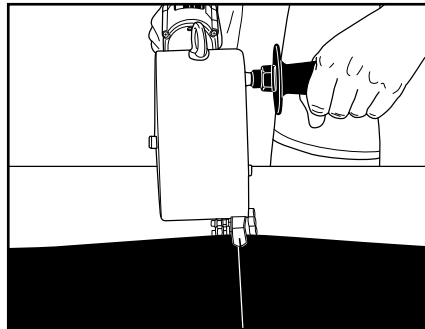
Examine the tool before applying fasteners.

- Clean any dirt build-up from the bed rails.
- Check the applicator to make sure the mounting brackets are free from dirt build-up.
- Check for any nicks in the bed that may interfere with the movement of the head. Should any nicks be found, they should be filed off before using the tool.
- Ensure applicator moves freely on bed. If not spray SLP5 GLIDE silicone lubricant on bed rails and mounting brackets for smoother operation.
- Inspect swipe arms, pusher tip and front/rear locator prongs for damage, chips or cracking. Replace damaged parts by authorized distributor.

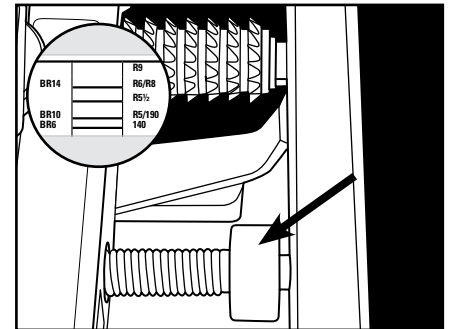
Belt Preparation



1. Square belt using centerline method.



2. Cut belt at least 4" (100 mm) behind old splice using Flexco belt cutting tool.



Installation Instructions *(continued)*

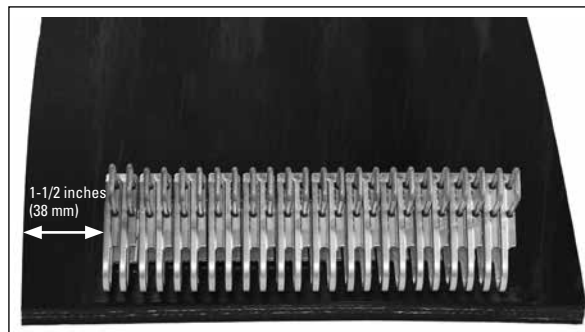
1. Select the Proper Fastener and Hinge Pin *(Continued)*

Flexco® XP Staple Belt Fastener Selection Chart					
A			B	C	D
Fastener Size	Belt Strength up to	Tension Rating up to	Belt Thickness Range	Recommended Min. Pulley Diameter	Max. Hinge Pin Diameter
	kN/m	P.I.W.			
XP5	2000	1150	9-12	350	8.1
XP5-L	2000	1150	11-14	350	8.1
XP7	3500	2000	13-15	500	10.3
XP8	3500	2000	15-18	500	11.0

c. Refer to the table above to select the proper size fastener.

Note: Use power applicator for XP8-L installation

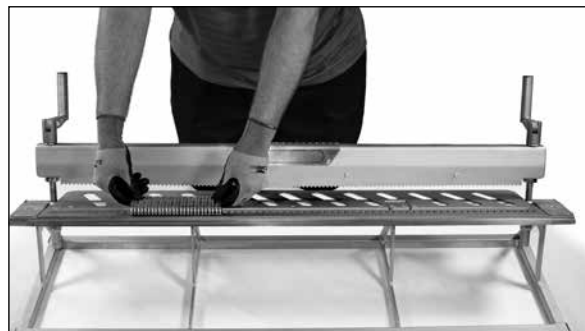
2. Load the Fasteners



a. Determine the exact number of fasteners needed for the belt by laying strips of fasteners across the belt end. Center fasteners so that approximately 1-1/2 inches (38 mm) of belt extends beyond the fasteners on each edge.



b. If a shorter fastener strip is needed, hold strip in one hand and carefully twist the strip with the other hand. Prior to placing in tool bed, trim any welded wire that remains at the end of the shortened strip so wire is flush with end fastener.



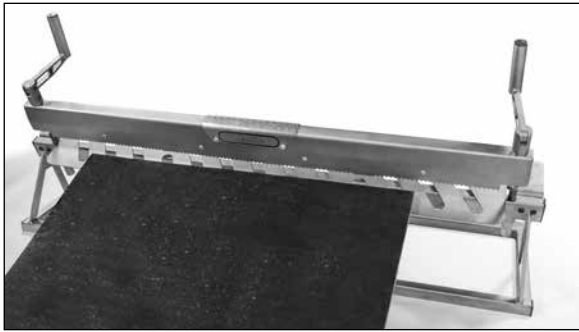
c. Center fastener strips within the bed.

- Insert the fasteners, with the open end of the fasteners toward the clamp bar. The heads (crowns) of the staple will fit into the slots in the bed.
- Use rocking motion to guide staple pairs (two staples per fastener plate) into each individual bed opening.
- Make sure there are no empty slots between fastener strips.

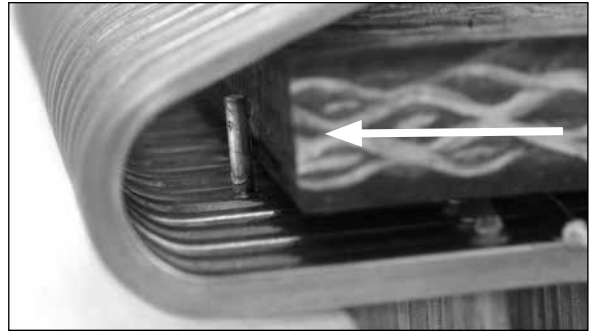
Installation Instructions *(continued)*

3. Load the Belt

BEST PRACTICE: Run crown side of staples on the carry side of the belt for optimal belt cleaner interface. Place carry side of belt facing down in frame for installation.



a. Place belt on belt guide plate and slide the belt end under the clamp bar and into the fastener.



b. Push the belt end into the fasteners until it is tight against the belt stops which are built into the fasteners. If belt end rises above the belt stop push the belt back so it is properly aligned.



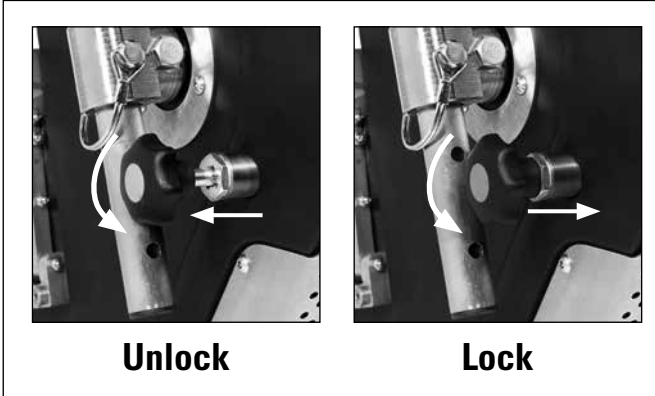
c. Center the belt so that approximately 1-1/2 inches (38 mm) of belt extends beyond the fasteners on each edge.



d. Secure the belt in this position by evenly tensioning the clamp bar handle on both ends of the clamp bar until the belt is securely clamped.

Installation Instructions *(continued)*

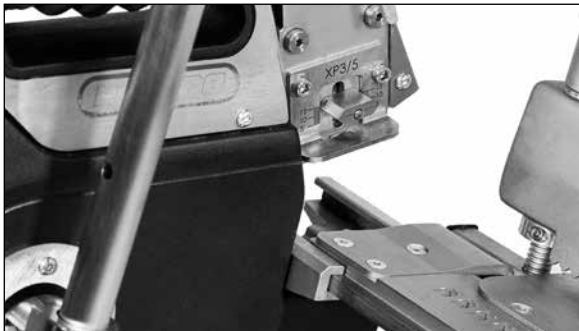
4. Load the Applicator



a. Unlock handle: Pull handle lock and turn 1/4 turn until knob stays in out position. Lock handle: Push handle forward to position “0” and turn handle lock 1/4 turn until knob snaps closed.



b. Adjust handle length: Remove retaining pin, slide handle to desired position, and reinsert retaining pin.



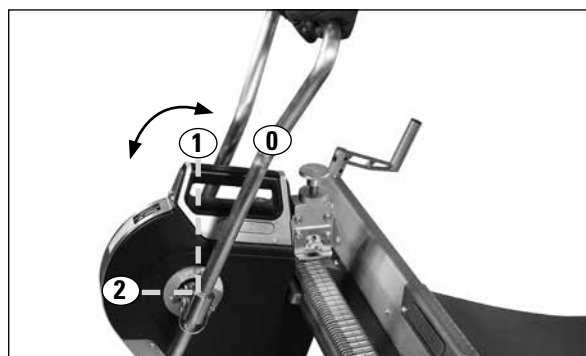
c. Attach the applicator to the bed by sliding the mounting brackets located on the applicator onto the left end of the bed rail. **Ensure the advance/actuation handle is in the forward position “0”.**



d. Push the applicator firmly to the right until the tool is solidly on the bed.



e. The applicator can be moved to the right either by continuing to push it across the bed or by using the handle to rapidly advance the head along the tool bed. The applicator can be moved to the left by disengaging the advance mechanism lever and pushing the head to the left.



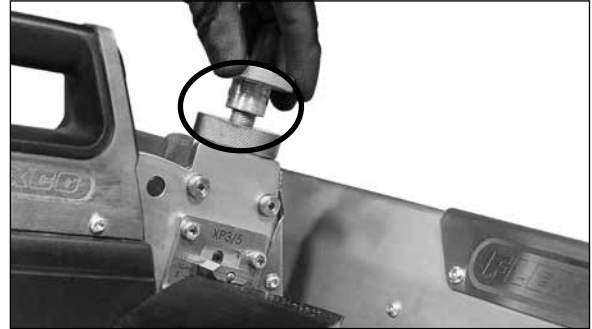
f. To use the rapid advance feature move the advance/actuation handle from start position “0” to position “1” and repeat to quickly advance the tool. Position the applicator over the first fastener in the fastener strip.

Installation Instructions *(continued)*

5. Set the Belt Thickness Gauge



a. Insert sample belt end into the belt thickness gauge located on the sides of the head. For an XP7 fastener use the left side belt gauge marked "XP7/XP8". For an XP5 or XP5-L fastener use the right side belt gauge marked "XP3/XP5".



b. Adjust the fastener compression knob until the belt just slides in the gauge opening. Turn clockwise to tighten. Turn counter-clockwise to loosen. Lock gauge in place by tightening the locking knob and remove belt from gauge. This setting is approximate.



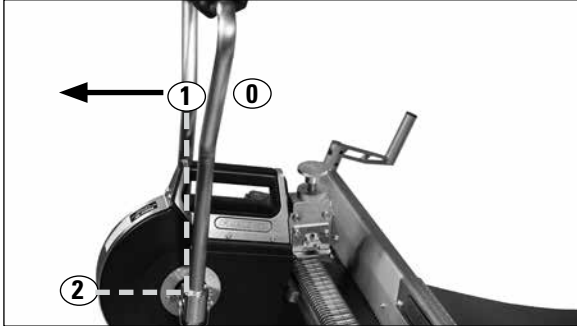
c. Use the stand alone belt thickness gauge as an alternative when a belt sample is not available. Correlate the belt thickness reference number marked on the gauge and adjust fastener compression knob accordingly.

BEST PRACTICE: Use XPLT XP-LOK™ Tensioner and XPLW-120 XP-LOK™ Belt Wire to prevent belt wave and ripple on rubber plied belting.

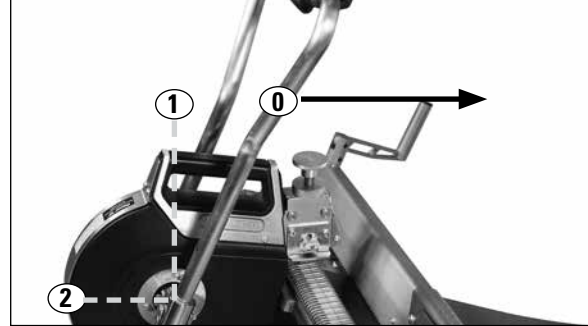
Always perform a test sample to verify proper belt thickness setting before completing final installation. A final adjustment may be necessary after the first few fasteners have been installed.

Installation Instructions *(continued)*

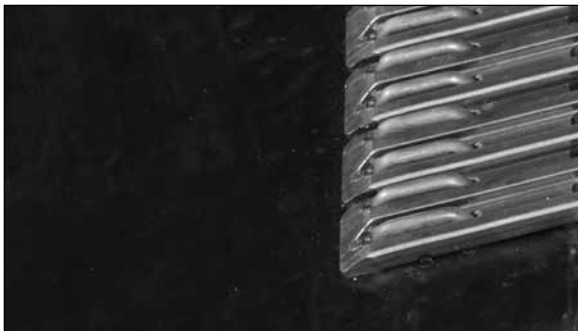
6. Fastener Installation



a. Move the advance/setting handle from position “0” to end of travel (position “2”). This action will result in the following sequence of events: advance applicator to the next fastener, compress top plate, drive staples, fold and swipe staple legs.

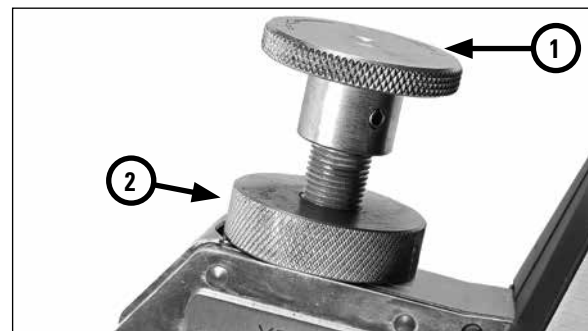


b. Push the advance/setting handle forward (position “0”). This action completes the drive cycle.



c. Examine the first fasteners to ensure that the staple legs are properly set. The leading edge of the fastener must be set tight on the belt to reduce the fastener's exposure to cleaner blades, skirt rubbers, and return idlers.

NOTE: To prevent belt ripple, do not over compress fasteners on the belt.



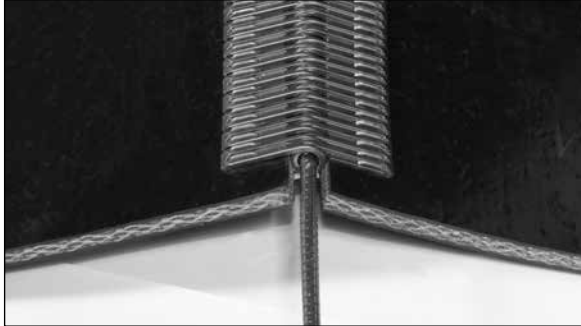
d. Because belt thicknesses may vary across the width of the belt, it is important to examine the fasteners as they are applied. If the top plate of the fasteners is not tight on the belt, adjust the compression by turning the adjustment knob (1) 1/4 turn to the right (clockwise), check and repeat as necessary. If the applied fasteners appear to create a "ripple" in the belt, the fasteners are over compressed. Adjust the compression by turning the adjustment knob (1) 1/4 turn to the left (counter-clockwise), check and repeat as necessary. Hold the compression position by tightening the adjustment knob's locking knob.(2).



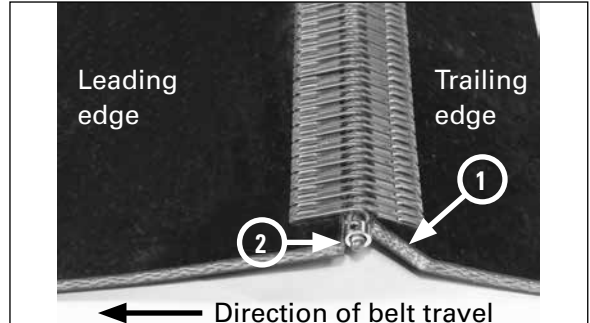
e. Loosen clamp bar, remove belt, and repeat the fastener installation procedure on the other belt end.

Installation Instructions *(continued)*

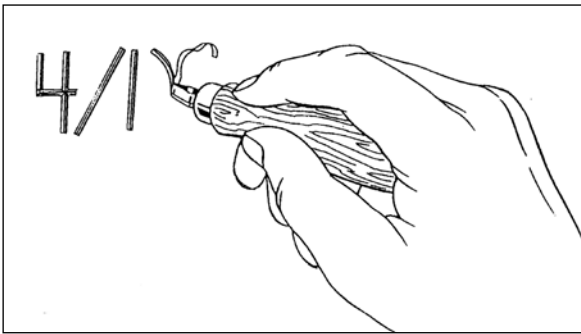
7. Complete the Splice



a. Insert the hinge pin. For ease of hinge pin insertion, overlap both belt ends. Tent both ends and start to join loops from one side. Insert hinge pin and continue to join the rest of loops.



b. Notch the trailing belt edge (1) and attach Flexco Hinge Pin Retaining Collars (2) to maintain proper hinge pin position.



c. Mark the splice date on the belt using the Flexco Belt Identification Tool or other comparable method and record it in your belt maintenance record.

8. Tool Transport

NOTE: When transporting the tool over any distance, it is recommended that the applicator be removed and carried separately. If you need to move the tool a short distance or reposition it, it can be carried. Take care to keep the tool level and use two people to move it as the weight may not be evenly distributed. Ensure that the advance/setting handle is locked during transit.

Troubleshooting

Problem	Cause	Correction
Pull advance/setting handle but applicator does not advance	<ol style="list-style-type: none">1. Advance mechanism lever was in disengage position2. Advance/setting handle was not pulled down to position "1" to complete advance cycle3. Advance/setting handle was not fully pushed forward (position "0") to engage advance mechanism4. Bed rails are dirty5. Advance mechanism lever spring was not in position or damaged (Rare)	<ol style="list-style-type: none">1. Engage advance mechanism lever2. Pull handle down to position "1"3. Push handle forward all the way to complete cycle4. Clean surfaces and spray SLP5 GLIDE silicone lubricant on bed rails and mounting brackets5. Adjust or replace spring
Staple legs are pushed up but staples are only partially bent over	<ol style="list-style-type: none">1. Operator did not pull handle to "position 2"	<ol style="list-style-type: none">1. Pull advance/setting handle down to position "2"
Staple legs are pushed up but staples are not bent over	<ol style="list-style-type: none">1. Damaged swipe arms2. Damaged swipe linkages	<ol style="list-style-type: none">1. Replace swipe arms by authorized distributor2. Replace swipe linkages by authorized distributor
Staple legs are pushed up but staples are not completely set	<ol style="list-style-type: none">1. Fastener compression was incorrectly set (under-compress)	<ol style="list-style-type: none">1. Adjust fastener compression by turning the adjustment knob ¼ turn to right (clockwise) and repeat as necessary
Belt has too much ripple or wave	<ol style="list-style-type: none">1. Fastener compression was incorrectly set (over-compress)2. Using rubber plied belting	<ol style="list-style-type: none">1. Adjust fastener compression by turning the adjustment knob ¼ turn to left (counter-clockwise) and repeat as necessary2. Use XPLT XP-LOK™ Tensioner and XPLW-120 XP-LOK™ Belt Wire to prevent belt wave and ripple
Cannot load applicator onto frame	<ol style="list-style-type: none">1. Pilot punch is in up position2. Mounting brackets are not aligned properly	<ol style="list-style-type: none">1. Push advance/setting handle to position "0" prior to loading onto frame2. Inspect and verify mounting brackets are properly installed