

FIBER LASER METAL SHEET CUTTER

Full Enclosure with
Parallel Shuttle Table

Our **FLY SPEED** model includes:

Machine main body, gantry, direct drive system, Z-axis, laser cutting head, shuttle table, laser source, control system, software and water chilling system etc.

▶ Machine Body

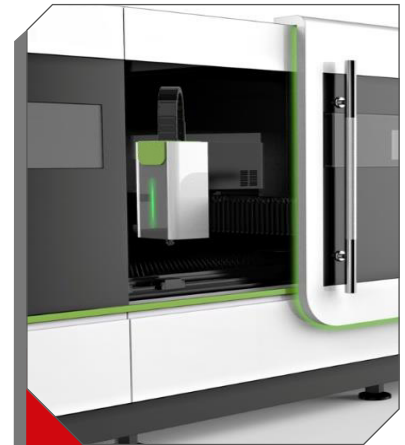
High-rigidity welded body, compact design and stable performance.

▶ Gantry

Special molding technique made aviation aluminum gantry: light weight, strong rigidity, high precision, fast response and stable running.

▶ Z-Axis System

Integral molding die-cast aviation aluminum Z-axis is equipped with high precision ball screw system, to achieve good rigidity, fast response and high precision.



Transmission System ◀

Synchronous drive system on both side of cutting gantry, equipped with high torque servo drive system and perfect laser welded gear system. Ensure the powerful driving, high accuracy cutting and excellent dynamic response.

► Raytools Laser Cutting Head (1,500W – 4,000W)

Adopts Switzerland Raytools auto-focusing laser cutting head, stable performance, easy operation, it enjoys the following features:

- Optimized optical configuration and smooth and efficient airflow design.
- Auto focus ranges +10~-15mm, accuracy is 0.05mm.
- Maximum acceleration of focus lens drive is 10m/s², maximum speed is 10m/min.
- Protective lens is added on the collimation lens, which can prevent the collimation lens to be hurt or damaged because of the falling dust.
- Drawer-type of lens mount, quick and easy access to every cover glass.
- Nozzle is added air-cooled design to protect nozzle and ceramic from damage by high temperature effectively.
- With crash protection which can prevent the laser head to be hurt by collision.
- With the optical interfaces of QBH, QD, etc., can be adapted with a variety of fiber lasers.

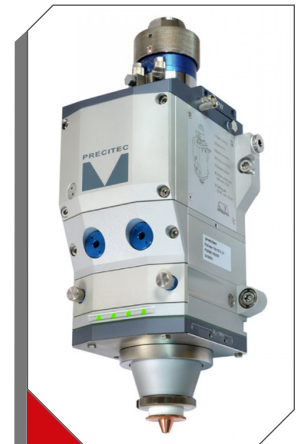


► PRECITEC Laser Cutting Head (6,000W)

The **PRECITEC Pro-Cutter** offers a fully integrated sensor system that monitors the cutting process and provides the user with relevant information. The head ensures a processing with up to 15 kW and that each component can be reproducibly manufactured at a high standard of quality.

The **Pro-Cutter** offers a complete solution for the laser-based fusion cutting of thin and medium material thicknesses in the wavelength range around 1µm. In flame cutting, greater material thicknesses can also be processed while maintaining high standards of quality.

- Motorized focus position adjustment for automatic machine setup and piercing work.
- Lightweight and slim design created for fast acceleration and cutting speed.
- Drift-free, fast-reacting distance measurement.
- Permanent protective window monitoring.
- Straight and angled design versions adapted to the machine concept.
- Completely dustproof beam path with protective windows.
- LED operating status display.
- Display of operating parameters via Bluetooth® and interface for machine control.
- Pressure monitoring in the nozzle area (gas cutting) and in the head.



► Auto Exchanging Shuttle Tables

With parallel auto exchanging shuttle table system ensures synchronous running, good efficiency, and reliability.



► Laser Source

This model equips with IPG advanced fiber laser source, IPG laser source enjoy the following advantages:

- It has a super compact design with the laser housed in a hermetically sealed cabinet
- Maintenance-free Operation
- A dehumidifier is installed within the cabinet to ensure optimal internal humidity
- Industry-leading wall-plug efficiency our lasers are known for has reached over 40%
- The electrical cost savings add up to many tens of thousands of dollars over lifetime of a laser
- Record reliability and maintenance-free operation
- Hot redundancy ensures 100% up time with no change in power
- Compact Rugged Design



► CypCut Control system

- FSCUT2000C System
- BMC1604V2
- Remote control panel
- Windows 7 - 32bits
- 17" touch screen
- USB, Network and DVI interface, etc.

FLY SPEED TECHNICAL PARAMETERS

Standard working area	10' x 5' (3,050 mm x 1,550 mm)
Optional working area	13' x 6.5' (4,000 x 2,000 mm) / 20' x 6.5' (6100 x 2000 mm) 26' x 6.5' (8000 x 2000mm)
Optional Laser Wattage	1500W / 2000W / 3000W / 4000W / 6000W
X, Y, Z axis distance	61" (3,050 mm) / 120" (1,550 mm) / 3.93" (100 mm)
X, Y Two-axis coordinated positioning speed (MAX)	140 m/min
Positioning acceleration (MAX)	1.5 G
Positioning accuracy	±0.05 mm/m
Re-positioning accuracy	±0.02 mm
Maximum load weight	1,543 lbs
Laser resonator	IPG (German Brand)
Laser head	Raytools (Precitec optional)
Controlling System	CypCut (Beckhoff optional)
X-Y-Z Servo Motors	X (2×2,900) – Y (1×850W) – Z (1×750W)
Machine Weight	20,945 lbs. (9,500 kg)
Dimensions	350" x 118" x 83" (8,900 x 3,000 x 2,100 mm)

► Nesting Software (optional)

Adopts CutLeader laser cutting auto-nesting software, with Chinese-English version, easy operation. Software enjoy the below functions:

- Text & image processing ability
- Share-edge cutting
- Auto-nesting
- Shape corner cutting without melting issue
- Multiple cutting applications
- Automatic report generation

High Pressure Servo-control Valve ◀ (optional)

Programmable cutting gas control thanks to servo-control valve, it can switch the type of cutting gas automatically, and accurate control the gas pressure without user intervention, user friendly and reduce gas consumption

Dust Collection System (optional) ◀

The Machine body adopts zoning control design, equips with high power filtration system, to sure no metallic dust in the filtered gas, and could meet indoor emission standard.

FLY SPEED MACHINE CONFIGURATION	
MACHINE BODY	
Driving System & Servo Motor	YASKAWA (Japan)
High Precision Gear & Reducer	Gudel (Germany)
High Precision Rack	Gambini (Italy)
High Precision Linear Guide Rail	Rexroth (Germany)
Control System	CypCut (Beckhoff optional)
Laser Source	IPG
Laser Cutting Head	Raytools
Nesting Software	Embedded in the software
GAS CIRCUIT COMPONENTS	
Cylinder	SMC/Airtac
Throttle Valve, Check Valve, Solenoid Valve	AIGNEP (Italy), SMC (Japan)
Oil Water Separator, Filter, Gas Pipe Joint	AIGNEP (Italy), SMC (Japan)
ELECTRICAL COMPONENTS	
Contactors, Air Switch	Schneider (France)
Connection Terminal	Weidmuller (Germany)
Photoelectric Switch	Mitsubishi (Japan)
Frequency Converter	Mitsubishi (Japan)

FLY SPEED 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 arranges the pipe from gas source to the machine (O2/N2/Air).
- Customer arranges 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.

▶ 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.

▶ 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.

▶ 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.

