

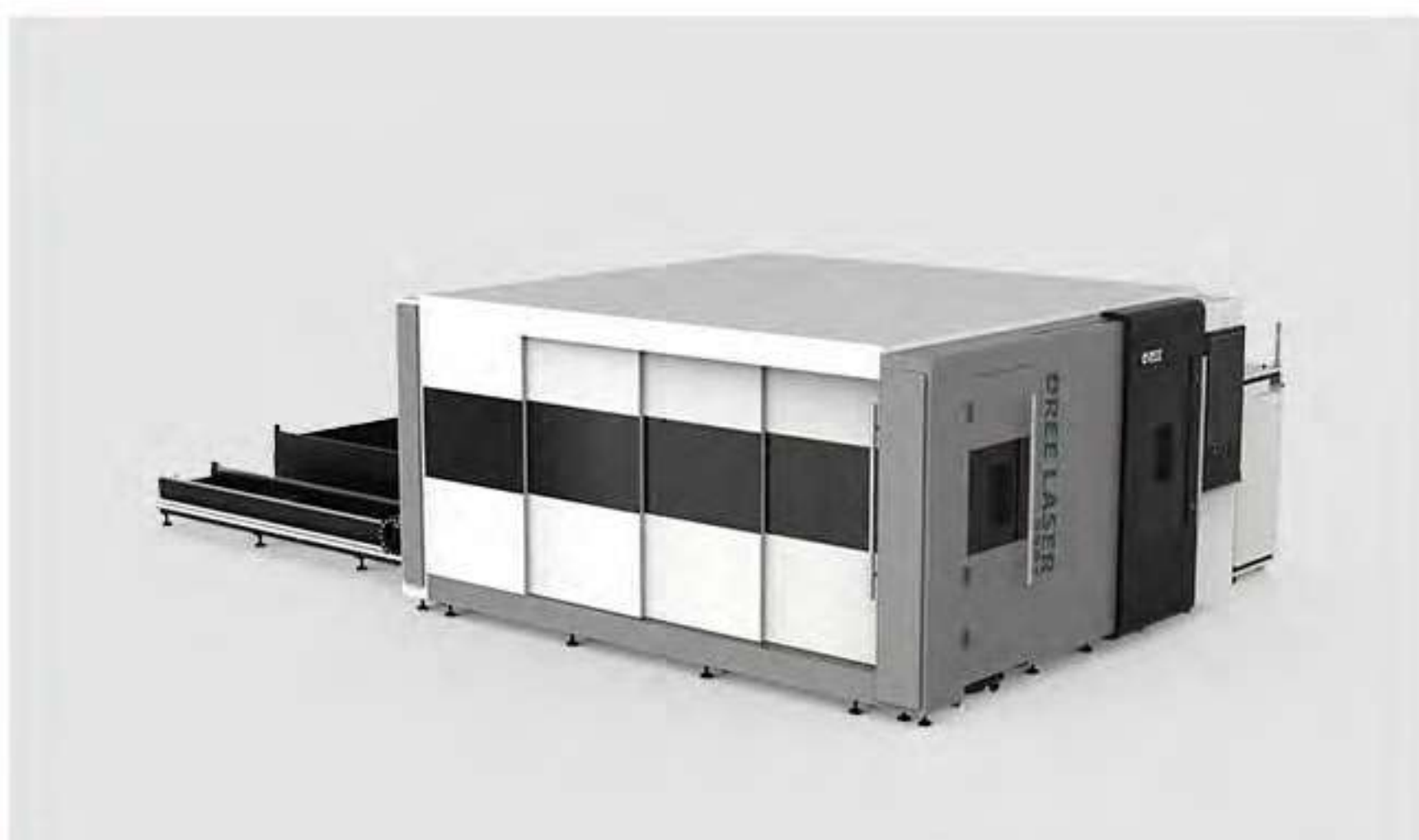
FULL ENCLOSURE PROTECTION

Multifunctional Cutting



Protective Closed Sheet & Tube Fiber Laser Cutting Machine OR-PHT

Exchange Platform • Super High Precision



|| Fully Enclosed Protective Cover



- **Intelligent Monitoring**
32-inch operation panel real-time monitoring

- The large 32-inch screen and the integrated design of monitoring and operation provide users with the ultimate experience;
- The protective cover has a built-in camera to monitor the machine without stopping the machine during operation, which is convenient for the operator to observe the cutting process in real time;
- The rear camera of the outer cover is convenient for the operator to monitor the side and rear dynamics in real time



Protective Cover >>>

Fully enclosed design, internal dust is filtered to discharge.



CE Standard Protective Glass >>>

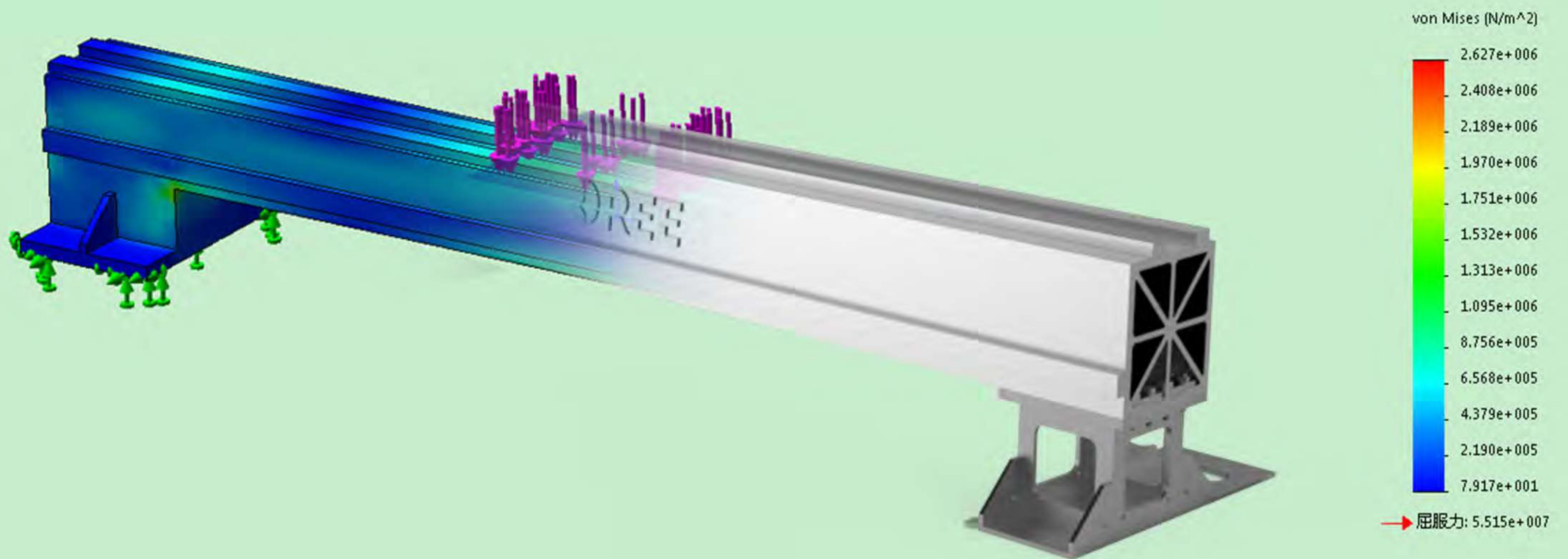
The observation window adopts European CE standard protective glass, which makes eye protection safer.



Thicken Sheet Metal >>>

The thickness of the sheet metal is 1.5-3mm, the shell is not easy to deform, and the body is more tough.

|| The Fifth-generation a'Aviation Aluminum Beam

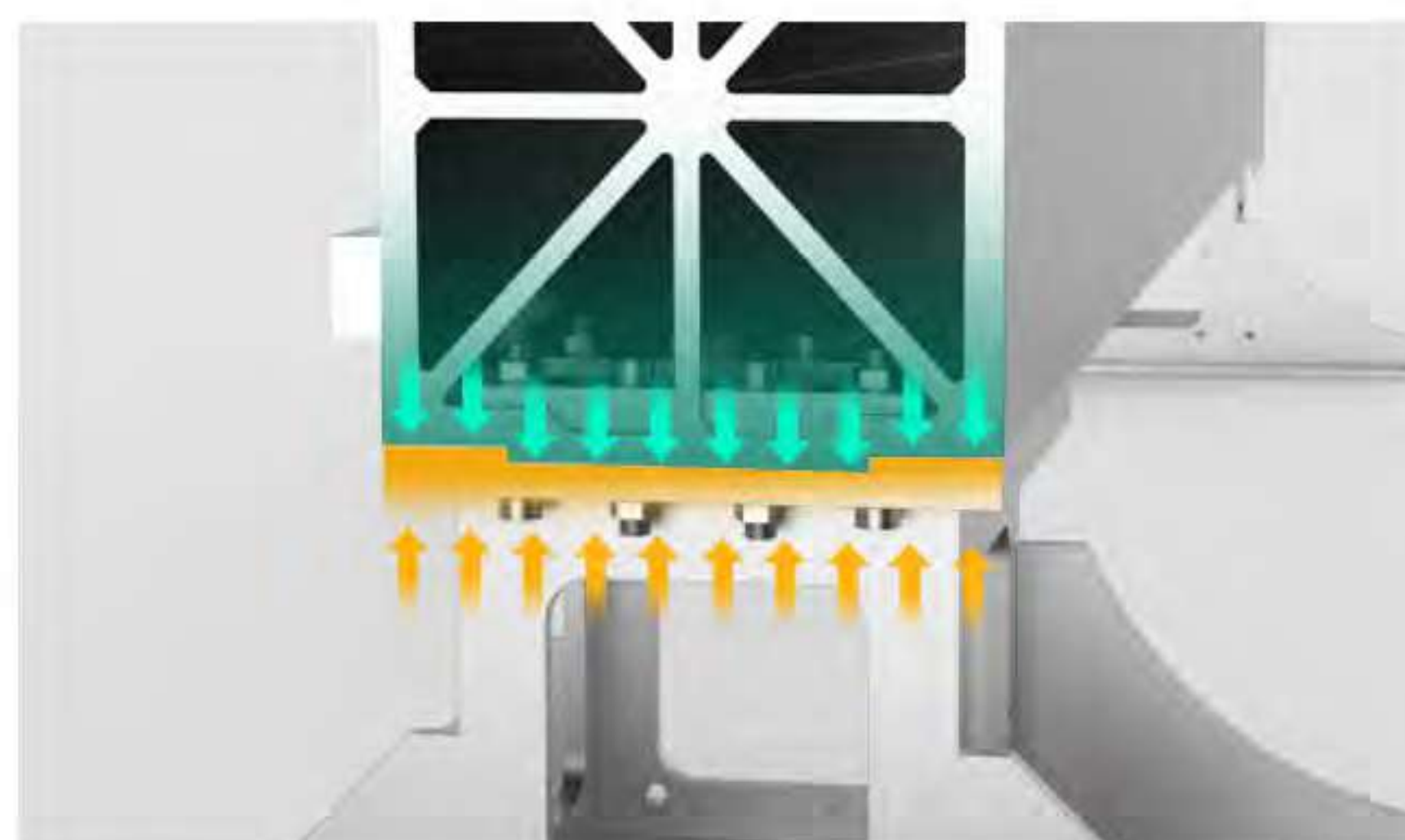


- In order to improve the structure of the beam and optimize its dynamic performance, the R&D staff of Oree took advantage of the previous 4 generations of beams and used finite element analysis to ensure the stability of the beam structure;
- Under the condition of normal operation of the laser cutting machine, physical monitoring was observed for 30 days;
- The structural stability and dynamic performance meet the expected standards, and finally the fifth-generation aviation aluminum alloy beam was successfully developed.



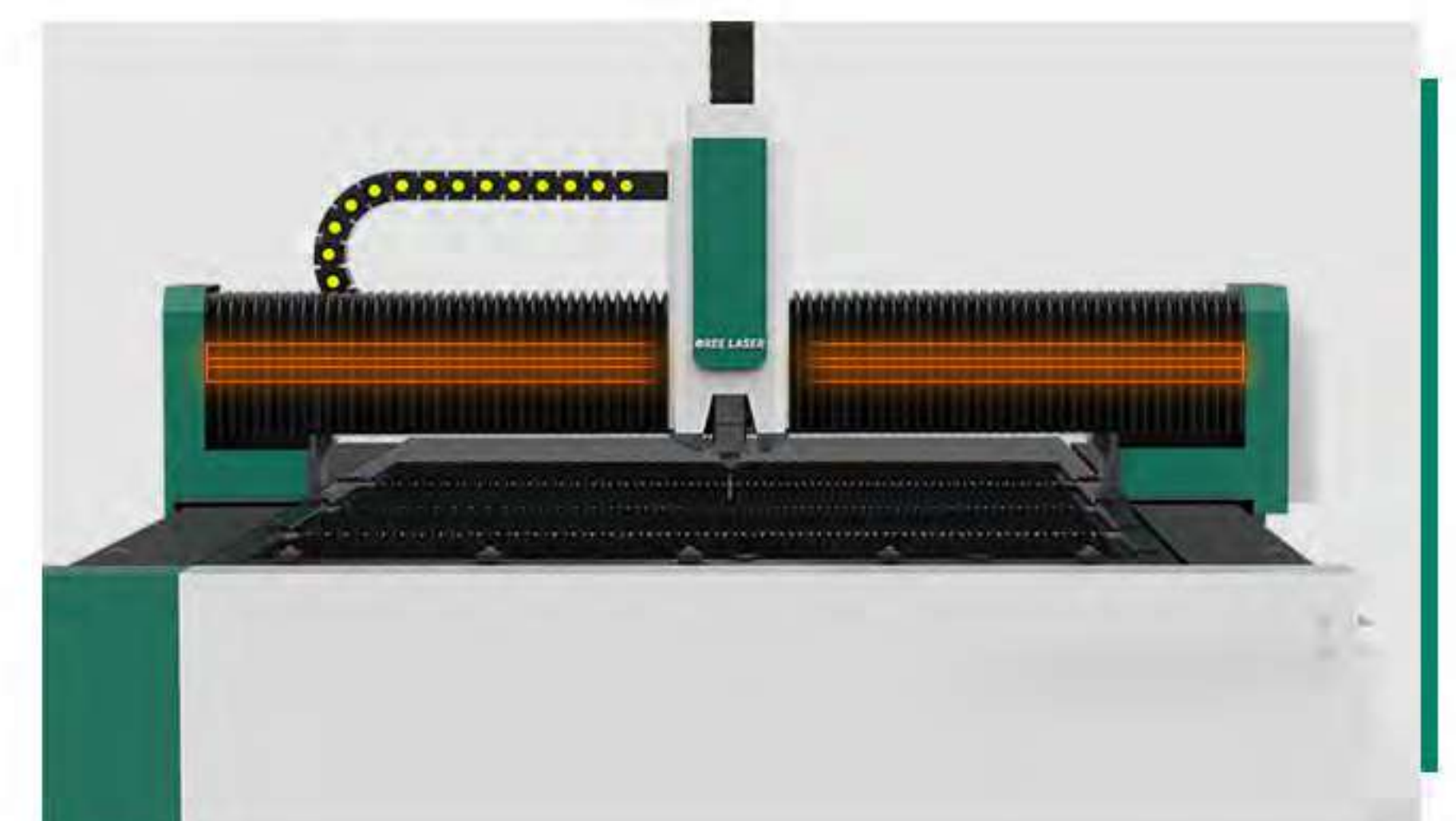
T6 Heat Treatment Process >>>

The whole is processed by **T6 heat** treatment process to make the beam obtain the highest strength. Solution treatment increases the strength and plasticity of the beam, and improves the corrosion resistance of the alloy; complete artificial aging makes the beam obtain the maximum strength (tensile strength), and obtains the hardness and ductility by controlling the effective **temperature and holding time**.



Stop Structure >>>

The beam is specially equipped with a "**stop structure**", the convex stop and the concave stop are tightly locked, and the strong stop of the side wall is on the inner side to resist external forces. The overall structure can ensure that the beam does not move, and the structure is stronger.



Lightweight And High Speed >>>

OREE's newly developed and upgraded mass-produced beams optimize and reduce their weight while ensuring structural stability, ensuring their ultra-high response speed.

II Duplex high-strength plate welding bed

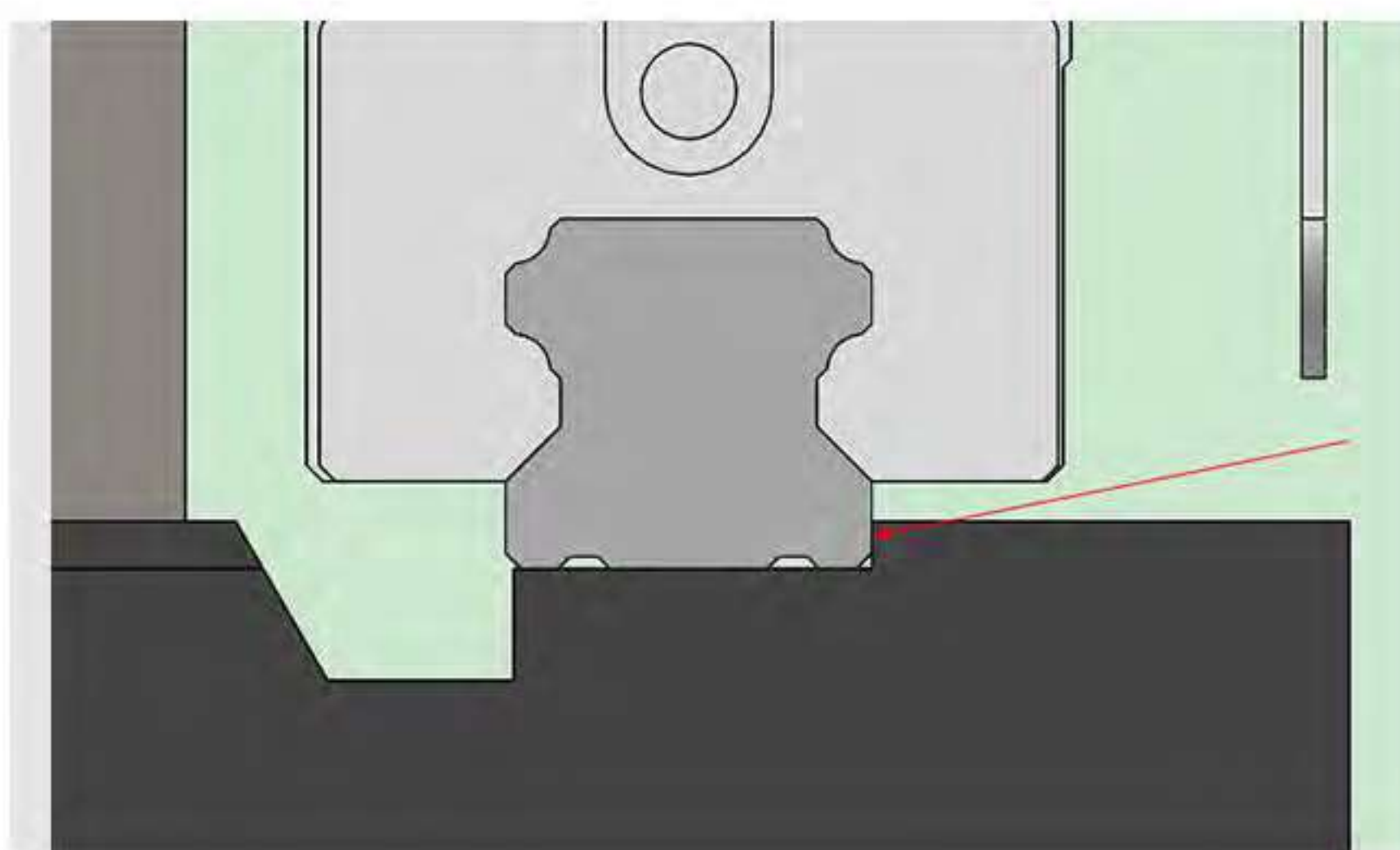


Duplex high-strength plate welding machine bed, mortise and tenon structure, natural aging treatment after 24-hour furnace annealing, adopts integrated processing technology of high-precision gantry machine tools from well-known European and American brands, and its long-term use accuracy is improved to more than 65% compared with similar products.



Fire-resistant brick fire-proof design >>>

It prevents the bed from expanding and deforming due to long-term heat, effectively reducing laser damage to the bed, and providing a strong guarantee for users to cut thick plates in batches for a long time. At the same time, the service life of the bed is prolonged.



Against wall structure >>>

The guide rail installation adopts the combined positioning of the guide rail against wall and the manganese steel guide rail positioning block to ensure the stability of the overall accuracy of the machine tool after high-speed operation.



Stress annealing >>>

The overall stress annealing treatment method is adopted to eliminate thermal stress, reduce the deformation of the bed, and significantly extend the service life of the bed, and it will not be deformed for 20 years.

|| Six-sided Steel Rapid Exchange Platform

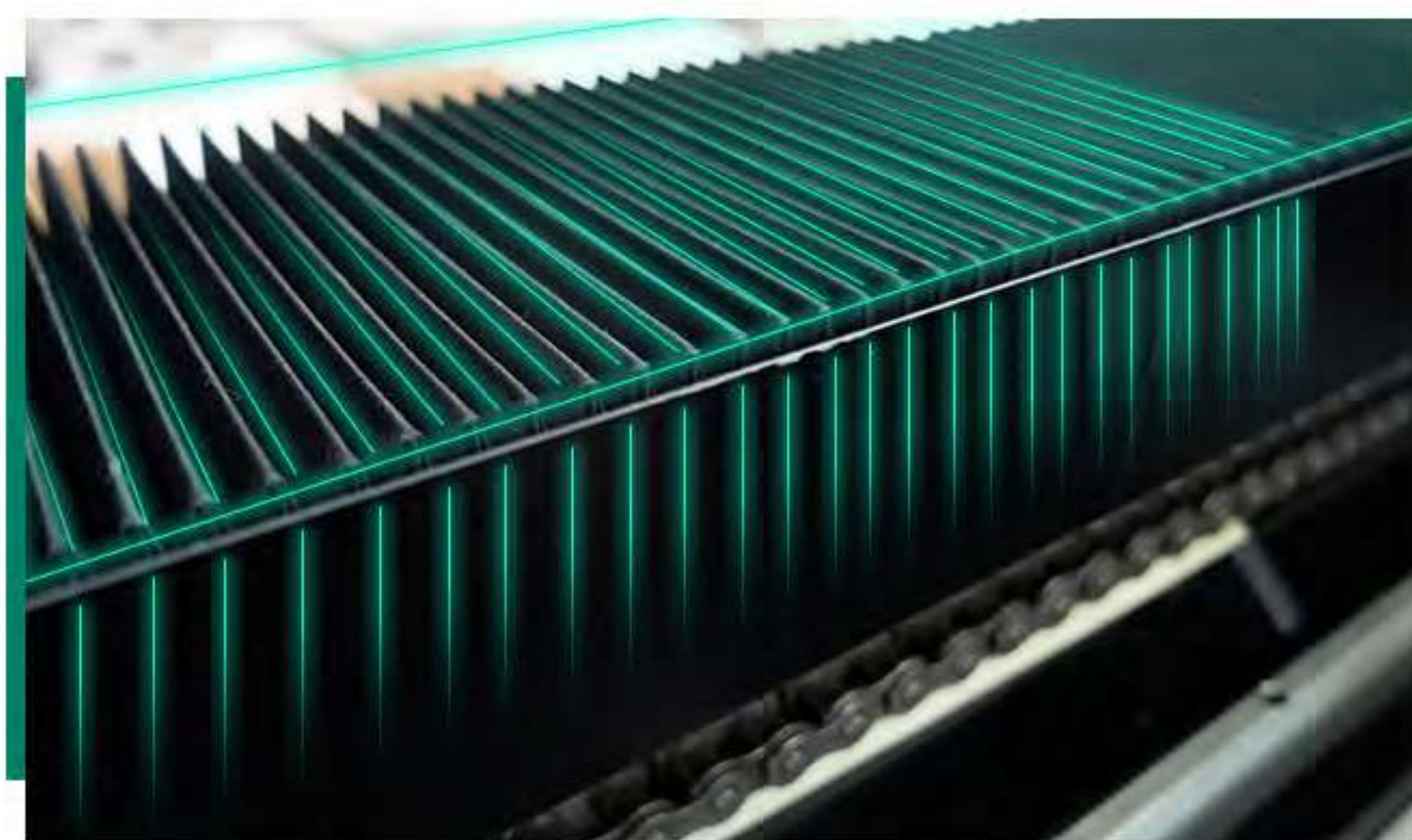
- Six-sided steel rapid exchange platform
The pulley and the track are inlaid and clamped, and the track brush is used to clean the guide. The two fit closely, and the platform exchange is more stable.



- **Pneumatic locking**
Pneumatic locking between platforms. The locking force is stronger than electromagnetic locking, and the cutting is firmer.

• Single Platform Exchange Only Takes 10 Seconds

Taking the 3015 platform as the standard, a single platform exchange only takes 10 seconds, which can effectively improve the processing efficiency of the manufacturer.



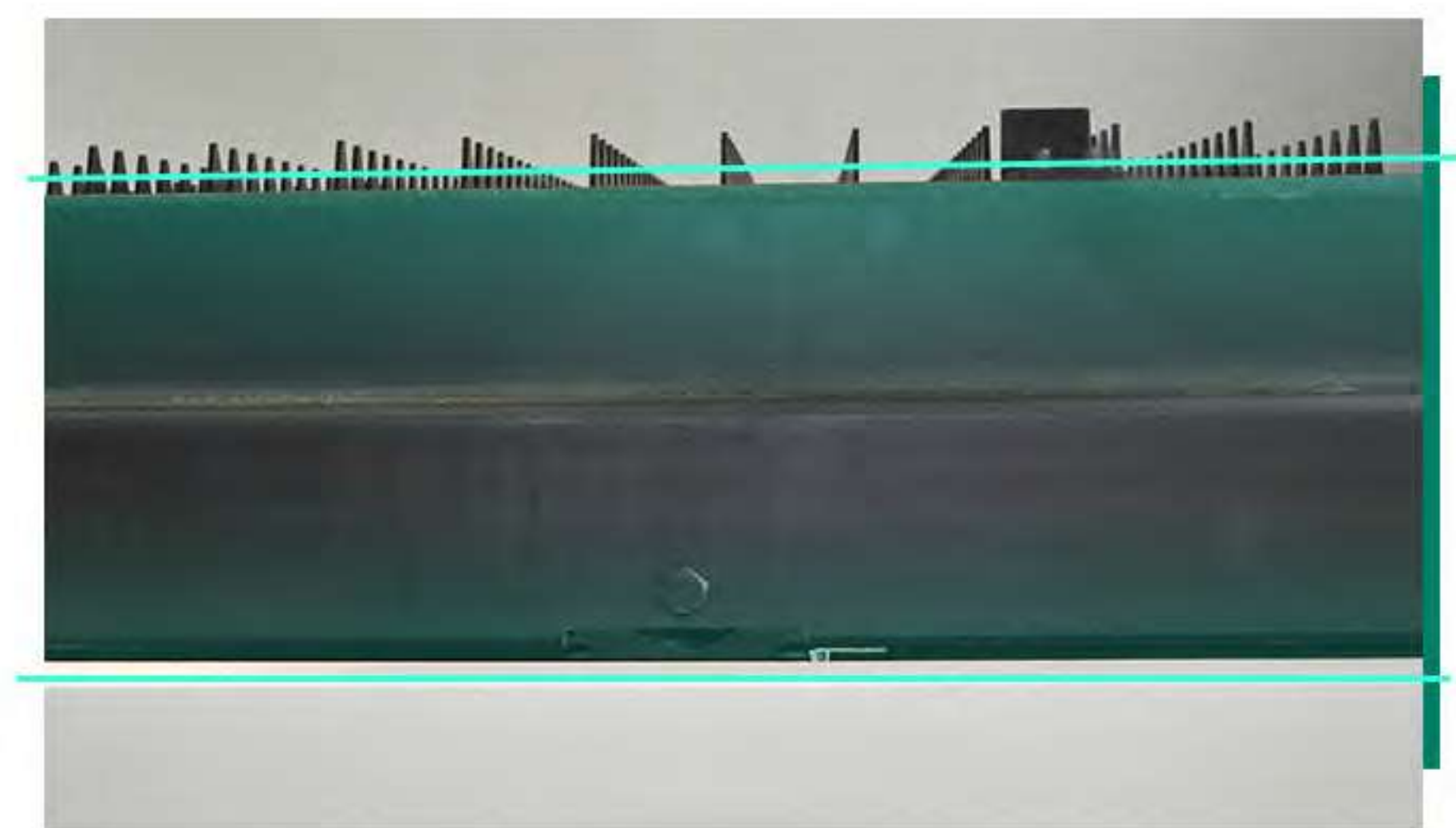
Burn-proof Partition >>>

Prevent sparks from burning the dust cover and reduce loss.



Reinforcement Of Knife Strip >>>

Prevent plate vibration during processing and improve cutting accuracy.



Heightening The Sheet Metal >>>

The sheet metal on both sides of the exchange platform is heightened, and the platform pulley is built in for safer.



Automatic Focusing Laser Head

The laser head is made of high-quality materials in accordance with advanced technology. It is strong and durable; it can achieve "online" measurement during the production process, and the measurement is accurate and rapid.



Laser Head Follow-up Function >>>

Follow the change of the height of the board, don't worry about the unevenness of the board affecting the cutting effect.



Automatic Cleaning >>>

Equipped with laser head brush, which can automatically clean the nozzle, which is efficient and worry-free.



Long Service Life >>>

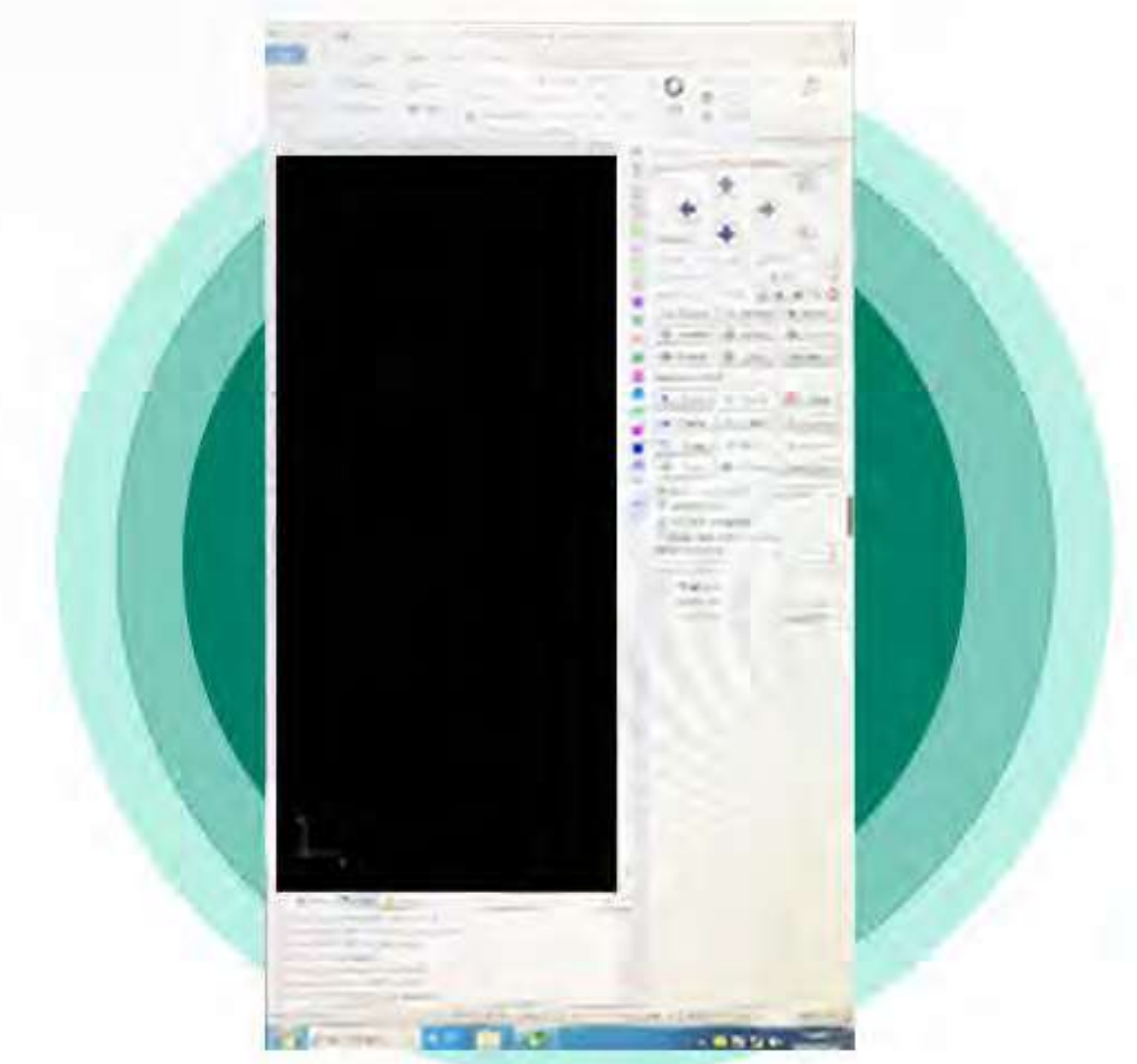
The protective lens is continuously monitored; the internal structure of the laser head is completely sealed to prevent the optical lens from burning due to dust.

Intelligent Control System



- **Roller wheel bracket**

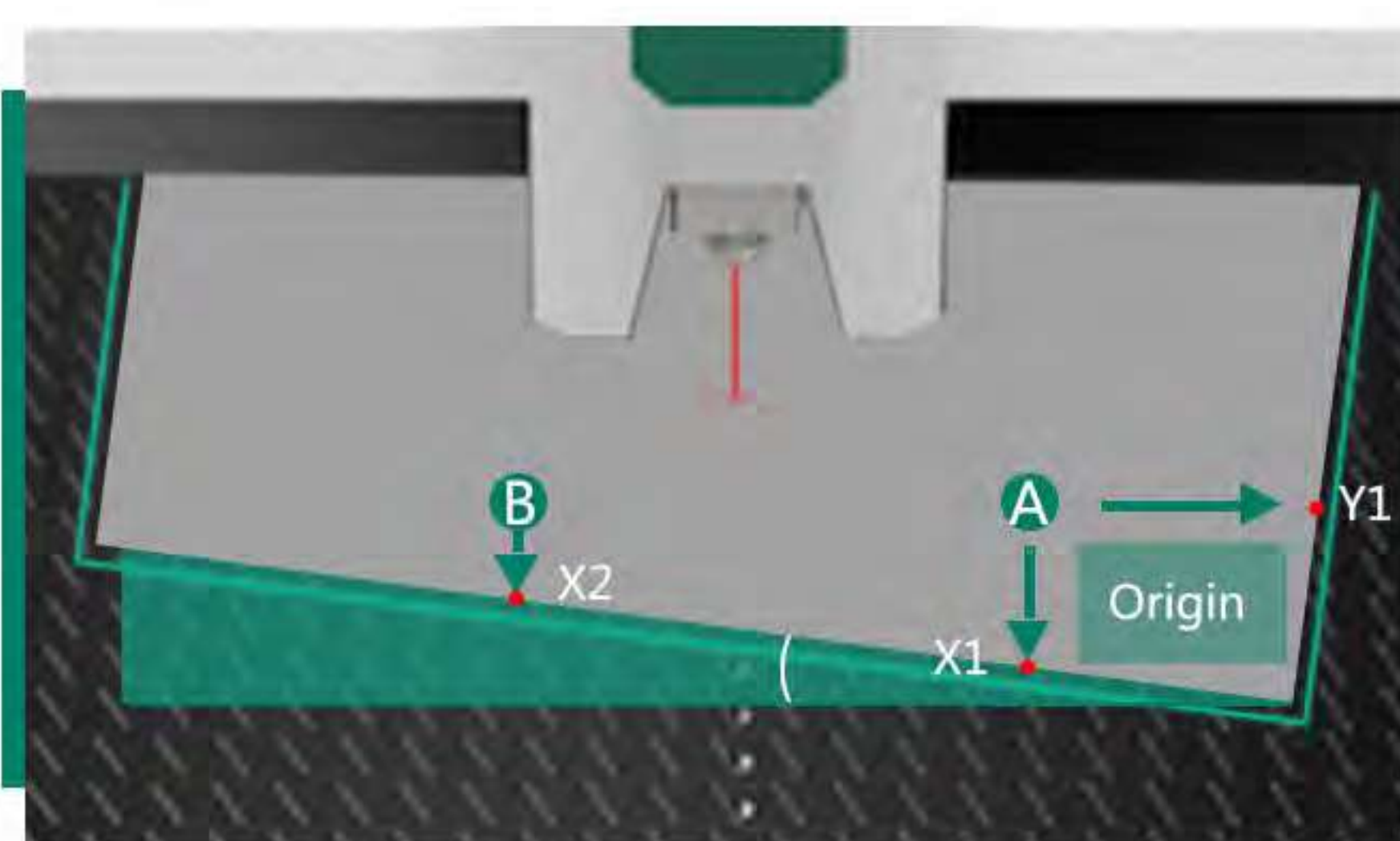
The roller bracket can be controlled to automatically rise or fall according to the position of the chuck. The bracket can be used for automatic feeding material.



- **Tube Pro(3000s)**

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The machine is equipped with professional plane cutting software and professional pipe cutting software, combined with a 32-inch touch screen, easy to use, rich in functions, suitable for various processing occasions.



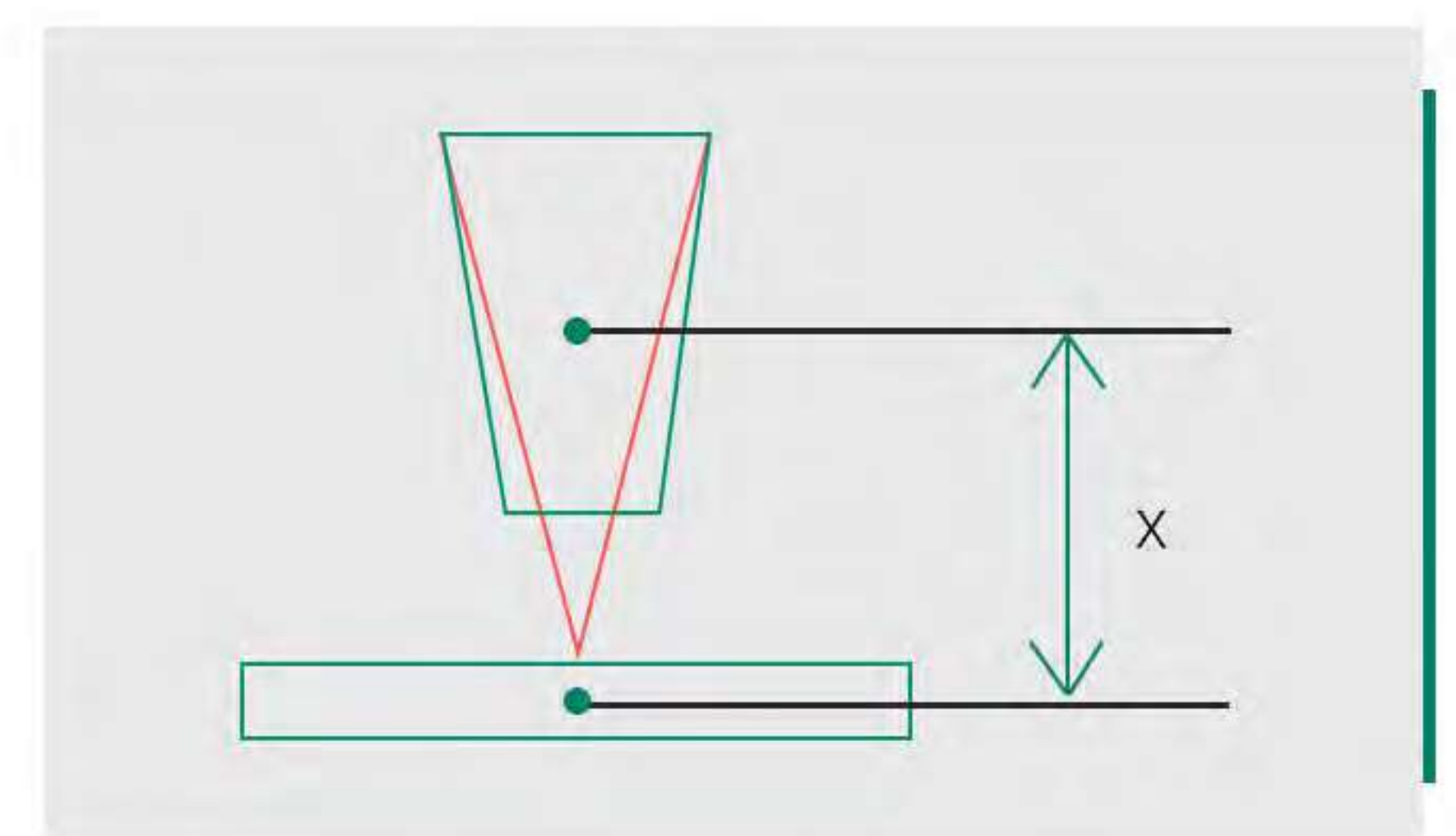
Edge Finding Aid >>>

Dual-drive deviation self-correcting two-stage capacitive edge seeking, accurately locates the edge of the plate, optimizes the layout according to the position of the plate, saves time and materials, and improves the utilization rate



Concise And Clear Process Settings >>>

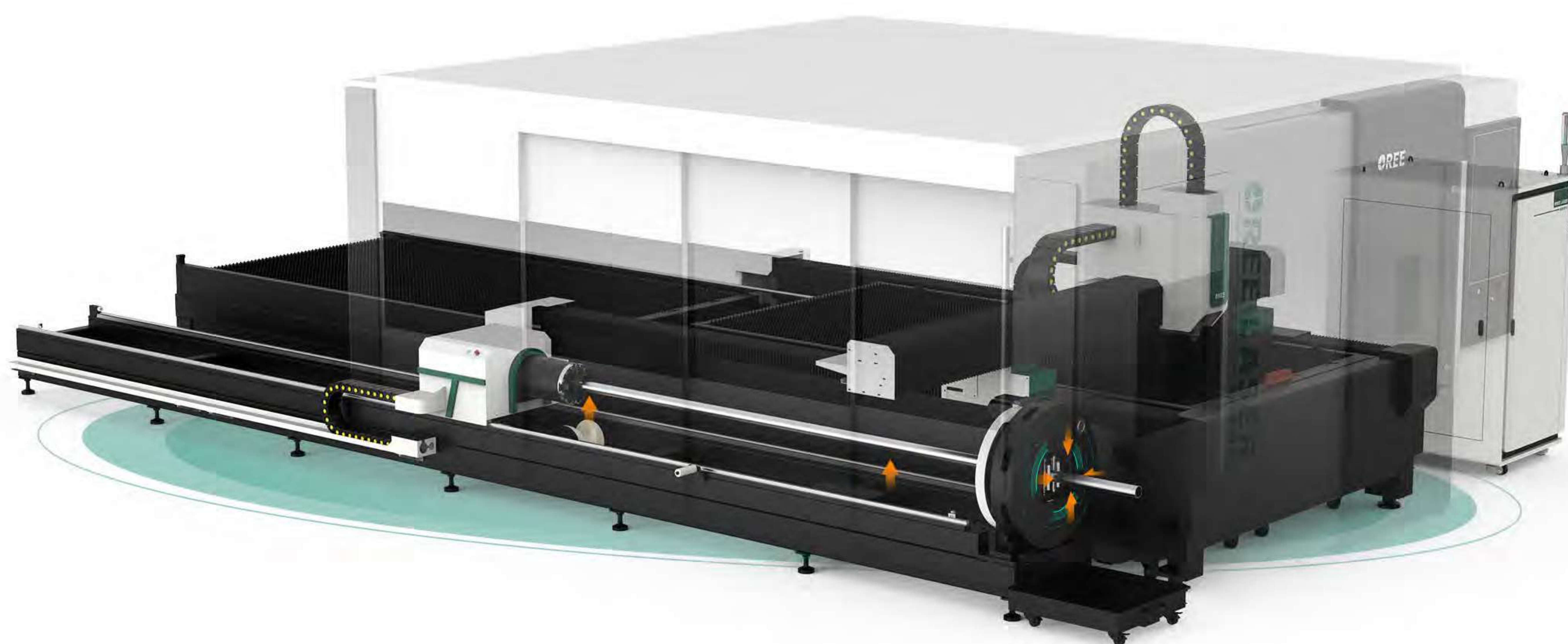
After importing graphics, you can quickly complete the setting of the entire board process; support three-level perforation and automatic layout. Film cutting, power-off memory and other functions are simple and easy to operate.



Find The Center Point >>>

Collect the real-time information of the Z axis during processing, obtain the deviation value between the pipe center and the chuck, and compensate in real time to achieve high-precision cutting

|| Front And Rear Automatic Self-centering Pneumatic Chuck

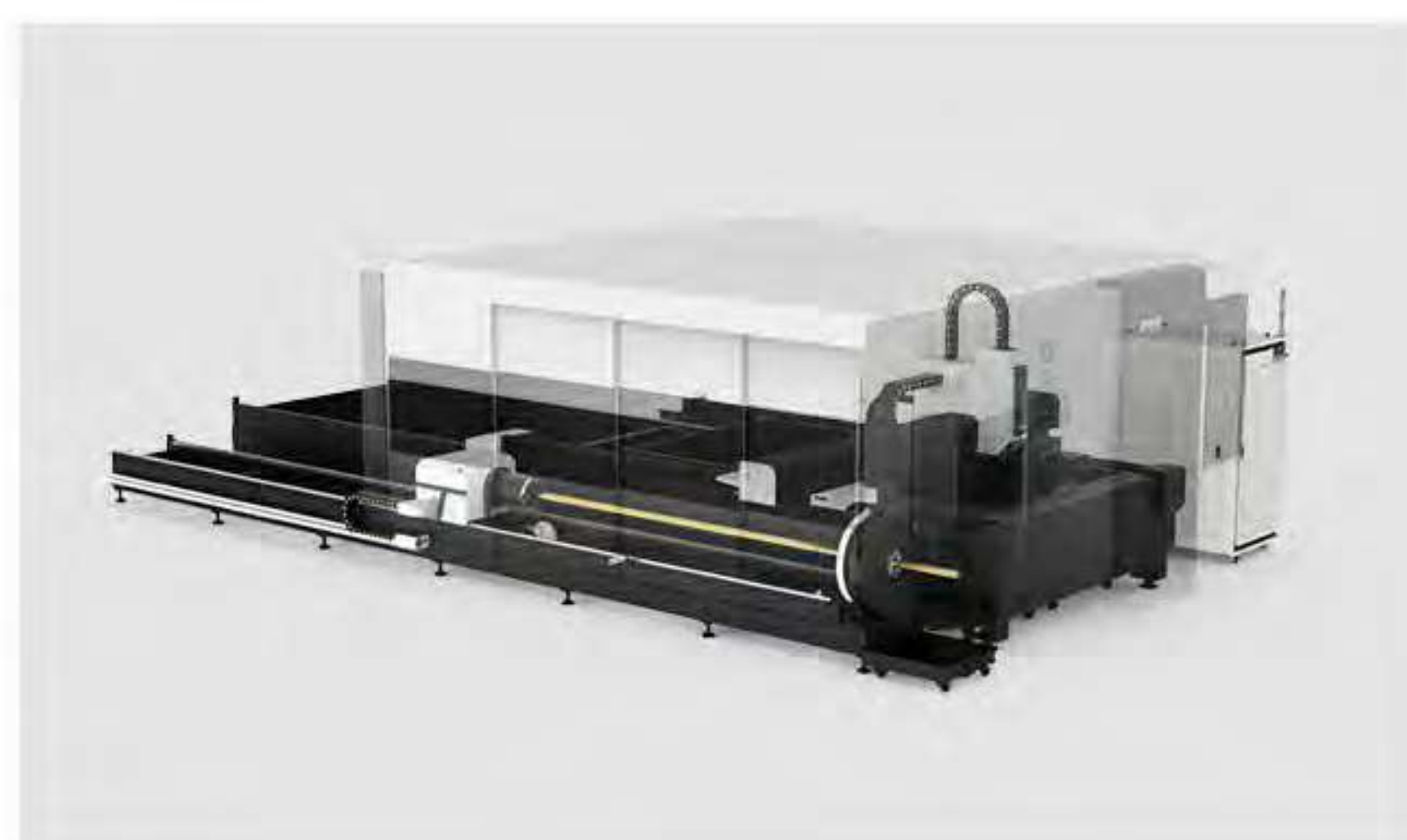


- High cutting precision and high dimensional accuracy. The cutting is smooth and clean, without burrs, and the material loss is minimal;
- High cutting efficiency for mass production. the laser processing can easily complete the positioning of several meters of pipe clamping, which makes batch processing possible;
- Tube laser cutting machine can realize the possible size and shape feature processing of the complicated tube structure like cutting, chamfering, grooving or hole, scoring and other.



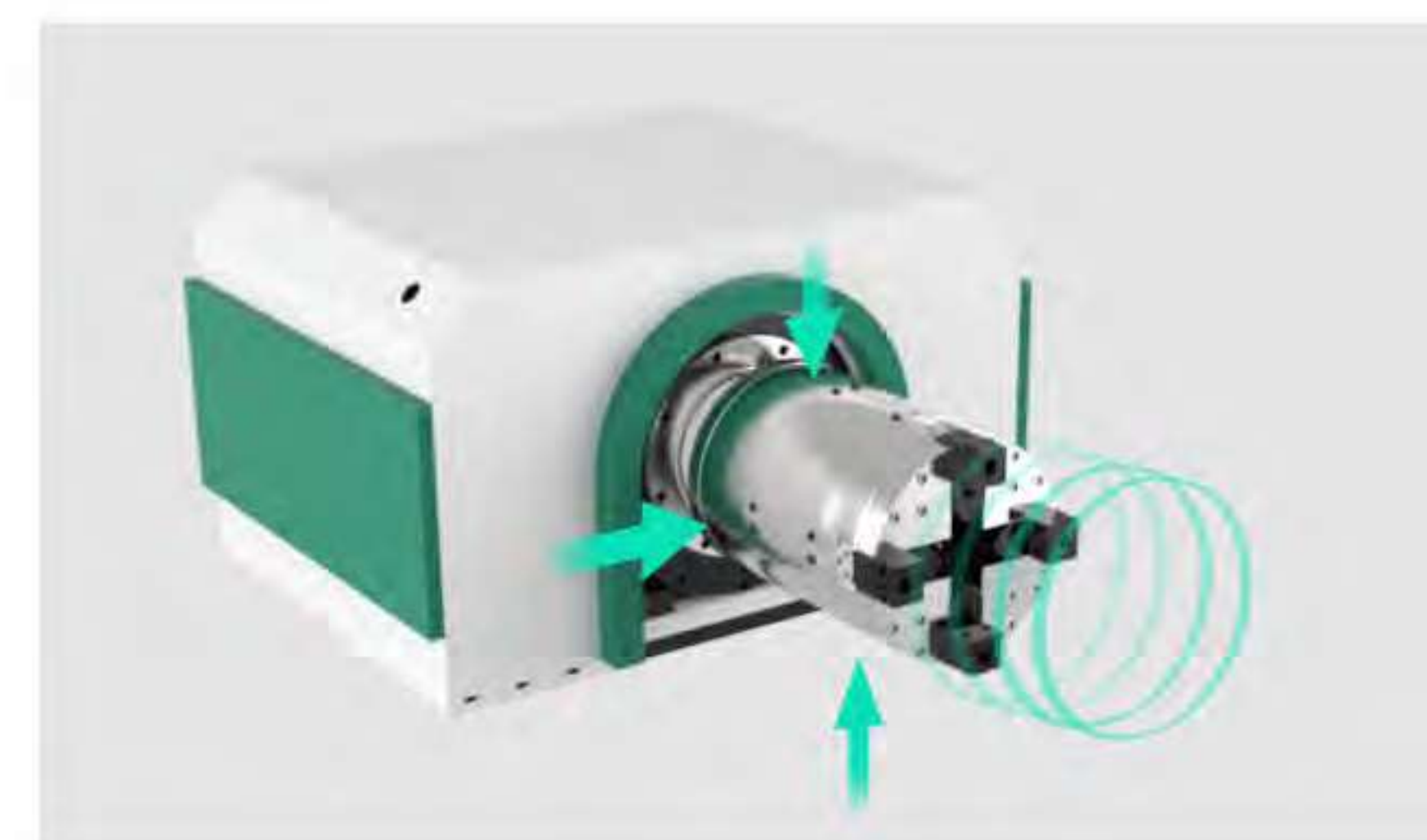
Automatic self-centering pneumatic chuck

Front and rear dual pneumatic chucks, maximum clamping diameter **350mm**. The chuck comes with a self-centering function, which makes it more convenient for pipe clamping and self-centering, reducing manual clamping centering errors.



Gear Transmission >>>

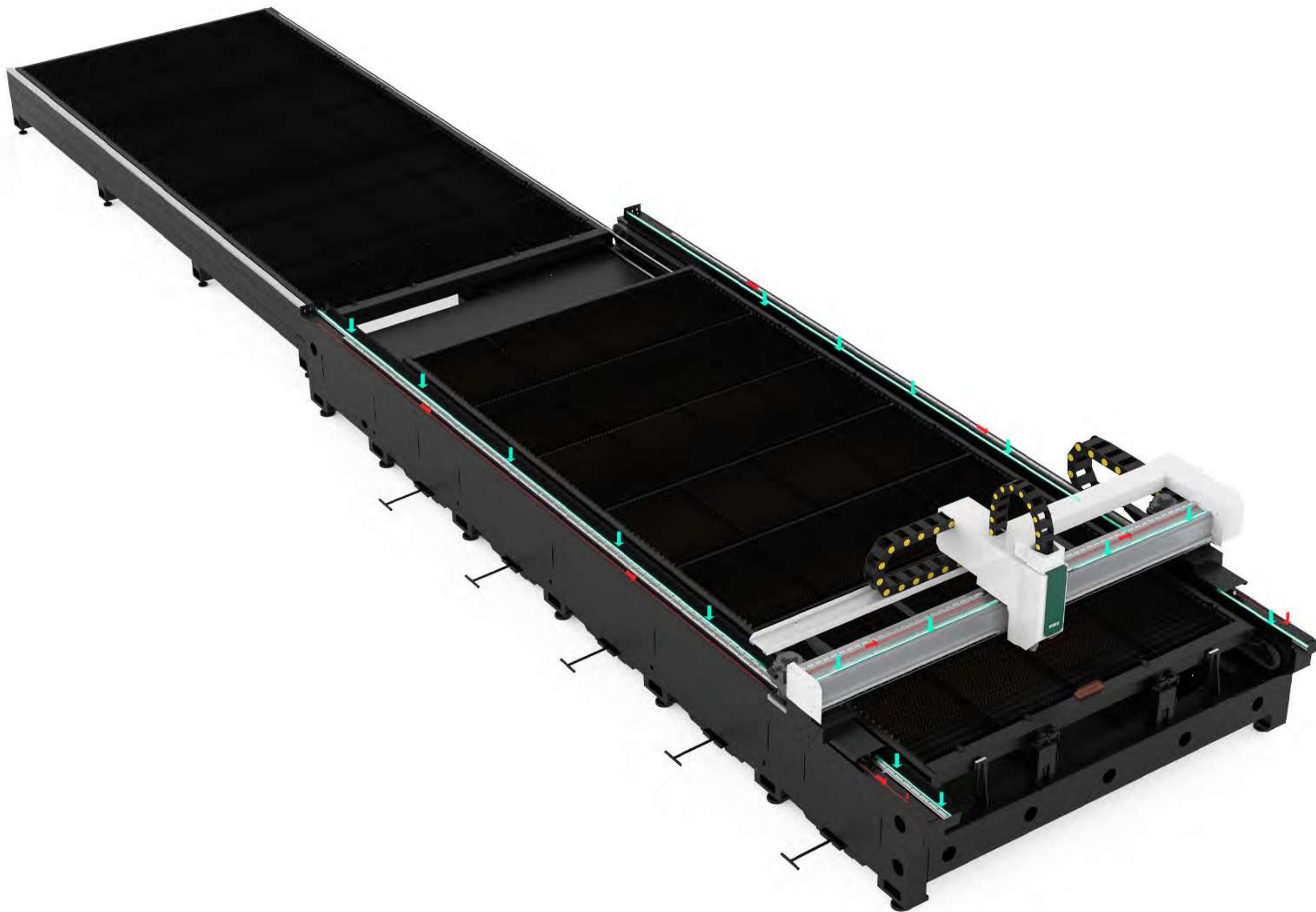
Upgrade the precision gear transmission, while ensuring the core material having enough toughness to buffer the external impact load; extend the life of the transmission structure and improve the stability.



Material Saving Design >>>

Optimize the front and rear pneumatic chuck structure, increase the chuck claws, the clamping space will be larger, and the remaining materials will be less than **200mm**, saving user costs

Automatic Lubrication System

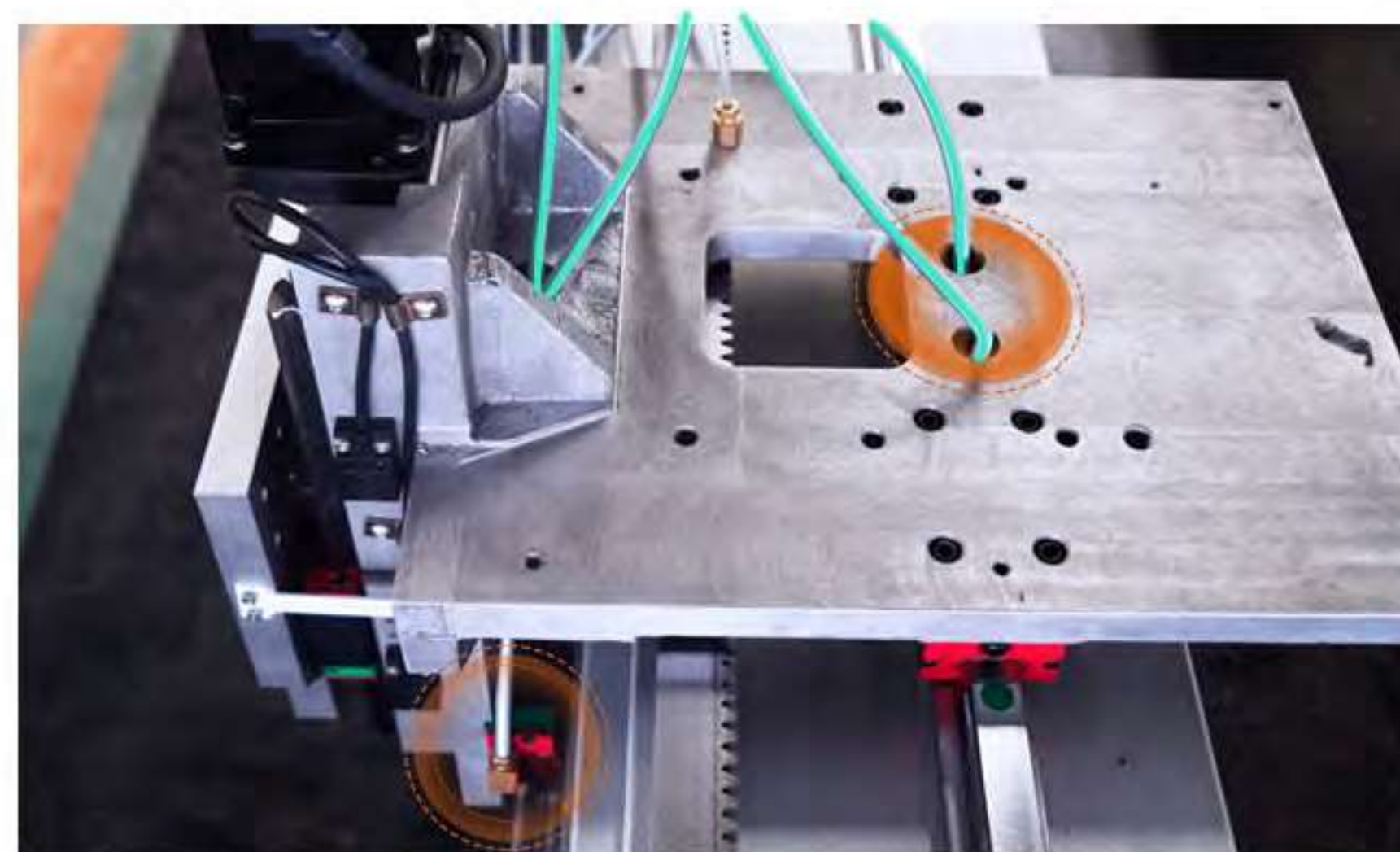


Whole body layout, automatic lubrication of guide rails and racks.



Automatic Lubrication >>>

The software controls the oil pump to automatically perform multi-point lubrication, and the lubrication times and time intervals are manually controllable, saving labor time.



Multi-point Lubrication >>>

Automatic lubrication system for automatic lubrication of guide rails, sliders, screws, racks and other points, reducing equipment strain rate.



Waste Oil Recycling >>>

Specially set oil return tank, which can recycle and centrally dispose of lubricating waste oil. Humanized design ensures the cleanliness of the equipment body.

QC Lifeline, Full Control

The QC quality control system under the "whole industry chain" mode is in the quality loop of equipment production. Each link requires quality management personnel to conduct real-time supervision in accordance with the requirements of operating standards and operating procedures, so as to ensure that the equipment is processed and assembled. The debugging end, the supervision end and other links realize the quality controllable, so that it meets the quality technical requirements.



- **LASER CUTTING**

Accurate cutting, small error, will not cause plate size error due to slitting



- **GROOVE WELDING**

Groove welding and seamless welding are used to make the plates (pipes) reach equal strength butt, and ensure that the bed reaches equal strength



- **STRESS ANNEALING**

Stepwise increase temperature to 580 degrees for annealing treatment, and then aging treatment for 1-2 days, release the internal stress of the bed, the internal stress is basically eliminated.



- **SANDBLASTING**

The impact of high-speed sand flow is used to clean and roughen the surface of the bed. After spraying, the bed can form a smooth and bright permanent coating film to achieve the purpose of decoration and anti-corrosion.



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- **FINISHING**

A few machining allowances are cut from the surface of the finely machined workpiece to obtain high machining accuracy and a small surface roughness value.

Production lines



Bed Foot Installation

Adjust the height of the feet according to the test results of the strip level to ensure the accuracy of subsequent installation.



Rail Installation

Use photoelectric autocollimator to detect the straightness and flatness of the guide rail to ensure that the detection value is within the standard range.



Rack Installation

The relative position of the guide rail and the rack is locked by the measuring rod and the multi-point position is clamped. After the distance is detected by the dial indicator, data statistics and analysis are performed to ensure that the two are parallel.



Beam Installation

After the beam is installed, use a three-coordinate measuring instrument to check the coaxiality to ensure the relative perpendicularity of the X/Y/Z three-axis



Positioning Accuracy Inspection

The laser interferometer tests the X-axis positioning accuracy to ensure the accuracy of the whole machine.



Positioning Accuracy Inspection

The laser interferometer tests the Y-axis positioning accuracy to ensure the accuracy of the whole machine.



Laser Power Meter Test

Ensure that the laser output power of the laser is within the specified range



72h Machine Aging Test

Simulate the high-intensity test of various harsh conditions in the actual use of the equipment, and at the same time, according to the requirements of use, rationalize the improvement to ensure the factory pass rate and improve the reliability of the equipment



Pack And Ship

Adopt sealed composite aluminum foil moisture-proof low-pressure packaging and thick wooden boards to protect the fuselage to prevent bumps and collisions during shipping, and minimize unnecessary mechanical losses that may occur during transportation.

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