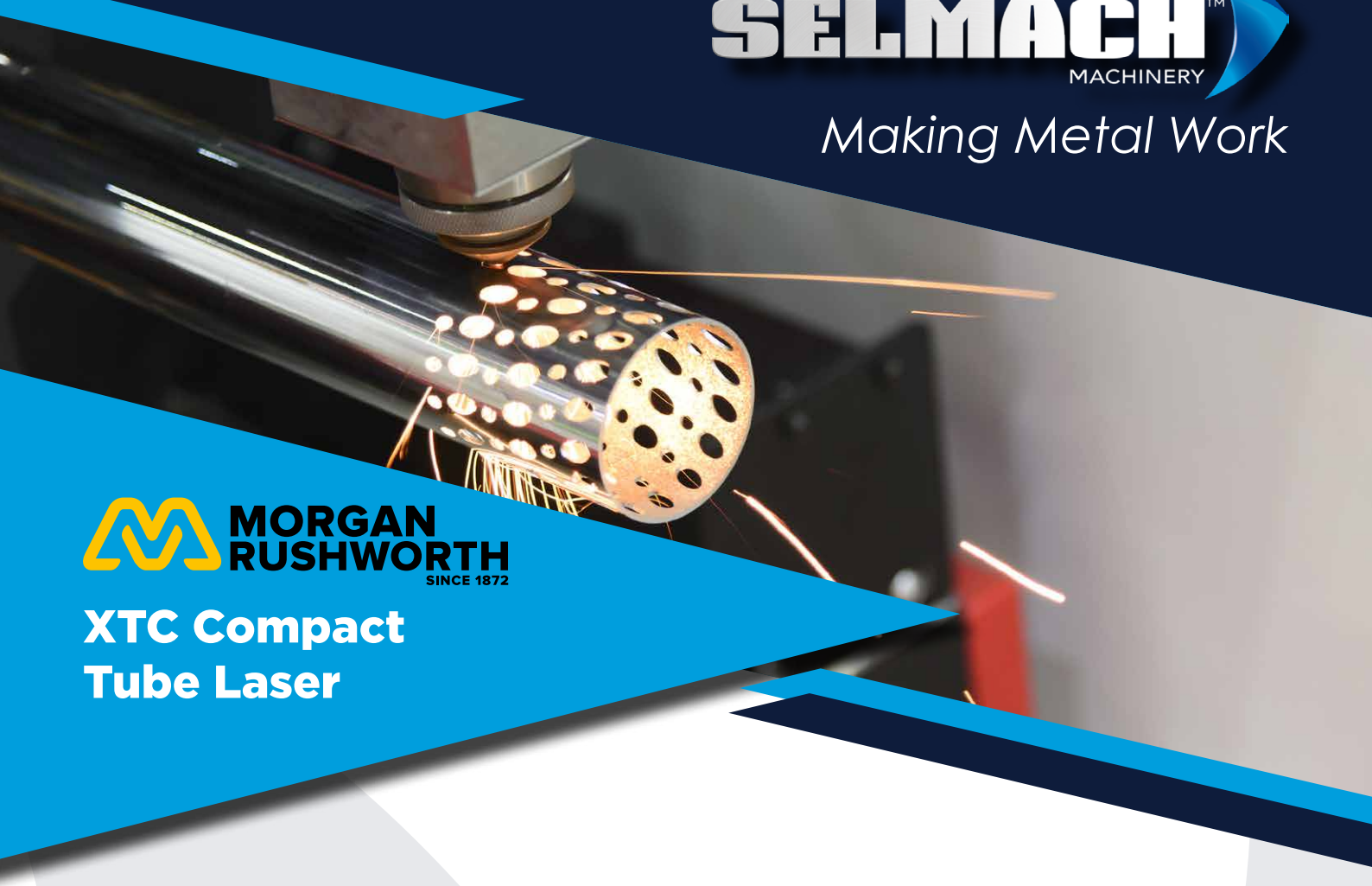
SELMACH™ MACHINERY

Making Metal Work



MORGAN RUSHWORTH SINCE 1872

XTC Compact Tube Laser

The Morgan Rushworth 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 8mm to 120mm. The machine achieves three major breakthroughs: “zero scrap waste, multi-scenario compatibility, and high-precision ultra-fast production,” redefining the standards for compact 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 zero scrap cutting, thereby minimising material waste. Additionally, it is equipped with a high-speed pneumatic chuck specially customised 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.

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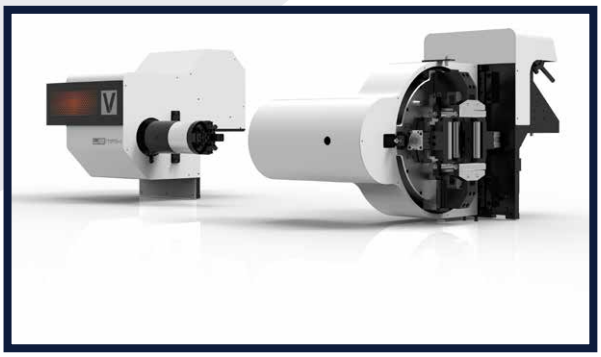
SUPERIOR TUBE CUTTING QUALITY



SUPERIOR TUBE CUTTING QUALITY

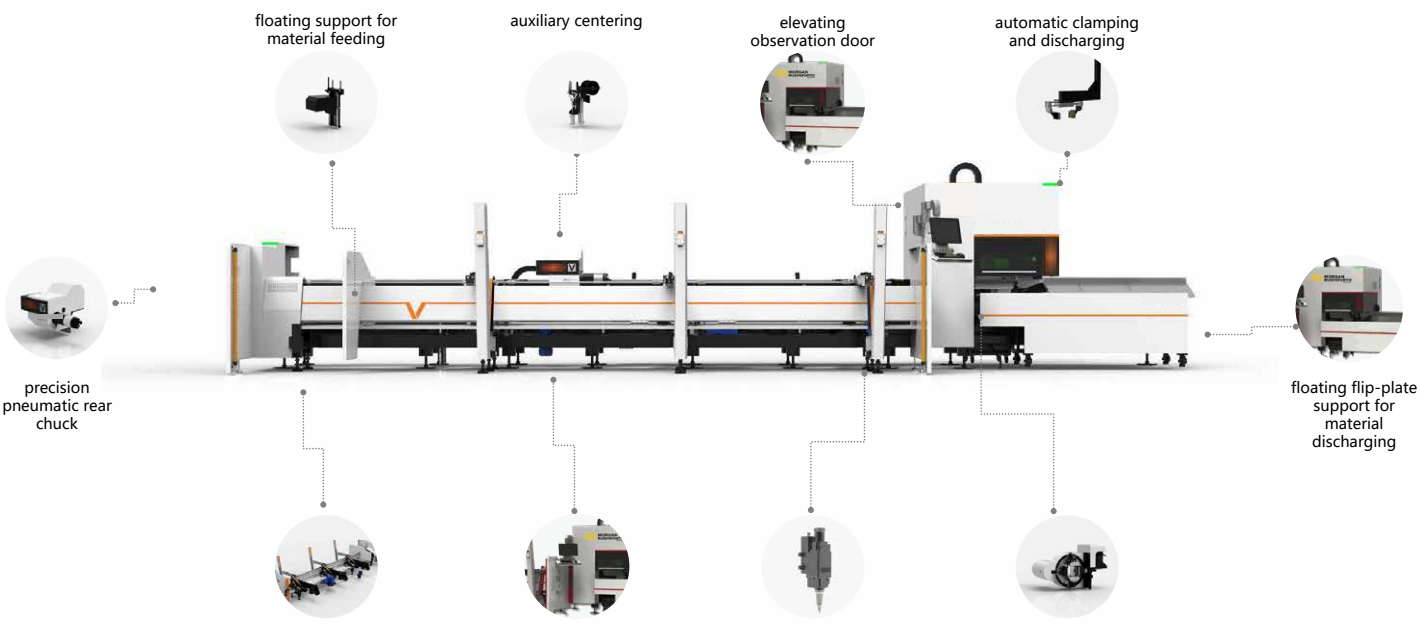
Machine Features

- High performance Raycus Laser Source
- Fibre optic beam delivery system
- BOCI BLT 310T Autofocus Laser Cutting Head
- High strength, rigid gantry design to ensure high accuracy and allow high acceleration
- German LEITESEN rack drive motion system
- Applicable tube types : Round tube, square tube, rectangular tube, oval tube, D-shaped steel, T-shaped steel, H-shaped steel, channel steel, angle steel, etc.
- Material Receiving and Collecting System
- CE compliant complete machine enclosure and light barrier system
- FSCUT3000DE Control System
- BOCHU TubePro Tube Cutting Software
- TubesT-Tube Nesting Software
- Semi-Automatic Loading System
- Zero scrap cutting with pneumatic clamping system to avoid final parts being stuck in the chuck.
- Scrap collection draw

Optional Equipment

- 1.5 - 6 kW Laser Source
- Optional infeed lengths up to 8m
- Optional outfeed lengths up to 4m
- Optional bevel cutting head

MAXIMUM ACCELERATION 2.0G	MAXIMUM POSITIONING SPEED 120M/MIN	MAXIMUM ROTATION SPEED 200RPM
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.	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 optimising overall processing efficiency.	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.



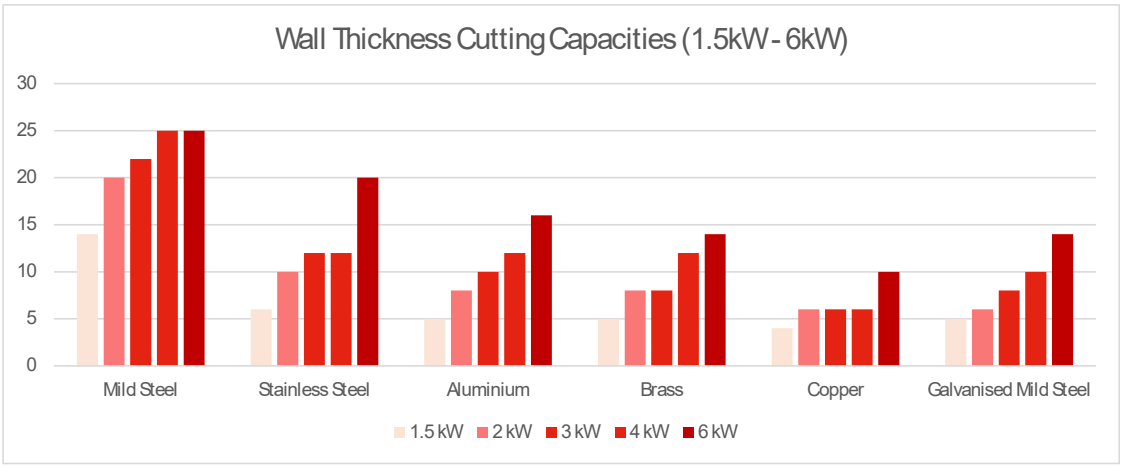
TECHNICAL SPECIFICATIONS

		XTC6312	XTC6316
Laser Power	kW	1.5, 2 or 3	
Max. Tube Length	mm	6,300	
Tube Diameter	mm	Round: Ø8 - 120 Square: 8 x 8 - 120 x 120	Round: Ø8 - 160 Square: 8 x 8 - 160 x 160
Suitable for Cutting		Mild Steel, Stainless Steel, Galvanised Steel, Aluminium, Brass and Copper	
Cutting Profiles		Round, Square, D-Shaped, Rectangular, Special Shaped, Angle, Triangular, Elliptical, Waisted Round, Channel, Strip and I-Beam	
Weight of Single Tube	kg	70	
Positioning Speed	m/min	120	
Chuck Rotation Speed	rpm	200	
Axis Acceleration	G	2.0	
Positioning Accuracy	mm	0.05	
Repeat Positioning Accuracy	mm	0.03	

KEY COMPONENTS

COMPONENT	BRAND
Fibre Laser Source	Raycus
Controller	BOCHU
CAM/CAD software	FSCUT3000DE
Servo motor and driver	HCFA
Rack and Pinion	LEITESEN
Guide Rail	SMAGIC
Laser Head	BOCI
Gas Proportional Valve	SMC
Rotate Chuck System	Morgan Rushworth
Automatic Support	Morgan Rushworth
Automatic Bundle Loader	Morgan Rushworth
Automatic Unloading	Morgan Rushworth

LASER SOURCE	kW	1.5	2	3	4	6
Cutting Capacity - Mild Steel	mm	14	20	22	25	25
Cutting Capacity - Stainless Steel	mm	6	10	12	12	20
Cutting Capacity - Aluminium	mm	5	8	10	12	16
Cutting Capacity - Brass	mm	5	8	8	12	14
Cutting Capacity - Copper	mm	4	6	6	6	10
Cutting Capacity - Galvanised Mild Steel	mm	5	6	8	10	14



DUAL FULLY-AUTOMATIC / SEMI-AUTOMATIC LOADING SYSTEMS

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.

HIGH SEALING PERFORMANCE	STRONG CLAMPING FORCE	WEAR-RESISTANT AND DURABLE
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.	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.	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.

INTEGRATED MATERIAL RECEIVING AND DISCHARGING FOR SEAMLESS CONNECTION

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.

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 labor intensity but also improves production efficiency.

ZERO SCRAP CUTTING

The front chuck of the XTC, through its ground-breaking 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 utilisation. 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 optimisation of material utilization. Moreover, while minimizing scrap waste, this design also ensures the cutting precision of the last work piece, providing a strong guarantee for processing quality.

OBSTACLE-FREE INTELLIGENT BLANKING WITH CHUCK AVOIDANCE DURING CUTTING

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.

SELMACH™ MACHINERY

Making Metal Work

MORGAN RUSHWORTH SINCE 1872

XTS Tube and Section Laser

The Morgan Rushworth XTS range of tube laser cutting machines are especially applicable for round, square, rectangular, oval, waist round tubes and even beams.

Manufactured with the world's leading fibre laser resonator and electronic components to ensure superior stability. The high clamping bed feature provides outstanding rigidity whilst performing at high speed and acceleration, taking your tube laser cutting to the next level.

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SUPERIOR TUBE CUTTING QUALITY

SEMI AUTOMATIC CHAIN UNLOADING SYSTEM

Machine Features

- High performance Laser Source
- Fibre optic beam delivery system
- RayTools Autofocus Laser Cutting Head
- High strength, rigid gantry design to ensure high accuracy and allow high acceleration
- High precision class alpha rack and pinion drive motion system
- Applicable tube types : Round tube, square tube, rectangular tube, oval tube, D-shaped steel, T-shaped steel, H-shaped steel, channel steel, angle steel, etc.
- CE compliant complete machine enclosure and light barrier system
- Lantek Flex3d CNC Laser Control and Software

Optional Equipment

- Outfeed Support - 12m
- Precitec ProCutter Head
- 3D Bevel Cutting Torch
- Optional Magazine Loading system
- Conveyor outfeed
- Weld Seam Detection
- UPS: Uninterruptible Power Supply
- Filtration & Extraction

CNC CONTROL AT YOUR FINGER TIPS

- Equipped with new multi-touch CNC Controller
- 5000mm-8000mm unrestricted mixed row automatic intelligent processing
- Seamlessly docked with the intelligent manufacturing factory
- MESS cloud data management system

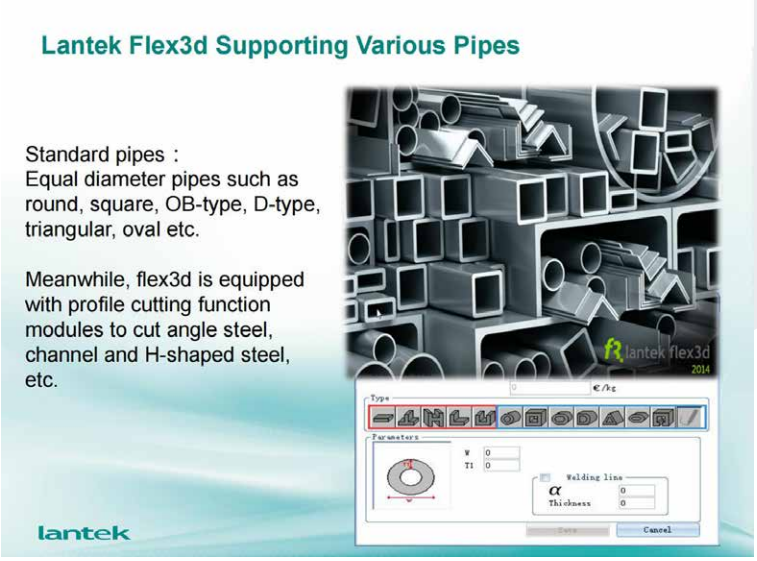
LANTEK FLEX3D

- Easy, Flexible Design
- Accurate, suitable for a wide range of pipe types
- Optimising and Cutting of Tubes
- CNC Simulation and Generation

lantek flex3d

Spanish nesting software

Born specifically for tube

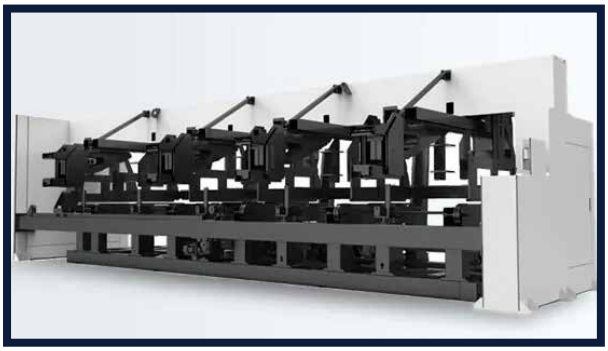


HIGH SPEED FULL STROKE CHUCK - UP TO 130 RPM

Tube Range Up to 270mm

FULL SERVO DYNAMIC SUPPORT

Tube Range Up to 270mm



INTELLIGENT AUTO LOADER

2.5T Ø20-200mm; 800 x 800 x 6200mm

3,500 - 6,200mm, unrestricted mixed-row automatic intelligent processing

AUTOMATED LASER CUTTING HEAD

2D (3D Laser Cutting Optional)

Auto Focus

High degree of automation and good performance

FLY CUTTING OF TUBE

Ultra-fast fly cutting, high precision and time saving.

SLAG REMOVAL

Ensures the inner wall of the pipe is clean, eliminating secondary cleaning processes.

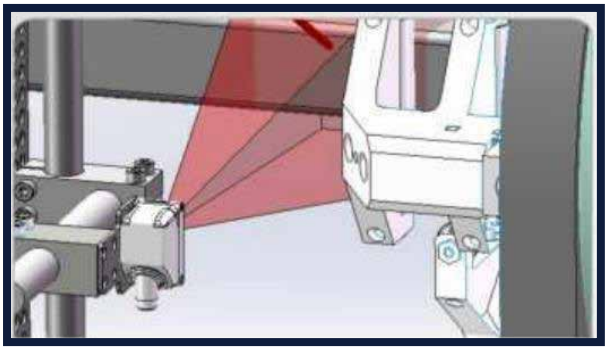
DUST REMOVAL

Tail chuck dust removal function to reduce environmental pollution and dust.

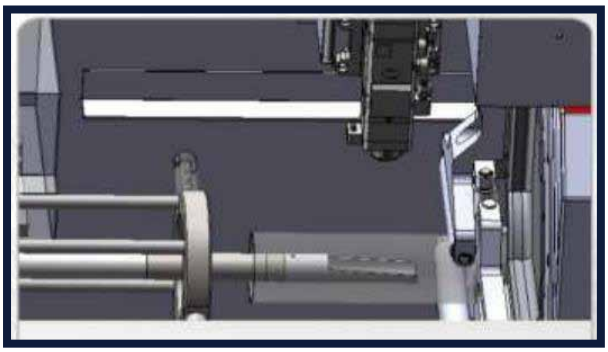
LONG PIPES & TUBES

Floating support specially designed for cutting long finished work pieces.

OPTIONAL EXTRAS



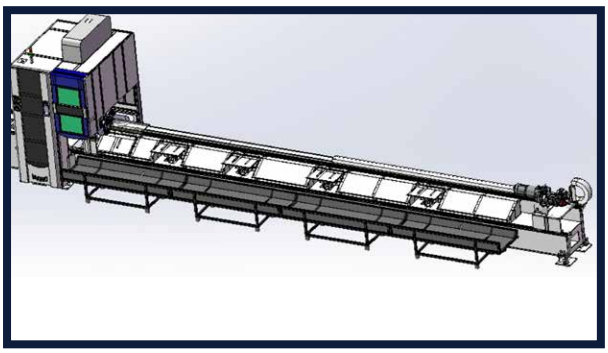
KEYENCE VISUAL WELDING SEAM DETECTION



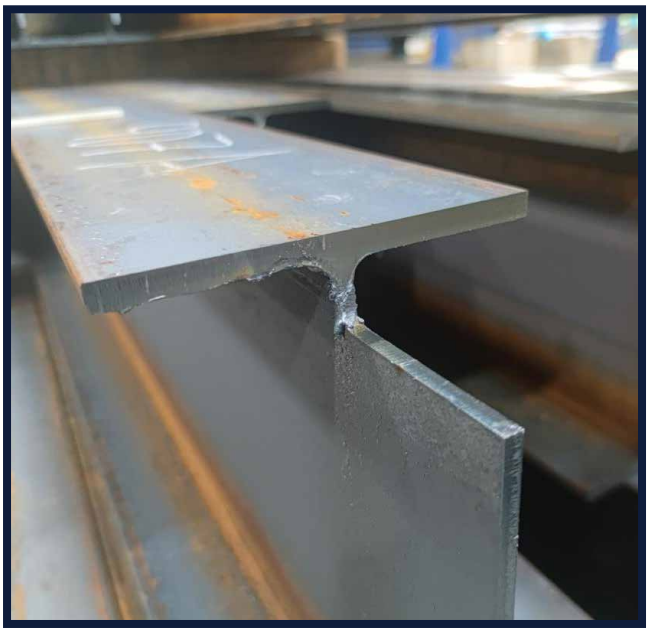
AUTOMATIC DE-SLAGGING

3D BEVEL CUTTING (+45°)

MES PRODUCTION MONITOR SOFTWARE



C3 CHUCK



TECHNICAL SPECIFICATIONS

STOCK CODE		XTS
Laser Power	kW	1.5 / 2 / 3 / 4 / 6
Tube Loading / Unloading Length	mm	12,000
Tube Diameter	mm	Round Ø : 20 - 270 Square : 20 x 20 - 270 x 270 Beam: ≤ 270 x 270
Cutting Profiles (Standard)		Round, Square, Rectangular
Cutting Profiles (Optional)		Angle, Channel, H-Shape, L-Shape, Steel Band, etc
Weight of Single Tube	kg	300
Positioning Speed	m/min	90
Chuck Rotation Speed	rpm	100
Axis Acceleration	G	1
Positioning Accuracy	mm	±0.08
Repeat Positioning Accuracy	mm	±0.1
Bevel	Deg	±45°

LASER SOURCE	kW	1.5	2.5	3	4	6
Cutting Capacity - Mild Steel	mm	14	20	22	25	25
Cutting Capacity - Stainless Steel	mm	6	10	12	12	20
Cutting Capacity - Aluminium	mm	5	8	10	12	16
Cutting Capacity - Brass	mm	5	8	8	12	14
Cutting Capacity - Copper	mm	4	6	6	6	10
Cutting Capacity - Galvanised Steel	mm	5	6	8	10	14

SELMACH™ MACHINERY

Making Metal Work

MORGAN RUSHWORTH SINCE 1872

XTM Tube Laser

The Morgan Rushworth XTM range of tube laser cutting machines are especially applicable for round, square, rectangular, oval and waist round tubes.

Manufactured with the world's leading fibre laser resonator and electronic components to ensure superior stability. The high clamping bed feature provides outstanding rigidity whilst performing at high speed and acceleration, taking your tube laser cutting to the next level.

WATCH THIS MACHINE IN ACTION

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SUPERIOR TUBE CUTTING QUALITY

OPTIONAL MAGAZINE LOADING SYSTEM

Machine Features

- High performance Max Photonics Laser Source
- Fibre optic beam delivery system
- RayTools Autofocus Laser Cutting Head
- High strength, rigid gantry design to ensure high accuracy and allow high acceleration
- High precision class alpha rack and pinion drive motion system
- Applicable tube types : Round tube, square tube, rectangular tube, oval tube, D-shaped steel, T-shaped steel, H-shaped steel, channel steel, angle steel, etc.
- CE compliant complete machine enclosure and light barrier system
- Lantek Flex3d CNC Laser Control and Software

Optional Equipment

- OuXTMeed Support - 4m / 6m
- Precitec ProCutter Head
- 3D Bevel Cutting Torch
- Optional Magazine Loading system
- Conveyor ouXTMeed
- Weld Seam Detection
- UPS: Uninterruptible Power Supply
- Filtration & Extraction

CNC CONTROL AT YOUR FINGER TIPS

- Equipped with new multi-touch CNC Controller
- 5000mm-8000mm unrestricted mixed row automatic intelligent processing
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- MESS cloud data management system

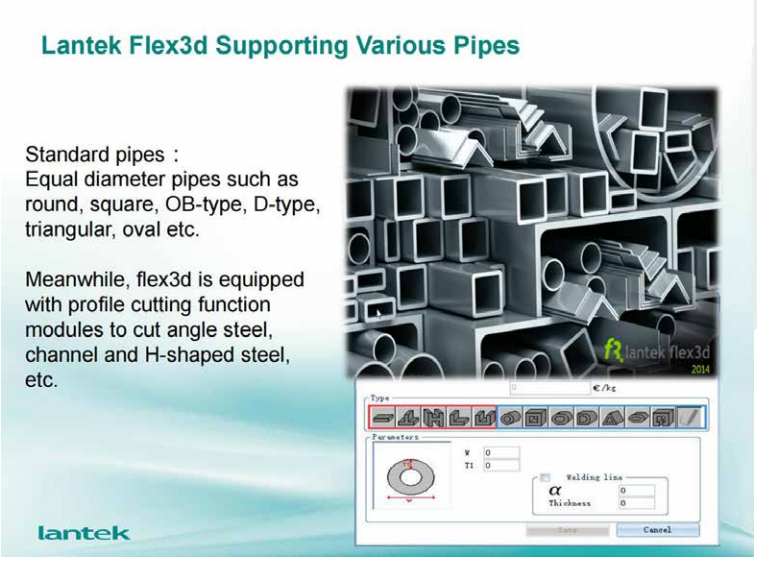
LANTEK FLEX3D

- Easy, Flexible Design
- Accurate, suitable for a wide range of pipe types
- Optimising and Cutting of Tubes
- CNC Simulation and Generation

lantek flex3d

Spanish nesting software

Born specifically for tube

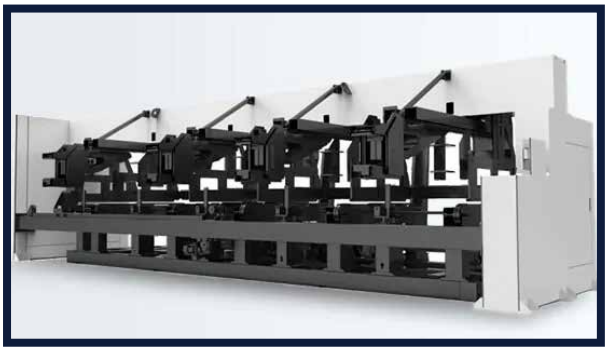


HIGH SPEED FULL STROKE CHUCK - UP TO 130 RPM

Tube Range Up to 235mm / 350mm

FULL SERVO DYNAMIC SUPPORT

Tube Range Up to 235mm / 350mm



INTELLIGENT AUTO LOADER

2.5T Ø20-200mm; 800 x 800 x 6200mm

3,500 - 6,200mm, unrestriced mixed-row automatic intelligent processing

AUTOMATED LASER CUTTING HEAD

2D (3D Laser Cutting Optional)

Auto Focus

High degree of automation and good performance

FLY CUTTING OF TUBE

Ultra-fast fly cutting, high precision and time saving.

SLAG REMOVAL

Ensures the inner wall of the pipe is clean, eliminating secondary cleaning processess.

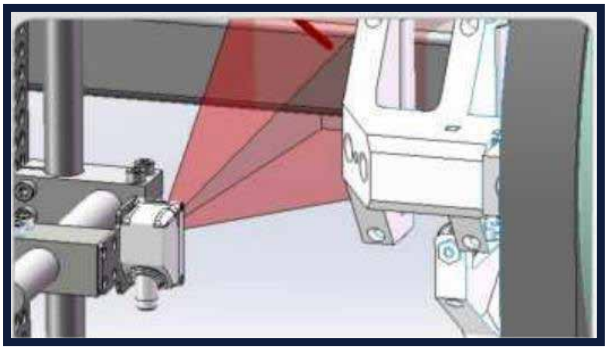
DUST REMOVAL

Tail chuck dust removal function to reduce environmental pollution and dust.

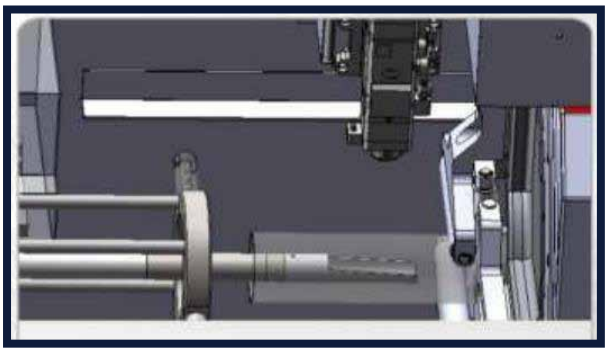
LONG PIPES & TUBES

Floating support specially designed for cutting long finished workpieces.

OPTIONAL EXTRAS



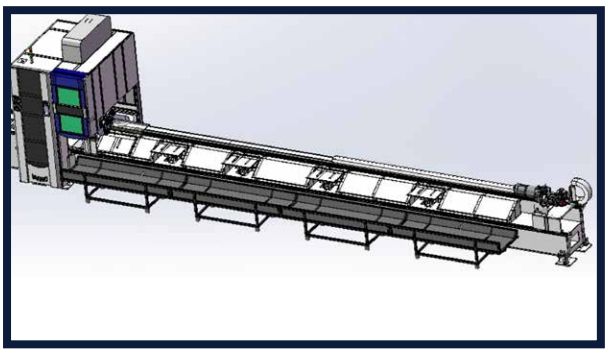
KEYENCE VISUAL WELDING SEAM DETECTION



AUTOMATICAL DESLAGGING

3D BEVEL CUTTING (+45°)

MES PRODUCTION MONITOR SOFTWARE



C3 CHUCK

CUTTING CAPACITIES

LASER SOURCE	kW	1.5	2.5	3	4	6
Cutting Capacity - Mild Steel	mm	14	20	22	25	25
Cutting Capacity - Stainless Steel	mm	6	10	12	12	20
Cutting Capacity - Aluminium	mm	5	8	10	12	16
Cutting Capacity - Brass	mm	5	8	8	12	14
Cutting Capacity - Copper	mm	4	6	6	6	10
Cutting Capacity - Galvanised Steel	mm	5	6	8	10	14

KEY COMPONENTS

COMPONENT	BRAND
Fibre Laser Source	Max Photonics
CNC Controller	Power Automation Higerman
CAM/CAD software Flex3D	Lantek
Servo motor and driver	Yaskawa
Rack and Pinion	YYC / J & T
Linear Guide	Hiwin
Laser Head	Raytools
Gas Proportional Valve	SMC
Reduction Gear Box	Innowelle
Chiller	Tong Fei
Rotate Chuck System	Morgan Rushworth
Automatic Support	Morgan Rushworth
Automatic Bundle Loader	Morgan Rushworth
Automatic Unloading	Morgan Rushworth
Electrical Components	Schneider
Welding Seam Visual Detection (Optional)	Keyence
C3 Chuck (Optional)	Morgan Rushworth

TECHNICAL SPECIFICATIONS

TABLE STOCK CODE		XTM6025 / XTM6025A	XTM8025 / XTM8025A	XTM6035 / XTM6035A	XTM8035 / XTM8035A
Laser Power	kW	1.5 / 2 / 3 / 4 / 6			
Tube Length	mm	6,000	8,000	6,000	8,000
Tube Diameter	mm	Round Ø : 20 - 235 Square : 20 x 20 - 235 x 235		Round Ø : 20 - 350 Square : 20 x 20 - 245 x 245	
Cutting Profiles (Standard)		Round, Square, Rectangular			
Cutting Profiles (Optional)		Angle, Channel, H-Shape, L-Shape, Steel Band, etc			
Weight of Single Tube	kg	250		530	
Positioning Speed	m/min	120		72	
Chuck Rotation Speed	rpm	130		75	
Axis Acceleration	G	1.2		0.6	
Positioning Accuracy	mm	±0.05		±0.05	
Repeat Positioning Accuracy	mm	±0.03		±0.03	
Length	mm	12,070	13,400	12,070	13,400
Width	mm	2,700		2,700	
Width (with Optional Magazine Loader)	mm	5,000		5,000	
Height	mm	2,300		2,300	
Weight	kg	8,000		9,000	
Weight (with Optional Magazine Loader)	kg	15,000		17,000	
OPTIONAL BUNDLE LOADING SYSTEM					
Bundle Size (Optional Bundle Loader)	mm	800 x 800 x 800		800 x 800 x 800	
Bundle Loading Weight	kg	2,500		2,500	

MORGAN RUSHWORTH
SINCE 1872

BENDING. CUTTING. EXCELLENCE

Tube Fibre Laser Cutting Machine

The Morgan Rushworth XTR Tube Fibre lasers are capable of processing up to 8,000mm tubes. With a maximum part length of 4,000mm, this machine can handle large and small parts with ease.

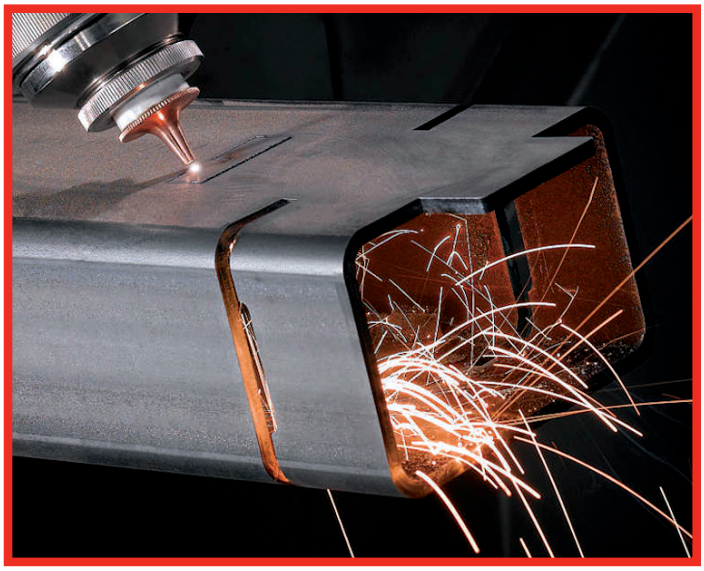
Featuring the Precitec Light Cutter 3D, the system can handle a multitude of profiles, including Round, Rectangular, Triangular, C, U, L, Elliptical, Obround and Custom Shapes, with diameters minimum of Ø16 up to a maximum of Ø220 mm with wall thicknesses from 0.8 - 12mm.

Optional additions includes bevel cutting and automated loading and unloading systems.

FEATURES AND BENEFITS

- **Process Up to Ø220 mm Diameters**
- **Handle up to 4,000mm parts**
- **Up to 6kW Laser Power**
- **1G Acceleration**
- **Lantek Flex3D Software**
- **Optional Automatic Loading System**

www.morganrushowrth.com | 01785 508030 | sales@morganrushworth.com



PRECITEC LIGHTCUTTER 2.0 3D

The LightCutter 2.0 is designed for high laser power. It is completely dust-tight, which guarantees a continuous, clean operation. The basis for clean cut edges is provided by the ultra-stable and drift-free sensor technology for a constant distance between component and optics.

Complex cutting contours are approached quickly and precisely with the LightCutter 2.0 3D. The slim design in the front area allows contact-free immersion in areas that are very difficult to access. The narrow contour of the 3D cutting head's lower section enables even complex cuts on tubes, profiles and free-form parts with an inclination angle of up to 45 degrees.

- Distance to the work piece remains always the same via capacitive sensor.
- The laser head is equipped with a cassette system for quick lens replacement.
- Cutting head includes lens protective mirror. This feature saves cutting lens and ensure long life usage. Easy interchangeable and low-cost protective mirror allows you to work freely without worrying about the Lens.
- The cutting head is equipped with a crash protection system - In case of collision with the work piece the head easily separates to avoid any damage.

MACHINE FEATURES

- High performance IPG Fibre Laser Source
- Lantek Flex3d Software
- Fibre optic beam delivery system
- Ease of processing for Large and Small size tube and profiles
- Rapid processing, programmable up to 45m/min
- Precitec Lightcutter 2.0 3D Laser Cutting Head
- High strength, rigid gantry design to ensure high accuracy and allow high acceleration
- Applicable tube types : Round, Rectangular, Triangular, H, C, U, L, Elliptical, Obround and Custom Shapes
- CE compliant complete machine enclosure and light barrier system
- High automation level and shorter configuration times
- More parts produced per day
- Profile Length measuring
- Tube centering (Laser Sensors)
- Tube Transfer System
- Automatic Weld Recognition
- Simple and User-Friendly operator interface and cutting database

OPTIONAL EQUIPMENT

- Bevel Cutting
- Fume extractor with filters
- Air compressor and dryer
- Automated Loading and unloading systems

SIMPLE TO USE, ADVANCED HMI

One of the biggest advantages of Morgan Rushworth Laser Machines is our advanced HMI; it comes as standard on all Morgan Rushworth Fibre Laser models.

Morgan Rushworth R&D engineers have been created Morgan Rushworth HMI from years of high experience on cutting machines. Morgan Rushworth HMI offers plenty of features to make machines easier to use for the operators, it's been improved with feedbacks from customers during previous years.

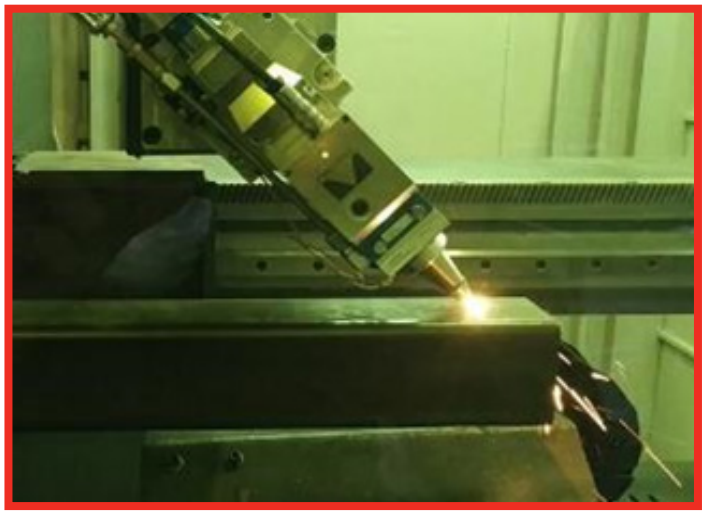
Morgan Rushworth HMI is fully integrated with Industry 4.0. All cutting parameters can be monitored and intervened by operators during cutting process. Integrated with IPG-nLIGHT Monitoring software; this allows users to check the online status of resonators.

Morgan Rushworth HMI has English, German, Spanish and Polish language options are available.

- One touch menu to reach all machine HMI pages
- Graphically real-time cutting monitoring
- Multi-touch (on) part program graphic view
- Safety warnings and graphical diagnostic
- Graphical zooming on parts program
- Easy to find every counter with "Block Search"
- Extensive cutting parameters database
- Detects errors during cutting process
- Control of laser power on different materials
- Automatic profile detection
- Allows to change parameters during cutting process
- Automatic multiple parts cutting process
- Fully integrated with Industry 4.0
- Power and frequency ramping on piercing
- Power ramping depending on cutting speed.
- Burr Cleaning with cutting gas
- Lead-in start hole

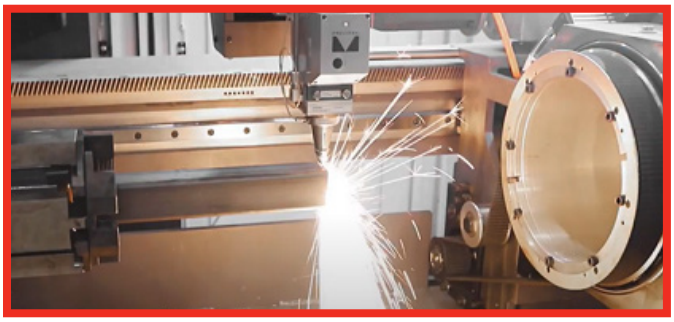
3D BEVEL HEAD (OPTIONAL)

The Optional 3D Bevel Head is is suitable for vertical and bevel cuts between 0 ° to 45 °. The 3D Bevel head is equipped with Backlash free



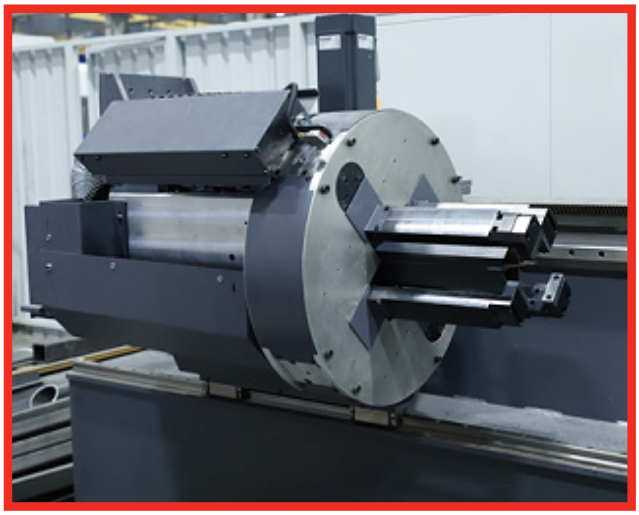
Positioning Speed in Y Axis	m/min	100
Positioning Speed in Z Axis	m/min	30
Cutting Speed	m/min	Up to 10
Angled Cutting Precision	degree	+/- 3
Minimum angled cutting thickness	mm	3

DOUBLE FRONT CHUCK



CUTTING LAST PART

The front chuck (the Chuck fixing the tube close to the cutting head) is designed to move 1.5 m in the direction of tube length. This short movement help us to cut the end of tube very close to the chuck clamps.

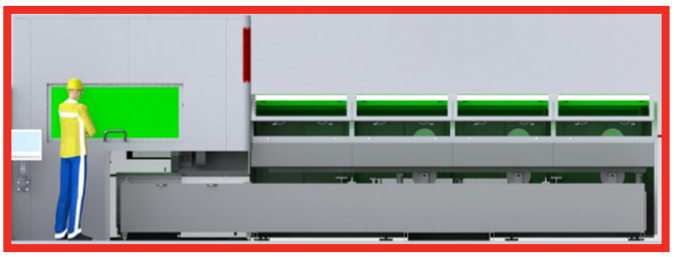


FEEDING CHUCK

LAST PART REMOVAL

BECKHOFF INDUSTRIAL PC

It's a very important and critical part of the machine, the laser safe cabin and enclosure ensures that operators are protected from the potential dangers of a Class 4 Laser, as per CE Regulations.

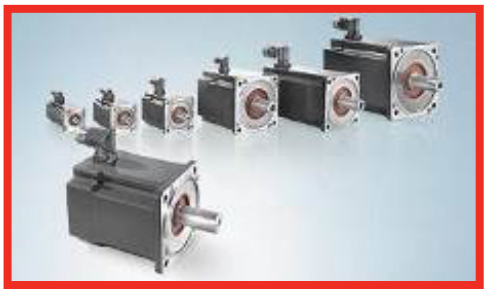


The multi-touch panel series from Beckhoff offers the greatest possible flexibility. The Beckhoff multi-touch panels with projective capacitive touch screen (PCT) technology feature a high touch-point density, which enables accurate, safe and jerk-free operation even in minute steps.

Zooming, scrolling, object turning, flicks etc. are now also usable for industrial applications with the multi-touch devices.

BECKHOFF SERVO MOTORS AND DRIVERS

Morgan Rushworth Laser Systems are using advanced and latest Beckhoff high quality servo motors and drivers, which represents robust, durable and high-performance synchronous servomotors "Made in Germany".



The servomotor range AM8000 stands for durable and powerful synchronous servomotors. High-performance AM8000 Synchronous Servomotors are characterised by high dynamics, energy efficiency and reduced lifecycle costs.

Beckhoff Servo Drive product line sets new standards in drive performance, AX5000 drives support fast and highly dynamic positioning tasks. The drives utilize EtherCAT as a high-performance communication system, providing an ideal interface with PC-based control technology while supporting coupling with other fieldbus systems.

TWINCAT CNC BY BECKHOFF

TwinCAT CNC offers complete CNC functionality as a pure PC-based software solution. TwinCAT CNC covers the complete range of classic CNC path control, including high-end systems for complex motion and kinematics requirements.

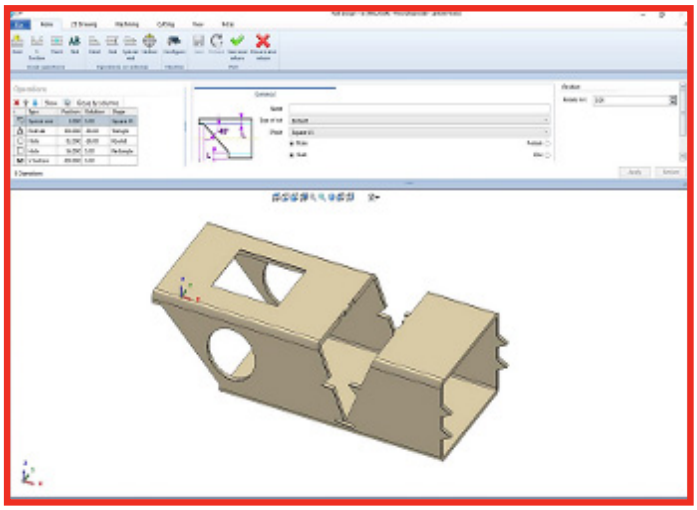
LANTEK FLEX3D TUBES

Lantek Flex3d Tubes integrates with various kinds of tubular geometry importers such as SAT and IGES. This software allows 3D design to be simple and intuitive. It gives a true vision of the resulting design profile that will eventually be cut on a machine.

This system is a parametric system which allows the user to change the values of any operations previously made, including changes to the initial parameters of each tube (lengthening, shortening, change of diameter).

Once the design stage is complete, the user can simulate optimisation of the tube (nesting) and the path followed by the cutting head. The software will directly generate the NC program in order to send this optimisation to the machine.

- Provides a real vision of the expected result on the screen.
- Displays the exact tube and simulates 3D and each process, thus reducing errors.
- Allows for easy manipulation and editing of the design with zoom, view, and rotation controls.
- Offers the user the ability to create standard tubes based on requirements.



- Allows the user to design tube types adapted to their needs from 2D outlines, in addition to cylindrical, rectangular, and triangular tubes.
- Allows for the design or import of desired geometry to create any type of cutout or trim with 2D design options.
- Lantek Flex3d Tubes is totally integrated with Lantek's management systems.

Filter Type: Panel Pleated Surface Filtration Dust Class M and H14 ePTFE membrane Polyester Non-woven, HEPA14 filtration quality.

- Average life - time of panel filters is apprx. 20.000 hours.
- Filter Efficiency Over 99,997% of 0,12 micron particles.
- W3/IFA certified according to EN ISO 15012 standard.
- Low operating cost thanks to superior long filter life time.
- Integrated pre-separator minimize the fire risks.
- Operator-friendly dust bin design: No contact with contamination during handling.

IPG FIBRE LASER

IPG's high-power fibre lasers utilise a modular design which combines the output of multiple fibre laser modules into a single delivery fibre, allowing continuous operation even in the event of a single module failure.

IPG's high-power fibre lasers are powered by the world's most efficient and long lasting single-emitter diodes.

IPG design their lasers with an optimal quantity of these diodes, to ensure laser operation at an ideal current, extending the lifetime of the laser, maximising electrical efficiency, and increasing return on investment.

RELIABLE

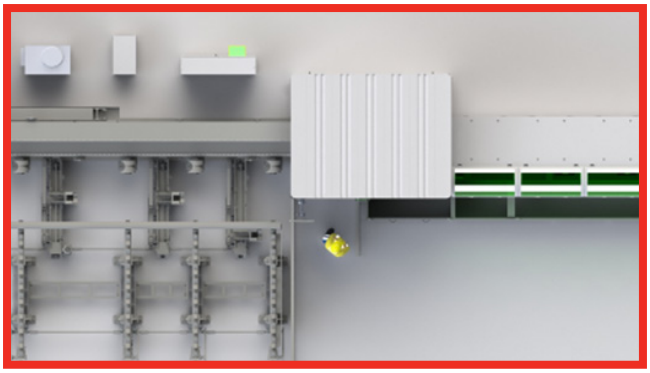
IPG high-power fiber lasers have the longest lifetimes, require minimal maintenance, and are supported by the best high-power laser warranty on the market.

COMPACT

IPG high-power fiber lasers are super compact and lightweight, saving valuable floor space and simplifying integration into production systems.

EFFICIENT

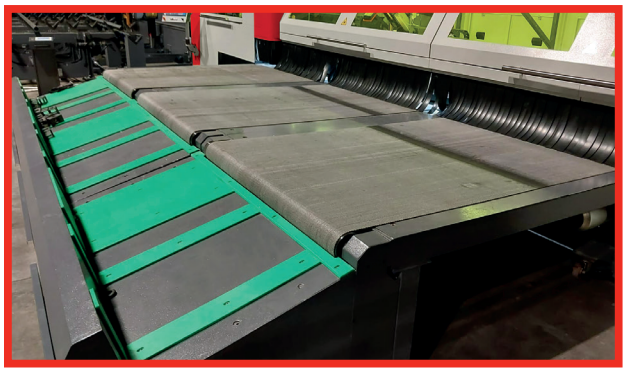
IPG high-power fiber lasers are the most energy efficient lasers on the market, achieving electricity savings that are comparable to the price of the laser itself.



BIRDS-EYE VIEW OF THE LOADING SYSTEMS

SEMI-AUTOMATIC LOADING (OPTIONAL)

FULLY AUTOMATIC LOADING (OPTIONAL)



CONVEYOR UNLOADING (OPTIONAL)

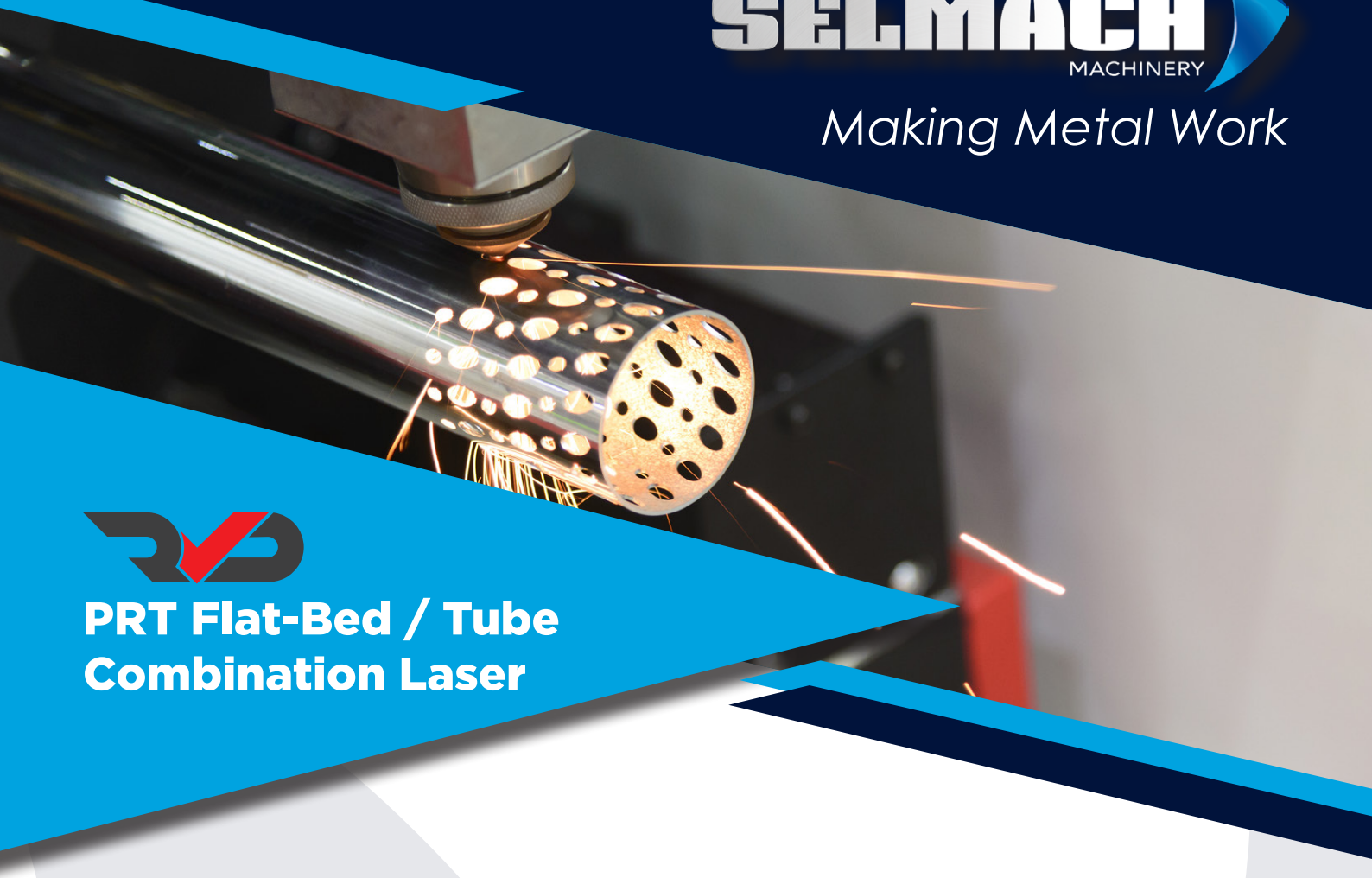
WATCH THE LOADING SYSTEM IN ACTION

TECHNICAL SPECIFICATIONS

STOCK CODE		XTR 6160	XTR 6220	XTR 8220
CNC Control Unit		Beckhoff CNC (18.5" TFT - Windows 10)		
Cutting Head		Precitec LightCutter 2.0 3D		
Max. Tube Length	mm	6,100		8,100
Max. Part Length	mm	2,000 - 6,000	4,000 - 8,000	
Min. Auto Loading Length	mm	2,000		
Acceleration of Drive Chuck	°/s²	7,000		
Speed of Driver Chuck	°/s	560		
Types of Profiles		Round, Rectangular, Triangular, H, C, U, L, Elliptical, Obround and Custom Shapes		
Min. Max. Round Diameter	mm	Min Ø12 / Max Ø160	Min Ø16 / Max Ø220	
Min. Max. Square Diameter	mm	Min 12 x 12 / Max 160 x 160	Min 16 x 16 / Max 220 x 220	
Length of Last Part	mm	60		
Max. Tube Weight	kg/m	240		
Min. Material Thickness	mm	0.8		
Rapid Traverse	m/min	90		
Vector Speed	m/min	50		
Acceleration	m/s²	1.0G		
Absolute Positioning Accuracy	mm	± 0.01		
Repeatability (X & Y Axis)	mm/mt	± 0.02		
Bevel Cutting (± 45°)		Optional		
Automatic Loading / Unloading		Optional		
Feed Rate	m/min	Programmable up to 45 m/min. Actual feed rate depends on material and thickness.		

SELMACH™ MACHINERY

Making Metal Work



PRT Flat-Bed / Tube Combination Laser

The RVD PRT Combination Laser features a fully enclosed protective cover, an exchange shuttle table, and a rotary attachment for tube cutting. It is capable of processing both metal sheets and tubes on the same machine.

The advanced CNC laser cutting system, combined with high-quality components and a meticulous assembly process, ensures safe and stable operation, exceptional cutting efficiency, and high precision.

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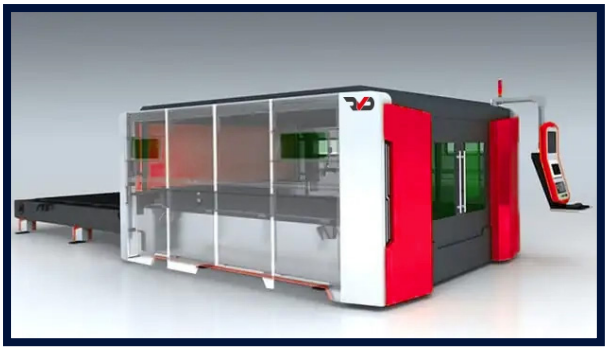
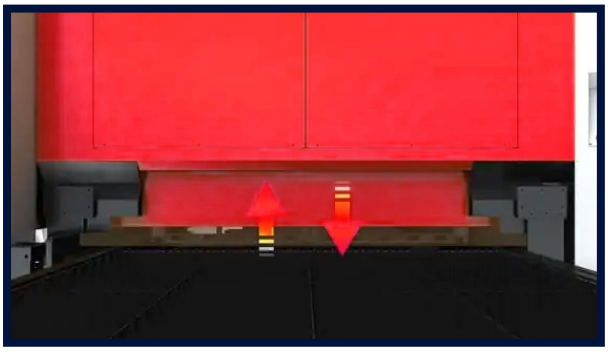


FULLY ENCLOSED DESIGN

Given the Class 4 Laser in use, as per UKCA and CE Standards the machine is fully enclosed for operator safety - enclosing both the plate cutting table and the tube cutting rotary attachement.



AUTOMATIC LIFT DOOR

- Prevents Laser Radiation Leakage
- Creates a closed cutting environment for easy dust and smoke removal
- Dust-free cutting of highly reflective materials

ONE GANTRY, TWO PROCESSES

The one gantry and laser torch works across the flat bed exchange table and tube laser, saving time, space and costs.

HEAVY-DUTY PLATE WELDED BASE

The thickness of the steel plate is up to 18 mm. The machine tool has better rigidity and is less prone to deformation. The stability of the machine tool is higher, the weight of the equipment is heavier, and the overall service life is increased.

Machine Features

- High performance Max Photonics Laser Source
- Fibre optic beam delivery system
- BOCI Autofocus Laser Cutting Head
- High strength, rigid gantry design to ensure high accuracy and allow high acceleration
- High precision class alpha rack and pinion drive motion system
- Shuttle Exchange Table
- Applicable tube types : Round tube, square tube, rectangular tube, oval tube, D-shaped steel, T-shaped steel, H-shaped steel, channel steel, angle steel, etc.
- CE compliant complete machine enclosure and light barrier system
- CupCut / TubePro CAD/CAM Software
- FSCUT 3000 CNC Controller

Optional Equipment

- 3m / 6m Tube Cutting Capacity
- Filtration & Extraction

AUTOMATIC

TECHNICAL SPECIFICATIONS

PART		PRT 3015
Laser Power	kW	1.5 - 6
Processing Surface / Max Sheet Size (L x W)	mm	1500 x 3000
CNC Control		CypCutE / CypTube
Laser Head		BOCI
Position Accuracy X, Y and Z Axis	mm	±0.05
Repeat Position Accuracy X, Y and Z Axis	mm	±0.03
Maximum Position Speed of X and Y Axis	mm/min	80
Acceleration	G	1.2G
Max Load of Shuttle Table	kg	900
X Axis Travel	mm	3,050
Y Axis Travel	mm	1,535
Z Axis Travel	mm	280
Front Chuck		Automatic (Pneumatic Type)
Feeding Chuck		Automatic (Pneumatic Type)
Tube Diameter	mm	Round - Ø20 - 240 Square - 240 x 240
Tube Length	mm	6,000
Length	mm	9,500
Width	mm	6,500
Height	mm	2,460
Weight	kg	7,500

KEY COMPONENTS

COMPONENT	BRAND
Fibre Laser Source	Max Photonics
CNC Controller	FSCUT
CAM/CAD software Flex3D	CypCutE, CypTube
Tube nesting cut for option	TubePro & TubesT
Servo motor and driver	Yaskawa
Rack and Pinion	YYC
Linear Guide	Hiwin
Laser Head	BOCI
Gas Proportional Valve	SMC
Reduction Gear Box	Desboer
Chiller	Tong Fei
Rotate Chuck System	RVD
Automatic Support	RVD
Automatic Bundle Loader	RVD
Automatic Unloading	RVD
Electrical Components	Schneider

LASER SOURCE	kW	1.5	2.5	3	4	6
Cutting Capacity - Mild Steel	mm	14	20	22	25	25
Cutting Capacity - Stainless Steel	mm	6	10	12	12	20
Cutting Capacity - Aluminium	mm	5	8	10	12	16
Cutting Capacity - Brass	mm	5	8	8	12	14
Cutting Capacity - Copper	mm	4	6	6	6	10
Cutting Capacity - Galvanised Steel	mm	5	6	8	10	14