



極致加工 最佳品質

Ultimate machining; Excellent Quality.

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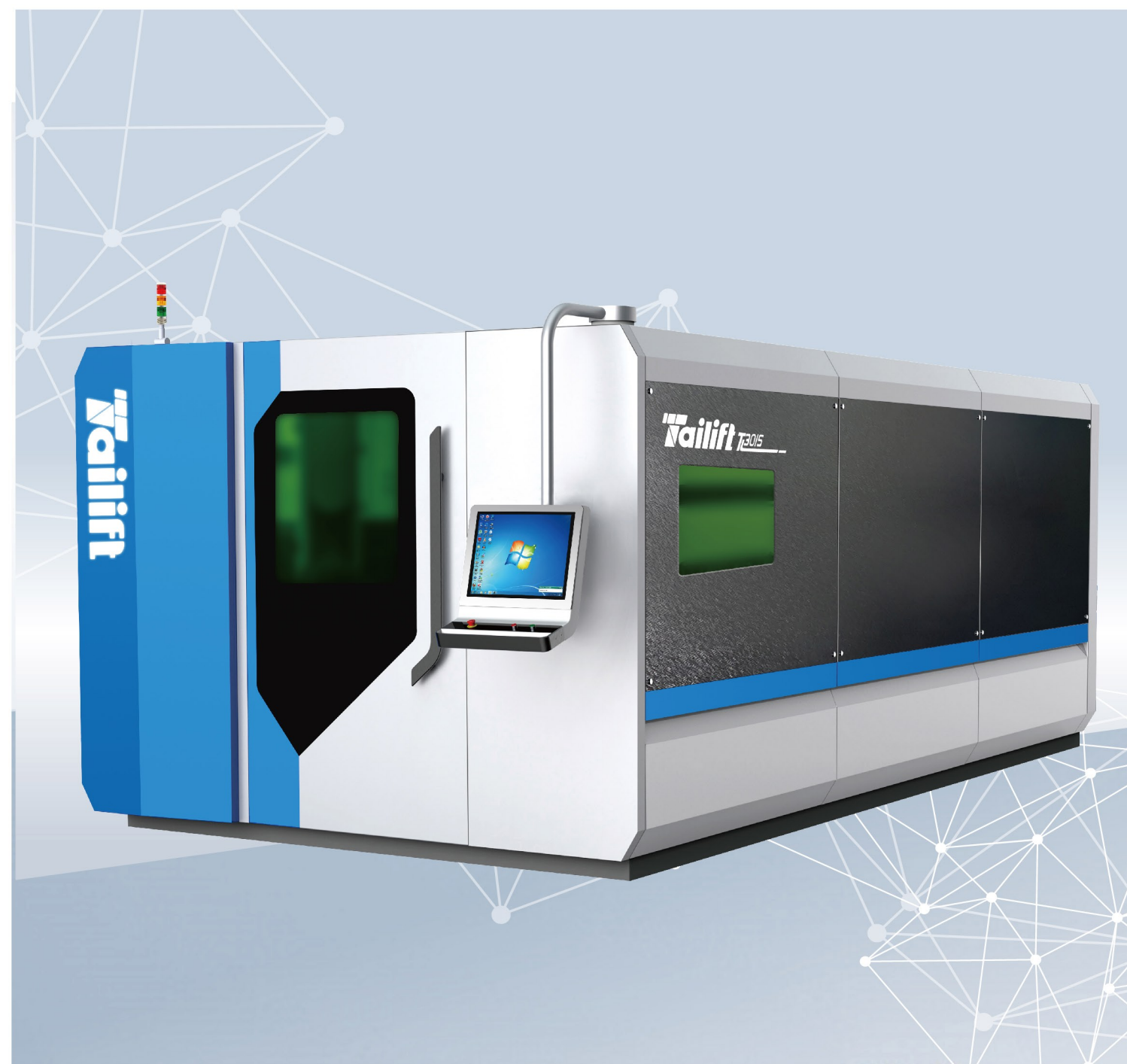
官方网站

2022 TAILIFT CORPO BROCHUER

Doc.S/N：2021-07 第1版次

tailift

The Pioneer of
Fiber Laser Cutting



Fiber Laser Cutting

光纖雷射切割機

TL serial

TL3015/4020/6020

專利科技！頂尖技術！
專為高品質、高精度雷射切割而打造

High-Tech !
Ultimate Performance !
Built for high speed, high accuracy laser cutting

徹底表露非凡的雷射切割性能

**Fully Exhibit Extraordinary Laser
Cutting Performance**

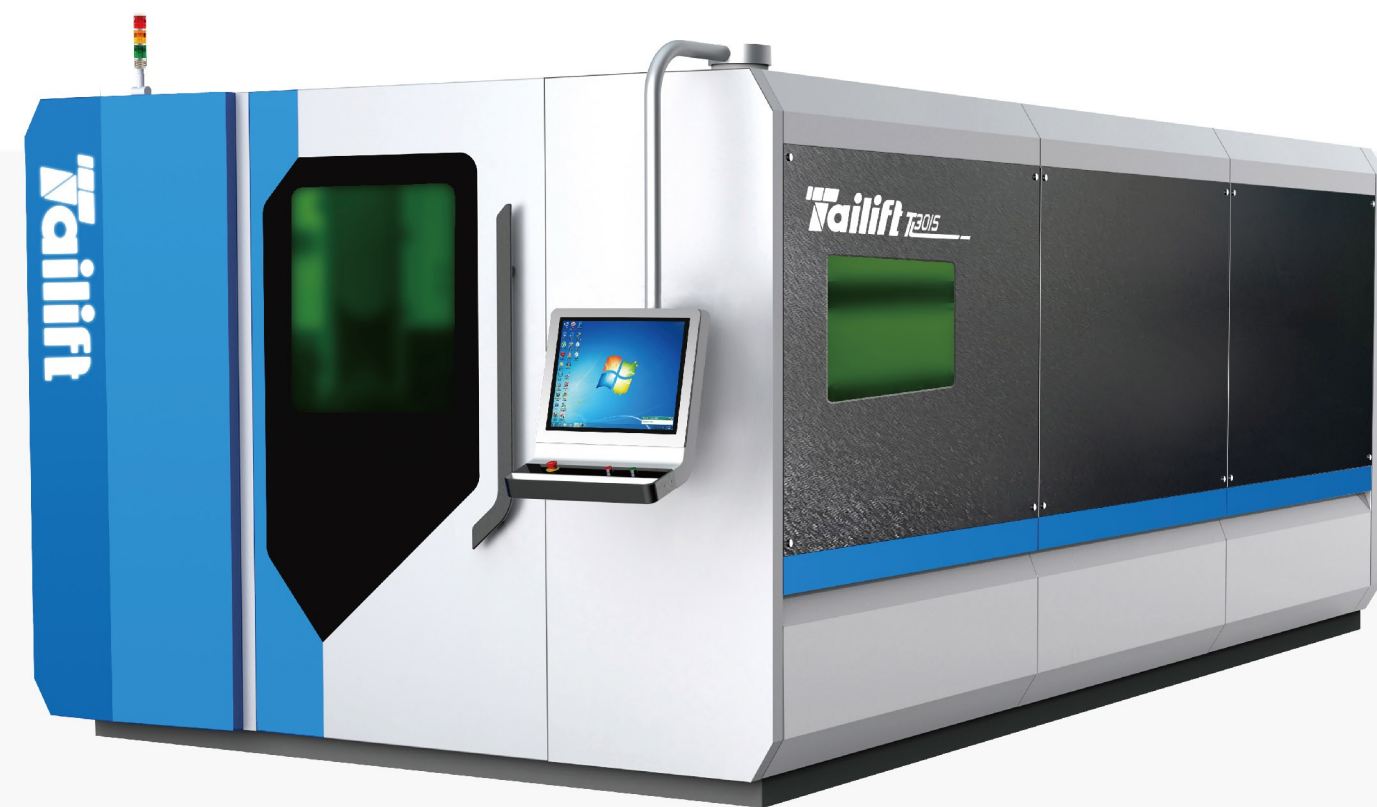
瑞士RayTools 雷射切割頭

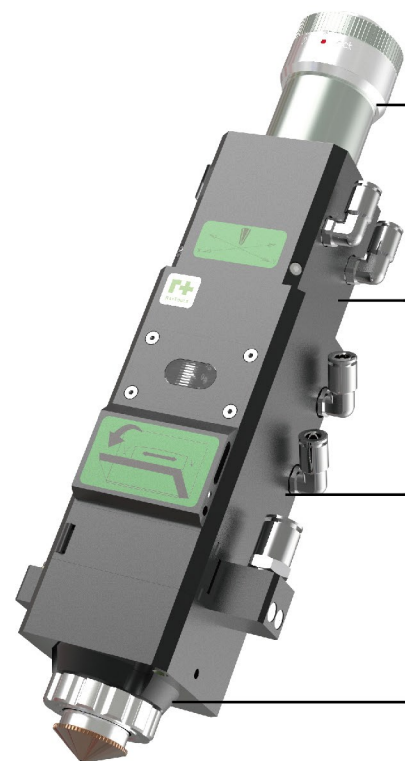
優化的光學配置和平滑高效的氣流設計，自動調焦範圍+10 ~ -12mm，調節精度0.05mm；最高光纖輸入功率可乘載3KW；聚焦鏡片驅動最大加速度10m/s²，最大速度10m/min；採用抽屜視鏡座，使得保護鏡片更換快速、簡單；准直和聚焦均採用複合鏡片，獲得最優的光學品質和切割效果；具備QBH、QD 等光纖介面，可與各種光纖雷射器進行適配。

RAYTOOL LASER CUTTING HEAD

Optimized optical configuration and smooth and efficient airflow design.
Auto focus ranges +10~-12mm, accuracy is 0.05mm.
Can be equipped with the D30 lens group, the maximum fiber input power is 3KW.
Maximum acceleration of focus lens drive 10m/s², maximum speed 10m/min.
Drawer-type of lens mount, quick and easy access to replace.
Collimation and focusing lens can choose of single lens or lens group, which can achieve the best optical quality and the effect of cutting.
With the optical interfaces of QBH、QD、QCS、LLK-D, etc., can be adapted with a variety of fiber lasers.

光纖雷射切割機 Fiber Laser Cutting Machine





● 高度防塵 Dustproof

防塵等級IP65，全封閉式包裹光路，鏡片污染可能性幾乎為零。
Comprehensive upgrade IP65 dust-proof design, Double protection, the risk of contamination of the lens is almost zero

● 高效水冷 High Efficient Water Cooling system

聚焦鏡、准直鏡、噴嘴均內置冷卻功能，強勢解決切割發熱問題。
Collimation lens, focusing lens and nozzle are all have cooling structures;

● 動圖零焦 Dynamic Zero Focus

可靈活調節刻度，使零焦位置統一化，不再為調整工藝參數煩惱。
Flexible adjustment of focus scale to unifies the zero focus position, for worry-free adjustment of process parameters

● 優化結構 Structure

一體化機身設計，改進的QBH光纖介面，不再因漏水生銹等原因卡死。
integrally formed cover which can improve QBH fiber connector to prevent rust.



BM111內置電機驅動單元，通過線性機構驅動聚焦鏡在22mm範圍內自動變更位置，使用者可以通過程式設定連續調焦，完成厚板的快速穿孔和自動切割不同厚度、材料的板材。

The cutting head has built-in motor drive unit through the linear driver and the focusing lens can automatically change the position in the range of 22mm. The user can set the focus continuously through the program to complete the rapid piercing of thick sheets or other different thickness and materials.

雷射切割頭構造 / CONSTRUCTION OF LASER CUTTING HEAD



BT240S系列在准直組件上增加了上保護鏡，最大程度的降低了准直鏡受污染的風險。同時，保護鏡結構也全面升級，在保護鏡上增加了防塵蓋板。雙層保護設計極大的提升了使用者在更換保護鏡片方面的體驗，鏡片受污染風險幾乎為零。

BT240s adds an upper protective lens on the collimator to minimize the risk of contamination of the collimator. The design of dustproof is upgraded to double protection so that the lens is almost impossible to be contaminated.

雷射切割頭構造 / CONSTRUCTION OF LASER CUTTING HEAD

● 優化結構 Structure

模組化，易維護，降低停機時間。
Modularization, Easy maintenance, Decrease down time.

● 多重保護 Multiple Protection

3片保護鏡片，高效保護准直聚焦鏡片。
3pcs of protection lens and highly protection to the collimating lens.

● 持久耐用 Durability

2路光學水冷，有效延長持續工作時間。
The design of dual water cooled optical system can extend continuous working time efficiently.

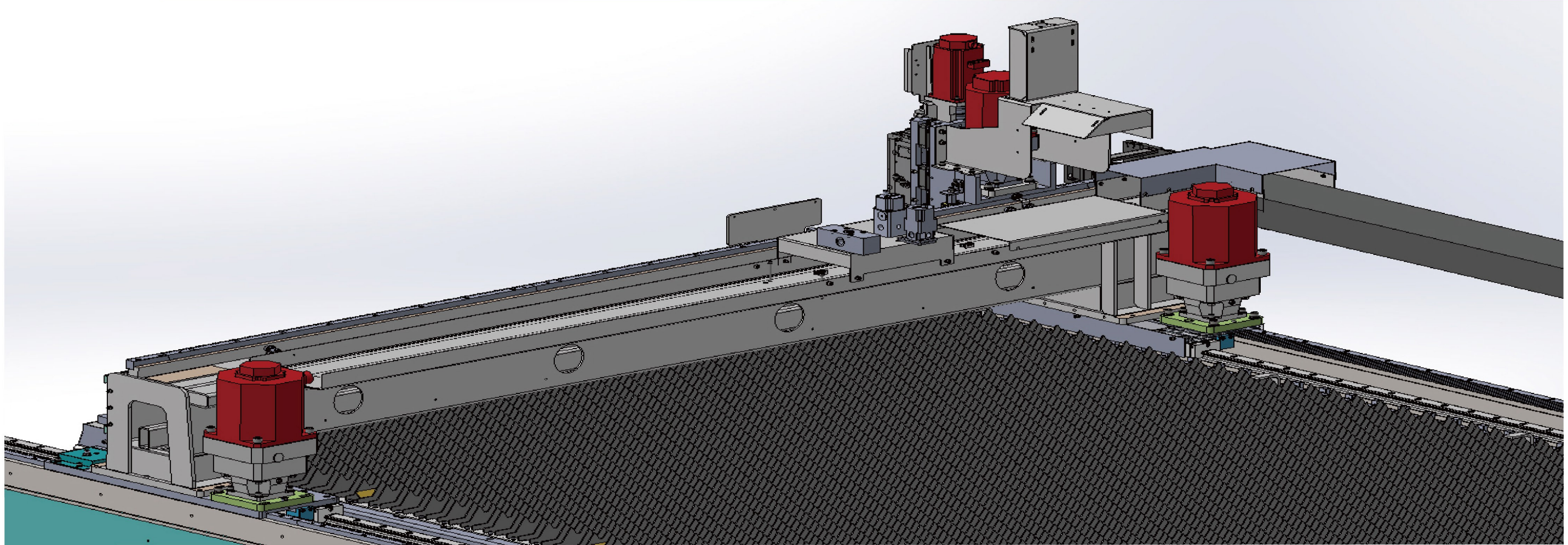
● 高度防塵 Dustproof

IP65級防塵，保護鏡座蓋板，防塵無死角。
Comprehensive upgrade IP65 dust-proof design, Double protection, the risk of contamination of the lens is almost zero

● 自動調焦 Auto Focus

減少人為干預，調焦速度10m/min，重複精度50μm。
Focusing speed 10m/min and reposition accuracy is 50um.





電路系統

各部品皆符合(CE&UL)規範，本機搭配之驅動&馬達系採用日本原裝進口製造於日本之安川伺服&馬達(YASKAWA)之7代(7S)高回應&高解析24bit(16777216每轉解析)更精準的表現在其實際加工(優於其他伺服品牌)

All components comply with CE&UL standard. With high-response and high-resolution 24-bit encoder (16,777,216 pulses/rev) Japan YASKAWA Sigma-7 servomotor achieves the highest performance in the industry (compared with other servo brands).

雙邊集塵系統

中央兩側吸塵管路設計減少管阻配置，搭配經濟高效型抽風機+鼓風機(標配)達到大流量吸塵煙霧效果，可選配高效型集塵設備。

TL6020系列則採用隨動式集塵設計。

All components comply with CE&UL standard. With high-response and high-resolution 24-bit encoder (16,777,216 pulses/rev) Japan YASKAWA Sigma-7 servomotor achieves the highest performance in the industry (compared with other servo brands).

智能進給驅動

X、Y、Z 軸採用日本安川伺服驅動系統，X、Y配備高剛性精密減速機及精密齒排；Z軸搭配高精度滾珠螺桿、直線導軌等傳動機構確保傳動精密度。Y軸雙邊同步驅動機架採用框式焊接結構，整體剛性好、強度高；橫樑採用輕量化設計，具備良好的鋼性與加速性，經過精密加工以確保運動過程之定位精確性。焊接件進行長時效應力消除，有效防止結構變形。

Tailor made design of reinforced welded body which achieves high-acceleration speeds, improve the life of the machine body to ensure long-term operation with accuracy and stability. X and Y axes transmit with Germany STÖBER high-precision gear reducer which gives high installation accuracy, transmission torque, reduced backlash, dynamic characteristics to achieve high-speed cutting possibilities.

平行交換式

為提高設備生產效率，一般雷射切割機配備有交換式工作臺，含兩個工作臺：一個工作臺用於切割，另一個工作臺於切割區域外用於上、下料。交換工作臺結構系統交換時，上、下工作臺必須層疊於尾端交換工作臺上，然後通過的牽引機構選擇上或者下工作臺將被牽引至切割位置。

Easy to loading/unloading different types and sizes sheet materials, Reduces the machine idle time and increase production capacity. Improve the efficiency of processing.



Laser Cutting Head



設備背面及交換台

The back of the device and the switchboard



恩耐發振器

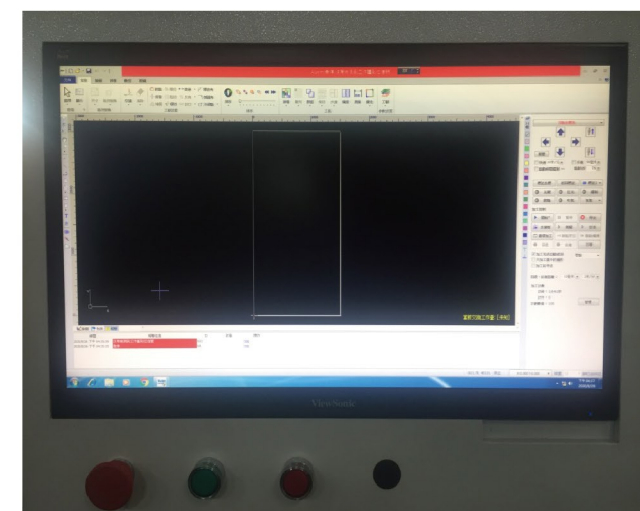
來自美國同時為世界最大的雷射光源供應廠，獨特的光路設計，即使在接近全反射的加工條件下依然能穩定的維持正常出光，完成加工。
零件最小化模組設計，包含光源在內90%的部品可於使用者端，現場更換。

nLight Oscillator

nLIGHT's semiconductor lasers are the industry's brightest and operate at unique wavelengths and power combinations. Our high-power continuous wave fiber lasers provide significant advantages over legacy fiber lasers for Programmability, Serviceability and Reliability. Reflection Protection Hardware-based protection provides uninterrupted failsafe processing of reflective metals with no damage to the laser. Unparalleled Serviceability
Modular design simplifies repairs maximizing uptime.

專業雷射切割CNC控制系統

. 易學習與操作，可在最短時間內投入工件的生產線上，提高最大化的生產效益。



CNC Controller

. Easy to operation interface-user friendly Cutting Correction, burn correction, Punching correction at different processing component

工藝：

- 支援三級穿孔，分段或漸進任意組合。
- 支援市場上絕大多數主流雷射器的通訊控制。
- 支持飛行切割，蛙跳，補償，引刀線，微連，預穿孔，帶膜切割等基本工藝
- 支援電容尋邊，光電，電動調焦，雙交換工作臺，自動排樣，圓管材切割，斷電記憶等高級功能模組
- 支持冷卻點，尖角環切，釋放角等高級工藝

- Supports three-stage perforation, segmented or progressive combinations.
- Supports communication control of most mainstream lasers on the market.
- Supports basic processes such as flight cutting, frog jumping, compensation, lead wire, microlinking, pre-piercing, and tape cutting.
- Supports capacitive edge seeking, photoelectric, motorized focus, double exchange table, auto sampling, round tube cutting, power failure memory and other advanced function modules.
- Support cooling point, sharp corner ring cutting, release corner and other advanced technology.

控制：

- 旋轉式操作箱，方便操作者隨不同角度作業。
- 人性化操作介面，操作簡單，容易上手。
- 切割圖型智能排版，切割順序自動優化生成。
- 切割路徑模擬，隨時監控切割過程。
- 偽雙驅，支援雙驅誤差檢測功能

- Swivel operation box is convenient for the operator to operate at different angles.
- User-friendly operation interface, simple operation, easy to use.
- The cutting sequence is automatically optimized.
- Cutting path simulation, monitor the cutting process at any time.
- Pseudo-dual drive, support dual drive error detection function.

Specifications

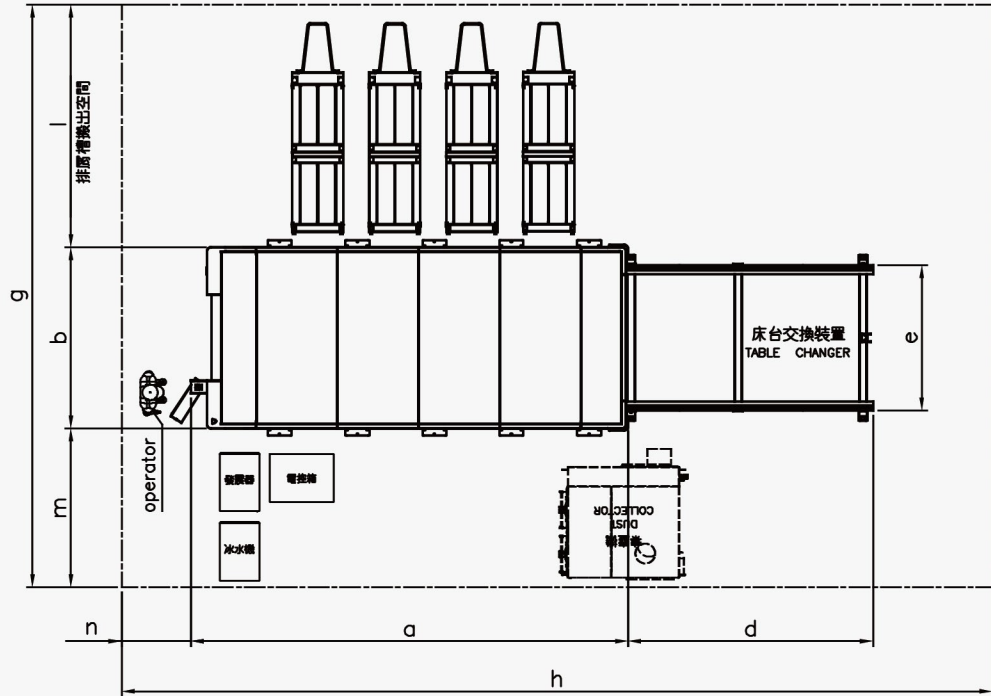
項目	Model	Unit	TL30150	TL4015	TL4020	TL6020
移動量(X*Y*Z)	Travel(X*Y*Z)	mm	1525*3050*200	1525*4010*200	2015*4010*200	2015*6050*200
加工範圍(X*Y)	Machining range(X*Y)	mm	1500*3000	1500*4000	2000*4000	2000*6000
軸最大移動速度(X/Y/Z)	Maximum axis movement speed	m/min	80/80			
移動速度(X/Y合成速度)	Feed rate	m/min	110			
加速度	Acceleration		1G			
定位精度(X/Y軸)	Positioning accuracy	mm	0.05/500			
重複定位精度	Repeatability accuracy	mm	±0.02			
電源供應	Power source		AC3相4線(AC 3ph.4 wires) 220V 60Hz			
雷射波長	Wave length of laser	nm	1080±10			
機台長 *寬 *高	Machine dimensions(L*W*H)	mm	5470*2333*2160	6480*2333*2160	6480*2880*2160	7490*2880*2160
工作台長 *寬 *高	Table dimensions (L*W*H)	mm	3400*1832*824	4049*1832*824	4049*2372*824	4700*2372*824
最大使用範圍	Maximum Use range	mm	7840*10950	7840*12610	8380*12610	8380*13620
排屑槽搬出空間	Chip flute moving out space	mm	2200	2200	2740	2740
配件預留寬度	Accessory width	mm	2000	2000	2000	2000
操作人員預留位置	User location		870	870	870	870

產品規格若有變更，恕不另行通知。
 依據選用的焦距、光纖碼、搭配形式不同，切割速度會有所差異。
 Specifications are subject to change without prior notice.
 Cutting speed may vary with the selected focus, fiber code and equipment.

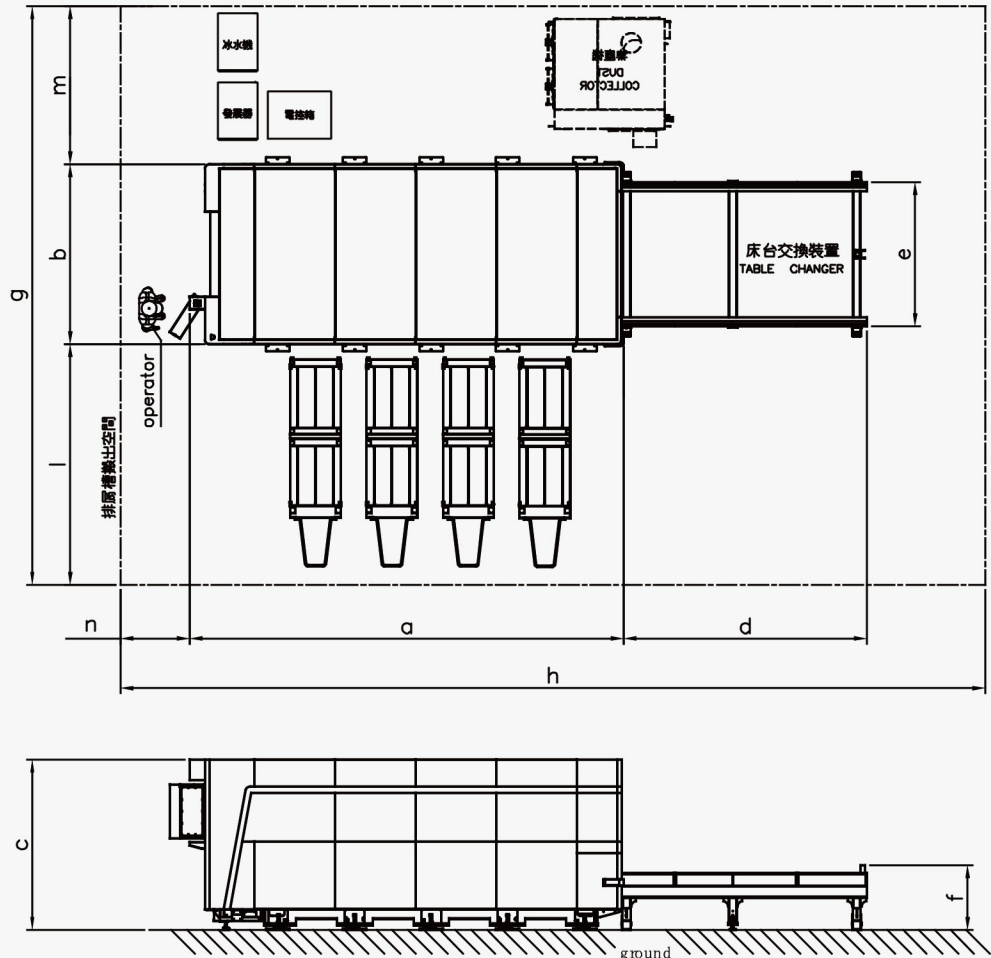


TL3015占地面積圖 / FLOOR PLAN

標配



選配



單位/unit: mm