

www.carryfreedom.com

*Moving the world!*

**CARRY FREEDOM BIKE TRAILERS**



**carry  
freedom™**

**LOOKBOOK**



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Welcome to the weird and wacky world of Carry Freedom bike trailers. Let us show you how we can change the world with this great transportation alternative.

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Since the original CITY trailer from 2003 we have been discussing a foldable trailer that can also be used as a walking trailer. The LEAF folds flat and is easy to store or travel with. The perfect addition to the Carry Freedom family.

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People love the trailers because of the accessories. So we concentrate on providing solutions for carrying just about everything. Your boat, your board, your wood from the hardware store. There is not much out there that we cannot carry.

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Sometimes people will need wider or longer. We have the parts so that you can adapt your trailer to meet what you need. If you buy a trailer to carry, for example, a cello, then we have the parts for you.

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Accessories also means bags and boxes for the ultimate cargo solution. Our cabin bags can be taken into the airplane and fit on both the Y and the LEAF trailers. All bags and folding boxes are super tough.

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Something to help you understand trailers better. Why a trailer uses less energy than panniers and why mono wheel trailers are not as efficient. Is it biased? Hell yeah...!

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Our team is small but dedicated. We are working on new products and making sure that you are getting what you need. Sometimes progress is slow, but the rewards are worth the time involved....!

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All you need to know about the Y and the LEAF. All weights, sizes and capacities are listed. See the list of accessories available on page 24.

### CONTACT

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### ADDRESS

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Germany

USED is owner of the Carry Freedom brand and its philosophy is very clear: The only good product, is a product that is being USED. Everything else is a waste of resources, time and of course money. We want to sell products that people need. "If you don't need it, don't buy it." That's the message.

## WELCOME

### COME ON IN TO THE CAR FREE WORLD

We create innovative high quality solutions tailored for people living in the real world. We have a dream, a dream of moving things without wasting resources using human pedal power. Every journey with a trailer is a journey without a car. By making "stuff carrying by bike" easy, we encourage more cycle journeys. Our trailers are frequently the last step for people to stop depending on their car.

We have a lot to show you in this lookbook. If you are new to trailers check out our Trailer Science chapter. Learn how to carry everyday loads like groceries, parcels or camping gear. We will also show you ways of carrying special loads like surfboards, kayaks and other weird and wonderful stuff you never dreamed of pulling with your bike.

Free your life, free your bike and carry more!



### ENJOY THE RIDE

*Daniela and Bob*

# THE NEW Y

The original Y-Frame trailer is one of the biggest selling load trailers in the world. You have used it to haul your supermarket goods, for your trip across Africa and to go surfing with your friends at the weekend. The Y-Frame did it all. Now it is time for a re-vamp. Without changing the original idea of a multifunctional load platform, we have added compatibility to interface with a lot more options, like flag and light holders, surf board carriers and give you better tie-down options as well. We have also introduced a "noiseless" tow bar system which stops rattling and a new grip surface that provides grip without scratching the load. Welcome to the new Y!

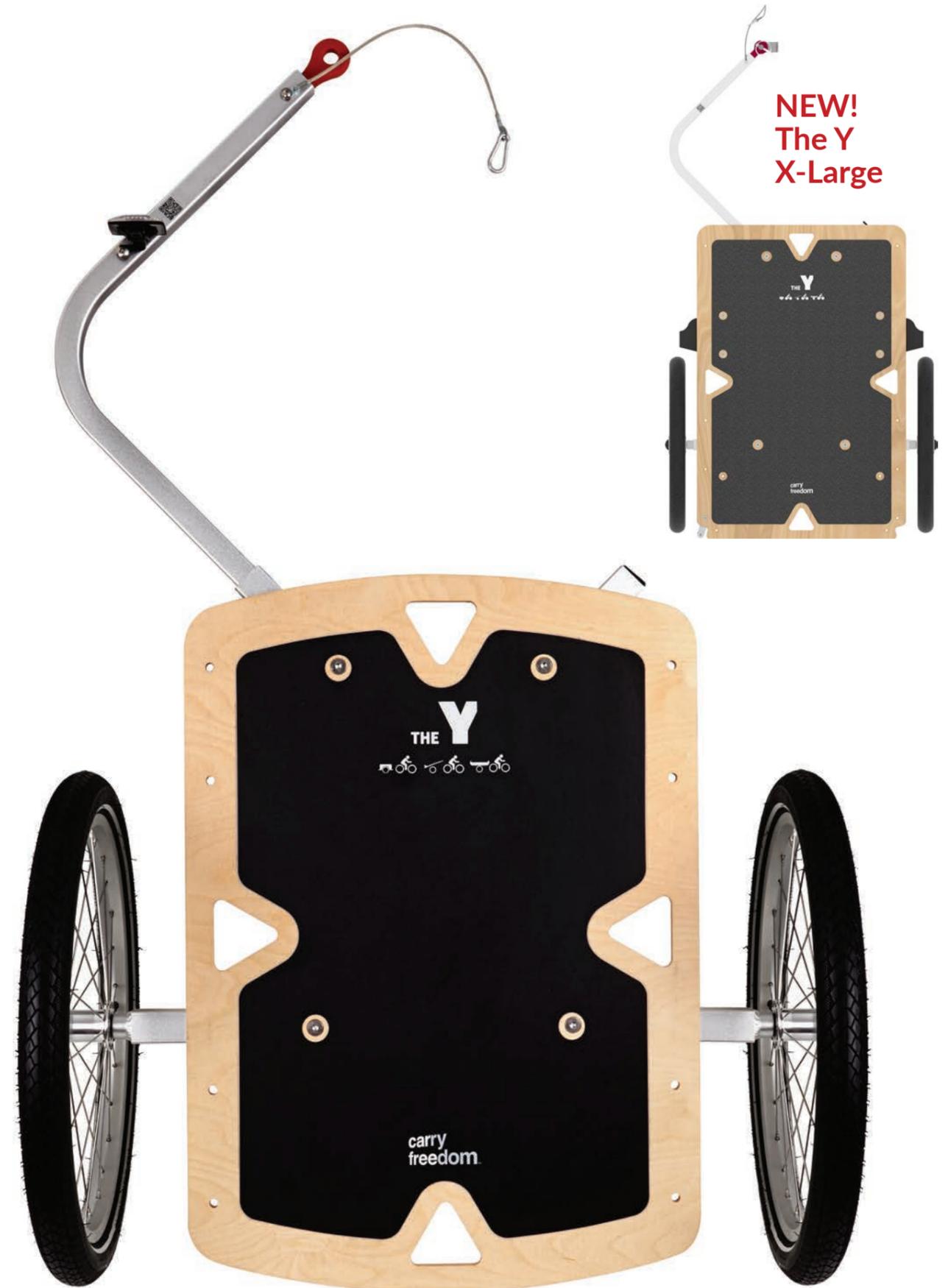
NEW! We are pleased to announce the new Xtra-Large version of the Y. With a larger load area and more straight lines than the other Y versions.



PRODUCTS

Check out the new Y here:

[www.carryfreedom.com](http://www.carryfreedom.com)



## THE NEW Y

*And Y not?*

How do you make a great product better? The Y was our first trailer, it's been inspiration for many that came after it. It has always been one step ahead. We listened to all your suggestions, read the comments on the blog and decided what to do. We've added more value, better features and a more modern look, because we want the Y to take you to a new level of alternative transportation. Used for expeditions, shopping, camping, car free lifestyle, delivery, kayaks, surfboards, etc.

**Y small features:**

Carries 45 kg  
Weighs 6.7 kg  
Fits to threaded and QR axles  
Wheel size 16 inch  
Load bed 580 x 380 mm  
Frame material aluminium 6061T6

**Y large features:**

Carries 90 kg  
Weighs 8.4 kg  
Fits to threaded and QR axles  
Wheel size 20 inch  
Load bed 700 x 500 mm  
Frame material aluminium 6061T6

**Y x-large features:**

Carries 90 kg  
Weighs 10.5 kg  
Fits to threaded and QR axles  
Wheel size 20 inch  
Load bed 900 x 600 mm  
Frame material aluminium 6061T6

Carry your guilt-free ice cream on a Y large like OPPO do in London.

See photo opposite.



## THE LEAF

*The LEAF is a folding trailer that has been designed for modern city mobility. The trip to the supermarket or the garden centre is easy with this flexible trailer. It's the first Carry Freedom trailer with a seat post hitch. The upright position makes it easy to fit and the LEAF is a great walking trolley.*



### PRODUCTS

*Check out the LEAF here:*

[www.carryfreedom.com](http://www.carryfreedom.com)



## THE LEAF

*A folding plan for the city!*

A folding trailer for shopping, travelling and city life, ideal for people living in apartments. The LEAF quickly folds flat for compact storage and can carry a week's shopping. Large wheels make going up and down stairs easy. The trailer is compact and manoeuvrable for use in crowded markets and streets when using the alternative tow arm position. Side leafs create a parcel shelf for occasional large boxes. The main load area can carry standard beer crates. Made from renewable wood and recyclable aluminium. The bike/trailer combination is visible and short, making it safe for use in city traffic.

**LEAF features:**

Carries 45 kg

Weighs 8,6 kg

Fits to all seat posts with one special bracket

Wheel size 16 inch

Basic load area 59.5 cm x 42.2 cm x 28.8 cm

Frame material aluminium 6061T6

Comes with hitch, safety strap, reflectors and manual.

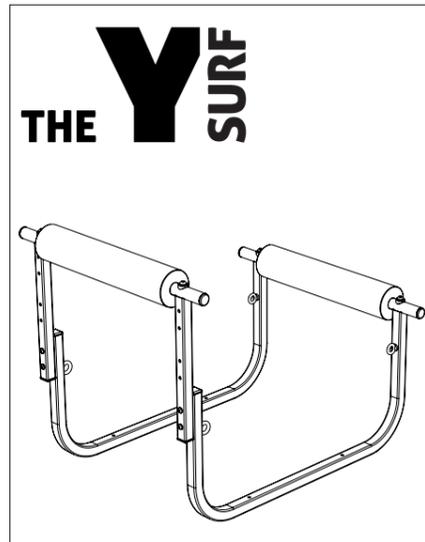
Folds flat for compact storing, travel and ease of use

Walk the city with a folding trailer.



*SURF IT  
PADDLE IT  
HAUL IT*

*The "car-free" way*



Go to the maximum and  
let us take you where you  
want to go!

Carry Freedom will carry your loads, be it a kayak, a paddle board or just normal stuff for everyday use like ladders or lumber from the building store. The Y can get longer or wider and will adapt to what you want it to be.



PHOTO: SIMON VAN HAL



## GET LONGER GET WIDER

*Free your bike  
and let your trailer do more*



LONGER ARM

*There are various options available for pulling long loads. We offer two extension arms that increase the length by 0.5 or 0.9 meters which is perfect for use with the Y-Surf. We also have the super Loong Arm that is 3 meters long. It can be cut down as needed. Use it for pulling boats and canoes.*



WIDER AXLE

Sometimes long is not enough and you need to go wide. Just bolt the wide axle beam under the existing axle to increase the width by 20 or 40 cm. This can be reversed at any time by simply unbolting the axle beam and your trailer is back to the original width.

The Options:  
We make your life easier with  
load carrying solutions.

Long arms, wide axles, fenders, flag holders, rear lights,  
side panels, kayak holders, stretch straps, boxes, bags

## BOX IT BAG IT

*You're gonna carry that weight a long time*



FOLDING BOXES FOR Y

We supply robust folding boxes for the Y. You can also use many boxes and cases available on the market. Also lockable aluminium boxes can be used for things like camera equipment.



BAGS FOR Y AND LEAF

We have teamed up with UPSO in the UK to supply a cabin sized bag for the LEAF and for the Y small. These bags are specially made for Carry Freedom. Also a liner tray for the Y-Surf is available, to carry a wetsuit and small stuff.

Model:  
Robust folding box - left  
UPSO recycled cabin bag - right



PHOTO: SAM STRAUSS

# TRAILER SCIENCE

*A lot of people out there know about panniers and bike packing, but trailer knowledge is less common. Check out the article on the next page. We tell you why two wheel trailers are the way to go when put up against panniers or mono wheel trailers.*



PROJECTS

Visit our website at

[www.carryfreedom.com](http://www.carryfreedom.com)

## TRAILER SCIENCE - WHAT IS BEST? WHY TWO-WHEEL TRAILERS ARE BETTER

Carrying a load by bike costs the cyclist energy. How can this energy be reduced to the minimum?

**Panniers** fix the load rigidly to the bicycle, if the bike moves, the load moves. Some pannier systems mount the load low to the ground so when the bike leans the load doesn't move as much as if it had been higher on the bike.

**Mono wheel trailers** lean with the bike, and the load moves from side to side in a similar manner to low slung panniers.

**Two wheel trailers** in contrast do not lean. The trailer and the load are isolated from the bike. It is this difference that we are focusing on.

### Energy saving of a trailer

Panniers move with their bike. Imagine a bike leaning slightly from left or right. Mono wheel trailers do the same, taking their load with them. Moving this weight costs energy. The faster the bike leans and the further the weight is moved from its original position, the more energy is used. Panniers are further away from the ground than a mono wheel trailer, hence pannier loads move more than loads on mono wheel trailers and use more energy.

### Moving loads cost energy

Using energy to move the load when a bike leans is a waste. Worse than this the energy needed comes from you and passes through your bike frame to get to the load. This means you need a stronger/heavier bike to cope with the extra energy flowing. Think of the lazy frame angles, extra strong frames and extra spokes on touring bikes. It would be so much better if you could lean your bike without moving the load it was carrying!

### Two wheel trailers

Consider the same load on a two wheel trailer; if the bike leans, the trailer and its load does not move. If the load does not move, no energy is used. If no energy is used then the bike does not need to be stronger to cope with the extra twisting forces and you are not wasting energy moving the load from side to side.

But how much does a bike lean during a given ride? Well, watch someone as they cycle; every time they turn their pedals, they and their bike wiggle slightly to the left then slightly to the right. That is a slight wiggle every turn of the pedals, 60 times a minute, 3600 times an hour. This is especially noticeable when the cyclist is pedalling out of the saddle, when accelerating or climbing a hill. Perfect cyclists do not wiggle but the

other 99% of us do. Cyclists are also continually correcting the balance of their bike, by leaning slightly left or slightly right. And finally as cyclists turn corners, the bike will also lean left or right.

### Energy cost of a trailer

So because the load does not move while the bike leans, energy is saved. However, using a trailer also costs energy. There is the extra weight of a trailer that has got to be pulled up hills, the wind resistance of the trailer and the drag from the trailer's tires/wheels. Does the benefit outweigh the cost?

### Trailer weight

A trailer might weigh 5 kg, but the bike towing it can be a few kg lighter than a touring bike, and it needs no panniers/racks, so the extra weight of the trailer needs to be compared against the savings made by using a lighter bike. We could assume that the bike can be 3 kg lighter so the net weight gain could be as low as 2 kg. Also the extra weight is not being wiggled and uses less energy. Also this extra weight is only there when a load is being carried. When you carry no load the bike weighs an extra 125 g (the weight of the hitch), this cannot be said of panniers.

### Aerodynamic drag

About 90% of your cycling energy is used in dragging you and the bike through the air, but a trailer sits very close behind your bike in a bubble of "turbulent" air that the bike pulls along anyway. The trailer is similar to a racing cyclist who tucks in behind the leader to save energy. A rough drag coefficient can be estimated if you know an objects frontal area. Most of a trailer's frontal area is in the shadow of the rider and will certainly not add more frontal area to a bike than panniers will. Cycling with loose clothing would cost more energy than cycling with a trailer.

### Tire Drag

A bicycle's tire drag accounts for only a few percent of a cyclist's energy. We use high quality touring tires and cartridge bearings to minimise this almost insignificant drag.

### Conclusion

On balance we consider the energy savings of rotationally isolated loads offset the energy cost of tires and wind, so over the course of a ride two wheel trailers use less energy for a given load than panniers or mono wheel trailers. Costing less energy allows a cyclist to carry more or go further for a given input. More than this the bike needs no special adaptation or qualities to tow a trailer and it feels "normal" when being cycled.

Enjoy your trailer and the freedom it brings.

## MEET OUR TEAM



*Daniela Ackmann*

Daniela was born in Quakenbrück, a small German city. She co-founded USED in 2003. Since then she has been taking care of sales and customer service in Europe. Daniela is the motor, she gets things done and provides the much needed "women's touch".



*Bob Ciddens*

Bob was born in London but lives in Germany. Met Nick in 2003 at the IFMA in Cologne and have been friends since then. He is co-owner of the USED GmbH and responsible for marketing and sourcing. Loves music and sings in a band.



*Nick Lobnitz*

Nick started Carry Freedom in 2003. He's a mechanical engineer with a passion for clean design. Most of his current focus is on utility bicycles and related products. He sold Carry Freedom to USED in 2013. But he is still here in spirit.

## TECHNICAL DATA

	THE Y small	THE Y large	THE Y x-large
Trailer	bike trailer with load bed platform		
Frame Material	aluminium 6061T6		
Frame Finish	silver anodised		
Load Bed Surface	non slip sticker		
Bag / Load Bed Material	multilayer weatherproof plywood		
Frame / Load Bed Size	580 x 380 mm	700 x 500 mm	900 x 600 mm
Maximum Load Area	900 x 490 mm	900 x 640 mm	1100 x 640 mm
Track Width	560 mm	702 mm	712 mm
Total Width	610 mm	772 mm	782 mm
Trailer Payload	45 kg	90 kg (50 kg with quick release hub axles)	
Trailer Weight (Unloaded)	6,7 kg	8,4 kg	10,5 kg
Box Size	600 x 485 x 140 mm	720 x 530 x 140 mm	920 x 700 x 150 mm
Wheels	detachable with quick release function, with IGUS bearings		
Wheel Size	16"	20"	
Tire	pneumatic tires with reflective side stripe		
Tow Bar	removable with clamp system		
Hitch	lollipop hitch with safety strap and one hitch adapter		
Delivered with	hitch, straps, safety strap, deflection device, reflectors and a flag/light holder		
Safety Test	the Y trailer has been tested and conforms to the DIN EN 15198 test		

	LEAF
Trailer	folding upright bike and walking trailer
Frame Material	aluminium 6061T6
Frame Finish	silver anodised
Load Bed Surface	non slip stickers
Load Bed Material	multilayer weatherproof plywood
Trailer size (when folded)	600 x 460 mm
Load Area	600 x 435 x 300 mm
Track Width	560 mm
Total Width	610 mm
Trailer Payload	45 kg
Trailer Weight (Unloaded)	8,6 kg
Box Size	750 x 540 x 18 mm
Wheels	detachable with quick release function
Wheel Size	16"
Tire	pneumatic tires with reflective side stripe
Tow Bar	removable
Hitch	lollipop hitch for seat post, with safety strap
Delivered with	hitch, safety strap, reflectors, grease

# ACCESSORIES LIST

*Ride hard, go further, carry more!*

## 1. HAND CART HANDLE

The handle is easily adjusted giving your trailer even more flexibility - for Y only

## 2. EXTENSION ARM 0.5

The shorter extension arm can be used for loads up to 1.80 meters - for Y only

## 3. EXTENSION ARM 0.9

The longer extension arm can be used for loads up to 2.50 meters - for Y only

## 4. LOOONG ARM

The longest arm we sell, adjustable for loads up to 6 meters - for Y only

## 5. Y-SURF HOLDER

Adjustable surf/paddle board, ladder, anything long holder - for Y large only

## 6. WIDE AXLE BEAM

This axle fits under the trailer and increases the width to 85 or 105 cm - for Y only

## 7. FOLDING BOXES

Strong robust folding boxes - for Y only

## 8. BAGS

Special bags made for Carry Freedom out of recycled material - for Y & LEAF

## 9. FLAG / LIGHT HOLDER

Use this to be seen in traffic and at night - for Y only

## 10. CARGO STRAPS

ROK Straps (pair) - for Y & LEAF



## GET IN TOUCH

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