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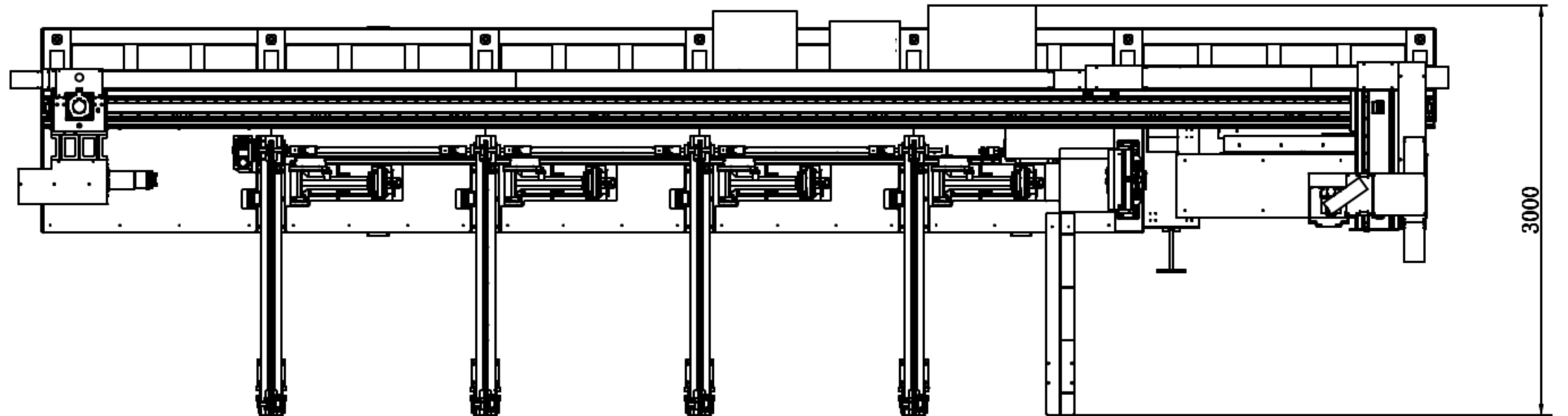
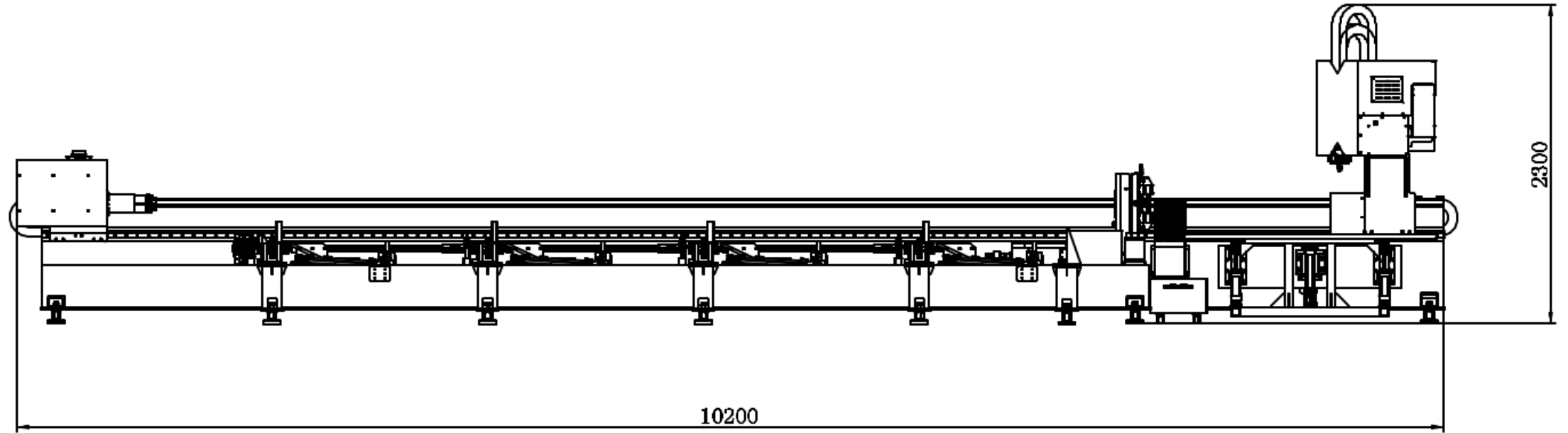
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HyTube 6523X Tube Cutting Machine Specifications

HyTube 6523X Fiber Laser Tube Cutting Machine



Dimension



Specifications

| NO. | Name | Parameters | Unit |
|-------------------------|--|--|------------------|
| Effective Stroke | | | |
| 1 | Pipe diameter (maximum outer diameter) | Circular tube φ 15 - φ 230 Square tube 15 * 15-230 * 230 Other pipe types: maximum diagonal \leq 220 | mm |
| 2 | Effective travel of X-axis | 0-6500 | mm |
| 3 | Travel Y-axis | 600 | mm |
| 4 | Z-axis travel | 0-250 | mm |
| 5 | B-axis travel | \pm 720 | $^{\circ}$ |
| 6 | U-axis (swing axis) | \pm 45 (optional) | $^{\circ}$ |
| Speed | | | |
| 7 | Maximum speed of X-axis | 100 | m/min |
| 8 | Y-axis maximum speed | 100 | m/min |
| 9 | Z-axis maximum speed | 40 | m/min |
| 10 | Maximum speed of B-axis | 100 | rpm |
| 11 | Maximum speed of U-axis | 1800(optional) | $^{\circ}$ /min |
| 12 | accelerated speed | 0.6G | m/s ² |

Equipment parameters

| Accuracy | | | |
|--------------------------------|---|-----------------|-------|
| 13 | Repeated positioning accuracy | ±0.05 | mm |
| 14 | Cutting accuracy | ±0.1 | mm |
| 15 | Position accuracy | ±0.2 | mm |
| Feeding specification | | | |
| 16 | Length of feeding pipe | 6500 | mm |
| Power Requirements | | | |
| 17 | Rated voltage of power supply | 415 | V |
| 18 | Number of phases | 3 | phase |
| 19 | frequency | 50 | Hz |
| Weight, dimensions, and others | | | |
| 20 | Chuck load bearing | 220 | kg |
| 21 | Operating Weight | 1000 | kg |
| 22 | Rated power of complete machine | 16-30 | KW |
| 23 | Overall dimension of machine tool (L × W × H) | 10200×3000×2300 | mm |
| 24 | Tailings | Less than 100mm | mm |

Applications



**Heavy industry
machinery**



Medical device



Vertical elevator



**Iron and Steel
Metallurgy**



**construction
machinery**



Farm machinery



Aerospace



bridge

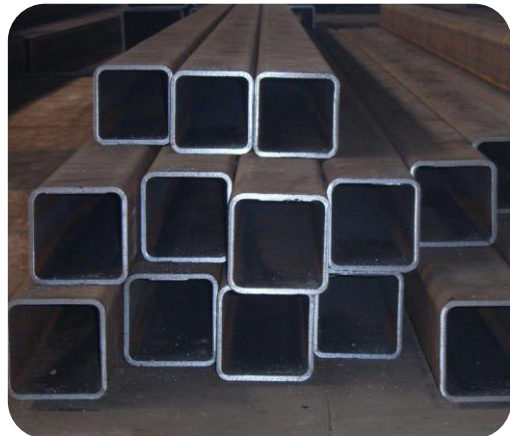
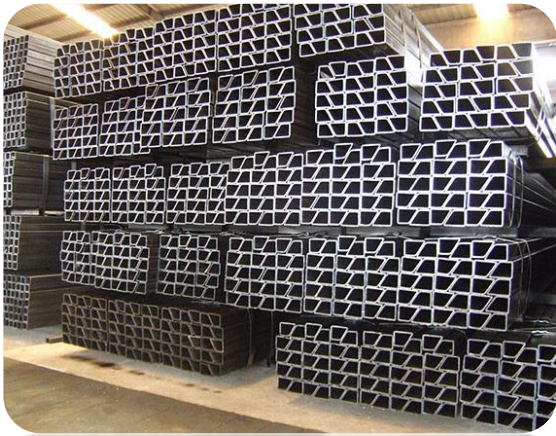


boating



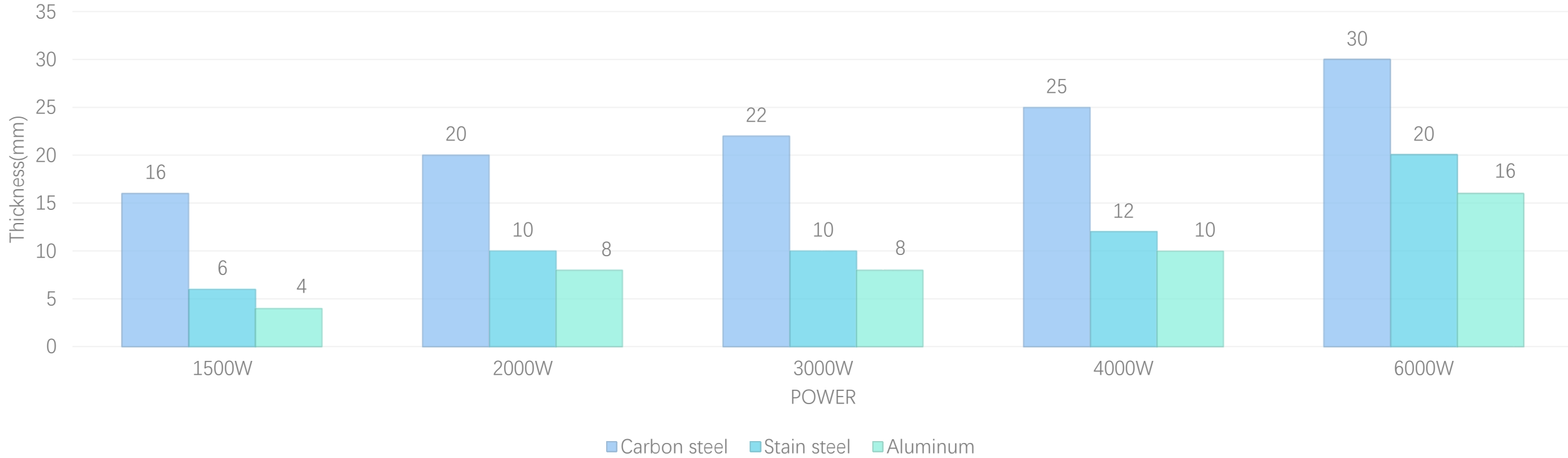
Oil pipeline

More applications



Cutting Capacity

1-6kW Cutting Capacity



Cut sample



The chuck has simple structure, small number of components, light weight, low failure rate, stable performance, small moment of inertia and low energy consumption. The axial size of the chuck is small, and the cost of realizing zero tailings is lower. The product is designed as a square middle hole, which increases the size of the square tube and the scope of use compared with the round hole chuck.

Laser

Laser processing methods including cutting, welding, cladding and surface treatment are widely used in new energy, automobile, ship, aviation, engineering machinery, electric power and other fields.



Machine Fabrication process

Main body frame:

The whole main body of the tool is made of the carbon structural steel with the staggered honeycomb welding structure, which is machined roughly after stress annealing and then the vibration aging treatment is performed. The natural aging may completely eliminate the welding and machining stress. With good rigidity and high precision, it may maintain normal use for 20 years without deformation.



Welding of main body

The main body frame is welded with the carbon dioxide protection welding, with such advantages as stable welding process, free internal defect, minimum splash, etc. At present, such welding becomes the most important welding for the black metal material.



Stress annealing

The material stress resulting from welding is eliminated. A very large fuel heating annealing furnace is used to perform stress annealing for several body frames at 600°C at the same time. With stable furnace temperature and uniform electronic monitoring, the welding stress is thoroughly removed, with guaranteed quality. Annealing of one small non-common electric furnace with non-uniform temperature cannot guarantee to thoroughly eliminate the stress.



Rough machining

Rough machining is designed to quickly cut the work blank margin. When rough machining is performed, the large load and cutting depth as much as possible shall be chosen so as to cut the cuttings as much as possible within a short period of time.

Vibration aging



Another method to eliminate the internal residual internal stress is as follows: When the vector sum of the residual internal stress in the work-piece and additional vibration stress reaches or exceeds the yield strength of the material has a minor plastic deformation, so that the internal stress in the material is loosened and relieved.

Natural aging



Place the body outdoors for more than one month. Eliminate the repetitive temperature stress caused for several times to relieve the residual stress, obtain the stable dimension accuracy, enhance the rigidity and enhance the deformation resistant capacity, so as to ensure the dimension stability of the body.

Precise processing



The CNC pentahedral machining center is used to machine the guide rail, racket, which have high precision requirements to obtain the high-quality installation base plane, so as to ensure the cutting accuracy of the tool.

Assembly Completion Detection

Combined with different optical components and coordinated with related software, it can detect the dynamic performance of CNC machine tools. For example, it can measure the dynamic parameters of CNC machine tools such as positioning accuracy, repeat positioning accuracy and micro-displacement precision. Machine tool vibration test and analysis, dynamic characteristics analysis of rack transmission, analysis of response characteristics of drive system, analysis of dynamic characteristics of quiderail etc., can be fulfilled; with

extremely high precision and efficiency, and timely processing of data, providing a basis for machine tool error correction.

Laser interferometer- Detect the rack accuracy, compensate and correct the error and ensure the machine tool accuracy.

