KNUTH
MACHINE TOOLS

ACE Laser

LASER CUTTING MACHINES

www.knuth.com

Everything for metalworking under one roof

KNUTH Machine Tools is a leading supplier of conventional and CNC machine tools. KNUTH is a global company with a presence in more than 30 countries.

In an area of 16.000 m² at our headquarters in Wasbek, Germany, we keep a complete selection of machines for all areas of machining and metal working ready for demos and quick delivery.

Open for you 24/7: Take a virtual tour through our warehouses, spare parts warehouses and workshop with Google Street View.

Quality Assurance for your KNUTH Machine

Quality by KNUTH

Certified Quality Assurance

More than 1400 machines are shipped annually from our headquarters in Wasbek, Germany. Every machine has to pass a series of tests in our 5-level quality assurance process that covers everything from incoming quality control to alignment testing, and from functional, technical and geometric accuracy tests to the final acceptance test. These tests are conducted by our master technicians who use a dedicated customized data processing system for this purpose.

An ISO 9001 certified quality management system ensures continuous control and improvement of all quality-relevant activities. Design, development and precision of each individual machine are documented exactly in detailed inspection protocols and acceptance test logs.

All-Encompassing KNUTH Service

Worldwide Reliability

Trust our global qualified staff take care of everything from installation and maintenance to repairs and upgrades quickly and professionally.

The Process of Making a KNUTH Machine Tool

KNUTH Machines in Action

Visit our YouTube page to experience machines in action before the real-life test on site

Subscribe to our YouTube channel - Go to KNUTH Machine Tools!

Complete Service by KNUTH

Reliable service from a single source

We provide highly qualified technicians and engineers all over the world to ensure reliable service from one central source. And our global supplier network ensures prompt availability of replacement parts and consumables at a local level.

CONSULTATION

- Sample work pieces
- Machine demos

START-UP

- Installation / Commissioning
- On-site Instruction

TRAINING

- User Training
- Maintenance Training

PREVENTIVE MAINTENANCE

- Inspection
- Maintenance

REPAIR

- Machine Repair
- Spare Parts

MACHINE WARRANTY

- Protect Insurance

KNUTH Technical Service Help Desk	**Tel. +49 4321 609-273**	**service@knuth.de**
KNUTH Parts Service	**Tel. +49 4321 609-229**	**ersatzteile@knuth.de**

Our Service Help Desk is available 24/7 online at: knuth.de/servicedesk

Laser Cutting Machines

ACE Laser

State of the art cutting technology sets the standard in price and performance

ROBUST DESIGN WITH HIGH QUALITY COMPONENTS

COMPLETE CUTTING PACKAGE

48 HOURS SERVICE FOR SOURCE AND CUTTING HEAD**

MAXIMUM EFFICIENCY AT AN AFFORDABLE PRICE

**Valid only in Germany

ACE Laser Cutting Systems
series 1530 • 2040 • 2060

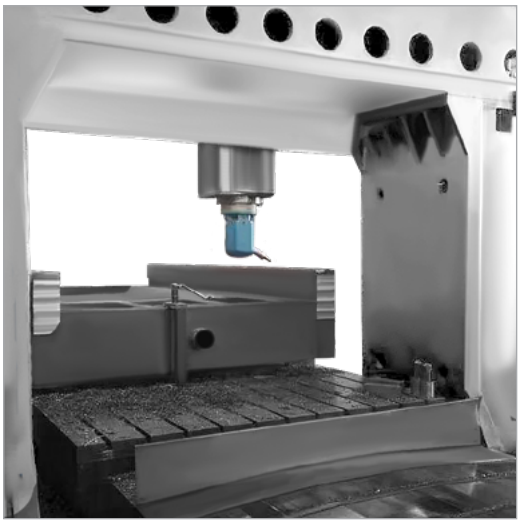
- The ACE laser is more than a machine, it's a cutting system that sets new standards in price and performance. It is fully customer oriented, designed for high performance and excellent part quality.
- It also fulfills your needs for productivity, safety and reliability. Extensive standard equipment gives users total operational control and versatility.
- These features make the ACE Laser the optimal choice for industrial laser cutting applications, from metal fabrication jobs for small shops to large series production for electronics, aerospace or automotive.

ACE Laser

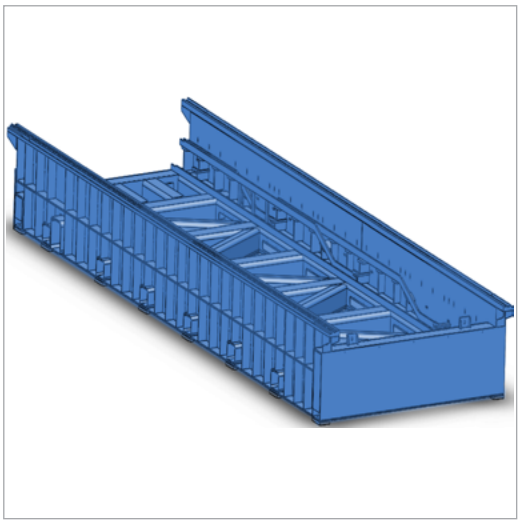
State of the art cutting technology sets the standard in price and performance

Main Features

Cutting table



- Machine design adopts latest technology standards. Lower body consists of a thoroughly welded frame from high quality steel, which is machined with modern industrial equipment to reach very high tolerance requirements.



- The side walls are reinforced to increase the structural rigidity. The customer can rely on a long-term and reproducible cutting-edge accuracy.

- A thermal treatment is applied to the welded machine frame and all structural parts. This eliminates all production-related material stresses – ensuring long-lasting, precise alignment of all components.

- All guideways and racks are fully covered with high quality bellows, which protects against premature wear, while keeping away dust, slag and small cut parts.

ACE Laser

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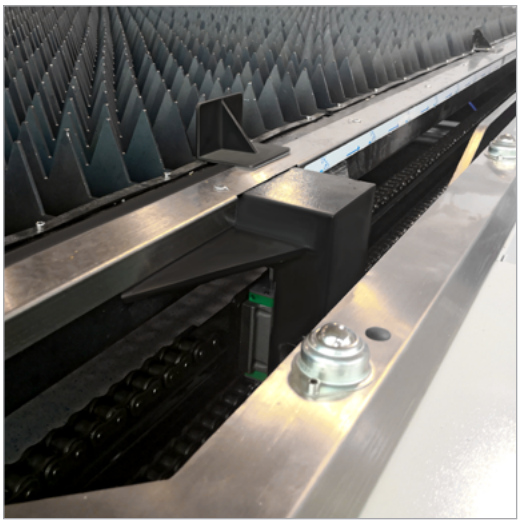
Main Features

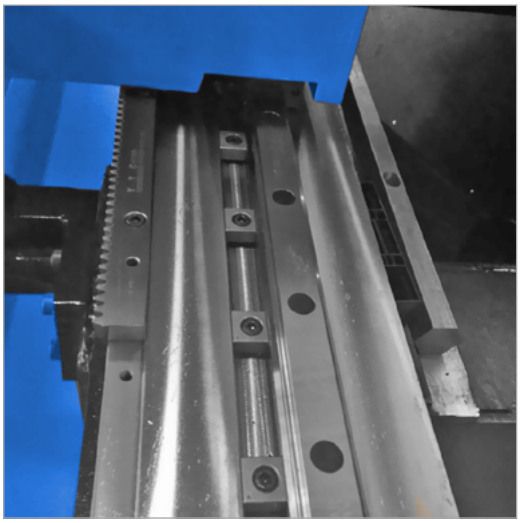
Cutting table



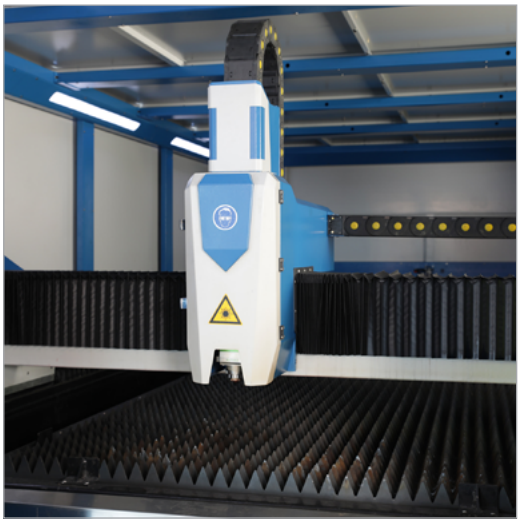
- Workpiece weight is supported by brackets. After usage, they can be replaced via KNUTH, or can be machined by the customer. The DXF file for the brackets as well for the strips are already saved in the CNC control.

- Machine is equipped standard with lateral scrap drawers which allow the removal of small sized parts and waste material without interrupting the cutting process.

Bridge



- This laser cutting system features a gantry type construction with drives on both sides and a large working area that can accommodate most common plate sizes.



- The Y axis bridge is made from high quality aero-space aluminum die-cast construction with low weight and high rigidity for excellent dynamics.
- An automatic centralized lubrication system is installed on the gantry, which increases machine reliability and minimizes service requirements.

ACE Laser

State of the art cutting technology sets the standard in price and performance

Main Features

Machine housing

- For the safety of people and the environment, the cutting system is equipped with a fully enclosed housing and filter extraction system.
- Front doors are equipped with windows with special protective glass, allowing the cutting area to be viewed without the laser beam escaping the enclosure.

- The design of the housing is very ergonomic for loading and unloading sheet metal plates. It features two front doors and, based on the size, some models can have large sliding doors on the right side as well. These doors have interlock system; opening them during operation will stop the machine.

Automatic Exchange Table

- The automatic exchange table system minimizes production downtimes, since the table can be loaded and unloaded during the cutting process.

- Using European technology, the pallet exchanging is done very fast and smoothly, via chain transmission.
- exchange time under 15 sec. for 3015 series.
- exchange time under 18 sec. for 4020 series.
- exchange time under 20 sec. for 6020 series.
- Secondary command panel at the backside of the machine with basic commands for controlling the exchange table.

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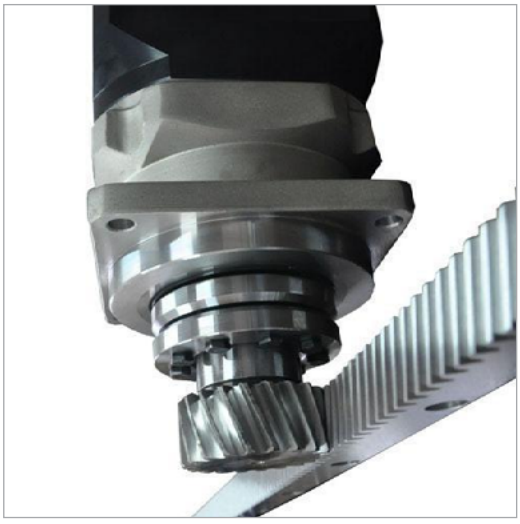
Main Features

Kinematics

- High-performance Schneider Electric servo motors and drives on all axes enable fast and accurate positioning and support high-speed movement. Offering more than just improved performance, these servos are designed to drive the industries of tomorrow due to their long life, maintenance free and energy-efficient design.

- The transmission on X and Y axes is done using high quality helical rack and pinion from the Taiwanese supplier - KAI HE. This low-wear and low maintenance drive system easily handles heavy load capacities and duty cycles due to a higher contact ratio (number of effective teeth engaged).



- Low-backlash gearboxes offer high output in a compact design. As a result, they have high stiffness and overload capacity. They also have lifetime lubrication making them maintenance free and reliable.

- Special linear guide ways from HIWIN on all axes, designed for large load capacity with high rigidity. They feature equal load ratings in the radial, reverse radial and lateral directions, and are self-aligning to absorb installation-error. They are designed for long life and smooth linear motion even at high speeds.

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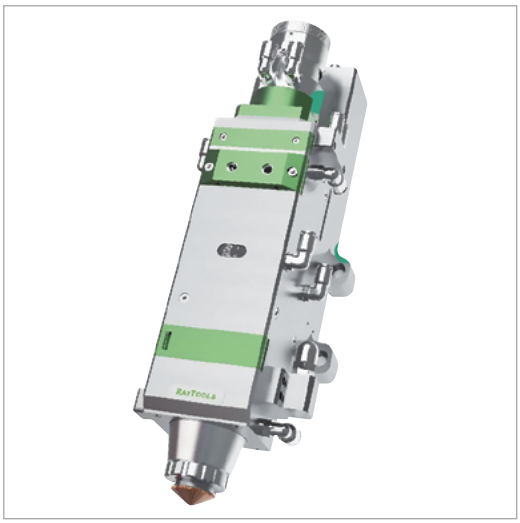
Main Features

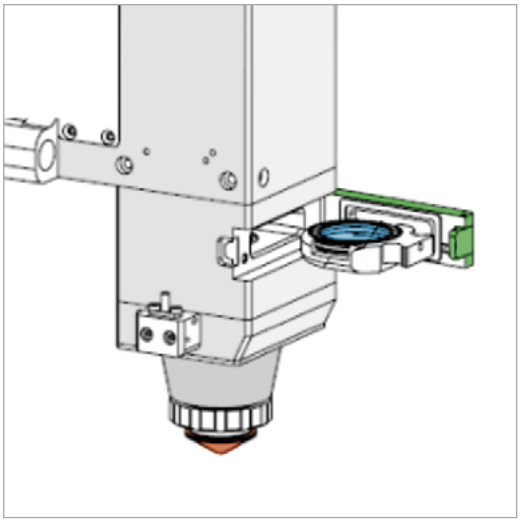
RayTools Cutting Head - for laser sources up to 4 kW



- High-quality cutter head made by the Swiss brand RayTools which comes with built-in motor and linear drive assuring a precise motorized focus position adjustment.

- The compact structure allows it to travel at high speed along the gantry on high quality linear guides with ball screws transmission.
- Equipped standard with crash sensor which protects the head from collisions with the cut parts or the workpiece.

- Focus lens can automatically change the position with adjustment accuracy of 0,05 mm. The user can set the focus continuously through the program to complete multiple paths of different thicknesses.
- Includes closed loop water cooling for collimation and focusing lenses to prevent heating and increase stability when working with high power lasers.



- Laser bem is guided by a flexible fiber optic cable which is maintenance-free and ensures a long tool life.
- The drawer type lens holder makes the replacement of protective lenses easy and quick.

ACE Laser

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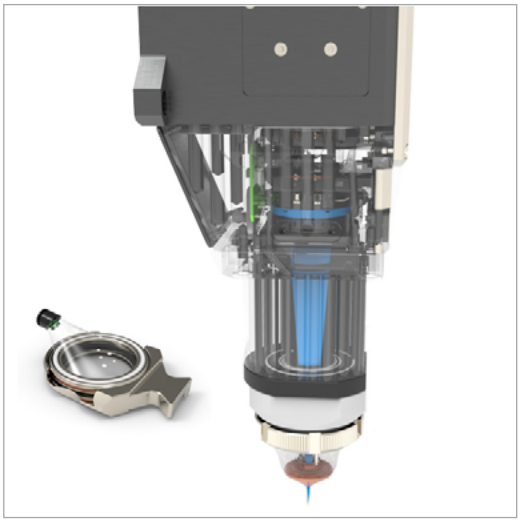
Main Features

BOCI Cutting Head - for 6 kW laser sources

- The BOCI laser cutting head is purpose-built for high-performance cutting with high-power lasers.
- With a focal range of ±50 mm and focal distance of 200 mm, it can easily cut through thick materials and produce high-quality cuts.

- With a focusing speed of up to 300 mm/s, it has a very fast response time, quickly collimating and focusing the laser beam to ensure accurate cuts, even when cutting complex shapes.

- This cutting head has a modular design with plug-in lenses drawers, making it easy to maintain,
- The entire assembly is double-sealed to provide maximum protection from heat, pressure, dust and water.



- Specifically designed for heavy-duty cutting, it features various built-in safety features that monitor the overall operation in real time to protect the cutting head and prevent unstble cutting processes.
- Anti-collision protection.
- Protective Lens Temperature Monitor.
- Cut-Gas Pressure Monitor.
- Nozzle and Sensor Cooling.

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Laser Sources

Raycus - Laser Sources

- Our machines are equipped with high-power continous fiber laser series developed and produced by Raycus. Our standard range spreads from 1000W to 6000W, but higher models can be provided upon request.
- Raycus laser sources are known for their high electro-optical conversion efficiency, high energy density, wide modulation frequency and high reliability.
- This series product meets the demand of most appliacation scenarious, on mulitiple controll models.
- Optimized optical system of the product with output boost of the fiber laser better facilitating customer's cutting requirements.
- The maintenance-free laser source significantly reduces maintenance and operating cost.

Technical Data

Nominal Power	W	1.000	1.500	2.000	3.000	4.000	6.000
Mode of Operation		CW/Modulated					
Wavelength		1080 ± 10 nm					
Power Stability		< 3 %					
FIBER DELIVERY SYSTEM							
Diameter	µm	50	50	100	100	100	100
ELECTRICAL RATINGS							
Supply Voltage		220VAC (-15% to +10%) Single-phase			400VAC (-15% to +10%) 3-phase		
OTHER SPECIFICATIONS							
Cutting capacity in structural steel	mm	8	12	14	18	20	22
Cutting capacity in stainless steel	mm	3	4	5	6	8	12
Cutting capacity in aluminum	mm	2	3	4	5	8	12
Cooling Method		Water Cooling					

We reserve the right to change specifications without prior notice

Laser Sources

Cutting Parameters

Material	Thickness	1.000 W	1.500 W	2.000 W	3.000 W	4.000 W	6.000 W
Carbon Steel	mm	m/min	m/min	m/min	m/min	m/min	m/min
		Oxygen					
	1	10 - 16	10 - 16	10 - 16	10 - 16	10 - 16	10 - 16
	2	5,0 - 6,0	5,0 - 8,0	5,0 - 8,0	5,0 - 8,0	5,0 - 8,0	5,0 - 8,0
	3	2,5 - 3,5	3,0 - 4,0	3,0 - 4,0	3,0 - 5,0	3,0 - 5,0	3,0 - 5,0
	5	1,2 - 1,8	1,5 - 1,8	2,5 - 3,0	3,0 - 3,5	3,0 - 3,5	3,0 - 4,0
	6	1,0 - 1,5	1,3 - 1,5	1,8 - 2,5	2,0 - 2,8	2,5 - 3,0	2,5 - 3,5
	8	0,8 - 1,0	1,0 - 1,2	1,6 - 2,0	1,8 - 2,2	2,0 - 2,5	2,0 - 2,8
	10	0,5 - 0,7	0,8 - 1,0	1,0 - 1,2	1,1 - 1,3	1,2 - 1,4	1,5 - 2,0
	12	0,5 - 0,8	0,7 - 0,8	0,8 - 1,0	0,9 - 1,1	1,0 - 1,2	1,3 - 1,8
	14		0,6 - 0,7	0,6 - 0,8	0,7 - 0,9	0,8 - 1,0	0,9 - 1,2
	16		0,5 - 0,6	0,6 - 0,7	0,6 - 0,8	0,6 - 0,8	0,7 - 0,9
	18			0,4 - 0,7	0,5 - 0,7	0,6 - 0,7	0,7 - 0,8
	20				0,4 - 0,6	0,5 - 0,6	0,6 - 0,8
	22				0,3 - 0,5	0,4 - 0,6	0,5 - 0,7
	25					0,4 - 0,6	0,4 - 0,6

We reserve the right to change specifications without prior notice

Material	Thickness	1.000 W		1.500 W		2.000 W		3.000 W		4.000 W		6.000 W	
Stainless Steel	mm	m/min		m/min		m/min		m/min		m/min		m/min	
		N2	Air	N2	Air	N2	Air	N2	Air	N2	Air	N2	Air
	1	20 - 24	22 - 26	30 - 35	32 - 38	32 - 35	33 - 38	35 - 45	38 - 48	40 - 50	40 - 50	50 - 70	50 - 70
	2	6,0 - 7,0	6,0 - 8,0	9,0 - 10	10 - 12	12 - 14	13 - 15	14 - 16	15 - 17	21 - 23	22 - 25	25 - 30	28 - 33
	3	2,0 - 3,0	2,5 - 3,5	4,0 - 5,0	4,5 - 5,5	5,0 - 6,5	6,0 - 7,0	8,0 - 9,0	9,0 - 10	12 - 14	14 - 16	14 - 20	16 - 22
	4	1,0 - 1,5	1,2 - 1,8	2,0 - 3,0	2,5 - 3,5	3,0 - 4,0	4,0 - 5,0	4,0 - 5,0	5,0 - 6,0	6,0 - 8,0	8,0 - 10	8,0 - 12	8,0 - 14
	5	0,5 - 0,8	0,6 - 0,9	1,0 - 1,5	1,2 - 1,8	1,5 - 2,5	2,0 - 3,0	2,5 - 3,3	3,0 - 4,0	4,5 - 5,0	5,0 - 6,0	6,0 - 8,0	6,0 - 11
	6			0,7 - 1,0	0,8 - 1,2	1,2 - 1,5	1,5 - 2,0	1,6 - 2,1	2,0 - 2,5	2,7 - 3,2	3,0 - 3,5	4,0 - 7,0	5,0 - 8,0
	8					0,6 - 0,8	0,7 - 1,0	0,9 - 1,2	1,0 - 1,5	1,3 - 1,6	1,5 - 2,0	3,0 - 5,0	3,5 - 5,5
	10							0,6 - 0,8	0,7 - 0,9	1,0 - 1,2	1,2 - 1,5	1,5 - 2,5	1,8 - 2,5
	12									0,7 - 0,8	0,8 - 1,0	1,0 - 2,0	1,2 - 2,2
	14									0,6 - 0,7	0,7 - 0,8	0,8 - 1,0	0,9 - 1,2
	16									0,4 - 0,5	0,5 - 0,6	0,7 - 0,8	0,8 - 1,0
	18											0,5 - 0,7	0,7 - 0,8
	20											0,3 - 0,5	0,5 - 0,6

We reserve the right to change specifications without prior notice

Bigger cutting speeds can be achieved when using Nitrogen

For simple shapes and small production

Maximum cutting thickness, only for sampling, not for production

Laser Sources

Cutting Parameters

Material	Thickness	1.000 W		1.500 W		2.000 W		3.000 W		4.000 W		6.000 W	
Aluminum	mm	m/min		m/min		m/min		m/min		m/min		m/min	
		N2	Air	N2	Air	N2	Air	N2	Air	N2	Air	N2	Air
	1	10 - 14	10 - 14	16 - 20	16 - 20	25 - 30	25 - 30	30 - 35	30 - 35	35 - 40	35 - 40	50 - 70	50 - 70
	2	2,0 - 4,0	2,0 - 4,0	6,0 - 8,0	6,0 - 8,0	10 - 12	10 - 12	12 - 14	12 - 14	16 - 20	16 - 20	20 - 25	20 - 25
	3	0,5 - 1,0	0,5 - 1,0	2,0 - 3,0	2,0 - 3,0	4,5 - 5,0	4,5 - 5,0	7,0 - 7,5	7,0 - 7,5	10 - 12	10 - 12	12 - 16	12 - 16
	4			1,2 -1,8	1,2 - 1,8	2,5 - 3,0	2,5 - 3,0	5,0 - 6,5	5,0 - 6,5	6,5 - 7,0	6,5 - 7,0	7,0 - 9,0	7,0 - 9,0
	5			0,5 - 1,0	0,8 - 1,0	1,0 - 2,0	1,0 - 2,0	3,0 - 3,5	3,0 - 3,5	4,0 - 5,0	4,0 - 5,0	5,0 - 7,0	5,0 - 7,0
	6					0,8 - 1,0	0,8 - 1,0	1,8 - 2,0	1,8 - 2,0	2,5 - 3,0	2,5 - 3,0	4,0 - 6,0	4,0 - 6,0
	8							0,9 - 1,0	0,9 - 1,0	1,0 - 1,5	1,0 - 1,5	2,5 - 4,0	2,5 - 4,0
	10									0,8 - 1,0	0,8 - 1,0	1,0 - 2,0	1,0 - 2,0
	12									0,6 - 0,8	0,6 - 0,8	0,8 - 1,5	0,8 - 1,5
	14											0,7 - 0,9	0,7 - 0,9
	16											0,6 - 0,7	0,6 - 0,7
	18											0,4 - 0,6	0,4 - 0,6
	20											0,2 - 0,3	0,2 - 0,3

We reserve the right to change specifications without prior notice

Material	Thickness	1.000 W	1.500 W	2.000 W	3.000 W	4.000 W	6.000 W
Brass	mm	m/min	m/min	m/min	m/min	m/min	m/min
		Nitrogen					
	1	10 - 14	14 - 18	18 - 24	25 - 33	35 - 40	50 - 70
	2	2,0 - 4,0	5,0 - 6,0	7,0 - 10	10 - 14	12 - 14	18 - 22
	3	0,5 - 1,0	1,5 - 2,5	3,0 - 4,5	5,0 - 7,0	8,0 - 10	10 - 14
	4		1,0 - 1,5	2,0 - 2,5	3,0 - 4,5	5,0 - 6,0	6,0 - 8,0
	5		0,5 - 0,8	0,8 - 1,2	2,0 - 3,5	4,0 - 5,0	5,0 - 6,0
	6			0,6 - 0,8	1,5 - 2,5	2,5 - 3,0	3,0 - 5,0
	8				0,5 - 1,0	1,0 - 1,5	2,0 - 3,0
	10					0,8 - 1,0	1,0 - 1,5
	12						0,8 - 1,0

We reserve the right to change specifications without prior notice

For simple shapes and small production

Maximum cutting thickness, only for sampling, not for production

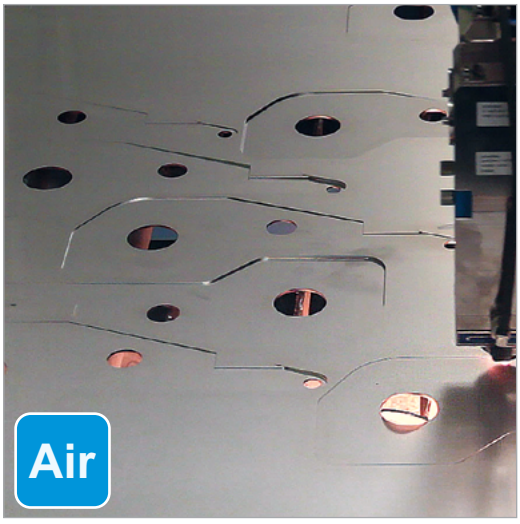
Laser Sources

Auxiliary Gases For Fiber Laser Cutting

- The laser cutting process relies on an assist gas, either active or inert. The gases used currently in the industry are oxygen, nitrogen and air.
- Machine is equipped standard with automatic gas console for using oxygen. The solenoid and proportional valves regulate the gas pressures (set in the control) during the cutting process without the interference of the operator.

- **OXYGEN -** this is the most commonly used gas, especially when working with carbon steel. Being an active gas, during the cutting process the reaction between oxygen and metal generates additional energy, giving more heat to the process, allowing you to cut thicker plates.
- At the same time it is very important to have an optimized control - too much pressure will decrease cutting quality.

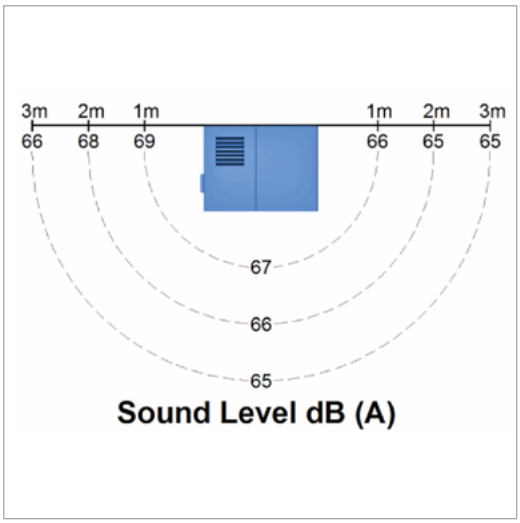
- **NITROGEN** – this non-reactive gas is mostly used for stainless steel and it is usually referred to clean cutting gas. Being an inert gas, it doesn't react with the metal, material removal being done only by the laser power. Therefore the cutting capacities are lower.
- At the same time, increasing gas pressure will result in higher cutting speeds. But the process is limited by the cooling effect of the high pressure gas.



- **AIR -** although not a new concept, it recently has become very popular mainly because of it's low cost. Compared with N2, air assisted cuts are around 20% less in quality, but the cost reductions can reach up to 50%.
- The choice of the assist gas is determined by the type of applications. Clearly air is not the best gas for all instances, there are cutting jobs for which nitrogen or oxygen offer a better solution.

Dust collector and filtration unit

VANTERM PL-Series



- Machine comes standard with a dust collector and filtration unit which protects the operator and the environment against the noxious emissions from cutting operations.
- With compact design and minimal set-up time, these dust collectors are delivered as ready-to-operate (Plug-n-Play) units.
- With built-in fan with silencer, the sound level is extremely low, less than 69 dB(A).

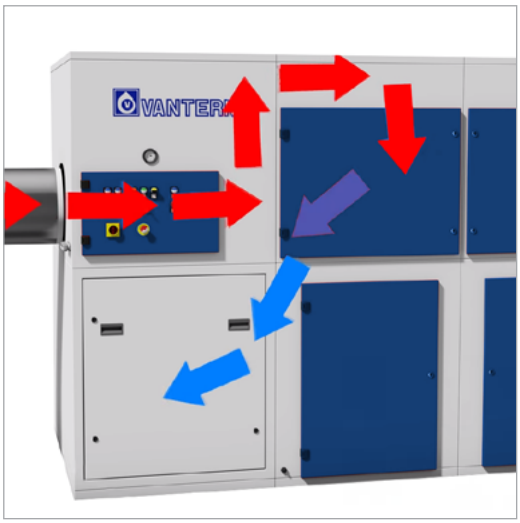
Filter elements

- PL-Series features very high-quality filter units which are W3 Dedusting Class certified, best possible filtration level in today's technology.
- Filter element's average lifetime is 20.000 hours and have proven their efficiency with thousands of applications all over the world.
- Thanks to the HEPA 14 filter quality of VANTERM Panel Filter Technology, PL Dust collectors separate the ultra-fine dust particles including as small as 0,12 microns with 99,997% filtration efficiency.
- Filters are ePTFE membrane laminated which facilitates an easy dust release and long lifetime.

Dust collector and filtration unit

Functions

- This is a highly effective unit, synchronized with the CNC machine, specially designed for extraction and filtration of dust and fumes generated during cutting operations. It starts and stops with the machine and shares fault signals.



- Standard features include a spark separator function. This has double functionality: to cool down the cutting residuum and to remove (by cyclonic separation) the bigger parts to prevent damage to the filters.

- Additional integrated functions can be checked via optical sensors on the side control panel.
- Unit features a jet pulse cleaning system. This is controlled automatically and is activated based on the dust load on the filter surface.
- Dust level of the filter elements is shown in real-time by the top manometer.

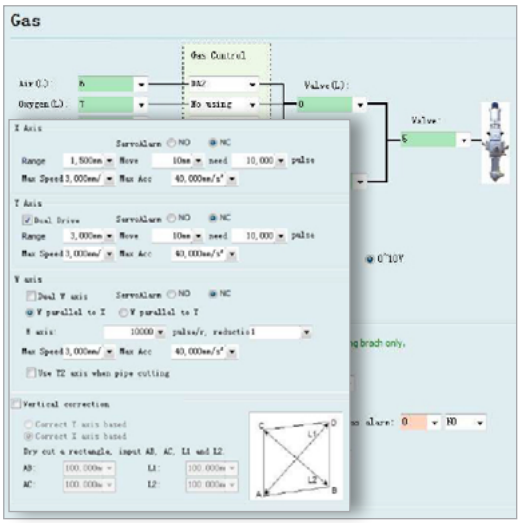
- User friendly dust bin design which allows easy change in just a few minutes.
- Operators only clamp / unclamp the bin without having any contact with the hazardous dust particles.

ACE Laser

State of the art cutting technology sets the standard in price and performance

Control Unit

- Machine control and operation are done on the main control panel which is located in front of the machine.
- It is a high performance CNC system with short look-ahead processing time and intelligent speed control to provide the best cutting experience.
- Very intuitive and user friendly user interface with various powerful functions.



- KNUTH engineers ensure optimal controlled laser power and cutting process by predefining advanced settings for laser input, focus control, height control and auxiliary gas connections.
- Machine is delivered with preconfigured mechanical parameters like feed speed, pitch compensation, origins, software limits, axis directions, etc.

- Additionally, for quicker and easier workpiece preparation, the machine is delivered standard with MPG.

- You can have full visualization of the cutting process through two cameras which provide complete real time monitoring of operations. One is inside the housing, targeted on the cutting process and the second one is in the back, for checking the table exchange system.

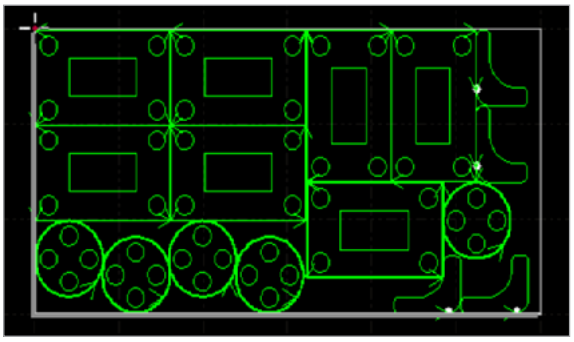
ACE Laser

State of the art cutting technology sets the standard in price and performance

Built-in cutting software

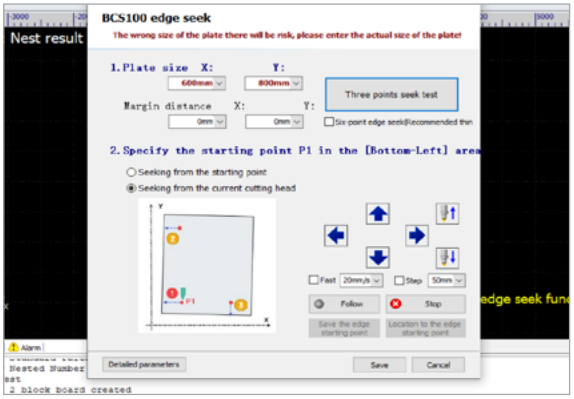
CypCut - Built-in Nesting and Cutting Software

General Overview
- Our machine is delivered standard with Cypcut software. It provides all the necessary features and tools to manipulate the design you add, as well as ways to directly send programs to the cutting machine while showing the status about the operation at all times.
- To give the operator the full control of the part production, the software takes you through all steps of the process, from importing the drawing until part cutting.
- Supports remote control through wireless teach box and Ethernet.

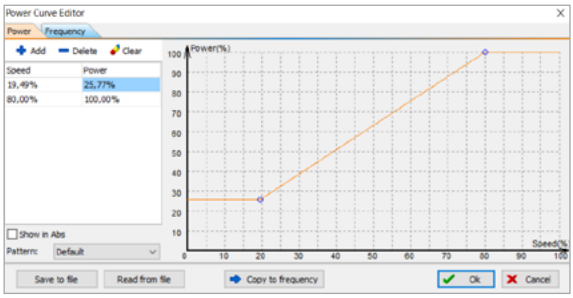


File management
- With powerful material library functions, you can keep all processing parameters so that it can be used again for the same material.
- It supports most common file extensions AI, DXF, PLT, Gerber, LXD and other graphic data formats.
- When importing the graphics, CypCut will automatically remove trivial and duplication, combine near as well as automatically smooth, sort and ungroup.

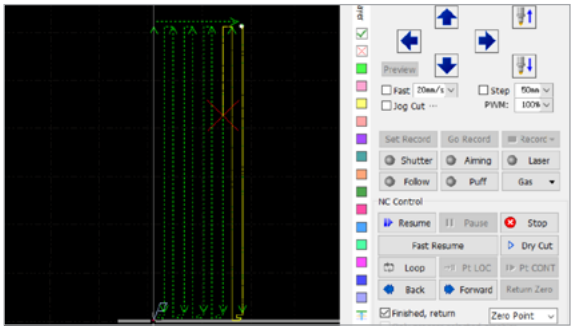
Functions
- Automatically seek edge and precise positioning.
- You can easily set the lead, slotted compensation, lead seal without gap, all basic editing functions, like mirror, rotation, alignment and advanced editing functions like curve splitting, curve connection, curve smoothness, text-to-curve, component integration, and many other functions.



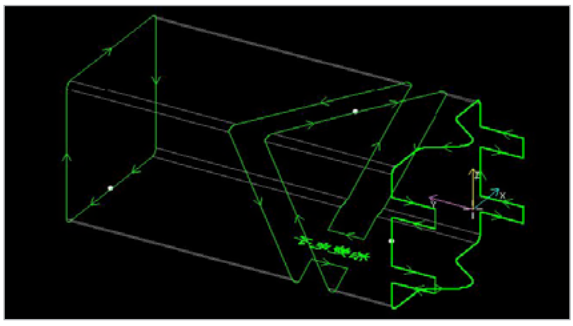
Real time laser power adjustment
- It allows you to edit the power curve and frequency in real-time, and to set parameters of slow starting.



Breakpoint memory
- With processing breakpoint memory, for tracing the breakpoint forwards and backwards, useful function when processing advanced graphics. Allows you to get positioned at any point of the process, to stop or temporarily stop and start processing from any position.



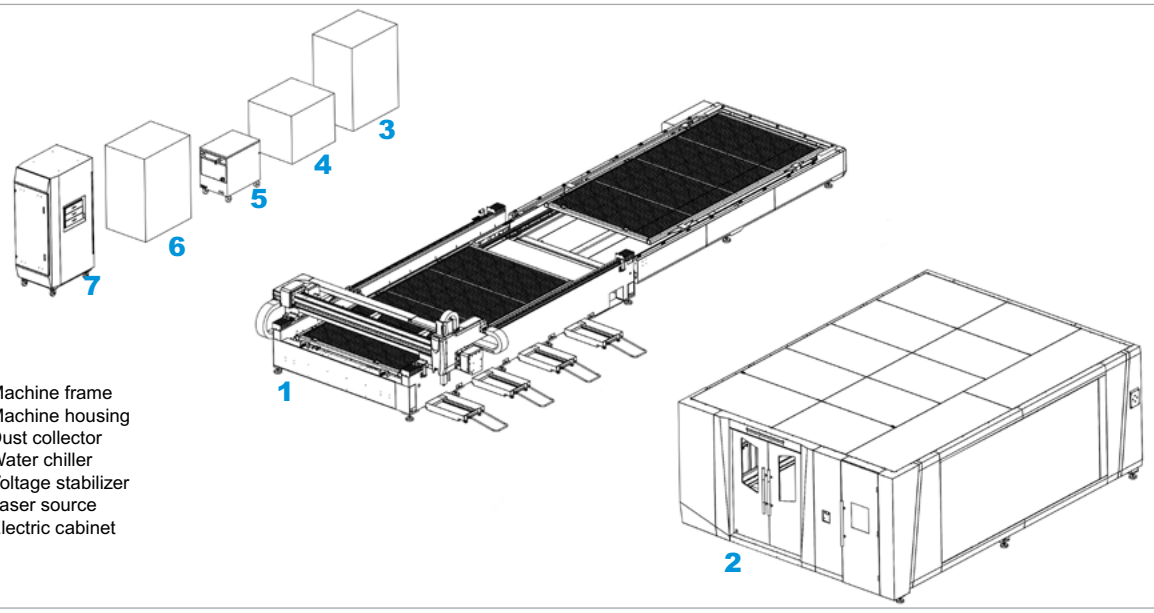
Nesting
- Time saving automatic nesting with various options which can be tailored according to customer's application and guarantee minimum material loss.
- The software includes several predefined nesting patterns which cover most common cutting scenarios.



ACE Laser

State of the art cutting technology sets the standard in price and performance

Technical Data



1. Machine frame
2. Machine housing
3. Dust collector
4. Water chiller
5. Voltage stabilizer
6. Laser source
7. Electric cabinet

ACE Laser Series		ACE Laser 3015	ACE Laser 4020	ACE Laser 6020
Working area				
Table dimensions	mm	3.000×1.500	4.000×2.000	6.000×2.000
Max. workpiece weight	kg	1.000	1.500	2.000
Axis acceleration X / Y axis	m/s²	10	10	8
Axis acceleration Z axis	m/s²	5	5	5
Travels				
Travel X-axis	mm	1.520	2.020	2.020
Travel Y-axis	mm	3.050	4.050	6.050
Travel Z-axis	mm	100	100	120
Rapid feed				
X axis rapid feed	m/min	100	100	80
Y axis rapid feed	m/min	100	100	80
Change time at cutting table	sec	10 - 15	12 - 17	15 - 20
Drive capacity				
Drive capacity X-axis	kW	1,0	1,0	2,0
Drive capacity Y-axis	kW	1,5	1,5	2,0
Drive capacity Z-axis	kW	0,4	0,4	0,4
Supply voltage	V	400	400	400
Measures and weights				
Overall dimensions (L×W×H)	m	9,8x3,7x2,15	10,34x4,28x2.2	16,30x4,74x2,2
Weight	kg	8.000	9.000	17.800
Fiber laser source	W	1.000 - 6.000	1.000 - 6.000	1.000 - 6.000

* Due to the process of constant improvement, products and product's data can change without notice.

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Standard Accessories

Ytterbium Raycus Fiber laser source

- High-Power fiber laser sources from Raycus, with very high electro-optical conversion efficiency.
- Standard with laser power between 1-6 kW, but we have bigger sources available on demand.

CNC controller with integrated CypCut cutting software

- Windows based CNC controller with integrated CypCut cutting software designed as a complete solution for laser cutting industry.
- Includes drawing import and editing, nesting, path generation and real-time process control.

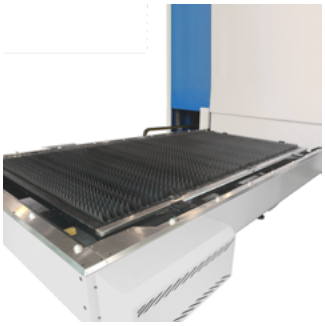
RayTools cutting head

- For laser sources 1 - 4 kW.
- High quality Swiss designed with built-in motor and drive unit, auto-focus, collision sensor and closed-loop water cooling system.

BOCI cutting head

- For 6 KW laser sources.
- Specially design for high-performance cutting with high-power laser sources. It can easily cut through thick materials and prouce high-quality cuts.

Automatic shuttle table

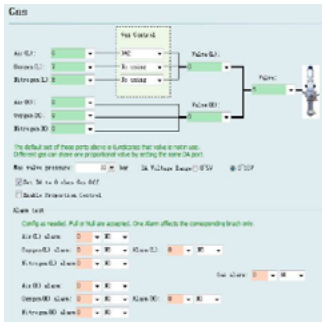


- Automatic shuttle table system which minimizes production downtime using the second table for setting the plates or unloading the cut parts, during the cutting process.

Vanterm - filter exhaust system

- Top quality highly certified filtration unit designed to extract and filter the dust, fume and smoke which are generated during cutting operations.
- Unit capacity depends on machine cutting surface and the power of the laser source.

Automatic gas console

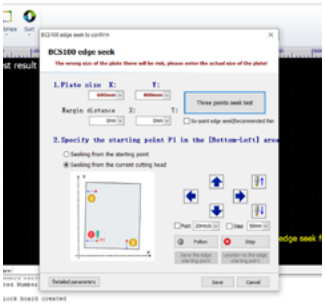


- Integrated in the machine, this unit adjusts and maintains gas pressure when cutting with oxygen to ensure the best cutting quality.
- It's controlled by the CNC unit and while cutting it doesn't require any assistance from the operator.

Central lubrication

- Mounted behind the bridge, this unit ensures automatic central lubrication, which minimizes service requirements and greatly increases machine reliability.

CAD/CAM Software (CypCut)



- CAD/CAM Software which provides all the necessary features and tools to manipulate your design.
- Includes drawing import and editing, nesting, path generation and realtime process control.

Water chiller

- Energy efficient water chiller with very high cooling performance to deliver a constant laser power for best cutting quality and speed.
- Standard features include automatic temperature adjustment, parameters setting, pressure and level control.

Operator manual

- Contains details about installation, machine components, operation and maintenance.
- Includes technical diagrams and spare parts list.
- Includes software and programming instructions.

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Optional Accessories

Laser head starting set for stainless steel / aluminum

- Set of consumables for first start-up and tests.
- Contains protective glass, ceramic part and nozzles.
- Suitable for cutting stainless steel or aluminum.

Laser head starting set for mild steel

- Set of consumables for first start-up and tests.
- Contains protective glass, ceramic part and nozzles.
- Suitable for cutting mild steel.

Refrigerated compressed air dryers

- Dew Point + 3°C
- Max. working pressure: 16 bar
- Flow rate: 0,88 m^3/min
- Connection: 1/2"
- Dimensions (LxWxH): 413x363x557 mm
- Including first and second stage filters

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