

Force Test Stands Series **ES**

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MODEL ES05

User's Guide



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.

The Model ES05 test stand can be used in various compression testing applications up to 30 lbF (150 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 stand's operation. However, if you have any other questions or concerns our engineering and technical support teams will be eager to

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## FORCE GAUGES BY MARK-10

### Capacities from 0.12 lb (0.5 N) to 1,000 lb (5000 N)

#### Force Gauges Series EG



- Reversible aluminum housing for hand-held use or stand mounting
- Three units of measurement: lb, kg, N
- Programmable initial status of units and mode of operation
- Automatic peak memory
- Push-button calibration
- Battery or AC operation with programmable automatic shutoff
- Permanent configuration memory
- Optional RS-232, Mitutoyo and analog outputs

#### Force Gauges Series BG (in addition to EG features)



- RS-232, Mitutoyo and analog outputs
- GCL – Gauge Control Language for full control of all functions
- Automatic timed output on RS-232
- Dual set points with outputs
- General purpose I/O for external device control
- Programmable analog and digital filters
- Averaging mode for obtaining average force readings over time

#### Force Gauges Series MG



- Low cost and small size
- Aluminum housing is reversible for hand-held use or test stand mounting
- Peak memory for tensile and compressive loads
- Selectable units of measurement programmable auto shutoff
- Push-button calibration
- IPM - Intelligent Power Management system for reliable operation

## 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.

## OTHER TEST STANDS BY MARK-10



TSAH



TSCH



TSTM



TST



TSA



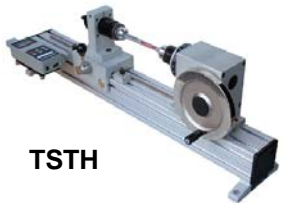
TSTMH



ESM



TSC



TSTH



TSFH



TSF



ES30



TSB

## 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** below.
2. Place the stand on a firm, flat and level working surface free from vibration to ensure accurate readings.
3. Save original packaging materials in case future transportation is required.

## LIST OF INCLUDED ITEMS

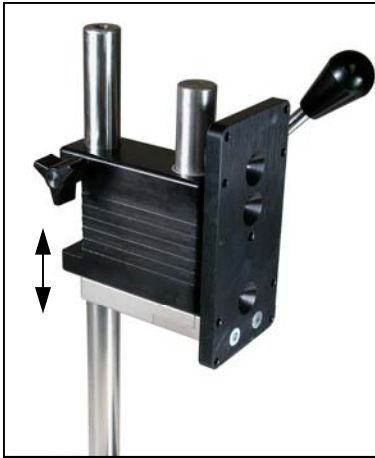
Quantity	Item
1	Force measurement test stand
1	User's guide (this booklet)
4	Thumb screws for gauge mounting



### **Optional base plate 14-1068**

Steel base plate has 25 #10-32 thread holes for fixture mounting

## OPERATION



**Fig. 1**  
Lever mechanism can be repositioned along the length of the column.

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

The loading mechanism can be repositioned along the length of the column by loosening the wing nut on the left side of the housing, repositioning the mechanism as desired, and tightening the wing nut, as illustrated in Fig. 1.

To initiate a compression test, push down on the lever. Note that the lever is spring loaded. To prevent damage to the ES05, keep your hand on the lever until it returns to its original position.

If the optional base plate has been ordered, install it by tightening the four screws provided, as illustrated in Fig. 2.



**Fig. 2**  
Optional base plate can be installed by tightening four screws.

## SPECIFICATIONS

Load capacity	30 lbF [150 N]
Maximum travel	1.5" [38 mm]
Loading method	Spring-loaded lever
Weight	6 lb [2.7 kg]

## DIMENSIONS

In [mm]

