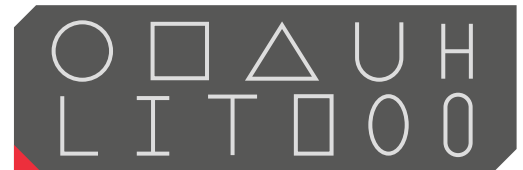


3- CHUCK FIBER LASER TUBE CUTTING MACHINE With Automatic Tube Loading



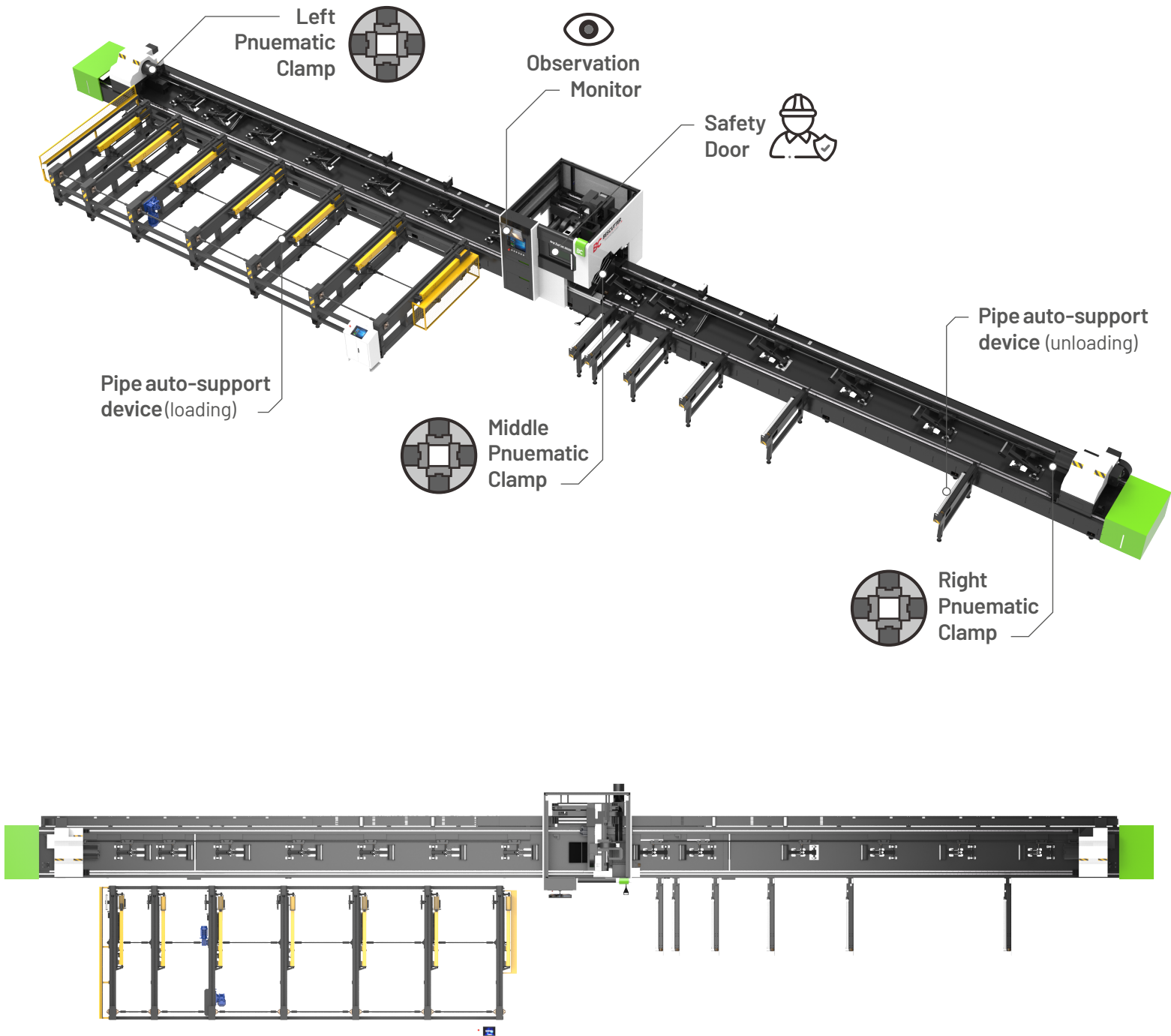
Our **HYTUBE HEAVY** is designed for long-sized tube/section bar automatic laser cutting.

Suitable for special tubes and structural steel section: **T/H/I/L sections, Round, Square, Triangle, Retangular, Oval, Channel and L Shape.** This machine is equipped with auto-loading device and special designed precise pneumatic clamps.



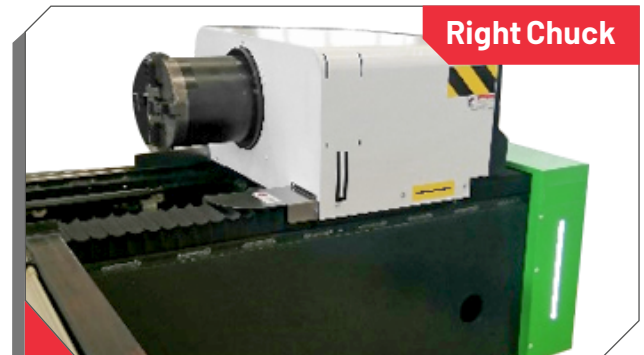
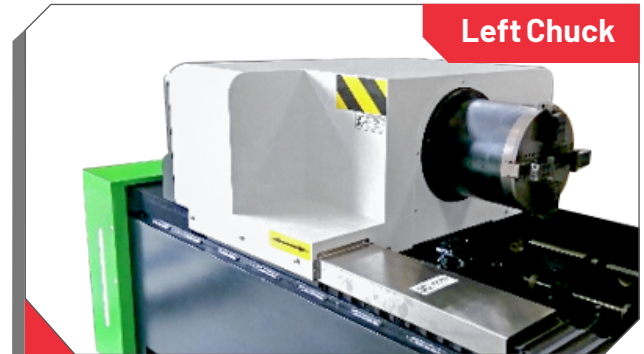
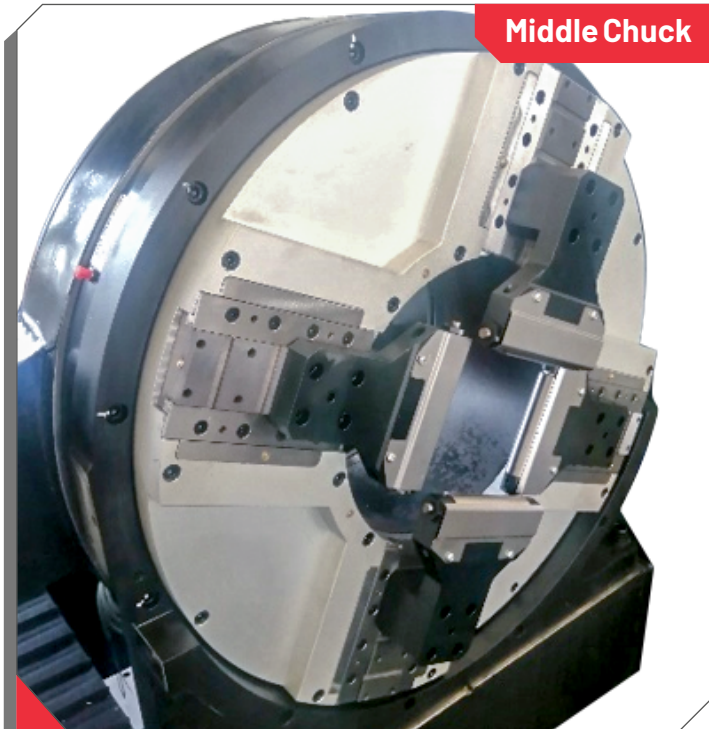
▶ Features

- 0 waste tube cutting
- 1 whole tube process
- 2 cutting stations
- 3 chucks
- 4 following support points
- 29.5' tube support or tailored
- Automatic unloading



▶ 3 Chucks introduction System

Servo controlled chucks, Pneumatic clamps, Germany precise reducer and YASKAWA EtherCAT control servo system

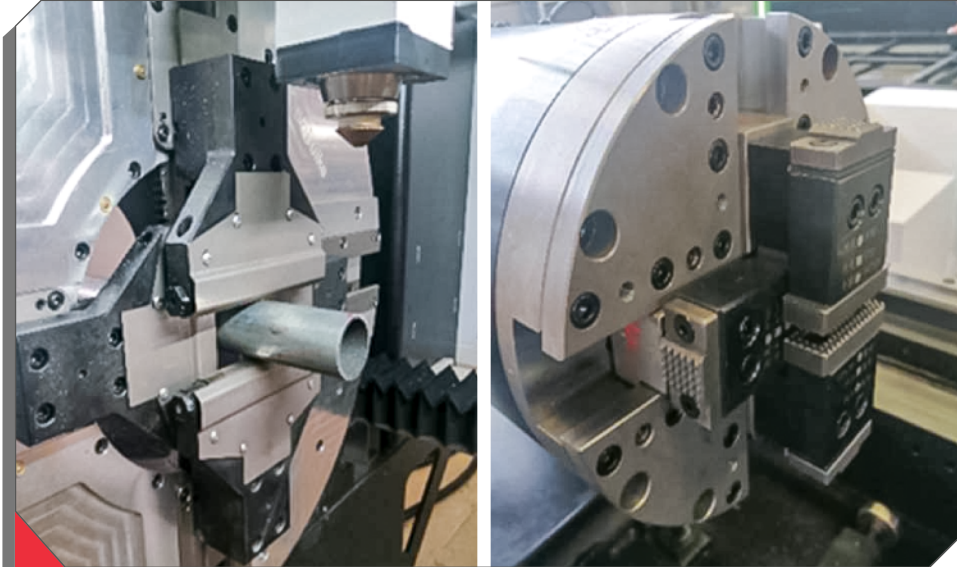


▶ HyTube Heavy - Control System FSCUT5000

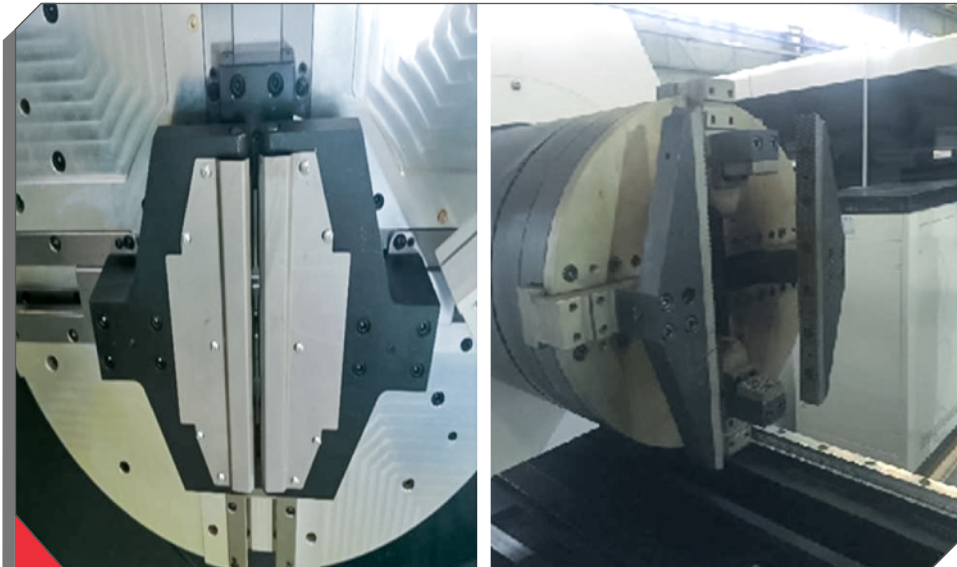
- Real-time tube deviation compensation for tube center.
- Support structural steel cutting: C/I channel steel also support independent corner cutting application.
- Autoloading & unloading available and cycling production.
- Support auto-feeding function.
- Open-loop control system with 5th motion control algorithm.
- Support maximum 0.02mm cutting path accuracy.
- The encoder supports real-time feedback.
- Easier to capture machine motion parameter.
- Support multiple layers cutting.

► Chuck & Clamping Jigs-1

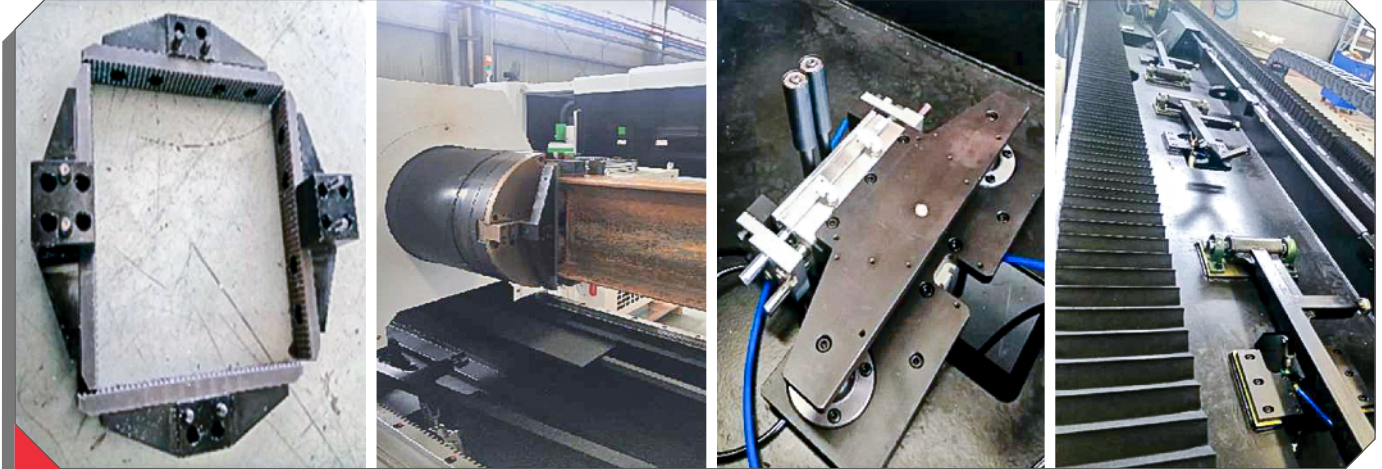
Clamps for **Square Tube & Round Pipe**



Clamps for **Angle Steels & Channel Steels**



▶ Chuck & Clamping Jigs-2



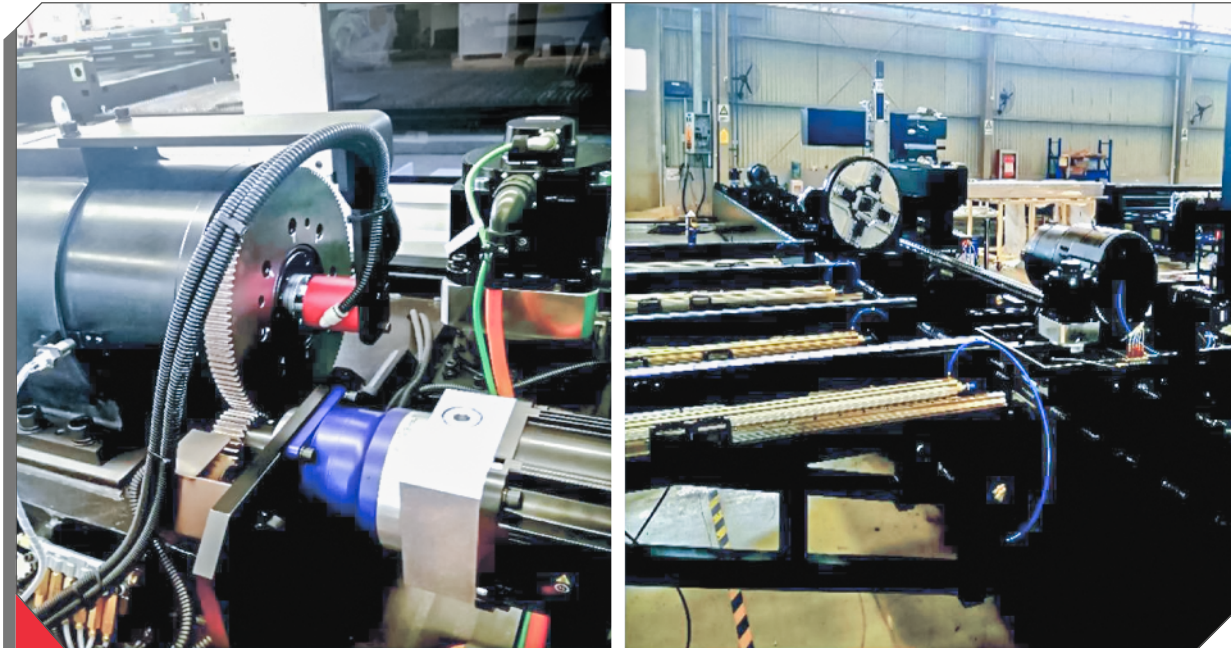
Jig for **Profiled Tube**

Jig for **I-Steel**

Tube auto-center device

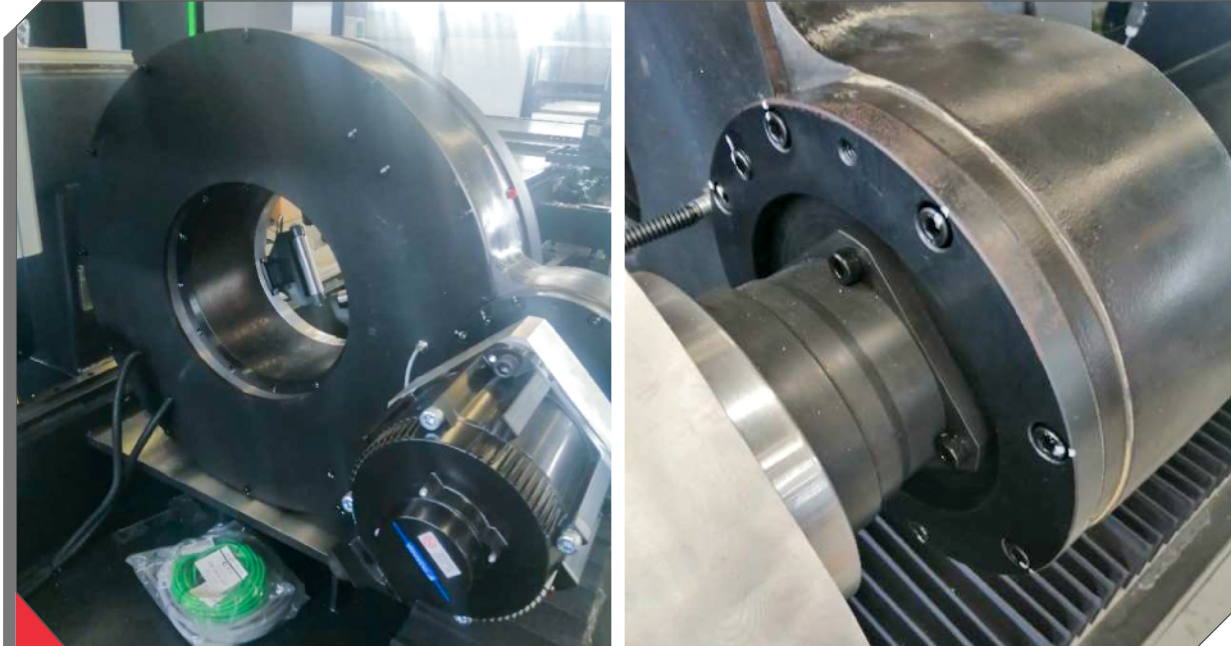
Following-support device

▶ Chuck & Clamping Jigs-3



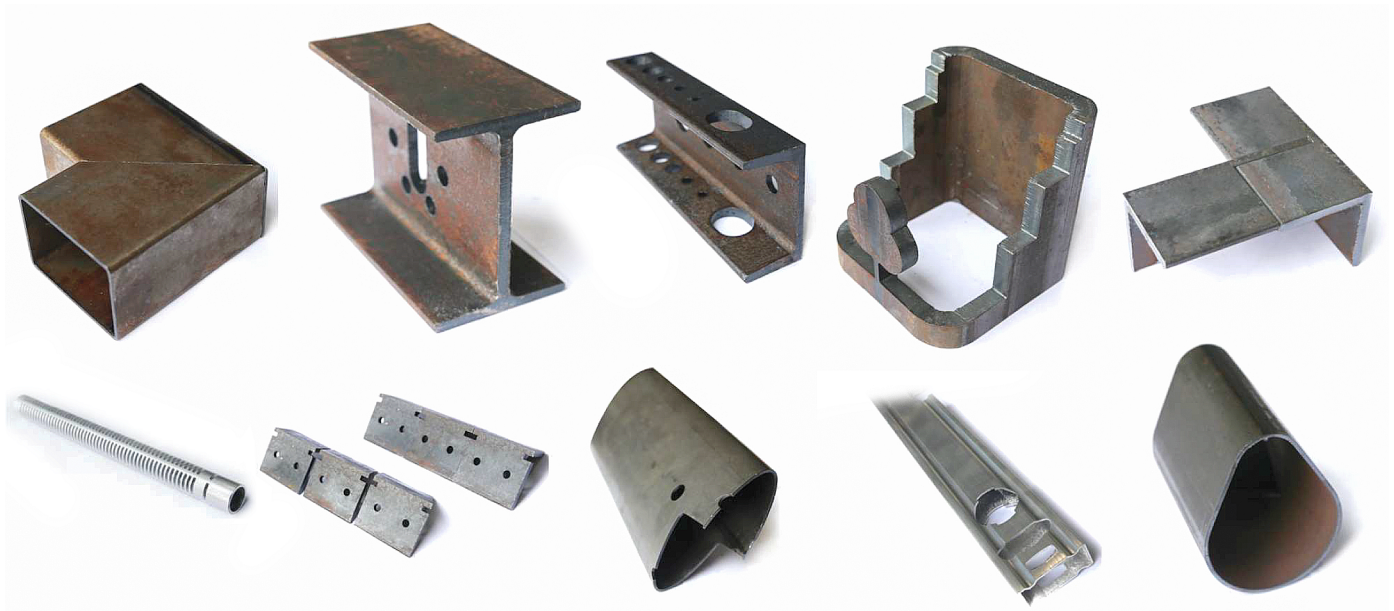
Left & Right chuck

▶ Chuck & Clamping Jigs-4



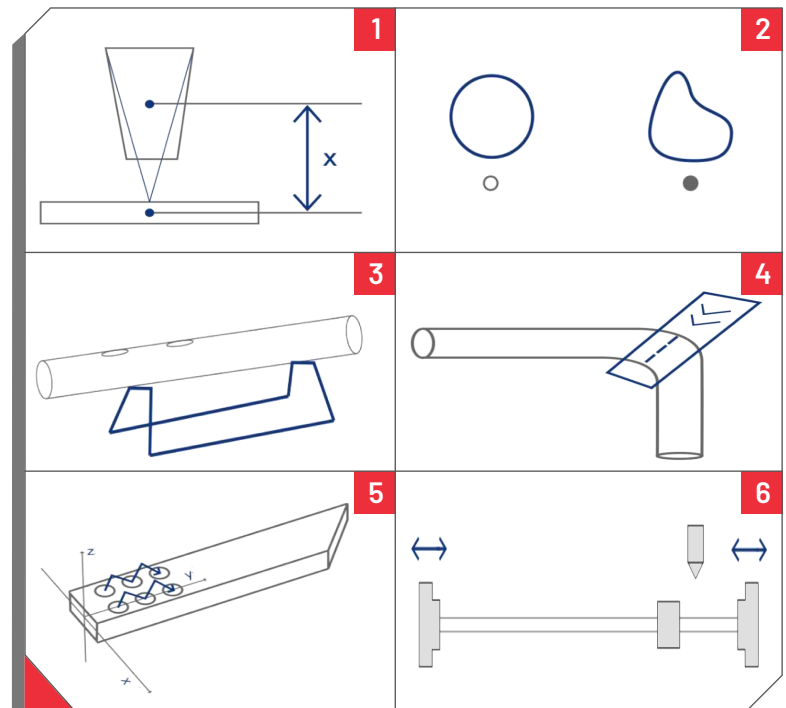
Middle chuck

▶ Sample Photos



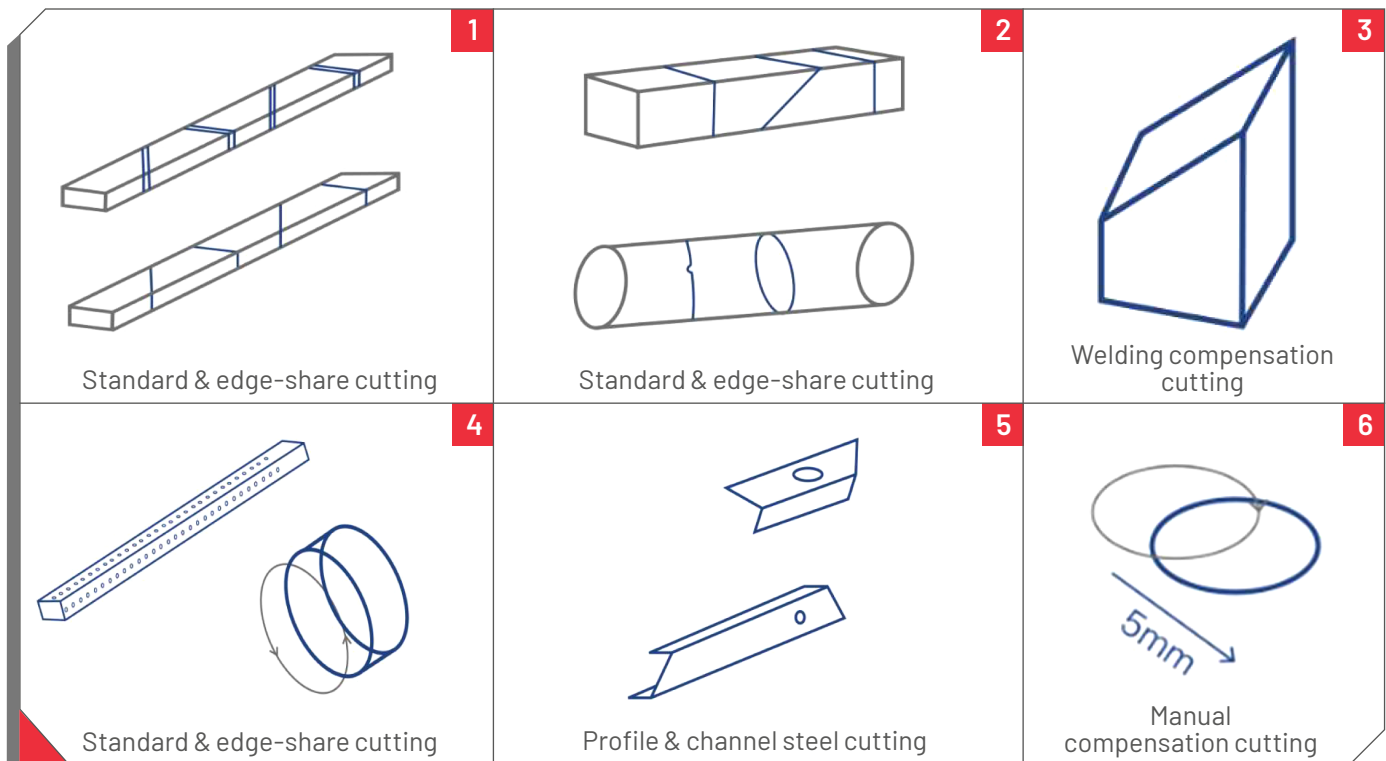
► **TubePro**
3D Tube Cutting Software

1. Focus on tube axis automatically.
2. Optional for workpiece and up & down mode.
3. Support automatic tube up & down support function.
4. Excellent corner cutting parameter control.
5. Optimized Z-axis up lifting height, fast leapfrog function.
6. Support 3-chuck rotation control.



► **Tube T software function:**

Professional programming nesting software, highly compatible with cutting software, unique functions in piercing, sharp corner processing, etc



HYTUBE HEAVY INTELLIGENT FIBER LASER CUTTER

Tube range (length)	29.5' (9,000 mm)
Tube diameter	Square Tube Side: 0.78" - 8.86" (20- 225 mm) Round Tube Dia: 0.59"- 12.2" (15- 310 mm)
X-axis	29.5' (9,000 mm)
Y-axis	8.86" (225 mm)
Auto-loading tube length	157"-354" (4,000-9,000mm) Tube Length Detection
Un-loading tube length	0- 236" (0-6,000mm)
CNC system	FSCUT5000
X, Y-axis positioning accuracy	±0.05 mm/1000 mm
X, Y-axis re-positioning accuracy	±0.03 mm
A, B-axis Positioning accuracy	± 30"
A, B-axis Re-positioning accuracy	± 10"
X, Y-axis max positioning speed	100 m/min
Max positioning speed	60 rpm
Laser resonator	IPG 2KW (Germany Brand)
Optional laser wattage	IPG 2KW / 3KW / 4KW / 6KW
Laser head	PRECITEC (Germany Brand)
Machine weight	28,660 lbs (13,000 kg)
Dimensions (L x W x H) auto-loading Not included	984" x 169" x 110" (25,000 x 4,300 x 2,800 mm)
Dimensions (L x W x H) auto-loading included	984" x 248" x 110" (25,000 x 6,300 x 2,800 mm)

HYTUBE HEAVY MACHINE CONFIGURATION

MACHINE BODY	
Driving System & Servo Motor	YASKAWA (Japan)
High Precision Gear & Reducer	Alpha (Germany)
High Precision Rack	Gambini (Italy)
High Precision Linear Guide Rail	Rexroth (Germany)
Control System	FSCUT
Laser Source	IPG
Laser Cutting Head	Raytools
Nesting Software	TubePro
GAS CIRCUIT COMPONENTS	
Cylinder	SMC/Airtac
Throttle Valve, Check Valve, Solenoid Valve	FESTO (Germany), NORGREN (U.K.), SMC (Japan)
Oil Water Separator, Filter, Gas Pipe Joint	FESTO (Germany), NORGREN (U.K.), SMC (Japan)
High Pressure Servo-control Valve	Lanny (Italy)
ELECTRICAL COMPONENTS	
Contactors, Air Switch	Schneider (France)
Connection Terminal	Weidmuller (Germany)
Photoelectric Switch	SICK (Germany)
Frequency Converter	OMRON (Japan)

HYTUBE HEAVY AUXILIARY LIST:

STANDARD AUXILIARY:	
Water Chiller	1 unit
Exhaust Fan Blower	1 unit
Transformer	1 unit
Stabilizer	1 unit
OPTIONAL ITEMS:	
Refrigerant Dryer and Filter	1 unit
Air Compressor	1 unit
Air Pressure Reducing Valve	4 units

- Customer arrange the pipe from gas source to the machine (O2/N2/Air).
- Customer arrange pipe for air compressor, refrigerant dryer and filter to machine.
- Pipes should be no oxidation or absolute clean cooper pipe

After the machine is delivered, BESCUTTER will arrange technicians to conduct several days training for the machine operators. The training contents are as follow.

► Safety Training

- Learn the safety knowledge of fiber laser, and pay attention to safety protection measures.
- Master the necessary safety skills in the operation.

► Operation Training

- Properly independently turn on/off the Machine.
- Identify and determine the system information and troubleshooting.
- Learn the functions of different parts of fiber laser cutting Machine: such as CNC control, load and unload the material, precautions of fiber laser use, the operation manual, independent operation, etc.
- Master using the original basic parameters to cut the parts with oxygen or nitrogen.
- According to the condition of the cutting material, optimize the cutting parameters, replace the cutting nozzle.

► Software Training

"The user is required to have the basic knowledge of the programming design"

- After training, the operator can install and use programming software independently.
- A single part drawing can be prepared; Input the part drawing; Make the part cutting plan and production plan.
- Able to input the cutting plan into the Machine; Calculate the cutting time;
- Make the production report.
- Master the data management.

► Maintenance

- Check the Machine independently and complete the basic maintenance according to the maintenance requirement.
- Through training, the user can learn the basic safety procedures for maintenance.

