LC LASERS

Welding & Cleaning

Precision At The Workpiece.

Handheld laser welders, pulsed and continuous-wave cleaners, and integrated laser-protection cabins.

DESIGNED & MANUFACTURED IN SPAIN



Choose The Process. Plan The Complete Cell.

Match the workpiece, production requirement and surface condition to the system. Include the feeder, enclosure, extraction and operator training in the specification.



Laser Welding

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Laser Cleaning

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LC-Cabin V2

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Two Processes. Different Objectives.



Laser Welding

A concentrated beam joins compatible metals with a small, localised heat source. This can reduce distortion and finishing effort on suitable joints, especially repetitive sheet-metal assemblies. Fit-up, material condition and the selected parameters remain central to weld quality.

Where It Helps

Stainless fabrication, enclosures, metal furniture, compatible aluminium assemblies and repeated joints where low distortion and consistent appearance matter. Assess the actual joint with a demonstration on your material.

Laser Cleaning

The beam removes surface contamination through laser ablation. Pulsed systems favour selective work and detail; continuous-wave cleaning favours heavier contamination on robust surfaces. Material, coating and required finish determine the settings and achievable rate.

Demonstrate The Job Before Specifying The System

Send the material, thickness or coating, photographs, required finish, target production rate and available workspace. R H Davey can help arrange the system specification and application discussion through Parweld.

Applications & Manufacturer Process Information

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LC-Weld NEO

An air-cooled sheet-metal workstation, with controls integrated into the feeder.



Use For

Sheet-metal assemblies where a compact mobile unit and accessible feeder-mounted controls suit the work.

Configuration

Choose NEO 3.0 at 800W or NEO 4.0 at 1200W. Single- and dual-feeder configurations are available. Specify the wire-feed option with the machine.

Specification	NEO 3.0	NEO 4.0
Laser power	800W	1200W
Supply / fuse	230V / 32A	230V / 32A
Consumption	<4000W	<4800W
Cooling	Air	Air
Torch lead	6m	6m
Screen	7in on feeder	7in on feeder
Frequency	1-10kHz	1-10kHz
Dimensions	440 × 690 × 430mm	440 × 690 × 430mm
Environment	0 to 30°C	0 to 30°C
Laser class	4	4

Controls At The Feeder

The 7in interface keeps settings with the wire feed. Synchronized mode uses prepared parameters; manual mode allows the welding profile to be tailored to the application.

Technical Specifications & Product Information

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LC-Weld SMART

Mixed fabrication with air cooling and a mobile, integrated workstation.

Active air cooling removes the need for a water-cooling circuit. The compact mobile layout and 7in touchscreen suit workshops handling a mix of assemblies.

Wire Feed Options

Single feeder or dual feeder, with the LC-GUN SM V4.4 welding gun. Specify the feeder configuration when requesting the package.



Specification	Value
Laser power	1500W
Supply / fuse	230V / 32A
Electrical consumption	<4200W
Cooling	Active air
Torch lead	10m
Interface	7in touchscreen
Frequency range	1-20kHz
Overall dimensions	875 × 447 × 865mm
Operating environment	5 to 40°C
Laser class / wavelength	Class 4 / 1070nm nominal

Specify The Working Package

Include the machine model, feeder, gun, enclosure and extraction arrangement. Choose the package around the joint and the planned work rate; power alone does not determine the result.

Technical Specifications & Product Information

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LC-Weld PRO

Production welding requiring task control, user management and operating statistics.

Water cooling, a 10in touchscreen and task-based controls suit planned production. User management and operating statistics help track use, while the machine includes a gas-cylinder stand.



Wire Feed Options

Single feeder or dual feeder, with the LC-GUN SM V4.4 welding gun. Specify the feeder configuration when requesting the package.

Specification	Value
Laser power	1500W
Supply / fuse	230V / 32A
Electrical consumption	<5500W
Cooling	Water
Torch lead	10m
Interface	10in touchscreen
Frequency range	1-50kHz
Overall dimensions	450 × 720 × 1100mm
Operating environment	5 to 40°C
Laser class / wavelength	Class 4 / 1070nm nominal

Specify The Working Package

Include the machine model, feeder, gun, enclosure and extraction arrangement. Choose the package around the joint and the planned work rate; power alone does not determine the result.

Technical Specifications & Product Information

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LC-Clean P 300W

Selective cleaning of components, detailed surfaces and restoration work.

Short, high-energy pulses concentrate the cleaning action into brief events. This supports selective surface treatment where control of detail and heat input matters more than maximum area throughput.



LC-LL300W

Manufacturer Reference

Specification	Value
Laser type	Pulsed fibre
Output	300W average / <100kW peak
Supply	230VAC
Electrical consumption	<1500W
Working hose	4m
Cooling	Air
Wavelength	1064nm
Frequency range	1-3000kHz
Overall dimensions	250 × 400 × 700mm
Approximate weight	<40kg
Laser class	4 (IEC 60825-1)

Control The Cleaning Area

Use for selective cleaning of components, detailed surfaces and restoration work. Provide the substrate, contaminant or coating, required surface condition and area to be treated when requesting an application assessment.

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LC-Clean P 500W

Component cleaning and surface restoration with greater pulsed output.

The 500W model increases average and peak power while retaining the pulsed process. Choose it for a larger cleaning workload where the surface still calls for selective treatment.



LC-LL500W

Manufacturer Reference

Specification	Value
Laser type	Pulsed fibre
Output	500W average / <240kW peak
Supply	230VAC
Electrical consumption	<2500W
Working hose	5m
Cooling	Air
Wavelength	1064nm
Frequency range	1-3000kHz
Overall dimensions	250 × 400 × 700mm
Approximate weight	<40kg
Laser class	4 (IEC 60825-1)

More Pulsed Output For Production Cleaning

Use for component cleaning and surface restoration with greater pulsed output. Provide the substrate, contaminant or coating, required surface condition and area to be treated when requesting an application assessment.

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LC-Clean CW 1500W

Heavier contamination on robust metalwork, structural steel and shipyard maintenance.

Continuous energy delivery suits broad, heavily contaminated areas. Compared with the pulsed range, the focus is on cleaning speed and heavier work rather than fine-detail selectivity. Set the process to the material and condition of the surface.



LC-LL1500W

Manufacturer Reference

Specification	Value
Laser type	Continuous-wave fibre
Output	1500W continuous
Supply	230VAC
Electrical consumption	<5500W
Working hose	6m
Cooling	Air
Wavelength	1064nm
Frequency range	1-10kHz
Overall dimensions	250 × 400 × 700mm
Approximate weight	<40kg
Laser class	4 (IEC 60825-1)

Choose Throughput For Robust Surfaces

Use for heavier contamination on robust metalwork, structural steel and shipyard maintenance. Provide the substrate, contaminant or coating, required surface condition and area to be treated when requesting an application assessment.

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Pulsed Or Continuous-Wave Cleaning?



Pulsed Cleaning Head



Continuous-Wave Head

Priority	Starting Point	Reason
Detailed component cleaning	Pulsed P 300W	Selective treatment and lower average output
Higher pulsed workload	Pulsed P 500W	Greater average and peak power
Robust, heavily contaminated metalwork	CW 1500W	Continuous energy for broader cleaning work

Test The Surface And The Finish

Assess the real coating and substrate before deciding the cleaning rate. Settings that remove contamination quickly may also affect the surface if they are unsuitable for the material.

Include Fume Capture

Laser cleaning can release dust, vapour and hazardous coating constituents. Identify what is being removed and specify suitable capture and filtration for the contaminant and process.

Laser Cleaning Technology & Process Information

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Feeders & LC-GUN SM V4.4

Single Feeders

V.1 / V.2



Covered spool holders and encoder-controlled feed. V.2 includes a feeder-mounted 7in screen.

Dual Feeders

V.2 DA / V.3 DA



Dual-wire configurations allow wire switching and programmable feed. Choose the configuration for the alloy and deposition requirement.

LC-GUN SM V4.4



Twin protective lenses help protect the optical path. The screw-fastened protector compartments and built-in lens-changing tool provide access for maintenance.

The dual-wire nozzle supports synchronized or independent feed configurations. Specify the gun, nozzle and feeder together for the selected wire and application.

Feeders, Gun & Configuration Details

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LC-Cabin V2

Modular laser protection, specified with the machine and the workspace.



Component	Specification
Structure	Aluminium panels and pillars
Standard panel	1.5 × 2.2m
Double door	2m total width / two 1 × 2.2m leaves
Electrical panel	1 × 2.2m / signal and control selected separately
Access control	Door sensor and locking system
Status indication	Laser status signal and audible / light call button
Configuration	Complete cabin, L-shaped or U-shaped arrangements

The Enclosure Is Part Of The System

Specify the machine, safety control and cabin interfaces together. Access controls, reflected beams, workpiece handling and extraction all need to be included in the cell design. A standard welding curtain is not a laser enclosure.

LC-Cabin V2 Features & Configuration Options

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Configure The Working Area

Examples from LC's modular cabin system. Final layout is specified to the site and process.

Component	3 × 3m Cabin	4.5 × 4.5m L	4.5 × 3m U
Double door	1	1	1
Electrical panel	1	1	1
Ground bases	0	0	0
Pillars	6	5	6
Solid panels	6	4	5
Warning light	1	1	1
Control	A	A	A
Corner panels	4	1	2
Wall panels	0	2	2

Send A Floor Plan With Your Enquiry

Include the available length and width, ceiling height, door and loading access, workpiece size, fixed obstructions and extraction route. State which laser system and process you intend to use.



Manufacturer Cabin Layouts & Component Counts

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Specify A Complete Laser Workstation

Application	Model / Manufacturer Reference	Options To Specify
Compact sheet-metal welding workstation.	LC-Weld NEO 3.0	Single or dual feeder / gun / cabin
Sheet-metal assemblies requiring the 1200W NEO configuration.	LC-Weld NEO 4.0	Single or dual feeder / gun / cabin
Mixed fabrication with air cooling and a mobile, integrated workstation.	LC-Weld SMART	Single or dual feeder / gun / cabin
Production welding requiring task control, user management and operating statistics.	LC-Weld PRO	Single or dual feeder / gun / cabin
Selective cleaning of components, detailed surfaces and restoration work.	LC-Clean P 300W / LC-LL300W	Cleaning head / enclosure / extraction
Component cleaning and surface restoration with greater pulsed output.	LC-Clean P 500W / LC-LL500W	Cleaning head / enclosure / extraction
Heavier contamination on robust metalwork, structural steel and shipyard maintenance.	LC-Clean CW 1500W / LC-LL1500W	Cleaning head / enclosure / extraction
Laser-protected working area	LC-Cabin V2	Footprint / door / controls / loading

Class 4: Plan The Controls Before Operation

These laser sources are Class 4. The installation requires a suitable controlled enclosure and access controls, trained operators, appropriate laser eye and skin protection, and process fume capture. Specify the controls through a competent laser-safety assessment and the manufacturer's instructions.

HSE Guidance On Laser Risks & Protection

Talk To R H Davey About Your Application

Send the material, thickness or coating, joint or cleaning objective, target output, available supply and workspace dimensions. We can discuss a practical demonstration, configuration, training and support through Parweld.

LC Lasers Manuals & Technical Documents

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