

OHTAKE

Japan Quality since 1968

Automatic Screw Hopper

自動ネジ補給機

NEJIKURA Tower Type

(T-510S · T-510J · T-510F)

Operation Manual

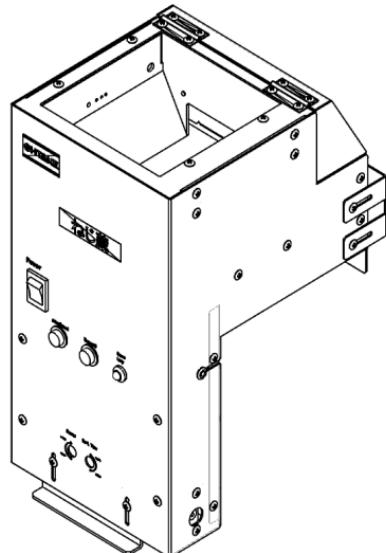
- Read these instructions for the proper use of this machine.
- After having read these instructions, keep them in a convenient place so you or the operator can refer to them whenever necessary.

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We do not have any branches in China.

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弊社の名を騙る偽サイトにご注意下さい。現在、当社は中国国内に支店はございません。



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1. Before you start

Thank you for purchasing our Automatic screw hopper, Nejikura T-510. Before starting to use the unit, please check if the following items are included in the package. If you found any missing or damaged item, please contact the retail store from where you have purchased the unit.

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1) Nejikura (Hopper)-----	x1
2) Additional screw hopper (with lid) -----	x1
3) Operation Manual -----	x1
4) AC power adapter × -----	x1
5) Allen wrench-----	x1
6) Screw (size 2.6X5)-----	x4
7) External signal output cable-----	x1
8) Adjustment screw-driver-----	x1

Accessory of T-510F only:

9) Hopper table -----	x1
10) Mount screws-----	x3

* For products purchased outside of Japan, no adapter will be supplied with the feeder.

Please purchase separate adapter with equivalent output specification as shown in Section 8.

Please read this manual thoroughly before you use this unit, and retain it for future reference.

2. Important safeguards

The precautions stated in this manual are provided for the customer to make the best use of this unit safely and for the preventive measure against injury and damage to the customers' properties.

■ Warning and Caution Marks



WARNING

This mark implies possibility of death or serious injury caused by incorrect handling in disregard of the instructions.



CAUTION

This mark implies possibility of accidental injury or physical damage caused by incorrect handling in disregard of the instructions.

■ Marks for type of hazard and hazard evasion.



This mark prohibits conduct of certain thing. Detail of prohibition is described in this manual.



This mark prohibits the disassembly of unit.



This mark instructs general restriction. Detail of instruction or restriction is described in this manual.



This mark shows to unplug the power source.



This mark entails general instruction.



WARNING

-  To avoid electric shock, never disassemble the AC adapter. High voltage is flowing through the internal circuit.
-  To avoid fire or electric shock, never pull or twist hard, destroy, or modify the power source cable.
Do not leave any heavy object on the cable.
-  To avoid electric shock, never plug or unplug the AC power adapter with wet hands.
-  To avoid fire or electric shock, electrify the unit 100-240VAC only. Do not put many loads on one electrical outlet. Do not modify the unit.
-  Never use the unit in place where inflammable item or explosive gas is near. Otherwise, it can cause you fire or explosion.
-  If anything unusual like fuming, burning smell, or generating unusual heat, turn off the power source switch and unplug AC power adapter immediately. Contact your dealer for repair.
-  In time of or close to thunder and lightning, stop using the unit and turn off the power source switch and unplug the AC power adapter. However, when thunderbolt starts falling, keep off the unit and do not touch the unit or AC power adapter. After lightning, check the unit. If you find any malfunction of the unit, contact your dealer.



CAUTION

The transformer-type AC adapter attached to the machine has nominal output of DC12V-500mA; during application, it is designed to supply an average output at about 15V to the screw feeder.

-  In the case where a different type of adapter or external power source is used, it is recommended to use a 15V switching type adapter, or regulated power supply which can provide constant output at 15V.
-  Set up the unit on flat and stable surface. Unstable installation can cause falling, overturning, and breakdown of the unit and cause you injury.
-  Keep the unit free from moisture and dust. The unit covered with dust can cause fire or electric shock. Check also if the plug is not covered with dust.
-  When you move the unit, be sure to unplug the AC power adapter from a wall outlet. Damaged power source cable can cause fire or electric shock.
-  When the unit is not used for a long time, unplug the power source from a wall outlet.
-  Use the sufficient length of power supply cord and do not give it excessive tensile force.

3. Function and features

Function:

As the scooper in Automatic Screw Feeder moves up and down, a screw sensor built in Automatic Screw Feeder checks the amount of screw in Automatic Screw Feeder. When the sensor detected the insufficient amount of screws in Automatic Screw Feeder, a belt conveyor runs for a time set by a timer and supplies the optimum amount of screws on the scooper of Automatic Screw Feeder.

Features:

- Nejikura T-510 can be installed with Automatic Screw Feeder models NJ series , NS series and FM series as shown on right.
- Nejikura can supply various screw sizes from M1 to M6.
 - NS series : M1 to M3 (20mm)
 - NJ series : M2 to M5 (18mm)
 - FM series : M3 to M6 (25mm)

Model	Automatic Screw Feeder
T-510S	NSB/NSR/NSBI/NSRI NSB ² /NSR ² /NSBI ² /NSRI ²
T-510J	NJ/NJR NJ ² /NJR ²
T-510F	FM-36/FME-36 FM ² -36/FME ² -36

NOTES : If M6 screw is longer than 25 screw, it may not be suitable.

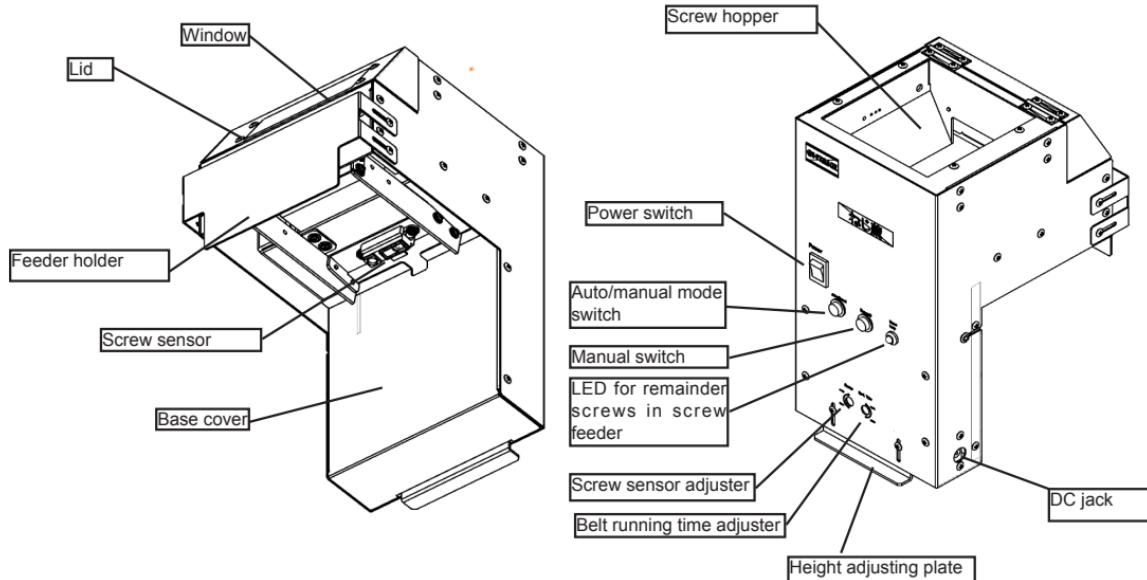
- No frequent refilling of screw is necessary.

Nejikura is provided with a screw hopper that can hold the screws up to 400cc.

It can hold approximately 10,000 pieces of size M2.3X5 screw and 2,800 pieces of size M3X6.

If an additional screw hopper is installed, the capacity increases up to 800cc and the frequent refilling of screw into hopper is not necessary.

4. Components

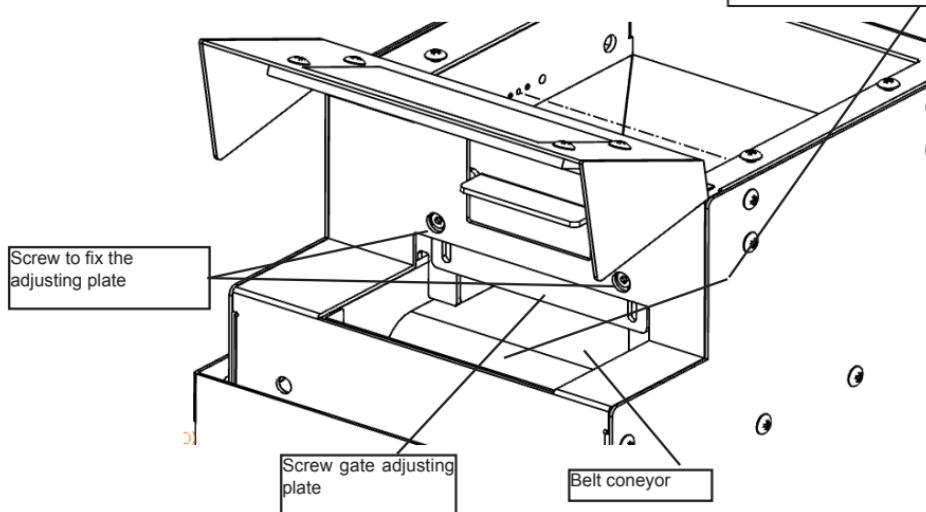


《Components inside the cover》



WARNING

Please be careful not to have your fingers or hands caught in the belt, as it may cause serious injury.



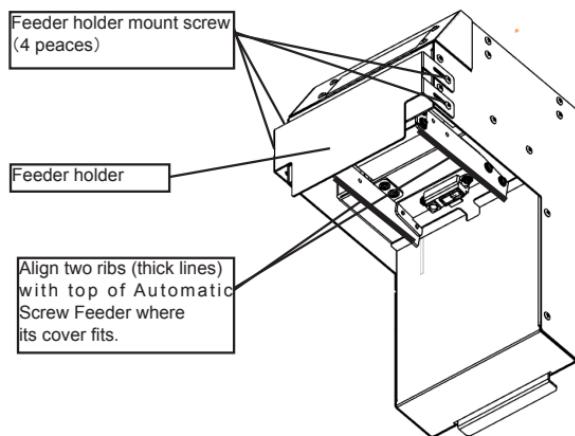
5. Installation and Adjustment

Nejikura T-510 can be used with Automatic Screw Feeder NJ, FM, and NSR/NSRI series. Please adjust Automatic Screw Feeder according to applied screws beforehand. For methods of adjusting Automatic Screw Feeders, please refer to the respective instruction manuals.

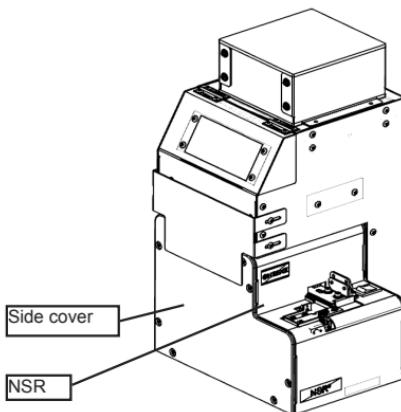
5-1. Mounting Nejikura on Automatic Screw Feeder

Loosen four screws fastening the feeder holder and mount Nejikura onto the Automatic Screw Feeder. When you mount it, align two ribs (thick lines shown in the illustration below) with top of Automatic Screw Feeder opening where the cover of the feeder fits. Press the Automatic Screw Feeder holder of Nejikura tightly against the side cover of Automatic Screw Feeder and tighten four screws.

『Mounting T-510S / T-510J』

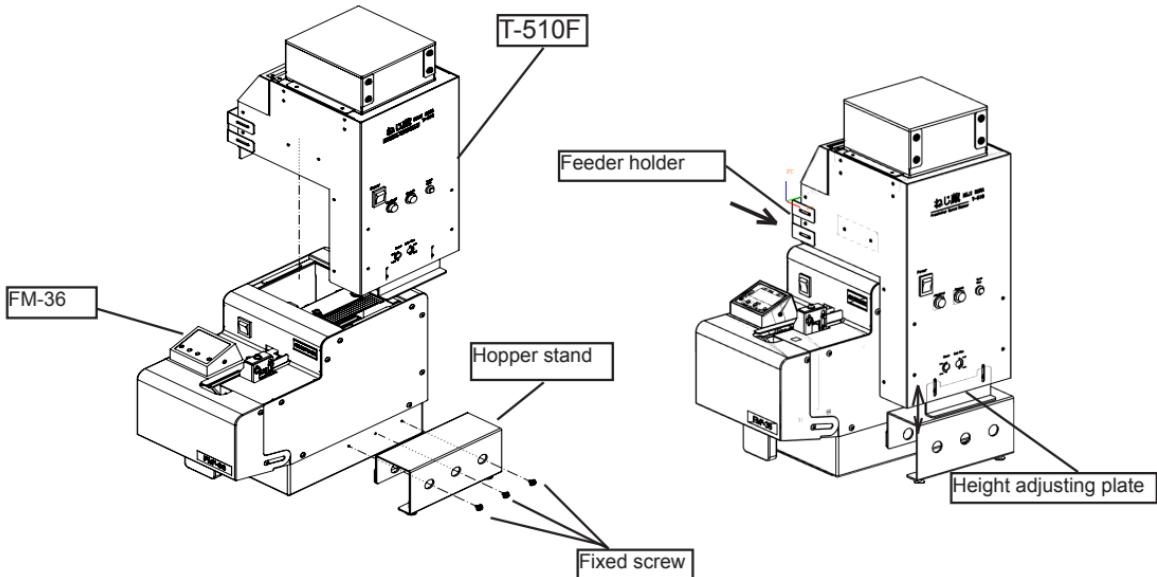


【EX. Mounting NEJIKURA on NSR】



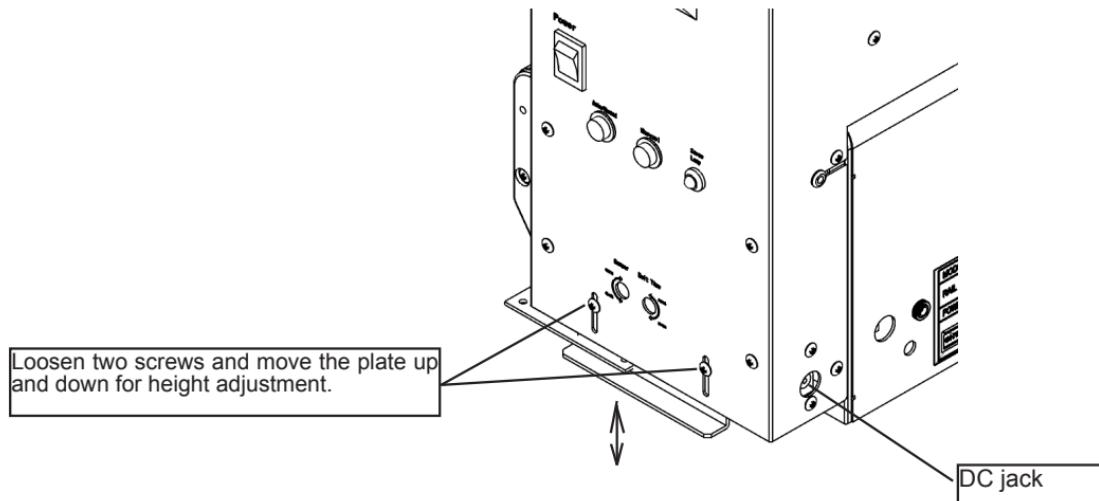
《Mounting T-510F》

- Fix the setting stand to the side of FM-36 with three attached screws.
- Loosen fixed screw on the feeder holder, and install the NEJIKURA on FM-36.
- Install the NEJIKURA stably on the Feeder by fixing the height adjusting plate at appropriate height.
- Fix Automatic Screw Feeder with the feeder holder as shown below.



5-2. Height adjustment

Loosen two screws fastening the height adjusting plate to the chassis. Adjust the height adjusting plate so that it touches the working table surface, and tighten the two screws (If the height adjusting plate can not touch ground, the adjustment is not necessary.)



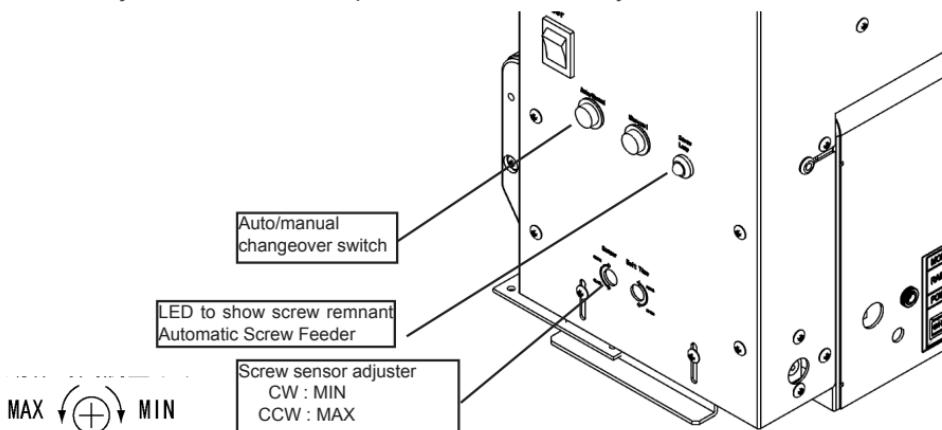
5-3. Connection of AC adapter

Insert the plug of supplied AC power adapter to the DC input jack and plug other end to a wall outlet.

5-4. Adjusting screw sensor

To operate the unit, an adequate amount of screws should be supplied to the scooper of Automatic Screw Feeder. In order to supply the screws to the scooper efficiently, adjust the screw sensor according to the following instructions:

- 1) Please confirm that the scooper of Automatic Screw Feeder is empty at start, and turn on the power switch of Automatic Screw Feeder.
 - 2) Turn the screw sensor adjuster, illustrated below, slowly from MIN to MAX direction and stop turning at the point where LED starts to blink.
 - 3) Then, turn on the Auto/Manual Changeover Switch (built-in lamp turns on.)
 - 4) Check that LED starts to blink as the scooper of Automatic Screw Feeder moves up and down.
- The adjustment will be completed if the belt conveyor starts to run after LED blinked three times.

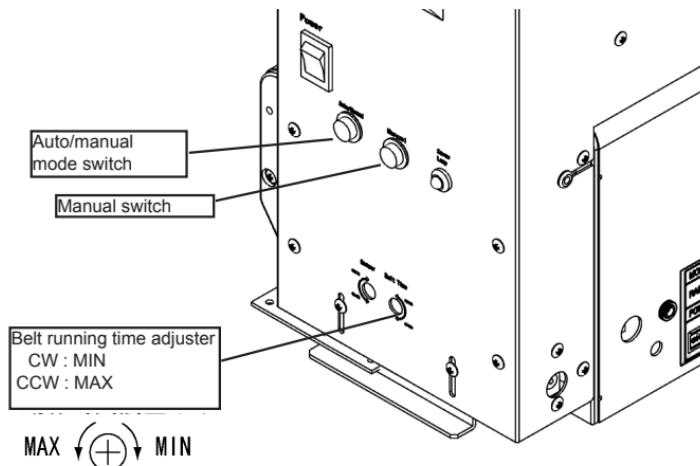


5-5. Adjusting belt running time

The belt conveyor carries screws and drops them onto the scooper of Automatic Screw Feeder. However, if the belt runs too often so the screws stacks over top of the rail inside Automatic Screw Feeder, please shorten the belt running time. Turn the belt running time adjuster to maintain an appropriate belt running time. Turn the adjuster to MIN direction for a shorter running time and to MAX for longer time.

To avoid the overflow of screws in Automatic Screw Feeder, set the belt running time short as needed.

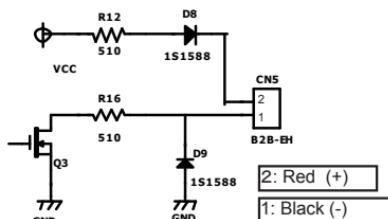
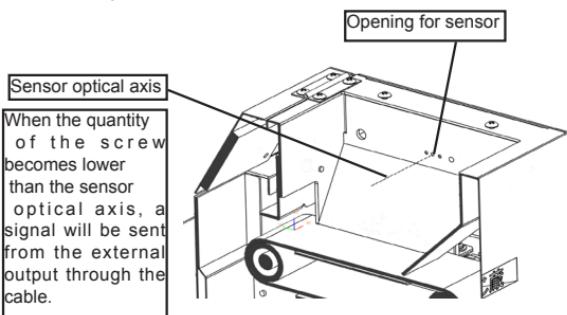
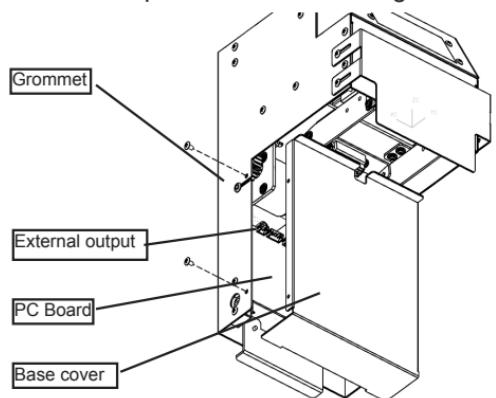
To identify the belt running time, turn off the Auto/Manual Changeover Switch (Green lamp turns off), and press the manual switch.



5-6. Checking screw amount in hopper.

Nejikura is equipped with output signal cable and sensor to check the amount of screws remaining in the hopper. If you would like to install this signal output cable with Nejikura, please follow installation procedures as below.

- 1) Remove the base cover (take out four screws as below.)
- 2) Connect attached external signal cable to the external output connector and pull it out through the grommet.
- 3) Re-install the base cover.
- 4) Connect lamp and buzzer to the signal cable.



5-7. Adjustment of the screw rate adjusting plate

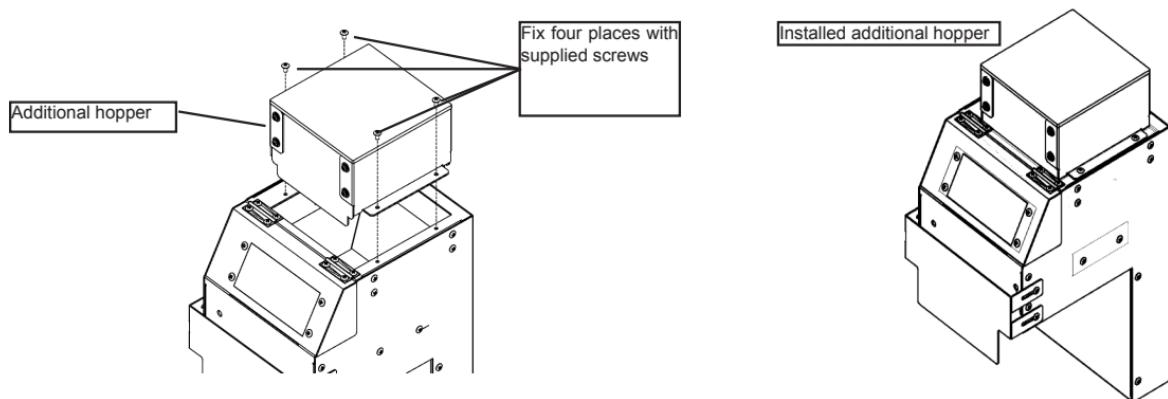
- Close the screw gate with the screw gate adjusting plate (see page 7) and fill the hopper with the screws.
- Open the screw gate adjusting plate. Adjust it according to the screw size (narrow for short-sized screws and wider for large or longer screws.)

5-8. Power

- Turn on the power source switch of the unit and set the Auto/Manual Mode Switch to Auto position. (When green LED of the Auto/Manual Switch turns on.)
- Turn on the power switch of Automatic Screw Feeder.

5-9. Installation of the additional hopper

- Please install additional hopper to Automatic Screw Feeder according to the following illustration as needed.



6. Note on operation



CAUTION

Do not dismantle Nejikura from Automatic Screw Feeder when screws remain in its hopper or when it is switched to automatic mode. The sensor will falsely see empty screws and induces to run the belt which causes screws to spill out.

When you dismantle Nejikura, please be sure to turn off the power source or switch it to Manual supply mode (LED of the Auto/Manual Mode Switch turns off.)



CAUTION

Do not supply excessive screws from Nejikura to Automatic Screw Feeder. The excessive supply to Automatic Screw Feeder can lead to malfunction of the Feeder. For the adjustment of suitable screw supply, please refer to paragraph 5-4 (Adjusting screw sensor) on page 11 and paragraph 5-5 (Adjusting belt running time) on page 12.

7. Troubleshooting

If the unit does not work properly, or any troubles occurred with your unit, please check the following troubleshooting list. If the trouble still exists, please contact your dealer or service center personnel.

1) The unit does not work despite the power switch was turned on.

- Check if the AC power adapter is correctly plugged in a wall outlet and DC input jack.
 Connect the AC power adapter to a wall outlet and to the DC input on chassis
- Check if the wall outlet is properly supplied with 100-240VAC power.
- Check if the scooper of Automatic Screw Feeder is filled with the proper amount of screws.
 See if the unit works when the amount of screws on the scooper is decreased or emptied.

2) Screw hopper does not supply screw.

- Check if the screw gate is wide enough for the supplying screws.
 The approximate wideness of screw gate should be about the same size as the length of screw.
- Check if the belt is not oil-stained.
 Wipe off oil on the belt with a piece of cloth soaked with alcohol or cleaning agent.

3) Nejikura does not supply the screws to empty scooper of Automatic Screw Feeder.

- Check if the Auto/Manual Mode Switch is turned on.
 Change Auto/Manual Mode Switch to Auto position (LED turns on.)
- Check if any solid item (such as screws) is clogged and preventing the belt from free running.
 Remove such solid items from the belt.
- Check if the screw sensor is stained.
 Clean the sensor (See page 6.)
- Check if the screw sensor is correctly adjusted.

 Adjust the sensor according to the procedures stated on page 11.

4) During automatic mode, green LED flashes on and off.

- Check if there are screws in the hopper. -----Supply screws to the hopper.
- Check if screws are stuck. -----Remove the screw.

8. Specification

Model	Automatic Screw Feeder
T-510S	NSB/NSR/NSBI/NSRI NSB ² /NSR ² /NSBI ² /NSRI ²
T-510J	NJ/NJR NJ ² /NJR ²
T-510F	FM-36/FME-36 FM ² -36/FME ² -36

※ Attached adapter (Transformer type)	Input : AC100V 50/60Hz Output : DC12V 500mA
Dimension	130W x 171D x 245H (mm) Mounted with additional hopper: 295mm H
Weight	Approx.3.1kgf

Notes)

- Within the specified range of screw dimension, instances may occur where unique shape or type of screws which cannot be compatible with the automatic screw hopper. Please adjust the amount of screws stored in the hopper, so the supply of screws can be more efficient.

- The product design, performance characteristics, and other specifications are subject to change and improvement without prior notice.

- The transformer-type AC adapter attached to the machine has nominal output of DC12V-500mA; during application, it is designed to supply an average output at about 15V to the screw feeder.

In the case where a different type of adapter or external power source is used, it is recommended to use a 15V switching type adapter, or regulated power supply which can provide constant output at 15V.

Screw supply amount	Variable
Compatible screw size	M1.0 ~ M6.0
Compatible screw length	T-510S : 20mm T-510J : 18mm T-510F : 25mm
Proximity sensor	Adjustable
Capacity	Original unit : 400cc With additional hopper : 800cc
Possible number of screws in storage	400cc: M2.3X5 / Approx.10000 pcs. M3.0X6 / Approx. 2800 pcs 800cc: M2.3X5 / Approx. 20000 pcs M3.0X6 / Approx. 5600 pcs

9. Warranty

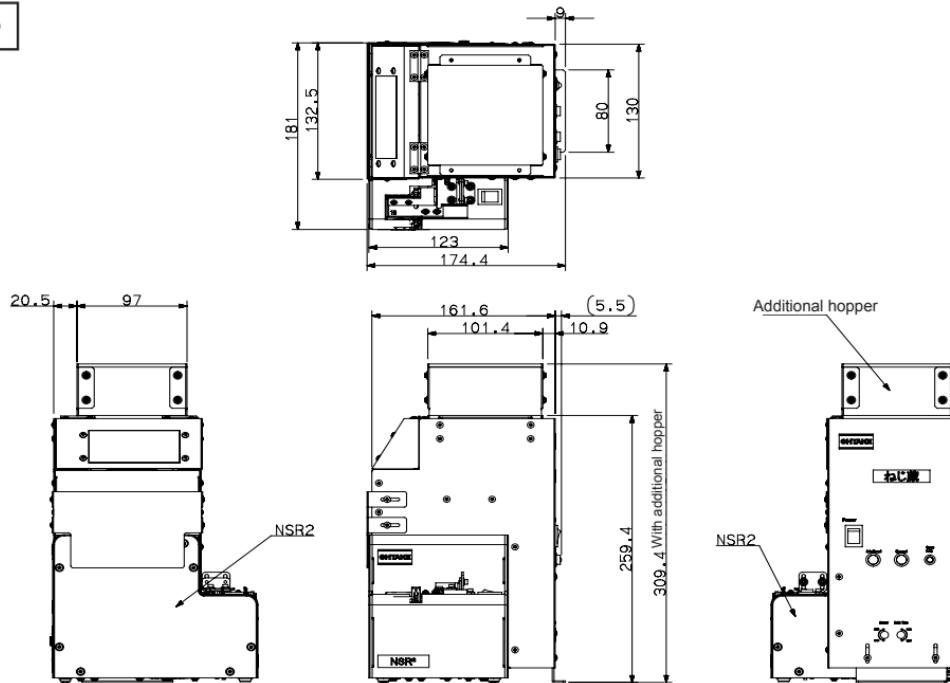
For users within Japan, the product is warranted for a period of six months after the date of delivery. Such warranty will not be applicable to purchases or users outside of Japan. If any troubles should occur, however, contact your local dealer. The solutions to the following situations may be implemented at a reasonable charge without regard to the warranty period.

- Defects caused by misuse.
- Defects caused by product modifications or unauthorized repairs.
- Defects caused by natural disasters or Acts of God.
- Defects caused by a factor external to the product.
- Cost of replacement of consumable parts (such as belt and motor)

The repair parts shall be kept available within 5 years after purchase.

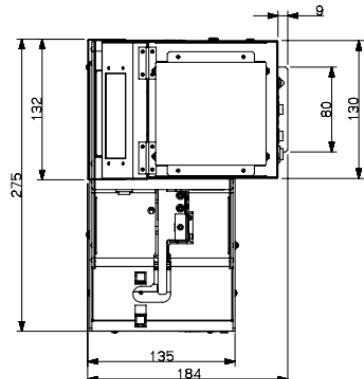
10. External dimension

T-510S

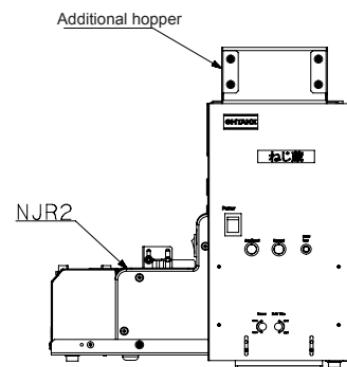
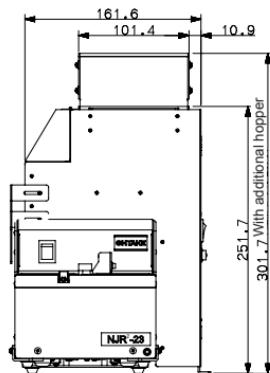
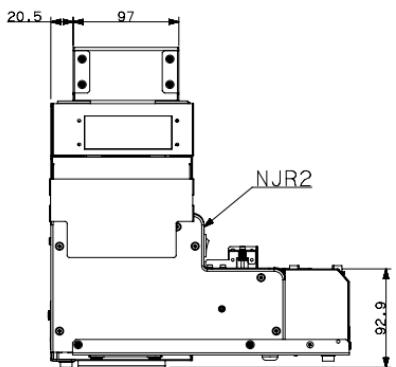


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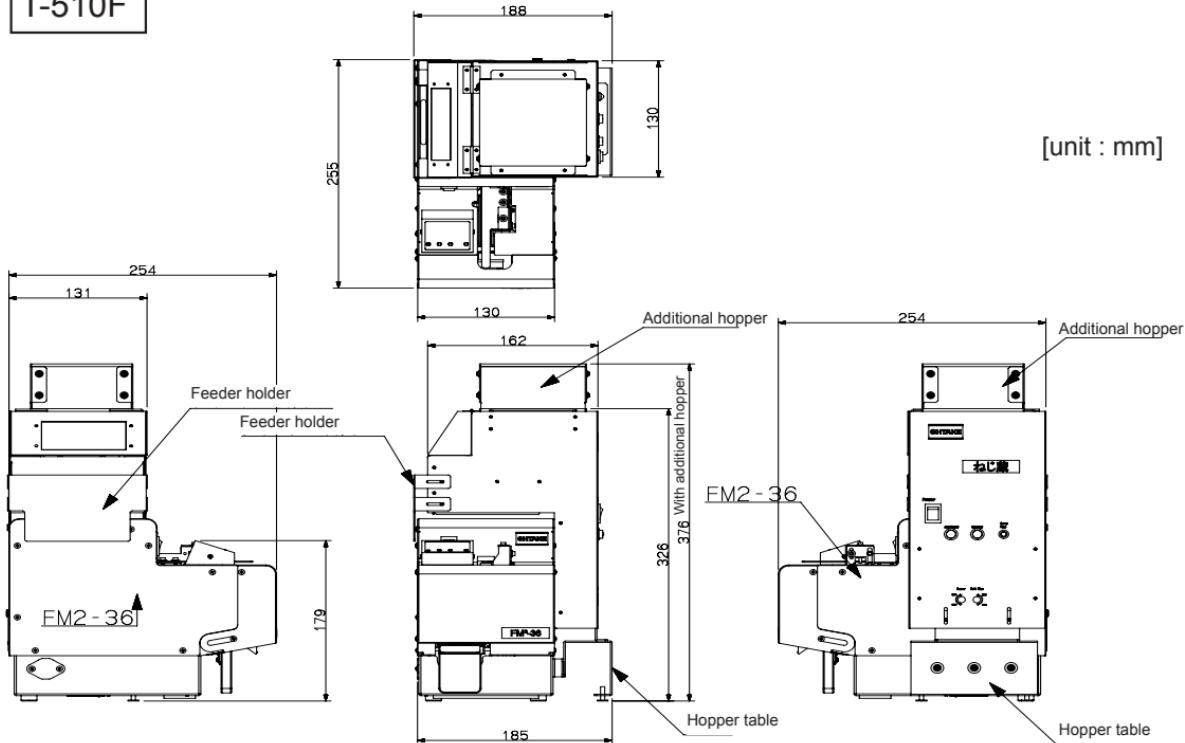
T-510J



[unit : mm]



T-510F



<http://www.ohtake-root.co.jp>

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(2016 年 6 月現在)