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CT-200

Tension and Compression spring analyzer

- The worlds most affordable, precision, digital spring analysis system
- Pocket PC controlled to achieve outstanding portability with PC functionality. (Optional laptop or PC models available).
- Portable 12kg (25lbs), servo-motor driven - ideal for placement on location at the coiler!
- Optional SPC control charts, capabilities tests and detailed report creation software
- Programmable for automated testing with spring test setups stored in files for quick recall and test.



- Automated loading, testing and sorting capabilities
- Excellent R+R performance
- Unique spring design module integrated with the system test results to enhance coiler setup efficiency and facilitate spring re-engineering, (optional).
- Includes automatic Self Calibration Routines

Specifications

	Compression	Tension
Load	<ul style="list-style-type: none"> 200N (45lbf), standard load range, resolution – 0.01N (0.0022lbf) Optional 40N (9lbf) load range, resolution – 0.0015N (0.00034lbf) Continuous digital display or Force/Load height graphical analysis tools and display Accuracy: ±0.04N (to 200N) and ±0.009N (to 40N) Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load) 	
Stroke	198mm (8")	190mm (7.5")
Fixtures	<ul style="list-style-type: none"> Standard flat top/bottom compression fixtures Optional fixtures for buckling springs 	<ul style="list-style-type: none"> Standard 3mm (0.12") pin fixtures for open or closed loop tension springs Optional additional pins
Displacement	<ul style="list-style-type: none"> Resolution: 0.005mm (0.0002") Accuracy: ±0.02mm (±0.0008") Absolute display of load height above a user defined fixed reference. 	
Free Length	<ul style="list-style-type: none"> 198mm (8") Maximum Automatically determined 	<ul style="list-style-type: none"> Within 190mm (7.5") Automatically determined
OD	55mm (2.2") Maximum	55mm (2.2") Maximum
Spring rate	<ul style="list-style-type: none"> Automatic or manual determination of spring rate (linear analysis), option for characterization of non-linear rates (e.g. conical springs) 	
Initial tension	NA	Automatic detection of tension spring initial tension.
Display	<ul style="list-style-type: none"> 256-color touch screen display / 17" Color monitor with PC option. 	
Computer	<ul style="list-style-type: none"> 133MHz (minimum) SH3 processor with 16Mbyte Flash RAM Serial, USB or infra-red connection to PC for data transfer Pentium Processor PC or Laptop optional. Fully Microsoft Windows 2000, ME and XP compatible 	
Languages	English, German, French and Spanish	
Software Features	<ul style="list-style-type: none"> Programmable for automated testing, Includes frelength, initial tension and spring rate results. Solid Height detection included. Full reporting and printing capability available. On-line and off-line SPC control charts and Cpk capability testing available. Design and reverse engineering algorithms Smart self calibration routines 	
Units	N, kgf, gf, ozf, lbf – mm, inches	
Test speeds	1.5mm/s – 12mm/s (3.5"/min – 28.5"/min)	
Power	<ul style="list-style-type: none"> 110V~220V AC 1.5A (Maximum) 	
Dimensions	<ul style="list-style-type: none"> 180mm x 440mm x 550mm (7.1"x17.3"x21.6") - LxBxH Weight 12kg (25lbs) 	

The top screenshot displays a graph with the title "L=16.02mm-F=0.00N 7:36a". The y-axis ranges from 0.00 to 2.00, and the x-axis ranges from 0 to 20. A linear fit line is shown with a slope of k=0.348. A data point is highlighted at L=11.95mm and F=0.40N.

The middle screenshot shows the "Design analysis" dialog box with a title "2:25p". It includes sections for "Spring data" (Material: Hard Drawn MB - 0.8mm, Service Condition: None, Wire Type: Round, End Type: PL-Open or Plain, Coil Dia: 0.025) and a table of parameters:

Item	Input	Output
Coil D	0.5	
OD	7.8	
FL	91.29	
TC	122	
AC		
HID		

The bottom screenshot shows a graph with the title "Xbar - F1 1:02p". The y-axis ranges from 1.88 to 2.22, and the x-axis ranges from 0.00 to 8.00. A table of variables is shown below the graph:

Variable	Value
F1	2.05
F2	2.03
F3	2.01
Fit	2.01
Other	2.02

The "Capability" section includes a "Cpk" dropdown menu and a "Go" button.

Full function spring design, analysis and SPC in real-time