

RAYTOOLS EMP SERIES



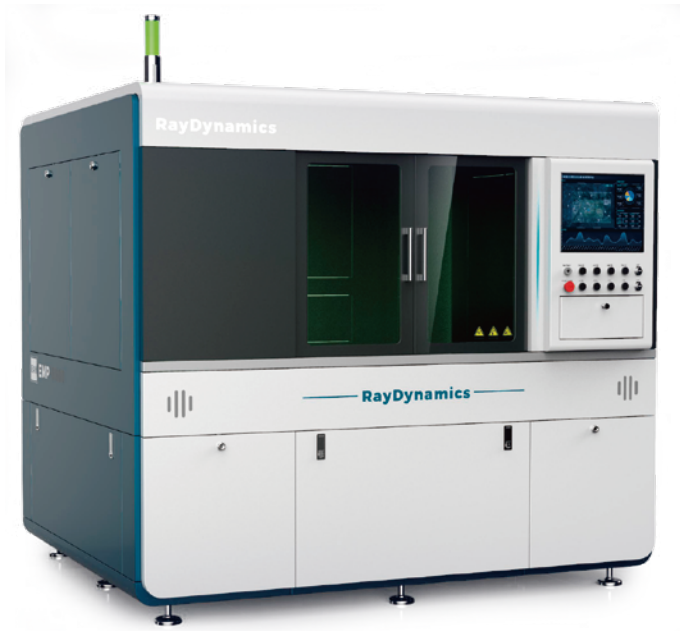
High Precision Micro Laser Cutting Station-Linear Motor Driven

Processing Size 500×400~1250×1250mm

High precision linear guide with high repeated positioning accuracy, less wearing and stable performance.

RayTools CNC controller based on EtherCAT protocol. Friendly HMI with high flexibility and easy expanding.

Applicable to laser cutting in jewelry, glasses, ceramics, aluminum substrates, luminaire finish, kitchen appliance, mobile communication, digital products, electronics components, watch & clock, computer accessories and instruments etc.



Raytools laser cutting head along with EtherCAT height sensor to safeguard the cutting.

Highly dustproof class IP 5x.

CCD vision system is optional.

Laser source and chiller are optional.

Technical Data

| Item | | EMP5040 | EMP6060 | EMP8080 | EMP1250 |
|---|--------------------------------|----------------------|------------------------|------------------------|------------------------|
| Linear Encoder(Fagor) | | Resolution Ratio 1μm | Resolution Ratio 0.5μm | Resolution Ratio 0.5μm | Resolution Ratio 0.5μm |
| Marble | | 1400* 1350*200 | 1800* 1350*200 | 1800* 1350*200 | 2300* 2208*200 |
| Visual Positioning Range (if CCD vision system is mounted) | | 500*290.5mm | 600*490.5mm | 800*690mm | 1250*1140mm |
| Max. Acceleration | | 1g | 1.5g | 1.5g | 1.5g |
| Processing Size | | 500*400mm | 600*600mm | 800*800mm | 1250*1250mm |
| X-Axis | Fast-Moving Speed | 60m/min | 60m/min | 60m/min | 60m/min |
| | Effective Travel | 400mm | 600mm | 800mm | 1250mm |
| | Positioning Accuracy (Cutting) | ±20μm | ±20μm | ±20μm | ±40μm |
| | Repeated Positioning Accuracy | ±5μm | ±5μm | ±5μm | ±5μm |
| Y-Axis | Fast-Moving Speed | 60m/min | 60m/min | 60m/min | 60m/min |
| | Effective Travel | 500mm | 600mm | 800mm | 1250mm |
| | Positioning Accuracy (Cutting) | ±20μm | ±20μm | ±20μm | ±40μm |
| | Repeated Positioning Accuracy | ±5μm | ±5μm | ±5μm | ±5μm |
| Z-Axis | Travel | 100mm | 100mm | 100mm | 100mm |

RAYTOOLS 1530^{eco} SERIES



Single Platform Fiber Laser Cutting Machine

Processing Size 3000×1500mm

Bridge and gantry type structure.
Racks and guide driving and
centralized lubrication tools
enable convenient maintenance.

Auto lubrication system for
gears, racks and guides:
Regular oiling with alarm for
lack of oil automatically.

Reinforced welding machine bed
through high temperature
tempering, which helps for stress
relief in vibrating.



Feeding pallet edge designed with
steeled materials and ball transfer to
prevent sheet damage and reduce
manual labor.

CNC laser cutting system is
flexible and convenient to
operate with laser power
adjustment function, which
can guarantee the cutting
quality.

Professional high precision
anti-collision laser cutting head to
achieve the best cutting effect.

Technical Data

| Item | Specification |
|--------------------------------------|---------------------------|
| Sheet Processing Size (Length×width) | 3000*1500mm |
| X-axis Travel | 1500mm |
| Y-axis Travel | 3000mm |
| Laser Power | 1000/1500/2000/3000/6000W |
| X/Y-axis Positioning Accuracy | ±0.05mm/m |

| Item | Specifications |
|-------------------------------|----------------|
| X/Y-axis Repeated Positioning | ±0.03mm |
| CNC System | RayTools |
| Phase Number | 3 |
| Main Power Protection Class | IP54 |

RAYTOOLS 1530EX^{eco} SERIES

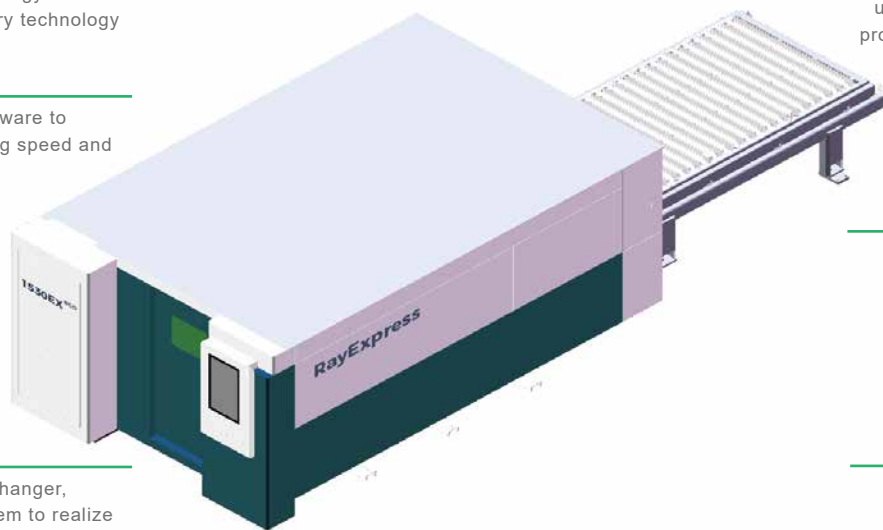


Fiber Laser Cutting Machine

Processing Size 3000×1500mm

High-tech equipment integrating laser technology, CNC technology and high-precision machinery technology

RAYTOOLS cutting software to achieve excellent cutting speed and effect



At the dual pallet changer, cutting plates can work with loading and unloading, achieving 2 times the processing efficiency of the single pallet changer

Auto focus cutting head with functions like high power focus, efficient cooling, real-time alert monitoring, to ensure stable and long-term operation of the machine

The SYNC dual pallet changer, controlled by CNC system to realize auto exchange of stations and shorten standby time

Equipped with drawer type discharging tool, convenient to remove small pieces or scrap

Technical Data

| Item | Specification |
|------------------------------------|---------------|
| Sheet ProcessingSize(Length×Width) | 3000*1500mm |
| X-axis Travel | 1520mm |
| Y-axis Travel | 3040mm |
| Z-axis Travel | 260mm |
| X/Y-axis Positioning Accuracy | ±0.03mm/m |
| X/Y-axis Repeated Positioning | ±0.03mm |

| Item | Specifications |
|-------------------------------|------------------|
| X/Y-axis Speed-Max | 100m/min |
| X/Y-axis Acceleration-Max | 1G |
| Laser Power | 3000/6000W |
| Workbench Weight Capacity-Max | ~700Kg |
| Boundary Dimension (L×W×H) | 9000×4800×2200mm |
| Phase Number | 3-phase & 5-wire |

RAYTOOLS 1530EX^{pro} SERIES

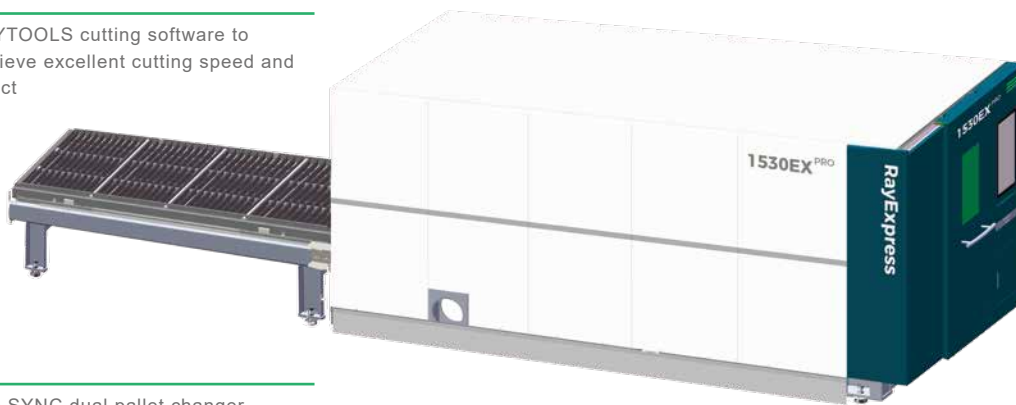


Fiber Laser Cutting Machine

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RAYTOOLS cutting software to achieve excellent cutting speed and effect



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Auto focus cutting head with functions like high power focus, efficient cooling, real-time alert monitoring, to ensure stable and long-term operation of the machine

Equipped with drawer type discharging tool, convenient to remove small pieces or scrap

Technical Data

| Item | Specification |
|-------------------------------------|---------------|
| Sheet Processing Size(Length×Width) | 3000*1500mm |
| X-axis Travel | 1545mm |
| Y-axis Travel | 3050mm |
| Z-axis Travel | 270mm |
| X/Y-axis Positioning Accuracy | ±0.03mm/m |
| X/Y-axis Repeated Positioning | ±0.03mm |
| X/Y-axis Speed-Max | 140m/min |
| X/Y-axis Acceleration-Max | 2G |

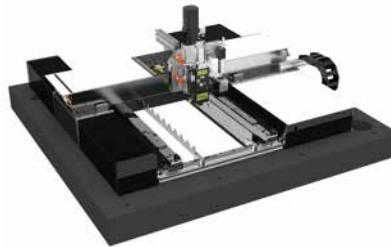
| Item | Specifications |
|-------------------------------|------------------|
| Laser Power | 3000/6000/12000W |
| Workbench Weight Capacity-Max | ~1200Kg |
| Boundary Dimension (L×W×H) | 8900×2270×2300mm |
| Total Weight | ~7000kg |
| Main Power Protection Rating | IP54 |

RAYTOOLS EMP9000 SERIES

Linear Motor Laser Cutting Module



High precision linear guide with high repeated positioning accuracy, less wearing and stable performance.



Single-Drive Gantry
500x400mm

Raytools laser cutting head along with EtherCAT height sensor to safeguard the cutting.

RayTools CNC controller based on EtherCAT protocol. Friendly HMI with high flexibility and easy expanding.



Double-Drive Gantry
600x600mm

Laser source and chiller are optional.

Highly dustproof class IP 5x.

CCD vision system is optional.

Applicable to laser cutting in jewelry, glasses, ceramics, aluminum substrates, luminaire finish, kitchen appliance, mobile communication, digital products, electronics components, watch & clock, computer accessories and



Double-Drive Gantry
800x800mm



- Supporting for identifying various Mark points including circle-type, cross-type, L-type and X-type
- Supporting for three modes: one-Mark point positioning mode, two-Mark points positioning modes + rotation, three-Mark points positioning modes + precise rotation
- Supporting for multiple processing methods, with optional grouping operation function and workpiece coordinate systems on the same sheet to avoid interference
- The software remains the common functions of the layer processing system in laser cutting, covering Leadline, Compensation and MicroJoint
- Convenient camera settings, integrating positioning and dynamic recognition functions
- High-precision CNC processing method
- Specific saving and importing models, retaining all marking information

RAYTOOLS

LCT6020 SERIES



Tube Cutting Machine

Positioning Accuracy $\pm 0.03\text{mm}$

Auto clamping and centering to achieve accurate feeding of square tube and high cutting accuracy.

Zero waste and optional bevel cutting function

Laser cutting works flexibly since no mold is required, saving time for product development and supporting fast cutting speed with high accuracy.

Optional auto loading and unloading system to improve cutting efficiency and save labor cost.

Applicable for processing tubes covering square type, round type, rectangular type, shaped type, I-beam type and U-steel type.

The cutting software supports the processing of any complex graphics on the tube surface, including opening, cutting, intersecting lines and micro cutting of shaped complex graphics, which is difficult to work by conventional processing.



Technical Data

| Item | Specification |
|---------------|----------------|
| X-axis Travel | 6000mm-12000mm |
| Y-axis Travel | 300mm |
| Z-axis Travel | 160mm-350mm |

| Item | Specifications |
|------------------------------------|---------------------|
| Mechanical Positioning Accuracy | $\pm 0.03\text{mm}$ |
| Rotation Axis Repeated Positioning | ± 8 Arc-minute |
| Linear Axis Speed-Max | 90m/min |

RAYTOOLS

LC1530T SERIES



Sheet & Tube Laser Cutting Machine

Acceleration 0.8G

Auto clamping and centering to achieve accurate feeding of square tube and high cutting accuracy.

Applicable for processing tubes covering square type, round type, rectangular type, shaped type, I-beam type and U-steel type.



Applicable for processing MS, SS, aluminum alloy, galvanized sheet, brass and other metal materials.

Applied to cut thin sheet and medium sheet, widely used in sheet metal processing, lighting, kitchenware, decorative materials, chassis and cabinets, etc.

Technical Data

| Item | Specification |
|---------------------------------|-------------------------|
| Processing Range | 3000*1500mm~6000*2500mm |
| Mechanical Positioning Accuracy | ±0.03mm |
| Mechanical Repeated Positioning | ±0.02mm |

| Item | Specifications |
|-----------------------|----------------|
| Positioning Speed-Max | 100m/min |
| Acceleration-Max | 0.8G |

RAYTOOLS

RayLoad SERIES



Gantry-Type Loading System

Loading Sheet Size 3000x1500~2500X1250mm

Integral three-dimensional storage tower + auto loading robot, forming a production system integrating sheet storage, auto conveying and loading.

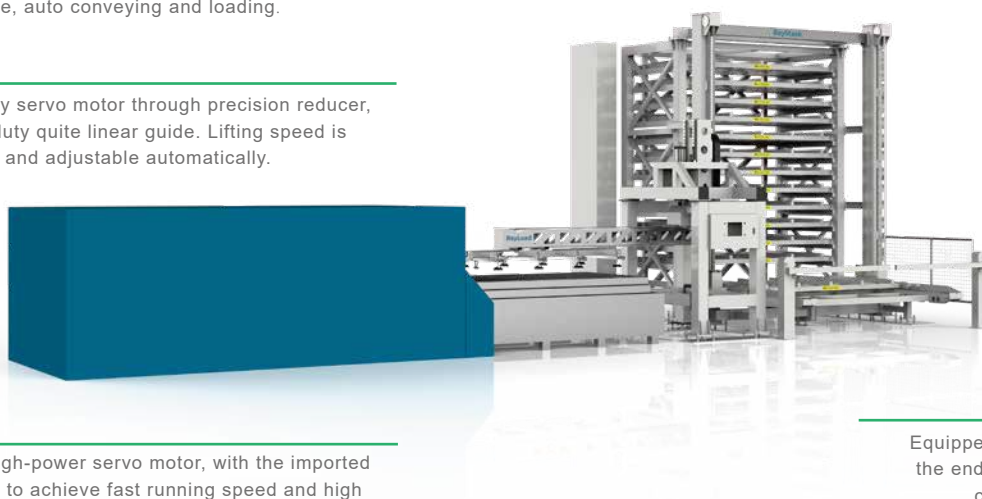
It is driven by servo motor through precision reducer, with heavy-duty quite linear guide. Lifting speed is 5-11.5m/min and adjustable automatically.

Max. load of 300kg for vacuum suction cup table.

Adjustable automatically for skip lifting speed and in/out speed of the three-dimensional storage tower from 5 to 11.5m/min.

Driving by high-power servo motor, with the imported linear guide, to achieve fast running speed and high positioning accuracy.

Equipped with pneumatic splitters at the end of the manipulator, which is convenient for separating the adhering sheet in auto loading.



Technical Data

| Item | Specification |
|--------------------------|----------------|
| Loading Sheet Size - Max | 3000X1500 (mm) |
| Loading Sheet Size -Min | 2500X1250 (mm) |
| Sheet Thickness - Max | 8mm |
| Sheet Thickness - Max | 1mm |

| Item | Specifications |
|------------------------------|----------------|
| Weight Capacity -Max | 300kg |
| Conveying Speed | 10-50m/min |
| Lifting Speed | 5-11.5m/min |
| Loading Positioning Accuracy | ±2mm |

RAYTOOLS

RayLoad SERIES

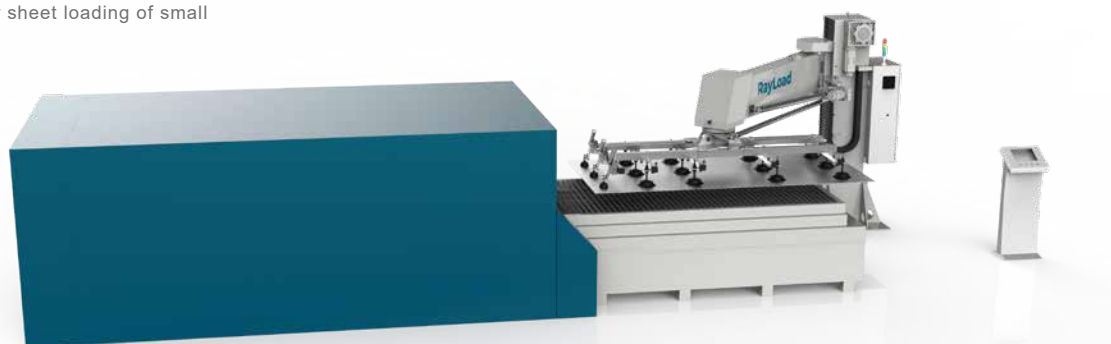


Cantilever-type Loading System

Loading Sheet Size 3000x1500~600x600mm

Oil-attached suction cups with great suction and long durability, effectively avoiding sheet damage. Cups at both ends can be closed by ball valves, which is convenient for sheet loading of small format.

Optional automatic mode or manual mode in loading through touch screen, which is applicable for various working conditions.



The system works by high-speed high-torque servo motors, with the imported linear guide, to ensure fast running speed and high positioning accuracy.

The screen supports setting, monitoring and debugging by hand, quick and convenient.

Technical Data

| Item | Specification |
|------------------|---------------|
| Sheet Size - Max | 3000X1500 |
| Sheet Size - Min | 600X600 |
| Lifting Speed | 1-5.7m/min |

| Item | Specifications |
|-------------------------------|----------------|
| Swing-arm Angle | 120° |
| Repeated Positioning Accuracy | ±2mm |
| Single Loading Cycle | 45±15S |

RAYTOOLS OLE SERIES



Robotic Laser Cutting Kit

Power Rating 1~6KW

World leading core components like IPG fiber laser, Fanuc robot and Raytools cutting head.

6 Axis robot cutting with easy access to complicated 3D metal parts.

Compact size to decline floor inhabitation.



Flexible options of laser power from 1KW to 6KW.

Offline robot CAM software optional to simplify application to various 3D workpieces.

Applicable to 3D or 2D metal cutting with flexible option in profile shapes and processing paths

Technical Data

| Item | Specification |
|---------------|------------------------------|
| Fiber Laser | IPG/Raycus (others optional) |
| Laser Power | 1KW/1.5KW/2KW/3KW/4KW/6KW |
| Robot | Fanuc |
| Working Radiu | 1811~1813mm |

| Item | Specifications |
|---------------|-----------------------------------|
| Payload | 20kg (others optional) |
| Axles | 6 |
| Repeatability | $\pm 0.05 \sim \pm 0.08\text{mm}$ |
| Wavelength | 1080nm ± 5 |

RAYTOOLS OLE SERIES



Robotic Laser Cutting Kit Pro

Power Rating 1~4KW

World leading core components like IPG fiber laser, Fanuc robot and Raytools cutting head.

6 Axis robot cutting with easy access to complicated 3D metal parts.

Compact size to decline floor inhabitation.



Flexible options of laser power from 1KW to 4KW.

Offline robot CAM software optional to simplify application to various 3D workpieces.

Additional programmable A/B axis to handle small contour cutting @ min. dia. 1mm

Technical Data

| Item | Specification |
|----------------------|------------------------------|
| Fiber Laser | IPG/Raycus (others optional) |
| Laser Power | 1KW/1.5KW/2KW/3KW/4KW |
| Robot | Fanuc |
| Working Radius | 1813mm |
| Payload | 35kg |
| Axles | 6 |
| Min.Cutting Diameter | 1mm(accuracy±0.1) |

| Item | Specifications |
|-----------------------|------------------------|
| Repeatability | ± 0.05~ ± 0.08mm |
| Wavelength | 1080nm± 5 |
| Cutting Head | Raytools GF101 + GF102 |
| Operating Temperature | 10-40°C |
| Cooling | Water cooling |

Specifications subject to change without notice.

RAYTOOLS OLE SERIES



Robotic Laser Welding Kit

Power Rating 1~20KW

World leading core components like IPG fiber laser, Fanuc robot and Raytools cutting head.

6 Axis robot welding with easy access to complicated 3D metal parts.

Compact size to decline floor inhabitation.



Flexible options of laser type (fiber/diode/blue laser) and power from 1KW to 20KW

Offline robot CAM software optional to simplify application to various 3D workpieces.

Applicable to metal welding with flexible option in profile shapes and processing paths.

Technical Data

| Item | Specification |
|---------------|-----------------------------------|
| Fiber Laser | IPG/Raycus (others optional) |
| Laser Power | 1KW~20KW |
| Robot | Fanuc |
| Working Radiu | 1811~1813mm |
| Payload | 20kg(other optional) |
| Axles | 6 |
| Repeatability | $\pm 0.05 \sim \pm 0.08\text{mm}$ |

| Item | Specifications |
|-----------------------|---|
| Wavelength | Fiber 1064nm/ Diode 915nm/ Blue 450nm |
| Welding Head | Raytools |
| Operating Temperature | 10-40°C |
| Cooling | Water cooling |

Specifications subject to change without notice.

RAYTOOLS

LaserRobot

CO₂ Laser Cutting Cell

Power Rating 125/175/250W

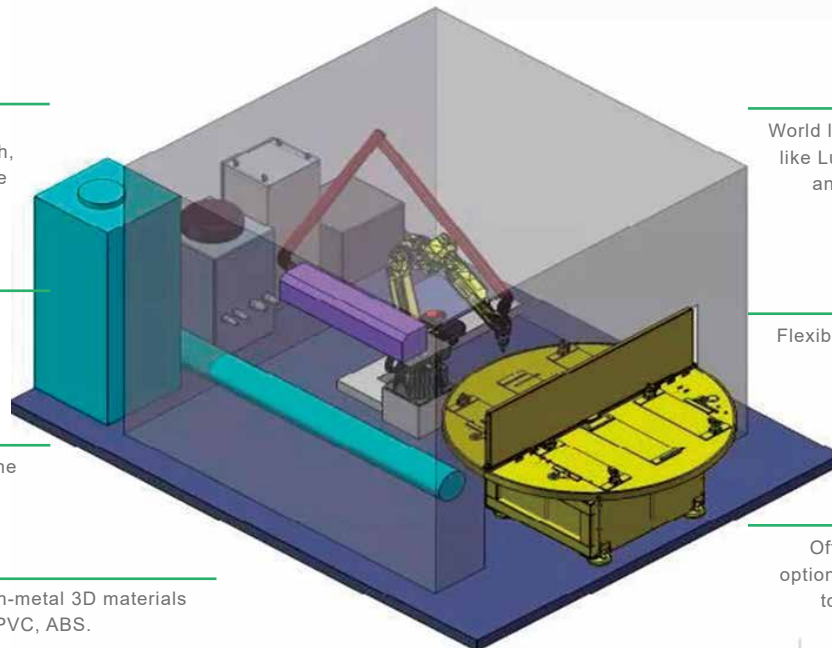


Wide application in industries of automobile internal/external finish, daily plastics and home appliance plastics.

6 Axis robot cutting with easy access to complicated 3D non-metal parts.

Articulated laser arm to deliver the laser beam.

Commonly used for cutting of non-metal 3D materials like PP, PC, PET, PUR, PA, PE, PVC, ABS.



World leading core components like Luxinar laser, Fanuc robot and Raytools cutting head.

Flexible options of laser power from 125W to 250W.

Offline robot CAM software optional to simplify application to various 3D workpieces.

Technical Data

| Item | Specification |
|-----------------------|------------------------------------|
| CO ₂ Laser | Luxinar (UK)/Others optional |
| Laser Power | 125W/175W/250W |
| Robot | Fanuc |
| Working Range | 2000x1400x1400mm (others optional) |
| Payload | 20kg |
| Axles | 6 |

| Item | Specifications |
|-----------------------|------------------|
| Repeatability | ± 0.05- ± 0.08mm |
| Wavelength | 10600nm |
| Cutting Head | Raytools AK230 |
| Articulated Laser Arm | Raytools ARM200 |
| Cooling | Water cooling |

Specifications subject to change without notice.

RAYTOOLS

RayEdge SERIES



4-in-1 Handheld Laser Welding Machine

Power Rating 1KW~3KW

Compact integrated design with easy operation.

Wobble welding to improve welding capacity to seam.

Wire feeder included to expand application range.

Multiple safety protection with auto beam off function once the nozzle goes away from workpiece.



"4-in-1 function" (Weld/Cut/WeldSeam Clean/Remote Clean). Quick-change structure of tip assembly from laser processing head.



Technical Data -1

| Item | RayEdge-1000 | RayEdge-1500 | RayEdge-2000 | RayEdge-3000 |
|--------------------------|--|----------------------|----------------------|----------------------|
| Laser | Maxphotonic/Raycus | | | |
| Laser Power | 1000w | 1500w | 2000w | 3000w |
| Laser Wavelength | 1080nm | | | |
| Fiber Length | 10m | | | |
| Fiber Core | 25um/50um | 50um | 50um | 50um |
| Welding Speed | 0-20mm/s | | | |
| Welding Style | Wobble (single axis) | | | |
| Wobbling Range | 0-5mm (Weld)/0-10mm (WeldSeam Clean)/0-80mm (Remote Clean) | | | |
| Welding Seam Width | Max. 5mm | | | |
| Welding Thickness | Max. 2mm | Max.3mm | Max.4mm | Max.6mm |
| (SS, MS and 5 series AL) | based on 1000W laser | based on 1500W laser | based on 2000W laser | based on 3000W laser |
| Cooling | Water Cooling | | | |
| Cover Glass | Φ20mm*3mm | | | |
| Collimation Length | 60mm | | | |

RAYTOOLS

RayEdge SERIES



4-in-1 Handheld Laser Welding Machine

Power Rating 1KW~3KW

Compact integrated design with easy operation.

Wobble welding to improve welding capacity to seam.

Wire feeder included to expand application range.

Multiple safety protection with auto beam off function once the nozzle goes away from workpiece.



"4-in-1 function" (Weld/Cut/WeldSeam Clean/Remote Clean). Quick-change structure of tip assembly from laser processing head.



Wire Feeder

Technical Data - 2

| Item | RayEdge-1000 | RayEdge-1500 | RayEdge-2000 | RayEdge-3000 |
|--------------------------|------------------------------|----------------|-------------------------|-----------------|
| Focus Length | 150mm | | | |
| Power Supply | 220V/Single Phase/50 or 60Hz | | 380V/3 Phase/50 or 60Hz | |
| Overall Dimension(LxWxH) | 910x490x800mm | 910x490x800mm | 1105x490x823mm | 1248x585x1070mm |
| Transportation Dimension | 1050x600x850mm | 1050x600x850mm | 1240x640x1040mm | 1330x590x1190mm |
| Weight | ~125kg | ~125kg | ~140kg | ~215kg |
| Transportation Weight | ~155kg | ~155kg | ~170kg | ~260kg |
| Wire Feeder | Included | | | |
| Wire Diameter | 0.8/1.0/1.2/1.6mm | | | |
| Feeding Speed | 0.1-18m/min | | | |
| Wire Material | SS/AL Magnesium/Copper | | | |
| Overall Dimension | 440x250x580mm | | | |
| Transportation Dimension | 470x310x620mm | | | |
| Weight | 14kg | | | |
| Transportation Weight | ~15kg | | | |

Specifications subject to change without notice.

RAYTOOLS

RayEdge SERIES



4-in-1 Air-cooled Handheld Laser Welding Machine

Power Rating 1KW~1.5KW

Compact integrated design with easy operation.

Wobble welding to improve welding capacity to seam.

Wire feeder(independent) included to expand application range.

Multiple safety protection with auto beam off function once the nozzle goes away from workpiece.



"4-in-1 function" (Weld/Cut/WeldSeam Clean/Remote Clean). Quick-change structure of tip assembly from laser processing head.



Wire Feeder

Technical Data -1

| Item | RayEdge-1000A | RayEdge-1200A | RayEdge-1500A |
|--------------------|--|---------------|---------------|
| Laser | Maxphotonics | | |
| Laser Power | 1000w | 1200w | 1500w |
| Laser Wavelength | 1080nm | | |
| Fiber length | 10m | | |
| Fiber Core | 20μm | | |
| Welding Speed | 0-20mm/s | | |
| Welding Style | Wobble (single axis) | | |
| Wobbling Range | 0-5mm (Weld)/0-10mm (WeldSeam Clean)/0-80mm (Remote Clean) | | |
| Welding Seam Width | Max. 5mm | | |
| Welding Thickness | Max. 2mm | Max. 2.5mm | Max. 3mm |
| Cooling | Air cooling | | |
| Cover Glass | Φ20mm*3mm | | |
| Collimation Length | 60mm | | |
| Focus Length | 150mm | | |

RAYTOOLS

RayEdge SERIES



4-in-1 Air-cooled Handheld Laser Welding Machine

Power Rating 1KW~1.5KW



HMI Interface



Wire Feeder



Handheld Laser Welding Head

Technical Data - 2

| Item | RayEdge-1000A | RayEdge-1200A | RayEdge-1500A |
|--------------------------|------------------------------|---------------|---------------|
| Power Supply | 220V/Single Phase/50 or 60Hz | | |
| Overall Dimension | 480x700x700 | | |
| Weight | <70Kg | | |
| Transportation Dimension | 580x800x750mm | | |
| Wire feeder | Included | | |
| Wire Diameter | 0.8/1.0/1.2/1.6mm | | |
| Feeding Speed | 0.1-18m/min | | |
| Wire Material | SS/AL Magnesium/Copper | | |
| Overall Dimension | 440x250x580mm | | |
| Transportation Dimension | 470x310x620mm | | |
| Weight | 14kg | | |
| Transportation Dimension | ~ 15kg | | |

Specifications subject to change without notice.

RAYTOOLS

RayEdge SERIES



Air-cooled Handheld Laser Cleaner

Power Rating 100W~300W

MOPA fiber laser adopted with high electro-optical conversion efficiency.

Laser pulses with high peak power do not damage the base material.

High cleaning efficiency without chemical product. Low running cost



Simple operation UI and easy to use.

Air cooled laser adapt to complicated climate environment and easy to maintain.



handheld laser cleaning head

Technical Data

| Item | LC-100 | LC-200 | LC-300 |
|-----------------------|--|--------|--------|
| Laser Type | MOPA Fiber laser, wavelength of 1060~1080nm | | |
| Brand | GZTECH/Hans' Laser | | |
| Laser Power | 100w | 200w | 300w |
| Fiber length | 5m | | |
| Max Pulse Energy | Single mode: 1.8mJ, Multi-mode: 5mJ/12mJ | | |
| Pulse Width | 10~500ns | | |
| Repetition | Single mode:1~4000KHz, Multi-mode: 1~3000KHz | | |
| Cooling | Air cooling | | |
| Focus Length | 254mm | | |
| Working Range | 100*20mm | | |
| Operation Environment | Operation temperature of 0°C~40°C | | |
| Facility Requirements | 220V single phase, 50/60Hz | | |
| Power consumption | 0.6kW | 0.9kW | 1.2kW |
| Dimension | 480mm*700mm*700mm | | |

RAYTOOLS

RayEdge SERIES



Water-cooled Handheld Laser Cleaner

Power Rating 1.5KW~2KW

CW fiber laser adopted for laser cleaning application.

Laser pulses with high peak power do not damage the base material.

High cleaning efficiency without chemical product. Low running cost



Simple operation UI and easy to use.

Water cooling approach ensures long term running stability.



handheld laser cleaning head

Technical Data

| Item | LC-1000CW | LC-1500CW | LC-2000CW |
|-----------------------|--|-----------|-----------|
| Laser Type | Pulsed Fiber laser, wavelength of 1060~1080nm | | |
| Brand | Maxphotonic/BWT | | |
| Laser Power | 1000w | 1500w | 2000w |
| Fiber length | 5m | 5m | 10m |
| Fiber Interface | QBH | | |
| Cooling | Water cooling | | |
| Focus Lens | Collimation length=60mm, Focusing length=800mm | | |
| Working Range | Single axial, Max 300mm | | |
| Operation Environment | Operation temperature of 0°C~40°C | | |
| Facility Requirements | 220V single phase, 50/60Hz | | |
| Power consumption | 5kW | 7.8kW | 10kW |
| Dimension | 480mm*700mm*700mm | | |

RAYTOOLS OLE-W SERIES



Laser Welding Machine

Power Rating 1/1.5/2/3 KW

Compatible to teaching, graphics import and draw.

Rich process handling, PSO, power ascent & descent and preheating processing.

Flexible extending, twin-workstation, exchange table or 4-workstation rotation, etc.



Flexible combination of laser, welding head and working size in accordance with exact application.

Wide range application such as R&D, sample welding, small-scaled production and etc.

Technical Data

| Item | OLE-W5030 (Cantilever type) | OLE-W5040 (Gantry type) |
|----------------------------------|--------------------------------|----------------------------|
| Working Area (mm) | 500x300x300 | 500x500x400 |
| Positioning Accuracy (mm) | ±0.02 | |
| Repeat Positioning Accuracy (mm) | ±0.01 | |
| Welding Motion Controller | Raytools | |
| Welding Speed (mm/s) | 30-100 | |
| Servo& Drive | AheadTechs | |
| Display | 19" LED | |
| Power Consumption (kw) | 4~11 | |
| Welding Head | BW210/BW240/BF320/BF330M | |

Specifications subject to change without notice.

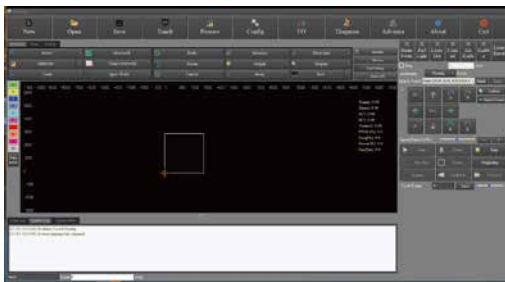
| Item | OLE-W5030 | OLE-W5050 |
|--------------------------|--------------------------|---------------------------|
| Laser | IPG/Maxphotonics/Raycus | |
| Laser Power (W) | 1000/1500/2000/3000 | |
| Chiller | S & A | |
| Ambient Temperature (°C) | 0~40 | |
| Ambient Humidity (%) | <70 | |
| Overall Size (mm) | 1000*950*1500 (W*D*H) | 1000*1300*1850 (W*D*H) |
| Weight (kg) | ~220 | ~250 |
| Optional | Dust Collector | |
| Optional | Wire Feeding | |

RAYTOOLS XW-100 SERIES

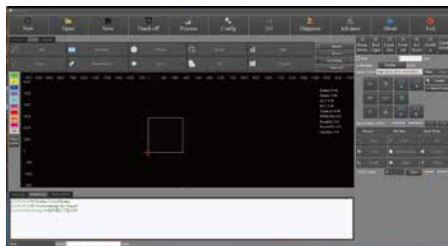
Welding Control System



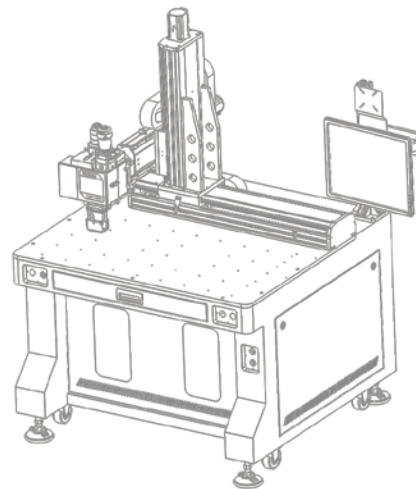
Main Interface



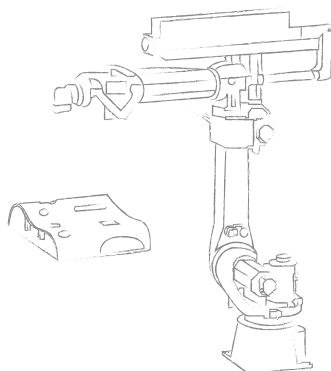
Parameters



Settings



application for welding platform
or robot welding.



application for multi-axis motion
welding or robot welding.

Process Feature

- adjustment of laser power ascent and descent, optimized start and end technique
- power curve adjustable and corner treatment
- with unique PSO function, uniform distribution of energy in welding process, and good welding consistency.
- able to control multiple types of galvo laser welding heads and laser spot.

Control Feature

- both EtherCAT serial bus servo and pulse controlled servo applicable.
- multi-axis motion and multi-position control
- with processing modes like teaching mode of hand-wheel and interface, and image inputting
- checking the alarm information online and looking up the corresponding solution at once.
- with intuitive monitoring interface,
 - flexible configurations for user defined input and output

Welding Heads Applicable



BF330-4F
4KW



BF330-2C/6C
2KW/6KW

RAYTOOLS PL5050 SERIES



New Energy Welding Station

Processing Range 500*500*200mm

Marble base +THK linear guide rail ensure a stable and reliable platform.

High-performance DDL motor drive technology ensures good dynamic performance.

With Renishaw grating and fully closed-loop control.

with a heat-resistant and fully enclosed shield, fitting laser processing applications.

laser welding specialized busfield system from AheadTechs of America.

customizable maximum speed and acceleration.

flexible configurations for user defined input and output

adjustment of laser power ascent and descent, optimized start and end technique

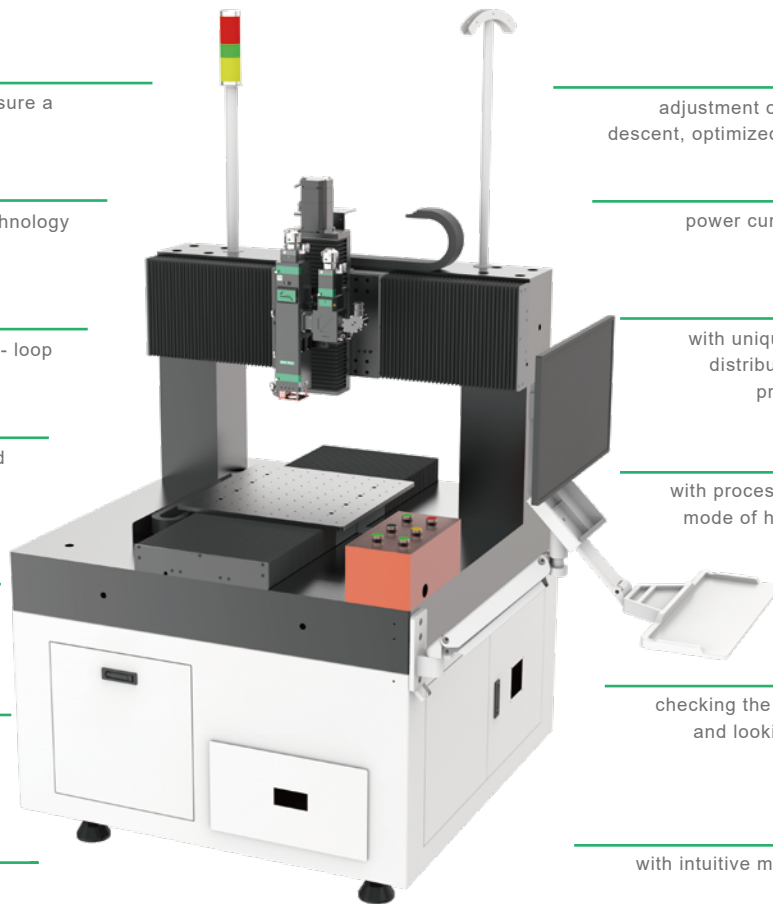
power curve adjustable and corner treatment

with unique PSO function, uniform distribution of energy in welding process, and good welding consistency.

with processing modes like teaching mode of hand-wheel and interface, and image inputting

checking the alarm information online and looking up the corresponding solution directly.

with intuitive monitoring interface, easy to monitor signals.



Technical Data

| Item | Specification |
|-------------------------------|---------------|
| Welding Head | User defined |
| Platform Processing Range | 500X500X200mm |
| Positioning Accuracy | ±4um |
| Repeated positioning Accuracy | ±2um |

| Item | Specifications |
|----------------------|---------------------|
| Processing Speed | ≤1000mm/s |
| Running Acceleration | < 5g (customizable) |
| Platform Size | 1200X1200X1900mm |
| Weight | 1000kg |

RAYTOOLS EMP-MLP SERIES



Multifunctional Laser Processing Station

Power Rating 1-6KW

Applicable to the CNC system independently developed by RayTools and able to meet the needs of certain functions and customized interfaces.

Cost effective for providing high precision servo or marble linear motor motion unit according to application requirements

a wide range of applications based on optional AB axis motion units to enable a variety of motion tracks in processing, including lines, circles, curves, surfaces and five axis

equipped with multi-functional laser processing head independently developed by RayTools, fast switching among laser welding, cladding and hardening with different power rating without replacing light source and optical device, perfect for initial processing tests and scientific researches.



with a heat-resistant and fully enclosed shield, fitting laser processing applications

applicable to the processing of a variety of metal materials, including iron base, nickel base, copper base, aluminum base, titanium base, etc.

optional in-and-out workbench and corresponding fixture for customizations and batch processing.

Enclosed sheet metal structure, with video monitoring, anti-collision module, lens heat alarm and gas pressure alarm and optional real-time APP performance monitoring unit, etc. to ensure human security and machine safety in processing.

Technical Data

| Item | Specification |
|-------------------------------|--|
| Function | Fast switching between laser welding, cladding and hardening |
| Laser | Fiber laser/Diode |
| Power Rating | 1-6KW (customizable for higher power rating) |
| Laser Wavelength | 900-1100nm |
| Positioning Accuracy | ±0.1mm |
| Repeated positioning Accuracy | ±0.05mm |
| Processing Speed | ≤200mm/s |
| Processing Range | 600*400*300mm(customizable) |
| Powder | 3-way, 4-way, annular, high-speed, wide |
| Feeding Nozzle | band, inner hole nozzle optional |

| Item | Specification |
|---------------------------------------|--|
| Hardening Size | 5*5/10*2/15*2/20*4mm (customizable) |
| Focal Spot (for welding and cladding) | manual adjustment available; adjustable range customizable |
| Two-axis Turntable | Configurable |
| Inert Gas Chamber | Configurable |
| Safety Monitoring Module | Processing monitoring camera, safety door alarm, processing head anti-collision module - configurable |
| Real-time Process Monitoring Module | Modules include infrared temperature measurement, closed-loop temperature control, high-speed camera, configurable |

RAYTOOLS

EMP-PF-2-1 SERIES



Powder Feeder

Power Rating 1KW

Adjustable Powder Feeding Speed

The powder will be transported to the processing area by gas. Adjust the powder feeding speed by adjusting the rotary speed and the powder plate size.

High Accuracy of Powder Feeding

The powder feeder is independent and controllable. With double-way of powder feeding and the high precision servo motor, it has high precision powder feeding.



Customizable Interface

The interface can be customized according to customer's requirements.

High Stability

With internal control and external control of two operating modes and pressure alarm function, mostly meet the needs of processing stability.

Technical Data

| | |
|-----------------------|---|
| Power Rate | ≤1000W |
| Powder Feeding Funnel | two-way, independent and controllable PLC |
| Dimension | 600X500X1450mm |
| Input | 220VAC, 50HZ |

| | |
|------------------------------|----------------|
| Powder Size | 20-200μ |
| Feeding Plate Speed | 0-20 rpm CV |
| Send Powder Repeat Precision | < ±2% |
| Gas Supply | Nitrogen/Argon |

Specifications subject to change without notice.

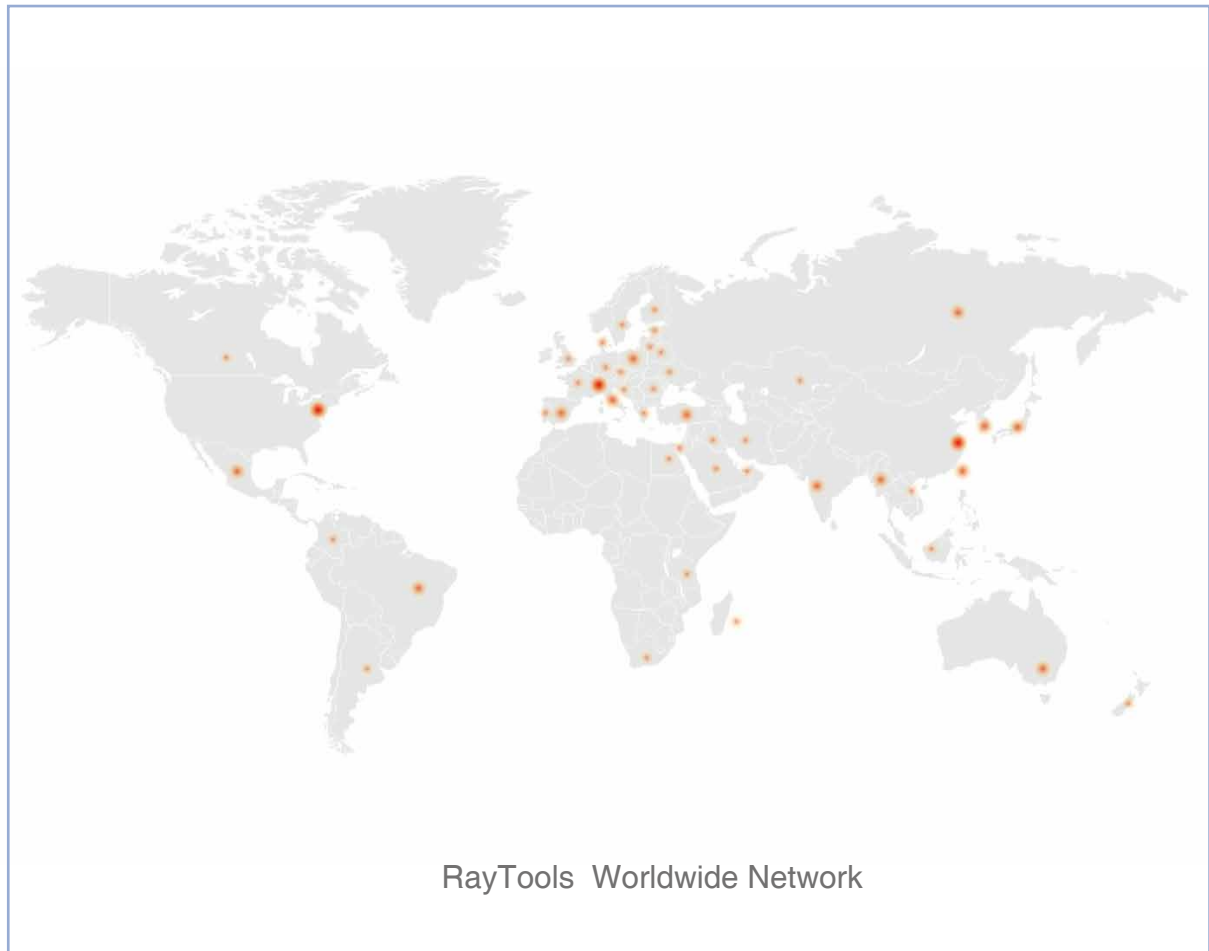
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LASER CUTTING&WELDING SOLUTIONS



RAYTOOLS

Empower Your Laser Solutions



About Us

- General Purpose:** Evaluation, generation and application of laser beam and control software for industrial use; custom project, knowhow and services;
- Achievements:** Industrial lasers beam delivery and automation for various applications, hybrid application concepts of high power lasers, diodes, custom projects; modular laser source and machine concepts, components, accessories and unique beam alignment technology;
- Advantages:** Independent company with vast know-how and engineering skills on demand and in line with customer requirements;

CONTENT

/ CUTTING

- 01 EMP Series 500*400~1250*1250mm
High Precision Micro Laser Cutting Station-Linear Motor Driven
- 02 1530^{eco} 3000*1500mm
Single Platform Fiber Laser Cutting Machine
- 03 1530EX^{eco} 3000*1500mm
Fiber Laser Cutting Machine
- 04 1530EX^{pro} 3000*1500mm
Fiber Laser Cutting Machine
- 05 EMP9000
Linear Motor Laser Cutting Module
- 06 LCT6020
Tube Cutting Machine
- 07 LC1530T
Sheet & Tube Cutting Machine
- 08 Rayload 3000x1500~2500X1250mm
Gantry-type Loading System
- 09 Rayload 3000*1500~600*600mm
Cantilever-type Loading System

/ ROBOTIC

- 10 OLE 1~6KW
Robotic Cutting Kit
- 11 OLE 1~4KW
Robotic Cutting Kit Pro
- 12 OLE 1~20KW
Robotic Welding Kit
- 13 LaserRobot 125/175/250W
CO₂ Cutting Cell

/ HANDHELD

- 14 RayEdge Series 1KW~3KW
4-in-1 Handheld Laser Welding Machine
- 16 RayEdge Series 1KW~1.5KW
4-in-1 Air-cooled Handheld Laser Welding Machine
- 18 RayEdge Series 100W~300W
Air-cooled Handheld Laser Cleaner
- 19 RayEdge Series 1.5KW~2KW
Water-cooled Handheld Laser Cleaner

/ WELDING & SURFACE TREATMENT

- 20 OLE-W Series 1/1.5/2/3KW
Laser Welding Machine
- 21 XW-100 1/1.5/2/3KW
Welding Control System
- 22 PL5050 1/1.5/2/3KW
New Energy Welding Platform
- 23 EMP-MLP 1~6KW
Multifunctional Laser Processing Module
- 24 EMP-PF-2-1 ≤1KW
Powder Feeder





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