

INSTRUCTION MANUAL

ITEM NO.: SF501, SF502
AUTOMATIC SCREW SUPPLIER



SF501

SF502



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I About SF501/ SF502


- Designed for speed, stability, and convenience.
- Improving screw driving speed and work efficiency by integrating pneumatic/ electric screwdriver, high-tech automatic feeder, and high precision jaw.
- The jaw is customized by particular screw and working environment to provide a stable operation.
- Standard pneumatic screwdriver; optional models by customer also available.

1. Features

Model	Voltage	Air pressure
SF501	220 V	5 kg / cm2



Model	Voltage	Air pressure
SF502	220 V	5 kg / cm2






II Installment

1. Preparation:

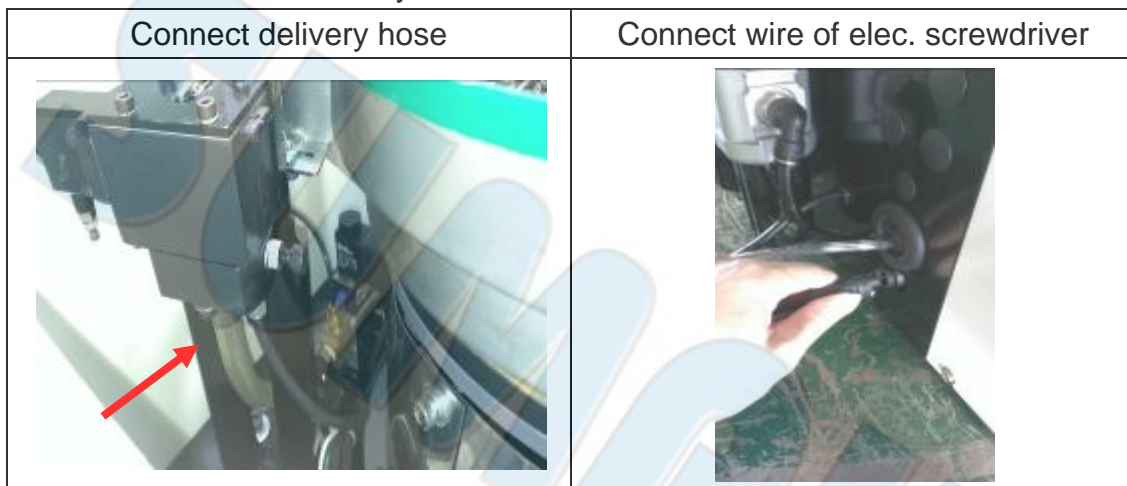
(1) Connect the screw delivery hose, air hose and signal cable to the feeder unit

- Take a balance of the driver unit for easier fastening. While taking balance, make sure that the signal cable and air hose do not contact with hook or balancer wire. Care should be taken to prevent excessive bending or twisting of hoses and cables, since this can cause damage or disconnection.
- Connect the screw delivery hose between the feeder and the driver as soon as possible. Make sure that it is not excessively bent or twisted after installation.

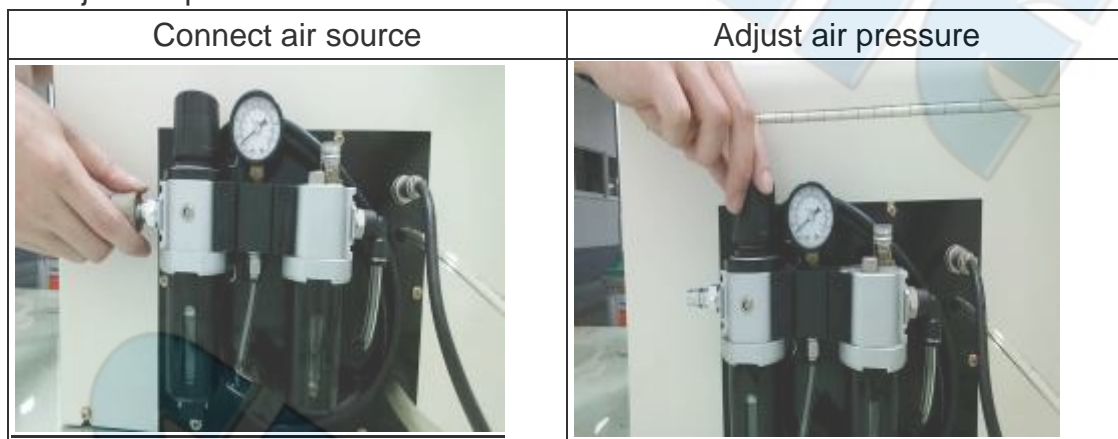
◆ For pneumatic screwdriver only.

Connect delivery hose	Connect air hose
	
	

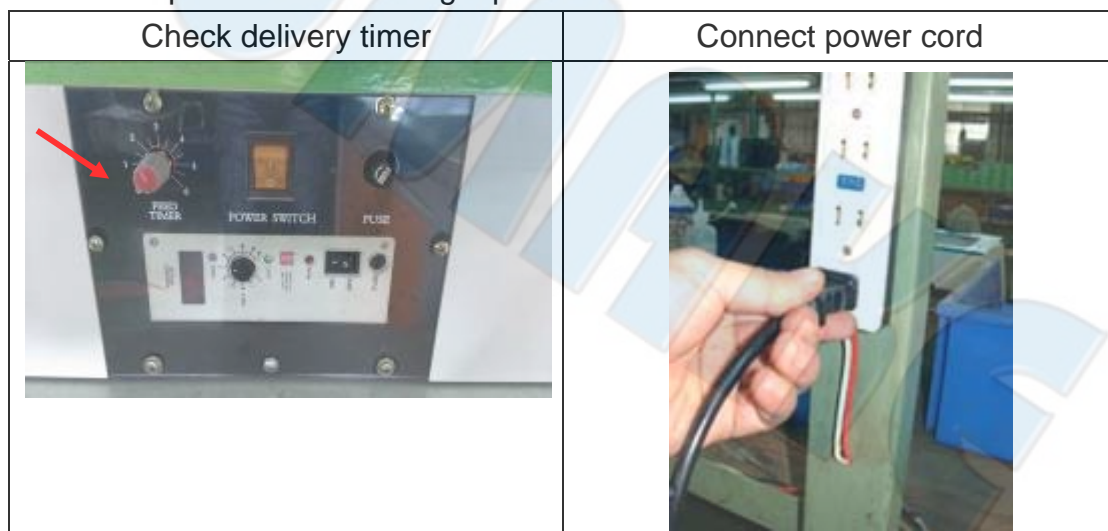
◆ For electric screwdriver only.



1. Connect feeder unit to compressed air source (air pressure 4-5 kg/cm².)
2. Adjust air pressure

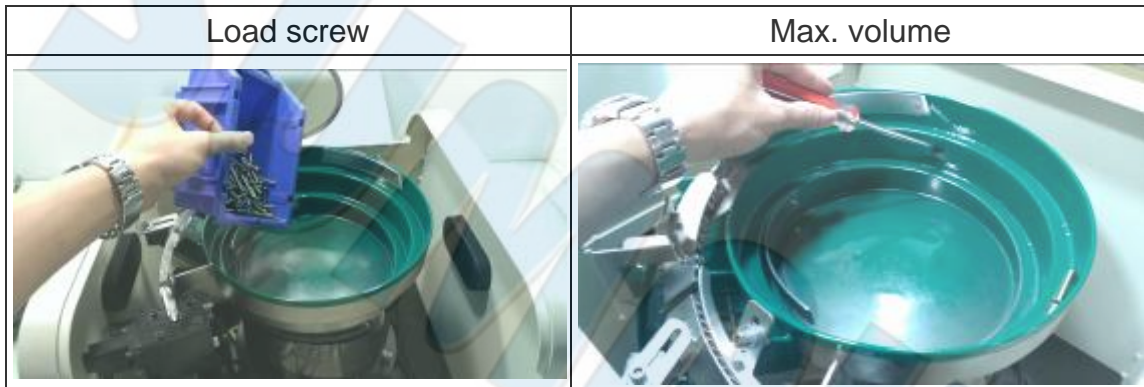


4. Check screw delivery timer setting on the front of the feeder unit. Standard operation setting is approximate 0.5
5. Connect power cord to a single-phase AC-220 wall outlet.



2. Tryout:

(1) Open the cover of machine then load some screws.



(2) Turn power switch on

Check whether the light of power and VFD is "ON".

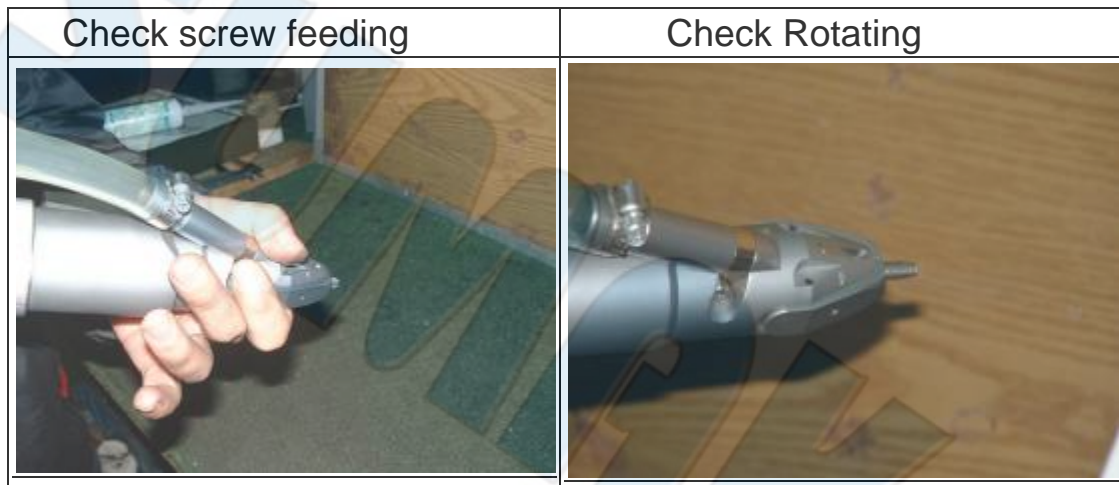


(3) Check whether feeding action is normal

One cycle will send a signal to the feeder from the driver unit and the escapement will release one screw from the chute for delivery to the driver's tip by compressed air. First cycle has a 3~5 seconds delay of feeding.

⊘ Never point the driver tip toward a person since a screw might shot out accidentally, causing possible injury.

(4) Check the pneumatic screwdriver is normal.(For pneumatic screwdriver only)



(4-1) Check the electric screwdriver is normal. (For electric screwdriver only)

- Push-start type:
The driver should rotate when the bit is pressed against a flat surface while the Y-pipe is compressed. Check for any abnormal sounds during rotation.
- Lever-start type:
The driver should rotate after pressing lever. Check for any abnormal sounds during rotation.

(5) Check whether torque setting of pneumatic (elec.)is proper or not.



Fit the driver tip over the hole of screw to be tightened a perform test fastening.
The screw is driven into the hole when the driver bit is pressed against the screw.
Check that the screw is fastened to the specified torque.

- Please refer to page 14 "Torque adjustment" for pneumatic screwdriver
- Please refer to page 14"Torque adjustment" for electric screwdriver.



Make sure that the driver is vertical to the work surface and the delivery hose is free of twists and bent.

3. Normal Operation

- (1) After all preparatory steps have been completed, load mass screw into the hopper.
- (2) Turn power switch on

Load mass screws	Turn power switch
	

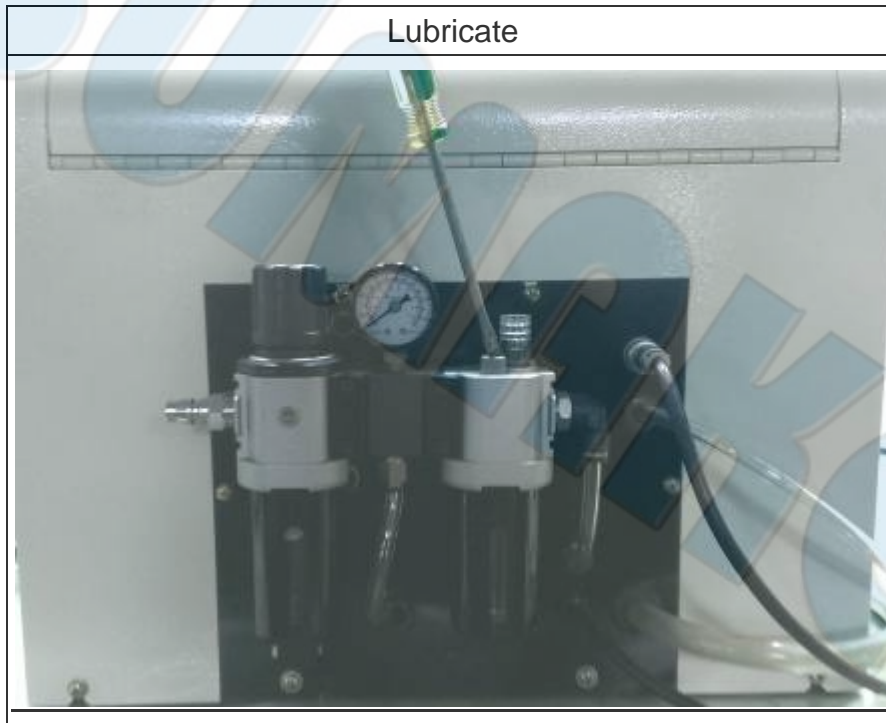
- (3) Hold the driver unit and press the Y-pipe manually to confirm that a screw is seen at the tip of the driver at the first time.
- (4) Align the screw at the driver tip vertically with the screw hole of the work-piece.
- (5) Then, repeat the steps to tighten subsequent screw.
- (6)

Operation Demonstration	Vertical direction
	

4. After Operation:

(1) Lubrication(For pneumatic screwdriver only)

Oil flow of 3 to 5 drops through the window, retighten the needle valve. Then, idle the driver unit alone for one or two minutes to allow oil to circulate.



(2) Turn power switch off after completing operations.

5. Maintenance:

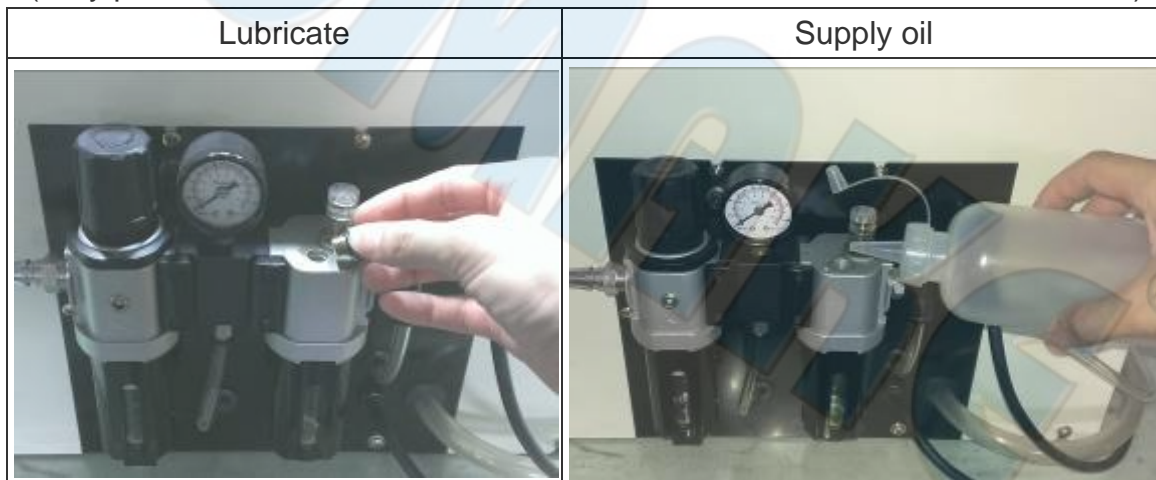
(1) Cleaning hopper interior

Clean the hopper interior once a week. Remove any remaining screw and dust. If the interior is extremely dirty, wipe thoroughly with a clean.

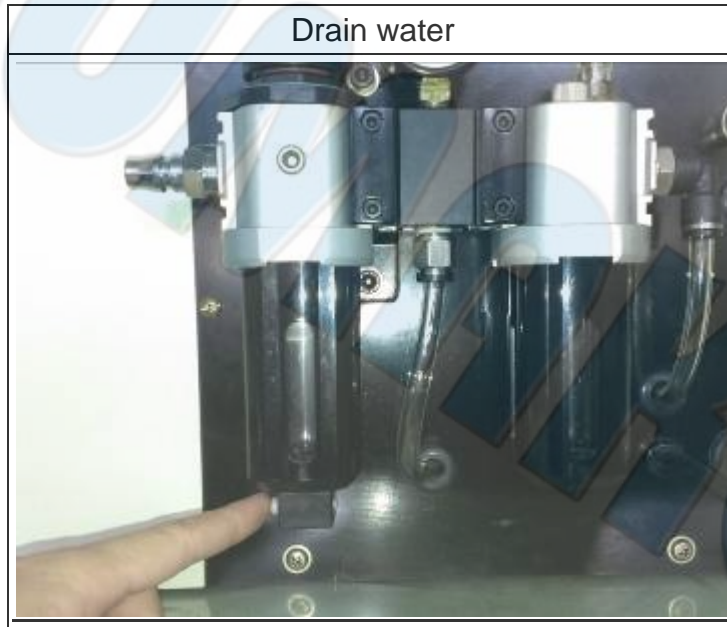
(2) Check air unit : Check that oil level is between the top and bottom marks.

Supply oil if oil is running low.

(Only pneumatic screwdriver needs oil; elec. screwdriver didn't need lubricate.)

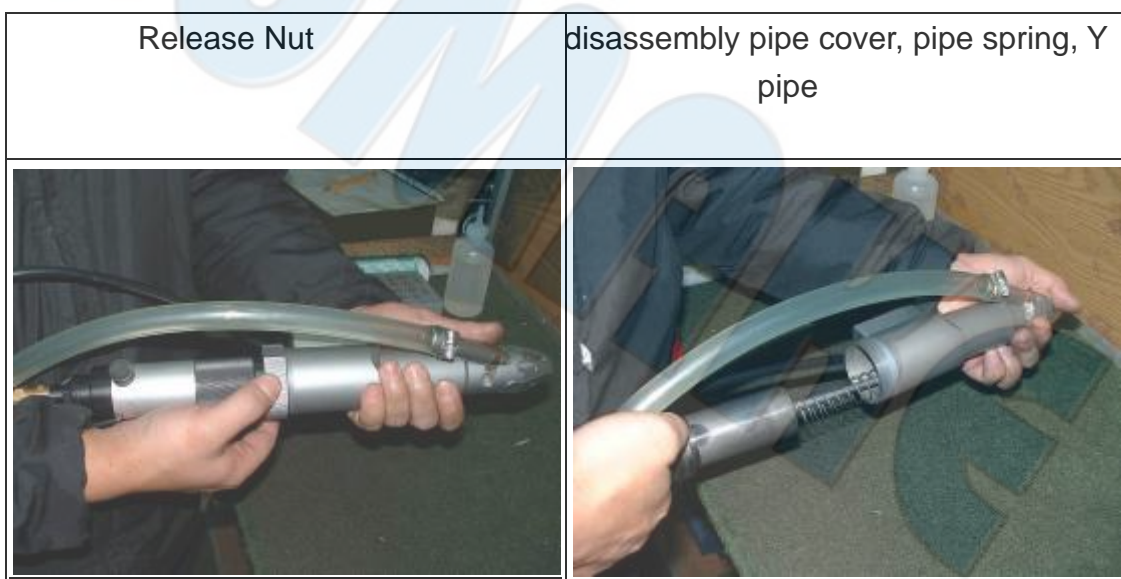






(3) Drain the water which is accumulated in filter..



(4) BIT Replacement(For pneumatic screwdriver only)



- To release the nut , disassembly pipe cover, pipe spring, Y pipe.
- Use a negative driver and push the ring forward. Keep pushing the ring forward and pull the bit out. And, still keep pushing the ring forward and insert the new BIT.
- Lubricate and assembly it.
-







<p>push the ring forward</p>	<p>Assembly pipe spring</p>
	
<p>Lubricate it</p>	<p>Assembly pipe & Y pipe</p>
	

(4-1) BIT Replacement (For electric screwdriver only)

- Release nut, pipe cover, pipe spring, Y pipe.
- Pull the latch out and remove damaged BIT then insert new BIT.
- Lubricate after finished and assembly adapter-pipe spring-pipe cover-Y pipe. Please ensure the pipe spring is inside of adapter & pipe cover.

<p>Release nut</p>	<p>Disassembly pipe cover, pipe spring, Y pipe, adapter.</p>
	

<p>Pull or press the latch</p>	<p>Assembly pipe cover, pipe spring, Y pipe, adapter.</p>
	
<p>Lubricate</p>	<p>Assembly pipe cover and Y pipe</p>
	

※ NOTE:

If the screwdriver set can't work smoothly, please don't push strongly.

The normal reason is "Ms. Plate" with "Circlip" is not match.

If this issue occurs, please release screws of delivery switch set then make Circlip located middle of Ms. Plate then assembly.

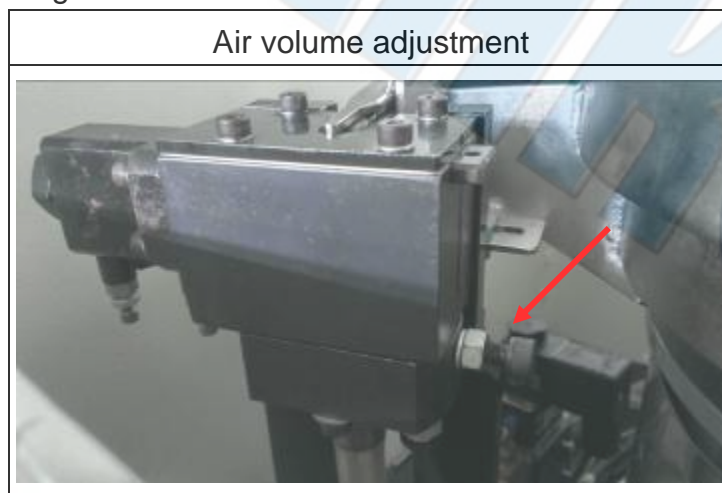


III Adjustment and Replacement

1. Air Pressure Adjustment

If satisfactory screw delivery cannot be obtained by time adjustments, the screw delivery air volume must be reset by turning the switch rod adjustment screw on right of the feeder escapement.

- a. use wrench to release nut
- b. use wrench to adjust screw by steps as below.
 - (a) To decrease air volume : Turn by clockwise direction.
 - (b) To increase air volume : Turn by counter-clockwise direction
- c. Tighten nut after adjusting.









2. Adjustment of escapement speed :

If the shutter of escapement works badly, then need to adjust speed value by procedures as below.

- a. Change shutter for rightward speed, adjust right valve
- b. Change shutter for leftward speed, adjust left valve.









3. Torque adjustment : (For pneumatic screwdriver only)
 - a. Release nut and remove pipe cover, pipe spring, Y pipe.
 - b. Use PH driver to insert hole then adjust torque range by turning.
 - c. Lubricate the screwdriver after adjusting then assembly pipe spring, pipe cover, Y pipe. Please ensure the pipe spring is inside of it.

<p>Release nut</p>	<p>Remove pipe cover, pipe spring, Y pipe</p>
	
<p>Insert PH driver to hole then adjust</p>	<p>Assembly pipe spring</p>
	
<p>Lubricate</p>	<p>Assembly pipe cover and Y pipe</p>
	

4. Torque adjustment : (For electric screwdriver only)

- a. Release nut and pipe cover, pipe spring, Y pipe.
 - b. Please turn the knob to adjust torque range <turn left or right> °
 - c. Lubricate the pipe cover after adjusting, then assembly adapter-pipe spring-pipe cover-Y pipe.
- Please ensure the pipe spring is inside of it.

<p>Release nut</p>	<p>Remove pipe cover, pipe spring, Y pipe, adapter</p>
	
<p>Turn the knob by left or right direction</p>	<p>Assembly pipe cover, pipe spring, Y pipe, adapter</p>
	
<p>Lubricate</p>	<p>Assembly pipe cover and Y pipe</p>
	

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