

# Force Test Stands Series **ES**

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MODELS ES10 & ES20

## **User's Guide**

**MARK-10.**

## ***Thank you!***

Thank you for purchasing a Mark-10 Series ES Force Measurement Test Stand. We are confident that you will get many years of service from this product.

Series ES test stands can be used in any number of compression and tension testing applications. Both models ES10 and ES20 are designed for testing up to 100 lb (500 N). To maintain smooth mechanical functioning of your test stand, avoid repetitive overloads and shock loads.

We hope that this User's Guide will provide a comprehensive explanation of the test stands' operation and sufficient detail on their specifications. However, if you have any other questions or concerns our engineering and technical support teams will be eager to help you.

Thank you again for your purchase and happy testing!

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## UNPACKING AND SETTING UP

1. Carefully unpack the stand and inspect for any damage. Inspect the contents to ensure that you have received a test stand complete with all accessories – see “List of included items” section.
2. Install the loading lever into the hub on the ES10 stand or install the hand wheel on the ES20 stand.
3. Place the stand on a firm, flat and level working surface free from vibration to ensure accurate readings. If preferred, the test stand can be secured to a work bench with two screws or bolts through the two clearance holes in the base – see “Operation” section for further details.

## LIST OF INCLUDED ITEMS

Quantity	Item
1	Force measurement stand, ES10 or ES20
4	Thumb screws for gauge mounting
1	Mounting hole drill template

### *Optional dial indicator kit ES001*

The dial indicator kit, ES001, clamps onto the column of the stand. The dial can be repositioned along the length of the column.

It allows for 1.0" travel and provides as resolution of 0.001".



### *Optional digital indicator kit ES002*

Displays up to 1" of displacement with resolution of 0.0005" and 0.01 mm. Includes zero button and in/mm selector button.



## OPERATION

The test stand can be mounted to a work bench using the clearance holes in the base – see drawing for hole location. The included mounting hole drill template can be used to locate holes in work area.

All Mark-10 force gauges (except the Series CG) can be mounted directly to the stand without adapters. Mount the gauge using the thumb screws provided.

The loading lever on the ES10 can be adjusted to allow for ease of operation. Reposition the lever using one of the three tapped holes located in the hub – refer to the dimensional drawing on the next page.

If the optional dial Indicator kit (ES001) or digital indicator kit (ES002) is purchased separately, it can be easily installed using the hardware provided.



ES20

ES10

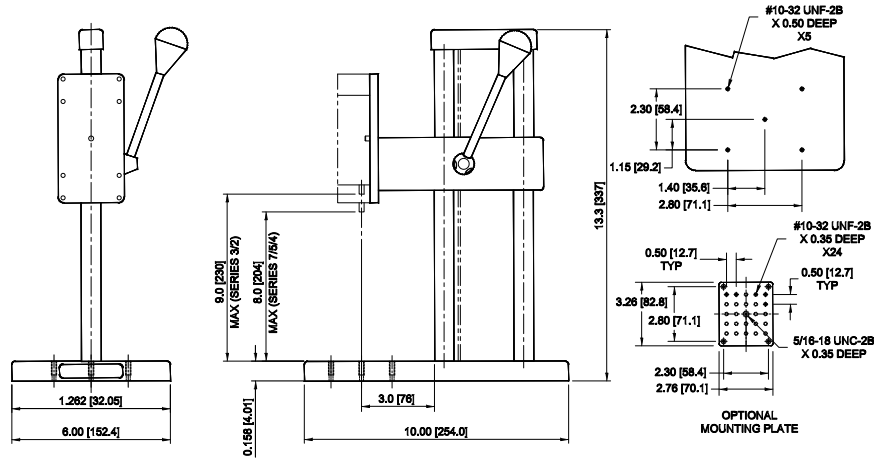
## SPECIFICATIONS

	ES10	ES20
Load capacity	100 lbs [500 N]	100 lbs [500 N]
Maximum travel	9" [228.6 mm]	9" [228.6 mm]
Loading method	Rack & pinion	Hand wheel
Rate	1.050"/rev [26.7 mm]	0.083"/rev [2.1 mm]
Weight	10 lbs [4.5 kg]	10 lbs [4.5 kg]

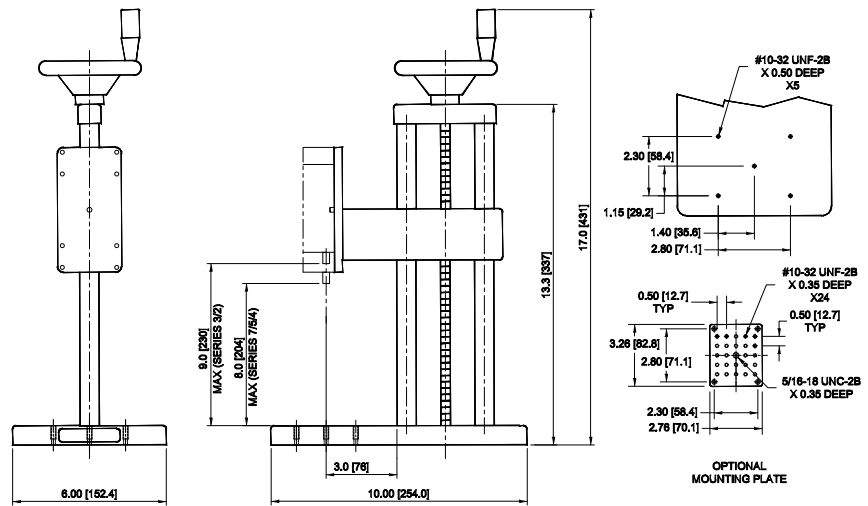
# DIMENSIONS

in [mm]

## ES10



## ES20



## OTHER MARK-10 PRODUCTS

A full line of force and torque measurement products and related items, including force gauges, torque gauges, force and torque test stands, sensors, grips, software, and more.



## WARRANTY

Mark-10 Corporation expressly warrants to its buyer for three (3) years from the date of delivery that the goods sold are free from defects in workmanship and materials. Mark-10 Corporation will, at its option, repair or replace or refund the purchase price of goods found to be defective. This remedy shall be the buyer's sole and exclusive remedy. Any modification, abuse, exposure to corrosive environment or use other than intended will void this warranty. This warranty is in lieu of all other warranties, including implied warranties of merchantability and fitness for an intended purpose. In no event shall Mark-10 Corporation be liable for any incidental and consequential damages in connection with goods sold or any part thereof.

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*Mark-10 Corporation has been an innovator in the Force and Torque measurement fields since 1979. We strive to achieve 100% customer satisfaction through excellence in product design, manufacturing and customer support. In addition to our standard line of products we can provide modifications and custom designs for OEM applications. Our engineering team is eager to satisfy any special requirements. Please contact us for further information or suggestions for improvement.*



*We make a measurable difference in force and torque measurement*

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