



## Large Hydraulic Four Point Bending Machine

**CRT-LH4PT-BB**

*The only machine on the market to accept variable beam lengths*

Bending tests are widely used for measuring the stiffness modulus and assessing the fatigue resistance of asphaltic paving materials. The Large Hydraulic Four Point Bending Beam Machine 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 30°C. The unique constant torque clamping and three-transducer deflection measurement system of the The Large Hydraulic Four Point Bending Beam Machine 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 European specifications.

### Standards

- EN 12697-24 Annex D
- EN 12697-26 Annex B
- ASTM D7460
- AASHTO T321

### 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
- Star servo valve with 'Sapphire Technology'
- Can be used with simple one or research level three LVDT transducers
- Accepts various beam sizes: 380 to 660mm in length and 50 x 50mm to 100 x 100mm cross-section
- Temperature controlled cabinet range -20 to 30°C
- Sinusoidal controlled strain or controlled stress fatigue test modes
- Constant torque motorised specimen clamping to eliminate errors due to localised beam indentation
- Self-contained loading system
- User friendly software for determination of fatigue resistance and stiffness modulus
- Capable of performing healing, modulus, fatigue multi-stage testing and camera triggering
- Supplied with a traceable calibration certificate
- Covered for noise reduction

## Key Uses

- Mix design
- End product specification
- Assessment of new materials

## Software

- User friendly, intuitive and reliable Windows™ software developed using LabVIEW™
- The user interface can be translated into the user's preferred language - please enquire
- One software package performs both fatigue and complex modulus testing
- Stored test data can be analysed and compared with other test data utilising 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

## Accessories

Accessories are not included in the price of main device (unless stated otherwise) and may be purchased separately if required.

CRT-PVC-BEAMLARGE PVC Dummy Specimen 100x100mm

CRT-LH4PT-COMPAIR Integrated Compressed Air Option

## Specifications

Technical specifications are subject to change without notice.

Force Transducer	±10 kN
Specimen Transducer Range mm	3 x ±1
Actuator stroke mm	10
Frequency Hz	0.1 to 60
Temperature (Integral Cabinet)	-20 to 30°C
Electrical Supply <sup>1</sup>	3 Phase 415 Volts 50 Hz @ 16A
Compressed Air	7-10 bar @ 100 L/min (optional integral extra)
Dimension mm (W x D x H)	1050 x 1600 x 2100
Working space required mm (WxDxH)	2050 x 2600 x 2300
Weight (approx.) Kg	650
PC	Included

<sup>1</sup> others available upon

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