

5940 Series systems perform tensile, compression, bend, peel, tear, puncture, creep, and cyclic tests on all raw materials and finished goods. These testing instruments are engineered for precision, built for durability, and offer flexibility for changing requirements. They are designed with features that increase testing efficiency and improve the testing experience for the operator.

The performance and versatility of the 5940 Series systems makes them the industry standard throughout the biomedical, automotive, electronics, and packaging industries to test materials and products made from plastics, elastomers, films, textiles, adhesives, and more. 5940 systems are offered in maximum force capacities of 0.5, 1, and 2 kN.

A key advantage of 5940 series systems are their small footprint. The small footprint of the 5942, 5943, and 5944 saves valuable laboratory space, which is an important consideration when purchasing a testing instrument.

## Features

- Meets or exceeds requirements of all national and international standards; namely ISO, ASTM, BS, DIN, EN, and AFNOR
- Thousands of accessories to meet test requirements in almost any application or industry: biomedical, automotive, electronics, plastics, metals, composites, elastomers, aerospace, textiles, and many more
- Supported by the largest global Service organization in the industry; delivering high-quality calibrations, training, preventative maintenance, and technical support
- Productivity Panel with Live Display, Soft keys and Specimen Protect for enhanced usability and productivity

## Bluehill® Universal and Instron® Connect

Designed from the ground up for touch, Instron's static testing software, Bluehill Universal, is easy-to-use, increases testing efficiency, and contains modular features that enable users to run the most complex of tests.

With ISO 9001 accreditation, our goal is to provide the best ownership experience by delivering the highest quality products, expert support, and world-class service. Instron Connect provides users with a powerful communication platform via a secure connection between the Instron system at your facility and Instron's global technical support engineers. With Instron Connect, users receive faster remote technical support, reduce risk with schedule verification and preventive maintenance reminders, and are effortlessly able to keep up to date with the latest software features.



# Specifications

		5942	5943	5944
Force Capacity <sup>1</sup>	kN	0.5	1	2
	lbf	113	225	450
Vertical Test Space <sup>3</sup>	mm	726	1123	1123
	in	28.6	44.2	44.2
Horizontal Test Space <sup>4</sup>	mm	100	100	100
	in	3.9	3.9	33.9
Testing Speed Range Min-Max (Return)	mm/min	0.05-2500 (1875)	0.05-2500 (2500)	0.05-2500 (2500)
	in/min	0.002-100 (75)	0.002-100 (100)	0.002-100 (100)
Position Control Resolution	nm	94	75	94
	µin	3.7	2.9	3.7
Frame Axial Stiffness	kN/mm	8.5	8.5	8.5
	lb/in	48500	48500	48500
Maximum Force at Full Speed	kN	0.5	1	2
	lbf	113	225	450
Maximum Speed at Full Force	mm/min	2500	2500	2500
	in/min	100	100	100
Height	cm	104	144	144
	in	41	56	56
Width <sup>5</sup>	cm	46	46	46
	in	18	18	18
Depth	cm	61	61	61
	in	24	24	24
Weight	kg	43	55	55
	lbs	95	121	121
Maximum Power Requirement	VA	250	250	300

## Common Specifications

### Force Measurement Accuracy:

± 0.4% of reading down to 1/100 of load cell capacity with 2525, 2530 or 2580 Series load cells; ± 0.5% of reading down to 1/1000 of load cell capacity with 2580 Series load cells (with Advanced Performance Option); ± 0.5% of reading down to 1/500 of load cell capacity with 2580 Series load cells; ± 0.5% of reading to 1/250 of load cell capacity with 2525 or 2530 Series load cells. <sup>1</sup>

### Displacement Measurement Accuracy:

±0.02 mm or 0.1% of displacement (whichever is greater)

### Strain Measurement Accuracy:

Meets or surpasses the following standards: ASTM E83, ISO 9513, and EN 10002-4.

### Testing Speed Accuracy:

(Zero or constant load): ±0.1% of set speed

### Data Acquisition Rate at the PC:

Up to 2.5 kHz (Advanced option) simultaneous on force, displacement, and strain channels, 1 kHz (Standard)

## Facility Requirements and Operating Environment

### Single Phase Voltage:

100, 120, 220, or 240 VAC ±10%, 47 to 63 Hz. Power supply must be free of spikes, surges or sags exceeding 10% of the average voltage.

### Operating Temperature:

+10 to +38 °C (+50 to +100 °F)

### Storage Temperature:

-40 to +66 °C (-40 to +150 °F)

### Humidity Range:

+10 to +90%, non-condensing

### Atmosphere:

Designed for use under normal laboratory conditions. Protective measures may be required if excessive dust, corrosive fumes, electromagnetic field, or hazardous conditions are encountered.

## Notes:

1. Meets or exceeds ASTM E4, BS 1610, DIN 51221, ISO 7500/1, EN 10002-2. JIS B7721, JIS B7733, and AFNOR A03-501 standards. Instron recommends that systems are verified on-site at the time of installation as required by ASTM E4 (par. 20.3) and ISO 7500-1 section 9) standards.
2. All systems conform to all relevant European standards and carry a CE mark.
3. Vertical test space on all systems is the distance from the top surface of the base platen to the bottom surface of the moving crosshead, excluding load cell grips and fixtures.
4. Horizontal test space is the distance between the center of the load cell to the column.
5. This is the system footprint width. The Operator Dashboard monitor may add 300mm (12in) to the overall width of the frame.
6. These specifications were developed in accordance with Instron's standard procedures and are subject to change without notice.

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