



Newsletter May 2024

Rotary Magnetic Scales for Robotic Applications from BOGEN Magnetics

BOGEN Magnetics designs and manufactures a comprehensive range of [rotary magnetic scales](#), segmented rings, arcs, and curved structures.

The portfolio includes RMSI and RMSN standard rotary scales for incremental and absolute measurement tasks, as well as tailored rotary scales to meet individual demands.

Key considerations for evaluation to ensure a precise fit for each application include:

- dimensions (outer diameter/shaft diameter),
- shapes (ring/arc/curved structure),
- materials (aluminum/stainless steel/hard ferrite/elastomer bonded ferrite/vulcanized ferrite/plastoferrite),
- mounting methods (with or without a hub, an installation by gluing, by press-fitting),
- patterns (pseudo-random code, special code pattern),
- application environments (installation in low/high temperatures)

The range includes the following features among others:

- high-quality materials resistant to dust, moisture, cooling lubricants, oil, chemicals, temperature fluctuations, and vibrations;
- axial and radial magnetization;
- precisely machined hubs for easy installation by gluing or press-fitting.

The magnetization process, developed and patented by BOGEN, is entirely performed in-house using advanced magnetization lines. It ensures high-precision coding and accuracy, is highly flexible, and allows for large volume cost-effective productions as well as for small batches and custom productions.

Incremental rotary scales can be equipped with single or multiple pole reference tracks. Absolute versions can pair the absolute track with incremental pole and/or reference tracks. The absolute code pattern can also be customized to meet specific requirements.

