



### 20" vs. 26" trike rear wheel

A 26" rear wheel gives the trike great comfort, bigger ground clearance of the rear derailleur and slightly lower rolling resistance. On the other hand, it also puts more stress on the rear wheel, the whole frame and the rear fork. Way too often trikes with 26" rear wheel are too soft and the cornering especially feels a bit strange in higher speeds. That is why we came up with new solutions, such as the wider rear hub with patented Syntace X-12 through axle and the rear fork with replaceable dropouts, which we use on the TRIcon 26.

A 20" rear wheel gives the trike smaller turning radius and more compact dimensions, especially when the trike is folded for transport or storage. A fully loaded trike has a lower centre of gravity and therefore is more stable. A 20" wheel with the same spoke count is stiffer and more durable. And some people simply prefer its look.

## Variability of trikes

The TRIcon trike and the T-Tris are available in a fast folding version with a robust folding hinge and folding handlebars, or in a basic version with a separable frame. With the separable frame you still have the possibility to separate the frame and fold the handlebars for transport or storage, but you will need a couple of minutes and two Allen keys. Both models also have either a 20" or 26" rear wheel. So if you are not going to opt for the FAT trike, all you need to do is to answer three basic questions:

- Rigid frame or suspension?
- 26" or 20" rear wheel?
- · Foldable or separable frame?

And you are ready to configure your custom-made AZUB trike.

## **Top Line or Mainstream Line**

Leaving aside the AZUB TWIN recumbent tandem and the folding Origami, we divide our two wheel recumbents into two groups - the exclusive Top Line and the basic Mainstream Line.

Bikes from both lines have similar handling and identical riders' positions. However, the Top Line models are performance bikes with a far stiffer asymmetrical rear fork and improved chain line with a pulley.

We recommend the Top Line models (MAX, SIX, MINI) for riders who are close to the max load limit of the bike (125 kg with luggage), plan serious touring, will pull a trailer, and/or require performance bike with the best power transfer efficiency.

Top Line





Mainstream Line

# Three types of steering

All of our two-wheelers, except for the Origami, can be built with three different types of steering. The basic one is the ASS (above seat steering/over seat steering). The bikes can also be equipped with USS (under seat steering) and OC (open cockpit).

**Above Seat Steering** is the most simple and durable system. It reminds beginners of standard bike handlebars and is therefore a good choice for first recumbent rides. ASS handlebars are rather narrow, which makes transporting the bike in a car trunk, on a bike carrier or on a train easier. They are an advantage also when storing the bike in cramped spaces. ASS offers better aerodynamics. We recommend this system especially for riding in city traffic and for expeditions.

**Under Seat Steering** is more responsive and faster to react. On the other hand, it offers absolute comfort thanks to the relaxed arm position. In case of an accident, there is nothing in front of the rider, which lowers the risk of injury. We have designed a special security system that protects the handlebars, shifters and brake levers from possible damage by allowing the bars to rotate vertically when the bike falls to one side. USS is often used on "higher" bikes, such as the MAX or the Ibex, because it makes getting on the bike easier. We recommend it to all riders who seek maximum comfort.

**Open Cockpit** is the least common system. It is a choice of experienced riders who usually have a particular reason for using it. OC handlebars offer a lot of space for lights and other accessories. It is the only system that enables the rider to use their arm muscles while pushing hard.

### ASS

Above Seat Steering



## USS

**Under Seat Steering** 



### OC

Open Cocpit



### **Accessories and options**

Majority of the bikes we produce are custom built. Our customers can choose from wide range of colours, components and accessories. They may go for Shimano Alivio, Deore, or XT traditional gearing systems, as well as for Sram DualDrive, Shimano Alfine gear hubs, or even the high-end Rohloff or the excelent piece of german engineering called Pinion drive with up to 18 speeds. There is a similarly wide choice of brakes, cranksets, tires, etc.





"This is Azub's top of the line three wheeler and it has blown people away with its easy folding, super stiff chassis and superb handling. I've heard at least three recumbent dealers and/or dealer employees call it "the best handling trike I've ever ridden."

Bryan Ball, bentrideronline.com

Folding or separable trike with rear suspension and 20" or 26" rear wheel



Great rear suspension, maximized power transfer efficiency and absolute confidence in cornering are the main features of the AZUB TRIcon. In addition, this trike can be folded into an amazingly small package. No matter if you choose a trike with 20" or 26" rear wheel, you will be smitten with its exceptional handling. The TRIcon is simply an amazing trike for all riders seeking decent level of comfort and extraordinary adventures on paved cycling paths or even gravel roads all over the world

We have achieved the really small dimensions thanks to our F2F (Fold-to-Flat) system with a main folding hinge in the middle of the frame and also a folding rear fork. Additionally, you can quickly remove both wheels and mudguards along with the carrier. All this in less than three minutes. But if you just want to fold the TRIcon into your car, simply fold it in half and go.

Unlike other 26" rear wheeled trikes, the TRIcon 26 has a wider rear fork with interchangeable dropouts. All trikes with standard triple crankset and cassette in the rear are supplied with a 157 mm wide rear hub with Syntace X-12 solid axle, which makes the whole rear wheel much stiffer and results in better riding characteristics. Other gearing systems, such as Sram Dual Drive, Shimano Alfine or Rohloff, and also electric hub motors can be used thanks to replaceable dropouts with standard 135 mm spacing.



Effective power transfer, small turning radius and small folded dimensions together with a comfortable AZUB mesh seat make this trike a perfect choice for relaxed touring, sporty rides or everyday commuting. Extremely rigid frame and exceptional steering geometry will enable you to experience a new dimension of trike riding.

T-Tris ends up very small and compact after folding, needing little effort to handle and transport it by car, train or a lift to your apartment. In addition, it's really easy to fold. It is not necessary to lift or rotate it in any way and it can be basically folded by anyone. We believe that it does not matter if you fold the tricycle in 7 seconds or 30. In our opinion, what matters is whether the trike is functional, and we strive to make its folding as user friendly as possible.





We've based the FAT trike on our non-suspended T-Tris trike, changed the geometry slightly and made the frame wide enough in the rear to accommodate a 26x4,8" rear tyre. We've also added higher handlebars and quality components – not only functional but also great looking. The AZUB FAT trike has no suspension and therefore belongs among examples of classic fat bikes. As well as other AZUB trikes, it has a very good weight distribution with the rider sitting as close to the rear wheel as possible, which significantly improves the grip of the rear wheel in difficult terrain. Also, the bottom of the seat is lower, which decreases the ground clearance a bit but on the other hand improves stability.

All AZUB bikes and trikes are custom built, and the FAT trike is no exception. You can order it in different colours, drivetrain components including the Rohloff hub or the amazing 18 speed Pinion drive, and many accessories. However, the red rims and Schwalbe Jumbo Jim tyres will always be the same. We just love them and we are pretty sure you do as well.



"We all had to wait awhile to see a full-suspension trike from AZUB but the vote count from our readers made it clear that the people think it was worth the wait. AZUB went in a very unconventional direction with the Ti-FLY's front suspension, using titanium leaf springs in place of a more conventional fixed cruciform. The rest of the trike borrows heavily from the TRIcon (last year's Trike of the Year winner). The end product is very impressive indeed."

Bryan Ball, bentrideronline.com

Folding or separable fully suspended trike with 20" or 26" rear wheel









Low maintenance



Titanium Grade 5



40 mm travel

#### World's most advanced recumbent trike.

Cutting-edge technology meets stunning shape and excellent riding properties.

AZUB Ti-FLY is the epitome of an intensive five-year development of our trikes. In 2015, our previous top model, the TRIcon 26, was presented with the prestigious award "Trike of the Year 2015", thanks to its superior workmanship, stable steering and the revolutionary design of the rear fork with a 157mm wide hub and a solid-through axle. In the Ti-FLY model, all these technical details are complemented by a unique technology of titanium front suspension, which makes the Ti-FLY the most advanced trike in the world. Experience the comfort and amazing stability this trike offers.



### The Ti-FLY review by Bryan J. Ball

AZUB Recumbents out of the Czech Republic has undoubtably become a major player in the recumbent trike market over the last few years. Their slick folding mechanism, highly adjustable fit system, excellent handling and overall fit and finish have earned them a lot of fans. However, there was always one thing that AZUB never offered that many other trike manufacturers have been selling lots of for years. Full suspension. Customers asked them when they'd see a full suspension AZUB and they were coy. When I asked, all I was told was, "We're working on something really cool and want to get it right."

And take their time, they did. AZUB spent over three and a half years developing their new baby. This "really cool" trike is finally upon us in the form of the radical new AZUB Ti-FLY. Now that it's out, I can admit that I did see some photos of it on an AZUB employee's phone at Recumbent Cycle-Con last year. My immediate response was, "Holy crap!" (I probably didn't say crap.) Now that I've put a couple hundred miles on one, my response is exactly the same...



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Both the MAX and the lbey are bikes that can be built either as fast mile eaters with lightweight components and narrow tyres, or as cool off-road machines capable of dealing with rough, demanding terrain. The MAX is the most favourite bike of AZUB's boss - Aleš Zemánek, and it is a great choice for all riders who want to enjoy the benefits of big wheels. For riders shorter than 180cm (6 feet), it is possible to equip the MAX or the IBEX with 24" wheels.

Max is the true culmination of our production team's long-term design and manufacturing experience. The result of this unceasing evolution is a unique recumbent that combines unparalleled handling characteristics with minimized rolling resistance and other advantages of a larger front wheel.

This cutting-edge design also makes our models compatible with nearly all standard mountain bike components available on the market today. Our approach gives customers the freedom to choose their own preferred components, such as front suspension forks (with recommended 80 mm travel) or even specialty derailleur systems. Please, feel free to contact us, as our experienced team will strive to assemble a bike that will meet your exact requirements.



Both the SIX and the Apus are user-friendly bikes with really amazing driving properties.

These bike models are popular among riders seeking maximal comfort, confidence, and good view. They work fine for weekend trips and commuting to work. When AZUB SIX is equipped with over seat steering and a set of carriers designed for up to three pairs of bike panniers, it is an excellent bike for multi-day adventures. The SIX is considered by many long distance travellers the number one choice for demanding expeditions all over the globe.

The design has been based on the usual European concept of recumbents. Geometry of the frame includes the bottom bracket located lower than the minimum height of the seat. This makes it suitable for a comfortable ride without any significant sporting ambitions. The 26" rear wheel further improves the already excellent comfort of this bike, which can be amplified by adding a front fork suspension.

Azub SIX is our bestselling two wheel recumbent.



The MINI and the Bufo are probably the most versatile bikes in our production line. Thanks to the lower seat and great dynamics of the small wheels, these bikes are easy to ride in busy city traffic, and when equipped with proper MTB components, they will work fine even in rough terrain. Tomáš Gayer, our 196cm (6'5") tall designer, and also Honza Galla, our marketing manager and test rider, both ride the MINI. On his bike, Honza has crossed the Negev desert in Israel and climbed the highest motorable mountain pass in the world, the 5.359m (18.380ft) Khardung-La in the Indian Himalayas, and it performed well both on rocky trails and in steep hills.

Stability of both models is due to their long wheelbase. Still, they are very compact and manoeuvrable thanks to their two 20" wheels. With the height of the seat lower than the bottom bracket height, these bikes offer great power transfer efficiency. And thanks to special drivetrain components, it is unlikely that the rider will miss high gears.

Folding or separable recumbent tandem with full suspension



### **AZUB TWIN**

Recumbent tandem



We made the first AZUB tandem sometime in 2004. The main reason was testing technical solutions under extreme loads. With a fully loaded tandem, our marketing manager Honza and his wife Eliška travelled all over Romania and Ukraine and they also went to Greece and many other countries. Other testers were Philippe and his, at the time ten-year-old, son Thomas, who travelled with a tandem bike from the Atlantic Ocean down the EuroVelo 6 route to our town of Uherský Brod.

After many years, we returned to the tandem project once again and using all our experience, we have constructed a durable tandem ready to set off for both short trips in the neighbourhood or around the world. The oversize 60mm tubes give the frame overwhelming toughness and even the rear swing arm with a pair of shock absorbers is extremely strong and stiff.

The great advantage of the entire frame is its foldability, or even its ease of dismantling if you need to travel with the bike for example on planes. The folding hinge has been developed specifically for tandem bicycles and has been used successfully for many years.

While designing the Twin, we kept three important things in mind. First of all, we wanted the bike to offer two truly laid back seats, no semi-recumbent position for the stoker. Secondly, we wanted the front bottom bracket height to be about the same as the height of the bottom of the front seat. This is a key feature that gives the captain both comfort and confidence while piloting the bike. And finally, there is the low height of the front seat itself, which is important for safe starts and landings in any conditions, especially with a heavily loaded bike. The last two points made us avoid 24" or 26" front wheels. The level of comfort one would expect from such a bike is ensured by a high quality suspension fork, which also prevents the tandem frame from overstraining.



The base for this folding recumbent was a frame from AZUB ECO 20. The ECO 20 was considered one of the most stable recumbents on the market and we thought we could add some improved functionality. So we designed it with a folding hinge. As with all other our models, it features an IPS system which allows you to adjust the seat position according to your preference. In combination with our sliding seat bracket and specially designed rear adjustment, you can really reach the ideal position with millimetre accuracy.

The bike also features an integrated carrier which can naturally be folded together with the bike. The Origami is simply a practical machine for those who need to travel often or have a small apartment. It can be folded into the optional bag to be transported on trains or buses or in trunks of small cars. The comfort of the bike is ensured by our ergonomic seat with soft seat pad and long wheel base.



# Folding hinge

After three years of building folding trikes, we decided to improve the folding mechanism. We have redesigned it completely to make it more user friendly, more durable, and to offer more precise operation, easy maintenance, and last but not least, the possibility to replace the whole hinge easily when necessary.

The hinge itself is not an inseparable part of the frame, it is a single unit which is inserted between the front and rear part of the frame. This offers many advantages.

The folding hinge can be manufactured from 7075 aluminium alloy, which is stronger than any weldable material. It is possible to use hard anodizing instead of powder coating and manufacture all parts with extreme precision. This surface treatment is well known for improving resistance against mechanical damage, but we went a step further and decided to have all parts anodized in teflon hardcoat (PTFE). This method, usually used in the arms industry, offers ultimate surface protection and also minimizes friction, which is exactly what we needed.

Thanks to the precisely matching jags and sags, the frame resists torsional strain much better. The larger diameter, longer hinge axle that rests in maintenance free sliding bearings improves the overall strength.

The hinge has an ergonomic XXL quick release lever which is positioned on the upper side of the frame. This makes both folding and unfolding extremely easy and smooth.

Available as an option for all our trikes.



This system made AZUB famous right at the beginnings in 2000 and it is still famous today. It allows riders to find the right position on their AZUB recumbent through a wide range of adjustable seat positions, through the possibility of adjustment their under-seat or upper-seat steering and also through the possibility of setting the ideal frame length.

Available on all our bikes and trikes.

# Sliding seat bracket

Our system of seat sliding directly on the frame tube, which is used on all our bikes and trikes, represents a further development of our IPS and we are really excited about it. It is accurate and fast in operation, and allows you to adjust your seating position with millimetre accuracy.

The bracket is made of heavy-duty plastic reinforced with glass fibre, and we have tested it in full operation for many months. The technology we use within its production also guarantees that the frame will remain free of major scratches even in frequent shifting.

A standard feature of all our trikes and bikes.



## Syntace X-12 Axle

Poor lateral stiffness is the biggest problem of vast majority of trikes with 26" rear wheels.

It is caused both by lower stiffness of a standard 26" bicycle wheel (when compared to 20" wheels), and by lower stiffness of the longer rear fork. We managed to minimize this issue by using a wider

157 mm hub and the patented Syntace X-12 through axle system, which you can find on majority of higher-end mountain bikes.

It will still be possible to order the TRIcon 26 with gear hubs or a motor with standard 135mm wide hubs.

Only for the TRIcon 26.



# Asymmetrical rear fork

We presented the design of our asymmetric rear fork at SPEZI 2007. It astonished not only recumbent bike riders but also professionals. It is not a gadget for a mere showing off! You can experience the functionality of its original shape and of its unique fit into AZUB frames on the Mini, SIX and MAX.

The asymmetric design of the rear swing arm offers two major advantages. The chain pulley which is used to eliminate the so-called pogo effect (horizontal swing of the bike while pedalling) has been designed as a side to side moving idler. No matter which gears are used, this substantially improves the smoothness of chain circulation and minimizes power transfer losses.

Besides, the asymmetric position of the rear shock, which is partly sank into the main frame tube, helps to keep the whole rear part of the bike frame really compact and therefore stiff and strong.

The whole rear fork is made of specially designed thin-wall Al 7020 tubes. It gives it two essential qualities that you are looking for: stiffness and extremely light weight. The interchangeable rear derailluer hanger as well as the Rohloff OEM dropout have become a standard feature of all AZUB models





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The Azub Bike company was officially founded by Aleš Zemánek in 2000. It is located in Uherský Brod in the eastern part of the Czech Republic, and the name AZUB is, in fact, an acronym for Aleš Zemánek Uherský Brod. From the very beginning, the main driving force of Aleš has been the will to build a recumbent bike that would match the quality of modern mountain bikes both in built and design. That was the reason for the dynamic development of our bikes in the very first years. Nowadays, beside the constant improvements, major design changes occur once in three to five years.

Even now, fifteen years later, we try to build bikes we ourselves would be satisfied with and would love riding. We use them for daily commuting as well as for long expeditions, and we listen to our customers, their needs and wishes. We are really happy to be known as a "friendly company". It is amazing when a customer becomes a friend, which is pretty common.

Thanks for that!











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