

**HASE**  
**BIKES**



**HASE BIKES CATALOG 2017**



can have access to independent mobility. It didn't take long for him to outgrow the workshop in his parents' garage in Bochum and move his young company to Waltrop. Now, many years – and numerous awards – later, we build bikes in a beautiful old Zeche Hibernia colliery building, which has been our headquarters since 2001. This is also where we develop and assemble all of our trikes and PINO tandems and produce our specialized, adaptive accessories and parts.



This building has changed a lot over the past century, and particularly in the past year. When additional rooms on the third and fourth floors became available, we had the chance to do some restructuring: our development and design teams can now let their ideas run free under the huge glass skylight of the old hall.

Below them, employees brainstorm ideas in the new, bright conference room, which also gets light from above through its glass ceiling. The procurement and production-planning departments are also enjoying new office space here. Overall, the renovation project gave us 2,700 square feet (250 m<sup>2</sup>) of additional space.

And not far from our venerable main building, with its classic red-brick façade, even more changes were taking place: a brand new hall with more than 8,000 square feet (750 m<sup>2</sup>) of floor space was built beside the slightly larger, modern HASE BIKES building from 2011 that houses a showroom and the test labs for the experts of EFBE, where all HASE BIKES vehicles are tested prior to series production.

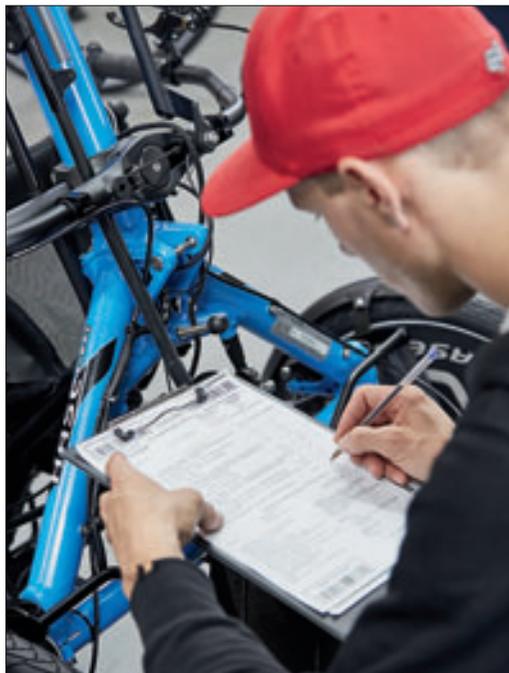
The new hall, which is a little over 100 meters from the main building, now offers much-needed space for our many test vehicles, trade fair materials, and top-seller models. On the façade that faces the main building, wooden cladding provides a beautiful contrast to the charcoal gray of the metal walls. The most prominent feature inside the hall is an enormous shelving system, where there's a place for everything, and everything is in its place. And the system can grow with our needs – there is still plenty of room.

### **HASE BIKES 2017: Keeping the wheels in motion...**

*Over the past few years, our numerous innovations have garnered us countless new HASE BIKES fans. It's been an exciting time. In 2016, we felt the need to focus more attention on the development of our company. There were new requirements to be met and changes to be made in order to keep pace with our growing worldwide customer base. Nevertheless, our engineering team was still hard at work on product innovations – like our new Special Pedal.*

As Albert Einstein once wrote, "Life is like riding a bicycle: To keep your balance, you must keep moving." And the same is true for a company like HASE BIKES. Over the years, we've come to realize that moving forward is key.

In 1989, Marec Hase won first prize at the youth science and technology competition "Jugend Forscht," which motivated him to continue his work: building highly unique bikes that serve a wide range of purposes. Like ensuring that people who are otherwise dependent on others for assistance



**It's the people that make a company**

We recently noticed that around 70% of our employees started working for us as trainees. "This is a very good sign," said Kirsten Hase, head of marketing. "Because it means that our employees are happy at HASE BIKES and stay with us for many years."

It also means that we employ people who have a lot of experience at our company, love their jobs, and are passionate about bikes. Our employees not only work as a well-oiled team but also have a lot of fun together. This can be seen at 10 a.m. every day

on the gallery of our production hall, where many of the approx. 50 employees come to share breakfast. Last year, we were also pleased to welcome several new employees who came to Germany as refugees. After seeing their impressive skills as trainees, we offered them employment contracts as soon as it was legally possible.

A team of employees who are passionate about their work – this is the basis for a company's success. We have learned this first hand and are therefore grateful to our employees for their amazing dedica-

tion. Without them, we would never be where we are today: one of the most important companies in the field of specialized bikes.

In our 2017 catalog, you can read about the experiences of several HASE BIKES customers, what they love about our trikes and tandems, and how these vehicles have even helped many of them achieve a new level of independent mobility. Our new Special Pedal was designed for this very purpose. It can be adjusted to individual riders with much greater precision than the comparable products currently avail-

able on the market. More information about this and other developments can be found on the following pages.

And by the way: if you're ever curious about what we're currently working on or want to learn more about people who have experienced something exciting with a vehicle from HASE BIKES, just visit our website, the HASE BIKES BLOG, or our Facebook page. We look forward to your comments and feedback!

Your HASE BIKES team

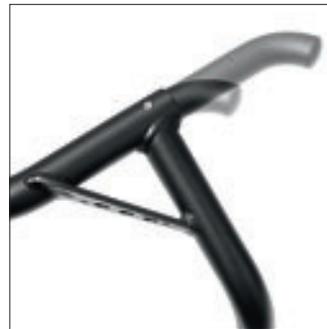




**Innovative seating and support**

*We're really quite proud of our new Harness System for trikes. It also fits to our new XXL Seat for the big and tall. Marec Hase and his team of designers have come up with even more brilliant new features related to seating and support.*

The new Special Pedal for stabilizing the foot is even more user-friendly, ergonomic, and comfortable. Thanks to its wide adjustment range, it can also be used for children. And its new Calf Support can be adjusted to allow for ankle movement. With our new Harness System, riders with limited upper-body stability can enjoy a safe ride on an untipable trike. It is also recommended for children riding in the front seat of the PINO or in a trike tandem. Buckling-up is a piece of cake: slip your arms through the shoulder straps, position



the lower belt, and let the magnetic buckle snap closed automatically. For unbuckling, simply turn the ergonomic release knob. The buckle comes with a Velcro strap that can be used as a child-safety lock.

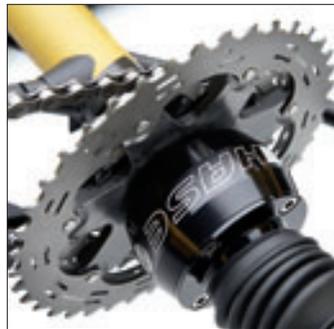
The new XXL Seat offers even more comfort than before: it is not only 2¾ inches (7 cm) wider and longer than the standard but also features new 3D contouring that holds you like a bucket seat. Our standard seats come with extension rods in the frame: simply loosen the locking bolts, pull

out the telescoping rods on both sides, re-tighten the bolts, and pull the fabric extension over the rods.

And for trikers who need a little help getting their wheels rolling, e.g. because they have a fixed gear: the ergonomic Push Bar not only helps the rider, but also prevents strain on the hands and wrists of the person doing the pushing.

Another small detail that makes a big difference: our new Weber adapter and redesigned Tandem Coupling can be used in combination or separately.





***I do my own thing:***

**HASE BIKES even easier to customize.**

*Our bikes and trikes are fantastically versatile. This is primarily due to their highly sophisticated design concepts. However, every model can also be perfectly customized to your individual needs with our extensive selection of accessories.*

*And now you can easily plan your dream bike online.*

The best news first: customizing your new HASE BIKE just got a whole lot easier. Take, for example, our tandems: start by choosing one of the two available models, the PINO STEPS (with mid-drive system) or the PINO ALLROUND (no mid-drive system). Then you can customize your tandem for any use and any special need by adding compatible accessories: a Children's Crankset for the family taxi, a PORTER SET for the cargo bike, a CITY BAG for the urban shopper... In the past, customers have chosen accessories with the help of HASE BIKES

dealers on the basis of detailed price lists for the various models. But we've now made the whole process much easier: under [www.hasebikes.com](http://www.hasebikes.com), HASE BIKES now offers a configurator. With a few simple clicks, you can choose a model and add the desired accessories or features. Incompatible options are not shown. This means that you can find out right away whether your special wishes can be met.



**A double dose of iron**

*Nicholas Garwood is a 15-year-old South African who happens to have cerebral palsy with spasticity. And a dad whose favorite pastime is competing in triathlons – especially the Ironman – with his son on the PINO. We met with Team Garwood at Ironman South Africa 2014.*

Nikki sits on the front seat of the PINO, his Team-Garwood jersey flapping in the wind. He smiles and gestures with excitement, shouting, “Go, Dad, go!” Anyone who gets to know Nikki – as we did during our visit to South Africa – can’t help noticing how boundless his energy is. And how much motivation someone like him can bring to a team. Nikki has a way of expressing emotion without reservation. And a contagious love of life. In this respect, his handicap is secondary. His condition, which was caused by brain damage from a lack of oxygen in the womb, has affected his mental development and the muscle coordination of his arms and legs, but Nikki is able to speak and read ... and is a whizz on his iPad.

His father, Kevin, who is now 51 and devilishly fit, quit his job when Nicholas was just 3 years old. He wanted to have more time for his son. And it wasn’t long before the two of them were inseparable. But something was still missing. “I always thought how nice it would be to do sports with Nikki,” said Kevin. “But the question was how?” His pastor’s wife sent him a video about an American father and son who compete in triathlons. “That was a revelation! I asked Nikki if he wanted to do something like that with me, and he said, ‘You bet I do!’” That’s when father and son became “Team Garwood”.

Kevin began training. Initially with little success. Then Nikki started riding along in a large jogger that converted into a bike trailer. This allowed them to train together – and the motivation that Nikki contributed was enormous. The bike trailer wasn’t an ideal solution, but the team didn’t give up. They competed in short-distance duathlons (running and cycling) and triathlons (running, swimming, and cycling). “It wasn’t until we found the PINO that we became a real team on the bike,” beamed Kevin. “The tandem works perfectly for us: it’s built to support Nikki’s legs in the front, and we both have a panoramic view and can easily speak to each other. I can even feed him when he gets hungry.”

Then came their first Ironman South Africa in 2012 – unfortunately with weather problems in the form of strong winds – and they weren’t allowed



to do the cycling leg. That did not deter them, however. They did Ironman South Africa again in 2013 and finished it to tremendous applause from the crowds.

It's race day, April 6, 2014, and Team Garwood has a lot on their to-do list: 2.3 miles (3.7 km) of swimming in the Indian Ocean followed by 112 miles (180.25 km) of cycling, and a marathon run of 26.2 miles (42.195 km). 6:45 a.m.: shouts of joy from Nikki as his kayak is pushed into the water. 7:00 a.m.: the swimmers start. Kevin hooks the

towline to his belt and sprints into the ocean. Soon, a red kayak can be seen meandering through the throngs of competitors. They finish the swim in an impressive time of 1 hour and 15 minutes.

Nikki's mother, Cheryl, helps him change clothes. Then he's strapped into the front seat of the PINO, snacks are packed, and off they go! In spite of its lightweight racing wheels, the tandem with two riders has twice the weight of the individual competitors with their triathlon machines. And today, the headwind is extremely strong on some parts of the

course. But Team Garwood pedals on. "Go, Dad, go!" Nikki is still brimming with enthusiasm and keeps Kevin going strong. The two long uphill stretches on the 56-mile (90km) lap set them back. "They have to make up time!" Cheryl calls out to us when we arrive at the cycling course. We cheer for Team Garwood as they race past. Nikki and Kevin give it their all once again on the second lap. But it's not enough: they finish the bike leg in 9 hours and 10 minutes, a mere 10 minutes over the cut off time, and are taken out of the competition.

Kevin is unfazed, but not Nikki. He cries bitterly, and his parents have a hard time consoling him.

Nevertheless: "They're both winners!" The encouraging words come from the commentator, who applauded Team Garwood even before the race began. The dynamic duo proved their status as true Ironmen long ago: in terms of team spirit and as an example of what can be accomplished by working together – with or without disabilities.

## The for-everything-and-always bike

The ALLROUND is the perfect bike for cycling duos – and for anything you need to carry from A to B.



**The tandem**  
With the PINO, the sense of shared experience is intense: thanks to the positions of the recumbent seat and saddle, communication is direct and effortless. The comfort is unforgettable, and the panoramic view – from both seats – fascinating. With its short wheel-

base, the tandem is almost as maneuverable as a single-seater and is great fun for both riders. And if that wasn't enough: the tandem also boasts a dizzying capacity for luggage.



**The family taxi**  
In two minutes flat, the Children's Crankset (accessory) can be mounted to the PINO's front boom, transforming the tandem into a family taxi. Or into a touring tandem for big and small. Need a break from pedaling? No problem. The front rider has a freewheel, too.



**The cargo bike**  
Load-carrying accessories turn the PINO into a cargo bike: the PORTER BAG up top holds 80 to 120 liters – plenty of space for the family's groceries! And when it's no longer needed, the bag can be folded and stowed behind the front seat. The PORTER RACK under the seat can

also handle heavy loads. And it's even available with a bag that keeps your cargo dry. Another important piece of the cargo set: the PORTER Kickstand provides rock-solid stability when the PINO is parked. And the RACK's low center of gravity guarantees extremely stable handling, even when the bike is fully loaded.



**Two-part frame**  
Whether you're all thumbs or a budding bike mechanic – a minute or two is all it takes to open the ultra-stiff frame joint. The two frame halves fit into practically any compact car. And once you've reached your destination, the tandem can be reassembled lickety-split.



## **PINO** ALLROUND

### **Features**

- recumbent-upright combination makes communication easy
- good visibility for both riders
- freewheel: ideal for families and riders with disabilities
- excellent maneuverability thanks to short wheelbase
- suspension
- two-part frame

### **Technical data:**

**Total length:** 83"-93" (210–237 cm)

**Total width:** 25" (64 cm)

**Total height:** 41"-43" (104–110 cm)  
depending on seat adjustment

**Seat height, front:** 25" (64 cm)

**Bottom bracket height, front:**  
24½" (62 cm)

**Wheelbase:** 57" (145 cm)

**Two-part frame/front boom:** 7005 aluminum, with adjustable and replaceable dropouts in the rear (Patria patent)

**Max. load:** 495 lb (225 kg)

### **Features and equipment:**

**Fork:** suspension fork Spinner Grind 1, reinforced version with steel shaft

**Brakes:** SRAM Guide hydraulic disc brakes

**Wheels:** Rear: 26", Rim: double wall with double eyelets, Hub: HASE BIKES Tandem Hub, Spokes: Sapim; Front: 20", Rim: double wall with eyelets, Hub dynamo: Shutter Precision, Spokes: Sapim, Tires: Schwalbe Marathon 47×406 (front), 50×559 (rear)

**Gears:** Shimano Deore 27-speed derailleur, Front derailleur: Microshift FD-R539 cold-forged, Microshift bar-end shifters and Herrmans Ergo grips

**Crankset/bottom bracket:** HASE BIKES crankset for tandem with integrated freewheel mechanism, Rear: 170 mm 28-38-48 tooth, left 36 tooth; Front: 165 mm 38 tooth

**Lighting system:** Hub dynamo: Shutter Precision, Taillight: B & M Toplight Flat Plus, Headlight: AXA Pico 30-T Steady Auto, LED, standlight

**Fenders:** SKS black matt

**Luggage rack:** Racktime Addit, Max. load: 66 lb (30 kg)

**Kickstand:** Humpert double kickstand

**Weight:** 55 lb (25 kg)

**Colors:** RAL 3002 Carmine Red matt / powder-coated, front boom black anodized with length-adjustment markings



**Practical STEPS for more mobility**

*Few people have known the PINO for as long as bike dealer Monika Schwarz. As a HASE BIKES partner for the past 20 years, she has followed the development of the tandem from the very beginning and has been riding her own for many years. We asked her to test-ride the new PINO STEPS for us.*

Who better to test our PINO STEPS prototypes than experienced bike dealer Monika Schwarz? The 46-year-old has always had a passion for anything with wheels and pedals – including adaptive cycles for special needs riders. She even worked in our manufacturing facility for several years. So when, in the spring of 2015, we walked into Fahrrad Claus – the bike shop she runs in Trebur with her companion, Oliver Claus – it was actually a visit to old friends. “The Pino is now a bike that can be – and is – used for many different purposes,” she

explained soon after our arrival. She knows all PINO model years and is familiar with the many options available for adapting the tandem to individual needs and wishes. The PINO has always played a role in Monika’s life – it was there when she needed to transport her ill sister, when she met Oliver, when she taxied her kids around, and whenever she needed to transport large loads.

For Monika, the new PINO is the most versatile family-touring-cargo-everyday bike possible. “In all my years, I’ve never seen a cargo bike with this much



carrying capacity," said Monika. Be it produce, pet supplies, or paint cans – the PINO can handle cargo of all sizes. And the new Shimano STEPS e-bike system has no problem with heavy loads. "The ride is smooth, and the motor provides good support," observed Monika, approvingly.

"Everyone I've shown the bike to has also been amazed at how seamlessly the e-motor is integrated into the PINO frame." And on shopping trips, the pedelec has practically as much cargo capacity as a car. "Even when fully loaded, I never

have to huff and puff up hills." And it's not just the unfolded PORTER BAG on the front seat that makes load-lugging a piece of cake: the PORTER RACK under the seat handles heavy loads like a breeze. From bottles to bulky boxes, the new PINO packs it in. Monika stows a tray of vegetable seedlings under the front seat.

"The fact is, I no longer need a car in the city," she said with a proud smile. "A few weeks ago, I even used the PINO for transporting an injured passenger!" Monika's son Darius had hurt his foot

and wasn't allowed to walk or pedal. So she taxied him around in the front seat of the PINO. "Thanks to the extra power from the motor, I even enjoyed it."

She also loves the new kickstand. "It folds away automatically when you start riding, and it's relatively effortless to engage, even when the tandem is fully loaded." And the best part: when parked on its stand, the PINO is as steady as a rock!

"The PINO with e-motor is my absolute favorite bike," confessed Monika. "It used to be my kid-taxi,

but now it's my go-to bike for every errand and destination." The best part is: "Since we've had the e-PINO, even Darius is crazy about shopping. Which frees up more time for me . . .," she said, smiling.

"Is that the new vegetarian bike?" joked a passerby, noticing the colorful assortment of vegetables we had brought along for lunch. Catchy, but that would be a much too one-sided name for the multitasking PINO STEPS.

## Cargo-hauling and outings are a breeze on the PINO STEPS

The Shimano STEPS motor guarantees a fast and effortless ride.



**Sharing the fun and relaxing ride**  
With the STEPS motor, the PINO cruises along with exhilarating ease – even when carrying heavy loads. The extra power is particularly helpful for family taxis. But even sporty tandemists appreciate the STEPS on hilly routes. The best part of this new mid-drive

system: it harmonizes perfectly with one or two riders – with no noise or vibration – and is unbelievably smooth-running. When the bike reaches 15 mph (25 km/h) the assistance switches off – meaning, for legal purposes, the PINO is still a bike.



### Powerful drive

We developed a new PINO frame for incorporating the powerful STEPS drive unit. And it was well worth it: thanks to the low and central center of gravity, the tandem is even steadier and easier to handle.



### Long-lasting battery

The STEPS battery, mounted neatly in the frame triangle, has a capacity of 418 watt-hours. This means: powerful assistance for many miles, depending on the selected assist mode, terrain, and rider performance. And the battery can be fully recharged in a mere 4 hours.



### Everything under control

The STEPS cycling computer displays not only standard cycling metrics, such as speed and distance, but also battery- and motor-related data like selected assist mode, estimated range, battery level, etc. Basically everything you need to know ... at a glance.



### Easy to operate

The switch for operating the computer and drive system is located ergonomically at the end of the handlebar grip. Here, you can change the computer display or choose a different assist mode with the touch of a button – easily and intuitively.

**Features**

- recumbent-upright combination makes communication easy
- good visibility for both riders
- freewheel: ideal for families and riders with disabilities
- excellent maneuverability thanks to short wheelbase
- suspension
- two-part frame
- e-motor

**Technical data:**

see PINO ALLROUND

**Features and equipment:**

**Fork:** suspension fork Spinner Grind I, reinforced version with steel shaft

**Brakes:** SRAM Guide hydraulic disc brakes

**Wheels:** Rear: 26", Rim: double wall with double eyelets, Hub: HASE BIKES Tandem Hub, Spokes: Sapim; Front: 20", Rim: double wall with eyelets, Hub: HASE BIKES, Spokes: Sapim; Tires: Schwalbe Marathon 47x406 (front), 50x559 (rear)

**Gears:** Shimano Deore 9-speed derailleur, Microshift bar-end shifters and Herrmans Ergo grips

**Crankset/bottom bracket:** Shimano STEPS and HASE BIKES with integrated free-wheel mechanism, Rear: 170 mm 44 tooth, left 38 tooth; Front: 165 mm 38 tooth

**Lighting system:** motor battery, B & M Toplight Flat Plus, Headlight: Busch & Müller Lumotec Lyt, LED, standlight

**Fenders:** SKS black matt

**Luggage rack:** Racktime Addit, Max. load: 66 lb (30 kg)

**Cargo system (optional):** CITY BAG, Volume: 80 L, Max. load: 88 lb (40 kg); PORTER RACK foldable carrier with double kickstand, Max. load: 88 lb (40 kg); PORTER RACKBAG (waterproof), Volume: 80 L

**Motor:** Shimano STEPS bottom bracket motor, Battery: lithium-ion, Capacity: 11.6 Ah, 418 Vh, Voltage: 36 V, Max. power: 250 W, Recharge cycles: 1000, Charge time: 4 h, Range: approx. 31 miles (50 km), Battery weight: 7 lb (2.55 kg), Battery guarantee: 24 months, Auto power-off: 16 mph (25 km/h), with walk-assist mode up to 3.7 mph (6 km/h)

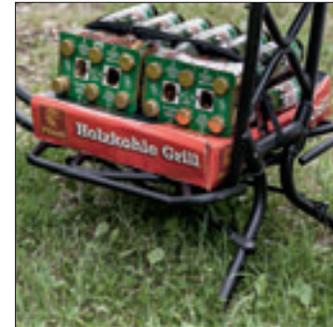
**Kickstand:** Humpert double kickstand

**Weight:** 68 lb (31 kg)

**Colors:** RAL 7023 Concrete Gray/ powder-coated, front boom black anodized with length-adjustment markings







**Our beautifully designed bags transform the PINO into a cargo-carrying machine.**

*The ideal cargo bike for shopping: we developed the CITY BAG as a colorful alternative to the functional PORTER BAG, with space enough for everything on your shopping list. And if you have an even larger load to transport, the PORTER SET offers two cargo areas with much more carrying capacity.*

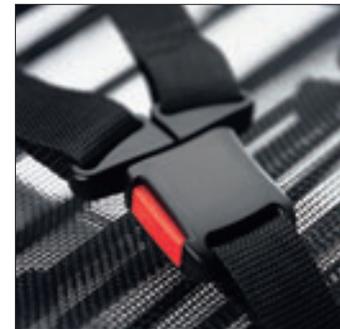
The new CITY BAG is an eye-pleasing highlight for our versatile tandem. Its design is extremely practical. Click, clack, and the cover is open – or closed again – with a single hand. Three self-locking magnetic fasteners hold it in place. The well-fitting cover ensures that everything inside stays clean and dry. The outer material is highly durable and tear-resistant.

The CITY BAG boasts a carrying capacity of 80 liters. And our PORTER BAG is even more versatile. Need to take your daughter or son to nursery school on your way to the shops? No problem with

the PORTER BAG: just stow it behind the seat when using the PINO as a family taxi and unfold it for solo shopping. The carrying capacity can even be expanded to 120 liters by opening the integrated zipper.

For extra-heavy loads, the lower PORTER RACK can be used in combination with the CITY BAG or PORTER BAG and has an integrated kickstand. A special RACK BAG is also available for protecting the rack cargo from the elements.





**Two more pedals – and the kids are on board!**

*With the Children's Crankset, the PINO can be a tandem for "mixed doubles": parents and kids can have loads of fun riding as a team. Taking your son to swimming practice or fetching your daughter from school? No problem. And where else can your child enjoy such a wide-open panoramic view on holiday adventures?*

"Go ahead and hop on. We're almost ready!" This is something you'll never have to tell your child twice when mounting the CHILDREN'S CRANKSET. And it's no problem if your eager young co-pilot gets the fidgets: the PINO DOUBLE KICKSTAND (accessory) is exceptionally stable. The 3-point seatbelt keeps your youngster safe in the recumbent seat. And, thanks to the freewheel, they can pedal – or rest – whenever the mood strikes. Although, most seasoned PINO-parents will tell you how proud their kids are to contribute their pedal power. The crankset is easy to

mount: just open the lever, position the crankset to fit the front rider's leg length, close the lever, pull the chain over the top – et voilà! The minimum height for the front rider is about 3'3" (100 cm).

If you want to have the option of choosing between a sporty or relaxed riding position, the HASE BIKES Double Grips are the perfect solution: once mounted and adjusted, they can be used for switching from a lower and sportier to a more comfortable, upright sitting position – without having to adjust the handlebars.



### **Two-man trips on trikes**

*When not working at his specialty plant nursery in Frankfurt, Wolfgang Krämer can be found on the trails with his son, rolling at a relaxed pace through the wooded parks of his region, enjoying the “beach-chair feeling” in his KETTWIESEL – and of course the fact that his son Alexander is having so much fun on the trike beside his.*

It's the sauce that makes all the difference: no one knows that better than Wolfgang Krämer. He runs a nursery in Frankfurt-Oberrad, selling one main product: a special mix of fresh herbs for making traditional Frankfurt-style green sauce (*Grüne Soße*). He has been at the helm of the 500-year-old family business for the past 50 years. And is crazy about his work: “This is my passion,” said the otherwise soft-spoken man enthusiastically, as he explained exactly how his product is used. “The cold sauce is made from two types of sour cream and sometimes hard-

boiled eggs but gets its fresh, distinctive flavor and color from seven fresh herbs: parsley, borage, sorrel, chervil, garden cress, chives, and salad burnet.” And it all comes down to the freshness of the herbs, meaning the dish is seasonal. There are no imported herbs in the Krämer herb mix. This means: a lot of hard work and love go into the product. “Otherwise, we could never do what we do,” admitted Krämer.

But what does all this have to do with HASE BIKES? One of Wolfgang Krämer's four sons was born with a rare metabolic disorder, CDG syndrome. By the time



it was diagnosed, his condition had already caused damage to his brain cells; now 26 years old, Alexander is delayed in his development, has impaired balance, and suffers from speech problems. "He used to ride a normal, upright tricycle, but it wasn't much fun for him." And it was unstable. "He would tip over right away on the slightest of slopes."

And then, by chance, Alexander and his brother, bike-fan Philipp, discovered our KETTWIESEL and TRIX trikes at a bicycle trade show in Frankfurt. "It was amazing: Alexander knew immediately that it

was something for him," explains Krämer, with delight. Then the gardener looked for a dealer nearby and took his son in to do some test-riding – in secret, without his wife, Doris. "She would have thought the trike was too dangerous and ruined the whole thing," he grinned. Krämer was so impressed with the vehicles that he also ordered a KETTWIESEL for himself. Something else that Doris wouldn't have approved of.

"Now she's totally thrilled about how well Alexander is doing with the trike." This is partially due to

the fact that father and son ride as a pair: On weekends, they often take rides in a recreational area in Neu-Isenburg, about six miles (10 km) from their home. "We have so much fun together!" The trail leads almost completely through the woods, with very few intersections, which can be dangerous for Alexander.

"It's just magical," said the gardener. "And the best part is seeing the happy expression on his face. That's what makes it all worthwhile." But he also gets a lot of joy from his own KETTWIESEL: "The

trike has such a super comfortable beach-chair feeling!" Since Alexander's trike has been equipped with electric assist, uphill stretches are also a piece of cake. "Last time, I even had to give up," admitted the father. "I just couldn't make it. And there was Alexander at the top of the hill, waiting for me, as proud as Punch!"

But hills or no hills – on Wolfgang Krämer's weekend excursions with Alexander, the fun he has on his own KETTWIESEL is like the icing on the cake ... or the green sauce on the schnitzel.

## More fun on the road: “Curves, here I come!”

One wheel in front, two in back, and you in the middle: the KETTWIESEL feeling. Go-kart agility, a minimal turning circle ... and so much more.



### The entry-level model for the HASE fun class

With the KETTWIESEL ALLROUND, you can experience the perks and practicality of triking. The fun and unparalleled cornering stability, as well as the safety and comfort of three wheels: at stoplights and during breaks, you can

relax in your seat while other cyclists dismount. It's easy to understand why the spirited roadster also serves as the chassis for many of our adaptive vehicles and handbikes. Ergonomics, sportiness, and unlimited variability are not mutually exclusive – they complement each other perfectly in the KETTWIESEL.



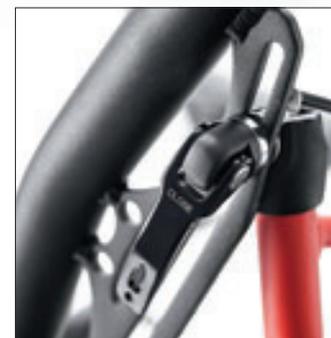
### A good grasp

People come in different shapes and sizes. That's why the under-seat handlebars of the KETTWIESEL are ergonomically adjustable: by loosening an Allen bolt, the angle and lateral positioning of each handlebar can be adjusted to the rider and sitting position.



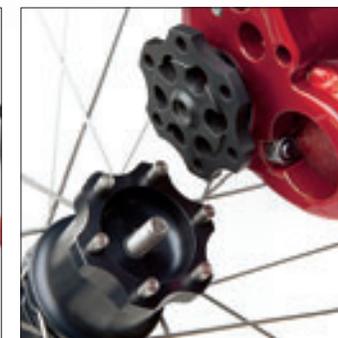
### Quick adjust for multiple riders

All KETTWIESEL models have a quick-adjust frame that can be quickly adjusted to different leg lengths without having to shorten or lengthen the chain. The length-adjustment markings on the front boom make it easy to re-adjust the length to previous riders.



### Laid-back or upright?

Adjusting the angle of the seatback is child's play, thanks to the handy quick-release levers. This setting lets you choose your preferred sitting posture: from laid-back and sporty to upright. Or: release the seatback to make the trike flat for storing or stowing.



### Effortless wheel removal

Tire change? Trike transport? The wheels of the KETTWIESEL are a cinch to remove. Just loosen a bolt to release the QUICKSTICK hubs – and they're off!

# KETT WIESEL

## ALLROUND

### Features

- very agile, smooth-riding
- excellent safety and stability thanks to low center of gravity
- space-saving when parked on end
- usable in tandem and as a trailer
- e-motor option

### Technical data:

**Total length:** 63"-81" (160-205 cm), without front wheel 54" (137 cm)  
**Total width:** 34" (86 cm)  
**Total height:** 31" (80 cm), with seat folded down: 21" (53 cm)  
**Turning circle:** left 10'10" (3.30 m), right 11'6" (3.50 m) at mean length adjustment  
**Seat height:** 34" (48 cm)  
**Bottom bracket height:** 19" (48 cm)  
**Pack size:** 63"-81" x 21" x 34" (160-205 x 53 x 86 cm)  
**Wheelbase:** 46"-64" (116-162 cm)  
**Frame/fork:** 7046/7005 aluminum  
**Front boom:** 6061-T6 aluminum  
**Max. load:** 265 lb (120 kg)

### Features and equipment:

**Suspension:** none  
**Folding mechanism:** none  
**Brakes:** Avid BB7 mechanical disc brakes with parking brake lever  
**Wheels:** 20"; Hubs: HASE BIKES QUICKSTICK (rear), Rims: double wall with eyelets, Spokes: Sapim, Tires: Schwalbe Marathon 47x406  
**Gears:** 9-speed Shimano derailleur, 11-34 tooth, SRAM with Centera twist shifter  
**Crankset:** Truvativ Touro 52 tooth  
**Lighting system:** Hub dynamo: Shutter Precision, Taillight: B & M Toplight Flat Plus, Headlight: AXA Pico 30-T Steady Auto, LED, standlight  
**Fenders:** SKS black matt  
**Weight:** 43 lb (19.5 kg)  
**Color:** RAL 3002 Carmine Red matt/powder-coated, front boom black anodized with length-adjustment markings



### **The KROSS challenge**

*Mobility has always been an important topic for him: Gunther Belitz knows about special needs and adaptive bikes – also from personal experience.*

*As an athlete, he loves challenges. This time, the challenge was: conquering the Winterberg bike park on a KETTWIESEL KROSS.*

Forty-eight degrees Fahrenheit (9°C), heavy rain, cold wind: this is the town of Winterberg in Germany's Sauerland region on a Saturday in early June. "When we first arrived and I saw the steep, muddy course from up top – well, it was pretty intimidating," admitted Gunther Belitz frankly. But the 52-year-old has never been one to shy away from athletic challenges: in the 80s and 90s, he was raking in the medals at the Paralympics, even at world-championship level. Belitz lost his left leg when he was a child. "I've always been a very

active person, wanted to do all kinds of things," he explained. "The classic wooden prosthesis was helpful for fouling in soccer, but I definitely wasn't the fastest kid on the field." Back then, he felt poorly advised when it came to assistive devices. "Isn't there anything better?" he asked. The technicians said no.

But then sometime in the mid-80s the carbon-fiber prosthetic leg hit the market, and his success story started – Belitz was one of the first to run with the new device. In 1992, he broke the world



record in long jump. Inspired by his own experiences, the professional journalist took over the German magazine *Handicap*. "I wanted to offer people who are dependent on assistive devices the same guidance that magazines like *Auto*, *Motor und Sport* offer car drivers," he said. A unique concept for the 90s: testing wheelchairs and prostheses.

But today, the journalist had come to try out HASE BIKES' sporty delta trike – with one wheel in front and two in back. Wide, knobby tires with plenty of grip, a chassis that keeps its composure even at

higher speeds, and a suspension system that absorbs everything the trail can dish out. "The winding route with banked curves certainly seemed daunting at first," said Belitz, "but after the first few meters, I knew that I could easily keep the trike under control. The SUV look is no gimmick. Its off-road performance is authentic!" As is the exhilarating ride.

The many mountain bikers on the course watched us with curiosity. "Challenges like these are just such an important part of life," grinned Belitz. "Once you've made it, it's an awesome feeling."

The bike-park test not only convinced the *Handicap* chief editor of the KETTWIESEL KROSS's off-road capabilities: it also demonstrated what a wide margin of safety the trike has on "normal" forest paths or bumpy roads. "It sticks to the curves like crazy glue," said our tester after the second run.

Not even the hostile lift attendant, who had apparently never seen a trike before and didn't want to send our vehicles to the top, could dampen the buoyant mood for long. But then again, who needs lifts when you've got a KETTWIESEL KROSS

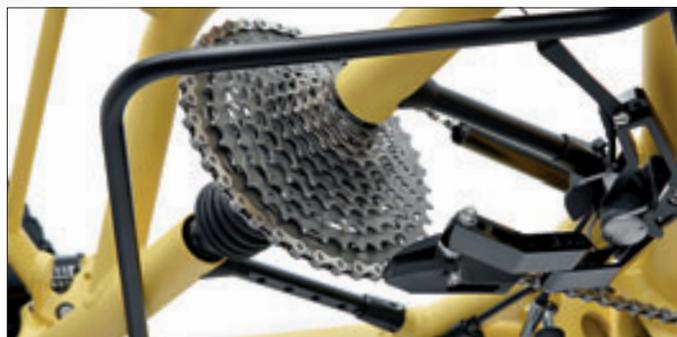
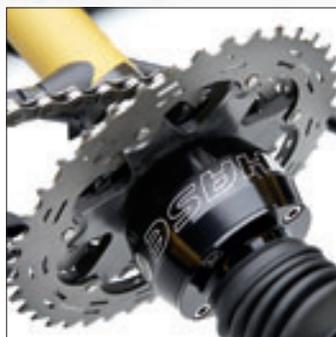
with powerful Shimano STEPS motor to get you up the hill? Once Belitz was back in the KROSS, plunging down the winding descent with us photographing him in action, it was smiles – and thrills – all around.

## Offroader at heart? Come to KROSS-country!

Fat, knobby tires and long-travel suspension: the off-road cousin of the KETTWIESEL is bringing the adrenaline of mountain-biking to the trike world.



reddot award 2015  
best of the best



**Adrenaline to the power of three!**  
Power-sliding into hairpin curves: on the sporty chassis with its long-travel independent suspension, tricks and maneuvers are as fun as they are irresistible. It's a good thing the trike is built with plenty of safety to spare – and can do what others can't: thanks to

the standard Differential, both rear wheels are driven. And with most of the weight on the rear axle, the KROSS will climb any slope – i.e. no spinning out. The ergonomic seat helps you put full power to the pedals. And as with every Kettwiesel: exhilaration awaits you around every corner...

**Special uses – special components**  
The use of derailleur gears on trikes with full suspension has always been a challenge: when the suspension compresses, the standard, low-hanging derailleur cage can come in contact with the ground. This is why we decided to develop our own derailleur system. It

features a linear design with much more ground clearance and offers a super-wide range from the smallest to the largest gear. Added bonus: the robust derailleur system, made from CNC-machined aluminum, is very forgiving of shifting mistakes.

**Easy to fold**  
Driving to the nearest bike park? With the new foldable frame, trike transport is a snap. Just open the quick-release levers to release the seatback and fold the seat forward. Then, after opening an additional quick-release under the seat, you only have to pull a cord, and –

presto! – the rear portion with the complete rear axle folds down and forward. The folded trike measures less than 3'2" (96 cm) in length. Small enough for practically any hatchback.

# KETT WIESEL

## KROSS

### Features

- very agile, smooth-riding
- excellent safety and stability thanks to low center of gravity
- full suspension
- usable in tandem and as a trailer
- e-motor option

### Technical data:

**Total length:** 69"-87" (176-221 cm), without front wheel 60" (153 cm)

**Total width:** 35½" (90 cm)

**Total height:** 32" (82 cm), with seat folded down: 21" (53 cm)

**Turning circle:** left 10'10" (3.30 m), right 11'6" (3.50 m) at mean length adjustment

**Seat height:** 20" (50 cm)

**Bottom bracket height:** 20½" (52 cm)

**Size when folded (L×W×H):** 38"×35½"×19" (96×90×49 cm)

**Wheelbase:** 52"-70" (132-178 cm)

**Frame:** 7046 aluminum

**Fork:** suspension fork Spinner Grind I

**Front boom:** 6061-T6 aluminum

**Max. load:** 265 lb (120 kg)

### Features and equipment:

**Suspension:** HASE BIKES Evo independent wheel suspension with sway bar and HASE BIKES air shocks

**Folding mechanism:** HASE BIKES FOLDING JOINT

**Brakes:** Rear: Tektro Auriga Twin hydraulic disc brakes with integrated parking brake, Front: Avid BB7 mechanical disc brake with parking brake lever

**Wheels:** 20", Hubs: HASE BIKES (rear), Rims: double wall with eyelets, Spokes: Sapim, Tires: Schwalbe Mad Mike 57×406

**Gears:** HASE BIKES LINEAR 11-speed, 11-42 tooth, Microshift bar-end shifter

**Crankset:** Truvativ 170 mm 42 tooth

**Drive system:** HASE BIKES DIFFERENTIAL

**Lighting system:** none

**Fenders:** none

**Weight:** 51.8 lb (23.5 kg)

**Color:** RAL 1018 Zinc Yellow/powder-coated, front boom black anodized with length-adjustment markings



### **Maria and the EVOLution**

*“Recumbents are stupid,” thought Maria Jeanne Dompierre up until just a few years ago. Or to be exact: until cycling had literally become a “pain in the backside.” Then her dealer recommended a ‘bent. In no time at all, she was hooked. Since 2013, she has even been running an Internet blog on the subject, featuring tests and tips. We asked her to test the KETTWIESEL EVO.*

“The pain in my sitting bones was immediately gone!” Maria told the story of her first experiences with a recumbent trike. “But I always felt so uncool!” she added with a laugh. For her, recumbent cycling had always been something for eccentrics. But the bright-eyed 37-year-old is not an eccentric – and didn’t want to be seen as one. She just wanted a trike that she could use for getting around on a daily basis – shopping and riding to work – and that would also be fun on outings in the countryside. The e-motor was an important

feature, as Maria lives near Detmold, in the hilly Teutoburg Forest. At the moment, she’s riding a tadpole, with two wheels in front and one in back – just opposite to the delta trikes of the KETTWIESEL family. Over time, her passion for recumbents grew. So much so that she even started writing a blog on the subject, just as a hobby but with highly professional content. And specifically from a woman’s perspective, as the “recumbent-bike lady”: [www.liegeradfrau.de](http://www.liegeradfrau.de). “I’ve always taken gender seriously;” said the social-education worker.



She discovered the stylish new generation of HASE BIKES at a bicycle trade show and was immediately fascinated. Not only by the trikes, but also by the people behind the name HASE. At a subsequent visit to the company headquarters in Waltrop, she made high-quality videos for her blog, showing how HASE BIKES designs and builds its trikes. At the end of her visit, she even decided to take home an Evo with motor and ROLLER BAG for testing.

After a few weeks, our HASE BIKES team visited her in Detmold, where she rhapsodized about her

many experiences with the Evo – shopping, touring over all kinds of paths, and making countless daily trips. Her conclusion: “The Evo is the perfect vehicle for the big city! Super practical, because – with its large bag – it can carry almost as much as a cargo bike, and it doesn’t take up much space at home. Tip resistant, super maneuverability – which makes it incredibly fun to ride – and the suspension is a dream! Plus, I can even get the Evo down the basement steps all by myself,” said the petite Maria. She then shared a long list of detailed obser-

ventions, because in her role as a tester – and blogger – Maria is extremely thorough. Today, Maria works in adult education. She used to coordinate community projects, for example with the homeless. “These roles made me really tough,” she said.

What impresses her most about the Evo: “You can just tell it was designed by people who love bikes. It’s more than just high-quality engineering; it’s an incredible passion for mobility that’s built into every component and feature. The people at HASE BIKES live this passion: perfecting the designs

without making everything overly complicated – and such great things come out of their work.” Which, of course, is music to our ears.

But the admiration is mutual, and what impresses us in particular is that she looks at every detail – and also says what she doesn’t like. For example, the fact that she can’t tow her dog trailer when the bag is attached to the seat. We’re working on it.

And we will also continue to follow Maria’s blog with great interest. Because there’s certainly still a lot we can learn there, too.

## Fresh impetus for evolution: Motor power with automatic shifting!

Evolution never stops – at least not with the KETTWIESEL. We've made it even more comfortable ... without sacrificing an ounce of riding fun or agility.



### Shimano Steps motor: Automatically faster

The e-motor provides assistance up to 16 mph (25 km/h) and harmonizes perfectly with your pedaling. With Di2 electronic shifting, you can change gears with the press of a button or let the system choose the best gear – automatically.



### Full suspension

The independent suspension system with air shocks makes the KETTWIESEL EVO a comfortable, full-suspension trike. A sway bar like the ones used in automotive design preserves the KETTWIESEL feeling. Down cobblestone roads or over curbs, the EVO keeps its cool.



### Adjustable frame

All KETTWIESEL models have a quick-adjust frame that can be adjusted to different leg lengths in a flash without having to shorten or lengthen the chain. The length-adjustment markings on the front boom make it easy to re-adjust the length to previous riders.



### Foldable frame

The new EVO frame is foldable – and the folding process is as easy as 1-2-3: just open the quick-release levers to release the seatback and fold the seat forward. Then, after opening an additional quick-release under the seat, you only have to pull a cord, and – presto! –

the rear portion with the complete rear axle folds down and forward. The folded trike measures less than 3'2" (96 cm) in length for easy stowing.



### The ROLLER BAG

The waterproof ROLLER BAG (optional accessory) is much more than just a pannier: like so many other HASE BIKES products, it was designed for maximum convenience. It can be opened and closed with a single hand for loading and unloading the huge compartment.

# KETT WIESEL

## EVO STEPS

### Features

- very agile, smooth-riding
- excellent safety and stability thanks to low center of gravity
- full suspension
- usable in tandem and as a trailer
- e-motor

### Technical Data:

**Total length:** 69"-87" (176-221 cm), without front wheel 60" (153 cm)  
**Total width:** 35½" (90 cm)  
**Total height:** 32" (82 cm), with seat folded down: 21" (53 cm)  
**Turning circle:** left 10'10" (3.30 m), right 11'6" (3.50 m) at mean length adjustment  
**Seat height:** 20" (50 cm)  
**Bottom bracket height:** 20½" (52 cm)  
**Size when folded (L×W×H):** 38"×35½"×19" (96×90×49 cm)  
**Wheelbase:** 52"-70" (132-178 cm)  
**Frame:** 7046 aluminum  
**Fork:** suspension fork Spinner Grind I  
**Front boom:** 6061-T6 aluminum  
**Max. load:** 265 lb (120 kg)

### Features and equipment:

**Suspension:** HASE BIKES Evo independent wheel suspension with sway bar and HASE BIKES air shocks

**Folding mechanism:**  
HASE BIKES FOLDING JOINT

**Brakes:** Rear: Tektro Auriga Twin hydraulic disc brakes with integrated parking brake, Front: Avid BB7 mechanical disc brake with parking brake lever

**Wheels:** 20", Hubs: HASE BIKES (rear), Rims: double wall with eyelets, Spokes: Sapim, Tires: Schwalbe Marathon 47×406

**Gears:** Shimano Alfine Di2 8-speed internal gear hub with manual electronic and/or automatic shifting

**Crankset:** Shimano Steps 170 mm 38 tooth

**Motor:** Shimano STEPS bottom bracket motor, Battery: lithium-ion, 11.6 Ah, 418 Wh, 36 V, Max. power: 250 W, Recharge cycles: 1000, Charge time: 4 h, Range: approx. 31 miles (50 km), Auto power-off: 16 mph (25 km/h), with walk-assist mode up to 3.7 mph (6 km/h)

**Drive system:** HASE BIKES DIFFERENTIAL

**Lighting system:** motor battery, B & M Toplight Flat Plus, B & M Lumotec Lyt, LED, standlight

**Fenders:** SKS matt black

**Weight:** 71.7 lb (32.5 kg)

**Color:** RAL 7023 Concrete Gray / powder-coated, front boom black anodized with length-adjustment markings





### **Regaining freedom ... by LEPUS and bounds**

*As a surgeon, Alfred Lang was used to making split-second decisions. But the dyed-in-the-wool Bavarian is also a man of action in everyday life – a fact that he is both aware and proud of. And that didn't change after losing his legs. Especially with respect to his mobility.*

"Standing all day in the operating room – that was never difficult at all!" The 67-year-old told us about his former profession when we visited him in the community of Nauheim in southern Hesse, Germany. "But all the paperwork ...!" Alfred Lang's accent is befitting of his Bavarian roots. To be exact: he comes from the Allgäu region and lived in Munich for many years. His Bavarian identity is no trivial matter for him: "I guess I do have a bit of healthy patriotism," he grinned. And he even, in some ways, fits the stereotype of a "real" Bavarian:

in spite of his calm demeanor, he is enterprising, energetic, and a little unconventional.

The medical doctor no longer has his legs. "Terror attack!" is sometimes his spontaneous answer when asked about the reason. "Or sometimes I also say 'car accident,'" he explained with a mischievous grin during our visit. Then he revealed the "mundane" truth: he lived with undiagnosed diabetes for many years.

There are certain people that Lang holds in particularly high regard: "my prosthetics maker, my physical therapist, and the people at HASE BIKES.



They gave me the strength," he explained, his expression now completely serious. "In the beginning it was almost impossible to walk. After I was somewhat mobile again, I had to take the car everywhere I went. That was no fun – and I wasn't getting any exercise either," he said. Later, over a bowl of Bavarian sausages, he told us what made him choose the LEPUS. "With the saddle-trikes, you have to turn corners very slowly – they tip over if you ride any faster than two miles an hour! The LEPUS's road-holding is super!"

The pictured LEPUS has a steel frame.

The medical supply shop had only offered him upright trikes. Then, at the HASE BIKES dealer Fahrrad Claus in Trebur, he finally found what he was looking for. The Bavarian was immediately impressed with the road performance of the trike – and even used the word "awesome!" to describe the experience, "although that's actually not in my vocabulary." He was also taken with the staff of the bike shop: "The shop assistant just grabbed a wrench, and in no time at all, she had adjusted these special pedals to fit my feet and legs per-

fectly. I really appreciate hands-on people like that. People who don't just say, 'Sorry, you'll have to come back later!' A woman who really knows her stuff," he added as if still in awe.

Lang has been riding his LEPUS practically on a daily basis for more than three years now. His trike is equipped with electric assist. The sensor-controlled e-motor amplifies his leg strength – so that, when he pedals, he can accelerate and climb hills just as fast, or even faster, than a rider with healthy legs. Shopping, leisure activities, visiting friends, and his favorite

route around the nearby Hegbachsee lake – his LEPUS takes him everywhere. "And to think that, in the past, cycling was never really a big part of my life," said Lang, almost apologetically. "But with the trike, I can stop anywhere I like, relax in the recumbent seat, and enjoy my pipe!"

Later, at the lake, we asked him whether the trike had given him back a measure of freedom. "No," he replied, in his characteristically deadpan humor. "It's given me that threefold!"

## The new generation of comfort trike

Foldability, suspension, and an enjoyable riding experience – the LEPUS has taken comfort and practicality to a new level.



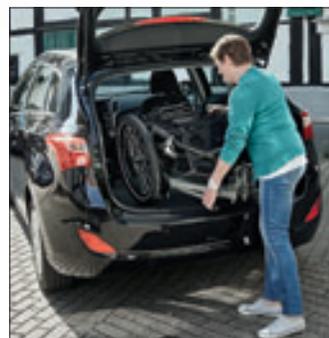
### It all comes down to comfort and safety

Getting onto the LEPUS is almost as easy as settling into your favorite easy chair. Just lower yourself onto the seat from the side. Then lift one leg over the front boom – which is nice and low, thanks to the small front wheel – and

you're ready to ride. The new independent rear-wheel suspension provides even more comfort on bumpy roads. Which also adds stability – a nice feeling. Because the more comfortable you feel on your trike, the more you will appreciate the freedom of independent mobility in everyday life.



**The mobility pack for on-the-go**  
Pack up and go; unpack and ride off. Thanks to its new frame, the LEPUS is even easier to fold. Just open the two quick-release levers to release the seat-back and fold the seat forward. Then open the additional quick-release under the seat, pull the cord, and the whole



rear portion of the trike folds down and forward. The "LEPUS pack" is only about three feet (1 m) long with the front wheel and fits into almost any compact car.



**The concept for relaxed mobility**  
The seat height, adjustable from 22½ to 25 inches (57–63 cm), gives you an excellent view of traffic, and the new, rear-suspension frame guarantees maximum stability, safety, and comfort, with a relaxed, intuitive ride. And as a bonus: cargo transport has never been so easy.

The multifunctional ROLLER BAG (top photo) is now compatible with the LEPUS. This optional accessory gives the trike a 50 or 100-liter "trunk" that can be detached and pulled behind you like a rolling hand basket when shopping.



## LEPUS

### Features

- excellent safety and stability
- adjustable seat height
- easy mounting
- suspension
- foldable
- e-motor option

### Technical data:

**Total length:** 65"-83" (166-211 cm), without front wheel 60" (153 cm)

**Total width:** 35½" (90 cm)

**Total height:** 39½" (100 cm), with seat folded down: 31½" (80 cm)

**Turning circle:** left 10'10" (3.30 m), right 11'6" (3.50 m) at mean length adjustment

**Seat height:** at high swing-arm setting 25" (63 cm), at low setting 22½" (57 cm)

**Bottom bracket height:** 17" (43 cm)

**Size when folded (L×W×H):** 38"×35½"×21" (96×90×54 cm)

**Wheelbase:** 52"-70" (132-178 cm)

**Frame:** 7046 aluminum

**Front boom:** 6061-T6 aluminum

**Fork:** 16" aluminum

**Max. load:** 265 lb (120 kg)

### Features and equipment:

**Suspension:** HASE BIKES EVO independent wheel suspension with sway bar and HASE BIKES air shocks

**Folding mechanism:** HASE BIKES FOLDING JOINT

**Brakes:** Rear: Tektro Auriga Twin hydraulic disc brakes with integrated parking brake, Front: Avid BB7 mechanical disc brake with parking brake lever

**Wheels:** 20", Hubs: HASE BIKES (rear), Rims: double wall with eyelets, Spokes: Sapim, Tires: Schwalbe Marathon 47×406 (rear), Big Apple 50×305 (front)

**Gears:** Shimano Nexus Premium 8-speed internal gear hub with twist shifter

**Crankset:** Truvativ 170 mm 32 tooth

**Lighting system:** Hub dynamo: Shutter Precision, Taillight: B & M Toplight Flat Plus, Headlight: AXA Pico 30-T Steady Auto, LED, standlight

**Fenders:** SKS black matt

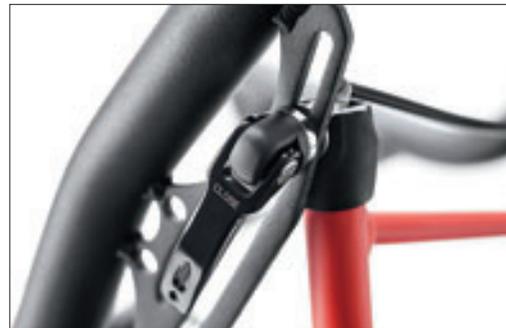
**Weight:** 54 lb (24.5 kg)

**Color:** RAL 7023 Concrete Gray / powder-coated, front boom black anodized with length-adjustment markings



SHIMANO TOTAL ELECTRIC POWER SY

SHIMANO



**TRIKE HIGHLIGHTS: Shimano STEPS**

*The Shimano STEPS is one of the best mid-drive systems for pedelecs. HASE BIKES is the only bike manufacturer that has equipped its trikes with the innovative system. An accomplishment we are especially proud of.*

The lightweight drive unit in the bottom bracket transforms the trike into a pedelec: 250 watts of nominal output guarantee powerful assistance and relaxed pedaling in any situation. The riding experience is exceptionally smooth: the consistent delivery of power and barely noticeable motor cut-off at 15 mph (25 km/h) are qualities that cannot be taken for granted among today's e-bike systems.

Even with a motor, the trike meets the legal definition of a bicycle – i.e. requires no registration or insurance. The cycling computer and control

panel are ergonomically located at the end of the handlebar.

And on all trikes – with or without motor – the angle of the seatback can be adjusted in a flash, using two quick-release levers. Upright for city traffic, laid-back for the sporty trike tour. Another engineering highlight is the quick-adjust frame: the trike can be easily adjusted to the leg lengths of other riders – without having to shorten the chain!



Uno X  
92 10.78  
95 10.84  
9.17  
Automat

HASE



**KLIMAX Set: mount fairing, hop in, stay dry.**

*The KLIMAX Set offers protection from rain and cold air. We developed the Fairing – and the Poncho for the worst and wettest of weather – especially for our trikes and tandems. These accessories fit to all LEPUS and aluminum KETTWIESEL models, can be mounted in a flash, and work like a dream. The cool, aerodynamic look is just the icing on the cake.*

When not in use, the KLIMAX FAIRING can be collapsed accordion-style, folded lengthwise, and stored in its inconspicuous bag. Attached behind the seat, it's always there when you need it – as showers don't always obey the weather forecast.

But the design of the KLIMAX is ingeniously practical in other ways as well: getting into the seat is as easy as hopping into a car. Just open a small clip on one side of the trike and raise the FAIRING like a gull-wing door. Climb in and pull it closed. Click – and go!

And it's just as easy when the optional RAIN PONCHO is attached to the FAIRING: when you pull the FAIRING closed, your head slips right through the opening in the PONCHO. The magnetic closure fits comfortably around your neck to keep you dry, even in a downpour.

And a separate SPLASH GUARD beneath your upper legs provides extra protection against moisture from below.





**Upgrades: Optimize your trike with fine accessories**

*HASE BIKES offers numerous clever solutions for hauling, hitching, stowing, and automatic shifting with your KETTWIESEL or LEPUS. These small add-ons make triking even more comfortable, versatile, and fun.*

With the Tandem Coupling, you can link two trikes to make a tandem. Just mount the coupling to the towing trike, remove the front wheel of the second trike, and attach the fork dropouts to the coupling. And with the new Weber hitch adapter, you can even pull trailers that have a standard draw bar.

Stow your papers, keys, and wallet in the Side Pouch – your trousers pocket is not a safe place when riding a trike. And if you're planning to carry more cargo, nothing beats the volume and versatil-

ity of the ROLLER BAG. It's available in both 50 and 100-liter versions and, with the ROLLER RACK, can be transformed into the perfect shopping basket. The RACK can also be used for transporting rollators and foldable wheelchairs.

Our HASE BIKES DIFFERENTIAL transfers the power to both rear wheels – meaning: ample grip on loose surfaces. Especially comfortable: the Di2 shifting system, in combination with the Shimano Steps motor, turns errands into fully automatic joy rides.



### **Learning to walk ... by trike**

*Sarah is fun loving and bright eyed, and on her trike, she really comes to life. On three wheels, she experiences freedom ... and is proud that she can ride and steer all by herself. But just as importantly: her TRET*S* is also helping her develop strength in her growing legs.*

"Yahooo!" She cheers and laughs as she cruises around on her trike: now that she owns a TRET*S*, eight-year-old Sarah Noack wants to go cycling with her parents and twin sister every day – and in any weather. She has been using the children's trike since May of 2015. Sometimes her parents hitch the TRET*S* to one of their bikes as a pedal-powered trailer; and sometimes she rides, like Laura, all by herself. It depends on how far the Noacks are planning to ride. Stefanie and Alexander, the twins' parents, are thrilled about Sarah's newfound motivation for

cycling. "We've always been cycling enthusiasts," said the mother. "With Sarah, it was somewhat more difficult in the beginning – but only in the beginning." Sarah was born premature. As a result, she suffers from multiple disabilities, has movement disorders, and is unable to walk unassisted. "We had asked our health insurance company to cover a normal therapeutic tricycle with a saddle," explained Stefanie. But they kept coming up with new reasons for denying our request. Then, Sarah's special school had a festival, where the twins both tried a TRET*S*. The couple



also considered a PINO, where Sarah could sit in front. "But we thought it was better if she had the option of riding independently," said Stefanie. "In any case, we're so happy now that it didn't work out with the therapeutic tricycle. Otherwise, we would never have been able to cycle like this as a family." Because the standard, upright trikes cannot be converted for use as a trailer:

After a few miles of independent pedaling, Sarah has had enough – which is no problem with her trike: the front wheel is removed, and the TRETTS is

towed as a trailer – then Sarah can pedal as much and as hard as she wants.

Sarah is a very communicative and active child. "The best part is seeing how much fun she has on the trike," said Stefanie. "It gives her a strong sense of freedom, being independently mobile." Sarah cannot walk without leg braces. On the TRETTS, she doesn't need them – another advantage. And while she's pedaling, her muscles are getting stronger all the time. "Riding the trike is incredibly beneficial for her," said Stefanie. "It's good exercise, and maybe it

will eventually even help get her on her feet." Learning to walk by cycling!

The four of them ride through their hometown of Hochheim am Main, or take cycling trips to Mainz or even sometimes Wiesbaden – as often as they can. On the many farm trails, Sarah does very well as a solo pilot; but when they're in the city – for example, on their way to the girls' favorite ice cream parlor – the TRETTS is hitched up and pulled as a trailer. The family's trips are great fun for everyone. "I wonder whether I would notice if Sarah used her brakes

while I was pulling her," commented Alexander loudly while riding beside his wife. Before she could answer, he almost slipped off his saddle in shock – Sarah had squeezed her brakes, just for a moment, but with power...

We all had a lot of fun on the photo shoot with the Noacks. Mostly because of our young protagonist: the bubbly Sarah was so excited about the shoot and all of the people who had come to see her, that it didn't take long for her to infect everyone with her radiant smile.

## Playful mobility for children with special needs

With the TRETS REH, your child can take part in recreational activities with the family and discover new ways of being physically active.



**Guide Bar:** Switching to autopilot Moms and Dads can give a hand to their rookie – or simply weary – trikers. With the Guide Bar, you can steer the TRETS for your child, turning over the controls again as soon as the little pilot is ready to ride solo.



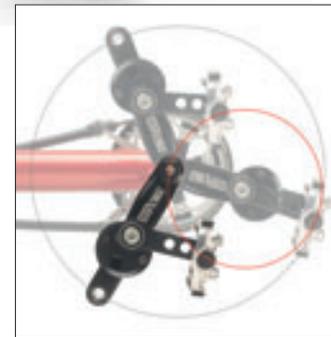
**Special Pedal:** Firm support, also for little legs! Our Special Pedals also provide comfortable stability for children with motor disorders, because they offer a perfect fit for children's small feet, are easy to use, and can be adjusted to various angles.



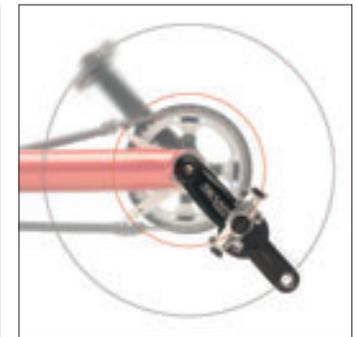
**Fixed Gear Hub:** More movement The trike becomes a fixie with a single gear. With the Fixed Gear Hub, the pedals remain in motion as long as the trike is moving. Especially sensible for physical therapy patients who can't push their foot through the "dead spot" of the pedal stroke (with friction clutch).



**Holder for Walking Stick:** Always with you Just place the walking stick or cane in the holder, secure it with the clamp, and hit the road. Multifunctional. Fits tubes  $\frac{5}{8}$ "– $2\frac{1}{8}$ " (15–60 mm) in diameter.



**Pendulum Pedal:** In the swing These pedals can help children with severely limited mobility slowly regain flexibility and strength. The trick: pedaling is possible with very little bend to the legs. Adjustable to allow for more movement as leg strength returns: beneficial training effect.



**Crank Shortener:** Perfect fit For children with legs of different lengths or restrictions in leg mobility. The pedals can be slid individually along the crank for separate adjustment, optimizing rehabilitation training or allowing the crank length to grow with your child.

**Features**

- exceptional safety and stability
- ideal for children with neuro-muscular disorders, such as cerebral palsy or muscular dystrophy, or with restricted movement, e.g. associated with spasticity, paraplegia, or dysmelia

**Technical data:**

**Total length:** Trike: 56"-69" (142-176 cm)  
Trailer: 35½"-54" (90-138 cm)

**Total width:** 30" (75 cm)

**Total height:** 34" (87 cm), with seat folded down: 20½" (52 cm)

**Seat height:** 14½" (37 cm)

**Bottom bracket height:** 13" (34 cm)

**Wheelbase:** 35½"-49" (90-124 cm)

**Pack size:** 43"-56"×30"×20½"  
(109-143×75×52 cm) without front wheel /  
Trailer: 40"-54"×30"×20½"  
(102-136×75×52 cm) without drawbar

**Frame & front boom:** aluminum

**Max. load:** 143 lb (65 kg)/88 lb (40 kg)  
when used as trailer

**Height of rider:** 3'3"-4'11" (100-150 cm)

**Features and equipment:**

**Brakes:** Avid BB7 mechanical disc brakes with parking brake lever

**Wheels:** Rear: 20", Hubs: HASE BIKES QUICKSTICK, Rims: aluminum double wall with eyelets, Tires: Schwalbe Marathon 47×406, canvas spoke protectors with 3M reflective print; Front: 12", Rim: aluminum, Tire: Schwalbe Big Apple 50×305, Spokes: Sapim

**Gears:** Shimano Nexus Premium 8-speed internal gear hub with twist shifter

**Crankset:** aluminum 115 mm 32 tooth

**Fenders:** SKS black matt

**Pedals:** Children's Pedals with Toe Clips and Straps

**Lighting system:** Dynamo: B & M Dymotec 6, Taillight: B & M Toplight Flat Plus, Headlight: AXA Pico 30-T Steady Auto, LED, standlight

**Weight:** 40 lb (18 kg)

**Color:** RAL 1018 Zinc Yellow matt/powder-coated



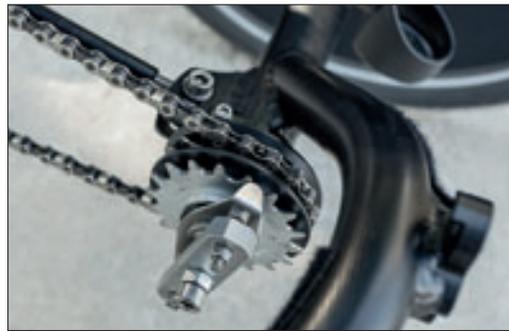
### **Sunshine Sammy**

*When Samuel comes zooming around the corner on his trike, people can't help but stop and smile. And the biggest smiles of all are on his parents' faces. The young teenager is a true ray of sunshine – and, thanks to his TRIX, mobility is fun again.*

Beyond a field of head-high crops, the sound of a motor can be heard. But not a real one: a child is going vroom, vroom, vroommm! Then a boy comes barreling around the corner on a trike, screaming with delight. Vroom. Followed by a small cloud of dust, which has barely settled by the time he's out of sight again.

"Samuel is our ray of sunshine," says Betty Fernandez, the boy's mother. "He wakes up practically laughing and is in a good mood all day long," adds his father, David.

Samuel and his parents are on one of their "walks", which look something like this: 13-year-old Samuel races around on his TRIX while Betty and David try to catch him ... the family's own version of tag. Or he rides ahead to an agreed stopping place and waits for them to catch up. Once the parents – finally! – arrive, Samuel gets a gummy-bear treat for his patience. "The two of us aren't really bike freaks," explains Betty, almost apologetically, "which is why we go walking with him. But we still have loads of fun." Especially Samuel. It



wasn't always this way: Samuel has Sjögren-Larsson syndrome, a genetic disorder that is actually most common in Sweden. In many cases, the disease progresses during periods of rapid growth, causing severe spasticity. After puberty, the condition remains stable. This is why Samuel is currently spending a lot of time in therapy sessions: occupational therapy, speech therapy, and wheelchair sports.

The disease also causes mental retardation. Therefore, he can only be out and about when

someone is with him. Samuel first experienced triking at the summer festival of his special school for physically disabled children. "The TRIX is part of his therapy – but it's the part that's really fun for him," explains David, who works in the quality assurance department of a pharmaceutical company and is therefore no stranger to the field of medicine. Samuel uses a rollator and can only stand with the help of special devices called "orthoses", which support his joints. But in the driver's seat of his trike, he experiences how much

fun mobility can be. "Because of his spasticity, he wasn't able to ride a standard TRIX with gears and a freewheel – he can't pedal consistently!" In other words, a little more customization was needed – no problem with the versatility of HASE BIKES: "We had them equip the trike with a fixed gear and special pedals with calf support. Now, riding is a piece of cake." Without a freewheel, the pedals keep moving as long as the trike is in motion, even if Samuel loses his pedaling rhythm. And everyone knows that fixies are the latest rage. Another

requirement: the TRIX had to be matt black. Like all boys his age, Samuel loves super heroes. And with the TRIX, he now has his very own "Batmobile".

Thanks to the fixed gear, Samuel can even ride in reverse – if ever he accidentally rolls a few centimeters past the agreed stopping point ...

**TRIX**

## **TRIX – magical mobility**

For development and playful physical activity. Kids with disabilities also need cool sports equipment that's fun to use.



### **Fully integrated**

The TRIX is a trike for young people with disabilities or recovering from injury. But that doesn't mean it has to look like a medical aid. Motivation is fuelled by fun and pride ... and looks can make a big difference. The bold yellow frame and stylish spoke covers have

been a big hit with our teen trikers. The TRIX is intuitive to ride and boasts extremely smooth handling. The brakes, like all components, are state of the art. The stability is in a league of its own. And, as young riders will immediately notice, the TRIX is wonderfully agile and simply loads of fun!



### **Push Bar: Full power ahead!**

Our new, sturdy Push Bar is the ideal solution for riders who need either a little starting push or assistance for the entire ride. Mounts easily to the tubes of the seat frame. Prevents hand and wrist strain, thanks to ergonomic grips.

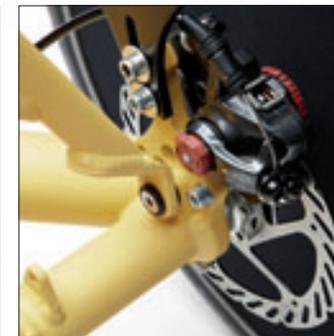


### **Designed for young people**

Kids love the TRIX: not only for the fun ride, but also for the cool design and eye-catching colors. The technical features have been carefully chosen. For example: stress-free adjustability to riders of different – or growing – heights. Thanks to its quick-adjust frame, the



length can be adjusted without shortening or lengthening the chain. Anyone between 4'1" to 6'3" (1.25–1.90 m) in height can ride the TRIX. The Pedals with Toe Clips and Straps also feature special heel straps that prevent the rider's feet from slipping off. The brake levers have a shorter reach for riders



with smaller hands. But that doesn't mean any less braking strength: the disc brakes offer excellent stopping power and precise modulation. And when the action stops, a simple flip of a lever is all it takes to set the parking brake.



## TRIX

### Features

- very agile, smooth-riding
- excellent safety and stability thanks to low center of gravity
- ergonomically designed for kids
- ideal as adaptive trike
- e-motor option

### Technical Data:

**Total length:** 63"-81" (160-205 cm), without front wheel 54" (137 cm)

**Total width:** 34" (86 cm)

**Total height:** 31" (80 cm), with seat folded down: 21" (53 cm)

**Turning circle:** left 10' 10" (3.30 m), right 11' 6" (3.50 m) at mean length adjustment

**Seat height:** 18" (45 cm)

**Bottom bracket height:** 16½" (42 cm)

**Pack size:** 63"-81" x 21" x 34" (160-205 x 53 x 86 cm)

**Wheelbase:** 46"-64" (116-162 cm)

**Frame:** 7046/7005 aluminum

**Fork:** 16" aluminum

**Front boom:** 6061-T6 aluminum

**Max. load:** 265 lb (120 kg)

**Weight:** 46 lb (21 kg)

**Height of rider:** 4'1"-6'3" (125-190 cm)

### Features and equipment:

**Suspension:** none

**Folding mechanism:** none

**Brakes:** Avid BB7 mechanical disc brakes with children's brake levers, parking brake mechanism

**Wheels:** Rear: 20", Hubs: HASE BIKES QUICKSTICK, Rims: double wall with eyelets, Tires: Schwalbe Marathon 47x406, canvas spoke protectors with 3M reflective print; Front: 16", Hub: HASE BIKES, Rim: aluminum, Tire: Schwalbe Big Apple 50x305, Spokes: Sapim

**Gears:** Shimano Nexus Premium 8-speed internal gear hub with twist shifter

**Crankset:** 140 mm 32 tooth

**Pedals:** Pedals with Toe Clips and Straps (adult size)

**Fenders:** SKS black matt

**Lighting system:** Dynamo: B & M Dymotec 6, Taillight: B & M Toplight Flat Plus, Headlight: AXA Pico 30-T Steady Auto, LED, standlight

**Color:** RAL 1018 Zinc Yellow matt/powder-coated



## **Uphill with hand drive**

*Whether it's a relaxed ride along the river or a winding climb up one of the nearby hills: on her KETTWIESEL HANDBIKE, Judith Knetsch has no problem keeping up when her family goes cycling. And her low riding position even brings her closer to her son ... in every sense of the word.*

She is slim, athletic, and a "handbiker." Her vehicle: a KETTWIESEL with hand cranks. Originally from Aßlar, a town in northern Hesse, Judith loves riding through the countryside. Ideally with her son, Anton, and husband, Dennis. "It always gives me such a wonderful sense of freedom," explains Judith. Anyone who's ever been there knows: the region around Wetzlar is quite hilly. To feel a sense of freedom, you need muscle power. Some people even avoid cycling in the region, because of the hills. But not Judith. And she conquers them not with her legs, but with her arms.

Two years ago, Judith had an accident and lost both of her legs. A major turning point in the life of the then 40-year-old. But modern medical technology can work wonders. With prosthetic legs, she went through physical therapy and was then able to return to her job as a teacher at a special school focused on mental development. "It didn't take me long at all to learn to stand and walk again," explained Judith. "I'm someone who loves a good challenge." And by the tone of her voice, it's obvious that she's used to staying focused on the future and



seeing the best in every situation. When she was in physical therapy, she learned how important exercise is for the healing process – including emotional healing. “And from my job, I knew that there were special, adaptive trikes that make it possible for people with limited mobility to cycle.” First, Judith tested the standard KETTWIESEL. But with her prosthetic legs, she didn’t have enough strength to pedal up the hills in her region. So she chose the KETTWIESEL HANDBIKE. With other trikes, her legs would have to be strapped down. “What I like so much about the

KETTWIESEL is that it’s so easy to get in and out of the seat. This means, any time I want, I can just lift my legs out of the leg rests, push the hand-crank assembly forward, and stand up. It’s just such a safe feeling.” Which describes pretty much every aspect of the KETTWIESEL, on both good and poor road surfaces. Because, unlike standard handbikes, the KETTWIESEL has rear-wheel drive. Which takes it up any hill.

And speaking of drives: the trike also has an almost invisible e-motor in the front hub. It works

just like a classic pedelec: when the rider pedals, the motor provides additional power, which takes the strain out of climbing hills and accelerating – “and I can be quite the speed demon,” she confirmed.

Now Judith can no longer imagine life without her HANDBIKE: “The seat height, for example, is perfect – I can ride right beside Anton’s trailer and communicate with him easily.” Unlike Papa, who tows his son on an upright bicycle. Our photo-shoot team also noticed Anton’s fondness for the low-riding recumbent trike. “Mama, Mama!” he

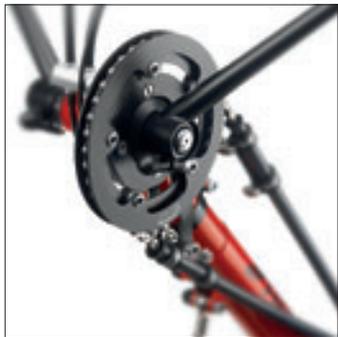
called happily from his trailer whenever she used the power of the two drives to accelerate and ride alongside him for a while.

The HANDBIKE is, above all, a recreational trike; riding along the Dill river, enjoying nature together, is fun for the whole family. But Judith can imagine even more: “A racing version of the HANDBIKE might also be fun ... with the landscape rushing past!” she said with a wink and sped off.

## HANDBIKE

### High-tech handbiking. Safety, speed, and ergonomics.

Be it a commute or a ride in the countryside, the HASE BIKES HANDBIKE has what it takes to make mobility fun and boundary-less.

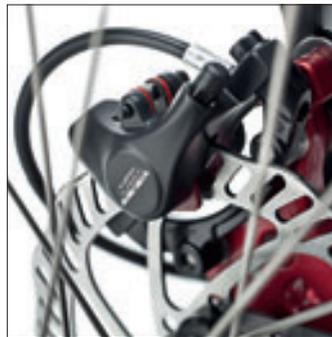


#### The big difference

Unlike wheelchairs with hand-cycle attachments, our HANDBIKE has rear-wheel drive. This means: reliable traction, even when riding uphill. And with the optional Differential on board, not even loose surfaces can slow you down. All HASE BIKES HANDBIKES use the same



drive train – regardless of whether you choose the sporty KETTWIESEL chassis (pictured) or the comfy LEPUS with its slightly higher seat. Our new frames are even available with rear suspension (optional). And you have everything at your fingertips: shifters and brake levers are mounted to the handgrips.



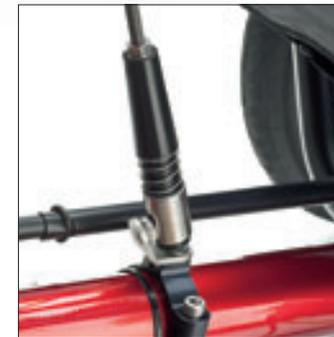
#### Stops on a dime

Speedy wheels need strong stoppers. For us, this means reliable hydraulic disc brakes. They not only offer superior braking power: unlike cable-actuated brakes, they are extremely responsive and provide perfect modulation.



#### Easy transfer

The drive unit of the HANDBIKE folds forward, making it easy to get in and out of the seat. The angle can be finely adjusted to the rider's height, needs, and preferences. Simply reposition the drive-unit support bar to adjust the angle and the distance to the hand



crank. The leg supports can also be perfectly adjusted to the rider's anatomy.



#### 150-mm Crank Arms:

**Ergonomically correct pedaling** Ergonomics are especially important on the HANDBIKE. This is why HASE BIKES offers 150-mm Crank Arms as an alternative to the 174-mm version. After all: efficiency and well-being go hand in hand.

## HANDBIKE

### Features

- very agile
- excellent safety and stability
- with Differential: improved traction
- easy transfer from wheelchair to trike
- e-motor option

### Technical data (example features and equipment):

**Suspension:** optional  
**Total length:** 63"-81" (160-205 cm), without front wheel 54" (137 cm)  
**Total width:** 34" (86 cm)  
**Total height:** 37" (95 cm)  
**Turning circle:** left 10'10" (3.30 m), right 11'6" (3.50 m) at mean length adjustment  
**Seat height:** 18" (46 cm)  
**Pack size:** 63"-81" x 21" x 34" (160-205 x 53 x 86 cm)  
**Wheelbase:** 46"-64" (116-162 cm)  
**Frame/fork:** 7046/7005 aluminum  
**Front boom:** 6061-T6 aluminum  
**Max. load:** 265 lb (120 kg)  
**Weight:** 46 lb (24 kg)

### Features and equipment for model shown:

**Brakes:** Tektro Auriga hydraulic disc brakes  
**Wheels:** 20", Hub: HASE BIKES QUICKSTICK (rear), Rims: double wall with eyelets, Spokes: Sapim, Tires: Schwalbe Big Apple 55x406 (rear), Schwalbe Marathon 47x406 (front)  
**Gears:** Shimano Nexus Premium 8-speed internal gear hub with twist shifter  
**Hand crank:** HASE BIKES 174 mm  
**Drive system:** Differential  
**Lighting system:** Hub dynamo: Shutter Precision, Taillight: B & M Toplight Flat Plus, Headlight: AXA Pico 30-T Steady Auto, LED, standlight  
**Color:** RAL 3002 Carmine Red matt / powder-coated





**“We can do it!”**

*The Kaywald School for mentally and physically disabled children has been running a cycling club as a successful part of its curriculum for several years now. In 2015, a group of students and teachers set a particularly challenging goal for themselves: cycling over the Alps! We joined them for two days of their journey.*

“Mountainbike-Schiebepassage” read the sign, telling mountain-bikers to get off their bikes and push. Mohammed on the KETTWIESEL KROSS looked over his shoulder at his co-pilot in the TRIX hitched behind him, calling out, “Hey, pedal really hard!” The two boys weren’t holding anything back.

Mohammed had the extra support of the STEPS motor in the bottom bracket. Every second or third curve revealed a new, magnificent panoramic view of the mountains. As well as how far they still had to climb. A challenging journey. The travellers were

from the cycling club of the Kaywald School in the southern German town of Lauffen. Thomas Rienth and his fellow teachers founded the club several years ago.

Thanks to generous donations from local companies and the school’s own fundraising organization, the club now has an impressive pool of vehicles at its disposal, including TRIX trikes and PINO tandems. First, the group practices on the school grounds. Then they go on tours in the local area. “Cycling helps students develop more body awareness and



even improves social competencies and self esteem," said the teacher. The cycling club has since become an integral part of the school's therapeutic programs. Then came the idea for a new, major challenge: crossing the Alps! The teachers' friends just shook their heads – "no way;" "much too dangerous;" "you'd never make it!"

But in July of 2015, there they were: nine students and five chaperones in the middle of the mountains! The route from the Austrian village of Bichlbach to the South Tyrolean town of Merano is 125 miles

(200 km) long and climbs to a dizzying 8,200 feet (2,500 m) above sea level! Two PINOS, one KROSS, four TRIX, two mountain bikes, and a normal tandem travelled for five days. The daily rides were incredibly strenuous, but nevertheless, the only complaints that could be heard from students at the breakfast table were "When can we get started?"

The group slept in guesthouses along the ancient Roman road Via Claudia Augusta. The view was often too spectacular for words – for example, when they passed Lake Reschen, with the famous

church steeple of Graun rising out of the water. With every mile they conquered, an overwhelming team spirit developed in the group of young cyclists. They waited patiently for slower riders, helped each other through the tough spots, and even pushed one another's trikes if someone couldn't go on. The HASE BIKES team was in complete awe.

As were many of the residents and hotel owners from the villages they passed. Especially once they saw that the majority of the bike-mountaineering group were young people with disabilities.

"It was tremendously strenuous – and tremendously rewarding," said Rienth after the journey. "Every day, the group grew stronger as a team. And the students learned that they could accomplish things that others, and even they themselves, would have never thought possible. That's an unbelievably important experience for them."

One mother called him shortly after their return: "How did you do it? My son is a head taller!"



### **Our expertise: Special solutions for adaptive cycling**

*When it comes to physical impairments, it's often the individual solutions that determine how mobile you can be and, above all, how much you enjoy the mobility. Stroke victims and thalidomide survivors, as well as people with rheumatoid arthritis, impaired balance, and various physical and mental disabilities, can often experience independent mobility with HASE BIKES vehicles and their adaptive parts and accessories.*

Our most important innovation of the year: the completely redesigned Special Pedal is extremely versatile, thanks to its modular structure, an enormous adjustment range, and optimized fit.

It is compatible with shoe sizes from US kids' 1/UK kids' 13/EU 32 to US men's 16/UK men's 15.5/EU 52, and the angle between the pedal and the direction of travel is more adjustable than ever.

The optional calf support offers the same level of versatility: the flexible joint that connects it to

the pedal can either be set to a fixed position or released to allow ankle movement.

Some riders with coordination problems need to be strapped into the seat of their trike or PINO for safety purposes. Thanks to our new 5-point Harness System, buckling up is easier and more comfortable than ever. You can learn more about these options on the following pages.



**Trailer Kit: Hitch and go!**  
 Ingenious accessory for the TRIX and KETTWIESEL: once its front wheel is removed, the trike can be easily hitched to a PINO tandem or a standard bicycle with the Trailer Kit – see photos above and on page 56.



**Seat or Seatback Extension: More space, more comfort**  
 More than just adjustable: with the optional extensions for seat bottom and back, the surface area is increased, meaning that pressure is even better distributed. For people with disabilities or tall riders.

**Seat XXL wide: Invitingly expansive**  
 The new HASE BIKES seat is also available in XXL. In addition to its extensive adjustability, the seat has 2¾ extra inches (7 cm) of space to comfortably accommodate riders of all shapes and sizes.



**5-point Harness System**  
 Our newly developed Harness System with integrated child-safety lock is not only user-friendly and super safe, but also versatile: you can use it as a simple lap belt, as a lap belt with shoulder straps, or as a 5-point system with crotch strap. The new padding ensures optimal comfort.



**Fixed Gear Hub: More movement**  
 The trike becomes a fixie with a single gear. With the Fixed Gear Hub, the pedals of the KETTWIESEL or TRETTS remain in motion as long as the trike is moving. Especially sensible for physical therapy patients and people with limited mobility (with friction clutch).



**Push Bar: Full power ahead!**  
 Our new, sturdy Push Bar is the ideal solution for riders who need a little push to get their trike moving, or even assistance for the entire ride. It is mounted to the tubes of the seat frame and has ergonomic grips that prevent hand and wrist strain.



## SPECIAL OPTIONS



### Special Steering / Shoulder Steering Unit: Twist and turn

Mobility for people with no arms or short arms. The width of the steering unit is fully adjustable. A coaster brake is used for stopping, and the Shimano Nexus automatic hub gears, for shifting.



### Coaster Brake: Legwork

When the legs are more mobile than the hands, the coaster brake ensures full braking power – with high tech: pedaling backwards transfers the leg power to a hydraulic disc brake.



### Single-hand Controls: Join forces

A single grip with all control elements! Using a special adapter, two brake levers can be mounted on one side. This allows the rider to shift gears and control both brake levers using a single hand.

### Hand-crank Assembly PINO: The power is in your hands

The sporty crank for tandemists with compromised leg function. The Hand-crank Assembly for the PINO is height adjustable and can be folded forward for mounting and dismounting. Can be ordered with a new PINO (option) or as a conversion kit. Not compatible with the PINO PORTER.



### LED Turn Signal System: Show the way

Even more passive safety – and not only for people with handicaps. The battery-powered Turn Signal System is operated intuitively with the simple touch of a button. And with its inconspicuous looks, it blends right in with the design of your trike.

### Holder for Walking Stick: Always with you

Just place the walking stick or cane in the holder, secure it with the clamp, and hit the road. Multifunctional. Fits tubes  $\frac{3}{8}$ "– $2\frac{1}{8}$ " (15–60 mm) in diameter.



### Handlebar Extensions: In perfect reach

The KETTWIESEL and LEPUS can be equipped with handlebar extensions of up to  $31\frac{1}{2}$ " (80 cm) in length. This makes the trikes accessible for people with very short arms.



### Armrest: Take a load off

If your arm needs a little support for steadiness, this comfortable armrest ensures a relaxed arm position.





**One-sided Leg Support: Comfort**

A solution for people with paralysis on one side of the body or a disability. The healthy leg pedals while the other is safely strapped into a comfortable support. Infinitely adjustable. Mounts behind the bottom bracket.

**Pendulum Pedal: In the swing**

These pedals can help people with severely limited mobility slowly regain their flexibility and strength. The trick: pedaling is possible with very little bend to the legs. The pedals can be adjusted to allow for more movement as leg strength returns, creating a beneficial training effect.

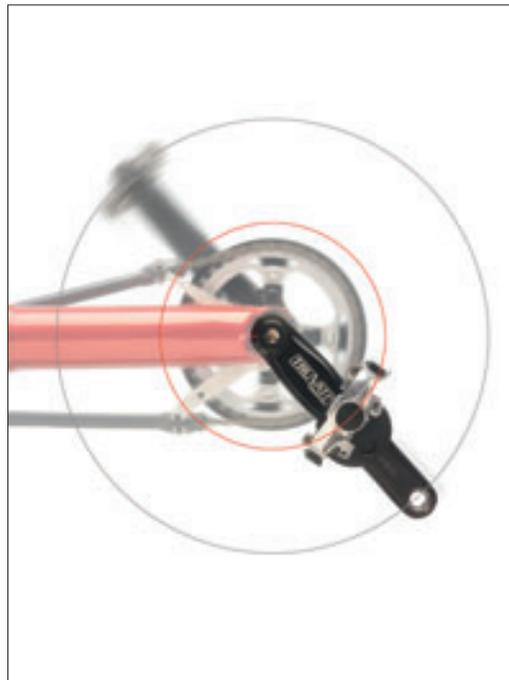


**Pedals with Toe Clips and Straps: Firm footing**

As an alternative to cleat systems: these pedals hold the front portion of the foot with a brace, guaranteeing the correct foot position, while the elastic strap around the heel prevents slipping. Children's version also available.

**Crank Shortener: Perfect fit**

For people with legs of different lengths or restrictions in leg mobility... but also for kids. The pedals can be slid individually along the crank for separate adjustment, optimizing rehabilitation training or allowing the crank length to grow with your child.



**Special Pedals: Firm support, maximum adjustability**

We designed our new Special Pedals in cooperation with Georg Busch from the company Ergodynamik Busch. They are much more adjustable to individual needs than other models: for starters, they fit an impressive range of shoe sizes, from US kids' 11 / UK kids' 13 / EU 32 to US men's 16 / UK 15.5 / EU 52. And the angle to the direction of travel can also be adjusted over a very wide range. Once all adjustments have been made, the straps can be easily fastened and released with one hand. The foot is held comfortably and securely in the proper position.



**Calf Support: Dynamic stability**

The Calf Support was redesigned for use with the new Special Pedals. Its unique and ingenious structure provides firm support for the leg but enables the ankle to flex naturally, allowing for a circular pedaling motion. This freedom of movement – made possible by an adjustable elastomer spring – is important because, when a joint is immobilized, the muscles atrophy.





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