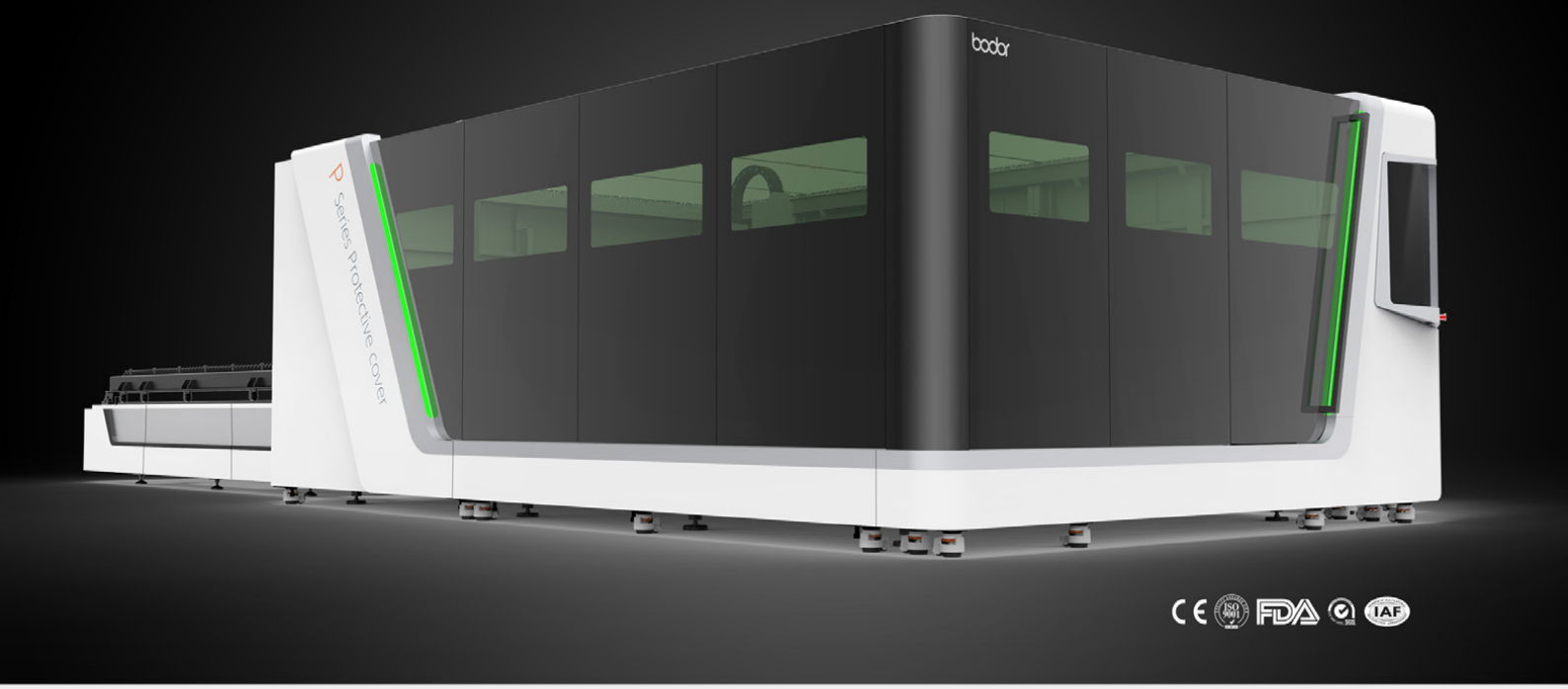
CLOSED OPERATION, MULTIPLE PROTECTION

All Cover Exchange Platform Laser Cutting Machine - P3015



All Cover Exchange Platform Laser Cutting Machine — P3015

The equipment meets the parts processing requirements of most industries, working accuracy is stable. Selecting the optimal force and supporting structure, the overall mechanical property of equipment is perfect. Adopting cutting-edge optical concept to improve cutting performance. High speed cutting, auxiliary loading and unloading and efficient production reduce labor costs. At present, laser cutting machines have been widely used in electronics, electrical, mechanical hardware, new energy lithium, packaging, solar, LED, automotive and other industries.

Product parameters

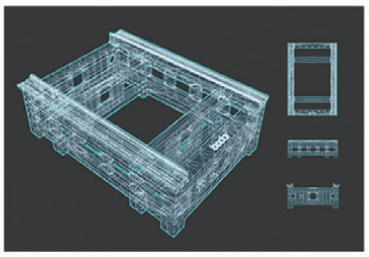
Model	P3015
Working area	3000*1500mm
laser power	4000W/3000W/2000W/1500W/1000W
Max. simultaneous positioning speed	140m/min
Max. cutting speed	35m/min
Positioning accuracy	0.03mm
Repositioning accuracy	0.02mm
Min. line width	0.1mm

A CAST IRON BED LASTS FOREVER.

No deformation in a life cycle

Material is more suitable

Technique is more suitable



Structure is more reasonable

Clone

Mold pouring, clone production; integrally formed, reject splicing

Durable

Using flake graphite cast iron, the lowest tensile strength of which is 200MPa. High carbon content, high compressive strength and high hardness. Strong shock absorption and wear resistance. Low thermal sensitivity and bed gap sensitivity reduce the loss of equipment in using, so the machine accuracy could maintain for a long time, and no deformation in a life cycle.

For more information, please go to the website : www.bodor.com

AUTO - FOCUS

Applicable to various focal lengths, which are controlled by machine tool control system. Focal point will be automatically adjusted in cutting process to achieve the best cutting effect of different thicknesses sheets metal.

Free

Free your hands. Focal length is controlled by operating system. We don't need to do manual regulation, which effectively avoids errors or faults caused by manual operation.

Fast

It can automatically adjust the most appropriate focal points in working process, greatly improving cutting speed;
When replacing different materials or different thicknesses sheet, manual focus laser head needs to adjust focal length manually, very inefficient; auto focus laser head can read system storage parameters automatically, very efficient;

Accuracy

Increasing perforation focus length, separately setting perforation focal length and cutting focal length, enhance cutting accuracy.

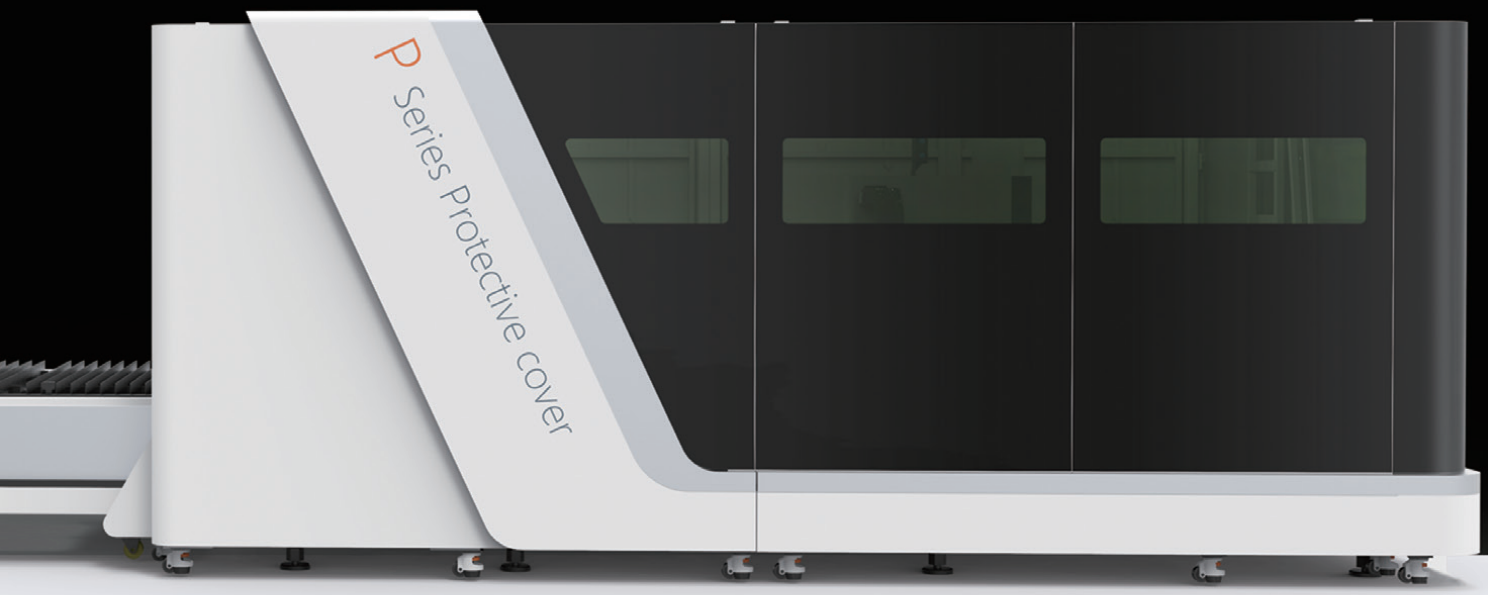
Durable

Built-in double water-cooling structures can ensure constant temperature of collimating and focusing components, avoid lenses overheating and extend service life of lenses;
Increasing collimation protective lens and focus protective lens, carefully protect key components.

For more information, please go to the website : www.bodor.com

ENVIRONMENT FRIENDLY AND HEALTHY

FULL PROTECTION COVER



All Cover Exchange Platform Laser Cutting Machine — P3015

Full closed protection improves using security; laser protection glass isolates laser radiation to human beings; automatic collection system of smokes and dusts is environment friendly; intelligent monitoring system reduces accident rate, making us enjoy beauty and health in cutting process.

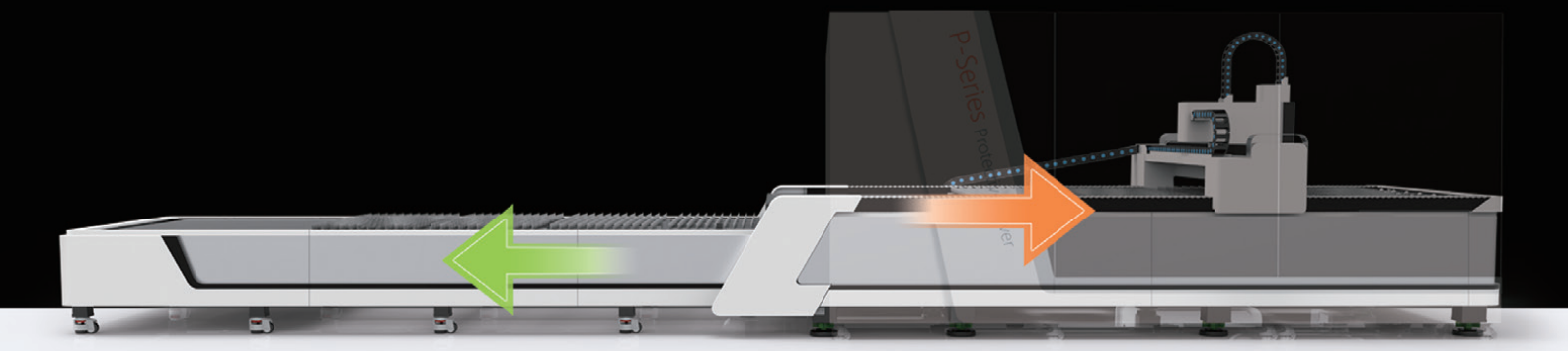
Bodor pro

BodorPro Automatic tracing-edge, dual-use for plate and tube

Using a new graphic rendering and presentation, pipe parts can realize dual display as flat and three-dimensional. Plane retouching is simple and quick, three-dimensional can synchronous display. The new automatic tracing-edge function, optimized edges searching mode and algorithm bring us higher cutting accuracy and accuracy stability. Dual-use cutting system of plate and tube can be switched freely, plate area and tube area are segmented intelligently, the security is enhanced. Making accurate position of pipe center, improve the tube cutting precision.

TIME-SAVING AND EFFORT-REDUCING

TWO AUTOMATIC EXCHANGE PLATFORMS SYSTEM



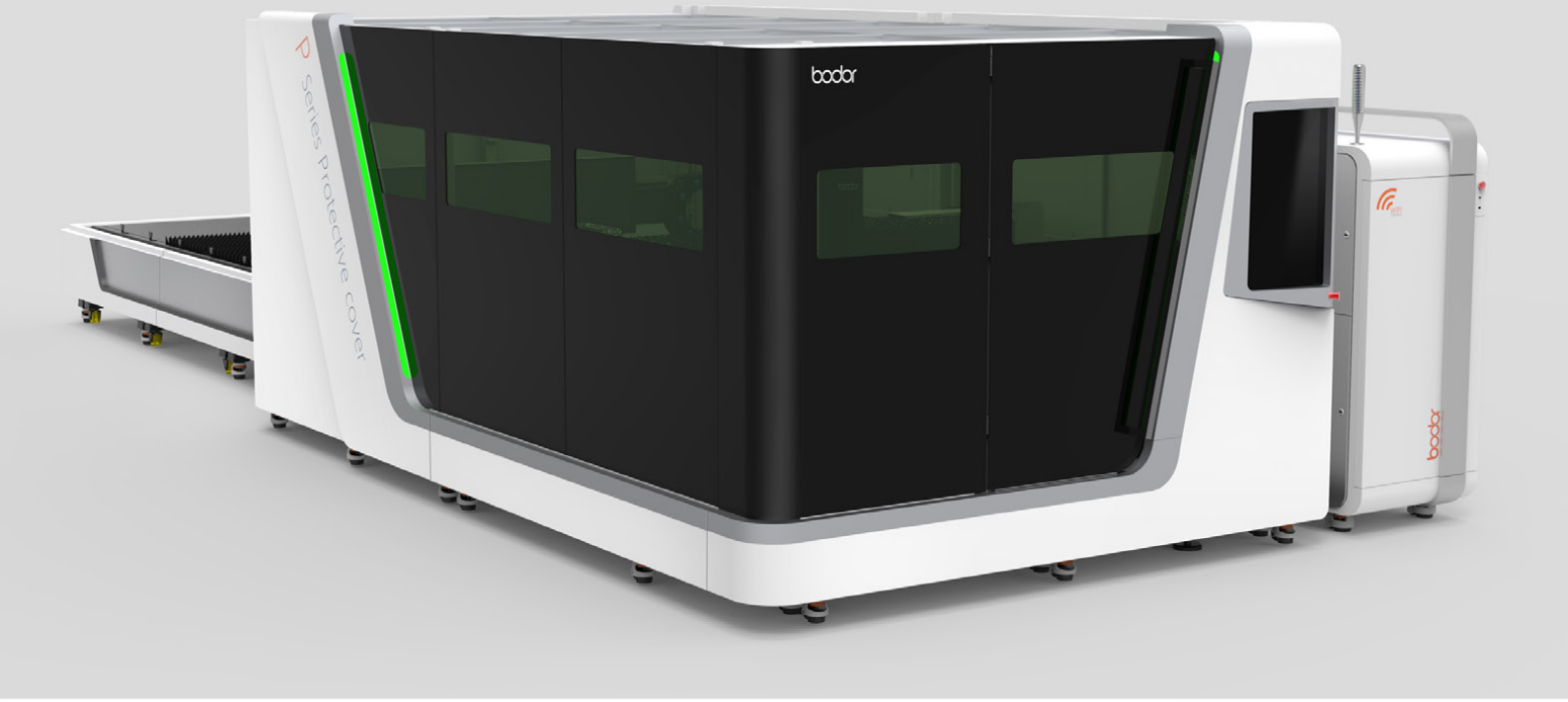
All Cover Exchange Platform Laser Cutting Machine — P3015

Rapid exchanging between two platforms greatly improve work efficiency. Rack and pinion transmission system has better rigidity and higher accuracy, saving feeding time, making operation more efficient.

OPERATING SYSTEM DISPLAY

Operating system display

The first one to use UI design in the world which lets display respond to processing table, making processing more intuitive. Elegant curves precisely fit machine body. Strong waterproof breathable system creates the best space, making operation more convenient. Diamond cutting process and HD plasma tempered glass make screen more exquisite and comfortable to use.



Appearance design

Aesthetics was introduced to industrial ID, perfect combination of technology and aesthetics

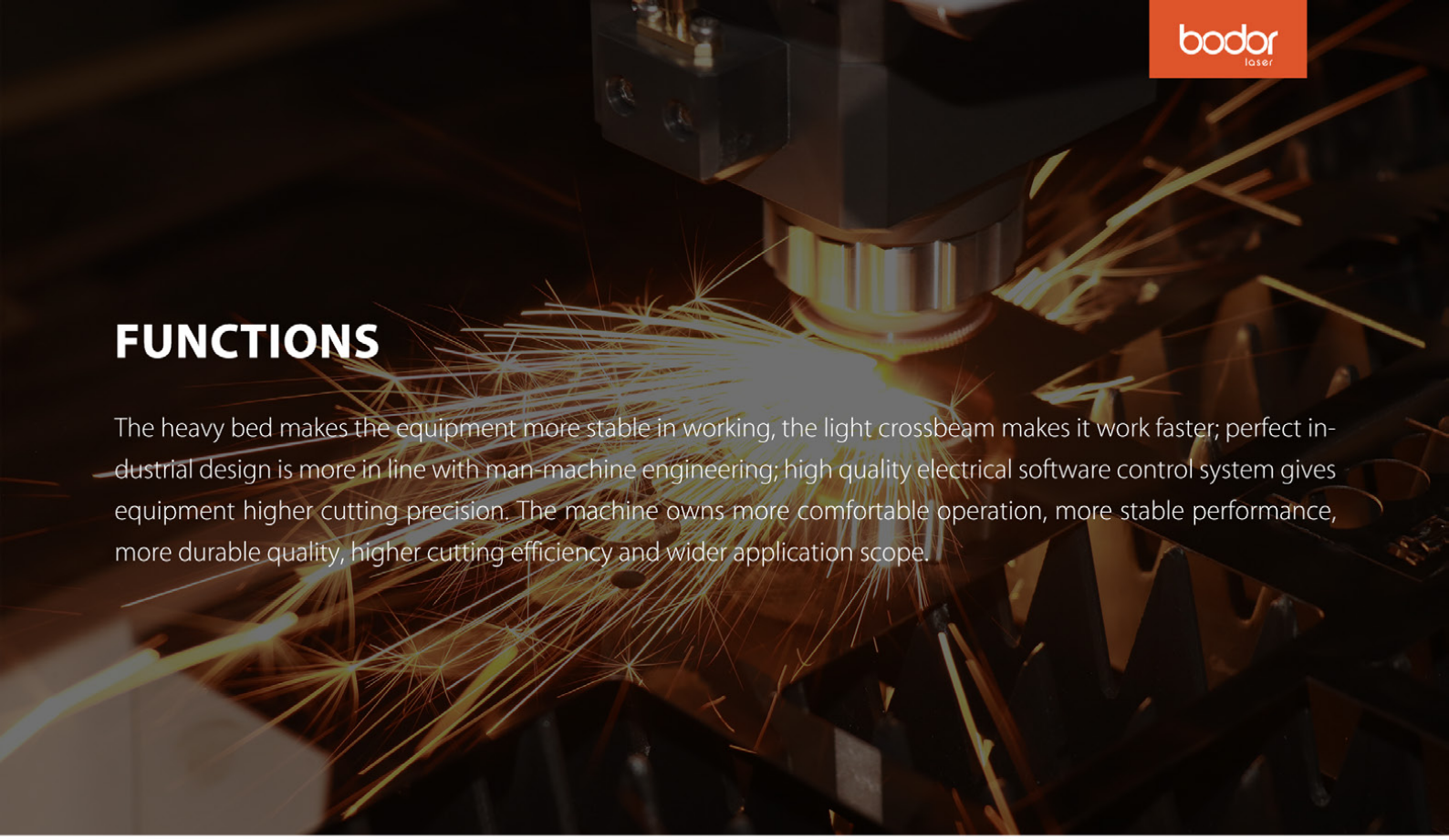
Surrounded by baking paint silver decoration,coordinated with diamond cutting tempered glass and alpine white sheet metal design, the international design of the machine is accepted by global consumer groups.
The workplace is neat, orderly and space-saving.

CAST ALUMINUM CROSSBEAM

Cast aluminum crossbeam

Integral steel mold pressure casting, light, flexible and efficient

After artificial aging, solution treatment and finishing, crossbeam owns good integrity, rigidity, surface quality, toughness and ductility. Aluminum alloy's metal characteristics of light weight and strong rigidity are helpful to high speed movement in processing, and high flexibility is beneficial to high-speed cutting of various graphics based on high accuracy. Light crossbeam can give equipment a high operation speed, improving processing efficiency to ensure processing quality.



FUNCTIONS

The heavy bed makes the equipment more stable in working, the light crossbeam makes it work faster; perfect industrial design is more in line with man-machine engineering; high quality electrical software control system gives equipment higher cutting precision. The machine owns more comfortable operation, more stable performance, more durable quality, higher cutting efficiency and wider application scope.

Auxiliary feeding mechanism

The promotion and demotion of subsidiary roller table reduces friction force between parts and working table, making loading and unloading more convenient.

Intelligent travel protection

Automatically monitor operation range of crossbeam and cutting parts, keeping operation within machining range. Double guarantees of fixed limitation greatly improve equipment and personal safety, minimizing the using risks.

Automatic lubrication system

Automatic lubrication system provides timing and ration lubricating oil for equipment to ensure its normal and high speed operation, and owns functions of abnormal alarm and liquid level alarm. The system greatly enhances cutting accuracy and effectively extends service life of transmission mechanism.t

WIFI remote intelligent assistance

Global real-time feedback ; Providing real-time fault analysis and troubleshooting.

A new generation of safety following module

Laser head keeping distance with work piece in cutting process can reduce collision risks. It will stop cutting when colliding plate. The safety following module reduces accident rate and improves cutting performance.

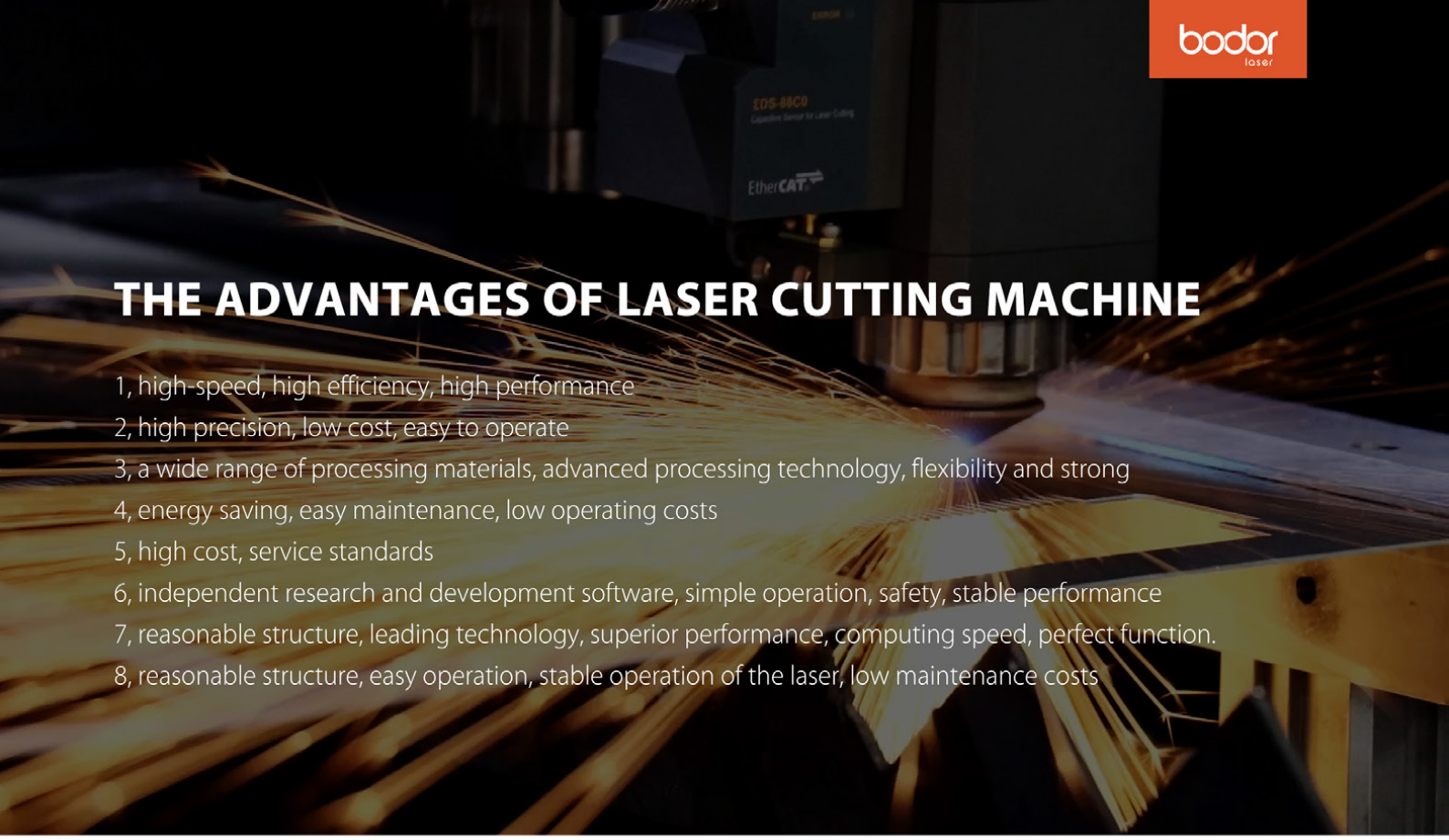
Intelligent alarm system

The system will start full abnormal alarm and push it to the interface through control center when equipment is abnormal.

Finding equipment abnormal in advance and reducing hidden dangers can multiply improve the equipment troubleshooting efficiency.

Auxiliary gas low pressure alarm function

Providing real-time pressure detection, pushing abnormal information when pressure value is lower than optimal cutting effect and precision. Ensure the cutting performance, accuracy and timeliness of gas replacement.



THE ADVANTAGES OF LASER CUTTING MACHINE

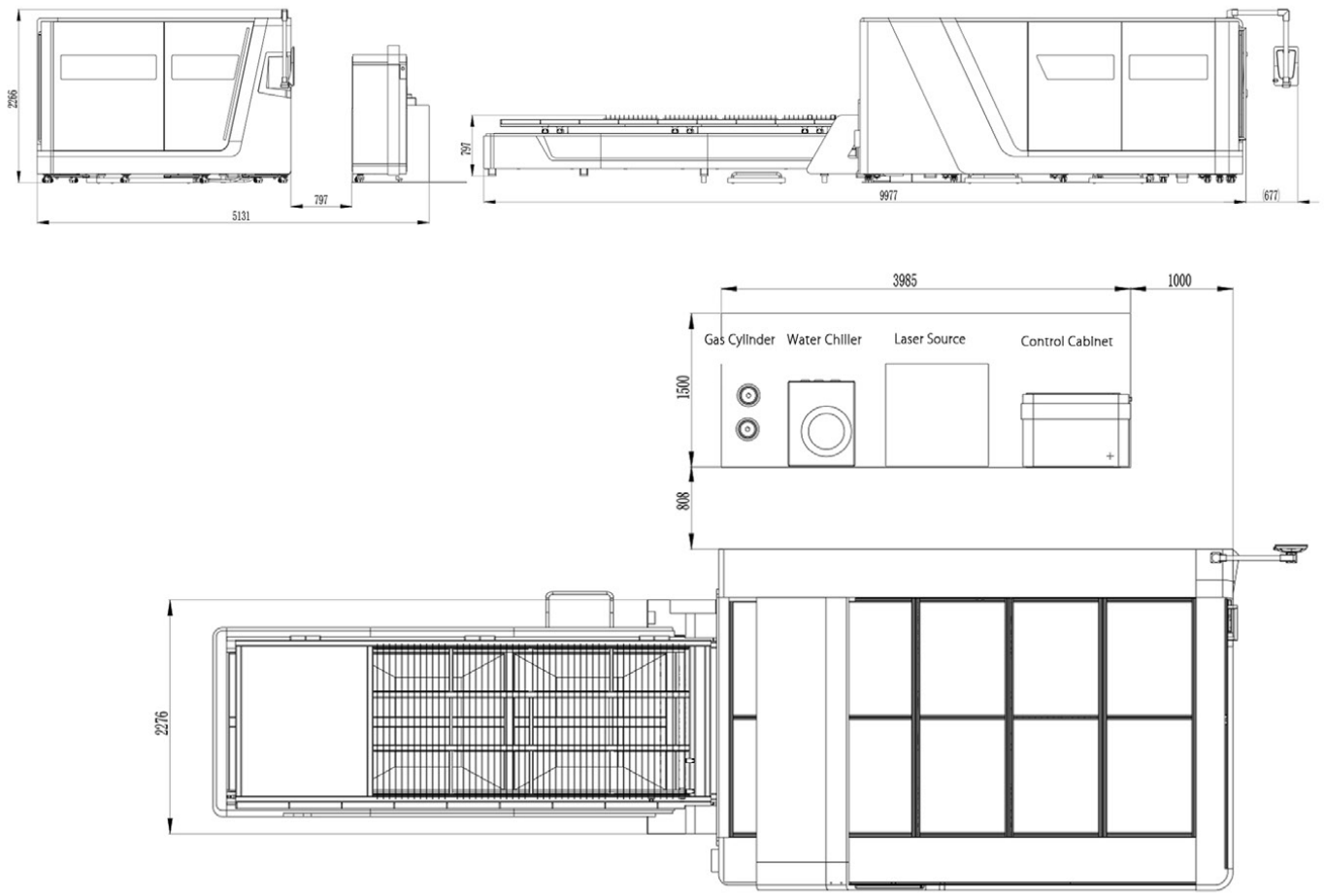
1, high-speed, high efficiency, high performance
2, high precision, low cost, easy to operate
3, a wide range of processing materials, advanced processing technology, flexibility and strong
4, energy saving, easy maintenance, low operating costs
5, high cost, service standards
6, independent research and development software, simple operation, safety, stable performance
7, reasonable structure, leading technology, superior performance, computing speed, perfect function.
8, reasonable structure, easy operation, stable operation of the laser, low maintenance costs

Laser cutting has the advantage over traditional cutting

1, high precision: focusing accuracy of 0.05mm, repeated focusing accuracy of 0.02 mm
2, narrow slit: the laser beam is focused into a small spot, so that the focus to achieve high power density, the material quickly heated to the degree of gasification, evaporation to form a hole. As the beam moves linearly relative to the material, the holes continue to form narrow-width slits. Cutting width is generally 0.10 ~ 0.20mm.
3, cutting surface smooth: cutting surface without burr, incision surface roughness generally controlled within Ra12.5.
4, good cutting quality: non-contact cutting, trimming little affected by heat, the basic no thermal deformation of the workpiece, completely avoid the formation of the material when the red edge cutting, kerf generally do not need secondary processing.
5, does not damage the workpiece: the laser cutting head will not be in contact with the surface of the material to ensure that no scratches the workpiece.

Contrast with other cutting advantages

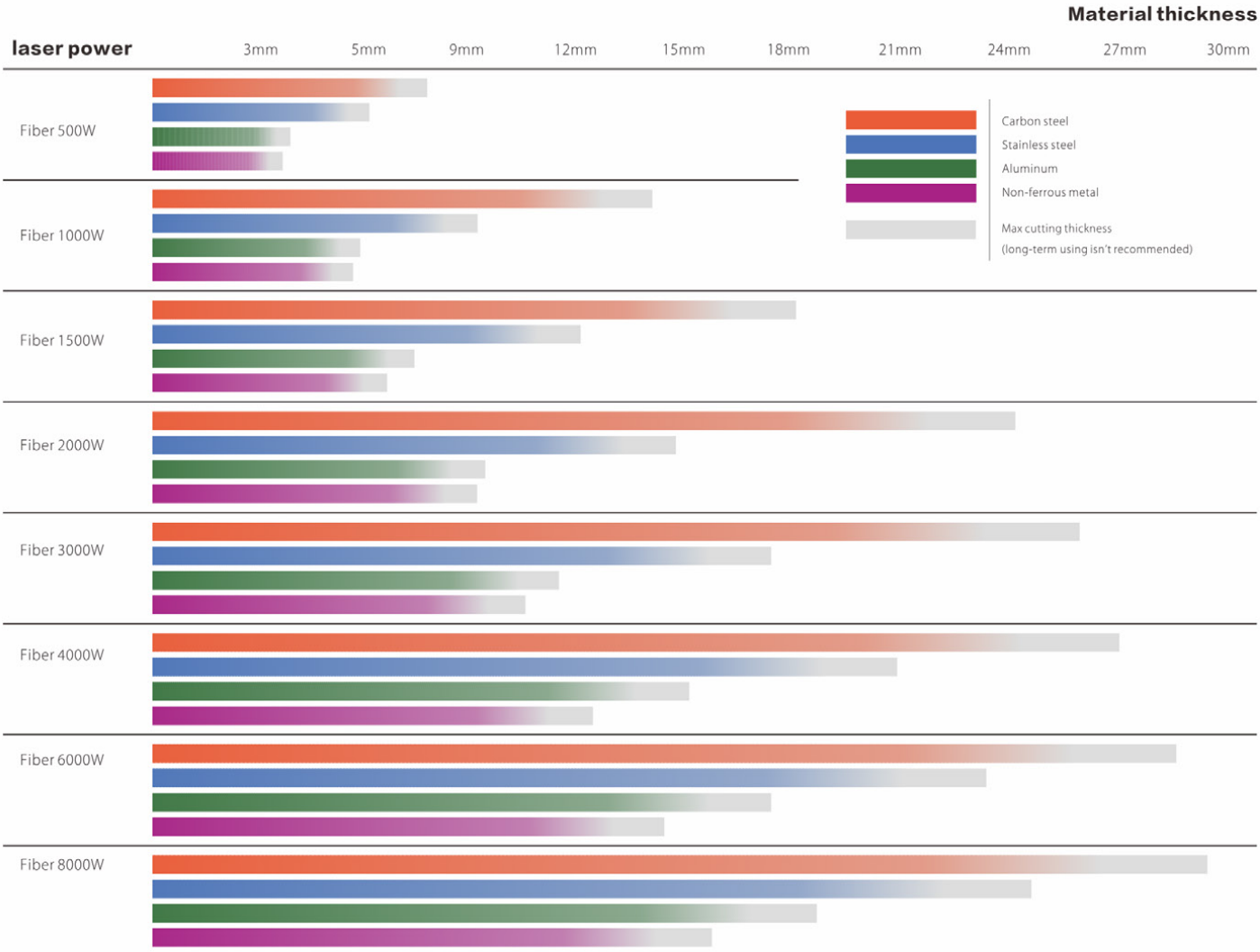
1, wire cutting: high precision, piercing difficulties, slow cutting speed. Equipment investment is not big. A device from tens of thousands to tens of thousands or so
2, laser cutting: high precision, speed with a great impact on board thickness, generally less than 10 m / min. Thick plate can not cut (generally 25MM below), equipment into large. Suitable for high-volume processing
3, water cutting: the accuracy is quite high, the speed is quite slow. Not suitable for mass production and processing. Equipment investment is relatively large.
4, plasma cutting: high precision (product verticality is not high), fast, consumables fast. Suitable for high-volume processing. Equipment into the general.
5, flame (oxygen) cutting: precision (thermal deformation large), slow, but can cut a lot of cutting at the same time, suitable for high-volume processing. Equipment into small, cheaper operating costs.
6, Punch: less variety of products more difficult, less obvious advantages of large quantities of products. Thick board cutting difficult. Cost input in general.
7, shearing machine: curved cutting not, straight cut OK, thick plate has difficulty.



PLACING REQUIREMENT

1.The whole machine should keep away from obstacles at least 1m.
2.The whole machine should be far away from the hypocenter.
3.The planeness of placing field should be less than 5mm.
4.Voltage fluctuation of the whole machine should be kept in± 5% .

Cutting Capacity



Above data is only for reference

Fiber Laser Cutting Process Parameters

		500W	1000W	1500W	2000W	3000W	4000W	6000W	8000W	10000W	12000W
Material	Thickness	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min				
Carbon steel (Q235A)	1	7.0--9.0	8.0--10	15--26	24--30	30--40	33--43				
	2	3.0--4.5	4.0--6.5	4.5--6.5	4.7--6.5	4.8--7.5	15--25				
	3	1.8--3.0	2.4--3.0	2.6--4.0	3.0--4.8	3.3--5.0	7.0--12				
	4	1.3--1.5	2.0--2.4	2.5--3.0	2.8--3.5	3.0--4.2	3.0--4.0				
	5	0.9--1.1	1.5--2.0	2.0--2.5	2.2--3.0	2.6--3.5	2.7--3.6				
	6	0.6--0.9	1.4--1.6	1.6--2.2	1.8--2.6	2.3--3.2	2.5--3.4				
	8		0.8--1.2	1.0--1.4	1.2--1.8	1.8--2.6	2.0--3.0				
	10		0.6--1.0	0.8--1.1	1.1--1.3	1.2--2.0	1.5--2.4				
	12		0.5--0.8	0.7--1.0	0.9--1.2	1.0--1.6	1.2--1.8				
	14			0.5--0.7	0.7--0.8	0.9--1.4	0.9--1.2				
	16				0.6-0.7	0.7--1.0	0.8--1.0				
	18				0.4--0.6	0.6--0.8	0.6--0.9				
	20					0.5--0.8	0.5--0.8				
	22						0.4--0.8				
	25										
Stainless steel (201)	1	8.0--13	18--25	20--27	24--30	30--35	32--45				
	2	2.4--5.0	5--7.5	8.0--12	9.0--15	13--21	16--28				
	3	0.6--0.8	1.8--2.5	3.0--5.0	4.0--6.5	6.0--10	7.0--15				
	4		1.2--1.3	1.5--2.4	3.0--4.5	4.0--6.0	5.0--8.0				
	5		0.6--0.7	0.7--1.3	1.8-2.5	3.0--5.0	3.5--5.0				
	6			0.7--1.0	1.2-2.0	2.0--4.0	2.5--4.5				
	8				0.7-1.0	1.5--2.0	1.2--2.0				
	10					0.6--0.8	0.8--1.2				
	12					0.4--0.6	0.5--0.8				
	14						0.4--0.6				
	20										
	25										
	30										
	40										
Aluminum	1	4.0--5.5	6.0--10	10--20	15--25	25--38	35--45				
	2	0.7--1.2	2.8--3.6	5.0--7.0	7--10	10--18	13--24				
	3		0.7--1.5	2.0--4.0	4.0--6.0	6.5--8.0	7.0--13				
	4			1.0--1.5	2.0--3.0	3.5--5.0	4.0--5.5				
	5			0.7--1.0	1.2--1.8	2.5--3.5	3.0--4.5				
	6				0.7--1.0	1.5--2.5	2.0--3.5				
	8				0.6--0.8	0.7--1.0	0.9--1.6				
	10					0.4--0.7	0.6--1.2				
	12					0.3-0.45	0.4--0.6				
	16						0.3--0.4				
	20										
	25										
	30										
Brass	1	4.0--5.5	6.0--10	8.0--13	10--16	20--35	25--35				
	2	0.5--0.9	2.8--3.6	3.0--4.5	4.5--7.5	6.0--10	8.0--12				
	3		0.5--1.0	1.5--2.5	2.5--4.0	4.0--6.0	5.0--8.0				
	4			1.0--1.6	1.5--2.0	3.0-5.0	3.2--5.5				
	5			0.5--0.7	0.9--1.2	1.5--2.0	2.0--3.0				
	6				0.4--0.7	1.0--1.8	1.4--2.0				
	8					0.5--0.7	0.7--1.2				
	10						0.2--0.5				
	12										
	14										
	16										

The cutting parameters are only for oxygen and nitrogen

Above date is only for reference

1000W FIBER LASER USING COST

Assisted gas / Consumption		Choosel:using air compressor Group as air supply to cutting stainless steel	Choosell:using O_2 cutting stainless steel	Choosellll:using N_2 cutting stainless steel
Power Consumption	Laser module	4 kw	4 kw	4 kw
	Water Chiller Group	2.8kw	2.8kw	2.8kw
	Host Machine	5.4kw	5.4kw	5.4kw
	Dust Exhausting Equipment	3kw	3kw	3kw
Total Power		15.2kw	15.2kw	15.2kw
Average Power Consumption (Take 80% Cutting Efficiency)		15.2×80%=12.16kw	15.2×80%=12.16kw	15.2×80%=12.16kw
Gas Consumption		15×85%=12.75kw	About 20L/h(1.45 $)	About 50L/h(3.61 $)
Quick-wear Part		0.36 $/h	0.36 $/h	0.36 $/h
All Cost Reference 0.1 $/kwh		1.216+1.275+0.36=2.85 $/h	1.216+1.45+0.36=3.03 $/h	1.216+3.61+0.36=5.19 $/h

500W FIBER LASER USING COST

Assisted gas / Consumption		Choosel:using air compressor Group as air supply to cutting stainless steel	Choosell:using O_2 cutting stainless steel	Choosellll:using N_2 cutting stainless steel
Power Consumption	Laser module	2kw	2kw	2kw
	Water Chiller Group	2.2kw	2.2 kw	2.2kw
	Host Machine	5.4kw	5.4kw	5.4kw
	Dust Exhausting Equipment	0.75kw	0.75 kw	0.75kw
Quick-wear Part		0.29 $/h	0.29 $/h	0.29 $/h
Gas Consumption		11×85%=9.35kw	About 20L/h(1.45 $)	About 50L/h(3.61 $)
Total Power		10.35kw	10.35kw	10.35kw
Average Power Consumption (Take 80% Cutting Efficiency)		10.35x80%=8.28kw	10.35x80%=8.28kw	10.35x80%=8.28kw
All Cost Reference 0.1 $/kwh		0.828+0.935+0.29=2.06 $/h	0.828+1.45+0.29=2.571$/h	0.828+3.61+0.29=4.73$/h

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3000W FIBER LASER USING COST

Assisted gas / Consumption		Choosel:using air compressor Group as air supply to cutting stainless steel	Choosell:using O_2 cutting stainless steel	Choosellll:using N_2 cutting stainless steel
Power Consumption	Laser module	12kw	12kw	12kw
	Water Chiller Group	4.94kw	4.94kw	4.94kw
	Host Machine	10.5kw	10.5kw	10.5kw
	Dust Exhausting Equipment	3kw	3kw	3kw
Total Power		30.44kw	30.44kw	30.44kw
Average Power Consumption (Take 80% Cutting Efficiency)		30.44×80%=24.35kw	30.44×80%=24.35kw	30.44×80%=24.35kw
Gas Consumption		20×85%=17kw	About 20L/h(1.45 $)	About 50L/h(3.61 $)
Quick-wear Part		0.43 $/h	0.43 $/h	0.43 $/h
All Cost Reference 0.1 $/kwh		2.435+1.7+0.43=4.57 $/h	2.435+1.45+0.43=4.32 $/h	2.435+3.61+0.43=6.48 $/h

2000W FIBER LASER USING COST

Assisted gas / Consumption		Choosel:using air compressor Group as air supply to cutting stainless steel	Choosell:using O_2 cutting stainless steel	Choosellll:using N_2 cutting stainless steel
Power Consumption	Laser module	8 kw	8 kw	8 kw
	Water Chiller Group	3.1kw	3.1kw	3.1kw
	Host Machine	6kw	6kw	6kw
	Dust Exhausting Equipment	3kw	3kw	3kw
Total Power		20.1kw	20.1kw	20.1kw
Average Power Consumption (Take 80% Cutting Efficiency)		20.1×80%=16.08kw	20.1×80%=16.08kw	20.1×80%=16.08kw
Gas Consumption		20×85%=17kw	About 20L/h(1.45 $)	About 50L/h(3.61 $)
Quick-wear Part		0.36 $/h	0.36 $/h	0.36 $/h
All Cost Reference 0.1 $/kwh		1.608+1.7+0.36=3.67 $/h	1.608+1.45+0.36=3.42 $/h	1.608+3.61+0.36=5.58 $/h

Above data is only for reference

4000W FIBER LASER USING COST

Assisted gas / Consumption		Choosel:using air compressor Group as air supply to cutting stainless steel	Choosell:using O_2 cutting stainless steel	Choosellll:using N_2 cutting stainless steel
Power Consumption	Laser module	15kw	15kw	15kw
	Water Chiller Group	6.08kw	6.08kw	6.08kw
	Host Machine	10.5kw	10.5kw	10.5kw
	Dust Exhausting Equipment	3kw	3kw	3kw
Total Power		34.58kw	34.58kw	34.58kw
Average Power Consumption (Take 80% Cutting Efficiency)		34.58×80%=27.66kw	34.58×80%=27.66kw	34.58×80%=27.66kw
Gas Consumption		20×85%=17kw	About 20L/h(1.45 $)	About 50L/h(3.61 $)
Quick-wear Part		0.43 $/h	0.43 $/h	0.43 $/h
All Cost Reference 0.1 $/kwh		2.766+1.7+0.43=4.90 $/h	2.766+1.45+0.43=4.65 $/h	2.766+3.61+0.43=6.81 $/h

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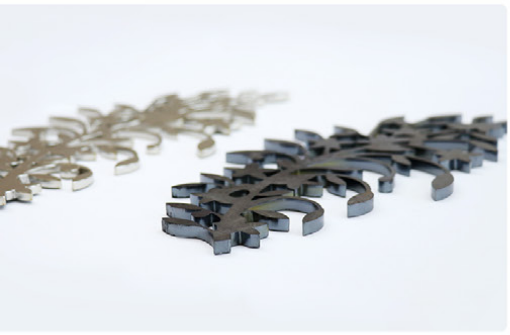

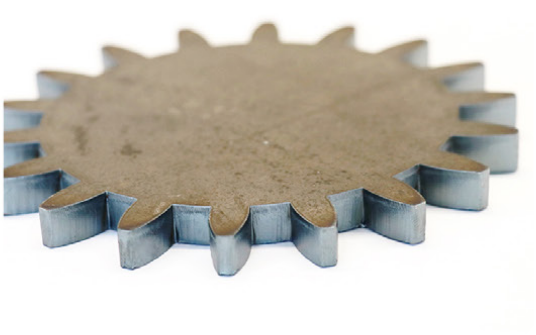

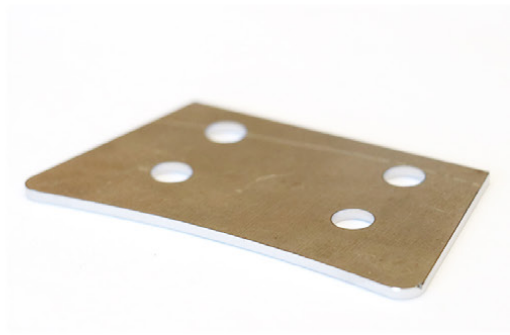

Metal Samples

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OFFICE

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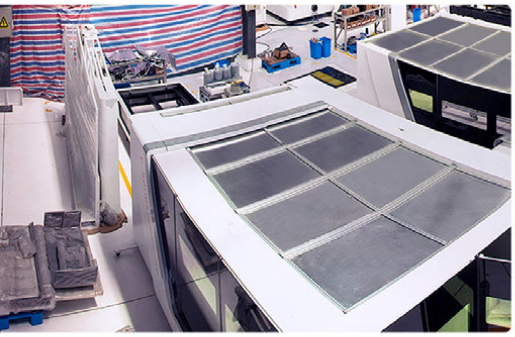

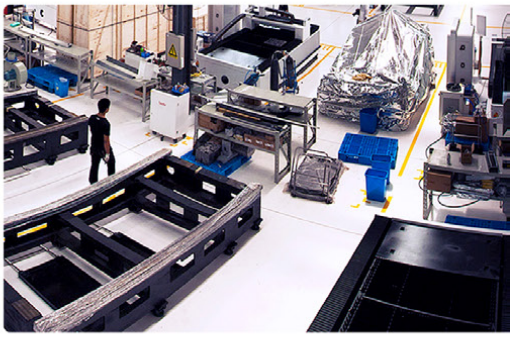

WORKSHOP

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