

TORSION ADD-ON 3.0

For Electromechanical Systems



Simple axial-torsion testing is often required for the complete evaluation of many pharmaceutical and surgical products, electronic components, consumer products, and packaging. Across all industries, the development of new products and materials demands stringent standard-based and functional testing with a need for increased capability in testing equipment. Some of these standards, such as ISO 80369 for luer connectors, include both axial and torsional test requirements. The Instron® Torsion Add-On 3.0 for Electromechanical Universal Testing Systems is designed for simple, simultaneous axial and torsional testing of devices and/or components. Torsion Add-On 3.0 easily mounts to any new or existing Instron 6800 or 5900 system, adding torsion capability to your lab while saving valuable lab space. It utilizes Bluehill Universal's dedicated axial-torsion and method types in a user-friendly and intuitive interface.

FEATURES AND BENEFITS

- Saves lab space by combining axial and torsional capabilities into a single system
- Easily mounts to new and existing Instron frames
- Integrated with 6800 Series handset for safe and ergonomic operation
- Meets requirements of ASTM F543, ISO 11040, ISO 80369, and other testing standards
- Performs unlimited rotations
- Compatible with existing fixtures
- Requires minimal operator training
- Uses Bluehill Universal software with TestProfiler
- Compatible with Bluehill's large library of calculations
- Compatible with Bluehill Universal Traceability Module to meet 21 CFR Part 11 compliance
- IQ/OQ documentation available
- Supported by Instron local service

APPLICATION RANGE

Torsion Add-On 3.0 provides more advanced test controls to evaluate components from a wide range of industries including biomedical, electronics, consumer packaging, and automotive.



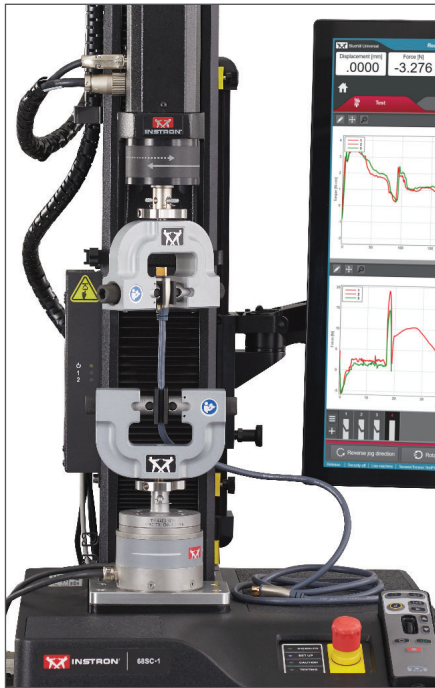
Usability Testing of Pen Injector



Low-Torque Testing of Luer Connections to ISO 80369



Bone Screw Testing to ASTM F543



Torsional Testing of HDMI Cable



Cyclic Testing of a Flexible Display



Product Development of Consumer Packaging

6800 HANDSET OPERATION

Torsion Add-On 3.0 integrates with the 6800 handset for ergonomic and safe control at the frame, preventing unintended motion of the crosshead.

RETURN TO ZERO

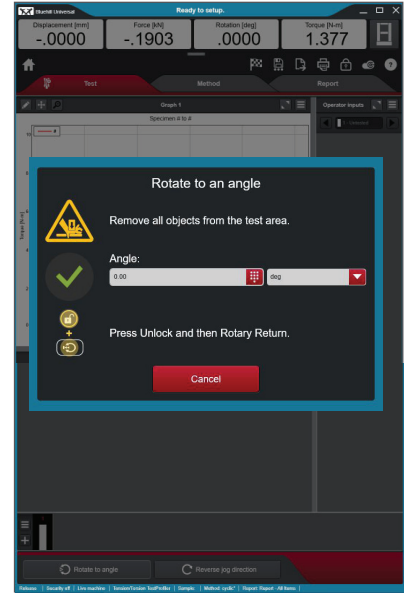


Easily return to zero rotation using the unlock and return buttons on the handset.

ROTATE TO ANGLE



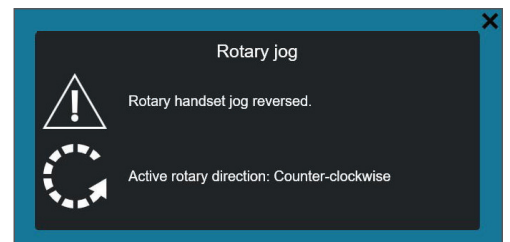
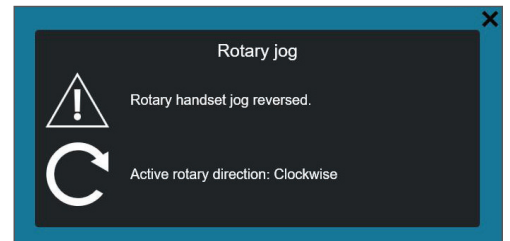
To rotate to a specific location, enter desired angle into Bluehill Universal and simultaneously press the unlock and return buttons on the handset.



MOTORIZED JOG



Use the handset jog button to rotate the motor in a clockwise or counterclockwise direction. Arrows on the motor label correlate with the jog button and Bluehill Universal icons. A solid arrow indicates clockwise rotation while a dashed line indicates counterclockwise rotation.



AXIAL/TORSION SPECIFICATIONS

Torsion Add-On 3.0 provides up to 20 Nm of torsional capacity. The axial load capacity is dependent on the testing system used. Please refer to the Axial System Specifications table below for more information.

TORSION SPECIFICATIONS

Torque Capacity		Angular Resolution	Maximum Rotation Speed		Minimum Rotation Speed		Electrical Requirements	Operating Temperature	
N-m	lbf-in	°	°/sec	rpm	°/min	rpm		°C	°F
±20	±170	0.001	480	80	1	0.002	Single Phase, 47/63 Hz, 120 or 220 VAC	5 to 40	41 to 104

AXIAL SPECIFICATIONS

Model Number	Axial Load Capacity	
	N	lbf
5942	500	112
5943	1,000	225
5944	2,000	450
5965 ¹	5,000	1,125
5966 ¹	10,000	2,250
5967 ¹	30,000	6,744
5969 ¹	50,000	11,240
68SC-05	500	112
68SC-1	1,000	225
68SC-2	2,000	450
68SC-5	5,000	1,125
68TM-5 ¹	5,000	1,125
68TM-10 ¹	10,000	2,250
68TM-30 ¹	30,000	6,744
68TM-50 ¹	50,000	11,240

Notes:

1. Custom top plate to allow full system travel is included with Torsion Add-On 3.0

BIAXIAL LOAD CELL CAPACITIES

Catalog Number	Axial Capacity	Torque Capacity	Load Accuracy
	N	Nm	
2527-302 ¹	1,000	25	±0.5% of reading Load: 1/100th Torque: 1/100th
2527-303 ¹	5,000	25	
2527-202 ¹	10,000	100	
2527-201 ¹	25,000	100	
2540-101	445	5	±1.0% of reading Load: 1/250th Torque: 1/250th

Notes:

1. Limited to 20 Nm by Torsion Drive



Bi-axial Load Cell

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