

PolySprint[™]

Finger Puncher

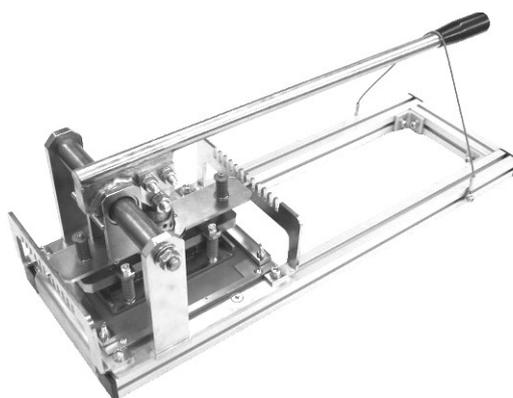
FP70-10-50

FP70-10-100

FP120-10-50

FP120-10-100

Operation Manual



-  Follow this manual when using Nitta *PolySprint*[™] Finger Puncher.
-  Please pass this manual to *PolySprint*[™] Finger Puncher users for a safe and trouble-free operation.

NITTA CORPORATION

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1. Safety Precautions

Please go over these safety precautions carefully to secure a correct and safe operation of the *PolySprint™* Finger Puncher FP120 (70) -10-100 (50)

 **WARNING** Disregarding instructions marked with this symbol may lead to death or serious injury.

 **CAUTION** Disregarding instructions marked with this symbol may lead to injury or property damage.

WARNING

 **WARNING** Do not use the *PolySprint™* Finger Puncher for any application other than the intended purpose of making belts endless.

Use for any unintended purpose may cause an unexpected accident.

 **WARNING** A person with experience and skills should always operate, maintain and inspect the *PolySprint™* Finger Puncher.

Handling by an inexperienced person may cause injury.

 **WARNING** Do not dismantle or remodel the *PolySprint™* Finger Puncher under any circumstance. Please note the Finger Puncher uses a sharp blade.

Dismantling or remodeling the *PolySprint™* Finger Puncher may cause physical injury.

For repair or inspection, please contact Nitta, your local distributor or agent in your area.

 **WARNING** Use a dry cloth for cleaning the *PolySprint™* Finger Puncher. To prevent fire, do not use alcohol, benzene, thinner or any other inflammable solvent.

 **WARNING** Put the wire on the cutting lever surely, and take the cutting lever to the carrying of this machine.

In that case, please have the position where the machine becomes the horizontal.

Failure to do this may cause injury.

 **WARNING** This machine is not intended for the physical, sensory or mental handicapped persons use. They must have the supervision of a person responsible for their safety, if they use this machine.

Failure to do this may cause injury.

 **WARNING** Do not allow the child to handle this machine. Keep this machine in the place where child's hand does not reach.

Failure to do this may cause injury.

1. Safety Precautions- Continued-

Caution



Do not use the *PolySprint*™ Finger Puncher under the following conditions:

- Under a corrosive gas environment
- Under an ambient temperature of 5°C or below
- Under an ambient temperature of 40°C or above
- Under a high humidity environment (humidity surpassing 85%)
- In places exposing the puncher to steam or water drops



To prevent physical injury, use the *PolySprint*™ Finger Puncher on a stable working bench or table that will not collapse.



Before using the *PolySprint*™ Finger Puncher, be sure to inspect the puncher in accordance with the procedure described on page 12 to help prevent injury.

2. Confirmation of Product

Thank you for choosing our *PolySprint*™ Finger Puncher FP120(70)-10-100(50).



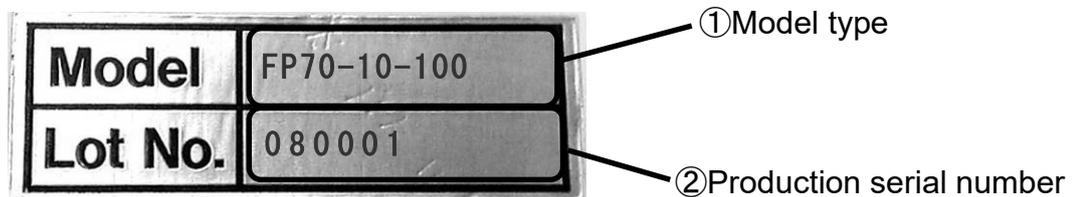
Check that the product is exactly what you have ordered. Use of the wrong product may cause injury.

2-1) Confirmation of Product

Confirm the following items upon accepting delivery of your order. Contact Nitta, your local distributor or agent in your area if you find any deficiency or defect in your item.

- ① Are descriptions on the face plate the same as those of your order item? Please confirm the model type.
- ② Has the product been damaged during transportation?
- ③ Has a nut or screw slackened?

2-2) How to Read Face Plate



2-3) Inquiries

When making inquiries, please inform our sales representative of the model type and the production serial number.

3. Specifications

3-1) Outline of Finger Puncher

- ① *PolySprint™* Finger Puncher is exclusively designed for manually punching finger spliceable Nitta *PolySprint™* belts with a cutting blade assembly.
- ② *PolySprint™* Finger Puncher is compatible with the following endless specifications:

Type	Finger geometry	Belt wide	Belt thickness
FP70-10-50	70mm length×10mm pitch	50mm or less	6mm or less
FP70-10-100		100mm or less	
FP120-10-50	120mm length×10mm pitch	50mm or less	
FP120-10-100		100mm or less	

3-2) Major Specifications of Finger Puncher

Type	FP70-10-50, FP120-10-50	FP70-10-100, FP120-10-100
Outer Dimension	180 mm W x 611 mm Lx 208 mm* H *When the lever is horizontal.	230 mm W x 611 mm Lx 208 mm* H *When the lever is horizontal.
Weight	9.0kg	10.5kg

4. Use Environment

Ambient Temperature	5-40°C (no condensation)
Ambient Humidity	15-85%RH
Place of Use	Indoors (free from dust, water)
Environment	No inflammable, combustible or corrosive gas; no steam



CAUTION

Use the *PolySprint™* Finger Puncher under the above conditions.

5. Storage Environment

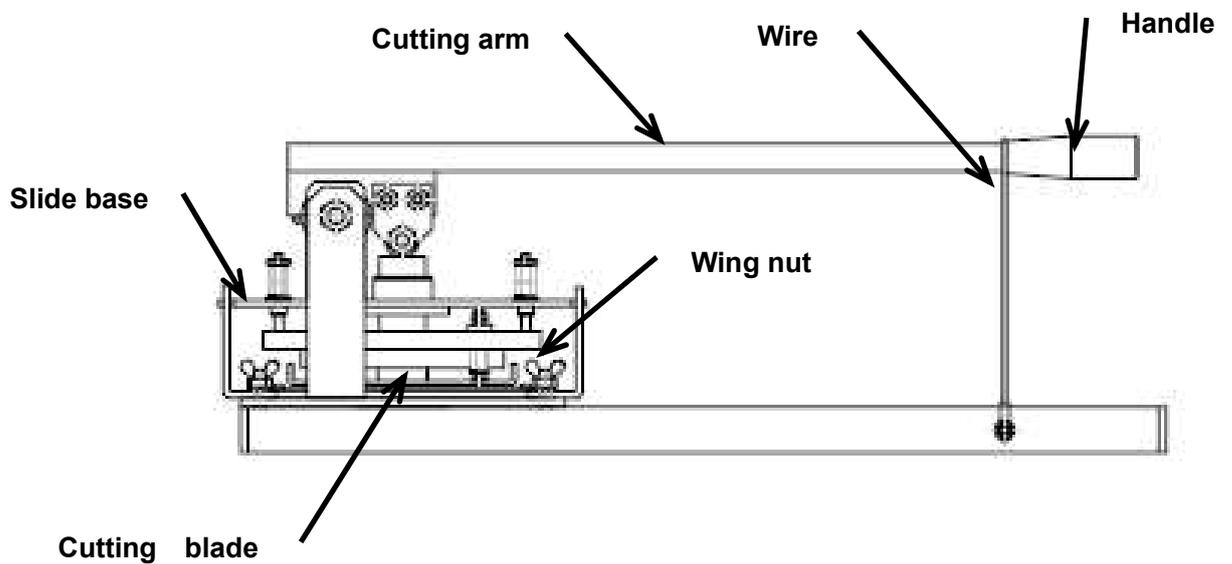
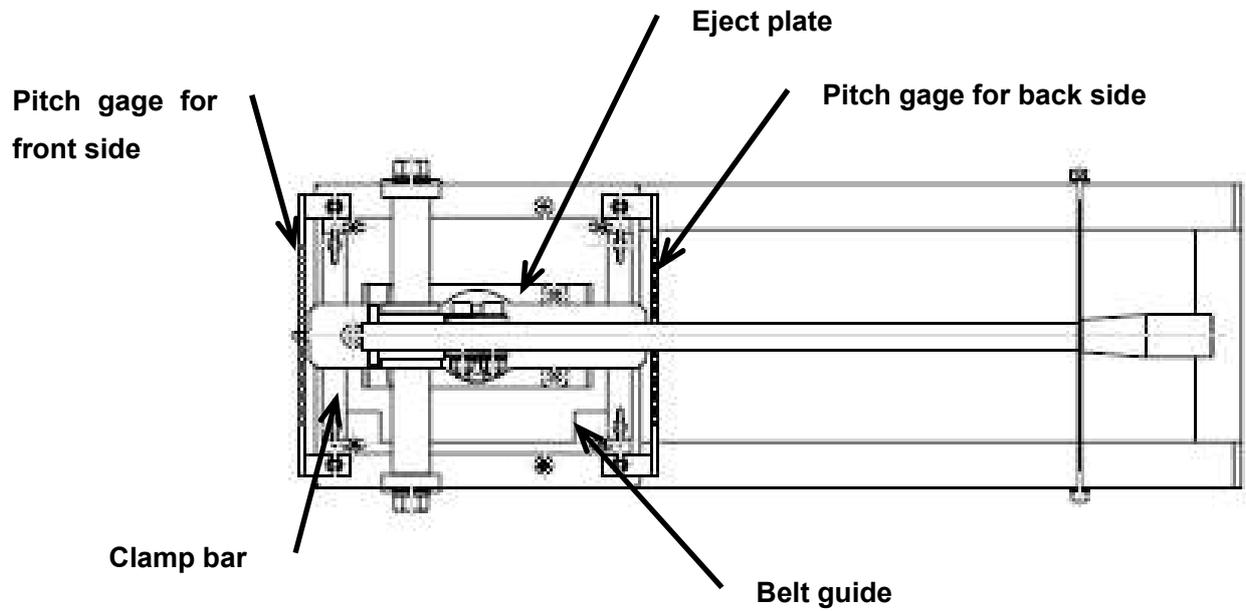
Ambient Temperature	5-40 °C (no condensation)
Ambient Humidity	15-85%RH
Place of Use	Indoors (free from dust, water)
Environment	No inflammable, combustible or corrosive gas; no steam



CAUTION

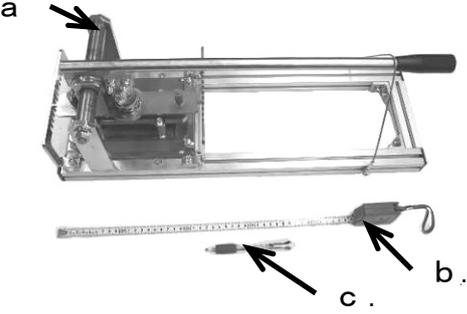
When the *PolySprint™* Finger Puncher is not in use, it should be stored under the above conditions.

6. Name of Each Part

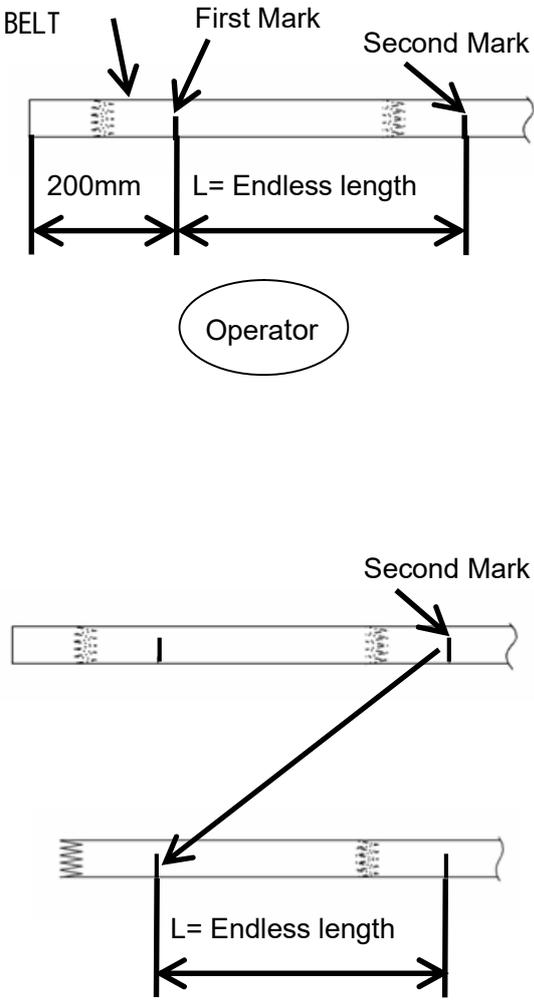


7. How to Make a Finger Joint

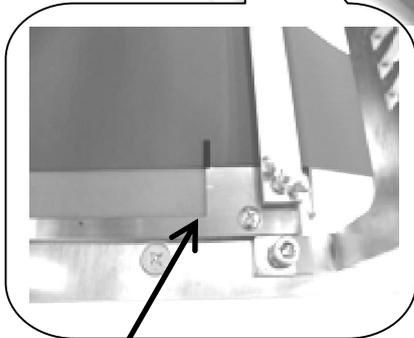
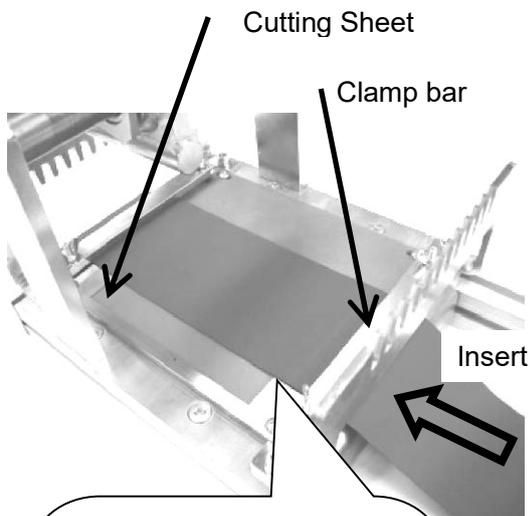
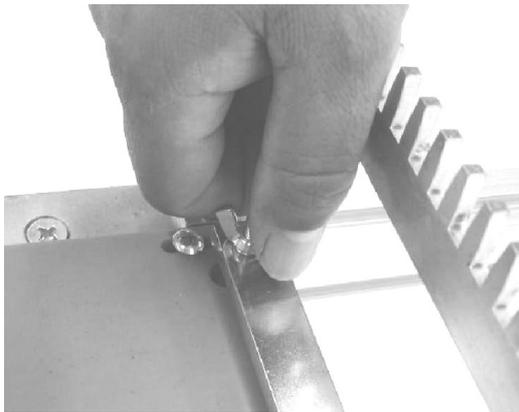
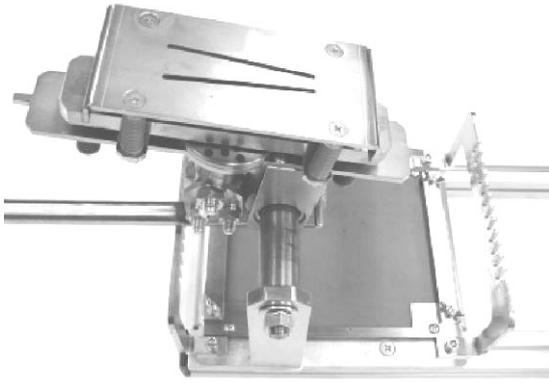
7-1) Required Tool (tool prepared in advance)

	<ul style="list-style-type: none">a. Finger Puncherb. Tape Measure or Ruler (for measurement of belt length)c. Ballpoint Pen or Felt Pen (for marking)
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7-2) How to Measure Belt Length

	<ul style="list-style-type: none">① Set the belt along a tape measure or ruler and make the first mark 200mm from the edge of the belt. (See diagram to left.)② Based on the first mark, make a second mark at the ending point of the required belt length. (Put both marks on the front side, i.e. on the operator side.)③ When consecutively making endless belts, obtain required belt length and from the second mark made at the preceding finger joint, measure out the required belt length and make another mark. Repeat the above process. By doing this, punching can always be made at the right position and there will be no wasted belt.
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7-3) How to Make a Finger Joint



Fit the fast mark with the corner of the belt guide.

① The cutting arm is turned forward.



Please never feel after the eject plate. It is likely to injure it by the cutting blade.

② The wing nuts which are the fixation of the clamp bar are loosened.

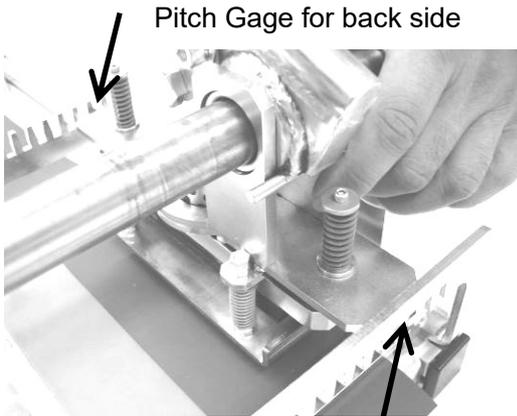
The wing nuts are loosened until the belt passes under the clamp bar.

③ Insert the belt between the eject plate of the finger puncher and the cutting sheet, and line up the first mark on the belt with the corner of the belt guide, and the wing nuts are tightened, and the belt are fixed.

※ Insert the belt along the belt guide.

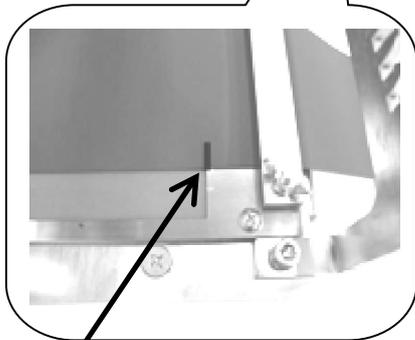
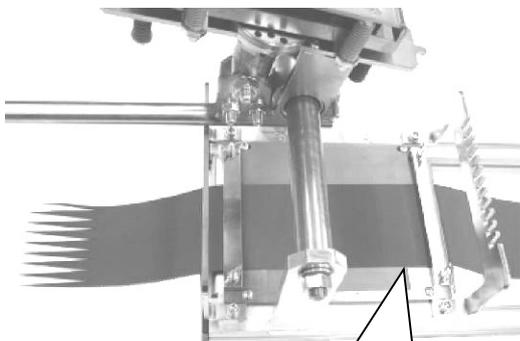
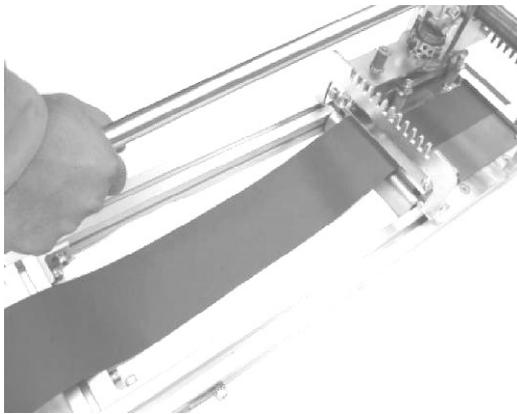
※ tighten the wing nuts evenly.

7-3) How to Make a Finger Joint - Continued-



Pitch Gauge for back side

Pitch Gauge for back side



Fit the fast mark with the corner of the belt guide.

④ The cutting arm is rotated to the cutting seat side, and Insert the protrusions of the slide base to the ditches of the pitch gauge.

⑤ Hold the finger puncher in place with one hand and push down the handle with the other hand to punch the belt.

※ After it is confirmed that the protrusions of the slide base inserted the ditches of the pitch gauge, the belt is punched.

⑥ The wing nuts are loosened, and line up the second mark on the belt with the corner of the belt guide, and the wing nuts are tightened, and the belt are fixed.

⑦ The operation described to ④ -⑥ is done again, and punch out the belt to obtain the required endless length.

※ When punching a long belt, you can insert the rear-edge of the belt from the other side of the finger puncher to avoid pulling the entire belt through the finger puncher.

8. Troubleshooting

If there are any finger joints which are not cut out properly when a belt is punched, follow the directions described in the “Maintenance” section on pages 9-11.

If the problem is not solved after following these directions, please contact Nitta, your local distributor or agent in your area for advice.

9. Maintenance

9-1) How to Perform Maintenance

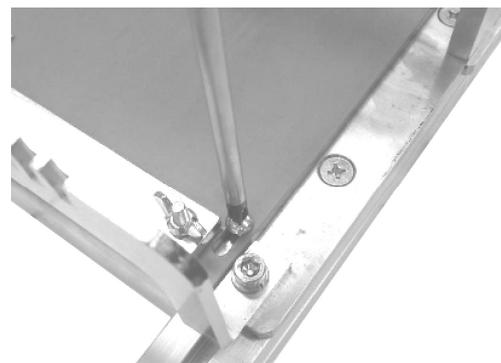
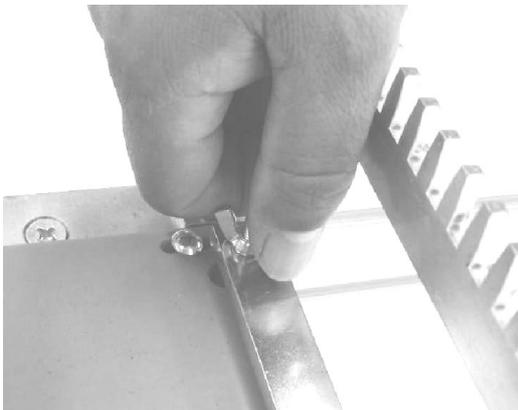
You can change the position of the cutting sheet and both sides of the cutting sheet can be used. Adjusting the position may solve any problems where a portion of the finger joint is not cut out.

The cutting sheet is consumable. Specify the cutting sheet for Finger Puncher when you order a new one.

9-2) Required Tool

+ Driver

9-3-1) How to change the position of the cutting sheet



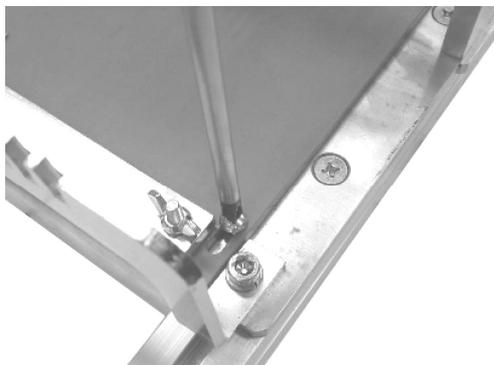
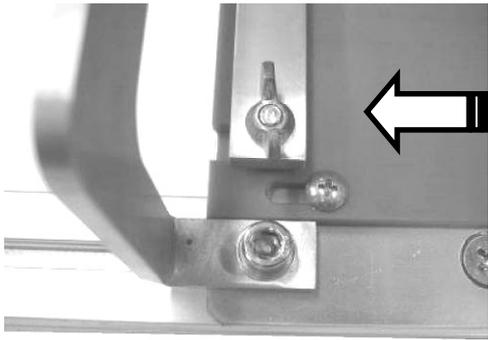
① The wing nuts which are the fixation of the clamp bar are loosened.

※ Do not pull out wing nuts. Just loosening wing nuts are enough.

② The truss screws which are the fixation of the cutting sheet are loosened.

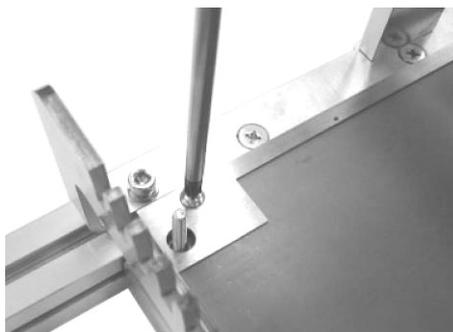
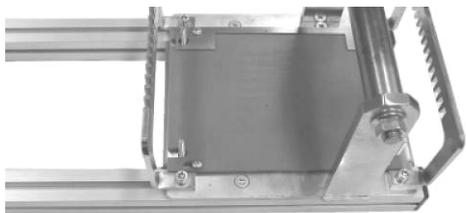
※ Do not pull out truss screws. Just loosening truss screws are enough.

9-3-1) How to change the position of the cutting sheet - Continued-



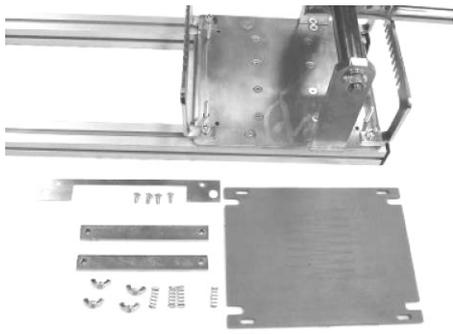
- ③ Change the position of the cutting sheet by sliding it forward or back in the hole on the cutting sheet.
 - ※ At the time of shipping, the cutting sheet is set in the center of the hole on the cutting sheet.
 - ※ The picture at left shows an example of sliding the cutting sheet forward in the hole.
 - ※ Both sides of the cutting sheet can be used and it can be set in any of the three positions; forward, center and back.
 - ※
- ④ Securely tighten the four loosened truss screws.
 - ※ Fit the corner of the cutting sheet with the corner of the belt guide.

9-3-2) How to reverse the cutting sheet

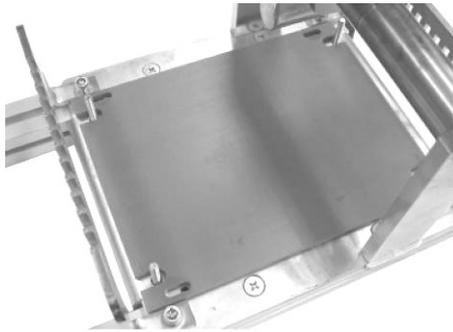


- ① Loosen the wing nuts, and the wing nuts, the clamping bar, and springs are detached.
 - ※ Be careful not to lose them taken out of the finger puncher.
- ② The truss screw which is the fixation of the cutting seat is detached.

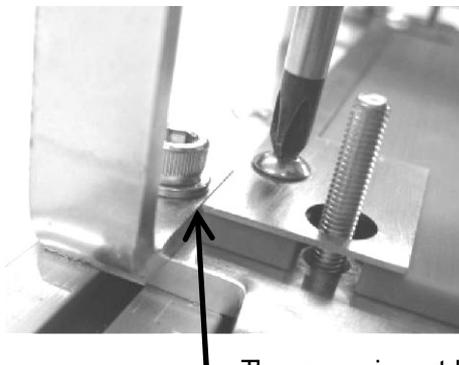
9-3-2) How to reverse the cutting sheet -Continued-



③ Detached the belt guide and the cutting seat.



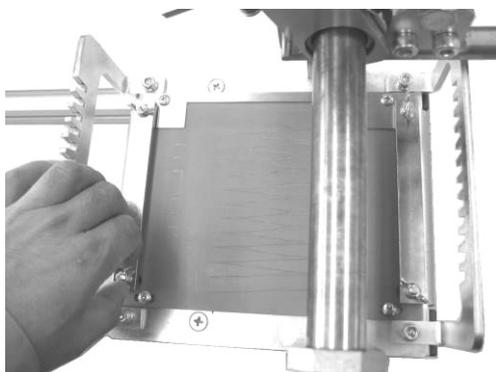
④ Reverse the cutting sheet to turn the unused side up and insert it back to the finger puncher.



The corner is matched mutually.

⑤ The cutting seat and the belt guide are installed with the truss screw.

※ Fit the corner of the cutting sheet with the corner of the belt guide.



⑥ Installed the springs, the clamp bars and the wing nuts.

Shown on the next page is a table for keeping maintenance records.

10. Maintenance Record

When shipped from Nitta	The cutting sheet was slid forward.	The cutting sheet was slid back.	The cutting sheet was reversed and set in the center.	The cutting sheet was slid forward.	The cutting sheet was slid back.
/					

The cutting sheet was replaced and set in the center.	The cutting sheet was slid forward.	The cutting sheet was slid back.	The cutting sheet was reversed and set in the center.	The cutting sheet was slid forward.	The cutting sheet was slid back.

The cutting sheet was replaced and set in the center.	The cutting sheet was slid forward.	The cutting sheet was slid back.	The cutting sheet was reversed and set in the center.	The cutting sheet was slid forward.	The cutting sheet was slid back.

The cutting sheet was replaced and set in the center.	The cutting sheet was slid forward.	The cutting sheet was slid back.	The cutting sheet was reversed and set in the center.	The cutting sheet was slid forward.	The cutting sheet was slid back.

11. Inspection

Inspection items	date/staff	date/staff	date/staff	date/staff	date/staff
The puncher body is free of damage or destruction.					
All screws of the puncher body are tightened.					
The belt can be completely punched out.					

Make a copy of this page and use it for inspection prior to each use.

12. Warranty and after-sales service

1. Warranty period

The warranty period is for one full year after the delivery of the order at your appointed place.

2. Warranty coverage

1) Should the product malfunction due to causes for which our company is responsible during the abovementioned warranty period, our company will provide a replacement product or repair the product free of charge. However, even within the warranty period the following cases shall not be covered by the warranty. Please note that even if our company provides a replacement product or repairs the product, the warranty period will be calculated from the initial date on which the product was delivered.

- ① Malfunction arising from any inappropriate conditions, environment, handling and usage which are not described in the Operation Manual and the Endless Splicing Procedure.
- ② Malfunction due to a cause arising from something other than the product, such as your own device.
- ③ Malfunction arising from any remodeling or repairing by other than our own company.
- ④ Malfunction arising from any reasons unpredictable due to our level of chemistry and technology before shipment.
- ⑤ Malfunction arising from fire, earthquake, flood, other disasters, voltage error, or other external factors for which our company bears no responsibility.
- ⑥ Malfunction where it can be confirmed that, if perishables stipulated by the Operation Manual and the Endless Splicing Procedure had been maintained and/or replaced correctly, prevention of the malfunction would have been possible.

2) The warranty does not apply to perishables. When perishables which have a limited lifetime are repaired, and should those perishables be determined by our company to have reached the end of their lifetime, the perishables will be replaced for a fee.

- ① Parts which fall under the category of perishables: “cutting sheet”.
- ② Parts which fall under the category of perishables having a limited lifetime: “Thomson blade”.

3) The warranty coverage is limited to what is stated in 1) above, and the warranty does not cover secondary damages (equipment damage, opportunity loss, profit loss) and any other damage incurred by the user as a result of a malfunction of the product.

4) After the warranty period, if after examination the product is repairable, our company will repair it upon request.

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The specification is subject to change for improvement without notice.

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