



**TRAX**

**Intelligent Pipeline  
Technology**

**Pre-Commissioning  
Assurance**  
Products & Services



# About

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Originally established as Online Electronics in 1996, IK Trax is now an independent company, part of IK Group Worldwide, an engineering powerhouse that delivers brilliant engineering for the most complex challenges in the oil & gas industry.

With over 25 years of expertise and a successful history, IK Trax have a proven track record in designing and manufacturing pipeline pig locating and signalling equipment, as well as advanced pipeline data logging and testing systems, guaranteeing our clients total assurance in their operations.

During pipeline pre-commissioning, it is vital operators collate the necessary data to allow them to minimise costs and transition efficiently from cleaning and gauging, to hydrotest and finally pipeline dewatering,

Pipeline systems often feature intricate internal geometry, including tee pieces, wye pieces, complex subsea fittings in manifolds, and heavy-walled pipes on FPSO topsides. Designing pigs for such systems requires careful consideration due to the challenging nature of these components. Efficient completion of the operation also requires selecting the appropriate pig tracking, locating and signalling methodology.

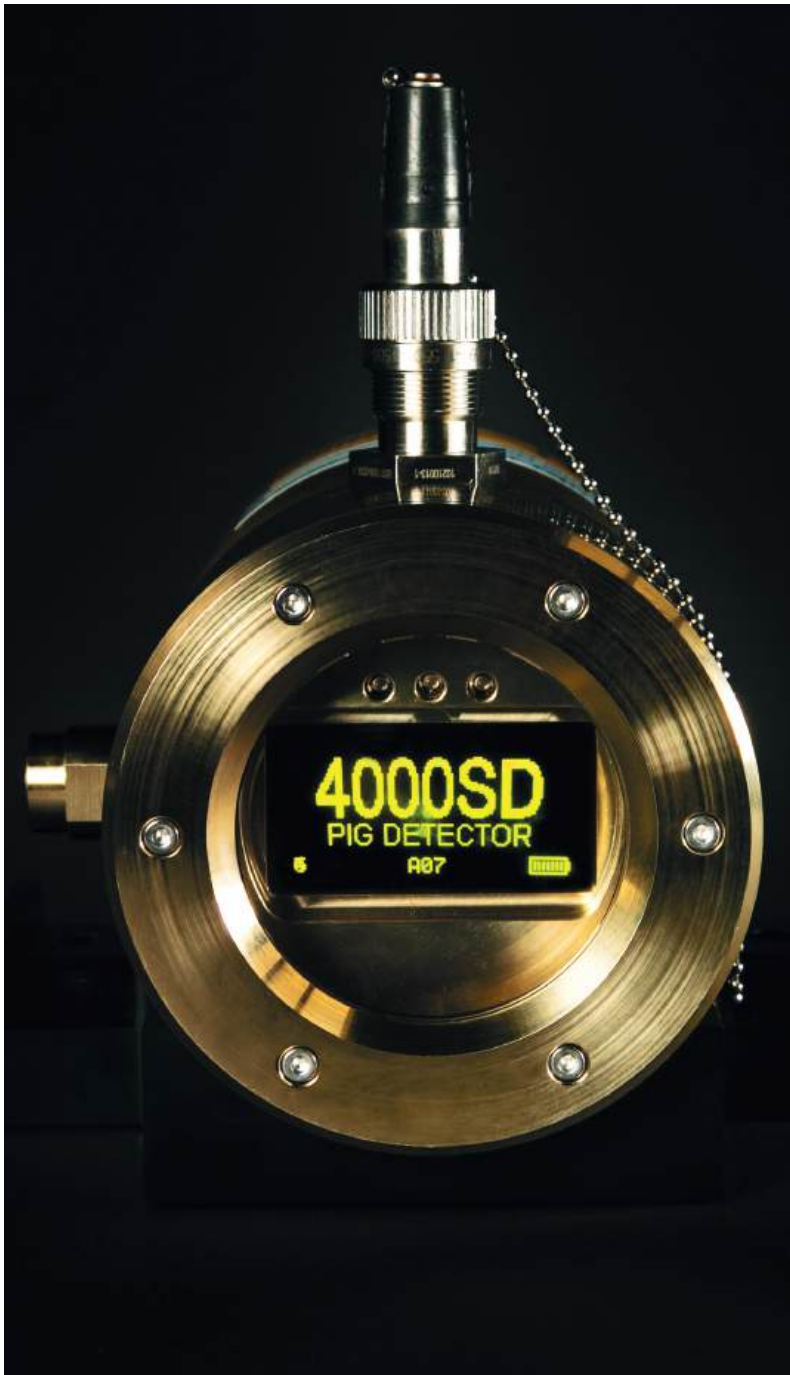
Alongside pig tracking and signalling, our data logging and testing solutions play a crucial role in streamlining the pipeline pre-commissioning process. They provide live data, assuring operators that they can proceed to the next stage. These solutions include pipeline gauging data systems, pressure and temperature monitoring during hydrotest and pipeline conditioning assurance in real-time.



**Intelligent Pipeline  
Technology**

## Magnetic Non-Intrusive Signallers

Magnetic Non-Intrusive Signallers confirm the successful launch and receipt of magnetic pigs and confirm pig passage at critical points along the pipeline. They can be installed quickly and easily to the pipeline and require minimal setup. All signallers provide local indication of pig passage via a graphical display and high-brightness LEDs. Magnetic signallers can be installed on pipelines of any size and carrying any medium.



### 4001D MAGSIG®

The 4001D MAGSIG® is ATEX and IECEx certified meaning it can be installed in hazardous areas, for example on platforms. The 4001D is a user-friendly device with an intuitive display that communicates pig passage data. The user can easily navigate and control the unit directly from the display.

### 4000SD SUBSEA

The 4000SD is a compact, self-contained, magnetic pig signaller which is suitable for harsh subsea applications and has an operating depth of 3,000m. The 4000SD can be deployed by a diver or an ROV and remote signalling can be provided with the addition of an Acoustic Link or Strobe.

#### Features and benefits:

- Up to 99 logged events
- Graphical display and high-brightness LED
- Events can be viewed locally and reviewed later via the display
- Single control button and intuitive menu system
- Quick and easy setup
- Versatile



## Electromagnetic Pig Locating

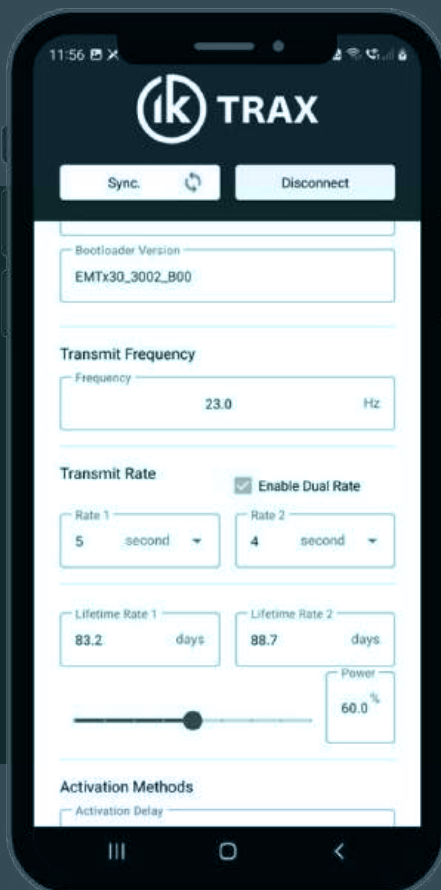
Electromagnetic Transmitter and Receiver systems enable quick and accurate locating of a pipeline pig in a topside or subsea pipeline carrying any medium. They can also be used as a contingency method of confirming launch and receipt. Electromagnetic technology is suitable for pipelines that are buried or trenched, pipeline bundles and pipe-in-pipe.

### Electromagnetic Transmitters

Pipeline pigs can be fitted with electromagnetic transmitters, enabling accurate verification of their location. IK Trax provides a wide range of ATEX and IECEx-certified transmitters to suit all pipeline sizes.

An electromagnetic transmitter can be located to within a few centimetres. This reduces vessel and operational downtime by facilitating the process of locating a stalled pig or confirming if a pig has left the launcher or been successfully received.

Battery life can be conserved by using a Pressure Switch, Water or Magnetic Activation Endcap. This means that pigs can be loaded in advance of the pig run without depleting battery life.



### Electromagnetic Config App

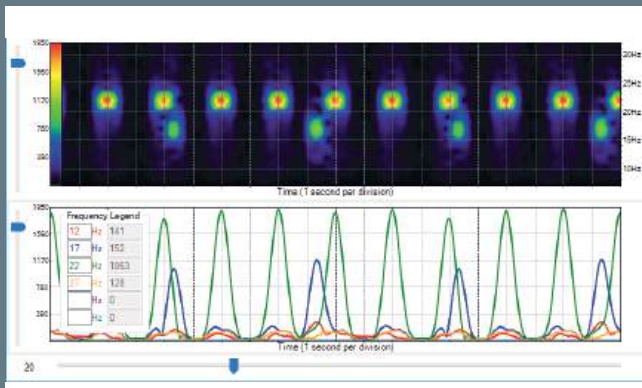
Our IK Trax Config Bluetooth and Windows Apps allow parameters such as frequency and pulse rate to be modified on-site to suit your project requirements. The app will also provide an estimated battery life under ambient temperature conditions based on your selected pulse rates and transmit power level. This enables you to configure these parameters to achieve the optimal balance between power and battery life.

# Electromagnetic Receivers

IK Trax's EMRx Multi-Frequency Receivers are used to locate and track pigs fitted with electromagnetic transmitters and/or magnets. They are designed for simple operation with one control carrying out all functions.

Both Onshore and Subsea options are offered, along with an ATEX and IECEx Zone 0 certified Receiver. The EMRx Subsea includes the option to relay the received signal back to the surface via ROV umbilical using RS232 allowing it to be interpreted topside.

EMRx Receivers permit the locating of transmitters even within very heavy walled launchers and receivers, pipeline bundles or Pipe-in-Pipe.



## Electromagnetic Receiver Applications

IK Trax's user-friendly EMRx Bluetooth and Windows Applications can be used in conjunction with any EMRx Receiver. They provide a graphical display of the signal, facilitating the pig locating and tracking process. They also allow advanced functionality such as tracking six colour-coded frequencies, audio output, data logging and the ability to mark points of interest. Screenshots and export functions allow for further analysis, reporting or sharing.

## Features and benefits

- EM Transmitters have a detectable null spot, providing precise detection.
- Full range of units to fit all pipeline sizes
- Self-regulation ensures the transmitter signal strength is constant over the battery lifetime
- Specialist operators are not required resulting in less costs than other tracking & location options.
- The transmitter can be adapted to become the pig body by fitting pig flanges, increasing the signal considerably.
- Transmitter and receiver parameters can be modified by the user without the need to return to the manufacturer.
- Titanium transmitter housings designed for high-pressure applications are available.



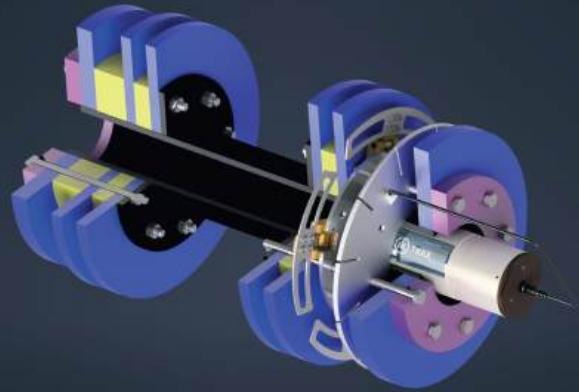
## Datalogging & Testing

IK Trax's data logging and testing equipment remotely records and communicates data at different phases of the pipeline pre-commissioning process. This allows the support vessel to be available for other tasks.

### Gauging Run Integrity Data (GRID®)

The GRID® system allows the presence and position of defects along a pipeline to be identified. There is no requirement to retrieve the pig for visual inspection of the gauge plate and it offers the capability to log multiple defects.

A pig fitted with a GRID® transducer and gauge plate is run through the line. The EM transmitter monitors the condition of the gauge plate.



#### Features and benefits:

- The system logs the time the defect was detected. The operator can then establish the approximate position of the defect from the average speed of the pig.
- Can be configured with a pressure switch that activates the system once the pipeline pressure exceeds a set threshold meaning that the system can be installed inside a wet pipeline at atmospheric pressure in advance of the required activation date.
- Optional Automatic Resetting Gauging Fingers (ARGF) allow multiple defects to be detected and logged on a gauging run.

### 6001SD

The 6001SD Temperature and Pressure Subsea Logger is a compact, self-contained, unit which logs and displays readings from internal digital pressure and temperature sensors during the hydrotest. Users can input their own testing parameters and upon meeting your criteria, the unit instantly displays a "PASS" confirmation. This enables operators to make informed decisions without having to recover the unit.



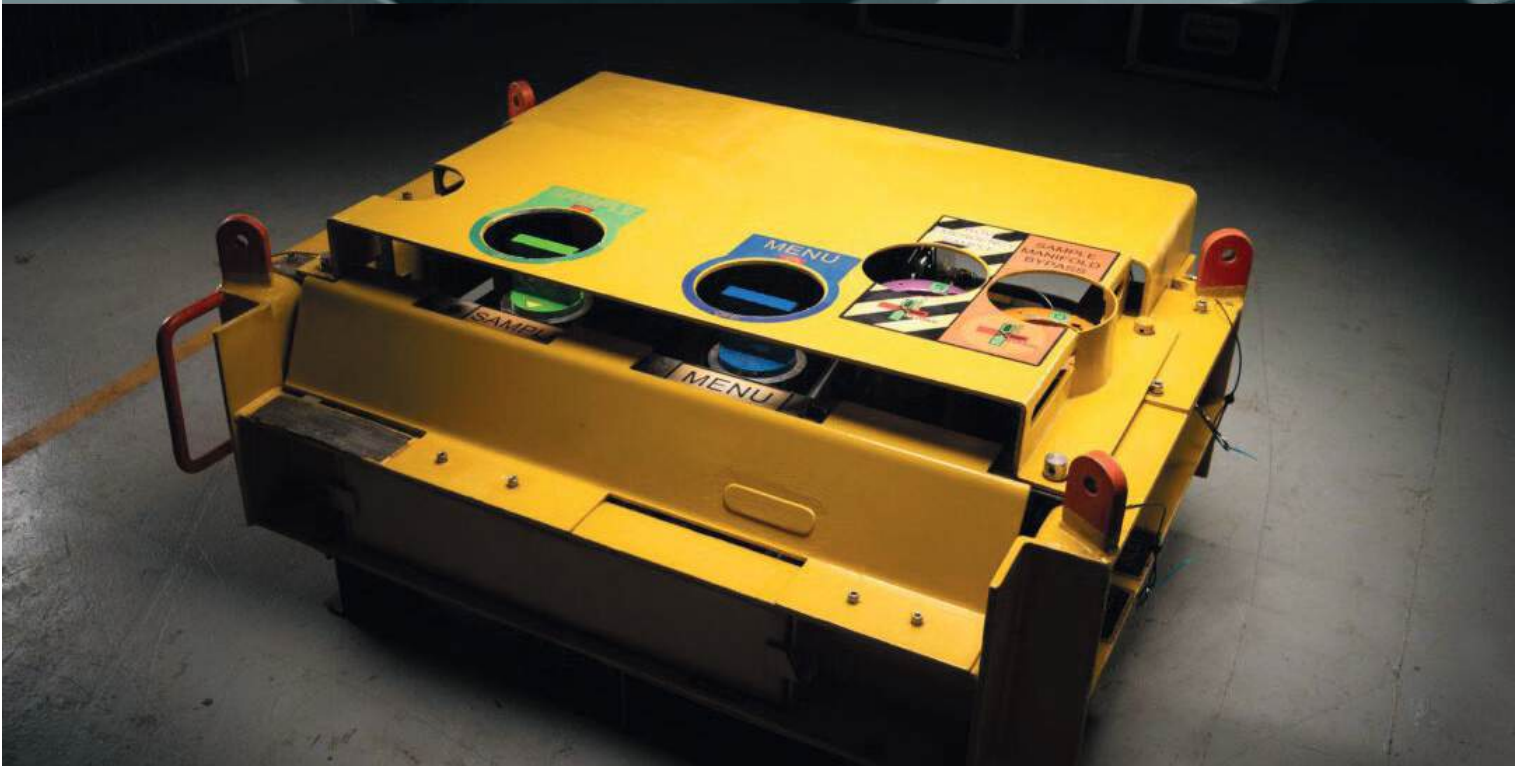
#### Features and benefits:

- Enables ROV, vessel or diver to perform associated tasks in parallel resulting in accelerated completion of work.
- High visibility OLED display
- Capable of displaying and logging 2x pressure and temperature for approximately 100 days, complete with time and date.
- Can be interfaced with an acoustic alarm, data transducer or strobe for remote confirmation.
- Unit and interface components can be mounted in an easy-to-deploy cradle.
- Compact, self-contained with minimal connections and cabling resulting in easy installation.
- All functions can be carried out using a single control button and intuitive menu system.
- Rated to 3000m.

## MEG ARTS®

MEG ARTS® is a system with a proven track record in providing highly reliable information on the composition of MEG and other chemicals received subsea during pipeline conditioning operations.

The flowing MEG is analysed for conformity with project purity, dryness or hydrate suppression requirements. Values of density, pressure and temperature are logged and displayed on a high-visibility OLED display. Up to 7 samples are captured for recovery to the surface to confirm composition.



### Features and benefits

- Pipeline conditioning assured through real-time and logged data and physical sampling.
- Can provide a graphical summary of pipeline conditioning operation from downloaded data.
- Automatic sampling eliminates the need for a vessel at, or transit to, receipt location resulting in significant savings in vessel time and costs.
- Optional ROV sampling allows for multiple samples from a single switch meaning the ROV does not need to relocate to different valves.
- Samples can be captured from specified train positions
- Removal of industry reliance on theoretical calculations
- Rated to 3000m.



**TRAX**

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## Maximise pipeline performance. Minimise risks.

Ensuring the optimal efficiency of your pipeline operations is our top priority. Our range of intelligent products is perfectly tailored to suit diverse applications onshore, offshore and subsea.

We utilise a variety of technologies to assist our clients throughout the entire lifecycle of a pipeline. To find out more about the complete range of products offered by IK Trax please visit our website or contact us directly to discuss how we can assist.



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