

6800 SERIES SYSTEM RETROFITS

Legacy Floor Model System Upgrades and Modernization

6800 Series system retrofits allow older legacy Instron electromechanical floor model universal testing machines to be upgraded with the latest control electronics and testing software so you can enjoy the latest in testing technology. Instron's universal testing machines are built to provide decades of reliable and repeatable test results. The comprehensive retrofit upgrade is a cost-effective way to extend the life of your legacy machinery, prevent unexpected downtime, and enjoy the latest in testing software and features.

FEATURES AND BENEFITS

A retrofit upgrade breathes fresh life into a wide variety of legacy table model systems from 50 kN to 250 kN and provides them with the following benefits:

- **System Life Extension:** Rejuvenates your system and extends its life.
- **Downtime Prevention:** A comprehensive replacement of vulnerable and worn components and electronics prevents unplanned downtime.
- **Supportability:** Upgrades your system with fully-supported electronics and mechanical components.
- **6800 Architecture:** Provides full access to latest Bluehill® Universal software and platform testing features.
- **Lab Uniformity:** Simplify operator training by upgrading all your machines to run on Bluehill Universal software and 6800 Series controls.
- **Accessory Compatibility:** Full compatibility with latest software and accessories. Backwards compatible with most extensometers, load cells, and accessories.

6800 UPGRADE FEATURES

- **Auto Positioning:** Save the correct fixture separation location for each test method to ensure all operators run each test exactly the same way across all shifts every day.
- **Operator Protect:** Instron's patent-pending Operator Protect system architecture is an intelligent workflow that keeps equipment and operators safer by controlling system status from setup to test completion.
- **Safety Coaching:** 6800 Series systems provide clear visual feedback regarding system status at all times. Users will easily understand when the system is in a safe setup mode, and are clearly reminded to exit the test space once safety limits are removed.



- **Smart-Close Air Kit (optional):** Finger pinch hazards from pneumatic grips are reduced through lower grip closing pressure and restricted speed during the setup phase of your test.
- **Collision Mitigation:** Reduce damage to equipment and delicate specimens by stopping the crosshead if force is detected upon return or during a jog.
- **6800 Ergonomic Handset:** Mounted directly to the column of the frame, the handset comes with customizable soft keys, specimen protect, and a fine position adjustment wheel.

NEW & REPLACED COMPONENTS

- 6800 Series control electronics
- Robust sheet metal electronics enclosure
- Removable 6800 ergonomic handset
- Maintenance-free brushless AC servomotor
- Absolute encoder
- Absolute position battery
- Speed sensor
- Power amplifier
- Drive belt
- E-stop button
- Indicator panel
- Smart-close air kit (optional add-on)

UPGRADE PROCESS

- Site survey conducted to assess viability of system upgrade
- Installed on-site by Instron Field Service Engineer in 1-2 days
- System calibration and training
- Availability of Retrofit replacement parts and service guaranteed for 10 years

6800 SYSTEM RETROFIT ELIGIBILITY

Model	Capacity (kN)	Support Phase	Manufacturing Period
4481	50	4	1993 - 2002
4482	100	4	1993 - 2002
4484	150	4	1993 - 2002
4485	200	4	1993 - 2002
5581	50	4	1996 - 2010
5582	100	4	1996 - 2010
5584	200	4	1996 - 2010
5585	250	4	1996 - 2010
5585H	25	4	1996 - 2010
5881*	50	4	2001 - 2009
5882*	100	4	2001 - 2009
5884*	150	4	2001 - 2009
5885H*	250	4	2001 - 2009
5982	100	2	2010 - 2022
5984	150	2	2010 - 2022
5985	250	2	2010 - 2022

Additional Notes:

1. Unlisted models can be upgraded upon request. Please contact Instron for support.
2. System speed, compliance, and general operating specifications are limited by the system being upgraded and the strain and load equipment utilized.

RETROFIT CONTROL ELECTRONICS

To save critical floor space, the retrofit's control electronics can be flexibly relocated to either side of the machine.** Its robust sheet metal enclosure allows it to also serve as a monitor stand.



**Distance of retrofit controller box from the machine is limited by 2.9 m (114 in) cable length

DROP THROUGH LOAD CELL ADAPTERS

Catalog Number	Frame Compatibility	Load Cell Compatibility	Max. Daylight Reduction
2501-291	4481, 5581	2580-50kN	133 mm
2501-292	4482, 5582	2580-100kN	111 mm

Data Acquisition Rate at the PC:

Up to 5 kHz simultaneous on force, displacement, and strain channels.

Load Measurement Accuracy:

±0.5% of reading down to 1/1000th of load cell capacity with 2580 Series load cells (Advanced Performance Option).

±0.5% of reading down to 1/500th of load cell capacity with 2580 Series load cells.

Strain Measurement Accuracy:

Meets or exceeds ASTM E83, BS 3846, ISO 9513, and EN 10002-4 standards.

Displacement Measurement Accuracy:

±0.01 mm or 0.05% of displacement (whichever is greater).

Testing Speed Accuracy:

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

Single Phase Voltage:

100, 120, 220, or 240 VAC ±10%, 47 to 63 Hz.

Operating Temperature:

+5 to +40 °C (+41 to +104 °F).

Storage Temperature:

-25 to +55 °C (-13 to +131 °F).

Ingress Protection (IP) Rating:

IP 2X. Protective measures may be required if excessive dust, corrosive fumes, electromagnetic fields, or hazardous conditions are encountered.

Humidity Range:

+10 to +90%, non-condensing at 20 °C.

* Retrofitted 588X frames are converted to static testers.



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