COOPER
INSTRUMENTS & SYSTEMS

Force, Weight, and Pressure Products to Keep You Moving in Design, Testing, Production and Process Control

www.cooperinstruments.com

COOPER INSTRUMENTS & SYSTEMS

Cooper Instruments & Systems is a worldwide leading supplier of force, torque, pressure and weight data collection instrumentation, custom sensor systems and calibration services. We proudly offer a wide selection of load cells, mounting hardware, torque cells, force and pressure sensors, torque gages, pressure transducers, pressure gages, digital instrumentation, hand-held units, and custom test stands. Optional Network (IIoT) and PLC connectivity are available, depending upon the application.

Cooper Instruments' corporate headquarters is located in Virginia and opened for business in 1988. Since then, our force and pressure products and systems have been used extensively around the globe.

Force, Torque, Pressure, Weight Experts Aid in Product Selection

Our dedicated sales professionals, customer service representatives and technical staff are the best in the business. Whether you need load cells, force and pressure sensors/transmitters, transducers, test stands, weigh modules for tank weighing, or a completely calibrated system, we will develop the right solution to meet your needs. IIoT and PLC connectivity optional.

Our testing lab ensures that all calibration services meet the strictest industry and testing guidelines. Our products are tested and retested to ensure precise results for every use and application. Thousands of businesses have turned to Cooper Instruments for complete solutions with their force, pressure and measurement needs.

From initial consultation to estimating, scheduling and planning, order processing, development and testing, manufacturing, and shipping, you can be assured that Cooper Instruments is involved throughout every step in the process. We will meet your specifications from products and calibration to deadline and budget.

International Reach

Whether your business is located in Virginia, New Jersey, California or Minnesota, or you operate plants in Brussels, Germany, or Japan, we can deliver your order well packaged, safely and on time.

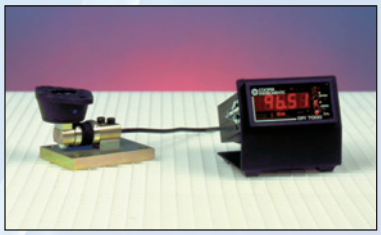
Our Line of Products

LOAD CELLS
A load cell is a transducer that is used to convert force into electrical signal. Our load cells are tough, durable and we have the widest selection of load cells available, from subminiature gram range load cells to paper thin sensors to 1 million pound load cells that are built for precision.

BRIDGE AMPLIFIERS
Cooper bridge amplifiers provide power for the transducer and convert the signal to a voltage, current or digital signal to interface directly with a computer or data acquisition system. We offer a direct USB interface with our DSC USB and data acquisition DFR 1250.

TORQUE LOAD CELLS
A torque cell is a load transducer that will convert a torsional moment into a proportional electrical signal. We offer a rotating variety, (operates in 360 degrees at various RPM) or a reaction-only style (can operate up to 360 degrees). Cooper offers a variety of physical configurations and torque ranges from 10 inoz to 100,000 inlb.

TORQUE GAGES
All torque gauges and torque testers capture the peak torque in both directions (CW and CCW) and have selectable units of torque measurement. Torque capacities are available from 10 inoz full scale to 5,000 inlb, depending on the torque gauge or torque tester.



DIGITAL INSTRUMENTATION
Digital instrumentation is used to power the transducer and display the reading in desired engineering units. We offer a variety of instruments from battery powered handheld instruments to multi-channel configurations. Our digital displays range from 3 ½ digits to 6 digits. Most of our instruments offer a peak hold function to capture the peak force during a measurement operation. Many of our instruments have either standard or optional control features with outputs, such as RS232, Analog or Ethernet.

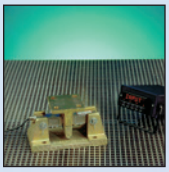
PRESSURE GAGES
A digital pressure gage incorporates a pressure transducer with a digital display to comprise an easy to use pressure measurement system. We have a variety of gages with accuracies ranging from 1% to 0.05% full scale. Some of our gages offer control functions with high/low limit settings as well as analog output.

LOAD FORCE SENSORS
Force sensors are essentially load cells, but usually do not have the amount of testing or tight electrical standards that a typical load cell would have. They generally will not come with a calibration certification, nor will they meet higher standards of temperature compensation or accuracy.

BOLT FORCE SENSORS
Bolt force sensors are completely calibrated load cells that are used primarily to measure tension on bolts. These units are typically not as accurate as our standard line of load cells, but their very low profile allows them to fit in applications where many other load cells will not.

ELECTRONIC FORCE GAGES AND WIRELESS DYNAMOMETERS
These units are typically used for weighing or material handling applications where knowing the weight of an item being lifted is critical. Electronic dynamometers are typically more accurate than a mechanical gage and can offer output functions and/or wireless remote displays.

MECHANICAL AND MOTORIZED TEST STANDS
Test stands are useful in eliminating the variability inherent in hand testing and can help to automate test processes. Motorized stands offer a significant advantage over manual test stands by providing constant test speed.

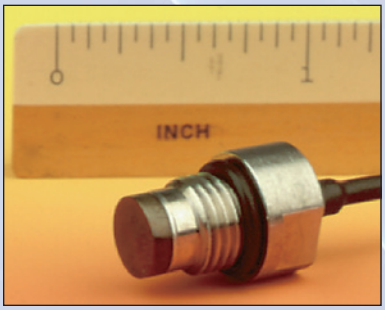


WEIGH MODULES FOR TANK, HOPPER, OR OTHER EQUIPMENT
Convert a tank, hopper, vessel or machine into a scale to grab data for process control, batch blending, day bins or inventory in storage silos. Double or Single ended shear beams with easy mounting aid in increasing your yield. Instrumentation can be supplied local, DIN rail mount or in Hazardous areas.

LVDTS
These transducers are for displacement/position measurement. This transducer uses the Linear Variable Differential Transformer (LVDT) principle which means that it is probably the most robust and reliable position sensor type available.

WIRE TENSION METERS
Wire tension meters are used for measuring the tension on aircraft cables, strapping materials and guy wires. The cables or material must be flexible. Tension ranges run from 0-1000 grams all the way up to 0-10,000 lbs.

CHART RECORDERS
Chart recorders are typically interfaced with a Cooper force measurement system to record trends, such as force versus time measurements. We offer paper and paperless recorders. Typically our recorders take a voltage input from a digital indicator or a bridge amplifier.



PRESSURE TRANSDUCERS
A pressure transducer is a sensor typically used to convert a liquid or gas media to a proportional electrical signal. Cooper offers a variety of styles, such as gauge, absolute and differential pressure measurement, as well as units with standard NPT and flush diaphragm pressure ports. Our ranges run from 0.5 psi to 60,000 psi with a variety of outputs including millivolt, voltage and current.

CRANE SCALES, & DYNAMOMETERS
Our line of crane scales and dynamometers are for applications where overhead lifting is used in the material handling process. Depending on the accuracy, application, or multi-point lifting used, we can provide a solution for commercial (billing) / shipping weights, or SAFETY requirements to prevent overloading. Dynamometers are typically used for weighing in material handling applications where knowing the approximate weight of an item being lifted is critical. Crane scales provide higher accuracy.

WIRELESS/BATTERY POWERED LOAD CELL AMPLIFIER
The MasterLink 3000 wireless amplifier connects to standard strain gage load cells, pressure transducers, and torque transducers. Supplied with a variety of connectors, depending on the device, the MasterLink 3000 has been designed to mount directly to the connector of the transducer, therefore requiring no mounting provisions. The MasterLink 3000 can also be used with load cells with flying leads and can be supported in a way that would suit the application. Wireless signals can reach up to 150 feet with extended range as an option. The system consists of the MasterLink 3000 which connects to the load cell and the following devices:

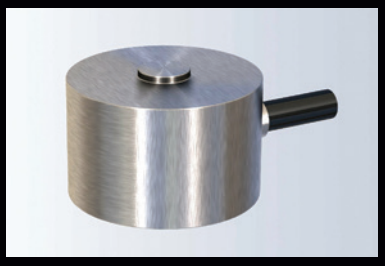
- Handheld display
- USB module with display software
- Analog output

See our complete catalog online: www.cooperinstruments.com

OEM Product Line

Cooper Instruments and Systems now carries an OEM EconoLine of products for higher volume applications. When accuracy specifications along with general physical and electrical tolerance needs are unique for high volume applications, Cooper Instruments OEM EconoLine will save you money.

Call Cooper Instruments today to discuss your application and we will meet your needs and budget.



Sample Industry Applications

AEROSPACE
Static Structural Testing
Landing Gear Drop Tests
Jet Engine Thrust Stands
Fatigue Testing

AUTOMOTIVE
Shock Absorber Testing
Engine Dynamometer
Steering Torque
Durability Testing

ENERGY
Pump-off Control
Coil Tubing Applications
Calibration Systems

MEDICAL & HEALTHCARE
Medical Test Machines
Ligament Axial and Torsion Loads Testing
Eye Surgery Systems
Systems for Separation of Blood

MATERIALS TESTING/HANDLING
Concrete Testing
Material Test Machines
Cable Tension Testing

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