



Data Sheet – CYC800

Cyclic Tester

Measurement of survival characteristics of small fibres exposed to repeated tensile loading.

User selectable constant load or strain methods and graphical display of load extension curves.

Compatible with the ALS1500 for automated testing of single fibres.

Uses common Windows™ software platform for Dia-Stron fibre testing instruments

System Description.

General Information.

Cyclic mechanical testing applies repeated loads to the test material until failure occurs. The technique is used to estimate the characteristic life or survival of the materials and has been applied to the evaluation of small fibres.

The Cyclic Tester is supplied as a complete system comprising the UV1000 control unit, Cyclic Tester mechanical unit and UvWin PC applications software. Automation can be added to the system through Automated Loading System (Model ALS1500) from Dia-Stron.

Control Unit.

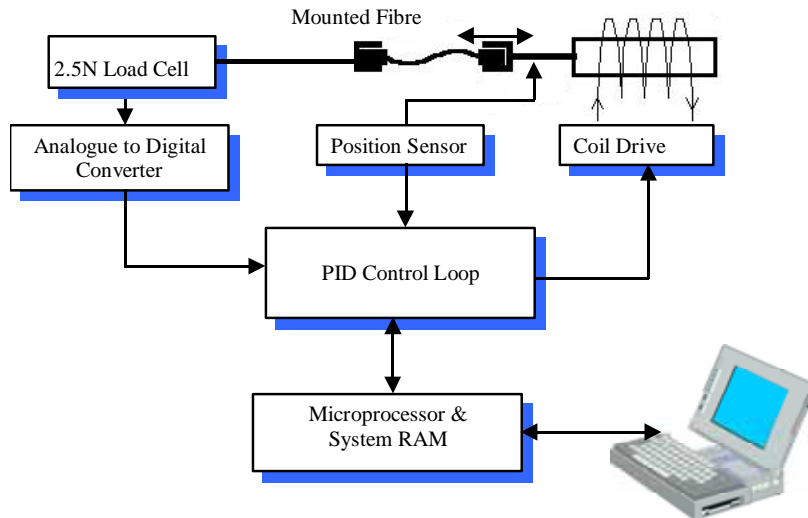
The Universal Control Unit (UV1000) supports all fibre testing measurement modules including the Fibre Dimensional Analysis System, and the automated sample loading modules. Commonality of the control units permits upward compatibility, allowing the user to upgrade testing capability in line with changing needs. . The control unit has no user interface and all method parameters are entered through the PC software.

CYC800 Mechanical Test Module.

At the heart of the Cyclic Tester is a closed loop controlled linear actuator capable of being programmed to achieve a wide range of movement distances, speeds and accelerations. A voice coil assembly acts as the linear actuator, with motion monitored by a non-contact encoder. This information is used by a servo drive to provide the positional and speed control. Load is measured with a 2.5N load cell. A schematic of the Cyclic Tester is shown below.

PC APPLICATIONS SOFTWARE

The CYC800 is operated through UvWin PC application, a new 32 bit software programme written for Windows™ NT, 2000 & XP. This application supports the Dia-Stron range of fibre testing instruments and automated sample modules. The Cyclic Tester protocols are user selected in UvWin, and data in terms of load-extension and cycles is displayed. UvWin incorporates data processing & includes calculation of the important Weibull survival analysis.



Specifications.

Samples size: 30mm
 Extension range: to 50mm
 Speed range: 1-100mm/sec
 Force resolution: 0.005g
 Force range: 0.005-250gmf
 Methods: Constant load or strain
 Cycles to break or multiple records
 Software: Windows 2000, NT, & XP
 Communications: RS232, USB serial adapter
 Power: Universal supply 85-265vac, 47-63Hz, 100W

System Components:

CYC800 Mechanical Testing Module.
 UV1000 Control Unit.
 UvWin PC Applications Software including manuals (supplied on CD).
 Mains cord and serial cable.

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