

DENALIWELD

DENALIWELD INC. USA

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DENALIWELD



20+

Years of combined welder experience
on our engineering team

150+

U.S. cities served through our dealer
network

2000+

Machines shipped annually (100 %
duty cycle certified)

120+

Preset welding parameters, AWS &
EN-ISO validated

Made by Welders - For Welders

Operator-centric laser welding machines engineered

Assembled in Illinois, USA



ABOUT US

DenaliWeld INC, is a proud employee-owned fiber laser welding machine manufacturer based in Chicago, USA. The company is bolstered by the most experienced engineers and design personnel in the laser industry with multiple innovative patents for our superior laser welding machines. All DenaliWeld machines are designed in Chicago and manufactured in Chicago factory. All laser welding machines have CE and SGS certifications.

Cooperative Partner



PRODUCTS

JET SERIES

Welds up to 3/8" Stainless Steel (SS) and Aluminum (AL)
100% Duty Cycle for Continuous Operation

WATER SERIES

Advanced water-cooled laser systems designed for long-duty applications

COBOT WELDING

Automated laser welding solutions for increased precision and repeatability

LASER CLEANING

Non-damaging to Base Materials
Effective on Metal, Wood, Ceramics, and Most Other Surfaces

LASER CUTTING

DENALICUT Metal Sheet Laser Cutting Machine
Designed for Practical Sheet Metal Fabrication

LASER SAFETY

Certified laser safety solutions for workshops, training centres and industrial environments.

JET SERIES

DENALIWELD

Air Cooled Fiber Laser Welding Machine

Introducing the Jet Series Portable Laser Welders – engineered with precision and innovation. Our patented CUAL mosaic laser source ensures reliable continuous operation in extreme environments, ranging from -10°C to 40°C (14°F to 104°F).

- **Compact & Lightweight:** Weighing only 90 pounds, the Jet Series is the smallest and lightest portable laser welder available.
- **Modular Design:** Easy maintenance and repair with a user-friendly modular structure.
- **Versatile Functionality:** Three-in-one capabilities include Welding, Cleaning, and Seam Cleaning.
- **Seam Tracking (Optional):** Enhance precision with an optional seam tracking system.
- **User-Friendly Operation:** All parameters are pre-set for effortless, one-click operation.
- **Data Tracking:** Integrated welding data acquisition system for monitoring operations and calculating costs.
- **Automation Ready:** Seamlessly switch to Cobot/Robot automation with DENALIWELD ROBOX™ at the touch of a button.

Experience the future of portable laser welding with the Jet Series – precision, portability, and power, redefined.

Main Components

DenaliWeld Laser Source

Experience precision and power with the DenaliWeld Laser Source—delivering accurate output and consistently operating at full power.



- **Patented CUAL Mosaic Laser Source:** Ensures continuous, reliable performance across a wide temperature range of -10°C to 40°C (14°F to 104°F), maintaining stability under demanding conditions.
- **Advanced Laser Control System:** Designed in-house by DenaliWeld, this system produces a smooth output curve, enhancing weld quality and delivering superior performance.

Built for accuracy, durability, and efficiency—DenaliWeld sets the standard for high-performance laser technology.

Benefit 1: Advanced 976nm Laser Pump Technology

Our laser pump utilizes cutting-edge 976nm technology, achieving an impressive 45% power transfer efficiency—far superior to the less than 20% efficiency of traditional 915nm pumps. Despite its compact size, it delivers higher output power while conserving energy. Although sensitive to temperature, our advanced chiller system ensures the working temperature remains consistently within a safe range, guaranteeing optimal performance and longevity.

Benefit 2: Proudly assembled in the USA

We assemble our equipment locally in the U.S. using top-tier international brand components, adhering to global standards as well as U.S. quality and safety requirements. At the same time, we maintain a robust inventory of parts, accessories, and consumables at our U.S. facility to ensure timely support for maintenance and repair needs.

Benefit 3: Proprietary Laser Control Software

Our independently developed laser control software precisely regulates laser output. By designing a custom output curve, we deliver intelligent and accurate power control, optimizing the welding process for smoother, stronger, and more precise welds.

DenaliWeld Welding Control System



- **Intuitive Controls:** All parameters can be quickly adjusted, allowing for seamless operation and faster setup.
- **Flexible Laser Positioning:** Effortlessly adjust the laser position without worrying about laser deviation, ensuring precision every time.
- **Advanced Safety Features:** Built-in safety settings provide enhanced protection for both users and observers, ensuring a safer working environment.
- **One-Click Welding:** Select from accurate preset parameters with a simple click to start welding, improving efficiency and reducing setup time.

- **Benefit 1: User-Friendly Interface**
- **Benefit 2: Comprehensive Access to Settings**
- **Benefit 3: Advanced Welding Log System**

DenaliWeld Laser Welding Head



- Experience versatility and precision with the DenaliWeld 3-in-1 Multifunctional Laser Welding Head, designed to deliver superior performance and ease of use.
- **3-in-1 Multifunctionality:** Combines welding, remote cleaning, and seam cleaning capabilities in a single laser head, enhancing efficiency and reducing equipment needs.
 - **Intuitive Display with Status Indicators:** Stay informed with a clear, easy-to-read display and indicator lights that provide real-time updates on the machine's operational status.
 - **Independent Air-Cooled Design:** Features a dedicated air-cooled channel for stable performance and consistent operation, even under demanding conditions.

DenaliWeld Wire Feeder



- Designed for precision and ease of use, the DenaliWeld Wire Feeder seamlessly integrates with your welding system to deliver consistent performance.
- **Enhanced Wire Capacity:** The newly designed system supports wire feeding up to 2mm (5/64), accommodating a wider range of welding applications.
 - **Double Wire Feeding:** Offers dual-wire feeding capability, increasing efficiency and flexibility for complex welding tasks.
 - **Seamless Integration:** Specifically designed to complement the DenaliWeld laser welding machine, ensuring smooth operation and optimal performance.
 - **User-Friendly Operation:** Equipped with a physical control button for easy operation, even while wearing welding gloves—ensuring quick adjustments and enhanced convenience.

Technical Parameter

Item	JET1500	JET2000	JET3000
Laser Power	1500W	2000W	3000W
Operating System	3-in-1 / Cleaning	3i-n-1 / Cleaning	3-in-1 / Cleaning
Laser Wavelength	1060-1100 nm	1060-1100 nm	1060-1100 nm
Fiber Length	Approx. 10 m (32.8 ft)	Approx. 10 m (32.8 ft)	Approx. 10 m (32.8 ft)
Operating Mode	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated
Oscillation Operation Mode	Spot, Line	Spot, Line	Spot, Line
Positioning	Laser red dot	Laser red dot	Laser red dot
Air Pressure	10-15 L/min (0.35-0.53 ft³/min)	10-15 L/min (0.35-0.53 ft³/min)	10-15 L/min (0.35-0.53 ft³/min)
Voltage	AC220V/380V±5%	AC220V/380V±5%	AC480V±5%
Power Consumption	6.5kW	7.7kW	9.2kW
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Current	29A/10A	35A/14A	14A
Focus Length	150mm (5.91 in)	150mm (5.91 in)	150mm (5.91 in)
Welding Speed	0-80 cm/min (0-31.5 in/min)	0-90 cm/min (0-35.4 in/min)	0-105 cm/min (0-41.3 in/min)
Cooling System	Air cooling		
Laser Protection Method	Security lock + Safety button		
Touch Panel	Monitor + PLC		
Wire Feeder	Single/Double Motor Automatic "push" and "pull"		
Wire Thickness (wire feeder)	0.8 mm, 1.0 mm, 1.2 mm, 1.6 mm, 2.0 mm (0.030", 0.035", 0.045", 1/16", 5/64")		
Machine Weight	Approx. 68kg (150 lb)	Approx. 74kg (163 lb)	Approx. 83kg (181 lb)
Machine Measurements	Height 736mm, Width 433mm, Length 883mm	Height 736mm, Width 433mm, Length 883mm	Height 696mm, Width 493mm, Length 936mm
3-in-1 Laser Head Weight	Approx. 900 g (1.98 lb)		
Cleaning Head	Approx. 980 g (2.16 lb)		

WATER SERIES



Water Cooled Fiber Laser Welding Machine

DenaliWeld delivers precision, power, and innovation with our water-cooled fiber laser welding machines. As a proud employee-owned company, we are committed to providing cutting-edge technology and exceptional reliability.

- **High Power Output:** Supports up to 3000W of continuous laser output, ensuring consistent and efficient performance across a range of applications.
- **Reliable Operation in Extreme Conditions:** Designed for continuous use, with reliable performance in environments ranging from -10°C to 40°C (14°F to 104°F).
- **Modular Chiller System:** Water-cooled with a modular design for easy maintenance and repair, ensuring minimal downtime and optimal cooling.
- **Compact & Lightweight:** Engineered for portability, it is the smallest and lightest machine in its class without compromising power.
- **3-in-1 Versatility:** Combines welding, cleaning, and seam treatment functions in a single machine, providing multi-purpose functionality.
- **User-Friendly Controls:** Pre-set parameters enable one-click operation, reducing setup time and enhancing ease of use.
- **Welding Data Acquisition System:** Tracks operation metrics and cost calculations for better process monitoring and efficiency management.
- **Automation Ready:** Seamlessly switch to cobotor robotic welding with a single click using DENALIWELD ROBOX™, enabling automated precision welding.

Main Components

DenaliWeld Laser Source

Built for precision, power, and reliability, the DenaliWeld Laser Source delivers consistent performance across a range of industrial applications, from robotic to hybrid welding.



- **Accurate, Full-Power Output:** Provides precise, stable laser delivery, ensuring full power output for superior weld quality.
- **Compact & Reliable Design:** Designed for continuous operation in demanding environments, with reliable performance from -10°C to 40°C (14°F to 104°F).
- **Advanced Laser Control System:** Independently designed by DenaliWeld, our system delivers a smooth output curve, resulting in cleaner welds and greater consistency.
- **High-Power Capability:**
 - Up to 8000W output for robotic welding, providing speed and precision for automated systems.
 - Up to 20000W output for hybrid welding, delivering unmatched power for high-performance industrial applications.

DenaliWeld Welding Control System



- **Intuitive Controls:** All parameters can be quickly adjusted, allowing for seamless operation and faster setup.
- **Flexible Laser Positioning:** Effortlessly adjust the laser position without worrying about laser deviation, ensuring precision every time.
- **Advanced Safety Features:** Built-in safety settings provide enhanced protection for both users and observers, ensuring a safer working environment.
- **One-Click Welding:** Select from accurate preset parameters with a simple click to start welding, improving efficiency and reducing setup time.

DenaliWeld Laser Welding Head



- The DenaliWeld Laser Welding Head is designed for versatility, precision, and operator convenience, offering advanced functionality for demanding industrial applications.
- **3-in-1 Multifunctional Design:** Integrates welding, remote cleaning, and seam cleaning capabilities into a single laser head, enhancing efficiency and operational flexibility.
 - **Intuitive Status Display:** Equipped with indicator lights for real-time monitoring, allowing operators to easily track the machine's status and performance.
 - **Advanced water-Cooled System:** ensures stable operation for up to four hours without overheating, as verified by test records.

DenaliWeld Water Chiller



- Engineered for efficiency, reliability, and sustainability, the DenaliWeld Water Chiller provides superior cooling performance to support long-term laser operation.
- **Modular Design for Easy Maintenance:** Built with independent modules, allowing for quick maintenance and hassle-free replacement, minimizing downtime.
 - **Optimized Cooling Efficiency:** Designed with precise cooling capacity calculations, delivering maximum cooling performance while maintaining minimal power consumption, ensuring stable operation during continuous use.
 - **Eco-Friendly Refrigerant:** Utilizes R410a refrigerant, which complies with environmental standards, ensuring sustainable and responsible.

The Key of Cooling

At DenaliWeld, we use an advanced Copper + Aluminum heat exchanging system to provide superior cooling performance. Unlike the micro-tube exchangers commonly found in 99% of coolers on the market, our system delivers much more reliable and efficient cooling, ensuring consistent and optimal temperatures for your laser equipment. This results in longer operational life, enhanced performance, and increased overall efficiency.

DenaliWeld Wire Feeder



- Designed for precision and ease of use, the DenaliWeld Wire Feeder seamlessly integrates with your welding system to deliver consistent performance.
- **Enhanced Wire Capacity:** The newly designed system supports wire feeding up to 2mm (5/64), accommodating a wider range of welding applications.
 - **Double Wire Feeding:** Offers dual-wire feeding capability, increasing efficiency and flexibility for complex welding tasks.
 - **Seamless Integration:** Specifically designed to complement the DenaliWeld laser welding machine, ensuring smooth operation and optimal performance.
 - **User-Friendly Operation:** Equipped with a physical control button for easy operation, even while wearing welding gloves—ensuring quick adjustments and enhanced convenience.

Technical Parameter

Laser Power	1500W	2000W	3000W
Operating System	3-in-1 / Cleaning	3-in-1 / Cleaning	3-in-1 / Cleaning
Laser Wavelength	1060-1100nm	1060-1100nm	1060-1100nm
Fiber Length	Approx. 10 m (32.8 ft)	Approx. 10 m (32.8 ft)	Approx. 10 m (32.8 ft)
Operating Mode	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated
Oscillation Operation Mode	Spot, Line	Spot, Line	Spot, Line
Positioning	Laser red dot	Laser red dot	Laser red dot
Gas flow rate	10-15L/min	10-15L/min	10-15L/min
Voltage	AC220V/380V±5%	AC220V/380V±5%	AC480V±5%
Power Consumption	7kW	9kW	11kW
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Current	32A/19A	40A/24A	29A
Focus Length	150mm	150mm	150mm
Welding Speed	0-95cm/min (0-37.4 in/min)	0-105cm/min (0-41.3 in/min)	0-105cm/min (0-41.3 in/min)
Cooling System	Water cooling		
Laser Protection Method	Laser beam lock + Security lock + Safety button		
Touch Panel	Monitor + PLC		
Wire Feeder	Single/Double Motor Automatic "push" and "pull"		
Wire Diameter in Automatic Mode	0.8 mm, 1.0 mm, 1.2 mm, 1.6 mm, 2.0 mm (0.030", 0.035", 0.045", 1/16", 5/64")		
Machine Weight	Approx. 80kg/176bl	Approx. 85kg/187bl	Approx. 90kg/198bl
Machine Measurements	Height 810mm, Width 580mm, Length 1170mm	Height 794mm, Width 497mm, Length 984mm	Height 1000mm, Width 720mm, Length 1370mm
3-in-1 Laser Head Weight	Approx. 900g/1.98lb		
3-in-1 Laser Head Size	L: 273.38mm, W: 36.5mm, H: 168.57mm		
remark	Cleaning function Max. 2kw for operation		

LASER CLEANING

DENALIWELO



JET MOPA Laser Cleaning Machine

- **Reliable Continuous Operation:** Engineered for consistent performance in environments ranging from -10°C to 40°C (14°F to 104°F).
- **High Power Output:** Delivers up to 300W of laser power for fast, effective, and thorough rust removal.
- **Modular Chiller Design:** Easy maintenance and repair with a modular cooling system that ensures optimal temperature control during extended use.
- **Compact and Lightweight:** Space-saving design with the lightest weight in its class, providing easy mobility and flexible operation.
- **One-Click Operation:** Pre-set parameters allow for simple, one-click activation, making the machine user-friendly and efficient.
- **Clean Results:** MOPA laser cleaning removes rust, paint, and surface contaminants with high precision—leaving minimal to no trace and preserving the integrity of the base material.
- **Multi-Material Compatibility:** MOPA laser cleaning systems are capable of removing surface contaminants not only from metal but also from non-metal materials like wood, ceramics, and plastics—making them highly versatile for diverse applications.

Main Components

DenaliWeld Laser Source



Built for precision, power, and reliability, the DenaliWeld Laser Source delivers consistent performance across a range of industrial applications, from robotic to hybrid welding.

- **Accurate, Full-Power Output:** Provides precise, stable laser delivery, ensuring full power output for superior weld quality.
- **Compact & Reliable Design:** Designed for continuous operation in demanding environments, with reliable performance from -10°C to 40°C (14°F to 104°F).
- **Advanced Laser Control System:** Independently designed by DenaliWeld, our system delivers a smooth output curve, resulting in cleaner welds and greater consistency.

DenaliWeld Welding Control System



- **Intuitive Controls:** All parameters can be quickly adjusted, allowing for seamless operation and faster setup.
- **Flexible Laser Positioning:** Effortlessly adjust the laser position without worrying about laser deviation, ensuring precision every time.
- **Advanced Safety Features:** Built-in safety settings provide enhanced protection for both users and observers, ensuring a safer working environment.
- **One-Click Welding:** Select from accurate preset parameters with a simple click to start welding, improving efficiency and reducing setup time.

Mopa Laser Cleaning Head



- Engineered for efficiency and user comfort, the DenaliWeld Laser Cleaning Head delivers stable performance and intuitive operation for demanding industrial applications.
- **Advanced Cooling System:** Individual air-cooled design channelensures stable operation for up to four hours (based on test records) without the risk of overheating.
 - **Ergonomic Design:** Designed for ease of use, providing comfortable handlingeven when wearing cleaning gloves.
 - **Enhanced Safety (Optional):** Available with an ergonomically designed welding machinethat includes a physical safety off button for quick and secure start/stop operation—even with gloves on.

Fiber Laser Cleaning Head



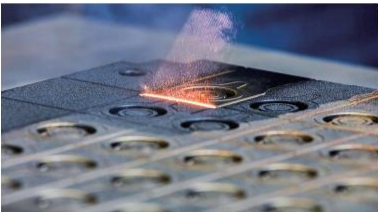
- **Extended Protective Lens Nozzle**
The extended nozzle design effectively shields the protective lens from smoke, dust, and debris, significantly extending lens service life while reducing maintenance and consumable costs.
- **Professional-Grade Laser Cleaning Performance**
Engineered for demanding industrial cleaning applications, including rust removal, paint stripping, oxide removal, and surface preparation. Delivers stable, efficient, and consistent cleaning performance across a wide range of materials.
- **Ergonomic Handheld Design**
Designed with an ergonomically contoured grip to provide superior comfort and control, minimizing operator fatigue during extended periods of continuous operation.

Technical Parameter

Item	Mopa-300W	2000W
Laser Power	300W	2000W
Laser Wavelength	1060-1070 nm	1060-1100 nm
Fiber Length	5 m (16.4 ft)	10 m(32.8 ft)
Laser Mode	Pulse & continuous	Continuous/Modulated
Positioning	Laser Red Dot	Laser Red Dot
Gas Flow	15-20L/min (0.53-0.71 ft³/min)	15-20L/min (0.53-0.71 ft³/min)
Voltage	AC220V	1Phase 230V
Power Consumption	1.3kW	7kW
Frequency	50/60 Hz	50/60 Hz
Current	6A	29A
Laser Head Weight	Approx. 980 g (2.16 lb)	Approx. 980 g (2.16 lb)
Laser Head Operation Mode	Safety button	Security Lock + Safety Button
Focus Length	210mm (8.27 inch)	800mm (31.5 inch)
Swing width	350mm (13.78 inch)	Max. 80mm (3.15 inch)
Scan speed	0-60000mm/s (0-2400 in/s)	0-20000mm/s (0-800 in/s)
Cooling System	Air cooling	Air cooling
Laser Control Method	Monitor + PLC	Monitor + PLC
Touch Scree	Capacitive	Capacitive

Jet Mopa Laser Cleaning Applications

Denaliweld's laser cleaning systems offer non-abrasive, eco-friendly solutions for removing rust, paint, and contaminants from metal surfaces. These systems enhance surface preparation and maintenance processes, improving overall productivity. MOPA laser cleaning systems are capable of removing surface contaminants not only from metal but also from non-metal materials like wood, ceramics, and plastics—making them highly versatile for diverse applications.



COBOT WELDING

DENALIWELD

DenaliWeld COBOT Welding System

The DenaliWeld COBOT Welding System combines advanced automation with user-friendly technology, delivering precision, efficiency, and seamless integration for modern manufacturing environments.

- **Independently developed:** Our independently developed welding robots and welding control systems are compatible with both air-cooled and water-cooled Denaliweld models, providing flexible integration across multiple platforms.
- **Modular Design for Easy Maintenance:** Engineered for uncomplicated maintenance and quick repairs, reducing downtime and increasing productivity.
- **Intelligent Cobot Programs:** Features a simple user interface with pre-set parameters for one-click operation, making it easy for operators to achieve consistent and precise results.
- **Welding Data Acquisition System:** Monitors and records welding performance, assisting in operation tracking and cost calculations for optimized workflows.
- **Seamless Automation Integration:** With one-click switching, easily transition between Cobot and robot automation using the DENALIWELD ROBOX™ system.
- **Wide Compatibility:** DENALIWELD welding machines are compatible with most leading Cobot manufacturers, ensuring versatility in industrial applications.
- **Advanced Automatic Welding Head:** Utilizing the Automatic Welding Head ((GCR 5/10/16)) enables real-time power adjustments throughout the welding process for enhanced precision and quality.
- **Optional Seam Tracking System:** Available with an optional seam tracking system, allowing for precise weld alignment and improved accuracy.

Features and Configuration

DenaliWeld Collaborative Robots (Cobots) are designed to deliver precision, efficiency, and ease of use, providing a cost-effective solution to elevate your welding operations. With their lightweight, flexible, and intelligent design, these cobots offer best-in-class performance to meet the demands of modern manufacturing.

- **Lightweight and Flexible Design:** Easy to integrate into various production lines, providing versatile welding solutions for a wide range of applications.
- **Intelligent and User-Friendly Operation:** Operators can quickly program the cobots for specific welding tasks, allowing staff to focus on other critical activities and increasing overall productivity.
- **Enhanced Speed and Safety:** With industry-leading operating speeds and advanced safety features, DenaliWeld cobots ensure efficient production while maintaining a safe working environment.
- **Cost-Effective Investment:** Offering affordable automation without compromising quality, DenaliWeld cobots deliver a high return on investment by reducing labor costs and increasing output.
- **Maximum Operational Flexibility:** Seamlessly switch between manual operation and automated welding, allowing for efficient workflow management and adaptability to changing production needs.

Independently developed welding robots and welding control systems

DenaliWeld independently developed welding robots and welding control systems, which are jointly tested to ensure optimal performance, reliability, and functionality to meet evolving user needs. We offer a wide selection of collaborative robot models, creating flexible and efficient automation solutions.

- **Full compatibility:** Compatible with air- and water-cooled DenaliWeld models, allowing for flexible cross-platform integration.
- **Proven Performance:** Rigorous joint testing ensures higher precision, smoother operation, and consistent results in real-world welding applications.

Seamless Transition from Manual to Automated Welding

DenaliWeld collaborative robotic welding solutions are designed for maximum flexibility, featuring handheld welding torches that enable a smooth transition between manual and automated welding.

- **Quick Switching Mechanism:** The laser welding machine is equipped with a manual/automatic switching button, allowing operators to easily toggle between handheld and robotic welding modes.
- **Enhanced Flexibility:** This dual-functionality design supports customized workflows, enabling users to adapt quickly to changing production demands while maintaining precision and efficiency.

Simple and Easy to Use

DenaliWeld collaborative robotic welding systems are engineered for simplicity, offering quick integration and hassle-free setup across a variety of robotic welding applications.

- **Fast Installation:** Designed for rapid deployment, allowing users to get up and running quickly with minimal downtime.
- **User-Friendly Interface:** Intuitive controls ensure easy operation, making it accessible for both experienced professional- and new operators.
- **Versatile Application:** Compatible with various robotic welding tasks, delivering consistent performance across different production environments.



Denbot 5-910



Denbot 10-1300



Denbot 16-2000

Technical Parameters

Technical parameters	Item	Denbot 5-910	Denbot 10-1300	Denbot 16-2000
Robot body	Maximum Load	5kg (11.2lb)	10kg (22.05lb)	16kg (35.27lb)
	Number of axes	6	6	6
	Maximum speed at the end	3.6m/s (11.81ft/s)	3.8m/s (12.47ft/s)	3.5m/s (11.48ft/s)
	Maximum linear velocity at the end	1.5m/s (4.92ft/s)	1.5m/s (4.92ft/s)	1.8m/s (5.91ft/s)
	Effective working radius	917mm (36.1in)	1300mm (51.18in)	2000mm (78.74in)
	Repeatability	±0.02mm	±0.03mm	±0.05mm
	Power consumption	≈200w	≈400w	≈600w
	Installation method	Ground based、Inverted type、Cantilever type		
	IP Grade	IP54/65		
	Ambient temperature	'-10℃ - 50℃	'-10℃ - 50℃	'-10℃ - 50℃
	Storage temperature	'-40℃ - 55℃	'-40℃ - 55℃	'-40℃ - 55℃
	End I/O port	2DI、2DO、EtherCAT、RS485		
Control cabinet	Robot packaging size	698x588x450mm (27.48x23.15x17.72in)	958x508x516mm (37.72x20x20.31in)	1465x516x472mm (57.68x20.31x18.58in)
	Net weight	22kg (48.5lb)	37.8kg (83.33lb)	60kg (132.28lb)
	Input power supply	'100-240VAC 47-63HZ 10A	'100-240VAC 47-63HZ 10A	220-240VAC 47 -63Hz 10A /100-200VAC 47-63HZ 16A
	IP Grade	IP44	IP44	IP44
	Communication interface	TCP/IP,Modbus/TCP,Profinet(Slave From),Ethernet/IP(Slave From),CAN,RS485		
	IO interface	16DI, 16DO (PNP,24V/Max 500mA) Configurable 8DI/8DO		
FlexPendant	Size	410x306x292mm (16.14x12.05x11.5in)		
	Weight	13.6kg (29.98lb)	13.6kg (29.98lb)	13.8kg (30.42lb)
	External dimensions (Excluding grip handle)	295x225x45mm (11.61x8.86x1.77in)		
	IP Grade	IP54	IP54	IP54
	Screen size	10.4 in		
	Screen resolution	800*600@60HZ		
	Weight	1.3kg (2.87lb)		

Robotic Welding



Robotic Laser Welding System

The DENALIWELD Robotic Welding System is designed for manufacturers who need faster welding speed, more stable weld quality, and a practical path to automation. By combining DENALIWELD laser welding machines, Denbot robotic arms, intelligent welding control, wire feeding, and precision robotic welding heads, this system helps simplify automated laser welding for modern production environments.

Whether you are upgrading from manual welding or building a flexible welding workstation, DENALIWELD provides a complete solution for consistent, repeatable, and high-quality welds.

- Integrated robotic laser welding solution
- Supports Auto Weld and Auto Weld Pro robotic welding heads
- Designed for stable, repeatable, automated welding
- Suitable for stainless steel, carbon steel, aluminum, galvanized sheet, copper, and thin metal parts

Auto Weld Robotic Laser Welding Head



The Auto Weld Robotic Wobble Laser Welding Head is designed for automated laser welding applications that require fast welding speed, stable weld formation, low heat input, and repeatable weld quality. With adjustable wobble modes, integrated CCD vision, a compact body structure, and easy I/O integration, the Auto Weld Head helps robotic welding systems achieve cleaner, smoother, and more consistent welds across thin stainless steel, carbon steel, galvanized sheet, copper, aluminum alloy, and other metal materials.

- 8 wobble modes for different welding processes
- Adjustable wobble frequency and amplitude
- Built-in CCD camera for visual monitoring
- I/O signal control for robotic system integration
- Fully sealed optical structure for better dust protection
- Integrated motor driver for stable operation
- Approx. 2.85 kg lightweight body design
- QBH interface for fiber laser compatibility



PRO

The Auto Weld Pro Robotic Laser Welding Head is designed for medium-power automated laser welding applications. Upgraded from the Auto Weld platform, it features enhanced structural design, improved thermal management, and greater operational stability for demanding industrial environments.

With an optimized optical system and integrated wire feeding module, the Auto Weld Pro delivers deeper weld penetration, reduced porosity, and superior weld consistency, making it an ideal solution for robotic laser wire-feed welding.

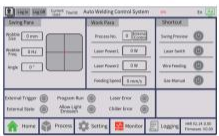
- Multiple wobble welding patterns
- Integrated wire feeding module with ± 0.2 mm feeding accuracy
- Coaxial wire feeding design for greater flexibility and reduced interference
- Built-in collimation and adjustable focus
- Integrated coaxial collision protection
- High-definition CCD vision system compatible with WeldMaster AI
- Optimized optical design for stable, high-efficiency welding



Air Cooled Laser Welding Machine



Denbot Robotic Arm Integration



Robotic Welding Control System

LASER CUTTING

DENALIWELD

Designed for Practical Sheet Metal Fabrication

The DENALICUT Metal Sheet Laser Cutting Machine is built for manufacturers that need a reliable, compact, and safety-focused cutting system for daily sheet metal production.

Compared with traditional cutting methods, fiber laser cutting helps improve cutting speed, reduce heat impact, create smoother edges, and minimize secondary finishing work. With a fully enclosed body and drawer-style table structure, DENALICUT is especially suitable for workshops that need safer operation, cleaner production, and better use of floor space.

The 5*10 ft model is designed for standard sheet metal processing, while the 4*8 ft model provides a more compact option for smaller-format materials, limited workshop space, and flexible production needs.

Key Features

■ High-Rigidity Frame for Long-Lasting Precision

The upgraded machine frame is designed to minimize deformation during long-term operation. Its anti-burning structure helps reduce the impact of heat on the cutting platform, supporting smoother high-speed movement and more stable cutting accuracy.

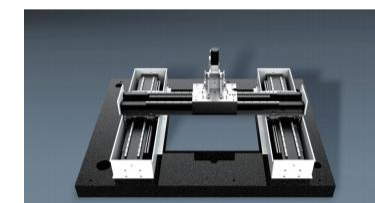


■ Fully Enclosed Design for Safer Operation

The enclosed machine structure helps shield laser radiation and provides an additional layer of protection for operators. It is especially suitable for production environments that require improved safety, cleaner operation, and better control of cutting fumes and sparks.

■ Compact, High-Integration Structure

DENALICUT combines the laser system, CNC control, cooling, dust extraction, and cutting platform into an integrated machine structure. This compact layout helps save workshop space and simplifies daily operation.



■ High-Rigidity Integrated Design

Equipped with a high-power fiber laser and imported precision transmission system for smooth edges and minimal heat-affected zones.

DENALICUT Metal Sheet Laser Cutting Machine

The DENALICUT is a professional metal sheet laser cutting machine line from DENALIWELD, designed for precise, efficient, and safer sheet metal processing. With a fully enclosed structure, drawer-style working table, high-rigidity machine frame, and intelligent CNC control system, the DENALICUT helps fabrication shops and industrial manufacturers achieve clean cutting edges, stable accuracy, and smoother daily production.

The series includes two models: 5*10 ft for standard sheet metal processing and 4*8 ft for compact workshop applications. Whether you are cutting carbon steel, stainless steel, aluminum, or brass, DENALICUT provides a practical fiber laser cutting solution for modern metal fabrication.

- Fully enclosed drawer-style fiber laser cutting machine
- Designed for metal sheet cutting applications
- High-rigidity frame for stable long-term cutting accuracy
- Smart dual-screen interface for easier operation and monitoring

DENALICUT 5*10

The DENALICUT 5*10 is designed for standard metal sheet cutting applications. With a reference processing format of 5 ft*10 ft, it is suitable for common sheet metal fabrication tasks and industrial production environments.

It is a practical choice for metal fabrication shops, display cabinet manufacturers, chassis and rack production, metal furniture manufacturing, kitchenware production, and custom metal parts processing.

DENALICUT 4*8

The DENALICUT 4*8 is designed for compact sheet metal processing needs. It is suitable for workshops that need a smaller-footprint fiber laser cutting machine without sacrificing cutting quality, safety, or operational efficiency.

This model is ideal for smaller parts, sample cutting, flexible production, teaching equipment, custom fabrication, and businesses with limited workshop space.

Cutting speed and thickness

- 3 kW: Recommended for cutting up to 3/8 in. AL and SS at speeds of 5 ft/min.
- 6 kW: Recommended for cutting up to 1/2 in. AL and SS at speeds of 2.5–4 ft/min.
- 12 kW: Recommended for cutting up to 13/16 in. AL and SS at speeds of 2.5–4 ft/min.

Stable Cutting Precision

The high-rigidity machine frame helps reduce vibration and deformation during operation, supporting stable motion, accurate positioning, and consistent cutting quality over long-term use.

One-Touch Extendable Table

The table extends automatically with one touch, eliminating manual pulling and making loading, unloading, and daily operation faster, easier, and safer.

Fully Modular Structure

A fully modular design enables fast one-day installation. The machine also comes standard with a fume purifier and transformer for easier workshop setup.

Smooth Edges and Minimal Heat-Affected Zones

The integrated fiber laser system and precision transmission structure are designed to deliver cleaner cutting edges with reduced heat impact. This helps reduce the need for secondary finishing and improves overall part quality.

Technical Parameter

Item	Subitem	DENALICUT 5*10ft	DENALICUT 4*8ft
Basic parameters	Working area	5*10 ft	4*8 ft
	Table load bearing	1500 lb	1100 lb
	Machine size	16.2 ft × 7.5 ft × 7.0 ft (L × W × H)	14.6 ft × 6.9 ft × 7.0 ft (L × W × H)
	Machine weight	≤6 kw: 11000 lb 12 kw: 11500 lb	≤6 kW: 10000 lb 12 kW: 10500 lb
Operation parameter	Max. linkage speed	380 ft/min	380 ft/min
	Max. acceleration	0.8G	0.8G
	Positioning accuracy	±0.0012 in./39.4 in	±0.0012 in./39.4 in
	Repositioning accuracy	±0.0008 in./39.4 in	±0.0008 in./39.4 in
	Laser source	DENALICUT	
	Laser head	DENALICUT	
Mechanical system	Machine bed	Welded bed	
	Servo motor and driver	INOVANCE	
	Gantry structure	Aluminum profile gantry	
	Slideway	T-Win	
	Rack	T-Win	
	Reducer	MOTOREDUCER	
Control system	Control system	Cypcut	
	Display size	21.5 in	
	Cutting gas automatic pressure regulation function	O2+N2	
	Breaker	Schneider	
	Relay	Schneider	
	Electrical proportional valve	SMC	
	System identification file format	DXF、LXD、PLT、AI、Gerber	

LASER SAFETY



DenaliWeld Laser Safety Curtain

DenaliWeld Laser Safety Curtain is specifically developed to resist high-energy laser irradiation. Unlike conventional fire-resistant fabric or ordinary PVC fire curtains, it provides certified optical protection, flame retardancy, and durable modular shielding for laser processing environments.



Dedicated Laser safety Curtain:

Specifically developed to resist high-energy laser irradiation, far from conventional fire-resistant fabric or ordinary PVC fire curtains.



Excellent Flame Retardancy:

Passed the NFPA701:2023 flame retardancy test, self-extinguishing upon removal from flame, with no melting drops or fragments.



Rich Extension Functions:

Laser safety windows, laser warning lights, and laser safety interlocks can be added.



Comprehensive Complidnce:

Certified by authoritative institutions, meeting laser safety standards in EU, US, and international Electrotechnica Commission (IEC).

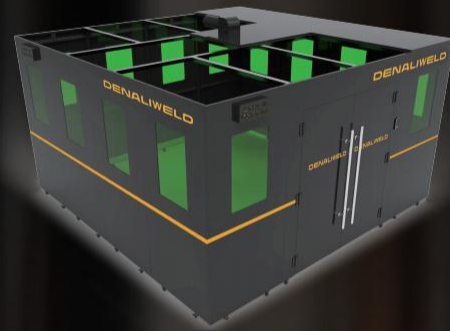
Technical Parameter



Item	The Upgraded Industrial Version Laser Safety Curtain Pro
PEL	PEL> 543.348 W/cm ² , Test Wavelength: 1070 nm, Spot Radius: Φ=1 mm, Test Duration: T=100 s
Thickness	1.4mm
Weight	0.35 lbs/ft ² (1.7kg/m ²)
Single measurement	Height: 80.9 in (2055 mm), Width: 59.1 in (1500 mm), Weight: 28.9lbs (13.1kg)
Actual Test Data	The standard installation position resists 400W CW laser direct exposure for 10 seconds without penetration, and 107W CW laser direct exposure for 100 seconds without penetration.
Material	Composite material with special coating
Color	Black and Customizable
Laser Safety Standards	GB 7247.1/4/13、IEC 60825-1/13、CE/EN 60825-1/4
Flame Retardant Properties	Passed the NFPA701:2023 Test
Features	Low Reflection (≈4%), Aging Resistance, Corrosion Resistance, Flame Retardant & Temp Resistance, Abrasion Resistance, Dirt Resistance
Warning	Curtains are damaged with an appearance of white smog, please do NOT continue to use.
Standard Configuration	Eyelets, Laser warning sign, Hook&loop fastener
Applicable Laser Types	All wavelengths and all lasers
Applicable Environment	Class 4 laser, Laser labs, Laser devices, Laser processing workplace

DenaliWeld Laser Welding Station

- We offer a wide range of laser protection solutions.
- Welding workstations provide complete protection of the welding area and are suitable for Class 4 laser work. Panels fitted with CE laser protection glass filter out 1060-1100nm wavelength laser light. All-aluminum construction for easy handling and installation.
- Freely adjustable to the shape and size of the site.
- Fitted with a safety door interlock for quick connection to the laser welding machine.



Laser Protective Helmet

- In dual-layer design, the outer variable light module can effectively block welding generated light, UV and other potential hazards, the inner layer of the laser protection glass filters the 1060-1100nm wavelength fiber optic laser, which will ultimately protect the user.
- Can be equipped with DENALIWELD respirator, effective filtration of toxic dust and smoke.



Made by Welders, for Welders

Fume Filter

- Multi-Stage Filtration Technology, Pre-filtration + High-Efficiency Filtration + Activated Carbon Filtration.
- All-Aluminum Construction, equipped with mobile caster wheels, Ensures easy movement and installation.
- Available in single or dual configurations with a maximum length of 4 meters.
- Freely Adjustable, Can be customized to fit the shape and size of different workstations.



Laser Safety Protective Clothing

- Denaliweld laser safety protective clothing, it's an FR exterior with a silver mesh interior.
- What that silver mesh does is it helps protect against any radiation, not just from the laser welder, but from any other high-powered equipment that's in the area.

