



Connection Systems



LPA Manufacturing Capabilities and Services

We manufacture and supply engineered parts, complex components and systems for safety critical environments such as defence, transportation, renewables, high-tech and other specialist industries

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DEFENCE



OFF SHORE



MARINE



PHARMACEUTICAL



RENEWABLE



INDUSTRIAL



MECHANICAL



AEROSPACE

3D CAD modelling

Finite element analysis & stressing

CNC precision manufacturing

Manual & robotic welding

4kw fibre optic laser cutting up to 25mm

Automatic cable cutting (CNC)

Electromechanical assembly

Automated electrical & mechanical testing

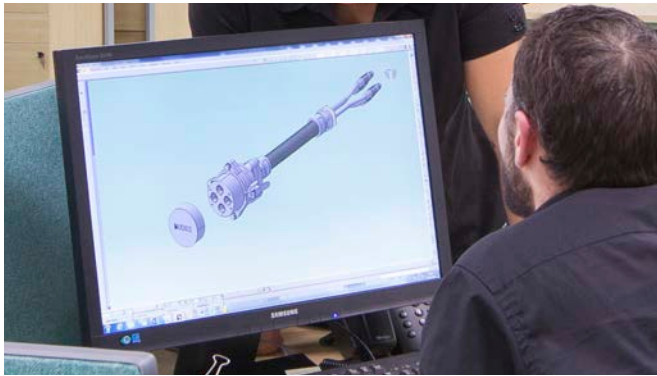
Vibration, shock & stress testing

Electrical testing

IP testing

LPA's manufacturing capabilities and services

With 40+ years of experience in design, prototyping, manufacturing, and complete product assembly; we are well equipped to offer a range of manufacturing capabilities and services. Renowned for our long life, high reliability product development ethos, we supply into the rail, marine, aerospace, defence, industrial, pharmaceutical, water and infrastructure markets. Using vertically integrated manufacturing, we are able to offer our customers a flexible approach to match their project specific requirements.

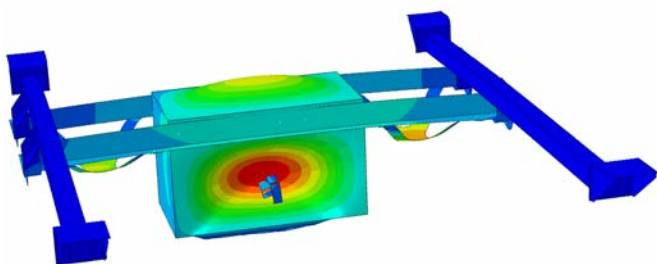


3D CAD modelling

Using 3D CAD modelling our engineers design realistic models of complex product components and assemblies.

The durability of the product design is evaluated through dynamic testing of strength, functionality, and usability.

To optimise interoperability and collaboration we can integrate with other systems including .stp, .dxf, .iges and .dwg files.



Finite element analysis

FEA provides an understanding of how the proposed component or product will function in real environments. It identifies issues and the adjustments required to optimise the final product design.



CNC Precision Machining & Laser Cutting

CNC Precision Machining

We manufacture complex parts and components to exact specifications using our CNC machining skills and capabilities for precision milling and turning.

SPECIFICATIONS:

Turning, milling, bar/castings

Sliding head (Swiss Turning) manufacture 32mm maximum bar diameter (Citizen Machines), bar machining up to 76mm diameter, 3 axis milling up to 2 meters in length, 500mm width, 4 & 5 axis milling with probing system to maintain accuracy/repeatability.

Press brake folding

Trumpf (100 Tonne) & Amada (80 Tonne) press brake, metal forming 3m maximum length.

Laser cutting

4kw fibre optic laser cutting capabilities for highly accurate cutting, engraving, and marking of sheet metal.

SPECIFICATIONS:

Maximum sheet size 3m x 1.5m, 25mm mild steel, 16mm stainless steel, 16mm aluminium, 8mm copper & 8mm brass.

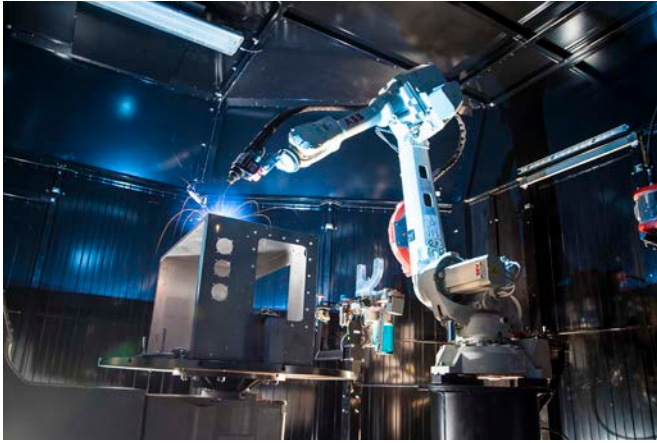


Product Assembly

We have dedicated and flexible space in our factory for electro-mechanical product assembly.

Enabling us to undertake complex assembly including wiring looms, electrical & mechanical components and systems.

We have a wide selection of calibrated tooling for all crimping applications.



Robotic & Manual Welding

Robotic welding can complete high volume and repetitive welding tasks. It offers a high level of accuracy and repeatability, along with reduced material waste.

Manual welding offers production flexibility and the embedded welding knowledge means that tasks can be adjusted during the production process.

SPECIFICATIONS:

Robotic welding:

Supports 1m² workpiece. Suitable for stainless steel and mild steel.

Manual welding:

Manual coded welders – Mig & Tig processes.

Mild steel, stainless steel, and aluminium with various material thickness and joint types.

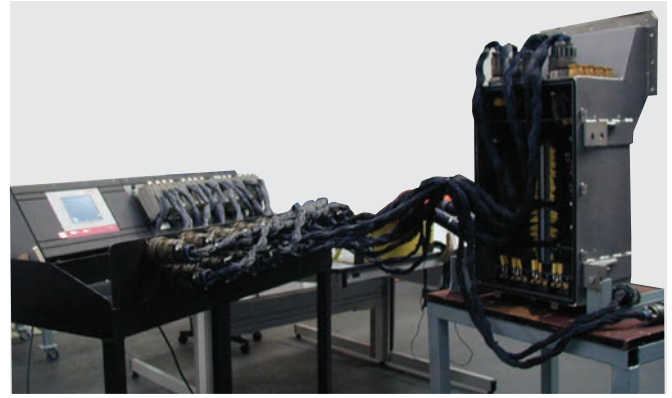


Automatic Cable Processing, Cutting & Preparation

The automatic cable cutting machine produces exact results and streamlines the cabling process so we can deliver cable to customer specifications in a timely manner. This also includes automated stripping and crimping of the specified cables.

SPECIFICATIONS:

Automated cable processing facility, 1mm²-300mm² cable, with a minimum length of 150mm, maximum length cable drum capacity. The option for Ink Jet printing on the cable is also available.



Electrical & Mechanical Dynamic Testing

To ensure product functionality and durability we use rigorous testing measures.

Our processes and facilities include but are not limited to high voltage testing, earth leakage testing, cable insulation checks, CNC CMM measuring facility, surface roughness inspection and pull-off testing of crimp/cable termination.

The large scale capability of our test facilities means we can offer full train end simulation, including CAD and mock up gauge testing.

SPECIFICATIONS:

Manual HV:

AC: 10,000V Output current: 0 – 50mA

DC: 14,000V Output current: 0 – 33mA

Automated (ATE Equipment):

AC: 1000V Output current: 0 – 2.50mA

DC: 1500V Output current: 0 – 2.50mA

Mechanical test

Cyclic testing to > 100K cycles.



Inspection, Quality, Service & Support

To ensure our products meet the correct standards we undertake rigorous quality testing and inspections on every item prior to delivery.

After-care is also critical to us. LPA engineers are available to visit customer sites to undertake repairs, fit replacements and carry out inspections.

We also offer a full in-house product repair, refurbishment, and replacement programme.



WHO TO CONTACT AT LPA

Get in touch with the LPA team, offering product & technical advice, sales & customer service.

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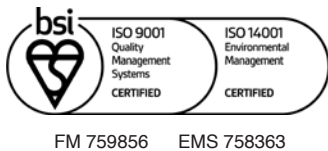
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