

# Product Notes



Caution

Before using these products, be sure to read the following notes

Please follow these operating instructions for correct and safe use of the products. Also included are important notes in order to prevent injury to users and damage to machines and devices.  
Read these instructions carefully before making your selection of damper or using them.

## ● Insufficient mounting strength of damper or insufficient strength of the unit to which the damper is mounted

- Operating dampers with insufficient mounting strength or insufficient strength of the unit to which the damper is mounted may cause damage to the machine/device and there is risk of injury.
- Operating dampers with insufficient mounting strength or insufficient strength of the unit to which the damper is mounted may generate abnormal noise or cause malfunction.
- In order to determine the appropriate mounting strength or strength of the unit to which the damper is to be mounted, ensure that the value of "loading torque x safety ratio" is met before mounting the product securely.

## ● Over-tightening of mounting screws

- When using screws to mount gear dampers, over-tightening of the mounting screws may damage the damper or the body proper, with possible consequence of damage to the machine/device and risk of injury.
- \* Use the correct tightening torque for the type and size of screws used.

## ● Insufficient insertion of Snap Fit type gear damper

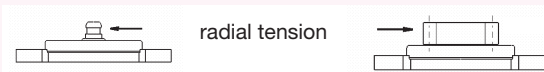
- When using Snap Fit type gear damper, ensure that you fully insert them into the unit to which the damper is mounted, otherwise the damper may be liable to fall out or damage may be caused to the damper, with possible subsequent damage to the machine/device or risk of injury.

## ● Mounting dampers to units non-recommended fitting shape

- Snap Fit type gear damper, or barrel dampers to units that are not of the recommended fitting shape may cause the damper to fall out or may damage the body proper, with possible subsequent damage to the machine/device or risk of injury.

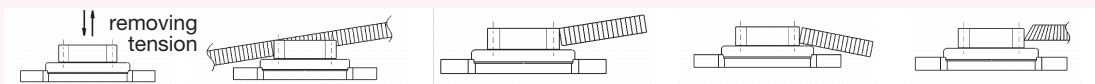
## ● Lateral pressure to the gear/shaft

- Applying pressure to the sides of the rotating gear/shaft (lateral pressure) may cause damage to the damper (body proper, gear and rotating shaft) and oil leakage, with possible subsequent damage to the machine/device or risk of injury.



## ● Tension to the gear

- Pulling on the gear of gear dampers (see the illustration below) may cause damage to the gear, cause it to drop or to be moved out of center, or could cause oil leakage, with possible subsequent damage to the machine/device or risk of injury.



- \* During the design process or assembly operation, ensure that the damper gear is mounted parallel to the gear/rack of the unit to which the damper gear is mounted.

## ● Using dampers beyond the specified torque

- Using dampers beyond the specified torque range may cause oil leakage, deterioration of performance, damage to the damper, with possible subsequent damage to the machine/device or risk of injury.

## ● Using dampers beyond the durability

- Using dampers beyond the durability may cause oil leakage, deterioration of performance, with possible consequence of damage to the machine/device and risk of injury.
- \* The durability for each damper is listed in the "Durability" column of the catalogue.
- If customers require a product which can be used beyond the durability, please contact our sales personnel for advice.

## ● Using dampers at high speeds

- Using dampers at extremely high speeds may cause oil leakage, deterioration of performance, or damage to the damper (body proper, gear, rotating shaft, etc.), with possible subsequent damage to the machine/device or risk of injury.
- \* The rotation speeds for each damper are listed in the "Durability" column of the catalogue.
- If customers require a product which can be used at speeds beyond those specified speed, please contact our sales personnel for advice.

## ● Using dampers at high/low temperatures

- Using dampers at high or low temperatures may cause oil leakage, deterioration of performance or torque failure, with possible subsequent damage to the machine/device or risk of injury.
- Ensure that you use the products within the range of temperatures recommended for their use. (The recommended temperature for use is NOT the same as the guaranteed temperature.)
- \* The recommended temperature for use for each type of damper is listed in the "Durability" column of the catalogue.
- If customers require a product that can be used at high speeds above the specifications given, please contact our sales personnel for advice.

## ● The operating environment for use of dampers

- Do not use dampers under vacuum or at high pressures.
- Avoid using dampers outdoors or in other locations in which the damper would be exposed to dust or to rain.
- Avoid using dampers in environments where they would be exposed to grease, lubricants or chemical agents/substances.
- Avoid using dampers in environments where they would be exposed to metal filings, machining oil, water, etc.
- If dampers are used in the above-mentioned conditions, they may suffer damage, with possible subsequent damage to the machine/device or risk of injury.

\*Please contact our sales representative for further information.