

# PRECAUTIONS FOR USE OF GAUGES



## Safety precautions

- Do not use gauges for any other purpose than inspection.  
For example, never substitute a thread gauge for a nut or bolt, and also never use a gauge instead of tools (hammer, tap, die, etc.)  
Otherwise, the gauge will break down, resulting in an injury or a loss of accuracy. Furthermore, safety may be degraded according to circumstances.
- As a gauge has a sharp portion to satisfy requirements for its function, concern about avoiding injury.  
In particular, the screw thread and incomplete thread of a thread gauge are sharp. Therefore, when peeling off plastic antirust packing material (seal peel), antirust paper, cushioning material, etc., treat it with enough care.
- Be sure to check that the gauge and handle are not loose before use.
- Do not hit the handle when using the gauge. Otherwise, the handle may break down, sometimes dropping the gauge.  
Keep in mind that an unexpected accident may occur if a large-sized gauge drops due to the looseness or breakdown of the handle.
- While a gauge or product is moving, never conduct inspection with the gauge.  
Otherwise, a serious accident may occur due to dropping, destruction or flying of the gauge or product.  
Even if an accident or injury does not occur fortunately, the gauge will suffer a trouble, wear or heat generation, thus adversely affecting the gauge life.
- After handling vaporizing antirust paper, wash the hand with soapy water or clean water.  
For detailed information, contact JAPAN ASSOCIATION OF CORROSION CONTROL (Phone : 03-3434-0451).
- Plastic antirust packing material (seal peel) is classified into inflammable solids by Fire Service Law. Fusing of such material may cause a burn injury.  
Do not bring it close to fire or do not throw it in fire carelessly.  
If you have it on you hand, wash your hand thoroughly.  
For detailed information, contact NIPPI CORPORATION (Phone : 045-772-4012).



## Cautions before use

- Before using a gauge, thoroughly wash the gauge and product with gas oil or kerosene, or wipe them with a clean cloth to remove dust and dirt.
- Before using a gauge, check the gauge for any rust, flaw, burr, etc.  
If rust, flaw or burr is found, remove it carefully with an Arkansas grinding stone of good quality.



## Cautions at the time of use

- When using a gauge, apply a sufficient amount of antirust lubricating oil of good quality to the gauge.  
Check that dust and cuttings accumulated on the product have been thoroughly removed, and then inspect the product with a gauge.

- A cloud of dust accumulated on the product will excessively precipitate wear of the gauge.
- When using a limit gauge, check that GO gauge passes and then check that NOT GO gauge stops.
- When inspecting a threaded product with a taper thread gauge, do not screw in the gauge rapidly to the end. Otherwise, the gauge is suddenly inserted, so that it will not come off. So carefully screw in at the final insertion.
- Pay attention to the condition of the opening of a product.  
A dent, burr, etc. may lead to misjudgment by the gauge.  
Especially when inspecting a threaded product, an error in judgment will easily occur due to inclination of the incomplete thread.
- Do not hit the gauge by strong force.  
For example, when passing GO gauge or drawing an immobilized gauge, do not hit or shock it strongly with a hammer etc.  
Otherwise, the gauge will flaw, break up and deform, thus losing its function.
- If the gauge is dropped by accident, check the extent of damage and remove burr with an Arkansas grinding stone of good quality, or take other proper countermeasures.  
As there is the possibility of a dimensional change according to the gauge shape, perform accuracy inspection.
- If a gauge is magnetized, demagnetize it.  
When a gauge is magnetized, cuttings and iron powder will easily stick to the surface, thus precipitating wear.



## Cautions at the time of keeping

- When keeping a gauge, do not leave the gauge fitted to a product or do not leave a plug gauge fitted to a ring gauge.  
Otherwise, the gauges or the gauge and product may stick firmly each other, sometimes resulting in rusting.
- When keeping a gauge, remove dust, cuttings, fingerprints, etc., and perform rust prevention.  
Also keep a gauge in a dry place where temperature does not excessively change.  
Recommended rust prevention:  
After washing a gauge with gas oil or kerosene,  
① Immerse it in an oil tank filled with rust preventive oil.  
② Wrap with antirust paper,  
③ Wrap with seal peel.



## Cautions for dimensional control

- Inspect a gauge periodically in consideration of wear, frequency in use and other factors.
- Gauge size has been established at 20°C. When environmental temperature is not 20°C, convert it to 20°C and judge the size.  
In case of comparison measurement, pay attention to a temperature difference between the gauge and the gauge block.  
Convert KURODA gauges (except gauge blocks) as follows:  
0.012 μm per 1°C for a length of 1 mm.
- When measuring a gauge, use a glove, tweezers, etc. to prevent a dimensional change due to rust or temperature rise, and avoid touching it with bare hands as much as practicable.