FANUCI®

USA — EUROPE — ASIA

FIBER LASER WELDING

CATALOG

2026 Edition

5.0 SERIES

INDUSTRIAL

PREMIUM HANDHELD
FIBER LASER WELDING

MANUFACTURING SINCE 2018

Designed by Dawid Grzesiak

| WATER-COOLED

Available in 1100W | 1700W | 2300W | 3400W |

FANUCI Operating System

Managed through an integrated console or Wireless Remote Tablet.
Dynamic Logic Control allows instant dual-parameter switching via single or double-click, reducing setup time.

Includes Pre-optimized Parameters for up to 8 mm steel.
Allows up to 64 custom parameters, and supports 20+ EU languages.

RAPTOR Weld 5.0 | 4-in-1 Laser Head

Ultra-lightweight ergonomic housing with oscillating beam movement. Features an Integrated Lens Sensor with an LED status indicator that monitors the protective lens in real-time notifying the operator exactly when maintenance is required.
A single solution for the fabrication workflow:

Laser Welding (incl. spot weld)
Remote Laser Cleaning
Laser Cutting
Pre/Post Weld Cleaning

FANUCI ULTRON PowerON Laser Source

Industrial-grade 976nm pump architecture featuring a market-leading 48% electro-optical conversion efficiency.

TUV-Certified weld integrity for:
stainless steel, carbon steel, and aluminum.

ChillX Water Cooling

Synchronized thermal management for the laser source and optics.
Engineered for an absolute 100% duty cycle (24/7/365) with high-capacity industrial integration for automated and robotic cells.

Fully integrated ABB & Weidmüller Componentry

Triple-stage protection (Surge, Short-Circuit, and Discharge) ensures zero-fault power delivery and maximum system uptime in volatile industrial environments.

Assembled in USA

FANUCI 5.0 PRO GENX

PRO GENX

FANUCI® Advantages & Benefits

	MIG & TIG	FANUCI
Speed	Slow	**Fast - up to 10x Faster**
Quality	Skill-Reliant	**Consistent Clean Welds**
Difficulty	Hard	**Easy**
Heat Affected Zone	Large / High Distortion	**Minimal / Distortion-Free**
Versatility	Weld Only	**Weld-Cut-Clean-Remote Clean**
Post-Processing	Costly Grinding & Polishing	**Zero to Minimal Cleanup**

MIG welding remains notably fast but produces excessive heat. This often warps thin materials, requiring expensive straightening and extra jigging. Operators also face the constant task of grinding off spatter and removing slag before finishing. Ultimately, the speed gained during the weld is lost because of the time-consuming manual cleanup required for a clean result.

TIG welding is defined by slow welding travel speeds and extreme skill, making it the industry's most expensive method per centimeter of weld. Slow movement creates a vast Heat Affected Zone, leading to warping and compromising the metal's structural properties. Ultimately, high labor costs and scrap rates directly result in a significant production bottleneck.

FANUCI redefines the production floor by delivering TIG aesthetics at speeds reaching up to ten times faster than traditional methods. Utilizing a highly concentrated fiber laser beam yields a minimal HAZ, virtually eliminating warping and any need for post-weld straightening. Since the process is spatter-free, it avoids the tedious manual work of grinding and polishing, allowing parts to proceed directly from welding to painting or assembly. FANUCI laser welding serves as the ultimate solution for an industry looking to bypass skill scarcity, enabling operators to produce high-strength, clean welds featuring unmatched consistency.

FANUCI®

Fusion Precision & Surface Integrity

Drive production volume with the industry-leading FANUCI Laser Welding systems. FANUCI delivers deep-penetration fusion with localized thermal management, ensuring structural integrity while preserving the material's aesthetic finish. Our advanced beam modulation technology provides unparalleled control over the weld pool, significantly reducing the porosity and spatter in all joints. Achieve repeatable, high-strength bonds on a substantial range of alloys with minimal setup time and maximized operational efficiency.

Integrated laser cleaning ensures 100% surface purity before the arc even strikes. The FANUCI system vaporizes oxides, oils, and rust in seconds. All without the need for any harsh chemicals or abrasives. This non-contact cleaning process eliminates the risk of mechanical deformation or surface contamination inherent in traditional grinding or sandblasting methods. Utilizing thermal management prevents substrate overheating, ensuring a pristine, weld-ready surface. The laser maintains the base metal's structural and aesthetic integrity.

Optimized for industrial stability

Every FANUCI system is engineered for continuous high-output operation, prioritizing beam consistency and operator safety.

| AIR-COOLED

Available in 1000W | 1500W | 2000W |

ChillX Air-Cooling

Integrated high-capacity industrial cooling fans optimized for extreme heat dissipation without the need for external chillers.

This lightweight, maintenance-free thermal architecture ensures high stability and simplified logistics for on-site industrial applications.

FANUCI Operating System

Managed via integrated console or Wireless Remote Tablet. Dynamic Logic Control allows instant dual-parameter switching via single/double-click, reducing setup time.

Includes Pre-optimized Parameters for up to 8 mm steel. Allows up to 64 custom parameters, and supports 20+ EU languages.

RAPTOR Weld 5.0 | 4-in-1 Laser Head

Ultra-lightweight ergonomic housing with oscillating beam movement. Features an Integrated Lens Sensor with an LED status indicator that monitors the protective lens in real-time, notifying the operator exactly when maintenance is required. A single solution for the fabrication workflow:

Laser Welding (incl. spot weld)
Remote Laser Cleaning
Laser Cutting
Pre/Post Weld Cleaning

FANUCI ULTRON PowerON Laser Source

Active-Flow Thermal Management optimized for high-velocity air-cooling to ensure stability. Industrial-grade 976nm pump architecture featuring a market-leading 48% electro-optical conversion efficiency.

TUV-Certified weld integrity for: stainless steel, carbon steel, and aluminum.

Fully integrated ABB & Weidmüller Componentry

Triple-stage protection (Surge, Short-Circuit, and Discharge) ensures zero-fault power delivery and maximum system uptime in volatile industrial environments.

| FANUCI 5.0 PRO PORTABLE

PORTABLE

Fanuci® Starting Kit: Everything you need

The complete, Fanuci-certified solution
to begin production immediately.

Remote Cleaning Kit

Laser Head Stand

Weld Cleaning Tube

10 Protective Lens

SmartTAB

DefenderVV

EasyWIRE
Single or Dual
Automatic Wire Feeder

Aluminum Welding Kit:
U-Groove Rolls 1.2-1.6
Teflon Liner 3m 1.6

Box of Nozzles
**each nozzle is explained on the following page*

Other Technical Components

Conductive Clip Assembly & Spare	Steel Liner 3m 1.6	V-Groove Wire Feed Rolls 0.8-1.6
RS232 Data Cable	Microfiber Towel	QBH Protective Cap
N^2 Tube Connector 10-6	N^2 Tube 10 (0.5 meter)	1m Black N^2 Tube
Dust Cover	Hexagon Wrench	Funnel (Water-Cooled Only)

Fanuci® Fiber Laser Welding Consumables

	Description	Welding Joint	Model	Wire Size ∅	Wires
	REF: GG-A-0381 Nozzle for autogenous welding. For external edges and outside corner joints.		C	-	-
	REF: GG-A-0379 Nozzle for welding with filler wire up to 1.2 mm. Universal for all standard joints: butt, lap, and corner.		AS-12	1.2 mm	1
	REF: GG-A-0380 Nozzle for welding with filler wire up to 1.6 mm. Universal for all standard joints: butt, lap, and corner.		BS-16	1.6 mm	1
	REF: GG-A-0384 Nozzle for welding with filler wire up to 1.2 mm. For external edges and outside corner joints.		CS-12	1.2 mm	1
	REF: GG-A-0382 Nozzle for welding with filler wire up to 1.2 mm. For external edges and outside corner joints.		ES-12	1.2 mm	1
	REF: GG-A-0382 Nozzle for welding with filler wire up to 1.6 mm. For external edges and outside corner joints.		FS-16	1.6 mm	1
	REF: GG-A-0866 Nozzle for welding with double filler wire up to 1.6 mm. Universal for all standard joints: butt, lap, and corner.		AS-16D	1.6 mm	2
	REF: GG-A-0882 Nozzle for welding with double filler wire up to 2 mm. Universal for all standard joints: butt, lap, and corner.		AS-20D	2.0 mm	2
	Wire Guide Nozzles for single wire. 0.8 mm, GG-A-0355 1.0 mm, GG-A-0356 1.2 mm, GG-A-0357 1.6 mm, GG-A-0358	-	-	-	1
	Wire Guide Nozzles for double wire. 1.2 mm, GG-A-1152 1.6 mm, GG-A-1153 2.0 mm, GG-A-1154	-	-	-	2
	Protective Lens <3kW, GG-A-0081 ≥3kW, GG-A-0281	-	D20*3	-	-
	Focus Lens <3kW, GG-A-0084 ≥3kW, GG-A-0336	-	D20 F150	-	-
	Reflective Lens <3kW, GG-A-0082 ≥3kW, GG-A-0337	-	33*16	-	-
	Collimating Lens <3kW, GG-A-0083 ≥3kW, GG-A-0338	-	D20 F60	-	-

Fanuci® Automatic Wire Feeding

EasyWIRE 5.0 PRO Single

The EasyWIRE 5.0 PRO Single is a versatile feeding system engineered specifically for easy fiber laser welding. An integrated digital displays all active parameters and offers specialized Pulse on Wire technology. This function enables the machine operator to pulse the wire feed directly, ensuring absolute control over the resulting weld bead appearance. EasyWIRE single remains the primary industrial choice for filler applications where clean and professional finish is required.

EasyWIRE 5.0 PRO Dual

The EasyWIRE 5.0 PRO Dual is built for industrial applications requiring significantly higher material deposition. By feeding two wires simultaneously, this system enables the machine operator to bridge wider structural gaps while welding thicker plates easily. The interface utilizes tactile physical buttons and a rotary dial, allowing for quick parameter changes while wearing welding gloves. Dual wire remains the primary choice for heavy-duty projects where filler volume is critical.

EasyWIRE Technical Specifications

Feeding Unit	**EasyWIRE Single Wire Feeder**	**EasyWIRE Dual Wire Feeder**
Wire Feeding Length	3m	3m
Wire Feeding Speed	2.5-100mm/s	5-100mm/s
Supported Wire Material	Carbon Steel, Stainless Steel, Aluminum	
Max. Weight Wire Reel Support	20kg	
Supported Wire Diameters	0.8-1.6mm	1.6-2.0mm
Power Supply	AC 220V, 50/60Hz, 2.5A	AC 220V, 50/60Hz, 3A
Feeder Weight	13.2kg	18.2kg
Feeder Dimensions	L: 560mm * W: 250mm * H: 350mm	L: 550mm * W: 265 mm * H: 420 mm

Fanuci® Be Laser Safe

FANUCI Laser Safety Equipment

FANUCI DefenderVV (Standard)
Carbon Fiber Reinforced Laser Welding Helmet

Parameter	Specification
Wavelength Range	900-1080nm
Optical Density (OD)	900-1000 nm: OD6+; 1000-1080 nm: OD7+ 1064 nm (Typical): OD10+
LB Class (EN 207)	Filter 900-1080nm: D LB7 IR LB8 CE Protection Plate 900-1100nm: D LB7 IR LB8 CE
Visible Light Transmittance (VLT)	Approx. 25%
Helmet Weight	860g
Permanent Filter	Substrate is a permanent protective layer effective when powered OFF
Filtration Class (PAPR)	TH3 PR SL

Fanuci workspace safety equipment creates a controlled environment for any production scale. This range includes stationary aluminum enclosures, mobile screens and flexible curtains. These solutions are easy to fit into your existing workshop layout and ensure a secure area for laser operations.

FANUCI Professional Safety Features

1	Main Power Key Switch	Lens Status Indicator	6
2	Emergency Stop Button	Gas Pressure Detection	7
3	Interlock Safety Clamp	Fiber Breakage Detection	8
4	Interlock Door Switch	Visual and Acoustic Alerts	9
5	Laser Activation Trigger	Infrared Perimeter Interlock	10

Technical Specifications Pro GenX

MODELS	1100W	1700W	2300W	3400W
LASER SOURCE				
Laser Wavelength	1060-1100nm	1060-1100nm	1060-1100nm	1060-1100nm
Operating Mode	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated
Cooling System	Water Cooling	Water Cooling	Water Cooling	Water Cooling
OPTICAL SYSTEM				
Focus Length	150 mm	150 mm	150 mm	150 mm
Fiber Cable Length	Approx. 12m (Extendable)	Approx. 12m (Extendable)	Approx. 12m (Extendable)	Approx. 12m (Extendable)
Positioning	Laser Red Dot	Laser Red Dot	Laser Red Dot	Laser Red Dot
Laser Head Weight	Approx. 760g	Approx. 760g	Approx. 760g	Approx. 760g
Laser Head Size (LWH)	273x36x168 mm	273x36x168 mm	273x36x168 mm	273x36x168 mm
ELECTRICAL AND CONTROL				
Power Supply	1Phase 230V	3Phase 380/400V	3Phase 380/400V	3Phase 380/400V
Power Consumption	5kW	7kW	9kW	11kW
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Current	25A	16A	17A	28A
Control Interface	HMI + PLC	HMI + PLC	HMI + PLC	HMI + PLC
Interface Features	Glove-Compatible	Glove-Compatible	Glove-Compatible	Glove-Compatible
PHYSICAL AND SAFETY				
Laser Protection	Laser Interlock Key and Password Lock Emergency Stop	Laser Interlock Key and Password Lock Emergency Stop	Laser Interlock Key and Password Lock Emergency Stop	Laser Interlock Key and Password Lock Emergency Stop
Machine Size (LWH)	1183x805x1042 mm	1183x805x1042 mm	1183x805x1042 mm	1290x880x1185 mm
Machine Weight	Approx. 252kg	Approx. 256kg	Approx. 270kg	Approx. 330kg
Wire Feed System	EasyWIRE Single/Dual	EasyWIRE Single/Dual	EasyWIRE Single/Dual	EasyWIRE Single/Dual
Wire Drive Mode	Automatic Push and Pull	Automatic Push and Pull	Automatic Push and Pull	Automatic Push and Pull
WELDING CAPACITY				
Steels	up to 3.5 mm	up to 5 mm	up to 6.5 mm	up to 8.5 mm
Aluminum	up to 2.5 mm	up to 4 mm	up to 5.5 mm	up to 7 mm

Welding capacities are based on real-world workshop conditions using standard industrial materials, and **not** laboratory results.
Actual results may vary based on specific material alloys, shielding gas purity, and operator settings.
Specifications are subject to change without notice for continuous product improvement.

FANUCI®

Technical Specifications Pro Portable

MODELS	1000W	1500W	2000W
LASER SOURCE			
Laser Wavelength	1060-1100nm	1060-1100nm	1060-1100nm
Operating Mode	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated
Cooling System	Air Cooling	Air Cooling	Air Cooling
OPTICAL SYSTEM			
Focus Length	150 mm	150 mm	150 mm
Fiber Cable Length	Approx. 12m (Extendable)	Approx. 12m (Extendable)	Approx. 12m (Extendable)
Positioning	Laser Red Dot	Laser Red Dot	Laser Red Dot
Laser Head Weight	Approx. 760g	Approx. 760g	Approx. 760g
Laser Head Size (LWH)	273x36x168 mm	273x36x168 mm	273x36x168 mm
ELECTRICAL AND CONTROL			
Power Supply	1Phase 230V	1Phase 230V	1Phase 230V
Power Consumption	4.5kW	5.5kW	6.5kW
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Current	20A	25A	29A
Control Interface	HMI + PLC	HMI + PLC	HMI + PLC
Interface Features	Glove-Compatible	Glove-Compatible	Glove-Compatible
PHYSICAL AND SAFETY			
Laser Protection	Laser Interlock Key and Password Lock Emergency Stop	Laser Interlock Key and Password Lock Emergency Stop	Laser Interlock Key and Password Lock Emergency Stop
Machine Size (LWH)	765x436x860 mm	765x436x860 mm	765x436x860 mm
Machine Weight	Approx. 60kg	Approx. 62kg	Approx. 65kg
Wire Feed System	EasyWIRE Single/Dual	EasyWIRE Single/Dual	EasyWIRE Single/Dual
Wire Drive Mode	Automatic Push and Pull	Automatic Push and Pull	Automatic Push and Pull
WELDING CAPACITY			
Steels	up to 3 mm	up to 4.5 mm	up to 6 mm
Aluminum	up to 2 mm	up to 3.5 mm	up to 5 mm

Welding capacities are based on real-world workshop conditions using standard industrial materials, and **not** laboratory results.
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FANUCI & FALCON GLOBAL GROUP

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Design Development. Quality Control. FDA Certification. Product Supply & Service Centre in America (North & South).

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FANUCI & FALCON CHINA

R&D Department. Production & Assembly. Patents. Product Supply & Service Centre in Asia and new developing markets.

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