



Cycling for everyone





EDITORIAL

If you asked the people at AZUB why they love their jobs, they would often talk about how great it is to build bikes that make customers happy and experience new adventures. It really is recharging when you see people's excitement when buying a new bike and what possibilities it opens up for them. But the possibilities that open up for our disabled customers are absolutely unimaginable. For many, a trike from AZUB is the only way to move freely over longer distances, enjoy the outdoors, or just go shopping. And it only takes a few of these customers a year, and our motivation to work is taken care of for a long time. The feeling of seeing a disabled cyclist go on his first ride is simply amazing.

And because we want to broaden the horizons of as many people as possible, we have been adapting our recumbent bikes and trikes for people who would otherwise not be able to ride a conventional bike. These people have all kinds of limitations and are coping with balance disorders, cerebral palsy, multiple sclerosis, the consequences of a stroke, a work accident, etc. Their stories are often

cheerless, but their desire to fight their fate is enormous, and their sense of humor is often surprisingly great. We try to put a smile on their faces with various modifications that allow them to sit in our recumbents, operate them easily and safely, and comfortably spend a long enough time in nature.

Such modifications can include simple things like mounting shifters and brake levers on one side of the handlebars only, installing an electric drive, using electronic or even automatic gear shifting, or raising the seat. However, they can be very specific and much more demanding adaptations that, for example, allow people without hands to steer a trike by leaning their body and braking it with their knee. And all this in complete safety.

Read some of our customers' stories, learn what modifications we've made for them, and see if we could build a similar trike for you, your relatives or friends, or for your clients and patients. If you have any questions, our colleagues are ready to answer them and find the best solution for everyone.





ABOUT AZUB

AZUB BIKE was founded by Ales Zemanek in 2000 and is based in Uhersky Brod, Czech Republic. This is also the origin of the company's name, an abbreviation of the owner's name and the city in which it is based. Since the beginning, it has been dedicated to designing and producing recumbent bikes and trikes. For more than two decades, it has gained a reputation for its innovative solutions both in development and in company management or marketing. Gradually working its way up to a premium brand, it has more than 80 dealers worldwide and specializes mainly in custom builds and truly unique solutions to customers' ideas and needs.

It has also confirmed its position by winning three Trike of the Year titles from the respected online magazine Bentrideronline. In 2015, it was for the AZUB TRIcon 26 trike, which was the first to use a wide rear wheel hub with a modern thru-axle, which

provides superior rear fork stiffness and excellent cornering behavior. In 2016, the TRIcon 26 was followed by the full-suspension Ti-FLY 26. Its front suspension is unique in the form of transverse titanium leaf springs, giving the trike excellent comfort and good light-sport riding characteristics. And finally, in 2018, we won the award for the AZUB Ti-FLY X off-road trike, which combines the wide rear fork and titanium suspension with three large 26" wheels, making it the ultimate machine for off-road trips.

Whether you buy your trike from our dealers or communicate directly with them, you will always get expert advice from people who really know about recumbent bikes and adaptations for people with various limitations and are ready to find the best solution for their customers. We aim to ensure that as many people as possible can experience the joy that cycling brings.



TRIKES AND THEIR MODIFICATIONS

While two-wheel recumbent bikes may also be the right vehicle for some people with disabilities, most of our customers with some physical limitations use recumbent tricycles. Unlike traditional upright bikes, these are stable and therefore do not require the rider to balance, are relatively easy to get on, and are easier for riders with disabilities to control. This is, of course, due to the three-wheel design, but also due to the use of a large ergonomic seat that supports the butt and the back throughout, ensuring that the rider does not slide forward off the seat and also partially supports the rider when cornering. At the same time, if necessary, it can be equipped with seat belts to prevent the rider from sliding sideways off the seat. Compared to upright tricycles, recumbent ones are much more stable and thus safer and better able to cope with riding on bad roads or directly off-road.

Trikes come in many configurations and can have small and large wheels. They can have an electric motor to help the rider pedal or be human-powered only. We offer them in a version without suspension, with rear suspension, or fully suspended. They can be equipped with a folding hinge for easy transportation. Our

smallest model called the T-Trisek, is suitable for riders from 135 cm (4'3") upwards, and if it's a child, they can grow with it up to 180 cm (5'11") and possibly beyond. The maximum height of the rider is almost unlimited. The maximum weight capacity of most of our cycles is 125 kg (275 lbs).

We are able to equip each of our bikes with all the usual accessories, such as mudguards, racks, lights, bike computers, cages and water bottles, bells, etc. But in addition, we also offer totally unconventional cycling accessories such as a headrest. For customers with health limitations, we can also fit special pedals to solve the limited ability to bend the leg at the hip or knee or to hold the leg so it does not lean sideways when pedaling. We also offer a variety of features like a high seat adapter, grab handles to make getting off more manageable, a cane holder, and much more.

You can find everything in our configurator at **configurator.azub.eu**.

You can also ask one of our dealers or us directly.





AROUND AUSTRALIA ON A TRIKE

Tommy Quick / stroke

Tommy Quick is a young man who suffered a stroke at the age of 12, changing his life forever. However, Tommy realized that his life didn't end there. On the contrary! It was just then that he started again!

In 2021, he embarked on a spectacular journey as part of a personal challenge to travel 9,000 km / 5,600 miles on a recumbent trike and visit the four furthest points of the Australian mainland. The main aim was to promote social inclusion for people after a stroke and raise awareness of the disease. However, it also set out to raise money to help stroke survivors and improve the availability and quality of services needed. However, after about one-third of travel, he was unfortunately hit by a reckless driver. Tommy suffered severe injuries and had to learn to walk again for the second time in his life. Thanks to much effort and excellent rehabilitation results, Tommy hit the road again after a few months. His goal was clear. To finish what he started. This time on an AZUB TRIcon 26 trike. As we prepare this leaflet, Tommy has completed most of the journey, reached all four points, and is yet to complete the last part of the journey, between where he was hit by the car and his home. He has covered thousands of miles not only on tarmac but also on gravel roads far from civilization. His courage and perseverance are absolutely incredible!

Trike:

AZUB TRIcon 26 with Shimano Steps motor. Hydraulic disc brakes on the front wheels controlled by one lever only. Rear parking brake. Headrest and cane holder. Homemade system to prevent knee buckling when pedaling.





JIRÍ WANTS TO LIVE AND CLIMB PEAKS

Jiří Hos / severe work injury

Mr. Jiri Hos had an accident at work in 2016. As an electrician, he was checking the transformer of a wind power plant near Aš in the Czech Republic and was hit by an electric discharge. As a result, he lost his leg, both arms and hearing. However, the cruel fate did not break him, and with the help of his wife, Jana, he fights his daily battle. In order to be able to do something like before, he decided to get a trike. Gradually, we developed and implemented modifications so that the tricycle could be propelled with only one leg and steered with the body. It was a big challenge for us, but we succeeded, and Mr. Hos has already climbed several Czech peaks on his recumbent. He is able to ride on his own; however, he needs help with getting on and off, as well as with turning on the engine. He makes no secret of his story and would like to motivate other disabled people by what he does.

Trike:

AZUB Ti-FLY 26 equipped with Shimano Steps motor, Enviolo stepless gear hub, and automatic shifting. The steering is controlled by tilting the hull, and the brakes by pushing the knee on a large orange part that we 3D printed. The rear hydraulic brake can be operated with a short end of one hand pushing on a conventional brake lever.



FOUNDATION TRUSTEE TRAVELS AROUND SLOVAKIA ON A TRIKE

Peter Káčer / Cerebral palsy

Despite suffering from cerebral palsy, Petr Káčer is a celebrity in Slovakia and is known to almost all viewers of the popular TA3 TV channel. Petr is a trustee of the TA3 Foundation, and as part of his awareness-raising and fundraising activities, every year, he goes on a seven-day tour on his AZUB recumbent. During those trips, he travels around Slovakia, visits organized events in different cities, meets his fans, and at the same time, hands over donations to selected people who have asked the foundation for help. During the event's first seven years, more than one million euros were raised and distributed, which is a fantastic figure.

Trike:

Currently the third from AZUB in the form of Ti-FLY 20 with Shimano Steps engine and our developed push brakes, which allow for braking even for people who would otherwise not be able to press the classic brake lever. The trike is also fitted with special pedals with larger foot support and a cane holder, among other features.





VETERINARIAN ON THE ROAD

Peter Káčer / Cerebral palsy

At the age of 24, doctors diagnosed him with a progressive type of autoimmune disease in the form of multiple sclerosis. They told him right off the bat that his condition would worsen and that he would end up in a wheelchair. At the same time, they stressed to him the need for exercise. He had been used to playing sports since he was young. He practiced karate, rode horses, swam, skied, and cycled. However, as his health deteriorated, his sporting opportunities gradually diminished, and he was left with regular rehabilitation exercises, swimming, and cycling. However, due to balance problems, he was forced to replace his regular bicycle with a more stable trike. He then considered a conventional upright tricycle and found stories of people using it. Through them, he got to the manufacturer and tried it out. However, he soon discovered that balancing on such a tricycle is very difficult, even though it has three wheels. He says: „Riding such a machine is governed by different principles than on a conventional bicycle and, for example, cornering is not done by leaning, but purely with the handlebars. Handling bumps is also different because there are two wheels at the back, and you have to handle bumps on the right or left side of the axle. But the worst thing is the center of gravity, which is high, so it is no problem for a healthy person to tip over.”

Honza just couldn't accept such a tricycle and was quite sad about it. Fortunately, his brother found information about recumbent trikes, and Honza visited our company shortly after. „Even according to the recommendations of physiotherapists, riding a recumbent trike is the most suitable rehabilitation exercise, which provides good physical exercise, sufficient stretching and strengthening of the muscles, which is so important for me, and of course safe stability given my difficulties,” says Honza about why he had to get the AZUB in the first place. He then rode his recumbent not only in the Czech Republic but also in Austria around Lake Neusiedl and in Hungary around the Tisza River. After a while, he bought a new trike with full suspension and e-assist to ride in greater comfort. His latest tour followed the Danube River.

Trike:

Actually, Honza would not need any exceptional modification because his „only” problem is balance. Even so, there are a few accessories that make his rides easier. AZUB Ti-FLY 20 with a Shimano Steps motor, grab handles for easier getting on and off, a high-seat adapter, and a cane holder.



ADJUSTMENTS FOR CYCLISTS WITH MOBILITY RESTRICTIONS

Electric drives

We always offer several different types of electric drives whose parameters and names change occasionally. There is no doubt that e-motors, in particular, are a massive benefit to people with disabilities as they help them to get up hills, cover longer distances and enable them to go on trips with family and friends without being held back.



One-hand Control

One pretty common disability we address is the limited functionality of one side of the body and the associated inability to operate the brakes and shifters, which are split between the two sides of the handlebars. Fortunately, the solution is quite simple, and controlling the whole trike on one side is a routine modification.



Electronic/automatic shifting

The fantastic technology of modern shifting systems or outright electric drives. To operate the electronic shifting, you don't need to exert much force to move the shift lever. All you need to do is gently push the button. What's more, there are now systems that can shift automatically, so all you have to do is get on and go.



Push Brakes

In some cases, people have trouble operating conventional brakes, where they have to squeeze the brake lever. This may be due to weak hand muscles or spasms that do not allow the fingers to release after braking. For such cases, we have developed so-called push brakes. They require modification of the handlebars and adapting the steering style, but they work perfectly. When using them, the cyclist brakes by pushing one or both sides of the handlebars and must steer by pulling one side only. It is pretty straightforward. One of our colleagues even rode a trike with push brakes down Pikes Peak, a 4,300m (14,100ft) mountain in Colorado, USA.



High Seat Adapter

For some riders, the seat on our trikes is too low, and they have trouble getting on and off. That's why we offer an adapter that raises our seat by 6 cm / 2 inches. While this will slightly reduce the stability of the trike when cornering fast, it will significantly increase the comfort of getting on and off.

Grab Handles

If you find getting on and off your trike difficult, the grab handles are one of your most essential aids, just like raising the seat is. They are located above the front wheels, and the rider can grip them firmly when getting on and off the trike.

Shortening of Cranks

If a person has too short legs or has problems bending their legs at the knees or hips, cranks that are shorter than the standard 170 mm can often help.

Pedals

We offer several different pedals. From very ordinary ones, over so-called SPD pedals, where you clip in a special cycling shoe to keep it from falling off the pedal to removable pedals in case the pedal sticks out when you get on and off the trike. We also offer a solution that ensures that one leg bends less than the other when pedaling. Some pedals keep the calf and knee in a straight line and don't allow it to buckle sideways.

Headrest

One of the more unusual cycling accessories, but one that is quite popular and adds to the comfort of the ride. In some cases, it helps to keep the rider's head in the correct position.

Other Modifications

As mentioned earlier, we have implemented countless modifications here at AZUB. Moreover, many have only been used once. Others were dead ends, and we have subsequently developed other solutions. In any case, there are modifications such as steering by tilting the rider's body, braking with the knee, using seat belts, or controlling the brakes by a person walking next to the tricycle that we have already successfully implemented and tested. Likewise, for example, the ability to quickly and easily change the side where the one-side-control-everything kit is mounted. This is needed, for example, in rehabilitation institutions where riders often take turns on one trike.

All these modifications started with an initial request from one of our customers, and we are ready to apply them in your case as well.












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