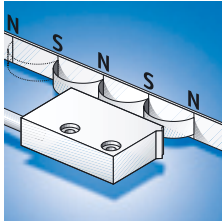


MAGLINE: Innovative, Contactless and Reliable Systems.

Magnetic Distance and Angle Measurement.



The functional principle of MAGLINE. Contactless sensing of magnet fields and conversion to analog measured values – either in absolute or incremental output signal forms.

MAGLINE is a prime example of the innovative energy at SIKO.

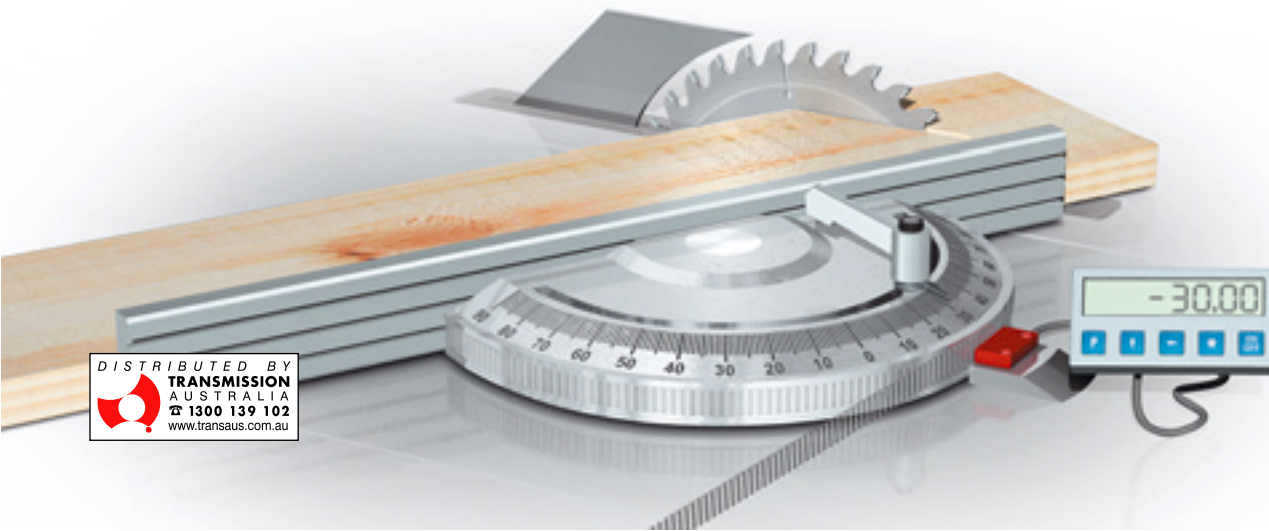
A complete system, the magnetic and, above all, contactless measuring technology for the detection of linear and radial positions is equally suitable for sensing number of revolutions or angles. Measurements under extreme industrial conditions are demanding in respect to reliability and reproducibility. The MAGLINE solution proves its superiority: dust, oil, grease, vibrations or shock are not a hindrance.

A proven product, the BASIC series offers a wide spectrum of components for incremental and absolute measurement down to the μm range. All measured values can be directly displayed or further processed by a controller. For this purpose, MAGLINE^{BASIC} has interfaces available for integration into nearly every industrial environment. The MICRO series is designed especially for precise and highly dynamic processes with high requirements on the measured value acquisition in the μm range. It is an economical alternative to optical systems in linear guide and drive engineering. At the other end of the scale, the MACRO system is designed for long measured distances and finds its main users in storage and conveyor technology.

The ROTO series is an alternative to conventional optical rotation encoder systems, if exact number of rotations or angle measurements under inhospitable conditions are required. Even in the oil bath of a hydraulic pump, this system performs reliably.

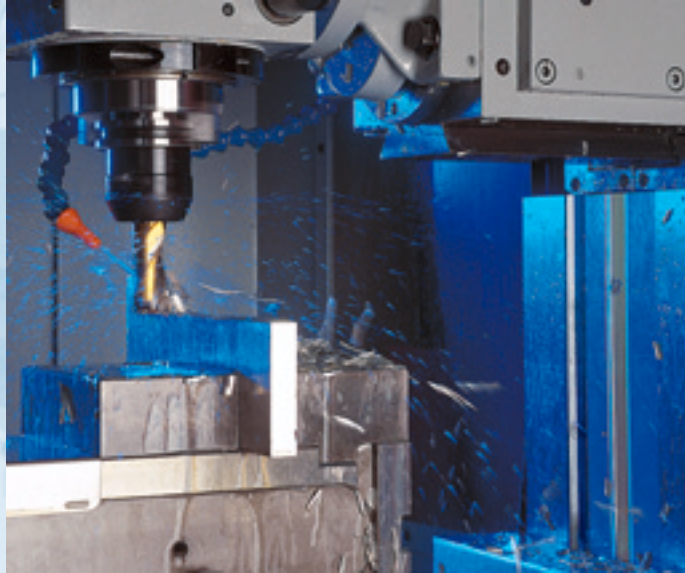
A large number of components with various dimensions and specifications make the four MAGLINE systems versatile and very flexibly integratable measurement solutions, although the mounting and handling of all are simple. MAGLINE systems from SIKO are customer-friendly products, durable and economical in every respect.

| Features | BASIC | MICRO | MACRO | ROTO |
|------------------|------------------------|----------------------------|------------------------|---------------------------|
| Scale | flexible magnetic band | flexible magnetic band | flexible magnetic band | magnetic ring |
| Measurement | incremental / absolute | incremental | incremental / absolute | incremental |
| Measuring length | unlimited | up to 4,000 mm / unlimited | up to 320 m | |
| Resolution | max. 5 μm | max. 1 μm | | max. 20.000 pulses/revol. |
| Accuracy class | max. 50 μm | max. 10 μm | max. 1 mm | max. 0.1° |
| Repeat accuracy | max. 5 μm | max. 1 μm | max. 1 mm | |



The magnet band serves as the scale in the measurement system. For simple angle measuring, its flexibility makes possible mounting on curved surfaces with a small radius.

Absolute and reproducible measured values allow a safe and economical handling of raw materials.



Under the influence of chips and lubricants, its functionality is not affected in any way.



The rotational speed as well as angle for balancing can be determined with ROTO.

In the example shown below pipes are bent more easily to an exact angle.

MAGLINE systems are mountable directly on positioners or processing mechanisms and therefore prevent measuring errors that occur as a result of gearbox play or spindle tolerances. For long measurement distances of a processing unit or feeder, the tolerance field of the sensors forgives height impacts and therefore makes possible the use of existing guides for the attachment of the components. The unavoidable soiling on fabrication machines is not critical since the function of MAGLINE is maintained even in an oil bath. Even for measured values in the μm range, the mounting effort remains low. Likewise for the ROTO system: The ring shaped scale is simply attached to the shaft to be measured so the sensor can detect the rotational movement radially.

The scale is quickly mounted and is well protected by the metal band. A sensor travels parallel and contactless to it to detect the distance information.

