

# **RMT - KYSON Rebel 510** 500W – 4 kW FIBER LASER 5' x 10'



















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#### ABOUT RMT



Revolution Machine Tools (RMT), founded by long time industry leader Kyle Jorgenson, is a metal fabrication machine tools company. RMT's design team has created the most innovative and precise tools in the North American market today. We have partnered with leading manufacturers to build our designs to our stringent specifications in state of the art manufacturing facilities.

With the fabulous growth and popularity of RMT machinery in the United States, we started receiving many requests from customers in Europe, the Middle East, Africa, and Asia. We are proud to have partnered with ANERKA as our International arm of RMT and the only authorized dealer for RMT products outside of the United States. ANERKA is led by trusted industry professionals who are dedicated to helping customers get the machinery they need to help their company grow and become more successful. With RMT and ANERKA, customer service is number one!















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### **BENEFITS OF RMT KYSON FIBER LASERS**

### LASER LIGHT SOURCE AND CHILLER

RMT has partnered with industry leaders for the highest quality laser light sources on the market. Ytterbium fiber lasers operating at the 1070 nm wavelength are perfect for laser cutting. The operating wave-length, multi-kilowatt power, good beam quality, wide operating power range, power stability and small spot size on our laser are perfect for most cutting applications. Fiber lasers have a wide dynamic operating power range and the beam's focus and position remain constant, even when the laser power is changed, allowing consistent processing results every time. A wide range of spot sizes can be achieved by changing the optics configuration. These features enable the end user to choose an appropriate power density for cutting various materials and wall thicknesses.

The laser light source chiller is a closed-loop liquid cooling system. The temperature of the light source is constantly monitored by the chiller, ensuring the light source is running at optimal temperatures. The standard cooling system will protect the laser in an environment up to +190 °F.



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# **CUTTING HEAD**

RMT KYSON Rebel fiber laser cutting machines used lightweight, intelligent cutting head. Even installed in the smallest possible space, PRECITEC Light Cutter offers a for reliable operation, the optical elements must be protected from fusion spatter, metal dust and pollution - so the LightCutter is completely sealed and protected from impurities in the cutting gas by an easily replaceable cutting and pressure-resistant protective window.

The treated purging air in the collimator area permits neither process dust nor particles to penetrate. The focusing lens is kept clean by a pressure-tight protective window cartridge, even if the cutting gas is contaminated. Quartz lenses of the highest quality ensure a stable focal position, which is extremely user-friendly, since it can be set both laterally and vertically from the outside.



### Efficient

Excellent value for money Very high cutting speed and optimal edge quality Simple and rapid changing of protective window cartridge Sophisticated design of mechanical components Flexible Focal lengths adapted perfectly to the application Plug & Play system **User friendly & Safe** Heat- and plasma-resistant distance control Sealed beam path, with optional air purging system Scale for setting the zero point of the focal position **High-quality optics** Sleek and sturdy design

# **Technical Specifications of the LightCUTTER**

Max. laser power	: 2 kW : (with wavelengths of 905-1090 nm)
collimator focal lengths (fc)	: 75 mm, 100 mm
focal lengths (ff)	: 75 mm, 100 mm, 125 mm, <b>150 mm</b> , 200 mm
max. clear aperture	: 26 mm
dimensions (W x D)	: 75 x 69 mm
axial length	: 352 mm (for fc100 / ff125 or ff125)
mass	: 3.1 kg (for fc100 / ff100 or ff125)
vertical adjustment range	: -5 mm / +3 mm
max. cutting gas pressure	: 25 bar

















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#### **ROBUST FRAME CONSTRUCTION**

A heavier frame means less vibration and better accuracy. The machine frames are reinforced to minimize twists and deformation while the robust frame of the machine is joined to the chassis by steel bars.



The machine frame goes through a heat treatment process for welding stress relief. Our RMT KYSON frames are machined with 5 axis CNC machining centers with single reference fixing. This keeps all axis parallel and the surfaces of the machine precise which provides great accuracy and longevity to the machine.

### **HIGH PRECISION DRIVE SYSTEM**

High precision helical gear rack and pinion system uses precision planetary and servo-worm reducers. Our special design eliminates any noticeable backlash variance. The rack used in these systems is also hardened & precision ground.

















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# **CUTTING TABLE**

The compact single cutting table system is designed for decrease your investment cost.

Optional dual cutting table system is designed for increasing your workflow and reducing time spent on placing and removing materials. Four hydraulic cylinders raise and lower the cutting table to position the material while loading and unloading the machine.

Cutting tables exchange speed can be adjusted according to thickness of materials.



#### **CONVEYOR SYSTEM**

A special hard steel construction conveyor system, standard on our machines, is located under the workspace. The conveyor removes slag and small parts during the cutting process. The operator can choose the movement direction of the conveyor.

#### **DUST-COLLECTION FUNCTION**

An automatic flap opens and closes according to the movement of the processing head, offering on-the-spot dust collection during processing. It also allows for acrid smells or fumes created during cutting to be removed from your shop environment. Automatic Zoned fume extraction is standard on all RMT Fiber Lasers

















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### **CONTROL & SOFTWARE**

The RMT KYSON Fiber Laser is controlled with a Beckhoff 6202 CNC control unit which provides unprecedented control of the cutting process. The control panel features an alphanumeric keyboard, PLC keys on the sides, touch screen keyboard and USB ports. The memory and storage can be increased based on manufacturing demands while the open CNC program, with a Windows based operating system, makes data sharing easy with other com-puters. A 15" TFT LCD screen ensures that even in poor lighting you have optimal addressability and contrast.



#### AUTOMATIC SHEET DETECTION

The angle of the sheet and its corner are found automatically by using 3-point detection method on the sheet.



















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# **CAD-CAM SYSTEMS**

RMT KYSON Fiber Laser using software roll of Radprofile Cut Cad / Cam with its own postprocessor.

Features like auto nesting and machining, calculating the time, micro-joint, total cut and more allow ease of cutting.

All data for cutting is installed in the technological Radan charts. This program is designed for nesting and machining and is installed directly on the CNC, without any adjustment to the cutting parameters.

Radan is a fast, modern programming application designed to assist in transferring data from CAD to NC code. If Radan is unable to cut a hole smaller than (0.5mm by the thickness of the material), it will be marked automatically.



**Lantek** Expert Cut is a CAD/CAM nesting software specially designed to automate the CNC programming of sheet metal cutting machines (oxy-cut, plasma, laser, water jet). It is the result of more than 25 year of experience of close collaboration with both manufacturers and machine operators. It perfectly combines machine technology with customers' programming and management requirements.

All of the Lantek Expert Cut options are integrated into one program. Lantek Expert is fully integrated with Lantek Integra, an ERP which offers different CAD/CAM/MES/ERP solutions for the sheet metal and fabrication sector. Additionally, Lantek Expert is designed to connect to an external ERP.



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STANDARD	OPTIONAL
Stress relieved machine frame	Dust Collection Unit
Motorized single pallet system	Auto-changing dual pallet system
IPG YLR Light source	Additional Operator Glasses
Chiller	Up to 4 kW laser laser light sources
Precitec Light Cutter Cutting Head	Precitec ProCutter Cutting Head (Auto Focus)
Precision Rack & Pinion Drive System (Made in Germany)	Air conditioner for electrical panel
5 Nozzles each of the Following: (1.0mm, 1.2mm,1.5mm, 2.0mm ,	Radan or Lantek CAD/CAM software
2.5mm , 3.0mm)	UPS Power Supply
3 Ceramic Nozzle Adapters	
Smart Slag Collection System/ Chip Conveyor	
Fiber Beam Transmission System (Fiber Cable)	
Operates with both N2 and O2 (cutting/assist) gases	
Home Position Alignment System	
Auxiliary Gas Selector	
Auxiliary Gas Pressure NC function	
Working Lights	
Warning Indicator Lamps	
Lens Cleaning Kit	
Removal and Adjustment Tools	
Light safety barrier	
Ground Plates	
User Manuals in English	

















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