

# Stand Alone Four Point Bending Beam Machine

CS-SA4PT-BB

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



A low cost, accurate flexural bending system which facilitates the rapid throughput of modulus and fatigue tests



## INTRODUCTION

The CS-SA4PT-BB uses advanced servo pneumatic 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 clamps are at 118.5mm (4.67 inch) centers (the distance between the outer clamps is 335.6mm (14 inches) according to AASHTO specifications but the height and width of the beam can be varied).

## KEY FEATURES

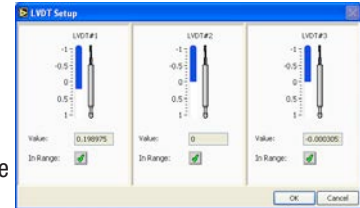
- Frequency range 0.1 to 30Hz<sup>1</sup>
- Low cost pneumatic stand alone four point bending machine
- Utilizes a low-friction actuator and high performance ceramic spool servo-valve
- On-specimen measurement system removes errors due to frame flexure
- Accepts AASHTO beam sizes
- Sinusoidal controlled strain or controlled stress fatigue test modes
- Constant torque motorized specimen clamping to eliminate errors due to localized beam indentation
- Self-contained loading system
- User friendly software for determination of fatigue resistance and stiffness modulus

## ACCESSORY

CS-PVC-BEAM  
Dummy PVC beam 50 x 50 x 380 mm (2 x 2 x 15 inch)

## SOFTWARE

- User friendly, intuitive and reliable Windows® software developed using LabVIEW™
- Specifically written to meet AASHTO and ASTM standards
- The user interface can be translated into the user's preferred language – please inquire
- 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                         | ±10kN (2248lbf)  |
| Specimen Transducer Range                | ±1 mm (± 0.04)   |
| Actuator Stroke mm (inch)                | 10 (0.4)   |
| Frequency                                | 0.1 to 30 Hz   |
| Electrical supply                        | 1 Ph 110-264 V 47-63 Hz  |
| Compressed Air                           | 7-10 bar (100 -145psi) @ 600 L/min (21 cfm)  |
| Dimensions (WxDxH) mm (inch)             | Test Frame 440 x 190 x 570 (18 x 7.5 x 22.5)<br>Data Acquisition Box 360 x 280 x 140 (15 x 11 x 5.5) |
| Working Space Required (WxDxH) mm (inch) | 826 x 1650 x 2100 (32.5 x 65 x 83) when fitted in cabinet CS-TCC                                     |
| Estimated Weight kg (lb)                 | Test Frame 45 (100)<br>Data Acquisition Box 6 (14)   |
| PC                                       | Included   |

## YOU MAY ALSO NEED..

CS-TCC  
Temperature controlled cabinet for CS-UTM-NU and CS-SA4PT-BB  
CS-COMP-1210  
Large Compressor (up to 10bar (145psi) and 1200l/min (43cfm)) for supply of air to two pieces of large flow equipment such as Roller Compactors and Four Point Bending rigs