

# Uniaxial Thermal Stress and Strain Test – UTSST

Accessories – Upgrade Kit for TSRST\*

## ADVANCED PAVEMENTS TESTING SYSTEMS



IPC Global's Uniaxial Thermal Stress and Strain Test Kit (UTSST) has been designed to enhance the capability of IPC Global's UTM-130. The UTSST Kit exceeds the requirements of Draft for ASTM.

Designed to determine the thermal properties of asphalt mixtures through the measurement of thermally induced stress and strain from restrained and unrestrained asphalt mixture specimens. The Thermal stress and strain can be measured using one of the two methods.

**Method A:** Uniaxial Thermal Stress and Strain Tester (UTSST)

**Method B:** Asphalt Thermal Cracking Analyzer (ATCA)

## Specifications

### Features

- Increases the functionality of UTM-130 (only)
- Frictionless unrestrained test rollers and base plate machined from stainless steel for freedom to deform and corrosion resistance
- Invar rods conforming to test standards for both unrestrained and restrained test methods
- Roller comb assists with roller alignment for easy unrestrained test set-up
- Restrained test platens machined from electroless nickel plated mild steel for corrosion resistance and long life
- Magnetic rubber disks ensure minimal loss of cooling around the unrestrained Invar rods' chamber openings.

### Test Standards

Draft for AASHTO (no number) 2013

### Dimensions and Weight

#### UNRESTRAINED TEST

<b>Base Plate</b>	30 x 355 x 200mm (HxWxD)
<b>Roller Plate Weight</b>	14.5kg
<b>Invar Rod Gluing Tip</b>	10 x 20mm (LxDia.)
<b>Invar Rod</b>	150 x 9.95mm (LxDia.)

#### RESTRAINED TEST

<b>Platens</b>	30 x 150mm (HxDia.)
<b>Platens Weight</b>	3.5kg each

### Ordering Information

- 79-PV70650 – UTSST TSRST Upgrade Kit
- 79-PV70651 – UTSST TSRST Restrained Platens
- 79-PV70652 – UTSST Unrestrained Glue Jig
- 79-PV70642 – TSRST Specimen Preparation Kit with Gluing Jig
- 79-PV70115 – LVDT with In-Line Conditioner (not shown)

\* Requires base TSRST kit for AASHTO TP10

\* Requires UTM-130 and extended temperature range environmental chamber (-50°C)

Additional accessories may be required to create a working testing system.

Please contact us for advice.

## Testing Made Easy

IPC Global's Uniaxial Thermal Stress and Strain Test Kit (UTSST) comprises of an unrestrained test kit designed to complement and upgrade the TSRST restrained kit. It can be easily mounted inside IPC Global's UTM-130 and extended temperature range environmental chamber (-50°C).

The optional unrestrained gluing jig ensures fast, accurate and easy alignment of invar rods to ensure the most accurate testing results.

IPC Global's superior UTS software is known for its simplicity in use, clarity of results and analytical power. UTS Software allows for real time graphing of results and configurable real time transducer levels screen, as well as customisable test templates to streamline the testing process.



79-PV70650 UTSST TSRST Upgrade Kit



79-PV70651 UTSST TSRST Restrained Platens

## Superior Performance

IPC Global offers a wide variety of accessories to extend the range of their advanced testing machines. The range includes fixtures for performing a variety of tests to local and international standards, displacement transducers and specimen preparation equipment.

IPC Global's accessories are constructed of high quality robust materials thus ensuring superior performance and appearance for years to come.



TSRST Restrained Gluing Jig



79-PV70652 – UTSST Unrestrained Glue Jig

## ► IPC Global Customer Care

**At IPC Global we are proud of our products.**

We are dedicated to supplying high quality, accurate, affordable, easy-to-use systems for Advanced Testing of asphalt, binders and other pavement materials. As a valued customer of IPC Global you will receive continuous, expert support and advice for your instrument. Furthermore, we offer full installation and training in the correct operation of your IPC Global equipment. For support from our expert Customer Care Team, contact your local IPC Global-Controls office/distributor or email [ipcglobalsupport@controls-group.com](mailto:ipcglobalsupport@controls-group.com).

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