

6+3 Laser Sandblasting Equipment

**New concept laser marking &
laser cleaning general equipment**

A. Control ability of 6 motion axes and 3D laser head

B. Autofocus function, make laser marking and cleaning easier

C. Teaching Demonstration, Non professional personnel can easily use

D. LSB control system, combine laser marking, clean and motion axes control

E. Break through limitation of normal laser machine focal length and process angle



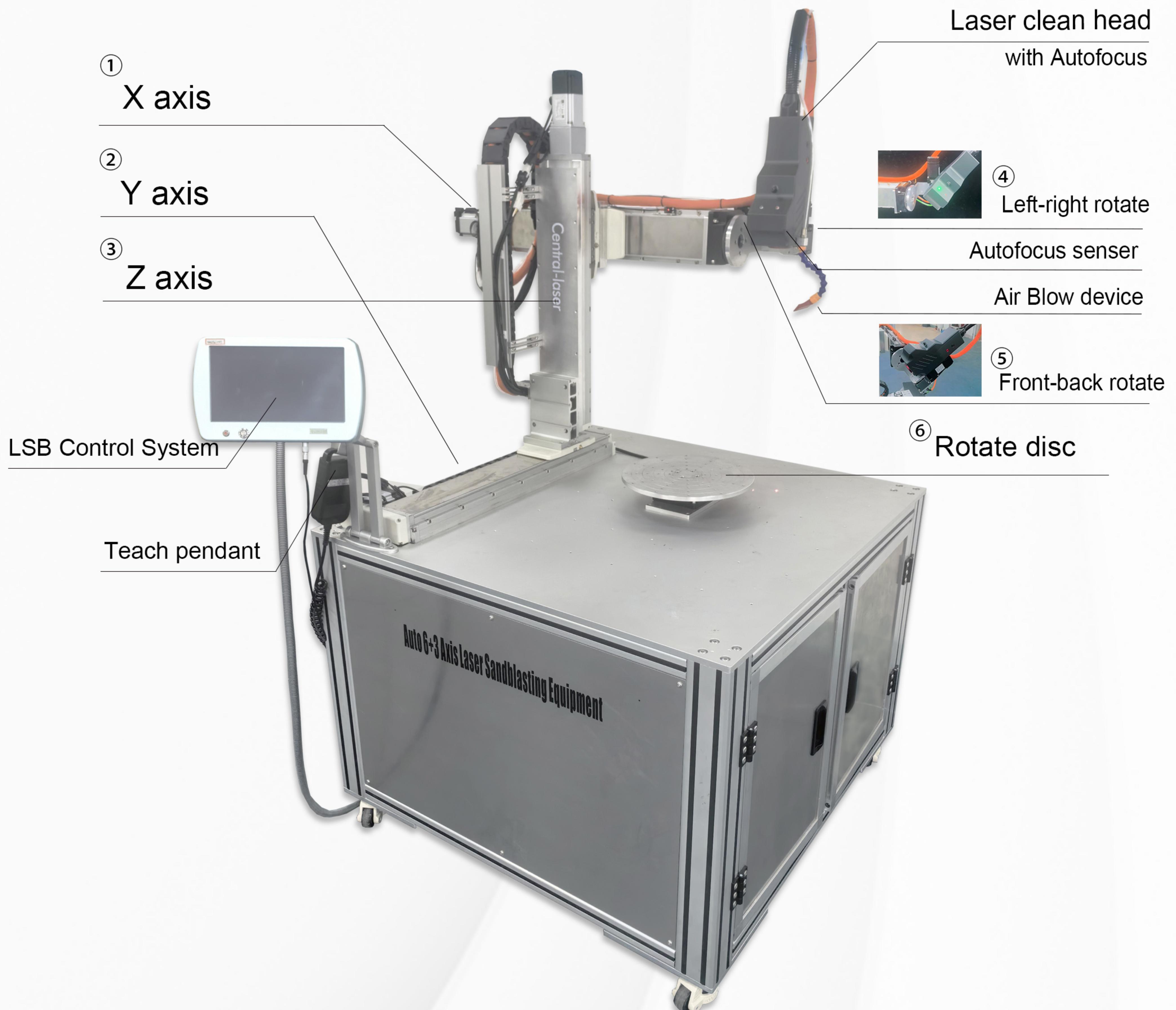
**No need to design additional project equipment
One machine solve application
difficulty of laser marking and cleaning**

6+3

Autofocus Laser Sandblasting Equipment

(Platform Ver.)

0-dead-corner processing for workpieces



Suitable for mold, small workpiece
Processing range: 520*630*330mm

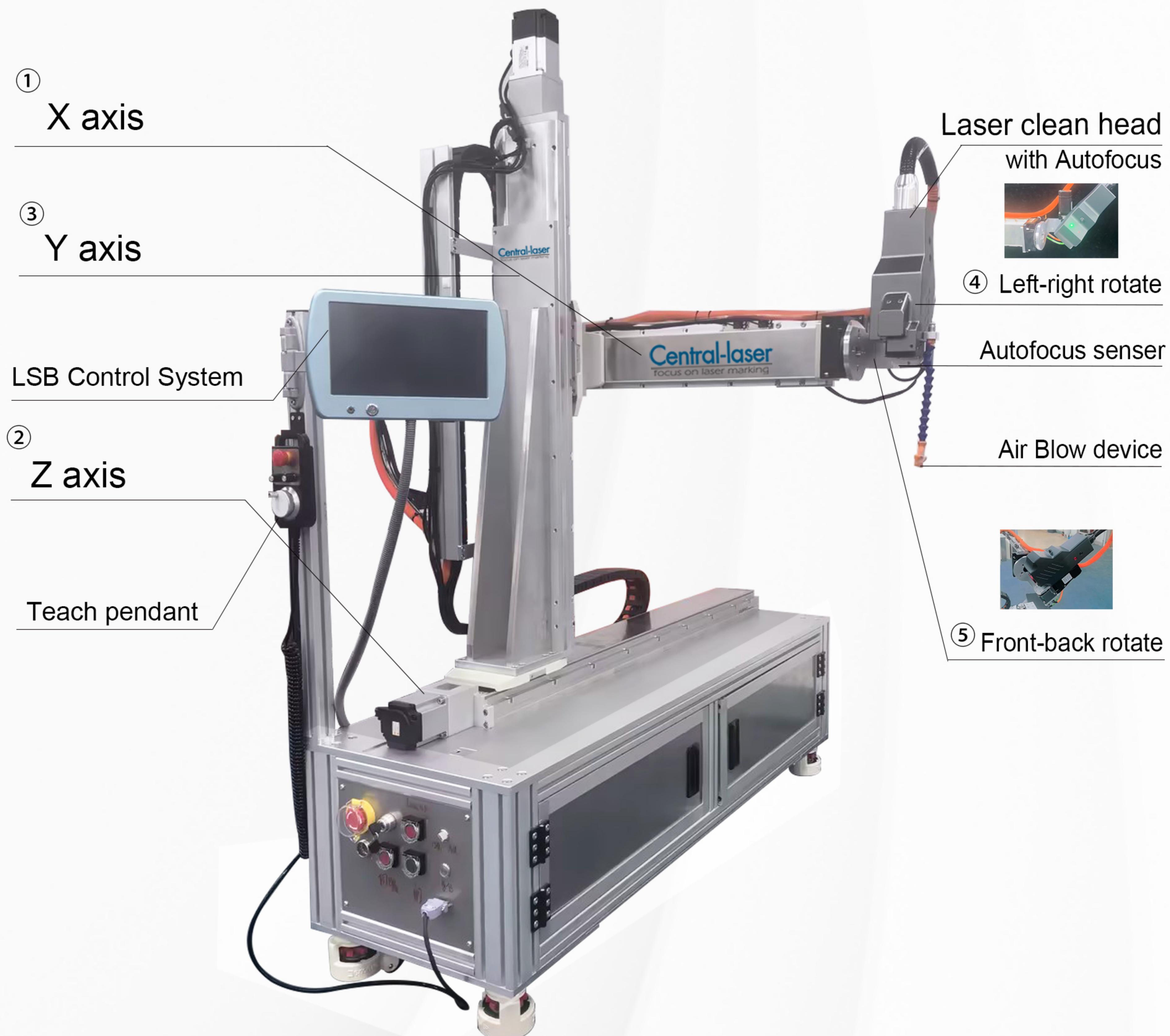
**Focus laser spot at any position on workpiece through
3D laser head and 6 motion axes**

6+3

Autofocus Laser Sandblasting Equipment

(Ground Ver.)

0-dead-corner processing for workpieces



Suitable for large workpieces

Processing range: 1120*930*1150mm

**Focus laser spot at any position on workpiece through
3D laser head and 5 motion axes**

6+3

Autofocus Laser Sandblasting Equipment



Laser Cleaning

A Can clean stereoscopic workpieces at any angle



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B Within autofocus range, don't need adjust focal length to clean



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C Can perform repeat cleaning on specific area with multiple processes



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Laser Marking

A Can mark stereoscopic workpieces at any angle



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B Within autofocus range, don't need adjust focal length to mark



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C Support marking and engraving of characters, patterns and QR codes



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Laser Cleaning

6+3 Autofocus Laser Sandblasting

Can move laser head to workpiece's any position and angle



Can Clean at any position

Normal laser clean



Unable to clean at any position



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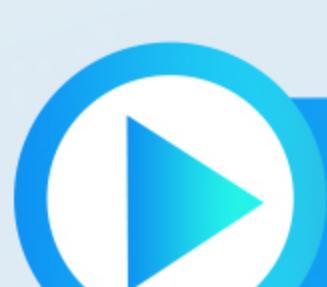
With autofocus, can always maintain laser focus on workpiece



Can Clean on irregular surface



Due to the limitation of laser focal length, unable to clean on workpiece with multilevel height



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6+3 incredible structure design, can easily clean workpiece's every surface



Can Clean Stereoscopic workpiece



Unable to clean automatically
Can only manually clean



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Can record every processing path and pram. through Teaching Demonstration to repetitive processing automatically



Can Clean Automatically



Can't clean workpiece repetitively in a fixed processing path



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Control 6 axes and 3D glavo's Z-axis, put laser focus into blind hole form different angle to clean



Can Clean Blind hole & Dead corner



Can only clean manually, waste time



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Laser Marking

6+3 Autofocus Laser Sandblasting

Don't need to find focus
through 3D glovo and
Autofocus



Easy Mark

Normal laser
mark



Must find focus accurately



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Can control 3D glovo
to workpiece's any
position and angle



Mark at
any position



Unable to mark every position



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Due to focal length of
3D glovo , can mark on
multilevel height
at the same time



Mark on
multilevel height



Unable to mark on multilevel
height at the same time



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Can engrave in one
time, don't need to
move laser head



Engrave



Unable to engrave



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3D laser head, easily
break through 2D marking
limit. Can cut within 5mm.
Cooperate with wobble
line, make cutting faster
and more even.



Cutting



Unable to cut



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Operational Advantage

Teaching Demonstration

Don't need 3D model, can perform automatic process

Move laser head and edit the machining path through Teaching Deconstration.

Control teaching pendant or touch screen to simulate machining path.

After editting the path, can directly perform automated process



LSB Control system

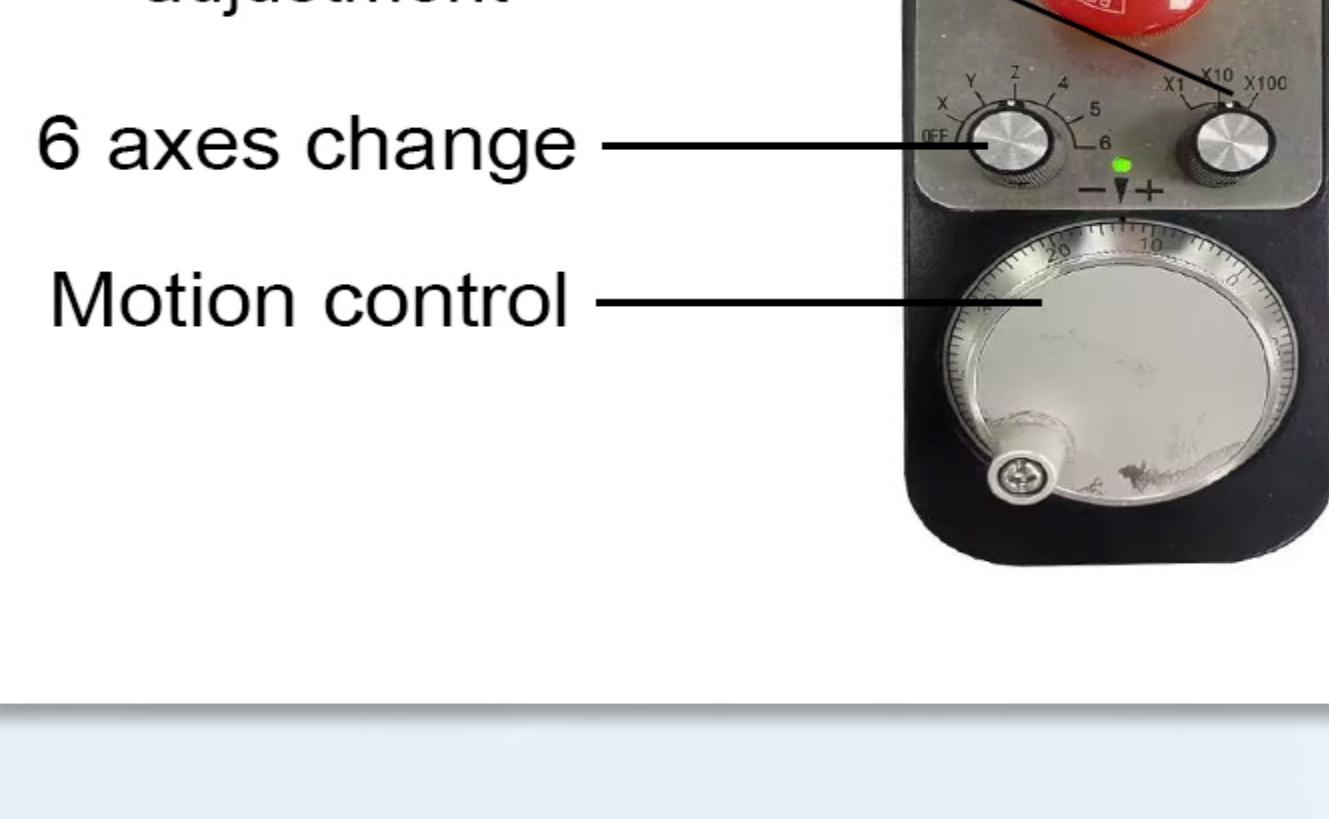
Touch Screen

Can edit the machining path and parameter



Teaching pendant

Control 6 axes through teach pendant to set processing path. It can adjust motion range for high accuracy process



6 Motion Axes

Can move laser head to workpiece any position and angle

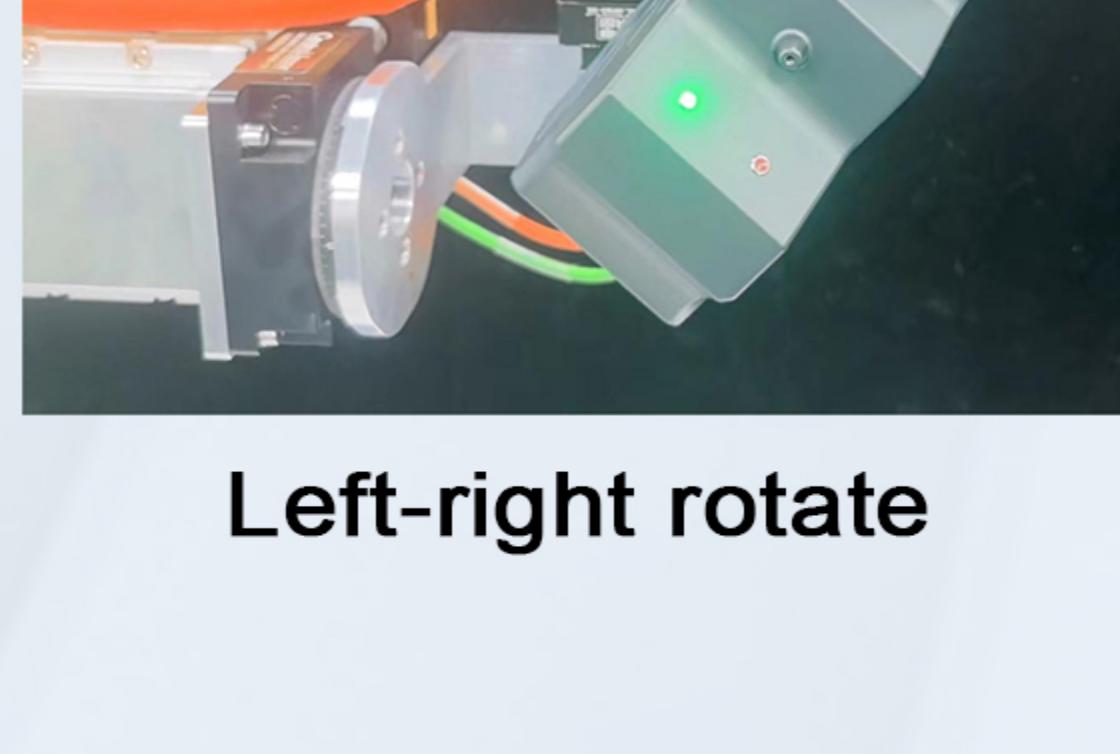
Coporate with Teaching Demonstration, control X, Y, Z axes, glavo front-back rotate, glavo left-right rotate, rotate disc for workpiece.



XYZ axes move



Front-back rotate



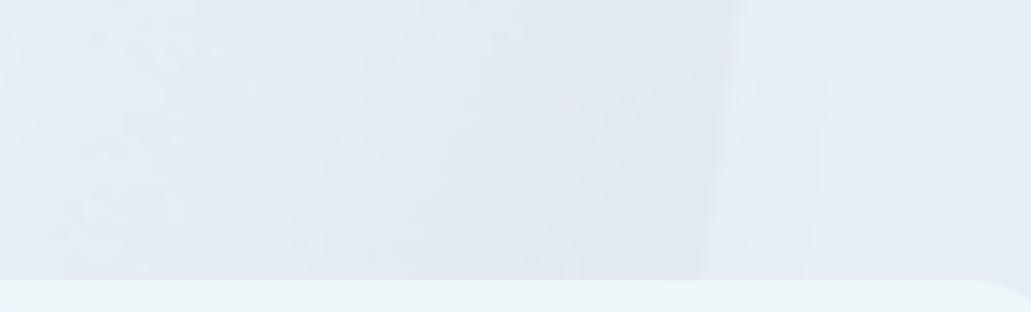
Left-right rotate



Workpiece rotate disc

High Accuracy Repetitive Process

Control laser marking and cleaning accuracy through motion axes and laser head. Make sure process area won't shifting, accuracy can up to $\pm 0.01\text{mm}$.



3D Laser Head Autofocus

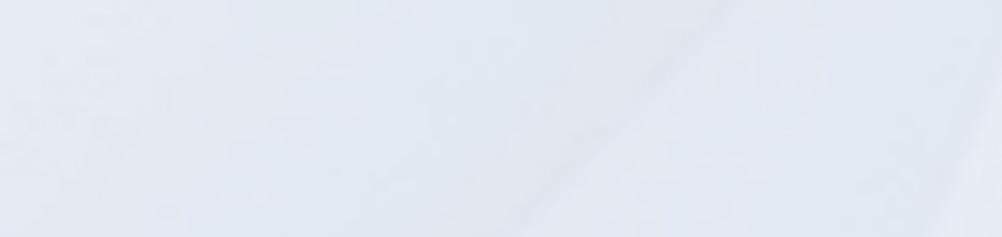
Within autofocus range

Can maintain laser focus always on workpieces
Don't need to adjust focus



Beyond autofocus range

Move laser head to make the part which exceeds the autofocus range back to the range



Laser Spot Control



Enlarge laser spot, have higher efficiency for rust,oil clean

Spot	On Focus	Slightly Defocus	Defocus
Effect			
Feature	The smallest spot, strongest power. Suitable for cutting, engraving, and removing heavy rust	Spot bigger. Suitable for paint, rust removal	Bigger spot. Suitable for oil removal

Process Mode

Static Process

Laser Head & Workpiece fixed to clean/mark

Static Cleaning

1. Specific area clean

Control laser head and motion axes to move to any position and angle

2. Repetitive clean

Set different parameter for each clean and do repetitive clean on specific area

3. Multilevel height clean

3D laser head, can set clean layer for each height directly clean without moving laser head

Static Marking

1. Specific area marking

Control laser head and motion axes to move to any position and angle

2. Engraving

Using 3D laser head focal length, can engrave without moving laser head

3. Multilevel height clean

3D laser head, can set clean layer for each height directly mark without moving laser head

Dynamic process

Laser head/workpiece move while cleaning

1. Normal clean

Can control laser and motion axes around workpiece to clean

3. Automated component clean

Can copy machining path and move to specific area for same path clean

2. Repetitive clean

Can set parameter for each clean to perform repetitive clean

4. Autofocus clean

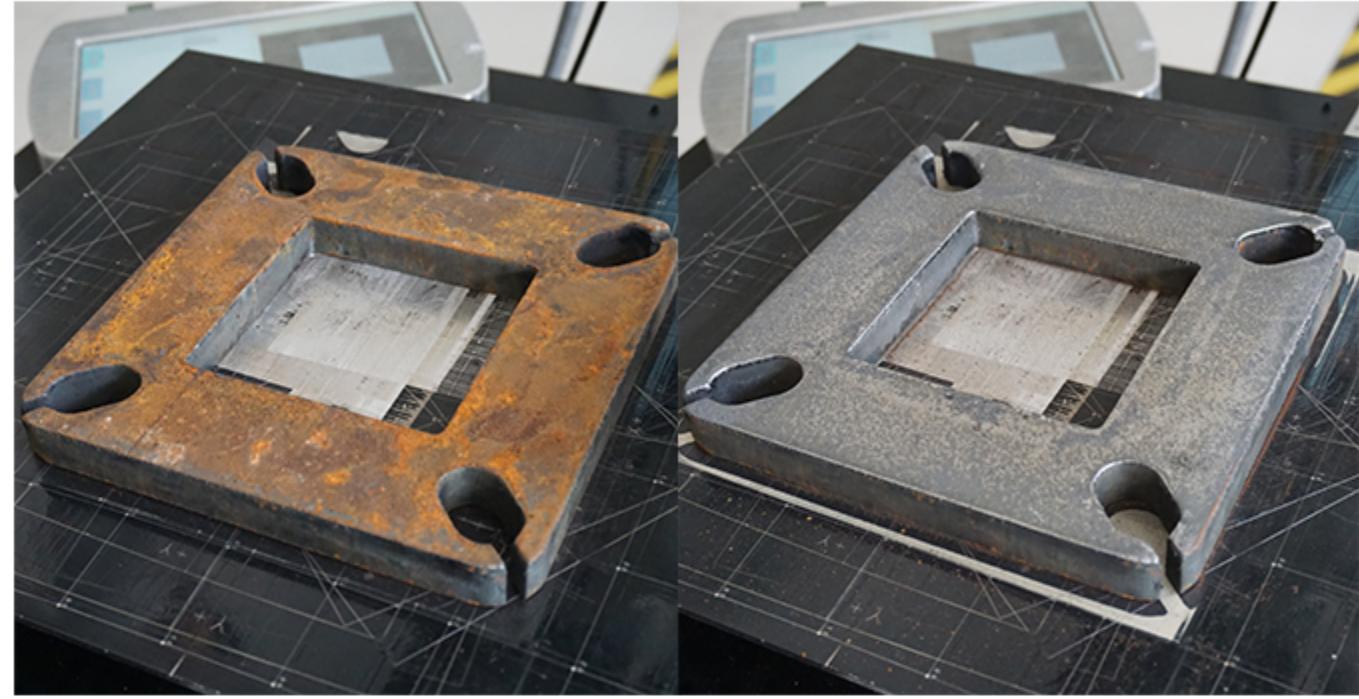
Within autofocus range, can always keep laser focus on the surface of workpiece

Application

Basic function

Laser Cleaning

Rust | With autofocus , can keep laser focus on workpiece, easy to remove rust



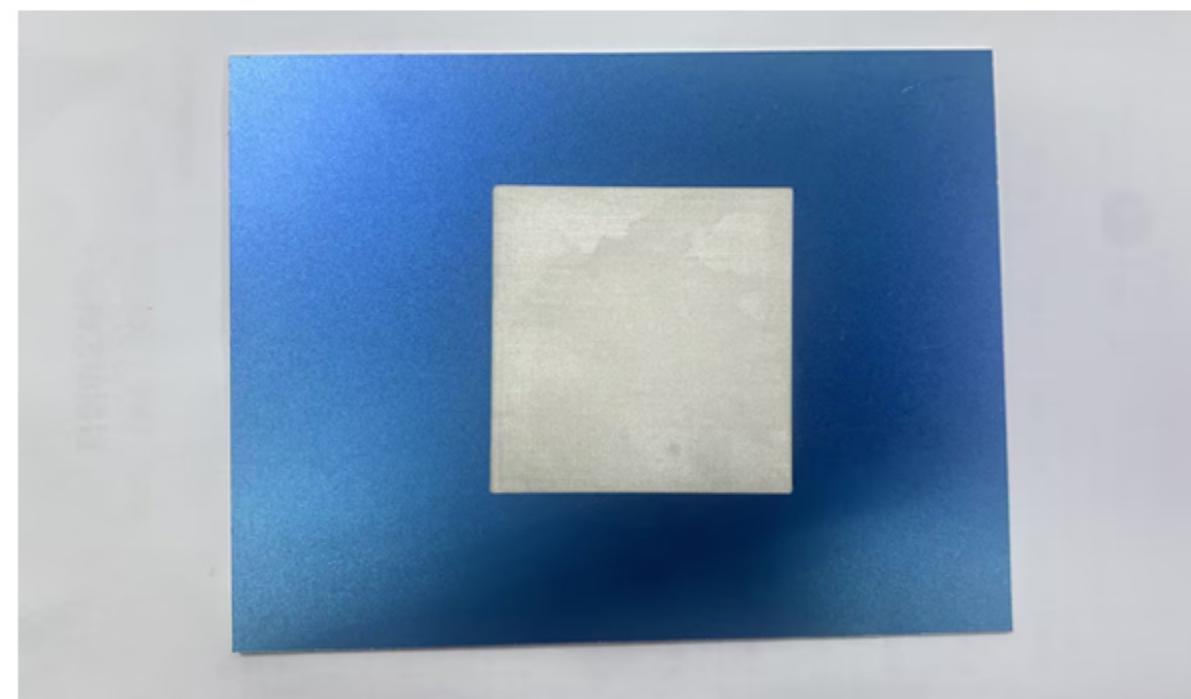
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Oil | Enlarge laser spot slightly to remove oil



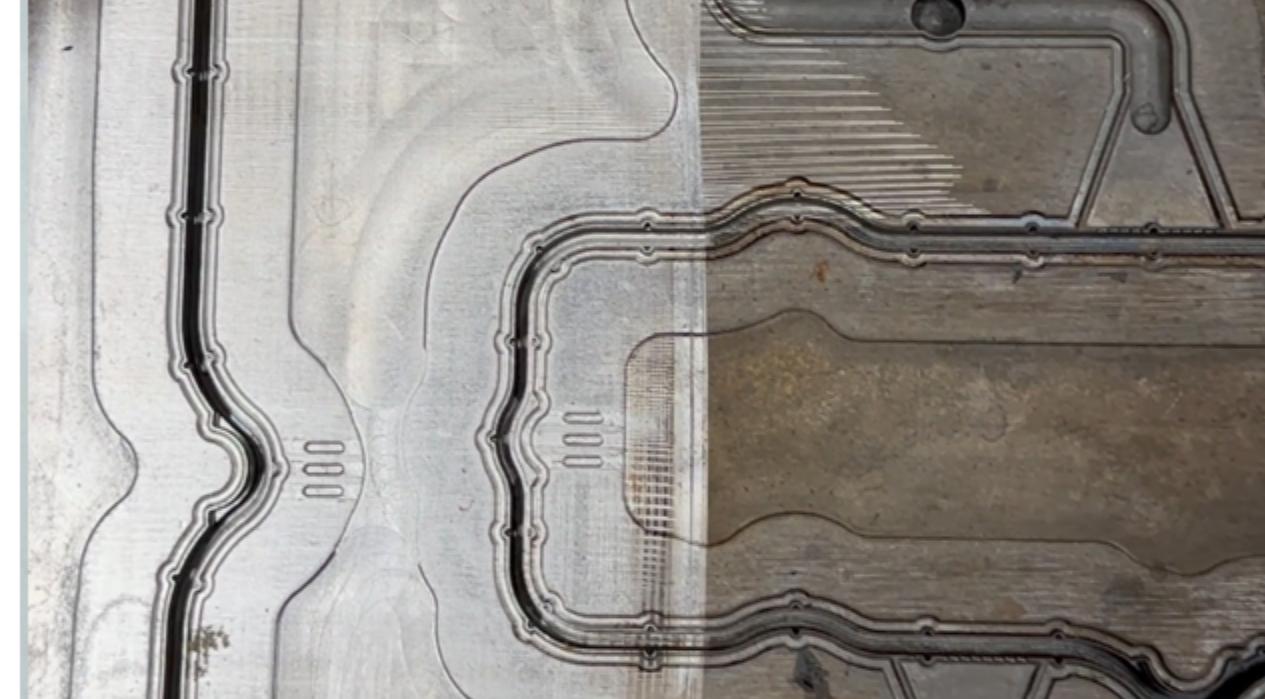
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Paint | Enlarge spot to remove paint



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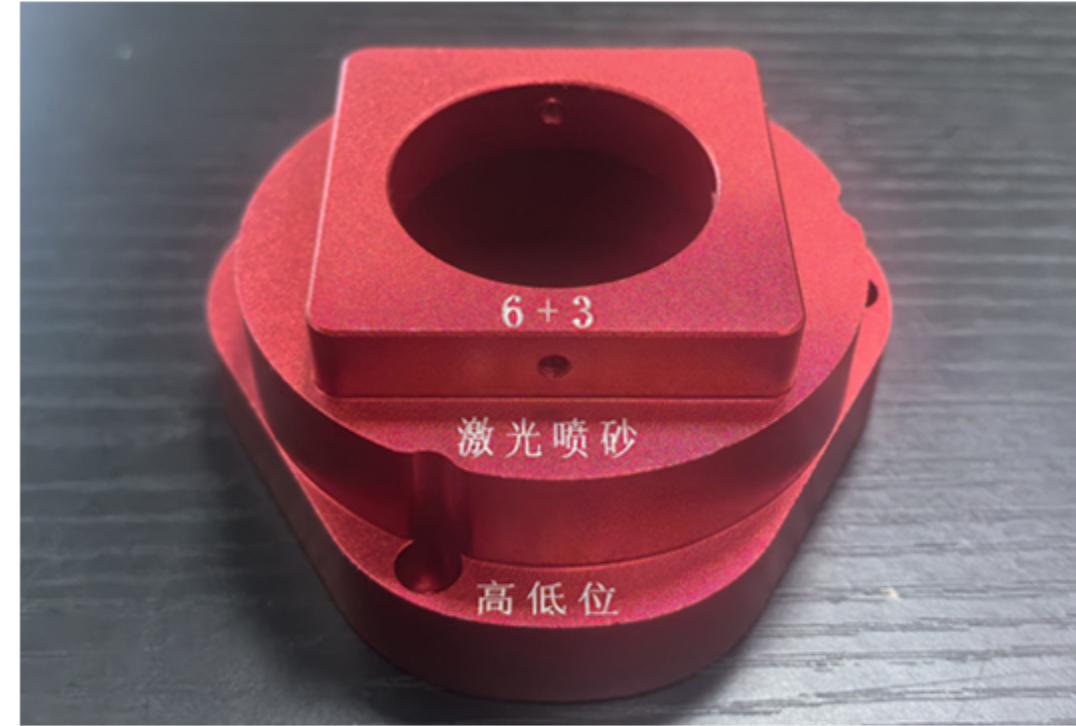
Dirt | Enlarge laser spot to largest size, power will decrease, don't hurt substrate



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Laser Marking

Multilevel height | Within focal length range, can mark on multilevel, don't need to move laser head



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QR code | Support all kind of codes



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Deep-Caving | 3D laser head, don't need to move while deep-caving



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Relief | 3D laser head, don't need to move while relieving



Depth: 3.0mm

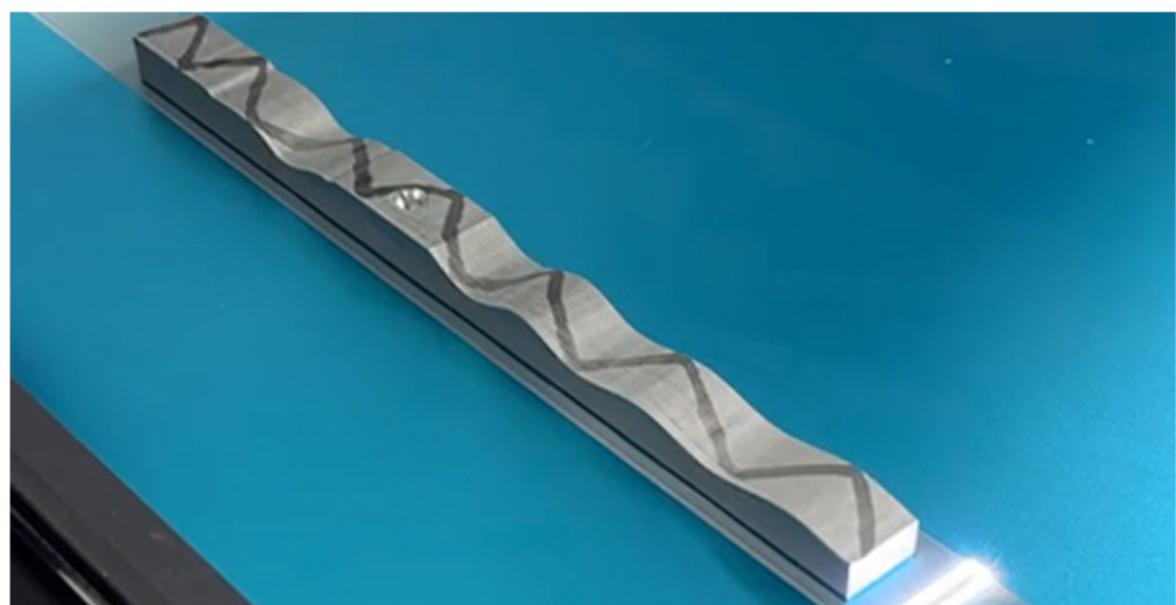


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Specific Features

Uneven surface clean

Detect workpiece's height through Autofocus. Automatically change focus to clean



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Through-hole clean

Move laser head and motion axes to project laser into the hole to clean automatically



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Mark on Any position

Can move laser head and mark at any angle and position



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Wobble Line Cutting

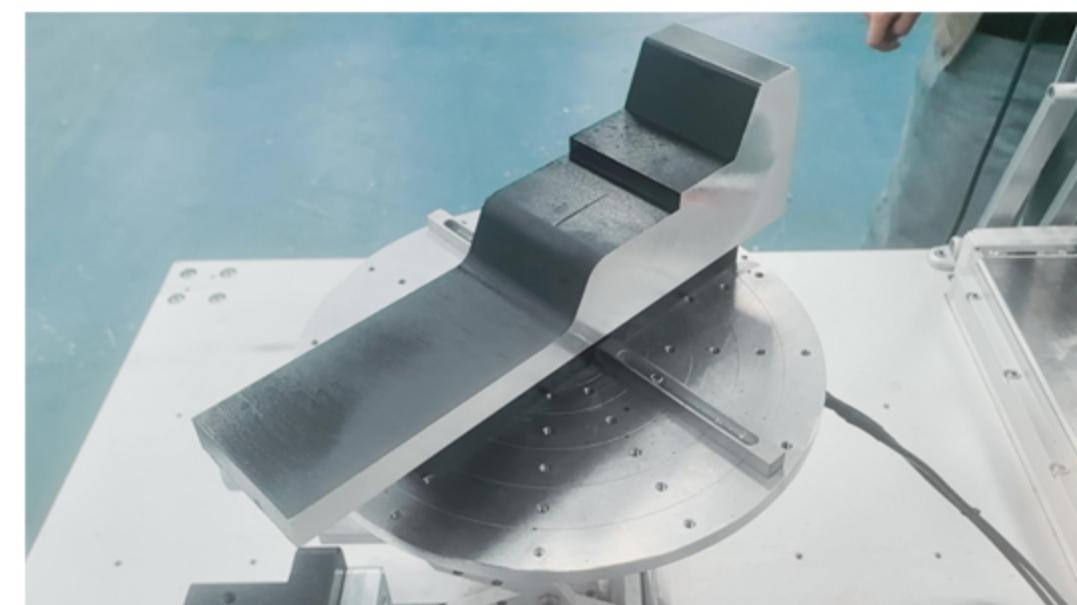
By wobble line cutting, can cut faster, have higher accuracy and more even edge. Can cut 1-5mm



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Stereoscopic workpiece clean

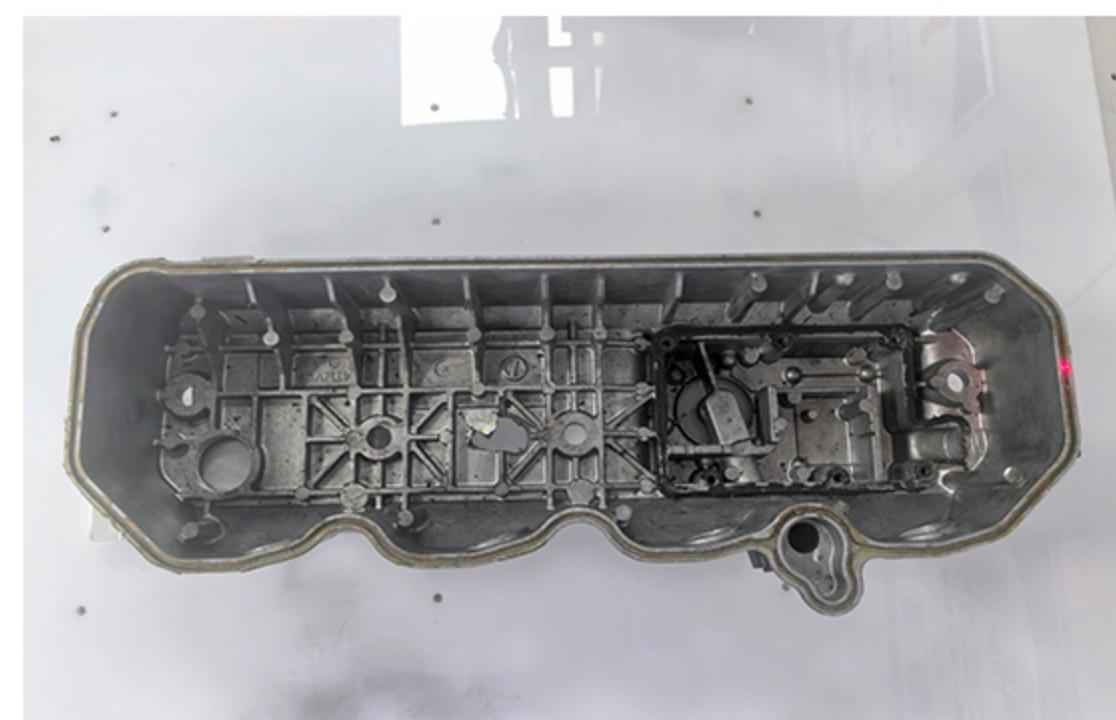
Move laser head and motion axes to clean around stereoscopic workpieces



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Non-standard workpiece clean

Edit machining path by Teaching Demonstration and perform automated clean



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Roughen

Can perform repetitive process to roughen the surface



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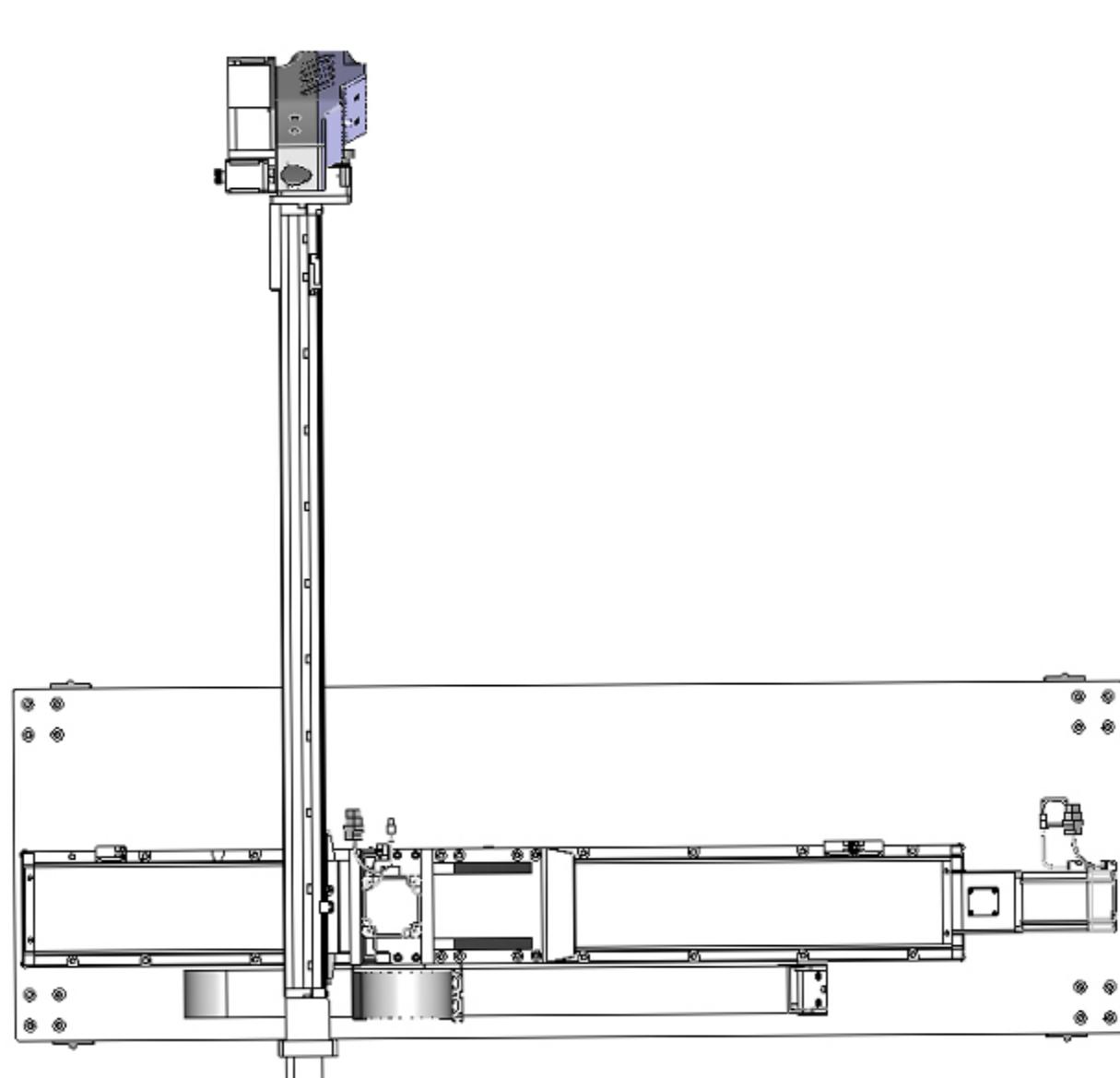
Parameter

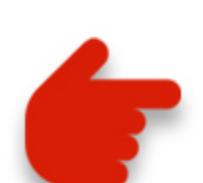
6+3 Autofocus Laser Sandblasting Equipment (Platform Ver.)

Model		LSB-AN3D-200-40-55-40-RO-140D	LSB-AN3D-300-40-55-40-RO-140D
Laser source	Power	200W mopa	300W mopa
	Pulse energy	Single mode 2mj	
	Wavelength	1064nm	
	Frequency/Pulse width	1-3000KHz / 13-500ns	
3D Glavo	Scan speed	≤14000mm/s	
	Scan range	140*140mm	
	Max. Min. Focal length	Min.: 215mm Max.: 253.5mm	
	Virable focal length	38.5mm	
	Marking position accuracy	≤0.0176mm	
User Operation	Control System	LSB Control System	
	Teach Pendant	Handweel Teach Pendant (6 axes)	
	Touch Screen	10.1"	
Platform (Customizable)	Size(Length,Width,Height)	1017*997*1687mm	
	Bearing	200kg	
	Motion Range	X axis: 1-400mm	Y axis: 1-550mm
	Max. Process area	520mm*630mm	
	Max. process height	330mm	
	Glavo left-right rotate angle	Left 39° Right: 39°	
	Glavo front-back rotate angle	±100°	
Rotate disc (optional)	Diameter	300mm	
	Height	70mm	
	Bearing	30kg	
	Rotate angle	360°	
Work Demand	Cooling	Air Cooling	Structure
	Working Temp.	0~40°C	
	Power Supply	110~220V, 50/60HZ	
	Power Consumption	2500W	



6+2 Automatic Laser Sandblasting Equipment (Ground Ver.)

Model		LSB-200-100-80-80-140L	LSB-300-100-80-80-140L
Laser source	Power	200W mopa	300W mopa
	Pulse energy	Single mode 2mj	
	Wavelength	1064nm	
	Frequency/Pulse width	1-3000KHz / 13-500ns	
2D Glavo	Scan speed	≤14000mm/s	
	Scan range	140*140mm	
	Virable focal length	248mm	
	Marking position accuracy	≤0.0176mm	
User Operation	Control System	LSB Control System	
	Teach Pendant	Handweel Teach Pendant (6 axes)	
	Touch Screen	10.1"	
Axes Table	Size(Length,Width,Height)	1518*460*1010mm	
	Motion Range	X axis: 1-1000mm	Y axis: 1-800mm
	Max. Process area	1120mm*930mm	
	Max. process height	1150mm	
	Glavo left-right rotate angle	±180°	
	Glavo front-back rotate angle	±160°	
Work Demand	Cooling	Air Cooling	
	Working Temp.	0~40°C	
	Power Supply	110~220V, 50/60HZ	
	Power Consumption	2500W	
Structure			

 [Click to see more details](#)