

Non-contact...

Non-repeatable errors are a particular concern in an angular motion system because they cannot be compensated for. The non-contact, modular RESM is rigidly locked to the machine's rotor, eliminating coupling losses, oscillation, shaft torsion and other hysteresis errors that plague sealed encoders.

The dynamically responsive RESM provides a system repeatability that cannot be matched by any sealed encoder – the best case bi-directional system repeatability of the RESM is 0.02 arc second.*



*On a 413 mm RESM read by an SR readhead and Si1000 interface

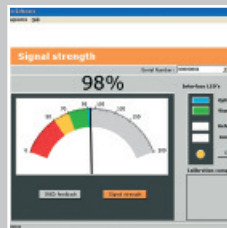
RENISHAW
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Dynamic signal control ensures ultra low cyclic error (± 40 nm SDE)

32400
32768
36000

A range of 16 line counts provide compatibility with industry standard controllers



Comprehensive **signum**™ software for ease of installation and real-time diagnostics

RENISHAW
apply innovation™

Redefine your machine's performance...



Wipe it... it works!

Angle encoders for machine tool applications



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

The new RESM angle encoder from the **SIGNUM™** range meets the extensive demands of machine tool applications

- Sealed to **IP64** - 'recoverable readhead'
- Ultra low cyclic error; **±40nm SDE**
- **High immunity** to dirt, water, oil, dust and grease
- Designed for **high shock / vibration** environments
- Capable of operation up to **85°C** and **3,600 rev/min**
- Graduation **accuracy to ±0.5 arc second**
- Available in a wide range of diameters from **Ø52 mm to Ø413 mm**
- **IN-TRAC™** auto-phase, optical reference mark, repeatable over entire temperature and speed specification
- **Non-contact** optical performance
- Up to **60 m cable length**



The lowest sub-divisional error in its class

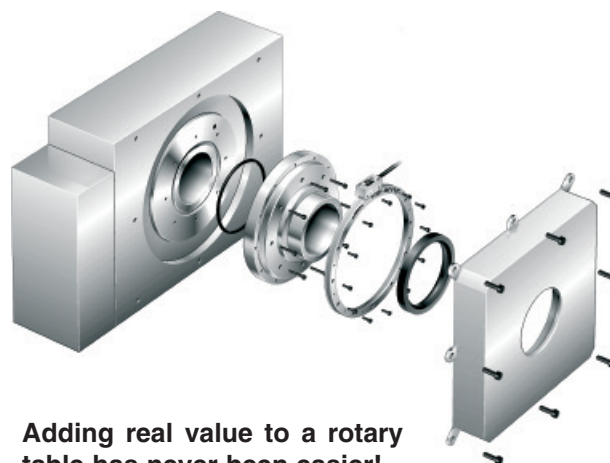
Improve the surface finish capability of your machine...

In a direct-drive axis, the dynamic performance of the encoder directly affects the quality of a machined workpiece surface.

SIGNUM™ offers exceptional signal purity, to give the lowest sub-divisional error (SDE) of any encoder in its class. On a 206 mm diameter system, **the SDE is ±0.08 arc second**. Compare that to the encoder you're currently using!

Cost-effective rotary table performance upgrades...

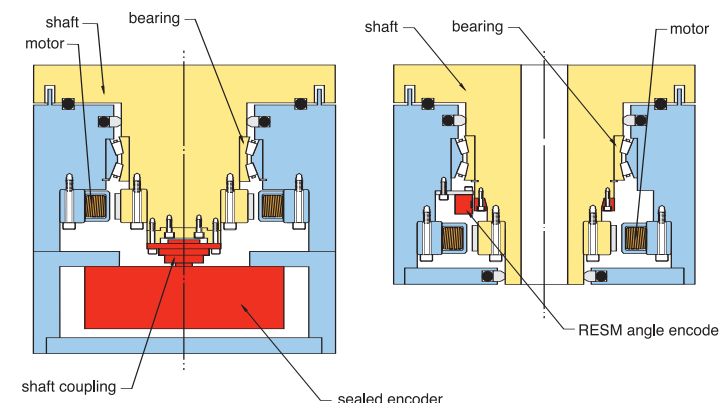
Direct encoder feedback on a rotary table significantly improves performance but it has always been an expensive custom product modification - until now. The total axial length of **SIGNUM™** is only 16.5 mm, so it can easily be bolted directly to the rear of the table's rotor. Direct encoder feedback can become a simple modular option and you won't even lose the table's through-hole.



Adding real value to a rotary table has never been easier!

Form factor...

The RESM features an ultra-low section and a large internal diameter, perfect for routing cables and pneumatic supplies. The patented taper mount utilises this form to provide error compensation and easy installation.



Mounting the ring directly and close to the rotating stage ensures a compact table design and optimum servo control with zero coupling losses.

For further information, please visit www.renishaw.com/RESM