

Testing machines

EZ Test Series



Compact and easy to use equipment

Tabletop machines of three types:

- **EZ-LX**
(maximum power 5 kN, stroke length 920 mm, 12 types of load elements)
- **EZ-SX**
(maximum power 500 N, stroke length 500 mm, 9 types of load elements)
- **EZ-LX-HS**
high speed model (maximum power 2 kN, stroke length 920 mm, 11 types of load elements).

Application areas

- **Pharmaceuticals and cosmetology**
 - Lipstick Curl Test
 - Adhesion tests of adhesive plaster
 - Strength testing of tablets and capsules
 - Testing of pharmaceutical packaging
 - Testing of needles and dressings
- **Electronics and electrical engineering**
 - 45° peel tests on printed circuit boards, integrated circuits, etc.
 - Shear testing of electronic components
- **Food industry**
 - Food Biting Simulation Tests
 - Tests for assessing the structure of gels and jellies
 - Tests to evaluate test characteristics and bakery products
 - Evaluation of viscosity, crispness, hardness
 - Evaluation of the consistency of mayonnaise, yoghurt, etc.
 - Evaluation of the force required to cut cheese and butter
 - Food cutting or breaking test

Wide range of accessories

Specification [EZ Test Desktop Models]

1. Model name	EZ Test		
	EZ-SX	EZ-LX	EZ-LX-HS
2. Load*	Max. 500 N (load cell can be selected from 9 types: 1 N, 2 N, 5 N, 10 N, 20 N, 50 N, 100 N, 200 N and 500 N)	Max. 5 kN (load cell can be selected from 12 types: 1 N, 2 N, 5 N, 10 N, 20 N, 50 N, 100 N, 200 N, 500 N, 1 kN, 2 kN and 5 kN)	Max. 2 kN (load cell can be selected from 11 types: 1 N, 2 N, 5 N, 10 N, 20 N, 50 N, 100 N, 200 N, 500 N, 1 kN and 2 kN)
3. Loading method	High-precision deformation control at constant speed through ball screw drive		
4. Measurement efforts	High precision type**	Within $\pm 0.5\%$ of the specified value (in the range from 1/1 to 1/500 of the rated capacity of the load cell); complies with JIS B7721 class 0.5, ISO 7500-1 class 0.5, EN 10002-2 grade 0.5, ASTM E4	
	Standard type**	Within $\pm 1\%$ of the specified value (in the range from 1/1 to 1/500 of the rated capacity of the load cell); complies with JIS B7721 class 1, ISO 7500-1 class 1, EN 10002-2 grade 1, ASTM E4	
	Range	Smooth installation	
	Calibration of force	Automatic calibration	
5. Traverse speed range	from 0.001 to 1000 mm/min		from 0.001 to 2000 mm/min
6. Traverse return speed	1500 mm/min		3000 mm/min
7. Traverse speed accuracy	$\pm 0.1\%$ of test speed		
8. Traverse speed and permissible load	Maximum speed is achievable under any load		
9. Distance between the traverse and the surface 500 mm 920 mm of the clamp attachment	500 mm	920 mm	
10. Maximum distance between clamps	• 395 mm (500 N load element + clamps)	• 700 mm (5 kN load element + 5 kN flat screw type clamps) • 755 mm (1 kN load element + 1 kN flat screw type clamps) • 860 mm (max. 500 N load element + clamps)	
11. Depth of the test space	100 mm		
12. Determining the traverse position	Measurement/display	Optical encoder/digital display (resolution: 0.01mm)	
	Accuracy	0.1% of the specified value or ± 0.01 mm (whichever is greater)	
13. Standard functions	<ul style="list-style-type: none"> • Creep test control***; • Automatic stop of the crosshead and return after determining the destruction of the sample (the crosshead automatically returns to its original position); • Entering test parameters into a file and freely setting the crosshead speed; • Display functions: <ul style="list-style-type: none"> - display of force or voltage (optional); - the crosshead movement is displayed in mm or % of the test base (optional); - force and displacement at peak, as well as displacement at the breaking point; • Load/displacement analog output: DC 0-5 V full scale (for external recording device); • USB interface (for software data processing); • Precise adjustment of the crossbar position in manual mode; • Adjustable controller; • Sound confirmation of key presses. 		
14. Dimensions (mm) and weight	400×530×885, approx. 33 kg	400×530×1315, approx. 55 kg	
15. Power Requirements****	100-150V or 200-230V AC; 1 phase; 700VA for EZ-SX, 850VA for EZ-LX and EZ-LX HS		
16. Operating conditions	Temperature: 5°C to 40°C; Humidity: 20% to 80% (non-condensing) Vibration: 10 Hz max.; Amplitude: 5 μ m max.		

Notes

- * If the rating of the load cell is less than the rating of the testing machine, the maximum allowable load is determined by the rating of the cell.
- ** Shimadzu Corporation recommends that the measuring cells be verified after installation of the equipment.
- *** During creep testing, the force must not exceed 70% of the maximum allowable, the test time must not exceed 12 hours.
- **** Earthing class D (less than 100 Ohm).



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