



100k ILC Rental Kit Instructions

Introduction

Thank you for choosing Morehouse for your ILC and PT needs. Our goal is to help customers with a very low overall uncertainty of direct comparison. The low uncertainty allows for a more robust method to ensure laboratories are meeting their claimed CMC uncertainties.

The 100k ILC rental kit has been sent to your laboratory based on the purchase request. The kit includes:

- Morehouse 100k Ultra-Precision Load Cell, SN: U-10299 (ASTM Class A of better than 2 %. Known to 0.005 % of full scale)
- Morehouse 4215 indicator, SN: 61391
- Load cell cable
- Morehouse CI adapter
- Morehouse lifting device
- Calibration certificate (not included if the Sapphire Proficiency Testing option was ordered)
- Packing list, indicating what options were ordered



Figure 1: 100k ILC Rental Kit



Figure 2: How to use the Lifting Device

Data Analysis

When you perform the calibration, record the data on the [Data Reporting](#) sheets. If you received a calibration certificate with the kit, then compare your data with the calibration certificate to conduct the ILC. In this case, **Morehouse is not responsible for ensuring the validity of the results as we have sent the answers, with the expectation that the end-user will use that data to improve their measurement process.** You can download an easy-to-use Morehouse [ILC worksheet](#) to assist with your data analysis.

If you requested the option for Sapphire Proficiency Testing to handle the ILC data, the kit will not include a calibration certificate. Email your Data Reporting sheets to Craig Glunt cglunt@sapphire-testing.com with **proficiency test** in the subject line to receive the formal report.

Rental Kit Return

We allow for 21 days from shipment to return of equipment. This provides at least one week for you to make the measurements, assuming a worst-case scenario five-day shipment. After you have completed your calibration, return the kit to:

Morehouse Instrument Company
1742 Sixth Ave.
York, PA 17403

If you have any questions, please contact us at info@mhforce.com or 717-843-0081.

Download Data Reporting sheets



Download ILC worksheet





Data Reporting Sheet 1

Morehouse Test ID: **Compression Calibration**

Equipment: _____

Manufacturer: **Morehouse** Model: **Ultra-Precision** Load Cell S/N: **U-10299** Meter S/N: **61391**

Company/Organization: _____

Date test performed: _____ Technician performing test: _____

Measurement Procedure Used (Circle): Deadweight / UCM / Custom Setup / Automated Machine

Type of Loading Performed: **CI Adapter Compression Calibration**

For this test the technician shall allow the load cell to be connected to the meter for **25 minutes prior to calibration**. The calibration is done in accordance with ASTM E74 by following the instructions below. The meter should be zeroed prior to the first exercise cycle after it is setup.

Zero Reading (after 1 st exercise)	Zero Reading (after 2nd exercise)	Zero Reading (after 3rd exercise)	Zero Reading (after 4th exercise)
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Note: Tare the meter after exercise, and at the end of each run. The starting zero should be close to 0.

Force Applied LBF (Hold force for at least 20 seconds)	0-degree orientation	120-degree orientation	240-degree orientation	Calibration Standard(s) Used Uncertainty ($k=2$)
0				
2000				
10000				
20000				
30000				
40000				
50000				
60000				
70000				
80000				
90000				
100000				
0				

Additional Comments or Information



Data Reporting Sheet 2

Morehouse Test ID: **Tension Calibration**

Equipment: _____

Manufacturer: **Morehouse** Model: **Ultra-Precision** Load Cell S/N: **U-10299** Meter S/N: **61391**

Company/Organization: _____

Date test performed: _____ Technician performing test: _____

Measurement Procedure Used (Circle): Deadweight / UCM / Custom Setup / Automated Machine

Type of Loading Performed: **Tension Calibration Using Your Adapters**

For this test the technician shall allow the load cell to be connected to the meter for **25 minutes prior to calibration**. The calibration is done in accordance with ASTM E74 by following the instructions below. The meter should be zeroed prior to the first exercise cycle after it is setup.

Zero Reading (after 1 st exercise)	Zero Reading (after 2nd exercise)	Zero Reading (after 3rd exercise)	Zero Reading (after 4th exercise)

Note: Tare the meter after exercise, and at the end of each run. The starting zero should be close to 0.

Force Applied LBF (Hold force for at least 20 seconds)	0-degree orientation	120-degree orientation	240-degree orientation	Calibration Standard(s) Used Uncertainty (k=2)
0				
2000				
10000				
20000				
30000				
40000				
50000				
60000				
70000				
80000				
90000				
100000				
0				

Additional Comments or Information
