GAUGING PROBES

Measure a Golf Ball Under Stress

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The Challenge

Sporting Goods Manufacturers are continually striving to build a golf ball that will fly further and longer.

For that, product development will include tests to see how well a golf ball responds under various degrees of stress. To quantify this, they will require measurement sensors that can detect the slightest change in deformation.

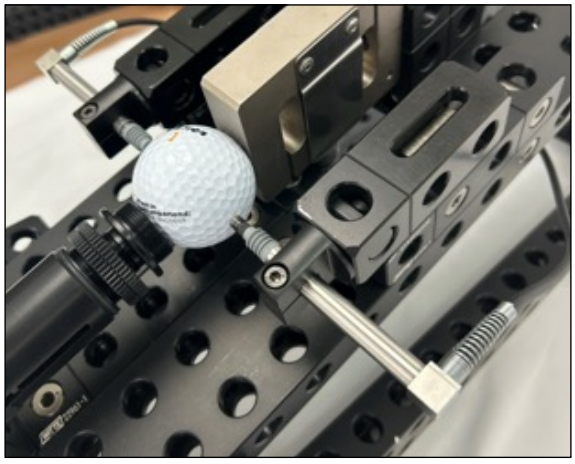

Figure 1: Two gauging probes with flat tips measure how much the golf ball expands as it is compressed with a load cell. The Load Cell readings are output via a Strain Gauge Interface Module.

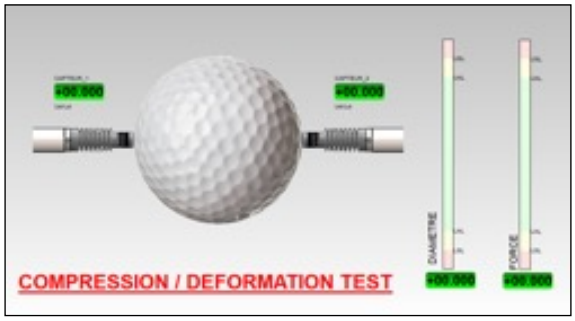

Figure 2: With OGS4, customized readings could be displayed of the probes and the force measurement.

The Solution

Solartron Metrology offers gauging probes that can be used to measure the deformation of a golf ball. Advantages include:

- **High Resolution -** Solartron LVDTs offer resolution up to 0.01 micron, showing the slightest change in measurement that Linear Encoders cannot provide.
- **Rapid Response** - Any change in measurement is immediately output to any data logger or PC, with no signal delay.
- **Customization -** Elements such as special length cables or tips can be added. For golf ball testing, flat or dome tips are ideal.
- **Multiple Outputs -** Solartron offers DC, 4-20mA, TTL, and other analog output options.
- **Digital Option -** In addition, Solartron's Digital Orbit® network offers a calibrated, digital sensor, and enables multiple, synchronized readings into a PC or PLC.
- **Network with 3rd party sensors -** With the Orbit® Network, Solartron offers modules that can connect to strain gauges, load cells and similar sensors for synchronized readings. In this case, a Strain Gauge Interface Module was connected to a load cell, and all readings were output to Orbit Gauge Software 4.0.

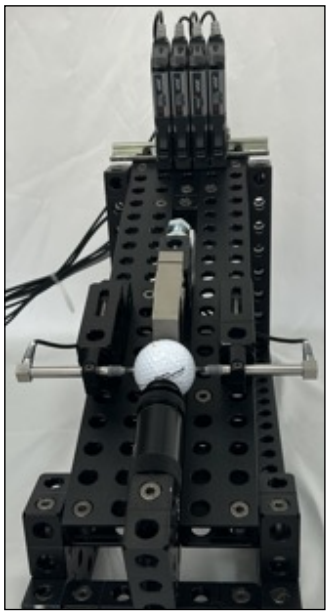

Figure 3: A full view of the Golf Ball tester, with the Orbit stack on top.

More information about Solartron Metrology Probes can be found here:

Solartron Metrology Catalogue Range

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THE ORBIT® NETWORK

ORBIT® – The Total Measurement System from Solartron Metrology

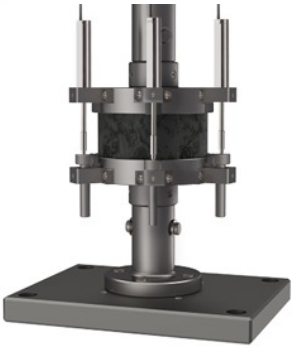
The Solartron Orbit® Digital Measuring System provides a limitless set of measurement solutions, with numerous different interfaces to computers and PLC's.

S-Series

OP Series

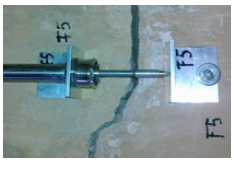
Special probes for low temperatures

Vented transducer



S-series transducer monitoring a crack

Compact displacement



Measurement of concrete compression

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