

Centre for manufacturing excellence



Custom facility from which we design, manufacture, test and support neutron flux detectors



Maintaining the safety of nuclear facilities and maximising the lifetime value they deliver

Centre for manufacturing excellence: custom built facility for manufacturing neutron flux detectors

Key features

- Gamma test cell
- Neutron test cell
- X-ray inspection
- Automated welding
- Outgassing furnace
- ISO 7 clean room

Overview

Ultra Energy owns and operates a world-leading centre of manufacturing excellence supporting its ability to design, manufacture, test and support neutron flux detectors (NFD) from its principle site in the United Kingdom.

Ultra is the UK authority in the design, manufacture, testing and service of NFDs for Britain's nuclear power generation fleet. Its centre of manufacturing excellence strengthens the company's ability to support its existing NFD product range and installations, while simultaneously enabling world-leading innovation in the development of future designs.

Ultra is able to offer its customers access to these one of a kind production and test facilities, as well as provide expert technical support and specialist advice.

All work can be tailored to meet specific requirements, providing a low risk, commercially sound and cost-effective solution for manufacturing existing, new and future designs of NFDs.

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Facility capabilities

Neutron generator

- $F10^7$ thermal flux
- 1% flux stability tolerance
- Dual 100mm circular test cavity

X-ray

- Weld inspection
- Electronic component inspection - 30mm metal penetration

Gamma cell

- Multiple source holder
- XY remote controlled test bed - 2.5m x 2.5 test room

Heat

- Baking capability of 1200° Celsius
- Profiling temperature change
- 1000° Celsius vacuum outgassing furnace

Precision welding

- Automated TIG welding
- RF vacuum brazing
- Resistive welding



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About Ultra Energy

Organisations working with nuclear technologies have a responsibility to safeguard people, the environment and infrastructure. We provide solutions that give our customers complete, long-term protection and control of safety critical systems, while helping them increase the net value derived from nuclear facilities over their total lifespan.

Part of Curtiss-Wright, Ultra Energy has worked with nuclear customers for over 60 years. We're embedded in strategic national infrastructure and helping organisations develop future nuclear applications. We support continuous operation of nuclear sites with protection and control solutions that monitor and manage factors such as radiation, neutrons, temperature and pressure within safety critical systems.

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