

Automatic Screw Feeder Machine User Manual



SKU: ATO-ASF-H2

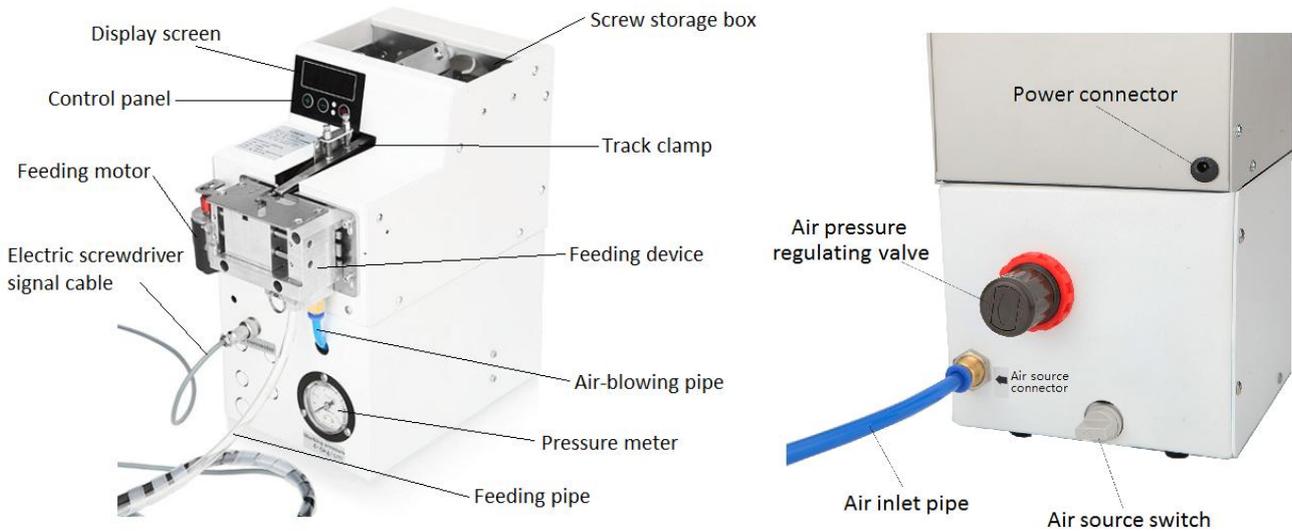
Important Information

- Thank you for choosing our screw feeder!
- This product belongs to electrical automation equipment. Please strictly follow the user manual.
- In order to use this product correctly, please read this manual carefully and keep it in a safe place for future use.
- If you encounter any problems that cannot be solved, please contact our customer service staffs.

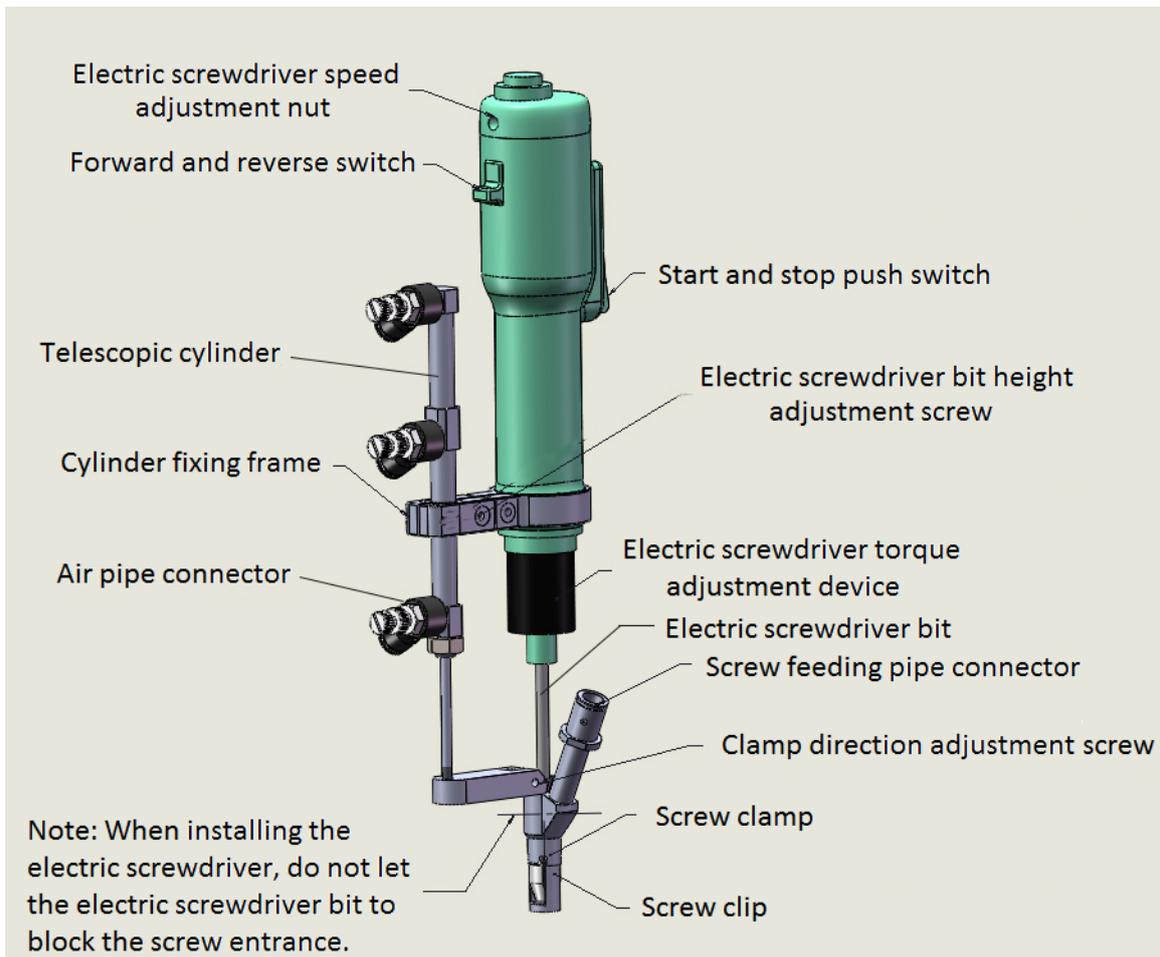
I. Structure

Automatic screw feeder machine mainly consists of an automatic screw feeding device and an electric screwdriver.

1. Automatic Screw Feeding Device:



2. Electric Screwdriver (with screwdriver assembly):



II. Features:

- Simple: It is ready to use when powered by power and air. User can master in 10 minutes.
- Safety: Low powered working, no electric shock if the user touches it. Using a low power DC motor instead of a cylinder to feeding screws, don't worry about pinching.
- No waste: It can be used with the customer's existing air screwdriver or electric screwdriver.
- Counting function.

III. Specification:

Shipping weight	7kg
Packaging included	1 * Automatic screw feeding device 1 * Electric screwdriver 1 * Electric screwdriver assembly 1 * Feeding pipe 2 * Power adapter with cable
Power supply	100~240VAC, 50/60Hz, 1~2A
Rated power	50W
Screw feeding method	Air-blowing type
Working pressure	5~6kg.f/cm ²
Screw feeding speed	60~80pcs/min
Screw feeding distance	1.5~2m
Screw locking speed	50~70pcs/min (according to screw length)
Screw feeding device parameter	Diameter: 320*145*270mm (L*W*H) Working voltage: 15VDC (2000mA) Weight: 5.5kg
Capacity of screw storage box	1000pcs of M3*8 screw (according to screw size)
Screwdriver parameter	Diameter: 230*42.5mm Internal motor: Brushless DC motor Motor speed: 1000-1800rpm Working voltage: 32VDC (3A) Torque range: 0.5-25Nm Weight:750g
Types of screw	Material: all Thread: M1.0~M6.0 Total length of screw: 2.7-25mm (total length of screw≥1.2 diameter of nut) Diameter of nut: 1.0-12mm Types of nut: See details as above types of nut diagram Note: It is best to contact our customer service to confirm whether your screws are suitable for this model, especially nonstandard screws need to be given detailed dimensions and pictures.
Warranty	2 years

IV. Installation Instruction

1. Preparation Before Installation Of Air-blowing Type Screw Feeder

Before installation, prepare the air source (air pressure 0.4-0.6MPa), power strip, worktop, etc. The screw feeder should be installed in a level, stable and able to bear the weight of the machine. If the installation operation is abnormal, it will cause the machine to shut down or fall abnormally, and even personal injury or property damage!

2. Installation Steps

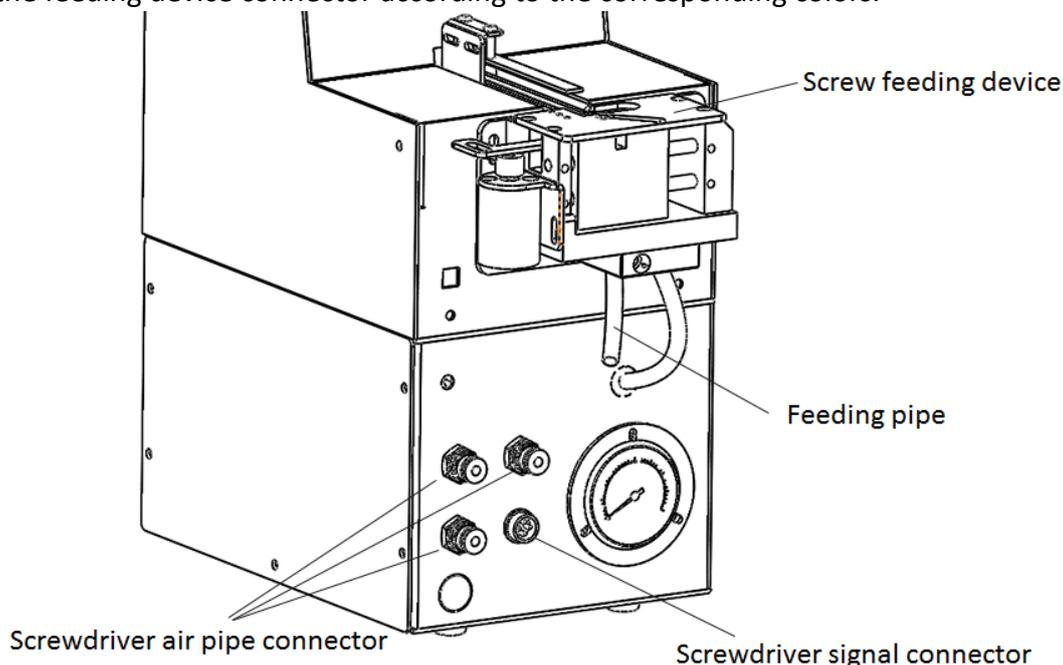
- a) Connect the signal cable, air pipe and feeding pipe of the electric screwdriver.

According to the corresponding plug interface, connect the air pipe of the telescopic cylinder, the signal cable of the electric screwdriver and the screw feeding pipe of the screwdriver assembly firmly. The connector should be inserted in place, and the lock ring should be tightened.

The air pipe of the screwdriver assembly is inserted into the cylinder interface according to the size. The longest one is connected to the bottom connector of the cylinder and then connected in place from bottom to top.
- b) Adjust the torque of electric screwdriver

Turn the torque adjusting nut on the electric screwdriver, clockwise to increase the torque, counterclockwise to decrease the torque. After adjustment, test it to see if the torque is appropriate.
- c) Connect screw feeding device

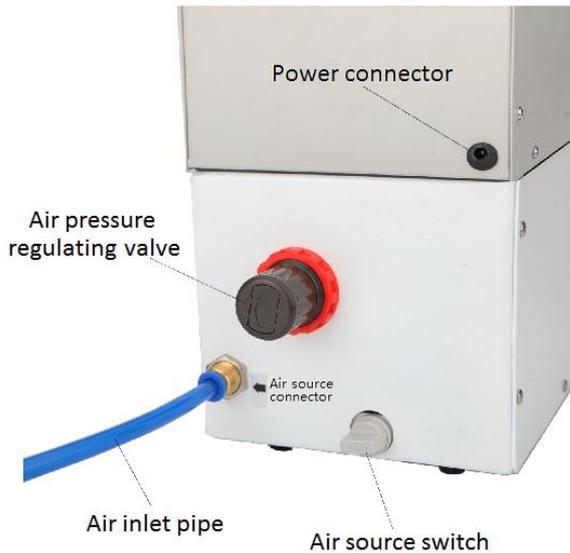
Insert the electric screwdriver signal cable and tighten the fixing lock ring. Insert the feeding pipe connector into the discharging hole with a pull ring, which is under the feeding device. Insert three air pipes (single-stage push-pull screwdriver assembly has two air pipes, two-stage push-pull screwdriver assembly has three air pipes) on the cylinder into the feeding device connector according to the corresponding colors.



- d) Connect the power cable and air source

Insert the power cable and the air inlet pipe into the corresponding connectors on the back

of the feeding device. Insert them as tight as possible to avoid air leakage or poor contact.



V. Operation Steps

1. Turn On Air Source Switch

Turn clockwise to turn on the air source and the pressure gauge pointer has pressure indication. Turn counterclockwise to turn off the air source and the pointer returns to zero.

2. Adjust Air Pressure

Pull out the air pressure regulating valve on the back of the machine. Turn clockwise to increase pressure, turn counterclockwise to decrease air pressure. Adjust the air pressure to about 0.5MPa according to the pressure gauge. After completion, press the regulating valve back to its original position for locking. (Please observe whether the air pressure value is within the specified air pressure range before adjusting!)



3. Turn On Power Switch

Long press "+" key to turn on the power when it is off. And then long press "+" key to shut down.

4. Loading Screws

Pour screws into the screw storage box. The volume of screws cannot exceed the bottom of the

track, and other debris or other screws cannot be poured in to avoid mixing, as shown in the right picture:



5. Operation Of Locking Screw

- a) Before first screw locking, quickly click (completed within 0.2 seconds, long press for screw locking function) electric screwdriver switch, until the screw feeding device sends out a screw.
- b) Move electric screwdriver and align with the hole site for locking.
- c) When the locking is completed, that is, after the electric screwdriver reaches the torque value lift the electric screwdriver. Don't lift the electric screwdriver before the torque value is reached.

Note:

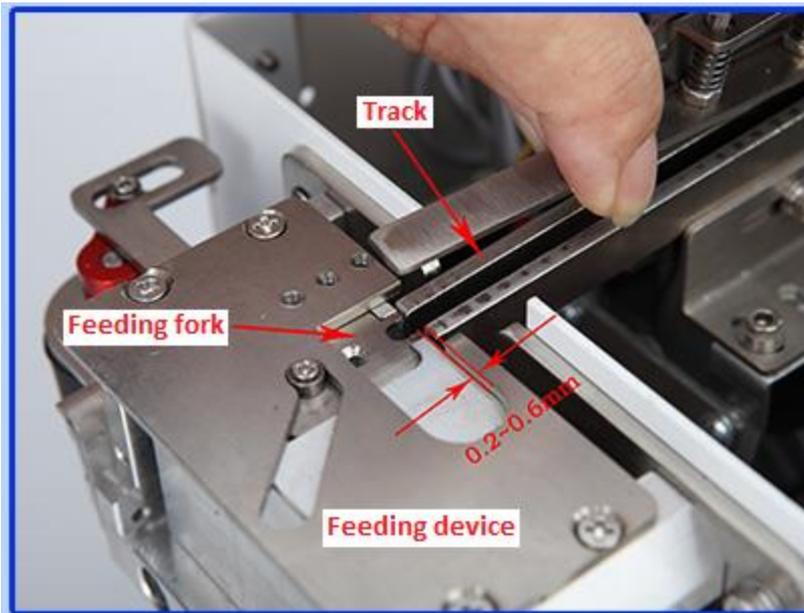
- a) Do not click the switch again before the previous screw is locked. So as not to have two screws stuck in the clamp mouth of the screwdriver assembly!
- b) When the torque value is insufficient, in other words, the screw has not been locked. If lifting the electric screwdriver, it may cause the screw not to be locked into the workpiece, and the screw remains in the electric screwdriver clamp. The screw feeding device will send the next screw into the electric screwdriver clamp after lifting screwdriver. Then the electric screwdriver clamp will have two screws. It will cause screw jam. When this situation occurs, just empty the screws (Empty operation refers to not operate towards the workpiece, just press the electric screwdriver switch).



VI. Attention Points

1. The feeding device needs to be placed flat. Otherwise, it will affect the screw out speed.
2. Do not bend the screw feeding pipe. Otherwise, the screw will get stuck in the bending part during the screw feeding process.
3. The vibration force of the track cannot be adjusted too big, or the screw will easily squeeze out of the track and affect the stability of the device. It can't be adjusted too small, and the screw may be pressured by track clamp and can't be sent.
4. When adjusting the track clamp, press 2/5 of the first nut in the front end of the track. The distance between the track clamp and the nut is 0.1~0.5mm. According to the way of the track clamp front high and back low, the track and the feeding fork should not touch. The

distance is between 0.2mm~0.6mm. The feeding fork should be slightly lower than the track.



5. After turning off the air source, the electric screwdriver bit cannot be seen in the inlet of screwdriver clamp when the screwdriver assembly is pulled to the bottom. Otherwise it will block the screw feeding. If it occurs, loosen the screw fixing the cylinder on the side of electric screwdriver. Move the cylinder fixing clip down to let the bit away from the screw clamp inlet 1~5mm (according to the thickness of the nut). The standard is single-stage cylinder work and blow the screw into the screwdriver clamp, the bit will hold the nut. Touch the screw in the clamp with hand.
If the screw shrinks into the screwdriver assembly, adjust bit down to a suitable position. If the screw will fly up when blowing, adjust bit up to a suitable position.
6. The screws poured into the storage box should not exceed the lower surface of the track. So as not to increase the motor load, shorten the motor service life, and hinder screw feeding.
7. The storage box is generally cleaned once a week to ensure smooth rolling of the box. (Remove the cover of the storage box and then clean up the debris inside the box.)
8. The screws are blown by pulsed air flow, so the screw feeding device can be set high and low. But do not put the machine in a humid, high temperature place, and keep the surface of the machine clean.
9. Be careful when handling the machine. The working place of the machine should be stable and clean.
10. Each screw feeder is dedicated to one type of screw. If you need to replace the screw, you can choose the accessories to replace and adjust.
11. Before pulling out the feeding pipe, turn off the air source first and strictly prohibit the mouth of the tube towards person, so as not to accidentally touch the electric screwdriver switch to blow a screw and hurt people.
12. Please use the power supply attached to this machine, do not use other power adapters.
13. Do not damage and lubricate the track.
14. Do not use oily screws, dirty screws, or any other screws that are not specified.
15. If the screw feeder is in a rest or not working for a long time, please unplug the power supply and turn off the air source switch.

16. In the process of use/maintenance, make sure that the screw feeding pipe and the screw clamp are reliably connected to prevent the screw from spraying out and hurting people!
17. Do not try to disassemble or repair the machine by yourself, especially the part specifically mentioned in the manual. If you have any questions, please contact our customer service staff.

VII. FAQ

1. No screw is feeding.

Treatment Methods:

- a) If the screw is stuck in the hopper and the plate does not move. Remove the stuck screw.
- b) Check whether the air source switch is turned on and whether the pressure gauge has normal pressure indication.
- c) Check whether the movable block of the feeding device can slide right and left in place.
- d) Check if there is a screw with a larger size stuck in the feeding pipe.
- e) The torque of the electric screwdriver is too large. The electric screwdriver does not automatically brake after the screw is locked in place. Turn down the electric screwdriver torque to allow the electric screwdriver automatic stopping.
- f) Feeder motor failure. Use troubleshooting method to replace the motor.

2. The screw cannot be fed to the track in a straight line.

Treatment Methods:

- a) The screws are deformed or mixed with other screws. Improve the quality of the screws.
- b) Too many screws are placed in the storage box. Reduce the supply of screws.

3. Vibration adjustment failure

Treatment Methods:

- a) Check whether there is a gap or foreign matter between the track and the surrounding parts.
- b) There is foreign matter inside the vibration motor. Remove the foreign matter.
- c) The vibration motor is damaged. It needs to be replaced.

4. The screw can reach the bottom of the pressure plate, but it can't be sent to feeding device.

Treatment Methods:

Pick up the pressure plate and wait for the screws to be sent to the feeding device, then lower the pressure plate to gently press the nut. Or adjust the vibration speed. When the screws are overlapped in the track, reduce the vibration speed. When the screws enter the screw feeding device not in time, increase the vibration speed and increase the vibration delay.

5. The screw is stuck in the feeding device

Treatment Method: Take up the pressure plate and remove the jammed screw.

6. The screw is not sent from the feeding device to the screwdriver clamp.

Treatment Methods:

- a) The screw is blocked by the screwdriver bit in the clamp. Use troubleshooting method to adjust the screwdriver assembly.
- b) The feeding pressure is too low. Use troubleshooting method to increase the pressure.
- c) The screw feeding time is too short. Adjust the feeding delay time.
- d) The screw feeding pipe is broken, too bent or unsuitable. Use troubleshooting method to replace the screw feeding pipe.