

RGK Chrome Wheelchair with Cycling Axle

The ultimate chair choice to compliment Team Hybrid handcycles



RGK manufacture some of the best wheelchairs in the world and over 25 years have sold 17,000 sports, kids, custom and everyday chairs.

The frame design of the Chrome makes it the ultimate choice for handcycle attachments. This chair is super strong and will stand up to years of hard work.

This particular Chrome wheelchair has been especially designed for hand cycles and is the only off the shelf chair that comes with a dedicated cycling axle. There are two wheel positions, the everyday axle has a 2-degree camber and the cycle axle has a 6-degree camber. On top of that toe-in has been designed into the chair so that when the handcycle is attached and the front wheels are in the air the rear wheels keep the perfect angle for rolling minimum rolling resistance and improved tire wear.

Both rear wheel positions have scissor brakes that fold out of the way when not in use.

Another great feature of this chair are the 24 x 1.75 Mountain Bike wheels. You are not restricted to a particular wheelchair style tire; you can go into any bicycle shop and purchase tires and tubes.

Additional specifications include: Tension adjustable upholstery, height adjustable Footrest and Folding adjustable Backrest with Snap Lock system.

Advantage of wheelchairs with a cycling Axle

The majority of everyday manual wheelchairs come with an adjustable rear axle. The rear axle and wheels can be moved forwards (short wheelbase) or backwards (long wheelbase) to adjust the COG (Center Of Gravity). A great number of wheelchairs are set up with a short wheelbase so that the user can manoeuvre the chair with speed and ease. This includes being able to do tight spins and pop wheelies for dropping down curbs etc.

When moving the rear axle and wheels forward the center of gravity moves backwards thus taking more weight off of the front casters allowing them to roll more easily. The downside of the COG moving backwards is that the chair is more likely to tip backwards when climbing hills and ramps or if the user propels the chair too vigorously.

When moving the rear axle and wheels backwards the COG is moved forward placing more weight on the front end of the wheelchair. As the wheels are moved further backwards more and more weight is placed on the front end this in turn makes the wheelchair more stable as the wheelbase has been increased. The downside to this is that because so much more weight is placed on the front casters the ability to wheelie and fast manoeuvre gets harder.

Because there is a downside to having the COG too far forward and too far backwards it is important to get the adjustment of the rear axle and wheels as close to ideal as possible for everyday use. This of course will greatly depend on the individual user, and some experience is needed to get the adjustment right. Users differ in weight, height and strength; these are factors that should be taken into consideration when final adjustments to the COG are made.

Now that the importance of the rear axle position and its relationship with the center of gravity has been explained we can begin to understand how the addition of a cycling axle will aid with traction when a handcycle has been attached to the wheelchair.

Lets imagine that we have docked our handcycle onto our wheelchair and the rear wheels are in the everyday position (COG moved backwards, short wheelbase). Although we can still cycle the front wheel does not have so much weight loaded onto it. This is fine when handcycling on flat terrain but when inclines are negotiated the front wheel will have a tendency to slip/spin.

Now lets place the rear wheels into the cycling axle (COG moved forwards long wheelbase). Because of the extended wheelbase the front wheel of the handcycle now has much more weight loaded onto it thus providing more traction. Now when we come to an incline it is easier to negotiate as the front wheel has a lot more grip.

There are no rules to say that a wheelchair with a cycling axle is a necessity, the majority of people are very satisfied to use a handcycle with their existing set up and of course this is completely fine. But as you can see from the explanation a cycling axle is a great help and will totally enhance your riding experience especially if your handcycle is a lightweight manual version.

