Chatillon® force measurement

Digital Force Gauge
DFE II Series

» Operating Modes
- Normal
- Peak

» Advanced Functions
- Load Limits
- Pass/Fail Limits
- Embedded SPC (Mean, CV, Std, Dev)
- Overload History

» Integral Load Cell
- Better than 0.25% FS Accuracy
- Mechanical Overload Protection to 150% FS

» Simple User Interface
- High Resolution Full Color Display
- Menus and Prompts Guide Operation
- Dynamic Function Keys
- Automatic Shutdown

» Multiple Language Interfaces
- English
- Spanish
- French
- German
- Portuguese
- Chinese

» NIST Calibration with Data

» 1 Year Warranty

The Chatillon® DFE II Series marks a new era in digital force measurement. This compact, easy-to-use force gauge is designed for economy applications without compromising functionality. Ideal for handheld or test stand applications. The DFE II Series is available with capacities from 2 lbf (10 N) to 500 lbf (2500 N). The DFE II features an integral load cell with a measurement accuracy of better than 0.25% full scale. A large, easy-to-read, high resolution dot matrix LCD full color display supports a variety of standard gauge functions including normal and peak readings, high/low limits, setpoints, pass/fail results, statistical results, load cell actuation and direction. Loads are displayed in ozf, gf, lbf, kgf and N units. The display can be inverted and displayed results may be “hidden” from the operator.

The DFE II now also includes multiple language interfaces. The DFE II is able to change the display language from English to Spanish, French, German, Portuguese, and Chinese. The user can view the screen in color and a local language.

All DFE II Series force gauges come with a carrying case, battery adapter/charger, testing accessories, RS232 cable and NIST Certificate of Calibration with data. The DFE II Series has analog, USB and RS232 serial communication.

ISO 9001 Manufacturer

Specification Sheet
SS-DFE II Series

AMETEK®
TEST & CALIBRATION INSTRUMENTS

Easy-to-Read Display.

A large, easy-to-read full color LCD can display readings, icons and visually indicate gauge or test status using various colors. The high resolution display features brightness adjustments and can be inverted when required. The display can even be "hidden" at the press of a button. A load bargraph indicating load direction, measured load and safe load and helps prevent overloads : the load bar changes from green to red to indicate proximity to load cell capacity. The integral loadcells feature mechanical overload protection at 150% Full Scale.

Single Touch Operation.

The rubber keypad features dedicated and dynamic function keys. The function keys correspond to displayed options and guide the user during operation. A navigation pod lets you navigate through the menus and to scroll and change values quickly. The innovative "i" key can be used to display critical information on the gauge such as gauge capacity and resolution, battery life remaining, loadcell overload history, even service information including last calibration date, or the location of service centers.

Dependable Measurements.

The DF II Series features an integral loadcell sensor that delivers repeatable, accurate results. The innovative load bargraph shows dynamic load, direction of load and warns you of pending overload conditions. Smart technology in the gauge even keeps track of overload history to aide in maintenance and troubleshooting.

Comprehensive Results.

The DF II Series supplies you with comprehensive results that are easy to view and understand. The gauge displays:

- Measured Result with Units
- Operating Mode
- Pass-Fail Result
- High and Low Load Results
- Saved Results
- Statistical Calculations
  - Average with MIN and MAX Results
  - Cv with Average and Standard Deviation
  - % Differentiation between Successive Results
  - Standard Deviation

Outputs

The DFE II Series comes standard with digital and analog outputs. RS232 outputs are supported with baud rates from 9600 to 115,600. Simply select the baud rate and whether or not you want to gauge to transmit with our without units. The unit also is supplied with USB communications capability. You may select the Mitutoyo output when communicating with a Mitutoyo device. Or, you may use the ±2V analog output to drive alarms or other ancillary devices. The DFE II features protocols for Chatillon test stands, Mitutoyo devices and an Alternate protocol.

Test Stand Compatibility.

The DF II Series has a universal mounting backplate that enables you to fit the gauge to commonly used Chatillon force testers including the MT Series and LTCM Series testers.

Calibrate and Verify Status.

The DFE II Series incorporates flash memory and hosts a set of self-diagnostic functions for monitoring the display, keypad and electronics. Using the "i" key, you have immediate access to battery conditions, including estimated battery life remaining. You can also view loadcell status, including the number of overloads that have been applied to the gauge. Zero offset verification is standard and a step-by-step calibration procedure is built-in allowing you to calibrate your DFE II gauge with certified standards.

Ordering

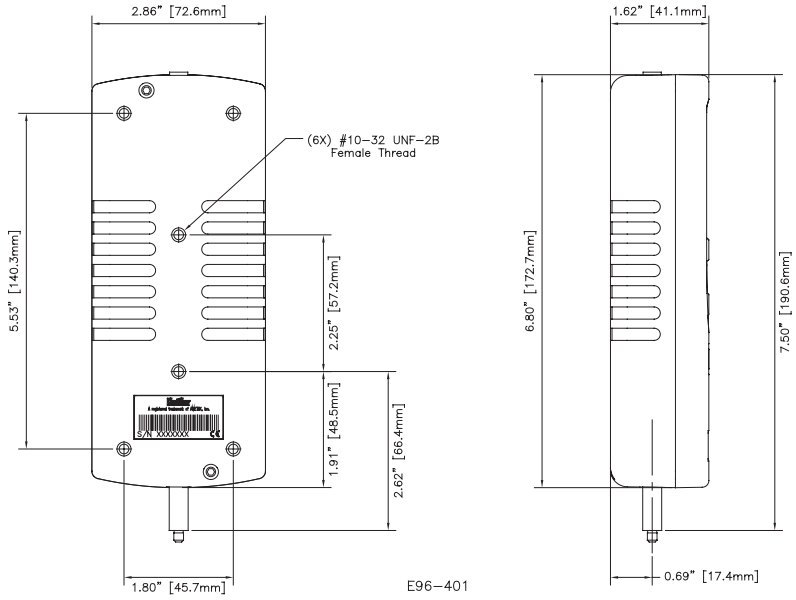
DFE II Series

Model	ozf	lbf	gf	kgf	N
DFE2-002	32 x 0.01	2 x 0.001	1000 x 1	1 x 0.001	10 x 0.01
DFE2-010	160 x 0.1	10 x 0.01	5000 x 1	5 x 0.001	50 x 0.01
DFE2-025	400 x 0.1	25 x 0.01	10000 x 10	10 x 0.01	100 x 0.1
DFE2-050	800 x 0.1	50 x 0.01	25000 x 10	25 x 0.01	250 x 0.1
DFE2-100	1600 x 1	100 x 0.1	50000 x 10	50 x 0.01	500 x 0.1
DFE2-200	-	200 x 0.1	-	100 x 0.1	1000 x 1
DFE2-500	-	500 x 0.1	-	250 x 0.1	2500 x 1

Accessories

Part No.	Description	DFE II
SPK-FMG-008A	Chisel Point, 110 lbf	■
SPK-FMG-008B	Chisel Point, 550 lbf	■
SPK-FMG-009A	Point Adapter, 110 lbf	■
SPK-FMG-009B	Point Adapter, 550 lbf	■
SPK-FMG-010A	Notch Adapter, 110 lbf	■
SPK-FMG-010B	Notch Adapter, 550 lbf	■
SPK-FMG-011A	Flat Adapter, 110 lbf	■
SPK-FMG-011B	Flat Adapter, 550 lbf	■
SPK-FMG-012A	Hook, 50 lbf	■
SPK-FMG-012B	Hook, 110 lbf	■
SPK-FMG-012C	Hook, 550 lbf	■
SPK-FMG-013A	Extension Rod, 6” (152mm), #10-32	■
SPK-FMG-013B	Extension Rod, 6” (152mm), 5/16-18	■
SPK-DF2-UNIV	Battery Charger Universal	■
SPK-DF-118	Carrying Case	■
P-10020	#10-32 to 5/16-18 Adapter	•
SPK-DF-HANDLE	Handle Assembly	•
SPK-DF-RS232	RS232 Cable, 10’ (3m)	■
SPK-FMG-141	Pistol Grip	•
ML3867	Swivel Hook, 50 lbf	•
ML3850	Swivel Hook, 110 lbf	•
ML3869	Swivel Hook, 225 lbf	•
ML3868	Swivel Hook, 550 lbf	•
NC002500	Hook, Latch	•
NC002867	NEXYGEN DF Software	•

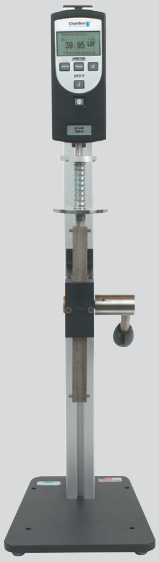
Dimensions - DFE Series



Specifications

Accuracy:	±0.25% of Full Scale
Maximum Overload:	150% of Rated Capacity
Tare Capacity:	10% of Rated Capacity
Resolution:	1000:1
Peak Capture Rate:	7000 Hz
Data Sampling:	7 KHz
Display Update Rate:	10 Hz
Data Save:	Up to 20 Results
Power:	Battery (Nickel Metal Hydride) or direct AC 120/230Vac
Battery Life:	With dimming ON: 20 Hours
	With dimming OFF: 16 Hours
Operating Temperature:	40°F to 110°F (5°C to 45°C)
Instrument Weight:	1.5 lbs (0.7 kg)
Shipping Weight:	4 lbs (2 kg)

ISO 9001/2000
ISO/IEC17025
Manufacturer



AMETEK Test & Calibration Instruments
A business unit of AMETEK Measurement & Calibration Technologies offering the following industry leading brands for test and calibration instrumentation.

Chatillon Force Measurement
Chatillon has been a hallmark in the industry since 1835. The hand held gauges and motorized testers have earned their reputation for quality, reliability and accuracy and they represent the de facto standard for force measurement.

Lloyd Instruments
Materials Testing Solutions
Materials testing machines and software from Lloyd Instruments guarantee the highest level of performance and capability for production testing, quality control, laboratory testing, research and education to provide expert materials testing solutions.

Davenport Polymer Test Equipment
Allows critical polymer parameters to be determined, including melt flow index and melt flow rate, intrinsic viscosity (IV) measurement of moisture-sensitive PET polymers and polymer density measurement.

Texture Analysers
The comprehensive program provides the platform to perform rapid, general food testing and detailed texture analysis on a diverse range of foods.

Newage Testing Instruments
Newage offers a comprehensive range of hardness testers, durometers, optical systems and software for measurement, data acquisition and analysis.

JOFRA Calibration Instruments
The inventor of the portable high precision dry-block temperature calibrators. The calibration instruments program also covers precision thermometers and temperature baths, temperature sensors hand held instruments for pressure calibration and process signal calibrators for easy control loop calibration, measurements and simulation.

M&G Pressure Testers & Pumps
Pneumatic floating-ball or hydraulic piston dead weight testers with accuracies to 0.015% of reading.

AMETEK®
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