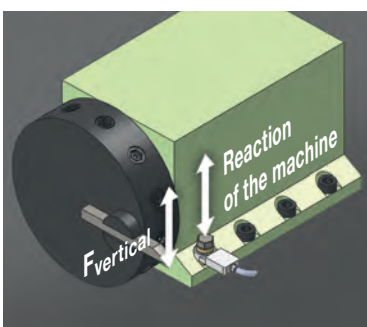




# **RING SENSOR SERIES WITH INTEGRATED CHARGE AMPLIFIER**

**THE RS CAN DETECT SMALL VARIATIONS OF CUTTING FORCES IN ANY KIND OF LATHE OR TURNING OPERATIONS**



The RS ring sensor series, directly placed on lathe turrets or spindle, provides easy cutting force monitoring. Retrofitting is possible on many machines without mechanical modification. It is fitted with hardened washers beneath any existing bolts. The piezo-electric element detects smallest variations of force of tools in compression or tension.

Bolt seats of the ring sensor are specially designed to facilitate the assembly avoiding hysteresis errors during measurement. The integrated charge amplifier guarantees high sensitivity and a stable, fail safe signal even over a longer distance to the process monitoring unit. The sensor generates a signal of a significantly higher linearity than a conventional sensor.

Protection level IP67 allows the installation in harsh operation conditions, e.g. where hot chips or aggressive moisture occur. In connection with ARTIS tool and process monitoring systems, the sensor provides two measuring ranges assuring the detection of overloads, collisions or tool breakages in many turning and/or boring operations.

## **Applications**

- >> Crankshaft and Cam shaft lathe operations with small lubrication grooves
- >> Turning bearing inner and outer surface
- >> Gear and other shaft turning

## **Benefits**

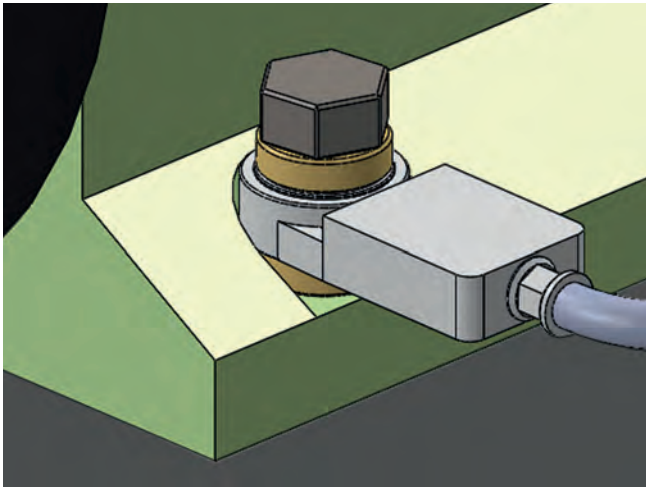
- >> High sensitivity makes the sensor perfectly suited to detect small force variations in the tool revolver of lathes and other machine tools
- >> Compact design, easy to integrate into the machine
- >> Fast installation suitable for retrofit
- >> Especially tough, with shielded cable and protection level IP67

**Ring Sensor series with  
integrated charge amplifier**



**Technical features**

- >> Piezoelectric sensor
- >> Two measuring ranges (switchable)
- >> Voltage signal 0 to  $\pm 10$ V
- >> Nominal force up to 140 kN (RS-M16), 100 kN (RS-M12), 50 kN (RS-M10)
- >> Sensitivity in the range of  $\mu\text{m}$
- >> Overload capacity max. 120 % of nominal force
- >> 2 % maximum linearity error
- >> Especially hardened force washers (included)
- >> Automatic centering
- >> To be used with the ARTIS Tool and Process Monitoring Systems CTM and Genior Modular



Protection level IP 67 and the compact design allow the sensor to be placed directly at the turret. The sensor can be fixed with an existing bolt or perhaps a longer one. The closer to the process, the better the signal quality.

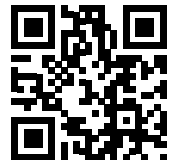


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