QUALITY & SERVICES

A commitment to quality that’s measurable
LAND Instruments International are leading specialists in the manufacture and application of infrared temperature measurement, thermal imaging and linescanning systems. As innovators and producers of high quality temperature measuring systems for over fifty five years, LAND’s position is unrivalled.

During this time LAND have built extensive facilities to provide a full range of services to its customers. These include accredited calibration facilities and repair stations for in-house product support. LAND also recognize the need for on-site support and provide servicing and product commissioning facilities for customers.

Quality Assurance
LAND pride themselves on both quality of product and quality of service. Quality Management systems to ISO9001 are in place to oversee all functions of the company including design, manufacture and after sales service. The primary aim of these systems is to guarantee total customer satisfaction with all LAND products.

Accredited Calibration Laboratories
The calibration laboratory at LAND in the UK became the first to be externally accredited to issue UKAS (United Kingdom Accreditation Service) certificates for thermal measurements and the first to meet the requirements of ISO17025. The calibration of most types of industrial non contact temperature sensors including on-line, portable, scanning and thermographic systems is undertaken in the custom built laboratory.

The calibration laboratory at LAND in the USA offers similar calibration services. The laboratory holds external accreditation to issue LAB (Laboratory Accreditation Bureau) certificates. These facilities also meet the requirements of ISO17025.

Calibration Sources
The LANDCAL range of primary and reference standard calibration sources are designed to provide accurate, traceable calibration.

Commissioning and Servicing
A team of qualified engineers is available to assist in the commissioning of thermometer systems where required.

On-site product servicing is also available to help maintain optimum performance from LAND products.

On-site service contracts, tailored to the customers need, are available in some areas.

Repairs
Full in-house facilities are available for the repair of LAND products.

A fast turn around can be provided where plant down-time may result. The products are returned to the customer fully tested and complete with a certificate of conformity.

Training
For LAND customers who wish to benefit from our expertise and application know-how in industrial temperature measurement, a range of training courses is available, tailored to suit individual requirements.

LAND has dedicated Training facilities to provide specialist, tailor made courses for end users and distributors in all aspects of radiation thermometry.

Training can be performed in-house or on-site.
In 1989, the Quality Management System at LAND Instruments International Ltd. met the requirements of ISO 9001 for the design and manufacture of measurement equipment through the Lloyds Register of Quality Assurance. Service and in-house repair came within the scope of the Quality Management System in 1994.

This was followed in 1996 with additional TickIT certification for software design and development.

In 2002 approval to the aerospace quality standard AS9100 was also included within the scope of certification.

Also in 2002 the LAND USA office achieved a unique quality double. The calibration laboratory met the requirements of ISO17025 and the Quality Management System was approved to ISO9001.

LAND’s association with aircraft equipment manufacturers has been long-standing.

Rolls Royce approved the quality system originally in 1976 (Supplier QA approval No 03108).

In May 1994, General Electric Aircraft Engines granted approval.

This coincided with manufacturing organisation approval by the Civil Aviation Authority to the requirements of JAR-21 (Ref. No. UK.21G.2140).

This was followed in 1996, by LAND becoming a Civil Aviation Authority approved maintenance organisation to the requirements of JAR 145 (Ref. No. UK.145.00500).

In 2002 FAA foreign repair station approval was granted.

**Quality Milestones - LAND UK**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1970</td>
<td>Calibration laboratory accredited by national authority to issue traceable calibration certificates</td>
</tr>
<tr>
<td>1976</td>
<td>Rolls Royce approved supplier</td>
</tr>
<tr>
<td>1989</td>
<td>ISO9001 / ISO9002 approval of Quality Management System</td>
</tr>
<tr>
<td>1994</td>
<td>General Electric Aircraft Engines approved supplier</td>
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<tr>
<td>1994</td>
<td>CAA manufacturing organisation approval</td>
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<tr>
<td>1996</td>
<td>TickIT certification added to ISO9001 approval</td>
</tr>
<tr>
<td>1996</td>
<td>CAA maintenance organisation approval</td>
</tr>
<tr>
<td>2000</td>
<td>AS9100 certification added to ISO9001 approval</td>
</tr>
<tr>
<td>2001</td>
<td>Calibration laboratory accredited to ISO17025:1999</td>
</tr>
<tr>
<td>2002</td>
<td>FAA Foreign repair station approval</td>
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**Quality Milestones - LAND USA**

<table>
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<tr>
<th>Year</th>
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<tbody>
<tr>
<td>2002</td>
<td>Calibration laboratory accredited to ISO17025:1999</td>
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</table>
To complement our range of high quality high precision temperature measurement systems, LAND have established calibration facilities which lead the world in the calibration of temperature sensors and sources including: radiation thermometers, thermal imagers and black body furnaces. In 1970, the calibration laboratory in the UK became the first to be accredited for the issue of calibration certificates in the field of laboratory thermal measurements. In 2001 the laboratory was also the first to attain approval to ISO17025. In 2002 the calibration laboratory in the USA was accredited to issue certificates for thermal measurements to the requirement of ISO17025.

Today, they are used and respected by many leading companies throughout the world – even LAND’s competitors have made use of the facilities. Regular inspections by third party personnel ensure that the highest standards possible are maintained. A consultancy service to advise customers on the best method of obtaining traceability for their temperature measurement equipment is available.

Re-calibration Reminder Service
Regular traceable calibration is essential for temperature measuring equipment if accuracy is to be maintained. Many authorities, particularly Defence organisations and Aerospace customers specify the frequency of re-calibration for sub-contractor’s instruments. Our Re-calibration Reminder Service automatically sends customers a written reminder when any item of temperature measuring equipment is due for re-calibration. This removes the burden of scheduling different re-calibration frequencies from the instrumentation engineer.

Emissivity Determination
In order to accurately measure temperature with radiation thermometers the emissivity of the measured surface must be known. In applications where the emissivity is not known, or uncertain, LAND provide an emissivity measuring service which is fast, convenient and highly accurate. Simply send a sample to the laboratory together with your order, we will conduct the required tests and return the sample with the emissivity value.
COMMISSIONING

Commissioning undertaken by team of engineers and product specialists
Optimum configuration for your requirements
Minimal disruption and down-time

Safe, accurate and quick installation of LAND systems is a speciality of our commissioning engineers.

If necessary, the engineers can be accompanied by product specialists, ensuring that the optimum measurement location, mounting arrangement, interconnections and signal processing options are chosen.

The importance of correct installation and commissioning of equipment is vital for satisfactory and long term performance, particularly where continuity of the production process depends on the reliability of the system. Commissioning is usually scheduled to coincide with maintenance shut downs in order to keep down-time to the absolute minimum.
SERVICING

When you purchase a LAND product, you have the added assurance of continued support from our service department. Nobody knows LAND products better than LAND Service Engineers. They provide on-site maintenance visits, calibration checking and replacement of instruments. They have a wealth of experience of industrial applications using infrared thermometers and can often pin-point and remedy unforeseen problems with your particular application. Service visits are arranged to suit your requirements, keeping disruption to a minimum.

TRAINING

Infrared temperature measurement has a wide and expanding range of applications - many temperature measurement problems can be solved by using infrared technology. All LAND employees undergo an extensive training program, equipping them with the information necessary to provide the best customer support, application and product knowledge available.

This knowledge is spread world wide through our extensive sales and distributor network. Intensive training courses are held frequently, ensuring that our staff are kept up to date with the latest developments in products and applications.

Customer training plays a vital role in the LAND philosophy of providing a complete ‘package’. Courses are tailored uniquely to cover your specific needs. Course content can range from a basic overview of infrared temperature measurement, specific applications such as steel or glass or to specific products in particular.

A purpose built training centre is located at LAND’s headquarters, in Dronfield, UK. This has the latest presentation equipment, a comprehensive display of LAND products and a dedicated training team, including product specialists and engineers to deal with any of your queries. Similar training facilities are available at our subsidiary companies in the USA, Europe and Japan.

Customised training courses can also be conducted at the customer’s site anywhere in the world. However, the benefits of participating in a scheduled training course in purpose designed training facilities with product specialists readily available usually serve most end-user training requirements.
PRODUCT PORTFOLIO

Land Instruments International design and manufacture an extensive range of on-line thermometers, linescanners and thermal imagers for continuous temperature measurement and process monitoring, and portable thermal imagers for condition monitoring purposes. A comprehensive range of temperature calibration sources is also available.

FIXED ON-LINE TEMPERATURE MEASUREMENT SYSTEMS
Land’s range of on-line temperature measurement systems combine high accuracy, continuous temperature measurement with long term reliability.
Your requirements for a fixed system, which precisely matches your needs, can be selected from a comprehensive range of general purpose and dedicated purpose thermometers, thermometer signal processors, mountings and accessories.

PORTABLE INFRARED THERMOMETERS
The Land family of hand held portable infrared thermometers provide accurate spot temperature measurement within the range -50 to 3200°C/-50 to 5800°F.
A range of low cost, hand-held thermometers is also available designed specifically for food manufacturing processes and preventive maintenance.

LINESCANNERS
Landscan linescanners use an infrared scanning system to produce a temperature profile across a hot object.
These systems are designed for ease of operation and maintenance in hostile environments such as hot rolling mills and glass plants and perform as accurately as the best radiation thermometers available.

PORTABLE THERMAL CAMERAS
The Land Cyclops portable thermal imager system provides high definition thermal images and accurate temperature measurement from -20 to 1500°C/-4 to 2732°F in condition monitoring programs. LIPS image processing software provides a full report writing and image processing facility.

ON-LINE THERMAL IMAGING SYSTEMS
A new range on-on-line and process imaging systems are available for plant and process monitoring, and routine test and investigation purposes within the temperature range -20 to 2000°C/-4 to 3600°F. LIPS image processing system provides comprehensive temperature analysis and trending on either live or stored images, alarms, exchange of data, and full remote control.

APPLICATION DEDICATED THERMOMETERS
There is a range of thermometers and thermometer systems designed to solve temperature measurement problems in specific industrial applications, such as steel, non ferrous metals, glass and mineral processing.

CALIBRATION SOURCES
A comprehensive range of blackbody temperature calibration sources and accessories is available for customers who wish to establish their own calibration facility.