

tailift

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Fiber Laser Cutting Machine

光纖雷射切割機

TE Series

TE3015/4020/6020

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

光纖雷射切割機

Fiber Laser Cutting Machine

BENEFIT

- PC-BASE架構的控制系統，提供直觀方便的操作環境，大幅縮短設備上線的訓練期。
- 特別加入”單件中斷點續割”功能，任何中斷點都能輕鬆續割，並完成工件，減少不良品產生。
- 切割輔助氣體多種選擇，適應各種加工需求，提高工作效率。
- 隨動分區集塵設備，減少粉塵對切割頭污染，提升工作環境品質。
- 獨有環境控制，發振器不結露，長時間加工不停機。
- 紅光輪廓投影，快速標定加工範圍，提高板材利用率。
- 操作面板與機身一體式設計，減少場地佔用面積。
- The PC-BASED control system provides, an intuitive and convenient operating environment, which significantly shortens the processing time.
- New function "continuous cutting", at any breakpoint with the use of ABS and complete the work-piece to reduce the product defective rate.
- Multiple choices for Auxiliary gas, to comply with different processing requirement in order to improve work efficiency.
- Down-stroke suction type wind pressure design, to reduce the cutting head being polluted and provide dust-free working environment.
- Eco-friendly design, with non-condensing resonator and uninterrupted processing.
- Red light contour projection, Rapid calibration processing range, improves sheet utilization.
- The control panel is integrated with the machine body to reduce the occupied area.



功率涵蓋1000W~6000W，
多品牌切割頭陣容搭配選擇，
依照您需求量身打造！

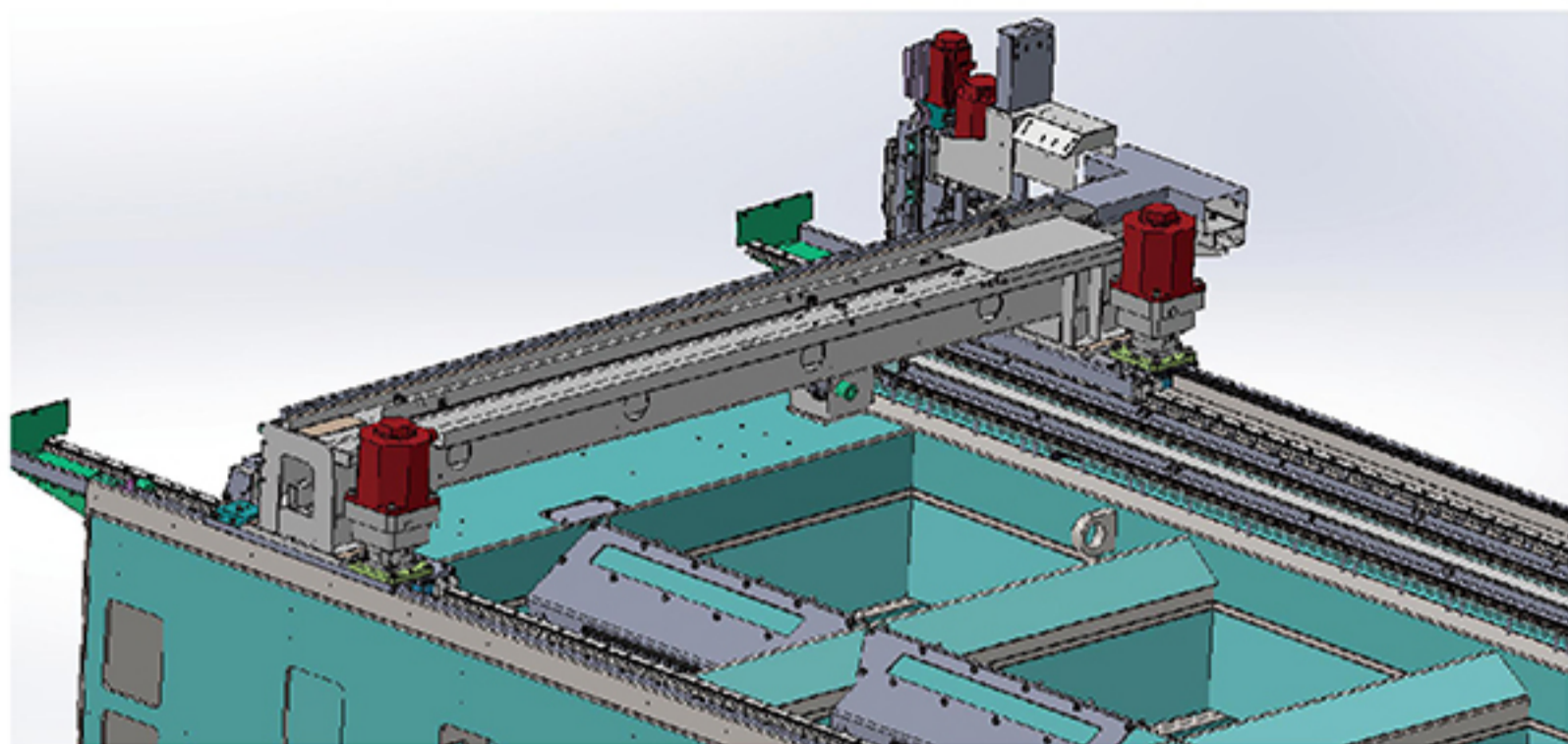
- 雷射頭內部構造完全密封，避免切割時光學部件沾塵。
- 凸輪式調焦設計，調節精確又方便。
- 保護鏡片抽換式設計，更換便利。
- The internal structure of the cutting head is completely sealed to avoid dusting of the optical components during cutting.
- Cam type focusing design, precise and convenient adjustment.
- Protective lens replacement design, easy to replace.

切割頭和高度感測器 Cutting head and height sensor

雷射切割頭採用進口技術光纖鐳射機專用切割頭，精確的高度感測器有利於高速移動切割運作時確保品質穩定，獨立的焦距跟隨設計，可在材料表面不平整下仍能穩定運行，完整切割。

The laser cutting head adopts the technical Fiber Laser cutting head . The precise height sensor is beneficial to ensure stable cutting quality during high-speed cutting operation. The independent focal length following design can be keeps the uniform cutting GAP in deformed surface sheet metal also.





雷射切割機結構形式 Laser cutting machine structure

龍門數控雷射切割機，其中X、Y 軸聯動實現平面切割進給龍門移動式結構。是兩軸聯動，Z 軸浮動跟蹤工件表面；機架採用鋼構精密焊接、整機高溫退火、應力時效處理；導軌面與齒排安裝面使用專業自動龍門銑一刀加工，能保持長時間良好的穩定性。

Minimal modular design, the Laser modules can be replaced at the customers factory, this reduces the machine down time.

The X and Y axis synchronization achieves the maximum cutting feed of the gantry type structure. Z-axis moves down to track the surface of the work piece; the frame is precision welded by steel structure high-temperature annealing of the whole machine base, stress release treatment; the machine surface of the LM Guide and the Rack & Pinion are processed by CNC Milling machines, which ensure the machine flatness and accuracy for long time.

高剛性高精度行星式減速機

伺服電機具有精確的速度與位置控制能力，且運行穩定、高性能低耗能，進口品牌斜齒減速機，運行平穩，噪音低，性能可靠。

The servo motor as high speed and position control capability, stable operation, high performance and low energy consumption. The brand Helical Gear Reducer runs smoothly, with low noise and high torque performance.



煙塵排除與隨動分區集塵裝置 Dust exhaust and collectors device

雷射切割的工作區域兩側對稱設置煙塵排出風口，並配置風壓下壓式設計，搭配隨動分區集塵裝置（選配）更能有效排除切割時所產生的粉塵。

The ventilation of smoke and dust exhaust located on both sides of laser cutting working area, on which the wind pressure design is down-stroke style. It can efficient to eliminate the dust during cutting by follow-up type dust collection (option) function.

恩耐發振器 nLight Oscillator

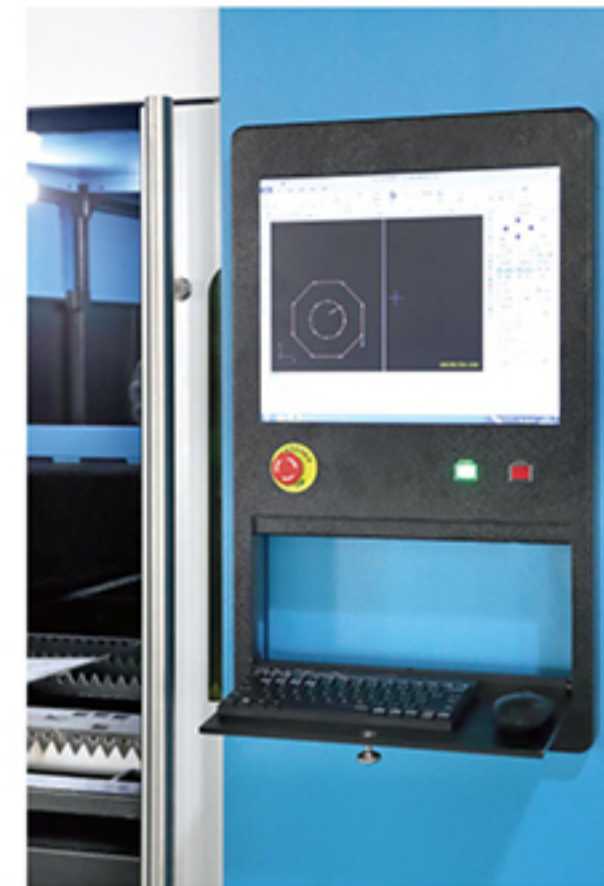
· 來自美國同時為世界最大的雷射光源供應廠，獨特的光路設計，即使在接近全反射的加工條件下依然能穩定的維持正常出光，完成加工。

· 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's semiconductor laser 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 laser 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。

· 具有遠端異常排除與監控軟體可安裝於手機(安卓/IOS)與電腦(WINDOWS/MAC)上使用。

CNC Controller

- Easy for operation interface-user friendly
- Cutting Correction, burn correction, Punching correction at different processing component.
- Break point selection: unexpected power failure, or unplanned time, choose whether or not to reprocess the last processed.



IPG發振器 IPG Oscillator

· 結合高功率光纖雷射器使用有源光纖和半導體二極體兩製成設備的動態運行範圍從10%至全功率，且在整個範圍內光束發散角或光束剖面無變化，可有效降低光學器件的損壞。

· 最小模組化設計，採用多個可單獨產生數百瓦特功率的光纖雷射模組輸出技術，雷射源可自動互補，維持輸出功率，使生產效能得以順暢。

· 可在客戶端單獨更換設備，縮短停機維修等待時間。

Combine with high-power fiber laser with AOC (Active Optical Cable) and semiconductor diodes, the dynamic range is from 10% to full power. Invariant of beam divergence angle or the beam profile over the entire range, which can effectively reduce the damage of optics.

The smallest modular design adopt multiple fiber laser module output tech that can automatically complement each other to maintain the output power during the production process.

The users can replace the modules separately, to shorten the machine downtime.

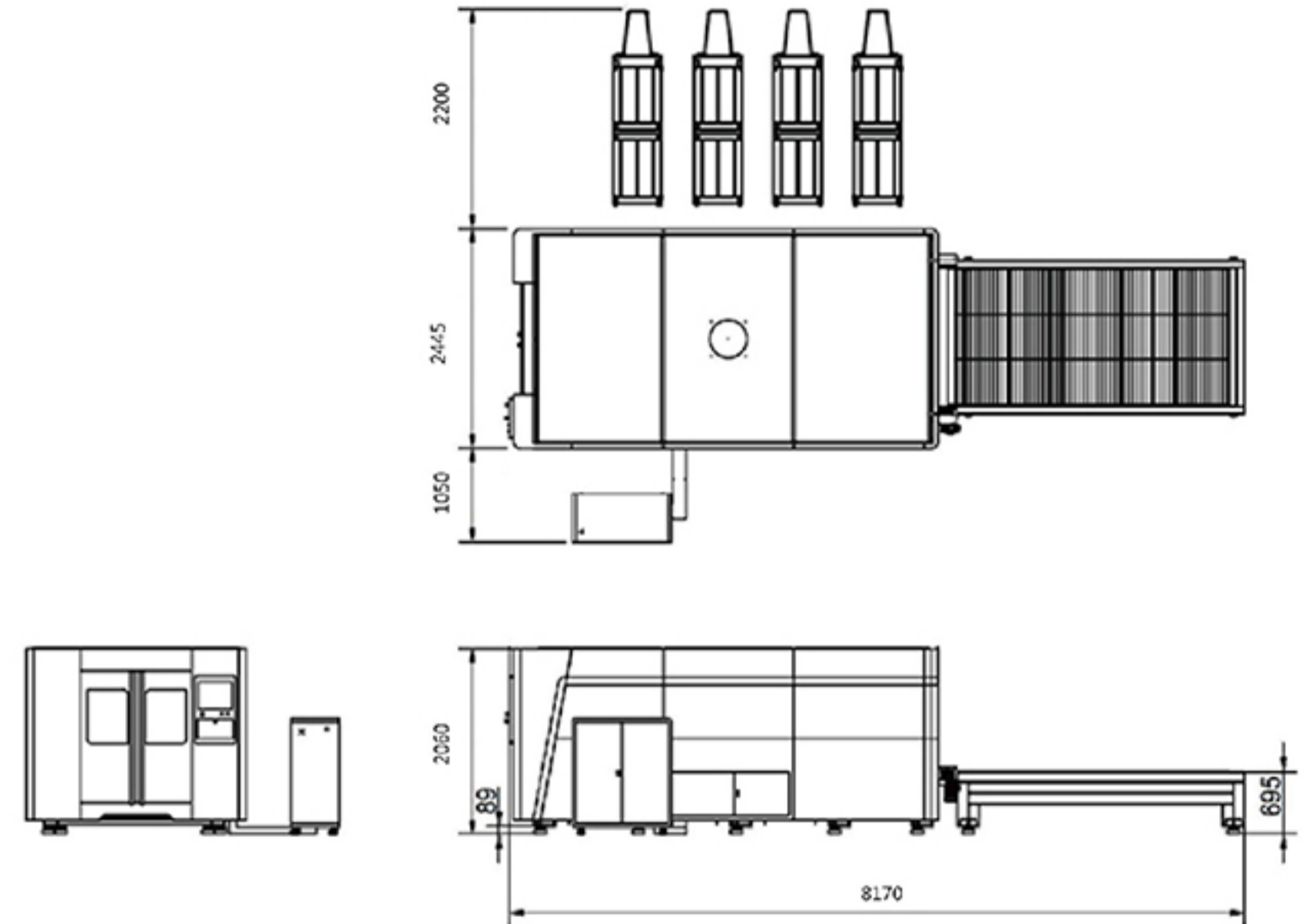


Specifications

項目	Model	單位	TE3015	
功率	Power	KW	1K、1.2K、2K、2.5K、3K、4K	4K、5K、6K
移動量(X*Y*Z)	Travel(X*Y*Z)	mm	3050*1510*210	3050*1510*120
加速度	Acceleration		1.2G/1.5G(OP)	
重複定位精度	Repeatability accuracy	mm	± 0.03/1000mm	
加工範圍	Machining range(X*Y)	mm	3050*1510	
最大工件承載重量	Max.workpiece load	kg	900	
工作台尺寸(X*Y)	Table size(x*Y)	mm	3100*1530	
上下工作台層高	Height distance between two pallet changer	mm	55	
工作台面型式	Table type		平行交換式 Chain pull parallel exchange workbench	爬坡式 Chain lifting system
機台長*寬*高	Approx.machine dimensions(L*W*H)	mm	8170*2445*2060	
預估機台重量	Approx. machine weight	kg	7000	
發振器型號	Resonator		nLight/IPG	
控制器	Control model		柏楚Advantech/PA(OP)	PA
切割用輔助氣體	Auxiliary gas for cutting	Bar	氧气(Oxygen)10bar; 氮气(Nitrogen)20bar; 空气(Air)16bar	氧气(Oxygen)10bar; 氮气(Nitrogen)30bar; 空气(Air)16bar
同時控制軸數	Movement method		4	
總功率	Total power	KW	1.2G-16.5KW 1.5G-22.5KW (不包含發振器、冷水機) (Without oscillator and water cooler)	
電力供應	Power source		380V/50Hz	

- 產品規格若有變更，恕不另行通知。
- 依據選用的焦點、光纖碼、焦距形式不同，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.

TE3015設備配置圖 / FLOOR PLAN



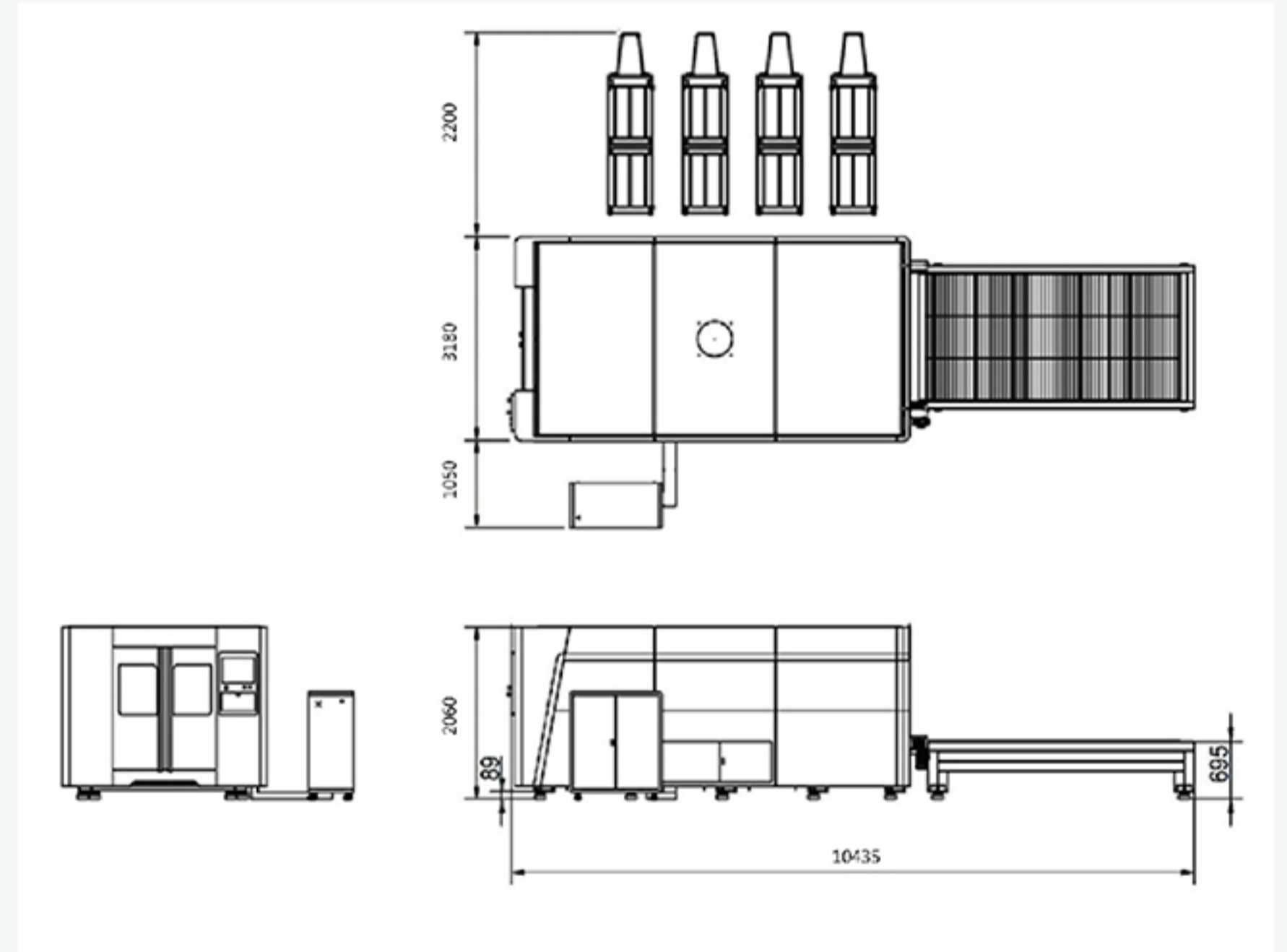
單位/unit: mm

Specifications

項目	Model	單位	TE4020	
功率	Power	KW	1K、1.2K、2K、2.5K、3K、4K	4K、5K、6K
移動量(X*Y*Z)	Travel(X*Y*Z)	mm	4050*2020*210	4050*2020*120
加速度	Acceleration		1.2G/1.5G(OP)	
重複定位精度	Repeatability accuracy	mm	±0.03/1000mm	
加工範圍	Machining range(X*Y)	mm	4100*2050	
最大工件承載重量	Max.workpiece load	kg	900	
工作台尺寸(X*Y)	Table size(x*Y)	mm	4100*2050	
上下工作台層高	Height distance between two pallet changer	mm	55	
工作台面型式	Table type		平行交換式 Chain pull parallel exchange workbench	爬坡式 Chain lifting system
機台長*寬*高	Approx.machine dimensions(L*W*H)	mm	10435*3180*2060	
預估機台重量	Approx. machine weight	kg	8100	
發振器型號	Resonator		nLight/IPG	
控制器	Control model		柏楚Advantech/PA(OP)	PA
切割用輔助氣體	Auxiliary gas for cutting	Bar	氧氣(Oxygen)10bar; 氮氣(Nitrogen)20bar; 空氣(Air)16bar	氧氣(Oxygen)10bar; 氮氣(Nitrogen)30bar; 空氣(Air)16bar
同時控制軸數	Movement method		4	
總功率	Total power	KW	1.2G-16.5KW 1.5G-22.5KW (不包含發振器、冷水機) (Without oscillator and water cooler)	
電力供應	Power source		380V/50Hz	

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- 依據選用的焦點、光纖碼、搭配形式不同，切割速度會有所差異。
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TE4020設備配置圖 / FLOOR PLAN



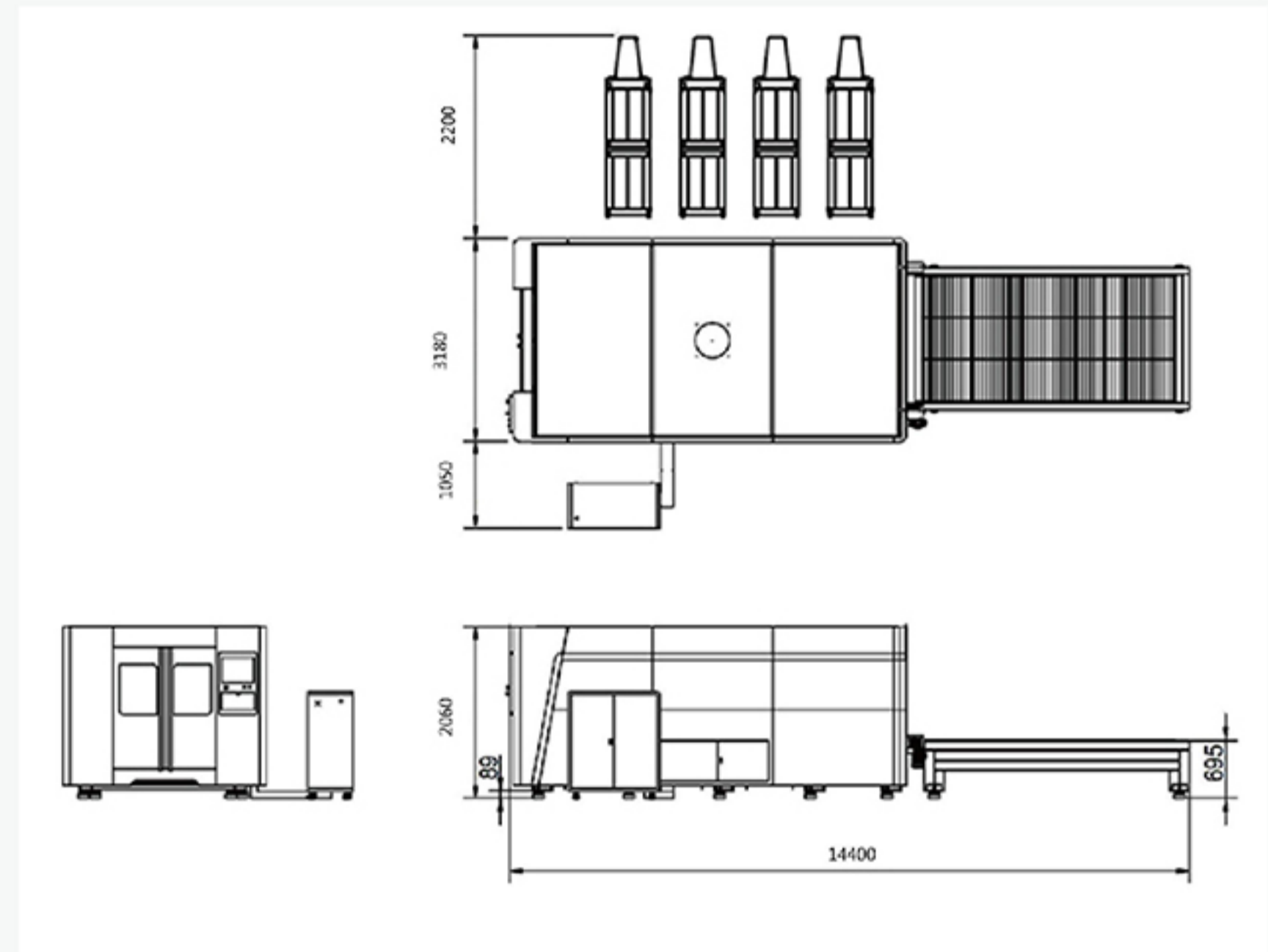
單位/unit: mm

Specifications

項目	Model	單位	TE6020	
功率	Power	KW	1K、1.2K、2K、2.5K、3K、4K	4W、5W、6K
移動量(X*Y*Z)	Travel(X*Y*Z)	mm	6050*2020*210	6050*2020*120
加速度	Acceleration		1.2G/1.5G(OP)	
重複定位精度	Repeatability accuracy	mm	±0.03/1000mm	
加工範圍	Machining range(X*Y)	mm	6000*2000	
最大工件承載重量	Max.workpiece load	kg	1100	
工作台尺寸(X*Y)	Table size(x*Y)	mm	6100*2050	
上下工作台層高	Height distance between two pallet changer	mm	55	
工作台面型式	Table type		平行交換式 Chain pull parallel exchange workbench	爬坡式 Chain lifting system
機台長*寬*高	Approx.machine dimensions(L*W*H)	mm	14400*3180*2060	
預估機台重量	Approx. machine weight	kg	11000	
發振器型號	Resonator		nLight/IPG	
控制器	Control model		柏楚Advantech/PA(OP)	PA
切割用輔助氣體	Auxiliary gas for cutting	Bar	氧氣(Oxygen)10bar; 氮氣(Nitrogen)20bar; 空氣(Air)16bar	氧氣(Oxygen)10bar; 氮氣(Nitrogen)30bar; 空氣(Air)16bar
同時控制軸數	Movement method		4	
總功率	Total power	KW	1.2G-16.5KW (不包含發振器、冷水機)	1.5G-22.5KW (Without oscillator and water cooler)
電力供應	Power source		380V/50Hz	

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TE6020設備配置圖 / FLOOR PLAN



單位/unit: mm



極致加工，最佳品質。

Ultimate machining; Excellent Quality.



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