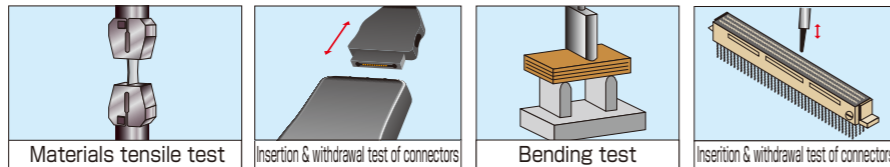


# Desk-top type Force Tester

## FTN 1-13A

Capacity: 500N/2kN (50Kg/200Kg)  
Force-Displacement



※Jigs are not included. (Optional)

This is an integrated force tester with a built-in amplifier for the compression and tensile force tests up to 2kN (200Kg). Two measurement speeds are available according to the load cell capacity (300mm/min. for 500N, and 125mm/min. for 2kN). A rotary encoder is provided for displacement detection. 7-segment LEDs are in use for data display. A software program is provided as the standard for easy tester operation and result output. Test conditions can easily be set by anybody.



### Features

- The max. allowable test force is 2kN regardless of its compact size.
- Two measuring speeds 5 to 300 mm/min. (500N) and 5 to 125 mm/min. (2kN) are provided.
- Compression, tension and breakdown tests are possible.
- The resolution is high at 0.1N for the force test and 0.01mm for the displacement.
- The power supply is 100VAC to 240VAC for worldwide uses.
- Simply operable personal computer software is provided as the standard.
- The load cell allows 3-ch calibration. (Optional feature)

### Standard Specifications

Item	FTN1-13A	
Max. force	500N (50Kg)	2kN (200Kg)
Max. speed range	5 to 300mm/min.	5 to 125 mm/min.
Moving speed range (inching & return)	5 to 300mm/min.	
Speed resolution	0.1mm/min.	
Resolution	Force	5000display 4-digit display
	2000display	4-digit or 5-digit display
	1000display	4-digit or 5-digit display
Displacement	0.01mm	
Accuracy	Force	3000 Series: ±0.2% F.S./UP Series: ±0.3% F.S.
	Displacement	±0.2mm
Driving block	Motor type	Stepping motor
	Motor control system	Pulse
Applicable load cell	UP Series & 3000 Series (Up to 2kN)	
Detector	Rotary encoder	
Input/output	Digital input/output	USB (For connecting to external PC)
	Analog input/output	Force (±10V/10bits)
Table size	Approx. 174 x 200mm	
Emergency stop	Installation on main body, driving block power off	
Outside dimensions	W300 x H820 x D400mm	
Weight	Approx. 40Kg	
Power supply	100 to 240VAC, single-phase, 3A	

### Performances

Item	FTN1-13A	
Measurement start trigger	Force/Displacement (LV setting available)	
Comparator	Force (Return/Stop, with a setting)	
	Displacement (Return/Stop, with a setting)	
Automatic zero	Upon receiving measurement start trigger	
Manual zero return	Zero resetting by key operation	
Breakdown	Breaking position detection (Detection sensitivity settable)	
Automatic return	Comparator/hardware limit (with speed setting)	
Data detection	Measurement positive peak detection (Force/displacement)	
	Measurement negative peak detection (Force/displacement)	
	Turn-back point (Force/displacement)	
	Measurement start point (trigger position) (Force/displacement)	
Automatic repetition of measurement	1 to 999999 times	
Real-time data output	Digital data output	

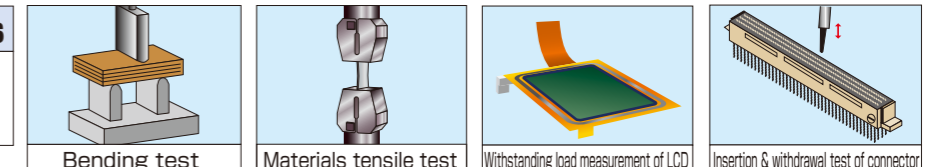
### Softwares

MODEL	FTN-3000	FTN-3001
	(Packed version)	(Full spec version)
Computer	DOS/V compliant IBM/PC compatible	
Operation system (OS)	Windows 7 or 8	

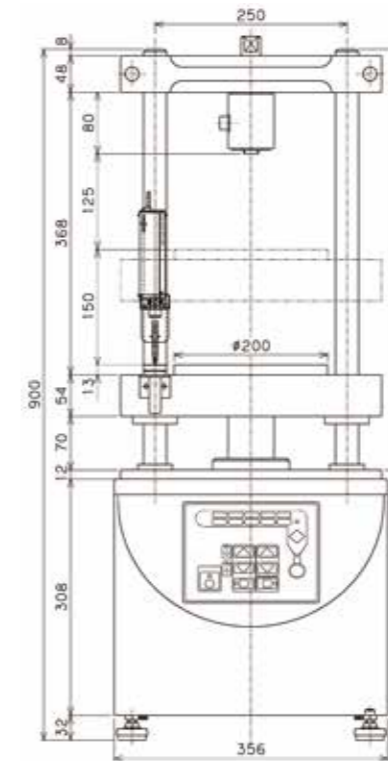
# Precision force testers

## MODEL-1310VC Series

Capacity: 2kN (200Kg)  
Force-Displacement



※Jigs are not included. (Optional)



### Standard Configuration

- MODEL-1310VC  
Tester: MODEL-1310VC  
Measuring amplifier: MODEL-1016C  
Load cell: 1pc (Up to 2kN)
- MODEL-1310VCW (Wide range)  
Tester: MODEL-1310VCW  
Measuring amplifier: MODEL-1016C  
Load cell: 1pc (Up to 2kN)
- MODEL-1311VC  
Tester: MODEL-1311VC  
Measuring amplifier: MODEL-1016C  
Load cell: 1pc (Up to 2kN)
- MODEL-1311VCW (Wide range)  
Tester: MODEL-1311VCW  
Measuring amplifier: MODEL-1016C  
Load cell: 1pc (Up to 2kN)

These are all-round desktop type precision force testers for force and displacement measurements up to 2kN (200Kg). When combined with MODEL-1016C amplifier, they can measure two-point data of force-displacement and breaking force-displacement.

A force-displacement graph is shown on an LCD panel in real time.

The two-column type is highly rigid, which makes these testers suitable for highly precise testing.

### Standard Specifications

Model	1310VC	1310VCW (Wide range)	1311VC	1311VCW (Wide range)
Max. force	2kN (200Kg)			
Test speed	5 to 125mm/min.	0.2 to 250mm/min.	5 to 125mm/min.	0.2 to 250mm/min.
Speed changing	In five steps or continuous			
Stroke	150mm			
Displacement display	Provided			
Detector	Rotary encoder		Linear gauge	
Display resolution	0.01mm		0.001mm	
Display accuracy	0.1mm		0.05mm	
Max. display value	±150.00mm		±30.000mm (Using linear gauge)	
Column length	548mm			
Column interval	250mm			
Table size	φ200mm CenterM10 x 1.5			
Driving mechanism	Ball screw			
Drive motor	DC brushless motor	Servo motor	DC brushless motor	Servo motor
Weight	Approx. 41Kg			
Size	W356 x H900 x D314mm			
Power supply	100 to 240VAC, single-phase, 1A	100 to 240VAC, single-phase, 5A	100 to 240VAC, single-phase, 1A	100 to 240VAC, single-phase, 5A