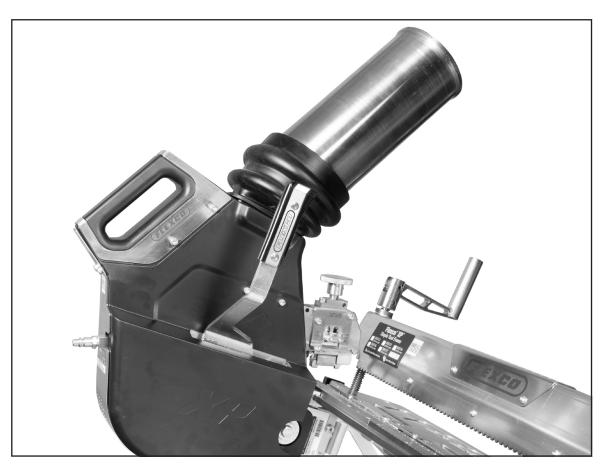


Pneumatic Flexco® XP™ Staple Fastener Installation System



Safety, Operation, and Maintenance Manual





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.

Patents: www.flexco.com/patents

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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 Pneumatic 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 fine power 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.

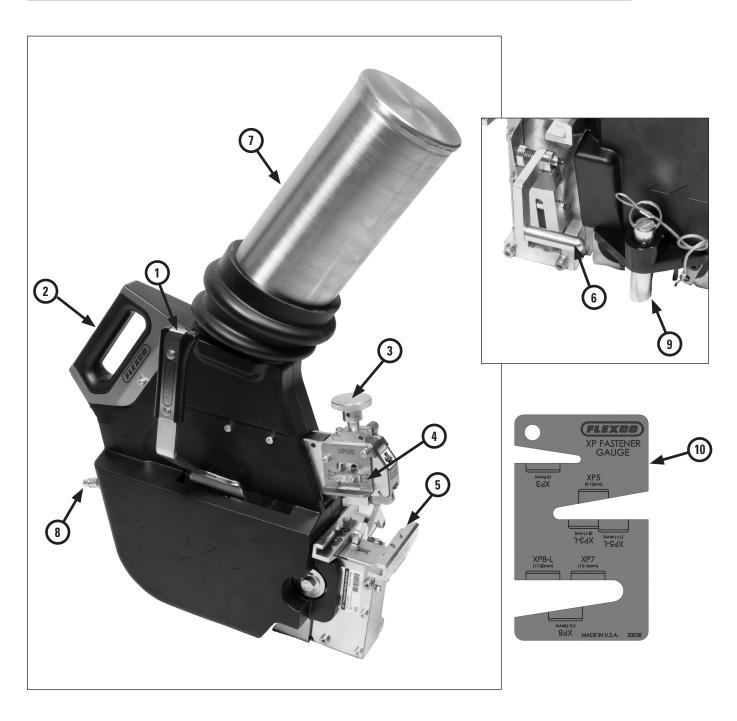
Flexco® XP™ Pneumatic Staple Applicator Specifications

Overall weight	28 kg (62 lbs)		
Overall dimensions	762 mm x 508 mm (30" x 20")		
Tool Air Fitting	Tool uses a 3/8" industrial shape designation male coupling. The airflow diameter should be .275" (7 mm) or		
	larger. The fitting must be capable of discharging tool air pressure when disconnected from the air supply.		
Operating Pressure	65 to 101 p.s.i. (4.5-7.0 bar)		
	Select the operating pressure within this range for best fastener performance.		
	DO NOT EXCEED THIS RECOMMENDED OPERATING PRESSURE.		
Air Consumption	Tool Requires 200 L/m (7 SCFM) of free air to operate at the rate of 20 fasteners per minute, at 5.6 bar		
	(80 PSI) - (where the free air pressure is at 1 bar (14.7 psia) and the temperature is at 22.2 C (72 F).		
Coupling	ISO 6150/B 8mm profile, 3/8" industrial shape designation quick release coupling		
Hose Length (included	7.6 meters (25 feet)		
with tool purchase)			
Air Flow Diameter	7 mm (.275") or larger.		



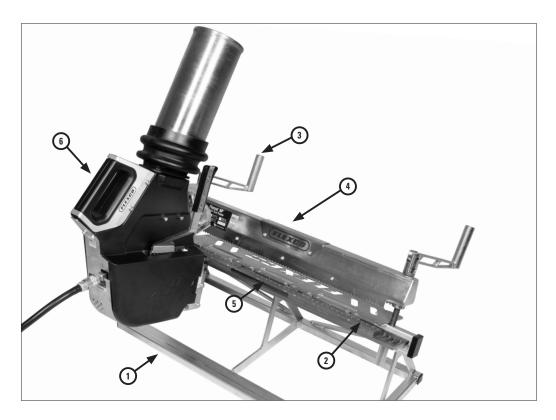
System Components

Flexco® XP™ Pneumatic Staple Applicator				
1. Advance/actuation handle	6. Advance mechanism lever			
2. Carrying handle	7. Pneumatic cylinder			
3. Fastener compression adjustment knob and lock	8. Air inlet: 3/8" Male quick release coupling			
4. Integrated belt thickness gauge	9. Two-Step Stop Pin			
5. Mounting bracket	10. Fastener Selection Gauge			



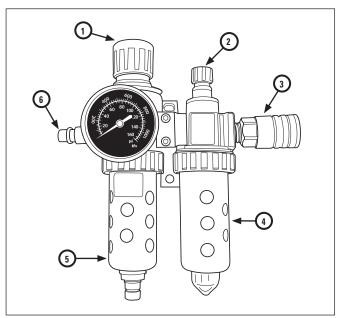
System Components (continued)

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



Regulator kit

- 1. Air pressure cap
- 2. Oil flow cap
- **3.** Air outlet ISO 6150/B 8 mm profile, 3/8" industrial shape designation, female coupling
- 4. Oiler
- 5. Filter
- **6.** Air inlet ISO 6150/B 8 mm profile, 3/8" industrial shape designation, male coupling

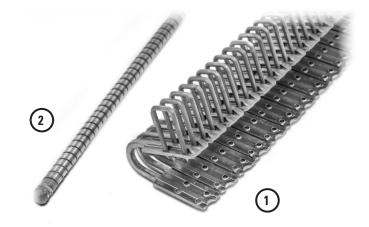




System Components (continued)

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

ADANGER

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.

AWARNING

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

ACAUTION

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

2. PERSONAL PROTECTIVE EQUIPMENT

AWARNING

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.

ACAUTION

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.

ACAUTION

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 and slippery conditions.

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



General Safety Rules (continued)

3. PERSONAL SAFETY AWARNING

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/actuation 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 or air cylinder.

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.

Never alter or remove safety devices.

Always disconnect air supply: 1.) Before making adjustments; 2.) When servicing the tool; 3.) When clearing a jam; 4.) When tool is not in use; 5.) When moving to a different work area, as accidental actuation may occur, possibly causing injury.

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.

Do not overreach. Keep proper footing and balance at all times to enable better control of the tool in unexpected situations. 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.

4. PNEUMATIC SAFETY

▲ DANGER

This tool is only designed to be used to install Flexco $^{\circ}$ XP $^{\circ}$ staple fasteners. DO NOT operate this tool when: 1.) Part of the tool or whole tool has been drenched in water or seawater; 2.) The operating pressure exceeds the pressure range prescribed.

Do not operate tool unless it is loaded onto the bed/ frame base.

AIR SUPPLY SOURCE: Use only clean regulated compressed air as a power source for this tool. NEVER USE OXYGEN, COMBUSTIBLE GASES, OR BOTTLED GASES, AS A POWER SOURCE FOR THIS TOOL AS TOOL MAY EXPLODE.

FITTINGS: A male plug is installed on the tool which is free flowing and which will release air pressure from the tool when disconnected from the supply source.

HOSES: Air hoses should have a minimum of 150 p.s.i. (10.6 kg/cm²) working pressure rating or 150 percent of the maximum pressure that could be produced in the air system. The supply hose should contain a fitting that will provide "quick disconnecting" from the male plug on the tool.

REGULATOR: A pressure regulator with an operating pressure of 0-125 p.s.i. $(0-8.79 \text{ kg/cm}^2)$ is required to control the operating pressure for safe operation of this tool. Do not connect this tool to air pressure which can potentially exceed 200 p.s.i. (14 kg/cm^2) as tool may fracture or burst, possibly causing injury.

General Safety Rules (continued)

AWARNING

Use the Flexco pneumatic tool only for the purpose for which it was designed.

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.

Do not store tool in a cold weather environment to prevent frost or ice formation on the tool's operating valves and mechanisms that could cause tool failure.

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.

Never leave a tool unattended with the hoses attached.

ACAUTION

Always carry the tool by a handle.

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.

NOTE: Some commercial air line drying liquids are harmful to "O"-rings and seals – do not use these low temperature air dryers without checking compatibility.

5. OPERATIONAL SAFETY

AWARNING

Do not use supply sources which can potentially exceed 200 p.s.i.g. as tool may burst, possibly causing injury.

6. MAINTENANCE SAFETY

ADANGER

Always disconnect air supply when servicing the tool or before making adjustments.

ACAUTION

Do not operate this tool if it does not contain legible WARNING LABELS.

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

Set-Up Information

Operating Pressure:

65 to 101 p.s.i./4.5-7.0 bar

Select the operating pressure within this range for best fastener performance. **DO NOT EXCEED THIS RECOMMENDED OPERATING PRESSURE.**

Air Supply-Pressure and Volume:

Air volume is as important as air pressure. The air volume supplied to the tool may be inadequate because of undersize fittings and hoses, or from the effects of dirt and water in the system. Restricted air flow will prevent the tool from receiving an adequate volume of air, even though the pressure reading is high. The results will be slow operation, mis-drives or reduced driving power. Before evaluating tool problems for these symptoms, trace the air supply from the tool to the supply source for restrictive connectors, swivel fittings, low points containing water and anything else that would prevent full volume flow of air to the tool.

Air Consumption:

Tool Requires 200 L/m (7 SCFM) of free air to operate at the rate of 20 fasteners per minute, at 5.6 bar (80 PSI) - (where the free air pressure is at 1 bar (14.7 psia) and the temperature is at 22.2 C (72 F).

Filter:

Dirt and water in the air supply are major causes of wear in pneumatic tools. A filter will help to get the best performance and minimum wear from the tool. The filter must have adequate flow capacity for the specific installation. The filter has to be kept clean to be effective in providing clean compressed air to the tool. Consult the manufacturer's instructions on proper maintenance of your filter. A dirty and clogged filter will cause a pressure drop which will reduce the tool's performance.

Lubrication:

Frequent, but not excessive, lubrication is required for best performance. Use synthetic based Air Tool Lubricant. Do not use detergent oil or additives as these lubricants will cause accelerated wear to the seals in the tool, resulting in poor tool performance and frequent tool maintenance. Only a few drops of oil at a time is necessary. Too much oil in the tool will cause "seal swell" and the tool may not function properly. **To maintain tool performance, always use air regular/filter and keep the tool lubricated.**

Cold Weather Operation:

For cold weather operation, near and below freezing, the moisture in the air line may freeze and prevent tool operation. We recommend the use of winter formula air tool lubricant or permanent antifreeze (ethylene glycol) as a cold weather lubricant. CAUTION: Do not store tools in a cold weather environment to prevent frost or ice formation on the tools operating valves and mechanisms that could cause tool failure. NOTE: Some commercial air line drying liquids are harmful to "O"-rings and seals – do not use these low temperature air dryers without checking compatibility.

Hoses:

Air hoses should have a minimum of 150 p.s.i. (10.6 kg/cm^2) working pressure rating or 150 percent of the maximum pressure that could be produced in the air system. The supply hose should contain a fitting that will provide "quick disconnecting" from the male plug on the tool.

Supply Source:

Use only clean regulated compressed air as a power source for this tool. **NEVER USE OXYGEN, COMBUSTIBLE GASES, OR BOTTLED GASES, AS A POWER SOURCE FOR THIS TOOL AS TOOL MAY EXPLODE.**

Pneumatic Integrity:

Do not use a tool that leaks air or does not function properly. Notify your nearest FLEXCO representative if your tool continues to experience functional problems.

Operational Instructions (continued)

Guidelines

1. When connecting and disconnecting couplings, make sure dirt, dust, and other foreign substances do not enter or attach to coupling and hoses.

2. Do not trip over the hoses.

3. Make sure there are no jobsite obstacles.

4. Be cautious not to injure your back while lifting the tool.

5. Replace with new hoses when they are worn or leaking.

Tool Inspection

Examine the tool before applying fasteners.

- Clean any dirt build-up from the bed rails.
- Check the pneumatic 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.

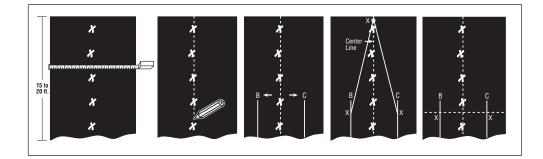
Belt Fastener Selection

Flexco® XP Staple Belt Fastener Selection Chart								
Fastener Size	Belt Strength up to	Tension Rating up to	Belt Thickness After Skive		Recommended Min. Pulley Diameter		Max. Hinge Pin Diameter	
Size	kN/m	PIW	mm	in.	mm	in.	mm	in.
XP3	1400	800	6-9	1/4 – 11/32	250	10	5.5	7/32
XP3-L	1400	800	8-11	5/16 - 7/16	250	10	5.5	7/32
XP5	2000	1150	9-12	11/32 - 15/32	350	14	8.1	5/16
XP5-L	2000	1150	11-14	7/16 - 9/16	350	14	8.1	5/16
XP7	3500	2000	13-16	1/2 - 5/8	500	20	10.3	13/32
XP8	3500	2000	15-18	19/32 - 23/32	500	20	11.0	7/16
XP8-L	3500	2000	17-20	21/32 - 25/32	500	20	11.0	7/16

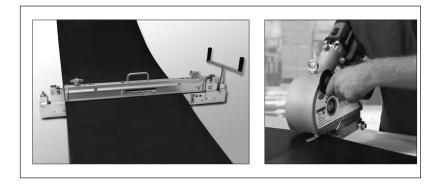


Belt Preparation

1. Square belt ends using the centerline method.



2. Cut each belt end at the square lineCut belt at least6" (150 mm)behind old splice using Flexco belt cutting tool

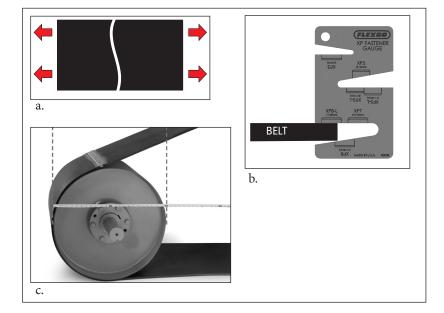


- 3. Skive each belt end
 Use fastener selection gauge to determine how much to skive if only one fastener size is available
 Leave a minimum of 1/16" (1.5mm) cover after skive
 - Skive to correct fastener size/width



Product Selection

- 1. Select the correct fastener size and material for the application (refer to fastener selection chart on page 11).
 - a. Use belt strength or tension rating
 - b. Measure belt thickness after skive
 - Use the fastener selection gauge to determine correct fastener size
 - c. Determine minimum pulley diameter (90° or greater wrap)



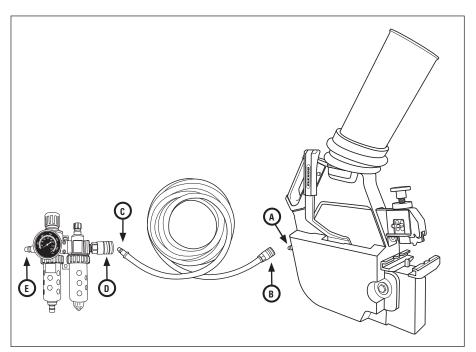
2. Select the correct size hinge pin and material for the application.

NOTE: Never cut the hinge pin ends shorter unless the ends are re-welded. This can cause the armor cable to loosen.

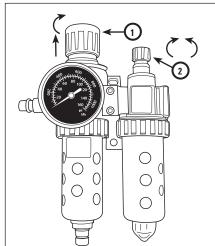




Tool Setup



- 1. Connect air supply to the tool
 - a. Connect A to B
 - b. Connect C to D
 - c. Connect E to air supply



- **2.** Adjust the air pressure on air control assembly
 - Mount air control assembly in upright position. Fill oiler with pneumatic tool oil.
 - To adjust air pressure, pull cap "1" up and turn clockwise to raise pressure, turn counter clockwise to lower pressure.
 - To adjust oil flow, turn cap "2" clockwise until tight, then turn cap counterclockwise one turn for proper adjustment.

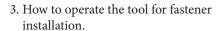
Basic Tool Operations

- 1. How to move the applicator tool on the bed.
 - Slide the tool to the right by continuing to push it across the bed.
 - Slide the tool to the left by disengaging the advance mechanism lever and pushing the tool to the left.

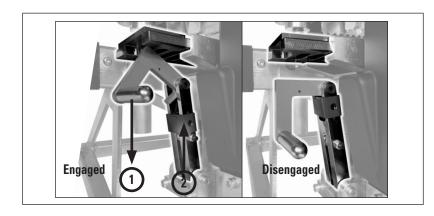
NOTE: Ensure the advance/actuation handle is in the start position or the tool will not slide. (See next step.)

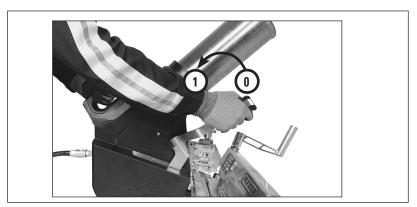
- 2. How to rapid advance the tool.
 - To use the rapid advance feature, move the advance/actuation handle from start position "0" to position "1" and repeat to quickly advance the tool.

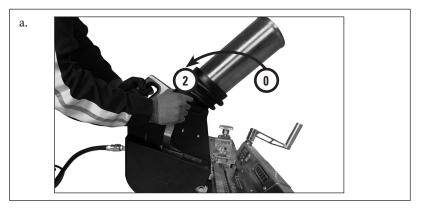
NOTE: If tool binds during advance – spray bed with SLP5 GLIDE.

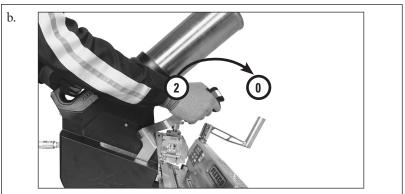


- Position tool so it is one H-hole before first fastener plate.
 - a. Move the advance/actuation handle from position "0' to end of travel (position "2").
 - b. Push the advance/actuation handle forward (position "0"). This action completes the drive cycle.











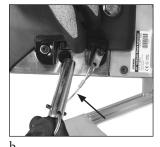
Basic Tool Operations (continued)

- 4. Two-Step Feature (Optional) may help with challenging installs to minimize belt compression for better installation results.
 - a. Lift protective cover and insert the stop pin. Move handle as directed above to drive the staples through the plates without swiping them.
 - b. Remove stop pin and store. Fully cycle the tool to complete the installation.









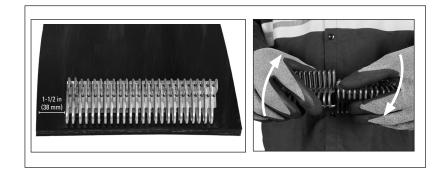


Best Practices

- 1. Use XPLT XP-LOK™ Tensioner and XPLW-120 XP-LOK™ Belt Wire to prevent belt wave and ripple on rubber plied belting.
- 2. 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. The leading edge of the fastener must be set tight on the belt **Do not over compress**.

Installation Instructions

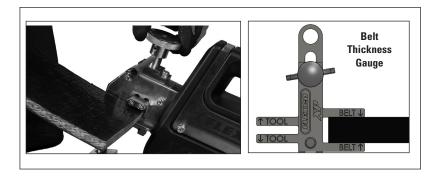
- 1. Determine the exact number of fasteners needed for the belt width.
 - Lay fastener strips across the belt width. Center fasteners so that approximately 1-1/2 inches (38 mm) of belt extends beyond the fasteners on each edge.
 - If a shorter fastener strip is needed, hold strip in one hand and carefully twist the strip with the other hand.

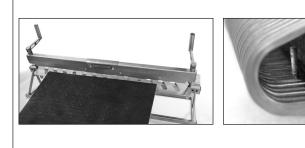


- 2. Load the fastener strips in the tool bed.
 - Without XP-LOKTM Make sure the fastener strips are **centered** on the tool bed.
 - With XP-LOKTM Make sure the fastener strips are placed on the right side of the tool bed leave 2-3 empty H-holes.
 - Make sure the fastener strips are fully seated down in the tool bed.



- 3. Set the applicator tool for correct belt thickness **after skive**.
 - Use scrap belt from conveyor that matches each belt end or use the actual belt on the conveyor (Alternatively: use Belt Thickness Gauge if available).
 - Use the correct side of the belt thickness gauge for the corresponding fastener size.
 - Set tool for every belt end and check thickness on ends and middle of the belt. (Belt thickness may vary due to wear and manufacturer).
- 4. Load the belt into the fasteners.
 - Slide the belt on the extended guide plate into the fastener belt stops.
 - Make sure the belt is centered within the fasteners.
 - Tighten clamp bar evenly and securely.

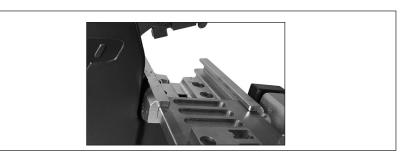






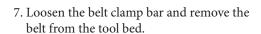
Installation Instructions (continued)

- 5. Load applicator tool on the tool bed.
 - Ensure the advance/actuation handle is in the start position.

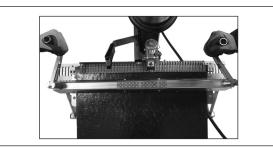


- 6. Install fasteners with the applicator tool.
 - Make sure applicator tool cycles completely.
 - Examine the first fasteners to ensure good fastener compression.

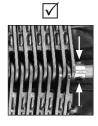
NOTE: If belt is worn the belt thickness gauge on the tool may need to be adjusted tighter for the thinner areas.

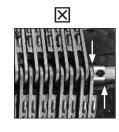






- 8. Repeat steps for the other belt end.
- 9. Bring both belt ends together and insert the hinge pin.
 - Make sure the fastener plates match up on both belt ends Correct fastener matching allows the splice to flex without restriction while troughing.



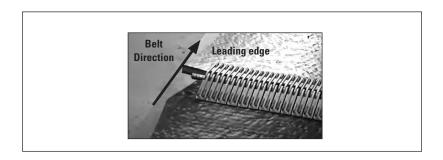


Make sure to set the applicator tool for the correct belt thickness on the other belt end

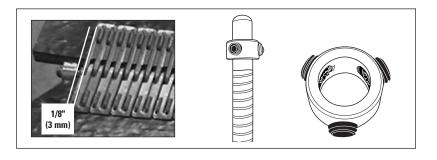


Installation Instructions (continued)

- 10. Notch the **trailing edge** of the belt only.
 - Notching is important to prevent the belt ends from catching on structure if belt mistracks.
 - Only notch the trailing edge so the leading edge can protect the splice from belt mistracking damage.



- 11. Install hinge pin retaining collars on each end of the splice.
 - Leave a **minimum of 1/8" (3 mm)** spacing from edge of fastener plate to edge of collars.
 - This spacing allows the splice to flex without restriction while troughing.





Troubleshooting

Problem	Cause	Correction
Pull advance/actuation handle but applicator does not advance	1. Advance mechanism lever was in disengage position 2. Advance/setting handle was not pulled down to position "1" to complete advance cycle 3. Advance/setting handle was not fully pushed forward (position "0") to engage advance mechanism 4. Bed rails are dirty 5. Advance mechanism lever spring was not in position or damaged (Rare)	1. Engage advance mechanism lever 2. Pull handle down to position "1" 3. Push handle forward all the way to complete cycle 4. Clean surfaces and spray SLP5 GLIDE silicone lubricant on bed rails and mounting brackets 5. Adjust or replace spring
Functioning but weak or low speed	Air supply restriction Tool dry, lack of lubrication	Check air supply equipment Use Air Tool Lubricant
Pull advance/actuation handle down but applicator does not actuate	Compressed air source unit is not turned ON Hose is not connected Couplings are not connected properly Compressed air source relief valve pressure is set too low	Turn ON compressed air source unit Connect hose Check if couplings have been connected properly Adjust pressure to recommended level
Staple legs are pushed up but staples are only partially bent over	Operator did not wait for handle feedback at end of the pull (position "2") before returning handle to start position "0"	Pull advance/actuation handle down to position "2" and wait for handle feedback prior to releasing
Tool stops during return stroke	Fastener compression was incorrectly set (over-compress)	Adjust fastener compression by turning the adjustment knob ¼ turn to left (counter-clockwise) and repeat as necessary
Staple legs are pushed up but staples are not completely set	Fastener compression was incorrectly set (under-compress)	Adjust fastener compression by turning the adjustment knob ¼ turn to right (clockwise) and repeat as necessary
Belt has too much ripple or wave	Fastener compression was incorrectly set (over-compress) Using rubber plied belting	Adjust fastener compression by turning the adjustment knob ¼ turn to left (counter-clockwise) and repeat as necessary Use XPLT XP-LOK™ Tensioner and XPLW-120 XP-LOK™ Belt Wire to prevent belt wave and ripple
Staple legs are pushed up but staples are not bent over	Damaged swipe arms Damaged swipe linkages	Replace swipe arms by authorized distributor Replace swipe linkages by authorized distributor
Cannot load applicator onto frame	Pilot punch is in up position Mounting brackets are not aligned properly	Push advance/actuation handle to position "0" prior to loading onto frame Inspect and verify mounting bracket are properly installed
Tool leaks air	O-ring or Gasket is cut or cracked Hose is cut or cracked Loose internal hose connections	Replace O-ring Replace hose Secure internal hose connections

