

The Usage Notice of Casters

(I) Application

Casters are attached to transportation equipment and other devices inside rooms and facilities, with the purpose of facilitating the relocation or transfer of cargoes, excluding people and animals, and moved by human power intermittently.

(II) Choice of the Casters and Usage Conditions

1. Load Capacity and Adequate Load

Load Capacity Upper limit for safe, smooth use for a long period of time

Adequate Load When casters are attached to a cart (use of 4 casters), the load needs to be supported at 3 points. Accordingly, please calculate the load, assuming 80% of the maximum load, as shown in the following equation:

$$\text{Adequate Load} = \text{Load Capacity per 1 pcs (daN)} \times 4 \text{ pcs} \times 0.8$$

*About a Unit.

1daN=10N \approx 1.02kgf (1kgf \approx 9.8N=0.987daN)
(Scale factor:9.8 \rightarrow 9.80665)

2. Speed Limits

Use the casters intermittently on a flat road at less than the speed tabulated below. This is the same also for using casters for towing, and using the power of a trailer or the like. Please avoid the continuous use, which generates heat.

Wheel Diameter	Speed Limits
Below 75mm	Below 2km/h
Above 100mm	Below 4km/h

3. Usage Conditions

Please determine the following items, according to equipment (loading and usage conditions).

Type of Bracket Swivel, Rigid, With Stopper, etc.
Installation Method, Material

Type of Wheel Diameter, Material

4. Usage Environment

In general, casters are designed, assuming that they are used indoors at room temperature. Please avoid exposure to the caustic environment (Ex.acidity, alkali, sea, oil). There is a risk that products will deteriorate.

If you want to use the casters at high or low temperatures, please consult with us. You would require brackets, wheels, and grease according to usage.

Some materials of the wheels may stain floor surfaces.

5. Stopper

Long-term abrasion or damage may degrade the functions before you notice. In addition, hard wheels, such as nylon wheels, have less braking force, from shipment.

If necessary for safety, please take measures, such as wheel clamps and floor locks, to complement the braking performance.

(III) Installation of Casters

1. Attach each caster to the fixated joint part properly with a bolt, a nut, a washer, etc. that fits the hole part for attaching, so that it will not loosen.
2. Attach each caster so that the attachment plane is horizontal.
3. Attach each swivel caster so that the swivel axis is vertical.
4. Attach rigid casters so that they are parallel to each other.

(IV) The Usage Notice

1. Setting Condition

Please do not use the products for any purposes other than those specified in the setting conditions, because they could place excessive burdens on casters, leading to deformation and damage.

- Please avoid overloading.
- Please avoid partial loading.
- Please do not use the casters with incorrect and unsecure fitting and installation.
- Please avoid excessive shock load (Please be cautious about the shocks from steps and loading goods).
- Please do not use the casters on a significantly uneven surface and move them across over a sharp protrusion.
- Please do not move the cart forward to the opposite direction of its rigid casters.
- Please do not use the casters using the power of a trailer, excluding when using towing casters.
- Please do not place a person or animal on a cart with casters.
- Please do not attach casters to a cart for the purpose of moving people or animals.

2. Stopper

Since a stopper may loosen unexpectedly due to a shock, please avoid the following operations.

- Please use the stopper pedal surely with the foot while wearing shoes.
- Please do not park the cart on a slope even if the caster stoppers are locked.
- Please do not move the cart when the caster stoppers are locked.
- Please do not step on the stopper pedals too hard or knock the pedals with a hammer.
- Please do not use the stopper pedal during driving.

3. Handling of the Casters

Use protective gears, such as gloves, to handle casters safely.

4. Remodeling of the Product

We will not take responsibility for the remodeling, reassembly, coating, welding, and attachment conducted by you. We would appreciate your understanding.

(V) Maintenance Checkup

Deterioration, including the loosening of screws and the corrosion of parts, may occur according to usage conditions and period. Check the following items regularly.

- Whether the caster mounting part is clamped tightly
If not, clamp it again.
- Swivel Part of Swivel Casters
If you find the swaged part has loosened, replace swivel casters.
- Whether the caster/shaft part has loosened or corroded
If you find screws have loosened, tighten them. If you find corroded parts, replace the parts.
- Whether there is the abrasion or deterioration of the tire part, the corrosion of the bearing part, or the like
If you find deteriorated parts, replace the parts.
- Whether there are foreign materials in the swivel or shaft part
If there are any foreign materials, remove them.
- Whether there are any damage, cracks, or deformation
If any, replace the parts.

As for pneumatic rubber / airless wheel, please refer to "The Usage Notice of Pneumatic / Airless Wheels" on page 121

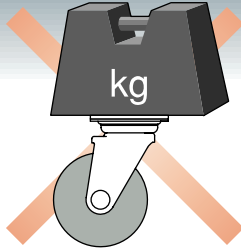
If there are any questions, please ask us before use.

Warning

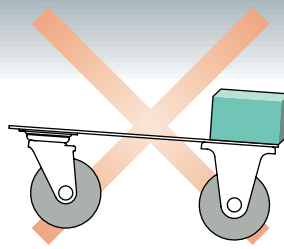


The following usage is prohibited.

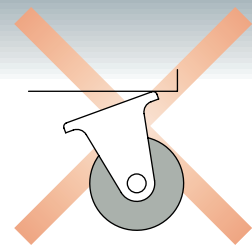
Wrong usage could lead to a serious accident.



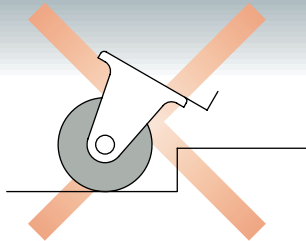
Please avoid overloading.



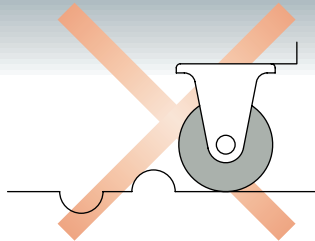
Please avoid partial loading.



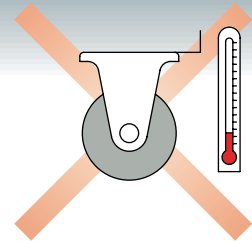
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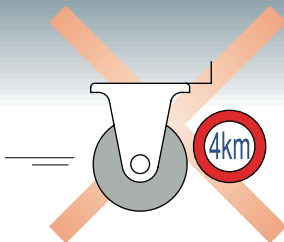
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Please do not use the casters on a significantly uneven surface and move them across over a sharp protrusion.

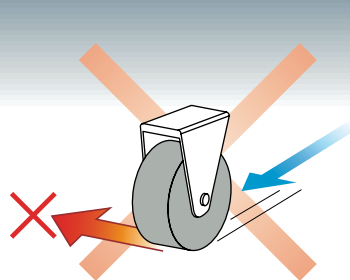


Please avoid exposure to the caustic environment (Ex.acidity, alkali, sea, oil), and do not exceed the specified temperature.

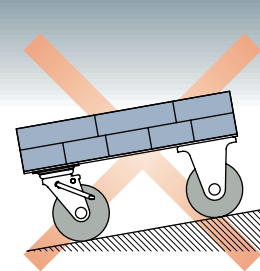


Please do not exceed the following speed limits.

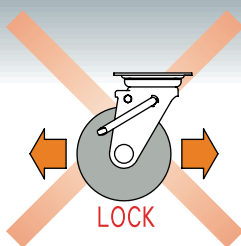
Wheel Diameter	Speed Limits
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Above 100mm	Below 4km/h



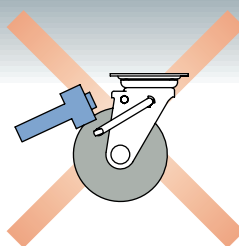
Please do not move the cart forward to the opposite direction of its rigid casters.



Please do not park the cart on a slope even if the caster stoppers are locked.



Please do not move the cart when the caster stoppers are locked.

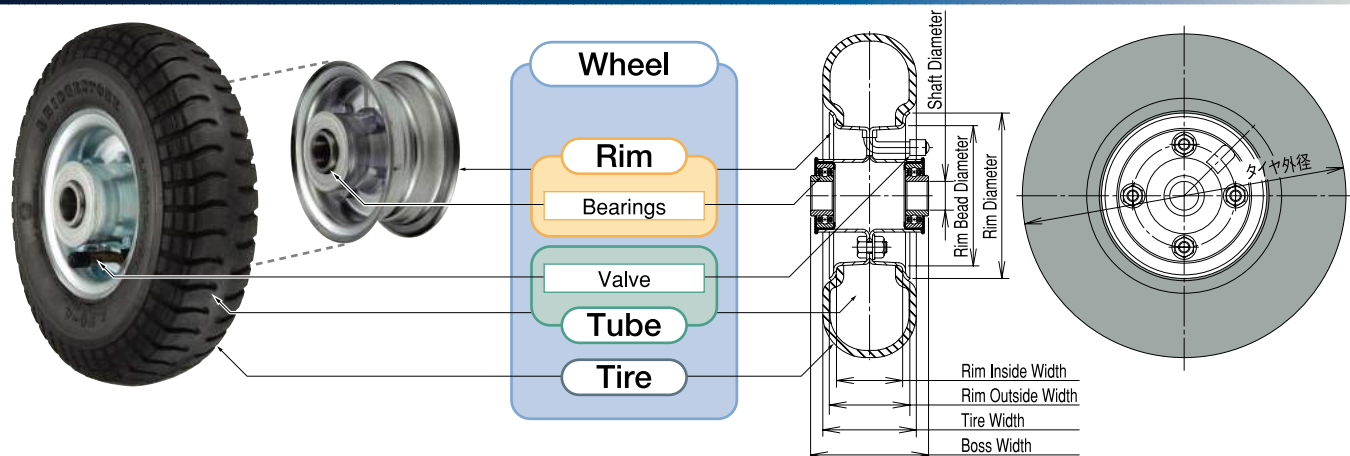


Please do not step on the stopper pedals too hard or knock the pedals with a hammer.

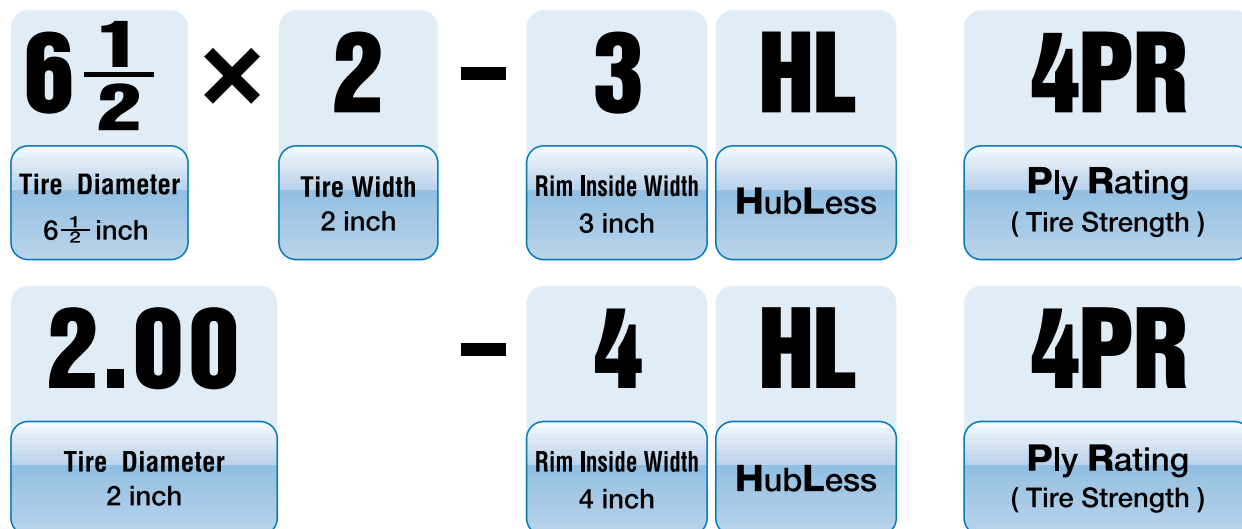


Please do not place a person or animal on a cart with casters.

Pneumatic Wheel Parts



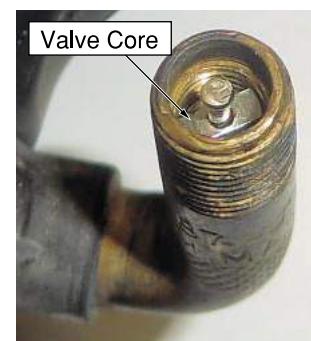
The Model Number of UKAI Pneumatic Wheels



* 1 inch = 25.4 cm For actual size, refer to the table of specs on each page.

The Usage Notice of Pneumatic / Airless Wheels

- Check the abrasion or deterioration of the tire part of the pneumatic rubber / airless wheel, the corrosion of the bearing part, etc. If you discover deterioration, replace the parts.
- The pneumatic rubber wheel may deflate spontaneously. Check air pressure, and if it is low, replenish air.
- Regarding air replenishment
The Schrader Valve (American Valve) is used for the pneumatic rubber wheel. When replenishing air, use an inflator for the Schrader Valve (American Valve). It is impossible to replenish air with other inflators for such as Dunlop Valve (English Valve).
- If air leaks after air replenishment
In the case of air leakage after air replenishment, possible factors include the damage to the tube and the loosening of the valve core. Check each part, to confirm whether there is the leakage of air. If the valve core loosens, tighten it again.



Schrader Valve
(American Valve)

If there are any questions, please ask us before use.