Niigata Seiki | For Operational Use

User Manual

Model No. DITG-**P

Measurement Instrument for Tension and Compressive Strength

# Dial Tension Gauge

Thank you for your purchasing our “Dial Tension Gauge”.
This product measures tension and compressive strength, e.g. the pressing force of a button or tension of a spring.

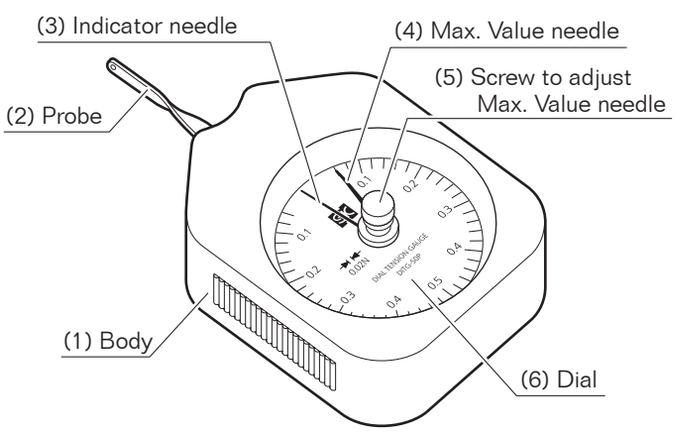
- To ensure optimum and safe use of this product, please read this manual carefully before use. Keep this manual in a safe place for handy reference.
- Always include this manual if you transfer or lend this product to any third party.
- Contact your sales store or our company for any questions about this product.

## SAFETY NOTICE

In this manual, the following symbols indicate:
⚠ Any action that can cause damage.
⃠ Any prohibited action.
◎ Any compulsory instructions.

## ■Part Names and Functions

* The model is DITG-50P.




(1) Body ..... Hold here when measuring.
(2) Probe ..... Touch the point of the probe on the point you want to measure. Tension can be measured by hooking an object in the hole at the point.
(3) Indicator needle ..... Indicates the measured value.
(4) Max.Value needle ..... Can be used to indicate the maximum value in any set of measurements. The Max. Value needle stops at the maximum attained value when the Indicator needle returns to the zero position, enabling you to read the maximum value easily. **The degree of accuracy given in the specification is the value when the Max. Value needle is used. Prevent errors by making sure to use the Max. Value needle when taking measurements.**
(5) Screw to adjust Max. Value needle ..... To return the Max. Value needle to its initial position.
(6) Dial ..... Indicates the measurement value.

# Safety Precautions please observe

This section explains the procedures you must follow in order to avoid any damage to the user, other persons or property.

⚠ Caution Any misuse may cause injury or damage to property.

◎ **Read and follow all the instructions in this manual.**
・Any use exceeding the scope described in this manual may cause an accident.

◎ **Use this product only for taking measurements.**
・Any use other than for the specified purpose may cause damage or wear of this product, or an accident.

◎ **Use this product in the following environment:**
- **Dry conditions. No rain, water or oil**
- **Not in direct sunlight**
- **Keep away from children or any other person. Only the user should be near the product.**

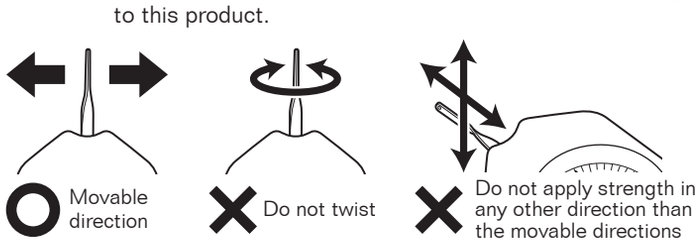
・Any use in any place that does not meet the above conditions may result in inaccurate measurement, damage to this product, accident or injury.

◎ **Handle this product with care**
・Avoid any physical shock or dropping the product. Do not place weight on this product. These may result in inaccurate measurement or damage.

⃠ **Do not disassemble or convert this product.**
・This may cause inaccurate measurement or damage to this product. Contact the sales store or the seller for repair.

◎ **Use within the range of measurement.**
・Do not apply any force in excess of the measurement range given in the specifications, this may result in inaccurate measurement or damage to this product.

⃠ **Avoid applying any force to the probe in any other direction than the movable directions.**
・Any twisting or pushing of the probe in any unmovable direction may cause inaccurate measurement or damage to this product.

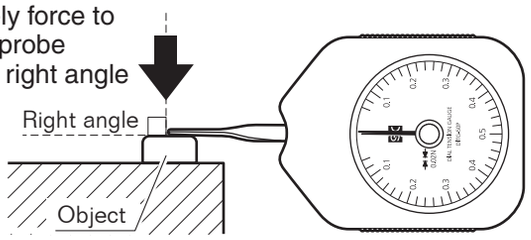


# Proper Contact

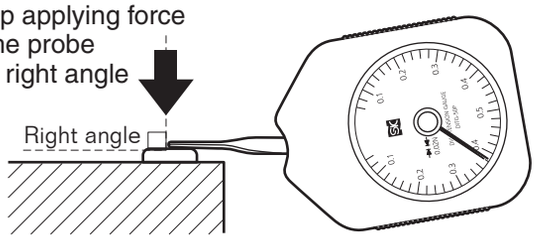
In order to obtain accurate values, ensure the probe instructions are followed.

**●Ensure the probe contact is at right angles to the object**
**●Contact the point of the probe**

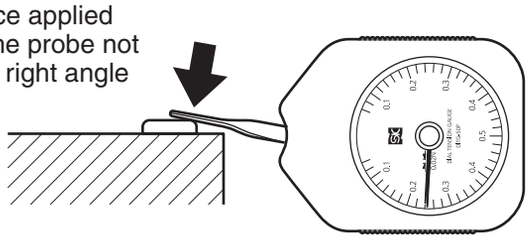
○ Apply force to the probe at a right angle



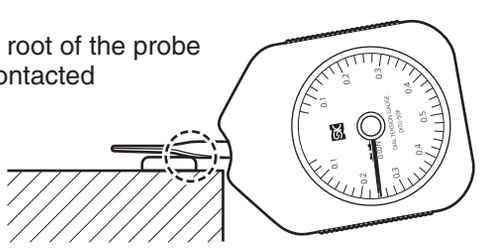

○ Keep applying force to the probe at a right angle




× Force applied to the probe not at a right angle



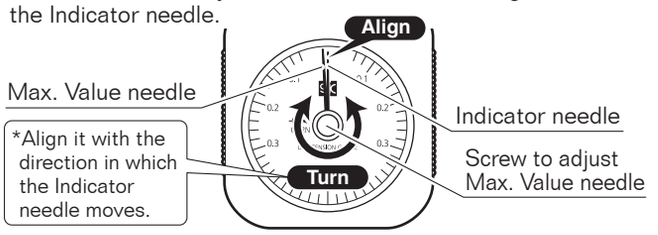
× The root of the probe is contacted



# How to Use

**(1) Place the Max. Value needle to the initial position**

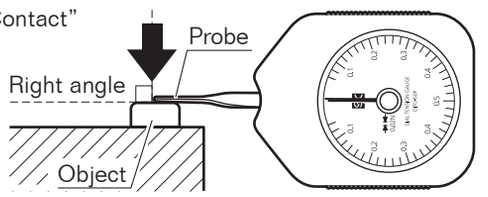
Turn the screw to adjust Max. Value needle to align with the Indicator needle.




**(2) Contact the probe with the object**

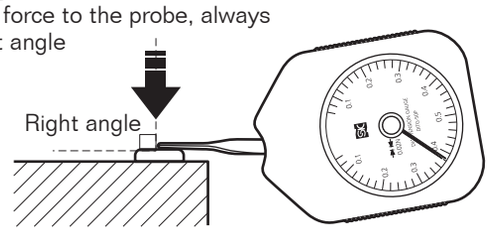
Contact the probe with the object so as to apply force at a right angle to the object.

* See "Proper Contact" on the left.



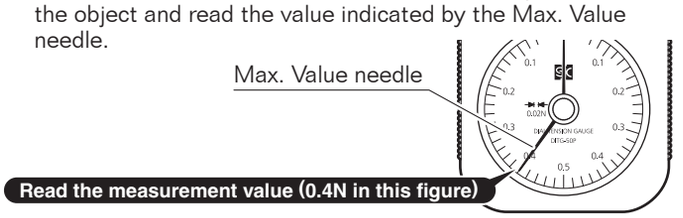

**(3) Apply force while the angle of the probe remains at a right angle**

When applying force to the probe, always maintain a right angle to the object.




**(4) Release the probe from the object and read the Max. Value needle**

As the force reaches the maximum, release the probe from the object and read the value indicated by the Max. Value needle.




*** When measuring tension, make sure to apply force to the probe at a right angle.**

## Product Specification

●Materials: Body…ABS Probe…Steel ●Weight: 60g

| Model No. | DITG-30P | DITG-50P | DITG-100P | DITG-150P | DITG-300P | DITG-500P |
|---|---|---|---|---|---|---|
| Measurement Range (N) | 0.03～0.30 | 0.06～0.50 | 0.10～1.00 | 0.15～1.50 | 0.30～3.00 | 0.60～5.00 |
| Resolution (N) | 0.01 | 0.02 | 0.05 | 0.05 | 0.10 | 0.20 |
| Accuracy* | ±1.5 units of scale | | | | | |

* The degree of accuracy achieved when the Max. Value needle is used.
(if it is not used, an error less than one unit of scale will be added to this degree of accuracy.)

## Maintenance and Storage

**Wipe away any dust or marks with a dry cloth.**
Any foreign particles between the body and the probe may obstruct the smooth movement of the units.

**Keep this product in the attached case and store in a dry, cool and dark place.**
Avoid direct sunlight and moisture. Keep in a safe place away from unauthorized users.


**Niigata seiki Co., Ltd.**
6-15-22, Tsukanome, Sanjo, Niigata, Japan, 955-0055
Tel. : +81-256-31-5660 Fax. : +81-256-39-7730
MAIL:intl.sales@niigataseiki.co.jp



I204–K 1403