

# ECONOMICAL AND PRACTICAL

## C series all-around protective covering fiber laser cutting machine



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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.

Model	C6(6025)	C4(4020)	C3(3015)
Working Area	6100*2500mm	4000*2000mm	3048*1524mm
LaserPower	6000w/3000w/2000w/1500w/1000w		
X/Y-axis Positioning Accuracy	0.05mm		
X/Y-axis Repositioning Accuracy	0.03mm		
Max. linkage speed	130m/min		

# All-around Protective Covering

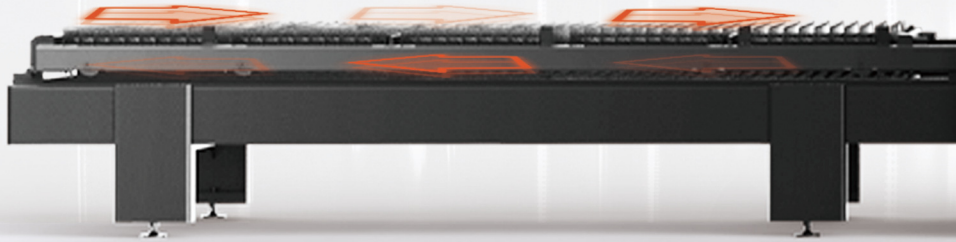


## All-around Protective Covering

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.

# Double Fast Exchange Tables

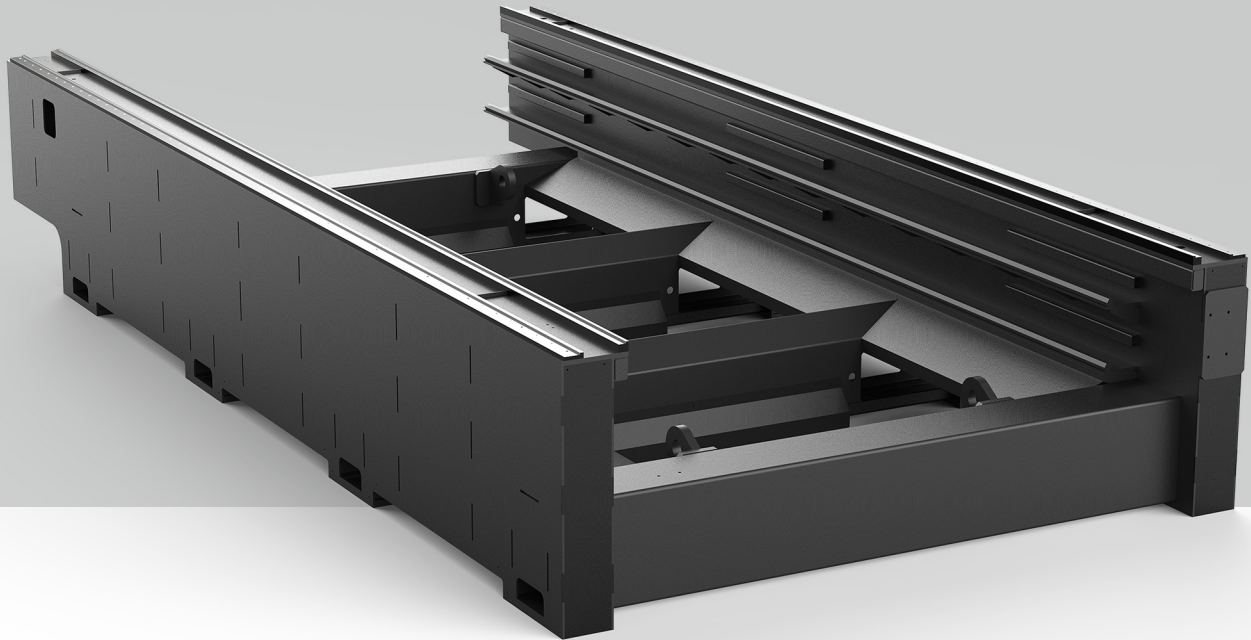
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## Double Fast Exchange Tables

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

## TENON-AND-MORTISE TYPE PLATE WELDING STRUCTURE BED



### Tenon-and-mortise Type Plate Welding Structure Bed

Use Chinese traditional tenon-and-mortise structure to provide stronger bearing capacity. Solder joint fixing and structural bearing ensure long-standing operation stability.



# STRETCHED ALUMINUM BEAM



## Stretched Aluminum Beam

Aviation-level material with enhanced rigidity, greatly reduces beam deformation during high-speed operation, and improves high-speed directional sensitivity and processing efficiency.

# Bodor Cutting 2.0

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Bodor Cutting  
V2.0

## **Bodor Cutting 2.0**

Upgraded nitrogen cutting ensures the cutting speed can be at most 4 times as fast as ordinary cutting. Smooth cutting surface spares the need for other procedures. Higher processing efficiency saves labor cost.



## AUTO - FOCUS

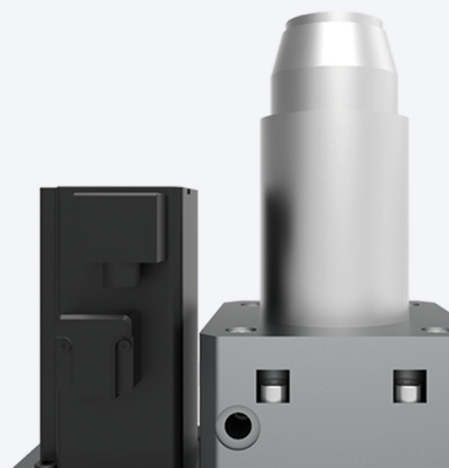
Applicable to various focal lengths, which are controlled by machine tool control system. Focal point will be automatically adjusted in cutting process to achieve the best cutting effect of different thicknesses sheets metal.

## Bodor Lightning Perforation Technology

Lightning Perforation reduces perforation time by 90%. For different materials and sheets of different thickness, auto-focusing laser head can automatically read parameters in the system storage to achieve high-quality cutting with less gas and electricity.

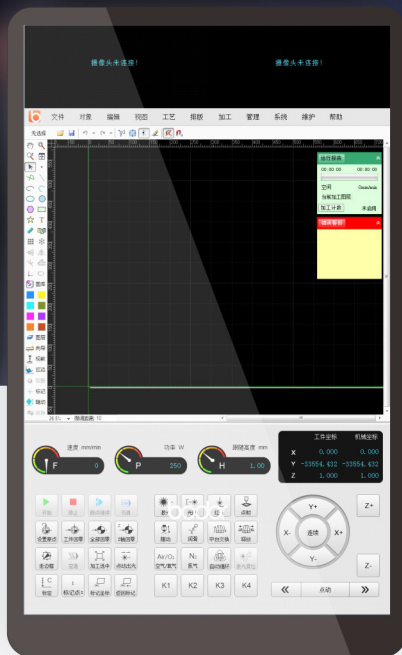
## Accuracy

By setting perforation focal length and cutting focal length respectively, the cutting is more accurate.





# BODOR PRO OPERATING SYSTEM



**Bodor Pro Operating System**

Bodor's independent R&D operating system can realize intelligent layout of graphics. Use optimal logic programming and software interactions in control aspect to achieve stunning using experience, effectively improve utilization of sheet metal and reduce leftover material.

bodor

# Automatic Obstacle Avoidance

» The ACC in laser cutting industry



## Intelligent anti-collision

360 degree radar system will foresee and detect any obstacles, enabling Z axis with a high-speed to immediately avoid obstacles in case of collision.



## More efficiency, less cost

Lower damage rate of laser head, reduces customer's maintenance cost accordingly, so as to prolong cutter's service life.

Avoid the production halt caused by collision, ensure continuous production.



# Bodor Cloud

IoT Cloud Platform for Fiber Laser CNC Machines

## IoT Cloud Platform for Laser CNC Machines

Digital Management of Equipment, Storage of Traceable Data.  
Access through Multiple Devices, All-around Information Display.  
Real-time Equipment Monitoring, Automatic Malfunction Alert.  
Apply for After-sale Service on Bodor Cloud Platform.





# TOUCH CONTROL

## 21.5-inch Touch Screen

21.5-inch touch screen offers larger display area and easier operation. 10 touch makes operating more accurate.

## 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.

### **More convenient for connecting electricity**

Single-phase power supply can ensure the normal operation of equipment. This function makes machine connecting the power more convenient, and the machine could work in various places.

### **Brand New Safety Following Module**

During the cutting process, the distance between laser head and materials are always maintained, reducing collision risks and ensuring cutting efficiency.

### **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**

Lubricants are automatically added on a regular basis and fixed amount, guaranteeing the normal and high-efficiency operation and greatly improving the cutting accuracy.

Abnormal liquid level alarm function can effectively extend the service life of the transmission mechanism.

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### **Smart Alarming Function**

The system offers all-around abnormal alarm to help detect malfunctions in advance and push them to the interface through control center, reducing potential safety problems.



# ADVANTAGES OF LASER CUTTING MACHINE

- 1, High speed, high efficiency and high performance
- 2, High precision, low cost and simple operation
- 3, Extensive processing materials, advanced processing technology and strong flexibility
- 4, Energy-saving and environmental protection, simple maintenance and low operating cost
- 5, High cost performance and standard after-service
- 6, Independently-developed software, simple operation, safety and stable performance
- 7, Reasonable framework, leading technology, superior performance, high speed operation and perfect functions
- 8, Reasonable structure, easy operation, laser source runs stable with low maintenance cost

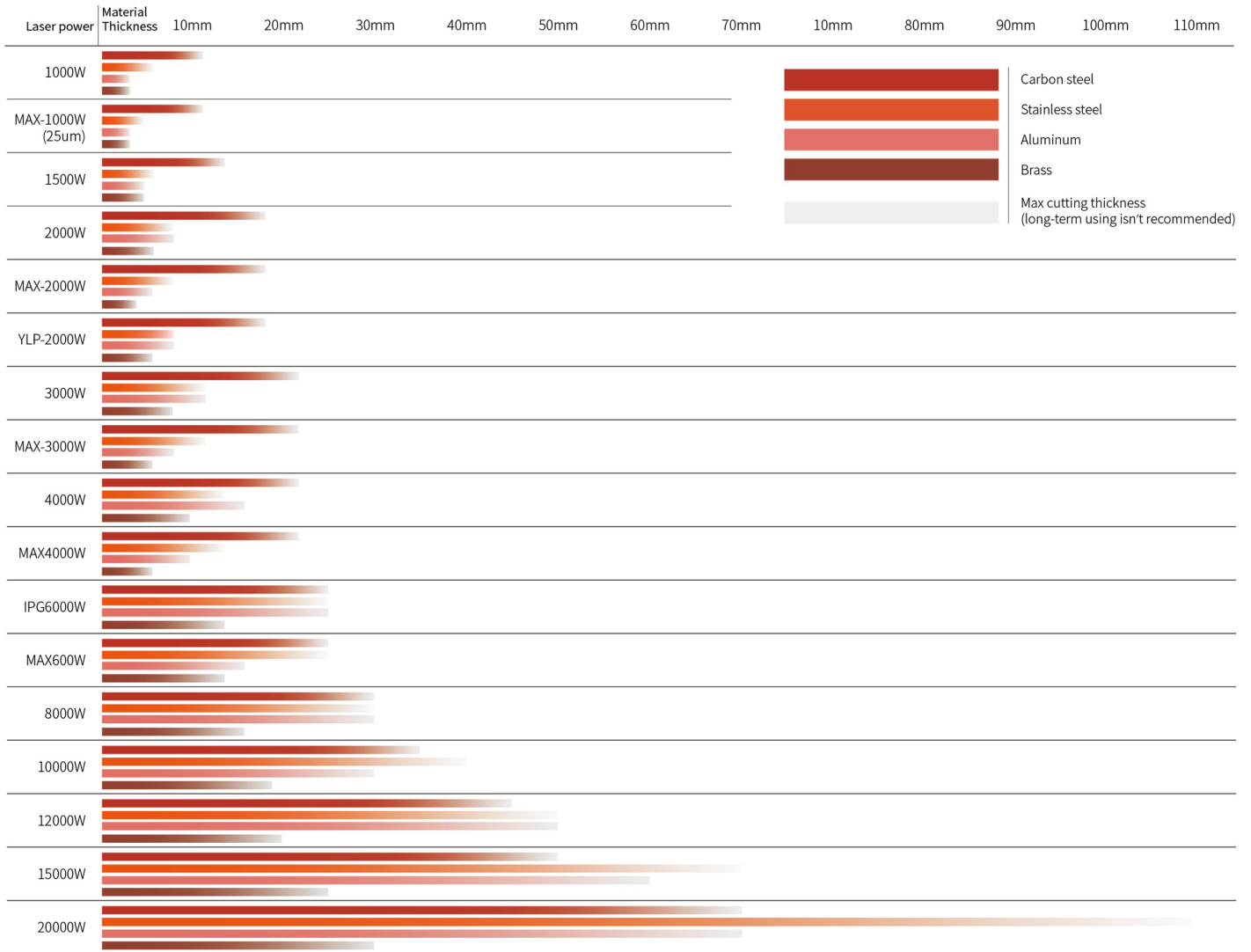
## The advantages of laser cutting compared with traditional cutting methods

1. High precision: Focusing accuracy is 0.05mm, repetition focusing accuracy is 0.02 mm
2. Narrow kerf: The laser beam is focused into a small spot, making the focus reach high power density, the material is quickly heated up to the gasification then evaporates to form holes. With the relative linear movement of the light beam to the material, the hole is continuously formed narrow gaps. Kerf width of the incision is usually 0.10 ~ 0.20mm.
3. Smooth section: Cutting surface without burrs, roughness of incision surface is generally controlled within Ra12.5.
4. Good cutting quality: Non contact cutting, cutting edge is less affected by heat, basically no thermal deformation of work piece, completely avoid down edge formed by material punching, in general, slit doesn't need secondary processing.
5. No damage to work piece: Laser cutting head won't contact surface of material to ensure no scratches to work piece.

## Advantages compared with other cutting methods

1. Wire cutting: High precision, difficult to perforate, low cutting speed. Low investment in equipment. The price range of a device is from tens of thousands to hundreds of thousands or so.
2. Laser cutting: High precision, cutting speed is influenced by plate thickness which is generally within 10 m / min. Not suitable for thick plate (only for 0~25mm plate), high investment in equipment is suitable for large batch processing.
3. Water jet cutting: High precision, low cutting speed. It is not suitable for large batch processing, and equipment investment is high.
4. Plasma cutting: High precision(The verticality of the product is not high), fast speed and consumption. Suitable for large batch processing, and equipment investment belongs to medium level.
5. Flame (oxygen) cutting: Accuracy(thermal deformation), low speed, suitable for large batch processing. Equipment investment is small and operation cost is cheap.
6. Punch: Difficult for processing various small-batch materials, suitable for few large batch processing. It is difficult to cut the thick plate. Equipment investment belongs to medium level.
7. Plate shearing machine: Not suitable for curvilinear cutting, straight line cutting is OK, difficult for thick plate cutting.

## Cutting Capacity



Above data is only for reference

# Fiber Laser Cutting Process Parameters

		1000W	MAX-1000W(25um)	1500W	2000W	MAX-2000W(50)	YLR-2000W	3000W	MAX-3000W(50)	4000W	MAX-4000W(50)	IPG 6000W	MAX 6000W	8000W
Material	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	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	8.0-10	8.0-10	8.0-10	8.0-10	8-10	8-10	8-10	8-10	
	2	4.0-6.5	4.5-7.0	4.5-6.5	4.7-6.5	4.7-6.5	4.7-6.5	4.8-7.5	4.8-7.5	5-7.5	5-7.5	5-7.5	5-7.5	
	3	2.4-3.0	2.4-3.0	2.6-4.0	3.0-4.8	3.0-4.8	3.0-4.8	3.3-5.0	3.3-5.0	3.5-5.0	3.5-5.0	3.5-5	3.5-5	
	4	2.0-2.4	2.0-2.4	2.5-3.0	2.8-3.5	2.8-3.5	2.8-3.5	3.0-4.2	3.0-4.2	3.0-4.0	3.0-4.0	3.0-4.5	3.0-4.5	
	5	1.5-2.0	1.5-2.0	2.0-2.5	2.2-3.0	2.2-3.0	2.2-3.0	2.6-3.5	2.6-3.5	2.7-3.6	2.7-3.6	3.0-4.2	3.0-4.2	
	6	1.4-1.6	1.4-1.6	1.6-2.2	1.8-2.6	1.8-2.6	1.8-2.6	2.3-3.2	2.3-3.2	2.5-3.4	2.5-3.4	2.5-3.5	2.5-3.5	
	8	0.8-1.2	0.8-1.2	1.0-1.4	1.2-1.8	1.2-1.8	1.2-1.8	1.8-2.6	1.8-2.6	2.0-3.0	2.0-3.0	2.2-3.2	2.2-3.2	
	10	0.6-1.0	0.6-1.0	0.8-1.1	1.1-1.3	1.1-1.3	1.1-1.3	1.2-2.0	1.2-2.0	1.5-2.4	1.5-2.4	1.8-2.5	1.5-2.2	
	12	0.5-0.8	0.5-0.8	0.7-1.0	0.9-1.2	0.9-1.2	0.9-1.2	1.0-1.6	1.0-1.6	1.2-1.8	1.2-1.8	1.2-2.0	1.2-2.0	
	14			0.5-0.7	0.7-0.8	0.7-0.9	0.8-1.0	0.9-1.2	0.9-1.2	0.9-1.2	0.9-1.2	1.2-1.8	1.0-1.5	
	16				0.6-0.7	0.6-0.8	0.6-0.8	0.7-1.0	0.7-1.0	0.8-1.0	0.8-1.0	0.8-1.3	0.7-1.2	
	18				0.4-0.6	0.5-0.7	0.5-0.7	0.6-0.8	0.6-0.8	0.6-0.9	0.6-0.9	0.6-0.9	0.6-0.9	
	20							0.5-0.8	0.5-0.7	0.5-0.8	0.5-0.8	0.5-0.8	0.5-0.8	
22								0.3-0.7	0.3-0.7	0.4-0.8	0.4-0.8	0.4-0.8		
25											0.3-0.55	0.2-0.5		
Stainless steel (201) N2	1	18-25	24-36	20-27	24-30	24-50	24-50	30-35	30-58	32-45	40-72	42-52	42-52	
	2	5-7.5	6-10	8.0-12	9.0-12	9.0-14	9.0-15	13-21	13-39	16-28	24-45	20-33	20-33	
	3	1.8-2.5	2.2-3.5	3.0-5.0	4.0-6.5	4.0-7.0	4.8-7.5	6.0-10	6-14	7.0-15	7.0-18	15-22	15-22	
	4	1.2-1.3	1.2-1.6	1.5-2.4	3.0-4.2	3.2-4.5	3.2-4.5	4.0-6.0	4.0-7.0	5.0-8.0	6.0-10.0	10-15	10-15	
	5	0.6-0.7	0.6-0.75	0.7-1.3	1.8-2.5	2.0-2.8	2.0-2.8	3.0-5.0	3.0-5.0	3.5-5.0	4.0-5.0	8.0-12	6.5-8.0	
	6			0.7-1.0	1.2-1.8	1.2-2.0	1.2-2.0	2.0-4.0	2.0-4.0	2.5-4.5	3.0-4.5	4.8-8.0	4.2-6.0	
	8				0.7-1.0	0.7-1.0	0.7-1.0	1.5-2.0	1.5-2.0	1.6-2.0	1.6-2.0	3.0-4.0	2.5-3.5	
	10							0.6-0.8	0.6-0.8	0.8-1.2	0.8-1.2	1.6-2.5	1.2-2.0	
	12							0.4-0.6	0.4-0.6	0.5-0.8	0.5-0.8	0.8-1.5	0.8-1.5	
	14									0.4-0.6	0.4-0.6	0.6-0.8	0.5-0.8	
16											0.5-0.8	0.4-0.7		
18											0.4-0.6	0.3-0.6		
20											0.3-0.5	0.2-0.5		
25											0.2-0.4	0.2-0.4		
Aluminum N2	1	6.0-10	6.0-10	10-20	15-25	15-25	20-30	25-38	25-40	35-45	35-45	42-55	42-55	
	2	2.8-3.6	2.8-3.6	5.0-7.0	7-10	7-10	10-15	10-18	13-20	13-24	13-24	20-40	20-40	
	3	0.7-1.5	0.7-1.5	2.0-4.0	4.0-6.0	4.0-6.0	5.0-7.0	6.5-8.0	6.5-8.0	7.0-13	7.0-13	15-25	15-25	
	4			1.0-1.5	2.0-3.0	3.5-4.0	3.5-5.0	3.5-5.0	3.5-5.0	4.0-5.5	4.0-5.5	9.5-12	9.5-12	
	5			0.7-1.0	1.2-1.8	1.2-1.8	1.8-2.5	2.5-3.5	2.5-3.5	3.0-4.5	3.0-4.5	5.0-8.0	5.0-8.0	
	6				0.7-1.0	1.0-1.5	1.0-1.5	1.5-2.5	1.5-2.5	2.0-3.5	2.0-3.5	3.8-5.0	3.8-5.0	
	8				0.6-0.8		0.6-0.8	0.7-1.0	0.7-1.0	0.9-1.6	0.9-1.6	2.0-2.5	2.0-2.5	
	10							0.4-0.7		0.6-1.2	0.6-1.2	1.0-1.5	1.0-1.5	
	12							0.3-0.45		0.4-0.6	0.4-0.6	0.8-1.0	0.8-1.0	
	16									0.3-0.4		0.5-0.8	0.5-0.8	
20											0.5-0.7			
25											0.3-0.5			
Brass N2	1	6.0-10	6.0-10	8.0-13	10-16	10-16	12-18	20-35	20-35	25-35	25-35	35-45	35-45	
	2	2.8-3.6	2.8-3.6	3.0-4.5	4.5-7.5	5.0-6.0	6.0-8.5	6.0-10	6.0-10	8.0-12	8.0-12	20-30	20-30	
	3	0.5-1.0	0.5-1.0	1.5-2.5	2.5-4.0	2.5-4.0	2.5-4.0	4.0-6.0	4.0-6.0	5.0-8.0	5.0-8.0	12-18	12-18	
	4			1.0-1.6	1.5-2.0	2.0-3.0	2.0-3.0	3.0-5.0	3.0-5.0	3.2-5.5	3.2-5.5	5.0-8.0	5.0-8.0	
	5			0.5-0.7	0.9-1.2		0.9-1.2	1.5-2.0	1.5-2.0	2.0-3.0	2.0-3.0	4.5-6.0	4.5-6.0	
	6				0.4-0.7		0.4-0.9	1.0-1.8	1.0-1.8	1.4-2.0	1.4-2.0	3.0-4.5	3.0-4.5	
	8							0.5-0.7		0.7-1.2		1.6-2.2	1.6-2.2	
	10									0.2-0.5		0.8-1.2	0.8-1.2	
	12											0.3-0.5	0.3-0.5	
	14											0.3-0.4	0.3-0.4	
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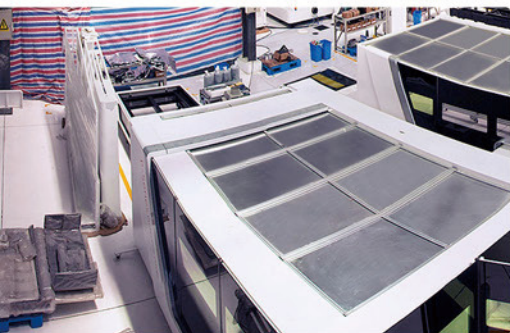




# OFFICE

For more information, please go to the website : [www.bodor.com](http://www.bodor.com)





# WORKSHOP

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