



# What's New at PCB Load & Torque Division

Load Cells, Wheel Force Transducers, Torque Transducers,  
Fastening Technology Test Instrumentation, & Telemetry Systems



 **PCB LOAD & TORQUE**  
A PCB PIEZOTRONICS DIV.



## Load Cells



### General Purpose Canister Series 1100

- Low profile design
- Drop in replacement
- Capacities from 25 to 300 lbf (110 to 1330 N)



### General Purpose Low Profile Series 1200

- Drop in replacement
- Capacities from 500 to 50k lbf (2200 to 220k N)
- English and Metric sizes
- PT and PC connector styles



### Fatigue-rated Low Profile Series 1400

- Drop in replacement
- Guaranteed for 100 million cycles
- English and Metric sizes
- PT and PC connector styles
- Capacities from 250 to 100k lbf (1100 to 440k N)



### S-Type Series 1600

- Ideal for critical weighing applications
- Capacities from 50 to 5000 lbf (250 to 20k N)

### Rod End Series 1300

- Sealed construction
- Fully calibrated in both tension and compression
- Built-in temperature compensation
- Capacities from 500 to 20k lbf (2200 to 89k N)



### Pedal Force Series 1515

- High overload protection (500% of FS)
- Compact, with a 1.12 in (30.2 mm) overall height
- Easy to install and remove
- Standard capacities of 200 & 300 lbf (890 to 1330 N)



## Wheel Force Transducers



### Series 5400

- One-piece sensor
- Fast and easy to mount, setup, align & calibrate
- Maximum operating temperature of +302 °F (+150 °C)
- Superior temperature compensation of 0.003% FS/°F (0.005% FS/°C)
- Exclusive application of fastener technology to achieve robust clamp load and assembly

## Torque Transducers



### TORKDISC® Rotary Torque Sensor Series 5300

- In-line non-contact rotary torque sensor
- DC to 8500 Hz bandwidth
- AC & DC coupled output with user-selectable filtering
- Capacities from 250 to 225k lbf-in (28 to 25k Nm)



### Rotary Shaft Series 3100

- 2 mV/V output sensitivity
- Full bridge design
- Temperature compensated
- AC or DC excitation voltage
- Capacities from 9 to 10k lbf-in (1 to 1130 Nm)



### Rotary Transformer Series 4100

- 2.5 mV/V output sensitivity
- High signal-to-noise ratio
- Shaft and spline drivers
- Up to 300% overload protection
- AC or DC excitation voltage
- Capacities from 50 to 100k lbf-in (6 to 12k Nm)



### Reaction Torque Transducer Series 2300 & 2500

- Flange mount on both sides
- High torsional stiffness
- 2 mV/V output sensitivity
- Capacities from 50 to 500k lbf-in (6 to 57k Nm)





## Fastening Technology



### Hand Torque Wrench

- Ergonomic design
- Lightweight & high strength
- Compatible with all strain gage instruments & data collectors

### Rotary Torque Transducer

- Measures torque only or torque & angle
- Industrial rated for power tool and fastener testing applications
- For use with Series 920 & 962 recorders



### Stationary Torque Transducer

- Keyed base for secure installation
- For use with Series 920
- Capacities from 100 lbf-in to 500 lbf-ft (11 to 678 Nm)



### Portable Peak Meter Model 910

- Accommodates most transducers with outputs between 0.8 and 5.0 mV/V
- Calibrates using external shunt calibration resistors
- Three selectable decimal point positions
- 5-channel version available



### Portable Digital Transducer Instrument Model 920

- Simultaneous display of track and peak data
- Collects up to 300 time and date stamped readings
- Measure torque, torque-angle or force



### Portable Data Recorder Model 962

- Battery operated, recorder
- Two transducer inputs – torque and force
- Collects up to 500 run-downs
- USB ports



### LabMaster Professional Model 3200

- Laboratory fastener testing recorder
- Interfaces via USB to a PC
- Includes LabMaster for Windows®
- Accepts input from torque transducers and load cells
- Displays real-time plots



### LabMaster Portable Model 3210

- Portable data recorder with 4-channel high-speed data acquisition card
- Durable hard shell case enclosure
- Includes LabMaster for Windows®
- Accepts inputs for torque angle transducers, load cells, and high level devices



### Joint Simulator

- Easily configured soft, medium, or hard joints
- Robust and durable design
- Bench top mounting
- Set up and verify operation of pneumatic or electric power tools



### Fastener Drive System

- Available in a variety of speed and torque configurations
- Combines a rugged, heavy-duty industrial DC electric motor and a dependable servo controller
- Can be supplemented with torque multipliers to extend their torque or speed range



### Force Washer Transducer

- High stiffness in a small package
- English and Metric sizes
- Ideal for static and dynamic measurements



### Fastener Load Cell

- Slotted base for securing to test fixtures
- Ideal for auditing and analyzing threaded fastener characteristics
- Measures fastener tension

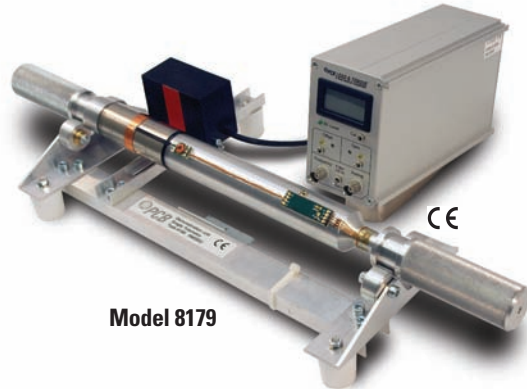


### Fastener Torque-Tension Load Cell

- Slotted base for securing to test fixtures
- Ideal for auditing and analyzing threaded fastener characteristics
- For use with LabMaster Professional, Model 3200



### Telemetry Systems



Model 8179



Model 8180

#### Single Channel Telemetry Systems

##### Models 8179 & 8180

- Compact size, light weight
- Easy to use, wear and maintenance free
- Extremely robust, dust and waterproof
- Contact free signal transmission and power supply

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#### Instrumented Steering Wheel Systems

- ##### Series 5600
- Telemetry provides friction-free wireless transmission
  - Inertial moment and weight comparable to OEM steering wheels
  - Two ranges of each measurement available at all times (steering moment, angle, and angle velocity)

**PCB Load & Torque Division**, is a manufacturer of high quality, precision load cells, torque transducers, and telemetry systems, located in Farmington Hills, Michigan, USA. In addition to the quality products produced, the division offers many services including: A2LA Accredited Calibration for torque, force, and related instrumentation; an A2LA Accredited Threaded Fastener Testing Laboratory; and complete and reliable custom stain gaging. PCB Load & Torque products and services fulfill the test and measurement needs of numerous industries including: Aerospace & Defense, Automotive, Medical Rehabilitation, Material Testing, Textile, Process Control, Robotics & Automation, and more. PCB's RS Technologies product line includes test systems and threaded fastener torque/angle/tension systems ideal for use in the Automotive, Aerospace & Defense, Power Generation industries, and for product assembly by manufacturers or processors of threaded fasteners or other companies that use threaded fasteners to assemble their products. The expert team of Design, Engineering, Sales, and Customer Service individuals draw upon vast in-house manufacturing resources to continually provide new, more beneficial sensing solutions. From ready-to-ship stock products, to custom-made specials, PCB proudly stand behind all products with services customers value most, including 24-hour technical support, a global distribution network, and the industry's only commitment to Total Customer Satisfaction. For more information please visit [www.pcb.com](http://www.pcb.com).



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