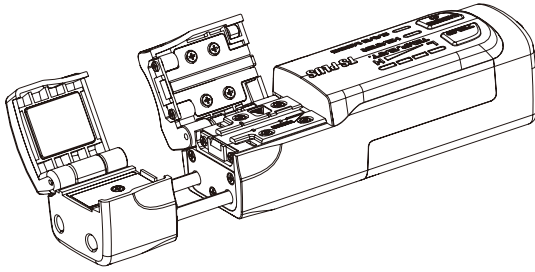


# Hot type ribbon optical fiber stripper

User's Manual  
V0.01



## Specification parameter

Strip length of the coating layer	30mm at most
Heating mode	normal mode/ power save mode
Temperature setting	normal mode: about 80°C, 95°C, 110°C, 130°C. save mode: about 70°C, 80°C, 95°C, 110°C.
Fiber fixing method	use: FH-2, FH-4, FH-6, FH-8, FH-10, FH-12, FH-250, FH-900
Power supply method	1) battery drive 2) AC drive: AC 100-240V,50/60Hz 3) use connecting wire to do DC 12V power supply from the fusion splicer
Outline dimension	139 (W) X34 (D) X34 (H) mm
Weight	approximate 260g of the overall machine+42g of the battery
Environment condition	Environment temperature when use: 0°C -40°C Environment temperature when preserve: TS-PLUS: -40°C + 60°C LBT-8: -20°C + 40°C (preserve less than three months) -20°C +20°C (preserve less than twelve months) Humidity: 0%-95 % (no moisture condensation)
Other	check the electric quantity of the battery: turn on the power switch of TS-PLUS, there are four type indication labels of electric quantity

## 1 Preface

First of all, thank you for purchasing the TS-PLUS heating type ribbon optical fiber wire stripping pliers from our company.

The design of this product meets the requirement of KS IPXL (Waterproof first level), it possesses the waterproof function of daily level, in addition, it is of small size and light and easy to strip the coating layer.

Before use this product, please read the specification carefully and put the specification near the product in order to read conveniently.

TS-PLUS is waterproof design, meet the requirement of KS waterproof first level.(Rainfall will bring no harmful effects to our products, however, we can't guarantee there won't be any damage or malfunction.)

## 2 Outline

### Product specification

#### Parameters of the optical fiber

Optical fiber materials	quartz glasses
Coating materials	UV sclerotic type resin
Quantity of optical fiber cores and thickness of the coating layer	single-core optical fiber: coating layer of the optical fiber is 0.25-0.4mm 2 to 12 cores ribbon type optical fiber Thickness of ribbon type optical fiber is 0.3 to 0.4mm
Optical fiber diameter	125µm

1 2  
3 4

### Use settings



- This product meets the requirement of KS IPXL (waterproof first level), but please don't put in water deliberately or let it be moistening for it may cause fire accident, electric shot or machinery breakdown.
- If water enter the inside of it, please turn off the power supply at once, and pluck the power adapter or battery, stop using it, then contact with our after sales service department as soon as possible.
- If there appear the phenomenon, such as smoking, peculiar smell or abnormal noise, please stop using it immediately and contact with our after sales service department as soon as possible.
- Please don't touch the heating surface when in use. You may get scald if touch it because the temperature of heating surface and surround margin will be high.
- Please don't dismantle this product arbitrarily, for it may cause fire accident, electric shot or machinery breakdown.

### Battery matters



- Please don't dismantle the battery without authorization. There are safety settings and protective settings in the inner of the battery to prevent dangerous happen. When these settings damaged, it may cause the battery heating, rupture and even on fire.
- Please don't use metal materials to connect the battery's positive and negative poles. In addition, also please don't transport it together with metal necklace or earring, otherwise it may lead to serious problems, such as short circuit batteries, large of the battery current, battery heating, smoking, rupture and catch fire.
- Please don't put the battery heating in the fire, it may lead to the insulator melting, safety device damaged, the electrolyte combustion, thus result in heating, smoking, rupture or catch fire of the battery.
- Please don't put the battery near heating equipment (such as electric furnace). Please don't use or place the battery under high temperature. It may lead to battery heating, smoking, and rupture and catch fire.
- Please don't let the battery be damped or erosion by sea water, once the protect device in the battery be damaged, it may lead to battery heating, smoking, rupture and catch fire.
- Please don't charge the battery under high temperature or hot weather. Because within high temperature condition, the protect setting will be stimulate, then it can't be charged; if the protect equipment damaged, it will charge with abnormal current, thus may lead to internal abnormal of the battery, then will result in battery heating, smoking, rupture and catch fire.
- When charging, please use the power adapter which our company authorized. If the charger you use without our company authorized, it may lead to internal abnormal chemical reaction due to the battery over charge, even may lead to battery heating, smoking, rupture and catch fire.
- Please don't use needle poke the battery or use heavy objects knock it. It may result in internal short circuit if the battery is damaged or deformed, thus may lead to battery heating, smoking, rupture and catch fire.
- Please don't collision the battery strongly, if the protect facilities damaged, it may lead to battery charge under abnormal current condition or internal abnormal chemical reaction, thus may result in battery heating, smoking, rupture and catch fire.
- Please don't weld directly on the battery, because the heating will lead the insulator melting and safety device damaged, thus may result in battery heating, smoking, rupture and catch fire.
- Please don't put the battery in the microwave oven or high-pressure container. It may result in battery heating, smoking, rupture and catch fire if the flash heating and sealing condition be damaged.
- Please don't use the battery in other devices that without the designated machine, otherwise it may lead to performance degradation and life span reduction, thus may result in battery heating, smoking, rupture and catch fire when abnormal current go through.
- Please don't use or place it under the blazing sun or in the extreme hot car, for this will lead to life span reduction and performance degradation.

## 3 The points should be pay attention

Our company pay high attention to safety factors when designing, but if operate improperly, it may result in fire or electric shot, thus may lead to life accident. In order to prevent accidents, please must obey the following rules when use this product:

- Meaning of the warning signs
- Please carefully read and absorb the contents about the warning signs on the specification book.



This signal means be careful, dangerous and warning



This signal means forbidden doing something.



This signal means enforcement actions or instruction.



14. There are positive and negative poles on battery, if can't connect it smoothly, please confirm the direction of the positive and negative poles. When charge in the opposite direction, it may lead to internal chemical reaction, thus may result in battery heating, smoking, rupture and catch fire.

15. If the battery liquid split to the eyes result from leakage, please rinse with water immediately, and then treated by doctors. If can't treated in time, it may cause harm to your eyes.

16. The battery charging temperature ranges from 0c to 40c, if charge beyond this temperature limit, it may lead to battery liquid leakage, heating, damage, then it may cause battery performance degradation and life span deduction.

17. Please don't be recharged after the battery is full, for it may cause the battery in high temperature condition, then will deduct its life span.

18. Please don't pluck the battery if your hands are wet, otherwise it may cause fire accident, electric shock or machinery breakdown.

19. Please charge under suitable environment (0c to 40c), if charge in cold outside or low temperature environment (lower than 0c), it may lead to battery liquid leakage, thus deduct its life span.

20. If you don't use the battery for a long time, please remove it from the machine, otherwise even it is in power off state, there will be tiny electric current passes through, over discharge will deduct its life span.

21. For the waste batteries, please obey the relevant regulation, you can also contact with our after-sale service department.

### Use / Maintain



1. When power supply with fusion splicer, please use dedicated DC connect cable. If uses other connect wire, it may result in dysfunction or failure.

2. If you don't use this product for long time, please pluck it from the AC power adapter in order to guarantee safety, otherwise may cause fire accident.

3. When you pluck the connect wire from AC power adapter, please hold the plug tightly, don't pull the connect section strongly, otherwise it may damage both ends of the connection wire.

4. Please don't keep it in moisture or dusty place, otherwise it may cause fire accident, electric shock or machinery breakdown.

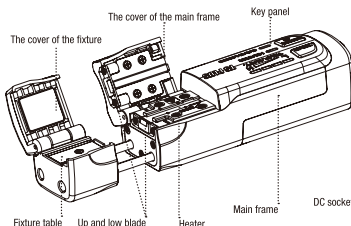


5. For safety, please don't use hands to clear the coating layer crumbs; you can use brush or other cleaning blade instead.

6. It is dangerous to strip the optical fiber of the coating layer, please be careful when handling.

7. The blade are consumables, when replace it, please use the designated ones and you should replace it with the whole set. If you can't replace properly, it may lead to the abnormal function when use.

## 4 Structure



- Tab all of the switch and heating mode. Applied to TS-PLUS power, all heating mode and power save mode under power-on state.
- The heating plate temperature conversion key. Short-time print the dump energy is used to switch the heating plate temperature, long-time print it can detect the remain dump energy.
- TEMP (cutting temperature/ charging state) LED indication light means heating plate temperature/ charging state.
- Normal mode LED
- Save mode LED

## 5 Power preparation

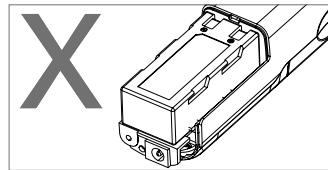
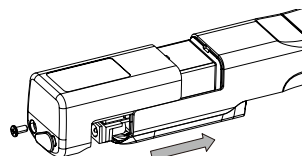
LBT-8 battery is the specialized TS-PLUS rechargeable lithium battery, if the battery power hasn't run out timely, when recharging, it can also be full charge. Before use it, you should charge because it is not full in power when it leaves the factory.

The equipment had already been installed with the LBT-8 battery when leave the factory.

There are three methods to charge for this product:

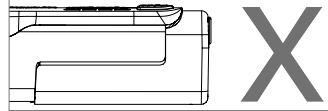
1. Battery drive.
2. AC drive.
3. Power supply with DC 12v in the fusion splicer.

3. Please use cross wrench to tight the fixed screw.



Pay attention to the positive and negative side of the battery.

Please make sure the battery plate is sealed, if there exist gaps, the waterproof function will be lost.



### The methods to confirm the electric quantity

Under the power state of TS-PLUS, press (1) button about two seconds, TEMP/BATT (3) indication light flashes, indicate four kinds of electric quantity level.

If the electric quantity is lower than 10%, the machine will be automatic turn off.

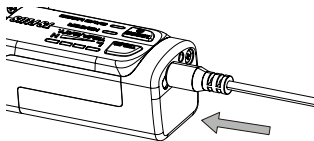
Please use LED to determine the electrical charge condition.

LED light express	The percentage of battery power remaining
●●●●	More than 75%
●●●○	50%~75%
●●○○	25%~50%
●○○○	Less than 25%

### Methods to charge

Install LBT-8 to the main engine of TS-PLUS to charge:

1. Please install the LBT-8 battery to TS-PLUS
2. Connect AC power to TS-PLUS.
3. After start charging, the left side of TEMP./BATT. (3) indication light turns green and glittering.
4. According to the remain electric quantity, charging time can be verified, generally it is two hours. The left side indication light turns green and illum.



The battery charging temperature ranges from 0°C to 40°C, if charge beyond this temperature limit, it may lead to battery liquid leakage, heating, damage, then it may cause battery performance degradation and life span deduction.

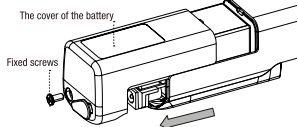
When charge, please use TS-PLUS and AC power (or INNO fusion splicer). Otherwise it may be electric leakage or fire accident

State of LED light	Signal meaning
light	Finish charging
flash	Be on charge
Black out	Battery LBT-8 or TS-PLUS is abnormal

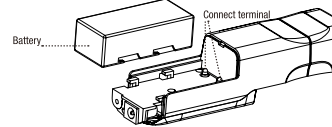
When abnormal phenomenon takes place, please contact our after-sale department as soon as possible.

### Replace the battery

1. Please use cross rim wrench to dismantle the fixed screw, open the battery plate.

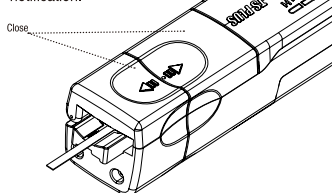


2. Please install the battery to the facility according to the following picture.

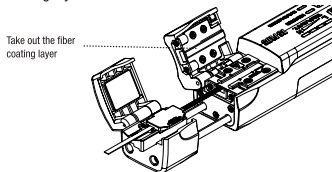


5  
6  
7  
8

4. Close the TS-PLUS fixture and main engine plate, heating indication LED about five seconds, the green light flashes, and you will hear sound notification.

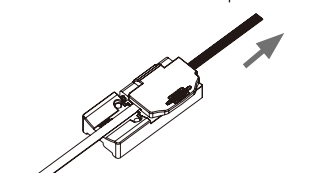


6. Finish stripping the coating layer. Take out the optical fiber fixture, and use brush to clean the UV coating layer.

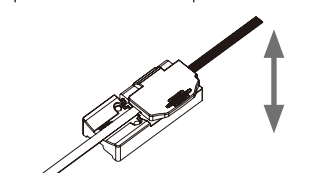


Please be careful don't forget to take out the stripped coating layer.

7. Please use the immersed gauze with its purity more than 99% alcohol to clean the optical fiber.



8. With the tip of your finger to flick the top of the optical fiber to make it's lined up.

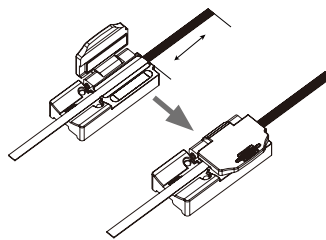


Be careful not to hurt your finger by the optical fiber.

## 6 Operation methods

1. Print the power key for two seconds (2) until the TEMP/BATT indication LED (3) light.

2. Put the optical fiber to the fixture, reserved about 30mm on the top of it.



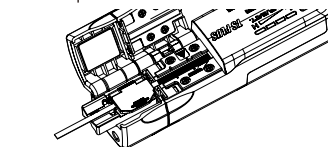
Refer to the following picture:

1. Connect DC wire and TS-PLUS port.
2. The other side of DC wire insert to the DC output port of fusion splicer wire stripper.

Only INNO fusion splicer VIEW-12R can support this function, whether other machine can support this function, please consult relevant departments.

When use INNO fusion splicer VIEW-12R to charge, fusion splicer battery drive and AC drive can both charge for TS-PLUS.

3. Put the optical fiber fixture to the fixture table.



When use INNO cleaver, please make sure whether the covered top position within the cleaver scope.

### The conversion of heating mode

The conversion of heating mode can use button (2) to do. Press this button rapidly can converse between normal mode and power save mode. Generally we will use normal mode.

If press this power button more than two seconds, power supply button of TS-PLUS will be completely cut off.

#### Normal mode:

Under normal mode, TS-PLUS can work continuously, with no need for waiting.

#### Save mode:

Under power save mode can extend battery life and save electric power.

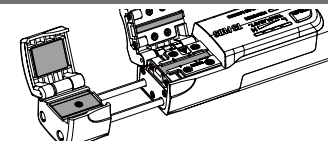
## 7 Maintain

### Daily cleaning

To make this product work properly, cleaning and maintain is a must before and after use.

Please use the cotton swab which had been soaked in the ethanol alcohol with its purity is 99%.

Please don't use other high purity medicament to do the cleaning.



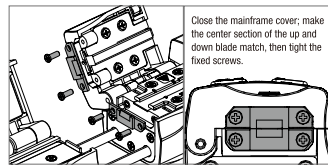
### Blade replacement

1. Use cross rim wrench to tight the fixed screw, take out the blades.

2. After install the new blades on the upper and lower parts, use screw to tight it, it is in the state of not completely fixed.

3. After confirm the position is match, tighten the screws.

Please turn off the power supply when replace the blade, if the heating plate is in cooling state, please wait five minutes after turn off.



Close the mainframe cover, make the center section of the up and down blade match, then tight the fixed screws.

## 8 Common problems

	Good condition
	Fiber been broke off
	Not well stripped
	Fail to strip

If the optical fiber coating layer didn't strip well, the following reasons will be count:

1. Cleaning incompletely
2. The residual slag may remain on the blade, heating plate or rubber
3. The blade doesn't cut to the coating layer. This case will be result from improperly alignment. Please make sure whether the blade is properly installed.
4. Blade abrasion

If this problem still exist even the blade position is properly, maybe the blade is abrasion, please contact our after-sale service department.

### Temperature setting

The change of temperature setting please use TEMP./BATT. Key (1). When the device leave the factory, it has already been set.

The second temperature from the left side.

Change the fourth temperature may shorten the duration of the battery.

### Function of Power supply automatic turn off

The power will automatic turn off if the main engine plate with no opening and closing action.