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QUALITY ASSEMBLY TOOLS

Adjustable Screw Feeder

Instruction Manual

Applicable Models: AT-1050, AT-1050C, AT-1060

AT-1060C

■ *Thank you* for purchasing the CHP adjustable screw feeder. In order to ensure maximum performance and product life, **please read this manual before operating your screw feeder.**

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1. General Safety Warnings

WARNING: Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Keep this manual readily accessible for reference.

■Working area safety
- Keep working area clean and well lit.
- Do not operate power tools in the presence of flammable liquids, gases or dust.
- Keep the power tool away from children.

■Electrical safety
To avoid risk of electric shock:
- No object should be placed on top of the power adapter.
- When plugging or unplugging the adapter, make sure that the unit is off.
- Always use matching outlet. Never modify the power plug in any way.
- Do not expose the power tool to wet conditions.
- Do not pull or damage the power cord. Keep the cord away from heat, oil, sharp edges or moving parts

■Personal safety
To avoid injury during operation:
- Do not use the power tool when under influence of drugs, alcohol or medication.
- Ensure that the switch is in OFF position before connecting the power source.
- Remove and adjusting key or wrench before turning on the power tool.
- Keep proper footing and balance at all time.
- Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts.

2. Screw feeder use and care
- Adjust the rail to fit your screw before use.
- Do not use the screw feeder if the switch is malfunctioning. Any power tool that can't be controlled by the switch is dangerous and must be repaired.
- Disconnect the power source before making adjustments, changing accessories or storing the tool.
- Keep the unit away from children or untrained personnel.
- Periodically check for any misalignment or binding of moving parts, breakage of parts and any other condition that may affect the operation.
- Keep the screw feeder clean before and after use.
- Always follow the instructions when operating screw feeder, changing accessories or adjusting rail.

3. Read Before Use
- Please switch off the power after operation.
- Do not knock or place any heavy objects on the top of the screw feeder
- Please handle with care and avoid dropping.
- Please avoid using the equipment under following environments:
    - Place with water, oil and other liquids.
    - Vibrating environment.
    - Outdoor or where electric spark can be generated.
    - High humidity/high temperature environment.
      (Suitable Humidity: 25% - 65%, Temperature: 15 – 35°C)

4. Declaration of Conformity (CE)

We, American Hakko Products, Inc., hereby declare that the products described in this manual are in conformity with the following Directive(s)/Standardization document(s):

EMC Directive 2014/30/EU

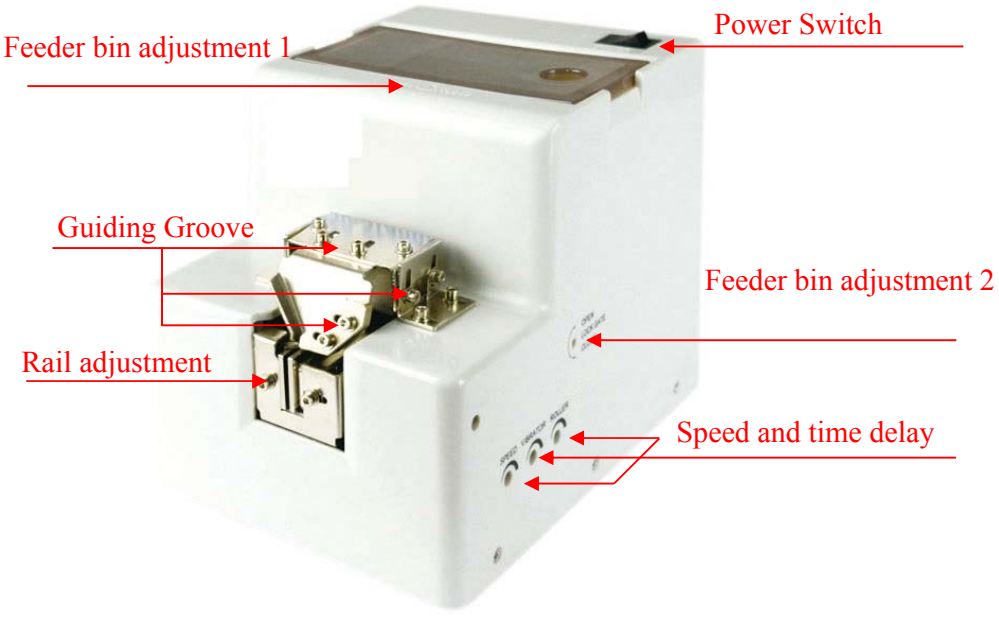
5. Product Information

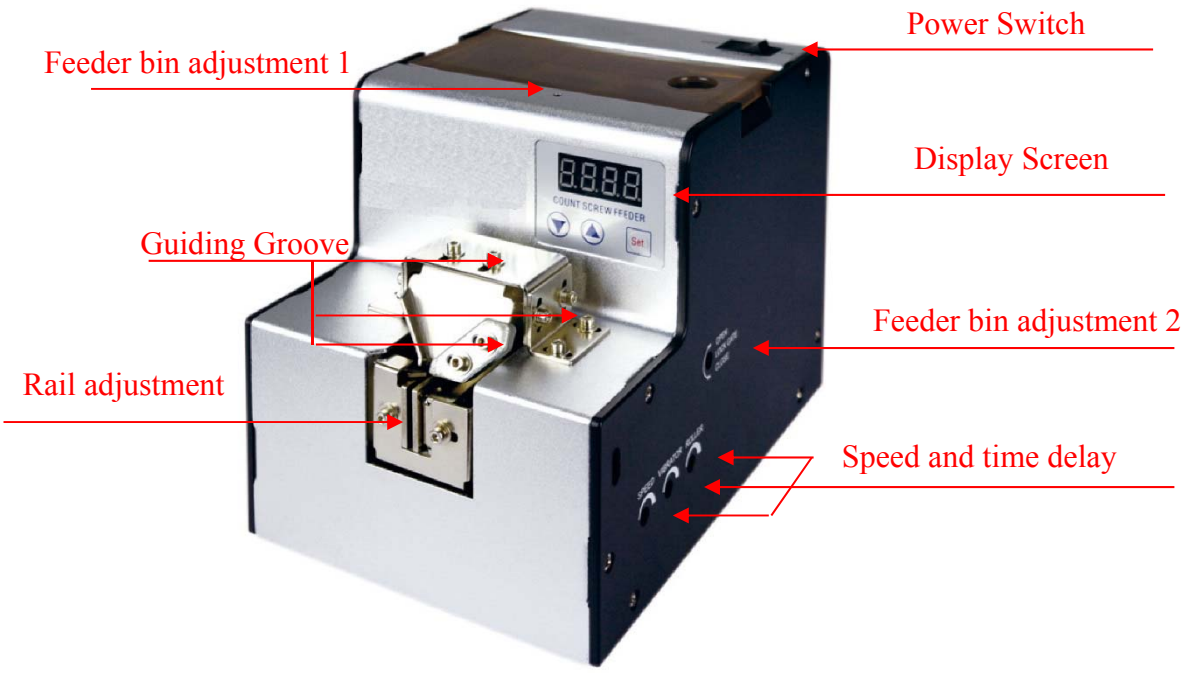
■Packing List:

- Screw feeder
- Power adapter
- Hexagon wrench
- Instruction Manual

■Specification

Model No.		AT-1050 Standard	AT-1050C Counting	AT-1060 Standard	AT-1060C Counting
Suitable Screw	Diameter of Screw Thread	M1.0~5.0mm	M1.0~5.0mm	M1.0~6.0mm	M1.0~6.0mm
	Type of Screw Head	JCIS: 1、2、3 and pan-headed. JIS: Pan head, button, truss, round, flat, WH, w/ spring washer, and w/ spring and flat washers		JCIS: 1、2、3 and flat-headed. JIS: flat head, tightening screw, pressure screw, and UH mushroom head (Flat head or oval flat head) w/ or w/o washer.	
	Material of screw head	Ferromagnetic Materials			
	Length of screw (Max.)	20mm		25mm	
	Length of screw (Min.)	Single screw: diameter x1.0 Screw with spring washer: diameter + 0.5x diameter) Screw with spring and flat washer: diameter + (1.1x diameter)			
Output speed		2PCS/ Second			
Protection/ Recovery Function		Overload protection circuit, reverse power polarity prevention circuit			
Input Voltage (Adapter)		100~240VAC、50/60 Hz			
Output Voltage (Adapter)		12 VDC			
Dimension(mm)		185x130x150mm		235x165x180mm	
Weight(kg)		1.8kg	2.2kg	4.8kg	4.8kg





6.Operation

- Procedure for removing the rail:

①

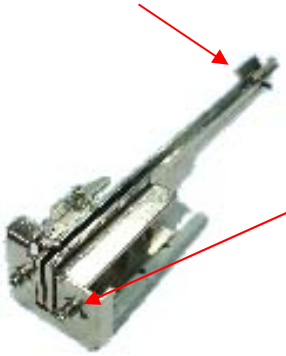
Loosen the set screw on the rail

②

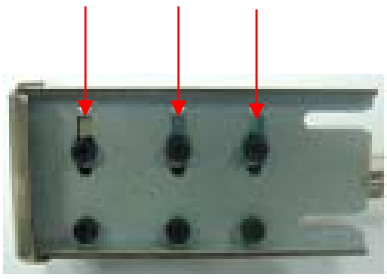
Fully open the door to draw out the rail.

- Procedure for adjusting the rail

① Adjust the clearance by adding or removing shims.



② Loosen the four screws, adjust them to the same clearance for the rail. Tighten when finished.



※Note: Use the appropriate size shims to adjust the rail clearance according to screw size, make sure the clearance is uniform along the whole rail.
The clearance=M(screw)+0.4mm

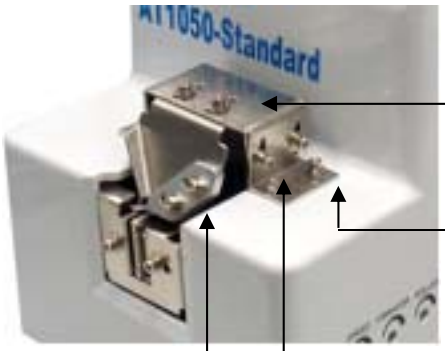
-Please pay attention to the following in order to operate correctly:

- The guiding groove must be aligned with the rail.
- The height between the guiding groove and rail shall be adjusted according to the thickness of the screw head. The height = Thickness of the screw head+0.4mm.
- The front and rear positions of the "V" groove feeding mouth shall be adjusted so that the slot of the nut is just exposed.

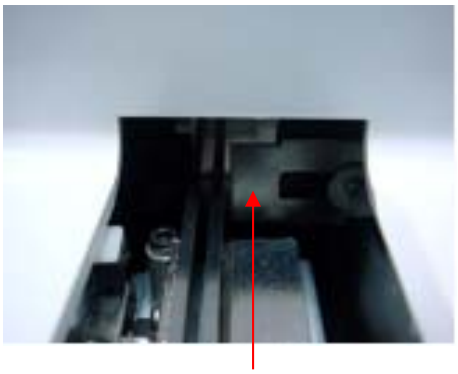
-Motor Speed Adjustment

Turn the SPEED knob clockwise for higher speed, and counterclockwise for lower speed; VIBRATOR delay refers to the time delay in feeding the screws after the one is sensed at the feeding gate. Turn the knob clockwise for longer delay, and counterclockwise for shorter one. Adjust the delay time according to the screw size. For M2 and below, the delay is suggested to be 1.0 sec. For M2-M3, 1.5sec. For M3 above, 3sec. ROLLER delay refers to the time delay in charging the roller with screws after a screw is sensed at the feeding gate. Turn the knob clockwise for longer delay, counterclockwise for shorter delay.

-Use included hex wrench to adjust guiding groove, motor speed and brush position:

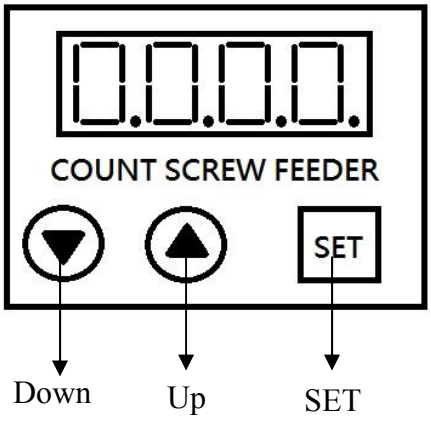


Adjust the height positions of the brush according to the size of the screw.
(Generally the front is lower while the rear is higher.)

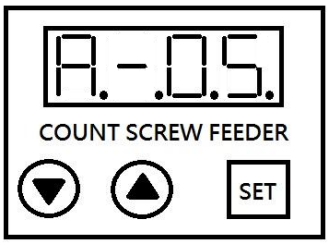


Close the side gate after all adjustments to prevent screws from falling out of the bin.

■AT-1050C/1060C counting function instruction

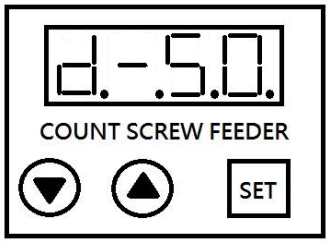


-Press and hold “SET” for 3 seconds to enter the screw counter setting:



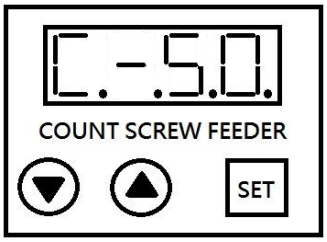
Screw feeding speed setting: Press▲▼to adjust:
Maximum: 20
Minimum: 01

-Press “SET” to choose the feeding delay setting:



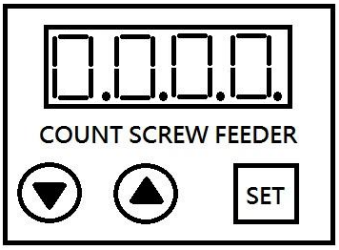
Feeding delay setting: Press▲▼ to adjust:
Maximum: 5.0 sec
Minimum: 0.5 sec

-Press “SET” to choose the sweeping speed delay setting:



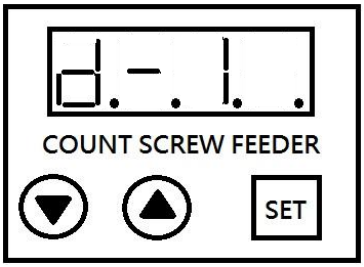
Sweeping delay setting: Press▲▼ to adjust:
Maximum: 5.0 sec
Minimum: 0.5 sec

−Press “SET” to choose the screw limit setting:



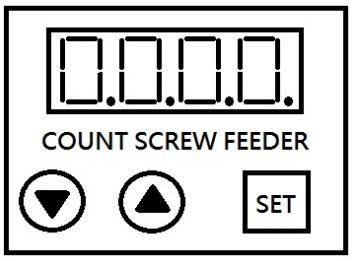
Screw limit setting: Press▲▼ to set the screw counting quantity

-Press “SET” to enter the alarm setting:



Alarm setting: 0-turn off the alarm
1-turn on the alarm

-Press “SET” to complete setting and return to the main screen.



7. Troubleshooting

- If the torque meter does not work properly, check the list below. If the issue can’t be resolved, do not open the unit and contact our customer service as soon as possible.

Problem	Cause	Solution
No power	1. Power supply is damaged 2. Switch damage 3. DC socket damaged	Check for damage
Indicator lit but the machine does not work	1. Sensor blocked or positioned incorrectly 2. Motor damage 3. Gears are blocked by foreign object	1. Check and readjust 2. Check for damage 3. Remove them from the unit
Screw gets jammed in rail	Rail, brush and guiding groove was adjusted incorrectly	Check and readjust
Screw falls out of feed bin	The feeding bin gate is positioned incorrectly	Adjust the gate position
Nonstop vibration	1. Feeding delay is too long 2. Sensor located in wrong location 3. Screw is not in the right position	Check and readjust
Screw feeding is too slow	1. Feeding speed is slow 2. Delay time is too short 3. The gap of the rail is not suitable 4. The rail touches the board 5. No gap between rail and front board 6. There are dropped screws between vibrated motor and bottom board	1. Adjust the speed 2. Increase the delay time 3. Adjust the gap 0.5~1mm 4. Remove the dropped screws

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