GEARMAX PRO

CORTE
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POWER
YOUR NEXT MOVE!

QLTEK®

P SERIES

HEAVY-DUTY TUBE LASER CUTTING MACHINE

Note:The appearance of the pictures in this solution is for reference only, and the actual equipment shall prevail.

Factory

QLTEK®

400,000
400,000+m² Production Area

1,500
1,500+ Employees

8,000
8,000+ alta potencia

Quality Control

At QLTEK, quality isn't a goal,it's a comprehensive system.

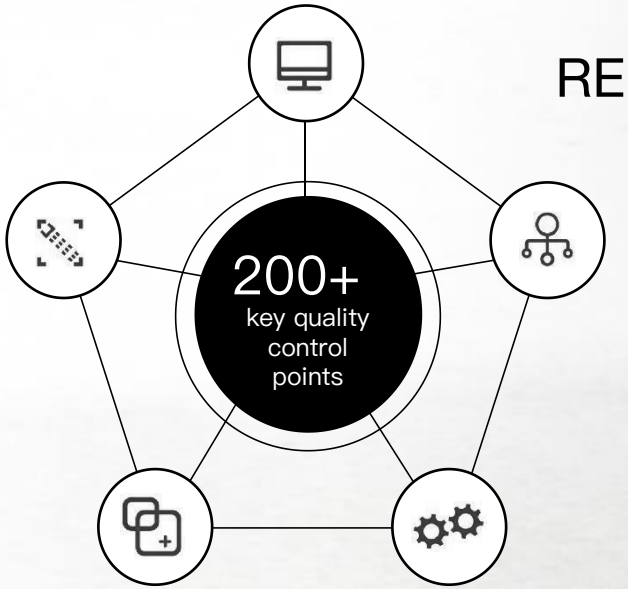
Thanks to our QSB (Quality System Benchmarking) end-to-end process management system and 5200 Grid quality control, we guarantee excellence at every stage of manufacturing.

SYSTEM

Operating and programming software.

REINFORCED STRUCTURE

Bed, beams and base.



OPTICAL MODULE

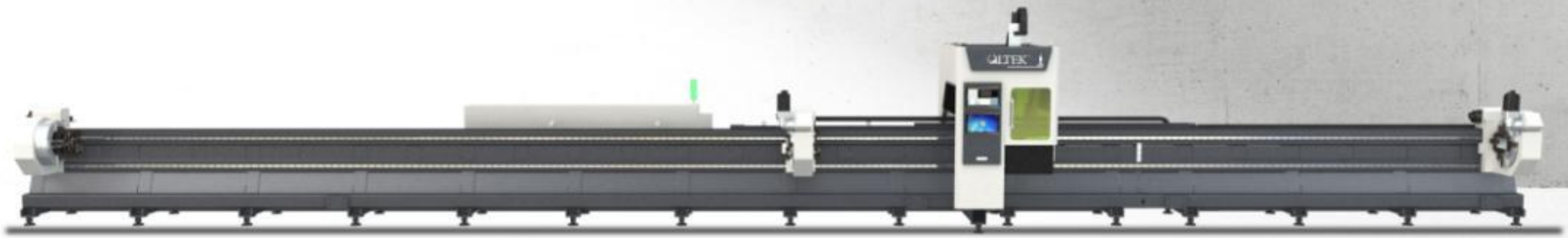
Laser and cutting head.

DRIVE UNIT

Guide rails, racks and gears.

Each module is designed to deliver precision, reliability, and optimal performance in demanding industrial environments.

Technical Parameter



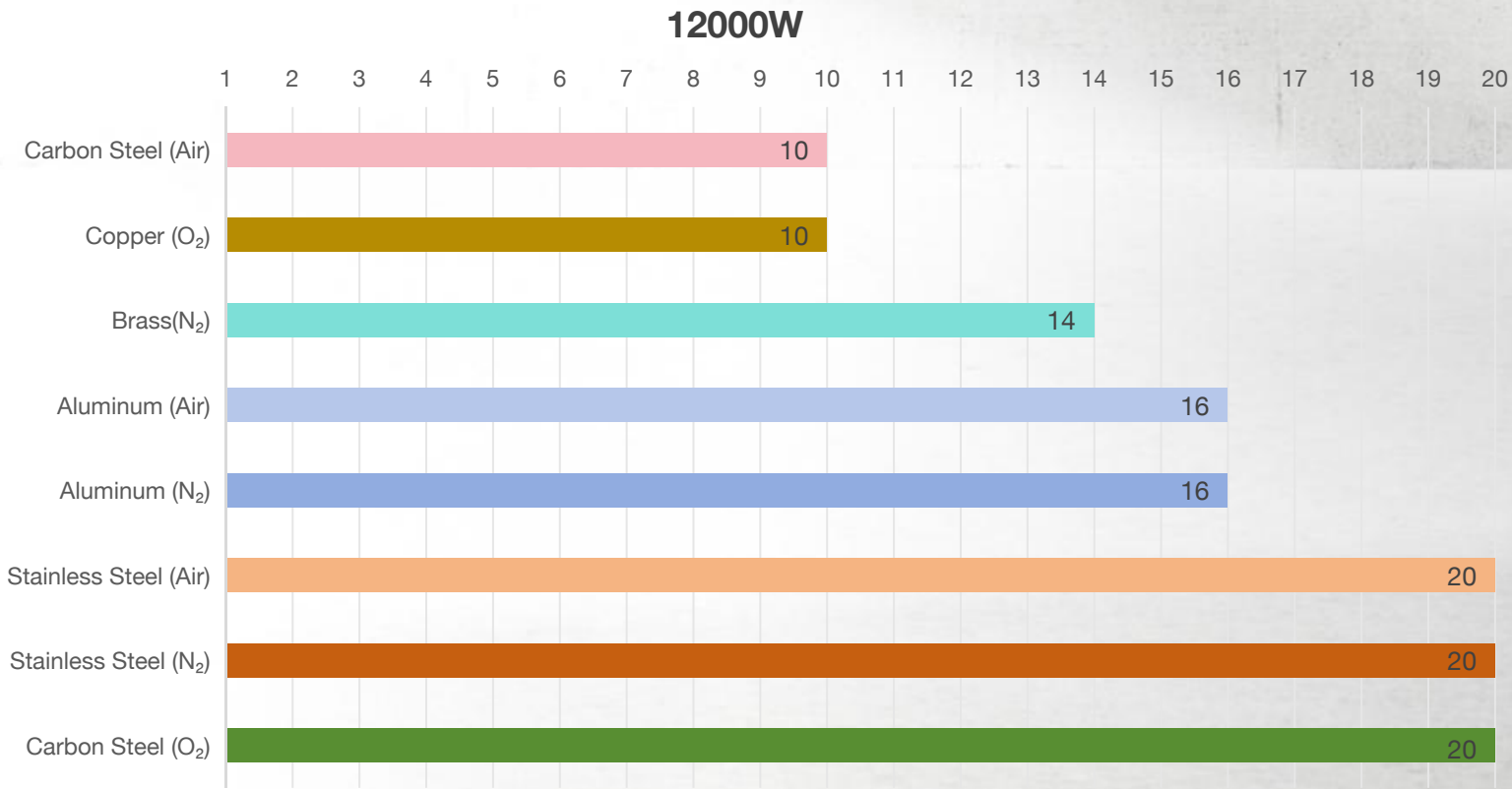
P Series	P5
Maxium tube length	12500mm(41.01')
X-axis travel	880mm(2.89')
Y-axis travel	12500mm(41.01')
Z-axis travel	480mm(1.57')
Finished part length	≤6000mm(19.69')
X/Y axis postioning accuracy	±0.05mm/m
X/Y axis re-postioning accuracy	±0.03mm
Maximum rotation speed of chuck	50rpm/min
Max. linkage speed	40m/min(≈131.2ft/min)
Maximum mass of single pipe	2000kg（≤166kg/m）
Waste material length	0mm (Reasonable process layout)
Standard pipe processing range	Round tube:Φ50-Φ508mm (1.97''-20.00'') Square tube:□50-□350mm(1.97''-13.78'')
Non-standard tubular processing range	I-beam：10#-45#(0.39''-1.77'') Channel steel:10#-40#(0.39''-1.57'') Angle steel:50-200(1.97''-7.87'')
Machine overall dimensions	22290*3255*3550mm(73.13'*10.68'*11.65')
Machine weight	19.5 tonelada
Power	12KW

Configuration List

Order number	Project	Brand / Specification	Remarks
1	Tube laser cutting machine	P series	QLTEK
2	Rotary chuck	QLTEK	China
3	Laser cutting head	QLTEK	China
4	X/Y high-precision reducer	MOTOREDUCER	China
5	X/Y high-precision helical rack	SOTER	China
6	Linear guide rail	DTX	China
7	Fiber laser	RAYCUS	China
8	Servo motors	INOVANCE	China
9	CNC control system	Vertical cutting: QLTEK 5.0B Bevel cutting: QLTEK 5.0A	China
10	Proporational valve	SMC	Japan
11	Water chiller	TONGFEI	China
12	Camera	QLTEK Customization	China
13	Semi-automatic loading equipment (Optional)	QLTEK	China
14	Auxiliary unloading equipment (Optional)	QLTEK	China

Note:The above table is standard configuration, for reference only, subject to the actual signed contract configuration.

Cutting Ability



List of accessories and Gas use

Catagoryes	Name	Qty/Pcs
Kits de accesories	Protective lens	≥10
	Nozzles	≥10
	ceramic ring	≥1
	Tool Box	1 set
	Fiber Protective Glass	1 set
	glasses scarf	1 set
	RFC Cable	1
	Bottom protection seal	1
	ceramic body	1
	Isopropanol	1
	Lens Cleaning Tissue	1 set
	Laser dimming photo paper	1
	Dust-free cotton swab	1
	Dust-free cloth	1

GAS	Gas pressure	Consumption(L/H)
Nitrogen (can cut stainless steel, aluminum, brass.)	1.4~1.8MPA	120-240 L/H
Oxygen (can cut carbon steel and copper)	0.5MPA~0.8MPA	30-80 L/H
Compressed air (more economical, can cut carbon steel, stainless steel, aluminum, and brass)	1.6MPA	120-240 L/H

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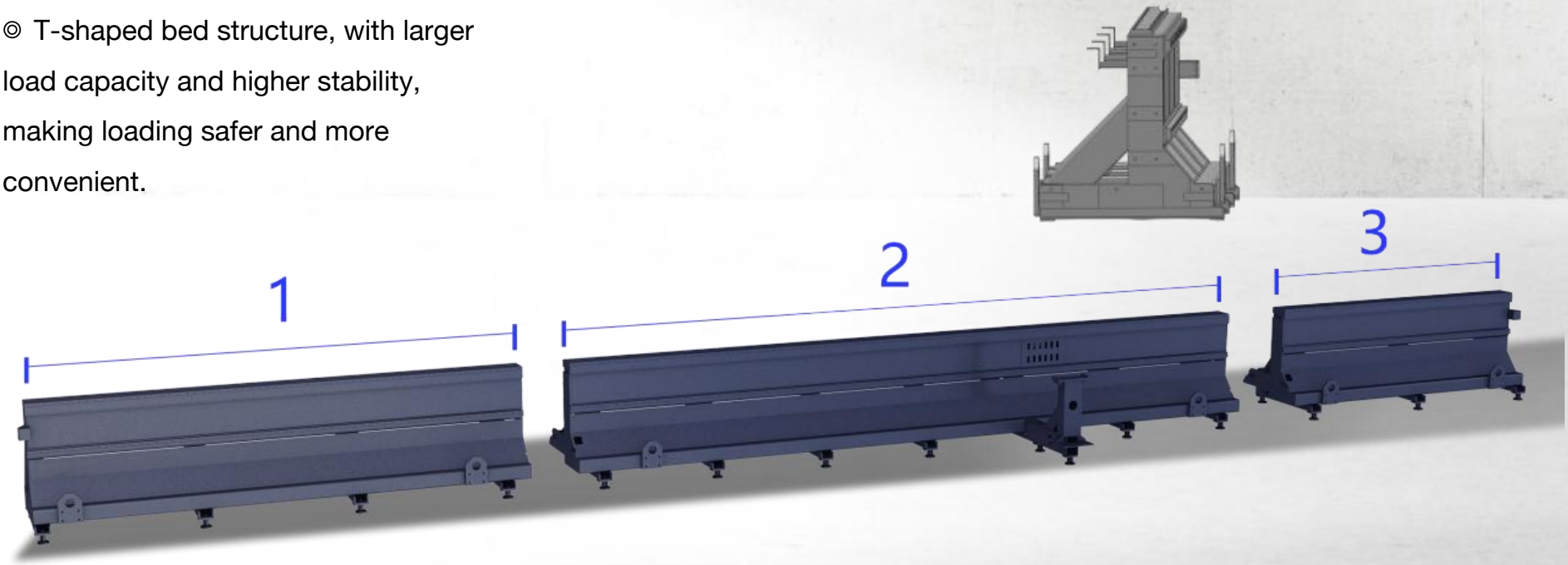
Typical customer

Customer-centric, practical, customer problem solving, customer value maximization

Segmented Machine Bed

◎ T-shaped bed structure, with larger load capacity and higher stability, making loading safer and more convenient.



◎ The structural design of multi-section machine bed adopts positioning keyway, which makes the assembly simpler, more stable and more reliable.

◎ The installation mode of chuck adopts side hanging structure, which reduces the unstability of the bed caused by heavy pipe processing ; The maximum unloading length is 12m, which can be selected according to customer requirements (6m, 9m, 12m)

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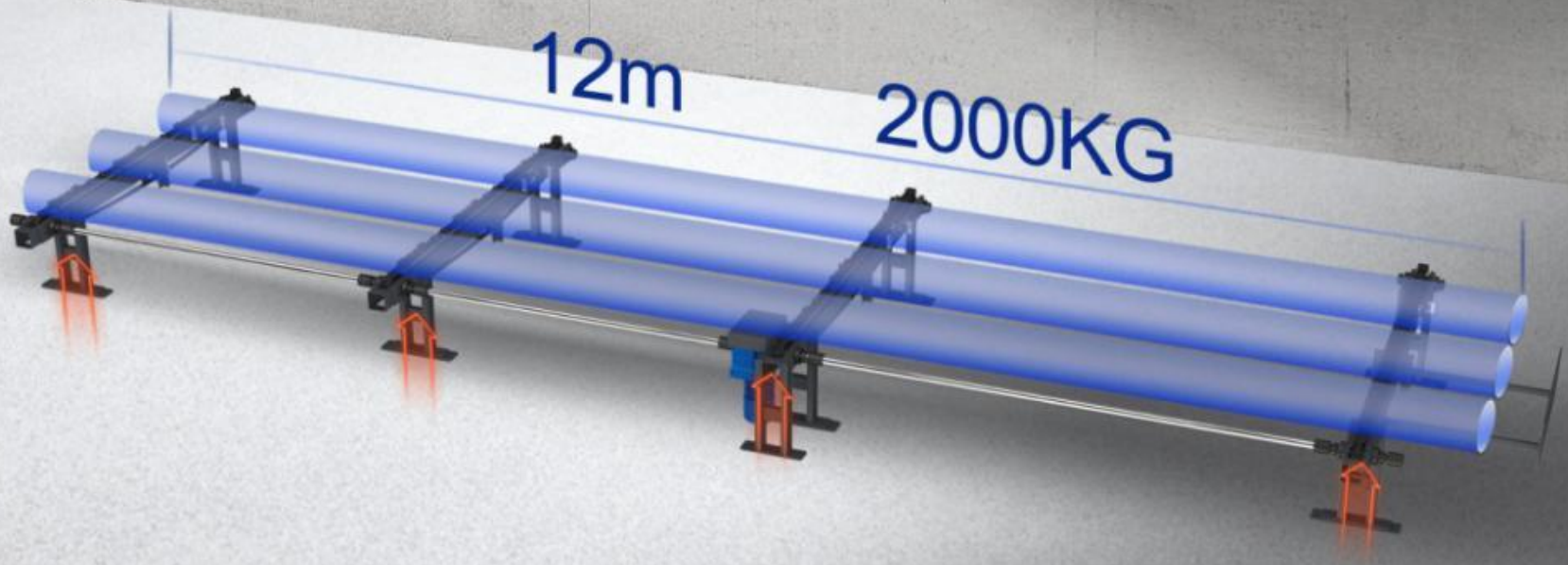
Semi-Automatic Loading Equipment（Optional）

Structural characteristics: multiple materials can be prepared at one time, and the baffle is used for positioning and stability; Adopt synchronous transmission mechanism design, the chain is conveyed horizontally and used in docking with the auxiliary loading system; Semi-automatic loading equipment, with 4 groups of standard 12m loading; If you want to load short materials, you can add one set. You can also make design adjustments according to customer needs.



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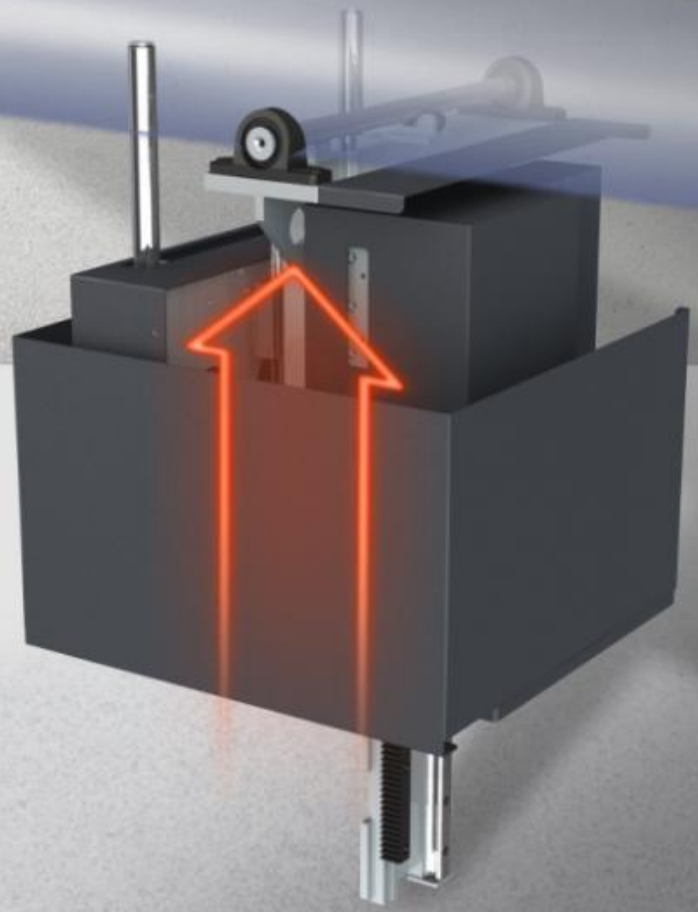
12m

2000KG



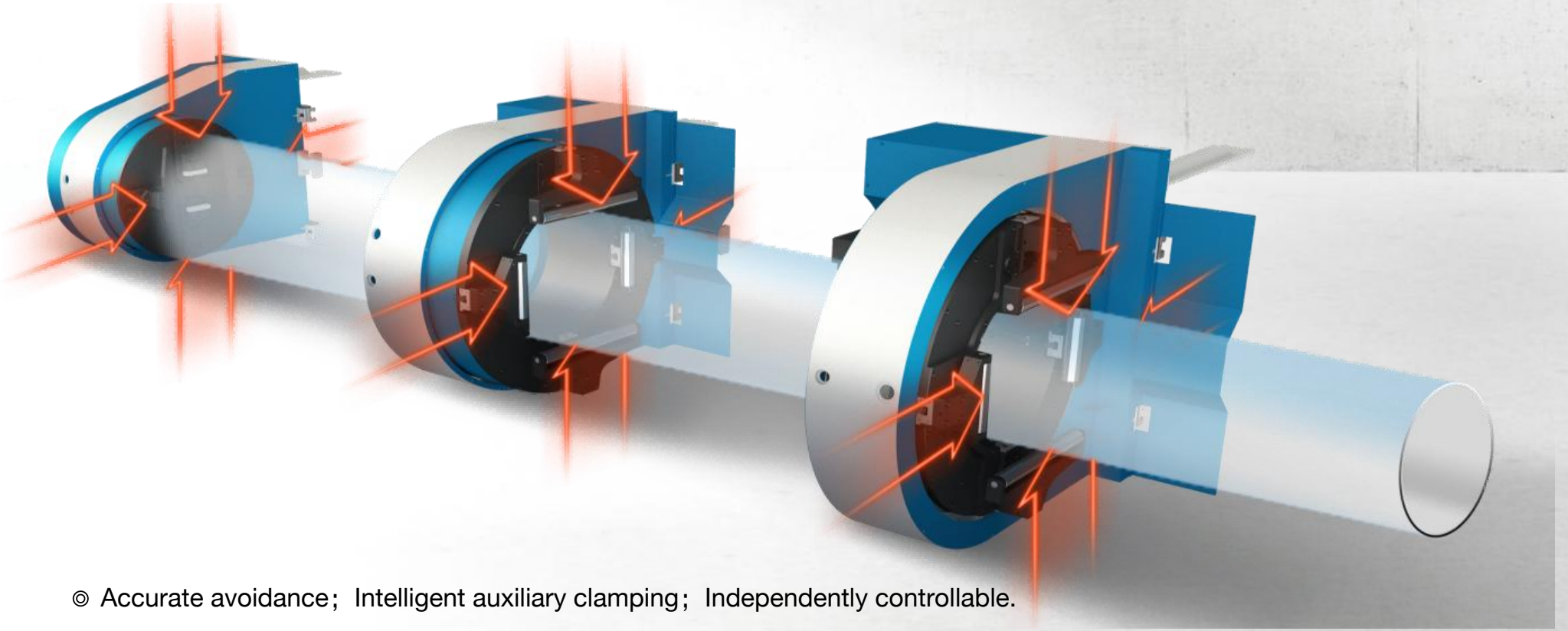
Design of Movable Three Chucks

Accurate avoidance.
Intelligent auxiliary clamping.
Independently controllable.
The chuck side hanging structure design is adopted, and all three chucks are driven by servo motors, which can automatically move according to the length of the machined parts, so that the cutting waste is less and the product precision is higher.

Follow-up Support

- Fast.
- Simple and convenient.
- High bearing capacity.
- Structural features: the loading speed is fast, the loading time is only 1min, and the auxiliary loading device for material placement can start processing quickly with one button, and the pipe with any length of 6~12 meters can be loaded, and the maximum weight can reach 2000kg.

Precision Chuck



◎ Accurate avoidance；Intelligent auxiliary clamping；Independently controllable.

◎ The chuck side hanging structure design is adopted, and all three chucks are driven by servo motors, which can automatically move according to the length of the machined parts, so that the cutting waste is less and the product precision is higher.

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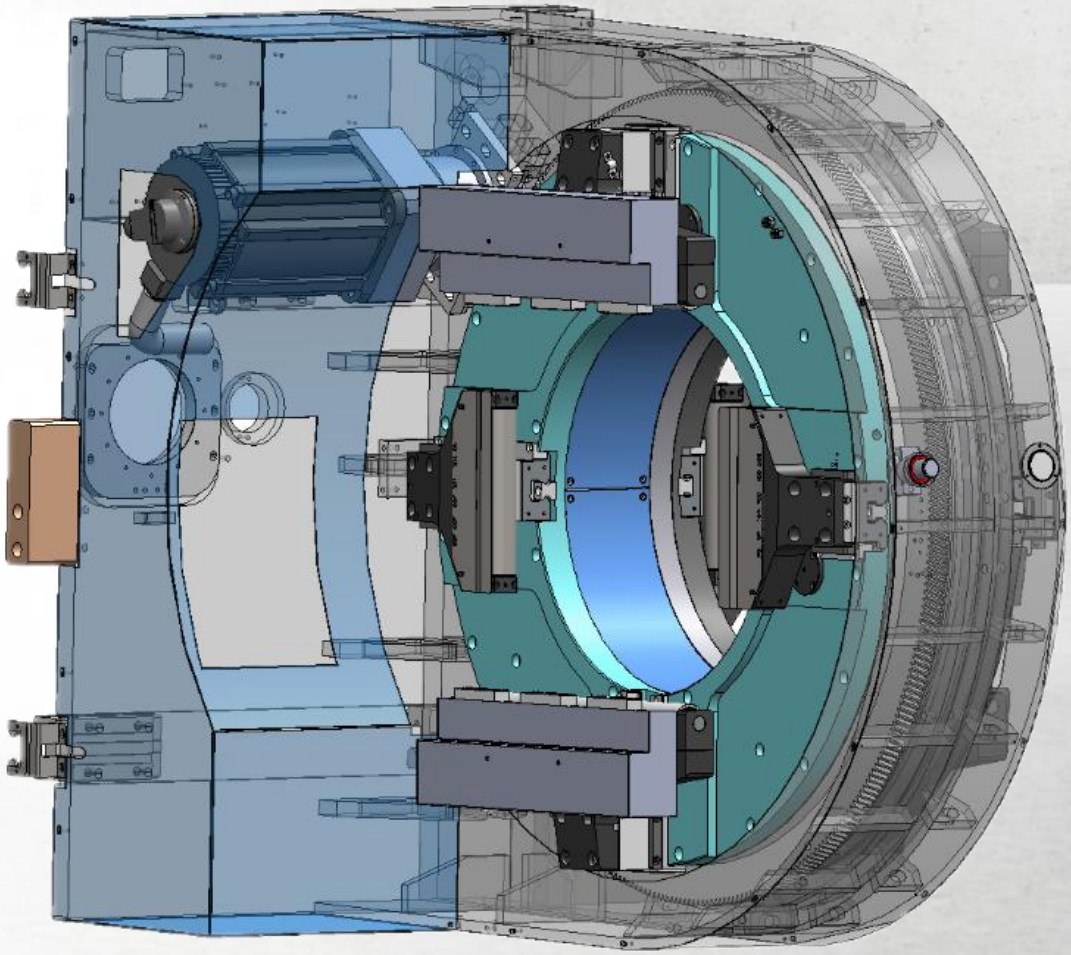
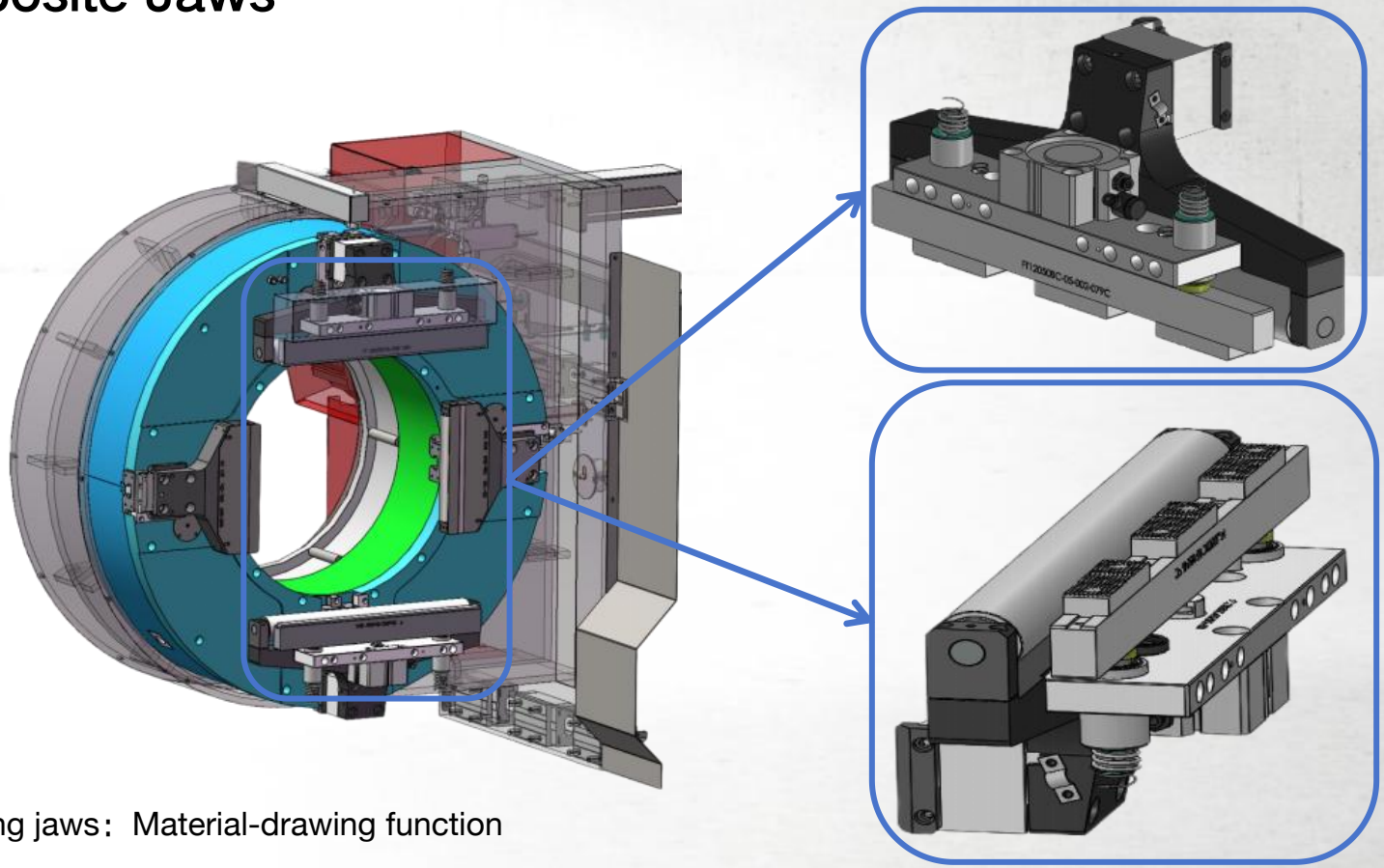
Composite Chuck (Optional)

- ◎ Composite roller double-sided clamping
- ◎ Lightweight and slim design
- ◎ High-precision gear structure
- ◎ High-precision cross roller bearing
- ◎ Low inertia
- ◎ Gear-linked jaws
- ◎ Double-sided roller design
- ◎ Visualizable and adjustable
- ◎ Adaptive clamping



Composite Jaws



◎ Locking jaws：Material-drawing function

◎ Double-sided clamping enables material-drawing actions and pipe locking. The front chuck can pull the pipe to cut the curved contour at the pipe tail and achieve zero-waste cutting.

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Auto-Focusing Cutting Head

Adapting to different materials and thicknesses, the focal length is automatically adjusted to the best cutting distance.
Slim laser head design for versatile cutting of all kinds of channel steel or H-beam.

Bevel (Optional)

A rotating shaft is added at the cutting head, which can realize the 45 degrees rotation of the cutting head in the X-axis direction. Through software control, the rotating shaft of the cutting head can cooperate with the X axis and AB of the chuck to realize the bevel cutting function.

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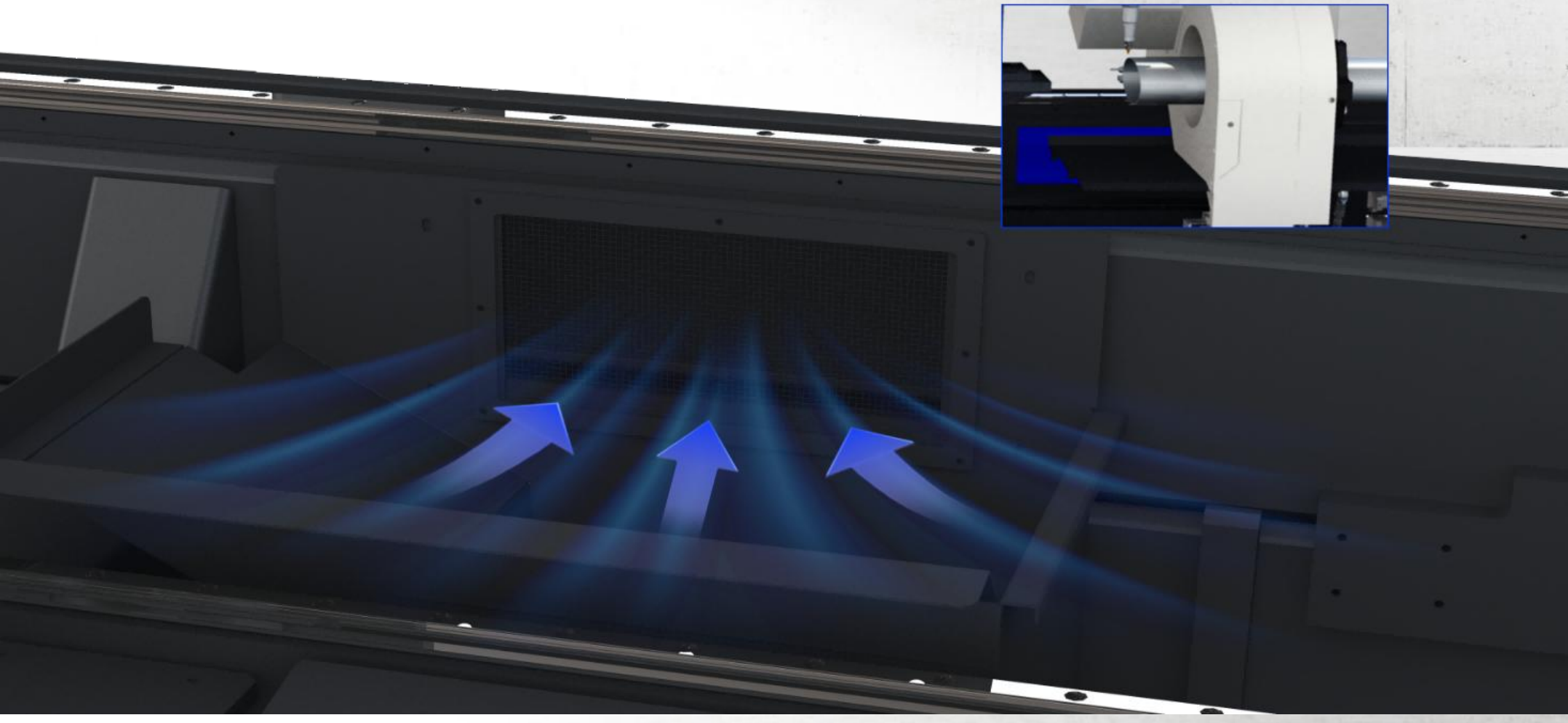
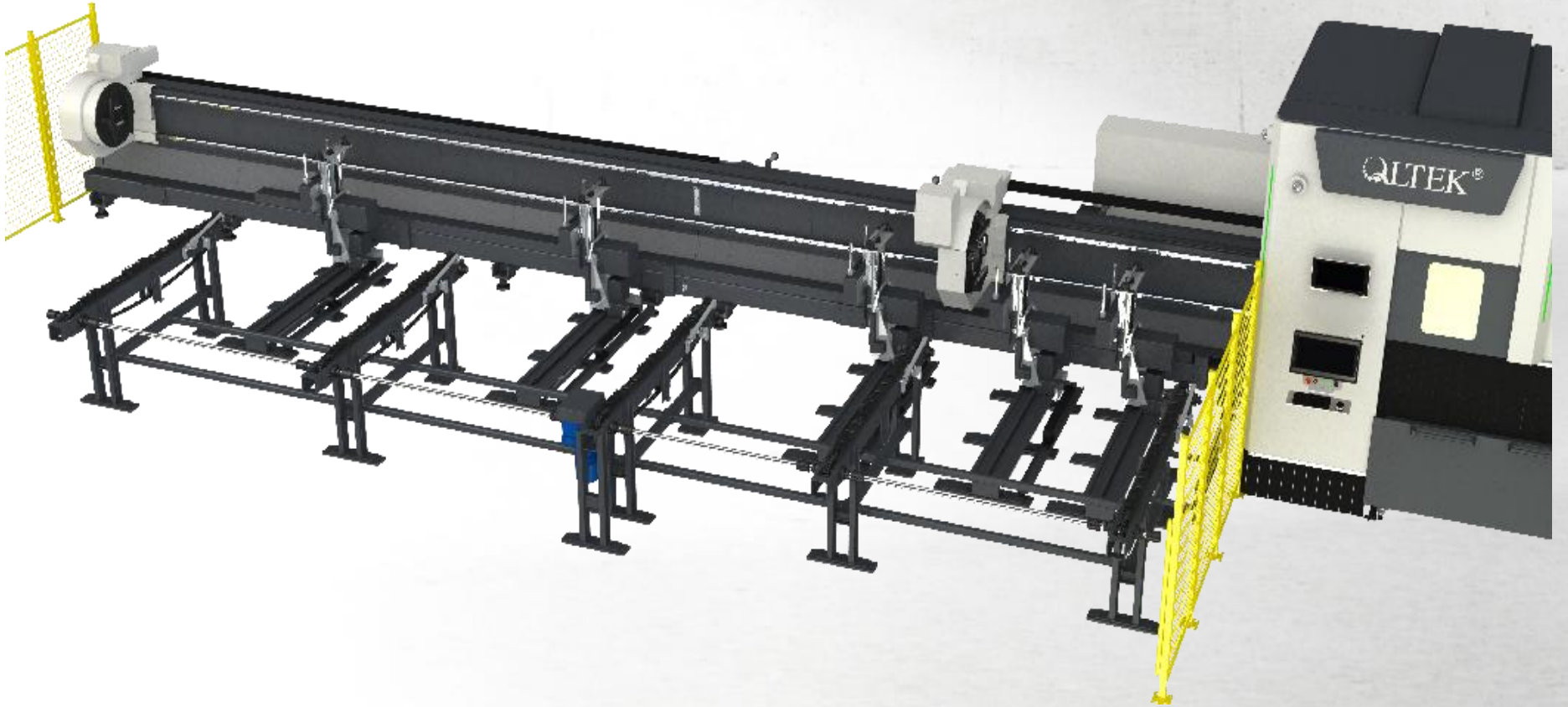
Dust Extraction Structure



Four Sets of Visual Monitoring Cameras (Optional)

Note: The sheet metal protection for the top cover and blanking area is optional.

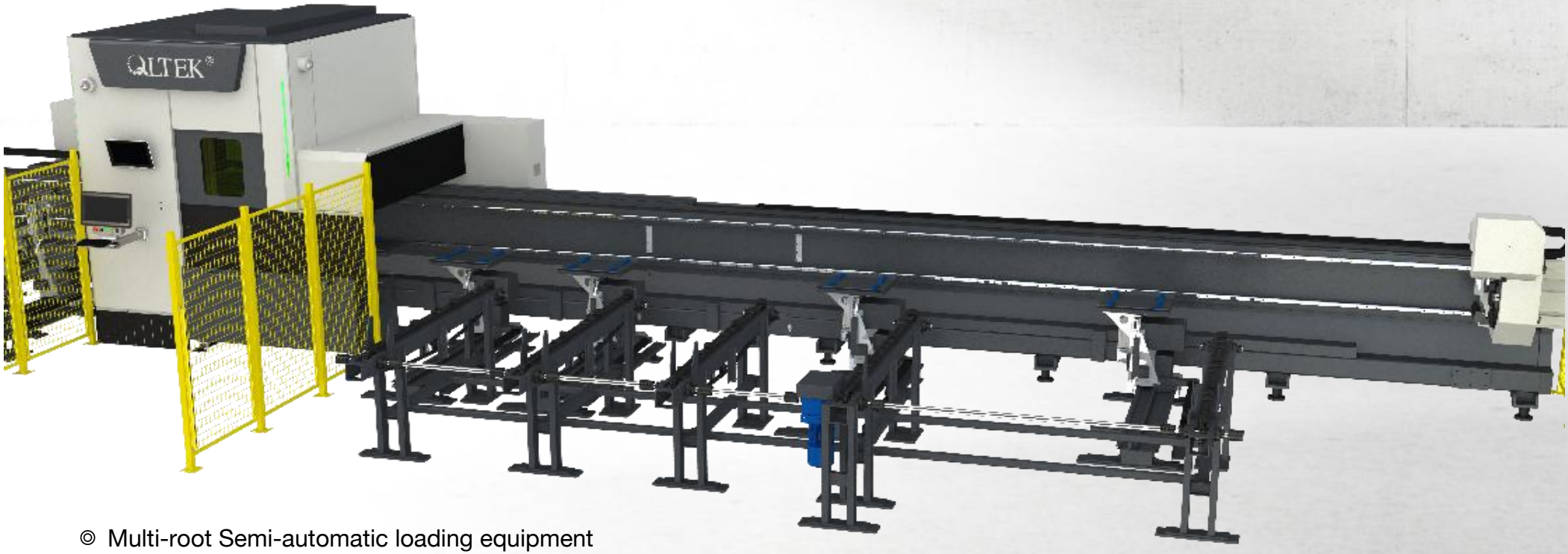
Semi-Automatic Loading Equipment (Optional)



◎ Simple and fast operation, higher load bearing, larger loading size, low failure rate and space-saving.

Note: The top cover, sheet metal protection for the blanking area, safety fence, safety light curtain, and camera are optional.

Semi-Automatic Unloading Equipment (Optional)

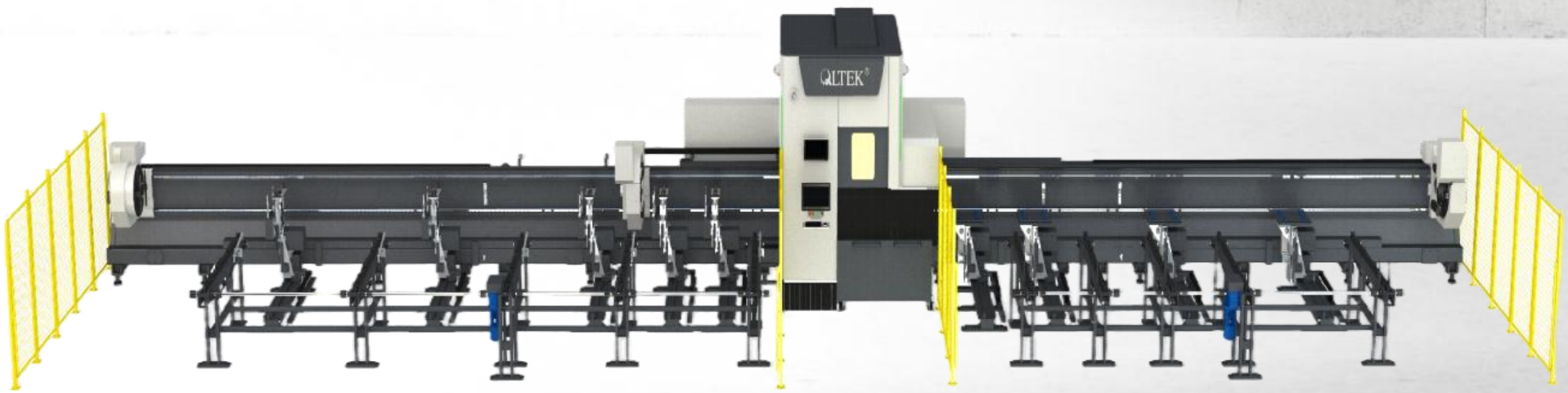


◎ Multi-root Semi-automatic loading equipment

◎ Chain-driven with material distribution stoppers to achieve semi-automatic feeding, liberate manpower, and improve cutting efficiency.

Note: The top cover, safety fence, safety light curtain, and camera are optional.

Safety Protection (Optional)



◎ Optional items: cutting area top cover, safety fence, safety light curtain, and camera

Software Features

Simpler Operation System

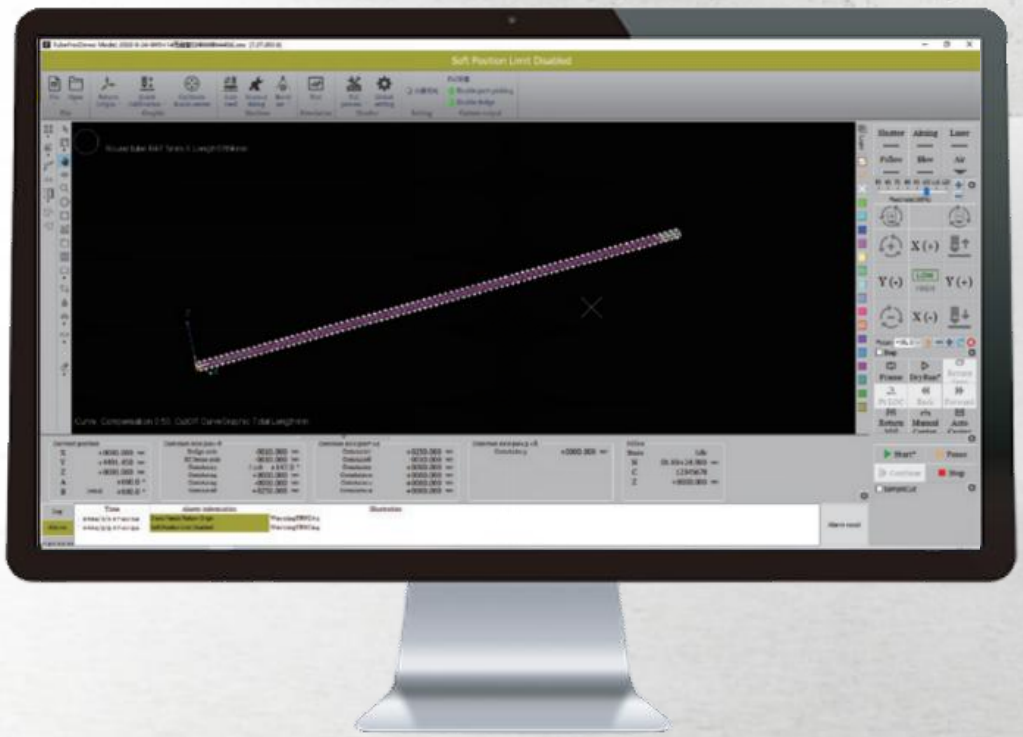
◎ The system has the features of high reliability, intelligence and networking, excellent performance, simple operation and convenient use.

Intelligent Cutting Control

◎ The corresponding process database can be set according to different materials and thicknesses, and it has real-time display function of cutting state and current position, comprehensive diagnosis function and quick fault finding.

Wide pipe adaptability and strong industry applicability

◎ It can efficiently cut various pipes such as round pipes and square pipes, and is widely applicable to the processing needs of pipe-intensive industries including fitness equipment, hardware and sanitary ware, and escalator handrails.



Software Function

◎ The system integrates multiple practical functions:

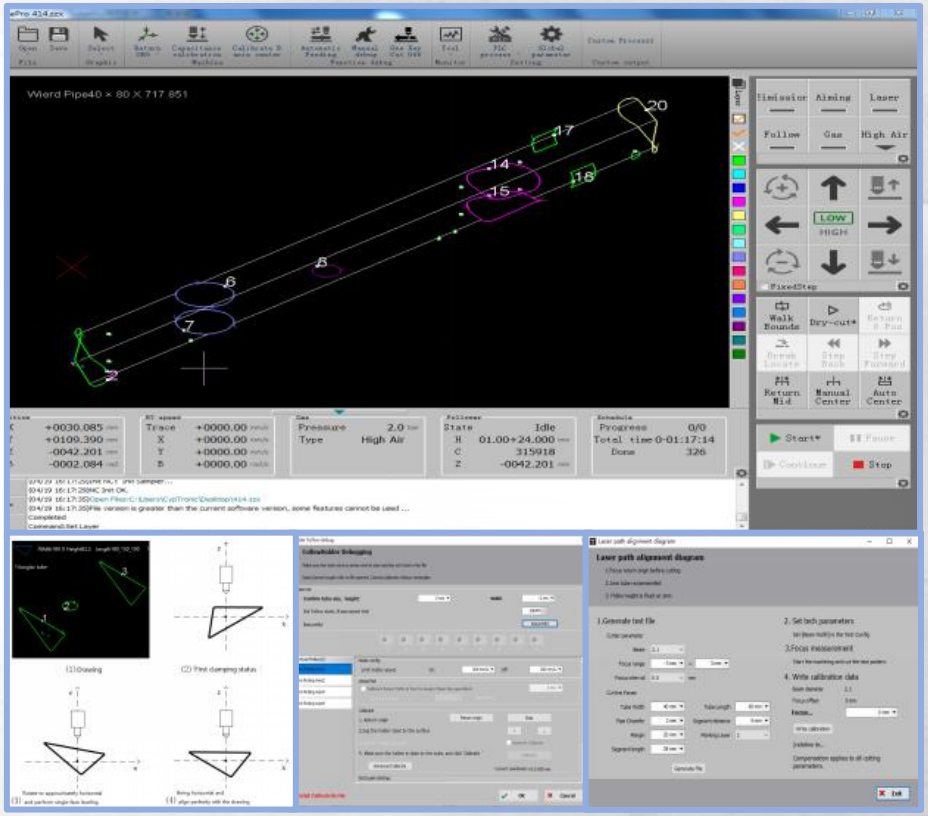
◎ Basic control: Plate surface height tracking (follow-up function), tool retraction, and breakpoint return to ensure processing continuity;

◎ Precision optimization: Edge finding, kerf compensation, and common-edge cutting to reduce material loss and errors;

◎ Intelligent nesting: Supports automatic import of various parts and path optimization, combined with the frog leap function to reduce invalid movements;

◎ Expansion capability: Compatible with marking and small hole marking to meet diversified processing needs.

◎ Double guarantee of cutting precision and stability,Equipped with a centering mechanism to assist in clamping pipes, combined with the automatic centering function to measure pipe deviation in real time, ensuring precise cutting trajectories;



Automatic Nesting

TubesT is a 3D tube nesting software designed for TubePro laser cutting system. From parts drawing and modification, full type compensation, strategic nesting to report generation, using TubesT will meet and exceed your production needs.

Intelligent Nesting

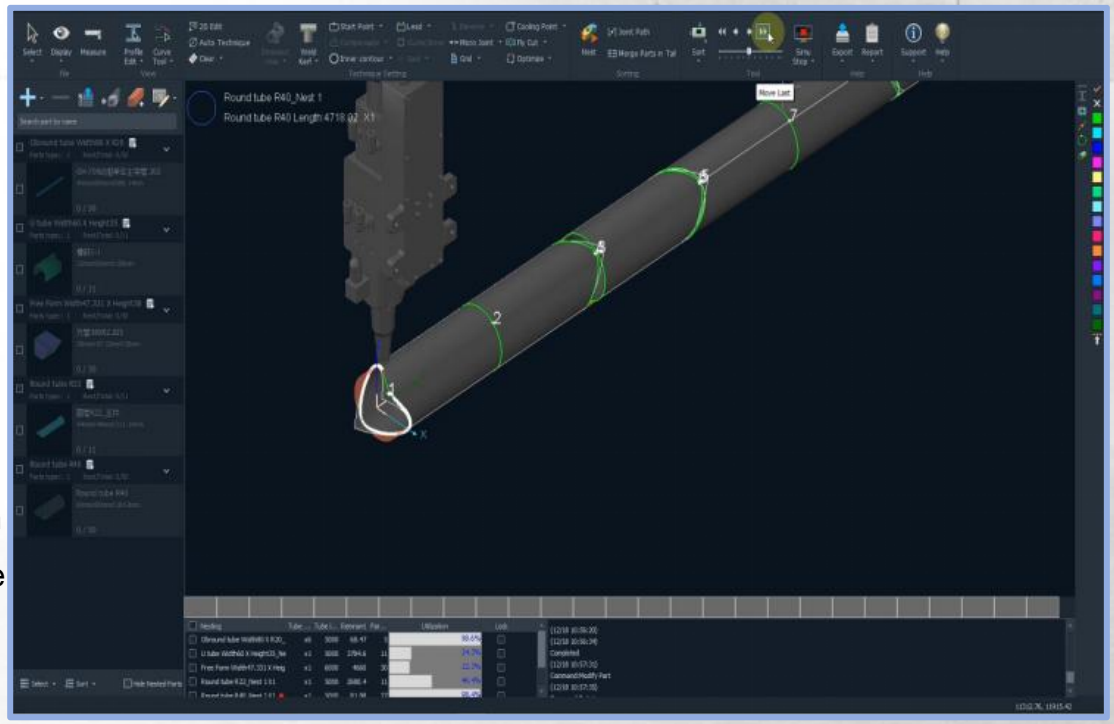
◎ TubesT supports nesting of parts of various shape all at once with minimum waste.

Flexible Common Line

◎ Different parts, regardless of applied compensation, can merge common line toolpath in TubesT to reduce cutting times and minimize waste in production.

◎ Quick Import

◎ Parts or assemblies(IGS format) of multiple shapes can be imported in TubesT in a one-time operation to improve efficiency.



Cutting the Sample

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