INSTRON®

The difference is measurable®

2519 SERIES STATIC LOAD CELLS

10 N - 5 kN

Instron® load cells are a key part of a materials testing system. Among our competitors, Instron is the only global materials testing supplier that designs and manufactures its own load cells. This ensures that Instron load cells meet the unique requirements of materials testing such as high accuracy over a wide measurement range, high stiffness and excellent zero stability.

The 2519-xxxN Series load cells are specifically designed for use with 3300 single column testing systems. Automatic transducer recognition and electrical calibration makes them easy to use. The load cells incorporate overload protection and can withstand loads up to 150% of their force capacity without damage and 300% without mechanical failure. The load cells allow the user to zero out the tare weight of a grip or fixture that weighs up to 40% of the force capacity, while still maintaining the full specified accuracy.

All Instron load cells are individually temperature-compensated and tested for accuracy and repeatability on calibration apparatus that is traceable to international standards, with a measurement uncertainty that does not exceed one-third of the permissible error of the load cell.

PRINCIPLE OF OPERATION

Instron 2519-xxxN Series load cells are precision force transducers consisting of a full strain gauge bridge bonded to a stiff and highly linear elastic element. When the element is subjected to a force, the electrical resistance of the gauges changes, providing an output signal proportional to the applied force.

The load cells are suitable for tension, compression, cyclic and reverse stress testing. They have a wide measurement range allowing accurate force measurements to be made down to 1/500th of the force capacity, reducing the need to change load cells.

FEATURES AND BENEFITS

- Force capacities from ±10 N - ±5 kN (1 – 500 kgf, 2.2 – 1,125 lbf)
- Suitable for a range of test types, including, tension, compression,cyclic, and reverse stress
- Accurate measurements down to 1/500th of load cell capacity - means fewer load cells and fewer load cell changes.
- Automatic recognition with electronic serial number and electrical calibration means simple, error-free operation
- Integral overload protection reduces the possibility of damage during handling and use
- Tare weight 40% of force capacity – can be used with a wide range of grips and fixtures
- Complies with all international force measurement standards, including ASTM E4, ISO 7500-1 class 0.5,and JIS B7721, B7733

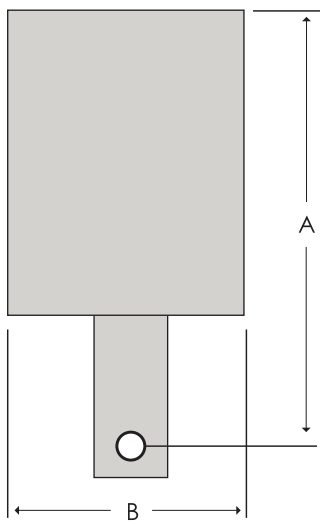
SPECIFICATIONS

Catalog Number	Force Capacity			Mechanical Fitting (Frame)	Mechanical Fitting (Load String)	Effective Length (A)		Width (B)	
	N	kgf	lbf			mm	in	mm	in
2519-10N	±10	1	2.2	M6 × 1.0RH Central Thread	2.5 mm Clevis Pin (Type 00f)*	78	3.1	51	2.0
2519-50N	±50	5	11	M6 × 1.0RH Central Thread	2.5 mm Clevis Pin (Type 00f)*	78	3.1	51	2.0
2519-100N	±100	10	22	M6 × 1.0RH Central Thread	2.5 mm Clevis Pin (Type 00f)*	78	3.1	51	2.0
2519-500N	±500	50	112	M6 × 1.0RH Central Thread	6.0 mm Clevis Pin (Type Of)	88	3.5	51	2.0
2519-1KN	±1,000	100	225	M6 × 1.0RH Central Thread	6.0 mm Clevis Pin (Type Of)	88	3.5	51	2.0
2519-2KN	±2,000	200	450	M10 × 1.5RH Central Thread	6.0 mm Clevis Pin (Type Of)	101	4	51	2.0
2519-5KN	±5,000	500	1,125	M10 × 1.5RH Central Thread	0.5 mm Clevis Pin (Type Df)	114	4.5	51	2.0

* Supplied with an adapter to convert to 6 mm Clevis Pin (type Of)

GENERAL PERFORMANCE

Linearity	±0.25% of Reading from 0.5 to 100% of Force Capacity
Repeatability	0.25% of Reading from 0.5 to 100% of Force Capacity
Hysteresis	±0.05% of Force Capacity
Creep	±0.1% of Force Capacity over a period of 20 minutes
Maximum Tare Weight	40% of Force Capacity
Overload	150% of Force Capacity without Calibration Change, 300% of Force Capacity without Mechanical Failure
Compensated Temperature Range	0 to 50 °C (32 to 122 °F)
Temperature Effect on Zero	±0.003% of Force Capacity per °C (0.002% per °F)
Temperature Effect on Sensitivity	±0.002% of Force Capacity per °C (0.001% per °F)
Frame Compatibility	3300 Single Column Machines



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