INSTRON®

The difference is measurable®

2580 Series | Static Load Cells

Instron® load cells are an integral part of the force measurement system and have been designed and manufactured by Instron specifically to meet the most demanding materials testing applications.

Features

- Force capacities from ±500 N to ±600 kN (50 - 60,000 kgf or 112 - 137,000 lbf).
- Superb accuracy down to 1/500th of load cell capacity means fewer load cells and fewer load cell changes (5900 Series systems only).
- Double-shear design allows for excellent alignment throughout the test and high resistance to offset loading, even with large specimens.
- Automatic recognition and electrical calibration means simple, error-free operation.
- The cells can withstand up to 300% of the rated capacity without mechanical damage and up to 150% without zero shift.
- High-axial and lateral stiffness reduces stored energy that can transfer to the specimen at yield or break, giving false values. High-lateral stiffness reduces measurement errors due to off-axis loading - this is commonly found when performing compression and flexural tests, or where specimens fail by tearing.
- All 2580 Series load cells comply with the highest applicable testing standards, including ISO 7500-1 and ASTM E4.

Principle of Operation

Instron 2580 Series load cells are precision force-transducers that contain a full strain gauge bridge bonded to an ultra-high stiffness elastic element. When the element is subjected to a force, the electrical resistance of the gauges changes, which results in an output signal proportional to the applied force. The exceptional performance of the 2580 Series load cells is illustrated by the ability to measure values down to 1/500th of the load cell capacity and to 0.5% of reading on 5900 Series testing systems.

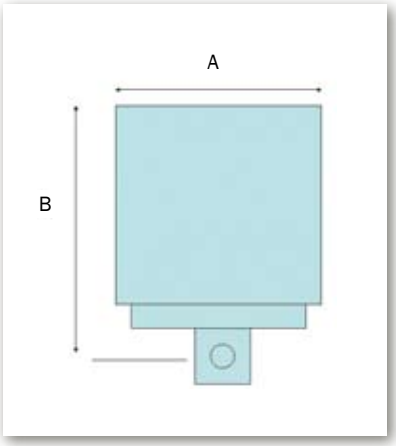
Simple attachment interfaces

Optional quick-attach system for 5900 Series testing systems

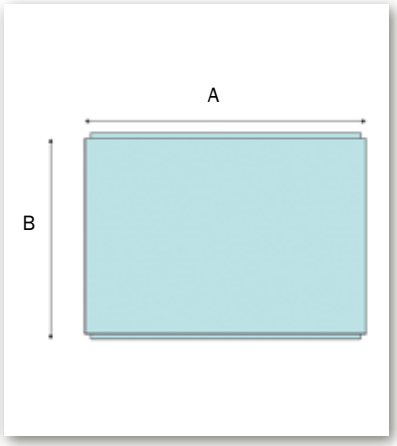
Specifications

	Maximum Capacity			Frame Fitting	Loadstring Fitting	Diameter (A)		Effective Length (B)		Weight	
	kN	kgf	lbf		mm or in	mm	in	mm	in	kg	lb
2580-105	±0.5	50	112	M10 × 1.5RH Central Thread	6 mm clevis pin (Type Of)	76	3	91	3.6	0.6	1.3
2580-106	±1	100	225	M10 × 1.5RH Central Thread	6 mm clevis pin (Type Of)	76	3	91	3.6	0.6	1.3
2580-107	±2	200	450	M10 × 1.5RH Central Thread	6 mm clevis pin (Type Of)	76	3	91	3.6	0.6	1.3
2580-108	±5	500	1125	M10 × 1.5RH Central Thread	0.5 in clevis pin (Type Df)	76	3	101	4.0	0.8	1.8
2580-201	±10	1000	2250	M16 × 2RH Central Thread 6 off M8 on 75 mm PCD	0.5 in clevis pin (Type Df)	107	4.2	122	4.8	4.2	9.2
2580-202	±30	3000	6750	M16 × 2RH Central Thread 6 off M8 on 75 mm PCD	0.5 in clevis pin (Type Df)	107	4.2	122	4.8	4.2	9.2
2580-203	±50	5000	11250	M16 × 2RH Central Thread 6 off M8 on 75 mm PCD	0.5 in clevis pin (Type Df)	107	4.2	122	4.8	4.2	9.2
2580-301	±100	10000	22500	M30 × 2RH Central Thread 6 off M10 on 75 mm PCD	0.5 in clevis pin (Type Df)	113	4.4	152	6.0	11	24.2
2580-302	±150	15000	33750	M48 × 2RH Central Thread 6 off M20 on 150 mm PCD	M48 × 2LH (Type IIf) 6 off M20 on 150 mm PCD 6 off M10 on 100 mm PCD (100 kN max)	218	8.6	170	6.7	35	77.0
2580-303	±250	25000	56200	M48 × 2RH Central Thread 6 off M20 on 150 mm PCD	M48 × 2LH (Type IIf) 6 off M20 on 150 mm PCD 6 off M10 on 100 mm PCD (100 kN max)	218	8.6	170	6.7	35	77.0
2580-304	±400	40000	88000	M48 × 2RH Central Thread 6 off M20 on 150 mm PCD	M48 × 2LH (Type IIf) 6 off M20 on 150 mm PCD 6 off M10 on 100 mm PCD (100 kN max)	218	8.6	170	6.7	35	77.0
2580-305	±600	60000	135000	M72 × 3RH Central Thread	M72 × 3LH (Type IIaf) 6 off M10 on 100 mm PCD (100 kN max)	230	9.1	211	8.3	45	99.0

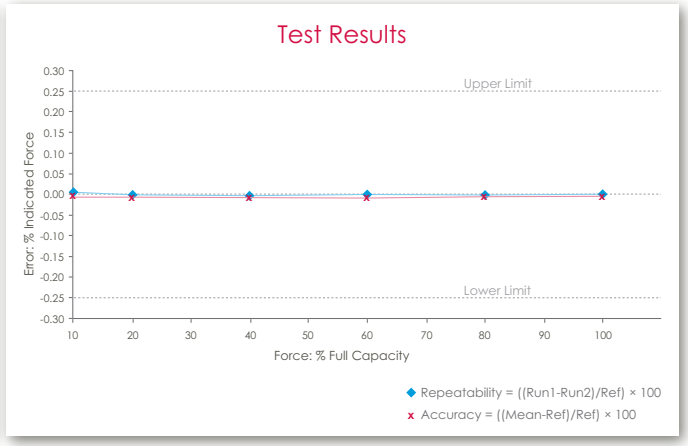
System accuracy when used with Instron 5900 Series: 0.5% of reading down to 1/500th of load cell capacity



500 N - 100 kN capacity



150 - 600 kN capacity



Typical load cell calibration test results

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