

# LIGHTWELD™ 1500 XC

## Handheld Laser Welding & Cleaning System

### QUICK SPECS:

**LASER POWER**    **HIGH PEAK POWER**  
 Up to 1500 W    Up to 2500 W

### SINGLE SIDED WELD THICKNESS

Stainless Steel, Galvanized Steel,  
 Mild Steel and Aluminum: Up to 4 mm  
 Copper: Up to 1mm

### LASER CLEANING:

Adjustable width up to 15 mm  
 Peak power up to 2500 W

### INCLUDES:

- Air-Cooled Base 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
- (2) Cleaning Nozzles
- (3) Cleaning Nozzle Inserts
- (4) Welding Nozzle Tips
- 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 XC handheld laser welding and cleaning system expands the welding capabilities of LightWELD with cleaning modes to quickly and easily remove oils, rust and coatings before welding, and removes debris and discoloration after welding. Exceptional visual appearance without the time and expense of abrasives or chemicals.

For welding, LightWELD XC enables dramatically faster welding and provides higher-quality, consistent results across a wider range of materials and thicknesses than MIG or TIG with minimal distortion, undercut or burn-through.

# LIGHTWELD™ 1500 XC

## Handheld Laser Welding & Cleaning System

### LightWELD Laser Welding and Cleaning

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

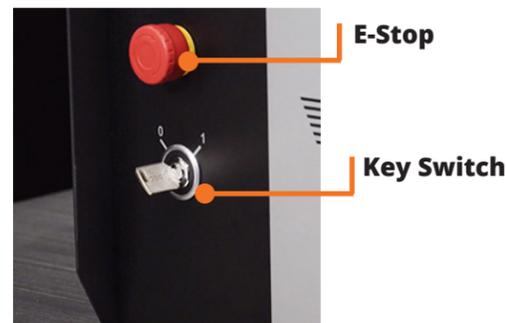
Laser Power	Peak Power	Power	Mode Storage Capacity	Cleaning Width-Length	Wobble Length & Frequency	Dimensions LxWxH	Weight
Up to 1500 W	Up to 2500 W	220V Single Phase, 24 A	74	Up to 15 mm	Up to 300 Hz Up to 5 mm	641 x 316 x 534 mm 25.2" x 12.4" x 21"	53 kg 118 lbs

### SAFETY FEATURES:

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

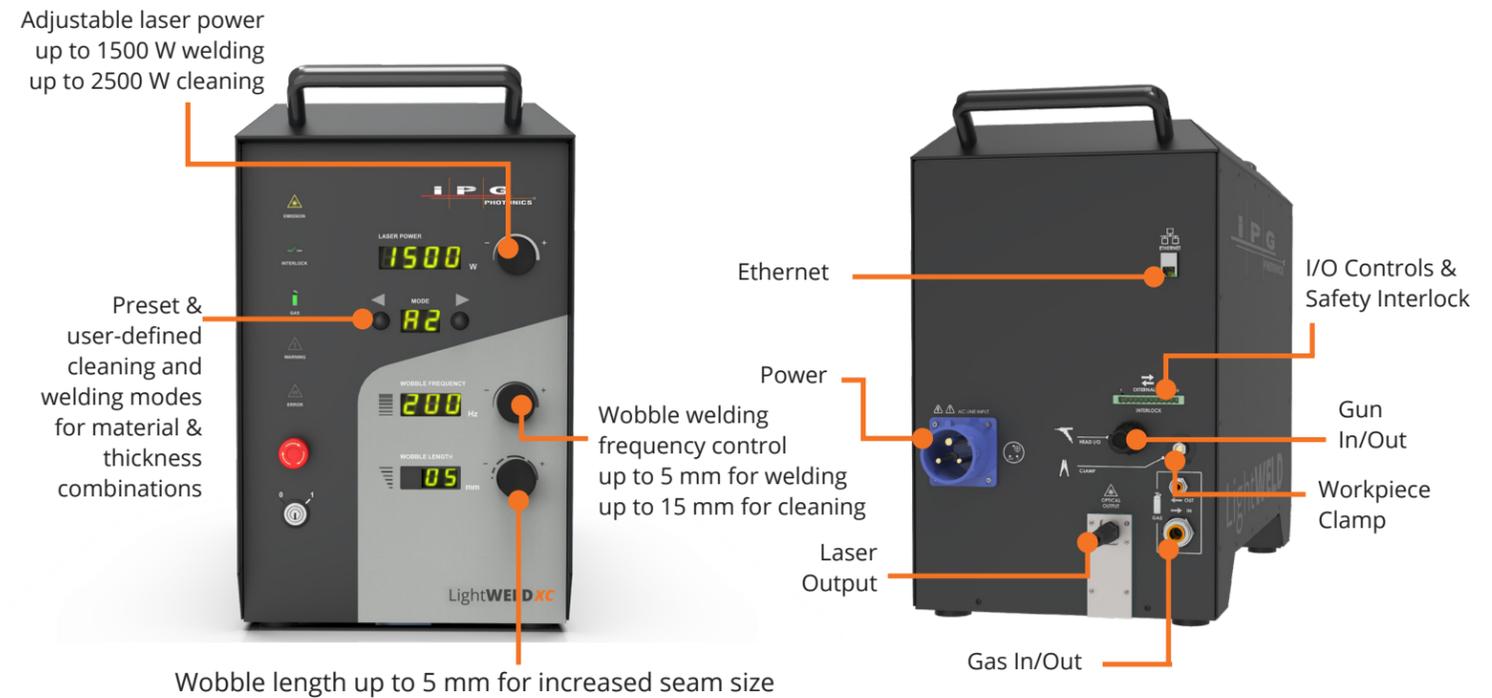
### BUILT-IN FEATURES INCLUDE:

- 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 XC, 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 power up to 2500 W 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. Select stored modes provide up to 2500 W of peak power for even greater welding and cleaning capability.

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 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 and cleaning head is compact, ergonomic and proven to be the most comfortable, well balanced and easy to use gun available with a selection of nozzle tips to optimize different joint types and cleaning requirements. The light weight and built-in wobble functionality enables operators to produce high-quality welds and cleaning throughout the day.

# ACCESSORIES

## LIGHTWELD **XC** WIRE FEEDER PACKAGE Handheld Laser Welding and Cleaning



This Wire Feeder package includes all necessary hardware and software to add a wire welding capability to the LightWELD **XC**.

### 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

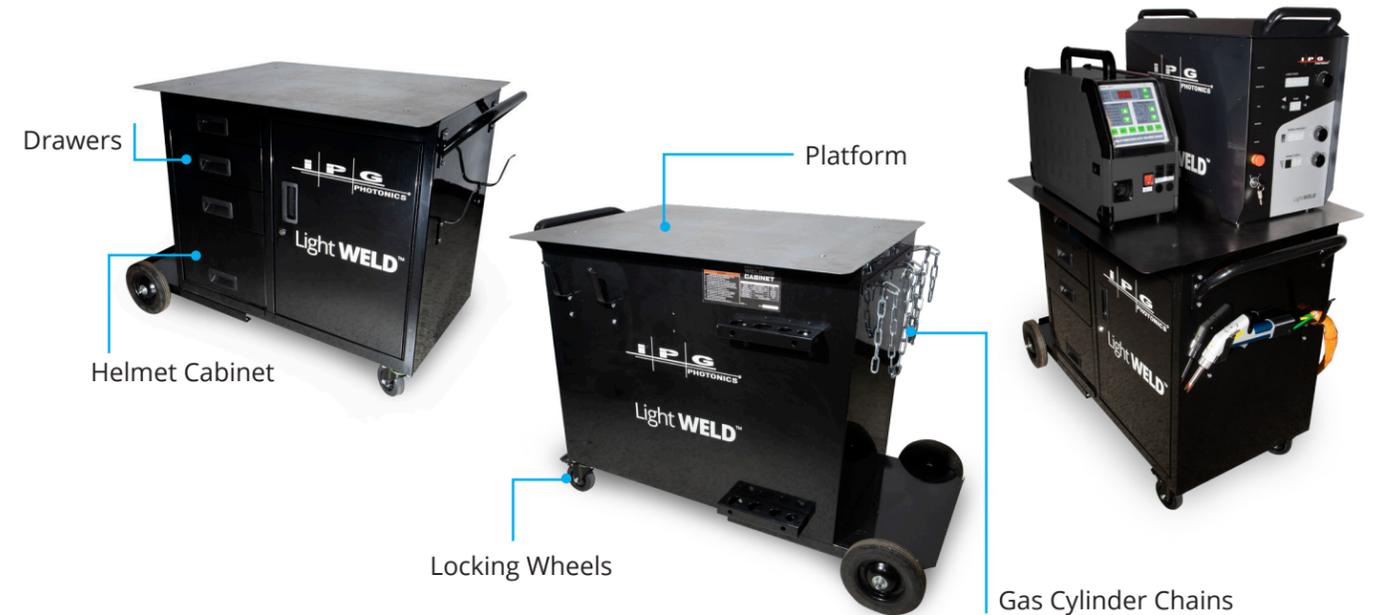
- Used for manual laser wire welding of low carbon steel, stainless steel, aluminum, non-ferrous metals and other alloys
- LightWELD **XC** provides synchronization trigger signal to wire feed unit. Wire feed settings adjusted on the wire feed unit
- Wire feeder nozzle attachment guides wire precisely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



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

## LIGHTWELD **XC** WELDING CABINET Handheld Laser Welding and Cleaning

Purchase Online:



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

### KEY FEATURES INCLUDE:

- Top platform sized for LightWELD **XC** system and optional wire feeder
- Locking cabinet with adjustable shelves
- Three storage drawers with ball bearing slides
- Platform & tether chains for two 225 mm (9 in) gas cylinders
- Cabinet for helmet storage
- Cable hooks for LightWELD **XC** gun cable
- Lockable swivel castors

LightWELD <b>XC</b> Welding Cabinet Size		Weight Capacity
<b>Cart (L x W x H)</b>	1238 mm (48.75 in) x 648 mm (25.5 in) x 850 mm (33.5 in)	
<b>Weight</b>	73.2 kg (161.3 lb)	
<b>Top Surface (L x W)</b>	875 mm (34.5 in) x 515 mm (20.3 in)	72.6 kg (160 lb)
<b>Drawer 1 (L X W X H)</b>	410 mm (16.3 in) x 320 mm (12.7 in) x 32 mm (1.3 in)	18.1 kg (40 lb)
<b>Drawers 2 &amp; 3 (L X W X H)</b>	410 mm (16.3 in) x 320 mm (12.7 in) x 115 mm (4.5 in)	36.2 (80 lb) each
<b>Helmet Cabinet (L X W)</b>	495 mm (19.5 in) x 355 mm (14 in)	18.1 kg (40 lb)
<b>Cylinder Platform</b>	Up to two 225 mm (9 in) gas cylinders	

# ACCESSORIES

## LIGHTWELD **XC** PPE & CONSUMABLES Handheld Laser Welding and Cleaning

Purchase  
Online:



**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



**Copper Nozzle tip**  
Set of 4  
CDSBME000089XXXXU



**1 point**  
CMUS0008398XXXXU



**2 point 6 mm**  
CMUS0008411XXXXU



**2 point 9 mm**  
CMUS0008719XXXXU



**Cone**  
CMUS0008794100XU



**Safety Glasses**  
CMMIXX0002678PX  
w/ Side Shield Protection  
1000-1550 nm OD 7+



**Safety Glasses LFO**  
CMMIXX0002677PX  
Large Fit Over  
1000-1550 nm OD 7+



**Safety Glasses ADJ**  
CMMIXX0002679PX  
Adjustable temple bar  
1000-1550nm OD7+



**Cleaning Nozzle Kit**  
CEU00003724XXXXU



**1 point**  
CMUS0009402XXXXU



**2 point 6 mm**  
CMUS0009401XXXXU



**Al 1100 Nozzle tip**  
Set of 4  
CDSBME00008901XU



**2 point 9 mm**  
CMUS0009400XXXXU



**Cone**  
CMUS0009399XXXXU



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[HANDHELDSLASERWELDER.COM](http://HANDHELDSLASERWELDER.COM)

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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