

## 1. Applications

Casters are installed on indoor and outdoor transport equipment and various types of equipment for the purpose of facilitating movement and transportation, and are used intermittently by human power.

They are used intermittently.

Select appropriate casters according to the application and conditions of use, install them correctly, and observe the set conditions.

## 2. Caster selection and conditions of use

When using casters, please select appropriate casters in consideration of the application, required functions, operating conditions, etc.

In particular, pay attention to the following items.

### ① Appropriate allowable load

The allowable load in the catalog indicates the limit of load that can be easily moved and used safely and for a long period of time when transported by hand on a flat floor.

Estimate the total load to be carried and select the appropriate allowable load caster.

Even if four casters are used, the following formula is generally used to multiply by 0.8.

#### ■ When 4 casters are used

Limit of total load = allowable load per 1 unit x 4 x 0.8

When using products of different sizes together, calculate the maximum load to be used based on the allowable load of the caster on the low load side.

\*In accordance with the revision of the Measurement Law, weight Kg must be clearly distinguished into mass Kg and force Kg<sub>f</sub>.

● Display of force is changed to daN (decaNewton).

1 daN = 10 N  $\doteq$  1.02 kg<sub>f</sub> (1 kg<sub>f</sub>  $\doteq$  9.8 N = 0.98 daN)

(Conversion factor 9.8  $\rightarrow$  9.80665)

### ② About speed

Use intermittently at or below walking speed on a flat floor at room temperature.

(Avoid continuous use that generates heat.)

Wheel diameter                      Operating speed

75mm or less ..... 2Km/h or less

100mm or less ..... 4Km/h or less

### ③ Conditions of use

Please confirm the wheel diameter, material, mounting method (plate type, screw-in type, etc.), and model used (flexible, fixed, or with stopper) with the actual product or catalog before making a decision.

### ④ Stopper

● Please note that wear and tear due to long-term use may cause a decline in functionality without notice.

● Generally, hard wheels (nylon wheels, phenolic wheels, etc.) have inferior braking power from the time of shipment.

● For braking performance, use other means (e.g., wheel stops, floor locks, etc.) when specifically required for product safety.

### ⑤ Environment

● Normally, casters are intended to be used at room temperature and in premises.

Avoid using the product in special environments affected by high temperatures, low temperatures, high humidity, acids, alkalis, salts, solvents, oils, seawater, chemicals, etc.

Doing so may cause deterioration of the product. If use is unavoidable, use metal fittings, wheels, and grease that are suited to the individual application.

Some materials may contaminate floor surfaces.

## 3. Precautions when installing casters

Please observe the following points regarding the installation of casters.

(1) Use the same series in combination.

(2) Install the caster so that the mounting surface is horizontal.

(3) Swivel casters should be installed so that their swivel axis is vertical.

(4) Fixed casters should be installed so that they are parallel to each other.

(5) Check the connection part to be fixed, and install it correctly using bolts, nuts, washers, etc. that match the dimensions of the mounting holes to prevent loosening.

Especially when installing a screw-in type caster, tighten the hexagonal part of the screw with appropriate torque. Excessive tightening may cause the shaft part to be strained, resulting in breakage.

(6) Do not tighten the swivel stopper of a screw-in type caster with the entire caster in the ON state. Doing so may cause deformation or damage to the stopper.

## 4. Cautions for use

### ① Setting conditions

● Please do not apply a load in excess of the allowable load.

● Avoid uneven loading.

● Please do not apply force from any direction other than the direction where the wheel is rotated.

● Avoid use where impact is applied (dropping, vibration, or being hit by the nails of a forklift, etc.).

● Please do not use the product on a significantly uneven surface or on a floor with sharp protrusions.

● Please do not tow a trailer.

● Please do not ride on the caster for any use other than the original purpose.

### ② Stopper

● Operate the stopper pedal securely with a foot wearing shoes.

● Please do not forcibly move the stopper pedal while it is engaged.

● Please do not step on the stopper pedal excessively or strike it with a hammer.

● Please do not leave the stopper on the inclined plane while it is in use.

Use other means, such as wheel stops, if particularly necessary.

● Please do not operate the stopper pedal while moving.

### ③ Product modifications

We are not responsible for any modification, reassembly, painting, welding, or installation of the product at the user's own risk.

## 5. Inspection • maintenance and replacement

① Perform periodic inspections and maintenance to prevent accidents and ensure long-term use.

② Normal inspection should check for complete tightening of the caster mounting area, for any damage, cracks or deformation in the caster, for tightening of the wheel bearings and shafts, and for any damage, cracks or wear of the tires.

If there is any looseness or abnormality in the coupling of the mounting part or wheel part, fasten it immediately.

③ If the product deteriorates or is damaged, replace it immediately. (Do not replace parts only.)

④ If foreign matter gets caught in the swivel or wheel, remove it immediately. It may cause poor turning or rotation.