

## Product Introduction

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# Morgan Rushworth XTC Compact Tube Laser

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# PRODUCT INTRODUCTION

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# Part 01.





## Morgan Rushworth XTC Compact Tube Laser

The XTC Compact tube Fibre laser tube cutting machine integrates intelligent, automated, and multi-functional modular designs. It supports ultra-fast automatic material feeding and offers flexible switching between fully automatic and semi-automatic modes, enabling efficient processing of tubes with diameters ranging from 10mm to 160mm. The machine achieves three major breakthroughs: "zero scrap waste, multi-scenario compatibility, and high-precision ultra-fast production," redefining the standards for ultra-mini-tube cutting. It adopts a side-mounted machine bed structure, with the front chuck featuring a retractable function. When combined with a composite dual-function chuck, it enables 0 scrap cutting, thereby minimizing material waste. Additionally, it is equipped with a high-speed pneumatic chuck specially customized for small tubes. A full-servo floating support system is utilised at both the loading and unloading ends, working in tandem to enhance cutting accuracy and processing efficiency.

- **High-Efficiency Processing:** The machine boasts ultimate dynamic performance, with a maximum acceleration of 2.0g, a chuck rotation speed soaring up to 200r/min, and a maximum empty travel speed of 120m/min. Its rapid dynamic response elevates the processing efficiency of small tubes to a new level.
- **Comprehensive Safety Protection:** The equipment features an enclosed design, with safety protection devices installed at the loading end, during the processing stage, and at the cutting, unloading, and material collection end. It is also equipped with safety light curtains and other devices to monitor abnormalities in real-time and respond swiftly, ensuring a highly efficient and safe processing environment.
- **Versatile Functions:** The machine integrates a variety of functions, including one-button cutting, automatic centerfinding, tube material correction, and automatic end-face alignment. It has a rich process library, wide application scope, and intuitive and simple operation, making the processing process smoother and more efficient.
- **Innovative Fully Automatic/Semi-Automatic Dual-Mode Loading System:** The system supports rapid automatic loading and can flexibly switch between fully automatic and semi-automatic modes, efficiently adapting to the cutting and processing of tubes with diameters ranging from 10mm to 160mm. It can automatically complete the loading, precise feeding, rapid cutting, and orderly collection of a diverse range of batch tube materials, including round tubes, square tubes, rectangular tubes, oval tubes, etc.
- **Smart Support System:** Featuring an innovative floating support design for loading and unloading, the system can intelligently adapt to the rotational posture of the tube, providing dynamic support that effectively enhances the processing precision of long tubes.
- **Wide Processing Range:** Equipped with a brand-new square-hole pneumatic precision chuck, the machine offers significantly improved clamping capabilities. It supports one-button clamping and cutting for round, square, and shaped tubes, broadening the horizons of processing possibilities.
- **Simplified Operation:** Powered by the BCS FSCUT3000DE tube cutting system, the interface is intuitive and user-friendly, simplifying complex operations and making it easy for anyone to get started.
- **Zero-Scrap Cutting with Two Chucks:** The front chuck is enhanced with an avoidance function, working in tandem with a chuck that combines composite clamping and gripping capabilities. This collaboration successfully achieves zero-scrap cutting with two chucks, significantly reducing scrap waste and helping users effectively control material costs.

# Equipment Specifications

<b>Maximum Acceleration:</b>	2.0G
<b>Maximum Positioning Speed:</b>	120m/min
<b>Positioning Accuracy:</b>	0.05mm
<b>Repeated Positioning Accuracy:</b>	0.03mm
<b>Power Range:</b>	500W-3000W
<b>Maximum Rotational Speed of the Chuck:</b>	200r/min
<b>Maximum Cutting Length of Tubes:</b>	6300mm
<b>Maximum Load Capacity for Single Tubing:</b>	70kg

**Automatic /semi-automatic Loading Tube Size Range:**

Round tube: Ø20mm-80mm / Ø10mm-160mm square tube:

20mm\*20mm-80mm\*80mm / 10mm\*10mm-160mm\*160mm

**Automatic / semi-automatic Loading Tube Length Range:**

5700mm-6300mm

**Processing Tube Specifications:** Round tube: Ø10mm-160mm

Square tube: 10mm\*10mm-160mm\*160mm

**Maximum Automatic load / semi-automatic capacity  
feeding machine:** 1.5T / 350kg

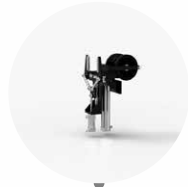


# Details of Equipment Composition

Floating support for material feeding



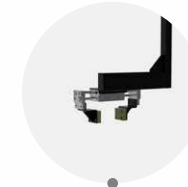
Auxiliary centring



Elevating observation door



Automatic clamping and discharging



Precision pneumatic rear chuck



Floating flip-plate support for material discharging



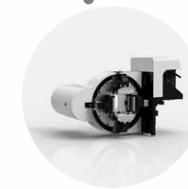
Full-automatic/Semi-automatic Loading Machine



Integrated console



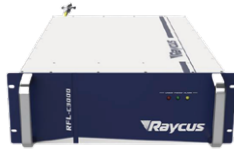
Intelligent cutting head



Front chuck with square hole and full-stroke capability

# Main Configuration of the Equipment

## Laser Source



Raycus Laser is a high-tech enterprise in China that is the first to independently research and develop, and produce Fibre lasers on a large scale. Raycus lasers are known for their high-quality light spots, stable signal transmission, and strong anti-interference capabilities.

## Laser Cutting Head



The BLT series adopts a new optical solution, closed-loop automatic focusing, supports intelligent knife retraction, built-in multiple sets of sensors, real-time closed-loop intelligent monitoring, rapid diagnosis of problems and early warning. It is easy to install, simple to debug, excellent in performance, and stable in cutting.

## Control System



The BOCHU FSCUT3000DE control system is designed specifically for tube cutting, offering high-precision, high-efficiency processing of round, square, oval, and shaped tubes, as well as angle and channel steel. Its intuitive interface and advanced processing functions ensure simple operation and reliable performance.

## Servo Drive



HCFA Technology is a significant player in the field of industrial automation control in China. Its servo motors are notably characterized by their compact size, high rigidity, low temperature rise, high rotational speed, and compliance with China's Grade 1 energy efficiency standards.

## Proportional Valve



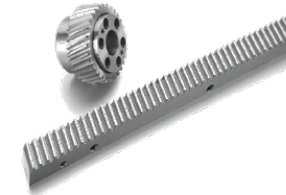
SHIMPO precision planetary gearheads deliver high rigidity, precision, and efficient power transmission, providing high torque in compact spaces with maintenance-free operation.

## Guide Rail



Japanese SMAGIC guide rails feature high rigidity, self-aligning capability, and lightweight construction, making them ideal for high-precision linear motion systems.

## Rack



German LEITESSEN racks offer advantages such as high precision, the capability for high-speed operation, unlimited travel length, a wide range of specifications and material options, as well as high stability and durability.

## Proportional valve



SMC, a globally renowned manufacturer of pneumatic components based in Japan, offers electrical proportional valves that feature stepless adjustment, remote control, compact structure, and precise control.

# PRODUCT FEATURES

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# Part 02.



# Safe and without gaps



## Safety grating for automatic loading area

On the back of the equipment, specifically for the automatic loader area—the only accessible part of the machine's interior—we have installed an advanced safety grating system, achieving intelligent safety protection. Should any unauthorized personnel inadvertently enter this area, the safety grating will immediately trigger a response mechanism, causing the equipment to rapidly cease operation, thereby promptly and effectively eliminating potential safety hazards and safeguarding the life safety of operators in all aspects.

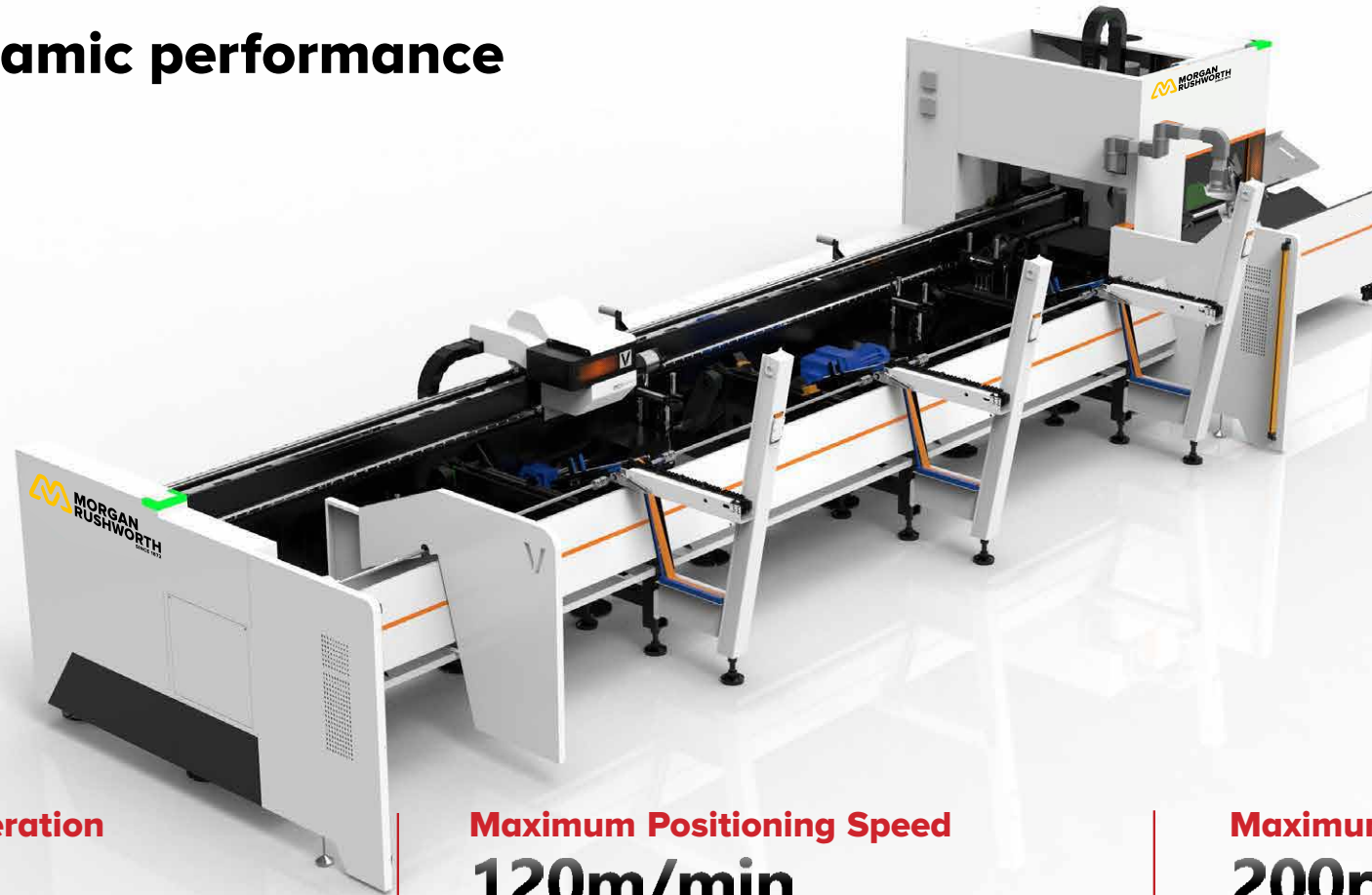
# Extremely Compact Structure



## **Highly Integrated Flexible Layout**

Adopting a side-mounted machine tool design, this machine tool cleverly integrates various functions through highly integrated technology and carefully plans the layout, creating an ultra-compact body structure that maximizes space savings and improves space utilization. Its design philosophy centres on integration, seamlessly incorporating key components such as complex circuit systems, laser technology, and oil-gas management into a compact and efficient layout. This not only achieves a high degree of intensification and miniaturization of the equipment but also ensures layout flexibility and operational convenience. With an overall footprint of only 10.2m\*2.95m, this machine tool demonstrates exceptional space optimization capabilities.

# Ultimate dynamic performance



## Maximum Acceleration 2.0g

The XTC cutting equipment is equipped with 2.0g acceleration dynamic performance, enabling precise positioning and efficient cutting. This significantly increases the cutting speed and reduces non-cutting (air travel time) optimising processing efficiency. Additionally, it effectively avoids laser energy waste caused by inefficiency and material ablation issues during small tube cutting.

## Maximum Positioning Speed 120m/min

The XTC significantly boosts cutting efficiency with a maximum positioning speed of up to 120m/min. Its rapid positioning and path switching capabilities drastically reduce non-cutting time such as material feeding and air travel, comprehensively optimizing overall processing efficiency.

## Maximum Rotation Speed 200r/min

With a maximum rotational speed of 200r/min, the laser cutting head achieves rapid and flexible movement. This is particularly evident in tasks such as rotational air travel, tube truncation, and complex corner cutting, where it demonstrates exceptional dynamic response and efficient processing capabilities.

## Innovative dual-mode system featuring both fully-automatic and semi-automatic loading



**10-160mm Fully automated processing of small tubes**

The XTC is equipped with an innovative hybrid system that combines fully-automatic and semi-automatic loading for small tubes. This system is meticulously designed to meet the processing needs of various types of tubular materials in bulk, including round tubes, square tubes, rectangular tubes, and oval tubes. It seamlessly integrates every link in the tube processing workflow, from automatically loading the tubes, precisely conveying them, to efficiently performing cutting operations, and finally organizing the collection of the processed tubes, thus establishing a one-stop closed-loop processing process. This innovative design significantly enhances production efficiency while granting greater flexibility to the manufacturing process, making tube processing more convenient, efficient, and intelligent.

# Automatic Feeding



## Feeding Specifications

The XTC fully-automatic loading machine boasts exceptional compatibility, capable of loading bundled tubes in one go with a maximum weight of 1.5 tons and lengths ranging from 5700mm to 6300mm. It demonstrates wide adaptability to various tube types, accommodating round tubes with diameters from 20 to 80 millimetres and square tubes with side lengths from 20 to 80 millimetres. This greatly enhances the machine's versatility and flexibility, as well as boosting production efficiency.



## Tube Types for Feeding

○  $\Phi 20-80\text{mm}$   
□  $20*20-80*80\text{mm}$

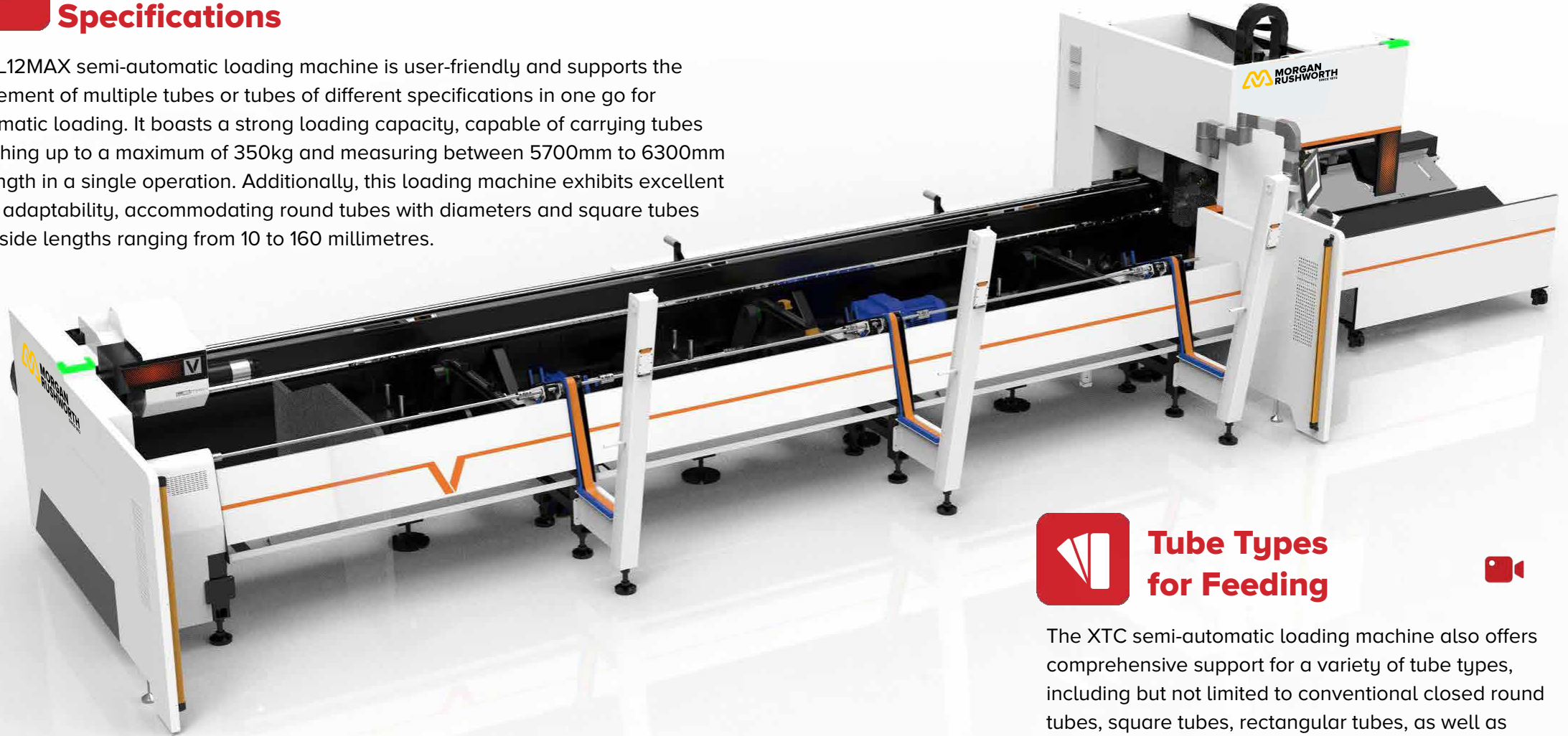
The XTC fully-automatic loading machine offers comprehensive support for a wide range of tube types, including but not limited to conventional closed round tubes, square tubes, rectangular tubes, as well as specially shaped oval tubes. It enables convenient unmanned and automatic loading operations. This feature extensively covers the majority of requirements in the field of small metal tube processing, significantly enhancing automated processing capabilities.



# Semi-automatic loading

## Feeding Specifications

The L12MAX semi-automatic loading machine is user-friendly and supports the placement of multiple tubes or tubes of different specifications in one go for automatic loading. It boasts a strong loading capacity, capable of carrying tubes weighing up to a maximum of 350kg and measuring between 5700mm to 6300mm in length in a single operation. Additionally, this loading machine exhibits excellent tube adaptability, accommodating round tubes with diameters and square tubes with side lengths ranging from 10 to 160 millimetres.

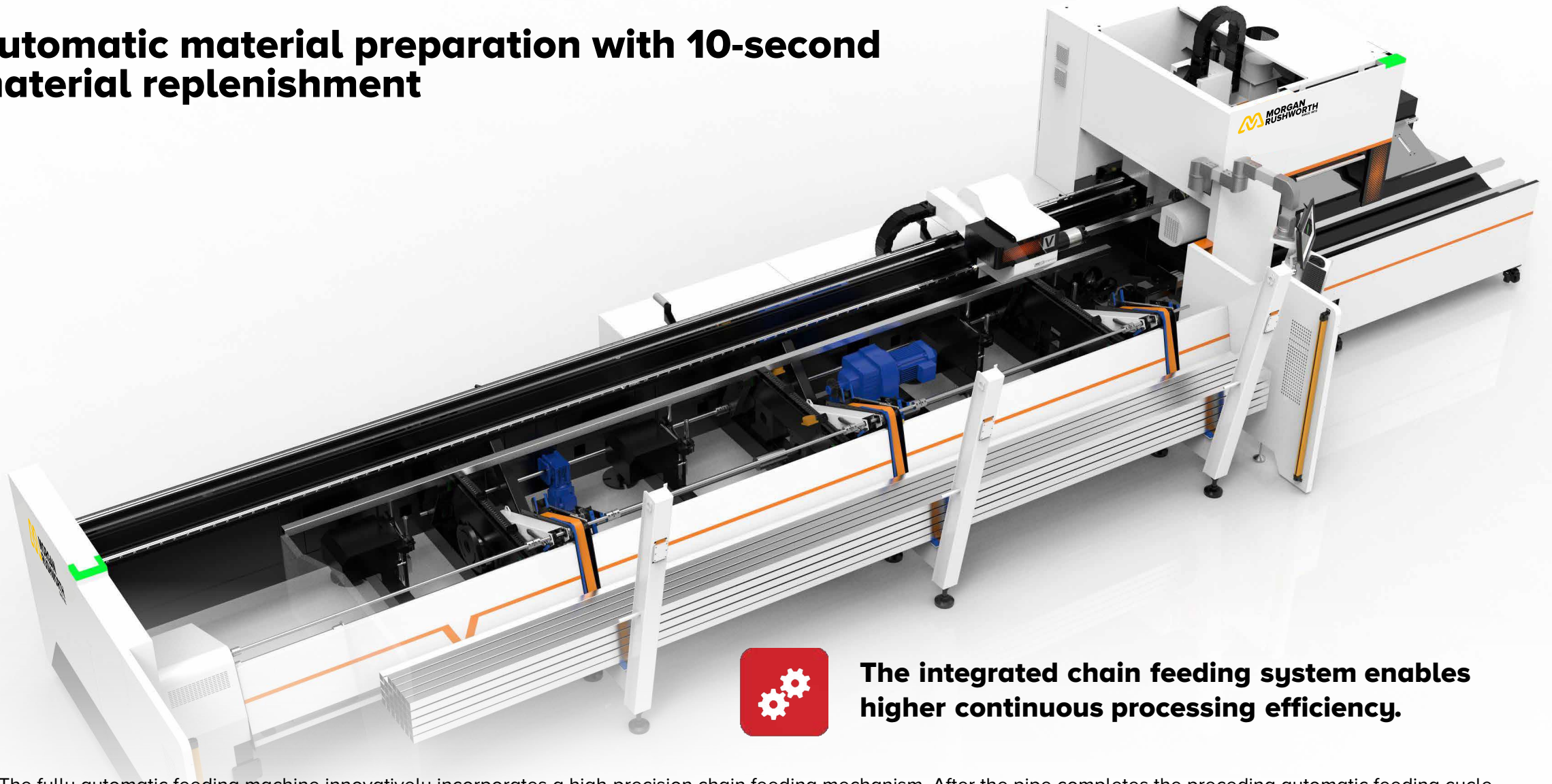


## Tube Types for Feeding



The XTC semi-automatic loading machine also offers comprehensive support for a variety of tube types, including but not limited to conventional closed round tubes, square tubes, rectangular tubes, as well as specially shaped oval tubes.

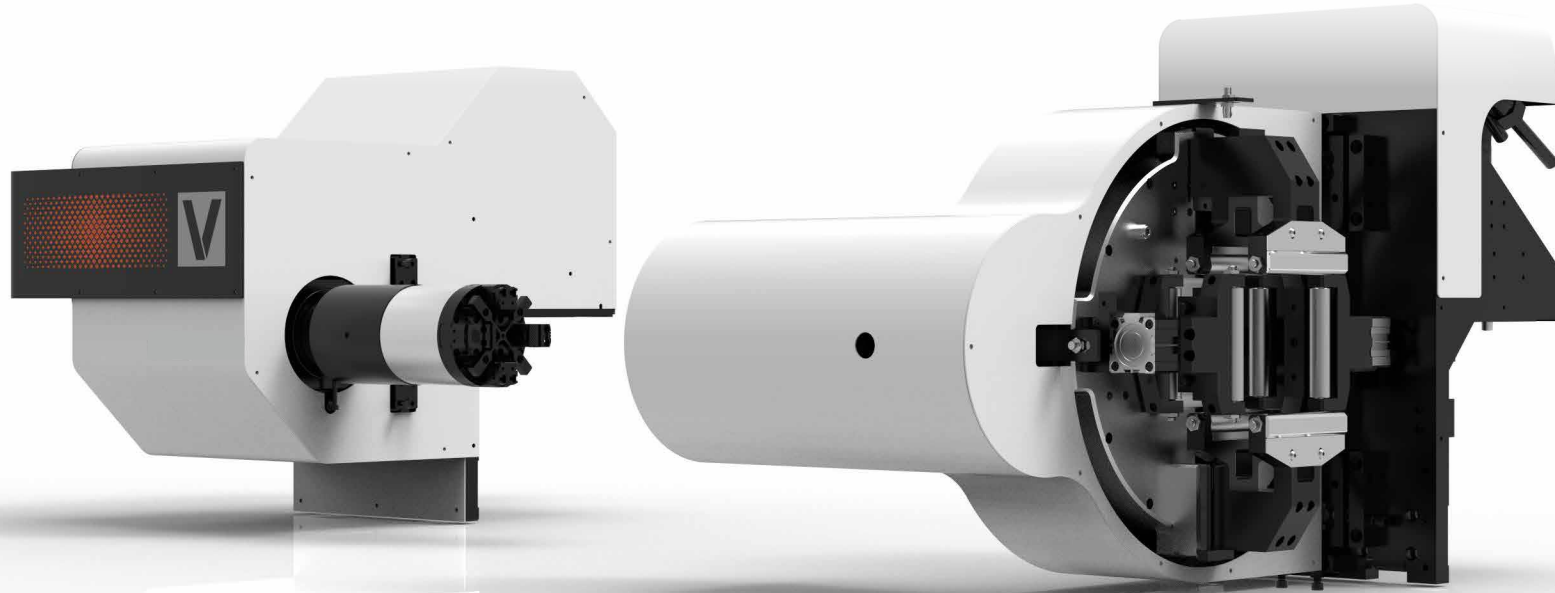
## Automatic material preparation with 10-second material replenishment



**The integrated chain feeding system enables higher continuous processing efficiency.**

The fully automatic feeding machine innovatively incorporates a high-precision chain feeding mechanism. After the pipe completes the preceding automatic feeding cycle, this chain feeding mechanism allows the pipe to be precisely, stably, and efficiently conveyed directly to the designated feeding position beneath the rear chuck, where it waits in synchronization with the cutting process. This design achieves seamless integration of the subsequent material replenishment step, completely eliminating waiting time between cycles and enabling ultra-fast material replenishment. It significantly enhances the continuous operation capability and overall production efficiency of the production line.

# Precision Pneumatic Chuck



## High Sealing Performance

The chuck adopts an advanced fully enclosed structural design, significantly reducing the risk of dust generated during cutting entering the interior of the chuck. This effectively avoids issues such as unstable clamping or jamming caused by dust accumulation. Additionally, its routine maintenance is extremely simple, greatly reducing downtime and maintenance costs, and improving overall work efficiency.



## Strong Clamping Force

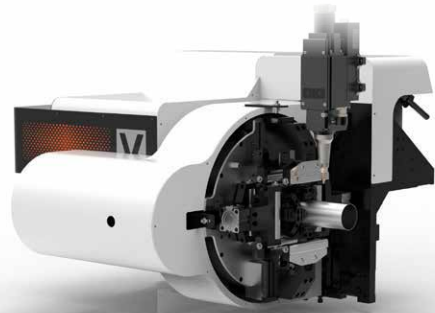
The chuck possesses excellent clamping performance, fully ensuring stable clamping of the tubing. At the same time, the clamping force supports visual adjustment, allowing users to easily adjust the clamping force to ensure that thin-walled small tubes are both stable and do not deform during clamping. This provides a safe and reliable clamping solution for various types of tubing.



## Wear-resistant and Durable

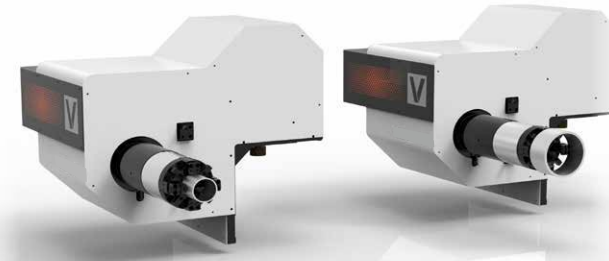
The chuck is made of high-quality wear-resistant materials, which allows the equipment to maintain excellent performance even under long-term, high-intensity working conditions. Additionally, the core components have undergone careful hardness modulation treatment, not only improving the durability of the parts but also ensuring that the chuck remains stable and reliable under high-speed, high-precision working conditions.

# Precision pneumatic rear chuck



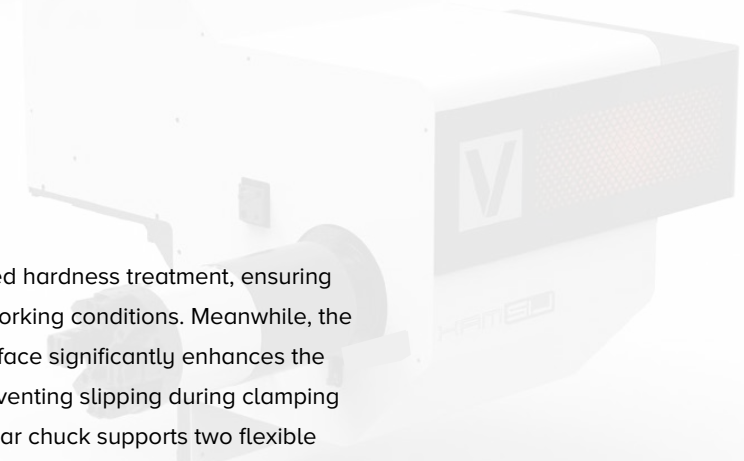
## Barrel structure Shorter tail material

The rear chuck adopts a barrel-type structural design, significantly shortening the length of the clamping jaws. This not only enhances the rigidity of clamping, ensuring stability and accuracy during high-speed cutting. Additionally, this design allows the rear chuck to easily penetrate into the interior of the front chuck, maximizing proximity to the laser cutting head, thereby achieving precise cutting of shorter tail materials and improving material utilization.

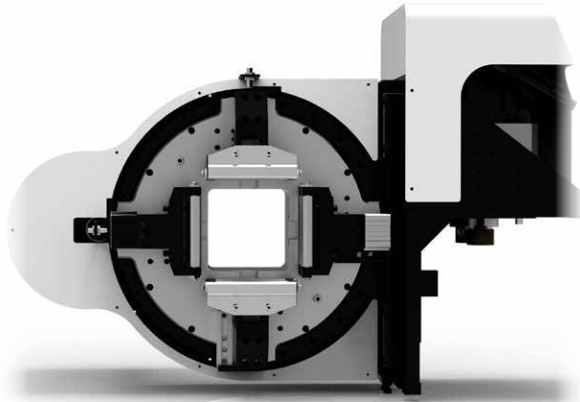


## Flexible tube Clamping Stable and Reliable

The chuck jaws have undergone carefully designed hardness treatment, ensuring their durability and stability under high intensity working conditions. Meanwhile, the unique serrated surface processing on the jaw surface significantly enhances the clamping adhesion with the tubing, effectively preventing slipping during clamping and improving cutting accuracy and safety. The rear chuck supports two flexible tubing clamping modes. For small diameter tubing, an external clamping method is used to ensure uniform and stable clamping force; for large-diameter tubing, an external supporting mode can be selected for more stable and reliable clamping.

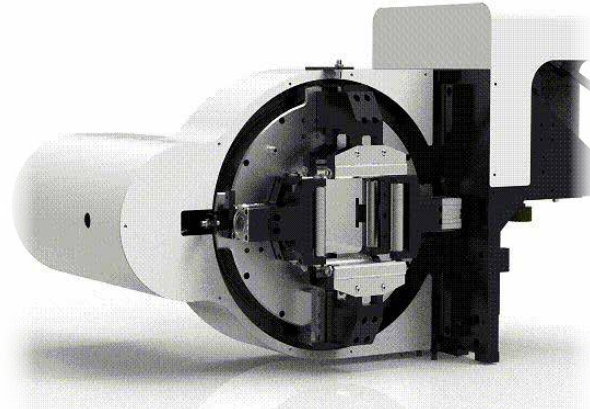


# Full Stroke Front Chuck



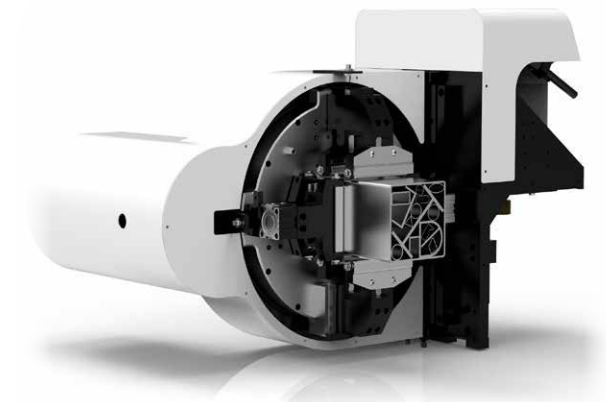
## Square Hole Chuck Larger Clamping Range

The square hole chuck significantly expands the clamping range, supporting a maximum clamping size of 120mm×120mm square tubes. Compared to round hole chucks of the same specification (with a maximum clamping size of 80mm×80mm square tubes), the clamping capacity is significantly improved.



## Full Stroke Faster Tubing Clamping

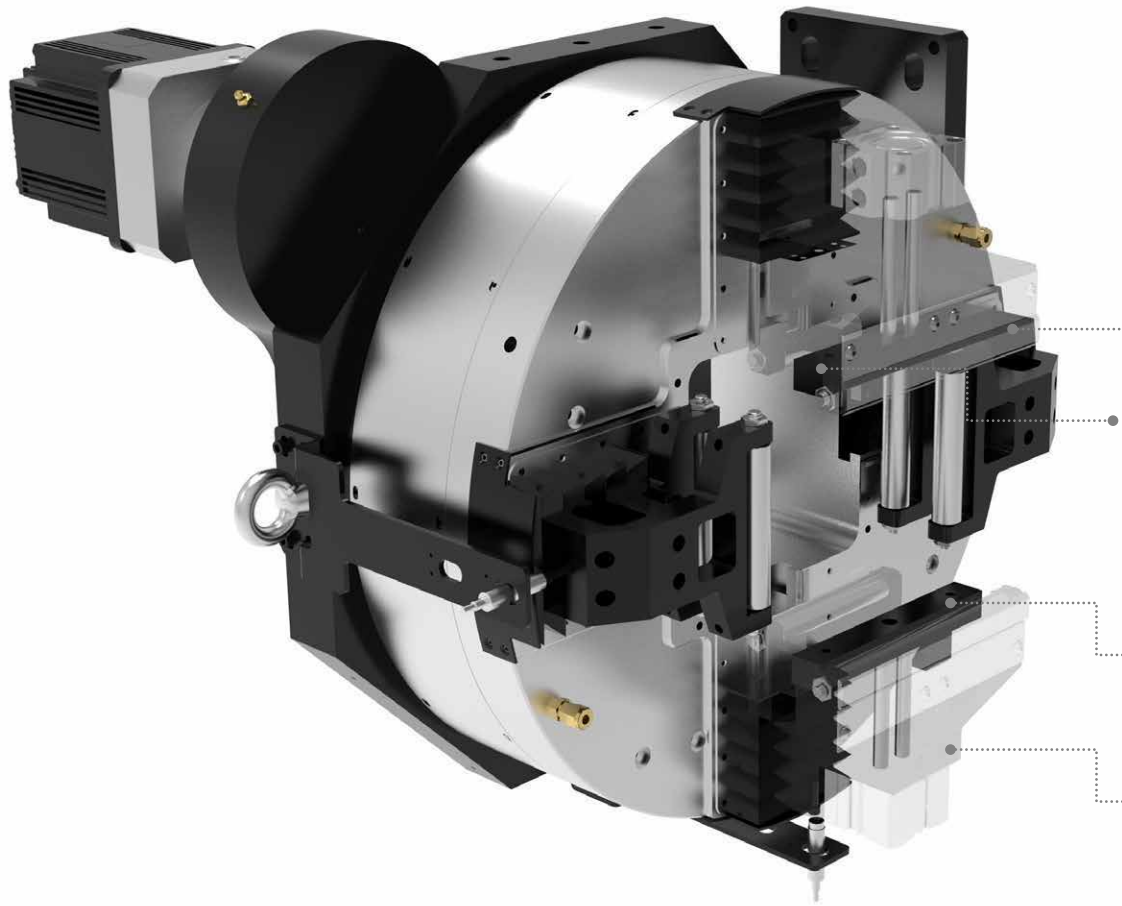
The new chuck structural design achieves full stroke automatic clamping. Regardless of the size of the tube being cut, there is no need for manual adjustment of the jaw position. With just one button, rapid tube clamping can be completed, significantly improving tube clamping and processing efficiency.



## Capable of clamping any tube shape Wider processing range

The design of the full-stroke chuck allows it to clamp various shapes of tubing in one go, greatly enhancing work efficiency and adaptability. The chuck features adjustable clamping force functionality, enabling fine adjustments to tube clamping according to actual needs. It can easily handle clamping of both thin and heavy tubes.

# A chuck with compound dual-clamping function enables zero scrap material cutting



**tightening  
clamping**

**tightening  
clamping**



## Dual functions of clamping and tightening

Under the premise of maintaining the original basic clamping function, a pair of jaws on the front chuck innovatively integrates a pneumatic clamping function. In actual production scenarios, when the front chuck needs to perform a 0-scrap cutting operation by retracting, this pneumatic clamping function is precisely activated to efficiently secure the pipe. Thanks to this innovative design, the front chuck alone can achieve a stable clamping of the pipe, allowing the rear chuck to be released from the clamping state. As a result, the working area of the cutting head is completely unobstructed, successfully eliminating cutting blind spots and achieving a 0-scrap cutting effect for the cutting head.

# Comprehensive Tubing Support Capability



## Servo Control and Program Synchronization

By utilizing servo control principles, the equipment can achieve very rapid and precise dynamic response and coordination efficiency. The combination of advanced control technology and the device's numerical control system enables the support process to be automatically and rapidly adjusted according to the program.

## Dual Support for Higher Precision and Faster Cutting

This feature avoids cutting accuracy errors caused by gravity-induced sagging and deformation of any tube type, and also circumvents the issue of tubing tail whip, allowing the highest rotational speed setting to be used for processing without restrictions.

## Adaptive Tubing Rotation Dynamic Support

Automatically adapts to the height support during tubing rotation, always maintaining contact between the support wheel and the bottom of the tubing to ensure stable cutting.

## Solve the Challenges of Cutting Small and Long Tubing

For the cutting of small and long tubing, which tends to exhibit bending due to its low inherent strength after clamping, the use of a dual-support structure can effectively counteract this deformation. This ensures that the tubing remains stable during cutting, resulting in higher quality cutting outcomes.

# Floating support enhances cutting accuracy



## Dynamically supporting various types of pipes

For varying pipe profiles such as square, rectangular, channel, and special-shaped sections, a floating support system provides precise, responsive support throughout rotation for stable and accurate machining.

## Folding plate for convenient discharge of short workpiece scraps/waste

The front end of the flip-up support is designed with an integrated folding plate, enabling automation and efficiency in the pipe cutting process. During pipe cutting, the folding plate can automatically descend, ensuring that the short workpieces and waste generated from cutting can freely discharge in this area without interfering with the operation of the flip-up support.

## Floating support ensures the precision of long workpieces

The flip-up support is capable of intelligently and automatically adapting to height variations of the pipe during rotational movements, ensuring that the support wheels remain in close contact with the bottom of the pipe at all times, thus providing stable support. This design is particularly crucial when only the front chuck is used for clamping, as it effectively ensures the stability of long workpieces during rotational cutting, thereby enhancing cutting precision.

# Integrated Material Receiving and Discharging for Seamless Connection



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## Material Receiving

The material discharging support system features adaptive adjustment capabilities, capable of flexibly accommodating workpieces of different lengths and achieving precise lifting support. After the cutting operation is completed, the support wheels automatically descend, and the workpiece slides smoothly and slowly down the inclined surface design into the material receiving area, effectively avoiding scattering and damage caused by direct impact on the ground or the receiving frame. Compared to processing scenarios without material receiving and discharging functions, this ensures the safety and integrity of the workpiece.

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## Material Collection

The material receiving area is designed with efficient storage and buffering capabilities, aiming to reduce manual intervention and enhance the automation level of the production process. This area can safely and orderly store a certain number of workpieces, thereby avoiding the cumbersome process of operators needing to frequently and individually pick up workpieces from the discharging area and manually place them in the designated location. By accumulating a certain number of workpieces, the material receiving area achieves the effect of "batch processing," enabling unified and less frequent material picking and handling operations when the workpieces accumulate to a certain amount. This optimization not only significantly reduces manual labour intensity but also improves production efficiency.

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## Zero scrap cutting

The front chuck of the XTC, through its groundbreaking and innovative design, seamlessly integrates automatic avoidance cutting technology with a composite dual-clamping function, bringing about a revolutionary transformation in the field of pipe cutting. It can effortlessly achieve a zero scrap/offcut cutting effect, comprehensively enhancing cutting efficiency and material utilization.

As the processing workflow nears its end, the front chuck of the XTC demonstrates exceptional intelligent characteristics by automatically initiating an avoidance program. This allows the cutting head to move freely and flexibly within the space between the front and rear chucks. Subsequently, the clamping jaws of the front chuck quickly and securely grip the pipe, while the rear chuck automatically releases and retracts to its initial position. At this point, relying solely on the single-chuck clamping state of the front chuck, the cutting head can smoothly complete the remaining cutting tasks.

This exquisite design ensures that there are no blind spots in the cutting process. The cutting head can precisely reach any position at the end of the pipe for cutting, truly achieving the goal of zero scrap/offcut cutting. In comparison to the traditional double-chuck pipe cutting method, which can result in up to 220mm of scrap waste, the front chuck of the XTC significantly reduces this figure to 0mm, achieving the ultimate optimization of material utilization. Moreover, while minimizing scrap waste, this design also ensures the cutting precision of the last workpiece, providing a strong guarantee for processing quality.



# Obstacle-free intelligent blanking with chuck avoidance during cutting



## Achieve fully automated pipe processing

In traditional pipe cutting, when using the chuck avoidance function to cut the last workpiece, a common issue arises where the workpiece gets stuck inside the front chuck after cutting and cannot automatically dislodge, requiring manual removal. This leads to equipment downtime and hinders full-process automation. The XTC features an innovatively designed intelligent automatic clamping and blanking system. After chuck avoidance cutting, this system automatically activates a pneumatic clamping mechanism to grip the tail end of the workpiece. The front and rear chucks then retract, releasing the workpiece from its constraints. Subsequently, the clamping mechanism releases, allowing the workpiece to freely fall onto a flip-up support and gently slide into the discharge frame, achieving obstacle-free, flexible blanking. This ensures the full automation and continuity of the pipe processing workflow, enhancing efficiency and reducing costs.



# More Environmentally Friendly Cutting



## Dust Extraction and Ventilation

In the meticulously laid out cutting area, dust extraction and ventilation windows are designed to capture and effectively remove dust and smoke generated during the tube cutting process. This maintains better cleanliness at the cutting site and creates a healthier and more comfortable working environment for operators.





## Centralized Collection for Convenient Disposal

Equipped with an independent waste material collection cart, it reduces the frequency of waste disposal and features a convenient pull-out design that makes manual handling easier and more efficient. Additionally, it is thoughtfully designed to not occupy any extra space of the equipment.

# Easy to Learn and Quick to Master



**BOCHU TubePro tube cutting software, with its intuitive and user-friendly interface and powerful functional design, has become software with a broader user base.**

**Intuitive and Simple Interface:** The software features a well-organized menu bar, toolbar, and clear icon design, allowing even first-time users to quickly grasp basic operations.

**Intelligent Guided Operation:** It simplifies the complex process of setting cutting parameters. Through intelligent guidance or preset templates, users can quickly complete the entire process from material selection, graphic import, path planning, to cutting parameter adjustment.

**Comprehensive Process Library:** The extensive cutting parameter library allows users to quickly adapt to a wide range of tube cutting applications and material thicknesses.



# BLT310T intelligent cutting head

BLT310T



## Water Cooling Design More stable cutting

The anti-corrosion coating process of the cutting head water channel can avoid water channel corrosion caused by long-term use, which may cause blockage of the cutting head water channel and reduce the cooling effect.



## Protective lens temperature monitoring Improve processing stability

Real-time monitoring of the temperature of the protective mirror during the cutting process. When the protective mirror is contaminated, the system will stop the light and alarm in time, effectively reducing the poor cutting caused by the contamination of the protective mirror.



## Three Sets of Protective Mirrors Optical protection Extends the lifespan of core lenses

Establish multiple protective barriers to enhance the sealing level of the core chamber.



## Air pressure monitoring sensor Improve processing stability

Real-time monitoring of the gas flow rate during the cutting process can reduce the impact of unstable gas pressure on the cutting surface.



## Amplifier Sensor More precise cutting

The integrated capacitor amplifier sensor makes the height adjustment more accurate and stable.



## Anti-collision protection Easier maintenance

The anti-collision design of the cutting head effectively reduces the probability of returning to the factory. There is no need for aftersales service to come to the factory, and customers can replace the head by themselves, which reduces maintenance costs.



# Rich Functional Applications

## One-Click Cutting

No drawing required, one-click setting for quick truncation, applicable to scenarios such as dividing tubes by length and removing tube ends.



## One-Click tube End Alignment

With one-click setting, the laser cutting head automatically captures the end face of the tube, eliminating the need for manual positioning. This can be applied for automatic positioning before automatic processing of batches of tubes.



## Flying Cutting

Efficient cutting of matrix square holes and circular holes on the surface of tubes.



## Four-point centring

After setting the tube specifications, one-click automatic centring can precisely locate the centre of the tube, significantly improving cutting accuracy and reducing the impact of dimensional deviations.



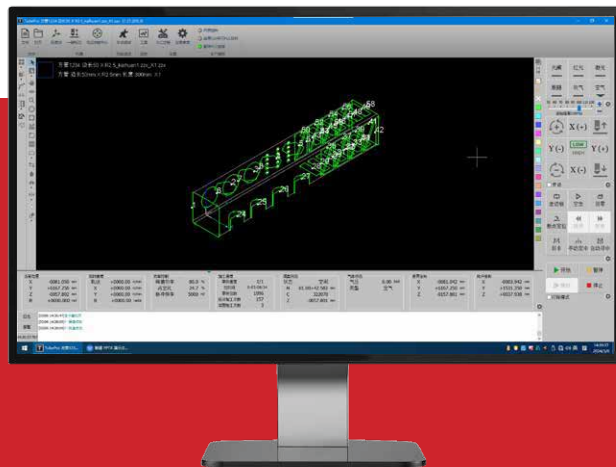
## Single-side levelling

With one click, the surface of the tube can be levelled horizontally, ensuring the accuracy of the tube's position before cutting.



## In-process centring

Flexible centring methods can be selected to address issues such as material deformation or clamping deformation of tubes. Automatic centring before cutting can be achieved on the processing section or processing graphics, improving overall cutting accuracy.



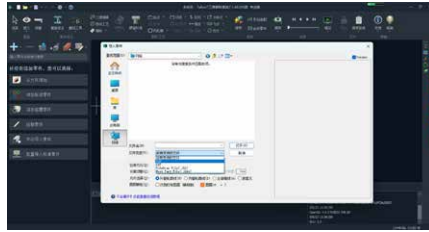
# FSCUT3000DE

# TubeT-Tube Nesting Software



## Quick Import

TubeT can automatically recognize the stretching direction of IGS files and can batch import multiple IGS files with different cross-sections at once. It supports the import of assembly files, greatly improving the efficiency of file import.



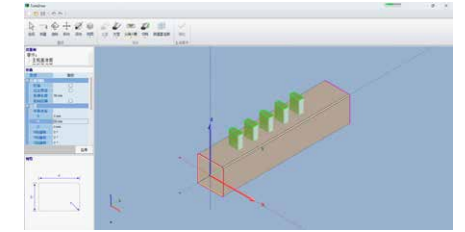
## Nesting Report

A concise nesting report with clear layout data allows for real-time tracking of material utilisation costs.



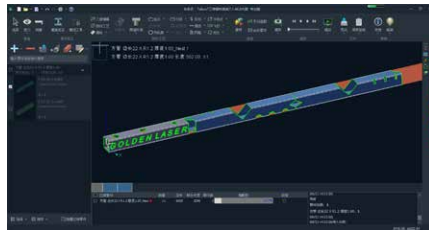
## No Drawing Required

Supports the creation of conventional parts without drawing, with menu-based parameter settings to quickly generate 3D processing graphics that seamlessly integrate with cutting software.



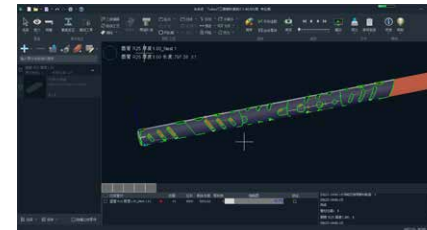
## Flexible Nesting

TubeT supports nesting for single or multiple parts, allowing flexible selection of nesting layouts and supporting mixed processing of parts.



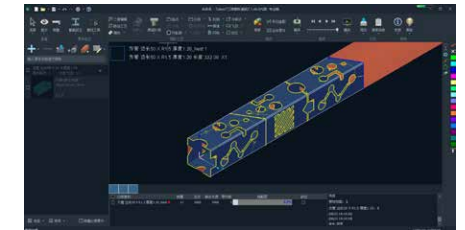
## Common Edge Nesting

TubeT can perform common edge processing on parts after weld seam compensation, as well as on isolated islands of identical or different parts. This achieves precise common edge nesting, minimizing the number of cuts and saving both time and money.



## Automatic Sequencing

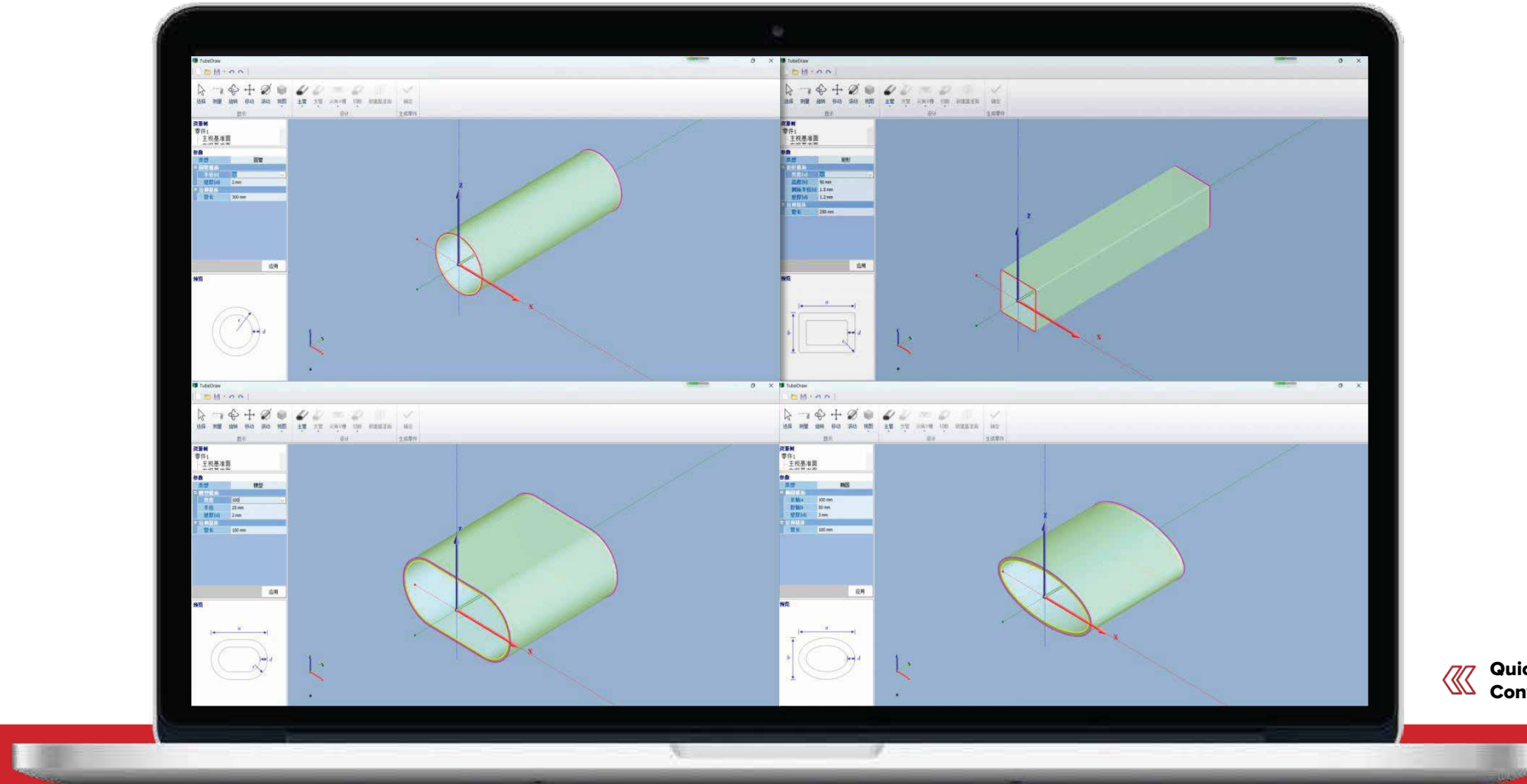
Automatic sequencing of airshifting paths can be achieved for all types of tubes, including irregular ones. For common rectangular and circular tubes, two automatic sequencing strategies are provided: sequencing by face and sequencing by circle, to achieve a more reasonable processing path.



# TubeT

✘The standard pipe nesting software version that comes with XTC is the non-dongle, online edition called TubeT (Small Pipe Version).

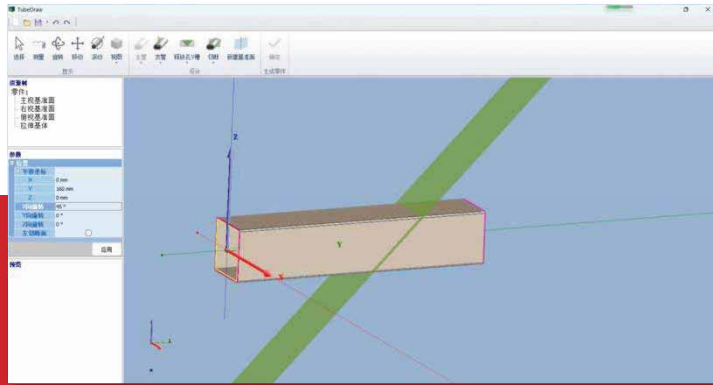
# No Drawing Required Function Simplifies Complexity



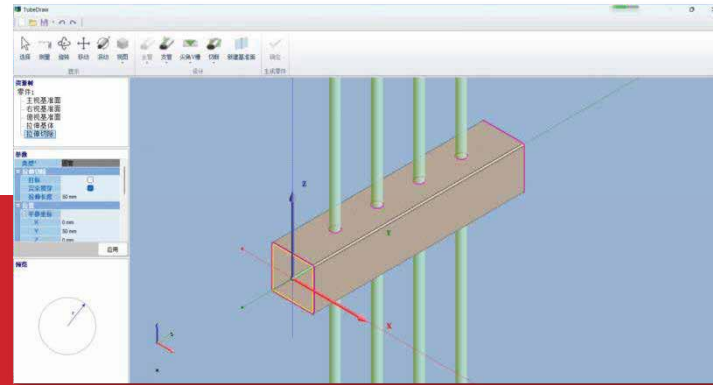
 **Quick Generation of Conventional tube Shapes**

The nesting software features a no-drawing-required function, which easily generates 3D cutting diagrams for conventional tube shapes through menu-based modelling. Complex V-grooves such as V-type and D-type can be created with one click. It seamlessly integrates with cutting software, freeing users from the constraints of 3D software. Design becomes production, doubling efficiency.

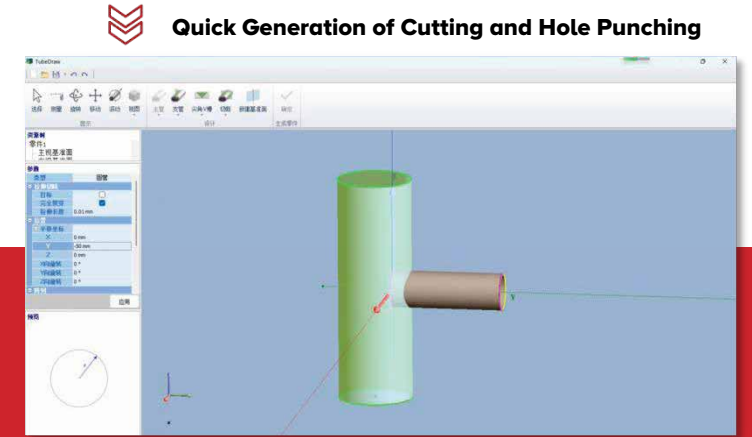
# No Drawing Required Function Rapid Production



**Tube Mitre Cutting and Truncation**



**Tube Surface Hole Cutting**



**Tube with Arc-shaped End**



**Metal Furniture**



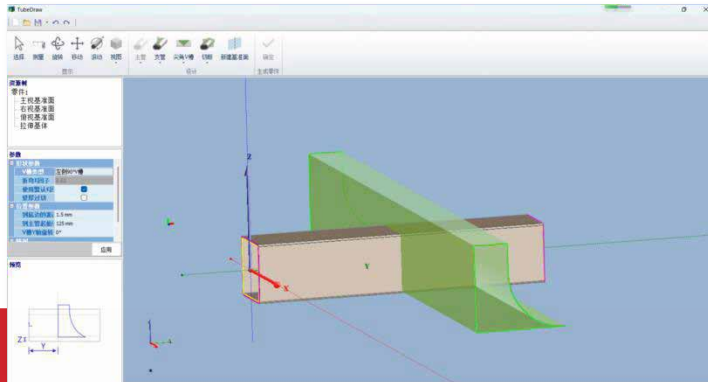
**Metal Guardrails, Doors, and Windows**



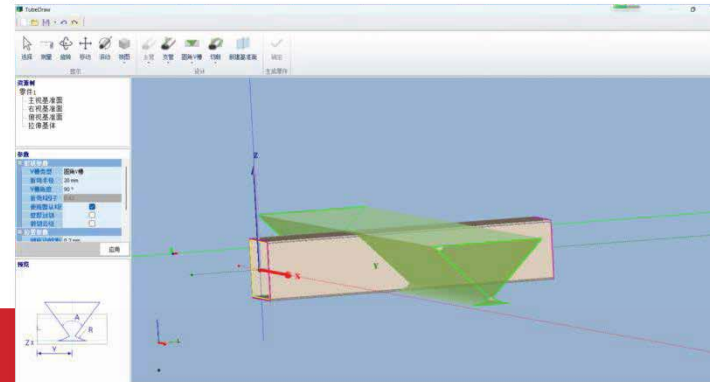
**Fence and Escalator**

# No Drawing Required Function No Welding Needed

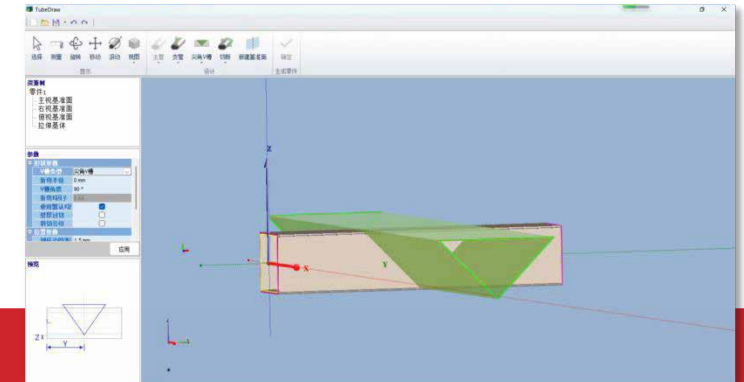
 Quick Generation of V-Grooves



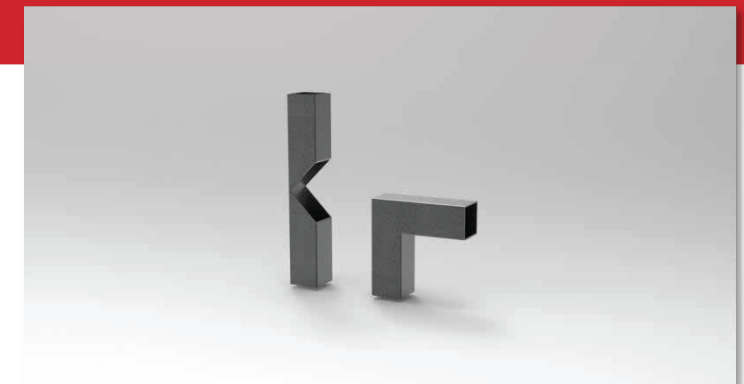
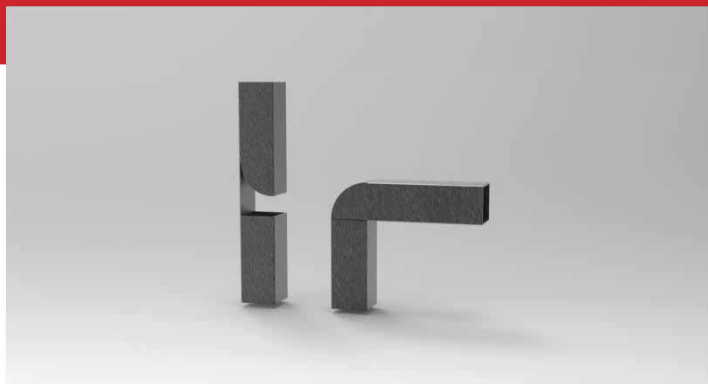
**D-shaped  
V-Groove**



**Rounded  
V-Groove**



**90°  
V-Groove**



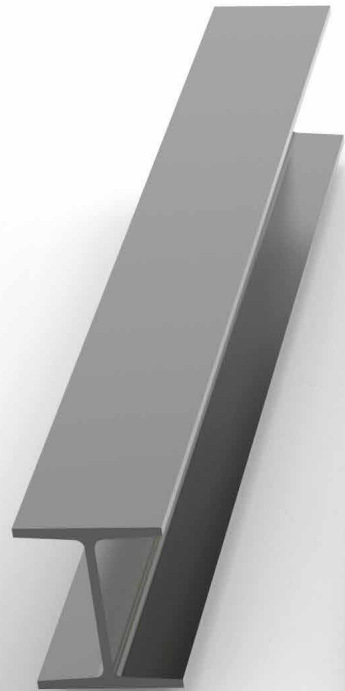
# PROCESSING CAPACITY

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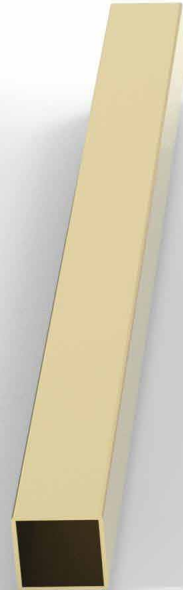
**Part 03.**



# Types of Cutting Materials



Carbon Steel Tube



Brass Tube



Copper Tube



Stainless Steel Tube

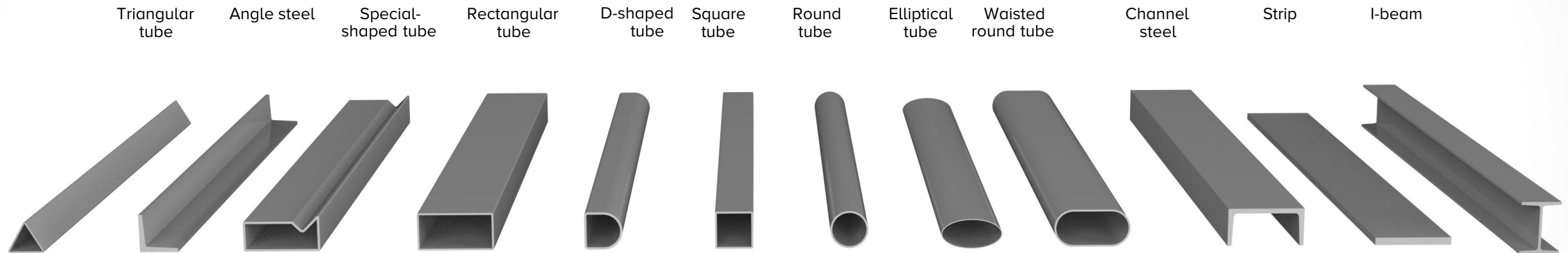


Galvanized Tube



Aluminium Tube

# Type of tube cutting



✂The cutting of non-standard pipes such as I-beams and concave special-shaped pipes (which require modification of the contour vectors) needs to be carried out with the support of the TubesT (Small Pipe Professional Version) pipe nesting software.

# Cutting process



# Range of tube Cutting Thickness



The above tube cutting thickness's are based on the range of thickness's for cutting circular tubes using laser power. The actual thickness of tubes that can be processed by a tube cutting machine also needs to be comprehensively determined in conjunction with the chuck's weight-bearing capacity.

# APPLICATION INDUSTRY

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# Part 04.



# Application Industries



Steel Furniture



Medical Devices



Fitness Equipment



Metal Display Stands



Automotive tube Fittings



School Furniture and Teaching Equipment



Metal Guardrails



Food tubelines



Bicycles



Children's Pushcarts



Hardware Valves



Bathroom tube Fittings

