

# THORN

## xTc 853

Many of our customers say... "I want an exciting lightweight cycle that I can go for a blast on in the summer evenings, that I can ride, lightly laden, over long distances briskly, and that I can also use for my annual touring holiday." ... Well, this bike is for them! It will do all this and much, much more! If you want a good-mannered bike on which to cycle prodigious distances where ultimate comfort is more important than ultimate speed, then this is the perfect bike for the job. Don't misunderstand, this is a very quick bike - one that encourages you to get out of the saddle and sprint up short climbs - but it is also very comfortable, especially over distance or over rough roads.

It is great fun **off-road**, where the application of a little finesse, in deference to its road forks and road going tyres, will allow it to cover most of the terrain that can be negotiated by mountain bike... however the XTC will accept 2.1" full knobbly mountain bike tyres **without** its mudguards with enough clearance for **dry conditions**.

The XTC would be our first choice as an all year round machine for day to day use (and it will also easily cope with the weekly shop).

The stability of the XTC when quite heavily laden owes as much to Andy's design as it does to our exclusive "conical" Reynolds 853 tubeset.

It is not an expedition tourer but it will carry lightweight camping gear for the annual holiday without fuss or drama.

### This is quite simply the best all-round touring cycle in the world...

if this is the type of cycle you require then try one for yourself... we are so confident of this cycles abilities that we offer our **14 day trial period**... talk to us, have us build you an XTC, and if you contact us within 2 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.



Fillet brazed and filed to perfection.

## UNIQUE THORN 14 DAY PLEDGE

14 day money back if not delighted guarantee on all new Thorn cycles

Bike pictured: fitted with HPX pump and Avid shorty 6 brake upgrades.



### Derailleur equipped 26 inch wheel - Fast all-round touring bike

#### Attention to detail

We have enhanced the XTC's resistance to accidental damage by using a smaller diameter, heavier gauge top tube... this has no discernible effect on comfort or performance and weighs very little more.



We use Ritchey forged rear drop outs - these are the highest quality, lightweight, drop outs available.

All the frame tubes (apart from the seat tube!) are sealed... we even use "capsule" stainless steel bottle bosses... so your high quality lightweight, pride and joy, will never suffer from internal rust!



Discreet dynamo mounting boss.



Pump mounts behind the seat tube.

## CYCLING PLUS

March Review C+148

THORN XTC A well made, beautifully finished steel frame, handmade wheels and off-road kit make a well balanced tourer that will cope with road, mountains and rough-stuff, while being light enough for commuting audeax and day rides.

#### Overall verdict

9 out of 10

Cycling Plus rating out of 10 :

Frame - 9 Wheels - 9

Handling loaded - 9

Equipment - 8



4-point fitting rear carrier bosses.



#### Frame and fork spec

The frame is 100% low temperature fillet brazed and the fillets are filed to perfection.

#### Main triangle

Reynolds heat treated, exclusive to us "Conical" 853 through out.

#### Top tube:

diameter  $\varnothing$  - 28.6/25.4mm  
gauge - 0.9/0.6/0.9mm



#### Down tube:

diameter  $\varnothing$  - 31.8/34.9mm  
gauge - 0.8/0.5/0.8mm

#### Seat tube:

diameter  $\varnothing$  - 31.8/28.6mm  
gauge - 0.8/0.5mm

#### Rear triangle

We use "cranked" 16mm Reynolds 725 seat stays and "cranked" 29mm x 17mm oval chain stays 0.8/0.6mm

#### Forks

We use Reynolds 531C blades (continental oval) brazed in to a cast crown and Columbus Nivachrom rifled 1 1/8" threadless steerer.

## Frame features



**1.** All slotted stops, guides & slides for brakes & gears are steel (not cheap plastic).



**2.** Brazed-on gear bosses are set close to the head tube to help cables clear the head tube...but they still function as gear lever bosses if required.



**3.** 3 sets of bottle bosses are provided. The seat tube set of bosses help the bottle to sit as low as possible and give a low centre of gravity. The down tube sets are spaced to allow the future fitting of S&S couplings if required.



**4.** Cast steel cantilever bosses are exclusively used - a rear brake hanger is provided.



**5.** There is provision for a 4-point fitting rear carrier and proper provision for front loading carriers.



**6.** We braze the mounting points for the front mudguard stays onto the bend of the forks to save weight, increase rigidity and improve safety (if something is picked up by the wheel such as a stick or drinks can the gap between the mudguard and tyre will increase as the stays are forced round by the object, allowing the object to fall clear and avoiding a potential cart wheel).



**7.** We provide bosses under the fork crown, seatstay bridge and chainstay bridge to allow for the neat, direct and secure "bolting" of mudguards to the frame, whilst also maximising clearance.



**8.** We fit a reinforced pump peg on the left hand seatstay (behind the seat tube on XTC) to allow the pump to be fitted, leaving the top tube free to lift the cycle when required.



**9.** We provide a drain plug in the bottom bracket shell to allow the draining of frame-destroying condensation or for the addition of rust inhibitor.



**10.** Our discreet dynamo mounting bosses not only take our stainless dynamo plate but will also accommodate our stainless Cateye cordless computer transmitter mounting.



**11.** We fit stainless steel inserts into the inner faces of the rear ends to both avoid rusting and obviate the necessity to carve away the right hand seatstay for chain clearance.



**12.** Our stainless steel headbadges are silvered onto the headtube. These not only look quietly understated but also prevent a stolen frame from having its origin disguised.

### Standard paint finish

The standard paint finish is Cobalt Blue Metallic with Silver graphics - available from stock. Upgrade to any single colour available +£55 (4 weeks wait).

### Other paint finishes

Some cyclists are able to own and use bikes for many years without scratching them... others only have to look at their bike hard for the paint to fall off... baggage handlers will always scratch your bike.

Whilst scratches look unsightly we've yet to see a bike die from external rust unless severely neglected. People's reactions to scratches also vary - if you are a careful owner who doesn't travel by air (or coach) much and you can adopt a philosophical attitude to scratches and see them as noble scars, then you could have any of the beautiful flamboyant finishes available and cover the scratches over with clear varnish.

If you are not only very fussy but also careless (be honest!), accident-prone or use airlines frequently, you must have a paint finish that can be touched up easily ... plain gloss enamel. If you fall between these extremes then you could choose a metallic finish, provided you are prepared to find your own touch-up paint.

All of our solo cycles are sprayed with multiple coats of oven baked enamel. This gives a beautiful finish that is fairly durable and can be easily rubbed down and primed and can easily be touched up if a suitable paint is available. Stove enamels don't air dry very well, so using the paint the cycle was sprayed with only pretends to solve the problem. In typical style we have got to the root of the problem. We have **started** with the touch-up paint... "Humbrol" make little tinlets of air-drying enamel, available the world over.

We selected 9 colours and had the stove enamel manufacturer provide paint which would be perfectly matched by our touch up.

The colours are:-



French Blue



Maroon



Italian Yellow



Navy Blue



Cream



Ferrari Red



Brunswick Green



Titanium White



Black

Apart from the Ferrari Red, Italian Yellow and Black the other colours are deadly dull and boring on their own.

However our two new paint finishes (paint options 4 and 6), which each use two of these colours in a spectacular stencilled finish, look stunning!



## Colour Options:



Any single colour - Option 1.1 / 2.1

**Option 1.1** - Any single Gloss, Metallic or Flam colour with Vinyl graphics (choice of colour).

**Option 2.1** - Any single Gloss, Metallic or Flam colour with Stencilled paint graphics (choice of colour). Stencilled graphics give a high quality and durable finish & more colour choice.

**Option 3.1** - Any two Gloss, Metallic or Flam colours in a faded finish with "Thorn" on the down tube and model name on the top tube in stencilled paint graphics.

**Option 3.2** - Any three Gloss, Metallic or Flam colours in a faded finish (as Sturburst but no airbrushing) with "Thorn" on the down tube and model name on the top tube in stencilled paint graphics.



Billiard Cue - Option 4.1

**Option 4.1** - "Billiard cue" - headtube, fork crown, and front of both top and down tubes in secondary colour (eg. yellow, white or cream); cut out in fork crown, "Thorn" stencilled on the front of the top tube, bike name stencilled on the front of the down tube and the rest of the frame in the main colour (eg. French Blue, Ferrari Red, Maroon, Brunswick Green, Navy Blue or Black). The join between main and secondary colour is achieved with four long points in each colour... hence "Billiard cue".



Full Retro finish - Option 6.1

**Option 6.1** - "Full Retro finish"... Identical to the "Billiard cue" but with the addition of Celtic bands at the top and bottom of the seat tube and a "V" flash between the two bands all in the secondary colour.



## Why 26" wheels?

We believe that apart from very specific uses (time trialling, road racing, track racing and possibly some Audax riding & very fast touring), the 26" (MTB) wheel is the most desirable wheel to specify for your new cycle. There is so much variety now on offer, in both tyres and rims, that the perfect combination for any solo application is possible.

We have, at one extreme, a rear wheel built with a lightweight 28 hole Shimano XTR hub, DT revolution spokes, alloy nipples and Mavic XC717 rim weighing in at 862g! Marry this with a 26 x 1.5" folding Panaracer Hi Road tyre and latex tube and you have a very fast, comfortable, reliable and ultralight combination that makes 700 x 28 feel sluggish, heavy and bone jarringly uncomfortable.

At the other extreme we have 48 hole Shimano XT tandem hubs (spaced for solo use), DT 2.0mm plain gauge spokes, brass nipples and Sun Rhyno rims. Which when mounted with Schwalbe Marathon XR 26 x 2.0" tyres, and heavy-duty Michelin butyl inner tubes, are the strongest, most durable and most reliable combination available today ... perfect for full-on expedition use on metalled or unmetalled roads or no roads at all!

Between these two extremes there are many diverse combinations and beyond these extremes there are skinny (uncomfortable) 23mm racing tyres and, we understand, there are also tyres with big knobbly treads designed for off-road racing! All these tyre combinations fit the same size rim! **Tyres for this size wheel are available in every country in the world.**

After conducting many experiments we have found that the rolling resistance of many of the tyres we recommend to be lower than that of narrow 700C sizes. This causes surprise to many, as skinny 700Cs have been one of cycling's holy cows. Skinny 700C tyres are more aerodynamic, so they are still the best choice for use at higher (racing?) speeds. But we are convinced of the superiority of the 26" wheel over the 700C sized wheel. Obviously the heavier the rider, the heavier the load, and the more extreme the terrain, the more noticeable the advantages are.

**We believe any open minded person will agree with our findings & remember...**

**We offer our 14 day money back guarantee to back this up!**



Sturburst - Option 7.1

**Option 7.1** - "Sturburst" paint finish is exotic, eye catching and tastefully exclusive.

**Option 8.1** - Anything you can think of and provide a clear drawing for. No refund or touch-up paint available.

Not wishing to labour the point, we can **not** supply effective touch up paints for metallics or flams (please put anybody, who says that they can, in touch with us... **if they can supply effective touch up they can have the contract to spray our bikes!**).

(Bikes pictured are for paint finish examples only.)

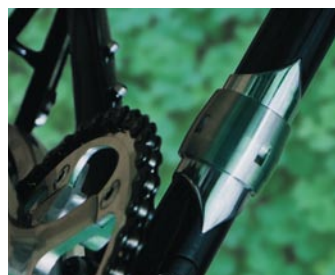
## Bike Build-up options...

Each bike is individually hand built from the frame up, to your exact specification, on our premises here in Bridgwater.

We offer many upgrades and custom options as standard, and can accommodate most component requests... Talk to us now about your dream specification.

## S+S Couplings

**S+S couplings** including cable joiners, fitted + £350



S+S couplings.

## Bicycle sizing revolutionised

We have always manufactured our cycles in many different sizes... each with its own proportional geometry and often with its own proportional tube gauge and diameter. However the "next size up" was only a little bigger in each dimension than the size below it.

Now we are making our cycles in much fewer seat tube sizes... instead of 15mm increments we go for 30mm... BUT, AND HERE'S THE THING, we are offering different length top tubes as well!

Just as people's inside leg lengths vary, so do the lengths of their arms and backs! We have taken this on board in our designs.

## There are 2 valid ways of choosing your frame size:-

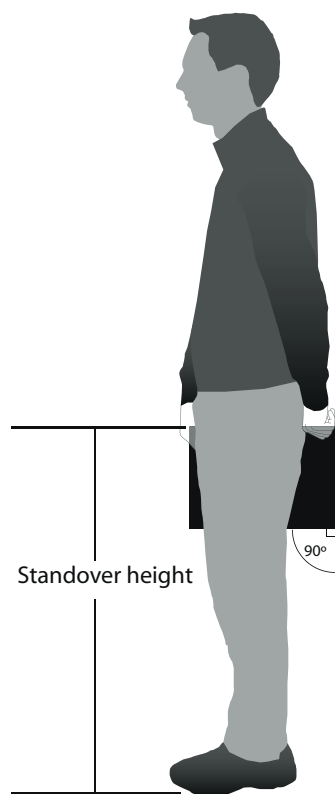
1. If you currently have a cycle that you are comfortable on, then take the measurements that we request and we will choose **the perfect size** for you. If you are coming from, say, a more racing background, we suggest that you give us the dimensions of your racing bike with 15mm added to handlebar height (thereby reducing dimension L\*) and 15mm deducted from your handlebar stem length (thereby reducing R\*). You should not change your saddle position.

2. If you don't have a cycle that you are at all happy with, then you need to have your standover height **in cycling shoes** and your actual height. You will also need to indicate the type of position that you think best describes your requirements... Relaxed, Sporty, Racing or Upright

### 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 (a thin hardback book is best) against the wall between your legs.
3. Raise the book as high as it will go. Without moving the book step forward and note the position of the top of the book.
4. Measure from the floor to the top of book... **that is your standover height!**

**Do NOT give us your trouser size... This will result in a cycle at least one size too small!**



## Top tube lengths

**Short top tubes** in general are for people with long legs and short bodies (mostly, but not exclusively, women) who want to use drop handlebars, or people who want to sit (very) upright with "straight" bars.

**Medium top tubes** are (in general) for people with shorter legs and longer bodies (mostly, but not exclusively, men) who want to use drop bars, or for people with long legs and short bodies who want "straight" bars.

## Notes on frame sizes

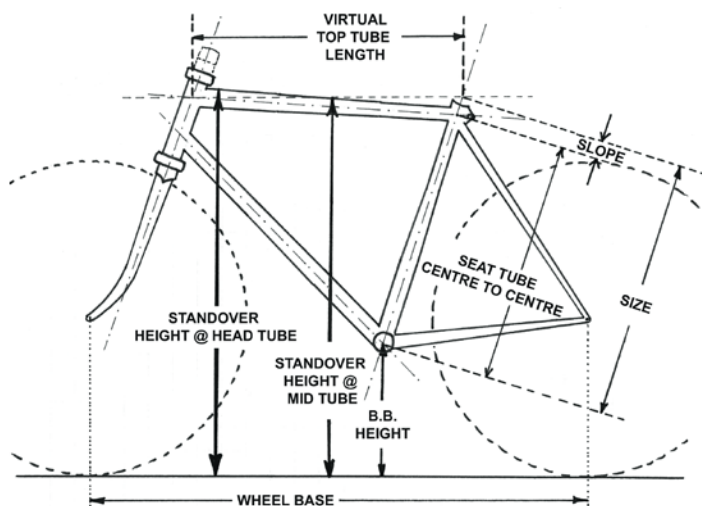
Very short people may not be able to clear the top tube at the headtube but they must be able to clear the top tube at the mid tube. Short people will almost certainly have 25mm clearance at the head tube. People of average height should expect to have 50mm clearance at the head tube and exceptionally tall individuals may expect 100mm clearance at the head tube.

We can't really make frames any smaller than our XXS. We believe that a custom frame is required (with more tubes in it!) if our XL size is too small! Making frames larger than our XL is an exercise in "diminishing returns".

## Don't get confused

The huge choice of cycles, sizes and top tube lengths is to enable you to have exactly the type of bike you want with the riding position you need.

## Frame Dimensions



Short Top Tube									
Frame Number	Size	Size	Slope (mm)	Seat tube centre to centre (mm)	Virtual top tube length (mm)	Bottom bracket height (mm)	Wheelbase (mm)	Standover height at head tube (mm)	Standover height at mid tube (mm)
98	XS	455S	40	415	480	277	1024	727	707
90	S	490S	50	440	505	277	1040	763	743
92	M	525S	50	475	525	277	1052	795	775
94	L	560S	60	500	550	283	1064	831	805
96	XL	595S	70	525	575	283	1084	867	835

Medium/Long Top Tube									
Frame Number	Size	Size	Slope (mm)	Seat tube centre to centre (mm)	Virtual top tube length (mm)	Bottom bracket height (mm)	Wheelbase (mm)	Standover height at head tube (mm)	Standover height at mid tube (mm)
99	XS	455L	40	415	520	277	1030	721	703
91	S	490L	50	440	535	277	1041	757	739
93	M	525L	50	475	555	277	1054	789	771
95	L	560L	60	500	580	283	1072	823	799
97	XL	595L	70	525	610	283	1082	859	827