



Encoders - IMT Newsletter



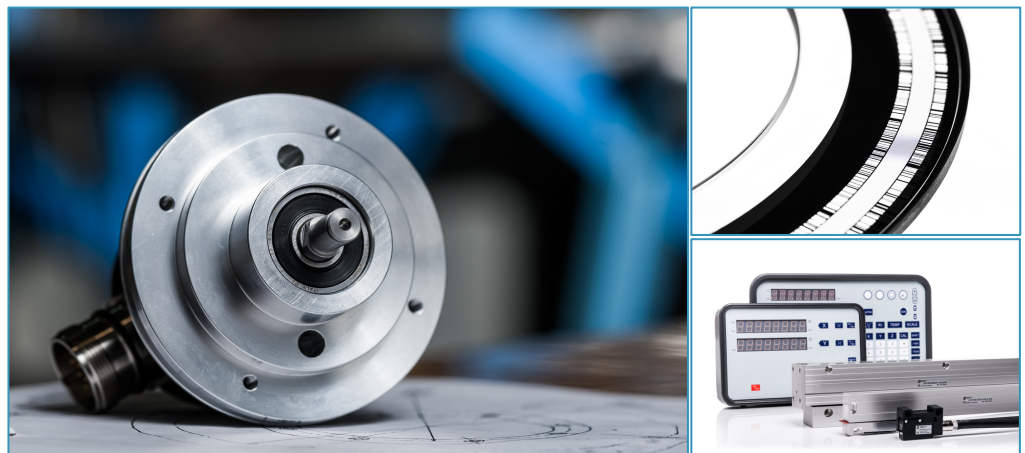
@IMTLtd_Uk

Innovative Measurement Technology Ltd ventures into the Encoder market with Precizika Metrology

A Member of
gtma
Supporting Manufacturing Excellence
www.gtma.co.uk

About

Having been successful for many years selling Gauging Transducers, last August Innovative Measurement Technology was able to bring Encoders and Glass scales to its customers with Precizika Metrology.



What is an Encoder

An encoder is a device used to convert physical movement into digital signals. The encoder can give a control system information about the magnitude and direction of movement allowing it to be used to control moving parts of equipment.

Common applications for encoders range from being used in CNC machines, conveyors, robotics or wherever else rotary and linear motion is monitored and controlled.

Optical glass gratings are also available where the user provides the electronics for a custom system. Available as discs up to 200mm in Diameter and linear scales up to 3400mm in length.



Did you know....

Precizika Metrology creates one of the largest, if not the largest, Linear Encoders on the market with a measuring length of up to 50,000mm

Visiting Precizika Metrology

Based in Lithuania, Precizika has a long history of more than 50 years in the design and production of metrology equipment. Previously being part of Brown & Sharpe then Hexagon Group, the company has achieved much success such as the National Science Prize for Encoders Development in 1983 and more recently the Lithuanian product of the year.

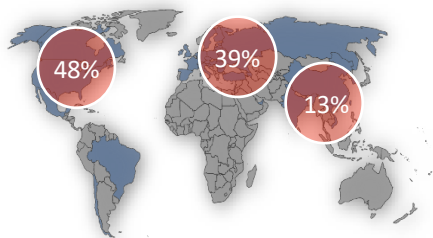
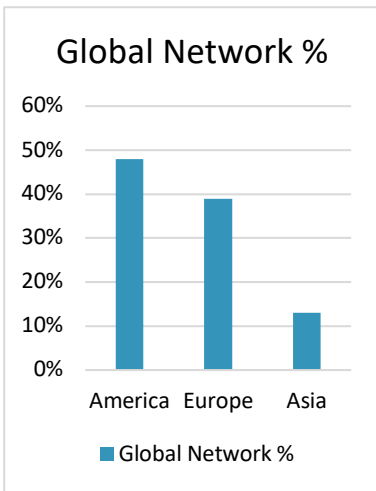
Having visited the company in 2017, IMT were impressed to see the exceptionally high quality of Encoders produced, seeing the production process in full as well as the skill from the workers to produce such a high-quality instrument.

Precizika Metrology Encoders can directly replace other brands such as Heidenhain, RSF... and be compatible with certain Siemens, Fanuc, Heidenhain controllers among others.

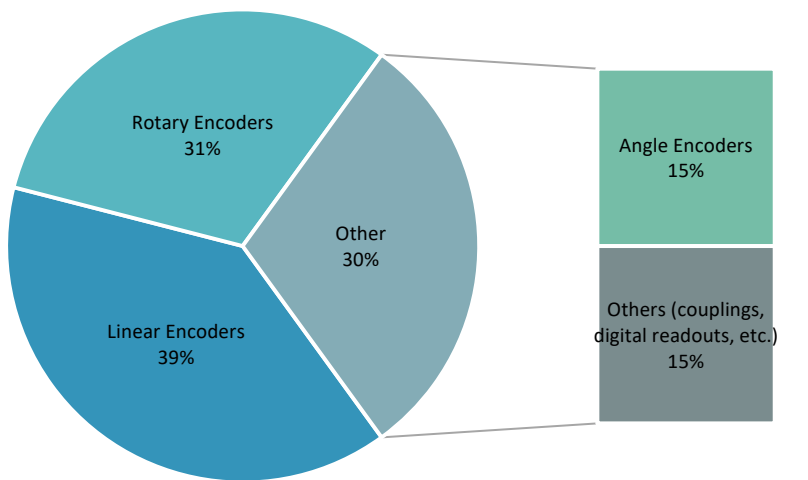
Furthermore, as an advantage over other manufacturers, Precizika have the capability to produce custom solutions, they create glass scales that are used in other manufacturers encoders and create one of the largest, if not the largest, Linear Encoder on the market with a measuring length of up to 50,000mm!

The company, which is ISO 9001: 2015 certified, is always driving forward investing in new products and future proofing existing ones.

The visit to the factory in Lithuania left a good impression with IMT and felt that Precizika was a perfect partner with its products fitting right into Innovative Measurements Technologies current line-up.



2017 Encoder Sales



- Linear Encoders
- Rotary Encoders
- Angle Encoders
- Others (couplings, digital readouts, etc.)

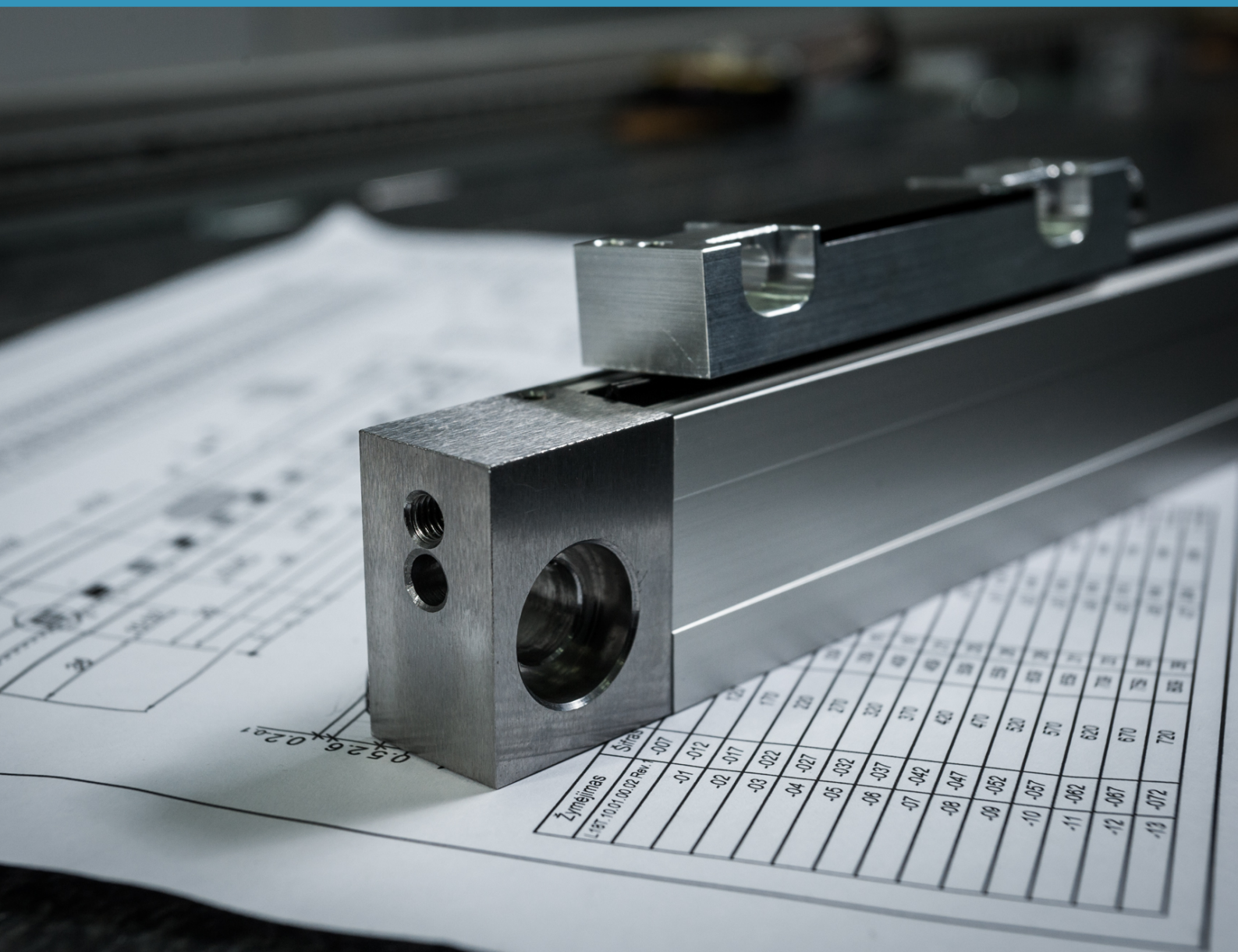
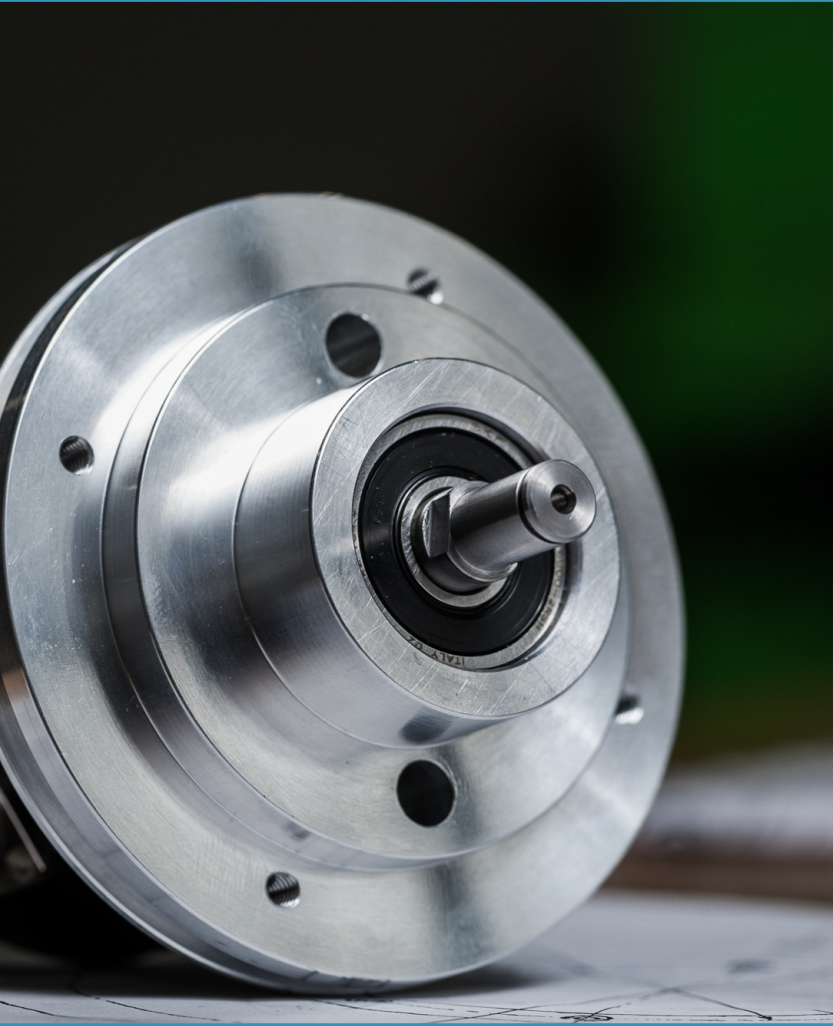
As you can see on the 2017 sales chart the bestselling encoder for Precizika Metrology is the Linear Encoder with 39% of the total sales. The range consists of photoelectric and magnetic linear encoders equalling 14 different series with distinct features up to 50m in measuring length with 0.1µm resolution. It is also possible to have an accuracy of up to 1µm/measuring

A close second with 31% of sales are Rotary Encoders which comprises of 19 distinct series ranging from 28mm to 170mm Diameter models. Model dependent, the Rotary Encoders can have up to 3.600.000 pulses per revolution, 21-bit singleturn resolution and up to 40-bit multiturn resolution. The accuracy achieved by the Rotary encoders are up to 2 arc.sec and optional features include high IP ratings and variations for the stainless-steel housing.

Angle Encoders along with accessories follow with 15% of the total sales each.

An interesting chart which can show how varied the encoders applications can be.

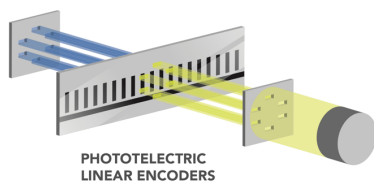
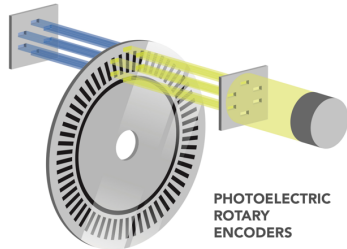




Did you know....

We have optical glass gratings available as disks with a diameter up to 200 mm and linear scales up to 3400 mm in length

How Encoders work

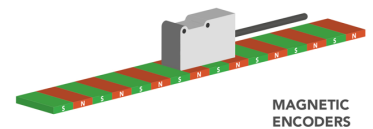
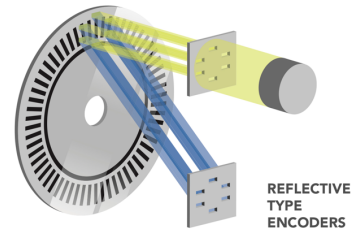


Encoders are used to convert angular or linear displacement into electric signals containing information about the magnitude and direction of movement. After further signal processing by the numeric control devices (processor complexes, digital readouts), this information is used to control moving parts of the equipment.

Our encoders, manufactured by Precizika Metrology, take advantage of photoelectric technology operating on the principal of light modulation or magnetic technology using a combination of permanent magnets and magnetic sensors to detect movement and position.

Absolute encoders are devices that provide true (absolute) positional information. This is because it generates a unique code for each position. The resolution is equal to 2^n (n =number of bit), the encoder uses grey or binary coding which can be translated into different protocols. This encoder type is normally used to monitor object position during power up and power down. Unlike incremental encoders, the encoded output provides the ability to read the object position without moving the encoder.

Singleturn absolute encoder delivers a single data item in the form of a "word" in parallel or serial mode for each position of the object, which can be read directly and quickly by control systems, whereas multiturn absolute encoder can perform a greater number of turns and delivers, in addition to the position of the object in the turn, the number of turns performed in relation to a reference mark.



A Member of
gtma
Supporting Manufacturing Excellence
www.gtma.co.uk

Largest Export markets



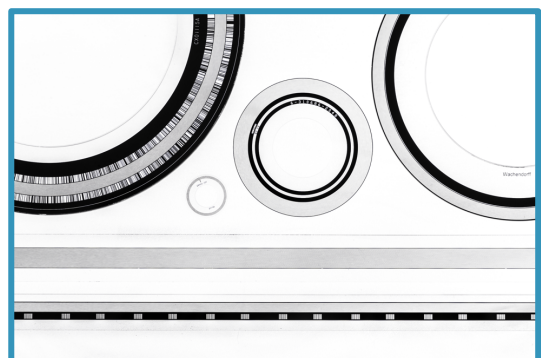
Optical Glass Gratings

Available in a variety of configurations Optical Glass gratings are for applications where the electronics and scanning unit is provided by the user for customized measuring or detection system.

As previously mentioned the glass gratings are available in different variations, Linear scales up to 3400mm, Glass disks up to 200 mm diameter or as special geometric designs.

Options available:

- Glass thickness selection
- 12 – 200 mm disc diameter
- Up to 3400 mm scale length
- Anti-reflective & protective coating
- Soda lime, Zerodur, BK7 and other substrate material on request
- Custom Shapes



Did you know....

Precizika Metrology is an ISO 9001:2015 Certified company

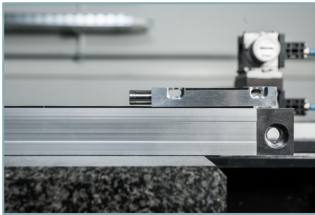


Featured Product

AK36 absolute rotary encoder. Is available in single turn and multi turn versions. Using SSI OR BISS serial interface, it can reach up to 21-bit single turn and 40-bit multiturn resolutions per revolution.

Features

- Photoelectric sender-receiver type sensing head
- Absolute type
- Digital output signal
- SSI or BISS output signal protocol
- High Resolution
- High precision
- Single turn absolute encoder
- Multi turn absolute encoder

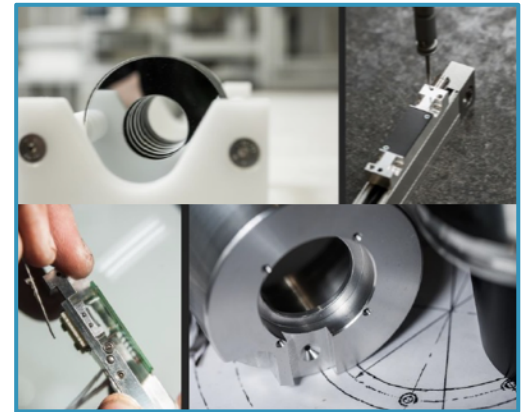


Custom Solutions

An advantage over competition is the ability to produce custom solutions. Precizika can offer adjustments to current encoders or entirely new projects based on a customer's specification. New projects are advised to have a discussion in which the best solution can be created, but the R&D department is always active and willing to experiment and keep up with a customer's everchanging needs.

Solutions that are offered:

- New product development
- Custom mechanical adjustments
- Flexible product design
- Encoder upgrades
- Specification alterations



INNOVATIVE
MEASUREMENT
TECHNOLOGY LTD.



Innovative Measurement Technology Ltd

Unit 3E Vinnetrow Business Park,

Vinnetrow Road, Chichester

West Sussex, PO20 1QH

United Kingdom

Tel: +44 (0) 1243 942010

Email: sales@imeasure.co.uk

Email: support@imeasure.co.uk

Web: <http://innovative-measurement-technology.co.uk>



IMT Website QR code

