



Welcome to Orbit Casters

Being manufacturers of wheels and casters, we are committed to reliability and innovation. Our aim is to develop the best wheel and the best caster for every application. Our motto is to "reinvent" the wheel based on our original and innovative ideas, expertise in manufacturing technology and creative thinking. We consider our committed and highly motivated employees our assets in our caster developments.

We at Orbit Casters make poly urethane products conforming to international standard and quality. Quality is our motto and we take no shortcuts to achieve our business goals. We take R&D seriously and extreme caution is taken right from designing to procuring and assembly of each component to ensure utmost standard and quality of our products, right from inception of the company.

With modern production facility and a fine blend of qualified personnel in design, R&D, production and marketing, Orbit Casters puts in serious efforts to manufacture and supply high quality Trolley Wheels and PU- profiles for material handling trolleys used in automobile industries. With our wide distribution network, we have supplied our products across the country. Our manufacturing facility includes fully automated PU casting machine, inhouse powder coating unit, press shop for sheet metal bracket manufacturing, welding shop etc. Orbit Casters is a company set up to make quality products for your business needs.

In an industrial environment, reliable casters and wheels are crucial for the safety and efficiency of production facilities and logistics processes. Swivel castors, fixed casters, casters with brake, heavy duty casters, transport casters, or industrial casters - with our comprehensive range of high-quality castors and wheels, we offer the right mobility solution for every requirement. In order to meet the requirements of a wide range of environments, our caster wheels are also available with a wide variety of tread materials: from plastic castors, polyurethane casters, nylon castors, steel castors, cast iron wheels to rubber castors.



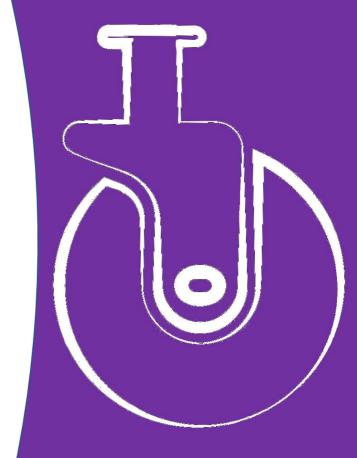
Mobility Made Easy

While also boosting efficiency and flexibility, caster wheels provide added mobility to a varied range of equipment and devices in various applications. Mobility, an important topic in both personal and professional sectors, has made many systems and devices mobile, making it easy while improving efficiency in daily life. Whilst making life easier and efficient, flexibility is maximised in every facets. All of these mobile applications require suitable solutions to function properly.

Wheels and casters are indispensable helpers in machine and systems engineering, and are used to transport materials, move machines or make flexible adaptations to production processes. With its wide range of products, Orbit Casters' is committed to cater to the various needs and requirements of manufacturing sector, especially automobile industry. We, as a company, are constantly evolving and are dedicated to maintaining quality and highest standards for our products.

In addition to our standard ranges, we also provide a wide range of tailored special solutions for customer-specific applications. We aim to provide the perfect solution to meet any specific requirement. Right from designing to manufacturing, every stage of manufacturing is strictly handled inhouse. Every parts and components for our caster wheels are procured in bulk quantity, thereby allowing us to fulfil customer specific requirements in a cost-effective manner, in specified time frame.

Our aim is to help the world move by providing specific mobility solutions, distinct in features and performance, and to help meet the diverse requirements of different industries. We intent to cater to the large manufacturing sector and at the same time, maintain quality. Explore the standard range of products by Orbit Casters in this catalogue.



Kingpin Type Swivel Casters

Traditional swivel sections are composed of several pieces: a top plate, a kingpin, a lower (thrust) race, a lower (thrust) bearing, an upper (load) race, and an upper (load) bearing. The kingpin, which is generally a bolt or rivet, holds the other five components together allowing the caster to swivel. The swivel action is centred about the kingpin. Wheel arms are attached to the bottom side of the upper race, the lower race and bearing serve as a strengthening element, necessary to keep a heavier duty caster together. The illustration to the right depicts the basic construction of a traditional swivel section.

This construction technique, albeit tried and true, is not without its share of problems. Those problems generally stem from the kingpin. As stated before, the kingpin keeps the swivel section together and attaches it to the top plate. Therefore, with it being the joining element, the force the caster absorbs will be transmitted through the kingpin. With that in mind, the abuse will be focused on the kingpin and it will become strained and stressed over time.



One must understand that, there are two situations where a rapid failure of a traditional swivel caster occurs. First and foremost is towing. Unless specifically designed for towing with heavy-duty bearings in the swivel section, most traditional swivel casters will fail when being towed. This predominately occurs because of high-speed cornering. High speed is, of course, a relative term. Casters are generally rated for loads at a walking speed, about 3-4 km/hr per. So, being towed at 8-10 km/hr and taking a turn reduces the load bearing capacity significantly. The reason for this is a deformation of the swivel section. There are two component forces acting on the swivel section during a turn. Momentum keeps the cart going in the initial direction and the new force; that of the tugger turning, combine to create a composite force that tilts the wheel in the rig. This force can cause the kingpin to shear and the caster to fail catastrophically.

Secondly, traditional swivel casters fail because of shock loading or rough terrain. Realistically, dropping a load on a cart or taking it across a rough surface, they are identical to the caster. As the caster is impacted, either from the floor or from the dropping of a load, the kingpin takes the abuse. When the load increases the force is transmitted through the caster, however, as the impact occurs the wheel and the legs resist the force and it is isolated in the kingpin. Over time the kingpin after many impacts will deform, either in length or circumference. When this deformation occurs to a great enough extent the swivel section will seize because the ball bearings will become captured between the race and the plate. Or, in more extreme cases, the swivel section will separate enough to allow the ball bearings to escape.





400 KG



Mounting dimensions

75 X 115 mm



Mounting bolt size

10 mm



Main fork thickness

3 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm









SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Pressed

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on polypropylene

insert

5. Tread colour: Red/white

6. Tread hardness: Shore A 93-95

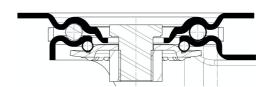
7. Wheel type: Balloon

8. Weight capacity: 400 KG

9. Wheel bearings: 6203-ZZ

10. Optional: Brake

11. Compatibility: Epoxy flooring







500 KG



Mounting dimensions

75 X 115 mm



Mounting bolt size

10 mm



Main fork thickness

4 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Pressed

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Red

6. Tread hardness: Shore A 93-95

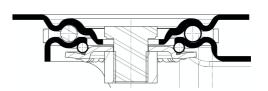
7. Wheel type: Balloon

8. Weight capacity: 500 KG

9. Wheel bearings: 6203-ZZ

10. Optional: Brake

11. Compatibility: Epoxy flooring



Shock Absorbing Casters

Move your sensitive goods safely!



Spring-loaded casters improve the service life of castors by reducing the amount of shock and impact load. They also protect sensitive and valuable goods by absorbing shock and impacts. Spring-loaded casters ensure that loads are distributed more evenly and reduce noise levels during transportation.

Shock absorbing casters by Orbit Casters incorporate steel spring. With casters ranging from pressed to forged and fabricated, Orbit Casters brackets incorporate steel to provide excellent damper characteristics.

Steel springs are normally only used for suspension and have a long service life. The properties of steel springs remain constant over time. Spring tension, initial tension and the maximum spring travel are taken to consideration when designing shock absorbing casters. The initial tension is the amount of force which is used to pre-tension the spring. The spring will only move or compress if this force is exceeded.

The spring tension is the amount of force which is required to reach the end stop. The maximum spring travel is the change in the mounting height between an unloaded state and maximum compression. The optimal static load is roughly half the spring tension. The damping performance of the caster is optimised for this range. If the force is too large or too small, the response of the suspension will be impeded.





400 KG



Mounting dimensions

75 X 115 mm



Mounting bolt size

10 mm



Main fork thickness

5 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

205 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Pressed

(a) 360° Swivel 3. Fork types:

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on PP insert

5. Tread colour: Red

6. Tread hardness: Shore A 93-95

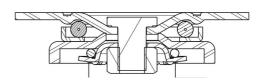
7. Wheel type: Balloon

8. Weight capacity: 400 KG

9. Wheel bearings: 6203-ZZ

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring







500 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness

5 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

205 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Pressed

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Red

6. Tread hardness: Shore A 93-95

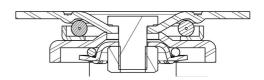
7. Wheel type: Balloon

8. Weight capacity: 500 KGs

9. Wheel bearings: 6203-2RS

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring

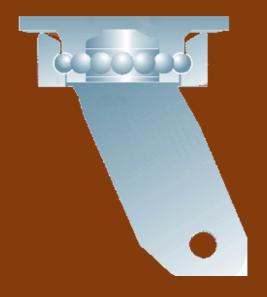


Kingpinless Swivel Casters

Compared to the traditional swivel section, a kingpinless swivel section is much simpler in design. It is constructed of a top plate with a forged inner race, an outer race to which the wheel arms are attached. The ball bearings rest between the two pieces. This design completely eliminates the need for a kingpin, as the name kingpinless implies.

As depicted in the illustration to the right, the construction is straightforward. Kingpinless casters provide an excellent alternative to traditional swivel casters in applications where the casters are subjected to high impact especially while transportation.

The technical advantage of kingpinless casters make them an excellent choice for many applications. Removing the kingpin eliminates the common problems associated with traditional kingpinned casters. Obviously, though, it isn't quite that simple, the reason for the enhanced durability and performance lies in load distribution.



Consider the towing application, using a traditional swivel caster can lead to shearing of the kingpin and catastrophic failure of the caster. By utilizing this design, the load that is placed on the caster is distributed over a greater surface area. A kingpin, on average is about 5/8" in diameter, giving roughly a 2" circumference about which the load is distributed. Comparing that to a kingpinless swivel section which as a diameter of about 2", giving a circumference of over 6", and the difference is translated in its performance and durability.

The same applies to the shock loading scenario. As the load is impacting the caster, or the caster to the floor, the greater impact area gained by the kingpinless design allows for the caster to absorb more force without failure. Beyond a technical aspect of greater resistance to abuse and better performance, kingpinless casters offer a highly competitive and efficient alternative to traditional towing casters. The use of common ball bearings as opposed to a sealed precision ball or a tapered bearing makes the price highly attractive, without sacrificing capacity or durability.





600 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness





Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop Forged with fabricated forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Red

6. Tread hardness: Shore A 93-95

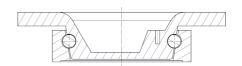
7. Wheel type: Balloon

8. Weight capacity: 600 KGs

9. Wheel bearings: 6203-2RS

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring







750 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness



6 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop Forged with fabricated forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Red

6. Tread hardness: Shore A 95-98

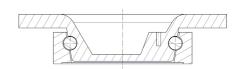
7. Wheel type: Flat

8. **Weight capacity**: 750 KG

9. Wheel bearings: 6204 ZZ

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring







900 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness





Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop Forged with fabricated forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Blue

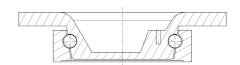
6. Tread hardness: Shore D 58

7. Wheel type: Flat

8. Weight capacity: 900 KG9. Wheel bearings: 6204 ZZ

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring, concrete flooring*



^{*}Floor surface should be level and free of metal debris and sharp metal objects that could possibly damage the PU layer





600 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness

6 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop forged with fabricated forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Red

6. Tread hardness: Shore A 93-95

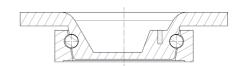
7. Wheel type: Balloon

8. Weight capacity: 600 KG

9. Wheel bearings: 6203-2RS

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring







750 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness

6 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop Forged with fabricated forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Red

6. Tread hardness: Shore A 98

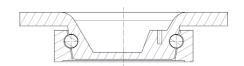
7. Wheel type: Flat

8. **Weight capacity**: 750 KG

9. Wheel bearings: 6204-ZZ

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring







950 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness





Axle bolt

12 mm



Wheel size



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop Forged with fabricated forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polyurethane treaded on cast iron insert

5. Tread colour: Blue

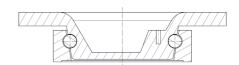
6. Tread hardness: Shore D 55

7. Wheel type: Flat

8. Weight capacity: 950 KG 9. Wheel bearings: 6204-ZZ

10. Optional: Brake/ Direction lock

11. Compatibility: Epoxy flooring, concrete flooring*



^{*}Floor surface should be level and free of metal debris and sharp metal objects that could possibly damage the PU layer





400 KG



Mounting dimensions



75 X 115 mm



Mounting bolt size

10 mm



Main fork thickness

3 mm



Axle bolt

12 mm



Wheel size

6" x 2"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Pressed

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polypropylene

5. **Tread colour**: White

6. Tread hardness: N/A

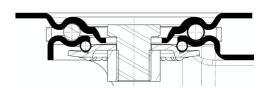
7. Wheel type: Balloon

8. Weight capacity: 400 KG

9. Wheel bearings: 6203-ZZ

10. Optional: Brake

11. Compatibility: Concrete flooring







1000 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness





Axle bolt

12 mm



Wheel size

6" x 2", 6" x 2.5"



Caster height

200 mm







SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop Forged with pressed/fabricated

forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Polypropylene/Cast Amide

5. Tread colour: White

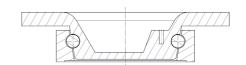
6. Wheel type: Flat

7. Weight capacity: 1000 KG

8. Wheel bearings: 6203 ZZ/6204 ZZ/6205 ZZ

9. Optional: Direction lock, Brake

10. Compatibility: Concrete flooring







1000 KG



Mounting dimensions

75 X 115 mm



Mounting bolt

10 mm



Main fork thickness

6 mm / 8 mm



Axle bolt

12 mm



Wheel size

6" x 2", 5"x 2", 5" x 1.5"



Caster height

200 mm





SPECIFICATION

1. Caster make: Orbit Casters

2. Bracket model: Drop Forged with pressed/fabricated

forks

3. Fork types: (a) 360° Swivel

(b) Rigid/Fixed type

4. Wheel type: Cast iron

5. Tread colour: Grey

6. Wheel type: Flat

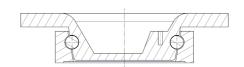
7. Weight capacity: 1000 KG

8. Wheel bearings: SKF 6205-ZZ C3

9. Optional: Direction lock

10. Compatibility: Concrete flooring/ MS Channel/ High

temperature applications



Product Selection and Recommended Usage Conditions



While all our caster wheels are designed and manufactured to sustain typical usage environments, the correct product selection and ambient usage conditions matter the most. The following parameters significantly affect the usage efficiency and life of the products and should be considered while selecting casters for your application.

Weight loading capacity

The gross weight considering the weight of the material handling structure and the gross weight of each part being loaded must be considered, whilst making allowances for:

- a) Even distribution of load across the number of caster wheels used.
- b) Fair usage of mechanical towing equipment or electrical tuggers, minimizing over speeding or imbalance that may lead to premature wear and tear of the caster wheels.
- c) Covering un-realistic distances per trip under load.
- d) Safe dynamic impact loads not more than 2G's of force.

Ambient conditions of the shop floor

The ambient floor conditions of the shop floor are equally important as the loading capacity of the casters. Rough floors can lead to premature wear of the wheel treads leading to load imbalance. Gutters, potholes or sharp projection on shop floors, especially at turns, can significantly affect the caster integrity and eventually lead to its damage, especially when moved around under loaded conditions. The shop floors are expected to be free from sharp metal filings and objects that could potentially puncture and damage the wheel treads.

Chemical spills on the floor, can lead to corrosion and damage of wheel treads. While utmost care is taken to prevent corrosion of the caster parts, via paint job and metal plating, chemical/water spillage or splashes may eventually lead to metal corrosion.

Instructions for safe usage of caster wheels

1. Loading capacity

Meanwhile, safety factors are considered while determining the load capacity of casters, it is highly recommended that the users conform to the loading recommendations. Load capacities mentioned in the catalogue apply to normal working conditions, provided, the floors are free from shrapnel and other imperfections such as gutters, potholes or sharp concrete projections that could possibly wear the wheel treads and compromise the caster integrity when subjected to impacts under load. Load capacity may be calculated considering the empty load of material handling structure plus the gross weight of each part to be loaded and the number of caster wheels. It may be noted that the ideal load capacity will be significantly affected if the caster wheels are subjected to impacts under loaded conditions.

2. Operating speed

Casters and wheels are manufactured to be operated under a safe operating speed of 4km/hr, which is equivalent to the average walking speed of an adult human being, on a flat, smooth and even surface, free from debris, metal filings, and other indentations, which is equivalent to the average walking speed of an adult human being. For mechanical towing or tuggered movement beyond the recommended speeds, it is highly recommended to reduce the load on the wheel, as the impact loads at higher speeds can possibly affect the caster integrity leading to its damage or breakdown.

3. Floor compatibility

While the wheels are manufactured for wide range of usage, it is highly recommended that the floor type maybe taken into consideration while choosing the wheels. Polyurethane treaded wheels are recommended for epoxy

Product Selection and Recommended Usage Conditions



flooring. Hard polymer wheels may significantly damage the smooth epoxy flooring as it tends to pick up debris leading to scoring and scratching soft epoxy flooring. Kindly contact us for further technical assistance.

4. Other recommendations

All wheels and casters go through strict quality check. However, we highly recommend further scrutiny from customer end to further nullify the misuse of the caster wheel that may lead to its failure. Some check points are as follows.

- a) Placing recommended load levels. Overloading can significantly reduce the caster wheel performance and its operational life.
- b) Subjecting the caster wheels to extreme shock/impact during transportation or material movement.
- c) Maintaining the speed within recommended levels
- d) Using the caster wheels only on recommended floor conditions.
- e) Checking the ambient atmospheric conditions, so that the caster wheels are not subjected to extreme temperatures, rain etc. Leaving the caster wheels unattended in bright sunlight, can lead to the eventual breakdown of thermoplastics and thermosetting plastics as a result of the ultraviolet rays from the sunlight resulting the underperformance or damage to the wheels.
- f) It may be noted the brakes should be in released position while movement. Failure to release the brakes can lead to significant damages to the wheel tread leading to imbalance and potential accident.
- g) Orbit Casters do not recommend user servicing of its caster wheels. Any unauthorised servicing or maintenance of the installed components will void its warranty. Orbit Casters will not be accountable for any incidents occurring due to unauthorised disassembly and servicing of its products without our prior consent.



WARRANTY

We guarantee our products to be free from any manufacturing defects that will affect its intended use. Any product found defective upon arrival shall be duly returned for verification/examination, which shall be replaced free of cost if found defective. Our caster wheels come with a range of standard warranty of 6 months to 2 years, depending on the product and /or application, against manufacturing defects from the date of purchase.

The product will not be eligible for warranty if any damage occurs due to mishandling, accident or unintended use at the customer's end, that is out of application parameters, or without prior discussion with Orbit Casters. Any unauthorised disassembly, modifications or servicing of the caster wheels will void the product off on its warranty. Orbit Casters will not be responsible for any incident arising/occurring due to misuse or usage of defective caster wheels. The company's liability in all cases will be restricted only to product replacement.

DISCLAIMER

Orbit Casters will not be liable to warranty its products that are misused/mishandled deviating from its recommended usage guidelines. Misuse/mishandling includes:

- 1. Overloading of caster wheels beyond the recommended load capacity without considering safety factors.
- 2. Subjecting the caster wheels to high impact load/shocks while transportation under loaded /stacked conditions.
- 3. Products used in unsuitable or uneven floors.
- 4. Storing the products in rain or under the sun, resulting in damage due to corrosion.
- 5. Using products under ambient conditions that are beyond recommended ranges, such as very high/ low temperatures.
- 6. Using the casters/wheels in locked or braked positions leading to damage.
- 7. Subjecting the casters to excessive speeds under load while moving.
- 8. Damage due to sharp objects like blades, stone, metallic objects etc.
- 9. Repair/modifications made without consent from Orbit Casters.
- 10. Subjecting the casters to impacts during loading/unloading trolleys.
- 11. Colour of casters and wheels are for representation purpose only. Subject to change without prior notice.

CONTACT US

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