Hammer Caster has started their own caster production when casters are not even commonly spread in Japan. Kept in a different form, the founder’s sincere attitude towards the product making has been steadily taken over to next generations for over a century.
Steel is a commonly used material for industrial casters. Surface treatment can also be applied to a wide range of applications, including plating that meets environmental regulations and heat treatment to improve durability.

**Steel**

Stainless steel is excellent in water resistance and corrosion resistance, and is often used in kitchen equipment that requires resistance against rust and chemicals that contains solvents.

**STS (Stainless steel)**

The plastic body softens the cold impression of metal. Because of its high design and low noise, it is suitable for indoor use in hospitals and offices.

**Specification Design**

**Attachment fitting**

- Plate type
- Threaded stem type
- Plain stem type
- Expander stem type

**Swivel section**

- Plate type
- Threaded stem type
- Plain stem type
- Expander stem type

**Stopper type**

- Side-stopper type
- Total Lock type
- No stopper

*Stopper system that brakes the wheel and locks the swivel at once.

**Select by Wheel**

- Rubber wheel
- Nylon wheel
- MC Nylon wheel
- Thermoplastic Urethane wheel
- Thermosetting Urethane wheel
- Phenol wheel
- Elastomer wheel
- Cast iron wheel

Recommended for applications requiring strength. Nylon wheel has excellent abrasion resistance, water resistance, oil resistance, and can be used in various environments. It is suitable for combination with heavy duty casters or stainless steel casters because of the non-marking to the floor.

**Rubber wheel**

Rubber wheel has excellent cushioning properties and can reproducibly absorb impacts. It is especially suitable for medical environments where noise needs to be minimized.

**Nylon wheel**

MC Nylon wheel is a high performance plastic material to replace metal. All performance in general is excellent and particularly the heat resistance can bear up to 120°C.

**MC Nylon wheel**

Thermoplastic Urethane wheel is a material that softens by heating and hardens at low temperature, being excellent in wear resistance and oil resistance. It can be used with many casters because of the non-marking to the floor.

**Thermoplastic Urethane wheel**

**Thermosetting Urethane wheel**

Thermosetting Urethane wheel is a material that softens by heating and hardens at low temperature, being excellent in wear resistance and oil resistance. It can be used with many casters because of the non-marking to the floor.

**Phenol wheel**

A material called Phenol. Although it is not suitable for applications needing heat resistance, it is extremely light and chemical resistant. Particularly the heat resistance can bear up to 90°C, and is resistant to high temperature and dry environments.

**Elastomer wheel**

Elastomer wheel is a material that softens by heating and hardens at low temperature, being excellent in wear resistance and oil resistance. It can be used with many casters because of the non-marking to the floor.

**Cast iron wheel**

Material with excellent load resistance, heat resistance and corrosion resistance. It is useful for transporting super heavy materials. However, the wheel is heavy itself and requires a strong trolley, which may require consideration.
Caster Selection

**Select by Load Capacity**

<table>
<thead>
<tr>
<th>Plate type (swivel / fixed)</th>
<th>ECO Load (daN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>420G, 420M, 420S, 420Y</td>
<td>600</td>
</tr>
<tr>
<td>420R, 420SR, 420YS</td>
<td>550</td>
</tr>
<tr>
<td>400G, 400M, 400S, 400Y</td>
<td>500</td>
</tr>
<tr>
<td>400R, 400SR, 400YS</td>
<td>450</td>
</tr>
<tr>
<td>320G, 320M, 320S, 320Y</td>
<td>400</td>
</tr>
<tr>
<td>320R, 320SR, 320YS</td>
<td>350</td>
</tr>
<tr>
<td>220S, 220S0S, 220S0M</td>
<td>300</td>
</tr>
<tr>
<td>920M, 920S0M</td>
<td>250</td>
</tr>
<tr>
<td>440G, 440M, 440S, 440Y</td>
<td>200</td>
</tr>
<tr>
<td>440R, 440SR, 440YS</td>
<td>150</td>
</tr>
<tr>
<td>550P, 550R, 550SR</td>
<td>100</td>
</tr>
<tr>
<td>420J, 420JR</td>
<td>50</td>
</tr>
<tr>
<td>300S, 300SR</td>
<td>0</td>
</tr>
</tbody>
</table>

**Caster Combination Examples**

- **2 Swivel (at front) x 2 Fixed (at handle side)**
  This combination is commonly used in factories and distribution warehouses and is ideal for carrying light packages. By placing a fixed type on the handle side, the driving direction is stabilized, so that the push cart does not shake from side to side. It is not suitable for transporting heavy objects because a large force is required for turning.

- **2 Fixed (at front) x 2 Swivel (at handle side)**
  It is a combination used when carrying a large load or heavy load. By arranging the swivel type on the handle side, the lever principle is applied and the direction can be easily changed. When carrying an empty load or a light object, the straight movement operation is less than that of the "2 fixed (at handle side)".

- **4 Swivel casters**
  It is a combination used in shopping carts and flat carts. By making all four wheels swivel, it has the advantage of being able to move in the desired direction from a spot, and it is convenient for lateral movements. Easy to operate on a flat floor but goes less straight on a road surface with a slight slope.
### Resistant to Freezing Cold!
- Food factories, freezers, etc.
- Automotive plants, drying furnaces, etc.

### Resistant to Extreme Heat!

#### Heat and cold resistant temperature range
(Wheel material general characteristic table)

<table>
<thead>
<tr>
<th>Wheel Type</th>
<th>Low Temperature</th>
<th>Room Temperature</th>
<th>High Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber wheels (Natural Rubber / Butadiene Rubber)</td>
<td>-40°C to +80°C</td>
<td>-40°C to +80°C</td>
<td>-40°C to +200°C</td>
</tr>
<tr>
<td>Nylon wheels</td>
<td>-40°C to +70°C</td>
<td>-40°C to +70°C</td>
<td>-40°C to +200°C</td>
</tr>
<tr>
<td>Thermosetting urethane wheels</td>
<td>-20°C to +85°C</td>
<td>-20°C to +85°C</td>
<td>-20°C to +180°C</td>
</tr>
<tr>
<td>Thermoplastic urethane wheels</td>
<td>-40°C to +80°C</td>
<td>-40°C to +80°C</td>
<td>-40°C to +120°C</td>
</tr>
<tr>
<td>Phenol wheels</td>
<td>-40°C to +80°C</td>
<td>-40°C to +80°C</td>
<td>-40°C to +200°C</td>
</tr>
<tr>
<td>MC Nylon wheels</td>
<td>-40°C to +80°C</td>
<td>-40°C to +80°C</td>
<td>-40°C to +120°C</td>
</tr>
<tr>
<td>Cast iron wheels</td>
<td>-40°C to +80°C</td>
<td>-40°C to +80°C</td>
<td>-40°C to +120°C</td>
</tr>
<tr>
<td>Heat-resistant rubber wheels (ARB)</td>
<td>-40°C to +80°C</td>
<td>-40°C to +80°C</td>
<td>-40°C to +120°C</td>
</tr>
</tbody>
</table>

- Standard range
- Heat-resistant range (Dry heat)
- Heat-resistant range (Wet heat)

---

**COLD-RESISTANT CASTERS**

In case of using wheels or casters in a cold environment, it is necessary to change the specification to cold-resistant. In addition, it is necessary to use it in a manner suitable for low-temperature environments. Please consult our sales office for details.

- **Parts that need to be changed in case of cold weather resistant specifications.**
  - For casters
    1. Grease to bearing bore
    2. Grease to swivel section
  - For wheels
    1. Grease to bearing bore

**HEAT-RESISTANT CASTERS**

In case of using wheels or casters in a high-temperature environment, it is necessary to change the specifications to heat-resistant. In addition, there are specifications suitable for each environment depending on conditions such as maximum temperature, dry heat, and wet heat. Please consult our sales office for details.

- **Parts that need to be changed in the case of heat resistant specifications.**
  - For casters
    1. Bushings (Not Applicable to MC wheel)
    2. Grease to bearing bore
    3. Grease to swivel section & dust seal
    4. Brake pad (for side-brake type)
  - For wheels
    1. Grease to bearing bore

#### Specifications

- Cast iron wheel
  - max. 200°C
- Phenol wheel
  - max. 180°C
- MC Nylon wheel
  - max. 120°C
- Heat resistant rubber wheel
  - max. 120°C

---

**Make sure to dry throughly for a while after using in the cold environment.**

If the caster is used again in a cold environment without being sufficiently dried, the water droplets from condensation may freeze, causing improper swivel or wheel revolving.

**Be careful of condensation.**

*Regardless of the specifications, physical properties decrease in a low temperature environment, and breakage and defects are likely to occur.*

---

**Heat and cold resistant temperature range**

(Wheel material general characteristic table)

- Rubber wheels
  - Natural Rubber / Butadiene Rubber
- Nylon wheels
- Thermosetting urethane wheels
- Thermoplastic urethane wheels
- Phenol wheels
- MC Nylon wheels
- Cast iron wheels
- Heat-resistant rubber wheels (ARB)

*Standard range*  
*Heat-resistant range (Dry heat)*  
*Heat-resistant range (Wet heat)*
Conductive Casters / Antistatic Casters

Eliminating static electricity keeps dust out of casters and prevents problems caused by static electricity.

**Conductive Casters**

Electric resistance: $1 \times 10^5 \Omega$ or less
(For both rubber wheel and Nylon wheel)

- Floor Material (Examples)
  - Metal
  - Conductive Floor

**Antistatic Casters**

Volume resistivity: $10^3 \sim 10^{15} \Omega$ cm
(For urethane tread and rubber tread)

- Floor Material (Examples)
  - Metal
  - Conductive Floor
  - Tile
  - Flooring
  - Bricks
  - Rubber

It temporarily discharges the charged electricity into the atmosphere. It is used in a wide range of fields regardless of floor materials.

- The load capacity should be about 60% of the standard specification.

It plays the role of earth to let the electricity from equipment and machinery escape to the floor.

- The load capacity should be about 60% of the standard specification.
Distribution / Freight Handling Sites

420 2S Cost Performance Model

- Light weight caster with new rubber wheel, based on 420S series. Suitable to roll boxes and pallets.
- Swivel type / Uni-chrome finished.
- RB & FR wheel / Affordable and high-performance wheels with ball bearing.
- Weight reduction by eliminating the king pin.
- Cost reduction and weight reduction were realized by reviewing parts of the body and wheel structure.

Distribution / Freight Handling Sites

Hammer Lock Reliable Stopper System

- A floor-locking device that has superior operability and durability. Popularly used in transport carts and equipment.
- Rubber base with built-in spring works to lock on uneven surfaces of various floor.
- The product performance can be improved by applying oil to each sliding part periodically.

MOUNTING HEIGHT 132-168-190mm
WHEEL SIZE 100-125-150mm
WHEEL TYPE RUBBER

PROPER MOUNTING HEIGHT 142-202-240mm
MAX HEIGHT 150-210-248mm
MAX LOADING WEIGHT 200-300-350 daN

Load capacity 100-160daN
Load capacity 200-350daN
Distribution / Freight Handling Sites

520YS | Refined Durability Model

- By heat treating to special steel, durability is increased and thus the service life is extended.

- Swivel type / Uni-chrome finished.

- Wide wheels provide excellent driving stability.

- Further heat treatment of thin special steel sheet enables weight reduction and strength improvement at once.

- With selected materials the quality and specification outperforms the standards of industrial casters and contributes to labor saving.

- MOUNTING HEIGHT: 137-171-196mm
- WHEEL SIZE: 100-125-150mm
- WHEEL TYPE: RUBBER-NYLON / URETHANE-MC NYLON

Construction Sites

515SA | Robust Supporter for Scaffolds

- Large size caster for scaffolding scenes with a total lock mechanism that is useful for construction sites and buildings cleaning.

- Dedicated handle for excellent level adjusting.

- Built-in bearing at wheel bore allows smooth movement even under high-load.

- MOUNTING HEIGHT: 171-196-240mm
- WHEEL SIZE: 125-150-200mm
- WHEEL TYPE: RUBBER-URETHANE

Load capacity 180~370daN

520YS-HBN 100mm

Load capacity 180~250daN

515SA-RB150
Assembly / Fabrication Sites

413J-XRZ | Metal Cut Resistant Model
- Caster with special rubber wheel that is cut-resistant, prevents metal chips from sticking to the tread. Popularity used in metal-cutting workshops.
- Total lock mechanism that brakes the wheel and locks the swivel at once.
- Ball bearing at wheel bore provides stable driving.
- Wheel tread takes cut-resistant rubber which has strong resistance against cutting oil.

| MOUNTING HEIGHT | 140-174-199mm |
| WHEEL SIZE | 100-125-150mm |
| WHEEL TYPE | RUBBER-URETHANE |

Assembly / Fabrication Sites

560S | Low Fitting Guardian of Industry
- Ideal caster for large machines that require stability of low fitting height and high-load capacity.
- Load capacity: 600daN
- Compact design with excellent durability against heavy loads.
- Ball bearings at wheel bore enable smooth wheel driving.

| MOUNTING HEIGHT | 95-105mm |
| WHEEL SIZE | 55-75mm |
| WHEEL TYPE | NYLON-PHENOL |
Assembly / Fabrication Sites

500BPS | Technology Based Highload Model

- Manufactured by welding extreme pressure materials to achieve high durability and high load capacity. Suitable for large machines and large transport vehicles.

- High durability and high load capacity achieved with extremely thick metal body.
- Improved running stability with built-in ball bearings.
- Easy maintenance with grease nipples.
- Swivel type / Uni-chrome finished.

500BPS-HBN: 150mm

- Load capacity: 400~500daN

Food Processing Plants / Bakery

ARB | Heat Resistant Model

- Suitable to use in environments that require heat sterilization and drying processes.
- Ball bearing at wheel bore provides stable driving.
- Heat-resistant rubber can bear up to 120°C.
- Load Capacity: 120~160daN
- All stainless steel is excellent in corrosion resistance and water resistance.

- MOUNTING HEIGHT
  - 142~164-187-246mm
- WHEEL SIZE
  - 100~125-150-200mm
- WHEEL TYPE
  - RUBBER-URETHANE
- MOUNTING HEIGHT
  - 132~168-190mm
- WHEEL SIZE
  - 100~125-150mm
- WHEEL TYPE
  - NITRILE RUBBER

- Heat resistance temperature 120°C
Food Processing Plants / Bakery

420 EN | Easy Fitting to Various Pipes

- Caster for pipe mounting which can be easily detached.

Easy installation with spanners.
Swivel type / Deco-chrome finished.

Can be attached to large, small, round and square pipes.

MOUNTING HEIGHT
WHEEL SIZE
60-68 / 85-95 / 107-126 / 152-180mm
40-50 / 65-75 / 85-100 / 125-150mm
RUBBER- NYLON-UReTHANE-ELASTMER-Mc- NyLon

Chemical plants / Clean Rooms

940 SOE | Gentle Protector of Precious Goods

- All stainless cushion caster that absorbs vibration and impact from travelling.

The built-in spring absorbs shock.
Ball bearings are installed to swivel section and wheel bore. Silent mechanism for travel noise reduction.

All stainless steel is excellent in corrosion resistance and water resistance.

MOUNTING HEIGHT
WHEEL SIZE
143-153 / 169-170mm
100-125mm
RUBBER-UReTHANE

Applicable Pipes: ⅞-⅜ / ø38
Q25-Q332

Suitable set load: 5-244daN

Automatic Tracking Vehicle
Automatic Tracking Cart
NETWORK

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  Headquarters factory
  4-7-35, Nishin-Iwata, Higashi-Osaka, Osaka 578-0947 Japan
  Hirakata factory
  Shodai-ajika, Hirakata, Osaka 573-1132 Japan

● Hammer Caster Sales Co.Ltd. (as Sales company)
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  Osaka Branch
  10-35, Shinyo-Nishi, Higashi-Osaka, Osaka 578-0964 Japan

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web : www.hammer-caster.com

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