

RESR optical angle encoder



Exceptional metrology

Up to ± 0.5 arc second accuracy



Easy to integrate and install

Unique taper mount and integral LED indicating optimum set-up



Optical, non-contact configuration

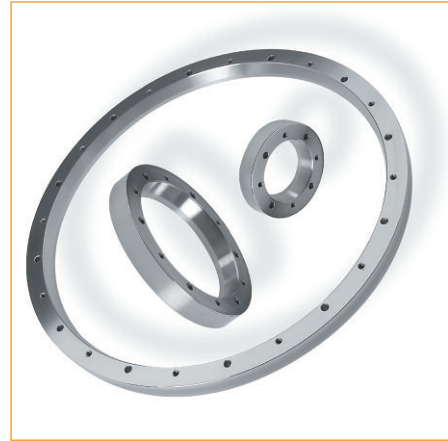
High speed and zero friction

The RESR is a one-piece stainless steel ring with axial graduations marked directly onto the periphery. The RESR boasts impressive accuracy with resolution to 0.01 arc second, suiting the most demanding precision applications. Read by Renishaw's RGH20 readhead, that utilises filtering optics, the system has a high tolerance to dirt, scratches and greasy fingerprints that can cause other encoder systems to miscount.

The low profile RESR with large internal diameter is easy to design in to most installations, but more importantly its low mass, low inertia design will not compromise system performance. The non-contact format enables the ring to be rigidly locked to the machine shaft, providing true direct feedback, whilst eliminating mechanical hysteresis such as coupling losses, shaft torsion and backlash. Consequently, the RESR provides faster settling times, higher repeatability and allows the servo loop to operate with higher gain and bandwidth.

The system offers: -

- High speed, non-contact, optical performance
- Graduation accuracy of 413 mm ring; ± 0.5 arc second
- Wide range of diameters and line counts that provide compatibility with industry standard controllers (52 mm to 413 mm with line counts from 4,096 to 64,800)
- Angular resolution to 0.01 arc second
- Patented taper mount provides error compensation and simplifies installation
- Zero backlash
- Filtering optics provide excellent dirt immunity
- UHV compatible
- Low magnetic permeability as standard
- Low profile for easy integration
- Low mass and low inertia
- Compatible with RGH20, RGH34 or RGH40 readheads that offer industry standard analog or digital outputs with reference mark option
- Integral set-up LED on all Renishaw encoders for quick set-up and instant "health check" at any time
- Ultra-low inertia versions also available from 75 mm to 200 mm diameter



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