

FlyPro 3015/6000W

Laser cutting Machine/With pipe cutting



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1. Technical specifications

1.1 Product Information

Model: FlyPro3015 Laser Cutting Machine

Laser power: 6000W

Working area: 3000 x 1500mm

Made in SUZHOU, CHINA

1.2 Product Introduction

FLY3015 includes of Machine main body, gantry, direct drive system, Z-axis, laser cutting head, shuttle table, laser source, control system, software and water chilling system etc.

1.2.1 Machine body

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

1.2.2 Gantry

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

1.2.3 Transmission system

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



1.2.4 Z-axis system

Integral molding die-cast aviation aluminum Z-axis, equips with high precision ball screw system, to enjoy good rigid, fast response and high precision.

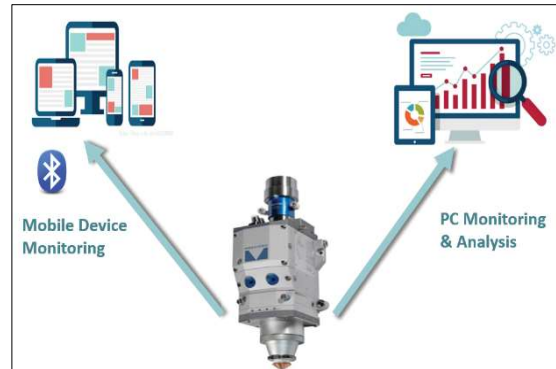


1.2.5 Laser cutting head

The PRECITEC ProCutter 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 productively manufactured at a high standard of quality. The ProCutter offers a complete solution for the laser-based fusion cutting of thin and medium material thicknesses in the

wavelength range around 1 μ m. 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 dust-proof 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



1.2.6 Auto exchanging shuttle tables

Parallel auto exchanging shuttle table system, ensure synchronous running, good efficiency, reliable and stable.

1.2.7 Tube cutting rotary device

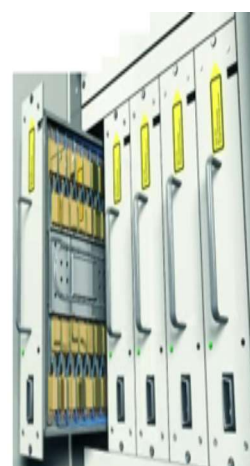
The Fly-Pro model equips with tube cutting device, support basic round and square tube cutting.



1.2.8 Laser source

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

- Output Power up to 6kW at Workpiece, designed for high performance in harsh cutting environments
- 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;
- Wide variety of fiber delivery options (50, 100, 150 or 200 μm) core diameter;
- record reliability and maintenance-free operation;
- Hot redundancy ensures 100% up time with no change in power;
- Compact Rugged Design



IPG Specification	YLS-6000K
Laser mode	CW,QCW
Wavelength	1070-1080nm
Standard output laser power	6000W
Laser beam quality	$\leq 4\text{mm} \cdot \text{mrad}$
Modulation speed	5kHz
Delivery fiber core diameter	$\geq 50\mu\text{m}$
Output stability	$\pm 2\%$
Power supply	400-460V/3P+PE@50-60Hz

1.2.9 Control system

Control system	CypCut
FSCUT2000C System	CypCut
BMC1604V2	
Remote control panel	
Winows 7 (32bits)	
17" touch screen	
USB, network and DVI interface etc.	

1.3 Technical parameter

Items	Specification
Model	FlyPro3015
Working area	3050x1550mm
Metal sheet size	3000x1500mm
X-axis distance	3050 mm
X 1-axis distance	1500mm
Y-axis distance	1550 mm
A,B axis-distance	Infinite rotation
Tube diameter	20~220mm (Standard); 20~320mm (Optional)
Z-axis distance	300 mm
X,Y single axis positioning speed(MAX)	100 m/min
X,Y Two-axis coordinated positioning speed (MAX)	140 m/min
X1 single axis positioning speed (MAX)	80 m/min
A axis positioning speed (MAX)	100rpm
Positioning acceleration (MAX)	1.4 G
Positioning accuracy [1]	±0.05 mm/m
A,B axis Positioning accuracy	±30"
Repositioning accuracy [1]	±0.03 mm/m

A,B axis Repositioning accuracy	±10"
Maximum load weight (for sheet)	700 kg
Maximum load weight (for pipe)	100 Kg (auto-loading) 200 Kg (Manual-loading)
Machine body weight	Approximately 7000 kg
Pipe rotation weight	Approximately 1000 kg
Exchanging shuttle tables & auxiliary weight	Approximately 2500 kg
Machine dimension	No pipe cutting 8900x3000x2050mm With pipe cutting 10900 x3600x2050 mm
[1] According to VDI/DGQ 3441 the measuring distance is 1000mm;	

1.4 Machine configuration

FlyPro3015 Core parts list:

No.	Core parts	Brand
1	Machine body	
1.1	Driving system & servo motor	YASKAWA(Japan)
1.2	High precision gear & reducer	Gudel(Germany)
1.3	High precision rack	Gudel(Germany)
1.4	High precision linear guide rail	Rexroth (Germany)
2	Control system	CypCut
3	Laser source	IPG
4	Laser cutting head	Precitec
5	Nesting software	Embedded in the software
6	Gas circuit components	
6.1	Cylinder	Airtac
6.2	Throttle valve, check valve, solenoid valve	AIGNEP(Italy), SMC(Japan)
6.3	Oil water separator, filter, gas pipe joint	
7	Electrical components	
7.1	Contactora, air switch	Schneider(France)
7.2	Connection terminal	Weidmuller(Germany)
7.3	Photoelectric switch	Mitsubishi (Japan)
7.4	Frequency converter	Mitsubishi (Japan)

FlyPro3015 auxiliary list:

Standard Auxiliary:

1	Water chiller	1 unit	Standard
2	Dust exhaust fan	1 unit	Standard

Customer arrange items:

1	Air compressor	1 unit	
2	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