

### P Series Mechanical Tester

Affordable \* Entry Level

Tension & Compression

Up to 1400 lb (7 kN) Load Capacity

Servocontrolled Constant Load Rate & Speed

High Accuracy & Resolution



#### 100P Single Column Test System

- 100 Series Load Frame
- DA Actuator
- P Controller
- Software - optional
- Load Cell
- Grips and fixtures – optional



#### 800P Dual Column Test System

- 800 Series Load Frame
- DA Actuator
- P Controller
- Software - optional
- Load Cell
- Grips and fixtures – optional



#### 150P Horizontal Test System

- 150 Series Test Table
- DA Actuator
- P Controller
- Software - optional
- Load Cell
- Grips and fixtures – optional



#### Choices

- P, Q, M, or R controllers
- Load frame width and height
- Actuator speed, force, and travel
- Accessories

## Modular Systems Approach

TestResources test systems are configured to match each customer's test requirements. A common single actuator test system will consist of a load frame or horizontal test table, a linear or torsional actuator, load, strain, or position transducers, controller, and software. Due to a modular product structure, system modules can be swapped or re-configured during as requirements change.

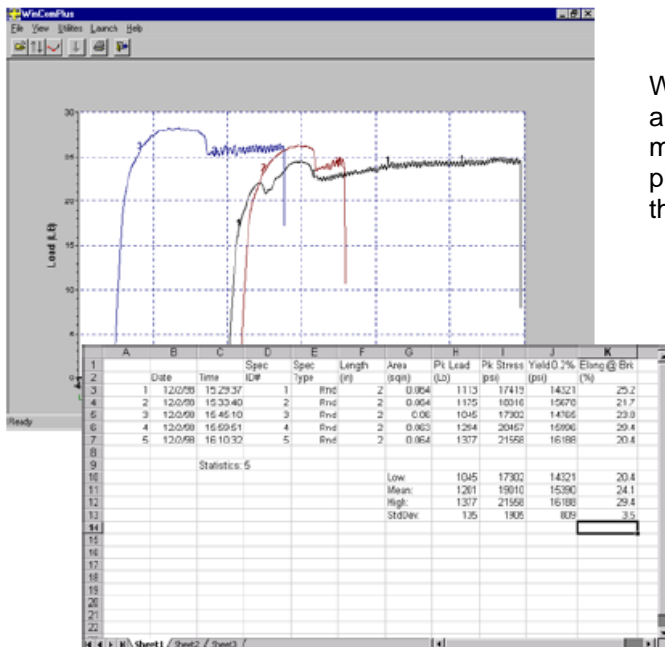
## P Controller \* Single Segment \* Constant Speed or Load Rate

P controllers serve testing requirements where constant speed, crosshead travel rate, or loading rate are required for the test. The P features single segment ramps with speed or loading rate set by the user. Single segment control enables a single speed test from beginning to end and in the pull (tensile) or push (compression) direction. As test forces increase, speed stays constant. The test stops automatically based upon the specimen break or test time, or if stop is pushed. The P controls measures force and position and includes limit switches to protect actuator travel. A 24 bit A/D converter provides high quality load accuracy while a high accuracy encoder measures position change. The controller includes memory to capture and display test data to an optional PC. Optional software plots and exports the data to a PC. The P controller also includes multiple data calculations that help improve operator efficiency.



## Optional software to plot and export data to a PC

WinCom **Basic** Software uploads test methods, calibration information, calculated test results and the contents of the raw XY data buffer to a computer via ASCII delimited format. The operator can then create plots using Excel and other tools.



Wincom **Plus** Software automatically produces single and multiple load – displacement – time plots. Plot multiple test curves on the same set of graph axes.

## P Controller Features

- Displays load, position, and position rate during the test. Displays activated results when the test finishes.
- Calculate high, low, mean and standard deviation for a group of tests.
- Store up to 300 results to memory – including date, time, specimen ID plus all calculated parameters.
- Select data log rates from 0.5 to 1,000 samples per second to match long and short tests.
- English, Metric and SI engineering units.
- All test methods have one pre-test control segment which can be used as a pre-load function.
- Single segment profile - user defined position or load rate and end channel - either load, position, time or sample break.
- Use with self identifying or standard load cells.

## Calculated Analyses include

- Maximum -- Load, Load/Width, Stress
- Minimum Load
- Average Load between Displacements
- Load -- at break, at displacement
- Displacement -- at break, at load
- Percent Elongation
- Contact us for latest list. Firmware development services are available.

## D Series \* Electromechanical \* Screw Driven \* Servoactuators

The DA servoactuator is compatible with the 100, 150 and 800 Series Load Frames and Test Tables, and includes servomotor, encoder, linear bearings, and integrated limit detection to protect the actuator in case of over travel conditions. They may be used in horizontal and vertical modes and are ideal for slower tests (Quasistatic) common to material and product testing applications. They are available in a variety of speeds, travels and load ratings.

### Actuator Choices for use with P Controllers:

Actuators	Units	DA250	DA500	DA1000	DA1400	DA1020	DA100
Max Load	lb (kN)	250 (1.1)	500 (2.2)	1000 (4.4)	1400 (6.2)	1000 (4.4)	20 (4)
Max Speed	ipm (mm/m)	25 (625)	7 (625)	2.2 (55)	0.9 (23)	15 (375)	180 (4500)
Min Speed	micron/min	30	8	2.5	1.5	30	-
Head Stroke	6" or 12" or special						
Accuracy	+/- 0.5% of reading to 1/500 of load cell - Meets ASTM E4, BS EN ISO 7500-1: 2004, DIN 51221						

## Load Frames & Test Tables – 100, 150 and 800 Series

Model	Type	Max Force	Vertical Space	Centerline Clearance	Baseplate
100-36	Single Column Vertical	1350 lb (7 kN)	31" (775 mm)	3" (75 mm) – 5" option	12" X 12"
100-60	Single Column Vertical	1350 lb (7 kN)	55" (1400 mm)	3" (75 mm) – 5" option	12" X 12"
150-36	Horizontal Test Table	250 lb (1.1 kN)	11" Wide	3" (75 mm) – 5" option	11" x 36"
100	Made to requirements	1350 lb	As Required	As Required	AR
800	Dual Column Vertical	3300 lb (15 kN)	As Required	16" Wide	6.5" x 22"
801	Dual Column Vertical	3300 lb (15 kN)	As Required	20" Wide	6.5" x 26"
802	Dual Column Vertical	3300 lb (15 kN)	As Required	24" Wide	6.5" x 30"
806	Dual Column Vertical	3300 lb (15 kN)	As Required	36" Wide	6.5" x 40"