

SELF BACKEY SB-400C/SB-650C

Controller SBC-1

Operation Manual

(As of April 2021)

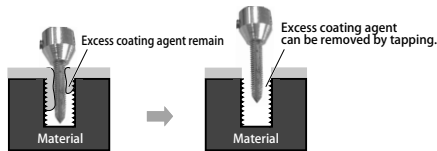
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About SELF BACKEY

SELF BACKEY is a tool to thread the inner surface of a hole that is roughly drilled in advance.

SELF BACKEY is most suitable for finishing touches after tapping because it can easily remove the burr, paint or adhesive from a screw hole when it is difficult to remove.



Features

- Automatically reverses and comes out as soon as tapping is complete to the predetermined depth, regardless of the hole is bottomed or through.
- Prevents accidental damage to taps by automatically turning back when excess burden to the tap is applied due to the wrong insert angle or unbalance between the tap and diameter of to the pilot hole.
- Since the tool is manually held while being operated, the tapping process is performed only through its rotational running without thrust in feeding or reversing direction. This way, risks of loss in thread accuracy or accidental damage to the tap because of inconsistency of rotation caused by the difference between feeding thrust and reversing thrust can be eliminated.
- The safety limit of torque can be precisely adjusted arbitrarily; specifically ideal for tapping threads of minute pitch or diameter.
- The depth (automatic reversing limit) can be set as desired.

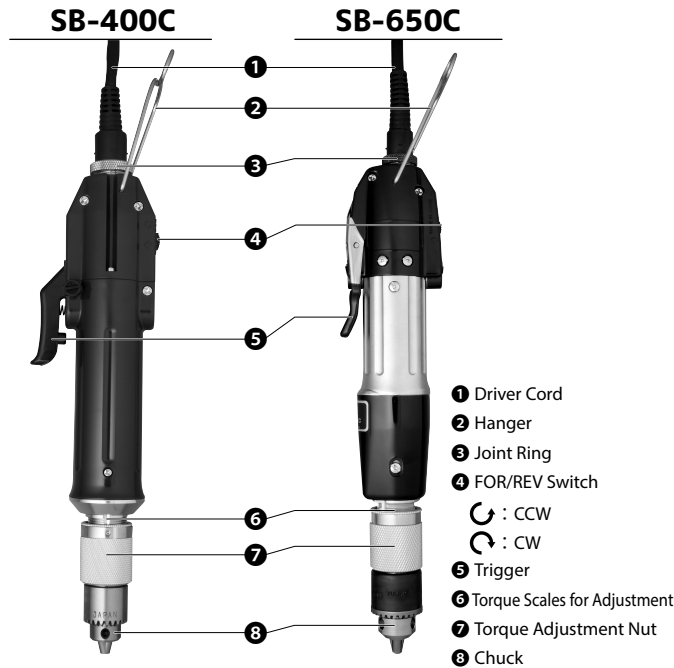
Definition of terms

- SELF BACKEY is mentioned as the "driver" in this operation manual.
- A bottomed hole is sometimes called a sac hole or a blind hole. In this manual, we call it "sac hole".

⚠ Handling

- Never apply oil inside the driver. Unnecessary greasing may cause failure.
- Disconnect power supply to the driver before installing or removing a tap. If you install or remove a tap while the driver is powered, it may injure your fingers or arms.

Parts Name (SB Tapper)



Accessories

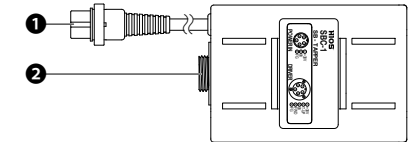
Please use the taps and other tools that are commercially available.

	SB-400C	SB-650C
Chuck Key		
Stopper 1 each		
	Φ2.0/2.3/2.6 mm	Φ2.6/3.0/4.0 mm
Drivers Cord (5P)		
	1.5m	2m

SB-Tapper Specifications

Model	SB-400C	SB-650C
Tapping Capacity	0.9-2.6mm	2.0-4.0mm
Chuck Diameter	Up to 4mm	Up to 6.5mm
Range for Torque Adjustment for Safe Load	Torque Guideline	
	N·m (kgf·cm)	0.1-0.55 (1-5.5)
Unloaded Rotation Speed (r.p.m) ±10%	HI	1,000
	LOW	670
Grip Diameter	Φ32.5	Φ37
Total Length	220mm	295mm
Weight	450g	750g
Compatible Power Supply	T-45BL	

SBC-1 Specifications



1 Power Supply Connecting Cord

Connect to power supply.

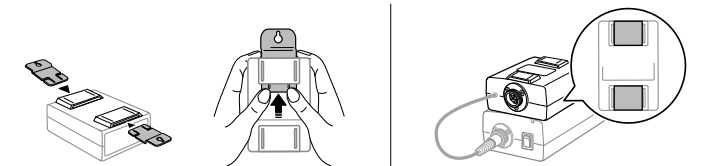
2 Screwdriver Connector

Connect driver cord with tapper.

Dimensions (WxDxH)	70×100×42mm
Weight	Approx. 153.5g
Accessories	Bracket×2, Double sided tapex×2, Manual×1

Installation

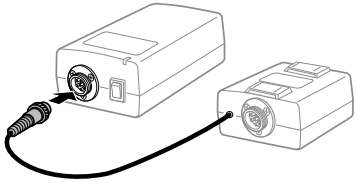
Either use brackets or double-sided tape.



Connection and Installation

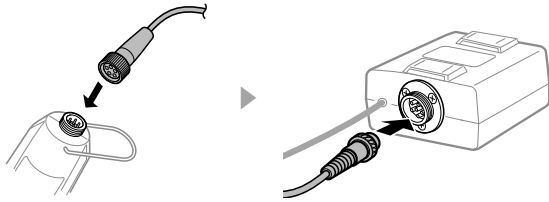
1 Connect SBC-1 with Power Supply.

- Use joint ring to lock power supply.

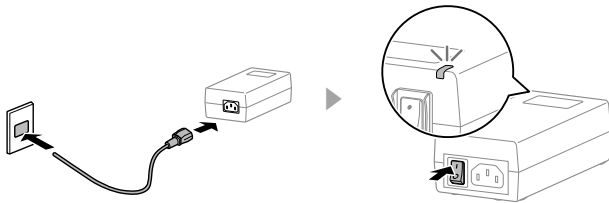


2 Connect Driver Cord with SB Tapper and SBC-1.

- Use joint ring to lock driver cord.



3 Connect power cable with electric outlet, then turn on.



Power Supply Output

Normally, set HI (30V). If you would like a slow RPM, please switch to LOW (20V).

Attach the Tap

1 Fix the stopper on the tap.

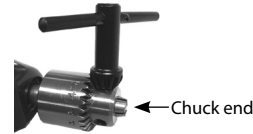
- Loose the screw of the stopper and fix it on the tap.

2 Fix the stopper at the target depth (where automatic reversing occurs).



- Select a smooth section of the tap where there is no thread and fix the stopper.

3 Attach the tap.

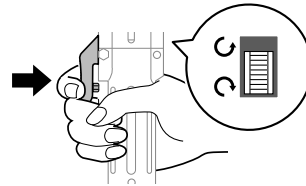


- Use a chuck key to open the chuck wide for the tap to be inserted. When you turn the key clockwise, the chuck end closes. When you turn the key counterclockwise, the chuck end opens.

Operation the Driver

FOR/REV Rotation

1 Select FOR of the FOR/REV SW.



2 Automatically returns after it finishes cutting the thread in the hole.

3 When you release the trigger, the driver stops.

- If you happen to release the trigger before the tap has completely come out, you need to perform this operation. Select REV and start rotation. When the stopper reaches the specified position, the driver automatically starts reverse rotation and the tap comes out.

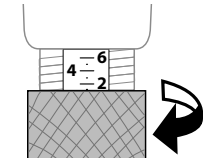
Adjust Torque

When the tap end touches the sac hole bottom or the stopper touches the material of a through hole, if strong resistance is applied to the tap, the thread may be damaged or the tap may be broken. In addition, excessive torque may occur due to unbalance between the tap and the diameter of the pilot hole, or slanted insertion of the tap. Therefore, it is necessary to promptly detect excessive torque for automatic reverse rotation.

⚠ Caution

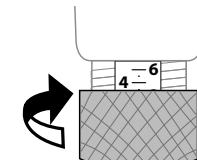
- Always start adjustment from low torque. (The clutch should start even when low torque is selected.)
- Do not start actual operation without testing. It may cause a broken tap or other damage. Sufficient testing is required before actual operation.

1 Set the torque of the driver to low.



2 Conduct a tapping to a pilot hole as a test.

3 If the clutch moves before the tap reaches the target position, fasten the adjustment nut a little; repeat testing to determine the ideal position.



4 Repeat steps 2 and 3 for adjustment.

- When it is confirmed that the tap has reached the target position and reversed automatically, you can start the actual operation.

Overload

When overload, it beeps and reverses. Do not release lever until tap is back in the first position.