



# PDT 80M Precision Drop Tester

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**Lansmont**  
*Field-to-Lab*<sup>®</sup>



The transport and distribution environment holds numerous opportunities for packages to experience impacts and/or drops. As a result, shock is transmitted both into, and throughout, a given package. The products within the packaging respond to both the amplitude and frequency characteristics of the shock. How the various packaging components mitigate that shock determines how much shock is transmitted into the product held within. Lansmont Drop Test Systems are used to perform pre-shipment testing in an effort to design and verify cost-effective, optimized protective packaging solutions.

## PERFORMANCE SPECIFICATIONS

### Maximum Package Weight:

Standard platen 177 lbs. (80.0 kg)

Extended platen option 150 lbs. (68.0 kg)

### Maximum Package Size:

Standard platen 24.0 in. (61.0 cm) front to back

Extended platen option 36.0 in. (91.5 cm) front to back

### Drop Height Range:

Standard platen

12.0 - 36.0 in. (30.5 - 91.5 cm), 1.00 in. (2.54 cm) increments

36.0 - 42.0 in. (91.5 - 107 cm), 2.00 in. (5.08 cm) increments

35.0 - 71.0 in. (88.9 - 180 cm) and 36.0 - 72.0 in. (91.5 - 183 cm),

6.0 in. (15.2 cm) increments

Extended platen

18.0 - 36.0 in. (45.7 - 91.5 cm), 1.00 in. (2.54 cm) increments

36.0 - 42.0 in. (91.5 - 107 cm), 2.00 in. (5.08 cm) increments

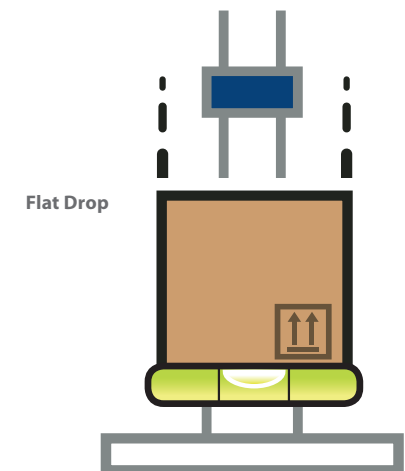
35.0 - 71.0 in. (88.9 - 180 cm) and 36.0 - 72.0 in. (91.5 - 183 cm),

6.0 in. (15.2 cm) increments

\*Extended drop height available.

## FLATNESS ACCURACY

Before each drop tester is shipped, its accuracy is verified to within +/- 2 degrees.





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## FEATURES



### Foot Switch:

The drop mechanism of the PDT 80M Drop Tester is operated via a footswitch. When the footswitch is pressed, the drop leaf is activated and performs a drop test. After the footswitch is released, the drop leaf will reset. The footswitch is protected inside a metal guard enclosure to avoid accidental activation.



### Precision Cam Design:

Lansmont's precision cam and bearings design is a key machine feature for producing a flat drop event. When the drop tester is armed and fired, the drop leaf first moves

straight down faster than the package and then swings out of the way in time to clear the path for the package's free fall.



### Counter-Balance Assembly:

The drop height of the PDT 80M Drop Tester is adjusted manually. To alleviate the weight of the drop assembly when making height

adjustments, the PDT 80M incorporates a unique counter-balance assembly. This feature makes the height adjustment process simple and easy for any test engineer.

## OPTIONS



### Edge and Corner Holding Fixture:

The optional flexible structure mounts to the drop tester and holds packages in position prior to the drop event when

performing edge or corner drops.



### Extended Platen:

If your package dimensions are too big for the standard platen, we offer an optional extended platen to accommodate

larger package sizes. The extended platen holds packages with a front-to-back dimension of up to 36 inches.



### Slotted and Oversized Baseplates:

For customers that need to test to drop heights below 12 inches, we have a slotted baseplate

option and foundation kit that allows for drops as low as 1 inch.

Larger packages may necessitate a larger impact surface. We offer an oversized baseplate which widens the impact area from the standard 36 inches to 60 inches.



### Test Partner Data Acquisition:

Lansmont's Test Partner sets the standard for data acquisition systems used for laboratory impact testing.

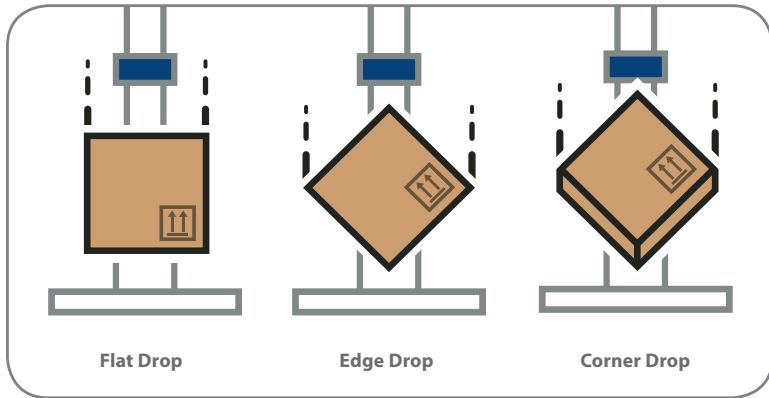
Test Partner is a powerful combination of software and hardware specifically tailored to capture and analyze mechanical shock, drop, and impact events. It can acquire up to sixteen channels of acceleration data simultaneously.



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## APPLICATIONS



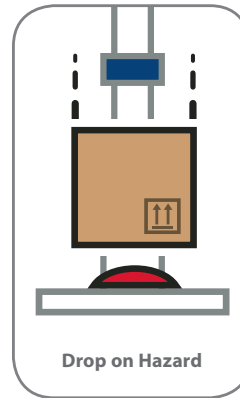
Flat Drop

Edge Drop

Corner Drop

### Controlled Orientation

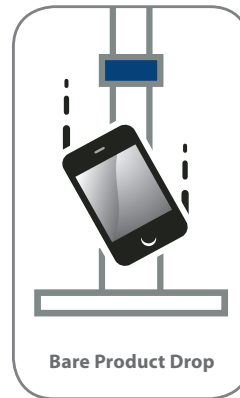
Test procedures and industry standards specify the requirement for controlled orientation drops, resulting in test sample impacts on predetermined faces, corners and edges. Lansmont Precision Drop Testers are built in accordance with ASTM D5276 requirements.



Drop on Hazard

### Hazard Drops

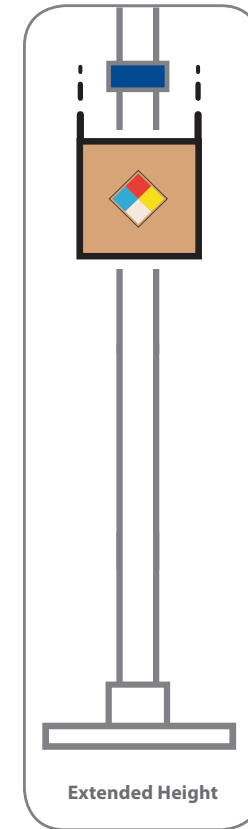
In reality, not all items are dropped on flat, laboratory-style floors. In fact, some small parcel distribution tests require drops to occur on a predetermined hazard.



Bare Product Drop

### Product Drops

Lansmont customers use drop testers to perform bare product drop testing to simulate in-use events that may occur once out of their protective packaging and in the hands of the consumer.



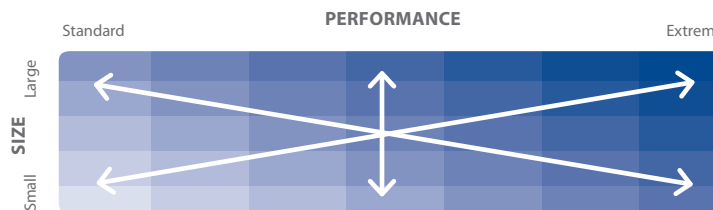
Extended Height

### Extended Height

Dangerous goods packages undergo severe drop tests during certification testing. Other high performance products and packages also need to survive high energy impacts. Lansmont offers extended height drop testers to satisfy these testing applications. Custom drop height options are available to extend your machine's drop height range.

## MADE TO ORDER

Not quite the equipment size or performance level that you need? If we do not already manufacture the test machine ideally suited for your company's testing applications, our engineering team can custom design a test system specific to your needs.





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## SPECIFICATIONS

### UTILITIES

#### Power -

Standard voltages: 110 VAC - 1 phase - 60 Hz. (10 amps)      220 VAC - 1 phase - 50 Hz. (5 amps)

Optional voltages: 100 VAC - 1 phase - 50 Hz. (10 amps)      200 VAC - 1 phase - 50 Hz. (5 amps)  
100 VAC - 1 phase - 60 Hz. (10 amps)      220 VAC - 1 phase - 60 Hz. (5 amps)  
200 VAC - 1 phase - 60 Hz. (5 amps)

#### Plant Air -

Pressure: 40 - 60 psi (2.8 - 4.1 bar)  
Flow Rate: 0.5 scfm

### MACHINE DIMENSIONS (standard machine)

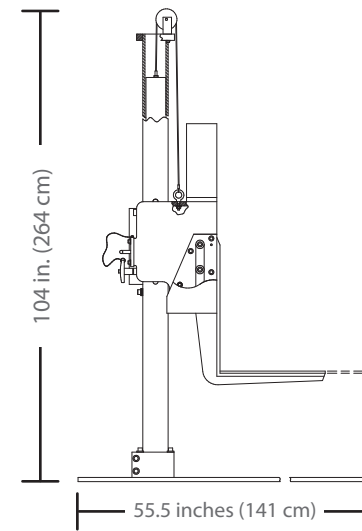
Height: 104 in. (264 cm)  
Baseplate width: 36.0 in. (91.5 cm)  
Baseplate length: 55.5 in. (141 cm)

### CRATE INFORMATION (standard machine)

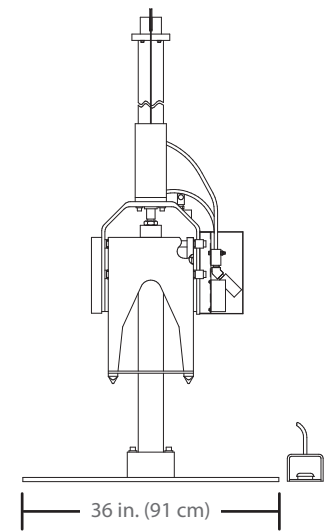
Height: 29 in. (74 cm)  
Width: 39 in. (99 cm)  
Length: 108 in. (274 cm)  
Shipping Weights: Gross Weight 750 lbs. (340 kg)  
Net Weight 420 lbs. (190 kg)

## SYSTEM DRAWINGS

### SIDE VIEW



### FRONT VIEW



### STANDARD BASEPLATE

