BKM electronics

GILSON COMPANY, INC.

OPERATING MANUAL

Gilson Load Frame
0.001—0.1in/min, 10,000lbf (44.5kN)
HM-396 and HM-396F

INTRODUCTION

The versatile HM-396 Load Frame can be utilized for multiple soil tests. California Bearing Ratio (CBR), Unconfined Compressive Strength, Soil Cement, and Triaxial tests can all be performed when fitted with the required Component Set. This 10,000lbf (44.5kN) capacity frame has a strain rate of 0.001 – 0.1 in/min (0.0254 – 2.54 mm/min) controlled to +/- 1% of set point. Front panel controls allow the operator to adjust the direction and speed of the platen. The strain rate is set using the calibration chart and the three-segment thumbwheel selector. Sliding the cross-arm up or down the coarse-threaded 1.25in (32mm) diameter rods and tightening the nuts makes adjustment for the wide variety of testing components quick and easy.

HM-396

FEATURES

- Precision adjustable strain rate of 0.001—0.1in/min (0.0254—2.54mm/min) allows for multiple testing options (calibration chart included)
- Powerful 1/8hp DC drive motor
- Load capacity up to 10,000lbf (44kN)
- Durable 16-gauge steel cabinet and precision loading screw with protective rubber boot
- Hardened steel 8in (203mm) diameter platen accepts a wide variety of test fixtures
- Heavy 1.25in (31.8mm) diameter vertical rods with coarse threads
- Front panel controls
- Upper and lower limit indicator lights
- Three-position control switch with built-in hesitation prevents motor damage when reversing direction
- Corrosion-resistant components

UNPACKING & SET UP

1. Inspect your HM-396 for damage, remove it from the pallet.
2. Place the Load Frame on a sturdy, level surface such as a bench top or HMA-94 Load Frame Cart.

(Continued on back.)

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3. Connect to a properly grounded power supply with correct voltage and amperage to output.
4. Adjust and level the crossarm to the appropriate height.
5. Install required Component Set and any accessories required for testing.

CONTROLS

1. **Main Power On/Off:** Includes an indicator light to show when the power is on
2. **Platen Direction:** Three-position switch (up, down and off) includes built-in hesitation to prevent motor damage when reversing direction
3. **Limit Lights:** Indicates when upper and lower limits are attained
4. **Strain Rate:** Three-segment thumbwheel selector (strain rate calibration chart included)
5. **Jog Button:** Increases the speed of platen to the maximum speed of the load frame jack screw (0.1in/min) when the switch is pushed to the up position.

OPERATING INSTRUCTIONS

ELECTRIC SHOCK WARNING

DISCONNECT AND LOCKOUT POWER SUPPLY WHEN SERVICING THE UNIT

1. Read all safety and operating instructions before operating the unit.
2. Power the unit with the Main Power switch (indicator light will show that the unit is on).
3. Based on the calibration chart (included), set the desired strain rate for the test using the three-segment thumbwheel selector.
4. Use the Platen Direction and High-Speed Jog switches to adjust the direction and speed of the platen for testing.
5. Center the Platen Direction switch to the off position when the test is complete.
6. Refer to ASTM and/or AASHTO test methods for specific test instructions.

COMPONENT SETS

California Bearing Ratio (CBR)	
ASTM D1883; AASHTO T 193	
HMA-684	6,000lbf load ring, dial indicator, piston
HMA-685	10,000lbf load ring, dial indicator, piston
HMA-685D	10,000lbf load cell, LVDT, readout box, piston

Soil Cement	
ASTM D1632, D1633	
HMA-687	10,000lbf load ring, dial indicator, 4 in platen
HMA-687D	10,000lbf load cell , LVDT, readout box, 4 in platen

Triaxial	
ASTM D2850, D4764; AASHTO T 296, T 297	
HMA-686	1,000lbf load cell, dial indicator
HM-413	1,000lbf load cell, LVDT, readout box

Unconfined Compressive Strength	
ASTM D2166; AASHTO T 208	
HMA-681	500lbf load ring, dial gauge, plastic discs
HMA-683	1,000lbf load ring, dial gauge, plastic discs
HMA-683D	1,000lbf load cell, LDVT, plastic discs

Accessories	
HMA-94	Load Frame Cart