



Custom Torque & Force Sensors

Teledyne LeCroy Test Services has an unsurpassed reputation for high-quality, cost-effective strain gage-based products and services.

Strain Gage Services, Installation and Calibration

Teledyne performs transducer-class strain gage installation on customer elements to create accurate torque sensors and load cells. Full machine shop and fabrication capabilities are available for turnkey manufacturing. We make use of metal foil, platinum-tungsten and semi-conductor strain gages as required by each application. All installations are zero balanced, temperature-compensated and calibrated with industry traceability standards.



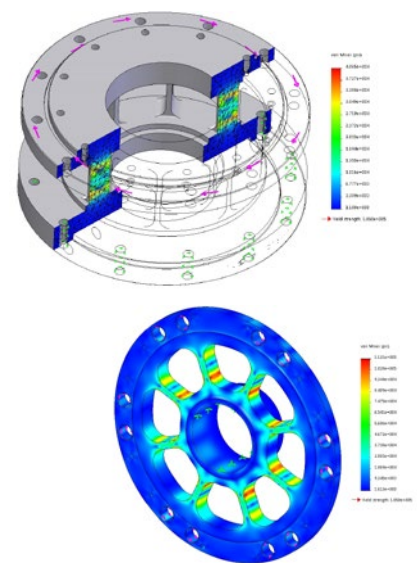
Custom Reaction Torque Transducer Design and Manufacture

Teledyne designs and builds custom reaction torque sensors to satisfy your unique requirements. We excel at solving application challenges such as temperature and vibration extremes, harsh operating environments, multi-axis loading and unusual substrate materials.



Experimental Stress Analysis and Consulting

Teledyne offers analytical and experimental consulting services on stress/strain related projects. Having successfully addressed a wide range of measurement-related challenges, our experienced engineers are often able to provide a solution path to an otherwise unsolvable problem.



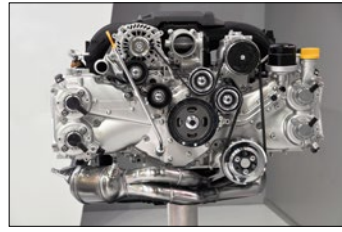
TORQUE SENSORS IN USE



Sensors using Customer Elements



Smart Power Tools



Powertrain Torque Measurement



Gearbox with Integrated Torque Transducer



Assembly



Automation Sensing



Bottle Capping



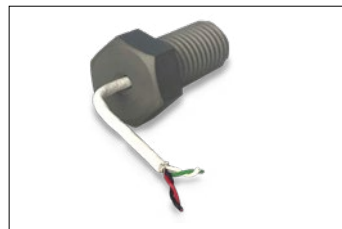
Valve Stem – Torque and Thrust



Precision Screw Tightening



Hydraulic Dynamometer



Instrumented Fasteners



Dental Implants

Technologies

- Metal foil strain gages
- Platinum-tungsten strain gages
- Semi-conductor strain gages
- Torque, force (load cell, load pin), thrust, twisting, bending, temperature and pressure measurements
- Signal conditioning & data acquisition and logging
- Wireless data transmission (rotating torque sensor)

Capabilities

- On-board signal conditioning providing voltage, current or digital output
- Torque transducer calibration services
- Injection-molded instrumentation for environmental protection and esthetics

Applications

- OEM and consumer products
- Product development testing
- Field testing and analysis

Applications (cont'd)

- Fastening assembly tools, smart power tools, medical devices, medical robotics, orthopedic surgical robots, dental implants, web tension control, industrial automation, industrial clutches, aircraft engine test stands, down-hole drilling, weight on bit
- Fastening spindle, robotic arm (robotic screwdriving), live tool holder, nutrunner, screw gun, industrial automation, oil & gas, medical devices (power tools), engine dynamometer
- Automotive powertrain (teledynelecroy.com/automotive/powertrain)



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