



## Sheet & Tube Combination Fibre Laser Cutting Machine



The Morgan Rushworth XRTC Combination Flat Bed and Tube Fibre lasers are capable of processing up to 6,000mm tubes, and sheet metal cutting tables up to 6,000 x 2,000mm. With a maximum tube part length of 4,000mm, this machine can handle large and small parts with ease.

Featuring the Precitec ProCutter 2.0, 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 Ø214 mm with wall thicknesses from 0.8 - 12mm.

Optional additions includes additional tube cutting lengths and automated loading systems.

### Features and Benefits



**Process Up  
to Ø214 mm  
Diameters**



**Shuttle Tables  
up to 6,000 x  
2,000mm**



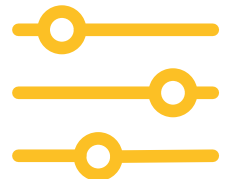
**Up to 12kW  
Laser Power**



**2.2G  
Acceleration**



**Lantek Flex3D  
Software**



**Optional  
Automatic  
Loading System**



## Machine Features

- High performance IPG, nLight or Max Photonics 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 50m/min
- Raytools Laser Cutting Head
- High strength, rigid gantry design to ensure high accuracy and allow high acceleration
- Shuttle Exchange Flatbed Table
- 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

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

### PRECITEC PROCUTTER 2.0 CUTTING HEAD

Precitec ProCutter 2.0 generation impresses with its increased performance and new automation features. Faster, easier, more efficient, more enduring – this is how laser cutting is shaping up in the new generation, due to numerous developments.

One of the main reasons for this is the completely redesigned cutting gas flow. In addition, the reliability and power capability has been perfected – up to the maximum laser power of 30 kW.

By default, the ability to exchange the nozzles automatically is now provided. The compact design is maintained, together with the extensive sensor technology, which has been specifically expanded to ensure even safer operation.



## 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.

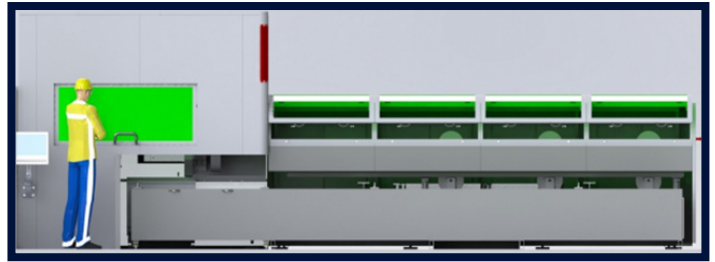
Morgan Rushworth HMI is fully integrated with Industry 4.0. All cutting parameters can be monitored and intervened by operators during cutting process. Integrated with IPG-nLIGHT Monitoring software; this allows users to check the online status of resonators.

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

## 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.



## BECKHOFF INDUSTRIAL PC

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.



## LANTEK FLEX3D TUBES

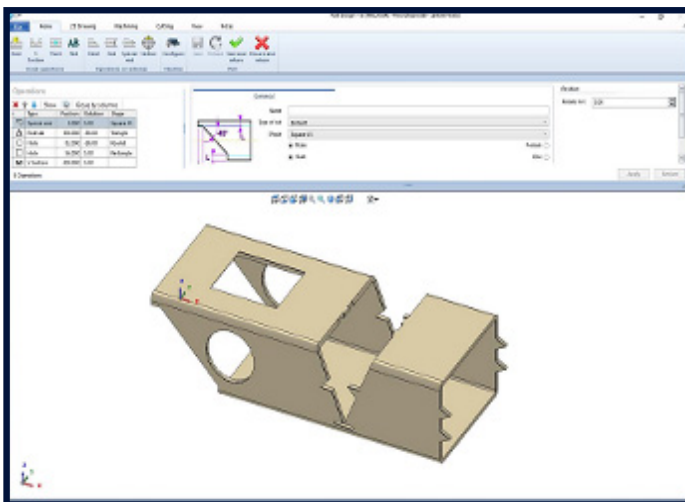
Lantek Flex3d Tubes integrates with various kinds of tubular geometry importers such as SAT and IGES. This software allows 3D design to be simple and intuitive. It gives a true vision of the resulting design profile that will eventually be cut on a machine.



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.

## FUME FILTRATION SYSTEM (OPTIONAL)

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.



## FIBRE LASER SOURCES

### IPG YLS & YLR

YLS resonators are available with wide range of powers. Therefore they may deliver cutting process on thick materials with high speed. Their stability and beam quality brings accurate performance for your applications. In case of maintenance, IPG technicians are required for assistance rather than our own engineers.



The IPG Photonics YLR-Series fibre lasers are developed to meet industrial market demands of efficient reliable maintenance-free high power lasers. The YLR-Series fibre lasers can be air or water-cooled. The wall plug efficiency for a fibre laser is typically exceeds 30 percent. All YLR-Series fiber lasers are Class 4 laser products and are designed and tested with important safety features. Follow this guide and apply laser safety practices for a safe and reliable device.



### nLIGHT

nLIGHT resonators are available with wide range of powers. Therefore they may deliver cutting process on thick materials with high speed. Their stability and beam quality brings accurate performance for your applications while its back-reflection protection ensures eliminating unwanted issues. In case of maintenance, our technicians are authorised for assistance.



### Max Photonics

Our Fibre Laser Machines can be equipped with 3-20kW new generation Max Photonics Fibre Lasers offering high power, compact size, superior beam quality, and high light conversion efficiency. This allows precise cutting & improvement on high reflective materials. Max Photonics Lasers are suitable for remote processing at high powers and resulting clean cutting surface. Fast integration on all models.



## TECHNICAL SPECIFICATIONS

| STOCK CODE                    |                             |                                       | XRTC 3015-61120                                                                   |
|-------------------------------|-----------------------------|---------------------------------------|-----------------------------------------------------------------------------------|
| Laser Source                  | kW                          | 1 - 15                                |                                                                                   |
| Resonator                     |                             | IPG / nLight / Max Photonics          |                                                                                   |
| Cutting Head                  |                             | Raytools                              |                                                                                   |
| CNC Control Unit              |                             | Beckhoff CNC (18.5" TFT - Windows 10) |                                                                                   |
| Flat Bed Laser Spec           | Max. Cutting Area - Width   | mm                                    | 1,500                                                                             |
|                               | Max. Cutting Area - Length  | mm                                    | 3,000                                                                             |
| Tube Laser Specs              | Max. Tube Length            | mm                                    | 6,100 (8,100 Optional)                                                            |
|                               | Max. Part Length            | mm                                    | 3,000                                                                             |
|                               | Min. Auto Loading Length    | mm                                    | 2,000                                                                             |
|                               | Acceleration of Drive Chuck | °/s <sup>2</sup>                      | 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 Ø16 / Max Ø120                                                                |
|                               | Min. Max. Square Diameter   | mm                                    | Min 16 x 16 / Max 120 x 120                                                       |
|                               | Length of Last Part         | mm                                    | 220                                                                               |
|                               | Max. Tube Weight            | kg/m                                  | 240                                                                               |
|                               | Min. Material Thickness     | mm                                    | 0.08                                                                              |
| Rapid Traverse                |                             | m/min                                 | 115                                                                               |
| Vector Speed                  |                             | m/min                                 | 160                                                                               |
| Acceleration                  |                             | m/s <sup>2</sup>                      | 2.2G                                                                              |
| Absolute Positioning Accuracy |                             | mm                                    | ± 0.01                                                                            |
| Repeatability (X & Y Axis)    |                             | mm/mt                                 | ± 0.02                                                                            |
| Automatic Loading             |                             |                                       | Standard                                                                          |
| Automatic Unloading           |                             |                                       | Optional                                                                          |
| Feed Rate                     |                             | m/min                                 | Programmable up to 50 m/min. Actual feed rate depends on material and thickness.  |

## CUTTING CAPACITIES

| STOCK CODE    |                 |    | 1 kW | 2kW | 3kW | 4kW | 6kW | 8kW | 10kW | 12kW | 15kW |
|---------------|-----------------|----|------|-----|-----|-----|-----|-----|------|------|------|
| Sheet Cutting | Mild Steel      | mm | 12   | 16  | 20  | 22  | 25  | 30  | 35   | 40   | 50   |
|               | Stainless Steel | mm | 5    | 6   | 8   | 12  | 16  | 25  | 30   | 35   | 40   |
|               | Aluminium       | mm | 3    | 4   | 6   | 10  | 12  | 25  | 30   | 35   | 40   |
|               | Copper          | mm | 2    | 3   | 3   | 6   | 8   | 12  | 10   | 15   | 15   |
|               | Brass           | mm | 3    | 4   | 4   | 8   | 10  | 16  | 16   | 15   | 20   |
| Tube Cutting  | Mild Steel      | mm | 12   | 16  | 20  | 22  | 25  | /   | /    | /    | /    |
|               | Stainless Steel | mm | 1    | 6   | 8   | 12  | 16  | /   | /    | /    | /    |
|               | Aluminium       | mm | 3    | 4   | 6   | 10  | 12  | /   | /    | /    | /    |

\* Material cutting thickness is dependent on many factors including material specifications, condition and machine parameters. All specifications are subject to change.

# 5 KEY REASONS TO BUY FROM SELMACH MACHINERY

## 1 - Honesty, Integrity and Loyalty

We believe that customer loyalty cannot be taken for granted. Therefore, we are constantly working to exceed your expectations, and to build a lasting relationship. As a result we will always endeavour to work closely with you, to provide the most effective solution.

## 2 - Technical Solutions

With years of experience and knowledge of the industry, we have an in-depth understanding of a wide range of applications. Therefore, we can recommend the most suitable machinery for your specific requirement. To aid in the decision-making process, we have over 50 machines under power in our showroom; to perform trials, prove feasibility and demonstrate the end result. We believe that it is this meticulous attention to detail that can really make the difference, and ultimately enable you to make an informed decision.

## 3 - Ease of Purchase

With over 200 machines in stock, available for immediate despatch, we can react quickly to meet your delivery expectations. Transport to your works can be arranged and offloading and positioning is available if required. For more technical applications, commissioning and training in use of machine controls is available from our trained engineers. Should you wish to finance your purchase, we have a range of competitive options available.

## 4 - After Sales Service

Real customer care doesn't stop when a machine leaves the showroom - we are committed to providing a first class after-sales service. Our trained engineers are on hand to provide technical advice and can rapidly respond to any issue that may arise. Should replacement parts be required, our extensive spares stock ensures minimum downtime. For your peace of mind, the majority of new machines carry a 12 months parts and labour warranty.

## 5 - Tools and Consumables

To complement our range of machinery, we stock a wide range of quality tooling and consumables to ensure continued optimum performance. Goods ordered before 3:00 PM are generally despatched same day on a Next Day carrier service. We accept payment by cheque, cash or card. Monthly credit accounts for purchases of tooling, consumables and spare parts are available, subject to approval.

