

M5KNE Motorized Test Stand User's Guide

Introduction

Thank you for choosing the Dillon M5KNE Motorized Test Stand. It is designed as a 2500 lb capacity, motorized test stand for use in a force measurement or materials testing system. With correct use it will give many years of reliable service.

Upon receiving the unit please check for obvious physical damage to the packaging material and the instrument itself. If any damage is evident please notify your Dillon distributor immediately.

Optional accessories are available from your Dillon distributor including the following:

- linear displacement encoders
- specialized fixturing
- Windows™-based software for displaying and processing test data

Test Stand Controls and Description

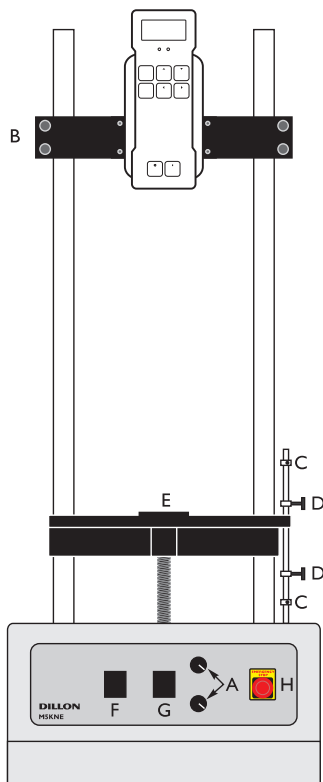


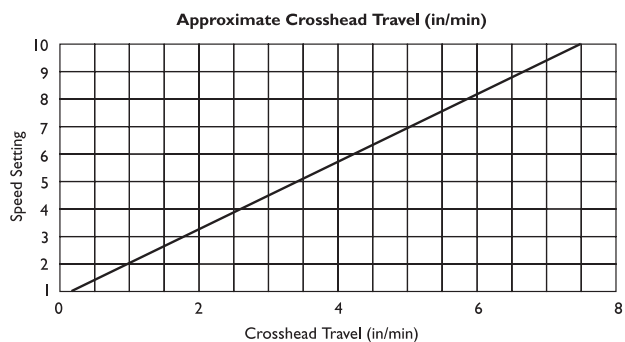
Figure 1
Test stand

The test stand front panel has the following controls (refer to Figure 1):

- Mode control switch (F)
- UP/DOWN switch (G)
- Independent up and down speed control knobs (A)
- Emergency stop switch (H)

The test stand has a limit switch assembly with two preset safety switches (C) and two limit switches (D). When the moving crosshead (E) hits either of the limit switches, the crosshead stops or switches directions based on the mode of operation. **Under no circumstances should the preset safety switches (C) be moved or severe damage to the test stand may occur.**

Below is the approximate crosshead speed at each speed setting with a 0.2-7.5in/min gearbox.



Operation

Attaching the Force Gauge and Crosshead Adjustment

Attach the force gauge or loadcell to the crosshead (B) with the screws provided. When using a force gauge with a remote loadcell, attach the loadcell to the optional mounting block and the gauge to the left hand column with the optional bracket. Attach the required grips or anchors for your particular application. Position the crosshead at the correct height for your test by loosening the hex head bolts, moving the crosshead and retightening the bolts.

Setting the Limit switches

Set the two limit switches (D) between the safety switches (C) so the moving crosshead moves only as much as you need for your test procedure.

Setting Crosshead Speed

Select a setting for the up and down speed of the moving crosshead with the controls (A) on the front panel.

Selecting a Mode

Select a testing mode using the MODE switch on the front panel. Below is an explanation of each mode:

Stop crosshead movement at any time by using the EMERGENCY STOP button.

Cycle mode: With the MODE switch in this position, move the UP/DOWN switch in the desired direction. The crosshead will move in that direction, then cycle continuously between the limit switches. During the cycle you may stop the test at any time by moving the MODE switch to MANUAL, moving the UP/DOWN switch in either direction, or pressing the EMERGENCY STOP button.

Manual mode: In this mode the crosshead will move only while holding the UP/DOWN switch in either direction. To stop the crosshead, release the UP/DOWN switch.

One Shot mode: The crosshead will start moving when you press UP or DOWN and will continue to move until it hits a limit switch. It will then reverse direction and continue until it hits the next limit switch. It will then stop and the test is complete.

Function with an AFG/AFTI

The test stand direction of travel will reverse in response to a signal from either a limit switch or from an AFG/AFTI with which it is working. See the AFG/AFTI manual for more details on this function.

Specifications

Power: 220/250V or 110/115V AC 50/60Hz

Power consumption: 200 Watts max.

Crosshead travel: 100 mm

Max. load: 5000 Newtons, 500kg, 1100lb

Limit switch repeatability: better than 0.5mm

Approx. weight: 54 lbs

Options

Crosshead speed: 1-10mm/min

Height scales: 0.01mm resolution

Capacity: 10000N, 1000kg, 2200lb

Horizontal operation

Increased crosshead travel

Longer columns

DILLON