

SUMAKE[®]

Professional & Industrial

INSTRUCTION MANUAL

ITEM NO.: **SAF-100R**
AUTOMATIC SCREW DRIVING MODULE



SAF-100R-I-23087A-YM

SAF-1000R

Instruction Manual Table of contents

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I. Instruction

The SAF-100R Automatic Screw Driving Module is suitable to automatic production also saves the trouble of manually picking screws as practiced conventionally. Furthermore, the machine can feed the screw to screwdriver also screwing to work-piece automatically. The working stability characteristic can enhance productivity, reduce human cost.

II. Item inspections

	Description	Q'TY	Remark
1	SAF-100R	1 set	
2	Signal connector	1 pc	
3	Power cord or power supply	1 pc	
4	Socket BIT	1 pc	
5	Instruction manual	1 copy	

III. Safety precautions



【Prohibition Sign】

Fire, electric shock, or personnel injury or death may occur if not observed.



【 Alarm Sign 】

Damage of properties, or electric shock or injury of personal may occur if not observed.



Follow instructions in the manual and operate the machine correctly



DO NOT dismantle or modify the machine.



DO NOT let contaminants such as water or oil enter into machine



DO NOT place and operate the machine on an unstable table.



Please connect use correct DC24V voltage to work.



If machine smoke, dropped from high place, influent, please remove the power cord and send the product for repair.



Please use the specified power cord or power supply



Remove the power plug if the machine is to remain idle for a long period of time



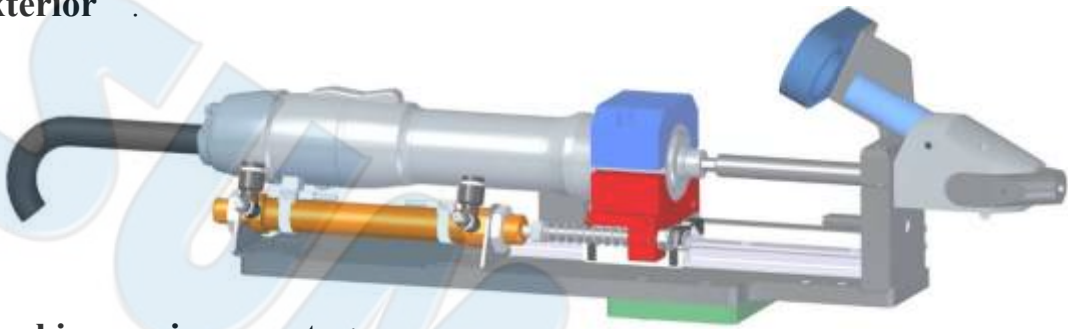
Do not use non-specified screws



DO perform regular maintenance of the machine as scheduled

IV. Specification

1. Exterior :



2. Working environment :

Model	SAF-100R
Working voltage	sensor: DC24V electric screwdriver: AC 110V / 220V
Working air pressure	5.5(±0.5)kg/cm ² =0.54(±0.05)MPa
Working Humidity	10°C~ 40°C

3. Weight :

Model	SAF-100R
Weight (kg)	Approx. 4.5KG

V. Pre-job checking

1. Install each items correctly.
2. Confirm that all power connectors, signal joint and air joint are properly installed in place.
3. Confirm the input power is correct.
4. Confirm that each sensor and cushion are positioned.
5. Confirm that all parts are securely locked.
6. Confirm the working air pressure ($5.5(\pm 0.5)\text{kg/cm}^2$).

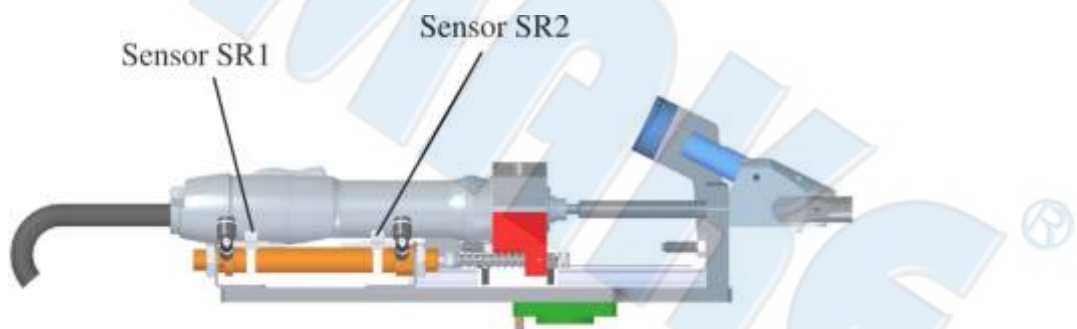
VI. Test run

1. Confirm that all parts are installed correctly before performing. Especially for voltage and air pressure.
2. Do not approach the working area during performing to avoid danger.
3. Turn on the power supply and air pressure source. At this time, the cylinder will move forward immediately to the upper limit. After reaching the positioning, please check whether the cylinder upper limit sensor has signal output. If signal output, it is normal.
4. Make control system to be manual mode, test the cylinder move upward/downward action and feeding action is normal or not.

(1) Cylinder move upward: Please confirm that the speed and positioning are normal. When the positioning is ok, the sensor (SR1) signal output.

(2) Cylinder move downward: Please confirm that the speed and positioning are normal. When the positioning is ok, the sensor (SR2) signal output.

(NOTE: Please adjust the cylinder speed by the speed control valve)



- A . Make cylinder to minimum limit position.
- B . Move the whole set SAF-100R and ensure the BIT aim the screw hole of work-piece, also the sensor lamp must be light.
- (3) Feeding : please ensure the screw can fed to tip of jaw after connecting with screw feeder, and the screw shank need exceed jaw. Please remove the screw before nextfeeding.
- (4) Electric screwdriver: please ensure the electric screwdriver working normal.
- 5. Please change to AUTO. Mode if manual testing is normal.

VII. Operating steps

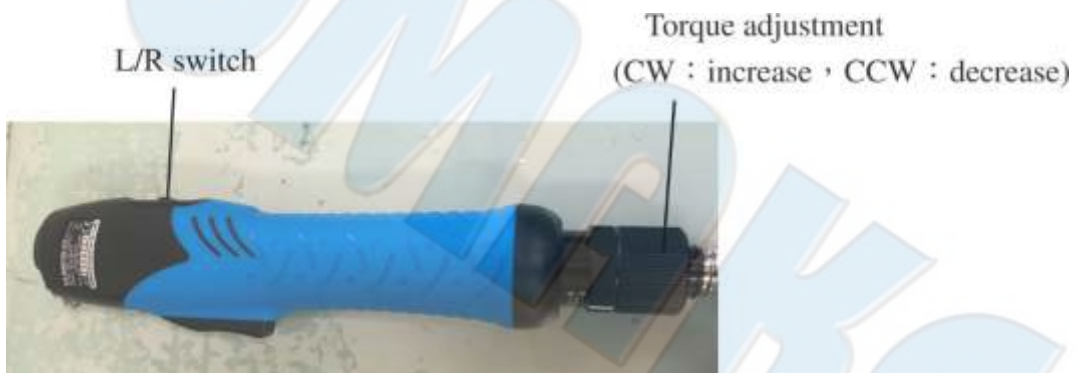
1. Operation :

- (1) Start working after test run.
- (2) The operation process accordance with the electronic control software and programming.

VIII. Troubleshooting

1. Stripping :

- (1) During replacement, the Work-Piece is not in correct position.
Check if the Work-Piece position is accurate.
- (2) The torque value setting of screwdriver is toobig to working.
Please adjust the screwdriver torque setting. (As shown in the figure.)



- (3) The BIT is bent and can't be accurately aligned to the screw position.
 - Check if the BIT is bent.
 - Change BIT.
- (4) The BIT is worn after working period of time.
 - Check if the BIT is worn.
 - Change BIT.
- (5) The screw head is deformed and abnormal and the BIT can't aim the screw, causing for stripping issue.
 - Check if the screws are normal. Change abnormal screws.

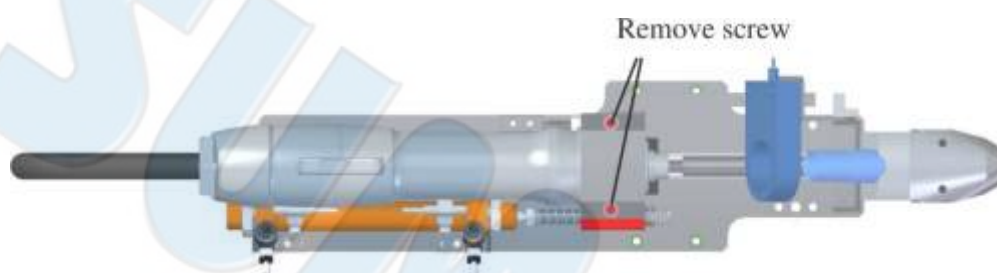
2. Working fail :

- (1) The screwdriver torque setting is too low.
 - Adjust the torque of the screwdriver to the proper setting.
- (2) Workpiece screw hole positioning deviation.
 - Correct the positioning of the work-piece or fixture so that the screw hole is aligned with the center of the screwdriver.

3. Electric screwdriver breakdown :

If the Electric Screwdriver cannot rotate, check if the power cord is normal.

※ To remove the driver, Please use a #4 wrench to disassembly electric screwdriver



4. Abnormal vibration :

- Please check whether the cylinder speed is too fast. If yes, please adjust the speed control valve.
- Please check whether the buffer cylinder is positioned. If not, please adjust it.

5. Automatic screw feeder breakdown :

- Please refer to the screw feeder instruction manual.

IX.Maintenance

1. Please clean the component regularly every week.
2. Check whether the BIT is worn, and replace it if necessary.

※The maintenance period should be shortened if the operation is frequent or the environment is bad.

Our company reserves the right to modify the product without prior notice.

EU Declaration of Conformity (DOC)

We: **SUMAKE INDUSTRIAL CO., LTD.**

4F, No. 351, Yangguang St., Neihu District, Taipei City, Taiwan

declare in sole responsibility that the equipment

Equipment : **AUTOMATIC SCREW FEEDER**

Model/ Serial No. : **SNF-A1, SNF-A2, SNF-A3, SNF-A4, SNF-A8, SNF-A9,
SNF-A10, SNF-A11, SNF-A12, SNF-A13, SF40TH, SF30A,
SF30M, SF30T, SF40A, SF40T, SF501, SF501T, SF502,
SF502T, SAF-100S, SAF-100G, SAF-100L, SAF-100R, SDA,
SF-SERIES**

The object of the declaration described above is in conformity with the relevant union harmonization legislation:

- Machinery Directive 2006/42/EC
- Low Voltage Directive: 2014/35/EU
- RoHS 2011/65/EU

The following harmonised standards and technical specifications have been applied:

- EN ISO 12100:2010
- EN ISO 13849-1:2023
- EN ISO 13850:2015
- EN ISO 13857:2019
- EN ISO 4414:2010
- EN 60204-1:2018

Name and Signature/Position



Mike Su – Managing Director

Date and Place

2023/9/26

Taipei, Taiwan

NOTE

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