



Morehouse
THE FORCE IN CALIBRATION SINCE 1925

Benchtop Calibrating Machine Datasheet (PD-5405)

✓ Both compression and tension calibration modes in a single setup

✓ Quick adjustment of working space

✓ Capable of calibrating a large variety of instruments

✓ Several Types of Quick-Change Adapters available for various instruments

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✓ Two-speed loading rate for fast adjustments and fine control

✓ Included Accessories for Calibrating Compression Only Instruments



✓ Fine load control capability as low as 0.05 lbf at 10,000

Standard Features

- » Benchtop Calibrating Machine, Model PCM-10MD-03 weighs less than 150 lbs, with a footprint of 16.5 x 11 inches
- » Capable of calibrating a variety of equipment such as: load cells, crane scales, dynamometers, tension links, ring force gauges, hand-held digital force gauges, etc.
- » Included bearing block and ball seat for calibrating compression only load cells
- » Two-speed mechanical jack with minimal maintenance required, and capable of coarse and fine adjustments
- » controlling force at very fine level depending on the reference standard (control load to as low as ± 0.05 lbf with a 10,000 lbf reference standard)
- » Included swiveling coupling nut for easy and fast setup, compatible with Morehouse Quick-Change Tension adapters at different sizes for calibrating various instruments
- » Morehouse Shear Web Load Cells available as reference standard from 200 lbf to 10000 lbf
- » Robust design, easy operation, and smooth force control even at maximum capacity

* Special adapters might be required to calibrate certain instruments in the Morehouse Benchtop Calibrating Machine. The clevises in the setup pictured above are not included with the standard Machine. However, a 12 klbf Adaptable Clevis Kit capable of calibrating numerous instruments is available for purchase.



Technical Specifications

Benchtop Calibrating Machine; 10,000 lbf	
Calibration Capabilities	
Loading Capacity	10,000 lbf
Quick Adjustment Increments	0.393 in.
Maximum Stroke	2.5 in.
Weight with reference standard	150 lbs
Mounting Thread in Standard Reference	0.625"-18, UNF-2B
Standard Handwheel Diameter	10 in.
Dimensions	
Overall Dimensions w/o Handwheel (WxDxL)	16.25 x 12 x 39.5 in.
UUT Working Area (WxL)	12 x 20.75 in.
Calibration Capabilities	
Reference Standards Available	200 to 10,000 lbf
Control Resolution*	±0.001 % of Ref Standard Capacity
Loading Mode	Compression and Tension
Loading Direction	Ascending and Descending
Operation Torque**	
Fine Adjustment Torque at Zero Load	0.5 lbf.in
Fine Adjustment Torque at 10,000 lbf Descending	3 lbf.in
Fine Adjustment Torque at 10,000 lbf Ascending	11 lbf.in
Coarse Adjustment Torque at Zero Load	30 lbf.in
Coarse Adjustment Torque at 10,000 lbf Descending***	100 lbf.in
Coarse Adjustment Torque at 10,000 lbf Ascending***	190 lbf.in

* * Example: If the calibrating machine is equipped with a 10,000 lbf Morehouse Ultra-Precision standard reference load cell with 4.0 mV/V rated output, the control capability of the machine would be ±0.05 lbf or ± 0.00004 mV/V.

** The machine was designed for manual operation. Reported torque values can merely be used to find a better understanding of how the operator feels while using the machine. In general, the fine adjustment control of the machine feels very smooth even at capacity. Turning the handwheel in coarse adjustment feels much tighter and normally operator needs to use both hands.

*** Values reported for information only. Coarse adjustment is intended to be used only for faster initial setup or unloading the instrument after calibration. It should not be used for applying calibration forces.