

THORN

>> VOYAGER



Derailleur Tandems



As Europe's largest retailer of tandems and as a shop which has worked hard to establish a justified and enviable **reputation for honest advice** we have been constantly asked to recommend an **inexpensive tandem**. Because we are committed tandem riders ourselves (and have been for many years) we know what features a tandem must have to make it **FAST, FUN AND SAFE...**
Let us look at these issues...

'FAST'

is easy, any lightweight tandem with quality tyres will be fast.

'FUN'

any tandem which feels safe is fun for a while; to remain fun, you both (particularly the stoker who needs plenty of room), will soon appreciate that **comfort, reliability and confidence equals FUN!**

'SAFE'

THE DIFFICULT BIT TO GET RIGHT.
A tandem and crew weigh significantly more than a solo and travel at greater speed...
A TANDEM MUST HAVE GOOD BRAKES.
Being longer than a solo, a tandem frame must be laterally stiff, (otherwise the rear end will whip.)
If the steering geometry is not correct the tandem will not steer accurately (or will be on the edge of stability.) Finally, the materials used and the method of construction must be suitable to resist the huge stresses generated by a tandem.

Being Europe's largest tandem retailer we have had the opportunity to test every inexpensive tandem on the market but, unfortunately, we found that all FAILED OUR SAFETY REQUIREMENTS, SOME WERE MERELY FRIGHTENING, OTHERS WERE DOWNRIGHT DANGEROUS.
SO WE DECIDED TO PRODUCE OUR OWN MACHINE **BUILT TO OUR EXACT SPECIFICATIONS** WHICH WE GUARANTEE IS A FAST, FUN, SAFE MACHINE WITH SUPERB HANDLING, GOOD BRAKES, HIGH RELIABILITY, COMFORT AND STRENGTH, WHICH WILL INSPIRE CONFIDENCE.

Frame

High quality, **lightweight**, butted mega-sized Cro-mo frame and threadless unicrown cro-mo fork. (5 year frame & fork warranty)
Alloy eccentric, reliable F.S.A sealed bearing 1 1/8" threadless headset.

Specification

- > 26" wheels... Vuelta Airline deep section 6063 T6 alloy rims, Shimano 8 speed RM-40 quick release cassette hubs, galvanized spokes, Velox rim tape, Schwalbe City Jet 26 x 1.5" road tyres and butyl inner tubes,
- > 24 speed SRAM twist grip shifters,
- > Radius Alloy "V" brakes and levers with cables,
- > Lightweight, all alloy, tandem triple x-over chainset 24 / 38 / 48 rings,
- > Sealed bearing bottom brackets,
- > Quality Sachs chains,
- > Suntour X-1 front mech, Shimano Acera rear,
- > Shimano HG70 11-28 8 speed cassette,
- > Shimano HG70 cassette 11-32,
- > Shimano sealed bottom brackets,
- > Lightweight alloy bars, stem and micro adjusting seat posts,
- > Gel saddles,
- > Pedals, toe clips & straps.

Stokers Bar Upgrade

Thorn stokers bars can be fitted at the rear, they give more hand positions for comfort.
Also the bars can be used reversed (as pictured)
SJSC stokers bars + £20



Childback

The safest most efficient way of cycling with your child is by tandem.

This super rigid machine can sprint, climb, turn corners, brake and take avoiding action much more efficiently than a trailer bike. Your child is also closer and can communicate with you more easily.

A childback tandem can easily be ridden solo, when it is only slightly more cumbersome than a solo bicycle... This makes it ideal for school runs. These slightly shorter machines are even more rigid than their full sized Thorn stable mates and could be ridden with adult stokers.

We offer a pair of rear cranks cnc machined with both 115mm and 140mm pedal holes to give young knees their best chance of developing correctly + £40



Childback CNC machined rear cranks with both 115mm and 140mm pedal holes
+ £40



Riding Tandem is fun!

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For partners of unequal ability, riding tandem is the best way they can enjoy cycling together.

Once the energy wasted in concern and frustration by both partners has been harnessed into forward progress, the new tandem team, in all cases we have known, has gone on to exceed all their previous (realistic) cycling ambitions. For those with balance problems or visual impairments, stoking a tandem is the only way to obtain full cardiovascular fitness in the open air.

A tandem fitted with Kiddy Cranks (or even better a childback tandem) enables families to continue cycling during the early years of parenthood. It also introduces children to the pleasures of cycling in a safe, controlled environment which is stimulating enough to be anticipated with excitement.

When two cycling-fit and strong parties ride tandem the result is a shared athletic experience of a quality beyond words... and fast!



Why do all our tandems use 26" wheels?

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We use 26" wheels for many good reasons...

The 26" MTB wheel is known in every country in the world, so spare tyres are available everywhere.

26" wheels are much stronger than the same weight 700C wheels. When a tyre manufacturer makes a good 26" tyre they know that the potential sales are in the millions, if they know that they make a good (wide) 700C tyre the potential sales are only in the thousands. Therefore tyre manufacturers can afford to put much more capital into R&D and also use higher quality materials.



Isn't it hard work with big fat tyres?

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Not at all! The Panaracer Hi Road 26 x 1.5" tyres, that we fit as standard equipment, have a high quality casing. They weigh less, provide more grip, are more reliable, are more comfortable and have a lower rolling resistance than any 700 x 35C tyre available. We have sold literally thousands of them and we have never had a failure at the side wall, failure at the side wall is very frightening and potentially dangerous yet very common with many 700C tandems. See our 26" Touring Tyre Test.

The unique THORN 14 day pledge.

Talk to us, have us build you a THORN, and if you contact us within two weeks of delivery and tell us that you don't wish to keep it, for any reason, we will arrange to have it collected and refund you in full, provided that you have not damaged the machine. (If, owing to unforeseen circumstances, you are unable to ride the cycle during the first 14 days, contact us and we are likely to extend the period.)

Lifetime warranty available on frame and forks.
12 months warranty on components.

As you can see, we really can "guarantee your satisfaction".

14
DAY MONEY
BACK IF NOT
DELIGHTED
GUARANTEE
ON ALL
THORN CYCLES

The THORN Tandem range...

THORN Voyager - We have achieved the near impossible and are able to offer a high quality Cro-mo tandem, at an unbelievably low price. Many upgrades in specification are available.

THORN Explorer - With our new low cost entry level "serious" tandem... You could: Explore bridle ways and towpaths on Sunday mornings, explore country pubs on a summer's evening, or explore your own limitation on a long Audax ride. You could even explore Europe on a lightweight tour... **THORN Explorer**... A new kind of togetherness.

THORN Adventure - Designed for a lifetimes use, for every purpose from fast touring up to and including heavy camping over unmade roads. A serious machine handbuilt in the U.K. from our exclusive "Reynolds 531" tubeset which features a "conical" downtube.

THORN Discovery - The worlds ultimate expedition touring tandem!

THORN Trident - 3 adult triplet - (call now for latest price & specification)

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Tandem Sizing

Sizing tandems can be difficult and confusing... where do you measure them to and from?

Here are the possibilities:

1. When we design a frame we measure them from the centre of the bottom bracket (crank axle) to the centre of the intersection between the top tube(s) and the seat tube(s). Many mountain bikes are also measured this way... this method makes a frame sound much smaller than it is if it has a sloping top tube (which our tandem frames all have).
2. You can measure from the centre of the bottom bracket to the top of the seat tube. This can tell you if you have enough seatpost out of the frame to allow: **a.** room to fit a stokers stem to the front seatpost, **b.** room to fit a suspension seatpost to the rear seatpost.
3. If you want dimensions... we prefer to use the "equivalent UK solo size", as it more accurately conveys the actual size of the tandem. (figure 1.)

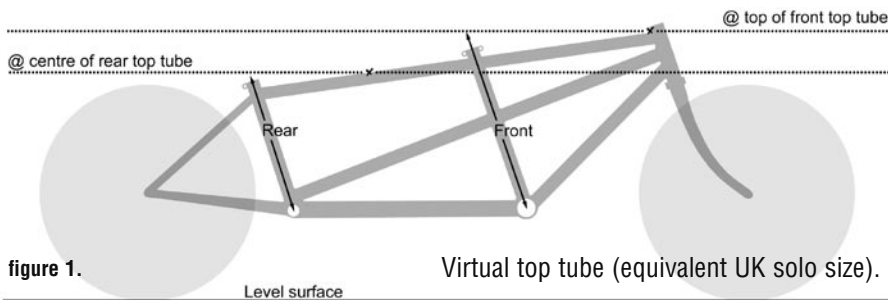


figure 1.

Front: On the front of a tandem you may have to stand as far forward as the handlebar stem, so we give an "Equivalent UK solo size" as if the top tube was parallel to the ground at this point.

Rear: On the rear of a tandem we give the "Equivalent UK solo size" as if the top tube was parallel to the ground at the centre of the tube (you don't need to stand any further forward on a tandem than this).

4. For simplicity we have called our frames - S/S, M/M, L/L and L/S (small, medium, large and large/small). Our childback sizes we call XXS.

Most (99%) adult tandems are sold to crews who comprise of a male pilot and female stoker. We have designed our tandems for a male/female combination.

Virtual top tube (equivalent UK solo size).

If you are a male/male, female/female or female/male combination you need to consult with our frame designer.

We also give the sizes of typical UK sized touring solos that our tandems are equivalent to (regarding handle bar height, standover and reach) e.g. Size M/M is suitable for a medium height male pilot who would be happy to ride a 22" touring solo and a medium height female stoker who would be happy to ride a 19" touring solo. (see figure 2.)

5. To double check your assessment of sizes XXS, S, M and L you can measure your Standover Height. Do not use you trouser size... this is usually 2" to 2.5" (50 to 63cm) less than your standover height and may result in the wrong size frame being built!



Tandem frame dimensions

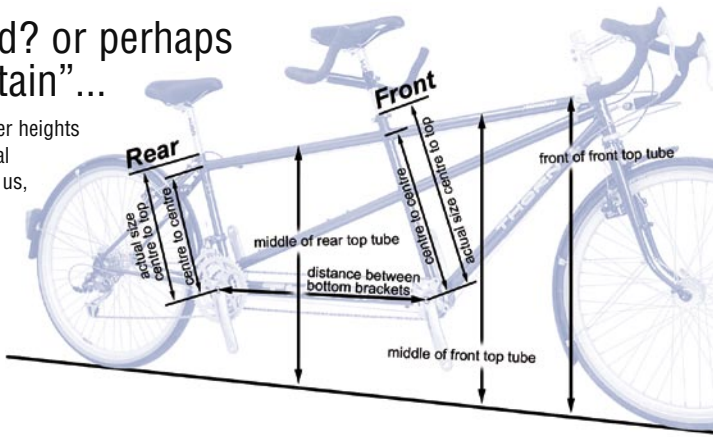
figure 2.

THORN Size (see point 4.)	Seat tube centre to centre (front/rear) (see point 1.)	Actual size centre to top of seat tube (front/ rear) (see point 2.)	Virtual seat tube equivalent UK solo size (front/ rear) (see point 3.)	Standover heights (see point 5.)			Distance between bottom brackets
				@ front of front top tube	@ middle of front top tube	@ middle of rear top tube	
S/S	17.25"/15.75"	500/435mm	20"/17.5"	775mm	750mm	705mm	25.5"
M/M	19.5"/17.5"	550/482mm	22"/19"	800mm	780mm	745mm	27"
L/L	21.5"/19.25"	600/522mm	24"/21"	850mm	830mm	785mm	28"
L/S	18.75"/14.25"	525/403mm	23.5"/18"	835mm	780mm	705mm	25.5"
M/M	20"/18"	560/480mm	23"/21"	800mm	775mm	740mm	27"
L/S	19"/14"	525/380mm	24.5"/17"	840mm	785mm	670mm	27"
L/L	22"/20"	602/530mm	24"/21"	850mm	830mm	785mm	27"
S/XXS	15.75"/11"	450/295mm	21.5"/15"	710mm	665mm	575mm	24"

Still confused? or perhaps just "not certain"...

Then, have your standover heights (in shoes) and your actual heights ready and phone us, if you can tell us what you would like to do on the tandem we can do the rest.

We have thousands of happy customers, talk to one! ... better still talk to us!



To measure your standover height...

1. Stand in cycling shoes with your back against a wall, feet together.
2. Place a large coffee table style book against the wall (between your legs).
3. Raise the book as high as it will comfortably go.
4. Measure from the floor to the top of book, that is your standover height.

VOYAGER ORDER FORM

Customer Name _____	BK N° _____
Address _____	
Postcode _____	
Telephone Number Home _____ Work _____ Mobile _____	

The Thorn Voyager is available as frame and fork only (including eccentric) at £399.99 ☐
 Thorn Voyager complete tandem £799 ☐

Size

20/18" - M/M ☐ 22/20" - L/L ☐ 19/14" - L/S ☐ 15.75/11" - S/XXS ☐

Choice of colour* Rocket Red ☐ or Jet Black ☐
 Choice of crank length* 170mm front / 170mm rear ☐ or 175mm front / 165mm rear ☐

Sub Total £

Tandem Setup Dimensions ... Please fill in

Front Rider

1. Your sex* = Male ☐ Female ☐
2. Your height = _____ cm
3. Your stand over height
(inside leg measurement from crotch to floor in shoes, **not trouser size**) = _____ cm
4. Body type* = Long legs ☐ Short legs ☐ Average ☐
5. Preferred riding style* = Upright ☐ Relaxed ☐ Sporty ☐
Aggressive ☐ Racing ☐

Rear Rider

1. Your sex* = Male ☐ Female ☐
2. Your height = _____ cm
3. Your stand over height
(inside leg measurement from crotch to floor in shoes, **not trouser size**) = _____ cm
4. Body type* = Long legs ☐ Short legs ☐ Average ☐
5. Preferred riding style* = Upright ☐ Relaxed ☐ Sporty ☐
Aggressive ☐ Racing ☐

VOYAGER UPGRADES

Wide ratio cassette - Shimano 9 speed 11-34 XT M750 cassette (11/13/15/17/20/23/26/30/34) + 9 speed SRAM twist grip shifters £50 ☐
 Knobbly MTB tyres £0 ☐
 Wheel upgrade - Sun Rhyno rims hand built on to Shimano LX M570 hubs using stainless steel spokes £100 ☐

X-Over Drive using - Thorn Power Pro alloy 110 / 74 PCD tandem chainsets with ramped steel rings 28 / 38 / 48T ☐

Choice of crank length* Front 170mm ☐ 175mm ☐
 Rear 160mm ☐ 165mm ☐ 170mm ☐ £100 ☐

Childback specially manufactured rear cranks with both 115mm and 140mm pedal holes £40 ☐

Alloy bottle cages £3.99 each Number required _____ £ _____ ☐

Alloy 4 point fixing rear carrier (fitted) Silver ☐ Black ☐ £20 ☐

SJSC stokers bars, fitted to the rear (gives more hand positions for comfort, can also be used reversed for children) £20 ☐

SKS mudguards, wide profile (fitted) Silver ☐ Black ☐ £25 ☐

Spares kit: includes 2 x tubes, 1 x gear inner, 1 x brake inner £15 ☐

Standard frame & fork warranty - 5 years ... Upgrade to a lifetime warranty for £70 ☐

Other Requirements _____ £ _____ ☐
 _____ £ _____ ☐

Special Instructions

Total Cost £

Please Note:- Occasionally some items become unavailable for long periods of time. We reserve the right to substitute items of similar (or greater) value where there will be no adverse difference in function. No surcharge will be made.

* = Please ☒ tick box required