

CSI-92: Environmental Stress Crack Resistance (ESCR) Apparatus



BENEFITS

- ✓ Cost Effective
- ✓ User Friendly
- ✓ Complaint to ASTM D1693
- ✓ Accurate and Repeatable Results

PRODUCT DESCRIPTION

The CSI-92 ESCR Test System was designed to be used for material testing of ethylene plastics and used to determine the environmental stress-cracking when exposed to different test media such as soaps, wetting agents, oils and detergents, at user-selected temperatures. When these thermoplastic materials are under certain conditions of stress, these reagents can accelerate the cracking process. These are one of the most common causes of unexpected brittle failure.

Manufactured with only high material, the CSI-92 ESCR Test System is supplied with all the required tooling accessories. The Constant Temperature bath is offered as a 24 station design. The integrated temperature bath is constructed of stainless steel, double wall insulated and fitted with digital temperature controller, heater and temperature sensor to accurately maintain the required test temperatures of 50 °C or 100 °C \pm 0.5 °C. A Test tube sample rack holds up to 24 glass test tubes which are immersed in a heat transfer medium. Rubber stoppers are used to seal the glass test tubes and brass specimen holders. The specimen holder is designed to maintain a constant stress on the mid-section of the test samples. Up to 10 specimens can be fitted into each brass specimen holder at one time.

Main Components

- ✓ CSI-92NJ Nicking Jig was designed to give a controlled imperfection to the surface of the test specimen. The size of the imperfection is 0.750 \pm 0.005 inches long and 0.020 to 0.025 inches deep; parallel to the long edges of the specimen and centered on one of the broad faces. The sample size is 1.5 \pm 0.1 inch by 0.50 \pm 0.03 inch with square edges.
- ✓ Specimen Holder is manufactured from half hard brass channel. Ten specimens may be placed in the holder at one time. The holder is immediately 0.5 inches above the top specimen.
- ✓ Glass tubes are used to hold the bent specimens immersed in the test reagent. The tubes are covered with a foil-wrapped cork.
- ✓ CSI-92B: Bending Clamp is used with the Nicking Jig, to provide a means of bending the ten specimens with controlled imperfections. The clamp is closed after specimens have been inserted by means of a vise or arbor press.
- ✓ CSI-92T Transfer Tool provides a means of transferring the specimens from the clamp to the specimen holder. The transfer tool is placed on top of the closed clamp and closed over the specimens. The specimens are lifted by the transfer tool and placed in the specimen holder by releasing the transfer tool.

TECHNICAL DATA

STANDARD FEATURES

- ✓ Sample Cutting Die
- ✓ Nicking jig with shims(x1) and cutting blades (x24)
- ✓ Bending Clamp
- ✓ Transfer Tool
- ✓ Brass Sample Holders (x24), can hold up to 10 specimen each
- ✓ Glass test tubes (x24) with rubber stoppers (x24)
- ✓ 1 Year Manufacturer's Warranty
- ✓ Lifetime Technical Support
- ✓ Operator's Manual & Conformance Certificate

OPTIONAL FEATURES & ACCESSORIS

- ✓ Constant Temperature Bath with Sample Holder Rack programmable temperature control, Integrated circulation system, double wall insulated, stainless steel

Material:	Stainless Steel
Insulation:	Double Wall Insulated
Maintainable Temperature:	50 \pm 0.5 °C
	100 \pm 0.5 °C
Temperature Range:	30 °C - 100 °C
Temperature Resolution:	0.1 °C
Temperature Accuracy:	\pm 0.5 °C
- ✓ Brass Sample Holders, can hold up to 10 specimen
- ✓ Glass Test Tubes with rubber stopper
- ✓ Cutting Blades for CSI-92NJ Nicking Jig
- ✓ Sample Cutting Dies as per customer specification

WEIGHTS AND DIMENSIONS

Approx. Physical Dimensions:	24" x 17" x 14" (CSI-92 + Temp. Bath)
Approx. Physical Weight:	90 lbs (CSI-92 + Temp. Bath)
Approx. Ship Weight:	160 lbs. (CSI-92 + Temp. Bath)
Approx. Ship Dimensions:	30" x 32" x 37" (Temp. Bath)
Electrical Specification	115/220VAC, 50/60Hz, 1Ph

TEST STANDARDS

- ✓ ASTM D1693
- ✓ IEC 60681-406

