

Technograph TGI series

2023/12/27

Features



•New Desk-Top testing machine with high accuracy, high performance, and simple operation.

■ High Accuracy

Accuracy of $\pm 1\%$ (JIS Class 1) of the indicated value from 1/1 to 1/1000 of load cell capacity, accuracy of $\pm 0.5\%$ (JIS Class 0.5) is available as an option.

Cross head speed range of 0.0005 mm/min to 1000 mm/min (TGI-50kN to TGI-250kN : 0.0005 mm/min to 500 mm/min).

Accuracy of cross head speed is $\pm 0.1\%$ of speed setting over entire speed range.

■ High performance with simple operation.

Automatic load cell span adjustment, One-push auto zero, Auto return to test start position (No overshooting), Test condition registration, Manual 3 level speed setting (freely settable), Analog output of test force and position, and support for continuous repeated tensile and compression testing.

■ Increased accuracy, with servo motor resolution four times greater than previous models. Position control is greatly improved, allowing steady operation in low speed ranges.

■ Increased return speed

The return speed can be set as desired between 0.1 mm/min and 1500 mm/min (up to 10kN) and between 0.1 mm/min and 750 mm/min (for 50kN and over).

Specification

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Specification name	Specification contents
Maximum test force	250 kN, 100 kN, 50 kN, 10 kN, 5 kN, 1 kN, 500 N, 200 N
Test space	Tensile and Compression testing beneath the movable crosshead. (An optional model is available allowing tensile testing above the movable crosshead.)
Loading method	Constant-speed strain loading with high-accuracy AC servo motor and backlash-free precision ball screw
Crosshead speed/permissible test force	Within the max. test force over the entire speed ranges.
Test force range	Choice of ×1 (AUTO) and ×100 if load cell rated output is 3 mV/V; ×1 (AUTO) if load cell rated capacity is 20 N or less. When ×1 (AUTO) is set: test force increase/decrease, full scale display, and automatic switching of decimal point position and display units
Test force measuring accuracy	±1% of indicated value in range 1/1 to 1/500 of load cell capacity for both tensile and compression (A high-accuracy model with ±0.5% of indicated value is available as an option.)
Applicable standard	JIS B 7721 Class 1 or Class 0.5 and ISO7500-1 Class 1 or Class 0.5
Crosshead speed accuracy	±0.5% of speed setting or ±0.0025 mm/min, whichever is larger
Speed setting method	Manual: Numeric input via control panel (0.1, 0.5, 1 to 500 set in 1 mm/min increments) When using data processing software: Automatically set in accordance with test conditions created.
Manual speed	3 speeds (HIGH/MIDDLE/LOW); each speed freely settable
Test mode	Single and cycle (combination of test force and position) Optional: Creep, stress relaxation, automatic loading
Display	5-digit digital display ±99,999, able to display peak or rupture test force, position: 5 1/2 digital display ±1999,999
Standard functions	Load Cell model and capacity: Auto adjust Load Cell span: Auto set for tension/compression. Load Cell Zero point: One push Position reset: One push Sample rupture detection: Selectable from stop, reverse and ignore Rupture sensitivity: Set as desired to 0.04 % to 99.00 % of test force Test condition registration function: 10 conditions Test force & position analog output: 0 VDC to 5 VDC (with scaling function) Interface: Conforms to USB 2.0/1.1 standard (B-type connector)
Options	Chuck adapter: Lower chuck mounting adapter for tensile testing Load Cell: for tension/compression type (with universal joint, connect pin, and compression plate) for tensile type (with universal joint and connecting pin) for compression type (with compression plate) Testing: Former jig is attachable. Displacement measuring function: Strain input type Test machine stand: Data processing software: Single, Cycle, Control
Power supply voltage, Frequency	TGI-250kN~TGI-10kN:3-phase 200 VAC±20 VAC, 50/60 Hz TGI-5kN~TGI-200N: Single phase 100 VAC ~ 115 VAC, 50/60 Hz
Operating temperature /humidity range	Temperature 5 °C ~ 40 °C, Humidity 20 % ~ 80 %RH (Non condensing)
Notes	Note 1: The test force measurement range varies depending on the rated capacity of the load cell used. Note 2: Testing machines are available with large effective width for models with maximum test force of 50 kN, 100 kN or 250 kN.

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Note 3: Models are available with extended stroke.

Note 4: Tensile testing stroke is for maximum test force capacity load cell with the (optional) chuck mounted.