



Wheelchairs: The Trend from Functionality to Individuality

Wheelchairs have been around for hundreds of years, but early wheelchairs were intended only to help a disabled individual move from point A to point B. As society progressed and disabled individuals became more integrated, the role of the wheelchair began to change as well.

Wheelchairs are now considered not only a means of transportation but also as a way to allow users to express their individuality. Users can find custom-made high quality ultra-light high-performance wheelchairs as well as accessories that enable them to individualize their look and style. The move from functionality to individuality is discussed in this article.

There were many attempts to connect furniture to wheels dating back to the time of Christ. But perhaps the first wheelchair was invented for King Phillip II of Spain. A drawing of the King dated 1595 shows him in a chair with wheels, armrests and footrests. However, he needed assistance to propel it and the wheelchair resembled more a modern baby's highchair than a wheelchair. In 1665 one of the first self-propelled vehicles was invented by Stephan Farfler. But it looked more like a present day hand-bike than a wheelchair as it was propelled by hand cranks attached to the front wheel. The modern wheelchair began to take shape in the late 19th century to early 20th century with the advent of push rims for self-propulsion and slings for seat and backrests. The 20th century saw a rapid development in wheelchairs, from the first motorized wheelchair, to the first folding wheelchair, to lightweight and sports wheelchairs.

The most recent two decades have seen the progress in the modern wheelchair accelerate. They are lighter and perform better than ever before. There are now many possibilities available to improve the ride, from suspension systems which help to remove vibrations and jolts **and** ultra, to ultra-light weight frames which enable better performance, to special designs for every individualized need and taste.

Types of customization include :

- fitting special physical needs
- improving or providing special performance
- expressing style and image

Customization of the wheelchair to fit some special needs of the user can include simple modifications of standard designs. Imagine a mother who is a triple amputee. How will she move herself and her baby? Special wheelchairs can now be designed to help her. For example a user with an amputated arm can use a special wheel which has dual handrims to allow both wheels to be controlled with one hand. The wheelchair can also be modified so that it is extra-

long allowing the child seat to be attached to the wheelchair in front of the mother. Other examples may include designing extra large wheelchairs for extra-tall users or reinforced wheelchairs for heavy users or specialized devices for users that have limited motor control or functions.

Individualizing wheelchair for performance is often required for athletes or very active users. This can include creating special wheelchairs for dance with the ideal center of gravity for allowing the user to perform spins and complicated maneuvers with ease. Dancers with limited motor control can have special handles created which allow their able bodied partners to assist them in their turns or maneuvers. Tennis players can have special requirements like reverse tilt seating position where the back of the seat is higher than the front of the seat, in order to give increased power in the arm and body movements. Rugby players need specially designed wheelchairs that can take a very hard hit without damaging the wheelchair or the occupant.

Customization in order to individualize and express style and personality are becoming more and more common. Frames can be custom designed to fit the individual's body like a glove, frames can be painted with special colors or designs, wheelchair upholstery can be made to order, lighted casters, funky spoke guards with individualized patterns or designs and bling-bling wheels with rotating spinners are becoming more and more available.

Customization not individualizes a wheelchair it makes it lighter and perform better. Most mass produced wheelchairs are made by using adjustable brackets to hold the frame together so that a prefabricated wheelchair can be adjusted to fit different individuals. However, these brackets create weight. Customized wheelchairs are made to fit the individual that they are created for. Instead of using adjustable brackets, the wheelchair parts are welded together. This means that the wheelchair is not at all adjustable, so it must be designed correctly by an experienced professional. However, custom-made wheelchairs are considerably lighter. They are also perform better since the energy from the push may be lost in the movement of the brackets.

Advances in assistive technology make it easier for disabled individuals to integrate into society. But even with new technology, users would not be able to integrate without public access and funding to purchase of the new technology. The best wheelchair in the world would not help a disabled person to move about if society did not provide ramps, special doors and other infrastructure to enable access to public spaces, transportation, sidewalks and roads. In developed countries laws and public funds have been set aside to help disabled people integrate. In addition, public funding is often available to assist disabled people to purchase assistive technology such as wheelchairs and other mobility devices. But what about societies where public access is not yet available and public funding is limited? Unfortunately in these countries wheelchair users are often forgotten. While the technology exists to help them to integrate, poorly developed sidewalks and roads, lack of ramps and elevators mean that even if they were able to purchase the technology, they can not take full advantage of them. People who could have equal access to facilities that able bodied people take for granted are often forced to stay at home. Future developments require that societies that consider themselves part of the developed world must create funding to develop their infrastructure and enable disabled individuals to fully integrate.

About The Author :

Dr. Gene Emmer is president of Med Services Europe: Med Services Europe GmbH is based in Zurich, Switzerland and specializes in Sales, Marketing and Business Development for the Medical industry. Med Services Europe helps manufacturers to build sales of their products. We are the European representative for Colours Wheelchairs, a US manufacturer of ultra lightweight wheelchairs <http://www.ColoursWheelchair.com>. Manufacturers, distributors and retailers of disability products are encouraged to contact Med Services Europe.

For more information :

<http://MedServicesEurope.com> or <http://www.Disability.com> or Telephone: +41764249963

Key Words :

Disability products,
disability, disabled,
Disability aids,
Disability Equipment,

assistive technology,
assistive technologies,
medical,
medical equipment,

wheelchair,
wheelchairs,
New Disability