

## Series F-S Master

Compact/ Economy/ Simple operation,

Easy to draw 'force-displacement' graph

Better access to high quality brightens the field of quality control and R.&D.



\* Attachment and computer are not included in the unit.

### [Application]

- Used for strength test for various materials (tension test, compression test, shearing test, peeling test etc.)
- Multipurpose system is used in the variety kinds of field.

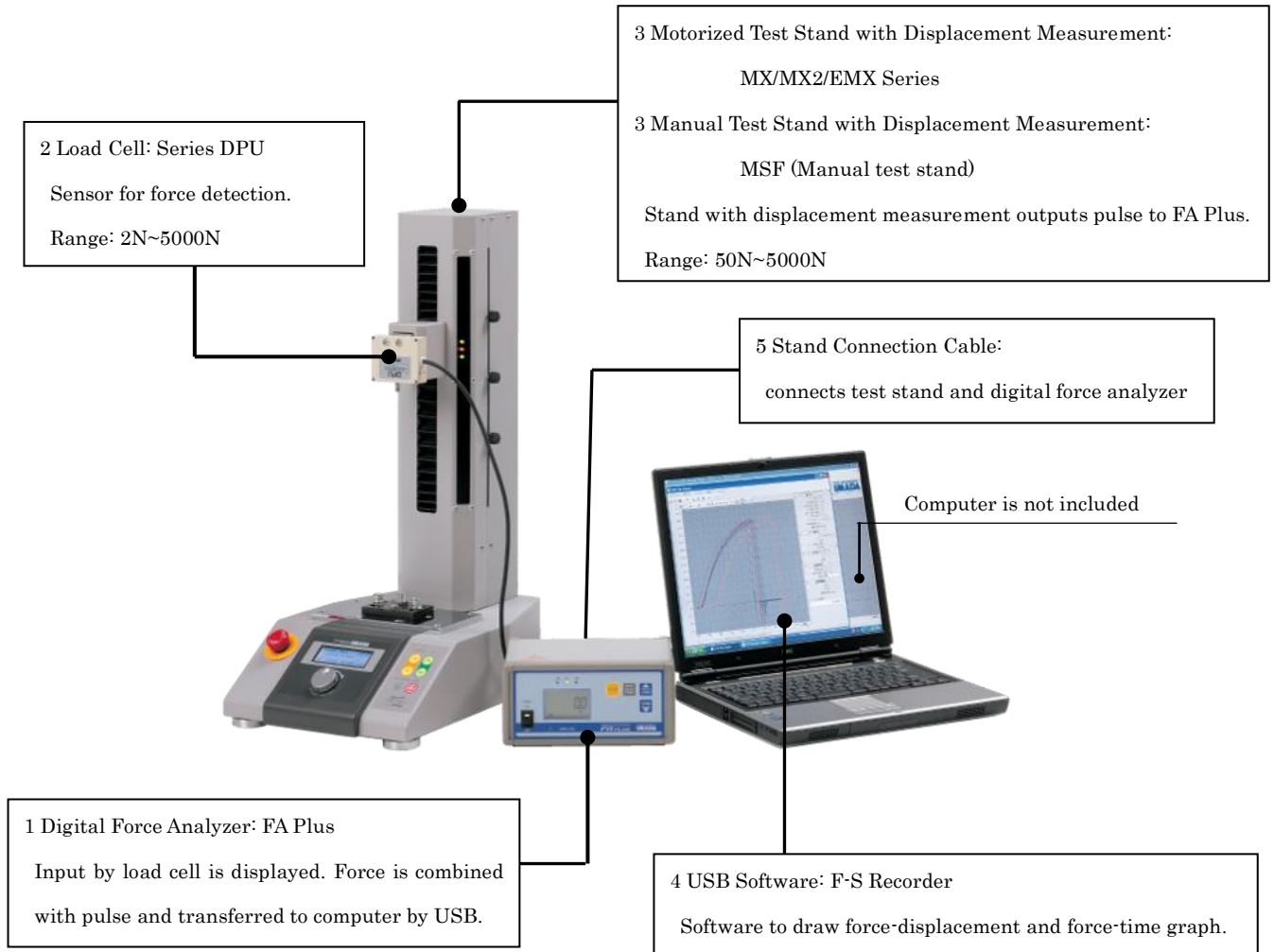
### [Characteristics]

- Keeping up with sudden force change by super high speed sampling (max 2000 times/ sec.)
- Spare sensor can be replaced with broken sensor. (Force calibration by standard weight is needed)
- Test stand includes functions of displacement pulse output, over-force prevention and force control
- USB correspondence software draws force – displacement or force – time graph at real time. Data comparison by displaying five graphs is possible. Automatic recording function by force or displacement trigger is available.

# Force-Displacement Measurement Unit

## [Contents]

Force – displacement measurement unit consists of 1~5  
Please note that attachment and computer is not included.



## [Model Name]

Wide variety of range is available for various purposes. Please choose one for stand and load cell respectively.

### ***F - S Master - 0.5K - 200N***

#### Range of Load Cell

2N, 5N, 10N, 20N, 50N, 100N, 200N, 500N, 1000N, 2000N, 5000N

#### Range of Test Stand

50N, 500N, 1000N, 2000N, 5000N

\*Load cell is DPU series. For another load cell, please contact us.

\*Please refer to the Stand Model chart on page 5 for detail.

---

## [1 Digital Force Analyzer: FA Plus]

Displays force value from load cell signal

- Change of unit. Track/Peak Selectable.
  - Comparator/ Overload, Sampling Hi/Lo Selectable.
  - Outputs displacement pulse from test stand and force value to computer with USB.
- \* Please refer to specification of FA PLUS for the detail and dimension.



---

## [2 Load Cell: Series DPU]

Load Cell for tensile and compression: Series DPU is included.

Range is from 2N to 5000N. Please choose one suitable for your purpose.

\* Please refer to specification for the detail and dimension.

---

## [3 Motorized Test Stand with Displacement measurement: Series MX (Option code-FA) ]

Displacement scale is attached to Series MX/MX2/EMX.

The range and instruction are the same with standard models.

Range is from 500N to 5000N. Please choose suitable one for your purpose.

## [3 Manual Test Stand with Displacement measurement: MSL ]

Displacement scale is attached to MSF manual test stand.

The instruction is the same with MSF. Capacity is 50N.

\*The displacement scale can be attached at factory to the stand you already use.

\*The specifications except pulse output is the same with the standard models.

---

## [ 4 USB Correspondence Software: F-S Recorder ]

Easy to draw force-displacement/ force-time graph with USB

- Direct input of super high speed sampling (max 2000times/sec.)
- Comparison of data by displaying five (max.) graphs
- Automatic start/stop function for recorder by force/displacement trigger
- Statistics (Max./Min./Average etc.)

### Operational Condition

OS: Windows2000 Sp3/ XP SP2/ Vista
Later than Microsoft Internet Explorer 5.01
Microsoft NET Gramework2.0

\* Please refer to specification of F-S Recorder for the detail.

---

## [5 Stand Connection Cable ]

Cable to connect test stand with digital force analyzer. Length-approx. 1m.

# Force-Displacement Measurement Unit

## [Specifications]

Item		Force-Displacement Test Unit
Model		F-S Master-□K-□N
Unit	Force	N(kN) , kgf(gf) , lbf(ozf) Selectable
	Displacement	mm , inch Selectable
Range	Load Cell	2N, 5N, 10N, 20N, 50N, 100N, 200N, 500N, 1000N, 2000N, 5000N Please choose one from Series DPU.
	Test Stand	50N, 500N, 1000N, 2000N, 5000N Please refer to Stand Model on page 5 for detail.
Resolution	Force	4 Digits with unit (Ex. Resolution of Load Cell 5N= 0.001N)
	Displacement	0.01mm (Displayed on F-S Recorder)
	Speed	0.1mm/min (Displayed F-S Recorder)
Accuracy	Force	±0.2%F.S. ±1 Digit
	Displacement	±0.1mm ±1 Digit (No force) * When max. force is applied, the stand may be deformed. upward and downward (approx. -1mm~+1mm)
Stand Model: Stroke: Speed		MSL: 80mm 0.5K2: 240mm: 10-300mm/min 1K2: 295mm: 10-300mm/min 1KE: 280mm: 0.5-600mm/min 2K: 340mm: 6-180mm/min 5K: 350mm: 10-300mm/min  *1 Please refer to Stand Model on page 5. *2 Stroke is travel distance. Possible distance differs depending on load cells and attachments.
Sampling Speed		max 2000times/sec.
Display Update		10times/sec.
Output		USB, RS232C, Analogue (Approx. -2V~2V), Comparator, Overload
Test Stand		Stroke limit, Over-force stop, Force control, Emergency stop
Power		AC100V~240V * Respective power is needed for both test stand and force analyzer
Accessories		Instruction manual, Inspection certificate, 2 Power cables, 2 Spare fuse, Driver CD-ROM, FAP Logger, F-S Recorder

\* Please refer to respective specifications of each product for the details.

---

## [Stand Model]

The model names of stands change as follows, when ordered as F-S Master

Model (standard)	Model (F-S Master)	Capacity
MSF	MSL	50N
MX2-500N	0.5K2	500N
MX2-1000N	1K2	1000N
EMX-1000N	1KE	1000N
MX-2000N	2K	2000N
MX-5000N	5K	5000N

## [Caution]

- Attached load cell is Series DPU. Please contact us for other types of load cell
- Please be sure to calibrate with standard weight when load cell is changed. If users do not have calibration system, we offer charged calibration service. Please contact stores about expenditure and period.
- The contents may change without notice.



Please feel free to contact us if not sure whether our products suit for your purpose.  
We are glad to help you with measurement, selection of suitable range, and so on.