



Nuclear Energy Components Ltd continues the legacy of Newburgh Engineering.

Established in 1939 by Isaac Middleton, Newburgh Engineering grew through those early years into a company with a reputation for consistently high quality and service.

We are an ISO9001, ISO14001, F4N and Joscar accredited contract manufacturer of precision components and assemblies ranging across all sectors including:

- **Nuclear**
- **Defence**
- **Oil & Gas**
- **Aerospace**
- **Automotive**
- **Rail**
- **Power Generation**



In the early 50s, we entered the civil nuclear market manufacturing components and assemblies for Dounreay and Calder Hall reactors. Over the years we have served many markets, but we have consistently remained faithful to the defence and nuclear sector, with systems, assemblies and components in practically all nuclear sites in the UK, and many around the world.

We have an ingrained nuclear safety culture, coupled with service levels to rival anyone in the world. If you would like us to help improve your supply chain, then please contact us.



Our capabilities

Our capabilities include:

- 9 axis mill turn
- Milling up to a 1m³
- Turning up to 2m long x 700mm dia.
- Advanced manufacturing inc.
 - rotary 4th axis milling with automatic vice and robot loading/unloading
 - turning with Y axis, driven tooling and auto bar feeder
- Fabrication and welding
- Water Jet Cutting
- Research & Development
- Project Management

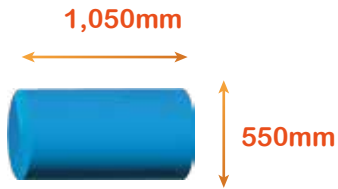


The scope of our service ranges from the production of low volume special purpose equipment to long-term manufacture of precision components and assemblies in dedicated production units. We have a long and extremely successful track record of setting up dedicated manufacturing facilities for major customers with contracts of over ten years in duration. This has been achieved through a commitment to our partners and by investing in cellular manufacture to service all the needs of our customers.

Approved welding procedures and the coding of welding engineers to other project-specific standards can also be supplied including carbon steel and most grades of stainless steel including Duplex, Hastelloy and other Nickel alloys.

Get in touch now to see how we can help you.

Our capabilities



Turning

CNC Daewoo Puma 400

Swing over bed: Ø700mm

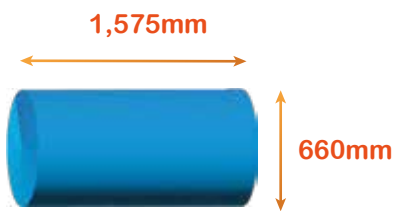
Max Ø550mm x 1,050mm



CNC Daewoo Puma 350L

Swing over bed: Ø700mm

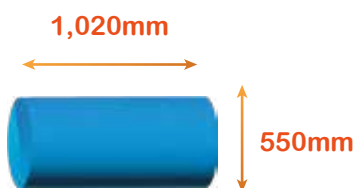
Max Ø550mm x 2,129mm



CNC Daewoo Puma 15

Swing over bed: Ø795mm

Max Ø660mm x 1,575mm



Mill/Turn

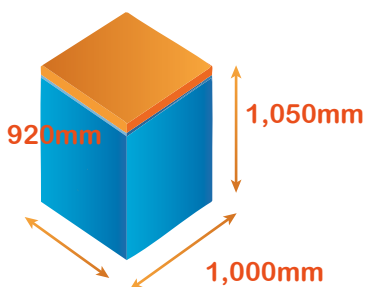
CNC Puma MX2000 ST (2 Machines)

Twin turning spindle, milling / turning spindle & bottom turret.

Swing over bed: Ø750mm

Turning Max: Ø550mm x 1,020mm

Tools 40, Milling spindle RPM 10,000. 15kw spindle power.



Horizontal Machining

CNC Mori-Seiki MH63 (4 Axis)

Travel: 1,000mm x 1,050mm x 920mm

Twin: 630 x 630 pallets, 13000rpm spindle speed

Our capabilities

WaterJet Cutting

Power Jet Systems CNC waterjet cutter

Max cutting envelope 2,085mm x 1,500mm x 150mm thick (Steel).



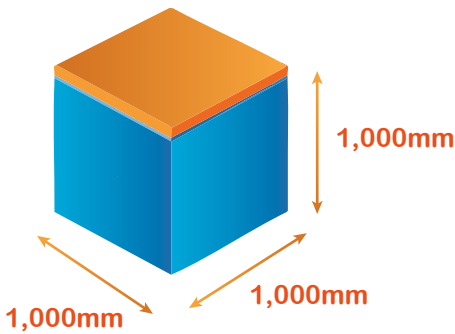
Inspection

Mitiutoyo Euro-C 122010 (Bridge Type) CMM

Travel: 2,000mm x 1,200mm x 1,000mm

Dye Penetration Inspection

Surface Finish Inspection



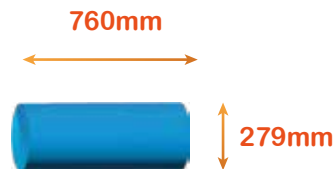
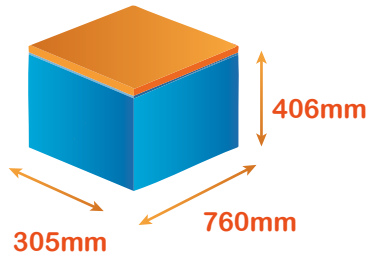
Fabrication and Welding

Working strictly in accordance with third party approved welding procedures, our engineers are qualified and coded to undertake the fabrication and welding of most grades of carbon steel and Stainless Steel grades 304L and 316L.

Approved welding procedures and the coding of welding engineers to other project-specific standards can also be supplied including Low-temperature carbon steel and most grades of Stainless Steel including Duplex and Hasteloy.

Our fabrication and welding engineers are qualified and coded by TUV - UK Ltd and BS EN ISO 9606-1:2017 - BS EN ISO 5817:2017.

Our capabilities



Toolroom / Development

CNC Haas TM-1 Toolroom Milling Machine

Travel: 760mm x 305mm x 406mm

Maximum spindle speed 4000rpm

BT40 spindle taper

CNC Haas TL-1 Toolroom Lathe

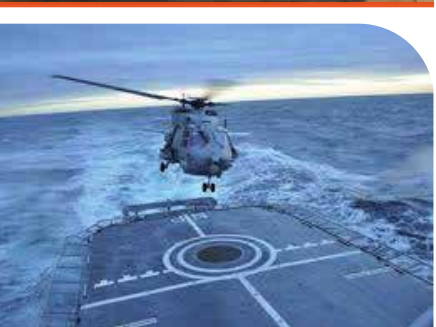
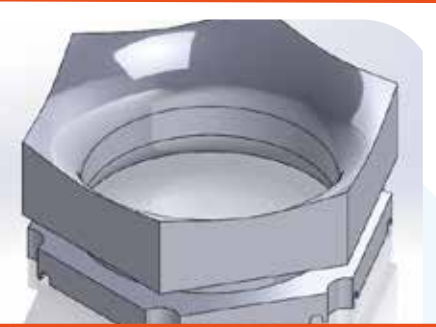
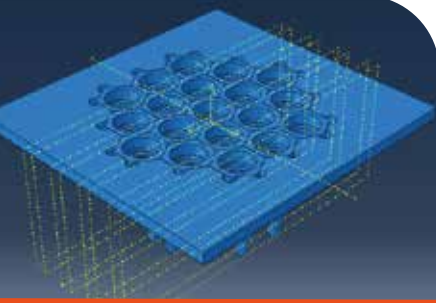
Swing over cross slide 279mm

Distance between centres 760mm

Spindle bore 58mm

Max spindle speed 1800rpm





HeliGrids

Modular HeliGrids (MHG) can reduce the manufacturing timescale from years to weeks and, unlike traditional HeliGrids, are repairable and can be shipped in crates, reducing costs.

The traditional way of manufacturing HeliGrids is very expensive, precise and difficult. They are manufactured from one large plate, which often on a twelve-month-plus lead time. The machining process requires large, capital-intensive machines that have to tie up thousands of individual features without error. The material cannot be repaired if error is made, making their manufacture very high risk.

R&D breakthrough

Contemplating this problem through our R&D department, we believed that there must be a better way. So, the concept of the Modular HelliGrid (MHG) was born. The concept is simple: you make each hole individually. Minimal material lead time, lower material costs, lower machine capital costs, and lower risk. components can be held in stock, delivering an MHG in weeks, not years. Shipping is easier in crates, and if you damage one in service, it is repairable.

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