

Automatic Screw Hopper

磁石式自動ネジホッパー

NEJIKURA MHP-80 Series

(MHP-80M · MHP-80S · MHP-80J · MHP-80F)

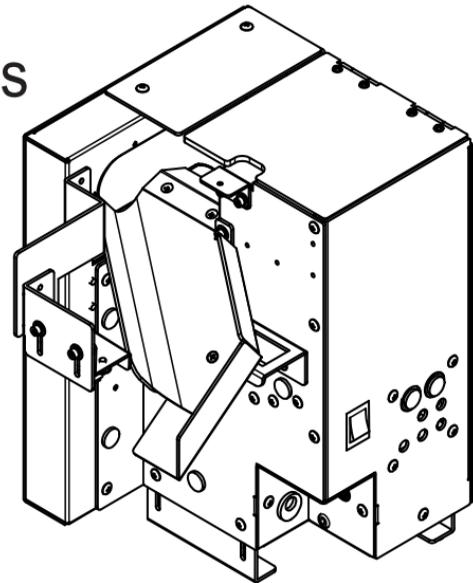
Operation Manual

- 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.

各位顾客请注意! : 「www.ohtake-root.co.jp 是敝司唯一的官方网站,
目前, 敝司在中国没有办事处与所谓的中国官网。」

注意! : www.ohtake-root.co.jp が当社唯一の HP アドレスです。
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。



MHPMAE01d

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1. OVERVIEW OF THIS MACHINE

By using this product in combination with our screw feeder, you can increase the capacity of stocking screws. This hopper can automatically detect the remaining amount of screws in the feeder with a sensor and automatically replenishes the screws.

Only steel screws may be used with this machine.
Stainless steel or plastic screws cannot be used.

2. BEFORE USE

Check that the following accessories are supplied with Nejikura.

- * Operation Manual 1 copy
- * AC Adapter 1 unit
- * Screw retaining Cover 1 unit
- * Adjustable screwdriver 1 piece
- * Ground Wire 1 piece

NEJIKURA Type	Corresponding Automatic Screw Feeder
MHP-80S	NSB/NSR/NSBL/NSRI Series
MHP-80J	NJ/NJR Series
MHP-80F	FM-36/FME-36 Series
MHP-80M	OM-26 Series

※ The design, performance and specifications are subject to change without prior notice for the sake of improvement.

3. OPERATING PRECAUTIONS

This manual contains safety alert symbols and signal words to help prevent injuries to the user or damage to property.

◎ Indications



WARNING

This indicates there is a chance of death, serious injury or fire if the instructions are not followed.



CAUTION

This indicates there is a chance of personal injury or damage to property if the instructions are not followed.

◎ Symbols indicating type of danger and preventative measures



Prohibited operation. Never do this!



Do not disassemble, modify or repair.



Do not touch with wet hands.



This indicates to stop operations.



Unplug power supply from wall outlet.



General caution.

Attach the ground wire by loosening the screw near the mark  of the equipment.



the near of the DC jack

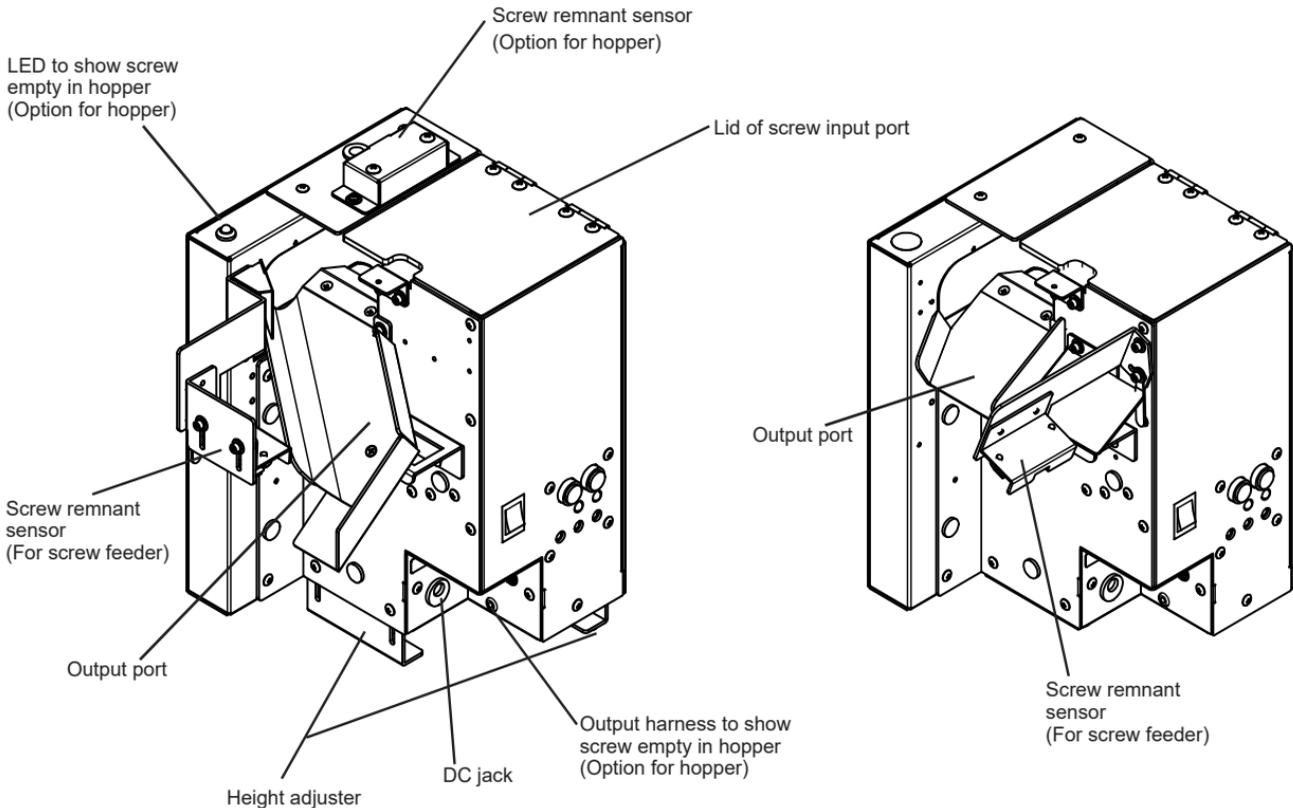
WARNING

-  Do not remove the cover of the main unit when the power is on. It may lead to injury or serious accident.
-  Do not disassemble the AC adapter as there is a risk of electric shock, fire or malfunction.
-  Do not damage, alter or change the power cord. Do not place heavy objects on the cord. Do not pull hard on the cord or twist the cord as it could be damaged, thereby causing a risk of fire or electric shock.
-  Do not handle the AC adapter with wet hands as it could cause an electric shock.
-  When using an outlet with AC100 ~ 240V, don't overload the electrical circuit.
Do not modify or remodel this machine as this may cause a fire or electric shock.
-  Do not operate this machine near flammable liquids, gasses or materials as there could be a risk of fire or explosion.
-  Stop operating the machine and unplug the AC adapter from the wall outlet when you detect overheating, smoke, a pungent odor or any other unusual condition, as there may be a risk of fire or electric shock. Contact the dealer, from which you purchased the machine and have it examined and repaired.
-  In the case of a thunderstorm, stop operating the machine, turn off the power and unplug the AC adapter from the wall outlet. If there is lightning and thunder nearby, move away from the machine and do not touch it or the AC adapter. After the thunder stops, and when it is safe to do so, check the machine. If there is any abnormality, contact your dealer.
-  When performing maintenance, changing parts or when you sense an abnormality in the machine, turn the power off and pull the AC adapter from the wall outlet.
In addition, there are parts that become hot in the circuit board. When performing maintenance around the circuit board, turn off the power for at least 5 minutes before performing work. There is a risk of burns.

 CAUTION

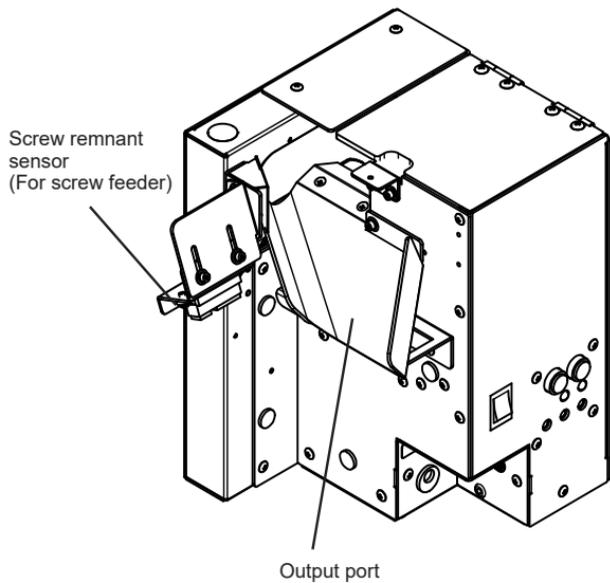
-  Properly adjust the amount of screws replenished from the machine to the automatic screw feeder. If the replenishment is excessive, the automatic screw feeder may stop.
-  Use only the AC adapter supplied with this machine otherwise it may result in a fire or electric shock.
-  Do not install this machine in an unstable location otherwise it may fall causing damage or injury.
-  Always operate the machine with the upper cover in place, otherwise it may result in injury.
-  Do not allow any foreign material to enter the machine while in operation.
-  Do not put your fingers into the machine while in operation, otherwise an injury will result.
-  Do not operate this machine in overly humid or dusty conditions.
-  Keep the plug socket clean at all times otherwise it may cause a fire or electric shock.
-  When moving the machine, always disconnect the AC adapter from the wall outlet or it may result in damage to the cord, or cause a fire or electric shock.
-  Turn off the machine and unplug the AC adapter from the wall outlet during closing hours or if the machine will be unused for any extended period of time.
-  When moving the machine, be sure to hold it with both hands and be careful not to drop it. Dropping the machine at your feet may cause injury.
-  Do not operate the machine with tension on the AC adapter cord. Keep the cord loose and untangled.
-  Do not use any screw that is out of the specified range nor any screw that is oily or dirty.

4. NAMES OF MACHINE PARTS

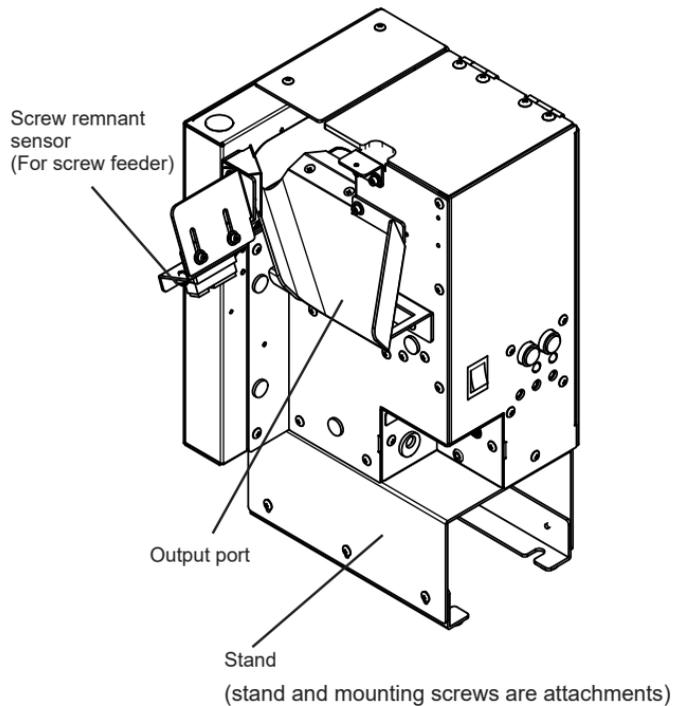


MHP-80M (Picture shown with remnant sensor)

MHP-80S



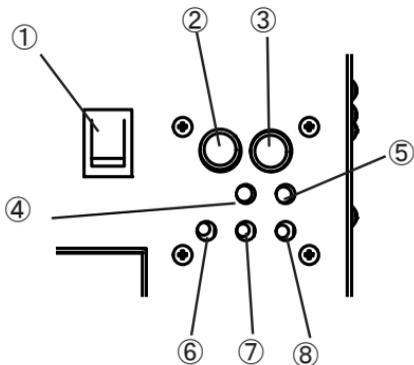
MHP-80J



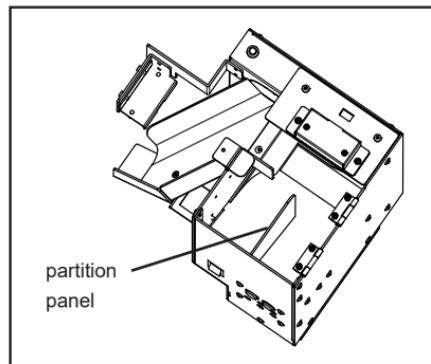
MHP-80F

Switch Function

- ① Power : Power source switch (red LED is turned on.)
- ② Auto/Manual : A changeover switch for the automatic and manual modes (green LED is turned on when it is in the automatic mode and off in manual mode.)
- ③ Manual : A switch to supply the screws with the manual mode. When it is in the manual mode, press this switch to supply the screws to Automatic Screw Feeder. This switch is unavailable in the automatic mode.
- ④ Empty Lamp (FEEDER) : LED indicator for output monitor from sensor that detects that there is not screw in screw feeder.
- ⑤ Empty Lamp (HOPPER) : LED indicator for output monitor from sensor that detects that there is not screw in hopper.
- ⑥ Time : Adjuster for screw supply quantity. It adjusts the rotating time of rotor.
- ⑦ Sensor (FEEDER) : Adjuster for sensor measurement distance in automatic screw feeder.
It detects screw amount in automatic screw feeder.
Empty Lamp (FEEDER) is turned on when sensor reacts.
- ⑧ Sensor (HOPPER) : adjuster for sensor measurement distance in hopper.
It detects screw amount in hopper. Empty Lamp (HOPPER) is turned on when sensor reacts.
Empty Lamp (HOPPER) on upper main body is also turned on.



note) About screw supply quantity into hopper.
Do not supply screws over height of partition panel.

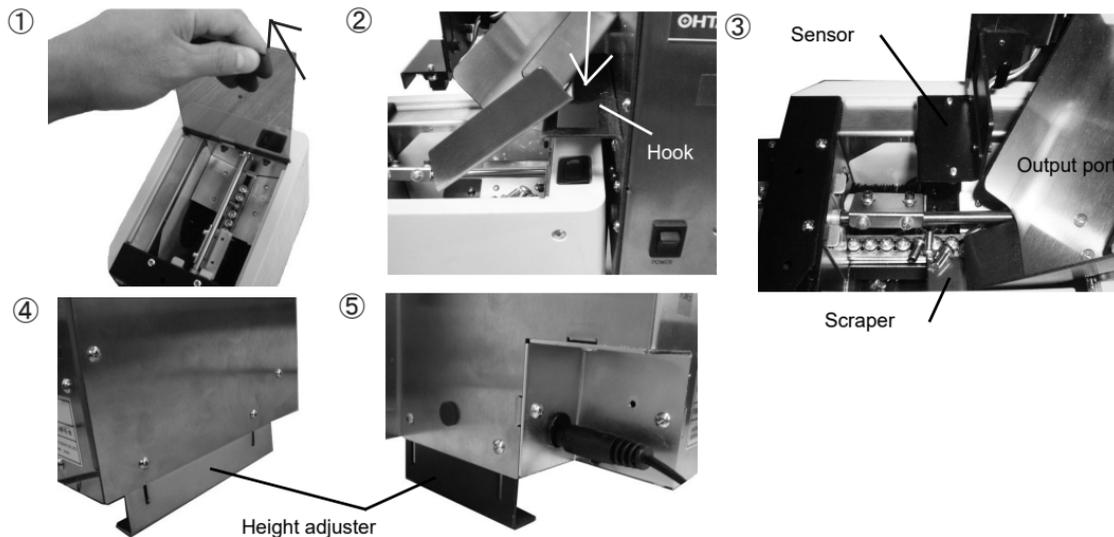


5. HOW TO USE AND ADJUST

5-1. How to attach to screw feeder.

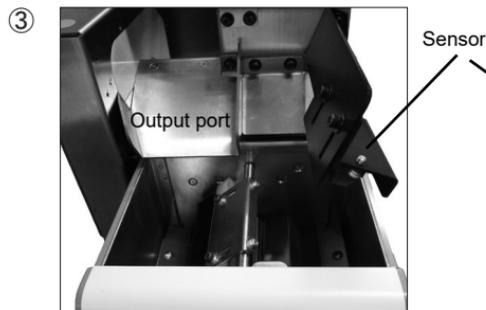
(In case of MHP-80M) (For OM-26 series)

- ① Remove the top lid of OM-26, pulling it upward from one side.
- ② Put hopper down on screw feeder, and be sure to put switch of OM-26 into part that has a hole of hook inside hopper.
- ③ Then, be sure that screw output port is inside OM-26, it do not touch scraper, and sensor is between brush of OM-26 and scraper.
- ④ Adjust bottom face to installation surface with height adjuster.
- ⑤ Remove it from screw feeder and adjust the height of adjuster inside hopper.

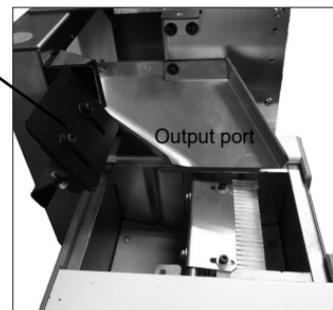


(In case of MHP-80S) (For NSB, NSR, NSBI, NSRI series)
(In case of MHP-80J) (For NJ, NJR series)

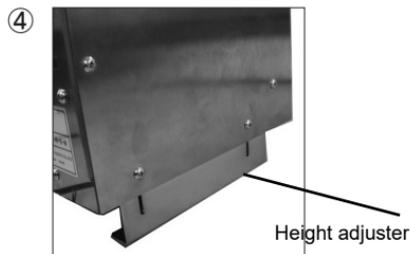
- ① Remove the top lid of screw feeder.
- ② Remove hopper from the top of screw feeder and put a hook on the back cover of hopper.
- ③ Be sure that hopper's screw output port is inside screw feeder and does not touch brush.
Make sure sensor is pointing inside screw feeder.
- ④ If necessary, Adjust bottom face to installation surface with height adjuster.
- ⑤ Remove it from screw feeder and adjust the height of adjuster inside hopper.



MHP-80S

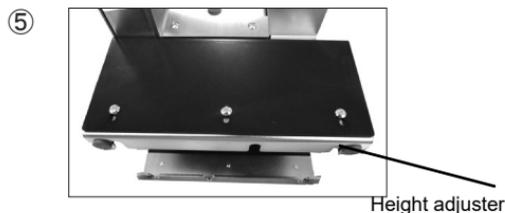
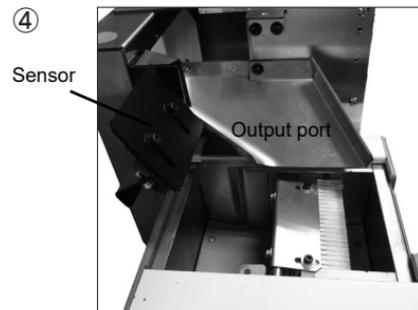
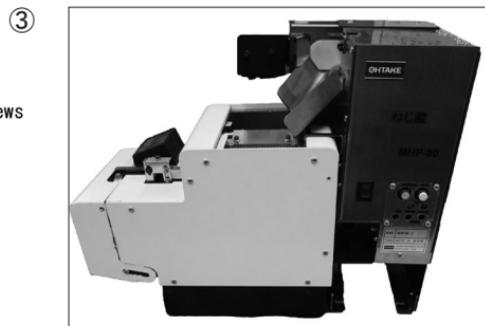
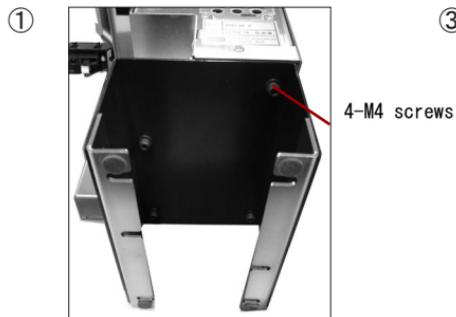


MHP-80J



(In case of MHP-80F) (For FM-36, FME-36 series)

- ① Attach enclosed stand on the bottom of hopper with mounting screws.
- ① Remove the top lid of screw feeder.
- ③ Remove hopper from the top of screw feeder and put a hook on the back cover of hopper.
- ④ Be sure that hopper's screw output port is inside screw feeder and does not touch brush.
Make sure sensor is pointing inside screw feeder.
- ④ If necessary, Adjust bottom face to installation surface with height adjuster.
- ⑤ Remove it from screw feeder and adjust the height of adjuster inside hopper.



5-2. Adjusting screw sensor

To keep an appropriate amount of screws in automatic screw feeder, adjust screw sensor.

(In case of MHP-80M)

How to adjust

- 1) Turn off the power of the automatic screw feeder with the amount of screws you want to start supplying from the hopper filled in the automatic screw feeder in advance. (1/4 of the capacity of the screw feeder is appropriate. MHP-80M will not work if there are no screws in the screw feeder)
- 2) Turn off Auto/Manual Changeover switch of hopper (turn off green lamp), turn on power switch of hopper.
- 3) Turn the adjuster of screw sensor with attached screwdriver from right end to left direction slowly, stop turning at the point where EMPTY Lamp of feeder starts to blink.
- 4) Supply screws in hopper, turn on Auto/Manual Changeover switch of hopper (turn on green lamp), turn on power switch of screw feeder.
- 5) Identify that EMPTY Lamp of FEEDER be turned on and screws are supplied from hopper when screw is gotten out from screw feeder.

5-3. Overview of operation

Screw remnant sensor see the bottom face of the room to scoop up from between scraper and brush of OM-26.

When screw quantity in feeder decreases, sensor that detects screw remnant turns on (EMPTY Lamp of FEEDER is turned on), and on/off are repeated by movement to scoop up screw.

In automatic mode, supply movement starts only for constant time when on/off are repeated three times.

When on/off are repeated three times again, supply movement starts only for constant time and are repeated until EMPTY Lamp of FEEDER is turned off.

Screws in feeder are soon used up after screws in hopper are consumed.

As screw remnant sensor for feeder do not turn on/off when screws in feeder are used up, supply movement continue stopping.

When screw remnant sensor for feeder can not detect screws for constant time, supply movement of OM-26 also stops.

(In case of MHP-80S,J,F)

How to adjust

- 1) Turn on power switch of automatic screw feeder when there is no screw inside.
- 2) Turn on Auto/Manual Changeover switch of hopper, turn on power switch of hopper. (turn on green lamp)
- 3) Turn the adjuster of screw sensor with attached screwdriver from right end to left direction slowly, stop turning at the point where EMPTY Lamp of feeder starts to blink.
Check to see if EMPTY Lamp blinks as scooping blocks of screw feeder move up and down.
- 4) After making an adjustment 3), check to see if screws deliver from hopper at the blink of feeder EMPTY Lamp after loading screws.

5-3. Overview of operation

Screw remnant sensor see the bottom face of feeder scooping block.

When screw quantity in feeder decreases, sensor that detects screw remnant turns on

(EMPTY Lamp of FEEDER is turned on), and on/off are repeated by movement to scoop up screw.

In automatic mode, supply movement starts only for constant time when on/off are repeated three times.

When on/off are repeated three times again, supply movement starts only for constant time and are repeated until EMPTY Lamp of FEEDER is turned off.

It continues to operate even after screws in hopper are consumed as long as screw feeder is in operation.

5-4. Adjustment of operating time (screw supply quantity)

Adjust one time of operating time(screw supply quantity) with timer adjuster. (switch function ⑥)

It is possible to adjust the number of times that supply screws to automatic feeder from one time to five times.

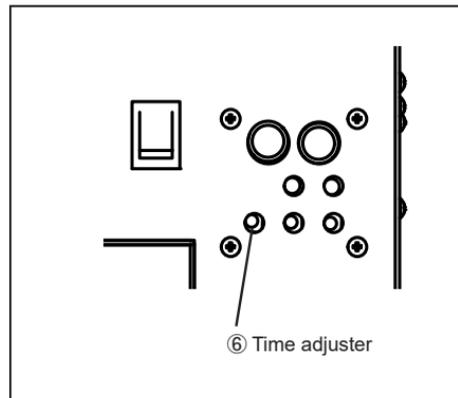
How to adjust

1) When Time adjuster is rotated to clockwise , it is minimized.

When Time adjuster is rotated to counter clockwise , it is maximized.

2) When screw supply quantity to automatic feeder become less , trouble becomes harder to happen. Use it with minimum normally.

Note) Using long size screws , set operating time longer than that of the standard.

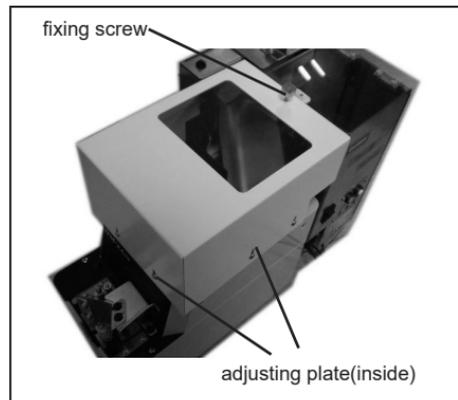


5-5. How to attach screw spill-out prevention cover

Put screw spill-out prevention cover over screw feeder, fix it on hopper with fixing screws. Be keeping cover horizontally , fix two adjust plate that is on that inside of cover with the stable position.

Note)

The left picture is an installation picture to OM-26 series.



6. Remnant sensor in hopper (Optional)

This machine has function that show that screw remnant quantity in hopper decreased.

The sensor is attached on the side of throwing port lid.

When screw quantity in hopper decrease , Empty Lamp(HOPPER) is turned on and empty screw LED in the upper part of main body is also turned on.

It is possible to output the signal from green blue harness that go out from DC jac

[specification]

In shortage of screw remnant quantity : ON

Limit sink current with fixed value resistor so that value of sink current becomes less than max 100mA.

[rated value]

direct current : MAX100mA

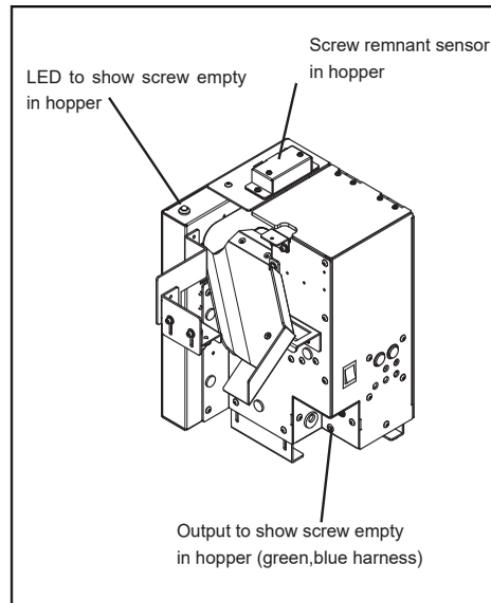
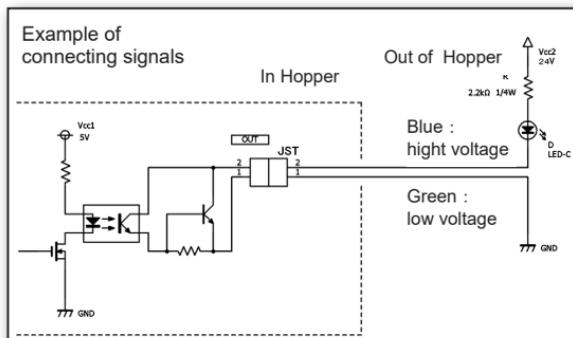
Output voltage : 5 ~ 24VDC (max 27VDC)

[NOTE]

Length of signal harness is max 3 m. Use the following,

C side (blue signal) is high voltage.

E side (green signal) is low voltage.



7. Troubleshooting

Check the following items , if this machine does not usually work or problems happened.

Consult your dealer , if problems are not resolved.

SYMPTOM	CAUSE	CORRECTIVE ACTION
This machine does not supply screws, even if screws in the room to scoop up in automatic screw feeder decreased.	<ul style="list-style-type: none">●Auto/Manual switch is off. (LED Lamp is off.)●Screw remnant sensor is dirty.●To adjust screw remnant sensor is not correct.●Screw quantity in screw feeder are not proper.●setting time of operation is short.	<ul style="list-style-type: none">※ Turn on Auto/Manual switch. (Turn on LED Lamp.)※ Clean the sensor.※ Refer to how to adjust screw sensor, adjust the sensor※ This machine dose not work automatically when screw in feeder is empty. Supply some screws.※ When screws supplied by one operation have few, set the longer operating time.
Supply dose not stop, even if the room to scoop up in automatic screw feeder has proper screw quantity.	<ul style="list-style-type: none">●Screw remnant sensor is dirty.●To adjust screw remnant sensor is not correct.	<ul style="list-style-type: none">※ Clean the sensor.※ Refer to how to adjust screw sensor, adjust the sensor

8. Specifications

Dedicated Adaptor (Switching type)	Input: AC100V 50/60Hz
	Output: DC15V 1A
Dimension	156 (W) × 150 (D) × 212 (H) (mm) (protrusion parts are not included.)
Weight	Approximately 3.3Kg
Attachments	Operation manual 1 copy AC Adapter 1 unit Screw spill-out prevention cover 1 unit Adjusting screwdriver 1 piece Ground wire 1 piece 【The following is for only MHP-80F】 Stand 1 unit Screw to fix the stand(M4 × 8mm) 4 pieces
Installation location	Level stable place
Installation and storage condition	Temperature 0~40°C Humidity 10~85% (without condensation)
Compliance standards	EMC: 2014/30/EU MD: 2006/42/EC RoHS: 2011/65/EU
Applicable diameter of screw	M2. 0~M6. 0
Applicable underhead length of screw	Up to 25 mm
sensor to supply screws	Photo sensor (capable of adjusting distance)
capacity of screw storage	approximately 800 cc
reference quantity of screw storage	M2.3 × 5 / approximately 20,000 pieces M3.0 × 6 / approximately 5,600 pieces M6.0 × 25 / approximately 280 pieces

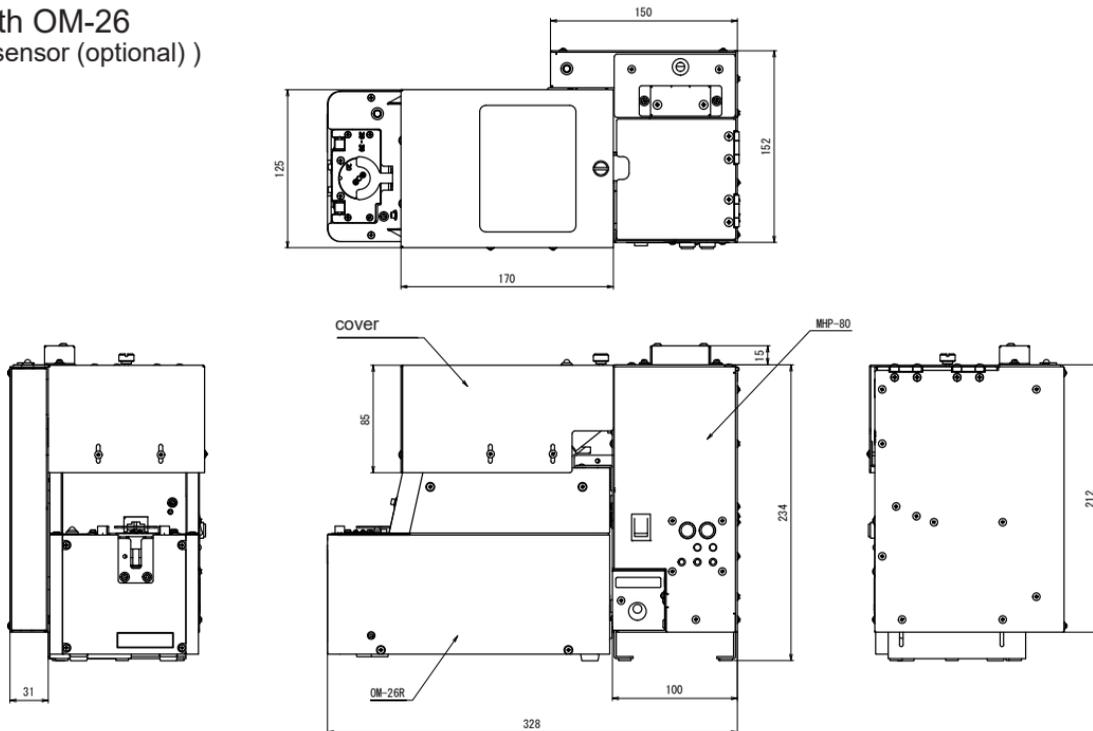
[CAUTION]

- This machine accepts only steel screws. Plastic or stainless screws cannot be used.
- Within the specified range of screw dimension, linkage of screws may be caused under the influence of shape and surface condition of screws. There is a case in which the decrease of screw storage are needed.
- Design , performance and specification may be changed without a notice for improvement.
- The noise of this unit is less than LAeq 70 dB at a distance of 1 m.
- This product complies with EU directive. Please check the EU Declaration of Conformity for compliance standards.

NEJIKURA Type	Corresponding Automatic Screw Feeder
MHP-80S	NSB/NSR/NSBI/NSRI Series
MHP-80J	NJ/NJR Series
MHP-80F	FM-36/FME-36 Series
MHP-80M	OM-26 Series

9. External dimensions

MHP-80M with OM-26
(With remnant sensor (optional))



Unit : mm

MHP-80S with NSRI

(without remnant sensor)



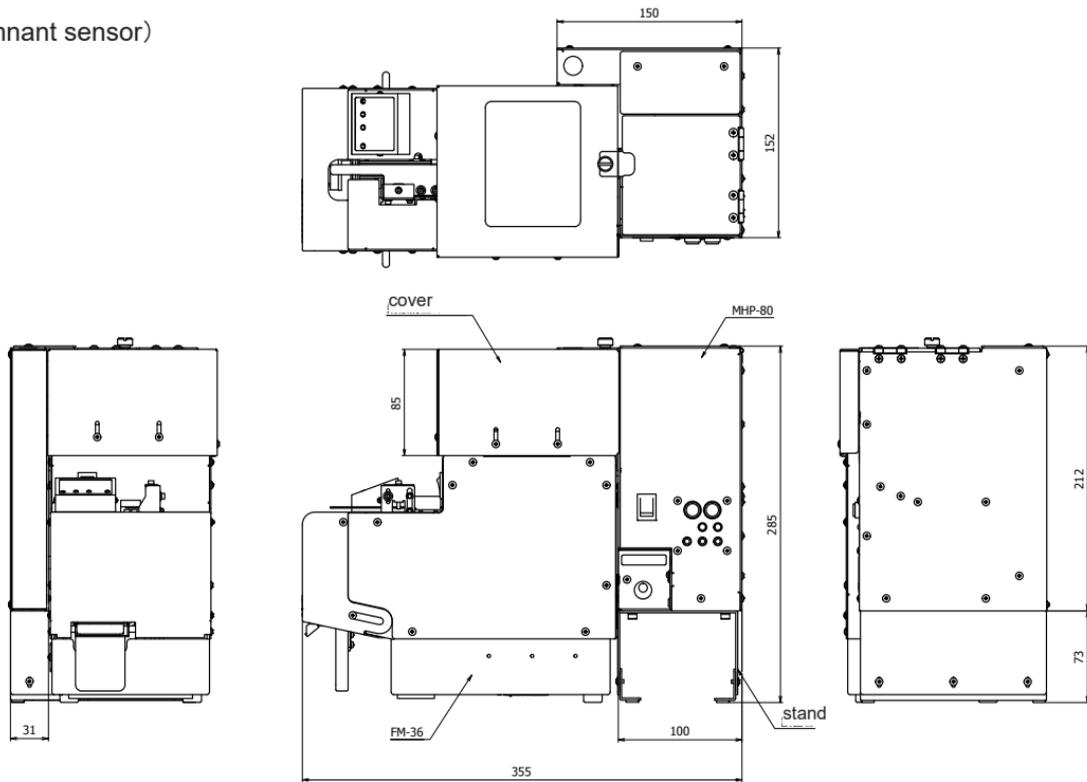
MHP-80J with NJR

(without remnant sensor)



MHP-80F with FM-36

(without remnant sensor)



10. WARRANTY

For users within Japan, the effective term of warranty is for 6 months from the date of delivery.

This warranty will not be applicable to purchases or users outside of Japan.

If any problems should occur, please contact your sales dealer.

After the warranty period, there will be a charge for repairs.

In the following cases, the purchaser shall pay for parts and labor regardless of the terms of warranty:

- ① Failure due to improper handling.
- ② Failure due to product modification or improper processing.
- ③ Failure due to causes beyond control (for example earthquake or fire).
- ④ Failure attributable to any cause other than this product.
- ⑤ Consumables (main motor, drive belt)
and replaceable parts and replacement work expenses.

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



RoHS



Please note that on disposal, this product may be safely recycled in accordance with the relevant national legislation relating to electrical/ electronic products. If in doubt please contact your retailer for guidance.

部品名称	有毒有害物質或元素					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六价鉻 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
驱动齿轮,轴心部件	×	○	○	○	○	○
螺钉	×	○	○	○	○	○
六角铜柱	×	○	○	○	○	○
电路板元件	×	○	○	○	○	○
连接器	×	○	○	○	○	○

○：表示該有害物質在該部件中的含量均在GB/T 26572-2011規定的限量要求以下。
 ×：表示該有害物質至少在該部件中的某一均質材料中的含量超出GB/T 26572-2011標準規定的限量要求。

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(as of Apr. 2021)

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(2021年4月現在)