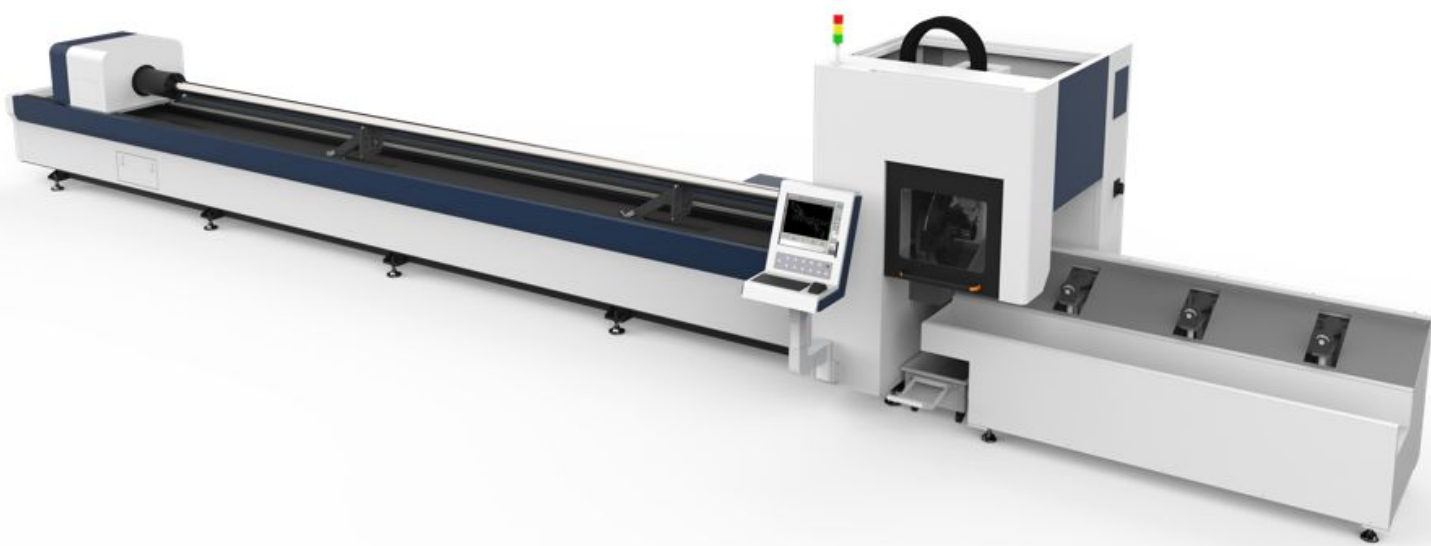


LW-P series IPG Fiber laser tube cutting machine

Technical solutions and quotations





Tube laser cutting machine

◆ Wide Cutting Applications

Applied in carbon steel, stainless steel, alloy steel and other metal types cutting.

◆ Special Profiles of Tubes

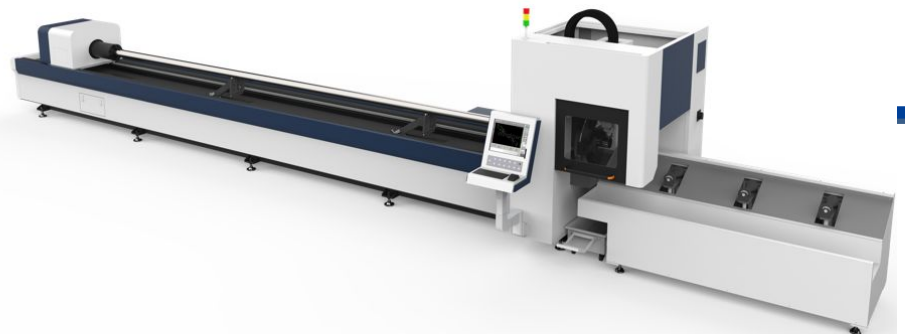
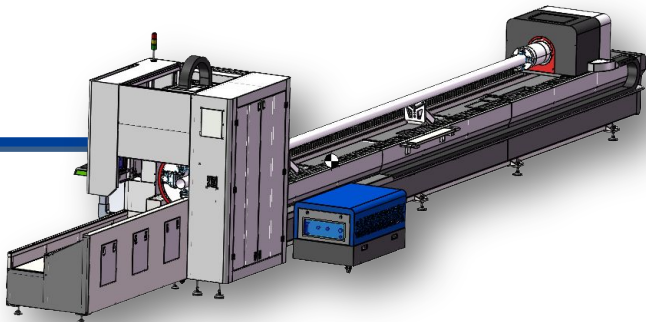
Applied in U-shaped, L-shaped, I-beam, rectangular, oval and other irregular profile and tube types cutting.

◆ Auto Pneumatic Chucks

The tube cutting machine is highlighted with excellent tightness and motional characteristics, the chucks can stably clamp a variety of tube materials as square, round, oval, flat, triangular, L-shaped, I-beam

◆ Powerful and User-friendly Nesting software

Professional tube cutting software and matching nesting software are implemented to draw graphics or text at random or instant processing, giving handy processing, simple and easy using experience.



Machine Function

Applicable profile shape

Professional for cutting round, square, rectangle, oval and etc. pipes and tubes.

Standard / Closed



Round



Square



Rectangular



Ellipse



Oval



D-type



Triangle

Modular / Non closed



U-steel



Angle steel



T-type



H-type



Lath steel

Machine Function

Application industry



furniture



medical device



fitness equipment



display shelf



Automobile industry



farm machinery



Fire pipe



Steel frame structure



oil exploration



bridge



boating



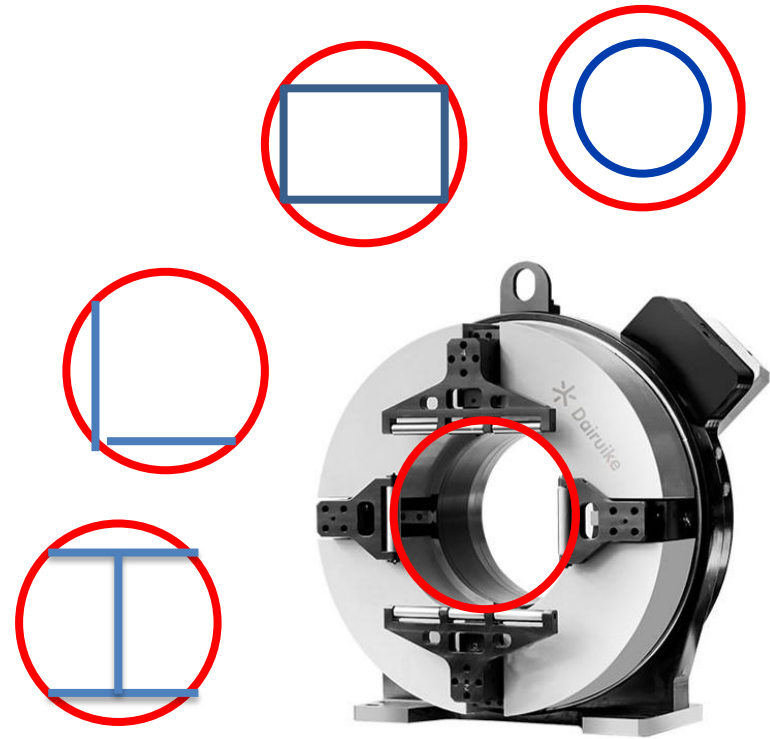
structure parts

Machine Function

Tubes Dimension - D360

| Shape | Max | Min |
|----------|---------|-----------|
| Circular | 10mm | D360mm |
| Square | 10x10mm | 254x254mm |
| H-shaped | 40x40mm | 254x254mm |
| L-shaped | 20x20mm | 254x254mm |
| Other | 20x20mm | 254x254mm |

The diagonal of the workpiece is less than 360mm



360mm Hollow Pneumatic Heavy Chuck



Technical Data

| Model | LW-P6000 |
|-------------------------------|-------------------|
| Round tube diameter | Φ20-Φ360mm |
| Square tube diameter | 20*20mm-254*254mm |
| Chuck rotating speed | 90r/min |
| Max moving speed | 60m/min |
| Max Accelerate | 0.6G |
| Optional Laser Source | RAYCUS/IPG |
| Laser Power | 1KW-6KW |
| Positioning Accuracy | ±0.05mm/m |
| Repositioning Accuracy | ±0.03mm/m |
| Max Tube Length | 6m |
| Machine Weight | 7000kg |

Machine parts list

| No | Item | Brand | Note |
|--|------------------------|-----------------|--------------|
| 1 | Machine cutting table | 6m tube machine | China |
| 2 | laser power | Raycus/IPG | China |
| 3 | Laser head | Boci Auto-focus | China |
| 4 | Chiller | TONGFEI/Hans' | China |
| 5 | CNC controller | FSCUT5000s | China |
| 6 | Auto height controller | BCS100 | China |
| 7 | Gear rack | YYC | China Taiwan |
| 8 | Rail guide | HIWIN | China Taiwan |
| 9 | X/Y axis Servo | YASKAWA | Japan |
| 10 | Planetary Gearbox | Motovario | Italy |
| 11 | Proportional valve | SMC | Japan |
| 12 | Pressure valve | SMC | Japan |
| 13 | Relay | Schneider | France |
| Auto rail lubrication system / with Voltage stabilizer | | | |

Machine table

We designed strong structure for it

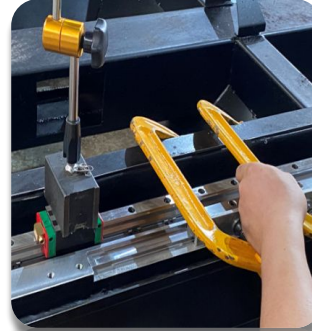
- Machine body is essential as the skeleton of human being, weld multiple tubes structure.
- The equipment is under ultra-high acceleration and speed conditions, The overall mechanical structure keeps deformation and vibration low, Maintain extremely high accuracy

Note: Resonance produced during high speed running is describe as 'killer' of the machine bed, for the structure of our laser bed, it is able to disperse and distribute steels and impact smoothly and evenly, and it keeps bed stable and avoid of resonance.



Product Introduction

Machining and installation of mechanical parts



- Datum Plane milling is vital for installation & running accuracy of motion parts, Lonwill adopt large gantry milling machine, error under 0.01mm/m, which comply with international standard ensuring parallelism and perpendicularity.

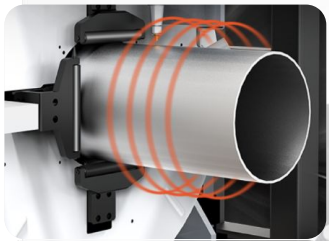
Product Introduction

Machine tool accuracy test



- In strict accordance with the mechanical installation standards and requirements, ensure that each part is installed within the design scope, and ensure the high accuracy of the whole machine after assembly.

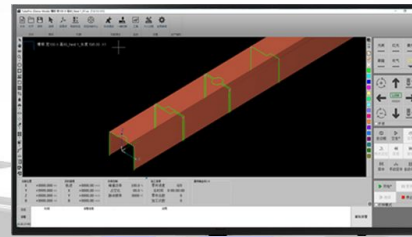
Product Introduction



Rear Chuck



Front Chuck



FSCUT Controller



Boci Laser Head



IPG Laser Source



Yaskawa Servo Motor



HIWIN Guide



YYC Guide Rail



- **CNC clamping system**

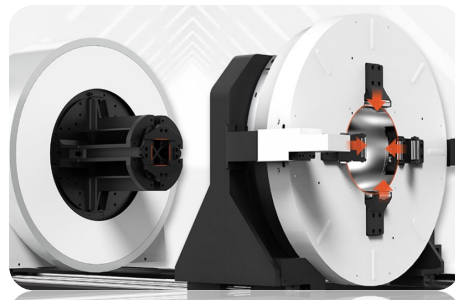
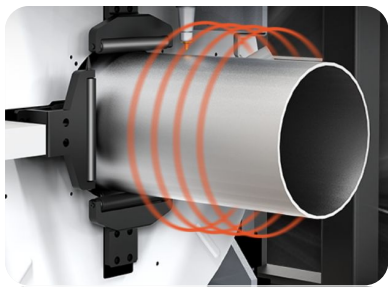
High-precision position control and torque control
CNC Self-centering chuck, position monitoring in torque control mode, thick tube does not loosen; position control mode accurately opens and closes, The stroke is short and the efficiency is high, and the thin tube does not deform.

- **Contour recognition**

Photoelectric detection contour recognition, non-inductive detection makes cutting more efficient, Obtain the contour and position of the pipe more accurately and stably.

- **Resume cutting after power failure**

Imported high-torque absolute encoder servo motor is used to ensure the high speed and acceleration of the whole machine at the same time With the function of continuous cutting after power failure, there is no worry about power failure, and the cutting can be resumed with one button



Full-automatic Pneumatic chuck



1

Anti-carton

Precise guide rail, slipping without jam

2

All-in-one design

Integral built-in drive, accurate and stable transmission, convenient installation from multiple angles

3

Stable clamping

Wide and narrow clamping, stable clamping suitable for a variety of profiles

4

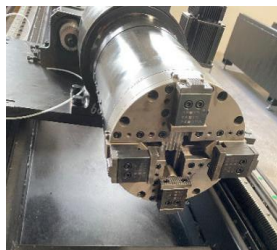
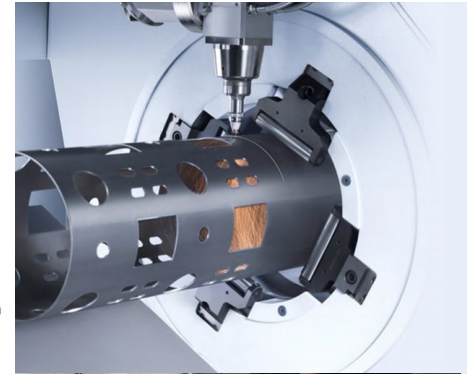
Large clamping force

Can realize heavy pipe clamping

5

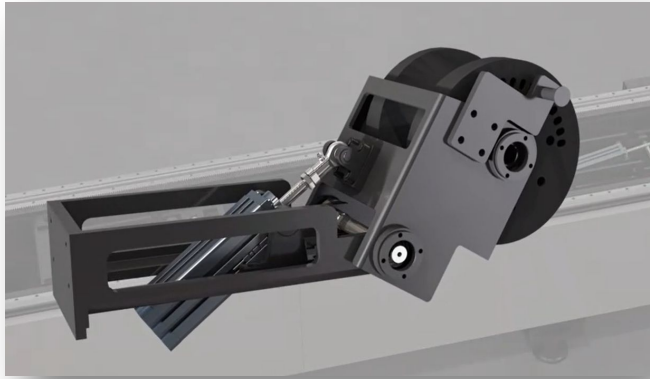
Suitable for large pipe diameter and heavy pipe

The jaws are equipped with wide and narrow double rollers as standard, supporting large-size I-beam clamping



- ◆ One-button clamping, auto centering, saving waiting time for loading and unloading;
- ◆ Pneumatic claws with large and constant clamping force, heavy tube is clamped tightly without slip, cutting accuracy guaranteed;
- ◆ Special support frame prevents tube from sagging and deforming, improving cutting accuracy and prolonging service life of chuck.

Automatic following-up support



More Stable and Scratch-resistant

It has tube follow-up support and righting device. It supports avoids tube sagging. Follow-up support will lift or fall along with tube rotation to prevent surface friction or scratch. And helps to protect tubes from deflection avoid any collision between tube and chuck while loading.



Edge-seeking, center-finding

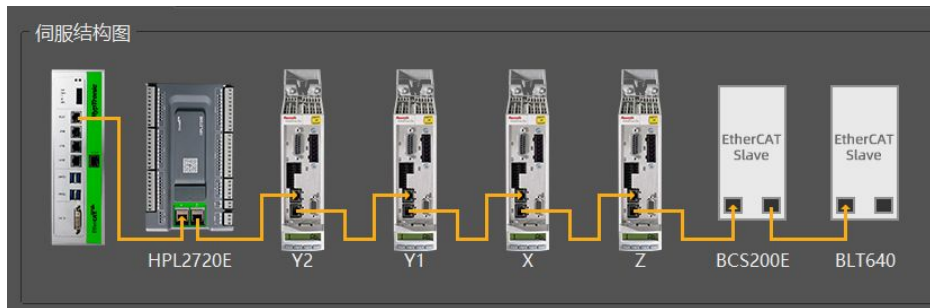
New function of edge-seeking, center-finding. Optimized edge-finding method and algorithm, higher cutting precision and stability



Product Introduction

Professional tube cutting CNC Controller

Specially developed for tube cutting controller. Tube deviation detection, automatic correction, cutting accuracy guaranteed; Co-edge cutting, reduce oddments, save production costs; Corner cutting technique without over-burnt, high quality of section.



BECKHOFF

EtherCAT®

Use the same EtherCat bus technology as BECKHOFF

- *Less wiring
- *Faster
- *Digitization
- *Intelligence



Laser Main Part

BLT4 Series

Tube cutting



BLT421T

BLT441T

Plane/Slant



BLT421

BLT441

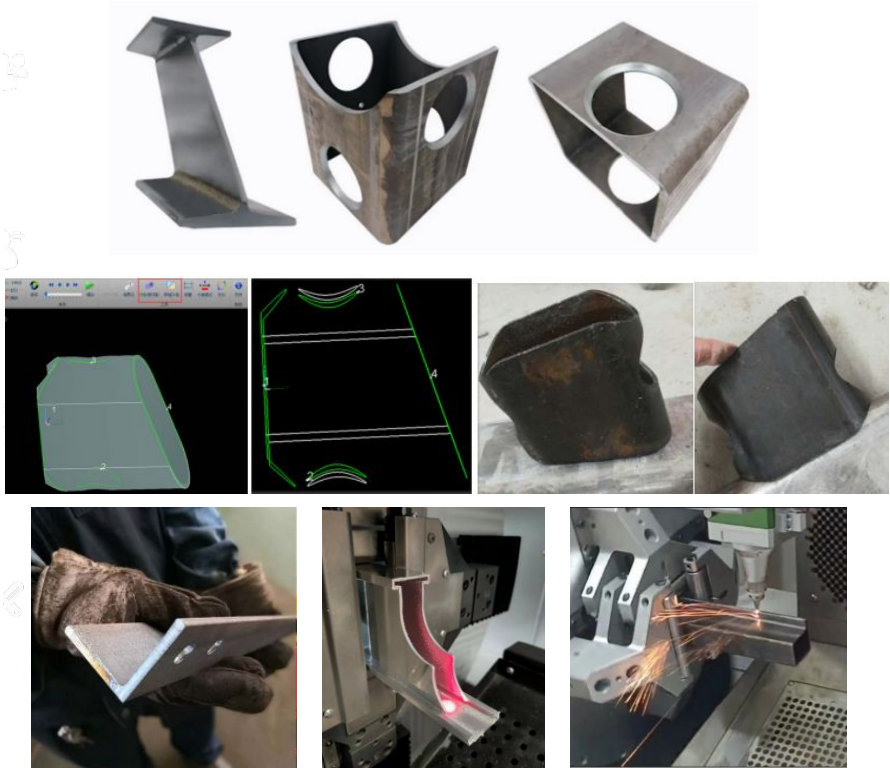
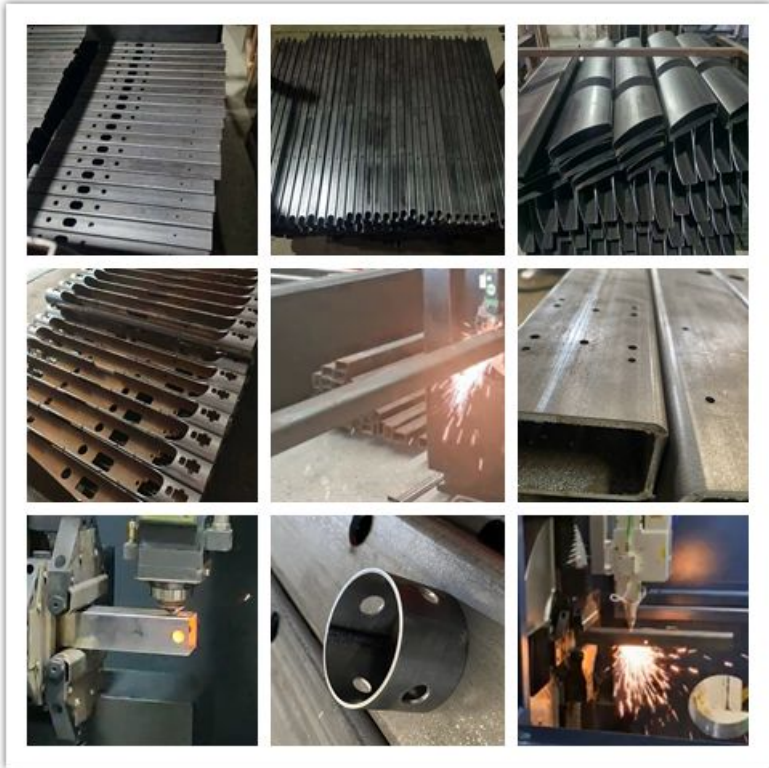
BLT461

BLT481

BLT4 Series Cutting Head Functionalities

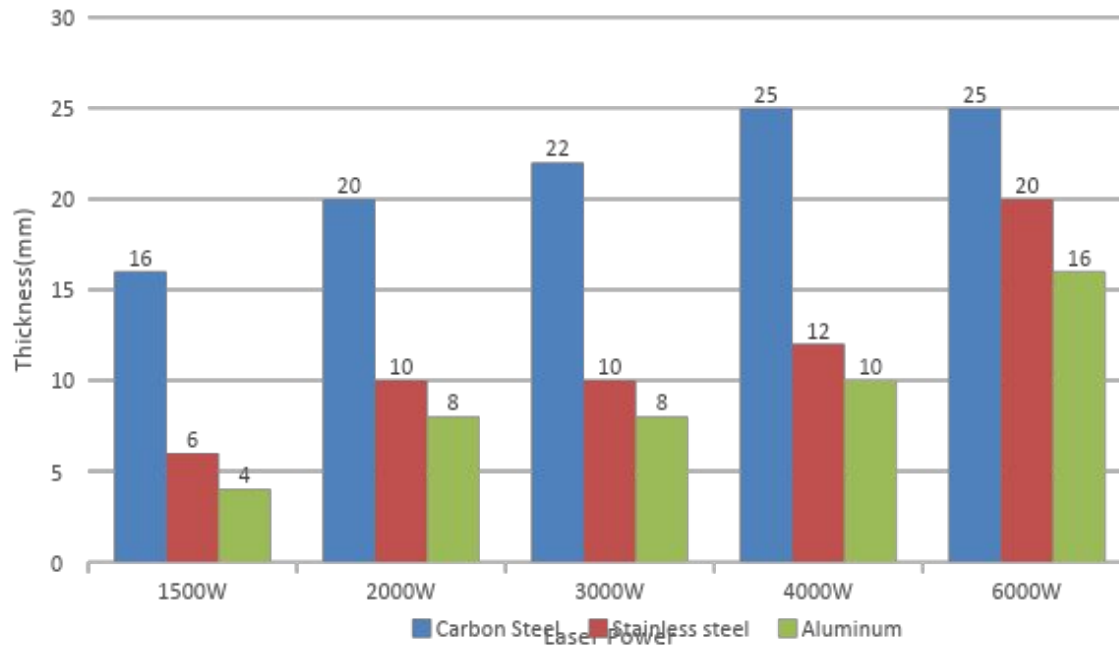
| Model | Plane/Slant | | | | Tube Cutting | |
|--|-------------|--------|--------|--------|--------------|---------|
| | BLT421 | BLT441 | BLT461 | BLT481 | BLT421T | BLT441T |
| Power | ≤8kw | ≤15kw | ≤20kw | ≤30kw | ≤8kw | ≤15kw |
| Closed-loop monitoring | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Collimation and focusing | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Built-in amplifier | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Nozzle cooling | ✓ | ✓ | ✓ | ✓ | | |
| Amplifier water cooling | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Protective lens temperature monitoring | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cutting- gas pressure monitoring | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Anti-collision protection | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pan-seal failure detection | | ✓ | ✓ | ✓ | | ✓ |

Cutting Samples Photos



Product Introduction

1-6kW Cutting Capacity



Packing and Shipping



After-Sale Service



Warranty period: From the acceptance qualified date, the warranty period will be one year, During warranty, free repair or parts replacement (except consumable parts.)



After the warranty, we will also provide favorable service of long term technical supports and spare parts. Furthermore, we promise to keep parts inventory for each part of machine. And onsite and offsite service is always available upon your request.



During or after warranty, we are always ready to help, your satisfaction is always our priority.



24 hours online service. We have our online services team in two shifts in order customer in different time zone.



Onsite service. Always ready upon your request with reasonable price.



Training in our factory. You are always welcomed to get training in our factory.

Onsite Project (Newest)

