Solartron Metrology
AMETEK

Application Story

Measurement in Machining Centers

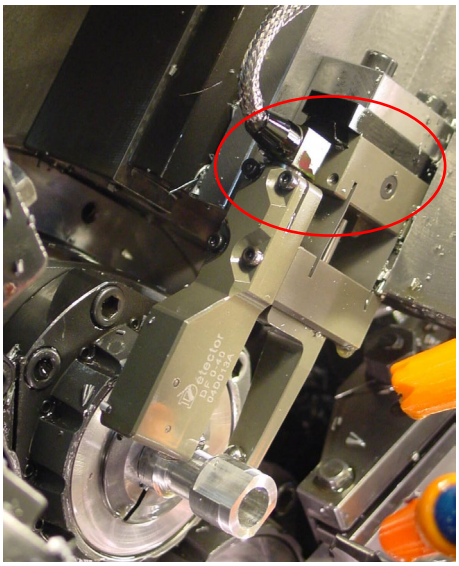
The Challenge

In a machining center, a cutting tool is often required to cut or drill to a very specific dimension, or the part must be scrapped. For this, measurement equipment with a high accuracy and quick response time are required.

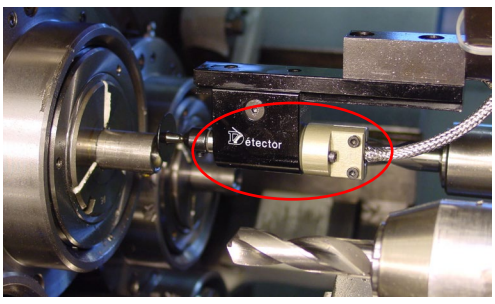
The Solution

Detector, located in France, (www.detector-France.com) manufactures length and diameter gauges, as well as broken tool detectors for the machining industry. Detector has utilized Solartron probes for over 20 years. Advantages include:

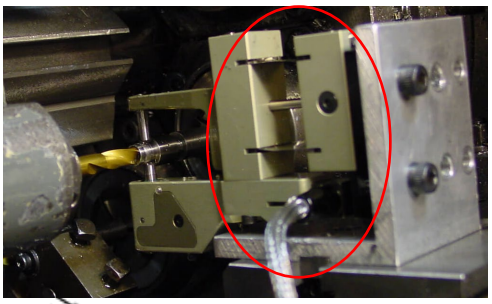
- **Highest Resolution:** For a distance monitoring application, even the slightest movement might be critical. Solartron gauging probes provide resolution of **up to 0.01 micron** in a cost efficient package.
- **Durability**: Solartron gauging probe designs endure harsh testing for millions of cycles
- **IP 68 Option:** Standard Solartron gauging probes can be sealed up to IP 68, with no ingress of oil or fluid
- **Rapid response**: Solartron LVDTs can provide immediately feedback to a readout or PLC, signaling if the machine center is close to being out of specification.
- **Multiple Output Options:** Solartron offers both Analog and Digital outputs, for any PLC requirements. This includes:
  - **DC and 4-20mA:** Signal conditioning can even be mounted to the end of the probe on our G-Type sensor
  - **PLC protocol**: Via Orbit®, our probes can output to multiple PLC protocols, including Profinet®, Ethernet/IP®, EtherCAT®, Modbus, and CC-Link®.



A Solartron gauging probe is mounted to their Diameter gauge in in a machining center. This is a custom Right Angle probe with steel braided cable



A Solartron probe is mounted into this Detector Length Measurer



DETECTOR
www.detector-France.com

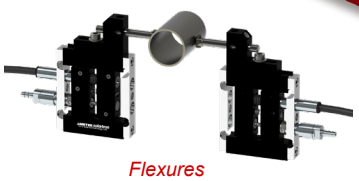
Digital Probes & The Orbit® Network

Solartron Metrology

AMETEK

Orbit® – The Total Measurement System from Solartron Metrology

The Solartron Orbit® Digital Measuring System provides a limitless set of measurement solutions, with numerous different interfaces to computers and PLC's.



Flexures

Block Gauges

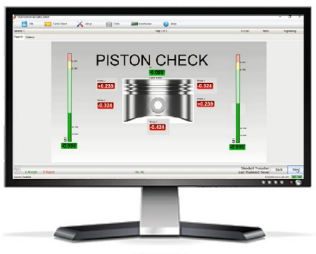
Displacement

Multi Channel Wireless Gauge

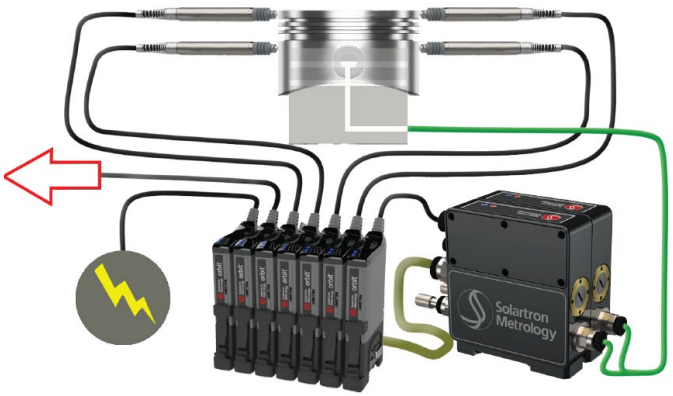
SI 8500

Bore Gauging

Digital Probes and Lasers checking an EV pouch



Orbit Gauge Software 4.0



Measurement of Piston with Air Gauging checking ID, and connected to Orbit with the Air Gauge Module. OD Checked with Digital Probes.