

PIRANHA

HANDHELD LASER WELDING



 **PIRANHA**

www.piranhafab.com

THE PIRANHA MA1 HANDHELD LASER WELDER

NEXT-LEVEL WELDING



Product Model		MA1-65	MA1-45	MA1-35
Weld Thickness* (inch / mm)	Stainless steel	1/4" / 6.5mm	0.18" / 4.5mm	0.14" / 3.5mm
	Carbon steel/ Iron	1/4" / 6.5mm	0.18" / 4.5mm	0.14" / 3.5mm
	Aluminum	0.22" / 5.5mm	0.16" / 4mm	1/8" / 3mm
	Galvanized sheet	1/4" / 6.5mm	0.18" / 4.5mm	0.14" / 3.5mm
	Copper	0.12" / 3mm	1/16" / 1.5mm	—
Wobble (inch / mm)		0-0.16" / 0-4mm	0-0.16" / 0-4mm	0-0.16" / 0-4mm
Operating Temperature (°F)		0~104	0~104	0~104
Operating Temperature (°C)		0~40	0~40	0~40
Weight (pounds)		86 lbs	84 lbs	62 lbs
Weight (kg)		39kg	38kg	28kg
Dimensions (inches)		26.3 x 10.9 x 21.3	26.3 x 10.9 x 21.3	22.7 x 10.4 x 16.7
Dimensions (mm)		667 x 276 x 542	667 x 276 x 542	576 x 265 x 425
Volume (cubic feet)		< 3.5	< 3.5	2.1
Volume (m³)		< 0.1	< 0.1	0.06

*Remarks: The data is extreme penetration depth based on lab test results; the penetration depth performance will vary according to different setups and applications.

Boost efficiency and productivity with the Piranha MA1 handheld LASER welder series, a lightweight, compact, and easy-to-use alternative to traditional welding methods. Where traditional welding depends largely on a welder's skill, Piranha's MA1 welders are designed for ease of use, delivering faster welding speeds, higher weld strength, and cleaner welds that minimize the need for post-processing.



- **COMPACT & PORTABLE**
- **LIGHTWEIGHT**
- **USER-FRIENDLY**

With 5 different copper nozzles



EXPERIENCE WELDING LIKE NEVER BEFORE



MIG

The technically complex processes of MIG welding require highly trained welders. This method is not suitable for all materials, such as special metals and thin sheets. MIG welding also results in decreased efficiency due to high welding wire consumption and the need for pre-cleaning and joint preparation grooves.



TIG

Heat introduced by TIG welding can often result in distortion, discoloration, porosity, reduced joint strength, and altered grain structure of the workpiece and may require post-processing such as grinding or polishing. This method also poses a safety risk as the arc's ultraviolet and infrared radiation can harm the welder's eyes and skin, and inhalation of fumes at the weld site can be dangerous.



HANDHELD LASER WELDING

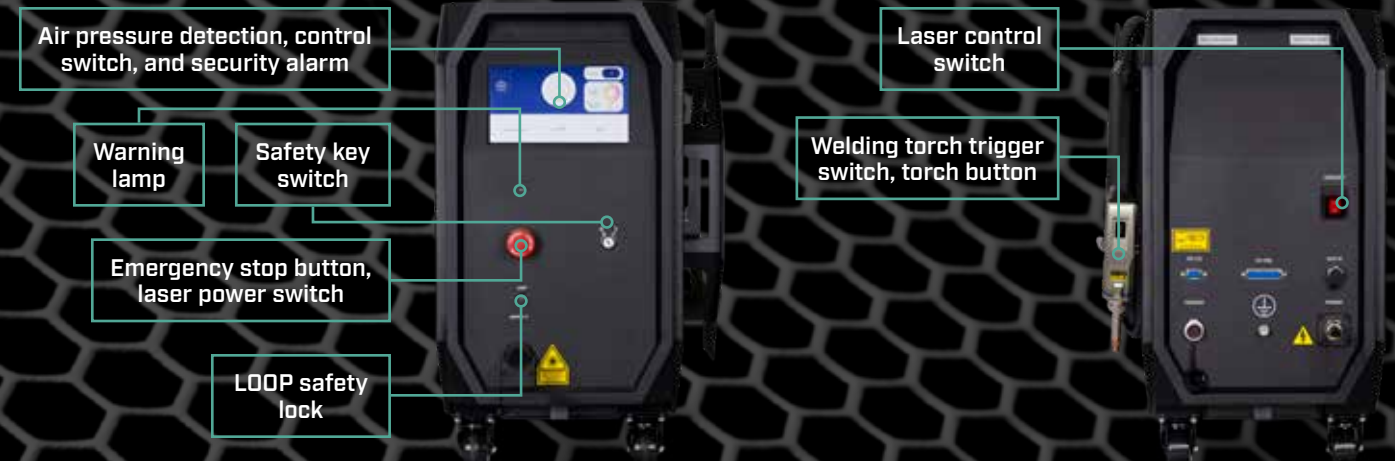
Piranha's MA1 series welders are safe and easy to operate, save energy, and are eco-friendly. Featuring a high-precision LASER control system, stable beam quality, and LASER powers ranging from 1,000–1,500 Watts, welders of all skill levels can complete high-quality welds safely and efficiently. Additionally, the MA1 welder's compact design makes it flexible for mobile welding projects.

Item	Traditional Welding	Piranha Handheld Laser Welding
Welding Speed	Average	Up to 4 times faster than TIG
Welding Quality	Highly dependent on user experience. Welding seams can be rough, irregular, and require rework and polishing.	Consistent high-quality results. Beautiful and neat welding seams, deep molten pool, and high strength. No cleaning necessary.
Training & Learning Curve	Difficult to learn	Easy – Train in hours. Proficiency in 1-2 weeks.
Heat-Affected Zone	Large	Small
Material Distortion & Deformation	High	Very Low
Welding Seam Damage	Potential for porosity, lack of consistency	Uniform melt pool and great consistency
Energy Consumption	High	Low – up to 80% reduction in electricity costs
Consumables	High welding wire consumption	Precise wire consumptions supported by wired feeding system

MAKING SAFETY A TOP PRIORITY

The MA1 is a class IV LASER product. Wearing appropriate personal protective equipment (PPE) is critical for welder safety.

Other safety features:



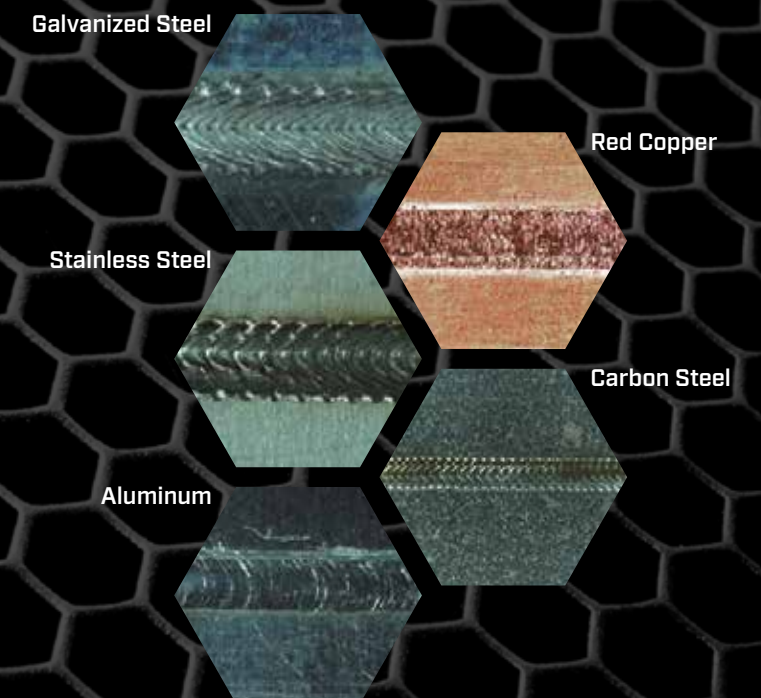
CLEAN & PRECISE



The Piranha MA1 handheld LASER welder features a LASER control system that controls wobble frequency, delivering smooth, symmetrical weld seams that don't require further processing. The MA1 also allows for autogenous welding, resulting in cleaner welds and lower material costs.

Additionally, the welder's wire feeder module enables deeper weld penetration—supporting 1.0 mm (~1/25"), 1.2 mm (~3/64"), and 1.6 mm (~1/16") welding wire diameters—and is compatible with a variety of materials.

Note: the wire feeder equipment is included in the quoted price.



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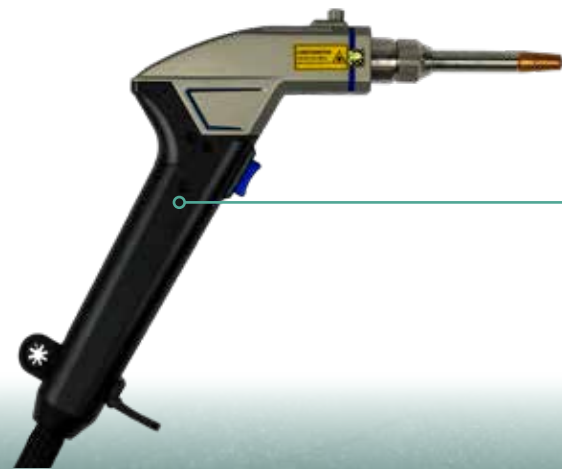
IMPORTANT FEATURES

EXCEPTIONAL QUALITY & PERFORMANCE

The Piranha MA1 handheld LASER welder uses world-class LASER technology to deliver unmatched LASER control and 99% power stability thanks to rigorous factory testing, including a 500-hour high and low temperature cycling power test and a 12-hour continuous welding test. With a lifespan of ~100,000 hours, the MA1's LASER power source offers stability and durability you can count on.

GET HIGHER QUALITY WELDS

With a 1.5-pound welding torch, the Piranha MA1 handheld LASER welder is crafted for comfort. Its collimated QCS interface delivers high transmission efficiency and heat output, while a built-in wobble function with a double safety LASER-on button ensures welders can work safely and efficiently produce high-quality welds.



1.5 lbs.
680g



SAME RELIABILITY, GREATER FLEXIBILITY

Choose a welder that meets your exact needs. Designed for easy transport, the MA1 occupies less than 3.5 cubic feet, making it ideal for mobile welding projects.

A LASER WELDER FOR ALL SKILL LEVELS

From beginners to experts, welders of all skill levels can master the MA1 with just 1-2 hours of training. Its 7-inch LED touchscreen features a multi-language operating system with 32 sets of pre-loaded process parameters. The welder can also customize based on user preference, as well as different materials and thicknesses.

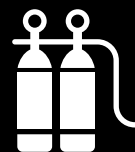


QUICK & EASY INSTALLATION

With user guide videos and clear instructions on the welder's rear panel, installing the Piranha MA1 is simple. You just need:



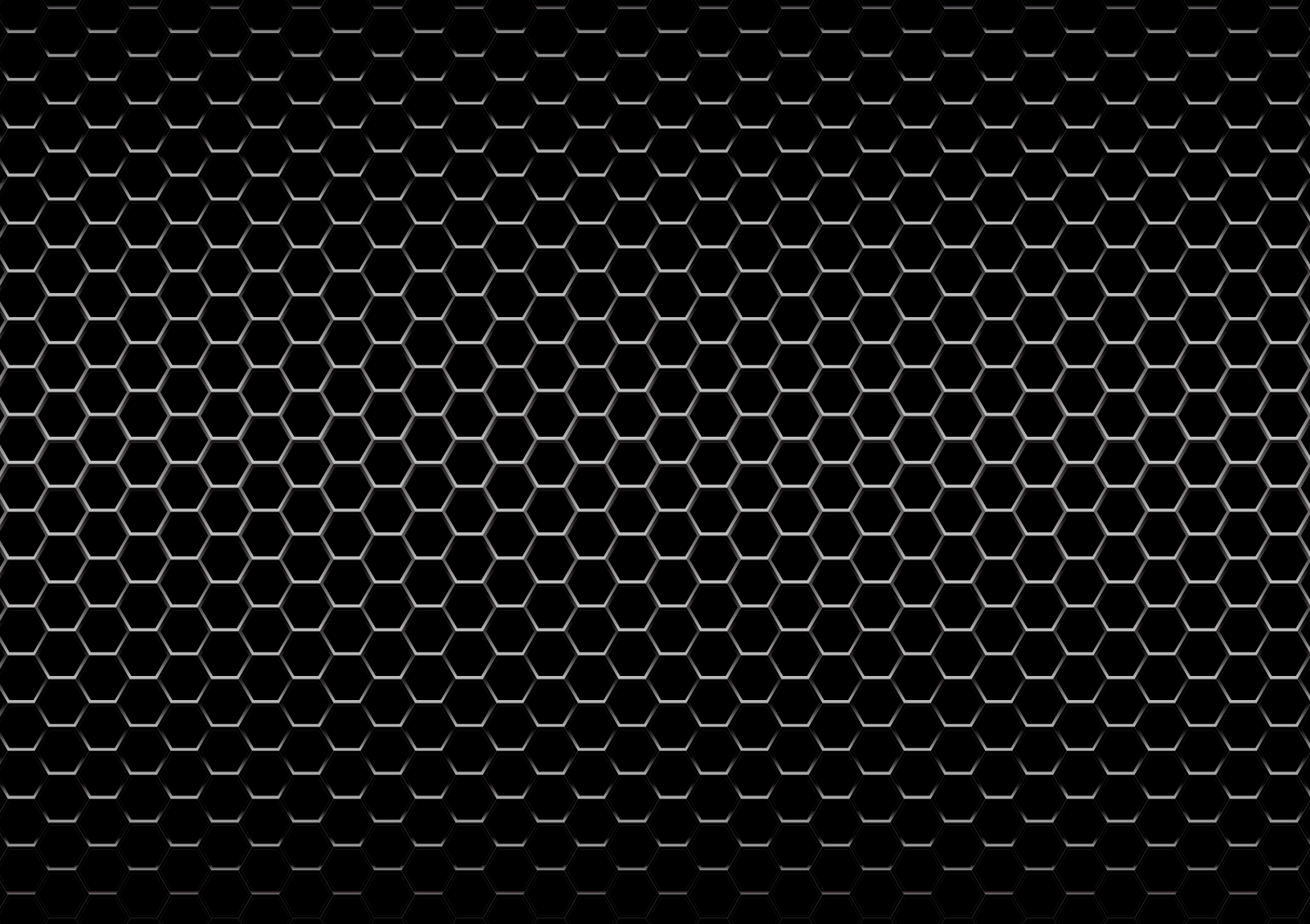
A standard 220
VAC power plug



Connection
to industrial
shielding gas
(i.e. argon or
nitrogen)



A ground clamp
attached to your
workpiece



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