



HUMBOLDT

Overlay Tester



HA-5600

Overlay Tester

ASTM WK26816; CS-TOT

In recent years many mixture design methods have produced materials that are stiffer, leaner and more resistant to rutting, however, such materials are often more susceptible to fatigue and reflection cracking. The Texas Overlay Tester (CS-TOT) was designed to simulate the expansion and contraction movements that occur in the vicinity of joints or cracks and which result in reflection cracking in overlays. With the CS-TOT it is possible to characterize both the crack initiation and crack propagation properties of asphalt mixtures. Cox & Sons has developed the CS-TOT, which is a dedicated, state-of-the-art piece of equipment for carrying out this test.

Features:

- Dedicated no compromise Texas Overlay machine
- Designed according to the proposed ASTM
- Integral surface-mounted, touch-screen control
- Double GSF cold rolled container slides for ultra accurate inline sample deformation
- Intelligently designed specimen gluing and "zero stress" carrying frame
- Fitted with high performance hydraulic actuator and powerpack
- Ergonomically designed for easy operation

Overlay Tester, 120V 60Hz

Overlay Tester, 240V 50Hz

HA-5600

HA-5600.5F

Ship wt. 1102 lbs. (500kg)

Specifications	
Measurement Interval	0.01
Waveform Type	Cyclic triangular and constant displacement or a combination
Maximum Displacement	0.025 to 0.2 (0.6 to 5.1mm)
Resolution of Displacement Measurement	0.00004" (1 μm)
Control Loop Rate	>1000 Hz
Load Cell Capacity	5500 lb (25kN)
Load Cell Accuracy	0.25 %FS
Cycle Time	5 to 1000 s
Cycle Time Measurement Resolution	0.1%
Temperature Control Range	23 to 104°F (-5 to 40°C)
Temperature Control Accuracy	±0.9°F (0.5°C)
Ambient Temperature Range	59 to 86°F (15 to 30°C)
Test End Conditions	(0 to 100)% load reduction and/or (0 to 10000) cycles
Specimen Dims Length: Height: Width:	5.9 ± 0.08" (150 ± 2mm) 1.5 to 2 ± 0.02" (38 to 50 ± 0.5mm) 3" (76mm)
Plate Dims Length: Height (Optional): Width:	11.8" (300mm) 0.51 or 0.75" (13 or 19mm) 5.9" (150mm)
Base Plate Material	Stainless steel
Base Plate Hardness (Brinell)	95 (Not lower than that of 6061-T6 aluminum)
Plate Groove Depth x Width	0.059 x 0.051" (1.5 x 1.3mm)
Plate Groove Separation	0.25" (6.35mm)
Initial Separation of Plates	0.079" (2mm)
Vertical movement of sample (% of crack opening)	<3
Dimensions (WxDxH)	62" x 25" x 43" (1580 x 650 x 1100mm)

Overlay Tester



Accessories	Model
Disc-shaped, compact tension fixtures	HA-5600.1
Semi-circular bending * (-5 °C to + 40 °C)	HA-5600.2
"Zero Stress" carrying frame to align the two base plates and fix the specimen prior to testing with specimen alignment	HA-5600.3
0.25" (6.25 mm) spacer bar for plate separation and alignment	HA-5600.4
10 lb (4.5kg) weight (in the shape of the specimen to ensure load is spread evenly and does not overhang the edges of the specimen)	HA-5600.5
Calibration kit	HA-5600.6