tiniusolsen.com

L Series

Electromechanical Universal Testing Systems

Tinius Olsen

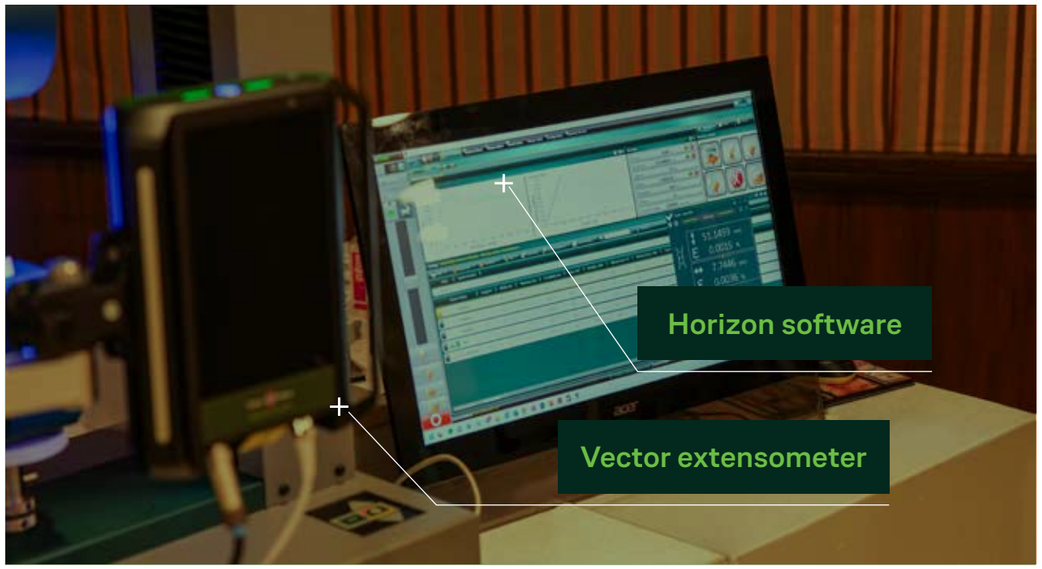
L Series

The L Series of electromechanical testing systems from Tinius Olsen is designed to test a wide range of materials including, but not limited to: plastics, films, paper, packaging materials, filter materials, adhesives, foils, food, toys, medical devices and components, in tension, compression, flexure, shear, peel and many more.

L Series is available in frame capacities of 5kN, 10kN, 25kN and 50kN and can be combined with a variety of grips and fixtures, and extensometers to provide standard testing systems for a variety of applications. Powerful data analysis and system control software (Horizon Materials Testing software) can be added to your system to provide a library of standardized test routines, generate a complete graphical result of your test, and perform sophisticated powerful analyses on the test data to produce the test report you need.

Robust construction of the loadframes comprising oil soaked pre loaded precision leadscrews, high precision ball race bearings, high grade material for crossheads and current electronics, combined with our years of experience in machine construction results in these superior testing machines.

Flexibility and simplicity of use is also built into the design of these machines. Each machine features rapid change Z beam loadcells that allow quick and easy capacity reduction to an appropriate capacity for the test. These loadcells have a measurement accuracy of +/- 0.5% of the applied load, from 2-100% of the loadcell capacity. Each machine also features rapid grip change capability: a simple pinning technique means that the gripping fixtures can be changed for different test configurations extremely rapidly and easily.



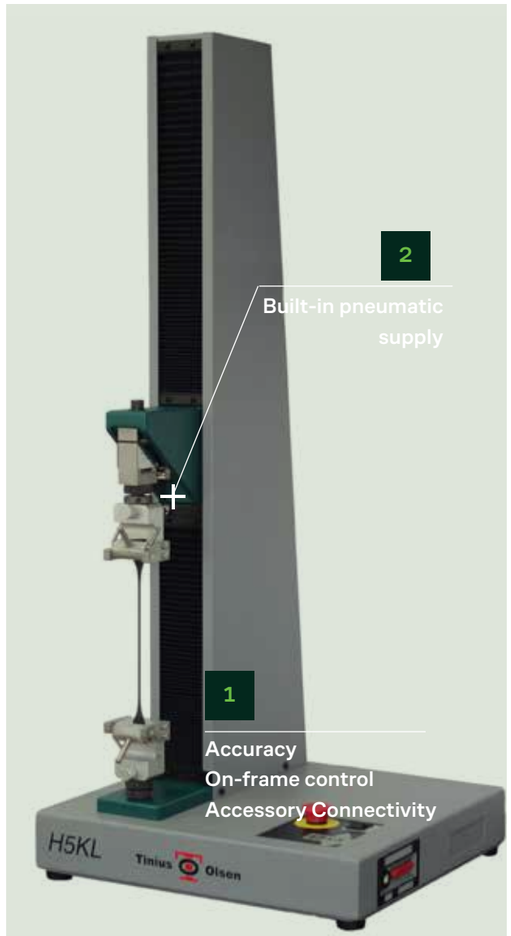
Horizon software

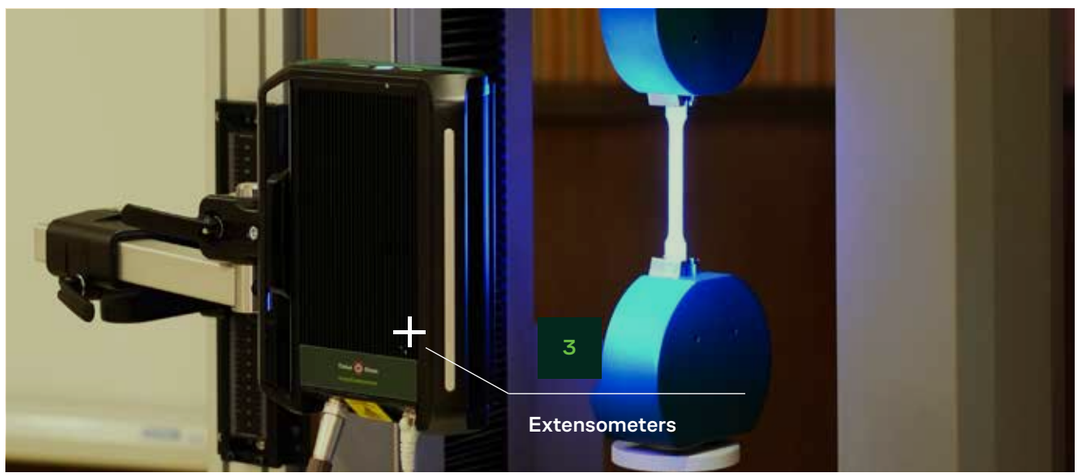
Our Horizon software sets new standards of data analysis by adding a host of report writing and data manipulation capabilities that will make easy work of your materials testing programs, whether they're designed for the demanding rigors of R&D or the charting and analysis functions of QC testing. In addition, Horizon Materials Testing software is networkable and scalable so operators and managers can operate equipment and review test results from multiple sources and locations.

Frame highlights

+ USB connectivity
+ Sunken power connector to ease service
+ Protective screen supporting panels on the sides
+ Air piped inside the machines to bottom and upper crossheads for supporting pneumatic fixtures
+ Suitable for tension, compression, flexure, shear and other tests to a maximum force of 50kN(11,000lbf)
+ Primary system interface is a PC running Tinius Olsen's Horizon data analysis software connected via USB
+ System features local Jog up, jog down and stop buttons so the crosshead can be positioned for easy specimen loading
+ Meets or exceeds the requirements of national and international standard for materials testing systems

Key Features





1

Accuracy

The loadcells have a measurement accuracy of +/- 0.5% of the applied load, from 2-100% of the loadcell capacity.

On-frame Control

Programmable jog-up, jog-down and stop keys are inbuilt on frame base to support quick and easy frame control. These keys help in moving crosshead up and down during sample setup pre-test or broken sample removal post-setup.

Accessory Connectivity

Connecting accessories is made easy with the test frame via a built-in accessory connection panel on the frame.

2

Built-in pneumatic supply

Connections for compressed air built into the frame (a compressed air inlet is supplied on the rear of the frame). This allows operation of pneumatic grips without long air supply lines obstructing the test area.

3

Extensometers

Full complement of optical, video, automatic, encoder, laser, strain gauge and LVDT extensometers are available for the determination of specimen strain.

Specifications

Model		5kL	10kL	25kL	50kL
Capacity	kN	5	10	25	50
	lbf	1,000	2,000	5,000	11,000
	kgf	500	1,000	2,500	5,000
Test speed range	mm/min	0.001-1000	0.001-1000	0.001-1000	0.001-500
	in/min	0.00004-40	0.00004-40	0.00004-40	0.00004-20
Clearance between columns	mm	–	405	405	405
	in	–	16	16	16
Throat depth	mm	115	–	–	–
	in	4.5	–	–	–
Max crosshead travel	mm	750	1100	1100	1075
	in	29.5	43.3	43.3	42.3
Dimensions (HxWxD)	mm	1140 x 490 x 360	1575 x 650 x 450	1575 x 650 x 450	1620 x 720 x 500
	in	45 x 19 x 14	62 x 26 x 18	62 x 26 x 18	64 x 28 x 20
Weight	kg	60	130	130	190
	lbs	132	287	287	419

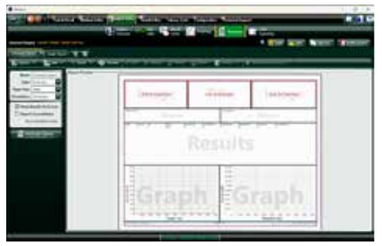
Notes

+ Load weighing system meets or exceeds the requirements of the following standards: ASTM E4, ISO 7500-1, and EN 10002-2. Tinius Olsen recommends that systems are verified at installation in accordance with ASTM E4 and ISO 75001.
+ Strain measurement system meets or exceeds the requirements of the following standards: ASTM E83, ISO 9513 and EN 10002-4.
+ Specifications are subject to change without notice.

Options and accessories

+ Grips and fixtures can be easily mounted securely with a locking pin, which also allows simple and rapid changes
+ Precision extensometers and deflectometers are available using encoder, strain gauge and/or LVDT technologies
+ Safety enclosures with interlocks can be installed to protect operators from violent specimen breaks

Software



Horizon makes testing **simple, precise and efficient.**

Tinius Olsen has built upon its long history of providing solutions to an enormous variety of testing problems to develop Horizon, a comprehensive software program that makes testing simple, precise and efficient. Whether the test sample is metal, paper, composite, polymer, rubber, textile, or a micro-component, Tinius Olsen's Horizon software goes far beyond data collection and presentation. It automates system operation and data analysis from R&D to QC testing.

Horizon software sets new standards of data analysis by adding a host of report writing and data manipulation capabilities that will make easy work of your materials testing programs. As with most features of Horizon, flexibility is key; reports can be customized by operators, as can all user screens, allowing operators to focus on features that are most important to them.

In addition to powerful reports, Horizon Materials Testing software is networkable and scalable so operators and managers can operate equipment and review test results from multiple sources and locations. Horizon provides a library of standard, specific and application-focused test routines that have been developed in close co-operation with customers and international standards. Among the many valuable features offered by Horizon are: a test routine library; simultaneous multiple machine control; test, output, method and result editors; and multilayered security. This software is designed for data acquisition, data analysis, and closed loop control of nearly all Tinius Olsen testing systems.

Horizon is rich with capabilities that improve productivity and enable the operator to build, access and use a modern, powerful materials testing database. It employs the latest Windows environments, running on touchscreen-enabled monitors, to create an intuitive user experience. Built-in tutorials, online help, and help desk access provide additional user support.

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