**Make quicker decisions**
Intelligent systems make finding and locking onto the correct target simpler than ever, for speed and reliability of operation.

**Improve operational safety**
Intuitive software offers live confidence indicators, alarms, flexible filters and clear displays to support DPOs in the field.

**Reduce downtime**
Vast, experienced and expert global servicing network with product-on-shelf back up and rapid response.
The scale and experience to deliver

Your global partner

Fleet managers understand the importance of working with companies with the scale, resources and experience to deliver reliable, accurate dynamic positioning sensors.

Leading engineering technologies company Renishaw plc has over 70 offices in 32 countries. Winner of 17 Queen’s Awards for innovation, enterprise and export, we have a research and development team of over 900 people, and around 3500 employees worldwide.

Fanbeam pioneered the use of time-of-flight laser technology to provide accurate, reliable sensors for DP systems. Twenty five years later, Fanbeam remains the most widely used sensor of its kind, due to its robust construction, intelligent software and unparalleled back up in the field.

Fanbeam is now produced in our Gloucestershire manufacturing plant, winner of the UK’s Best Electronics and Electrical Plant in 2012.

Intelligent design

It’s the combined design of our targets, Fanbeam laser unit, software and interface that make Fanbeam the preferred laser-based reference position system. Our range of data outputs, and the experience of fleets in combining Fanbeam with a range of other sensors and DP systems, make it ideal either for holding a vessel in station, or for moving a vessel with high levels of accuracy.

A wide range of applications

Fanbeam has been designed and developed according to two key principles:

- **Control:** DPOs should be supported by intelligent, clear, quick-to-operate, pre-configurable software, which offers the peace of mind of automation, alerts and confidence indicators.
- **Responsiveness:** Since conditions at sea are unpredictable, and no two operations are the same, DPOs should have the ability to control laser tilt, target acquisition, filters and all other aspects of sensor control, quickly and simply.

The 25-year development programme behind Fanbeam, and its widespread adoption across a range of DP applications, has enabled us to deliver an intelligent system, which aims to give reliability and accuracy in the broad range of conditions found offshore.

The system has been used extensively, as a sole, primary or secondary reference position system by:

- Construction and multi-purpose support vessels
- Anchor-handling tug supply vessels
- Dredging and rock-dumping vessels
- Heavy-lift construction semi-subs
- Windfarm construction vessels
- Emergency towing vessels
- Well-stimulation vessels
- Platform supply vessels
- Accommodation floatels
- Dive support vessels
- Crew supply vessels
- Shuttle tankers

Fanbeam 5 production now takes place at Renishaw’s state-of-the-art assembly facilities near Stroud, UK.

The simple yet highly robust design of the Fanbeam laser unit allows for high-performance operation in extremes of environment.
Why Fanbeam 5 is our most intelligent DP laser reference system yet

Fanbeam 5 is the laser system that:

• Makes target acquisition and tracking more reliable
• Gives DPOs clear and simple access to the data they need
• Uses advanced, intelligent algorithms to predict position, calculate confidence and suggest solutions to difficulties encountered during operations
• Offers service models that keep your fleet working, wherever vessels are in the world

Better target identification

Fanbeam works by sending out an invisible laser beam from the Fanbeam unit, which is usually mounted over the aft of the vessel. This laser beam is reflected from a specifically designed target mounted on the installation, and received back into the Fanbeam unit.

• Personnel on deck, or reflective surfaces are not a problem for Fanbeam 5, as its new intelligent systems use complex algorithms to identify and reject false targets.
• Operators can pre-program range cut-offs for targets, so anything out of range is discounted.
• On-screen indicators warn of potentially false targets.
• A range of easy-to-install targets give accuracy in tough conditions: tube targets offer low-cost, 360° coverage for short-range operations. Fanbeam prism clusters provide reliable positioning at longer ranges, including outside the 500 m exclusion zone up to 2000 m.
• A gyro interface enhances the ability to re-locate temporarily lost targets.
• Auto-level filtering removes the need for operators to adjust settings in changing conditions.
• Operators can tilt the laser during operations, for those occasions when the target is mounted on a tall platform and the Fanbeam is on a low or small vessel, allowing for fine-tuning at any time during operations.

New software and a new interface, for quick data interpretation

Fanbeam 5 software, installed on the DNV Type-approved embedded PC, is designed to give DPOs the data they need to act swiftly and with confidence, while allowing for a high degree of personalisation, through filters and interface setup. In addition to target-acquisition and tracking benefits, Fanbeam’s software and interface speed up operations.

• Function keys enable swift operations.
• Real-time visual representation of laser movement is an instant guide to sensor activity.
• Vessel display options visualise the position of the vessel relative to the target, helpful for DPOs working on a range of vessels of different types.
• Touchscreen control reduces error and the time taken to complete operations, as well as minimising the risk of failure due to the lack of moving parts.
• The LED back-lit keypad and pointer are optimised for night-time operations.
• Display switches quickly between daylight and night-time colours for maximum screen clarity.
• Pre-programmable filters support correct target identification.
Support for DPOs

The Fanbeam 5 software interface features the following benefits:

- Clear, easy to understand numeric readouts, and ergonomically designed controls for quick manipulation during complex operations
- New confidence indicators that draw on a range of measurements to give a live, numerical confidence score, which DPOs can use to inform actions
- A range of data output options, and the ability to see the data telegram transmitted to the DP system
- Multi-target software that allows DPOs to determine relative heading of moving platforms
- Pre-programmable alarms for target identification, target loss, and minimum and maximum ranges, as well as bearing
- Full end-user manuals developed with scores of fleet managers and thousands of DPOs. Clear and simple guides are given to all aspects of installation, positioning of targets, software programming, and maintenance

A range of accessories to support your operation

The Fanbeam system is supplied as a full kit. Our range of accessories is designed to help fleets support Fanbeam in the field and adapt setup to their own needs.

- A choice of targets: tube for low-cost, short-range performance; prism for long-range, high-reliability positioning
- Control system configurations to suit bridge layout: large panel or bracket mount HMI
- Accessories to support transport and re-mounting: transit case, mounting bolt, isolation kit
- Marine-grade displays
- Accessories to help you keep working: Spares Kit 1 supports day-to-day maintenance; Spares Kit 2 contains spare parts usable in the field; Spares Kit 3 contains a laser head which is field swappable in the event of a laser or tilt failure
- Cable lengths for all types of vessels
- ‘Plug and play’ adaptor lets you upgrade from a previous Fanbeam or other laser sensor, quickly and cost-effectively

The Fanbeam prism clusters offer optimum long-range performance.

Fanbeam targets include tube targets for shorter-range operations.
Keeping your fleet working

Service centre features
We have chosen as our service centre partners companies that share our commitment to swift solutions and expert engineering. Our service centres feature:

• Expert, experienced Fanbeam engineers
• Full complements of spare parts, for quick servicing to get you operational
• Complete backup systems, ready to go when required
• Full training programmes for all staff
• Regular technical audits to guarantee you the service you expect

For a full and up-to-date list of Renishaw’s authorised service centres, please visit www.renishaw.com/fanbeam

With Renishaw’s worldwide access to service, support and repair centres, you can eliminate the potential for vessel downtime.

Repair by Exchange
‘Repair by Exchange’ is an innovative, cost-effective service option that ensures our service is of the high standard our customers expect. Repair by Exchange offers customers the ability to keep their fleet working, with a minimum of downtime and handling. Fanbeam units are kept at key service centres globally, and, in the event of damage, a replacement unit can be sent to your vessel in exchange for faulty equipment:

• No waiting for repair work to be done
• No waiting for spare parts to arrive
• Deal with a service centre convenient for you
• Minimise the risk of downgrading of DP class and potential loss of vessel day-rate

Renishaw’s new Repair by Exchange option ensures the ongoing performance of your fleet in the event of failure.
About Renishaw

Renishaw is an established world leader in engineering technologies, with a strong history of innovation in product development and manufacturing. Since its formation in 1973, the company has supplied leading-edge products that increase process productivity, improve product quality and deliver cost-effective automation solutions.

A worldwide network of subsidiary companies and distributors provides exceptional service and support for its customers.

Products include:

- Additive manufacturing, vacuum casting, and injection moulding technologies for design, prototyping, and production applications
- Advanced material technologies with a variety of applications in multiple fields
- Dental CAD/CAM scanning and milling systems and supply of dental structures
- Encoder systems for high accuracy linear, angle and rotary position feedback
- Fixturing for CMMs (co-ordinate measuring machines) and gauging systems
- Gauging systems for comparative measurement of machined parts
- High-speed laser measurement and surveying systems for use in extreme environments
- Laser and ballbar systems for performance measurement and calibration of machines
- Medical devices for neurosurgical applications
- Probe systems and software for job set-up, tool setting and inspection on CNC machine tools
- Raman spectroscopy systems for non-destructive material analysis
- Sensor systems and software for measurement on CMMs
- Styli for CMM and machine tool probe applications

For worldwide contact details, please visit our main website at www.renishaw.com/contact