

DFE II Series

Digital Force Gauge



Functions and Features



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.

DFE II Series

The 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 gauge features an integral load cell with a measurement accuracy of better than 0.25% full scale. A large, easy-to-read, 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 DFE II also includes multiple language interfaces, and is able to change the display language from English to Spanish, French, German, Portuguese, and Chinese.

DFE II Series

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 or 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 $\pm 2V$ 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 Compability

The DFE 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

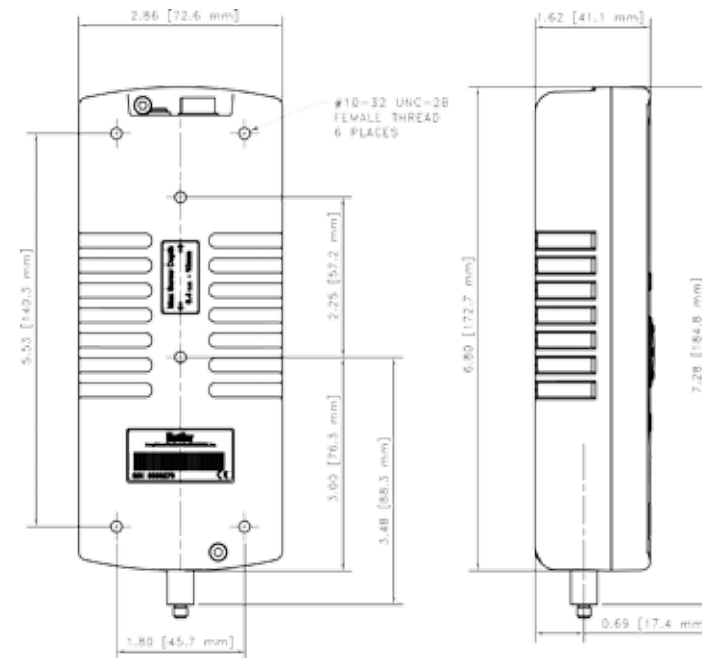
DFE II Series					
Model	ozf	lbf	gf	kgf	N
DFE2-002	32 x 0.01	2 x 0.001	1000 x 1	1 x 0.001	10 x 0.01
DFE2-010	160 x 0.1	10 x 0.01	5000 x 1	5 x 0.001	50 x 0.01
DFE2-025	400 x 0.1	25 x 0.01	10000 x 10	10 x 0.01	100 x 0.1
DFE2-050	800 x 0.1	50 x 0.01	25000 x 10	25 x 0.01	250 x 0.1
DFE2-100	1600 x 1	100 x 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	•
SPK-DF-FORCETEST	FORCETEST DF SOFTWARE KIT	•
SPK-FMG-USB	Interface DF 2 Series to PC	■



Dimensions and Specifications

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 Hz
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 to 110°F (5 to 45°C)
Instrument Weight	1.5 lbs (0.7 kg)
Shipping Weight	4 lbs (2 kg)



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