



HLF Series

High-Speed Fiber Laser Cutting Machine



01 Value experience

Perfect combination of production efficiency and performance

02 Superb craftsmanship

High-speed cutting of thin plates, precise and perfect piercing of medium and thick plates

03 Smart guard

Intelligent operation interface for equipment status monitoring and comprehensive upgrade of cutting expert parameter library

04 Unparalleled technology

Nano-level interpolation, independent CNC control technology, to ensure extremely fast response of each axis

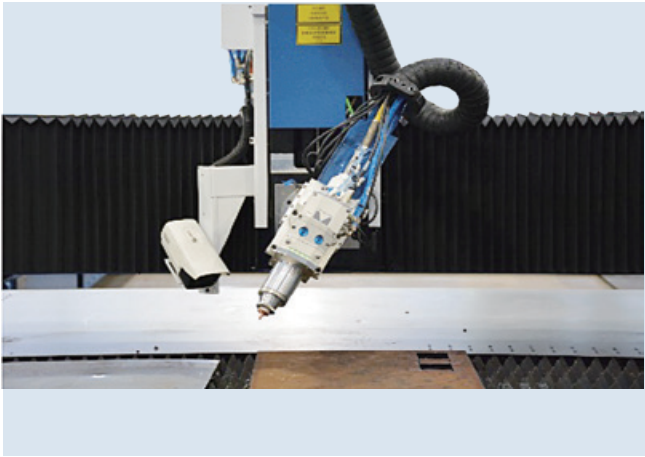
Strongest control system SIEMENS 840DSL



Key technical parameters

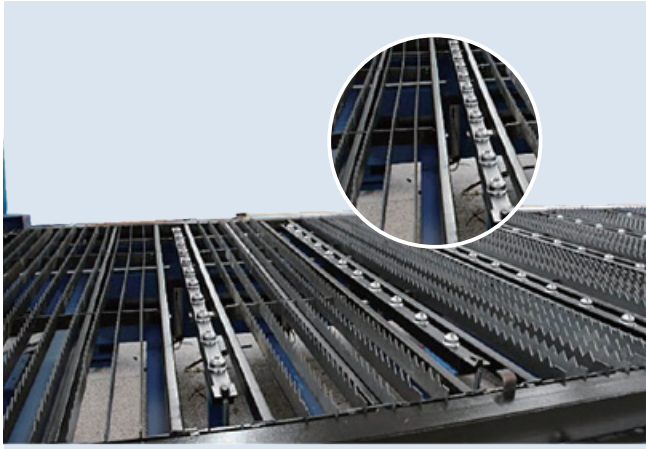
Item	Unit	HLF-1530	HLF-1560	HLF-2040	HLF-2060	HLF-2560	HLF-2580	HLF-25100	HLF-25120
Cutting range	mm	3000×1500	6000×1500	4000×2000	6000×2000	6000×2500	8000×2500	10000×2500	12000×2500
X axis stroke	mm	3040	6040	4040	6040	6040	8040	10040	12040
Y axis stroke	mm	1520	1520	2020	2020	2520	2520	2520	2520
Z axis stroke	mm	300	120	300	300	300	300	300	300
X-Y maximum trajectory speed	m/min	170	170	170	170	140	140	140	140
X / Y maximum acceleration	m/s ²	2.0G	2.0G	2.0G	2.0G	1.8G	1.8G	1.8G	1.8G
Positioning accuracy	mm	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03
Repositioning accuracy	mm	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02
Maximum load of worktable	Kg	1000	1000	1800	2800	3500	4800	6000	7000
Machine layout dimension	mm	9300×4800×2150	16000×4800×2150	11500×5000×2150	16000×5000×2150	16000×5500×2150	20500×5500×2150	24500×5500×2150	28500×5500×2150
Machine weight	Kg	9500	14000	12000	17000	20000	25500	30000	36500
Laser generator power	Kw	3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 30							

DIVERSIFIED CONFIGURATION AND FLEXIBLE COLLOCATION



Bevel Cutting (Option)

- Achieve $\pm 45^{\circ}$ bevel cutting
- Welding can be done directly after cutting, saving time and labor cost



Pneumatic Sheet Support Device (Option)

- Convenient for loading and unloading, and reduce scratches, equipped with pneumatic jacking device
- Reduce the scratches on the surface of aluminum plate and stainless steel plate, a steel ball to be equipped on the top of jacking rod



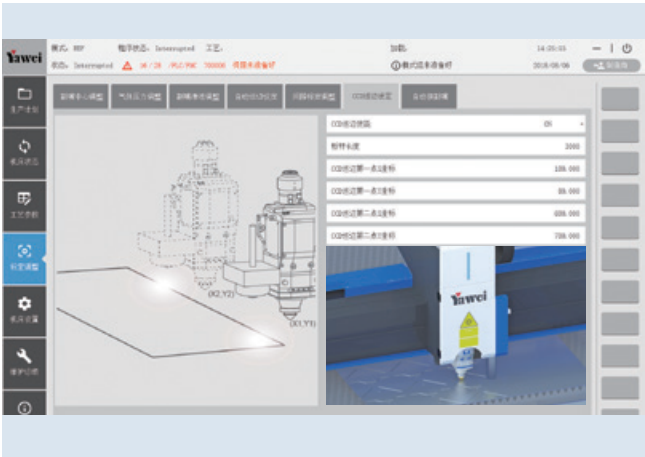
Hydraulic Lifting System (Option)

- Synchronous motor to achieve hydraulic synchronous lifting, with large load and low failure
- Shorter Z-axis travel, to meet high speed cutting
- Zone dust exhausting system with better effect



Movable Operation Station (Option)

- Simplify labelling process, easy and quick operation
- Front and rear dual channel control screen, satisfying efficient cutting experience



Secondary Positioning by Optical Eye (Option)

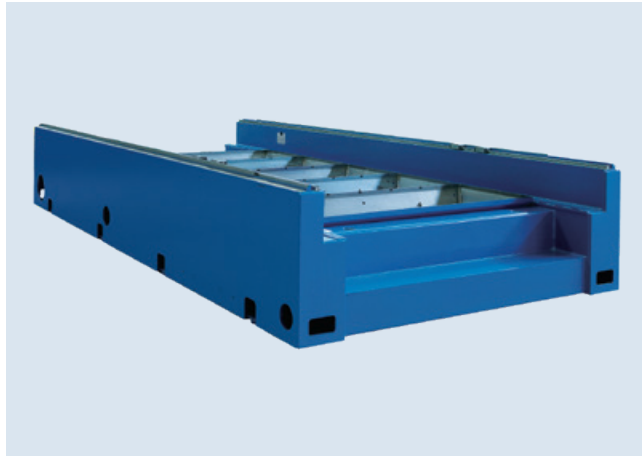
- Fast positioning for semi-finished product, precise secondary cutting
- Higher efficiency of automatic edge finding, better accuracy more intelligent
- Good leakproofness prevents splash, stable and reliable, moduling installation structure.



Pneumatic Clamps And Side Positioning (Option)

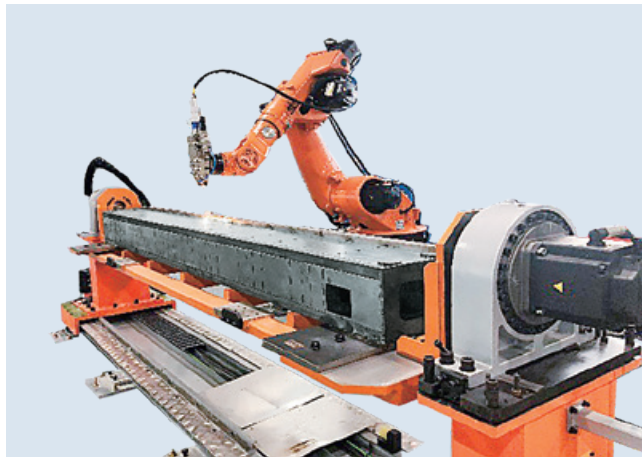
- Avoid the influence of auxiliary gas on the origin of plate positioning in thin plate processing
- Reduce the movement of plate with film during cutting, when the film is blown up by auxiliary gas

HIGH QUALITY COMPONENTS



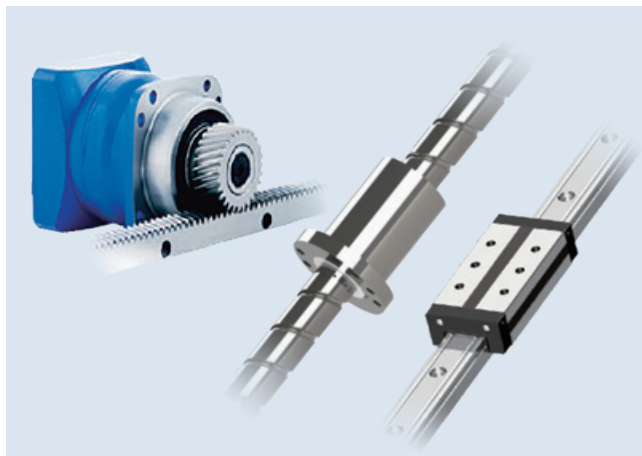
Basement

- Steel welded basement adopts annealing to relieve stress, reduces deformation and ensures good rigidity and stability
- The basement is processed by imported large-scale CNC equipment to achieve the precision beyond design standard
- Enhanced design for anti-heat design, easily capable of high power cutting



Beam

- The high rigidity and lightweight beam has better bending and torsion resistance, and natural frequency is increased by more than 15%
- The lightweight design is optimized by FEA to ensure higher rigidity
- High speed dynamic characteristics, fast acceleration



Transmission Parts

- International first-class brand from Germany/ Japan
- High strength, low noise, long lifetime
- High positioning accuracy and perfect synchronization performance



Cutting Head

- Germany brand, with good stability, safety and high efficiency
- Guaranteeing the best cutting performance at the ideal cutting speed
- Lasermatic distance sensor with high efficiency and precision



Fiber Laser Generator

- Constant BPP over full power range, excellent light beam quality, and small laser facula
- Over 40% wall-plug efficiency, continuous processing for high reflective materials
- Modular 'plug & play' design, compact and firm structure, and convenient installation



CNC System and Drive

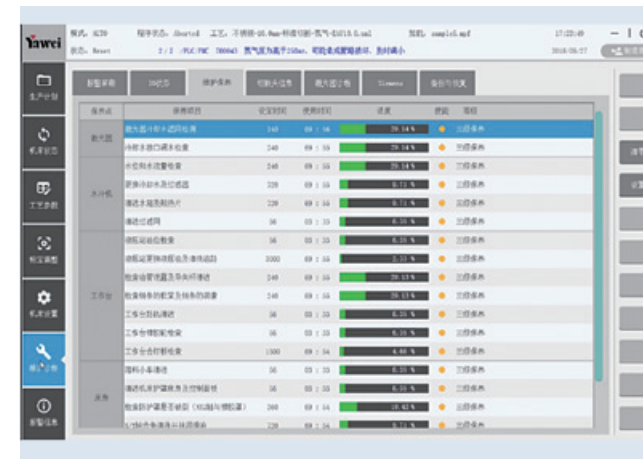
- The CNC system adopts SIMENS 840DSL, driven by the new generation network architecture
- Realize functions like factory networking, machine information monitoring, remote diagnosis and so on
- Secondary development of advanced laser function by Yawei, all in readiness

ADVANCED TECHNOLOGIES



Cutting Head Collision Protection

- YAWEI patent technology can provide full protection for cutting head
- Cutting head falls off automatically when accidentally collide with the tilted workpieces
- Cutting head can recover to the cutting state rapidly, and minimize the impact



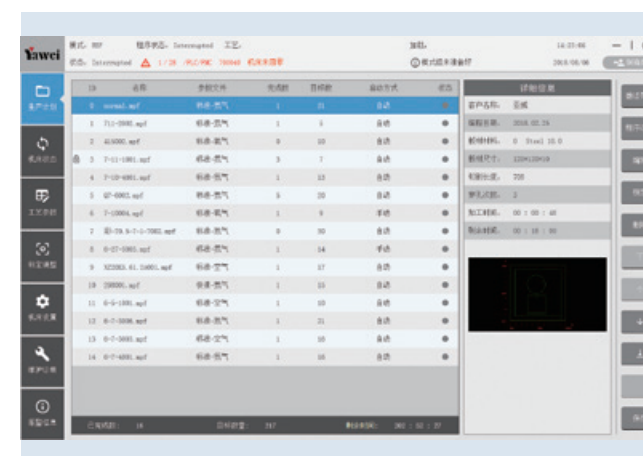
Intelligent Maintenance Reminder

- Turn on and off intelligent maintenance prompt function
- Check the use time schedule to understand the maintenance of machine tools
- Convenient user machine tool maintenance to extend the service life of machine tools
- According to different maintenance items, different maintenance levels are set to facilitate customer maintenance of equipment



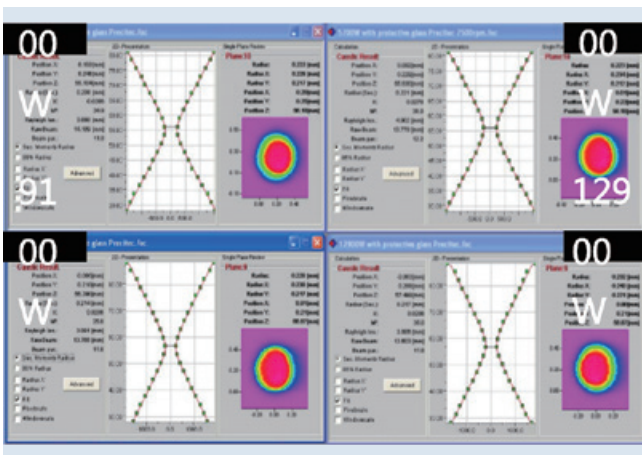
Cutting Craft of High Power

- The creative "thunder piercing" process for moderate and thick sheet with superfast speed, good piercing quality greatly rise up the processing efficiency
- Efficient cutting with low gas pressure, automatic power optimization, reduce the running cost greatly
- Shinning kerf by full power cutting, new cutting process for aluminum alloy without scrapes, greatly improve the kerf quality



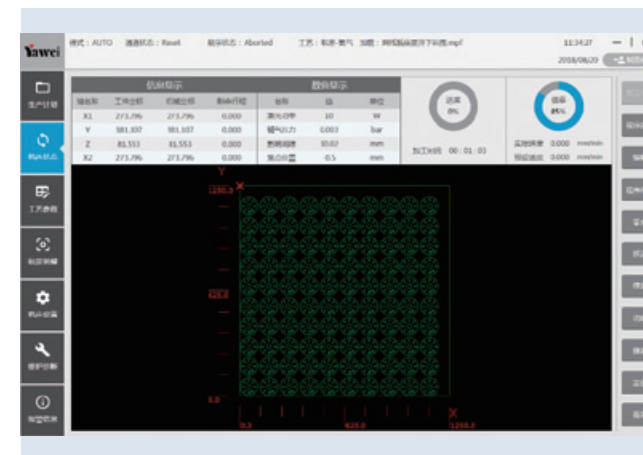
Production Plan List

- New plan list function, easily lead in and adjust the production plans
- Information, like quantity and time of production and so on, is clearly shown on the interface
- Operator can setup start mode of different workpieces autonomously



Focus Real-Time Compensation Functionpower

- Capture the focus position in real time and calculate the offset automatically
- Focus automatic compensation, improve the cutting stability of thick plate
- Original imported numerical control system, all-round escort

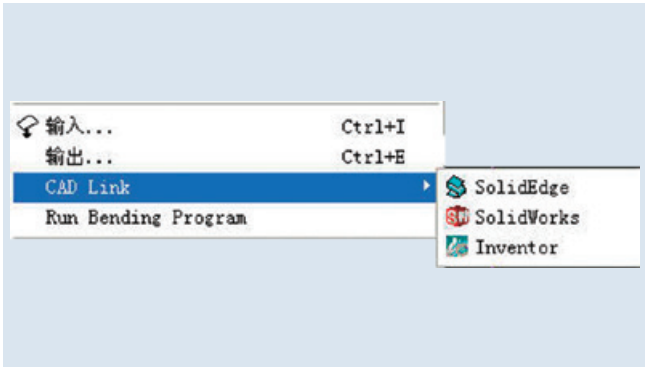


Digital HMI Control Platform

- New production planning function, seamless connection with factory MES
- Flexible entry, arbitrary choice of cutting profile
- Slow starting function, improve common edge and corner cutting quality, and improve stability

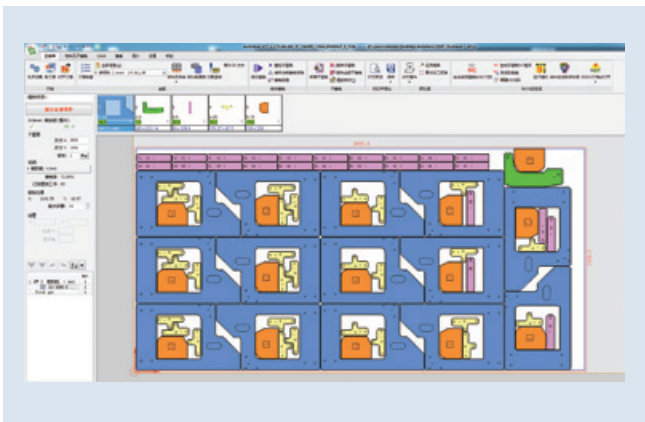
PROGRAMMING SOFTWARE

Customized CNCKAD programming software by Yawei for laser cutting machine, The practical graphic functions which is easy to be acquired, strong and flexible backup process. With the help of an auto-matic nesting module and a display of cutting simulation, you will do your cutting jobs efficiently.



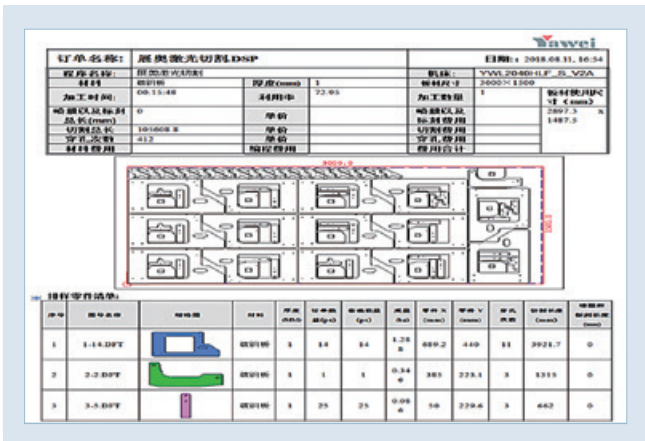
3D Design Unfold (Option)

- From 3D plotting software, such as Solid Edge, CNCKAD can read the 3D data automatically, and save the data in 2D graphics for further processing
- One-key real-time 3D files lead-in function has been realized really



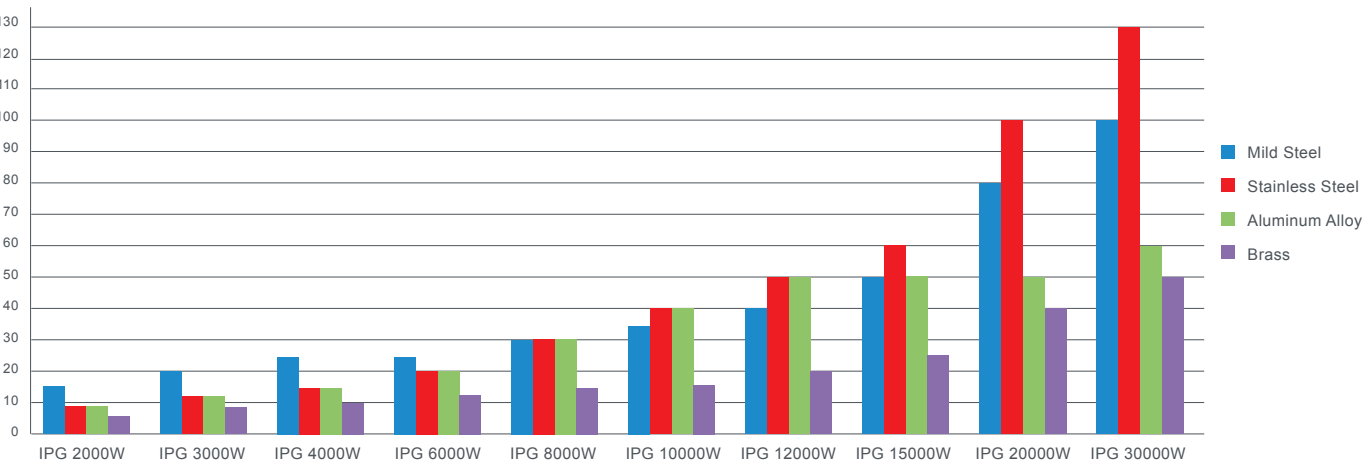
Automatic Nesting

- With autonest module of CNCKAD, can realize autonest function for different batch production. This function helps to optimize the layout, save material, and improve efficiency
- The workpieces with different material can be nested on the related sheet automatically

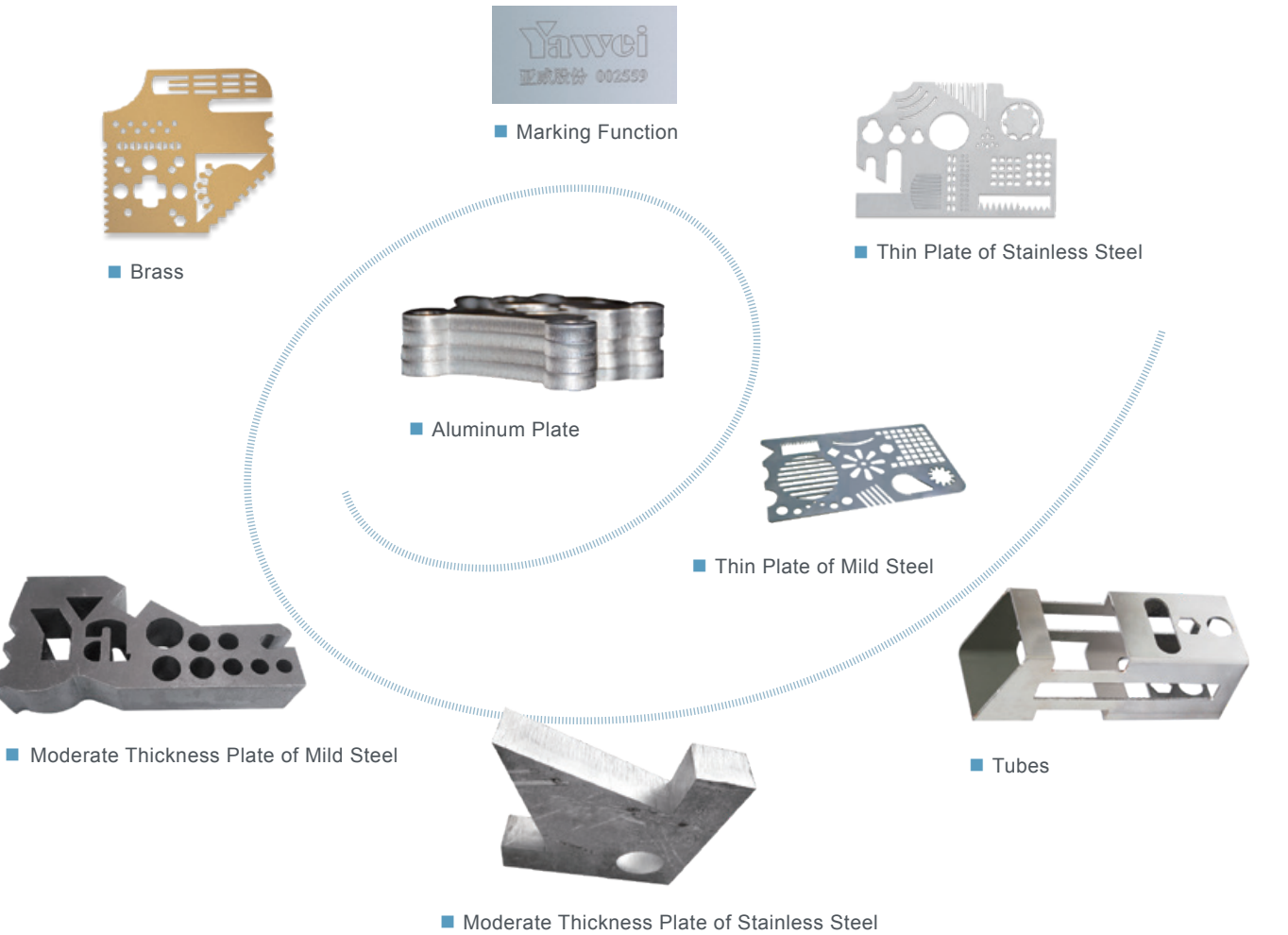


WIDE APPLICATIONS

Process capability



- The process capacity chart shows the testing data under specific conditions
- Even if for the same material, the cutting quality may differ due to different chemical composition contents, and processing shapes, etc





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