

# **ED*X*treme Dynamometer**

Lifting the bar in  
electronic dynamometers



# Dillon EDXtreme

- Guesswork is not acceptable – failure is not an option. When you have people working around high tension cables and massive loads, there is no room for error. You have to have complete confidence in the strength and the accuracy of your measurement tools.

Since 1937, Dillon Dynamometers have been chosen for the jobs where only the best will do. Now, Dillon has once again lifted the performance bar and set the standard for others to follow.

## Features

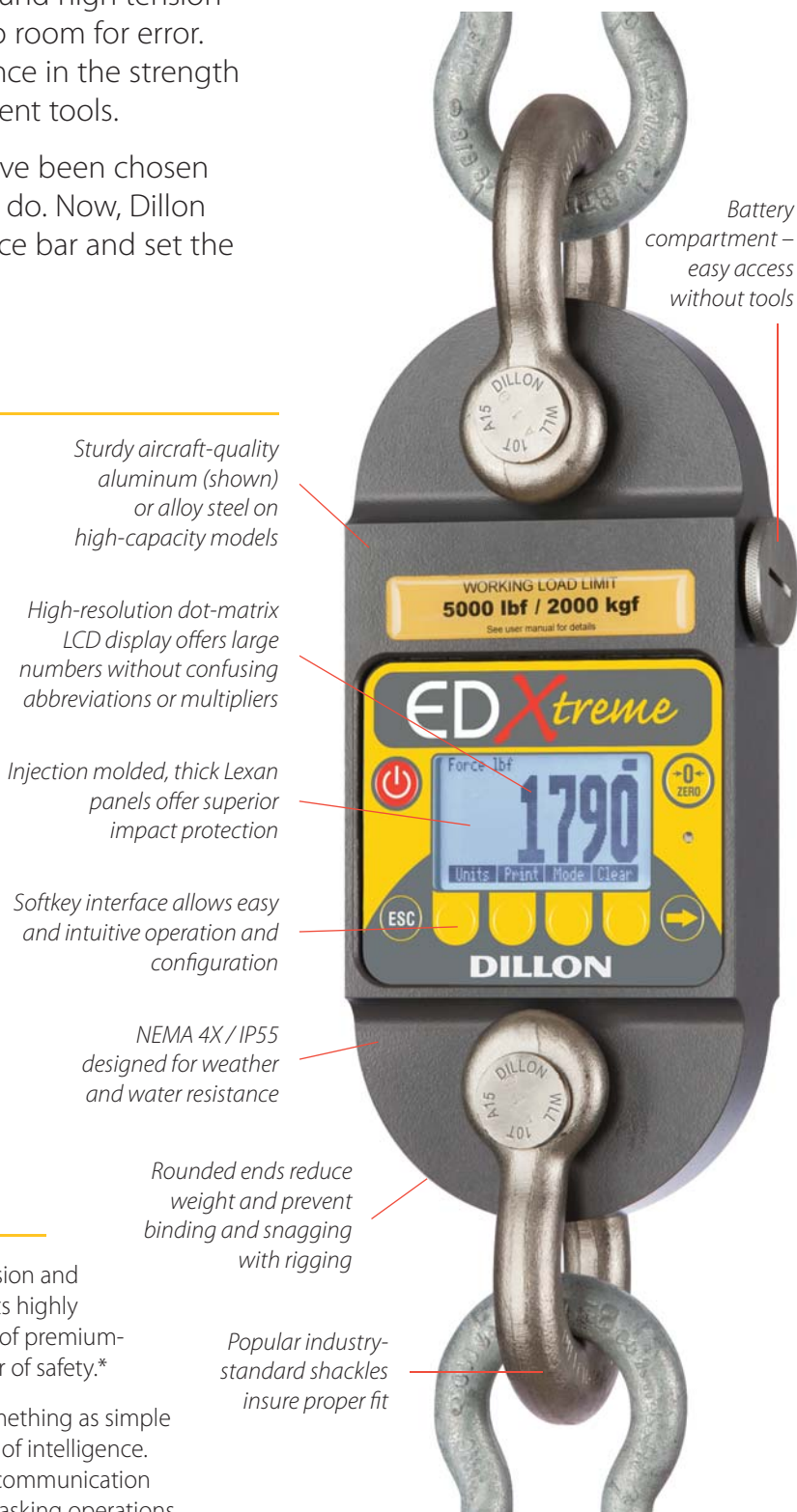
- Dramatically improved battery life in the EDXtreme link
- Dramatically improved radio communications distance
- High speed Peak Capture 10/100/1,000 Hz
- Improved backlight intensity
- Lift and store of weight / force
- Date and time
- Continuous data storage
- Re-calibration reminder
- Can communicate with two Communicators via radio
- Overload at 120% with date and time record

## Uncompromising on safety and adaptable to the need

The EDXtreme exemplifies the trademark precision and rugged construction of Dillon dynamometers. Its highly refined design draws on the inherent strengths of premium-grade materials to achieve a 5:1 minimum factor of safety.\*

While the EDXtreme may be configured for something as simple as a digital hanging scale, it offers a higher level of intelligence. With user-defined functions and sophisticated communication options, the EDXtreme readily adapts to multi-tasking operations or multi-link systems capable of monitoring a series of critical stress points from a single location — *it is the definition of application versatility.*

\* Models with 75 T/160,000 lb or higher capacity feature a 4:1 safety factor and 0.3% accuracy.



**Models available in capacities from 2500 to 550,000 lbf (1000 to 250,000 kgf).**

# For the toughest jobs you face

## Xtreme engineering

Building a precision instrument that can survive real-world punishment requires masterful engineering. This is where Dillon's experience shines through. The engineers assigned to the EDXtreme drew on a depth of industrial application knowledge and conducted exhaustive materials testing to achieve the highest structural integrity.

- **Superior strength and corrosion resistance** – High capacity models are constructed of powder coated aircraft-quality alloy steel. Lower capacity models are powder coated aircraft-quality aluminum.
- **5:1 factor of safety\*** – This measure of strength and safety is maintained at all capacities. Computer modeling confirms the low stress and long product life that is inherent in the EDXtreme design.
- **Retained hardware** – Allows permanent attachment of centering spacers, which eliminates fumbling during high capacity rigging.
- **NEMA 4X/IP55** – The EDXtreme is clearly the choice for reliability in any environment – in-plant or out on the job site.
- **CE** – Approval on all capacities excluding 550K.

\* Models with 75 T/160,000 lb or higher capacity feature a 4:1 safety factor and 0.3% accuracy.

## Configuration options

A basic stand-alone model can be easily upgraded "in-the-field" to accommodate changing needs. Remote configuration, data acquisition, an audible alarm and single point monitoring of multiple links are all possible with the hardwired or radio communication options available with the EDXtreme. An RS-232 interface is standard on both the EDXtreme and Communicator for connection to a host PC.

### Typical Configurations

1. Stand-alone EDx for direct measurement applications.
2. Single network with one EDx radio dynamometer and Communicator.
3. Single network with multiple EDx dynamometers and one Communicator. The Communicator monitors the load at each scale, plus the total weight.
4. Single network with two, three or four Communicators.
5. Multiple networks with multiple EDx dynamometers and Communicators.



## Xtreme accuracy: 0.1%

High resolution and accurate repeatable readings are essential to proper weighing. The higher standards set for the EDXtreme meant taking the time to ensure that material characteristics, load element design and strain gauge meshed perfectly. The result of that effort is a typical accuracy of 0.1% of full scale capacity\*. The enhanced resolution mode of 1 part in 5000 provides the level of readability needed for refined weighing.

## Xtreme ease

- **Exclusive SOFTKEY interface** – Dillon has eliminated confusing menus for faster setup and simple operation. In addition to lbf, kgf and Newtons, programmable functions can correct for gravitational variations and allow the use of custom units of measurement.
- **Wide-angle, backlit LCD** – Provides improved readability over a wider viewing angle and has backlighting for low light conditions.
- **Battery operation** – The EDXtreme is powered by two standard C-cell batteries. Batteries are easily accessible for fast replacement.



## Communications unlock the full potential of the EDXtreme

One of the foremost reasons for choosing an electronic dynamometer is added functionality.

### Remote real-time data acquisition

The radio or hardwired options available with the EDXtreme offer the convenience and safety of remote operation. Additionally, data from the dynamometer(s) can be downloaded to a PC via an RS-232 connection for compilation and analysis or to generate hard-copy printouts.

### Improved radio performance

The EDXtreme radio dynamometer utilizes leading-edge 2.4Ghz radio frequency technology to eliminate common interference issues. This spread spectrum technology will establish and maintain the strongest, most reliable communications.

### Dynamic monitoring and control

The optional Communicator is an extremely powerful hand-held remote that can define the function and manage the operation of one or more EDXtreme dynamometers. In multiple-link lifting arrays, the Communicator can display readings at any or all lift points and calculate the total load.

### Optional audible alarm

When safety and load monitoring are paramount, the optional audible alarm adds an extra level of protection. The alarm sounds when a pre-defined load limit has been exceeded, ideal for situations when the operator may not have sight of the screen.

## Standard Accessories

Cases for secure transportation and storage of instruments and shackles.



**Small details improve durability.** The EDXtreme features a recessed connector and embedded antenna to help prevent damage from snags that commonly disable other instruments.



**Specifications and dimensional details** are available from an authorized Dillon Distributor or the website at [www.dillon-force.com](http://www.dillon-force.com).



## Dillon on the job

Dillon force measurement equipment is the preferred choice of public utilities, nuclear facilities, tower erectors, armed services and material handlers throughout the world. In addition to the EDXtreme, Dillon's electronic line includes the EDJunior, an exceptional value for basic applications. Dillon also manufactures crane scales, high accuracy mechanical dynamometers and overload protection devices.

### AUTHORIZED DISTRIBUTORS

**Ask the experts.** Dillon distributors offer complete service capabilities from application assistance to sales and product support. Their experienced representatives are the most knowledgeable experts that you will find in the force measurement industry. We recommend that you consult these capable specialists for all of your measuring needs.

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## Force Measurement Equipment

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# EDXtreme Dynamometer Specifications

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## Capacity & Resolution

Model*	Capacity x Resolution (normal/enhanced)			Overload†	Construction
EDx-1T (EDx-2.5K)	2,500 lbf x 2/0.5	1,000 kgf x 1/0.2	10,000 N x 10/2	700%	Aircraft-quality 2024 aluminum
EDx-2T (EDx-5K)	5,000 lbf x 5/1	2,000 kgf x 2/0.5	20,000 N x 20/5		
EDx-5T (EDx-10K)	10,000 lbf x 10/2	5,000 kgf x 5/1	50,000 N x 50/10		
EDx-10T (EDx-25K)	25,000 lbf x 20/5	10,000 kgf x 10/2	100,000 N x 100/20	500%	Aircraft-quality E4340 alloy steel
EDx-25T (EDx-55K)	55,000 lbf x 50/10	25,000 kgf x 20/5	250,000 N x 200/50		
EDx-50T (EDx-100K)	100,000 lbf x 100/20	50,000 kgf x 50/10	500,000 N x 500/100		
EDx-75T (EDx-160K)	160,000 lbf x 100/50	75,000 kgf x 50/20	—	400%	Aircraft-quality E4340 alloy steel
EDx-100T (EDx-220K)	220,000 lbf x 200/50	100,000 kgf x 100/20	—		
EDx-150T (EDx-330K)	330,000 lbf x 200/100	150,000 kgf x 100/50	—		
EDx-250T (EDx-550K)	550,000 lbf x 500/200	250,000 kgf x 200/50	—		

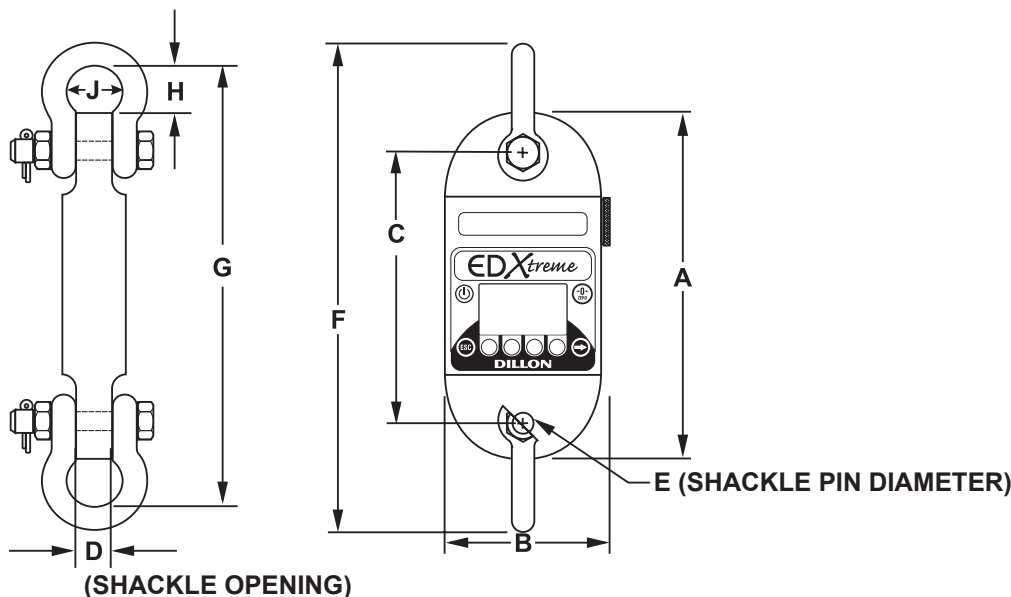
\* Model number in parenthesis shows U.S. convention for describing capacities. † Ultimate overload protection rating.

## Dimensions inches (mm)

Model	A	B	C	D	E	F	G	H	J	Shackle
EDx-1T	10.6 (269)	5.0 (127)	7.8 (198)	1.06 (26)	0.75 (19)	15.3 (389)	13.4 (340)	1.36 (34)	1.69 (43)	Dillon
EDx-2T	10.6 (269)	5.0 (127)	7.8 (198)	1.06 (26)	0.75 (19)	15.3 (389)	13.4 (340)	1.36 (34)	1.69 (43)	Dillon
EDx-5T	11.4 (289)	5.3 (135)	8.1 (206)	1.46 (37)	1.00 (25)	17.5 (444)	15.7 (400)	2.17 (55)	2.28 (58)	Green Pin*
EDx-10T	11.5 (291)	5.3 (133)	7.9 (201)	2.01 (51)	1.38 (35)	21.0 (534)	18.5 (470)	3.50 (89)	3.25 (83)	Green Pin*
EDx-25T	13.7 (348)	6.0 (152)	9.0 (229)	2.91 (74)	1.97 (50)	28.7 (730)	25.2 (640)	5.70 (146)	4.96 (126)	Green Pin*
EDx-50T	15.8 (400)	6.8 (172)	10.3 (262)	4.13 (105)	2.75 (70)	38.8 (986)	33.7 (856)	8.98 (228)	7.09 (180)	Green Pin*
EDx-75T	16.5 (419)	7.8 (197)	10.3 (262)	4.13 (105)	2.75 (70)	39.3 (998)	33.7 (856)	8.58 (218)	7.09 (180)	Green Pin*
EDx-100T	18.0 (457)	7.8 (197)	11.0 (280)	5.00 (127)	3.25 (83)	46.9 (1191)	40.4 (1025)	11.14 (283)	7.48 (190)	Green Pin*
EDx-150T	21.0 (533)	8.8 (222)	12.6 (321)	5.25 (133)	3.75 (95)	53.9 (1368)	45.6 (1159)	12.3 (313)	9.0 (229)	Crosby
EDx-250T	27.0 (686)	9.8 (248)	17.5 (445)	8.5 (216)	5.00 (127)	75.8 (1925)	62.8 (1595)	17.9 (454)	13.0 (330)	Crosby

\* Dimensions using Green Pin shackles. Crosby shackles available. Consult factory for dimensions.

Dimensions shown are nominal and subject to tolerances.



## Dynamometer Specifications

**Enclosure:** Designed to NEMA4X/IP55. Suitable for continuous outdoor use.

**Accuracy:** 0.1% of capacity up to EDX-50T.\*  
0.3% of capacity for EDX-75T and above.\*

**Repeatability:** 0.1% of capacity up to EDX-50T.\*  
0.3% of capacity for EDX-75T and above.\*

\* Normal resolution mode with Dillon provided shackles.

**Proof Load:** 150% of capacity up to EDX-75T on Load Link.  
110% of capacity EDX-100T and above on Load Link.  
Will proof load shackles upon request.

**Ultimate Overload:** See table on reverse.

**Safe Overload:** 200% of capacity.

**Body Protection:** Aluminum and alloy steel capacities are powder coated.

**Bearings:** Unmatched repeatability attained by needle bearings in shackle pin holes up to EDX-5T. Shackle pin acts as inner race.

**Shackles:** Forged industry standard anchor shackles. Models up to EDX5T use precision machined shackle pin. Higher capacities use bar stock pin.

**Display:** 128 x 64 dot-graphic LCD display shows up to 6 digits 1.0" (26 mm) high plus annunciators and softkeys. Digits are .11 inches (3 mm) thick for unmatched readability.

**Display Update Rate:** 2 times per second.

**Peak Capture Rate:** 10/100/1,000 Hz

**Connector:** Recessed sealed connector may be used for serial communications or connection to a Communicator II remote.

**RS-232 Communication:** Print or extract data easily. Continuous output can drive a scoreboard. Configurable poll character.

**Calibration:** Traceable to the National Institute of Standards and Technology. Certificate included with curve of readings.

**Battery Life:** Stand alone EDXtreme with no radio and no backlight lasts up to 400+ hours. 150 hours continuous with Radio Link System. Use with two C-Cell alkaline batteries. (When using backlight, battery life will be reduced, depending on intensity.)

**Operating Temperature:** -4° F to 158° F (-20° to 70° C).

**Included with Instrument:** All include certificate of calibration, manual and batteries. Plastic carry case included for EDX-1T to EDX-50T. Higher capacities include rugged plywood storage crate. Instruments with shackles include centering spacers (EDX-20T & up) and shackle storage crate (EDX-20T to EDX-75T). Display backlight.

**Options:** Shackles. Radio communications.

**Approval:** CE on all capacities excluding 550K.

## Communicator II Specifications

**Enclosure:** Designed to NEMA 3 / IP54 with optional sleeve.  
Suitable for protected outdoor use.

**Instrument Size:** 9.5 x 5.0 x 2.5 inch (241 x 127 x 64 mm).

**Accuracy:** Not applicable. Only sends and receives digital information.

**Display:** 128 x 64 dot-graphic LCD display can show full readings up to 5 instruments.

**Battery Life:** Up to 80 hours continuous radio using (4) AA alkaline batteries.

**Operating Temperature:** -4° F to 158° F (-20° to 70° C).

**Connectors:** Sealed connectors may be used for serial communications and wired connection to an EDXtreme dynamometer.

**RS-232 Communication:** Print or extract data easily. Continuous output can drive a scoreboard. Configurable poll character.

**Included with Remote:** Carry case and batteries

**Accessories:** Rubberized case protector sleeve.

Remote wall mount bracket. Serial and remote cable assemblies.

**Optional audible alarm:** Alarm sounds (105dB) when pre-defined load limit has been exceeded.

**Approval:** CE

## Radio Specifications

**FCC Certified:** For unlicensed low power devices. No radio licensing or permits required for normal operation.\* (In the US and Canada. Check local ordinances in other countries.).

**Frequency:** ISM 2.4 GHz frequency band operates between 2.4 to 2.4835 GHz.

**Output Level:** 10 mW (10 dBm).

**Display Update Rate:** 1 time per second.

**Number of Links Remote Can Control:** Up to 15 addresses.

**Configuration Address:** Automatic and configurable.

**Antenna:** Integral antenna.

**Range:** Open-air range up to 600 feet, line-of-sight. Indoor range dependent upon environment with 300 feet common. Low power radio systems are dependent upon interference levels from other radio systems and environmental conditions. Radio devices are not suitable for all applications.

## Weights

Model	Unit Weight lb (kg)	Weight with Shackles lb (kg)	Unit Ship Weight lb (kg)	Unit/Shackle Ship Dimension in (mm)
Communicator	1.25 (0.6)	—	5 (2)	13 x 9 x 19 (330 x 229 x 483)
EDx-1T	4.3 (2.0)	8.6 (3.9)	18 (8)	16 x 7 x 19 (406 x 178 x 483)
EDx-2T	4.4 (2.0)	8.7 (3.9)	18 (8)	16 x 7 x 19 (406 x 178 x 483)
EDx-5T	5.6 (2.5)	14 (6)	23 (10)	16 x 7 x 19 (406 x 178 x 483)
EDx-10T	16 (7.3)	38 (17)	53 (24)	21 x 11 x 23 (553 x 279 x 584)
Model	Unit Weight lb (kg)	Shackle Weight lb (kg)	Unit Ship Weight/Dimension lb (kg) / in (mm)	Shackle Ship Weight/Dimension lb (kg) / in (mm)
EDx-25T	25 (11)	91 (41)	37 (17) 16 x 7 x 19 (406 x 178 x 483)	85 (39) 15 x 8 x 26 (381 x 203 x 660)
EDx-50T	38 (17)	216 (98)	52 (24) 16 x 7 x 19 (406 x 178 x 483)	250 (113) 17 x 9 x 23 (432 x 229 x 483)
EDx-75T	54 (25)	229 (104)	82 (37) 12 x 10 x 32 (305 x 254 x 813)	250 (113) 17 x 9 x 23 (432 x 229 x 483)
EDx-100T*	70 (32)	395 (179)	480 (218)	
EDx-150T*	120 (54)	650 (295)	750 (340)	
EDx-250T*	250 (113)	1490 (675)	1600 (726)	

\*Ships on pallet

## AUTHORIZED DISTRIBUTORS

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## Force Measurement Equipment

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