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Dillon Model CT Manual Test Stand User's Guide

Thank you for purchasing the Dillon Model CT Manual Test Stand. A test stand ensures that a specimen under review is pulled or pushed in axis with the measuring device (typically a force gauge). The handwheel allows easy application of force. Product samples are tested in a very controlled manner for best testing reproducibility. This benchtop frame may be used with a variety of force gauges, including all digital models offered by Dillon.

Features:

- ※ 500 N / 50 kg / 110 lb force capacity
- ※ Tension and compression
- ※ Smooth screw drive
- ※ Many attachment points on the base plate

Basic Assembly

Handwheel **-** Remove acorn nut atop stand. Finger tighten the brass nut and then back off 1/8 turn. Check that the shaft can turn easily yet does not move when pushing/pulling up and down. Place handwheel onto shaft aligning keyway with the notch. Place acorn nut on exposed shaft threads and tighten with a wrench.

Feet **-** Screw four feet into corners of base plate. Adjust individually for stability and to level position.

Affixing to Benchtop

Screws may be used in lieu of the feet to rigidly affix to a bench for improved stability. Use screw with same threading as feet. Make a template by piercing a sheet of paper with a pencil at four threaded corner holes on the bottom side of the stand. Use template to mark locations on bench, and drill holes in bench. Insert screws of suitable length from bottom side of the bench.

Register

Register your Dillon products at www.dillonforce.com.

Force Gauge Attachment

Determine if your gauge has mounting holes that align with the patterns on the mounting plate. (If not, purchase a Dillon force gauge or drill holes directly in the mounting plate). Use the appropriate screws to loosely attach the gauge. Check that gauge is centered and plumb with the stand column. Secure screws.

The mounting plate may be flipped on the stand if this better suits your equipment and application. Simply remove the two Allen screws, rotate 180 degrees and reinstall the screws.

Attachment to base plate for tension tests

Attach a stem to the force gauge for visual reference. Turn the handwheel until the stem nearly contacts the base plate. If it aligns with the threaded hole, this may be used

for attaching an inline tension grip. If it does not, alignment may be achieved with a tension plate accessory or by using shims (not included) between the force gauge and mounting plate. All five holes are M6 x 1.0mm. Dillon offers flexible coupler/adapters if thread conversion is required.

Operation

Turn handle clockwise to raise the crosshead and counterclockwise to lower it.

The CT Test Stand is capable of overloading force gauges or itself. Keep a watchful eye on the force gauge to insure forces remain within limits of the gauge and stand.

CAUTION: Test stand or gauge damage from overloads is not warranty covered.

Do not run the crosshead arm or mounting plate into the top or bottom of the stand. Applying torque once contact occurs may result in overload damage to the stand. Overloads to the test stand may result in non-smooth operation, particularly in specific crosshead locations and/or handle positions. Overload of this type calls for stand replacement.

Safety

WARNING: Pinching hazards exist with moving parts. Keep hands clear of all moving parts other than the handwheel. Some samples release a large amount of energy when they fail or separate. When working with such samples, insure some protection exists for the operator such as a safety shield or part restraint.

Maintenance

Remove particle build up by rubbing the guide rods and acme threads with a disposable cloth. The bushings are oil impregnated for long use. The guide rods and acme threads may be coated with light general purpose oil if desired.

If the stand becomes difficult to turn under no load, loosen screws at the top and bottom of the guide rods. Move crosshead to its bottommost position and tighten the lower screws. Move the crosshead to its topmost position and tighten the upper screws. Check for smoothness through the travel range. If still binding, stand may have been overloaded. Seek replacement.

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