

Force Gauges

Family of Digital Force & Torque Instruments

Quantrol™
by DILLON

precisely

- > Up to 2500 N / 550 lb capacities
- > Full range of gauges to fit any application
- > Interchangeable load cells (AFG only)



our best force and torque measurement instruments

The Advanced Force Gauge (AFG) and Advanced Force & Torque Indicator (AFTI) provide premium features, versatility and accuracy. The Basic Force Gauge (BFG) offers outstanding performance at an affordable price. The Compact Force Gauge (CFG) is lightweight and small, making it ideal for field use.

Advanced Force Gauge - Model AFG

With the introduction of the all-new AFG from Quantrol, the industry's most advanced force gauge just got better. The AFG offers unique features that separate it from everything on the market today.

Class-Leading Features and Versatility

> Interchangeable Loadcell Cartridges

The AFG features an interchangeable loadcell cartridge for quick capacity changes. This loadcell, known as the Advanced Loadcell Cartridge (ALC), can be quickly detached and exchanged for another ALC. Each ALC's calibration and capacity are automatically recognized by the AFG for immediate use. Nine different ALC capacities are available, ranging from 2.5N - 1000N (0.55lbf - 220lbf).



> High-Speed 5000Hz Data Acquisition

Peak readings for both tension and compression are accurately captured with a 5000Hz internal sampling rate. This high-speed processing is vital when capturing force values that occur over a very small amount of time.

> Outstanding Accuracy of 0.1%

The AFG provides an outstanding accuracy rate of 0.1% of capacity, making it suitable for the most demanding applications.

Various display modes show live, peak tension or compression, or all simultaneously

Large, high-resolution backlit display for easy readability

Load-bar graph indicates applied load to prevent overload

Simple "pass" and "fail" LEDs for quick test assessment

Rugged, ergonomically shaped aluminum case

Intuitive control button arrangement with "dual level" design for simple operation

Smart port automatically recognizes Quantrol force & torque transducers

Quick-change Advanced Loadcell Cartridge

Top-mounted serial port keeps connectors out of the way



> **Versatile Display**

The AFG includes advanced display features: Peak readings in both tension and compression can be displayed while monitoring the live reading. The display readout can be inverted with the touch of a button. A load-bar graph on the display provides a quick visual representation of applied load to assist in preventing overload. The display is backlit for easy reading in dimly lit areas.

> **Smart Sensor Recognition**

The AFG can be connected to external Quantrol Smart Force and Torque Sensors. When connected, these sensors are automatically recognized, requiring no additional calibration or setup.

> **Communication with external devices**

With configurable communication protocols and outputs including RS-232, Analog and Mitotoyo for bi-directional data transfer, the AFG can control data loggers and test stands.

> **Test Stand Control**

Take control of a Quantrol motorized test stand with the AFG to ensure accurate and repeatable test results. The AFG features cycle test mode where any number of cycles are executed between user-configurable load points. Also, the AFG is able to stop or reverse the test stand based upon a load value or sample break.



The features of the AFG are designed to increase throughput and quality without adding additional cost.

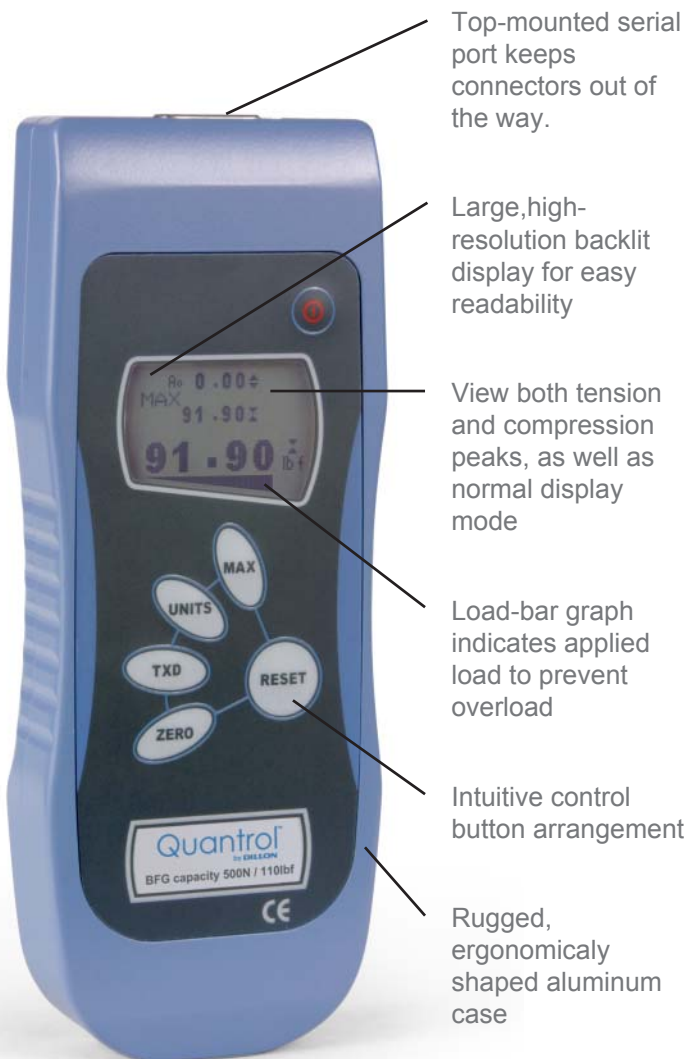


AFTI shown with optional Smart S-Beam Loadcell.

AFTI – Advanced Force & Torque Indicator

The AFTI contains no internal loadcell but maintains the superior features of the AFG. The AFTI is designed for users who require a precision external force and/or torque sensor. Like the AFG, when connected to a Quantrol Smart Torque Sensor, the AFTI automatically converts to torque units of measure. Also, clockwise and counter-clockwise annunciators indicate direction the load is applied.





Top-mounted serial port keeps connectors out of the way.

Large, high-resolution backlit display for easy readability

View both tension and compression peaks, as well as normal display mode

Load-bar graph indicates applied load to prevent overload

Intuitive control button arrangement

Rugged, ergonomically shaped aluminum case

Basic Force Gauge - Model BFG

The all-new BFG from Quantrol offers a myriad of new features at an even lower price. The BFG force gauges are designed for easy operation and provide outstanding performance in both tension and compression.

Outstanding Features and Value

> 0.25% Accuracy in 6 Capacities

The BFG is available in six different capacities ranging from 10N - 2500N (2.2 lbf - 550 lbf), each with an accuracy rating of 0.25% of capacity.

> 1000Hz Data Acquisition

Tension and compression readings are accurately captured with the BFG's 1000Hz internal sampling rate for high-speed data acquisition.

> RS-232 Communication

Data is transferred using standard protocols through an RS-232 port for communication with data loggers and PCs.

> Test Stand Interface

The BFG can be mounted to a Quantrol test stand for accurate and repeatable results.

> Versatile Display

The BFG includes the same advanced display features as the AFG: Peak readings in both tension and compression can be displayed while monitoring the live reading. The display readout can be inverted with the touch of a button. A load-bar graph provides a quick visual representation of applied load to assist in preventing overload. The display is backlit for easy reading in dimly lit areas.

> On-board Loadcell Diagnostics

To ensure accurate readings, the BFG is able to measure the current loadcell offset and compare it with the offset when calibrated.

BFG. Engineered to meet the specifications and budget of fundamental testing.



Smart Force and Torque Sensors for AFG and AFTI

Quantrol Smart external sensors are automatically recognized, requiring no additional calibration or setup when connected.

A Static Torque Wrench

Solid construction for reliable operation and long life. Fitted with a 1/2" square drive ready for standard sockets and adapters.

B Rotary Torque Sensor

This unique instrument measures both rotational torque and static torque. 3/8" square drive on both ends. Includes one female-to-female adapter.

C Static Torque Sensor

Designed to be mounted to a bench or test fixture to measure torsional forces. Measures static torque in both directions. Standard 3/8" male square drive for easy fitting of adapters.

D Static Torque Screwdriver

Can be used as a hand-held device or mounted to a bench stand. Includes a drill-like chuck and key for screw driver bits and 3/8" square drive for socket attachment.

E S-Beam Loadcell

Provides an economical solution to general force measurement applications that require an external load-measuring device. Solid steel construction is designed to last. Measures force in both tension and compression.

F S-Beam Jr.

For applications that require an extremely small load cell. Measuring only 0.75" in height, it is suitable for tension and compression applications where space is limited.

G Load Button

A tiny compression load cell available in a wide range of capacities. Ideal for applications that require a compact, higher capacity compression cell with superior accuracy.

H Ultra-compact Load Button

Smaller than the Load Button, the ultra-compact Load Button will fit in tight places where others can't. Measures just 0.25" high and 0.75" diameter.



