

RD5 Long Stroke – Mountain Bike and Motorcycle Dyno

Standard features:

- 5HP AC motor with computer controlled variable speed drive
- 5K Pancake load cell for +/- 5,000 lbf. range
- 4 Clamp cross bar
- Columns for 50 in / 1275mm test opening
- Strokes (7) in Metric:
 - 25-40-50-75-100-125-150 mm
- Velocities up to 2.50 m/sec
 - Depends on the stroke
 - Depends on the damper force
- IR-Temperature sensor and quick release mount
- CTW Probe analysis software
- Clevis fixtures, ½" with pins and brass buttons – set
- Input power 200-240 VAC I/III phase – 40 /23.8 A(i)
 - Option for 380/440/480 VAC three phase
- 1-Year Support package

Options Software:

- PVP Validation – updating to CTW Pro allows the user to validate the PVP data into pass/fail

Options / Hardware:

RD5 – Long Stroke

- Longer columns +12"
- Win11 laptop set-up for the dyno
- Range of custom and fixtures including
 - Motorcycle damper & fork
 - Bicycle
 - Extra-large ID
- NIST traceable calibrations
- Safety Enclosure
- Full CE style safety interlock
 - Combines with enclosure
 - Door locked when moving
- Dyno armor to protect the top plate
 - User logo engraved



Shown with stand



Delivery / Crating / Shipping:

- Customer can opt to pick-up in Lexington, NC but then NC State tax applies
- Crate – prepared for international approvals and certifications
- Shipping – to be determined
 - By ground transport in Continental US
 - International shipping is not a problem

The RD5-LS uses CTW-Probe Analysis software to allow the user to create and run Tests of various velocities on one of three strokes to collect force data that is presented in various industry-standard graphs. The RD5-LS is a compact, lightweight tabletop machine that is designed to be structurally sound where loading is applied based on FEA analysis. Measurements are taken based on the line of actuation to ensure only the damper or specimen result is recorded.

Standard System Features:

Sensors and signals:

Displacement, Force and Temperature via an infrared non-contacting sensor are standard. **Velocity** is derived from Displacement giving (4) channels to be used in viewing the resulting data.

- Force / load is measure via Interface 5K pancake style design with an attached cable to ensure accurate and repeatable results.
- Displacement is mounted on the centerline of the actuator to deliver a true sine wave on the axis of load.
- Temperature is mounted on an easy to move, CTW custom quick clamp allowing the User to test any damper at a constant point helping to improve consistency in comparing dampers and changes.

Data Acquisition:

Data is collected and converted to digital output via a 16-bit, simultaneous sampling 8 channel USB card. This interface is located inside the frame of the machine for protection and seamless connection between the sensors and the card. A USB cable is supplied to complete the connection to the computer.

Electronics:

CTW uses a proprietary design 5 channel board (standard) to collect the sensor signals before passing them to the data card. There are options for additional channels and sensors if needed including multiple load cells and pressure sensors.

Strokes: (estimated)

The RD5-LS comes standard with (7) strokes.

- 15-25-50-75-100-125-150 mm

Strokes are changed manually by the User and can be done quickly in less than a minute from start to finish. While the different strokes help accommodate different length dampers they also provide a frequency change to gather more information on any damper.



Velocity:

Peak velocity can only be achieved on the largest stroke. It is limited by the amount of HP in the motor and for this model it is 5HP. Based on the force of the damper, Velocities higher than 2.0 m/sec and as low as a few mm/sec are well within reach.

Columns:

Columns are 1.50" diameter and standard length provides a test opening of approximately 50" / 1268 mm from the end of the load cell stud to the top of the actuator. Longer columns can be purchased.

Cross bar:

The crossbar uses a (4) clamp is available with a 5K pancake style load cell upgrade.

Power input:

The RD5 runs on 200-240 VAC single (I) or three (III) phase input. There is an option to have a high voltage input allowing the machine to operate on 380-500 VAC III phase (such as Europe and Asia). This is an either-or option (not both); it must be picked at time of purchase.

* Note – Outside of the USA, typically there is only 220 single OR 380/440 three phase.

* Note – for peak performance, three phase (III) must be supplied.

Software:

CTW machines are controlled using proprietary CTW Probe analysis software. This allows the User an easy to use, command driven platform to interface with the machine. While simple to use, the software is very flexible for the advanced user to go into further detail and procedures to give quick graphical and numeric data. See website for additional information.

Training:

Training is not required but it is the only way to get the most out of your machine. You are welcome to come to Lexington for training or we can come to you at an additional cost. CTW also provides training videos and help on our YouTube channel.

Support:

The RD5 comes with a 1 -Year phone and e-mail support contract as well as use of TeamViewer remote access ability for training and help. We want you to have every opportunity to use and get the most from the machine.

Warranty:

The RD5 comes with a 1 -Year limited warranty on any item based on failure outside of user misuse.

