

# P SERIES

ALL-AROUND SHEET FIBER LASER METAL CUTTING MACHINE

1.5kW-40kW



# INTRODUCTION

Now the company has more than 2,000 employees from more than 20 countries around the world. Headquartered in Jinan, China, Bodor sets up 9 oversea subsidiaries, respectively in the US, India, Hungary, Turkey, Brazil, Mexico, Japan, South Korea, and Germany. The global footprint of Bodor has now covered over 180 countries and regions on six continents, building a complete sales channel and service network around the world to provide global customers with the best laser cutting application solutions.

**51000m<sup>2</sup>**

Production Base

**7000+**

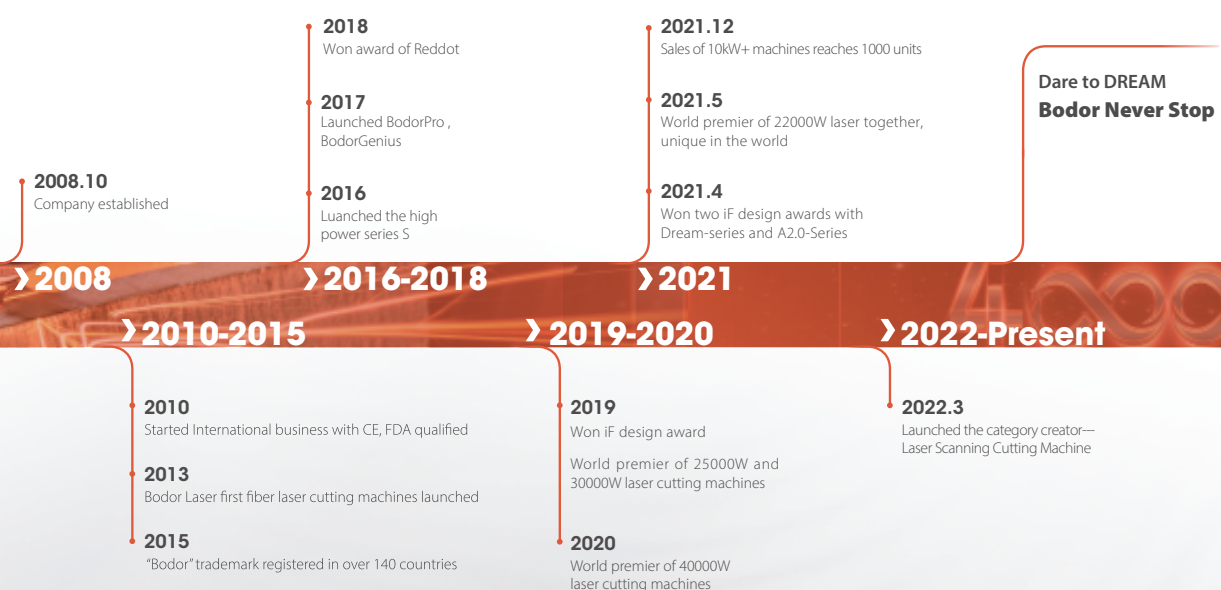
Delivery Capability

**2000+**

Global Employees



# COMPANY HISTORY



# GLOBAL NETWORK

**180**  
countries covered

**10+**  
global branches

**4**  
Technical centers



## ULTRA-HIGH POWER CAPABILITY

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● **World premier**

World premier of 25000w, 30000w, 40000w and world unique 22000w laser cutting machine.

● **Sales record(Until 31th, Dec. 2021)**

Choice of 1000 companies worldwide on 10kW+ laser cutting machines, in 46 different countries and regions

● **No. 1**

Leading sales volume of 10kW+ laser cutting machines

# R&D CAPABILITY



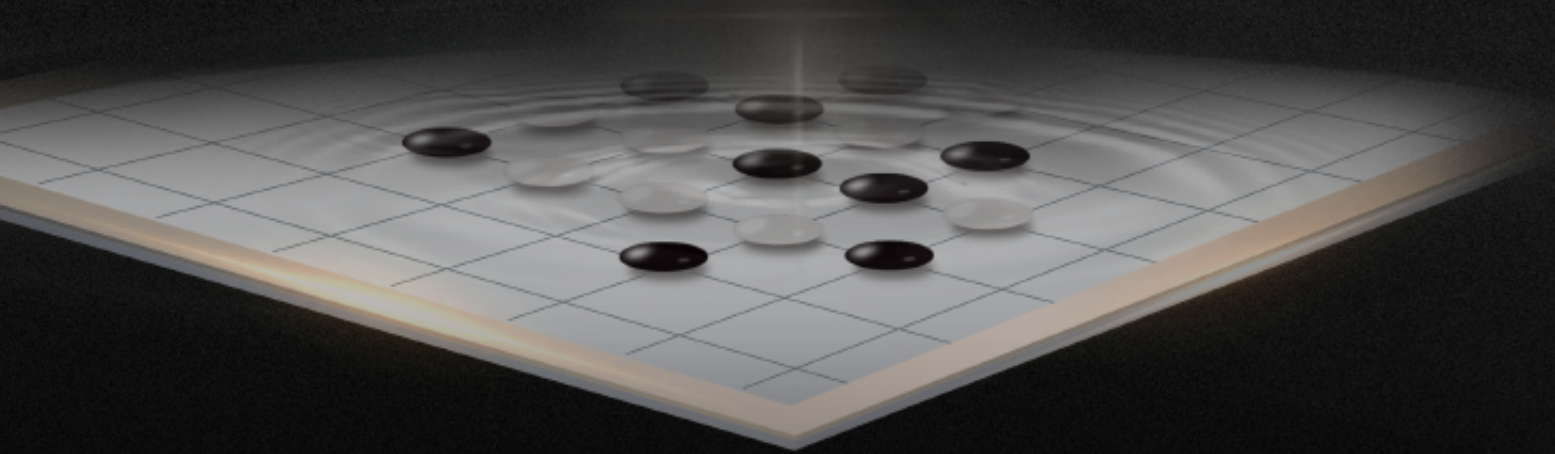
- Strong R&D team lead by the drafter of National Standards for CNC laser cutting machines
- Over 200 R&D Technicians, the R&D level is in line with international standards
- 10 subdivision platforms, including plate cutting, pipe cutting, application engineering, etc.
- 2 core R&D Centers in China and 4 overseas Technology Centers
- More than 200 patent certificates, 5 international awards, 22 industry awards

 **200+**  
R&D Team

 **200+**  
Patents

 **10**  
R&D Platform

# THE BLACK GO CHESS



Black Go chess — inspired by Go

Circular — endless loop, endless exploration

Black — derived from obsidian crystal, steady and deep



# HIGHER SAFETY LEVEL



## Advantages

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- The all-around protective covering isolates laser radiation and pollution, offering higher safety level.
- Smoke and dust produced during cutting will be automatically collected to ensure a clean operating area.
- Smart monitoring system helps reduce accident rate.

# SELF-DEVELOPED CONTROL SYSTEM



## Advantages

- Bodor Laser independent research and development system, perfect combination with BodorGenius laser head, brings to customers upgraded cutting technology and efficiency.
- BodorThinker
  - Integration of CAD and CAM can directly identify drawings and nest
  - Good adaptability, support G code(NC)、DXF、PLT、ENG and other file formats
  - The newly added batch processin function, in conjunction with the processing data-base, makes it more convenient in batch cutting.
  - The updated CAM logic and more open CAM function make it more convenient to change drawings, use more comprehensively, and easier to cut.

# INTELLIGENT FUNCTIONS

## Automatic Nozzle Changer

- Accurate control system is used to automatically replace nozzles based on material and thickness.
- The latest fully automatic calibration and cleaning functions lower manual repetitive labor.

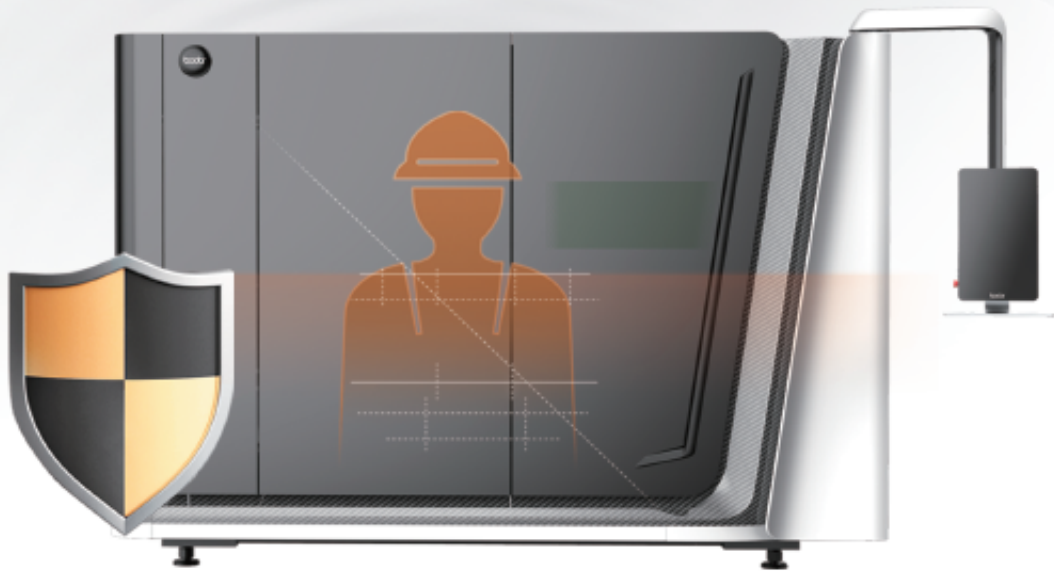
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## Intelligent Anti-collision

- 360°radar system can detect any obstacles in advance, and Z axis high-speed motion will be activated to immediately avoid obstacles, avoiding collisions.



# INTELLIGENT FUNCTIONS



## Vision-sensing Anti-collision

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- **Multi-dimension alert**

Perfectly suitable for various operating conditions, with high and low-level sensitivity.

- **Safe processing**

Dual protection methods in a real sense, reducing injury rates for customers.

# INTELLIGENT FUNCTIONS

## Space Eye

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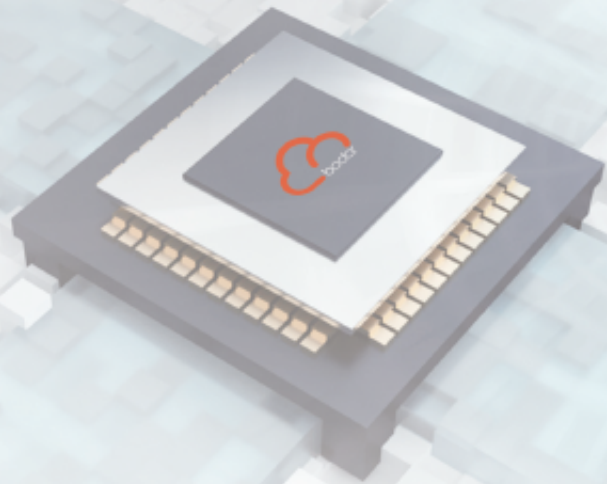
- **Edge seek in 3s, resetting limitation.**

Without long-span mechanical movement, the vision system of the machine locates apexes and offset angle of sheets in only 3 seconds.

- **Simple focusing with one click**

Vision + algorithm, make zero focus recognition simple and perform automatic cutting, recognition, and compensation.

# INTELLIGENT FUNCTIONS



## Auxiliary Low Gas Pressure Alarm Function

- Real-time gas pressure detection and abnormal information report ensure cutting quality and precision, and remind operators to replace gas in time.

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## High Speed Cutting Expert Database

- Including data for various cutting techniques, such as carbon steel oxygen fast cutting (COF), carbon steel Economic fast cutting (CEF), Low Pressure Nitrogen fast cutting (LNF), etc.
- For COF, the speed is doubled without changing the cutting quality when cutting thick plate
- For LNF, the nitrogen pressure reduces to 4 bar when cutting 10mm stainless steel, the cutting speed can be improved at least 10%.

# INTELLIGENT FUNCTIONS

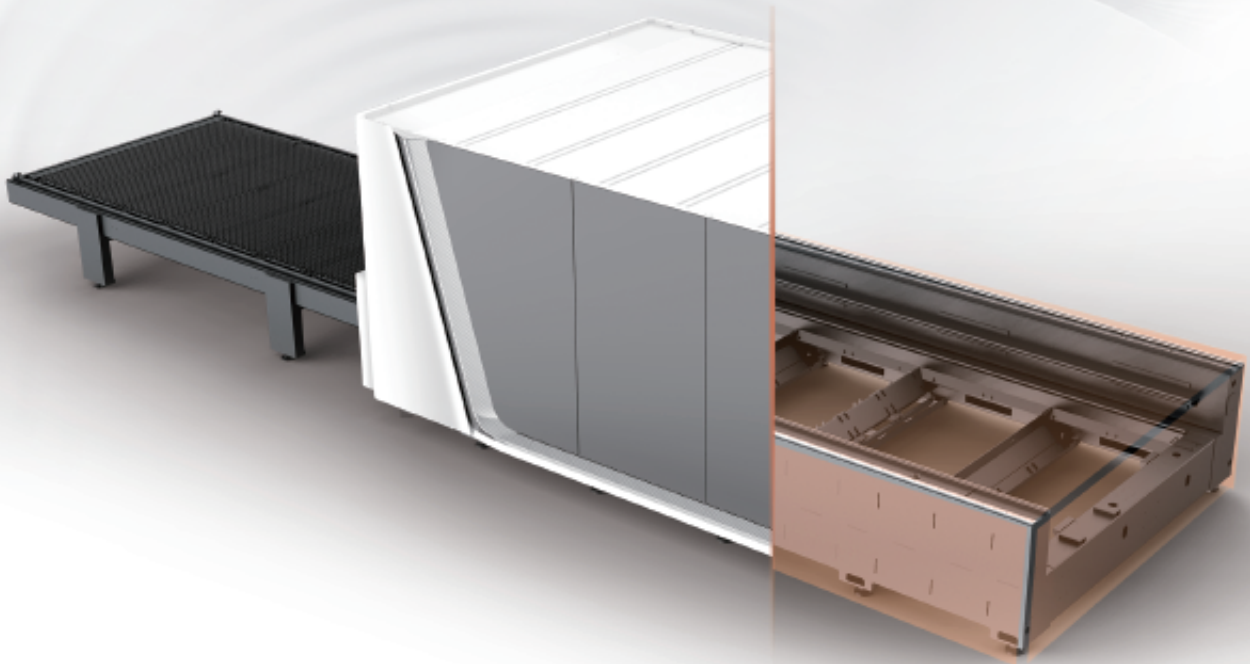


## One-click Processing

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- The machine can automatically exchange the workbench after processing, execute automatic edge seeking and cutting.
- Reduce the repetitive operation in batch cutting, reasonably distribute each function, realize human-machine cooperation, greatly improve the processing efficiency.

# MORTISE-AND-TENON TYPE PLATE WELDED SEGMENTED BED

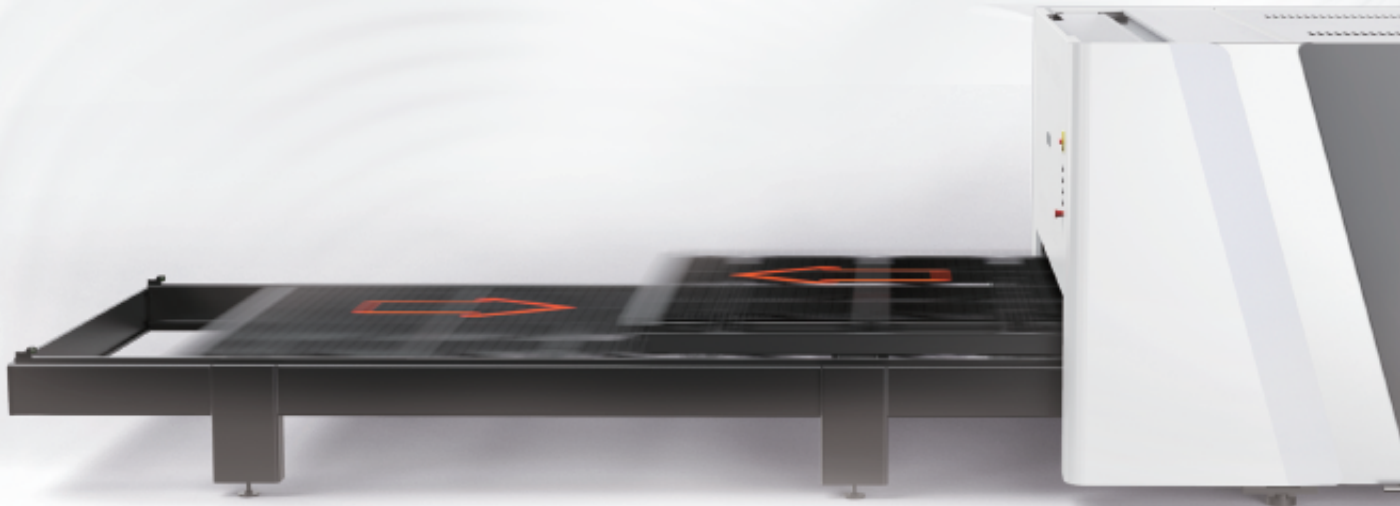


## Advantages

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- Using Chinese traditional tenon-and-mortise structure to provide stronger bearing capacity.
- Solder joint fixing and structural bearing ensure long-standing operation stability.
- Welded structure improves shock absorption effect, lowering deviation caused by shock, offering more accurate cutting.
- Brand new modular platform solves deformation problem caused by heat and facilitates parts replacement.

# PALLET CHANGER



## Advantages

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- Fast change of two pallets greatly improves efficiency.
- Rack and gearwheel transmission system has better rigidity and higher accuracy, saving feeding time.

# BODORGENIUS AUTO FOCUS LASER HEAD

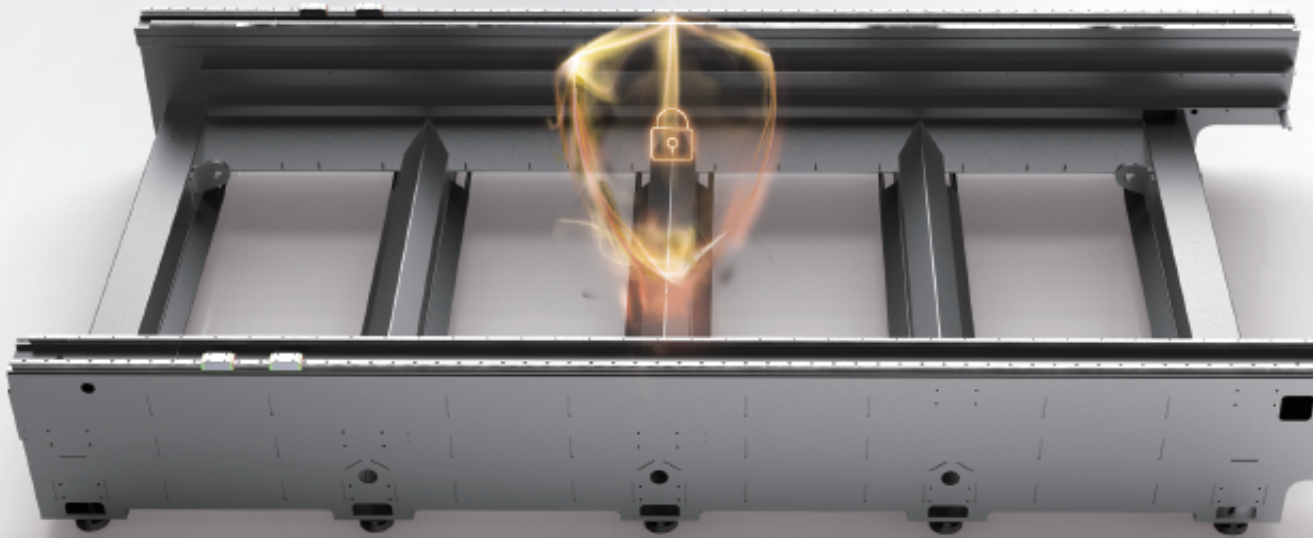


## Advantages

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- The lightweight design ensures excellent acceleration performance and cutting speed.
- Excellent design in air flow and water-cooling structure enables the laser-head to continuously and efficiently operate at high power.
- Built-in drive unit, the automatic focus adjustment range is +10~ -12 mm, adjustment accuracy of 0.05mm.
- Collimation mirrors and focus mirrors are all using composite lenses, which can obtain the optimal optical quality and cutting effect.
- Distance detection device has no drift, ensures rapid reaction.

# UNIQUE ANTI-BURNING MACHENISM (FOR 6KW AND ABOVE)



## Advantages

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- The table adopts the way of cast iron plate cushion backing the cooper plate to absorb cutting heat and prevent table from being damaged.
- The bed surface is covered with additional cast iron plates to prevent the bed from being damaged by the falling material and cutting splash.



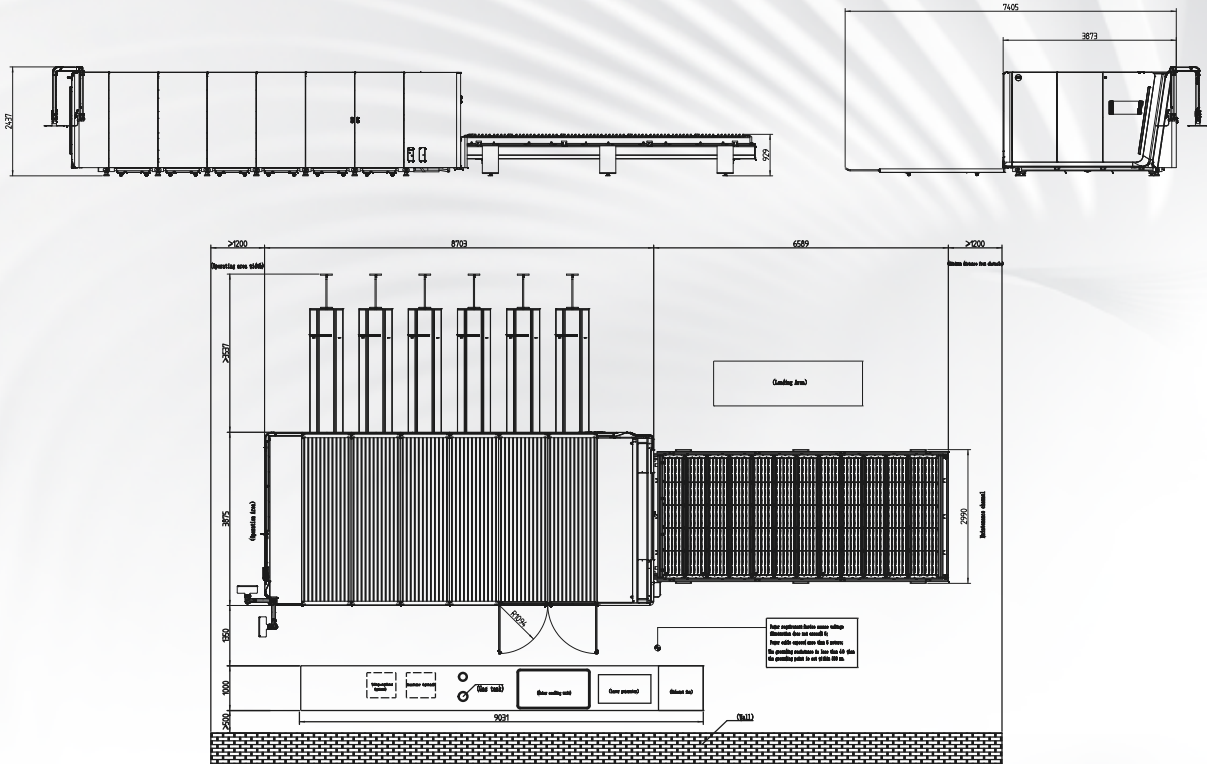
# BODOR CLOUD

## Advantages

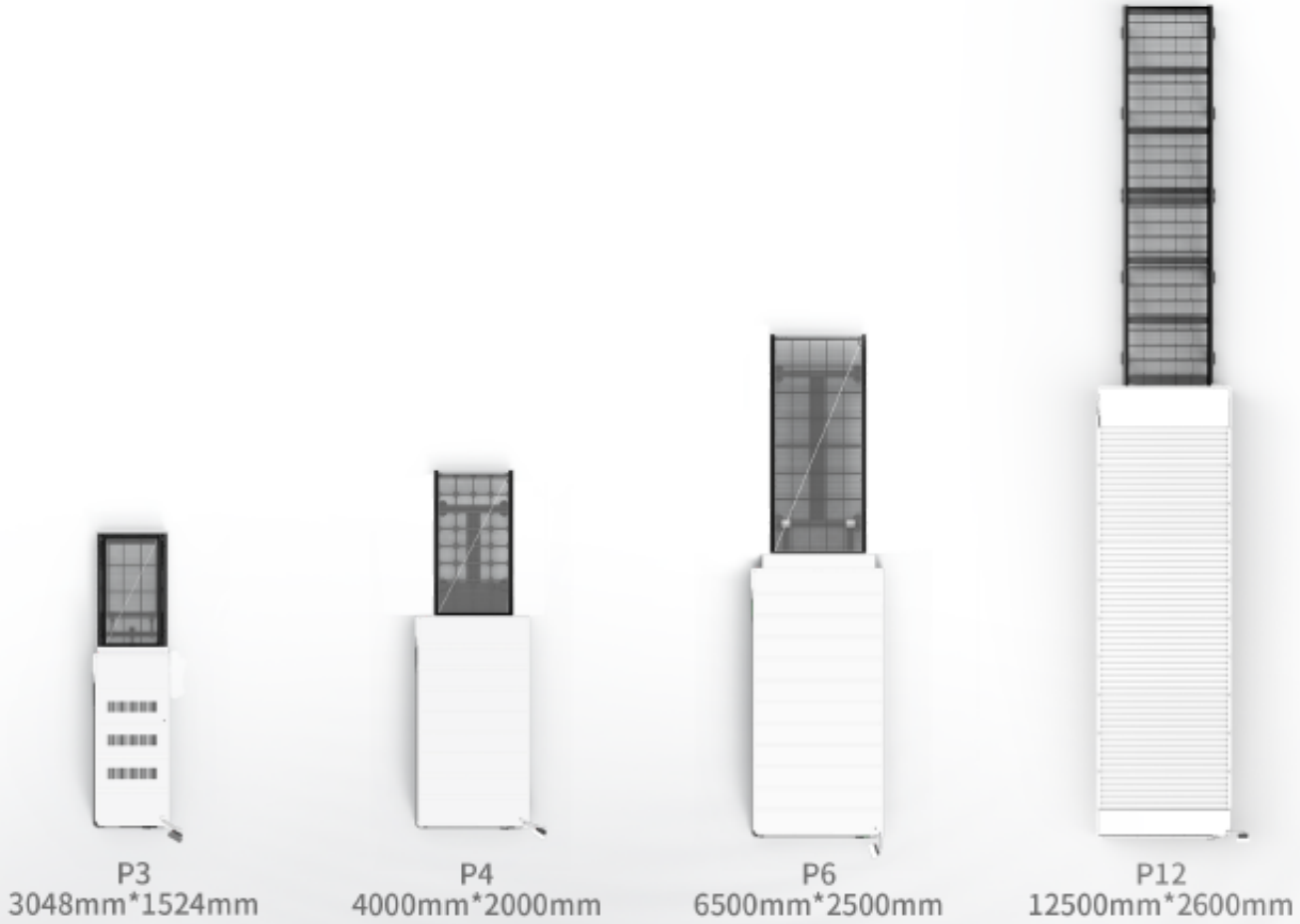
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- Daily equipment status management ( processing data, report forms )
- Alarm and maintenance reminder
- Cloud transmission for processing programs
- Remote online service access with one key
- Real-time information of the latest cutting process

Layout



The above layout drawings and figures are for reference only, the actual drawing shipped with machine prevails.



## Technical Data

ITEM	P12	P6	P4	P3
Working area	12500mm*2600mm	6100mm*2500mm	4000mm*2000mm	3048mm*1524mm
Max. linkage speed	200m/min	200m/min	200m/min	200m/min
Max. acceleration	2.8G	2.8G	4.0G	4.0G
Table load bearing	9500kg (≥6kw)	"3800kg (1-4kw) 5100kg (≥6kw) "	"1800kg (1-4kw) 2500kg (≥6kw) "	"1050kg (1-4kw) 1450kg (≥6kw) "
Machine overall dimensions	28735*4050*2670mm	16800*3900*2500mm	10990*3420*2400mm	8840*2240*2520mm
Overall weight	±32500kg	±16600kg	±8100kg	±6500kg
Z axis travel	370mm	370mm	370mm	350mm
Positioning accuracy	±0.05mm	0.05mm	0.05mm	0.03mm
Repositioning accuracy	±0.03mm	0.03mm	0.03mm	0.02mm
Total power capacity/current with 40KW MAX source	275.9KVA/419.2A	276.9KVA/420.7A	268.9KVA/408.5A	264.6KVA/402.0A
Total power capacity/current with 30KW MAX source	215.9KVA/328A	216.9KVA/329.5A	208.9KVA/317.4A	204.6KVA/310.8A
Total power capacity/current with 22KW source	153.3KVA/234.3A	154.3KVA/235.8A	146.3KVA/223.7A	141.9KVA/217.1A
Total power capacity/current with 12KW source	106.4KVA/161.6A	107.4KVA/163.1A	99.4KVA/151.0A	95.1KVA/144.4A
Total power capacity/current with 6KW source	71.6KVA/108.8A	72.6KVA/110.3A	64.6KVA/98.2A	60.3KVA/91.6A
Total power capacity/current with 3KW source	×	56.9KVA/86.4A	48.9KVA/74.3A	44.6KVA/67.7A
Total power capacity/current with 2KW source	×	48.2KVA/73.2A	40.2KVA/61.0A	35.8KVA/54.5A
Total power capacity/current with 1.5KW source	×	54.4KVA/82.6A	46.4KVA/70.5A	42.1KVA/63.9A

## Configuration And Components

laser head	Bodor Genius		
Laser source	Bodor Power		
Machine bed	●		
X-axis、Y-axis、Z-axis Servo motor and driver	Bodor		
Linear Rails	Bodor		
Protective Enclosure	●		
Enhanced-partition Dust Removal	●		
Control system	BodorThinker		
Display size	21.5 inches"		
Door-open Protectio	●		
Water Chiller	●		
SpaceEye	●		○
Visual collision detection	●		
Centrifugal fan	●		

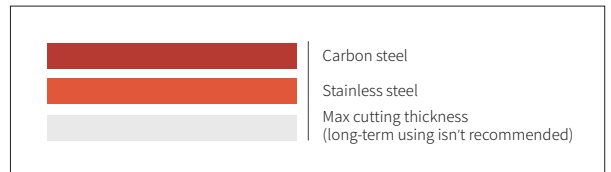
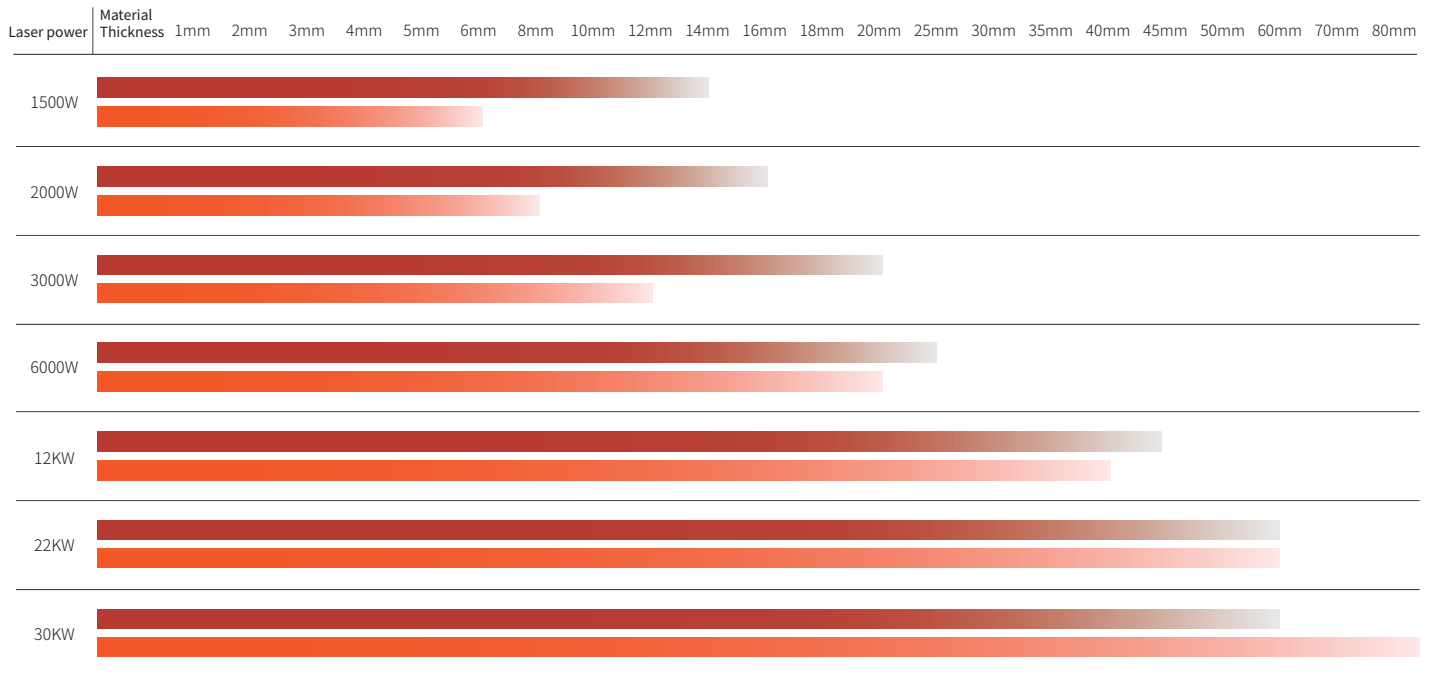
## Additional options

125mm focus distance laser head (3-4kw)	○	Mixed gas cutting function	○≥12kw
Integrated compressed air system	○	Nitrogen proportional valve	○1.5-3kw
Parker Gas post-treatment device	○	security light curtains	○
Parker Gas post-treatment device Integrated compressed air system	○	Air conditioning room	○
laser fume filter	○	Laser case plus air conditioner	○
peripherals placed on 2nd floor	○	Electric cabinet with air conditioner	○
iTrans	○	iCleaner	○
iTransTower	○	Bodor MES (Digital Factory Management System)	○
iLoader	○	Laser Scanning Cutting Machine	○

## Cutting Parameters

		1000W	1500W	2000W	3000W	6000W	12kW	15kW	22kW	30kW
	Thickness	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min
"Carbon steel (Q235A) O2"	1	8.0-10	8.0-10	8.0-10	8.0-10	8-10	9-11	9-11	9-11	9-11
	2	4.5-5.5	4.5-5.5	4.0-6.0	5.5-7.5	5-7.5	5-7.5	5-7.5	5-7.5	5-7.5
	3	2.4-3.0	2.5-3.4	3.0-4.0	3.0-4.0	3.5-5	3.5-5.5	3.5-5.5	3.5-5.5	3.5-5.5
	4	1.8-2.2	2.1-2.4	2.8-3.3	2.8-3.5	3.0-4.5	3.5-5	3.5-5	3.5-5	3.5-5
	5	1.6-1.8	2.0-2.5	2.2-2.8	2.6-3.2	3.0-4.2	3.3-4.8	3.3-4.8	3.3-4.8	3.3-4.8
	6	1.2-1.3	1.6-1.8	1.8-2.3	2.5-2.6	2.5-3.5	3.0-4.2	3.0-4.2	3.0-4.2	3.0-4.5
	8	0.6-0.8	1.0-1.2	1.2-1.7	1.6-1.8	2.2-3.2	2.5-3.8	2.5-3.8	2.5-3.9	2.5-3.9
	10		0.7-0.9	1.0-1.2	1.4-1.6	1.8-2.5	2.2-3.6	2.2-3.6	2.0-3.8	2.2-3.8
	12		0.7-0.8	0.8-1.0	1.0-1.4	1.2-2.1	1.2-3.5	1.2-3.6	1.6-3.8	1.6-3.8
	14		0.5-0.7	0.6-0.85	0.8-0.9	1.2-1.8	1.7-3.3	1.5-3.5	1.5-3.8	1.6-3.8
	16			0.6-0.75	0.7-0.8	0.8-1.5	1.2-3.1	1.2-3.5	1.4-3.7	1.5-3.7
	18				0.6-0.7	0.6-1.2	1.0-2.7	1.2-3.0	1.4-3.6	1.4-3.6
	20				0.5-0.6	0.5-0.8	0.6-2.4	1.2-2.7	1.5-3.5	1.5-3.5
	25					0.3-0.55	0.5-1.6	0.8-1.8	1.0-3.0	1.0-3.1
	30						0.3-1.0	0.6-1.4	0.8-2.2	1.2-2.6
	35						0.3-0.7	0.4-0.7	0.6-1.0	0.9-2.2
	40						0.2-0.4	0.3-0.5	0.5-1.1	0.8-1.7
45						0.2-0.3	0.2-0.5	0.3-0.6	0.5-0.8	
50								0.2-0.6	0.4-0.6	
60								0.2-0.5	0.2-0.4	
"Stainless steel (201) N2"	1	18-20	20-30	24-50	30-55	42-52	70-85	72-100	72-100	72-100
	2	5.0-7.0	8.0-16	9.0-17	12-30	20-33	40-66	45-70	50-75	50-75
	3	2.2-4.0	3.0-5.5	4.0-7.0	6.0-10.0	15-22	35-45	38-50	38-55	38-55
	4	1.2-2.3	1.5-3.2	3.2-4.0	4.0-6.0	10-15	20-32	25-35	25-33	30-35
	5		0.7-1.5	2.0-2.7	3.0-5.0	7.0-12	18-25	20-30	22-30	25-32
	6		0.7-1.3	1.2-1.8	2.0-3.2	4.8-9.0	12-15	15.0-25.0	17-25	18-26
	8			0.7-1.2	1.0-1.8	3.0-4.0	8-12	8.0-12.0	12-18	15-20
	10				0.5-0.85	1.6-2.5	6.0-8.0	6.0-10.0	8.0-12.0	12-15
	12				0.4-0.5	0.8-1.5	4.0-5.5	4.0-6.0	6.0-9	8-12
	14					0.6-1.2	3.0-5.0	3.5-5.5	5.0-7.0	6-10.5
	16					0.5-1.0	2.2-2.8	2.5-3.0	3.0-5.0	5-9
	18					0.4-0.8	1.2-2.0	1.2-2.2	1.8-4.2	3-6.5
	20					0.3-0.6	1.0-1.6	1.3-1.8	1.5-3.3	2-4.7
	25						0.5-0.8	0.6-1.2	1.5-2.0	1.8-2.5
	30						0.3-0.6	0.5-1.0	1.0-1.5	1.5-1.8
	35						0.3-0.5	0.4-0.8	0.4-0.8	1.0-1.5
	40						0.3-0.5	0.3-0.6	0.3-0.6	0.6-1.3
45							0.2-0.5	0.2-0.6	0.8-1.0	
50							0.1-0.5	0.2-0.5	0.25-0.5	
60							0.1-0.2	0.1-0.3	0.2-0.3	
70									0.17-0.3	
80									0.15-0.3	
"Aluminum N2"	1	8-10	10-15	15-25	25-30	42-55	60-85	70-100	70-100	70-100
	2	2.8-3.6	5.0-7.0	7-10	13-20	20-40	38-50	40-55	40-70	40-70
	3	0.7-1.1	2.0-2.6	4.0-8.0	6.5-7.5	15-25	30-40	35-45	35-60	35-60
	4		1.0-1.4	2.5-3.0	3.5-5.0	9.5-12	20-30	30-40	30-43	30-45
	5		0.5-0.7	1.2-2.5	2.5-3.5	5.0-8.0	15-25	20-30	22-35	22-34.0
	6			0.6-0.9	1.5-2.5	3.8-5.0	10-15	15-24	18-28	18-32
	8				0.7-1.0	2.0-2.5	7.0-12	8.0-12.0	12-20	12-23
	10					1.0-1.5	4.5-8.0	5.0-9.0	7.0-12.0	7.0-16
	12					0.8-1.3	4.0-5.0	4.0-6.0	4.5-6.5	4.5-12
	14					0.9-1.2	1.8-2.7	2.5-3.2	3.0-4.0	3.0-8.0
	16					0.5-0.8	1.5-2.5	2.0-3.0	2.5-3.5	2.5-6
	18					0.5-0.7	1.0-1.8	1.5-1.9	1.8-2.2	1.8-2.2
	20					0.5-0.7	0.9-1.5	1.3-1.8	1.5-2.0	1.5-2.0
25						0.6-0.9	0.6-1.2	0.8-1.5	0.8-1.5	
30						0.3-0.8	0.5-1.0	0.6-1.2	0.6-1.2	
35						0.3-0.6	0.3-0.8	0.4-0.9	0.4-0.9	
40						0.3-0.4	0.3-0.5	0.3-0.5	0.4-0.6	
"Brass N2"	1	6.0-10	8.0-13	10-16	20-30	35-45	55-65	60-70	65-75	65-75
	2	2.8-3.2	3.0-4.5	5.0-6.0	6.0-10	20-30	38-42	40-45	40-60	40-60
	3		1.5-2.5	2.5-7.0	3.0-8.0	12-18	18-30	20-35	25-40	25-40
	4		0.8-1.2	1.8-3.0	2.5-4.0	8.0-12.0	15-20	18-30	20-35	20-35
	5				1.5-2.0	6.0-8.0	10-15	15-20	20-28	20-30
	6				1.0-1.8	3.0-6.5	6.0-8.0	8-15	12-20	12-22
	8					1.6-2.2	5.0-7.0	8.0-10.0	9.0-12	9.0-15
	10					0.8-1.2	4.5-6.0	5.0-6.5	6.0-10	6.0-13
	12					0.3-0.5	2.4-4.0	2.8-4.2	3.0-4.5	5.0-10
	14						0.8-1.5	1.0-1.8	1.8-4.0	3.0-7.0
	16						0.6-1.2	0.8-1.5	1.5-3.0	1.5-3.0
	18						0.4-0.6	0.6-0.8	1.0-2.5	1.2-2.5
	20							0.4-0.6	0.4-2.0	1.2-2.0
25								0.3-0.5	0.5-0.8	
30									0.4-0.6	

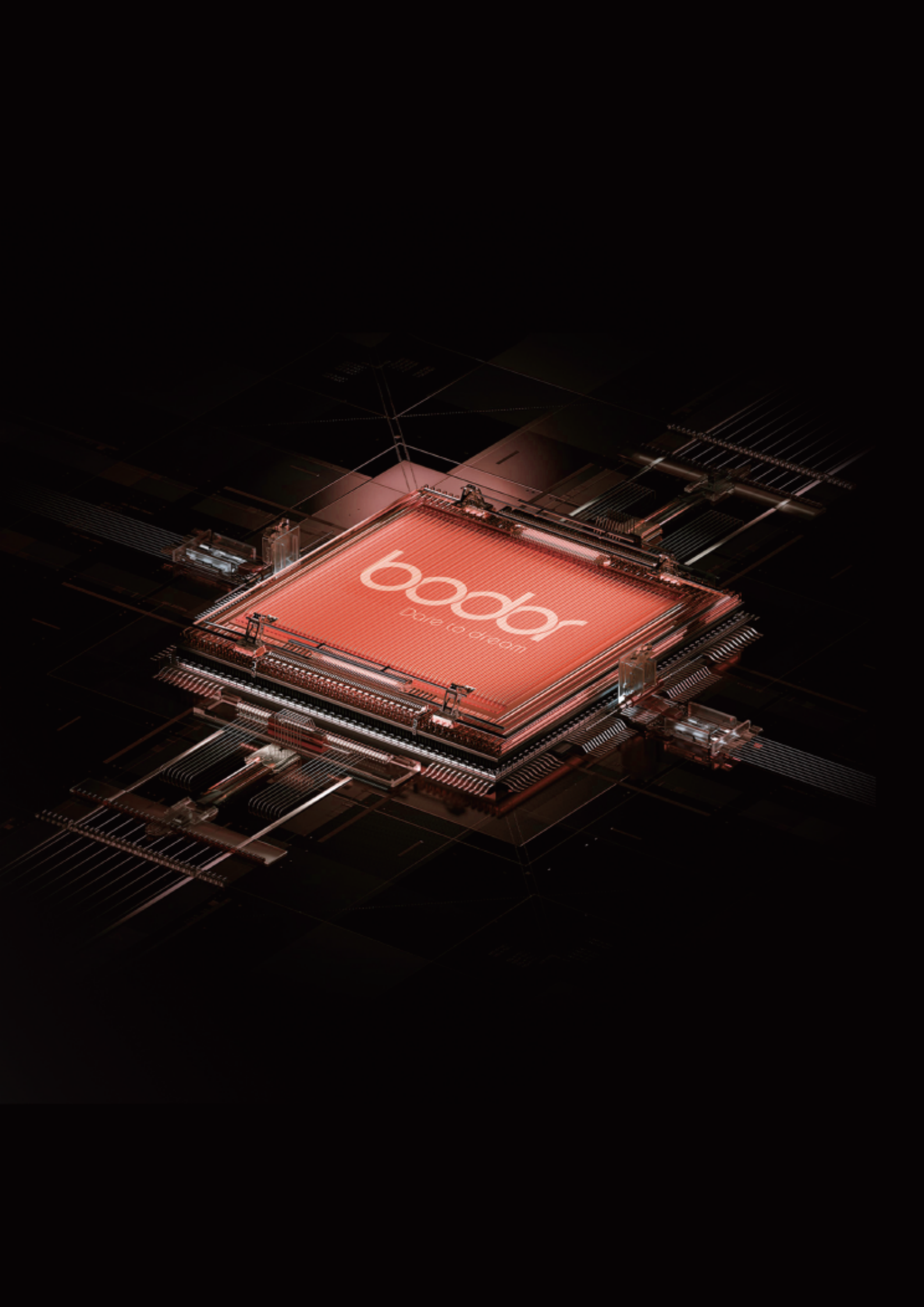
## Cutting Capacity



Above data is only for reference

## Cutting Samples





boodor  
Care to dream