

# LIGHTWELD<sup>®</sup> XR

## eXtended Range Handheld Laser Welding & Cleaning System

### QUICK SPECS:

#### LASER POWER

Up to 1500 W

#### WELDING CAPABILITY

- Stainless, Galvanized & Mild Steel: up to 6.35 mm (0.250")
- Aluminum 3 & 5 Series: up to 6.35 mm (0.250")
- Aluminum 6 Series: up to 3 mm (0.120")
- Titanium & Nickel Alloys: up to 5 mm (0.200")
- Copper: up to 2 mm (0.080")

#### WELDING CAPABILITY

Pre- & Post-weld up to 15 mm width  
Pulsed cleaning power up to 2500 W peak power

### INCLUDES:

- LightWELD XR Unit
- 5 or 10 m (16 or 32') Gun Cable
- 5 or 10 m (16 or 32') Workpiece Clamp
- User Guide
- Welding Helmet with IR Shield
- (3) Cleaning Nozzles
- (4) Welding Nozzles
- Laser Safety Glasses OD 6+
- 3 m (10') CAT 6 Ethernet Cable
- (5) Cover Slides

### APPLICATIONS:

- Metal fabrication shops
- Auto body applications
- Maintenance and repair
- Construction and piping
- Farm, furniture & appliances
- Aerospace & transportation



LightWELD XR extends the range of materials and thicknesses of previous models, enabling fabricators to benefit from a wide range of solutions. Pre-weld and post-weld cleaning functionality optimizes weld quality and productivity.

LightWELD systems are easy to learn and operate, 4X faster than TIG welding and produce high-quality, consistent results for operators of all skill levels.

# LIGHTWELD® XR

## eXtended Range Handheld Laser Welding & Cleaning System

LightWELD Laser Welding and Cleaning	
High Speed Welding	Up to <b>4X Faster</b> than traditional methods - increased productivity for lower costs-per-part
High Quality Results	Consistent welding of thick, thin and reflective metals without distortion, undercut or burn-through - minimal heat affected zone
Easy to Use	Simple set up, easy to learn and operate for consistent high-quality welds and cleaning
Exceptional Visual Finishes	Removes oils, rust and coatings before welding, and debris and discoloration after welding without the time and expense of abrasives or chemicals
Enhanced Material Capability	Sheet metal up to 0.250" thick, copper, titanium, nickel alloys, metals with dissimilar thicknesses, ultra-thin parts, materials with low and high electrical conductivity
Wobble Welding	Up to 5 mm of weld width - increases capability and creates highly aesthetic seams
Operator Safety	Multi-level sensors and interlock safety features

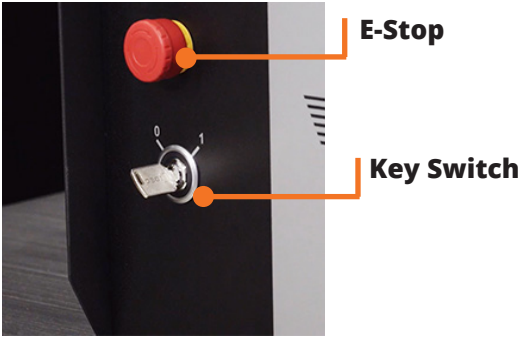
Laser Power	Pulsed Cleaning Power	Power	Mode Storage Capacity	Cleaning Width-Length	Wobble Length & Frequency	Dimensions LxWxH	Weight
Up to 1500 W	Up to 2500 W Peak Power	220V Single Phase, 24 A	74	Up to 15 mm	Up to 300 Hz Up to 5 mm	641 x 316 x 534 mm 25.2" x 12.4" x 21"	53 kg 118 lbs

### SAFETY FEATURES:

LightWELD XR is a Class IV laser system and routine precautions are required for the safe operation of the equipment.

#### BUILT-IN FEATURES INCLUDE:

- Key switch control of laser source and Emergency-stop button ensure deliberate operation
- Fiber laser interlock verifies integrity of laser delivery to the welding and cleaning gun
- 2-step gun trigger, enable and then fire, for intentional operation
- Part contact electrical interlock turns off the laser power if the gun is not in contact with the parts



Operators must wear all recommended personal protective equipment (PPE), including the IPG laser safety glasses and IPG helmet with shield provided with LightWELD XR, laser-resistant and heat resistant gloves, caps, leather apron and other laser-resistant and heat-resistant clothing.

### CONTROL PANEL AND CONNECTIONS:



Laser power up to 1500 W for welding, and high-frequency pulsed cleaning up to 2500 W peak power is easily adjusted with intuitive controls to quickly dial in optimum weld settings for various materials and thicknesses. With 74 stored preset and user-defined process parameters, novice welders can be trained and welding in a matter of hours.

Clearly labeled rear connections make getting started fast and easy. Laser delivery, gas and gun control is pre-wired in a 5 m (optional 10 m) cable. Just plug in the power cord and gas connection, attach the workpiece clamp to your work surface and you are ready to go. An ethernet connection provides access to advanced parameter settings to fine tune and save process parameters.

### HANDHELD GUN & NOZZLE TIPS:

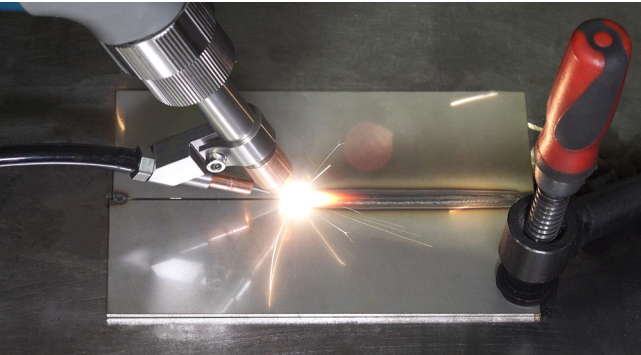


The handheld welding & cleaning gun is compact, ergonomic and comfortable. Specially designed nozzle tips for welding and cleaning applications, plus built-in wobble functionality enables operators to produce high quality welds consistently. Nozzle tips switch out easily to accommodate fusion welding, wire welding and cleaning which further optimizes productivity.



ACCESSORIES

LIGHTWELD WIRE FEEDER PACKAGE  
P/N: CEU00003548XXXXU



This optional wire feeder package includes all necessary hardware and software to add a wire welding capability to the LightWELD XR.

Included with Wire Feeder Kit:

- Wire Feed Unit
- Proprietary Weld Head Nozzle Attachment
- System Trigger Cable
- 4 tips: 0.8mm, 0.9mm, 1.2mm, 1.6mm
- 4 Rollers (2 U-Rollers, 2 V-Rollers)
- 4 Liners (2 Teflon liners, 2 Steel liners)
- IPG Process Mode software upgrade

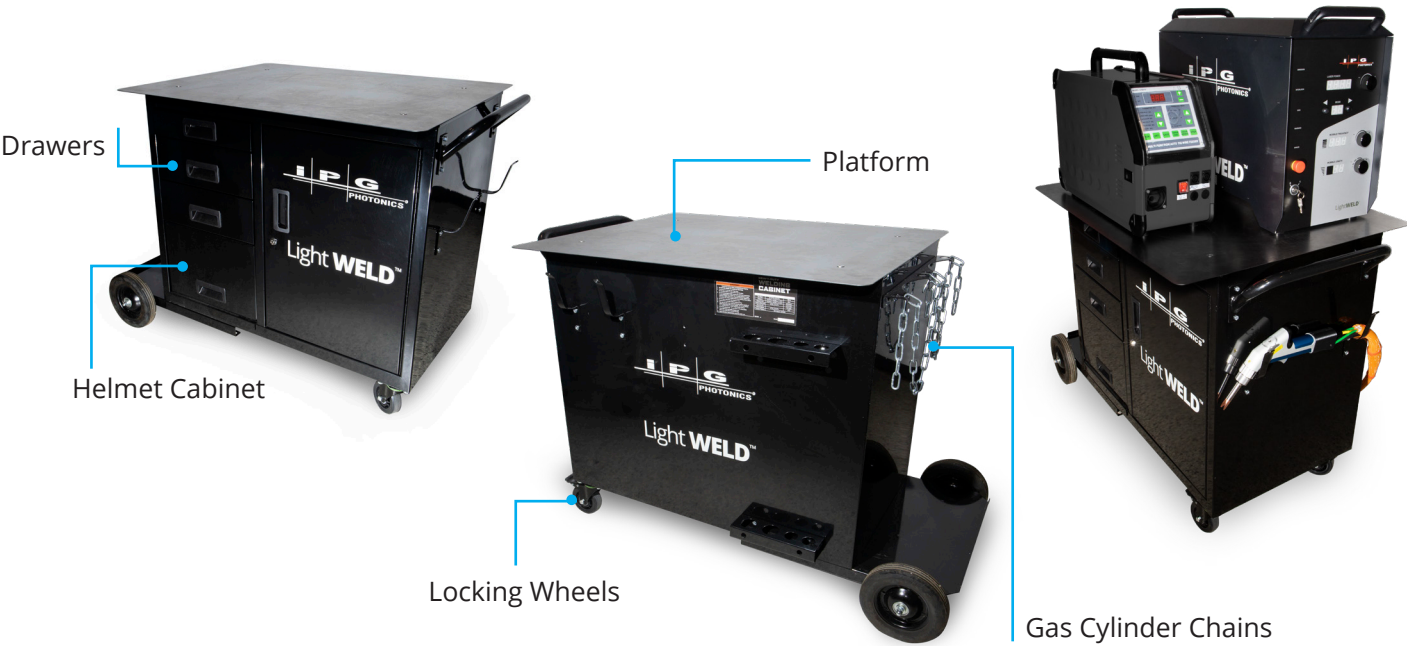
- Used for manual laser wire welding of low carbon steel, stainless steel, aluminum, non-ferrous metals and other alloys
- LightWELD XR provides synchronization trigger signal to wire feed unit. Wire feed settings adjusted on the wire feed unit
- Wire feeder nozzle attachment guides wire precisely to the weld pool
- LightWELD XR Process Modes provide standard parameter settings for typical materials and wire types



LightWELD XR Wire Feeder Specifications	
Wire feed delivery length	2.7 m (9 ft)
LightWELD XR Interface	Low Voltage enable signal cable
Wire Feed Speed Range	40 – 600 cm/min (15 - 230 ipm)
Compatible Wire Diameters	0.8 mm - 1.6 mm
Wire Reel Capacity	1 kg (2 lb), 5 kg (10 lb) or 10 kg (25 lb) by shaft change
Compatible Wire Materials	Steel, Stainless Steel, Aluminum
Power Requirements	115V 50/60 Hz
Wire Feed Unit Weight	22 kg (48.4 lb)
Wire Feed Unit Dimensions (L X W X H)	420 mm (16.5 in) x 210 mm (8.3 in) x 570 mm (22.4 in)

LIGHTWELD WELDING CABINET  
P/N: CEU00003073XXXXU

Purchase  
Online:



This heavy duty welding cabinet provides mobility for your LightWELD XR system and accessories.

KEY FEATURES INCLUDE:

- Top platform sized for LightWELD XR system and & optional wire feeder
- Three storage drawers with ball bearing slides
- Cabinet for helmet storage
- Locking cabinet with adjustable shelves
- Platform & tether chains for two 9 in. gas cylinders
- Cable hooks for LightWELD XR gun cable
- Lockable swivel castors

LightWELD XR Welding Cabinet Size		Weight Capacity
Cart (L x W x H)	1238 mm (48.75 in) x 648 mm (25.5 in) x 850 mm (33.5 in)	
Weight	73.2 kg (161.3 lb)	
Top Surface (L x W)	875 mm (34.5 in) x 515 mm (20.3 in)	72.6 kg (160 lb)
Drawer 1 (L X W X H)	410 mm (16.3 in) x 320 mm (12.7 in) x 32 mm (1.3 in)	18.1 kg (40 lb)
Drawers 2 & 3 (L X W X H)	410 mm (16.3 in) x 320 mm (12.7 in) x 115 mm (4.5 in)	36.2 (80 lb) each
Helmet Cabinet (L X W)	495 mm (19.5 in) x 355 m (14 in)	18.1 kg (40 lb)
Cylinder Platform	Up to two 9 in gas cylinders	

ACCESSORIES

LIGHTWELD **XR** PPE & CONSUMABLES



**Welding Helmet with Shield**  
CEU00002506XXXXU

Auto-Darkening Laser  
Welding Helmet with IR Shield  
& IR coated lens provides  
protection from specular  
reflections



**Cover Slides**  
CDSBOM00023702XU

Pack of 20



**Safety Glasses**  
CMMIXXX0002678PX

w/ Side Shield Protection  
1000-1550 nm OD 7+



**Safety Glasses LFO**  
CMMIXXX0002677PX

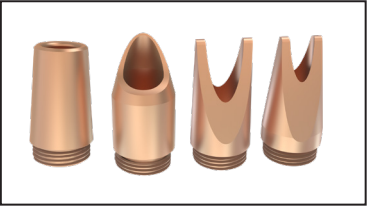
Large Fit Over  
1000-1550 nm OD 7+



**Safety Glasses ADJ**  
CMMIXXX0002679PX

Adjustable temple bar  
1000-1550nm OD7+

COPPER WELDING NOZZLES



**Copper Nozzle Set**  
CDSBME000089XXXU



**1 point**  
CMUS0008398002XU



**2 point 6 mm**  
CMUS0008411XXXXU



**2 point 9 mm**  
CMUS0008719XXXXU

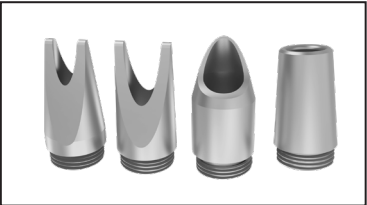


**Cone**  
CMUS0008794100XU

Purchase  
Online:



ALUMINUM WELDING NOZZLES



**Al 1100 Nozzle Set**  
CDSBME00008901XU



**1 point**  
CMUS0009402XXXXU



**2 point 6 mm**  
CMUS0009401XXXXU



**2 point 9 mm**  
CMUS0009400XXXXU



**Cone**  
CMUS0009399XXXXU

CLEANING NOZZLES



**Cleaning Nozzle Set**  
CEU00004105XXXXU



**2 prong**  
CEU00003909XRXXU



**1 prong**  
CEU00003708XRXXU



**Outer Corner**  
CEU00003803XXXXU





**LEARN MORE**



# WELDONE

WELDING SOLUTIONS & PRODUCTS **ONE** GLOBAL PARTNER

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NOLEGGIO  
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FORMAZIONE  
CONSULENZA

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**GAS TECNICI • SALDATURA E TAGLIO • IMPIANTI DI ASPIRAZIONE • SCUOLA DI SALDATURA**

MAX. AVERAGE OUTPUT POWER: 2500W  
MAX. PEAK OUTPUT POWER: 5000W  
PULSE DURATION:  $\geq 1$   $\mu$ s  
PULSE REPETITION RATE: 0 - 100kHz  
WAVELENGTH RANGE: 900 - 1200nm

**DANGER - INVISIBLE LASER  
RADIATION AVOID EYE OR SKIN  
EXPOSURE TO DIRECT OR  
SCATTERED RADIATION  
CLASS 4 LASER PRODUCT**

IEC 60825-1:2014

**LASER RADIATION  
DO NOT STARE INTO THE BEAM OR VIEW  
DIRECTLY WITH OPTICAL INSTRUMENTS  
CLASS 2M LASER PRODUCT**

MAX. AVERAGE POWER: 1mW  
WAVELENGTH RANGE: 600 - 700nm

IEC 60825-1:2014

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