

SMAC Quality Control

Moving Coil Actuators

Having problems with your current inspection system with LVDT, Camera, Laser....? Or are you still gauging parts manually?

A unique **automated contact measurement system** from SMAC! Successfully automates inspection procedures and perform in poor environment where conventional solutions have failed.

100% inspection Increased quality SPC data acquisition

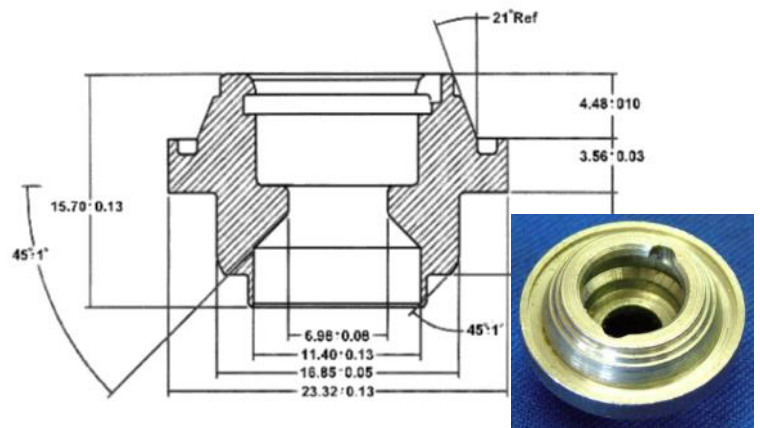
Process control feedback

Increased throughput

Measuring, Bore Gauging and Groove Inspection

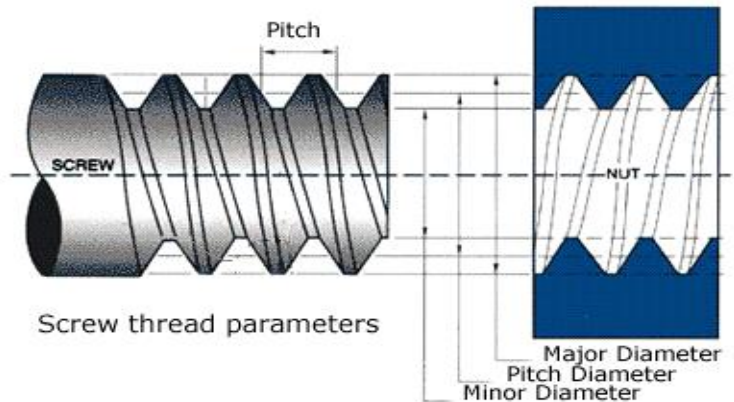
Resolution: 5μ (0.0002 inch) to 5 nm (1.968×10^{-7} inch)

- Air bag components
- Fuel Injector Plug
- inside the fuel injector assembled part
- XYZ—Mini CMM
- Internal and External Diameter Gauging
- Height Gauging
- Thickness Gauging
- Multiple Point Gauging



Thread Screw Check

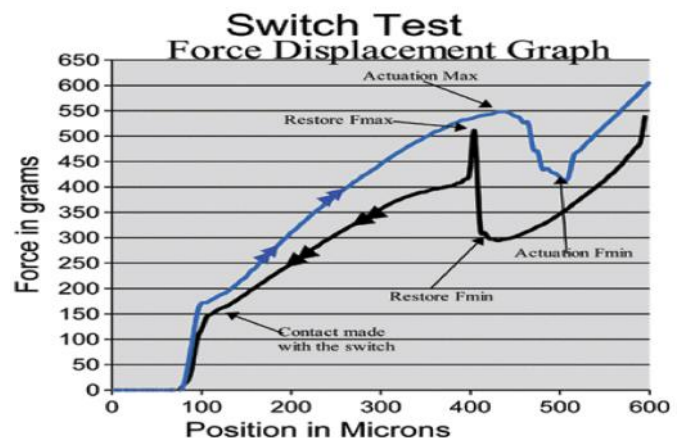
- Casting Parts
- Oil pan
- Fuel valves
- Wheel bearings



Force Displacement

- Measurement of spring rate for diesel injector etc...
- Automotive/Industrial Switches
- Door latch assemblies

And many more...



Why Use SMAC QC solutions?

Comparison with conventional solutions

X Camera

- Optical distortions
- **Require consistent lighting = No shadow**
- **Vibrations = Blurred the image**
- **Dirty environment (oil/coolant mist)**

X Laser

- **Reflective inaccuracies.**
- Problems with textured and or certain color surfaces.

X LVDT

- **Pneumatic**, variables in air pressure cause inaccuracies
- **Non-programmable!**
- **Not linear**: positional data and spring is non linear—must be scaled
- **Very short operating strokes.**
- **Poor positional resolution**
- **Require the motion provided by another source**
- **Poor force control (by Pneumatics)**

X Eddy Current

- Surface of the material must be accessible.
- The finish of the material may cause bad readings.
- Based on its level of conductivity
- **The depth of penetration into the material is limited** (ESPECIALLY THICK CAST PARTS, AND BLIND HOLES)
- **Expensive & fragile** (Ceramic core) probe tips (\$300 to \$500+ to replace)

SMAC measurements can easily be correlated to be manual gauge methods “GAUGE CORELLATION”

SMAC offers a **FREE proof of concept at our in house lab.**

Feel free to send in the parts that need to be checked.

Please contact us for more details on 760-929-7575 / info@smac-mca.com or visit www.smac-mca.com to find out your local branch.

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