



## Specifications LOAD TEST STAND

LTS-200N/LTS-500N

Spec.No. ENLTS4149-A

1/6

### 1. General

**Load Test Stand, LTS** is a desk type testing machine featuring light weight and compact size, and you can make tests easily. During the test, test force and shifting value of movable crosshead can be displayed digitally and also the peak value can be confirmed after tests.

You can make use of this Load Test Stand in Strength test on various kinds of materials and checks on products and so on in wide range of the fields.

### 2. Specifications

2-1	Max. testing capacity	LTS-200 N : 200 N LTS-500 N : 500 N
2-2	Testing space	Tension & Compression test can be made at the lower section of movable crosshead. The dimensions of testing space are shown on the Outline dimensions in page 6.
2-3	Allowable test force for test speed	Within all of the test speed: 200 N Within all of the test speed: 500 N
2-4	Movable crosshead speed	Between chucks :0 mm to 310 mm (PCH-500N-012 is installed.)
2-5	Movable crosshead speed	
	Setting method	
	Test speed	Digital display setting by the select mode. (Make selection by using [↑]·[←] keys.)
	Manual speed	One chosen speed in test speeds.
	Speed range	Select 4 speeds from the 4 speeds in below: (S100 will be the standard specifications.)
	<input type="checkbox"/> Speed range① (LTS-200N-S100/LTS-500N-S100)	
	Test speed	10、20、30、50、75、100 mm/min
	Return speed	One(1) speed in test speeds. The return speed becomes 100 mm/min when the “RAPID RETURN” is selected in the Function mode. (LED on the “RETURN” key lights on when the “RAPID RETURN” is selected.)
	Speed accuracy	Over-shooting prevention function attached. ±3 % of setting speed (No load applied.)
	<input type="checkbox"/> Speed range② (LTS-200N-S300)	
	Test speed	30、50、100、150、200、300 mm/min
	Return speed	One(1) speed in test speeds. When the “RAPID RETURN” is selected, the return speed is 300 mm/min. (When the “RAPID RETURN” is selected, the LED on the “RETURN” key will light on.)
	Speed accuracy	±3 % of setting speed. (No load applied.)



## Specifications

### Speed range③ (LTS-200N-S50/LTS-500N-S50)

Test speed

5、10、20、30、40、50 mm/min

Return speed

One(1) speed in test speeds

When the "RAPID RETURN" is selected in the Function mode, the Return speed is 50 mm/min.

(When the "RAPID RETURN" is selected, then LED on "RETURN" key will light on.)

Speed accuracy

±3 % of setting speed (No load applied.)

### Speed range④ (LTS-200N-S20/LTS-500N-S20)

Test speed

1.5、2、5、10、15、20 mm/min

Return speed

One(1) speed in test speeds.

When the "RAPID RETURN" is selected in the function mode, the return speed is 20 mm/min.

(When the "RAPID RETURN" is selected, the LED on the "RETURN" key will light on.)

Speed accuracy

±3 % of setting speed (No load applied.)

### 2 - 6 Test force measurement

Test force display

4 digits digital display (-sign applied.)

Display range

-9 999 to 9 999

Display

7 segments, red LED

Range

Once (1), 10 times

Can be changeable by the "RANGE" key.

(When 10 times is selected, the LED on the "RANGE" key lights on.)

Measurement accuracy

Once (1), ±0.1 % of full scale of load cell

10 times, ±0.5 % of full scale of load cell

Peak detection function

After the test, test force value in the peak and position value will be displayed in the test made directly before in the selection mode.

Auto zero function

Automatic zero point adjustment with the "ZERO" key.

Measuring unit

SI unit, N

Changeover of load cell

Change can be made in function mode.

3 kinds of load cells can be registered.

Detective function of sample break point

Detects when the test force decreases suddenly more than the sensitivity of break point detection after exceeding 7 % of rated capacity of load cell, or detects when the test force decreases less than 5 % of rated capacity of load cell.

Control at the time of break detection

At the time of break detection, stop of movable crosshead, reverse to position 0 mm and disregard of detection can be available.

Setting range of sensitivity of break point detection

0.1 % to 9.9 %

Setting method

Control and sensitivity of break detection can be set in function mode.



## Specifications

Analog output	DC±5 V (output connector :BNC female) Load resistance 5 kΩ or more, scaling function applied. Accuracy : ±0.5 %F.S. Resolution: Approx. 1/4 000 Output cable : Sold separately.
2 - 7 Position display of movable crosshead	
Position display	5 digits digital display (with - sign )
Display range	-999.99 to 999.99
Display resolution	0.01
Display	7 segments, red LED
Display unit	mm
Zero reset	Zero reset can be provided at the optional position with the "RESET".
2 - 8 Cycle test function	
MAX setting	Sets the MAX value against the test force or position value.
MIN setting	Fixed position value : 0 mm
Setting method	Digital display setting
No. of cycle times	1 cycle
2 - 9 Safety device	
EMERGENCY SW	Shuts the power supply of the testing machine during operation. (Lock method)
Stroke limit	Stops the operation of movable crosshead during operation. Setting can be made at the optional positions on upper/lower within the operating range of movable crosshead.
Limit of overload	Stops the movable crosshead when the test force value arrived at the ±102 % of rated capacity of load cell.
2 - 10 Keeping the test condition	Shuts off the power supply, and at the time of feeding power, the condition will be the one before shutting off. However, you can't keep the operation condition. (Keeps the condition when the movable crosshead stopped.)
2 - 11 Communication function	Used to communicate with the external devices such as personal computer and so on.
conform	Standard Conform to USB2.0. Also, applicable to the instruments to the USB1.1 standard. (Connector : B type female)
	Connection USB connection port
	No. of communication times Test force and position value can be transferred with 20 times/s.
2 - 12 Horizontal adjustment function	With level adjuster attached that can adjust horizontally at the lower section of testing machine.
2 - 13 Outline dimensions	Width 475 mm × Height 710 mm (*) × Depth 347 mm *□Lever adjuster is excluded. Space for the connection with connector at the rear side of testing machine. : 80 mm



## Specifications

2-14	Weight	Approx. 17 kg
2-15	Power supply	Single phase AC100 V ±10 V (50/60 Hz)、300 VA
2-16	Operating condition	Temperature : 5 °C□ to 40 °C□ Humidity :20 % to 80 %RH (Excludes frozen.)
2-19	Standard accessories	<input type="checkbox"/> LTTU-50N Rated capacity : 50 N <input type="checkbox"/> <b>LTTU-200N Rated capacity : 200 N</b> <input type="checkbox"/> LTTU-500N Rated capacity : 500 N (For LTS-500N)
	Load cell	
	Power supply cable	2.4 m 1 pce For AC100 V, one side 3P plug (with 2P conversion adapter )
	Fuse for power supply	Midget fuse 5 A, 1 pce
	USB communication cable	A connector male ~B connector male 2 m, 1 pce
	USB drier	Attached
	Instruction manual	Each 1 set (Main body of testing machine, standard software)
	Standard data processor software	LTSD-01 For set up CD-ROM : 1 pce Setting item Test condition name Kinds of tests (Tension/compression) Test force range (Once/10 times) Test speed (6 steps selectable) MAX control (LOAD/POSITION) MAX operation (STOP/RETURN) Input of the MAX value Sample break detection (STOP/RETURN/OFF) Input of sensitivity value of Sample break
	Printing items	s - s curve The maximum value (Test force · displacement) Break point (Test force · displacement)
	Data store	CSV file outputs of test data per sample. Test results (maximum point · Break point) Output of data CSV file
	Operational environment	OS : Windows XP(Japanese version) ,RAM: 256 MB or more USB port installed PC, CD-ROM drive (Required at the time of installation.)

### 3. Function of options (■ attached □ not attached)

- Analog output cable (CAC-124S-2M)  
BNC cable (one-side Y terminal, 2m)

※Specifications and outline dimensions and so on which have printed may subject to change for the propose of improvement without notice.

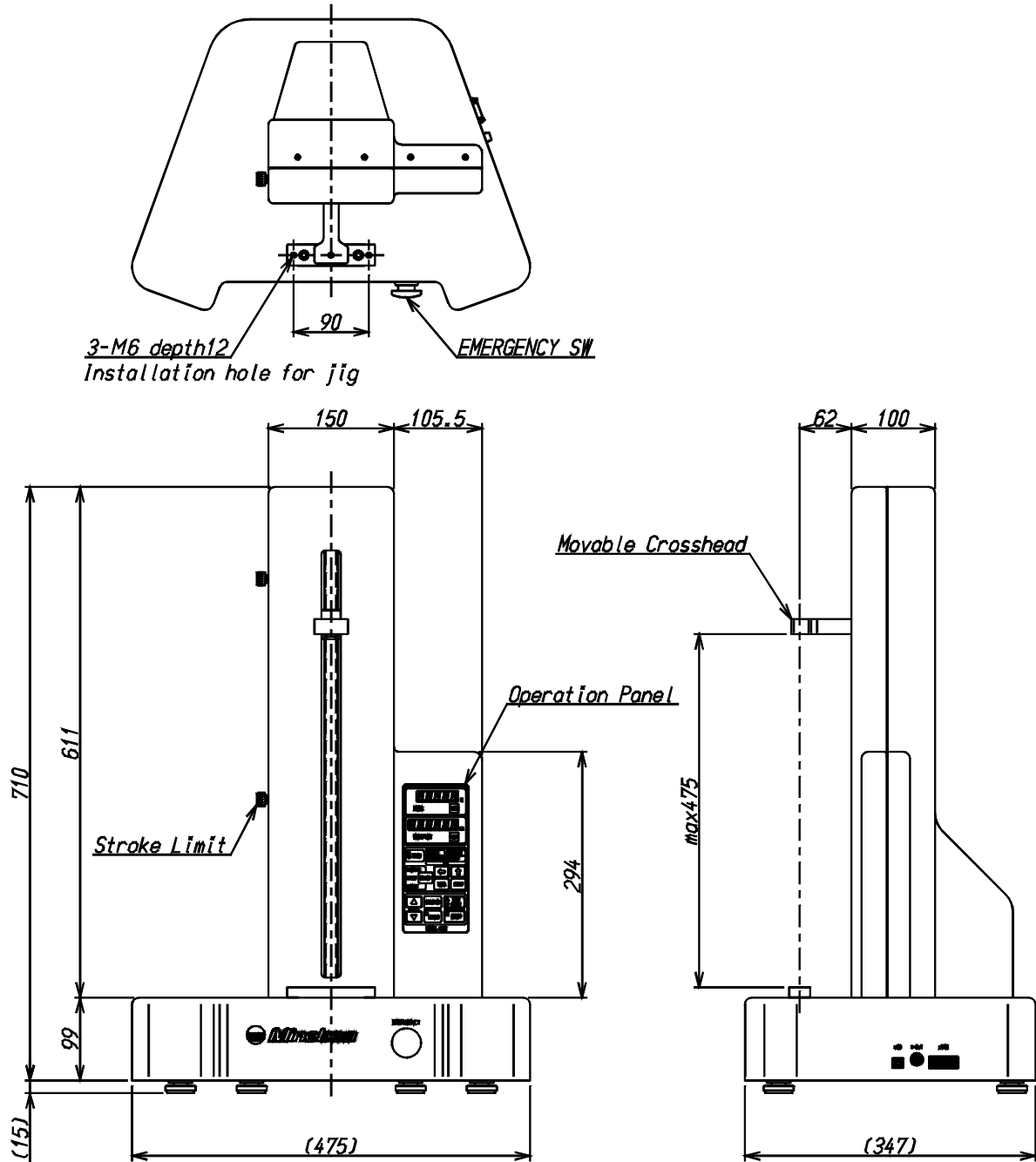


LTS-200N / LTS-500N

Spec.No. ENLTS4149-A 5/6

## Specifications

Outline dimensions of testing machine



Unit : mm

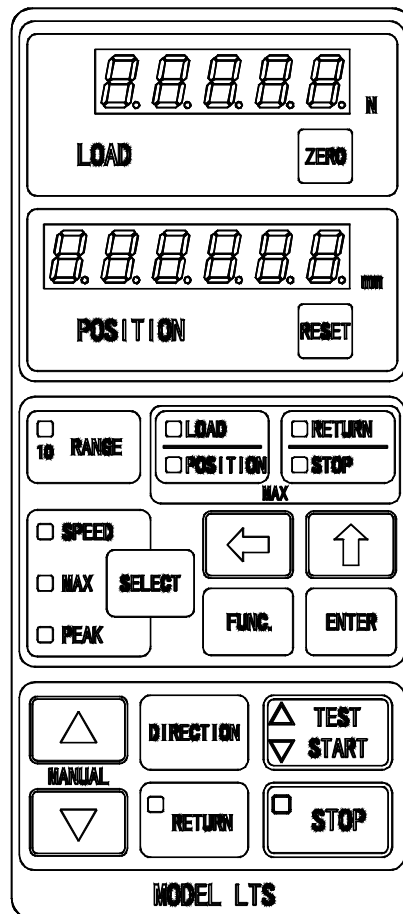
# Specifications

LTS-200N / LTS-500N

Spec.No. ENLTS4149-A

6/6

Outline dimensions for operation panel



Test force display section(LOAD) : Displays test force value, setting item and set value.

Position display section (POSITION) : Displays position value, setting item and set value.

“ZERO” key : Resets the test force value to zero.

“RESET” key : Resets the position value to zero.

“RANGE” changeover key : Changes the test force range. (once, 10 times)

“LOAD/POSITION” changeover key : Changes the kinds of control (LOAD,POSITION) at the MAX point.

“RETURN/STOP” changeover key : Change the kinds of operation (RETURN, STOP) at the MAX point.

“SELECT” key : Changes the SELECT menu (SPEED, MAX, PEAK).

“←”key : Changes the set value and shifts the digit of set value to the left.

“↑”key : Changes the set value and increases the set value.

“FUNC.” key : Change the Measurement mode for the Function mode.

“ENTER” key : Decides the setting items and set values.

“▲” key : Ascend the movable crosshead to upwards. (Manual operation)

“▼” key : Descend the movable crosshead to the downwards direction.  
(Manual operation)

“DIRECTION” changeover key : Changes the test direction .(upward, downward)

“RETURN” key : Reverses the movable crosshead to the position 0 mm.

“TEST START” key : Starts the test.

“STOP” key : Stops the test.