

No.250、260

STROGRAPH

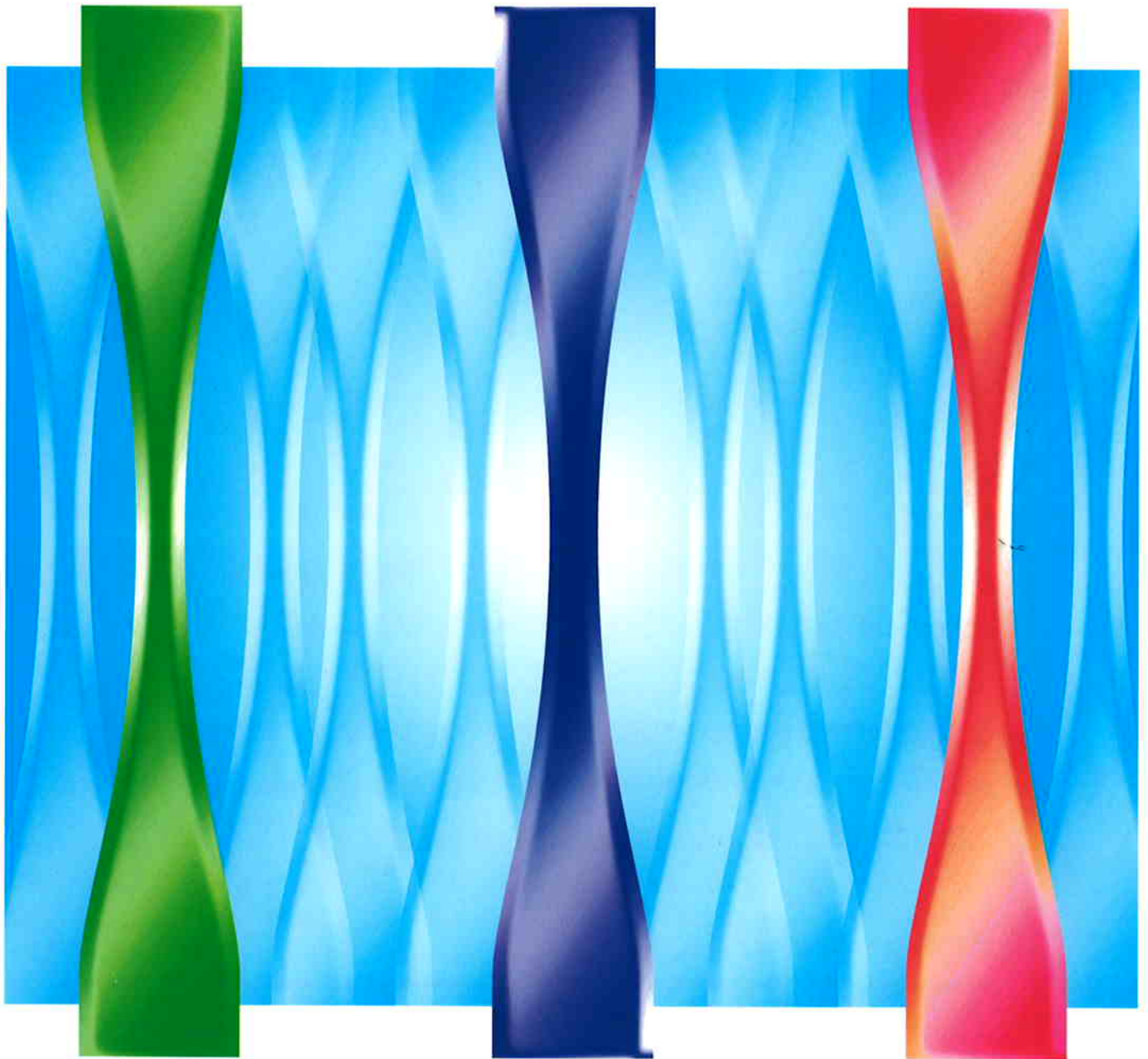
Universal Type Tester with High Performance CPU Control

Strograph

V

Series

V·VG·VGS



TOYOSEIKI

No.250, 260

Strograph

Series

V · VG · VGS

Tensile test is one of basic methods of testing mechanical properties of materials. Though measuring method is simple, but since it provides many informations useful for clarification of characteristics of materials, it is being used as the most general testing method.

The Strograph V Series comprises tensile testers pursuing ease of operation and cost performance. These universal type testers with original design matching with the atmosphere of laboratory and incorporating advanced high performance CPU control widen evaluation test functions by using special jigs for bending and compression etc. in addition to conducting tensile tests.

Models VG and VGS are newly designed to meet wide needs of users.

Universal Type Strograph with High Performance CPU Control

STROGRAPH

Three Basic Models Selected by Load Capacity (V•VG•VGS)

No.250



V50

(Floor Type)

- Original design matches with modern laboratory atmosphere.
- Models V and VG can be selected as floor type or desktop type.
- Compact, light weight with high performance.
- Good looking and movable control panel attached by magnet.
- Data output can be connected to personal computer, recorder and printer.
- Crosshead return speed is automatically selectable by fuzzy function, assuring safety and efficiency.

No.260



VG

Series

(Floor Type)

(Desktop Type)

No.260



VGS

Series

(Desktop Type)

Control Panel

Strograph's Ease of Operation Realized on the Control Panel



B-SET

Breaking detection level can be set.
% drop from peak is judged.

AUTO

Load range is automatically selected.
Starts from set range and automatically increases range before
over range.

mm
%

Crosshead stroke can be selected in mm or % unit.
Sample's strain is directly read in mm or as % of set chuck span.

S.S

Crosshead speed is selected (with registration func-
tion) in 0.5mm/min steps, non-step up to maximum
1000mm/min.

Selected by combination of speed setting buttons.

FINE
SPEED

Convenient for fine adjusting crosshead position.
Chuck position on moving side can be fine adjusted with speed
proportional to switch pressing force.

TEST

Links with data processing unit (personal computer,
recorder, printer).

Simultaneously starts selected processing unit.

A-RET

Q-RET

Crosshead returns to home position
A-RET: with fuzzy speed after end of test,
Q-RET: with set speed after stopping,
by manual operation.

Data Output Choice

Computer (Option)



All test results
can be output to 3
data processing units.
Select according to
need.

- (1) Personal computer
(See next page)
- (2) Recorder
(See specifications)
- (3) Printer
(See specifications)

Recorder (Option)



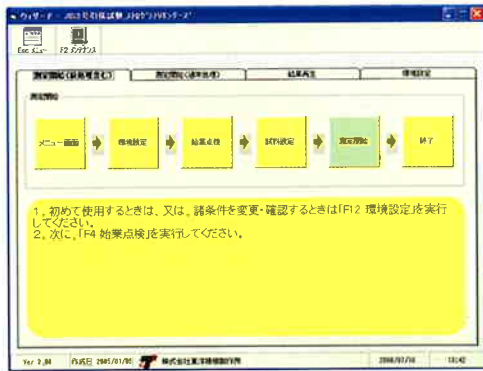
Printer (Option)



Windows Soft Display Examples

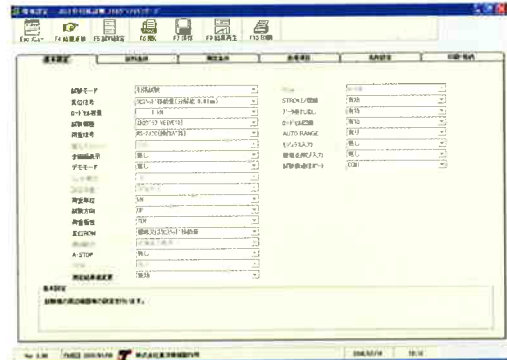
Data processing software allows measurement by tensile test, tearing test, compression test, bending test and peeling test and possesses the following features.

- (1) Description of operation can be viewed by displaying wizard window.
- (2) In result reproduction window, graph display color can be changed and graphs of different lots can be displayed by multiplotting.
- (3) Once measured result can be recalled and can be overwritten by measuring once again.
- (4) Past test result can be recalled and compared while conducting measurement.
- (5) Recalculation can be done by adding processing items to once measured result.



Wizard Window

Flow of software operation is described in wizard window.



Environment Setup - Basic Setup Window

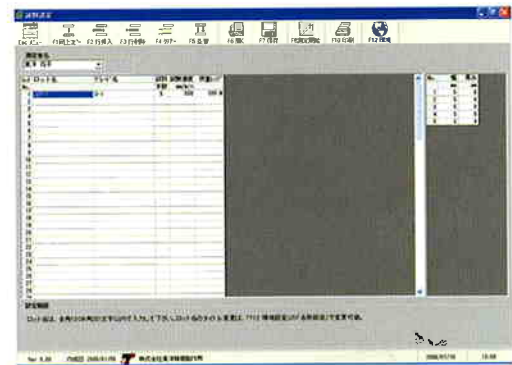
Basic setup, sample conditions, measuring conditions, processing items, etc. can be registered and recalled.



Environment Setup - Processing Items Window

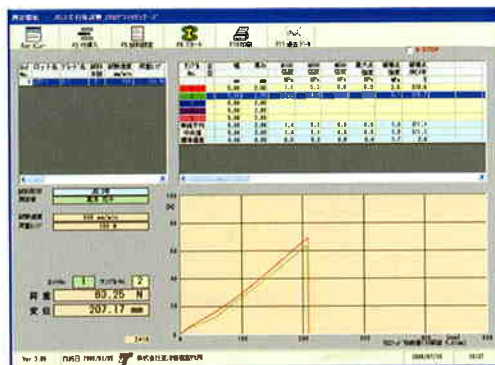
Processing items can be arbitrarily layout in unit system, format, etc.

One processing item can be selected as judgement standard and good/bad judgement can be made.



Sample Setup Window

Sample setup can also be registered and recalled. If in same test mode, maximum 100 lots of samples (up to 20 samples per lot) can be registered.

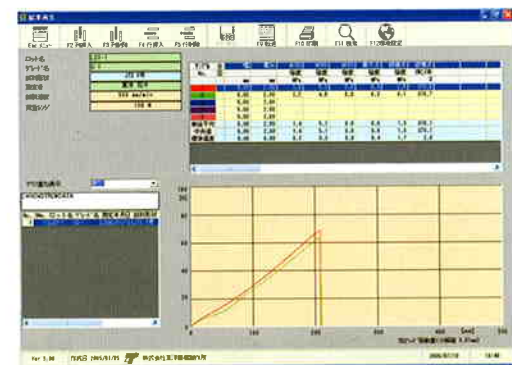


Measuring Window

Stroke and load multigraphs are drawing during measurement.

Test results can be transferred to Excel sheet. Measured graph can also be saved in text format file that can be read out in Excel.

Previous measured data can be recalled and seen during measurement.



Result Re-play Window

Result re-play window allows you to re-calculate modulus of elasticity and re-specify values of other processing items on graph.

Moreover, you can re-calculate by adding processing items.

Multiple graph of different lots can also be displayed.

Options



Contact Type Mark Tracer (Model DE-C)

Traces elongation between the marks by directly clipping at the marked part of sample.

• Main Specifications

- | | |
|----------------------------|--|
| 1. Stroke detecting system | Pulse type encoder |
| 2. Marks span | 20mm~50mm |
| 3. Tracing range | Max. 1,000mm (effective stroke) |
| 4. Resolution | 0.01mm |
| 5. Thickness of sample | 0.01 ~ 5.0mm |
| 6. Measuring range | 10, 20, 50, 100, 200, 500, 1000mm full scale (analog output) |
| 7. Dimensions | W270 x D300 x H1,390mm |
| 8. Electric power source | AC 100V 50/60Hz 3A |

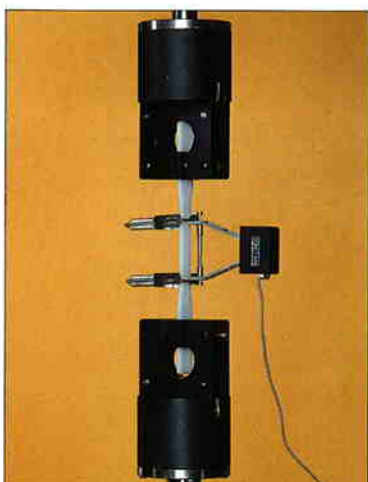


Contactless Type (Optical Type) Mark Tracer (Model DE-A)

Incorporates image splitting system in which images of two marks (upper and lower) marked on the sample are properly captured by two cameras, and the tracing cameras trace the marks while capturing the center of the mark images from start of pulling to breaking without regard to the color of sample.

• Main Specifications

- | | |
|--------------------------|---------------------------------------|
| 1. Tracing system | CCD camera system (resolution 0.1mm) |
| 2. Marks span | 20, 25, 50mm |
| 3. Color of sample | All colors possible |
| 4. Tracing range | 450mm (dumbbell No.3) |
| 5. Marking ink | Main mark (silver), mask mark (black) |
| 6. Light source | High intensity LED |
| 7. Dimensions | W250 x D250 x H1,700mm |
| 8. Electric power source | AC 100V 50/60Hz 2A |



Fine Elongation Meter (For Elasticity Modulus Meas.) (Model D)

• Main Specifications

- | | |
|----------------------------|---|
| 1. Stroke detecting system | Strain gauge |
| 2. Marks span | 50mm |
| 3. Stroke range | 0.25, 0.5, 1, 2, 5mm 5 ranges |
| 4. Zero correction | One touch auto zero system |
| 5. Full calibration | Electrical calibration or calibration device for fine elongation meter (option) |
| 6. Accuracy | Within $\pm 0.5\%$ |
| 7. Output | DC10V F.S (each range) |
| 8. Electric power source | AC 100V 50/60Hz 1A |
| 9. Dimensions, weight | W135 x D390 x H230mm 6kg |

* As regards fine elongation meter for Strogaph, refer to its separate pamphlet.

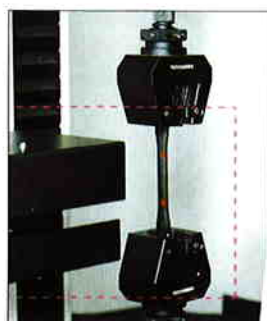


Fine Elongation Meter calibration device (Option)



Contactless, Laser Type Elongation Tracing Device (Model DE-S) (Contactless type elongation measuring device needing no marking, No.906)

This contactless type allows elongation measurement by simply irradiating two marks with respective laser beam.



• Main Specifications

- | | |
|-------------------------------|--|
| 1. Applicable sample | Plastic, rubber, GFRP, CFRP, ceramic, metal, etc. |
| 2. Setting laser span | 20~50mm |
| 3. Resolution | Large change type 10 μ m, fixed optical unit 1 μ m |
| 4. Elongation measuring range | Within effective stroke of tensile tester |
| 5. Maximum tensile rate | 500mm/min |
| 6. Light source | Red semiconductor laser |
| 7. Color of sample | All colors possible |
| 8. Electric power source | AC 100V 1 ϕ 5A 50/60Hz |

Air Chucks

Easy to Use Chucks

Kind of chuck has to be selected according to the material to be tested, but general purpose test samples can be covered by vise type or wedge type clamping chuck. As regards clamping operation, manual type, air type and in case of large capacity vise type chuck, hydraulic type is also available.

The following two types are typical examples of air type clamping chucks by which the operator does not get tired.

Fixed position wedge chuck
(air operated) (Patent pending)



Suitable for sample of slippery material of hard surface.

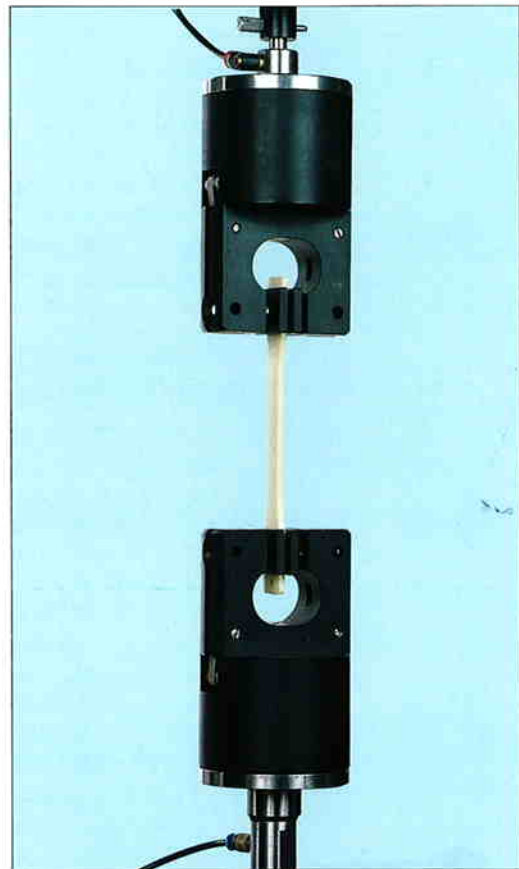
(Example)

Hard plastic, metal sheet or wire, thick sheet of soft plastic, etc.

Tensile capacity

For 5kN, 10kN, 20kN

Vise chuck (air operated)



Suitable for sample of material soft to slightly hard material.

(Example)

Film, rubber, paper, cloth, soft plastic sheet, thread

Tensile capacity

For 500N, 1kN, 2kN, 5kN

(Note) High capacity types of other shapes are also available.

Full Automatic Tensile Tester

No.211 Strograph AE
(Elastomer)



Tensile test is automatically performed by simply setting the dumbbell samples in the tray.

No.211 Strograph AE
(Film)



Tensile test and peeling test of soft samples such as plastic film are automatically performed.

No.211 Strograph AE
(Superia)



Cutting of dumbbell sample from original sheet, tensile test and all processes such as hardness, specific gravity, etc. are automatically performed.

No.218 Strograph APII



Tensile test of plastic from measurement of elasticity modulus to breaking of plastic sample is automatically performed.