

N3D

Autofocus Flying Laser Marker



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86-0512-66359058



4 Breakthroughs

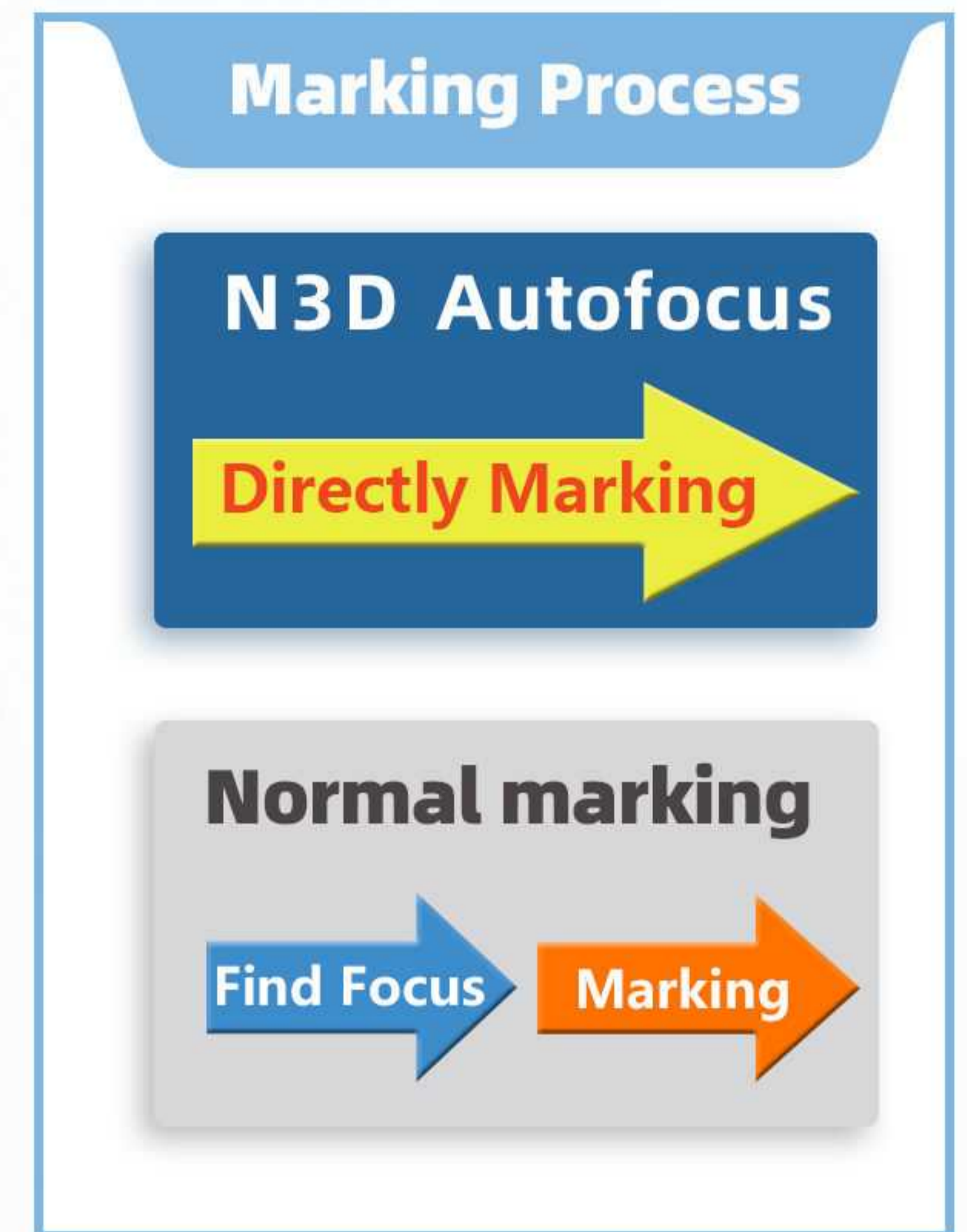
01

More convenient operation



With 0 Delay Autofocus, can detect workpiece height automatically, don't need to find focus manually. Even height changes, can directly mark without changing laser head position.

- ★ Simplify marking process
- ★ Can mark on multi-height in one time
- ★ 0 Delay Autofocus, Significantly simplify mechanical design



02

Faster flying marking speed



When marking filling patterns such as Bar codes and QR codes, N3D can adjust defocus to enlarge spot, and increase the filling spacing to improve the marking speed.

- ★ Can increase 35-40% flying marking speed in QR code

2D

Pipeline: 20m/min
Mark Speed: 8000mm/s
Power: 60%
Specing: 0.08mm

Pipeline: 30m/min
Mark Speed: 8000mm/s
Power: 60%
Specing: 0.08mm

Code distorted when speeding up pipeline

N3D

Pipeline: 20m/min
Mark Speed: 8000mm/s
Power: 60%
Specing: 0.08mm

Pipeline: 30m/min
Mark Speed: 8000mm/s
Power: 80%
Specing: 0.15mm

Code is still scannable when pipeline speed up

N3D can adjust defocus to enlarge laser spot; marking line is thicker and clearer without affecting pipeline speed

- ★ Make font clearer and thicker without filling in
- ★ Improve marking quality without affecting pipeline speed

2D



Pipeline: 20m/min
Mark Speed: 4000mm/s

2D laser marking cannot change thickness of font lines unless filling fonts are used

N3D

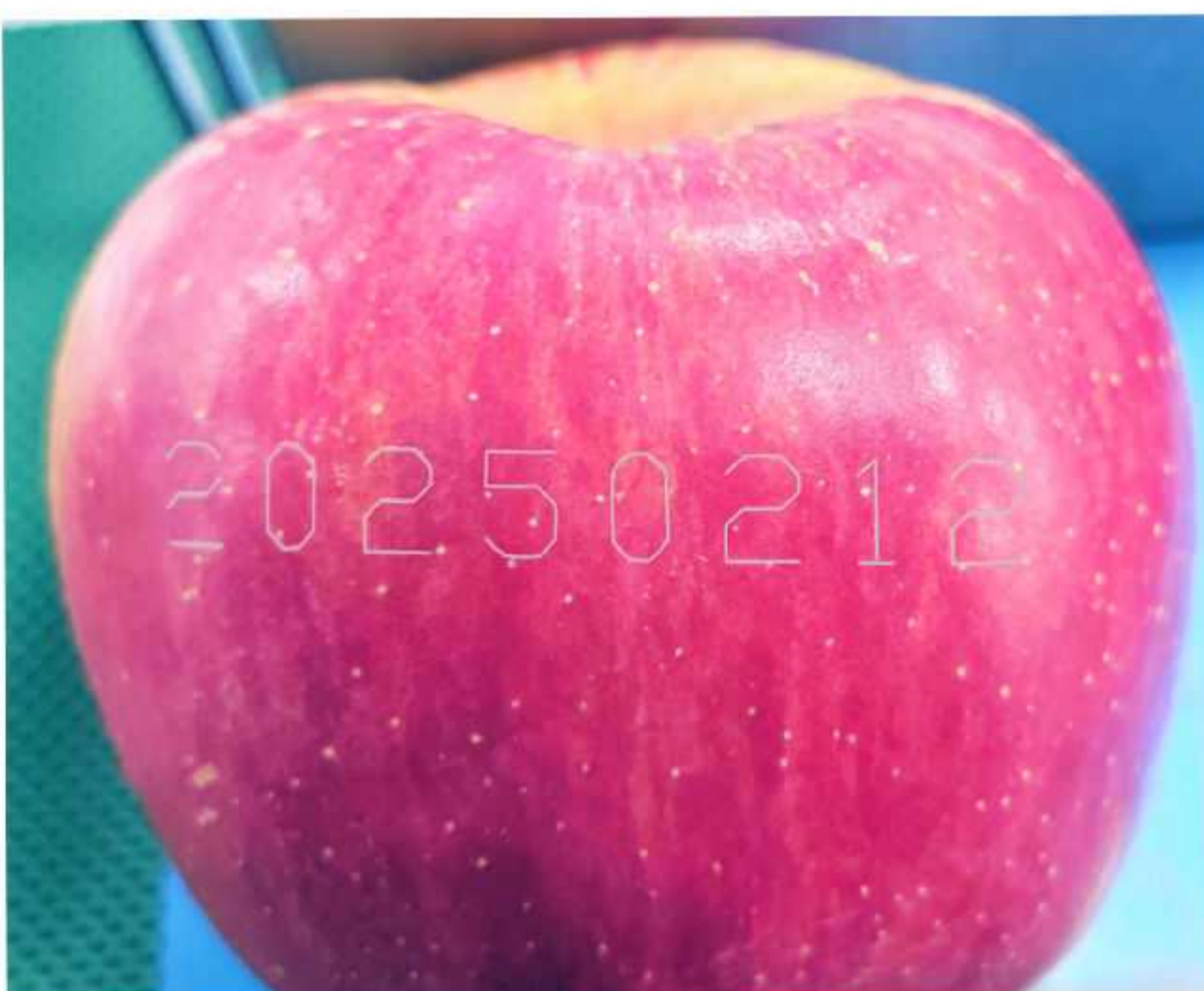


Pipeline: 20m/min
Mark Speed: 4000mm/s
Defocus: 0mm

Pipeline: 20m/min
Mark Speed: 4000mm/s
Defocus: 8mm

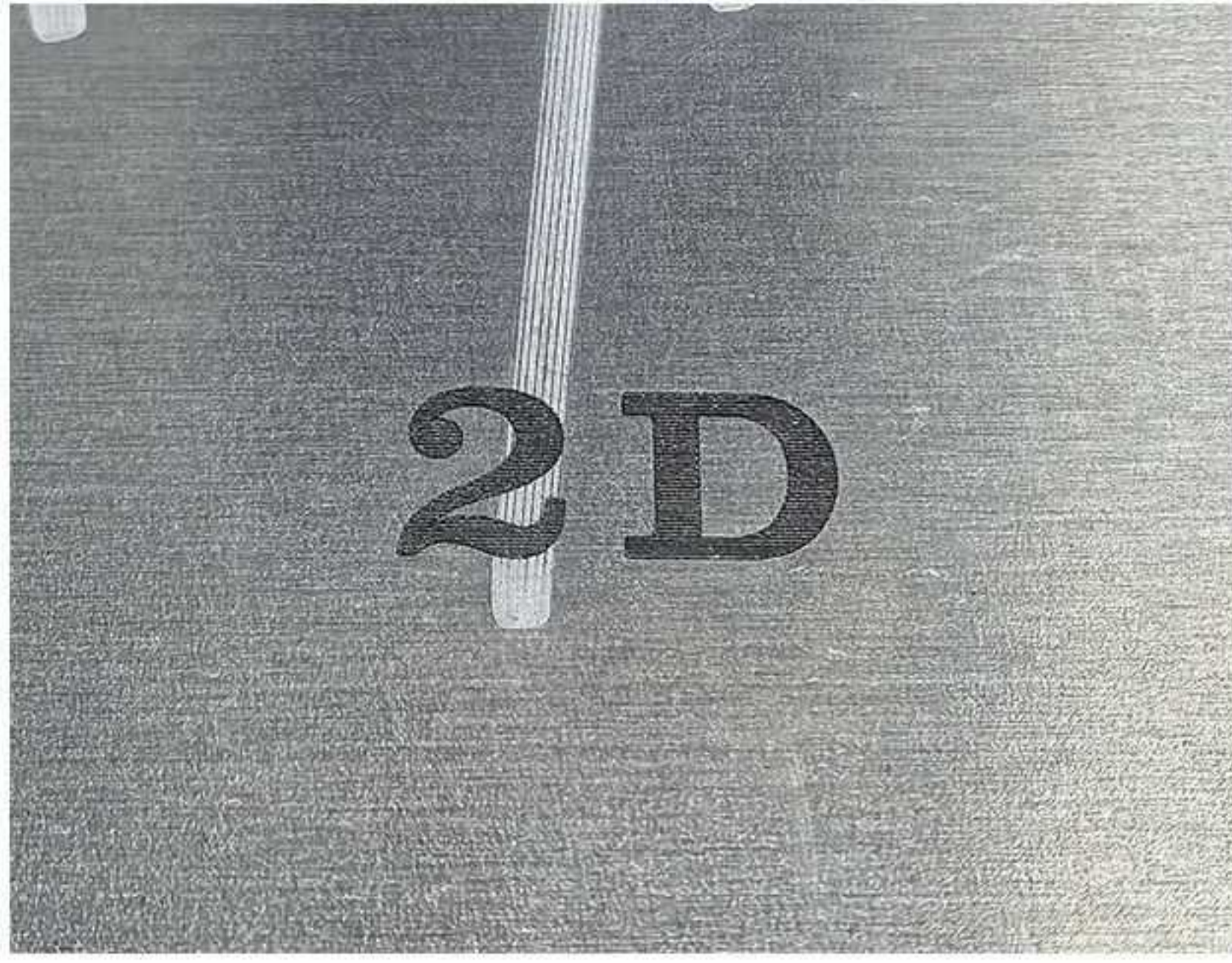
Without changing marking parameters and pipeline speed, adjusting the defocus and laser power alone can make the marking font lines thicker and clearer

Autofocus function, real-time detection of height of the workpiece, ensuring that the focus of each marking character is maintained in the correct position.



- ★ Can mark inclined, curved and irregular surfaces
- ★ Solving the problem of inconsistent marking effects caused by height errors in workpieces
- ★ Can mark uneven surfaces of finished packaging bags, fruits, etc

02 ENGRAVING



2D Engrave depth < 0.2mm

2D marking machines cannot change the focal length and can only rely on effective focal depth, difficult to engrave over 0.2mm

Can only lift column to adjust focus to engrave



N3D Engrave depth > 3mm

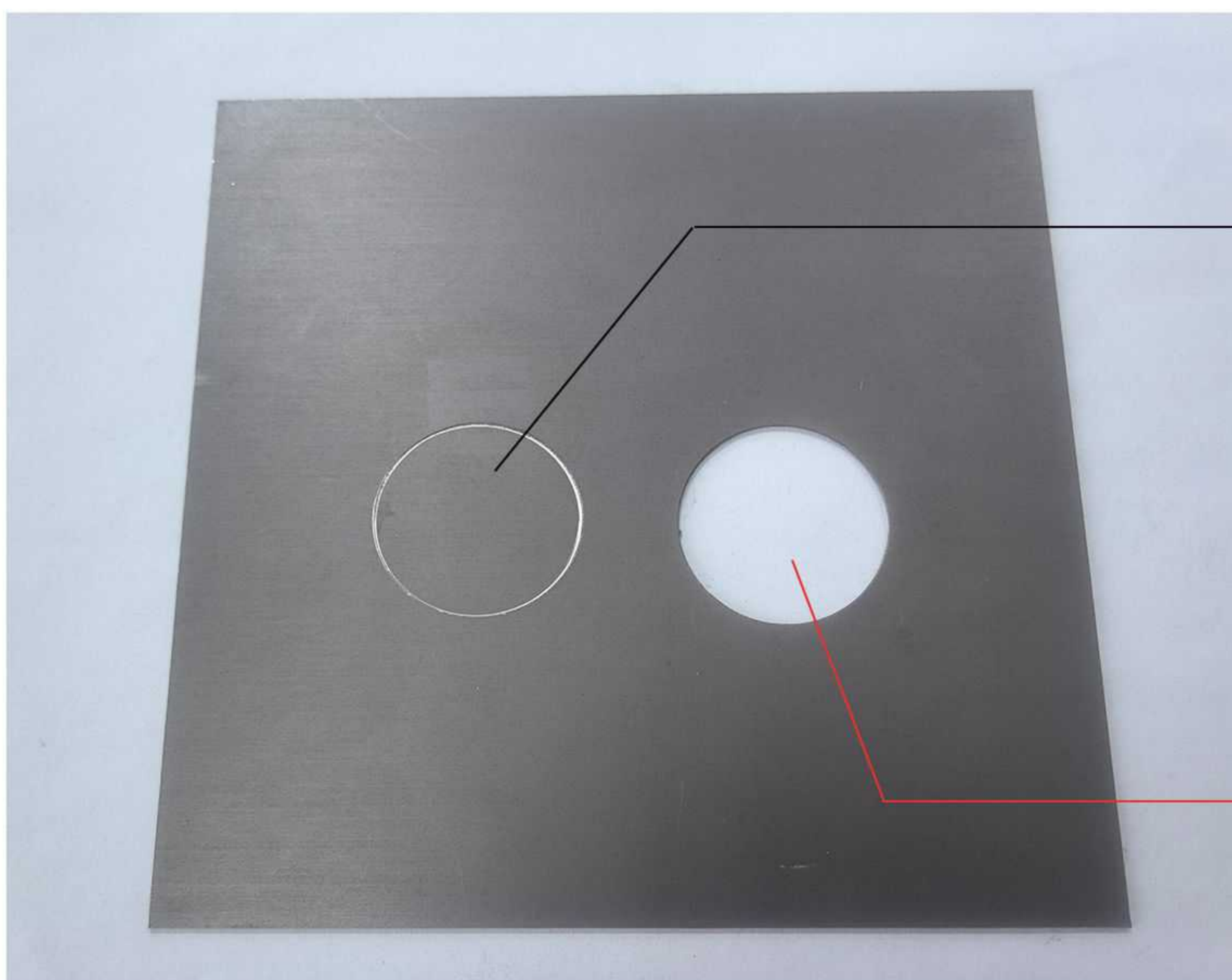
3D laser head can easily engrave over 10mm

Focus can be kept on the actual engraved surface, the engraving process can be edited in the program to complete engrave in one time

03 CUTTING



2mm Aluminium
Cutting Time: 5min



2D Marker

Due to 2D focus limit,
can't cut over 0.2mm

N3D Marker

Through 3D focal length,
can cut over 3mm

With wobble line function,
cut faster and more even

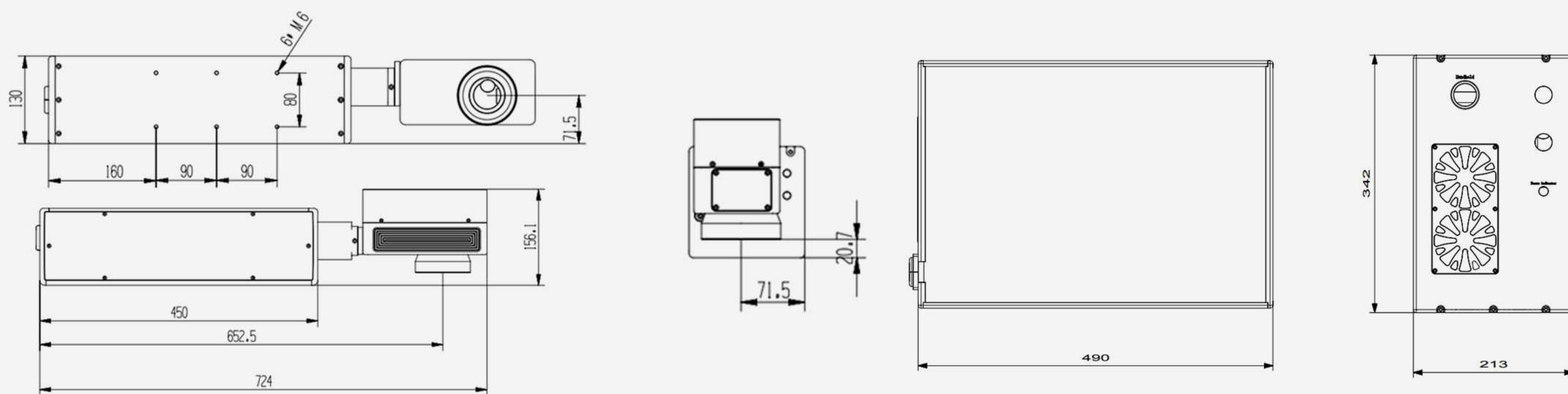
规格参数

光纤10光斑 3D自动对焦激光打标机规格参数

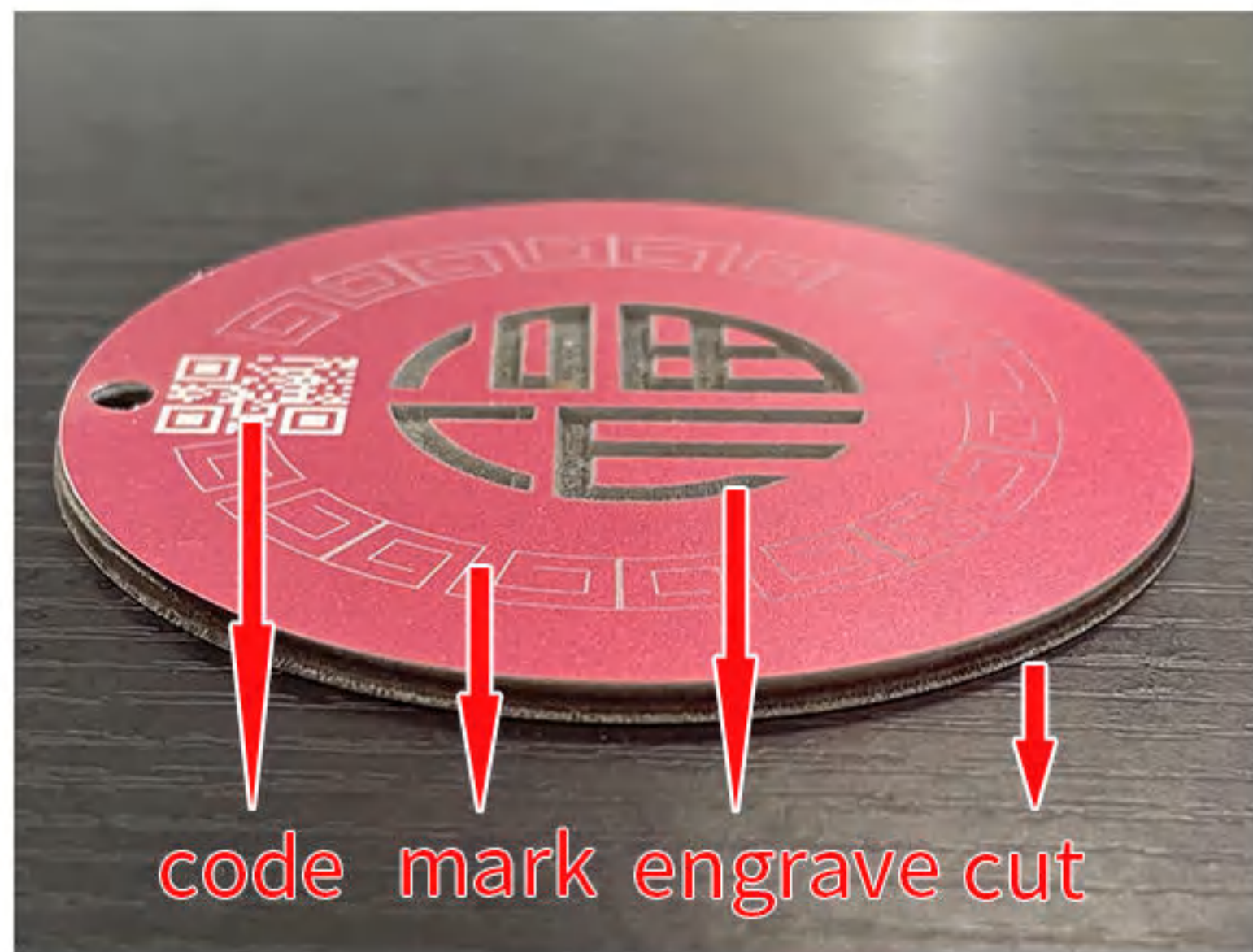
整机构成：激光打标控制系统（N3D触控屏+板卡）+3D振镜+电源+自动对焦模块

型号	CK-N3D-100FB
激光功率	100W
激光波长	1064nm
XY轴速度	≤7000mm/s
动态Z轴速度	≤3000mm/s
打标幅面	标配70mm
标刻特点	深雕（突破焦深限制，深度轻松可达2mm）；高低位阶；自动对焦；螺旋线深雕
冷却方式	水冷
操作系统	N-3D激光控制器，MC3++激光打标控制卡
3D振镜	提供平面精密校正档及焦距误差校正档案
接口	USB接口，编码器接口，I/O接口，光电开关接口等
语言版本	简体中文，繁体中文，英文
字体	TURETYPE，单线体，点阵字，独有内部自带字体
电力需求	110~220V，50~60HZ
最小打标字号	0.2*0.2mm
环境温度	10~40℃
重量	约25Kg
可选其他光源	紫外、绿光
选配	冰水机

电源箱及光机座结构图



APPLICATION

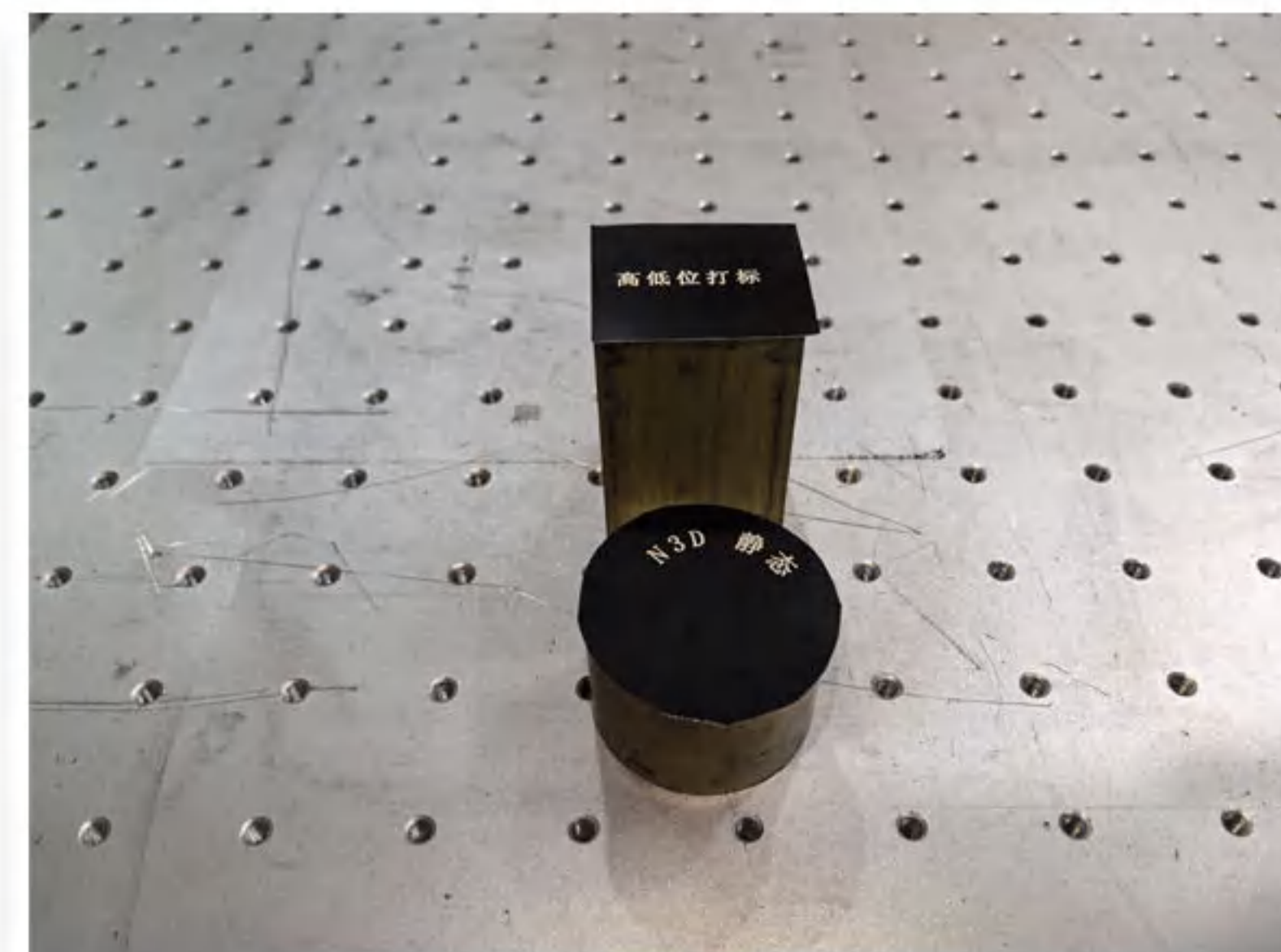


code mark engrave cut

Aluminium Depth: 2mm



Multi-height marking



Multi-height objects marking



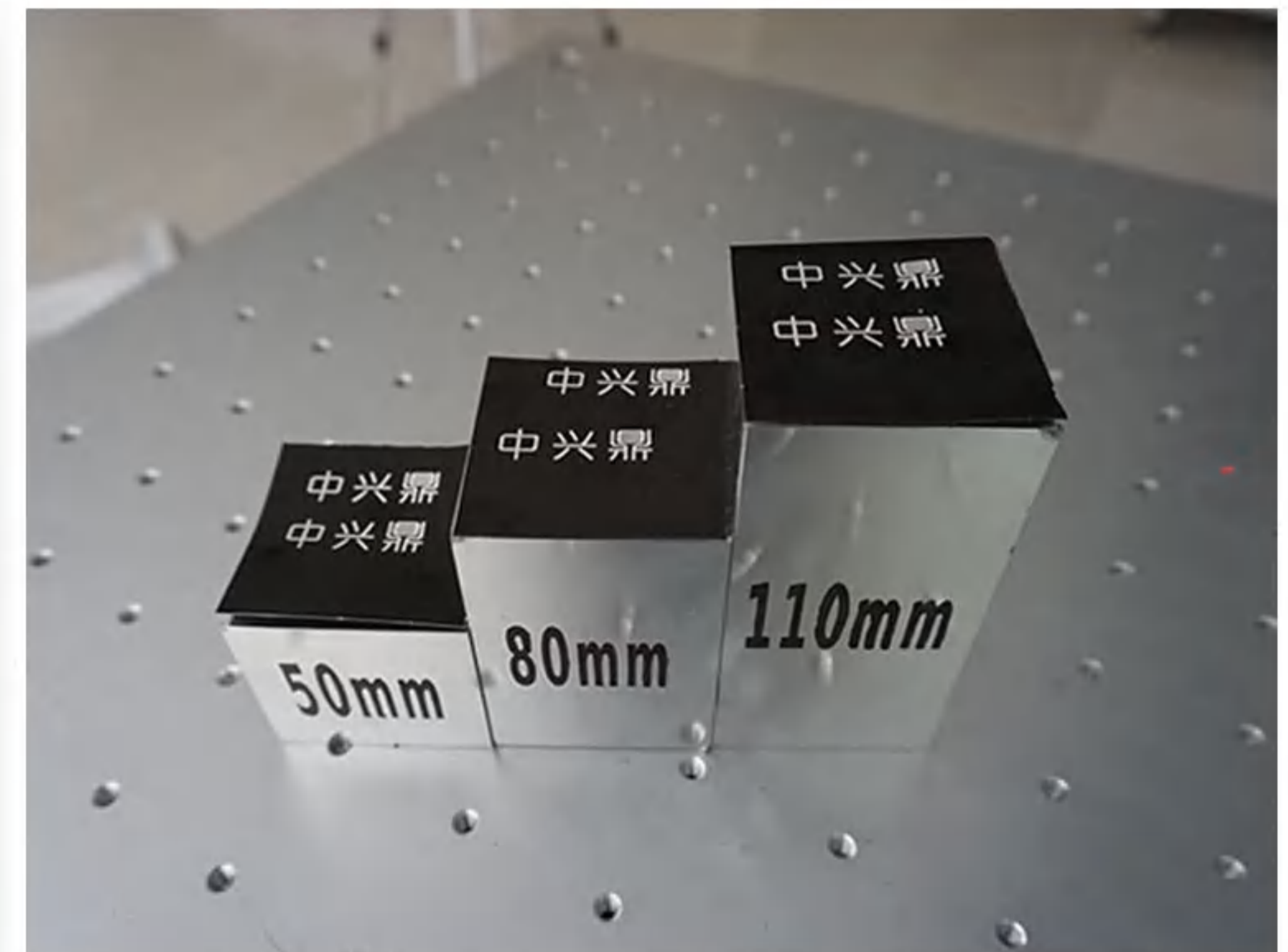
Engraving



Date of manufacture



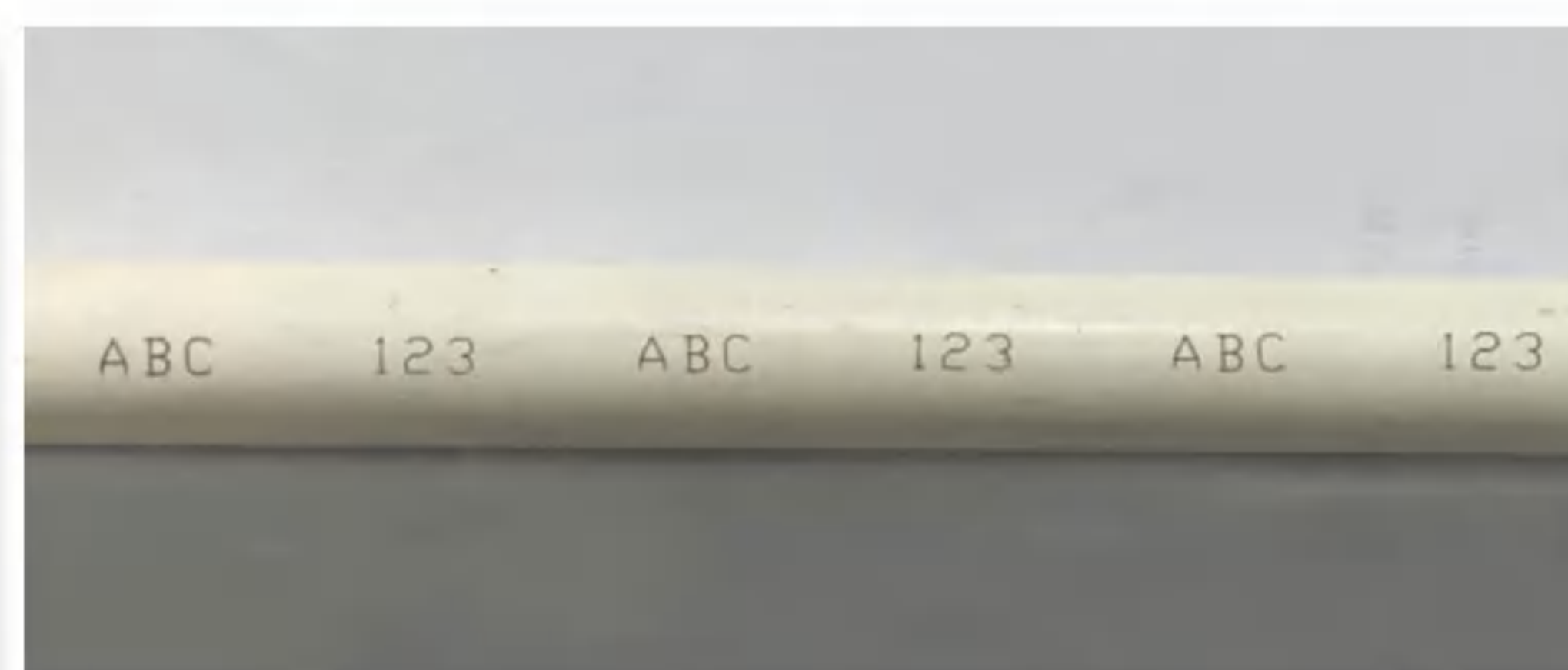
Different height flying marking



Different height marking in one time



PVC pipe (same character)



PVC pipe (different character)



Cable marking



Medicine box



Multi-height marking in one time



Mold marking



Cutting and engraving



Cable marking



Metal marking

PARAMETER

3D Autofocus Laser Marker

Component: Laser control system (N3D+control card) +3D laser head +power supply +autofocus module+table+pipeline

Model	CK-N3D-5UV	CK-N3D-10UV
Power	5W	10W
Wavelength	355nm	
XY Speed	≤7000mm/s	
Z axis Speed	≤3000mm/s	
Marking area	110mm (optional)	
Cooling	Water-cooling	
Control system	N3D control system, MC3++ laser control card	
3D Laser head	Provide plane precision correction files and focal length error correction files	
Interface	USB interface, encoder interface, I/O interface, photoelectric switch interface, etc.	
Language	CHS, CHT, English, Japanese, Korean, Vietnamese, Portuguese, etc.	
Typewrite	TURETYPE, single-line style, dot matrix characters, unique internal fonts	
Power demand	110~220V, 50~60HZ	
Min marking size	0.2*0.2mm	
Temperature	10~40°C	
Weight	≈50Kg	
Size	85*95*145cm	
Optional laser source	1064nm, 532nm	