

Modular Design

PD-Series

Expert For Small and Medium Size Tube
Length: 6-12Meters Size: 10-260MM



Industry
CNC Controller



Precision Body
& Processing



Module Design



"0" Tailings



Social Media



www.hansme.net

Overseas certification

PD-Series

North American NRTL labeling certification
EU, CE Certification



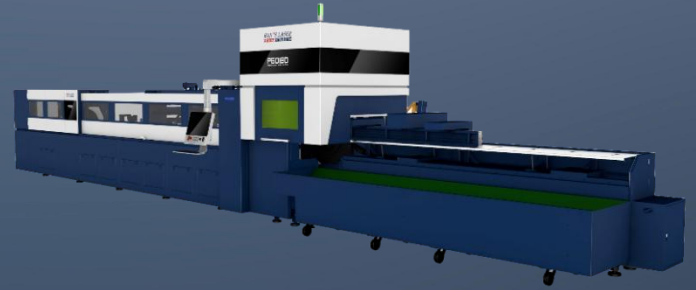
Identification



Standard Configuration

Automatic Feeding, can be mass stable production

- Size ranging Roller Supporter & Fixture Unloading Supporter, for basic accuracy requirement.
- 2 Chucks, for common size workpiece.
- Straight cutting torch, for common straight cutting processing.



Model	Max. Material Length For Loading	Max. Material Length For Unloading	Max. carrying weight	Square	Round	C-shaped	L-shaped	H-beam	I-beam	3 Chucks	Bevel-cut
P-10D	6200mm/8200mm	2000mm/2500mm /4000mm	100Kg	110mm	110mm	80mm	80mm	80mm	100mm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
P-18D	6200mm/8200mm /9200mm/10200mm	2000mm/2500mm /4000mm	200Kg	180mm	180mm	180mm	150mm	150mm	180mm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
P-26D	6200mm/8200mm /10200mm/12200mm	4000mm	500Kg	260mm	260mm	250mm	200mm	200mm	250mm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

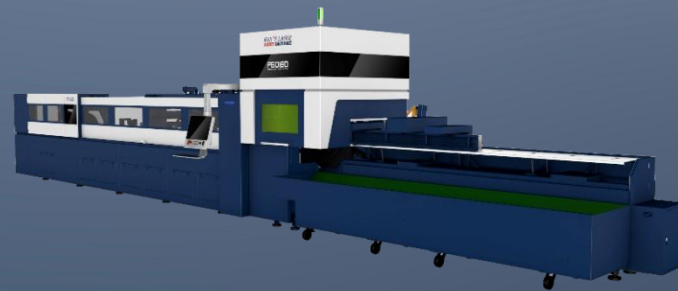
Major Dispositions

Core Component Brand

No.	PD series	High-level Configuration	Economic Configuration
1	High Precision Rack	APEX (TaiWan)/STRRONSE(Germany)	TOCO(Sino-Japanese joint venture)
2	High Precision Reducer	X-Alpha (Germany)/AB-APEX (TaiWan)	X-Alpha (Germany)/ AB-Desboer (Sino-Japanese joint venture)
3	High Precision Linear Guide	HIWIN (TaiWan)/Rexroth(Germany)	TOCO(Sino-Japanese joint venture)
4	Cutting Head	Han's Laser (China)	Han's Laser (China)
5	CNC Control System	Hans laser(China)	Hans laser(China)
6	Servo Motor	Rexroth(Germany)	Inovance(China)
7	Servo Driver	Rexroth(Germany)	Inovance(China)
8	Fiber Laser	IPG/(Germany/America) Hans laser(China)	Hans laser/Max(China)
9	Electric System	Schneider (Germany)/LS(Korea)	LS(Korea)
10	Air-operated System	Park(America)/Air TAC(TaiWan)	Air TAC(TaiWan)/China's first-tier brand
11	Chiller	DVT/Hans laser(China)	DVT/Hans laser(China)
12	Voltage-stabilized	China's first-tier brand	China's first-tier brand

Modular Optionals

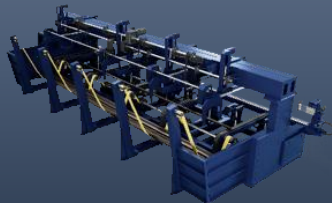
Flexible Combination



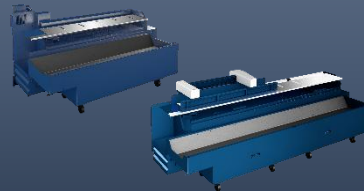
● Array Auto Loading Structure



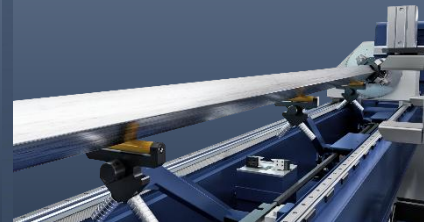
● Hook and push type automatic Loading



● 2.5M&4M Floating Unloader



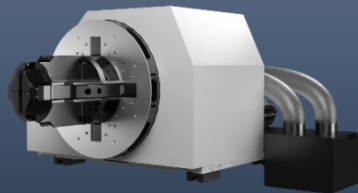
● Seamless Servo Material Supporter



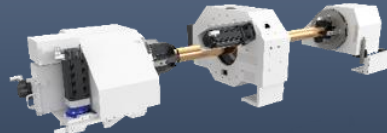
● Closed cover



● Mechanical transmission chuck



● 3 Chucks For 0 Tail

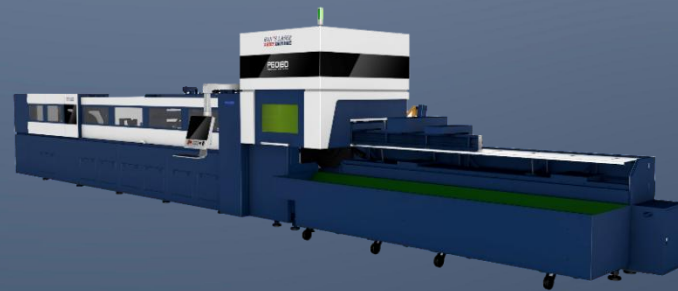


● Bevel Cutting Torch

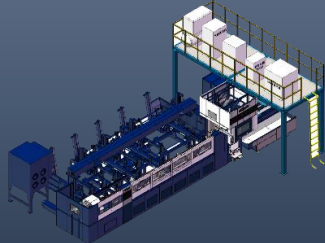


Optional function

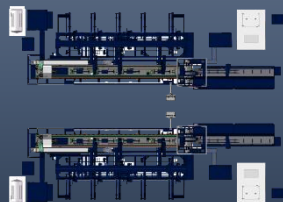
Personalized customization, strong applicability



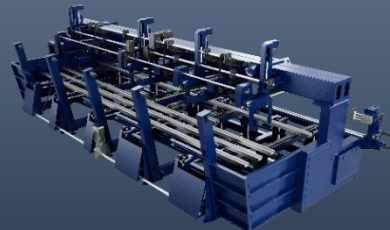
- Auxiliary are in the attic



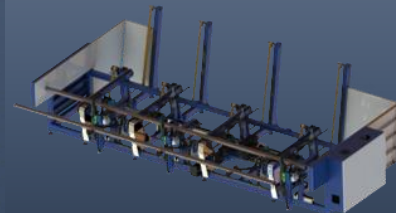
- Symmetrical structure



- Bridge type semi-automatic loading



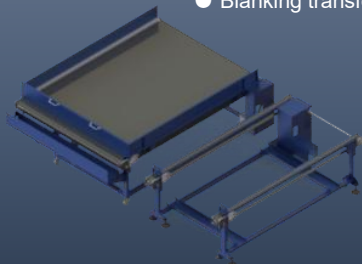
- Automatic lifting feeding



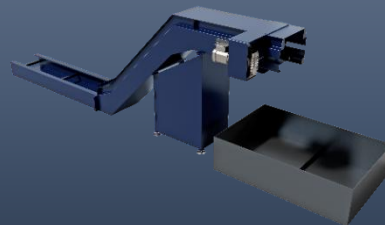
- Inner protects against burn



- Blanking transfer



- Chip cleaner



- Air conditioning cabinet



High-precision

High-precision component

- Equipped with international top brand, Large torque and large inertia servo motor of Rexroth
- MS2N Series, Greater torque, Higher speed and the best energy efficiency, High resolution servo motor
- Through Rexroth's unique raceway optimization technology, Repeated positioning accuracy, the carrying capacity and service life are significantly improved
- Flange output planetary reducer, Large torque, Laser welding helical gear, High rigidity, High precision, High reliability

4500 r/min

Rexroth MS2N, HCS01

1,000,000 Km

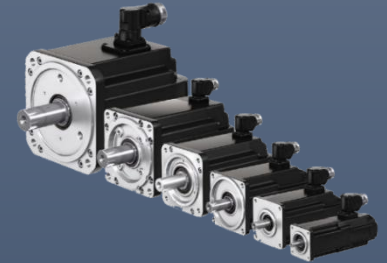
Rexroth HGH35

≤1 Arcmin

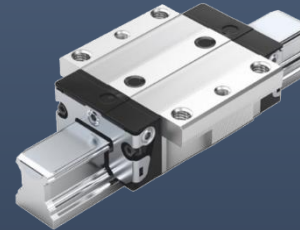
WITTENSTEIN Alpha-TP050



● Servo Driver



● Servo Motor



● High Precision Linear Guide



● High Precision Reducer and Rack

High-precision

Han's Precision Facility

All manufacturing lines are established based on high-end numerical machining centers. Han's Laser has invested RMB 0.4B into a world-class precise-oriented production center that generates core components of laser-related parts and crucial machine main parts to be a part of our final laser machines.

12 Units

MISTUBISHI 5AXIS
Large Size Machining Center

120 Units

Mazak, Okuma, DMG
Machining Center

1 Room

ZEISS & Hexagon Coordinate
Measurement Center



Horizontal Welding Bed

- MISTUNISHI 5Axis one-block fine machining, achieve 0.05mm straightness.
- Anneal, heat treatment to achieve machine body durability and distortion proofing.



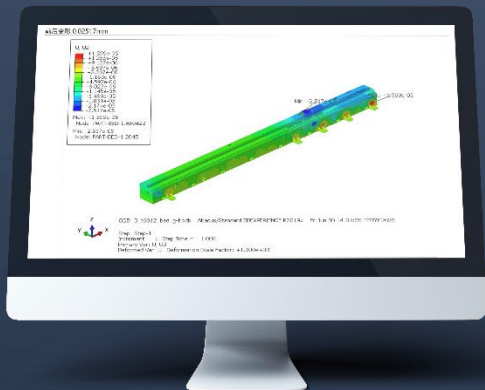
- Vibration release, release inner force after machining.



High-precision

Digital Design Software

Using CAE finite element analysis to analyze load-bearing deformation and dynamic performance rigidity, simulating calculation and demonstration, optimizing design, and ensuring reliability.



High Standard Assembly Accuracy

- Interferometer for positioning accuracy and rotation positioning accuracy:

0.03°

axis positioning accuracy

0.05mm

X-axis positioning accuracy

0.02mm

Depth of parallelism



- Interferometer for positioning accuracy and rotation positioning accuracy ≤ 0.05 mm.

The B-axis gripper clamps the iron block dial gauge holder and fits it onto the front end of the iron block. The dial gauge needle is placed on the inner circle of the rotating support, automatically turning on the B-axis. The A-axis does not move, and the difference between the readings of the four diagonal angles of the A-clamp holder on the top, bottom, left, and right during the rotation of the B-axis is the coaxiality between the A-axis rotation center and the B-axis rotation center.



Professional Claw

Fully Enclosed Dustproof Claw

±0.1 mm

Contour Accuracy

±0.15 mm

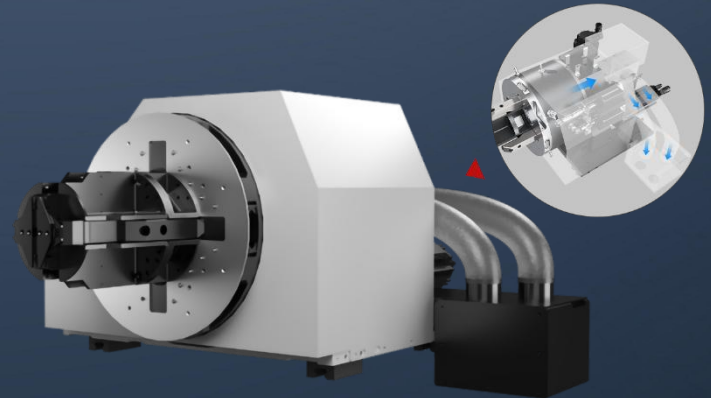
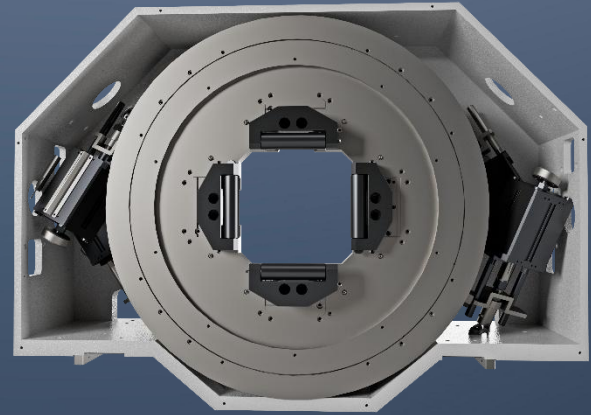
X-axis positioning accuracy

±0.25 mm

Drill Precision

Pneumatic clamping with four claw roller, and self-centering function is realized by grasping and clamping linkage. The feeding chuck seat and fixed chuck seat are of plate welding structure. After high temperature annealing, rough machining, vibration aging and high-precision machining, the chuck has good rigidity, light weight and good dynamic performance.

- Continuous stable accuracy, High reliability;
- Automatic calibration function to prevent pipe shaking and ensure cutting accuracy;
- Customizable square and circular cards, with a larger cutting range for square tubes.



Advantage

Mechanical transmission chuck

- Fool-proofing design, Internal oil circuit circulation, the core components have a long service life and can continue to be used after reversing
- Wired transmission safety testing device, reliable operation, low safety risk
- The accuracy adjustment method is reliable, which can ensure long-term stable operation



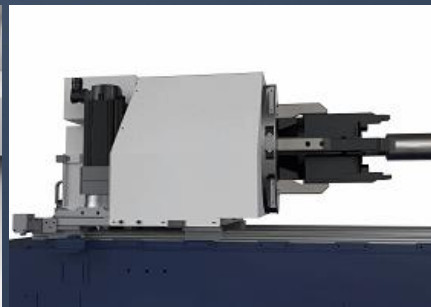
● Cylinder retaining structure



● Fast response speed

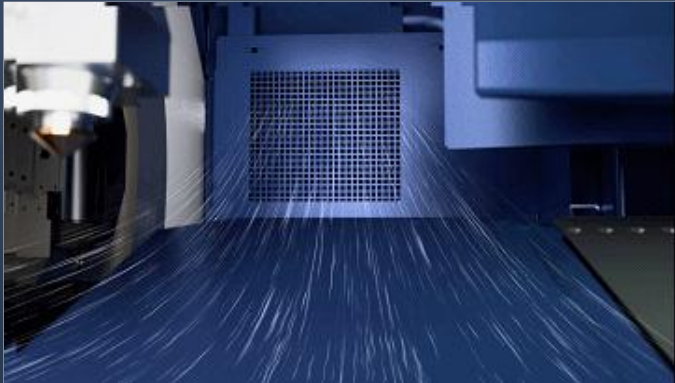
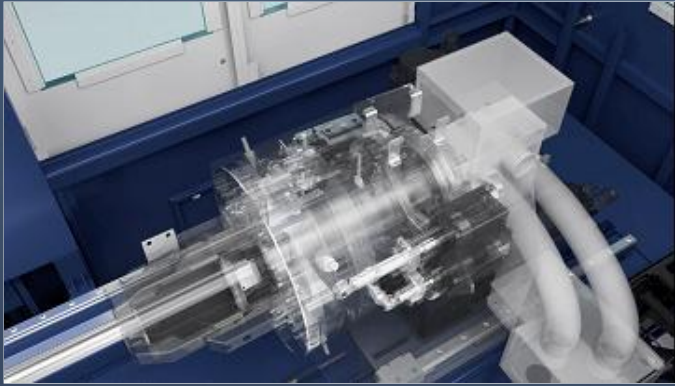


● High safety factor

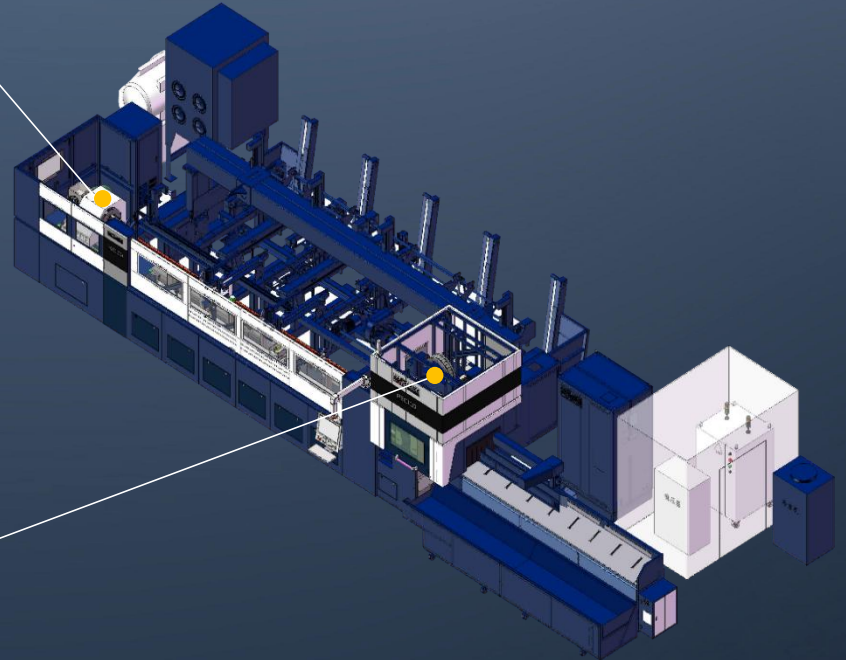


● Safety detection function

Advantage



- Full negative pressure air extraction dust removal
- Cutting area and moving chuck air extraction structure



Advantage

Loading Module



10mm Tiny Tube Fully Automatic Loading



Low Noise



Prevent Surface Damage



High-efficiency with an Interval of 22 Seconds

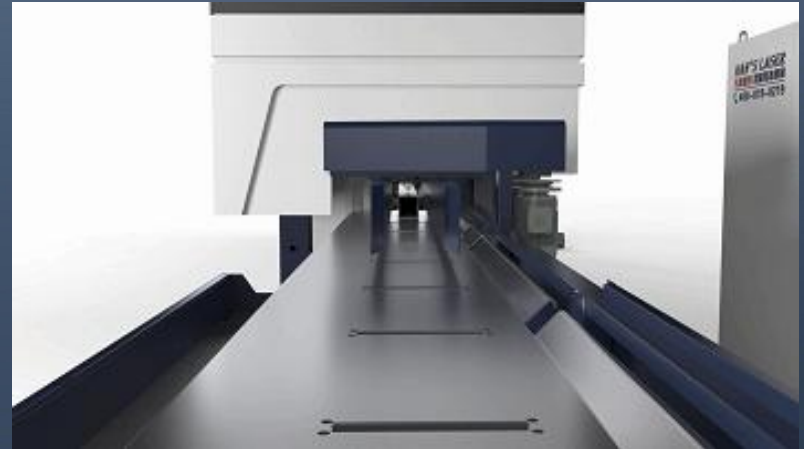


Advantage

Loading / Unloading Auxiliary Support



- Servo adjustment of height to meet the feeding needs of pipes of different sizes;
- Prevent rectangular or small tubes from sagging or deforming, resulting in poor machining accuracy



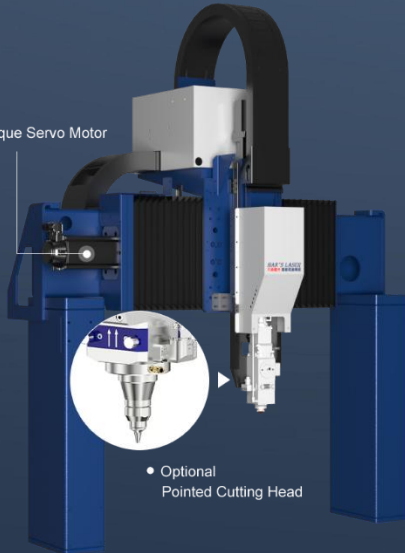
- Floating support during long workpiece processing can prevent pipe sagging and extend the lifespan of the chuck;
- Prevent V-notch workpieces or workpieces with high cutting volume from shaking or deformation

Optical System

High Torque Servo Motor

X,Y,Z linear axis and A, B rotary axis all adopt high resolution high-precision large torque servo motor, which has high precision, high speed, large torque, large inertia, stable and durable performance, ensuring the high speed and acceleration of the whole machine.

• High Torque Servo Motor



• Optional
Pointed Cutting Head

Han's Cutting Head

The cutting head adopts capacitive sensor, which has high sensing accuracy, sensitive response, stable and reliable performance.

- Double protective mirror high sealing cutting head;
- Water cooling system and transmission system cavity design;
- Efficient service and reasonable service cost.

Multiple Optional For Laser Source



• Han's Smart



• Coractive

Han's Canada subsidiary



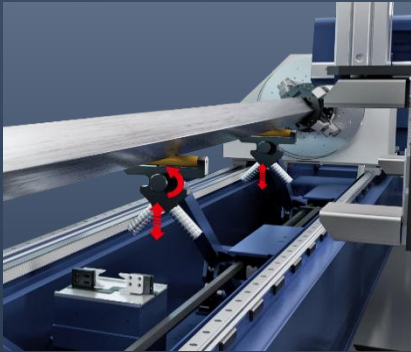
• IPG

Han's Strategy Partner

Special Fields Application

Professional Solution for Small Size Tube

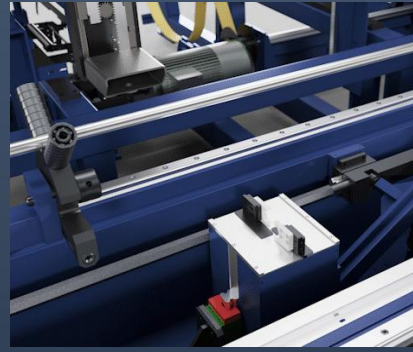
Avoid small size tube shaking since its weak rigidity, achieve high cutting accuracy for the small size tube, guarantee the high speed rotation stability.



Seamless Servo Material Supporter



Feeding Floating Support



Small Tube Anti Sway Module



Double Wheel Claw

Special Fields Application

3chucks for “0” tail and long workpiece

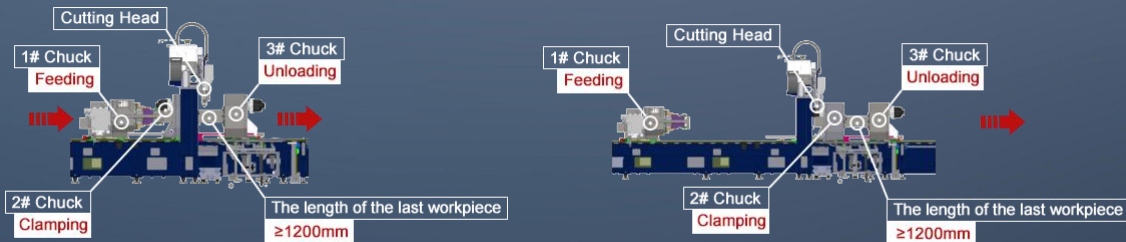
- Covering the majority of pipe cutting needs, making it more competitive in the market;
- The bed and guide rail are horizontal structure, and chuck are subjected to more balanced forces and have a long service life;
- Capable of cutting straight pipes, cutting long work pieces, and processing zero tailings;
- Balancing automatic feeding efficiency and fast cutting of short work pieces within 2 meters;



Special Fields Application

3chucks for "0" tail and long workpiece

When cutting the last workpiece, it is held by the 2nd and 3rd chucks, which pass over the cutting head, allowing the cutting head to cut at the tail of the 2nd chuck, thus achieving a "0" tailings. Due to the third chuck being a claw, it can be fed in the X-axis direction, so the last workpiece can not only be cut off, it can also cut contours, making it a true "0" tailings.



Special Fields Application

Segmented Floating Unloading Structure

The left claw of the third chuck clamps the workpiece and pulls it to the right to the floating support for cutting. At the same time, the first chuck returns to the left origin and is ready to load. The loading and unloading are carried out simultaneously without interference, and the fastest way to achieve zero second tube change is.



Special Fields Application

Welding seam detection

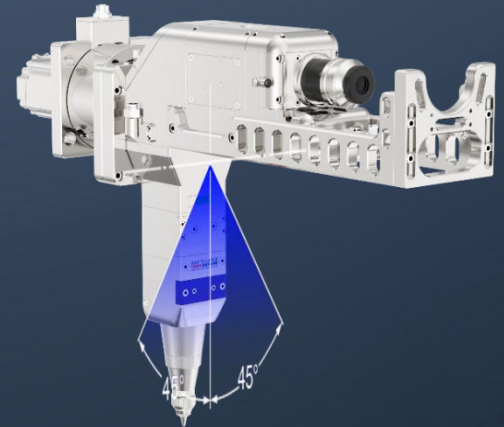
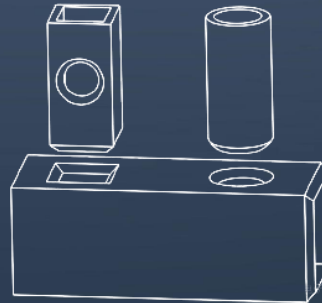
- Short detection time, without affecting tube replacement and cutting time;
- Wide detection range, pipes above 30mm can be tested;
- Strong applicability, suitable for testing pipes of different materials.
- The detection accuracy is as high as 99%



Special Fields Application

Bevel-Cut

- The groove cutting head with fully independent intellectual property rights has superior performance, and timely after-sales and maintenance are guaranteed.
- Groove cutting, seamless splicing, suitable for subsequent welding requirements of steel structures and large pipes.



CNC Control System

Developed by Han's SMC

- Based on the Intel X86 platform, equipped with a laser tube cutting CNC core with independent intellectual property rights, with excellent performance;
- Adopting Ethernet CAT bus communication, easy wiring, paired with an absolute encoder motor, can eliminate the zero return step, achieve high-precision anti-interference control, alarm information management, and cause analysis.
- 3D graphic preview and trajectory display;
- Perfect laser tube cutting processing function and process, convenient debugging and operation;
- Interpolation cycle as low as 0.5ms, improving efficiency;
- IO module, can be paired with professional CAM software and MES system, with rich functional scalability to achieve remote control services
- High secondary development capability, capable of modifying NC programs, PLQ defining M codes, etc., to facilitate meeting customer customization functional requirements.
- Collaborate with work order management to achieve digital factory management.



CNC Control System

Han's 801 Digital Control System

- **Production Management System**

The system has a task list, which can add different programs and process parameters for different programs, as well as a counting function.

- **Align The Material Head With One Click**

The Han's 801 system has a faster speed and is used in automatic machining processes to improve machining efficiency and increase light output.

- **Alarm File Library**

Professional CNC system alarm file library, click on the alarm text, and there is information such as analyzing the cause of the alarm and providing suggestions for handling the alarm.

- **Semi Automatic Pipe Orientation Adjustment**

Before automatic feeding and cutting, the operator adjusts the orientation of the pipe according to its orientation (0 degrees, 90 degrees, 180 degrees, 270 degrees), such as profiles, irregular pipes, and weld facing upwards, to address the issue of incorrect chuck clamping orientation.

- **Maintenance Information**

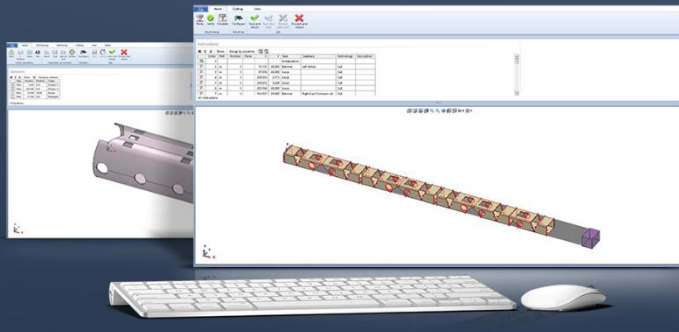
The maintenance content includes last week's maintenance time, maintenance cycle, usage time, progress (percentage), etc., to facilitate timely equipment maintenance for customers.



Lantek Flex 3d Tubes

Professional Offline Programming Software

Lantek has a wealth of feature tutorials and diagnostic functions, and every year, it releases new versions with stronger and more comprehensive functions to respond to the constant demands and new features of customers in the market.



- **Diversified Profiles**

Simple and flexible design, supporting the import of various pipes and profiles such as SAT and IGES. Make 3D design simple and intuitive, able to display the final design contour results cut in the machine.

- **Parametric Design**

Through system parameter settings, users can change any previous operation values, including changing the initial parameters of each pipe fitting (growth, shortening, diameter change).

- **Instant Simulation**

After the design phase is completed, users can simulate and optimize the path followed by pipe fittings (nesting) and cutting heads. The software will directly generate an NC program and send the optimization results to the machine tool.

- **Stronger Computing Power**

Automatic correction vector: If enabled, whenever the system detects a collision between the cutting head and the tube, The system will attempt to correct the collision vector. For this purpose, the system will use MEC files. If there is no MEC, The previously configured H value will be used. Different types of vector correction methods are provided for users to avoid, Avoid collision between cutting head and pipe.

- **Powerful New Feature Development Capabilities**

Identify parts drawn by different drawing software and recognize part information saved in various formats, covering circular, square, long circular, H-shaped, angle, channel, T-shaped, semicircular, projection, irregular, sheet (flat iron), triangular, C-shaped, and other shape specifications from the original conventional pipes: circular, square, rectangular, etc.

Lantek Flex 3d Tubes

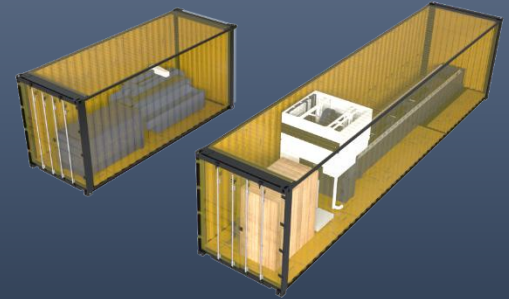
Powerful special-shaped pipe processing function



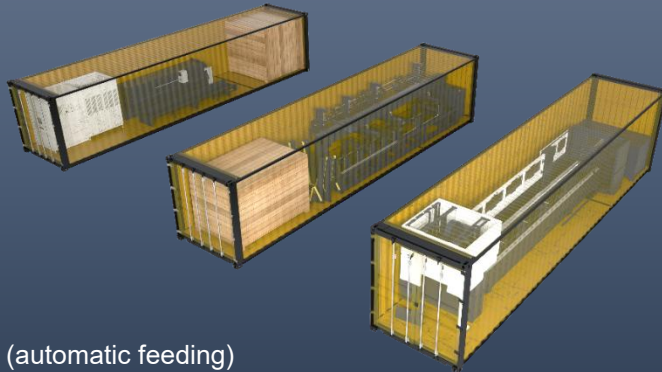
Packing and shipping

Professional Offline Programming Software

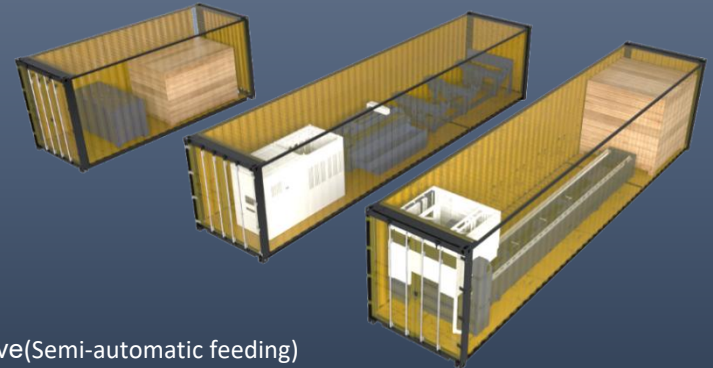
- Complete fumigated tie and Heat shrink film packaging material, Wooden cases are made with bows
- 40HQ, Standard international container;
- The main machine and feeding material adopt the integrated structure, No need to disassemble when packing



Selective(Hand feeding)



Standard (automatic feeding)



Selective(Semi-automatic feeding)

Application Industry



Round



Square



U-bar



Angle steel



I-beam



H-beam

- **Applicable industry**

Fitness equipment, sport equipment, oil pipeline, machinery, bus manufacturing, locomotive manufacturing, agricultural equipment, specific vehicles, appliance, laser processing and other tube processing industries.

- **Applicable materials**

professional cutting for various metal tubes and profiles.



Aluminum Alloy Square



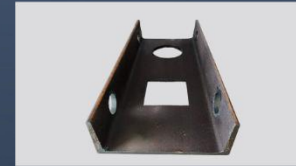
Carbon Steel Special-shaped



Stainless Steel Round



Carbon Steel Angle steel



Carbon Steel U-bar



Aluminum Alloy Ellipse



Application Case

HAN'S LASER & BLM & TRUMPF



INTRO

HAN'S LASER

Han's Laser Technology Industry Group Co., Ltd. (SZSE:002008) founded in 1996, and listed on SZSE in 2004. Through innovation and development, Han's Laser is one of the world-leading manufacturers of all kinds of laser equipment and laser solutions, focusing on R&D, production, sales, and service of laser machines and relative product portfolio. As a vertically integrated laser equipment provider, Han's Laser has a comprehensive service system integrating innovation, assembly and laser solutions.

Han's Laser achieves sales revenue of 16.317 billion yuan in 2021. The main indicator of sales and market value are at the forefront of the world's listed laser companies. There are more than 15,000 employees of which R&D personnel account for nearly 34%. A number of core technologies are at the international leading level, with 6,962 valid intellectual property rights.



Han's Laser Smart Equipment Group Co., Ltd.

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HAN'S LASER

To Exceed The Customer's Expectations