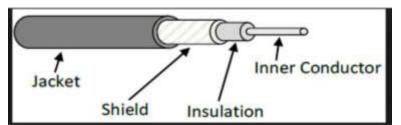


# **Cable stripping process**



No.	Sequence	Equipment and Tool	Time cost	Worker	AUTOMATION
1	Arrange the cables	Human beings		4-5	We can supply
2	Jacket strip	Twin head CO2 laser striper	0.5s/cable	1	the complete
3	Jacket remove	Remover	10s/bin	1	automation production line
4	Shield cutting	Four head Fiber laser Striper	20s/3bin	1	especially for
5	Shield brush	Brush the shield	10s/bin	1	your request.
6	Insulation cutting	Twin Head CO2 laser striper	15s/3bin	1	
7	Insulation remove	Remover	5s/bin	1	
8	Inner conductor cutting	Four head fiber laser	ls/bin	1	
9	1-10 repeat				

# Striping working processing sequence

NO.	1	2	4	5	6	7	9
step	Jacket cutting	Jacket remove	Shield cutting	Shield Brush	Insulation Cutting	Insulation remove	Inner conductor cutting
Cable							
Machi ne	CO2 Striper	Remover	Fiber striper	Brusher	Co2 striper	Remover	Conductor cutter



### Explanation:

- 1. The complete strip working scheme is as following:
  - (1) Same fixture, one time position is ok, no need position each time. Each sequence has a separate fixture.
  - (2) The system we need:
    - 2 set CO2 laser striper (2 heads)
    - 1 set FIber laser striper(4 heads)
    - 1 set remover bending
    - 2 set removers
    - 2 set brusher
    - 1 set Tin Spread(optional)
  - (3) 10 workers need.( including cable arrange)
  - (4) We can supply Complete automation line to replace the human being workers
- 2. Laser Stripping Specification:

Model	QA-C30-2H	QA-FL20-4H	
Laser	CO <sub>2</sub> Laser Source	Fiber Laser Source	
Head	2	4	
Laser power	30W	20W	
Wavelength	10.6µ m	1064nm	
Power adjustment	0~100%	0~100%	
Cutting speed Adjustment	0~300mm/s	0~300mm/s	
Position preicision	$\pm 0.03$ mm	±0.03mm	
Cooling System	Air cooled	Air cooled	
Power	220(110)V/50(60)Hz/ 1.5kVA	220(110)V/50(60)Hz/ 1.5kVA	
Dimension	1140×665×1115 mm	1140×665×1115 mm	

Remark: We can supply to make the special fixture for the production line.





## QA-FL20-4H vertical four-heads Laser Wire Stripping Machine

### A) System Characters:

The QA-FL20-4H series vertical four head optical fiber stripper has many unique advantages in the application of laser wire processing.

1. Traditional wire stripping processes are achieved by mechanical or thermal processing with special wire strippers or knives.

2. Mechanical peeling is due to the contact of the jaw, resulting in a certain extrusion and cutting force on the metal wire core, resulting in damage to the metal core. If the jaw does not contact with the metal line, the insulating skin can not be cut clean. For the insulated leather wire made up of multi-layer rayon fabric, mechanical skin peeling is more difficult to meet the requirements.

3. Electro thermal peeling device (electric knife), although it does not hurt metal wire core, but because of its low stripping efficiency, poor quality, inconvenient use, is not an ideal peeling tool.

Because laser has many unique advantages, laser can be used to peel off wire insulation skin and metal shielding layer. It is especially suitable for the cutting of the outer, inner and shielding layers of the very thin coaxial and electronic lines in 3C equipment.

Now the use of the very thin coaxial line is becoming more and more widely used, and as the requirement of the volume of the 3C equipment is getting higher and higher, the machining requirements of the thin coaxial line are becoming higher and higher. The cutting of the shielding layer in the conventional processing needs to be retreated after tin, but with the improvement of the processing requirements, more and more technology for the shielding layer from tin processing is expected to be made. The conventional double head fiber optic stripper has been unable to meet this demand. In view of this, our company has launched a vertical four head optical fiber stripper.



### **B)** System advantage:

- 1. High output, effectively reducing production cost
- 2. High quality, high yield, production yield is greater than 99.9%.
- 3. High stability and high reliability
- 4. Customized by customer needs and simple operation
- 5. Can be very convenient to realize automatic production
- 6. Shields that are especially suitable for very thin coaxial lines do not go up to tin cutting technology.
- 7. It is suitable for small data lines below AWG24.

### **C)** System Industry application:

1, It is suitable for mobile phones, notebook computers, video cameras, digital cameras and other microelectronics products, the internal line stripping;

2. It is especially suitable for small data lines below 0.5mm (AWG24).

### **D)** System Configuration:

Name	Manufacture	Remark		
Laser source	Imported Laser	Long life, high reliability and good beam quality		
Control System	Import PLC and Touch	Easy programming, multiple prefabrication procedures and long time running reliability.		
Optical lens	Chinese	High quality optical devices		
Worktable	Import Taiwan	High quality optical devices		

#### 1. Laser Source

The optical fiber laser Source adopts the German imported laser, integrated overall structure, without optical pollution, power free coupling loss, compact and compact structure, air cooling, with high efficiency and reliability that other lasers do not have.



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## 2. Optical System

Optical system: High quality reflector, Focusing system and optical switching system.

## 3. Control System

a. Control system hardware

The imported PLC and touchscreen control have long term operation reliability and strong ability to expand.

b. Special control software

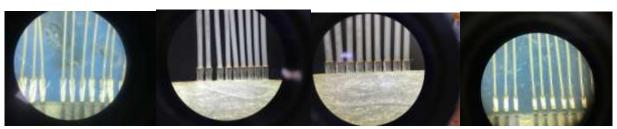
The control software is the control software developed by our company. It has the characteristics of convenient operation, flexible parameter setting, friendly interface and fast running speed. At the same time, many working modules are built, which can easily generate the batch and short stripping procedures quickly; each coking head can only control the power frequency alone.

# E) Specification

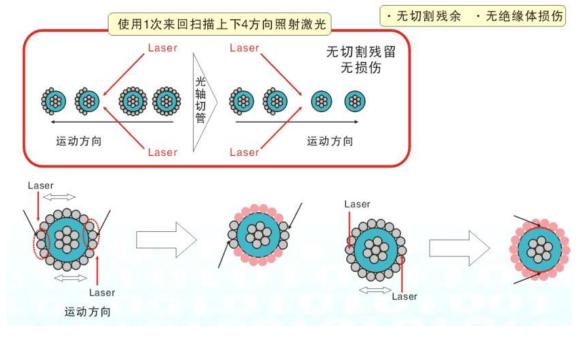
Model	QA-FL20-4H		
Laser	Fiber Laser source		
Head	4		
Laser power	20W		
Wavelength	1064nm		
Power	0~100%		
adjustment			
Cutting speed	$0{\sim}200$ mm/s		
Adjustment	0 <u> </u>		
Position	$\pm 0.03$ mm		
precision			
Cooling System	Air cooled		
Power	220(110)V/50(60)Hz/ 1.5kVA		
Dimension	$1140 \times 665 \times 1115$ mm		



# F) Samples:

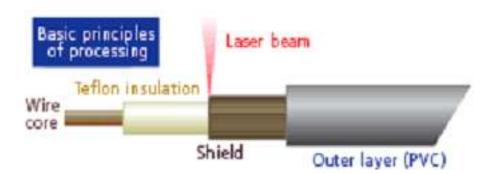


# G) Stripping process of four head stripper



# H) Application:

It is suitable for stripping the internal lines of mobile phones, computers and Digital Microelectronics products. Peeling Single line, line, multi-layer line, etc., It is suitable for small data processing below 0.5mm Especially used for stripping the extremely thin coaxial line, does not need to turn the wires, and does not need to go to tin. It can clean the shielded wires clean and will not damage the insulators.



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# QA-C30-2H Dual Heads CO2 Laser Wire Stripping Machine



### PRODUCTS INTRODUCTION

QA-C30-2H Daul Head Laser wire stripper is a newly developed equipment of Questt Asia Technolodgy Co.,Ltd. It has the characterized in high precision, high velocity, easy operation, stable capacity, modernized design and compact structure, etc.

It is a new application to use laser for wire stripping and cutting. The traditional processing for wire stripping is realized by wire stripping pliers or a knife. As a result that mechanical stripping might cause an extrusion and cutting force to wire core due to jaw contact, and such damage to the wire core. If the jaw does not touch metal wire, the insulation layer cant be cut cleanly. Regarding multi-layer composed of rayon knitted leather insulated wire, mechanical stripping is more difficult to meet the requirements.

#### FEATURES

• High-performance PLC controller with complete functions, simple and convenient operation and stable working.

• It is able to perfectly strip various kinds of shield without deforming and hurting insulation; conductors are not damaged while stripping the insulation which ensures a high finished product rate.

• It resolved the problems of manual strippers such as inconvenient control, incompletely stripping when

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cut superficially and copper-core easily cut off when cut deeply, not able to strip multilayer lines.

- Simple and convenient to operate, Non mechanical contact work will not result in any mechanical extrusion or stress on processed materials. Process quality is thus the highest.
- Precise control of the laser cut position, size, depth, repeating orientation. Minimize the possibility of finished product defects.
- It has rational structure, humanistic design, stable output power, high velocity, high precision, good quality and long life-time.
- Adopted German top class laser diode as the laser source to ensure output power, energy and precision required for micro coaxial wires stripping(no tinning needed)

• Adopted advanced "beam-splitting" technology to ensure the power and homogeneity of the laser beam from the multi-heads for absolutely stripping shields without hurting insulators.

#### APPLICATIONS

Fine wire's stripping off, ability to process the lines, drop-out lines, cables simultaneously, single wire, twisted pairs, multilayer lines etc.

For example: The interface wire for mobile, computer, notebook PC, vidicon, camera, electronic dictionary and other micro-electronic products.

#### Specifications

Model	QA-C302H		
Laser type	CO2 laser		
Laser output power	30W		
Wavelength	10600nm		
Laser power adjustment	0~100%		
Stripping speed	0~200mm/s		
adjustment			
Repeating accuracy	$\pm$ 0. 03mm		
Cooling mode	Air cooling		
Power supply	220(110)V/50(60)Hz/ 1.5kVA		
Machine Size	$1140 \times 665 \times 1115$ (L×W×H) mm		

#### **Sample Photos**



### Wuhan Questt Asia Technology Co., Ltd



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