

OM-R 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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Overview

Thank you very much for selecting the OM Series Automatic Screw Feeder. This machine can line up screws (Type M2 - M6) and supplies them one by one to help the efficiency of screw fastening work. Different sizes of screws can be used by changing the rail and parts of the escaper assembly. It can be used wherever there is a power source for an AC adapter. Note: Only steel screws may be used with this machine. Stainless steel or plastic screws cannot be used.

Before Use


Please check for the following accessories before operating the machine:

- | | |
|--------------------------|------------------------|
| • (1) Instruction Manual | • (1) Hexagonal Wrench |
| • (1) AC Adapter | • (1) Screwdriver |




Operating Precautions

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

 **WARNING** This indicates there is a chance of death, serious injury, or fire 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

 **WARNING** **Warning**










 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.









Operating Precautions (Continued)

-  When using an outlet with AC100 - 240V, don't overload the electrical circuit. Do not modify this machine as this may cause a fire or electric shock.
-  Do not operate this machine near flammable liquids, gases, 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 ASG for additional information.
-  When performing maintenance, changing parts, or when you sense an abnormality in the machine, turn the power off and unplug the AC adapter from the wall outlet.
-  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 may result.
-  Do not operate this machine in overly humid or dusty conditions. Keep the socket plug clean at all times otherwise it may cause a fire or electric shock.

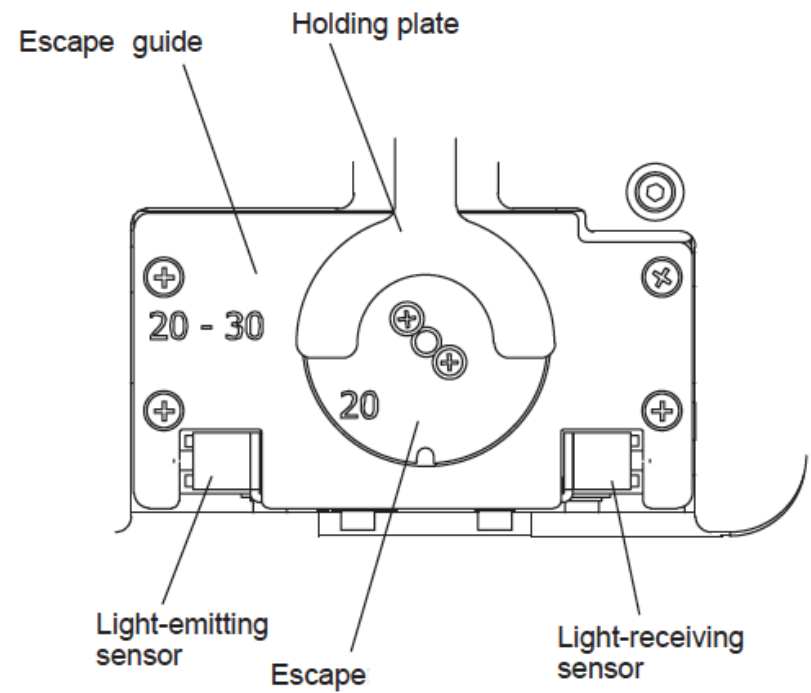
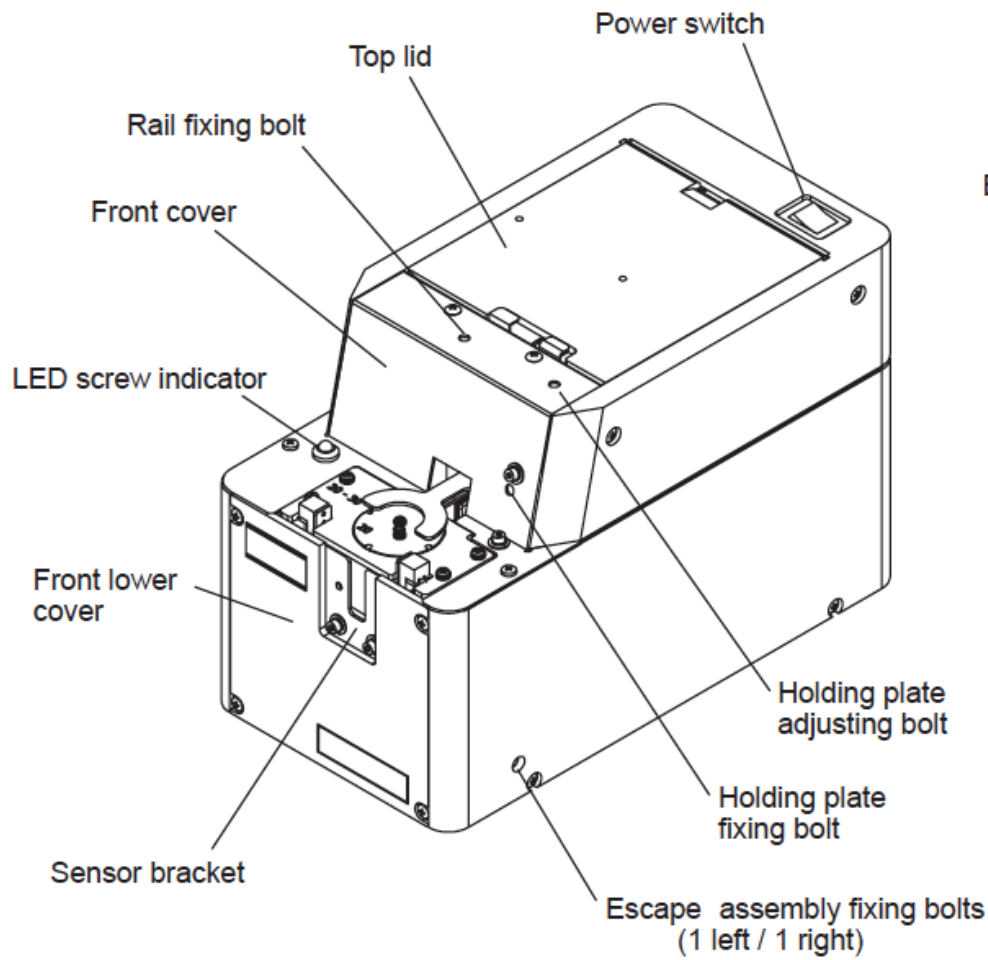


Operating Precautions (Continued)

-  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 when not in use.
-  Do not operate the machine with tension on the AC adapter cord. Keep the cord loose and untangled.
-  Do not bend, alter, or damage the rail. Do not apply any oil. It is recommended that the user clean the rail periodically.
-  Do not use any screw that is out of the specified range nor any screw that is oily or dirty.
-  Do not exert excessive force when picking up screws from the escape

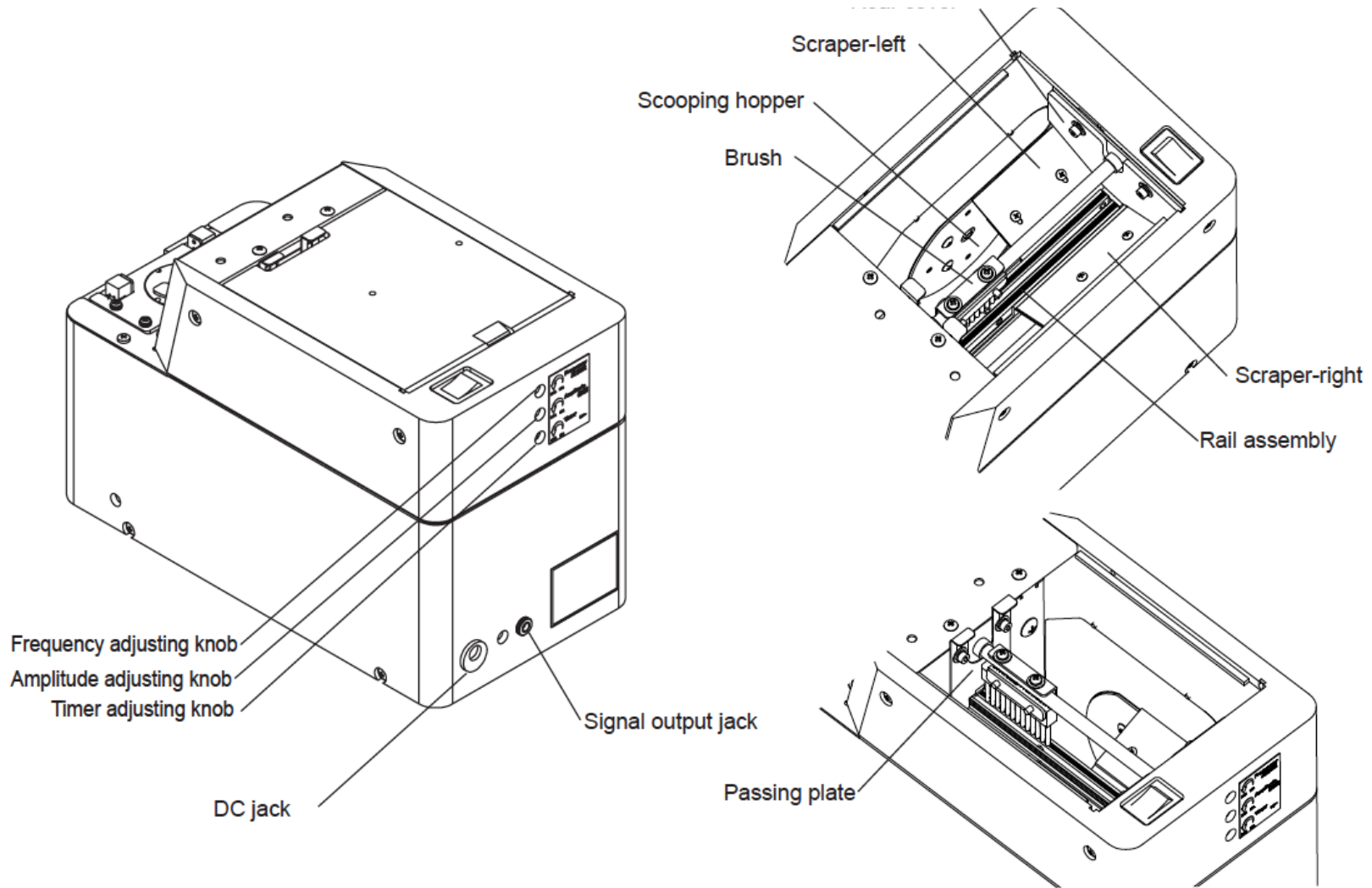


Names of Parts





Names of Parts (Continued)





Adjustments and Checks before Use

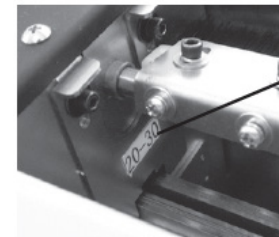
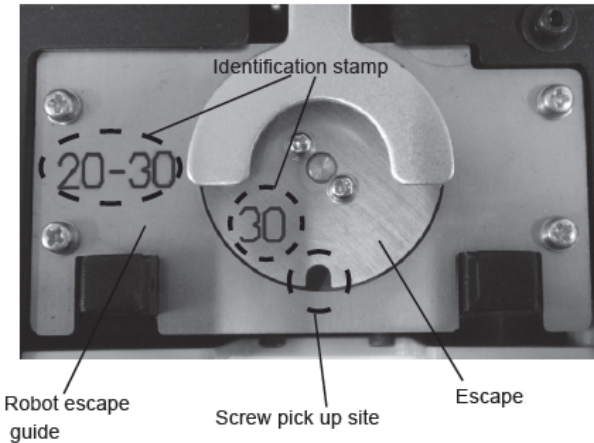
Check the Model Number

Ensure the model number of the screw presenter is appropriate for the size of screw you are using.

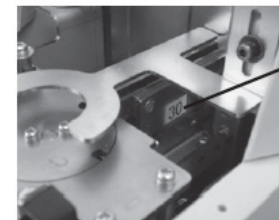
Before delivery, each section of the machine is checked and adjusted with panhead screws matching the nominal diameter of the model ordered. Operate the machine with the screws loaded to check that the pick up is smooth. If the height or shape of the screw head is different each section must be readjusted. If this is the case, make the following checks and adjustments:

- Check the screw load amount
- Check and adjust the passing plate
- Check and adjust the holding plate
- Check and adjust the timer
- Check and adjust the brush
- Check and adjust the rail vibration
- Check and adjust the front and rear sides of the rail

If the rail, escape, robot escape guide and passing plate are replaced, screws with a different nominal diameter can be accepted. After these parts are replaced, fine adjusting is required.



Passing plate identification seal



The rail identification seal can be found after removing the front cover.



Adjustments and Checks before Use (Continued)

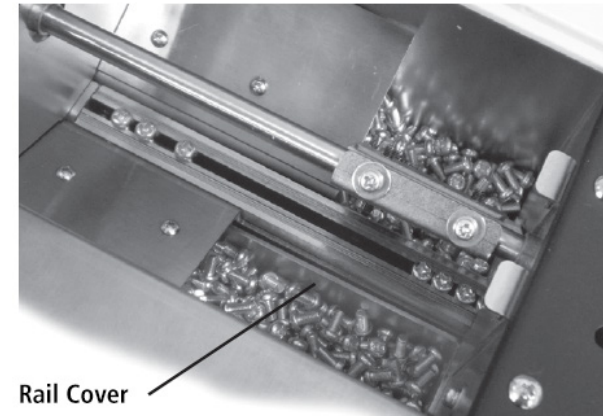
Basic Operations

Loading the Screws

- Turn the power switch ON and OFF so that the brush stops vertically above the rail.
- Open the top cover and load screws on the left and right side of the rail evenly.
- Do not load screws above the surface of the rail.
 - ❗ **CAUTION:** Screws with a diameter larger than 5mm or longer than 20mm under the head should not be loaded higher than the rail bottom.
- The type and length of screw changes the load capacity so check and adjust the load accordingly.
- Do not overload the hopper with screws otherwise it may cause a malfunction or damage the machine.
- This machine accepts only steel screws. Plastic or stainless screws are not accepted.

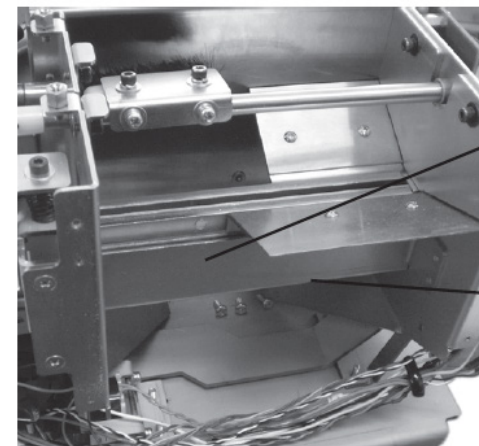
Turning ON the Power

- Use only the adapter supplied with this machine to connect it to a wall outlet. When you turn the power on, the switch lamp lights up, the motor rotates, and screws are brushed onto the rail.
- The rail vibrates to deliver screws toward the end of the rail, then the escape rotates to deliver screws to the pick-up location. When the screws come to the stopper, the LED indicator lights up and the escape stops rotating.
- **CAUTION:** Use only the AC adapter supplied with this machine otherwise it may cause damage to the machine.



Rail Cover

Do not load screws above the surface of the rail



Rail Cover

Do not load screws above this point. (Rail bottom)

Disassembled state



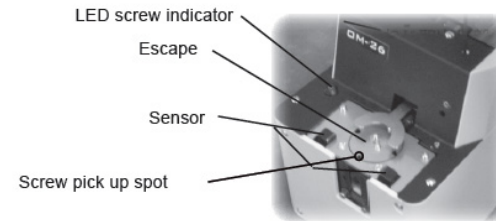
Adjustments and Checks before Use (Continued)

Picking Up Screws

- With screwdriver on the robot, pick up the screws at the stopper.
- Use the bit guide to guide the screwdriver bit vertically onto the screwhead.
- When inserting the screwdriver onto the screwhead, do not use excessive force as it may alter the position of the escape or cause damage to the machine.
- Use the correct bit for the size of screw you are using.

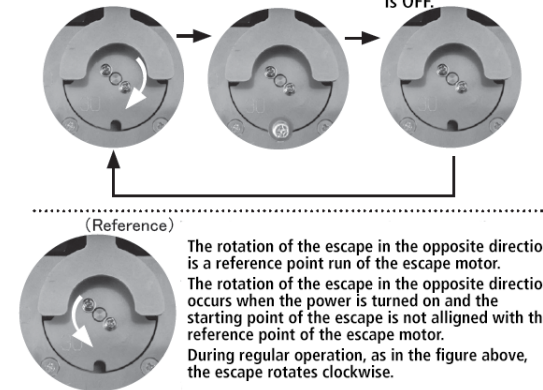
Action of the Escape

- The escape rotates 90° clockwise, stops for 0.6 seconds, and rotates again 90° clockwise. When a screw is caught in the escape and the notch position is altered, the escape automatically rotates to the left to reestablish its position. It will then return to the correct rotation.
- This machine continues its operation when no screw is found at the screw pick up location.
- The machine continues operating with a screw at the pick up location but will stop after a certain period of time if the screw is not picked up.
- Once the screw is picked up, the machine starts operating again. This time period can be varied by adjusting the timer.
- When no screw is found at the pick up location after a certain period of time, the rail vibration increases. The vibration sound will also increase.
- If a screw is not found at the pick-up location, the machine stops operating. At this time, the escape keeps rotating. Turn the power switch OFF and ON again when you want to restart operation.



Action of the Escape

- Accepting a screw
LED screw indicator is OFF
- The screw is carried to the pick-up location
LED screw indicator is ON
- Picking up the screw at the pick-up location.
LED screw indicator is OFF.





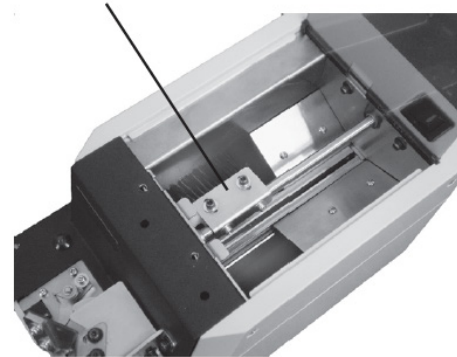
Adjustments and Checks before Use (Continued)

Adjusting the Brush Height

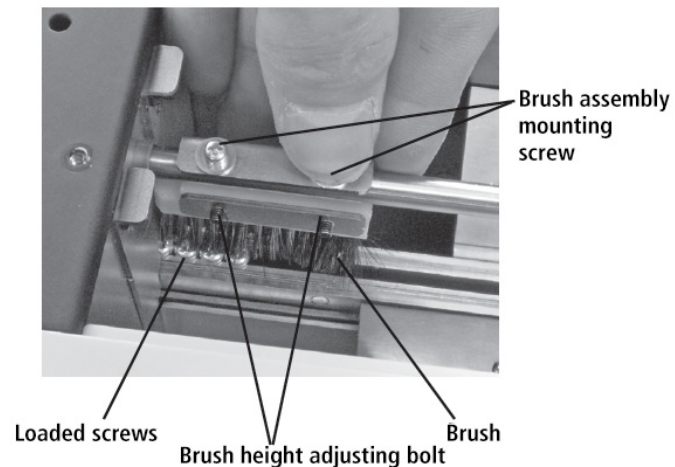
! Turn OFF the power switch before starting replacement and adjustment.

- Load the screws into the screw hopper and turn ON the power switch until the screws are aligned in the rail.
- Turn power switch ON and OFF in order to set the brush to the left as shown in the figure on the right.
- Move the brush by hand to check that the screws in the rail are in slight contact with the brush bristles. If needed, make necessary adjustments.
- When the brush height is too high or low, this will have an adverse effect on the screw alignment and transport.
- If any adjustment is necessary, loosen the brush height adjusting bolt to adjust the brush height.
- If the plastic portion at the front of the brush comes into contact with the passing plate, loosen the brush assembly mounting screw and move the brush assembly back so there is no clearance.
- Turn ON the power switch to check that the brush operation is normal.

Turn power switch ON and OFF in order to set the brush bristles in a horizontal position towards the left side.



Move the brush by hand to check that the screws in the rail are in slight contact with the brush bristles. If needed, make necessary adjustments.

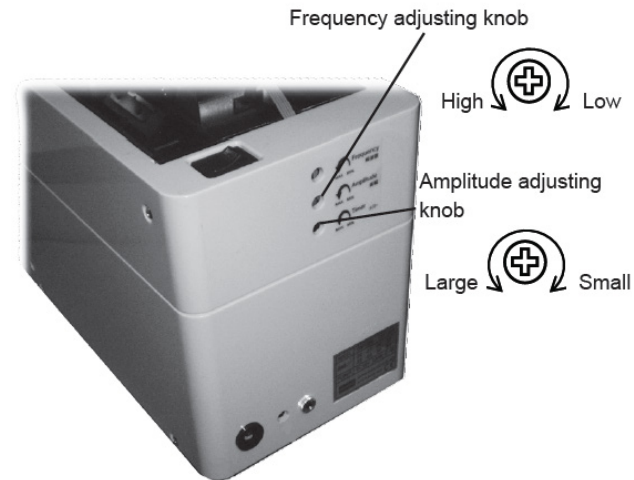




Adjustments and Checks before Use (Continued)

Checking and Adjusting the Rail Vibration

- The amplitude and frequency of the rail vibration can be adjusted.
 - The vibration has been adjusted at the factory for screws that correspond with the rail.
 - Put some screws into the rail and turn the power on. If they are delivered smoothly, there is no need for adjustment.
 - The screw transport feed differs depending on screw type.
 - For screws with a low transport speed or screws that easily escape from the rail, an adjustment is necessary.
1. Turn the frequency adjusting knob (first hole at the top in the back of the machine) using the accompanying screwdriver. Find the frequency at which the rail vibrates appropriately.
 2. Turn the amplitude adjusting knob (second hole from the top) and find the amplitude for which screws are delivered smoothly.
- If the vibration is adjusted too high, screws may escape from the rail and fall into the machine. Adjust the vibration to a proper value that matches the loaded screws.
 - With the accompanying screwdriver, turn the knob without using excessive force.





Adjustments and Checks before Use (Continued)

Check and Adjust the Front and Rear Sides of the Rail

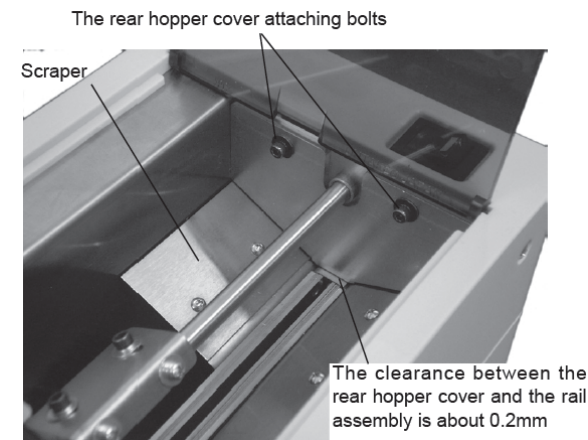
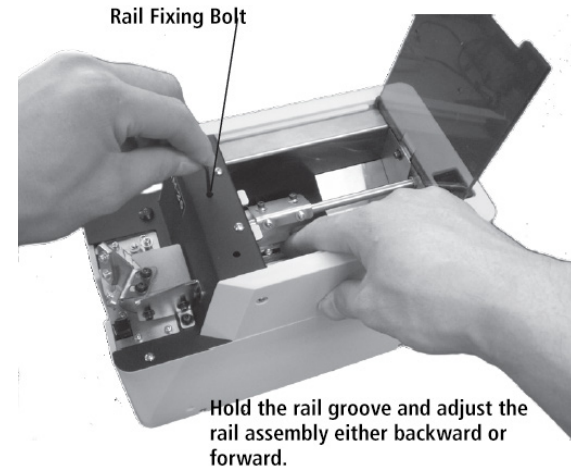
! Turn OFF the power switch before starting replacement and adjustment.

- If the rail comes into contact with the escape or the clearance between the rail and escape is too large, loosen the rail screw. Hold the rail groove and adjust the rail assembly either backward or forward. After making an adjustment, be sure to tighten the rail screw.
- When the rail comes in contact with the escape, the escape disc doesn't rotate properly. When the clearance between the rail and the escape is too large, screws may fall into the machine.

Check and Adjust the Rear Hopper Cover

! Turn OFF the power switch before starting replacement and adjustment.

- Check that the clearance between the rear hopper cover and the rail assembly is about 0.2 mm.
- If the rail hits against the rear hopper cover, the vibration will lessen and the screws will be delivered slowly. If the rear hopper cover is too high, the chance of screws falling between the rail and the scraper increases.
- If adjustment is required, loosen the rear hopper cover screws and make the appropriate adjustments.



Adjustments and Checks before Use (Continued)

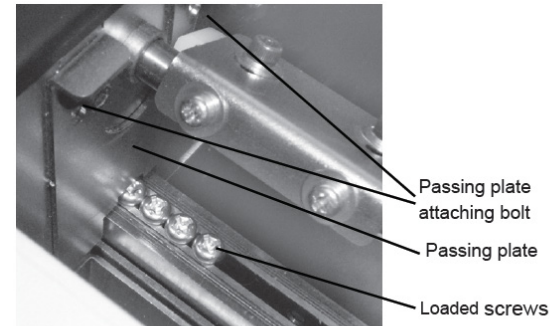
Check and Adjust the Passing Plate

! Turn OFF the power switch before starting replacement and adjustment.

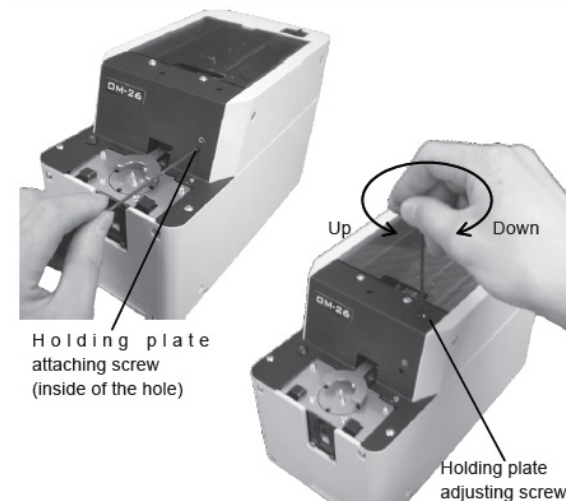
- Check that the passing plate is adjusted to a height that permits loaded screws to pass just within the limit.
- If the passing plate is too low, screws cannot pass. If the passing plate is too high, the screws will not be transported smoothly.
- If adjustment is required, loosen the passing plate screw and adjust appropriately.

Check and Adjust the Holding Plate

- Check that the clearance between screws in the rail and the holding plate is about 0-1mm.
- If any adjustment is required, loosen the holding plate attachment screw and turn the holding plate adjusting screw to move the plate up or down.
- If there is no clearance, the screw cannot pass. If the clearance is too large, screw may pile up or escape. Turn the holding plate adjusting screw clockwise to move the plate down. Turn the holding plate adjusting screw counter-clockwise to move the plate up.



The clearance should be just enough to permit the loaded screws to pass through the passing plate.





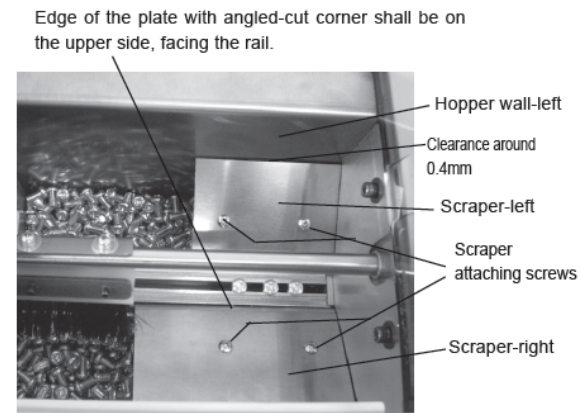
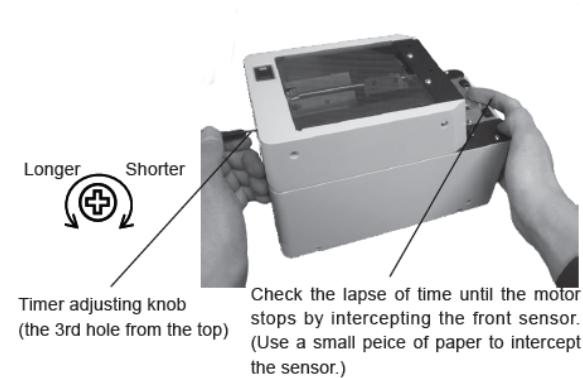
Adjustments and Checks before Use (Continued)

Check and Adjust the Timer

- The screw transport feed differs depending on screw type.
- Set the timer longer for screws with a low transport speed and shorter for screws with a high transport speed.
- This machine continues its operation when no screw is found at the screw pick up spot.
- The machine continues operating with a screw at the pick up location but will stop after a certain time period if the screw is not picked up. This time period can be varied by adjusting the timer. After the screw is picked up, the machine starts operating again.
- Cover one of the optical sensors to make sure it's working.
- Make an adjustment with the timer adjusting knob (the 3rd hole from the top) at the rear of the machine body (as shown in the figure on the right).
- Turn the timer knob clockwise (as viewed from the rear side) to decrease the time period. Turn the knob counter-clockwise to increase the time period.

Check and Adjust the Scraper

- Check that the clearance between the scraper right/left and the hopper wall right/left, are around 0.4mm.
- When the scraper makes contact with the hopper wall, the rail vibration decreases and the screws are delivered slowly. When the clearance between the scraper and the hopper wall is too large, the screws may be caught by the scraper.
- If any adjustment is required, loosen the scraper attaching screw and move the scraper plate up or down.
- If there is any damage to the plate, contact ASG.





Maintenance

- A dirty rail may interfere with the screw transport speed. Clean the rail with a soft, clean cloth dipped in alcohol. If cleaning is difficult, remove the rail from the machine and clean the rail. Replace the rail if needed.
- Before removing the rail from the machine, be sure to turn off the power supply and take the screws out of the hopper.

Part Adjustments and Replacement

- The brush and main motor are wearable parts.
- When using a different diameter of screw, the following items must be replaced: rail, escape, and passing plate. These parts may be ordered separately. The replacement and adjustment procedures are described on the next page.
- When replacing any parts, a fine adjustment is required. Make these fine adjustments by following the instructions in this manual. Before replacing any parts, be sure to remove all the screws from the hopper.



Part Adjustments and Replacement

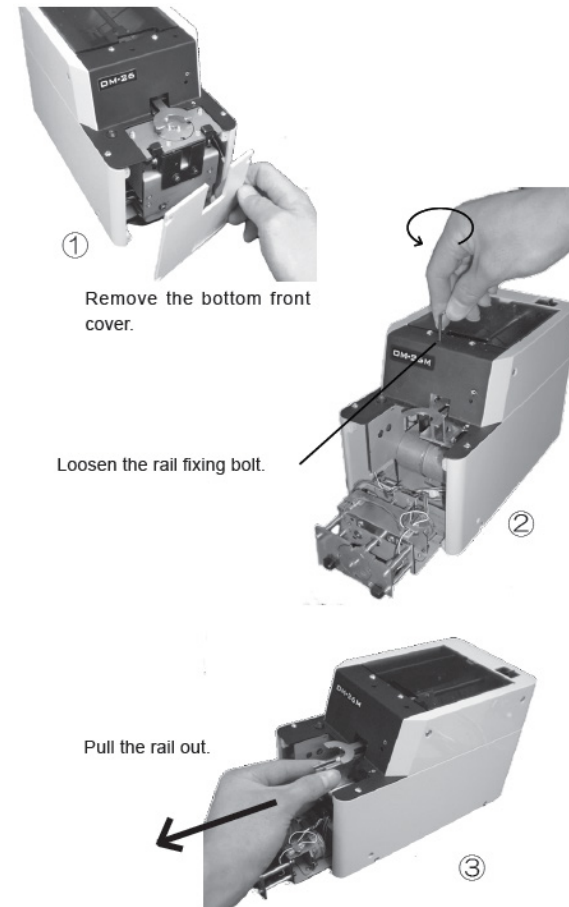
Replacing the Rail Assembly

- ❗ Turn OFF the power switch before starting replacement and adjustment.
Before replacing, remove all the screws from the hopper, the rail, and the escape.

The rail assembly of this machine can be easily replaced. If there is any dirt or flaw on the rail that prevents a smooth operation, we recommend cleaning or replacing the rail. Use the passing plate, escape, and rail assembly that correspond to the diameter of the screws to be used.

1. Remove the bottom front cover.
2. Loosen the escape assembly screws and pull out the escape assembly. Insert the accompanying allen wrench into the left hole on the front top cover and loosen the rail screw.
3. Pull out the rail assembly and replace it with a compatible rail.

Reassemble. After replacing the rail, adjustments are required. Fix the rail so that it does not contact the escape and make sure that screws won't fall into the clearance between the escape and rail.



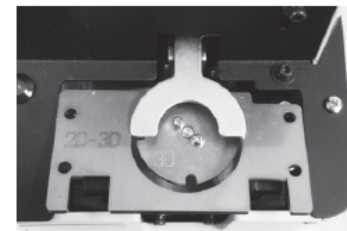
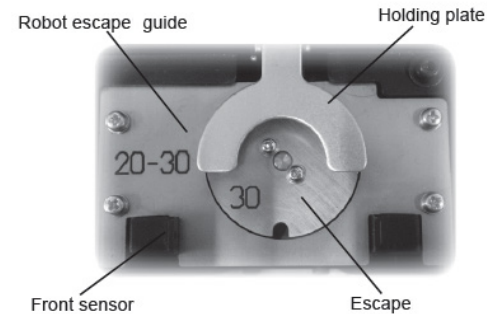
Part Adjustments and Replacement (Continued)

Replacing and Adjustment of the Escape

! Turn OFF the power switch before replacing.
Before replacing, remove all the screws from the hopper, the rail, and the escape.

- When using screws with a different diameter, replace the escape, the robot escape guide, the rail, and the passing plate.
 - Raise the holding plate to replace and adjust the necessary parts. After replacement, be sure to adjust and check the parts in the area of the escape. When you remove the escape attaching screw, please use the driver specified for M2 (bit No.0).
1. Remove the robot escape guide and the escape. Loosen and remove the attaching screws of the robot escape guide and the escape.
 2. Attach the robot escape guide and the escape that corresponds with the screw's nominal diameter. Assemble the escape loosely as it will need adjusting later. Note that the stopper should not be on top of the escape. The stopper should be laying flat against the escaper guide-left. If it is not laying flat, adjust.

Names of the parts



Remove the Robot escape guide.



Remove the escape

Part Adjustments and Replacement (Continued)

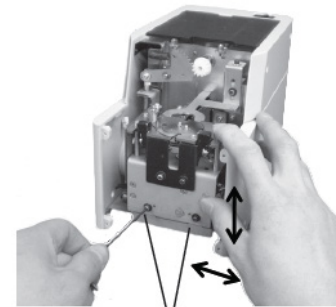
Replacing and Adjustment of the Escape (Continued)

3. Check the position of the parts for smooth delivery of the screws.

- ! Check that the clearances between the outside edges of the rail and the robot escape guide right and left are almost even. If they are in contact, the screws cannot be delivered. If there is too much clearance on either side screws may fall into the machine.

At this time, make the top surface of the escape even to or 0.1 - 0.5mm lower than the rail surface. If it's too high, the screw won't enter an escape notch. If it's too low, a screw will not enter a notch properly.

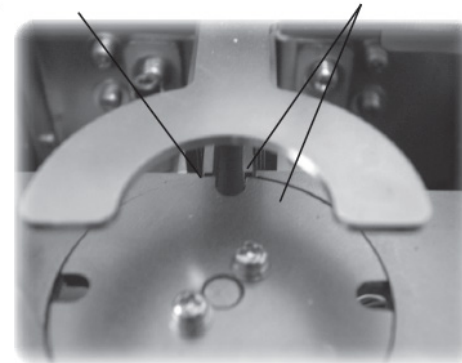
If any adjustment is required, remove the cover, loosen the escape bracket attaching screw and move it up or down, left or right and tighten the screw.



Escape bracket attaching bolt

The clearances between the sides of the rail and the robot escape guide should be almost even.

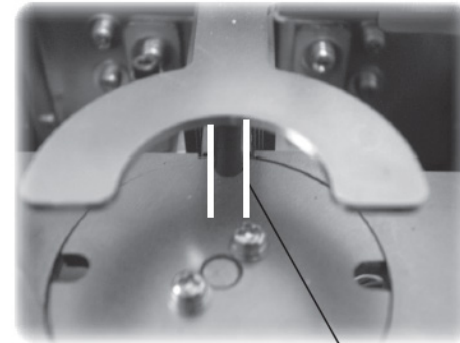
The surface of the escape should be slightly lower than the surface of the rail.



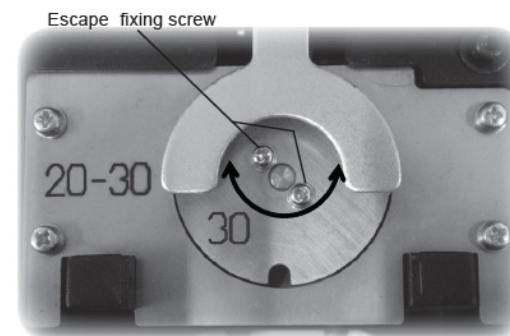
Part Adjustments and Replacement (Continued)

Replacing and Adjustment of the Escape (Continued)

4. Adjust the escape notch position.
 - Turn the power switch ON while covering the sensor light axis with a small piece of paper.
 - When the power is ON, the screw sensor LED lights up and the escape rotates around to the starting point.(Reference point run.)
 - When the escape stops, loosen the attaching screws and adjust the escape by hand so that an escape notch and the rail groove align. Tighten the escape attaching screws.
 - After adjustment, turn the power switch ON in order to make a reference point run and check that an escape notch and the rail groove align.
 - Next, remove the paper blocking the sensor's optical axis and the escape will start rotating.
 - At each rotation stop, check that all 4 notches of the escape align with the rail.
 - After checking and adjusting each component, do an operational check with screws loaded.
 - If any abnormality is found, make the said adjustments once again in addition to the rail vibration and front/rear position adjustments.
 - When installing the cover, take care not to catch or pinch the wires.



The rail groove notch matches with the escape notch.

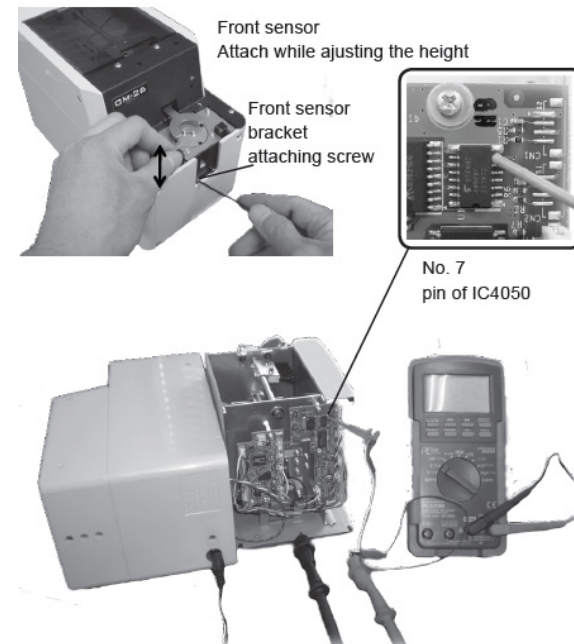


Part Adjustments and Replacement (Continued)

Checking and Adjusting the Sensor

The following are rare situations that require adjustment:

- There is no screw at the pick up spot but, the LED is on and the escape doesn't rotate.
- There is a screw at the pick up location, but the LED is not on and the escape rotates. Check the voltage when required.
- When checking the voltage, take the rear cover off and check the voltage level of No. 7 pin of IC4050 and adjust the sensor bracket. When measuring the voltage level, the metal part of the main body is the ground.
- When a screw is not at the pick up location, turn the power ON.
- Next loosen the 2 sensor bracket attaching bolts and do the following:
 - Pull the sensor bracket down and check if the voltage is over 4V and if the sensor light is ON. At this time, the escape is stopped.
 - Next, while checking the voltage level, slowly push the sensor bracket up which causes the voltage to decrease. When the voltage is around 0.25V-1.5V tighten the sensor bracket. During this procedure when the voltage is around 2.5V, the LED screw sensor turns OFF and the escape rotates.
- When there is no screw at the pick up location, the voltage is 0.25V-1.5V and the LED screw indicator is OFF.
- When there is a screw at the pick up location and the voltage is over 3.5V, the LED screw indicator is ON.



Part Adjustments and Replacement (Continued)

Replacing the Passing Plate

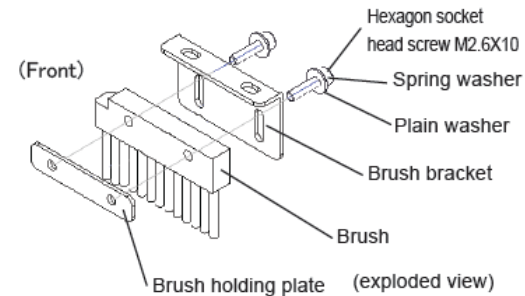
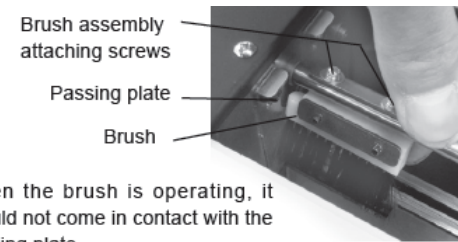
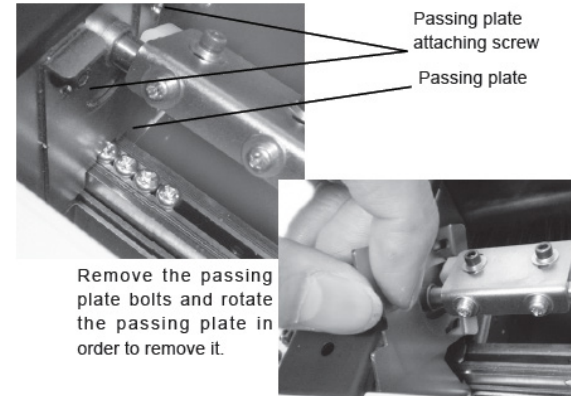
! Turn OFF the power switch before starting replacement and adjustment.

- Use the passing plate, rail and escape that correspond with the diameter of the screws to be used.
- Remove the passing plate. Do not lose the attached bolts. Using bolts other than those supplied with this machine may result in a malfunction.
- Refer to Check and Adjust the Passing Plate for adjustment.

Replacing and Adjusting the Brush

! Turn OFF the power switch before starting replacement and adjustment.

- If the brush is too worn to sweep screws off of the rail, replace it.
- Turn ON and OFF the power switch in order to set the brush bristles facing to the left and detach the brush assembly.
- The brush assembly can be disassembled as shown in the figure on the right.
- After reassembling, check that the front part of the brush doesn't come in contact with the passing plate. The ideal clearance is 0mm.
- For adjustment, refer to Adjusting the Brush Height on page 10.



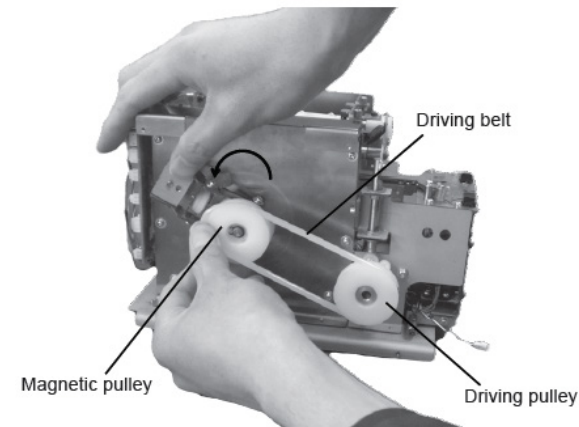
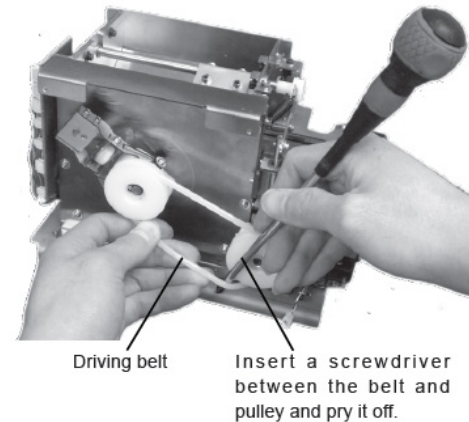
Part Adjustments and Replacement (Continued)

Replacing the Driving Belt

! Turn OFF the power switch before starting replacement and adjustment.

If the driving belt is worn, cut, or slips while in use, replace it with a new one.

- Turn the power OFF and remove all covers.
- Remove the driving belt from the pulley by using a screwdriver to take it off.
- When you mount the new belt, start with the driving pulley and then the magnetic pulley.
- After reassembling, check that the screws are being brushed normally.
- **CAUTION:** The driving belt has a strong tension. Be careful not to pinch your fingers!



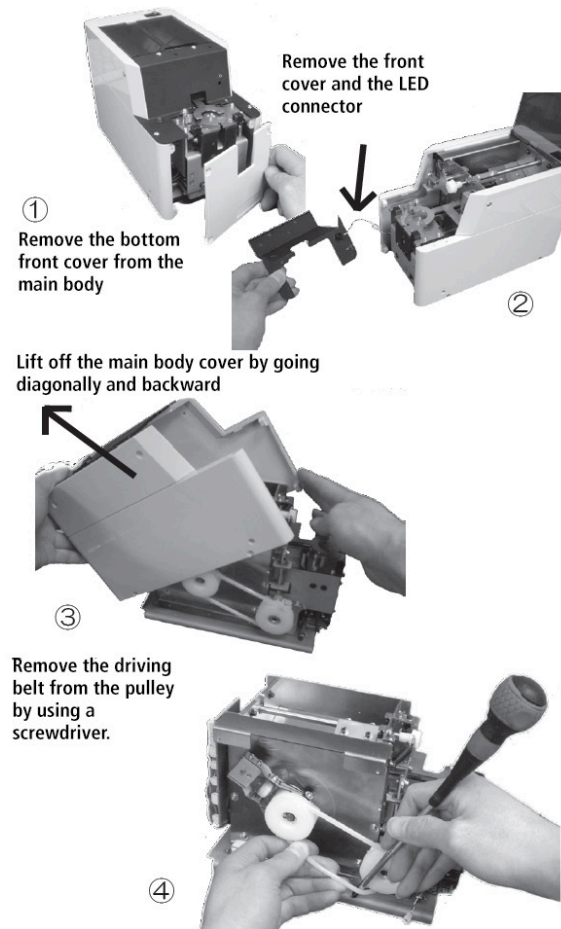
Part Adjustments and Replacement (Continued)

Replacing the Main Motor

! Turn OFF the power switch before starting replacement and adjustment.

When the motor is damaged, replace it with a new one.

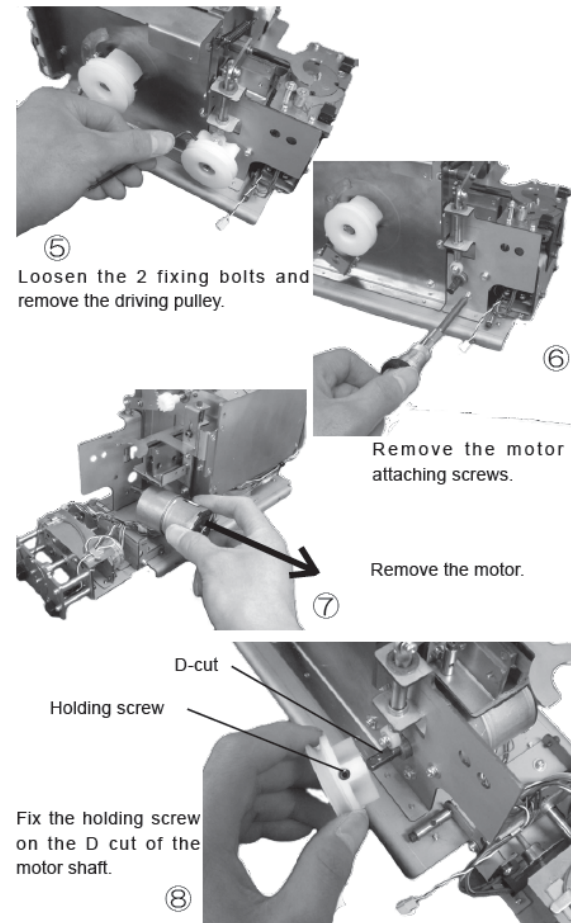
1. Remove the bottom front cover from the main body.
2. Remove the LED connector.
3. Remove the outside cover screws, lift off the main body cover
4. Remove the driving belt from the pulley by using a screwdriver. CAUTION: The driving belt has a strong tension. Be careful not to pinch your fingers!



Part Adjustments and Replacement (Continued)

Replacing the Main Motor(Continued)

5. Using the accompanying hex wrench, loosen the 2 hex head bolts from the driving pulley and remove it. If the bolts are hard to access, rotate the motor pulley with the hex wrench.
6. Remove the motor attaching screws.
7. Pull the escape assembly forward and pull the motor out from the right side of the machine.
 - Next, remove the motor harness from the clip and remove the connector from the board.
 - Reassemble.
8. When attaching the driving pulley, one holding screw should be put in the straight side of the D cut of the motor shaft. **CAUTION:** Be careful not to break the motor wires.





Application with Robotic System

External Output Signals

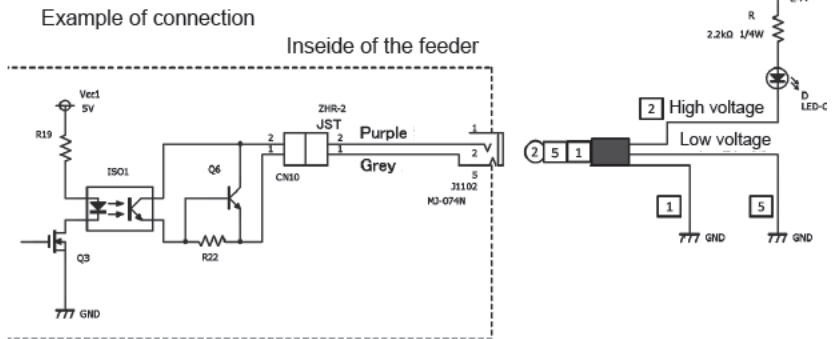
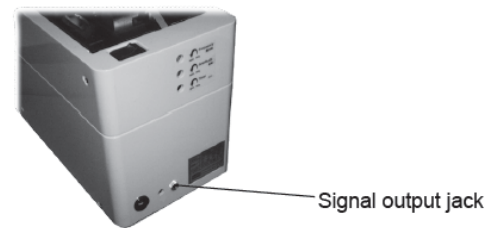
The jack on the back of the machine detects the presence of screws on the rotational escape, which shall be used with automatic assembly machines or external screw counters.

FUNCTION: Screw present: signal high (ON)

- Incoming current: shall be limited to less than 100mA
- **CAUTION:** Additional resistor is required on external circuit for regulating current.

CAPACITY: Max DC current: 100mA

- External supply voltage: 5 - 24VDC (Max: 27VDC)
- **CAUTION:** Please use the plug type of 3.5 - 3 conductor miniature jack.





Application with Robotic System(Continued)

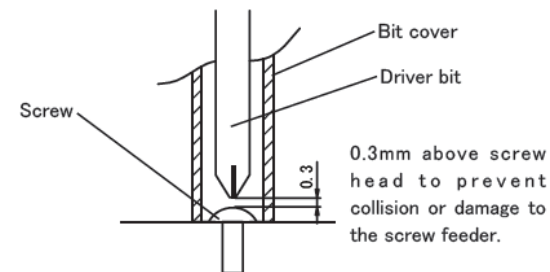
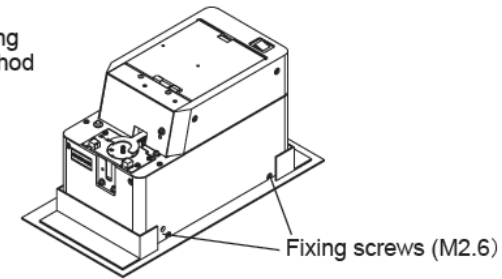
Installation with Robotic System

- When installed with a robot, the screw feeder will be fastened to the robotic assembly with the screws at the bottom of the cover. Please refer to the diagram on the right.
- In addition, if the rubber supports are replaced by the user, please keep length of the screws less than 5mm in order to prevent damage to internal mechanism of the screw feeder.

Robotic Operations

- To avoid contact between the screwdriver and screw feeder, set the lowest point of the bit at least 0.3mm above the screw when in use with an automatic assembly system.

Fixing method



Miscellaneous

Overload Protective Circuit

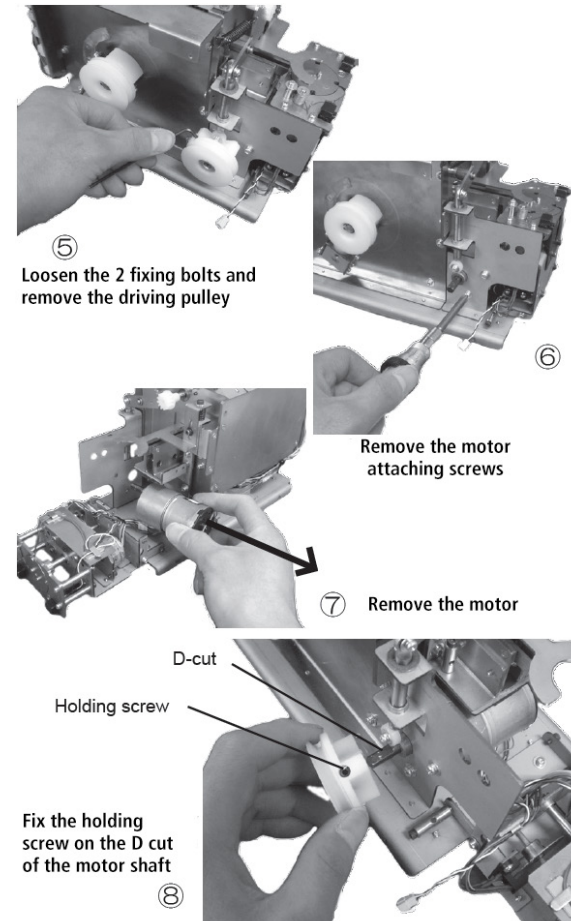
This machine is equipped with an overload protective circuit. Normally, the driving motor rotates forward to feed screws to the escape continuously. However, if there is an overload at the driving section, the driving motor rotates backward for a certain amount of time and then returns to normal rotation.

When the cause for the overload is removed, during the reverse rotation, the driving motor returns to the normal rotation.

If the cause of the overload is not removed during the reverse rotation, the driving motor repeats the sequence of reverse rotation/normal rotation to shut off the power to the driving motor. NOTE: ASK DAN IF HE CAN HELP WITH THIS SECTION JUST FROM IF TO OVERLOAD.

During this time, the escape action is not stopped. When the power to the driving motor shuts off, turn OFF the power switch and remove the cause of the overload. For example, when too many screws are loaded into the hopper, reduce the quantity of loaded screws to a proper level. If any screw is caught in the transport section, remove it.

After removing the cause of the overload, turn ON the power switch to operate the machine.



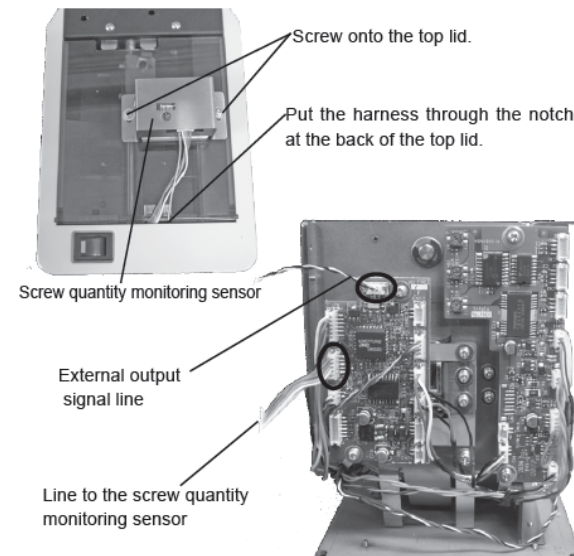
Miscellaneous (Continued)

Screw Quantity Monitoring Sensor (Optional)

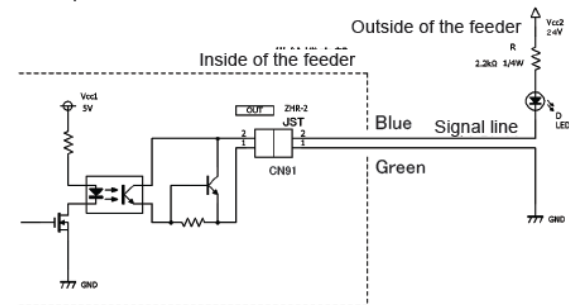
As an optional attachment, there is a sensor which monitors the quantity of screws remaining in the hopper. With this attachment connected to the signal line, you can set the sensor to monitor the level of screws remaining in the hopper.

Attachment Procedure

- Remove the main body cover.
- Using the accompanying bolts, attach the sensor to the top lid. (2 holes)
- Put the harness through the notch at the back of lid.
- Put the external output signal line which is attached to the sensor into the connector at the top of the board. Put the signal line out through the line-out hole in the cover at the rear.
- **FUNCTION:** Screw empty: signal high (ON)
 - Incoming current: shall be limited to less than 100mA
 - **CAUTION:** Additional resistor is required on external circuit for regulating current**
- **CAPACITY:** Max DC current: 100mA
 - External supply voltage: 5 - 24VDC (Max: 27VDC)
- **NOTE:** Please keep the length of output signal wire less than 3m
- The Blue wire functions as signal output high (Collector end), with the green wire as common (Emitter end)
- When installing the main body cover, take care not to catch or pinch the harness.
- Next, adjust the screw quantity monitoring sensor by following the instructions in the sensor manual.
- Details on how to adjust and use the sensor are in the sensor operating manual. To order, contact ASG.



Example of connection





Troubleshooting

Problem	Cause	Corrective Measure
The machine does not operate even though the power switch is turned ON.	<ul style="list-style-type: none"> Power is not supplied. 	<ul style="list-style-type: none"> Check the connection of the power supply of the AC power adapter.
	<ul style="list-style-type: none"> A screw hasn't been removed from the pick up location for a certain amount of time. 	<ul style="list-style-type: none"> Take the screw out from the pick up location. Adjust the timer setting knob.
	<ul style="list-style-type: none"> Too many screws were loaded into the hopper. 	<ul style="list-style-type: none"> Reduce the quantity of screws in the scooping to a proper load level.
	<ul style="list-style-type: none"> Presence of a foreign object 	<ul style="list-style-type: none"> Remove the foreign object.
	<ul style="list-style-type: none"> The AC adapter is faulty. 	<ul style="list-style-type: none"> Contact ASG.
Screws do not move properly.	<ul style="list-style-type: none"> Screws with a larger diameter than the specified rail size were loaded or screws with a different diameter were mixed in together. 	<ul style="list-style-type: none"> Use screws with the specified nominal diameter. Remove the screws with the different nominal diameter.
	<ul style="list-style-type: none"> An insufficient quantity of screws are in the hopper. 	<ul style="list-style-type: none"> Add a proper quantity of screws into the hopper.
	<ul style="list-style-type: none"> Screws in an abnormal position in the passing plate cannot be swept away with the brush. 	<ul style="list-style-type: none"> Adjust the brush. Adjust the passing plate. If a proper amount of screws are loaded into the hopper, the status may be improved.
	<ul style="list-style-type: none"> The axis of the screw thread entered the passing plate. 	<ul style="list-style-type: none"> Remove the screw and check and adjust the passing plate.
	<ul style="list-style-type: none"> A screw has stopped in an incorrect position while moving on the rail. 	<ul style="list-style-type: none"> Remove the screw. Take care not to damage the rail. Move the holding plate upward to remove the screw. After, adjust the position of the holding plate.
	<ul style="list-style-type: none"> The rail does not vibrate. 	<ul style="list-style-type: none"> Check to see if a screw is obstructing the vibration. If it is, remove the screw. Check the vibration adjustment. Check that the scraper does not make contact with the hopper wall. If no screw is obstructing the clearance, consult ASG.
A screw has fallen into the rail groove.	<ul style="list-style-type: none"> Screws with a smaller diameter than the specified rail size were loaded. 	<ul style="list-style-type: none"> Use screws with the specified nominal diameter and length.
The screws in the rail are not flowing properly.	<ul style="list-style-type: none"> The clearance between the holding plate and the head of the loaded screw is too small. 	<ul style="list-style-type: none"> Adjust the holding plate. Adjust the vibration. If, after following the instructions written above, the machine still does not function properly, consult ASG
	<ul style="list-style-type: none"> The rail is oily or dirty. 	<ul style="list-style-type: none"> Clean the rail.
	<ul style="list-style-type: none"> The rail does not vibrate. 	<ul style="list-style-type: none"> Remove the screws caught in the clearance. If there is no screw that is caught, consult ASG. Check that the vibration level is properly adjusted.
	<ul style="list-style-type: none"> The motor is worn or malfunctioning. 	<ul style="list-style-type: none"> Replace the motor.



Troubleshooting (Continued)

Problem	Cause	Corrective Measure
Screws tend to pass through the passing plate in an incorrect position.	<ul style="list-style-type: none"> The passing plate is not adjusted properly. 	<ul style="list-style-type: none"> Adjust the passing palte.
The axis of the screw thread tends to enter the passing plate.	<ul style="list-style-type: none"> Too many screws are in the hopper. 	<ul style="list-style-type: none"> Maintain a proper level of screws in the hopper.
No screw at the pick up location	<ul style="list-style-type: none"> Screws are not moving along the rail. Screws are not transferring smoothly from the rail to the escape. 	<ul style="list-style-type: none"> Adjust the position of the holding plate. Adjust the distance between the end of the rail and the escape.
The machine stops suddenly.	<ul style="list-style-type: none"> The overload protective circuit was activated. 	<ul style="list-style-type: none"> Turn the machine OFF and then ON again. Remove the cause of overload.
	<ul style="list-style-type: none"> Too many screws are in the hopper. 	<ul style="list-style-type: none"> Maintain a proper level of screws in the hopper. If the screws are at a proper level, consult ASG
	<ul style="list-style-type: none"> A screw is caught in the clearance. 	<ul style="list-style-type: none"> Remove the screw that is caught.
The brushing operation does not stop though a screw is at the pick up site.	<ul style="list-style-type: none"> The timer knob is not properly adjusted. 	<ul style="list-style-type: none"> Readjust the timer knob.
The escape operation does not stop though a screw is at the pick up location.	<ul style="list-style-type: none"> The sensor does not detect a screw. 	<ul style="list-style-type: none"> Check the voltage of the sensor - see the sensor section.
The noise of the machine has gotten louder.	<ul style="list-style-type: none"> Adjustments of the vibrational frequency and the amplitude volume are too high. 	<ul style="list-style-type: none"> Adjust the vibrational frequency and amplitude volume again.
	<ul style="list-style-type: none"> There is insufficient grease. 	<ul style="list-style-type: none"> Apply grease to the transport section.
The escape does not rotate when screws are not present, although the indicator light is on.	<ul style="list-style-type: none"> Front screw sensor obstruction. 	<ul style="list-style-type: none"> Make sure the sensor is clear of debris. Replace the escape or stopper if damaged or worn.
	<ul style="list-style-type: none"> Incorrect adjustment of the front screw sensors 	<ul style="list-style-type: none"> Adjust the front screw sensors.
The escape rotates in the wrong direction.	<ul style="list-style-type: none"> When the escape is operating, foreign object is preventing the escape from rotating smoothly. 	<ul style="list-style-type: none"> Check to see if the screw is hitting the holding plate.
	<ul style="list-style-type: none"> Escape and the escape guide do not fit together. 	<ul style="list-style-type: none"> Replacement is needed if the escape or escape guide is damaged or worn off.
The escaper continues to rotate in the wrong direction.	<ul style="list-style-type: none"> The origin sensor may be improperly adjusted. 	<ul style="list-style-type: none"> Contact ASG



Specifications

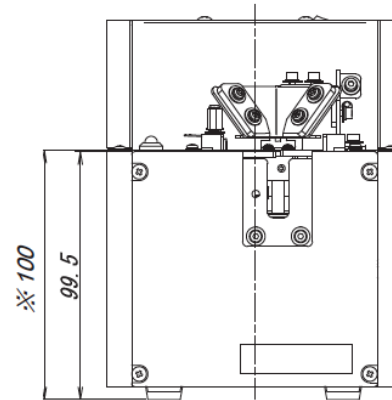
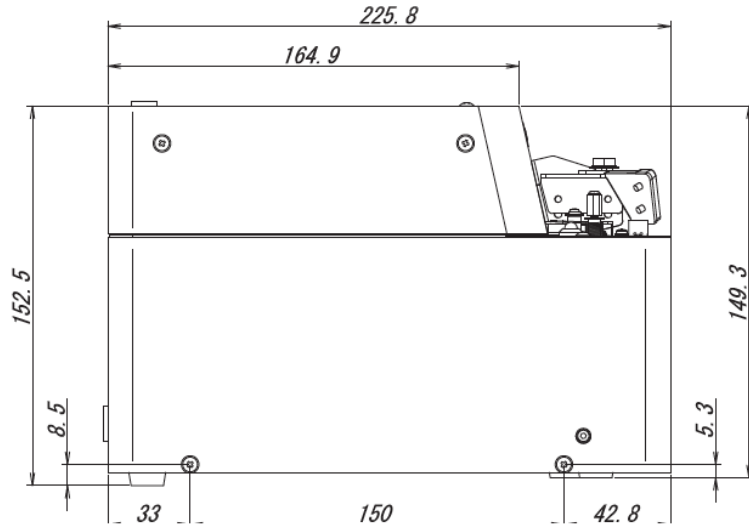
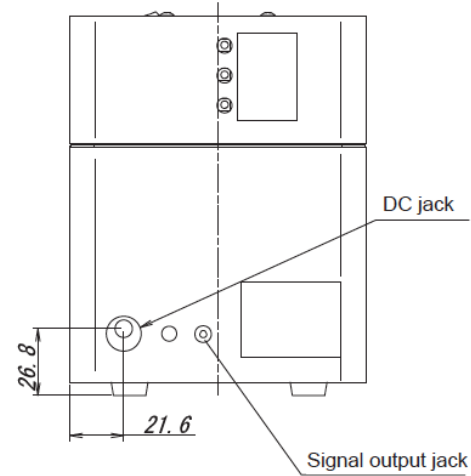
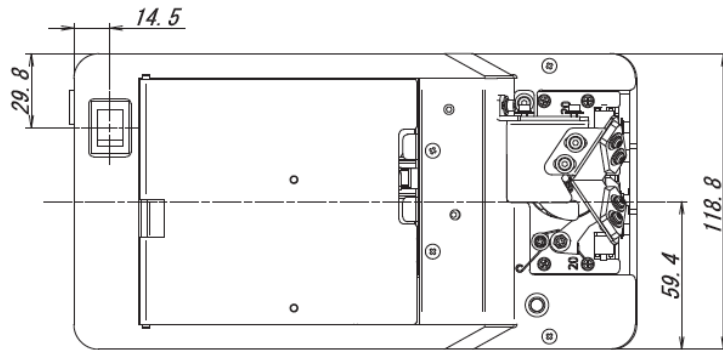
- This machine accepts only steel screws. Plastic or stainless screws cannot be used.
- Check if the axis diameter of the loaded screw matches the rail width.
- Within The range of screw size and length below, there may be instances of unique screw shape or structure not compatible with the feeder unit.
- To use a screw with a different diameter, match it with the corresponding parts mentioned in the table above.
- The rail, escape, stopper assembly, right escape guide and passing plate are available for replacement.
- The design, performance, and specifications are subject to change without prior notice.

Power AC adapter (switching type)	Input: AC100 - 240V 50/60Hz Output: DC15V
Dimensions	119 (W) x 226 (D) x 152 (H) (mm)
Weight	Approx. 3.1 Kg (including rail)
Screw capacity	Approx. 300 cc
Accessories	Operation Manual 1 copy AC Adapter 1 unit Hexagonal Wrench 1 piece Screwdriver 1 piece

Reference Table of the Specified Screws						Screw Head Shape						
						Pan Head			Bind	Flat head	Counter-sunk head	Hexagon flange bolt
Screw nominal diameter (mm)	Screwshaft diameter (mm)	Screwhead diameter (mm)	Washer diameter (mm)	Screw head thickness (mm)	Screw shaft length (mm)	Sems	Double sems	Washer head				
Ø 2.0	1.9 - 2.1	2.4 - 6	2.4 - 10	0.35 - 6	2.6 - 25	0	0	0	0	0	0	0
Ø 2.3	2.2 - 2.4	2.7 - 6	2.7 - 10	0.35 - 6	2.9 - 25	0	0	0	0	0	0	0
Ø 2.6	2.5 - 2.7	3.0 - 6	3.0 - 10	0.35 - 6	3.2 - 25	0	0	0	0	0	0	0
Ø 3.0	2.9 - 3.2	3.5 - 6	3.5 - 11	0.35 - 6	3.6 - 25	0	0	0	0	0	0	0
Ø 3.5	3.4 - 3.7	4.0 - 8	4.0 - 11	0.35 - 6.5	4.1 - 25	0	0	0	0	0	0	0
Ø 4.0	3.8 - 4.2	4.5 - 8	4.5 - 12	0.35 - 6.5	4.6 - 25	0	0	0	0	0	0	0
Ø 5.0	4.8 - 5.2	5.5 - 10	5.5 - 12	0.35 - 7	5.6 - 25	0	0	0	0	0	0	0
Ø 6.0	5.8 - 6.2	6.5 - 11	6.5 - 12	0.35 - 7.5	6.6 - 25	0	0	0	0	0	0	0



External Dimensions



※ Height to top of escape

Unit : mm



Warranty

The warranty is 6 months after delivery. If any troubles should occur, please contact ASG. In the following cases, the purchaser shall pay for parts and labor regardless of the terms of warranty:

- Failure due to improper handling.
- Failure due to product modification or improper processing.
- Failure due to causes beyond control (for example earthquake or fire).
- Consumables (brushes, main motor, bit guide, escape, escape guide, stopper, driving belt, scraper) and replaceable parts and replacement work expenses.

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