DILLON

Force Measurement Equipment

# ED Series Crane Scales

## EDXtreme & EDjunior Crane Scales

# ED Series Crane Scales

Guesswork is not acceptable. When you have people working around 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 — Dillon ED Series Crane Scales.

Two ED Series models are available: The high-end EDXtreme (also called EDX), and the affordable EDjunior. Choose EDXtreme for the most demanding applications; EDXtreme is built with the best materials and designed with cutting-edge features like radio control. Where cost is a concern, and reliability is a requirement, choose EDjunior – the perfect crane scale for simple jobs.

## EDXtreme – The ultimate in reliability & accuracy

*Popular industry-standard shackles insure proper fit*

*Sturdy aircraft-quality aluminum (shown) or plated alloy steel case*

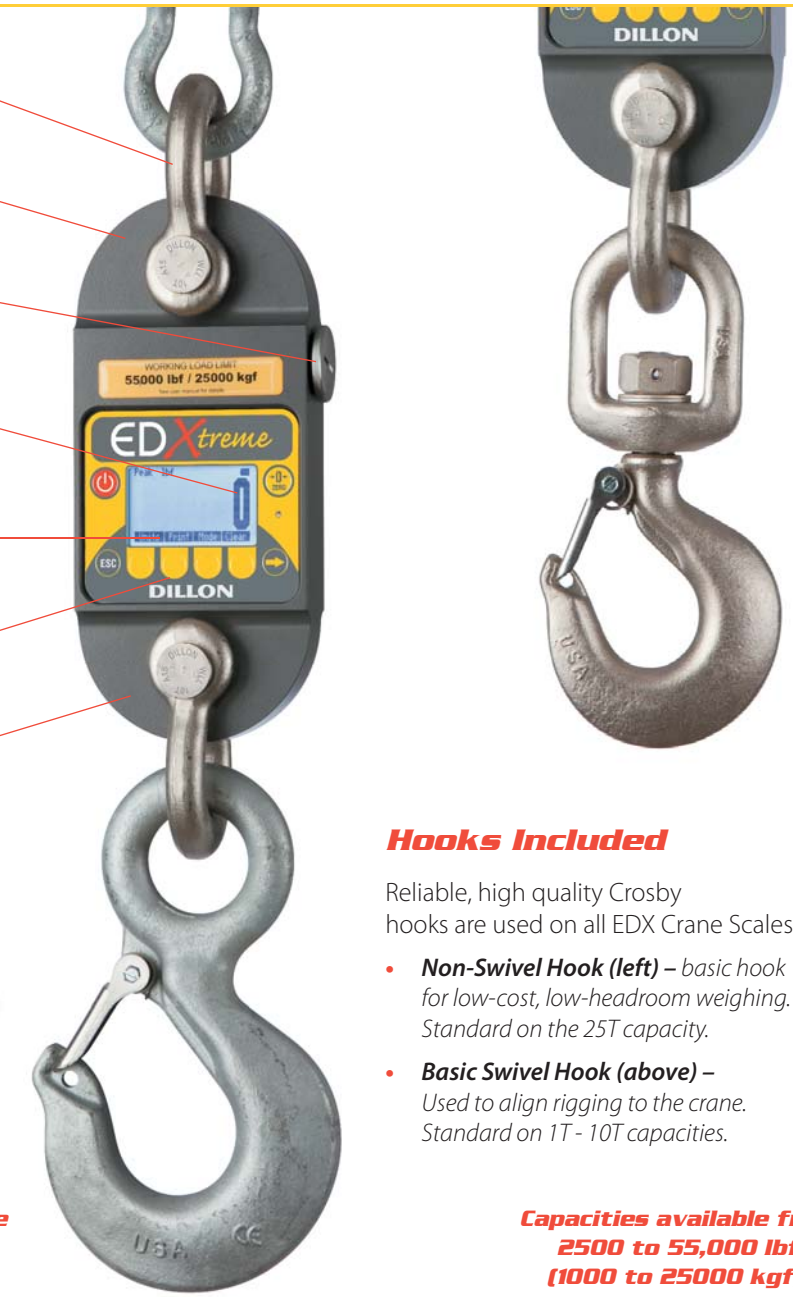
*Battery compartment – easy access without tools*

*High-resolution dot-matrix LCD display offers large numbers without confusing abbreviations or multipliers*

*Injection molded, thick Lexan panels offer superior impact protection*

*Softkey interface allows easy and intuitive operation and configuration*

*NEMA 4X / IP55 designed for weather and water resistance*




**All EDXtreme Crane Scales include storage crate, instructions, and certificate of calibration.**

### Hooks Included

Reliable, high quality Crosby hooks are used on all EDX Crane Scales.

- ***Non-Swivel Hook (left) –*** *basic hook for low-cost, low-headroom weighing. Standard on the 25T capacity.*
- ***Basic Swivel Hook (above) –*** *Used to align rigging to the crane. Standard on 1T - 10T capacities.*

**Capacities available from 2500 to 55,000 lbf (1000 to 25000 kgf).**

***Specifications and dimensional details*** *are available from an authorized Dillon Distributor or the website at www.dillonforce.com.*

## Xtreme accuracy: 0.1%

Accurate repeatable readings are essential to proper weighing. The higher standards set for the EDX Crane Scales 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 –*** *Eliminates confusing menus for faster setup and simple operation.*
- ***Local gravity correction –*** *Unit adjusts to local gravitational conditions, without recalibration.*
- ***Custom units of measure –*** *User-defined units of measure mean the instrument adapts to changing requirements.*
- ***Wide-angle, backlit LCD –*** *Provides improved readability over a wider viewing angle and has backlighting for low light conditions.*
- ***Battery operation –*** *Powered by two standard C-cell batteries. Batteries are easily accessible for fast replacement.*

## 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 EDX Crane Scale 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 Crane Scale design.*
- ***NEMA 4X/IP55 –*** *The EDXtreme is clearly the choice for reliability in any environment – in-plant or out on the job site.*

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

## Expandable Scale Network

A basic stand-alone model can be easily upgraded "in-the-field" to accommodate changing needs. Remote configuration, data acquisition and single point monitoring of multiple links are all possible with the hardwired or radio communication options available with the EDXtreme Crane Scale. An RS-232 interface is standard on both the EDXtreme and Communicator for connection to a host PC. Optional audible alarm sounds (105dB) when pre-defined load limit has been exceeded.

### Typical Configurations

1. *Stand-alone EDX for direct measurement applications.*
2. *Single network with one EDX radio Crane Scale and Communicator.*
3. *Single network with multiple EDX Crane Scales 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 Crane Scales and Communicators.*


**Optional Remote Communicator II showing four crane scale readings and total of all.**

# EDjunior – The market leader in accuracy & value

**The EDjunior is all about value.** Behind its simple design and easy operation, you will find the quality and performance not found elsewhere. With the EDjunior, Dillon proves that economy can go hand-in-hand with accuracy, long service life and, most importantly, worker safety – just compare the Dillon EDjunior to the competition. Nothing else comes close!


## Measurement Capabilities

The EDjunior provides peak detection as well as live load readings. Selectable units of measure include lbf, kgf and Newtons.

**Accuracy —** The load element design and strain gauges chosen for the EDjunior produce an accuracy of 0.2 % (full scale). This level of precision offers flexibility for use in a broad range of applications. Capacities up to 10,000 lb (5000 kg) available.

**Resolution —** Readings are displayed with a resolution of 1 part in 1000 to ensure the level of readability required for critical lifting applications.

## Control Interface

The exclusive Dillon SOFTKEY interface provides direct access to setup and display functions without the typical confusing menu structure. The 6-digit dot-matrix display features 1 inch (25 mm) high numerals for greater visibility.

## High Strength, Low Weight

Heavy, cumbersome tools make tough jobs even harder. Through the use of aircraft quality materials, Dillon has made the EDjunior an easy-to-position, highly mobile instrument with exceptional strength. It offers an impressive factor of safety at all capacities.

## All Environments

With its NEMA4/IP55 design, the EDjunior is at home in virtually any environment and ideally-suited to outdoor job-site applications as well as in-plant use.

## Hooks Included

- **Basic Swivel Hook –** Used to align rigging to the crane. Standard on 1T - 10T capacities.

***Specifications and dimensional details*** *are available from an authorized Dillon Distributor or the website at www.dillonforce.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. Dillon also manufactures mechanical crane scales, high accuracy mechanical and electronic 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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# ED Series Crane Scales Specifications

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## EDXtreme & EDjunior Crane Scales

## EDXtreme – Capacity x Resolution

| Unit Capacity lb. (kg) | Capacity x Resolution (normal/enhanced) | | | Overload[1] | Body Construction |
|---|---|---|---|---|---|
| 2,500 (1000) | 2500 lb x 2/0.5 | 1000 kg x 1/0.2 | 10000 N x 10/2 | 700 % | 2024 Aircraft Aluminum |
| 5,000 (2000) | 5000 lb x 5/1 | 2000 kg x 2/0.5 | 20000 N x 20/5 | 700 % | 2024 Aircraft Aluminum |
| 10,000 (5000) | 10000 lb x 10/2 | 5000 kg x 5/1 | 50000 N x 50/10 | 700 % | 2024 Aircraft Aluminum |
| 25,000 (10000) | 25000 lb x 20/5 | 10000 kg x 10/2 | 100000 N x 100/20 | 500 % | E4340 Aircraft Alloy Steel |
| 55,000 (25000) | 55000 lb x 50/10 | 25000 kg x 20/5 | 250000 N x 200/50 | 500 % | E4340 Aircraft Alloy Steel |

1. Ultimate overload protection

## EDXtreme Specifications

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

**Accuracy:** 0.1% of capacity up to EDX-25T.*

**Repeatability:** 0.1% of capacity up to EDX-25T.*
** Normal resolution mode with Dillon provided shackles.*

**Proof Load:** 150% of capacity up to EDX-25T on Load Link.
*Will proof load shackles upon request.*

**Ultimate Overload:** See table above.

**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 EDX-5T 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. Passes only with three consecutive confirming runs, with all points in specification.

**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

## 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 64mm).

**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.

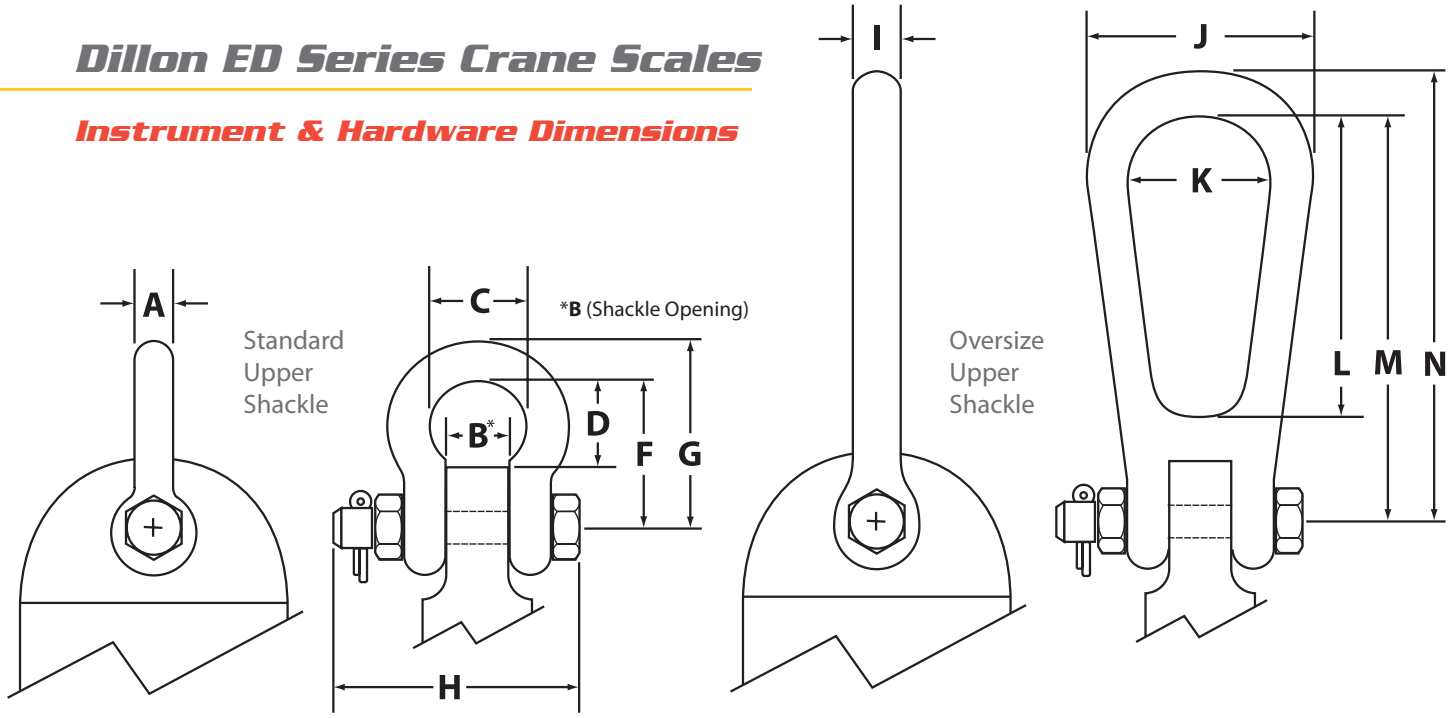
**Antenna:** Integral antenna.

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

CE

# Dillon ED Series Crane Scales

## Instrument & Hardware Dimensions




### EDXtreme Standard Upper Shackle

| Unit Capacity lb. (kg) | A in. (mm) | B in. (mm) | C in. (mm) | D in. (mm) | F in. (mm) | G in. (mm) | H in. (mm) | Weight lb. (kg) |
|---|---|---|---|---|---|---|---|---|
| **EDX-1T** 2,500 (1000) | 0.76 (19) | 1.06 (26) | 1.69 (42) | 1.35 (34) | 2.76 (70) | 3.77 (96) | 3.55 (90) | 2.2 (1.0) |
| **EDX-2T** 5,000 (2000) | 0.76 (19) | 1.06 (26) | 1.69 (42) | 1.35 (34) | 2.76 (700) | 3.77 (96) | 3.55 (90) | 2.2 (1.0) |
| **EDX-10T** 25,000 (10000)* | 1.25 (32) | 2.01 (51) | 3.27 (83) | 3.43 (87) | 5.20 (132) | 6.46 (164) | 7.01 (178) | 11 (5.0) |
| **EDX-25T** 55,000 (25000)* | 1.75 (45) | 2.91 (74) | 4.96 (126) | 5.66 (143) | 8.00 (203) | 9.76 (248) | 9.80 (249) | 32 (14.5) |

### EDjunior Standard Upper Shackle

| Unit Capacity lb. (kg) | A in. (mm) | B in. (mm) | C in. (mm) | D in. (mm) | F in. (mm) | G in. (mm) | H in. (mm) | Weight lb. (kg) |
|---|---|---|---|---|---|---|---|---|
| **EDjr-1T** 2,500 (1000)* | 0.43 (11) | 0.75 (19) | 1.16 (29) | 1.18 (30) | 1.94 (49) | 2.39 (61) | 2.64 (67) | 0.5 (0.2) |
| **EDjr-2T** 5,000 (2000)* | 0.63 (16) | 1.06 (27) | 1.69 (43) | 1.46 (37) | 2.87 (73) | 3.50 (89) | 3.86 (98) | 1.7 (0.8) |
| **EDjr-5T** 10,000 (5000)* | 0.87 (22) | 1.42 (36) | 2.28 (58) | 2.13 (54) | 3.78 (96) | 4.65 (118) | 5.12 (130) | 4 (1.8) |
| **EDjr-10T** 25,000 (10000)* | 1.25 (32) | 2.01 (51) | 3.27 (83) | 3.43 (87) | 5.20 (132) | 6.46 (164) | 7.01 (178) | 11 (5.0) |

### EDXtreme Oversize Upper Shackle — *not available on 25,000 lb and 50,000 lb models.*

| Unit Capacity lb. (kg) | I in. (mm) | J in. (mm) | K in. (mm) | L in. (mm) | M in. (mm) | N in. (mm) | Weight lb. (kg) |
|---|---|---|---|---|---|---|---|
| **EDX-1T** 2,500 (1000) | 0.94 (24) | 4.88 (124) | 2.76 (70) | 4.49 (114) | 6.98 (177) | 8.64 (219) | 6.4 (2.9) |
| **EDX-2T** 5,000 (2000) | 0.94 (24) | 4.88 (124) | 2.76 (70) | 4.49 (114) | 6.98 (177) | 8.64 (219) | 6.4 (2.9) |
| **EDX-5T** 10,000 (5000) | 0.94 (24) | 4.88 (124) | 2.76 (70) | 4.49 (114) | 6.73 (171) | 8.39 (213) | 6.4 (2.9) |

### EDjunior Oversize Upper Shackle — *not available on 2500 lb model.*

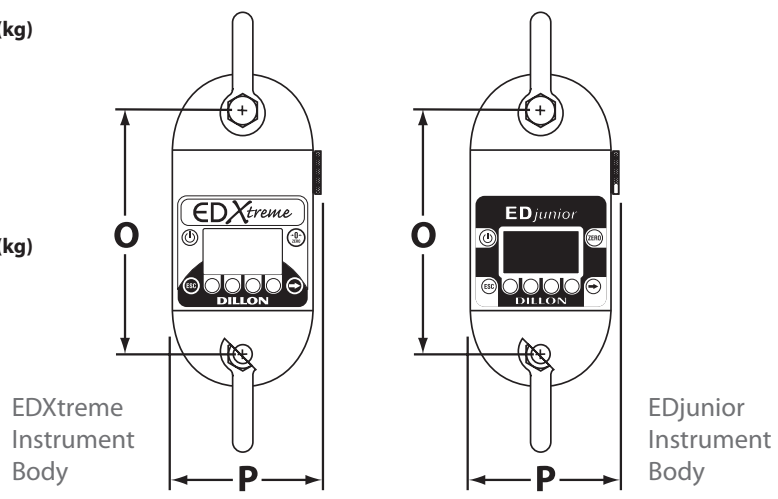
| Unit Capacity lb. (kg) | I in. (mm) | J in. (mm) | K in. (mm) | L in. (mm) | M in. (mm) | N in. (mm) | Weight lb. (kg) |
|---|---|---|---|---|---|---|---|
| **EDjr-2T** 5,000 (2000) | 0.94 (24) | 4.88 (124) | 2.76 (70) | 4.49 (114) | 6.98 (177) | 8.64 (219) | 6.4 (2.9) |
| **EDjr-5T** 10,000 (5000) | 0.94 (24) | 4.88 (124) | 2.76 (70) | 4.49 (114) | 6.73 (171) | 8.39 (213) | 6.4 (2.9) |

### EDXtreme Instrument Body

| Unit Capacity lb. (kg) | O in. (mm) | P in. (mm) | Weight lb. (kg) |
|---|---|---|---|
| **EDX-1T** 2,500 (1000) | 7.79 (198) | 5.01 (128) | 4.3 (2.0) |
| **EDX-2T** 5,000 (2000) | 7.79 (198) | 5.01 (128) | 4.4 (2.0) |
| **EDX-5T** 10,000 (5000) | 8.10 (206) | 5.34 (136) | 5.6 (2.5) |
| **EDX-10T** 25,000 (10000) | 8.04 (204) | 5.26 (134) | 16 (7.3) |
| **EDX-25T** 55,000 (25000) | 9.18 (233) | 5.98 (152) | 25 (11) |

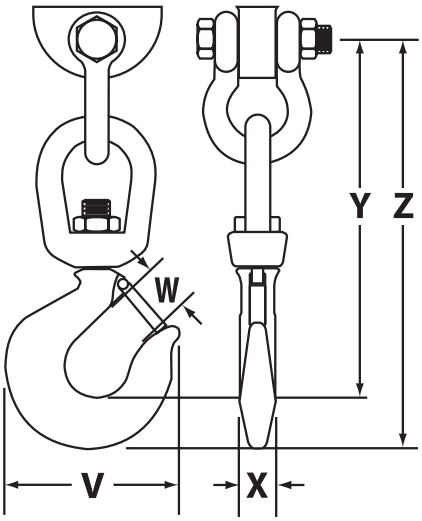
### EDjunior Instrument Body

| Unit Capacity lb. (kg) | O in. (mm) | P in. (mm) | Weight lb. (kg) |
|---|---|---|---|
| **EDjr-1T** 2,500 (1000) | 6.89 (175) | 4.98 (127) | 2.9 (1.3) |
| **EDjr-2T** 5,000 (2000) | 7.85 (199) | 4.98 (127) | 4.5 (2.0) |
| **EDjr-5T** 10,000 (5000) | 8.17 (207) | 5.34 (136) | 6.4 (2.9) |
| **EDjr-10T** 25,000 (10000) | 8.04 (204) | 5.26 (134) | 16 (7.3) |

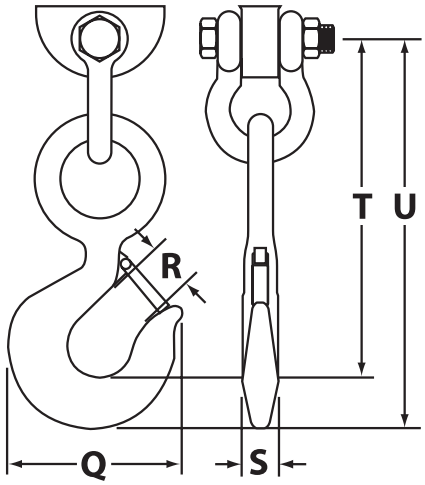



** Green Pin shackles*

*Dimensions and weights shown are nominal and subject to tolerances*



Basic Swivel Hook



Non- Swivel Hook

EDXtreme Basic Swivel Hook — *not available on 50,000 lb model*

| **Unit Capacity lb. (kg)** | **V in. (mm)** | **W in. (mm)** | **X in. (mm)** | **Y in. (mm)** | **Z in. (mm)** | **Weight lb. (kg)** |
|---|---|---|---|---|---|---|
| **EDX-1T** 2,500 (1000) | 4.8 (123) | 1.14 (29) | 1.36 (34) | 10.3 (261) | 11.8 (298) | 7.1 (3.2) |
| **EDX-2T** 5,000 (2000) | 4.8 (123) | 1.14 (29) | 1.36 (34) | 10.3 (261) | 11.8 (298) | 7.1 (3.2) |
| **EDX-5T** 10,000 (5000)* | 6.3 (160) | 1.39 (36) | 1.61 (40) | 13.5 (342) | 15.3 (388) | 14 (6) |
| **EDX-10T** 25,000 (10000)* | 8.3 (212) | 1.95 (50) | 2.27 (57) | 17.2 (438) | 19.8 (504) | 34 (15) |

EDjunior Basic Swivel Hook

| **Unit Capacity lb. (kg)** | **V in. (mm)** | **W in. (mm)** | **X in. (mm)** | **Y in. (mm)** | **Z in. (mm)** | **Weight lb. (kg)** |
|---|---|---|---|---|---|---|
| **EDjr-1T** 2,500 (1000)* | 3.2 (81) | 0.72 (19) | 0.95 (24) | 7.4 (186) | 8.2 (208) | 1.7 (0.8) |
| **EDjr-2T** 5,000 (2000)* | 4.8 (123) | 1.14 (29) | 1.36 (34) | 10.1 (257) | 11.6 (294) | 6.8 (3.1) |
| **EDjr-5T** 10,000 (5000)* | 6.3 (160) | 1.39 (36) | 1.61 (40) | 13.5 (342) | 15.3 (388) | 14 (6) |
| **EDjr-10T** 25,000 (10000)* | 8.3 (212) | 1.95 (50) | 2.27 (57) | 17.2 (438) | 19.8 (504) | 34 (15) |

EDXtreme Non- Swivel Hook

| **Unit Capacity lb. (kg)** | **Q in. (mm)** | **R in. (mm)** | **S in. (mm)** | **T in. (mm)** | **U in. (mm)** | **Weight lb. (kg)** |
|---|---|---|---|---|---|---|
| 55,000 (25000)* | 14.1 (358) | 3.00 (76) | 3.19 (82) | 27 (686) 2 | 2.8 (578) | 138 (63) |

## *Common Measurements:*

1. Headroom: add dimensions (F OR M) + O + (T OR Y OR EE)
2. Total Length: add dimensions (G OR N + O + (U OR Z OR FF)
3. Shackle Thickness: subtract dimensions (G OR N) - (F OR M)
4. Hook Thickness: subtract dimensions (V OR Z OR FF) - (T OR Y OR EE)

*(Y) *May use clevis link or shackle depending upon capacity.*

** Green Pin shackles*

# Dillon ED Series Crane Scales

## EDjunior – Capacity x Resolution

| Unit Capacity lb. (kg) | Capacity x Resolution | | | Overload[1] | Body Construction |
|---|---|---|---|---|---|
| **EDjr-1T** 2,500 (1000) | 2500 lbf x 2 | 1000 kgf x 1 | 10000 N x 10 | 700 % | 2024 Aircraft Aluminum |
| **EDjr-2T** 5,000 (2000) | 5000 lbf x 5 | 2000 kgf x 2 | 20000 N x 20 | 700 % | 2024 Aircraft Aluminum |
| **EDjr-5T** 10,000 (5000) | 10,000 lbf x 10 | 5000 kgf x 5 | 50000 N x 50 | 700 % | 2024 Aircraft Aluminum |
| **EDjr-10T** 25,000 (10000) | 25,000 lbf x 20 | 10000 kgf x 10 | 100,000 N x 100 | 500 % | E4340 Alloy Steel |

1. Ultimate overload protection

## EDjunior Specifications

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

Accuracy: 0.2% of capacity.

Repeatability: 0.2% of capacity.

Ultimate overload: 700%

Safe overload: 200%

Display: 128 x 64 dot-graphic LCD display shows all digits 1.0" (26 mm) high plus annunciators and softkeys.

Display update rate: 2 times per second.

RS-232 communication: Not available. See Dillon EDX Crane Scale.

Calibration: Traceable to the National Institute of Standards and Technology. Calibration card included.

Battery life: 400 hours typical use with two C-cell alkaline batteries.

Operating temperature: -4° F to 158° F (-20° to 70° C)

Included with instrument: Batteries, manual and calibration card.

Optional accessories: Shipping / storage crate.

Approval: CE

### 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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