

SHIMPO

Force Gauge Stand

FGS-50L Operation Manual

■ Safety Precautions

Thank you for purchasing the NIDEC-SHIMPO product.

To ensure safe use of this product and obtain the best result of the product functions, be sure to read this operation manual before use of this product. In this operation manual, the levels of hazard defined in safety precautions are classified into the following categories: [DANGER], [WARNING] and [CAUTION].



DANGER

Indicates hazardous conditions that may result in death or serious injury if this product is improperly handled, and limited conditions that need highly urgent warning in case of hazard.



WARNING

Indicates hazardous conditions that may result in death or serious injury if this product is improperly handled.



CAUTION

Indicates hazardous conditions that may result in slight injury or property damage if this product is improperly handled.

Even if a hazardous level is defined as **CAUTION**

it may result in serious accident depending on the situation.

Be sure to observe these instructions, because they all provide important information.

After reading this manual, be sure to keep it in the place where users can refer to it anytime.



Read Carefully

To ensure safe and proper use of this product, be sure to read this operation manual carefully before using the product, and thoroughly understand the handling procedure.

[Installation and Measurement]



DANGER

This product is heavy. Use thorough caution when handling this product during installation.

If this product accidentally falls onto feet, it causes serious injury. Use thorough caution when handling this product.



WARNING

During measurement, be careful not to get your hand or finger caught in the slide assembly.



CAUTION

During measurement, use thorough caution against workpiece scatter.



CAUTION

Do not move this product by holding the lever or handle.



CAUTION

Do not install this product in a place with high humidity, or a place where it may be directly splashed with water.

■ Operating precautions

1) Avoid using or storing this product in the following places:

- 1) A place where this product is exposed to water, oil, chemical or dust.
- 2) A place where this product is exposed to vibration of other machinery.
- 3) A place where a high temperature (40°C or higher) is expected.

2) If this product is splashed with water, oil or chemical, wipe it off immediately.

3) Avoid cleaning this product with paint thinner or gasoline.

■ Before operation

Make sure that the package contents conform with your order.

Unpack the product, and check the following points:

- 1) Check the model and type indicated on the attached nameplate.
- 2) Check the product for damage attributable to transportation.
- 3) Check the accessories. (Refer to the following accessory list.)

Accessory list

Item	Quantity
Cross-recessed pan head screw, M4 x 8, For FGC/FGN	4pcs
Cross-recessed pan head screw, M5 x 6 For FGX	3pcs
Hexagon wrench, 5 mm	1 pc
Cable grip	1 pc
Socket head bolt, M6 x 16 (for Jig mounting)	2pcs
Set screw M6 x 20 (for film chuck)	1pcs
Plain washer, M6	2pcs
Operation manual	1 copy

■ Mounting the accessories

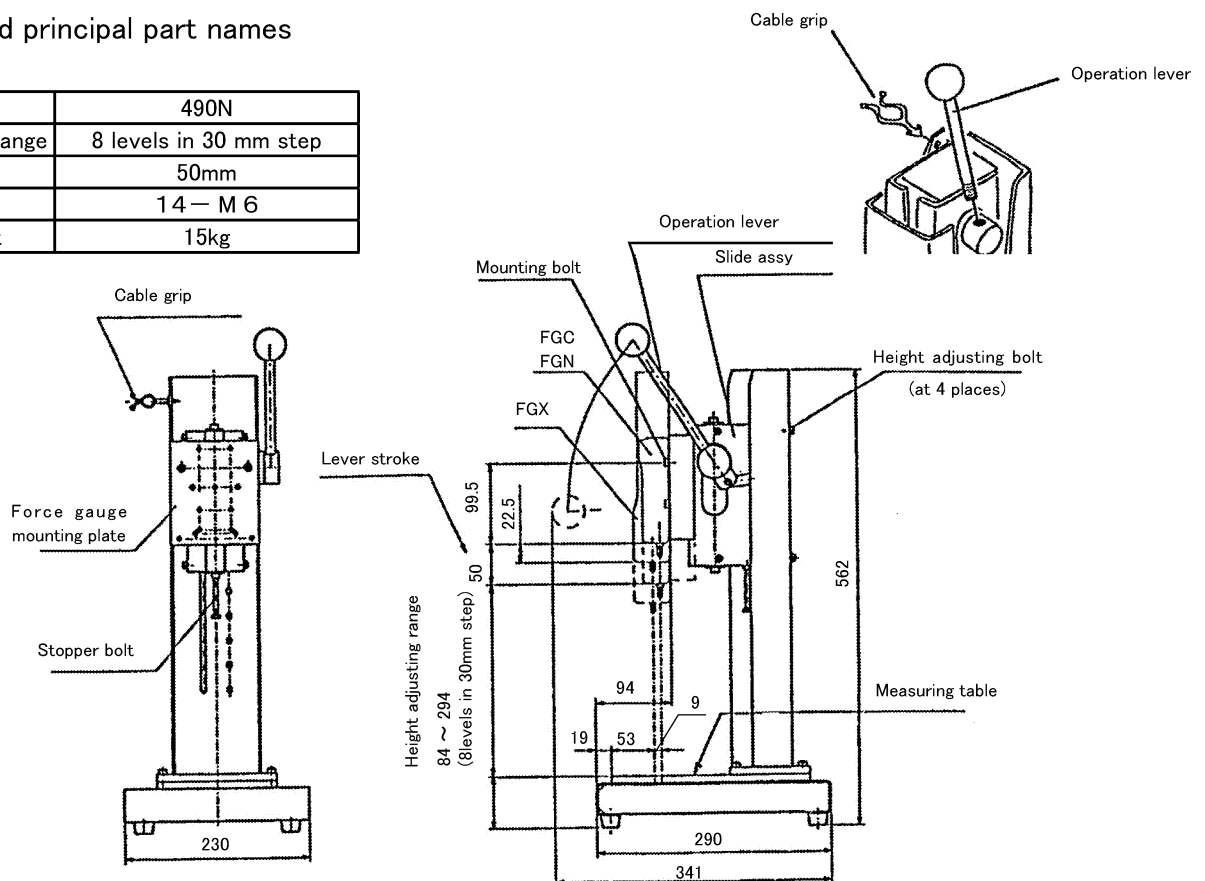
1) Screw the supplied operation lever into the lever boss as shown on the right.

2) Attach the cable grip to the stand body.

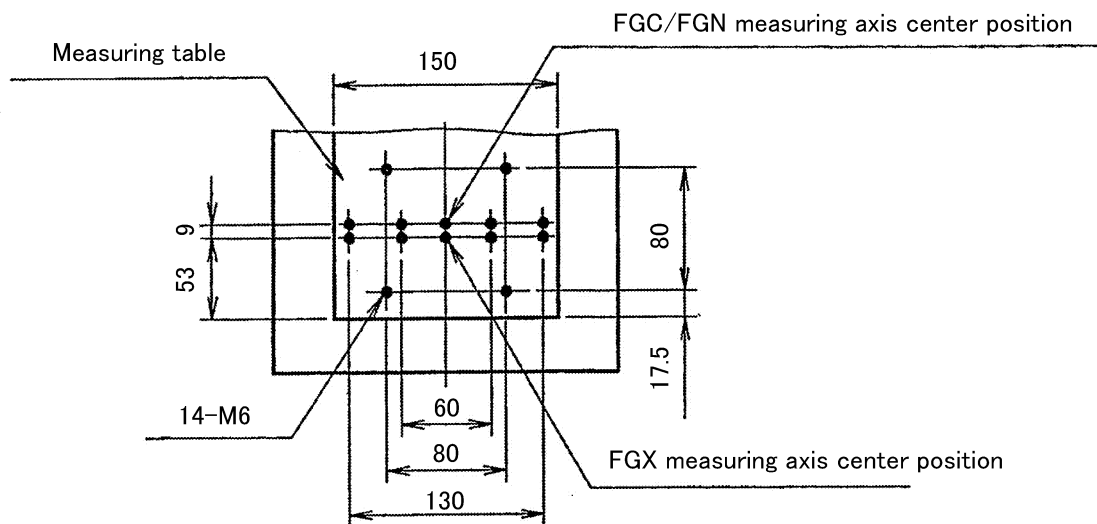
■ Appearance and principal part names

Specifications

Load capacity	490N
Slide height adjusting range	8 levels in 30 mm step
Stroke	50mm
Jig mounting hole	14 - M 6
Stand body weight	15kg

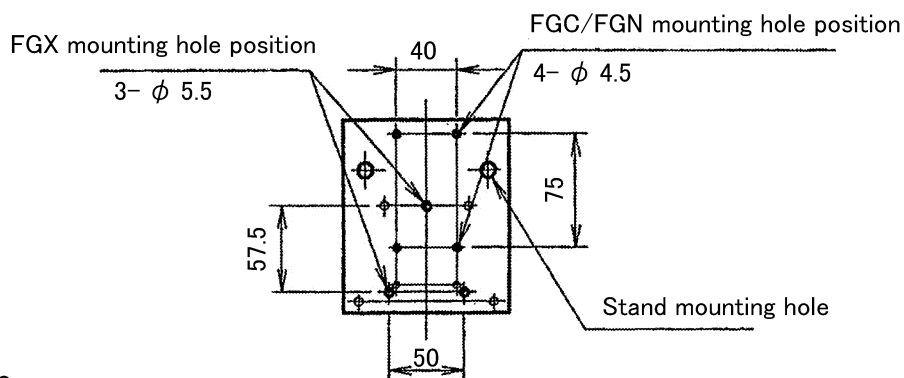


■ Screw hole positions on measuring table



■ Force gauge mounting hole positions

The mounting holes other than those indicated by arrows are intended for the DFG-0, and DFG-2 to DFG-50 (old types).



■ Stroke adjustment procedure

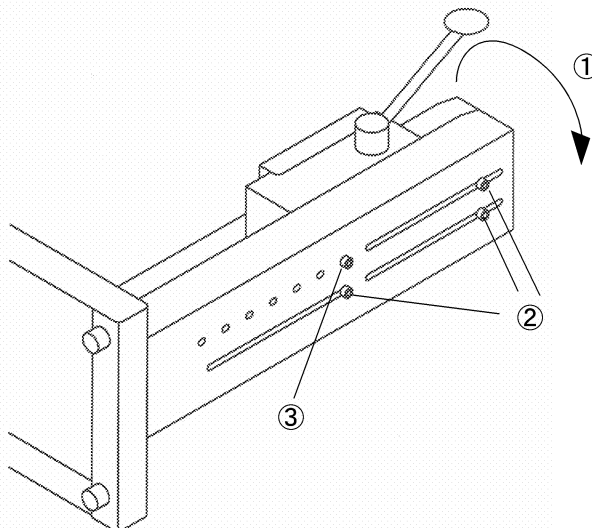
The force gauge stroke can be adjusted with the lever.
The stroke adjusting range is 50 mm.

■ Slide height adjustment procedure

If height adjustment cannot be performed with the lever, 8-level 30 mm-step height adjustment is enabled by moving the slide assembly.

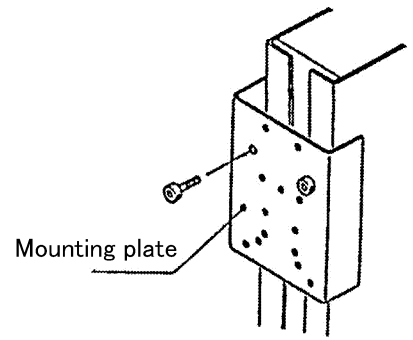
- ① Lay the stand body with the side facing up. (Remove the cable grip beforehand.)
- ② Loosen the height adjusting bolts in three slots out of four. (Do not remove the bolts.)
- ③ While raising the slide assembly, remove the bolt from the small hole, and hold the slide assembly at an appropriate position. Then, tighten the remaining three bolts.

In this step, be careful not to get your hand or finger caught between the slide assembly and the stand body.

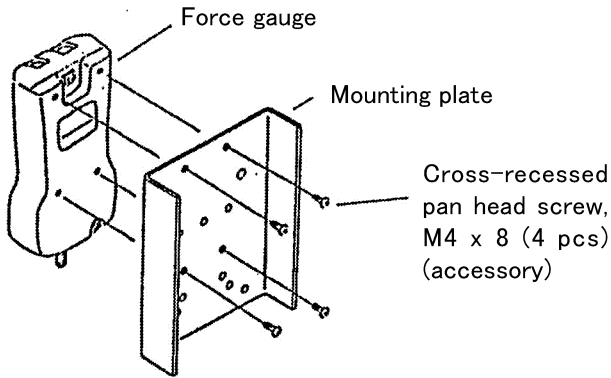


■ Force gauge mounting procedure

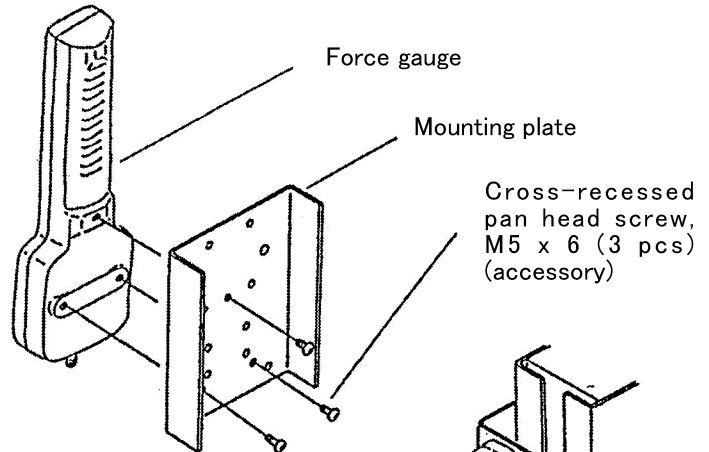
- 1) Remove the mounting bolts by using the hexagon wrench (accessory), and remove the force gauge mounting plate.
- 2) Mount the force gauge to the force gauge mounting plate as shown below.



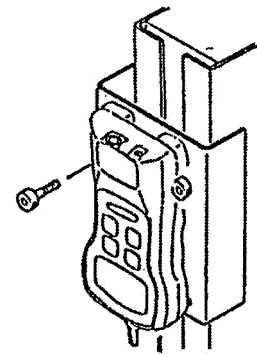
FGC/FGN series



FGX series



- 3) Mount the force gauge to the stand body by using the removed bolts.

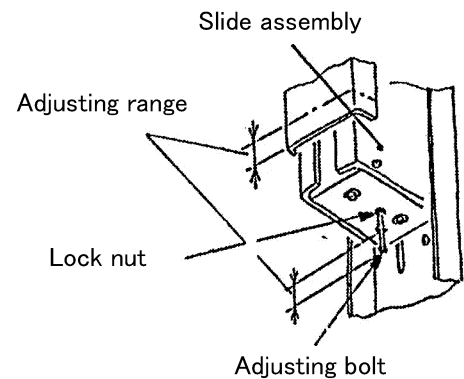


■ Stopper adjustment procedure

To determine the force gauge lower end position during measurement, adjust the stopper position according to the procedure below.

Loosen the lock nut at the bottom of the slide assembly.

- 1) As the adjusting bolt is screwed into the slide assembly, the stopper position is raised.
- 2) After positioning the stopper, tighten the lock nut to complete the stopper adjustment procedure.



■ Measuring procedure

Install the stand body on a level solid table.

During measurement, operate the lever at a constant speed as smoothly as possible. If the lever operation speed is rapidly changed (to a high or low speed), accurate measurement cannot be performed.

During measurement and height adjustment, use thorough caution not to apply impact to the force gauge measuring axis.

The measuring stand can be horizontally installed.

To apply large load, fasten the stand body.

For details on the force gauge, refer to the force gauge operation manual for each model.

SHIMPO

NIDEC-SHIMPO CORPORATION

1 Terada, Kohtari, Nagaokakyo-city, Kyoto, Japan

Phone:(075)958-3608 FAX:(075)958-3647