

ELECTROPAK





Electropak Limited is an engineering company with an outstanding range of facilities. Whatever your engineering requirements are, we can help.

Established in 1986 with ISO 9001 and AS 9100 Rev C aerospace approval. Our business is focused on manufacturing complete projects with all manufacturing done in house and under our control. Our dedicated and highly skilled staff includes; Project Managers, Machinists, Sheet metal workers, Welders and Painters.

Electropak is committed to investing in our people and equipment. We regularly take on apprentices and we have recently installed 3 brand new Haas machining Centres.

Quality and service is the foundation that our business is built upon.

BAE SYSTEM APPROVAL NO. BAe/AG/10859/MAA
For:- ENGRAVING, MACHINING, SHEET METAL,
LASER AND WATER JET CUTTING.



Certificate No. 0052/1





Clients and partners

Electropak Limited is an approved engineering company to many national organisations throughout the UK.

Our customer base includes such clients as





Case Studies



We produce support legs for medical X-ray scanners using a wide range of our services. Firstly the aluminium sheet is cut down to size quickly and efficiently on our Bystronic Bystar 4020 laser cutter. Our Bridgeport VMC 800 vertical milling machine is then programmed to profile the support legs accurately to within a tolerance of $\pm 0.05\text{mm}$. An end mill cutter is used to achieve the legs distinct shape and a face mill cutter is used to machine the step. A chamfer tool then produces a 45 degree bevel on the edge of the support leg so that it can locate easier into the scanner. A hole is drilled and tapped in the end of the support leg before it is bent accurately on our press brake. Sharp edges and burrs are removed and the support leg is sent for alchrom treatment to provide a corrosion-resistant protective coating.

BAE SYSTEMS



This wing tip pod test bench was manufactured for BAe Systems using nearly all of our manufacturing facilities. It involved laser cutting, sheet metal work, milling, turning, welding, painting and engraving. The aluminium sheet metal parts were TIG welded together to give a clean, precise and strong weld. The Bench was assembled and delivered as a turn key project so that it could be used to test wing tip pods for the Eurofighter Typhoon aircraft. Our AS9100 approval demonstrates our commitment to meeting the necessary quality and safety standards needed to produce high quality products for the aerospace industry.

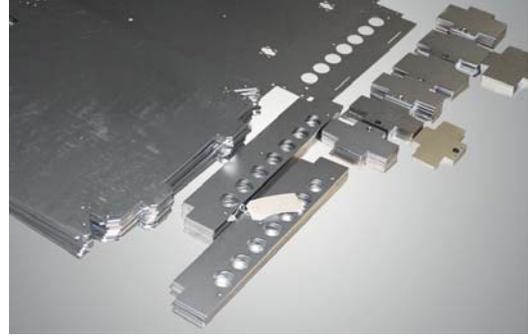
ALSTOM



We manufactured these vacuum circuit breaker units for the rail industry. The units are mounted on top of trains and are used to switch between different supply voltages on long distance mineral trains serving the South African mining industry. We turned and milled the castings to a very tight tolerance of $\pm 0.02\text{mm}$ before attaching them to the ceramic insulator. We were able to ensure that we met these tight tolerances using our FARO gauge measuring system which generates quality reports including SPC analysis. The completed assemblies were then wet painted at our painting facility.



Laser cutting



Laser cutting is the quickest and most accurate way to cut sheet metal. Radan software allows us to cut any shape or profile, and the nesting facility gives maximum sheet utilisation.

The machine: Bystronic Bystar 4020

Power: 2.8kw

Profiling area: 4m x 2m

Software/File compatibilities Radan, Autocad

Range of materials are mild steel, stainless steel, aluminium, nickel alloy and zintec. Thickness from 0.5mm to 20mm

Selection of our range cut from various materials



1.5mm aluminium



1.0mm steel



8.0mm perspex



3.0mm 316 stainless steel



3.0mm NS4 Aluminium



all shapes all sizes



Water jet cutting



Water jet cutting is a very versatile process. Materials up to 150mm thick can be cut without warping or exerting heat stress.

The machine: Bystronic Byjet 50,000 psi
 Power: 50,000 psi
 Profiling area: 3m x 1.5m

Software/File compatibilities Radan, Autocad

Range of Materials are mild steel, stainless steel, aluminium, nickel alloy, zintec , brass, copper, bronze, plastics composites, foam, ceramic, glass, natural stone, wood, leather, acrylic, fibre glass, gasketing, manganese, rubber, hard tool steel, titanium, marble and granite.

Selection of our range cut from various materials



Metals up to 100mm thick



Aerospace aluminium



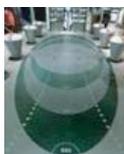
perspex, copper, bronze, brass



Composites



Cork



Rubber flooring



Ceramics



Leather



Machining



Plant List

Bridgeport VMC 800 automatic 22 tool station

Hitachi-Seiki automatic 22 tool station

Colchester Mascot Lathe

Machining Capability 460mm Diameter and up to 2000mm between centres

Acra M40 Lathe

Machining Capability 200mm Diameter and up to 700mm between centres

Hardinge Conquest

Machining Capability up to 42mm Diameter
18 tool station turret and bar feed

Nakamura Tome TW-20

6 axis turning milling centre

2 x HAAS TM-IP

Automatic tool station and 4th axis

HAAS VF-2

Automatic 20 tool station and 4th axis

Selection of our range machined from various materials



Steel



Stainless Steel



Aluminium



Monel



Brass



Sheet metal fabrication



Our laser and water jet cutting facilities give our sheet metal shop the advantage of accuracy and absence of notch marks. Our coded welders complete the package with TIG and MIG welding.

Our Machinery

ADIRA 2.5m x 30 ton press brake
 ADIRA 2.5m x 63 ton C.N.C press brake
 IMAC notcher
 2 X TIG set
 2 x MIG set
 1 X aluminium TIG set
 11,000A. spot welder
 1m x 60 rollers
 1m x 16swg guillotine
 2m x 6mm guillotine
 2x stud welder

Samples of our work



Electronic equipment enclosures



Train Motor chassis



Electronic equipment enclosures



Electronic equipment chassis



Copper busbar



steel chassis



Wet painting and powder coating



Our paint shop has a great reputation for quality and service. Our finished parts go into the aerospace, medical and rail industries.

Our services and facilities include:

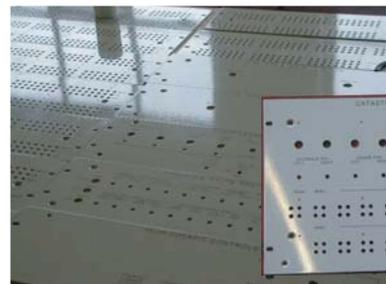
- Zinc phosphate pre-treatment for steel parts
- Alochrom pre-treatment for aluminium parts
- Vapour degreasing and shot blasting facilities
- 2.0m x 1.7m x 4.5m computer controlled oven Facility
- Specialised wet spray booth
- Track system
- Stock colours, including RAL, BS 4800 and Pantone shades
- Specialised masking
- Full test facility.



Wet painted case for the rail industry



Wet painted aircraft test set panel



Powder coated aircraft test set panel



Stove enamelled test set case



Powder coated insulated busbar for the rail industry



Powder coated lift equipment housing

Engraving



Our wide range of computerised engraving machines means we can engrave on all materials including stainless steel. Our AS9100 Rev.C and BAE Systems approvals make us one of a small number of engravers to the military and civil aircraft industries.

We specialise in the engraving and supply of:

Warning labels, valve and tag labels, switch plates, serial plates, scales and dials, reverse engraving, mimic diagrams, machine nameplates, lift panels, identification labels, hydraulic labels, electrical labels, control panels, component marking and many more.

Our Machinery

2 X C.N.C Millgrav engraver/router with Apex controller

2 X P.N.C. engraver with Apex controller

1 X Rotary and radial engraving capability

2 X Gravograph Vx89 with rotary table

2 X model K manual engraver

Machine engravers on all metals and plastics





Quality and Inspection

Electropak has assessed capability to ISO 9001 and the aerospace specification AS EN 9100 Rev.C. We also have BAE Systems approval.

Our quality department has both C.M.M. and FARO arm measuring systems. Full inspection reports traceable to NADCAP standards are available.

We are committed to providing quality product.



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aerospace
 sector
 certification
 scheme



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