

# Wheelchairs

A **wheelchair** is a chair with wheels, used when walking is difficult or impossible due to illness, injury, problems related to old age, or disability. These can include spinal cord injuries (paraplegia, hemiplegia, and quadriplegia), cerebral palsy, brain injury, osteogenesis imperfecta, motor neurone disease, multiple sclerosis, muscular dystrophy, spina bifida, and more. For example, globally every year between 250,000 to 500,000 incidents lead to the lower limbs being immobilized.

There are people who are temporarily disabled because of an injury or trauma and some people are permanently disabled because of the long lasting damage to their organs. In both cases they need help to provide them with a solution to mobilise themselves. Wheelchairs are effective instruments to help them move around for many years. With the advancing technology, wheelchairs also got better in quality and comfort. Now there are more functions available for the users and it also has easily movable options which makes it very easy to carry around and use whenever needed.

Wheelchairs come in both manual operated mode and motorised mode with button facilities and controls in the hands of the user. Let us check out some of the best options available to opt when buying a wheelchair for someone you love!

## Rise Mechanics

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Rise Mechanics is a high-tech company, engineering and manufacturing new-generation robotic mobility devices for people with lower limb disabilities with unique design, mechanics, electronics and software.

Their product Omnibot which is proving to be one of their breakthroughs in the AT industry has the following specifications:

- Free movement in the vertical position of the body.
- Health status improvement.
- Easy self-transfer from and to a wheelchair or other furniture.
- Maximum manoeuvrability.
- Lightweight – compact – 60 kg.

- Aluminium tubing chassis.
- Antibacterial breathing materials.
- Low centre of gravity.
- Adaptable steps and knees.
- 4 x 4 movement.
- 0 grade turning radius.

Its Estimated Price is 21,000 Euros.

[Early bookings](#) receive a 30% discount on the estimated price.



## [Quickie](#)

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**Quickie Wheelchairs** is owned and operated by industry professionals who provide customers with all types of Home Medical Equipment. Their specialty has grown from strictly rehabilitation equipment for the new user to a full line of products ranging from [ultra-light wheelchairs](#) and ambulatory aids to urology supplies and wound care.

Their wheelchairs come in a variety of range, some being

- The quickie power wheelchairs
- Ultra-light wheelchairs
- Tilt-in-space wheelchairs
- Sports wheelchairs
- Paediatric wheelchairs



**Q700M**

The quickie power wheelchair comes with different customization alone and ranges from around – 1000 dollars for a ultra light Quickie QX to around – 7000 dollars for a powered wheelchair [Quickie Q700 M](#), suiting different needs of different people.

[Quickie Max Mobility Drive MX2+ Wheelchair](#) Power Assist Wheels is a revolutionary new design in power assist manual wheelchair propulsion. It easily attaches to almost any ultralight wheelchair that utilizes a 'camber tube' style axle assembly. It can be attached to most folding manual wheelchairs as well. It costs around 6,400 dollars.

## Features

- Powerful
- Lightweight
- Easy to use
- Easy to install



Specifications are mentioned in the next table.

<b>Drive Unit Weight:</b>	12.5 lbs
<b>Battery Type:</b>	36v Lithium Ion, 3.4Ah
<b>Driving Range:</b>	12.3 Miles ( Approximate )
<b>Attachment:</b>	1 1/4, 1 3/8, 1 1/2, or 2in Camber Tube; or folding wheelchairs
<b>User Weight:</b>	30 - 331 lbs
<b>Performance:</b>	max speed 5.5 mph ( 5.3 mph up to 6 deg incline )
<b>Motor:</b>	250 Watt
<b>Warranty:</b>	1 Year battery defects, 2 Year drive unit defects

## Freedomwheels

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Freedomwheels concept NO DEALER, NO DISTRIBUTOR, NO SHOW ROOM Or SHOP & NO COMMISSION AGENT.

They supply & support directly to the user.

### Products

#### FW450 Folding Motorized Wheelchair

- Driving range: 15-20km
- Max speed: 6km/h
- N.W.: 40kgs (with battery)
- Overall size: 1090\*685\*930mm
- Folded size: 805\*420\*730mm
- Flip-up Armrest & Adjustable and Detachable Footrest
- Wheels: 8 inch (front), 22 inch (rear)
- Tyre : Solid (front) Air inflation (rear)
- Loading capacity: 100kg
- Motor: DC 250W \* 2Pcs
- Brake: Manual Parking Brake
- BatteryPack: 24V 12Ah (9.5kg) Sealed Lead Acid
- Frame materail: steel



**Cost: Rs 45,000**

#### FW234 Standing Power Wheelchair

- Driving range: 20-30 Km( depend on user weight and road condition)
- Max speed: 6 Km/h

- Battery: 24V 40AH
- Control: Dynamic Shark control
- Motor: 250W\*2pcs (Taiwan)
- Brake: Electro-Magnetic Brake
- Seat: 450mm\*500mm\*510mm
- Overall size:  
1110mm\*630mm\*1280mm
- N.W.: 114.5 KGS
- Wheels: 8 inch (front), 12 inch (rear)
- Tyre : Pneumatic Tyre (Air inflation)
- Package size: 1200\*800\*1320mm
- Weight capacity: 100 KGS
- Features:
- Front Wheel Drive
- Flip up armrest,
- Power Operated Elevating Legrest
- Reclining Backrest



**Cost: Rs 234,000**

## Innovations

People with limited mobility have relied on wheelchairs for centuries to help them get around. But not much has changed in wheelchair design over the last 200 years. A lot has been changing in the present times, below are some of the innovative ideas that are currently embryonic, although some of them have reached the stage of commercialization.

### *Some latest and upcoming innovations*

- Sit & Stand Wheelchair (Mechanical & powered) – This idea has already been commercialized in several countries for e.g. Mechanical sit and stand wheelchairs by Phoenix Medical or for more latest technology above mentioned Omnibot.
- Using a component that transforms a regular manual wheelchair into an electric wheelchair. The device is operated by a joystick and locks into the wheelchair's wheels. This is an excellent alternative for those who cannot afford a motorized wheelchair. Example: [Batec mobility](#) from Spain and [Neomotion](#) from India.
- Illuminated wheelchairs may be the solution for individuals who enjoy being out at night but are concerned about their safety. They feature lights that are activated by turning the side wheels.



- New concepts in a power wheelchair are making them more compact, easy to use, more maneuverable, with intuitive control, all-wheel-drive system, longer range, more durable, foldable, and even gives ability to climb stairs (E.g.: Ibot by [Mobius mobility](#)), etc.
- Self-driving wheelchairs are also a possibility, fitted with visual sensors that detect objects automatically, including glass doors.
- The user only has to set the current location and the destination to reach to keep them going.

- [Brain activated wheelchair](#) for example a wheelchair by [NOW technologies](#) called Gyroset.
- [Wheem-I by Italdesign](#) (Italy) — A wheel-on semi-autonomous electric device that provides ride-sharing for wheelchair users. It is primarily designed for micro-mobility and is usable on a variety of surfaces.



**Wheem-I**

Possibilities are limitless and with the ever-growing need for these assistive technologies, their growth and market potential are also the key driving force behind these innovations.