


## SWX-CD-SPRM Charging Electric Hydraulic Riveting Tool

# Operation Instruction Manual



-  For the consideration of your safety, please carefully read and understand this Instruction Manual prior to the operation, and you can only use this product after having comprehensive understanding about this product.
  - Please well maintain this Instruction Manual. If any changes to the user of product, please hand over this Instruction Manual to the new user.
- First of all, we appreciate you select our product.

Please carefully read and understand this Instruction Manual prior to the operation, as well as use this product after having thorough understanding. If you have any usage difficulty or failure, please contact the dealers or manufacturer. Please don't disassemble the tool without permission in order to avoid losing the tiny parts or contaminating the hydraulic system so as to damage the function.



Warning: Use or operate this product without complying with the Instruction Manual listed below may cause the serious personal injury!

## Main Safety Note



Warning: When you use the charging electric hydraulic riveting tool, in order to avoid the incidents e.g. fire hazard, electric shock and injury etc., you must pay attention to the basic safety items listed below. Please carefully the following safety items prior to operation.

### 1. Working Site

1.1 Keep the cleanness and lightness of working site. The disordered and dark working site will cause the incident.

1.2 You can only operate this tool after removing the children and visitors. The distraction will cause you to relax the control.

1.3 This tool doesn't have the electric insulation, don't use it under the condition that the lead or wiring terminal is electriferous.

1.4 Don't use or store within the environment of strong acid, strong alkaline or other corrosive liquid, gas and high temperature, to avoid the tool to be corroded and the aging of components.

1.5 Don't charge or use this tool in the environment that the inflammable, explosive liquid, gas and dust are existing.

### 2. Electric Safety

2.1 The power plug of charger must be matched with the socket. Don't modify the plug by any means.

2.2 Don't expose the charger, battery and tool in the rain or humid environment to work, the access of water will increase the hazard for the electric shock of electric system.

2.3 Don't use the wires randomly. Don't use the wires for loading, pull the charger or pull out its plug. The damaged or winding wires will increase the hazard of electric shock.

2.4 If the charger suffers from the intense collision or falls on the ground, as well as is damaged in any form, please don't use or dissemble it. You should hand over it to the qualified maintenance personnel for treatment. Use the damaged charger may cause the hazard of electric shock or fire.

2.5 If the temperature is lower than 10°C or higher than 40°C, don't charge the battery. Don't cover or block the heat emission holes of charger and battery in the course of charging.

2.6 If encountering the weather of thunderstorm and lightning, please unplug the power plug of charger.

2.7 Don't cause the short circuit of battery or burn the battery to avoid the occurrence of explosion.

### 3. Personal Safety

3.1 Keep warning. When using this tool, please pay attention to the performed

operation and keep sober. Don't operate with tool under the reaction of fatigue, drug, alcohol or treatment. The distraction in the course of operating this tool may cause the serious personal injury.

3.2 Use and put on the safety protection equipment. Put on the safety hat, anti-skip gloves, insulated shoes, safety glasses, safety harness (work at height) etc. equipment can reduce the personal injury.

3.3 When using this tool, don't operate in a careless manner. Don't start and stop without consciousness, which may cause the malfunction even damage of microprocessor and electronic protection system.

3.4 When using the tool, don't put any part of body e.g. fingers etc. into the working jaw to avoid the clamping injury.

3.5 Please store the vacant tools beyond the scope of children, and don't allow the personnel who are not familiar with this tool or don't understand the instruction to operate this tool.

## Learn About Your Tool

Thanks for purchasing and using **SWX-CD-SPRM** Charging Electric Hydraulic Riveting Tool. **SWX-CD-SPRM** applies the mechanical and electrical integration technology including the high-performance lithium battery for supplying the power, the motor for driving, microcomputer (MCU) for controlling. It integrates the design of human engineering with the features e.g. beautiful exterior appearance, simple and convenient operation large output force, super safe and high working efficiency etc., as well as equips the human-computer interaction interface. It also has the new functions e.g. display the power of battery, switch of lighting, failure warning, pressure indication and product operation calculation etc.

### 1. Main Technical Parameter

The maximum output force: 45KN

Working stroke: 40mm

Hydraulic oil: 15# Low freezing anti-wear hydraulic oil (tool original Shell Tellus T15) about 115ml.

Environmental temperature: -10 to 40°C

Battery: DC 18V 3Ah lithium battery

Riveting period: 3-6 seconds/time

Riveting time per saturated battery: About 320 times

Charging power: AC 100V-240V, 50-60Hz

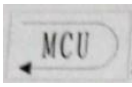
Charging time: About 1 hour

## 2. Introduction of Product Structure

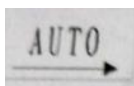


No.	Name	Function
1	C frame	fix the tooling
2	Riveting Die	Replaceable Riveting Die
3	Riveting Head	Replaceable Riveting Head
4	LCD display screen	Display all data
5	Function key	Power switch, function switch and lighting
6	Lighting lamp (LED)	Lighting
7	Start button	Start the motor and perform the riveting
8	Battery lock	Lock or take out the battery
9	Battery	Chargeable lithium battery (18V)

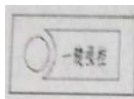
## 3. Description of Function

3.1  Microcomputer control system---Automatically implement the pressure monitor in the course of riveting and perform the double safety protection,

automatically reset and stop after completing the riveting, the piston will reset after releasing the start button.



3.2 Automatic pressure release function---The device of automatically releasing the pressure. When the riveting force reaches to the maximum, the tool will stop automatically and release about 90% of pressure.



3.3 One-key control operation---In the course of riveting operation, the motor will start and carry out the pressing if completely pressing the pressure control button. If half releasing the pressure control button, stop pressing and keep the piston not reset. If completely releasing the pressure control button, stop pressing and the piston will reset.



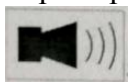
3.4 Micro-double-stage hydraulic system---Enable the piston to push in rapidly in the course of riveting the low pressure, and the piston will slowly push in after the tooling contacts with the terminal.



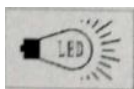
3.5 350° freely rotate the C frame---It can be applicable to the application sites with multiple angles.



3.6 Fast stop---if releasing the button or completing the work, and in case of any special situations, the internally installed special braking device of tool, which can stop the pressure output in an instantaneous manner.



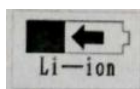
3.7 If powering on, the power of battery is insufficient and in case of error in the course of riveting, the microcomputer control system will make a sound for warning and LCD display screen will display the error code (See the Sheet 1).



3.8 If working in the dark environment, LED lighting lamp with high luminance will enable the working environment to be bright and improve the safety.

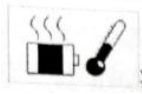


3.9 The overall structure of tool is compact and complies with the design of human engineering, the anti-skip rubber of hand-holding position and the optimized gravity design will enable the operation to be more relaxed.



3.10 High-performance lithium ion battery---Provide the strong power

source without discharge memory effect, the design of super low power consumption can ensure the standing time of 6 months. Meanwhile, it is equipped with over-discharge protection to extend the life-span of battery.





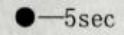




3.11 Temperature sensor---The tool will generate heat if continuously working for long term, if the temperature exceeds 60°C, the tool will stop automatically and display the failure warning to protect the tool from being burnt. And it will continue to work after the temperature is reduced.



3.12 Microcomputer control system---Automatically implement the pressure monitor in the course of riveting and perform the double safety protection, the piston will reset upon releasing the button after completing the riveting, stop the rotation of motor and count, as well as realize the data exchange through the connection of converter and computer.

#### Sheet 1 Signal Indication and Implication

No.	Error Code		Instruction	Implication
1	on---		Power-on self-inspection	Self-inspection and the system is normal
2	E01		Over loading	The hydraulic system may have failure, it is required to check immediately
3			Charging reminder	Remind the power of battery is in short, the number of times that can be used, recommend to charge the battery
4			Power shortage warning	The power of battery runs out, it is required to charge the battery immediately
5	E02		Sensor error	Temperature sensor and voltage inspection have error
6	E03		Temperature warning	The temperature of tool is over high, it is required to use after cooling
7	E04		No pressure	The motor rotates but no pressure



## Operation Method and Notes

Please carefully check whether the housing of charger, housing of battery, working head of tool and housing are complete and whether the battery connection is reliable prior to using this tool to ensure the safety.

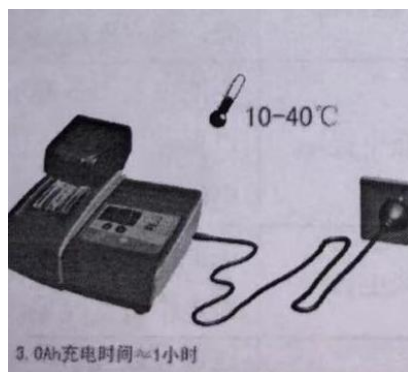
### 1. Charge the battery



Press the battery lock  
Push out the battery



Push in



10-40°C  
3.0Ah charging time=1 hour



Push in the battery

As for more operation instruction, please refer to the *Operation Instruction Manual* of Battery.

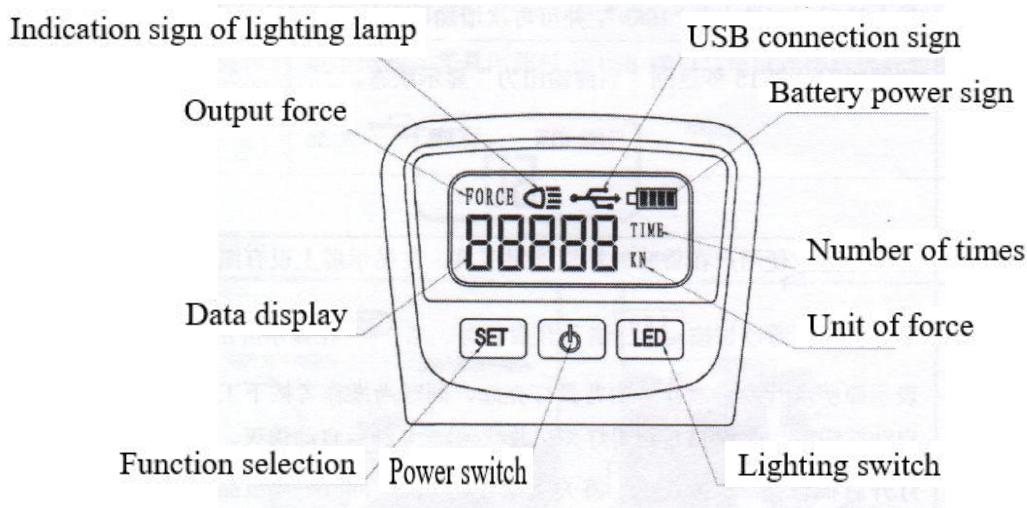
Note:

1. The battery can be charged and discharged for hundreds of times, but it will finally ineffective. When the operation times of tool is obviously reduced, please replace the battery. Please charge the battery in a timely manner, don't completely run out the power of battery, which will cause the permanent ineffectiveness of lithium battery.
2. If the tool is placed for long term without using, the internal of battery will generate the phenomenon of self-discharge. It is required to take out the battery, and ensure to fully charge the battery every quarter.
3. Don't use the lead to connect both electrodes of battery, which will cause the electric sparkle, burning even explosion.

4. Don't use the damaged battery or charger, otherwise it will increase the hazard of electric shock.
5. It is not allowed to burn the battery in any condition, otherwise it will cause the explosion.
6. When charging the battery, don't cover the charger with any article due to it is easy to cause fire hazard if the charger can't emit the heat.
7. Please cut off the power if not using the charger so as to reduce the risk that children and untrained personnel suffer from injury.
8. Don't use the charger in the humid environment, don't expose in the rain and snow, otherwise it will increase the hazard of electric shock.
9. Don't disassemble the battery and charger without permission. If any failure occurs in the course of using, please hand over to the professional personnel or manufacturer for maintenance. It is able to continue to use until the problem is solved.


## 2. Operation of Tool

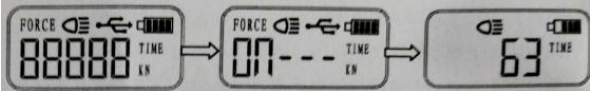
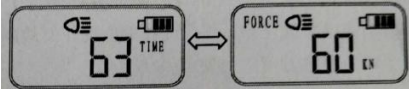
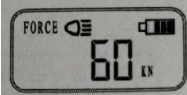

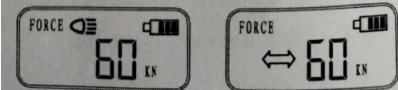


### 2.1 Description of Display Screen






### 2.2 Display Screen Reading and Setting

If the tool is in the condition of power-off, the display screen will not display anything.

Power on	Long press  key for three seconds, the tool will access to the status of power-on. All content on the display screen will last for 1 second, and then access to the self-inspection procedure and display for 1 second. The display screen displays the record of last use, and the tool accesses to the status of power-on.
----------	---

	
<p>Switch the display content</p>	<p>Under the status of power-on, short press <b>SET</b> to perform the switch between “Current use times” and “Current output force”.</p> 
<p>Set up “Setting output force” (If it is equipped with the pressure sensor)</p>	<p>Long press <b>SET</b> for 3 seconds to access to the status of setting, in which the display data will keep flashing to reflect. Short press <b>SET</b> again, increase 10KN (or 5KN, set up according to the requirement), increase to the maximum value and return to the minimum value “10KN”, and it is able to increase again. After setting up, long press <b>SET</b> again for 3 seconds or no actuation for 15 seconds to return the display status of “Current output force”.</p> 
<p>Set up the lighting lamp</p>	<p>The lighting lamp is used for facilitating the user to operate the tool in the dark environment. There is one lighting lamp indication sign on the display screen, it is able to access to the status of power-on through long pressing <b>LED</b>. If  appears on the display screen, which indicates that the lighting lamp powers on, and the background lamp of LCD will light up. Meanwhile, after the use presses the starting button of tool motor, the front-equipped LED lighting lamp will light up and continue, it will automatically light off after 20 seconds. Under the status of lighting lamp powers on, long press <b>LED</b> to turn off the function of lighting lamp, and turn off the background lamp of LCD.</p> 
<p>Display of battery power</p>	<p>The power of battery is displayed through . It will display four blocks if the power of battery is in the saturated condition, and it will reduce the block to the right in sequence according to the power. If the power of battery is in short, that is, the tool is still in working condition when reaching to the last block, the battery power sign  will flash</p>

	and the buzzer will sound according to the frequency of flash. It is unable to perform the normal starting operation to tool, and it is required to take out the battery for charging.
Display of tool failure	When the tool has failure, e.g. the motor is burnt, the driving system fails and hydraulic system fails etc., the tool will stop automatically and the the screen displays the error code as shown in the figure: indicate that the tool has the over-current. After removing the failure, the tool will access to the normal display interface. 
Power off	After completing the use of tool, long press  for 3 seconds or no operation to the tool for 30 minutes, the tool will access to the interface of power-off.
USB connection with the computer (If there is such configuration)	Take out the battery, carry out the data exchange after connecting the USB interface on the circuit board of tool with the computer, the screen will display the sign  .

#### Special Note:

The overall-process riveting of this tool is the one-key control operation. That is, in the course of riveting operation, if pressing the starting button completely, the motor will start and perform the riveting. If the starting button is in the half-releasing condition, stop pressing and keep the piston not retract. If releasing the starting button completely, stop pressing and enable the piston to retract completely.



#### Warning:

1. Don't hammer or knock any part of this tool. It is required to check whether the tool has any damage, aging, missing parts, incorrect calibration or stuck component, as well as any other hazard and unfavourable factors of safety and normal operation prior to operation, ensure the switch to be operated effectively without any stuck. If any problem is identified, please stop the operation immediately until the problem is solved.
2. The stop screw on the clamp head is used for preventing the clamp head from falling or ejecting, don't disassemble without permission.
3. In the course of riveting, the latch must be completely locked in the groove of

upper die holder. It is required to prevent the latch from falling when riveting.

4. Remove any oil, grease and dust especially from the handle and controlling component so as to prevent it from falling in the course of operation.

5. The built-in safety valve has been through the strict pressure testing prior to ex-factory, and the user are not allowed to adjust without permission. In case of any pressure shortage, please hand over the tool to the professional maintenance personnel, and it can be used only after the pressure testing.

6. If there is no tooling in the working jaw, please don't perform the riveting operation, otherwise which will damage the tool and ever cause the personal injury incident.

Warning: In the course of tool piston stretching out, please don't put any body part e.g. fingers etc. in the working jaw to avoid the occurrence of any incident.

## **Maintenance and Service**

Your tool is the product with excellent design and process. Please don't disassemble the internal components without permission. All failures due to the user disassemble the components without permission or the damages caused by the improper operation shall not be within the scope of warranty maintenance. But the paid repair can be performed for the user (Only charge the cost expense for component).

1. Keep the tool and its components dry. The rain, moisture and various liquids or water may all corrode the housing of tool, the metal surface and the electronic circuit. If the tool is wet, please take out the battery and re-install the battery after the tool is completely drying out.
2. Don't store the tool in the places of over-cold or over-heat. The over-cold or over-heat will enable the plastic parts of tool to be deformed, shorten the life-span of electronic components and damage the battery.
3. Don't use the strong chemical detergent or strong detergent to clean the tool.
4. In order to ensure the life-span of tool, it is recommended to replace the hydraulic oil inside the tool once every year.
5. If the tool is placed for long term without using, please reset the piston to the bottom, clean the surface of tool and evenly spread the anti-corrosion grease on the metal surfaces of riveting tooling and tool, as well as put it in the tool box for storage.
6. The sealing component belongs to the wearing part. If the tool appears the hydraulic oil leakage after being used for a period of time, please contact the dealers or manufacturer to deploy the professional maintenance personnel for replacing the sealing component.

**Description of Warranty Maintenance [Please well maintain this card]**

1. This tools shall be guaranteed for maintenance for one year since the date of purchase according to the national regulations.
2. Due to the force majeure (e.g. water disaster, fire disaster, earthquake, lightning stroke, typhoon etc.) or normal wearing, man-made damage, incorrect operation, especially operate not in accordance with the instruction manual, as well as disassemble and repair without permission shall all not be within the warranty maintenance.
3. If the users use, maintain and store in a proper manner according to the regulations of instruction manual, in case of the occurrence of any damage or abnormal working due to the manufacturing quality issue, the users can contact the original dealer or its appointed maintenance store for maintenance with the purchase voucher and this card, the users can also directly contact the Sales Department of our company.
4. The free warranty service of this product doesn't include the auxiliary parts, transportation fee and insurance fee.
5. This warranty card can only be used and effective in China.

Suzhou FENGYI Technology CO. LTD  
A6-1 Weiting Industrial Town, Suzhou, Jiangsu Province  
Tel.: +860512-68955006  
Enquiry hotline: +8615250079346 (same to wechat)  
Homepage: [www.sz-swanssea.com](http://www.sz-swanssea.com)

Please note that this card shall come into effect upon the dealer seals after purchasing the product. This card will be invalid if altered, and no replacement if lost.

Name of user		
Name of product	Charging Electric Hydraulic Riveting Tool	
Type of product	BZ-300	
No.		
Date of purchase voucher		
Dealer		

**Maintenance Record**

Date	Maintenance Component	Content and Replaced	Maintenance Peron	Remark

(This Instruction Manual is developed on July 6<sup>th</sup>, 2016)

Suzhou FENGYI Technology CO. LTD  
A6-1 Weiting Industrial Town, Suzhou, Jiangsu Province  
Tel.: +860512-68955006  
Enquiry hotline: +8615250079346 (same to wechat)  
Homepage: [www.sz-swanssea.com](http://www.sz-swanssea.com)