

Large Hydraulic Four Point Bending Machine

CS-LH4PT-BB

AASHTO T321 (TP8), ASTM D7460, EN 12697-24 ANNEX D, EN 12697-26 ANNEX B



The only machine on the market to accept variable beam sizes



INTRODUCTION

The CS-LH4PT-BB uses advanced servo-hydraulic technology and a high-speed digital data acquisition and control system together with user-friendly software. During testing both graphical and tabular data are displayed on screen and test data is stored to disc in Microsoft® Excel® compatible format. The test frame is housed in a temperature controlled cabinet with fan-assisted air circulation and a temperature range of -20 to 60°C (-4 to 146°F). The unique constant torque clamping and three-transducer deflection measurement system of the CS-LH4PT-BB can be configured to accept different beam sizes. This means that the ratio between beam dimensions and maximum aggregate size of test specimens will satisfy the requirements of the relevant US and European specifications.

KEY FEATURES

- Frequency range 0.1 to 60Hz
- High quality servo hydraulic four point bending machine
- Double acting fatigue rated hydraulic actuator with integral stroke transducer
- Utilizes Star servo valve with "Sapphire Technology"
- Unique three transducer on-specimen deflection measurement system
- Accepts various beam sizes: 380 to 660 mm (15 to 26 inch) in length and 50 x 50 mm (2 x 2 inch) to 100 x 100 mm (4 x 4 inch) cross-section
- Temperature controlled cabinet range -20 to 30°C (-4 to 86°F)
- Sinusoidal controlled strain or controlled stress fatigue test modes
- Constant torque motorized specimen clamping to eliminate errors due to localized beam indentation
- User friendly software for determination of fatigue resistance and stiffness modulus
- The possibility to make frequency/temperature sweeps
- Covered for noise reduction

SOFTWARE

- User friendly, intuitive and reliable Windows® software developed using LabVIEW™
- Specifically written to meet ASTM and AASHTO standards
- The user interface can be translated into the user's preferred language – please inquire
- One software package performs both fatigue and complex modulus testing
- Stored test data can be analyzed and compared with other test data utilizing a spreadsheet package
- Utilities are included for curve fitting of acquired data; testing of system's inputs and outputs; phase correction and a transducer database for storing calibration factors



cDAC - ADVANCED DATA ACQUISITION SYSTEM



- » Measurement of up to 32 transducers
- » Wave Types:
 - ✓ Haversine
 - ✓ Pulse
 - ✓ Square
 - ✓ Triangle
 - ✓ Constant
 - ✓ Ramped
 - ✓ Rest Periods



SPECIFICATIONS

Force Transducer	±10 kN (±2250lbf)
Specimen Transducer Range mm (inch)	3 x ±2.5 (±0.09)
Actuator Stroke mm (inch)	10 (0.4)
Frequency	0.1 to 60 Hz
Temperature (Integrated Cabinet)	-20 to 30°C (-4 to 86°F)
Electrical Supply	CS-LH4PT-BB: 3 Ph 400 V 50Hz CS-LH4PT-BB60: 3 Ph 208-230 V 60 Hz
Compressed Air	7-10 bar (100-145psi) @ 100 l/m (3.5cfm) (optional integrated extra)
Dimensions (WxDxH) mm (inch)	1050 x 1100 x 2100 (41.5 x 43 x 83)
Working Space Required (WxDxH) mm (inch)	2050 x 2100 x 2300 (81 x 83 x 90.5)
Estimated Weight kg (lb)	650 (1435)
PC	Included

ACCESSORIES

- CS-PVC-BEAM
Dummy PVC beam 50 x 50 x 380 mm (2 x 2 x 15 inch)
- CS-PVC-BEAMLARGE
Dummy PVC beam 100 x 100 x 660 mm (4 x 4 x 26 inch)

YOU MAY ALSO NEED...

- CS-LH4PT-COMPAIR
Integrated compressed air option