

# ***PolySprint™***

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## **Finger Puncher**

### **FP35-5-30SP2**

## **Operation Manual**

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- 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

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Please go over these safety precautions carefully to secure a correct and safe operation of the Finger Puncher FP35-5-30SP2.



## **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 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 Finger Puncher.**

Handling by an inexperienced person may cause injury.



## **WARNING**

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

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

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



## **WARNING**

**Do not operate by placing a finger on top of the cutting sheet.**

**Do not extend the handlebars with pipes or other items.**

Doing so may result in damage to the unit or injury.



## **WARNING**

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



## **WARNING**

**This machine is not intended for use by the physically, sensory or mentally handicapped. They must have the supervision of a person responsible for their safety, if they use this machine.**

Failure to do this may cause injury.



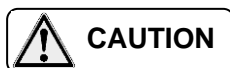
## **WARNING**

**Do not allow children to handle this machine. Keep this machine out of reach of children.**

Failure to do this may cause injury.

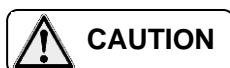
## 1. Safety Precautions - Continued -

### **Caution**

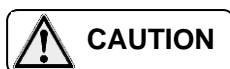


**Do not use the Finger Puncher under the following conditions:**

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



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



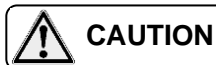
**Before using the Finger Puncher, be sure to inspect the puncher in accordance with the procedure described on page 12 to help prevent injury.**

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## 2. Confirmation of Product

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Thank you for choosing our *PolySprint™* Finger PuncherFP35-5-30SP2.



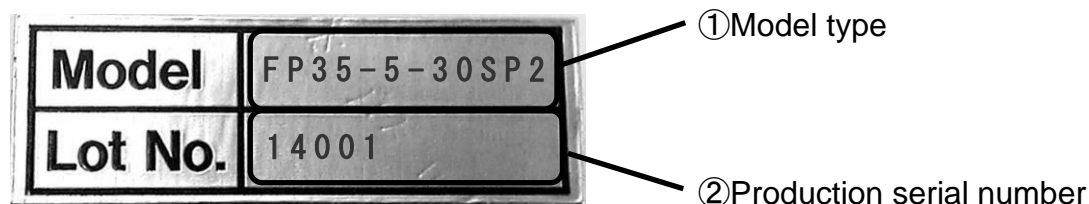
**Check that the product is exactly what you have ordered. Use of the wrong product may cause injury.**

### 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.

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## 3. Specifications

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### 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:  
Joint specifications: finger geometry 35mm long x 5mm pitch  
Maximum belt width: up to 30mm  
Maximum belt thickness: up to 2mm

### 3-2) Major Specifications of Finger Puncher

Type	FP35-5-30SP2
Outer Dimension	Puncher Body: 136 mm wide x 400 mm long x 413 mm* high *160 mm when the lever is removed.
Weight	3.7kg

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## 4. Use Environment

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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.

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## 5. Storage Environment

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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

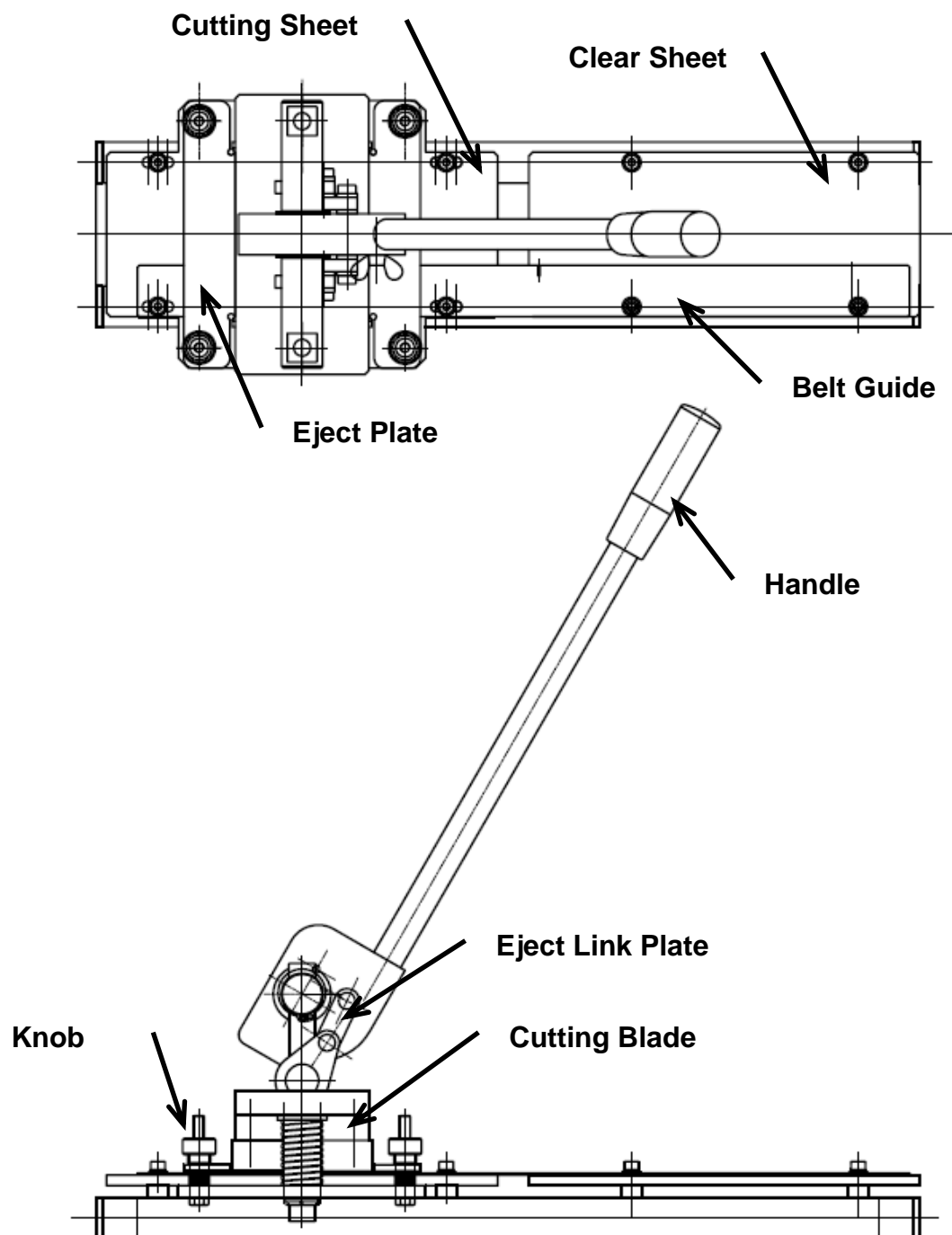
**CAUTION**

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

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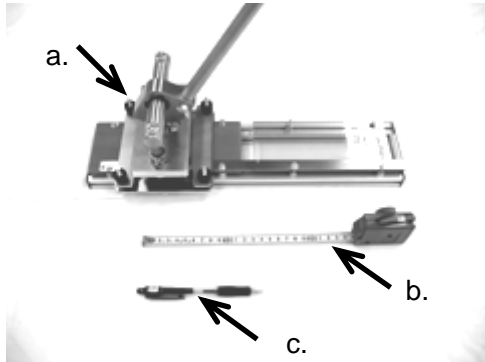
## 6. Name of Each Part

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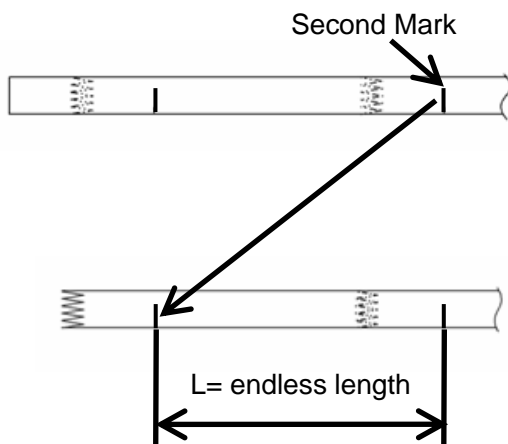
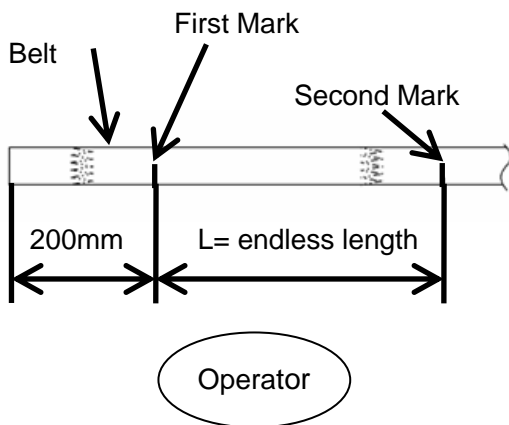
## 7. How to Make a Finger Joint

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



- a. Finger Puncher (FP35-5-30SP2)
- b. Tape Measure or Ruler  
(for measurement of belt length)
- c. Ballpoint Pen or Felt Pen (for marking)
- d. Gloves(protective equipment)

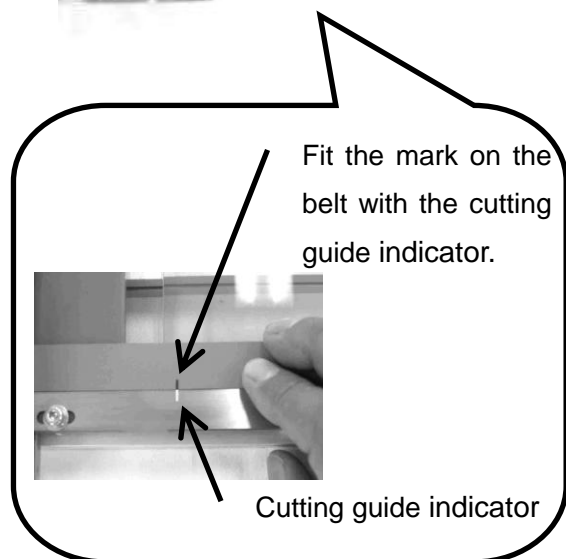
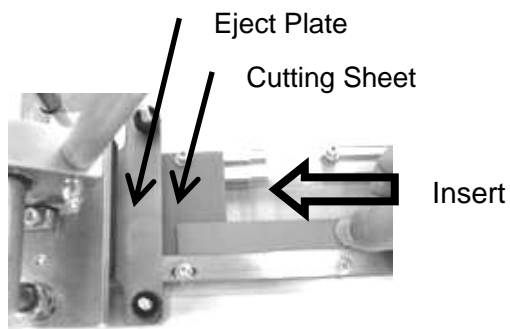
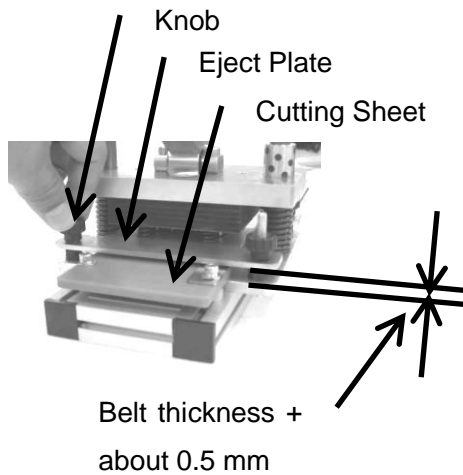
### 7-2) How to Measure Belt Length



- 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.)

※ 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.

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



#### ① Adjustment of Eject Plate

Adjust the clearance between the eject plate and the cutting sheet to be equal to the belt thickness + about 0.5 mm. Make adjustment by turning the four knobs. The eject plate, when adjusted to the proper height for the belt, fulfills its functions.

※ When processing belts with the same thickness, make an adjustment once before use; no further adjustment is necessary thereafter.

※ Avoid any clearance between the knobs and the eject plate. When the eject plate is not adjusted to the proper height for the belt, the belt may sometimes get stuck on the cutting blade after punching.

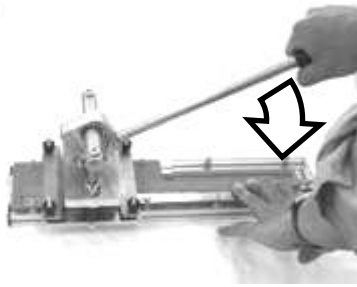
#### ② Inserting the Belt

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 cutting guide indicator of the finger puncher.

※ Insert the belt along the belt guide.



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



③ Hold the finger puncher in place with one hand and push down the handle with the other hand to punch the belt. (See diagram to left.)

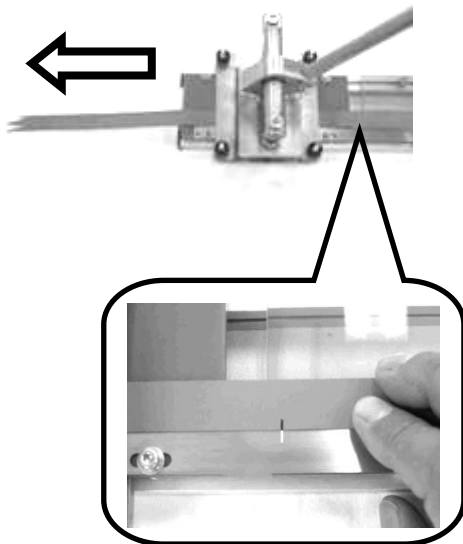
※ Push down the handle of the finger puncher, and the eject plate also comes down and fixes the belt.

※ Do not put your hands close to the cutting blade.

④ Slowly return the handle to its start position.

※ When you release the handle at the bottom position handle is the momentum will bounce danger.

Do not release the hand from the handle until return the handle to its start position.



⑤ Fit the second mark made on the belt with the cutting guide indicator of the finger puncher and punch out the belt to obtain the required endless length. (The belt from edge to edge will be endless length + 35 mm.)

※ 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.

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## 8. Troubleshooting

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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.

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## 9. Maintenance

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### 9-1) How to Perform Maintenance

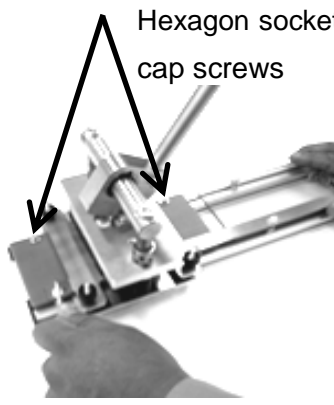
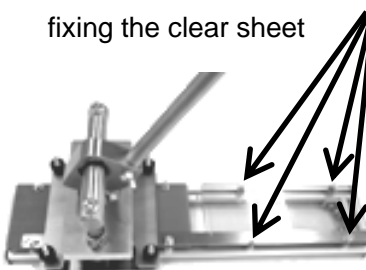
You can change the position of the cutting sheet and both sides of the cutting sheet can be used. Adjusting the position may solve any problems where a portion of the finger joint is not cut out.

The cutting sheet is consumable. Specify the cutting sheet for FP35-5-30SP2 Finger Puncher when you order a new one.

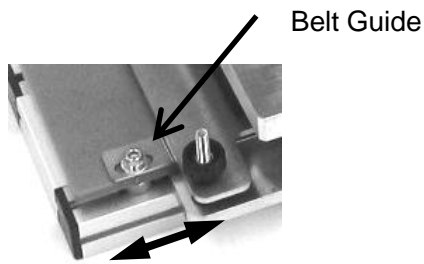
### 9-2) Required Tool

Hexagon wrench (3 mm)

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

 <p>Hexagon socket head cap screws</p>  <p>Hexagon socket head cap screws for fixing the clear sheet</p>	<p>① Loosen the four hexagon socket head cap screws for the cutting sheet by using a hexagon wrench.</p> <p>※ Do not pull out hexagon socket head cap screws. Just loosening hexagon socket head cap screws is enough.</p> <p>※ Do not loosen hexagon socket head cap screws fixing the clear sheet.</p>
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### 9-3-1) How to change the position of the cutting sheet - Continued-



② Change the position of the cutting sheet by sliding it forward or back in the hole on the belt guide.

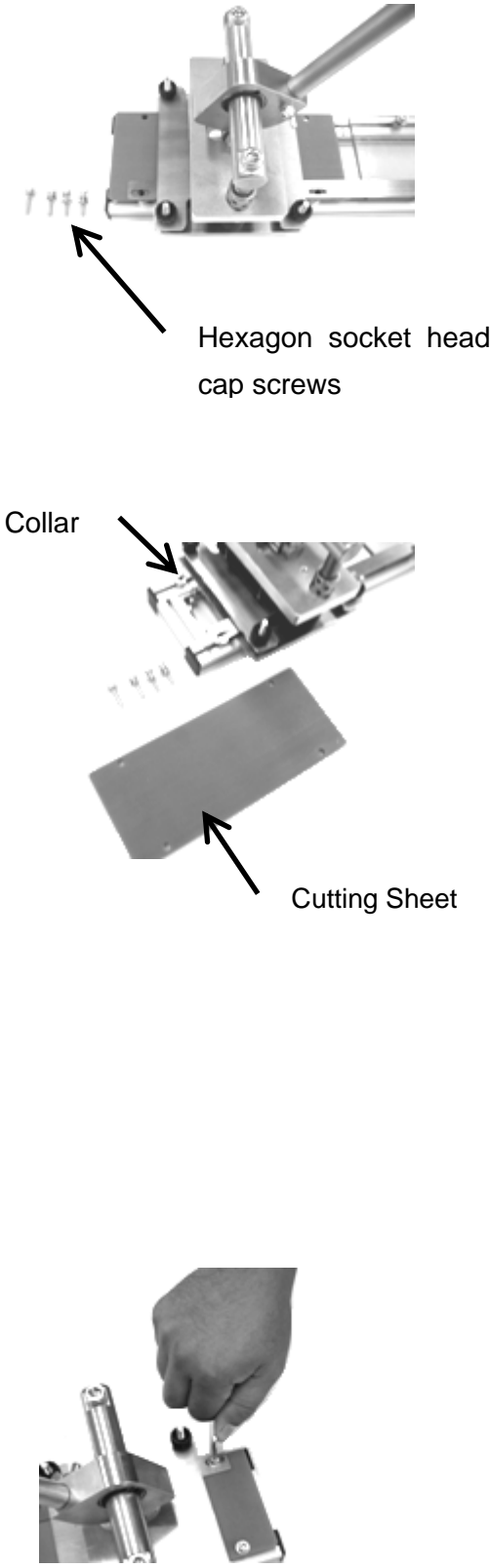
※ At the time of shipping, the cutting sheet is set in the center of the hole on the belt guide.

※ The picture at left shows an example of sliding the cutting sheet forward in the hole. Make sure it's set at the very edge of 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.

③ Securely tighten the four loosened hexagon socket head cap screws.

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

 <p>Hexagon socket head cap screws</p> <p>Collar</p> <p>Cutting Sheet</p>	<ol style="list-style-type: none"><li>① Loosen the four hexagon socket head cap screws which hold the cutting sheet in place and take them out.<ul style="list-style-type: none"><li>※ Never loosen hexagon socket head cap screws which hold the clear sheet.</li><li>※ Be careful not to lose hexagon socket head cap screws taken out of the finger puncher.</li></ul></li><li>② Take out the cutting sheet from the finger puncher.<ul style="list-style-type: none"><li>※ Collars may sometimes drop when the cutting sheet is taken out. Be careful not to lose any collar.</li></ul></li><li>③ Reverse the cutting sheet to turn the unused side up and insert it back to the finger puncher.</li><li>④ Securely tighten the four hexagon socket head cap screws.</li></ol>
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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.

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## 12. Warranty and after-sales service

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### 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.

## Memo

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The specification is subject to change for improvement without notice.