

H1-5KT/S

Universal Testing Machines - Single Column



Model H5KS shown with HW11 grips



Model H5KT ready to perform a flexural test



Model H1KS testing paper strips; shown with HT50 tensile grips

Technical Specifications

Model		H1K	H5K
Capacity	lbf	200 lbf	1,000 lbf
	kN	1 kN	5 kN
	kg	100 kg	500 kg
Maximum Sample Diameter	in	6	8
	mm	150	200
Load Cells	Rapid change Z beam load cells with digital encoding for automatic recognition and scaling		
		1kN, 500N, 250N, 100N, 50N, 10N, 5N	5kN, 2.5kN, 1kN, 500N, 250N, 100N, 50N, 10N, 5N
Maximum Crosshead Travel (excluding grips)	Measurement direct from ballscrew - fully auto scaling of single measurement range.		
	in	17.5	30
Testing Speed Range	mm/min	445	750
	in/min	0.00004 to 40 up to 100 lbf, 0.00004 to 20 up to 200 lbf	0.00004 to 60 up to 200 lbf, 0.00004 to 20 up to 1000 lbf
Jog Speed	mm/min	0.001 to 1000 up to 500N, 0.001 to 500 up to 1kN	0.001 to 1500 up to 1kN, 0.001 to 500 up to 5kN
	in/min	0.00004 to 40	0.00004 to 40
Return Speed	mm/min	0.001 to 1000	0.001 to 1000
	in/min	0.00004 to 40	0.00004 to 60
Dimensions HxWxD	mm	0.001 to 1000	0.001 to 1500
	in	32x14x14	45x20x18
Weight	kg	820x360x360	1140x490x450
	lb	55	110
	kg	25	50



S Series Controller



Model H1KT testing a stuffed toy

Single Column Models

The single column materials testing machines have frame capacities of 1kN or 5kN (200 lbf or 1,000 lbf) and include two model types, namely the S series and the T series. These machines are designed to test a wide range of materials in tension, compression, flexure, shear and peel.

S Series

Using a combination of quality engineering and advanced technology, Tinius Olsen offers a series of machines that are accurate and simple to use. All S series machines feature an easy-to-read backlit liquid crystal display which can be switched between a numerical and graphical display. All data shown on this display is obtained in real time, with the autoranging graphical display showing the test curve of the specimen under test. The control unit features dedicated keys for moving the crosshead up, down, stop, performing the test as well as keys for load and extension tare and crosshead return. The control panel also features an alphanumeric keypad to allow the input of test conditions, test data and the formatting of the test report. The control unit can retain up to five separate test routines for easy and rapid recall.

Powerful as stand-alone units, the machine capability is enhanced by direct connection of a printer through which comprehensive test reports and high resolution graphs can be quickly obtained. The S series of testers are also designed for users all over the world...an optional language module can be plugged into the control panel and all data on the backlit LCD display will be shown in the selected language. Language options include: English, French, Portuguese, German, Italian, Spanish and Polish.

T Series

Building on the quality and technology that is built into the S series, Tinius Olsen offers the T series of machines to

Specifications:

Load measurement accuracy: $\pm 0.5\%$ of applied load from 2% to 100% capacity

Extended range down to 1% capacity with accuracy of $\pm 1\%$ of indicated load

Position measurement accuracy: 0.01% of reading or 0.001mm, whichever is greater

Speed accuracy: 0.005% of set speed

Notes:

1. Load weighing system meets or exceeds the requirements of the following standards: ASTM E4, EN 10002-2, BS 1610, DIN 51221, ISO 7500-1. Tinius Olsen recommends that systems are verified at installation in accordance with ASTM E4 and ISO 75001.

2. Strain measurement system meets or exceeds the requirements of the following standards: ASTM E83, EN 10002-4, BS 3846 and ISO 9513.

3. These models conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1 4. Specifications are subject to change without notice

complement the popular and successful S series. The T series models have similar specifications to the S series, but they talk directly with a standard PC running a data analysis software package, via a high speed RS232 in both ASCII and super high speed binary modes.

Common Features

The S and T series use rapid change Z beam loadcells that allow for simple and quick 'sizing' of the machine to an appropriate capacity for the test. These loadcells have an accuracy of 0.5% of the applied load value, from 2% to 100% of the loadcell capacity.

The S and T series have a huge assortment of specimen grips and fixtures available, allowing the selection of an ideal grip for your application.

Key Features

- PC control via high speed RS232 using ASCII mode and super high speed binary mode
- Force accuracy of 0.5% of applied load across the loadcell display range
- Machines are proof loaded to 200% of capacity
- Displacement resolution of 0.0001mm (T series in binary mode)
- Speed resolution of 0.001 mm/min
- Built-in intelligent active force and displacement alarm system
- 32 bit precision motor controller
- 150% mechanical overload capacity on each loadcell
- 20% digital load tare while maintaining full load cell capacity
- Automatic motor drive alarms that monitor over/under voltage, current and temperature.

Operating temperature range: 32 to 100 °F (0 to 38 °C)

Storage temperature range: 14 to 115 °F (-10 to 45 °C)

Humidity range: 10% to 90% non-condensing, web bulb method

Power: Standard optional voltages 220/240VAC, 50-60 Hz, 2000W

Power must be free of spikes and surges exceeding 10% of the nominal voltage.

ORDERING INFORMATION		
	H1KT	Single Column Universal Tester, Computer Driven, 1KN/200LBF capacity
	H1KS	Single Column Universal Tester, with console, 1KN/200LBF capacity
	H5KT	Single Column Universal Tester, Computer Driven, 5KN/1000LBF capacity
	H5KS	Single Column Universal Tester, with console, 5KN/1000LBF capacity
	HT5020	QMAT Pro for Textiles Software Package
	HT1010-1034	Load Cells, 5N, 10N, 25N, 50N, 100N, 250N, 500N, 1KN, 2KN, 5KN
	HT1010-4160	Grips and Accessories, see separate list
	G265	Silent Laboratory Compressor (Optional) for use with pneumatic grips only
	G278A	IBM Compatible Computer
	G278B	Ink Jet Printer

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