

THORN NOMAD S&S

"The ultimate, affordable adventure touring machine"

Brochure incorporates,
THORN Rohloff eXp
and **THORN eXpR**

Issue 2 May 2009

Please read and note: Prices are rising all the time and we do not wish to waste resources; consequently the prices, in printed copies of this brochure, may no longer be correct. The current prices, given in the on line brochure, are correct



www.davidmyresphotography.com

S&S Couplings



are standard
equipment



**Thorn's designer,
test pilot and
touring Guru,
Andy B. shares his
experience of
creating and riding
a Raven Nomad.**

I have many cycling passions; I enjoy (?) the challenge and athletic experience of riding (long) duccox events. I still enjoy the thrill of riding, at pace, off-road. I enjoy using my bike as an everyday vehicle, whether it is riding to work, or simply pottering around the lanes. I enjoy a bit of light (B+B) touring...but my greatest passion is for adventure touring my partner, Fiona, is every bit as passionate about our cycling holidays (perhaps even more so!) as I am.

We like the self-reliant feeling of carrying our home, and the distilled assortment of essential belongings and equipment we need to survive in the wilderness. We like to cycle in mountains and camp (in our tent, I must stress) under the stars. We like to see as few vehicles as possible... often (but not always!) the least trafficked routes are the gravel roads. Generally, the inhabitants of these areas treat us with much more respect than they do the tourists in their camper vans. In some of the busier wilderness areas (!), we have often witnessed a coach load of "adventurous back-packers" stopped at a small shop, sat amidst a scruffy little group of dwellings, drinking Coke. They are invariably in raptures, surveying the views from the vantage point of a dusty veranda. "Isn't it magnificent?" they say, as we re-stock with some essentials (or non-essentials). We don't have the heart to tell them that the best views were to be found at the top of a climb, a few clicks back that they couldn't see properly (assuming they were awake) through the dusty windows of their noisy, smelly old coach, en route from one tourist-must-see to the next, whereas we have had the time to stop and admire the views, the

wildlife, the quiet and the smells, whilst eating a simple snack, and drinking from our bottles, recently filled from a crystal mountain stream. We have been on roads more beautiful yet that they will never travel in their coach... we have felt the feeling of truly being "part of it all". These cyclists, who have not yet discovered bikes and are currently back-packers are much younger than us and potentially much stronger and fitter, yet they credit us with superhuman powers... we try and assure them that we are not superhuman, we simply have confidence in our ability to find a suitable spot to camp each night and we have confidence in our ability to reliably produce a small amount of power, for however long is necessary to find it. We also have the ultimate bikes for the job. You don't need a special bike... but boy is it easier with the right tool for the job!

Fiona and I have been developing and improving our own heavy-duty touring bikes for many years. The best of the new ideas get incorporated into production models. Our own bikes, Hector and Bertha, have reached the zenith of perfection... they can carry anything that we could possibly wish to load onto them...

Rohloff
14 speed internal hub gear

Advantages

- > Minimum maintenance... hub totally sealed from grime
- > Low running costs
- > No weight penalty!
- > Rohloff state that nobody has yet worn out, or experienced a total failure with, one of their hubs... that's over ten years & 50,000 hub units!
- > 14 usable gears (even spaced @ 13.6%)
- > Excellent gear range (528%)
- > Perfect chain line = less wear
- > Dished rear wheel & shorter spokes make a much stronger wheel
- > Quick, easy, wheel removal and fitting... No Tools or adjustment required
- > Super quick gear change
- > Change as many gears as you want at any time even without pedalling
- > Indexing mechanism within hub so cable adjustment is not critical
- > No derailleurs to collect grime, get bashed or cause the chain to come off and jam... No chain suck!
- > Chain slip can't happen with our frame!
- > Service life over 100,000km
- > Much cleaner & easier to clean
- > www.rohloff.de



including each other, if the worst came to the worst! They are tough enough to survive rough handling in transit. They are comfortable. They look good but don't shout too loud. If there was a world championship for riding down steep, broken, gravel roads whilst carrying full camping kit and up to 10 day's of food... I am certain that they would win it... they are that good, that surefooted! They are also rather good on tarmac... if you feel the need. Obviously, they use a Rohloff hub. Even better (for this kind of work), they use the Rohloff hub with an EX (external) box. Even more obviously (being Thorns) they have top quality (mega oversize, heavy gauge, seamless, cold drawn, double butted, heat treated) steel tubed frames. Of course, they use V brakes. Naturally, they run on fat 28" rubber. Usefully, they have S+S couplings. They also have 6mm stainless steel bosses for our own heat-treated Cro-Mo carriers, direct mudguard fittings (if/when 'guards are required), stainless guides for the (perfect) cable runs, our own bomb-proof, cast, stainless, socketed dropouts and eccentric chain adjustment.

We love them... they are perfect... unfortunately they are also very, very expensive to produce, however, I have incorporated all these features into a new frameset... made to my exact (and exacting) standards and hand TIGed, by master builders in Taiwan. These bikes are affordable and will stand the most critical comparison, in every way, with Hector and Bertha.

Look at any adventure touring website and you will soon find glowing reports of the (derailleur geared) Thorn Nomad... it was the benchmark of heavy-duty touring machines... affordable and far superior to all (expensive) custom builds that we have seen! The frame of the new bike is better still, it comes with super tough powder coat paint, and S+S couplings as standard and it is designed exclusively for the Rohloff EX hub. There was only one name that we could give such a bike (until you give it its own) and that is "NOMAD" or Raven Nomad as we will refer to it. The Raven NOMAD is surely destined to be the benchmark adventure touring bike of the 21st century... it's a little bit late but it had to be "right" and there are still many years to go!

It is available in 5 sizes (small, small/medium, medium, large and X large) each suitable for straight or comfort bars. And with a choice of 2 super-tough paint finishes... Traditional, easy to touch up, gloss black or understated but "sexy" (?) dark matt green.

Steel is real

High quality steel is the best, possible material for a strong, comfortable, well equipped, long lasting frame... all our bikes are high quality steel... we would not wish to build our bikes with anything else... and we would not wish to use anything else for our own cycling!

Cheap (thick walled) aluminium frames are strong enough, they could have the fittings required on a touring bike but they are heavy and very uncomfortable. More expensive (thin walled) aluminium frames are less uncomfortable and they are quite light but they can't have the fittings required and they break! Dealing with a broken lightweight aluminium frame is easy... you recycle it into bottle tops!

Titanium frames are fairly

light, they ride very well but it is extremely expensive to have the required fittings and furthermore, all titanium frames that we have known, have also broken! It is usually impossible to repair a titanium frame. Perhaps there are some titanium frames, being made today, or which may be made in the future, that won't break... but we doubt it. We certainly wouldn't want to risk such a huge sum of money, when steel is almost as light, much more durable (and could be easily repaired if necessary), rides better, is relatively inexpensive and a steel frame can have all the fittings you require. Steel is real!



Frame

The Raven Nomad is a direct descendant of our well known, much loved and very highly regarded Thorn Nomad. It has very slightly sportier geometry and the tubes are a little lighter in gauge but the top and the



down tube are larger in diameter. This creates a superb multi-use frame.

Made from our own design and commissioned rugged, mega oversize THORN 969 frame tubes and stays. These are cold drawn and butted from seamless Japanese 4130 Chromo blanks and the tubes are then heat-treated. The resultant tubeset is "lightweight", considering its great strength. It is very stiff and very resilient... perfect for carrying heavy loads, perfect for long distance comfort. This Thorn 969 tubeset is exclusive to our bikes. The heavy-duty chain stays are long enough to provide heel clearance with very large panniers. This makes the Raven Nomad a genuine, first-class touring bike, which is well up to the demands of cycle camping or a global tour, if required to do so.

Its robust qualities also mean that the Raven Nomad is a first-class day-to-day, all-year-round machine which, with a modicum of care, will give a lifetime of sterling service.

Frame construction & features

The frames are beautifully T.I.G. welded, to our own exclusive design, by the finest frame builder in Taiwan and are subject to independent quality control at all stages of the process.

All frames have a full complement of fittings:



Cast stainless steel brazed-on fittings for perfect Rohloff-specific gear and rear brake cable routing. With continuous

runs of outer cable to keep dirt out and shifting sweet.

Three sets of bottle bosses are provided.



Bosses for directly screwing the mudguard to the seat stay and chain stay bridges.



We have designed and specified our own lightweight alloy 73mm eccentric and steel shell, to adjust chain tension.



We have, at considerable expense, had our own Rohloff-specific, cast stainless steel, vertical, twin-eyed, socketed dropouts made. Also included is a rear ISO disc mount with stabilising tube.



Brazed-on stainless steel seat clamp with forward facing slot to keep out the dirt. Oversize seat tube, accepts a 29.8mm diameter seatpost.



Stainless steel 'J' shaped guides on the non drive side chainstay allow the Rohloff external gear mech and cables to be quickly removed without tools. This enables the frame to be separated by the S&S couplings in a matter of minutes!



Stainless steel, made in the USA, 'Bicycle torque couplings' enable the frame to be separated quickly. The couplings add only a little weight and are undetectable in use.



The frames have V brake bosses and oversize (6mm thread) upper carrier bosses on the 19mm oversized seat stays.



Forks

The Raven Nomad comes with our exclusive "Twin Plate Crown" fork. These are built using Reynolds "Super Tourist" blades,

as fitted to & developed on, our current flagship eXp cycles.

The twin plates make the forks extra resistant to lateral movement, such as when wrestling with heavy loads in deep mud or sand; in these situations the extreme positive feel of the steering is of huge benefit. The wonderful thing is that, although the twin plates make the forks laterally more rigid, they do not diminish the zero-maintenance, shock absorbing abilities that have made Reynolds forks legendary!

The forks have a full complement of brazed on fittings; The forks have V brake bosses fitted behind the blades to reduce brake squeal, the facility to directly screw the mudguard to the underside of the crown, oversize 6mm stainless steel fittings for lo-loader carriers, fittings for mudguard stays and a generator boss.



Frame and fork finish

The frames (and forks) undergo a multi-stage anti-corrosion process and are then powder coated in a modern, high tech facility, the decals are applied and then the frames are treated to a second clear powder coat to seal in the decals.

The Raven Nomad is available in a choice of 2 colours, each with discreet decals, the colours available are;

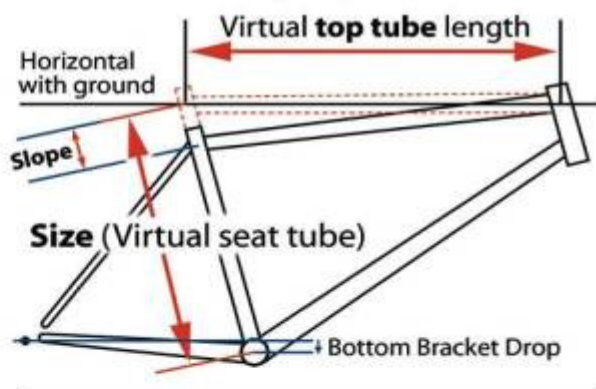
- [1] Gloss black
- [2] Dark matt green



Frame sizes

Actual seat tube c-t (mm)	Actual seat tube c-t (mm)	Virtual top tube length (mm)	Standover height at head tube* (mm)	Standover height at mid tube* (mm)	Chain stay length (mm)	Bottom bracket drop* (mm)
497L	417	570	760	735	448	51
512L	432	590	785	755	453	51
537L	447	605	810	780	459	51
562L	482	620	835	795	466	46
587L	527	635	860	820	472	46

*with 1.75" Panaracer Pasela Tourguard tyres.



Raven Nomad S&S - Order form

Frameset... £799

The THORN Raven Nomad S&S is available as frame & fork only

Frameset: Thorn Alloy eccentric, FSA Orbit XL II headset (fitted). Thorn Micro-adjustable alloy seatpin, touch-up paint, eccentric adjusting tool & all stainless screws, Twin Plate Crown fork. (please choose frame size & colour) **Nomad S&S frameset** ☐

Complete Bike... £2099
Standard Specification.

Individually hand build to your exact specification... Please choose your desired frame size, frame colour & standard component options below. **Complete Bike** ☐

Size & Colour

* Please tick box required

Size { 497 L ☐ 512 L ☐ 537 L ☐ 562 L ☐ 587 L ☐

Colour { Powder Coat with matching colour Twin Plate Crown fork...
Black gloss ☐ Dark Matt Green ☐

Upgrade to a "Hand Made in Somerset" Rohloff eXp frame and fork without couplings..... £ 700

Upgrade to a "Hand Made in Somerset" Rohloff eXp frame and fork with S&S couplings..... £ 1200

Upgrade to a "Hand Made in Somerset" eXp R frame and fork without couplings..... £ 750

Upgrade to a "Hand Made in Somerset" eXp R frame and fork with couplings..... £ 1250

All Hand Built in Somerset frames are made individually for each customer and (almost) any size can be produced.

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.

Call on **01278 441500**
Email **sales@thorncycles.co.uk**
Online **www.sjscycles.com**

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TA6 5HX

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 affect on function. No surcharge will be made for this.

St John St Cycles is a trading style of Thorn Cycles Ltd (incorporated in England 4121096) registered office: St John St Cycles, 91-93 St John St, Bridgwater, TA6 5HX

Invoice N°

Title: Mr / Mrs / Miss / Ms / Dr

First name _____

Surname _____

Address _____

Town _____

County _____

Postcode **Postcode** _____

Country _____

Telephone Number

Home _____

Work _____

Mobile _____

Email address _____



Set up dimensions Height = _____ mm

Preferred riding position, please tick one (or two) boxes below.

☐ Racing ☐ Sporty ☐ Relaxed ☐ Upright

Standover Height = _____ mm Shoe size = _____

Please tick box below to indicate handlebars to be used.

☐ Dropped ☐ Straight ☐ Comfort ☐ Other

The following dimensions will enable us to set up your new bike exactly like your favourite machine. Please choose "L" or "H"

N= _____ mm

Overall saddle length & name of saddle:

S= _____ mm

Distance from top of pedal (with crank in line with seat tube) to the top of the saddle, measured along the seat tube.

L= _____ mm

Distance from the bottom of a level straight edge, placed on the top of the saddle to the top of the handlebar stem with drops. Or to the top of the handlebar grips with straight, riser or comfort bars. Bars are lower than saddle.

H= _____ mm

Distance from the bottom of a level straight edge, from the top of the stem, with drop bars. Or from the top of the handlebar grips with straight, riser or comfort bars to the top of the saddle. Bars are higher than saddle.

B= _____ mm

Distance that a plumb line (a weight on a bit of thread) falls behind the centre of the bottom bracket, when suspended from the tip of the saddle.

R= _____ mm

Distance from the tip of the saddle to a centre line through the handlebar grips. (Or the tops of drops) Please see diagram



Please note:

The dimensions that you send us must be accurate. Please get somebody else to check your measurements.

How standover height is to be measured.

- [1] Cycle shoes must be worn
- [2] Measure the distance from the ground to the top of a tube (or thick book) which is parallel to the ground.
- [3] Raise the tube (or book) as high as it will go, until contact with the crotch is made.

Standover height is **NOT** trouser length, trousers go down to the ankle...
...feet go down to the ground with **shoes!**



Raven Nomad S&S - Options

Standard Components & Options (no pedals included) * = Please tick box required

Headset - 1 1/8" threadless FSA Orbit XL II (aerospace bearings... currently the best available), black

Wheels - Rohloff Speedhub 500/14 CC EX OEM (external gear mech) 32 hole rear hub in silver (135mm rear O.L.N.), quick release skewer.

Rohloff reversible steel sprocket* **15t** ☐ **16t** ☐ **17t** ☐

32 hole Shimano* Deore M530 quick release front hub **Black** ☐ **Silver** ☐

32 hole rims* **Rigida Andra 30 (Rohloff drilling)** ☐ **Rigida Grizzly (Rohloff aligned eyelets)** ☐

black, with ABT, wear indicators, stainless steel spokes, presta valve inner tubes, Velox rim tape. Panaracer tyres* **Hi Road 1.5"** (rigid bead) ☐ **Pasela Tourguard 1.5"** (rigid bead) ☐ **Pasela Tourguard 1.75"** (rigid bead) ☐

Chainset - > Thorn alloy 110PCD chainset - choice of crank length*

140mm ☐ 145mm ☐ 150mm ☐ 155mm ☐

160mm ☐ 165mm ☐ 170mm ☐ 175mm ☐

> Thorn highest quality alloy single 110PCD reversible chainring in black*

34t ☐ **36t** ☐ **38t** ☐ **39t** ☐ **40t** ☐ **42t** ☐ **44t** ☐

> SRAM PC48 chain.

> Shimano UN53/54 sealed bearing bottom bracket.

Brakes - Shimano Deore M530 V-brake set **Black** ☐ **Silver** ☐

> Rohloff twist grip shifter - with spare hub cable & fitting kit.

Stem - Thorn 1 1/8" alloy "front loading" threadless stem (length/angle + alloy spacers to suit)

Stem - Length _____ mm Angle* _____ (Internal use only)

Handlebars* > **Thorn Comfort bars Mk2** - New improved design - Designed in consultation with a senior physiotherapist. Double butted (1.8/3.0/1.8mm) 2014 alloy, 18° sweep. Extra wide 25.4mm centre section gives more room for attaching bar bags, computers & lights etc. (easy adjustment of reach simply by rotating the bars) **Black** ☐ **Silver** ☐
High quality alloy straight bars ☐
 > Comfortable handlebar grips & bell

Saddle* Gents gel ☐ Ladies gel ☐

Gents San Marco Rolls Classic ☐ **Thorn men's anatomical saddle** ☐

Thorn women's anatomical saddle ☐

> Thorn alloy micro-adjustable seatpin 29.8mm

> High quality brake + gear inner wires and outer cables, no pedals or mudguards included.

Transmission Upgrades

> **Rohloff SLT-99 8 speed Road drive chain**, Includes a free 50ml bottle of Rohloff special chain lubricant (Highest Quality, highly recommended)

..... + £30 ☐

> Shimano Deore ^{M532} HollowTech II splined (Octalink) chainset (104 PCD, 4 arm)*

170mm ☐ **175mm** ☐ **180mm** ☐ **Silver** ☐ **Black** ☐ Deore ES51 splined (Octalink) bottom

bracket, Thorn highest quality alloy single 104PCD 4arm reversible chainring in black*

32t ☐ **34t** ☐ **36t** ☐ **38t** ☐ **39t** ☐ **40t** ☐ **42t** ☐ **44t** ☐ + £45 ☐

> Shimano ^{VT M770} Hollow Tech splined (Octalink) chainset (104 PCD, 4 arm)*

170mm ☐ **180mm** ☐ **185mm** ☐ **XT M770** ☐ **ES71** splined (Octalink) bottom bracket, Thorn

highest quality alloy single 104PCD 4arm reversible chainring in black*

32t ☐ **34t** ☐ **36t** ☐ **38t** ☐ **39t** ☐ **40t** ☐ **42t** ☐ **44t** ☐ + £90 ☐

> Thorn alloy 110pcd chainguard in black (up to 44 teeth) + £15 ☐

Wheel Upgrades

Rims

Rigida CSS black rims...with long-lasting tungsten carbide braking surface.

Includes set of 4 x Swisstop blue cartridge brake pads...these require cartridge

Shoes...please select LX or Deore V brake upgrade, highly recommended! Choose either:-

Heavy duty Andra 30 CSS rims with Rohloff specific drilling.....+£55 ☐

Or lighter weight Grizzly CSS rims, with eyelets aligned for Rohloff.....+£55 ☐

> Shimano **XT** 32 hole front hub (better bearings and seals) + £20 ☐

> **Rohloff hub in Black anodized finish** (Improved resistance to winter salt corrosion) .. + £30 ☐

> Schmidt Son dynamo front hub - 32 hole in silver, Busch & Muller Lumotec switchable

halogen headlamp (without standlight), upgrade bulb for front use only & Highest

Quality Thorn alloy headlamp bracket fitted to the fork crown... this will ensure a bar

bag will not interfere with the beam (Highly recommended for cycling at night) + £170 ☐

> **As above but black Schmidt Son dynamo front hub** (Resists salt corrosion better) + £190 ☐

Note - Busch & Muller Oval Plus switchable headlamp will not fit due to the Rohloff cable route.

Choose the following option to future-proof your Nomad...in case a disc brake, suitable for touring, becomes available

Upgrade to disc compatible Rohloff hub - Rohloff Speedhub 500/14 CC DB OEM -

32 hole rear hub in silver ☐ or black ☐ £23 ☐

Brake Upgrades

> Shimano Deore LX M580 V-brakes & Deore M510 levers +£15 ☐

> Shimano XTR M970 V-brakes & XTR M950 levers THE BEST RIM BRAKE! ... Excellent braking power & modulation, cartridge pad system allows quick replacement requiring no adjustment +£200 ☐

Notes on handlebar grip and bar end compatibility with a Rohloff Shifter

If you ride with your right hand constantly gripping the Rohloff shifter, the bones at the base of the thumb can become very painfully bruised. Male riders, with average sized hands, need 112mm (or more) of handlebar grip to provide sufficient room to avoid this constant contact.

But please note that if 112mm long grips are used, there is not enough straight section to fit bar ends to the outside of our comfort bars (the bends take up much of the available width of these bars) But please note that Comfort bars, with Ergon grips but without bar ends, are still a highly recommended and very comfortable option, especially on rides where breaks from cycling are expected.

Straight bars with Ergon grips and either Cane Creek ergo control or SJS ergo control bar ends are also a highly recommended set up and are especially very suitable for use where many hours in the saddle are anticipated...without a break!

Inboard bar ends seem like a good idea but very few people actually end up using them much.

Ergon WP-1 women's handlebar grips are not suitable for Rohloff use...the smaller diameter grip makes the "step" up in diameter of the Rohloff shifter more noticeable.

> Thorn Carbon Anatomic carbon bar ends - perfect shape for a secure comfortable grip & only 44g each! + £50 ☐

> **Thorn Cork grips for Rohloff - Highly recommended** + £10 ☐

> Ergon MP-1 anatomic grip Mens + £20 ☐

> Cane Creek Ergo Control bar end grip II + £29.99 ☐

Saddle & Seatpost Upgrades

Gents Saddles

Brooks B17 - black ☐ honey ☐ +£20 ☐

Brooks Swift Titanium rails - black ☐ honey ☐ +£90 ☐

Brooks B17 Titanium - black ☐ brown ☐ honey ☐ +£75 ☐

Womens Saddles Note: many women find B17 & B17 Titanium very comfortable

Brooks Finesse (womens) Titanium rails -

black ☐ honey ☐ or maroon ☐ +£85 ☐

Brooks B17 - black ☐ honey ☐ +£20 ☐

Suspension Seatposts

Cane Creek 3G Thudbuster suspension seatpost, 3.9" (9.9cm) of plush travel, 400mm length, 590g, includes neoprene cover. Includes 27.2 to 29.8mm shim + £140 ☐

USE XCR SUMO (with layback) suspension seatpost - 65mm travel, 390mm length, including shim, black, 382g + £75 ☐

Tyre Upgrades...cost per pair

> Schwalbe Marathon Supreme folding tyre [HD-V Guard] puncture protection (HS 382)
A superb upgrade for most people 26 x 2.0 (50-559)
(45mm mudguards are too narrow) please select option [MG55N], [MG65W], [CMG2.0], [CC1] or [MG0] from "Mudguard Options" below
.....+£15 ☐

> Schwalbe Hurricane RaceGuard® folding tyre (HS352).
26 x 2.0 (50-559) 560g ... (45mm MUDGUARDS ARE TOO NARROW)
Please select option [MG55N], [MG65W], [CMG2.0], [CC1] or [MG0] from "Mudguard Options" below + £15 ☐

> Schwalbe Marathon XR folding tyre TravelGuard (HS359).
THE EXPEDITION TYRE! ... 26 x 2.25 (57-559) 890g, (45mm or 55mm MUDGUARDS ARE TOO NARROW) Please select option [MG65W], [CMG2.25], [CC1] or [MG0] from "Mudguard Options" below + £15 ☐

> Panaracer Pasela Tourguard folding tyre with Aramid belt 26 x 1.5 (37-559) 411g + £15 ☐

> Panaracer Pasela Tourguard folding tyre with Aramid belt 26 x 1.75 (42-559) 435g + £15 ☐

> Panaracer Pasela Hi road Compe folding tyre 26 x 1.5 (40-559) 375g + £15 ☐

Mudguard Options

Please select an option to suit your requirements.

> Mudguard colour* **Silver** ☐ **Black** ☐
[MG45] 45mm guards to fit 1.5" tyre + £20 ☐
[MG45N] 45mm guards to fit 1.75" tyre (narrow clearance) + £20 ☐
[MG55W] 55mm guards to fit 1.75" tyre (wide clearance) + £25 ☐
[MG55N] 55mm guards to fit 2.0" tyre (narrow clearance) + £25 ☐
[MG65W] 65mm guards to fit 2.0" tyre (wide clearance) + £23 ☐
[MG65-2.25N] 65mm guards to fit 2.25" tyre (narrow clearance) ... + £23 ☐
[MG0] No Mudguards £0 ☐
[CC1] Crud Catcher front guard, black & Thorn Carbon Kevlar MTB rear guard, black - rear rack mounting + £39 ☐

[CMG1.5] 50mm Thorn Carbon mudguards to fit 1.5" tyre + £90 ☐
[CMG1.75] 50mm Thorn Carbon mudguards to fit 1.75" tyre + £90 ☐
[CMG2.0] 68mm Thorn Carbon mudguards to fit 2.0" tyre + £140 ☐
[CMG2.25] 68mm Thorn Carbon mudguards to fit 2.25" tyre ... + £140 ☐

*Please also note: Because of close clearances this setup is not suitable for muddy conditions. This is due to the clearance between the mudguard and V brake inner wire.

Accessories

Carriers for Twin Plate Crown fork

Thorn steel loader, black £70 ☐

Rear Carriers

Thorn steel expedition rear carrier, black £70 ☐

Blackburn MTN rear carrier black ☐ or silver ☐ £25 ☐

Blackburn EX1 Expedition rear carrier black ☐ or silver ☐ £30 ☐

Pedals

SPD type

Shimano PD-A530 pedals..... SPD system one side, standard platform on the other, (inc cleats) £50 ☐

Shimano (M520) SPD double sided pedals (inc cleats) £19 ☐

Shimano LX (M540) SPD double sided pedals (inc cleats) £45 ☐

Shimano M959 SPD double sided pedals (inc cleats) £130 ☐

Clip & Strap type

> MKS GR9 alloy platform pedals, including toe clips & straps -
Please select a size* S ☐ M ☐ L ☐ XL ☐ +£35 ☐

Platform type

Shimano MX30 DX ATB flat pedals.....£60 ☐

Other pedals, please specify.....

Lighting

> Cateye TL-LD1100 LED rear light - The most visible LED rear light we've seen! 10 super bright LED's, highly water resistant, 4 modes... including simultaneous flashing and constant mode! Run time: 50 hours (constant), 100 hours (flashing) £26.99 ☐

Accessories

S & S hard bike case (made by Samsonite) 661 x 661 x 254mm (26" x 26" x 10") £299.99 ☐

Original design Profile cage "made exclusively for Thorn" **THE BEST EVER BOTTLE CAGE!** (Not to be confused with the current offering.) Great for touring, securely holds LARGE drinks bottles Number required _____ x £8 = £_____ ☐

Thorn Accessory bar, black:£16 ☐
55mm ☐ 105mm ☐

Topeak Turbo Morph Mountain mini track pump with pressure gauge £32.99 ☐

Cateye CC-MC100W Micro wireless cycle computer - 10 function, LED back light, very neat + reliable, no messy wires, fitted and set up £35 ☐

Thorn alloy accessory bar, black: 50mm ☐ 100mm ☐ £14.99 ☐

Rohloff Spares

Rohloff special chain lubricant 50ml bottle - **We highly recommended this chain lube** £4.99 ☐

Rohloff 2 stage full oil change kit for Speedhub 500/14 - includes cleaning oil, all season oil, syringe, oil filling tube & drain plug £25 ☐

TS20 Torx screwdriver - required for changing hub and shifter cables £7 ☐

Rohloff sprocket tool for Speedhub 500/14 £29 ☐

Rohloff sprocket (steel) for Speedhub 500/14 ... 15t ☐ 17t ☐ £29 ☐

16t.....£25 ☐

Notes:

Rohloff eXp and eXpR (custom built frame upgrade) **“Hand built for you in Somerset”**

The Thorn Rohloff eXp and eXpR have received the highest possible critical acclaim, they truly are the definitive Rohloff-geared touring bikes

The Rohloff eXp is designed to accept 2.25” tyres with mudguards it has the BB height to traverse severely broken terrain.

The eXpR has more elegant, tighter clearances and will accept 1.75 tyres and ‘guards. It has straight stays and a lower BB height

Our “off the shelf” Nomad S+S bikes are truly superb bikes, there is absolutely no need for a custom built frame for 99% of individuals.

Our “Hand built for you in Somerset” range of frames are however, more than just superbly functional machines, they are works of art. The smooth-fillet brazed machines are embellished with brazed-on stainless steel badges and these frames have sealed tubes, to ensure that internal rust can not prematurely destroy them. The eXp range are built to last 2 lifetimes; although we only guarantee them for one! The cost of our most expensive bicycle is less than the loss incurred during the first 10 seconds of ownership of a new motor car!

It’s little wonder then, that some cyclists, who could easily find a perfect fit on an off the shelf frame, choose to treat themselves to the very best of the best!

Andy Blance (our designer) has developed, with Reynolds, a vast array of tubes (mostly 853) in different gauges and diameters, to ensure that your new baby delivers exactly what you are looking for, be in no doubt that Andy will certainly tell you if you are looking for the impossible.

Kevin Sayles is our resident master builder, we won’t say that he is the finest builder in the world, we just say that, if you travel the world, you won’t find a better one!

A perfect job can’t be improved upon.

Kevin works slowly and methodically, with painstaking detail, he is a master “with the torch”,



every one of his frames is an individual work of art and we pay him a generous wage.



It should now be obvious that these frames are not, by any means, going to be cheap; even we would agree that they are fiercely expensive! But, considering the end result, the expertise, the guarantees and the pleasure it will give over a lifetime, each one represents excellent value for money.

(Please see page 5 for current upgrade cost)

Rohloff eXp and eXpR Which bike should I choose?

By Andy Blance

As previously mentioned, the Rohloff eXp has “cranked” seat stays and chain stays, to give it the clearances necessary to fit 26 x 2.25” tyres, with sufficient mudguard clearance to allow the bikes to be used in mucky conditions without clogging. The bottom bracket height is sufficient to allow the bikes to cover severely broken terrain with little risk of bashing your feet into a rock. Although the Rohloff eXp may be used with 26 x 1.75” tyres, it will look very “gappy”, this of course does not matter as far as the ride is concerned but it can upset some people’s aesthetic sensibilities.

The eXp R has straight stays and is much more elegant looking, when used with narrow 1.5 or 1.75” tyres. The straight stays will not, of course, allow the eXpR to accept tyres wider than 1.75”. (Actually there is just room to squeeze in some slick 2.0” tyres, such as Schwalbe Marathon Supreme but there is very little room to spare if you buckle a wheel. These narrower tyre sizes are more suitable for tarmac and short sections of good quality trail and the eXpR frames have a lower BB height to make the most of these conditions. The eXpR carries a heavy load beautifully yet, when you drop the kit off at “base camp”, you are left with a very exciting bike.

Size	Virtual seat tube length (centre to centre) (mm)	Actual seat tube length (centre to centre) (mm)	Slope (mm)	Virtual top tube length (mm)	Chainstay length to centre of bottom bracket acoustic (mm)	Mid tube standover with 1.75" tyre (mm)	Standover at front of bike with 1.75" tyre (mm)
485 M	385	100	530	< 440	715	748	
485 L	425	60	565	< 453	735	755	
510 S	440	70	530	< 440	755	765	
510 M	440	70	550	< 447	755	765	
510 L	440	70	585	< 460	755	765	
535 S	455	80	545	< 447	780	810	
535 M	455	80	570	< 460	780	810	
535 L	455	80	600	< 465	780	810	
560 S	470	90	560	< 453	800	835	
560 M	470	90	585	< 460	800	835	
560 L	470	90	610	< 465	800	835	
585 S	485	100	570	< 460	830	855	
585 M	485	100	595	< 465	830	855	
585 L	485	100	630	< 472	830	855	
610 M	530	80	605	< 465	865	895	
610 L	530	80	635	< 479	865	895	

I am very fortunate in owning two superb touring bikes. I have an S&S coupled eXXp (see Thorn Sterling brochure), for rough road touring and air travel and I have a non-coupled eXpR for European tarmac touring. If I “only” had one bike, it would, without doubt, be the Rohloff eXp, the pleasures of being able to travel on rough tracks, away from motorised traffic, are beyond words. Some of the best “mountainbiking” I have ever experienced was the ride up to Mt Aspiring hut (SI...NZ), after dropping the bags off at the campsite in Wanaka, on my original derailleur geared eXp. My own eXpR is the best handling bike that I have ever ridden and I have clocked over 100Kph, with full camping kit, down the very bumpy descent of the Bwlch y Groes (the highest pass, on sealed public roads in Wales). You could never accuse either of these bikes of being lightweight but the extra stiff frames respond so well to a spirited effort yet, because they are the finest steel obtainable, they also provide a comfortable ride.



These bikes really are thoroughbreds!

Size	Virtual seat tube length (centre to centre) (mm)	Actual seat tube length (centre to centre) (mm)	Slope (mm)	Virtual top tube length (mm)	Chainstay length to centre of down ally cockpit (mm)	Mid tube standover with 1.75" tyre (mm)	Standover at front of bike with 1.75" tyre (mm)
470 S	370	100	500	< 440	683	712	
470 M	370	100	540	< 440	683	712	
470 L	370	100	570	< 447	683	712	
490 S	415	75	535	< 440	720	745	
490 M	415	75	555	< 447	720	745	
490 L	415	75	580	< 447	720	745	
490 XL	415	75	600	< 453	720	745	
510 S	430	90	540	< 440	733	762	
510 M	430	90	570	< 447	733	762	
510 L	430	90	590	< 453	733	762	
510 XL	430	90	610	< 453	733	762	
530 S	430	100	550	< 447	747	780	
530 M	430	100	580	< 447	747	780	
530 L	430	100	600	< 453	747	780	
530 XL	430	100	630	< 453	747	780	
550 S	440	110	560	< 447	767	804	
550 M	440	110	590	< 453	767	804	
550 L	440	110	610	< 453	767	804	
570 S	450	120	570	< 447	783	824	
570 M	450	120	600	< 453	783	824	
570 L	450	120	630	< 453	783	824	
590 S	490	100	580	< 447	812	845	
590 M	490	100	610	< 453	812	845	
590 L	490	100	630	< 460	812	845	
610 S	530	80	590	< 453	847	874	
610 M	530	80	630	< 453	847	874	
610 L	530	80	640	< 465	847	874	



***Andy and Fiona
Crossing back into Chile from Argentina.
(This crossing is only possible by foot, horse or bike!)***



***Above,
dropping
down into
Chile (and the
main road)
from the Paso
Christo
Redentor.***

***Right,
still dropping
down...
30 minutes
and a visit to
the customs,
later.***





S & S Machines - Bicycle Torque Couplings (BTCs)

These allow the cycle frame to be easily broken down into two sections.

Steve Smilanick is S & S Machine's President... and he is a cyclist. He wanted an easily transportable but "proper" bike... so he designed and made himself the first pair of BTCs... he was very pleased with the result... so he made some more! Roseville (California)-based S & S Machine's core products are numerous mechanical parts, the exit cone and the aft closure for the last remaining Star Wars project, the theatre high altitude area defence system (THAAD'S) missile. Historians will surely argue that Reagan's Star Wars projects brought about the end of the cold war... It is fitting that a company with these skills and background is now producing a product that can transform humankind's greatest invention... THE BICYCLE!

BTCs are made from 17-4 [chromium-nickel] stainless steel, described by its manufacturers as being suitable for use in a

variety of critical applications such as "jet engine parts" and "nuclear reactor components". Certified test reports show that the lugs have an average yield strength of 141,500 p.s.i.

The machining is carried out on a Mazak Multiplex C.N.C. machine [dual C.N.C. lathes with full milling capability at each position]. The machine, which costs \$400,000, allows each lug to be made without changing fixtures and therefore with an accuracy and repeatability of 0.0001 inch! The couplings have [precisely machined] trapezoidal teeth that are brought together by a stainless steel ring [surface hardened to a higher degree than the thread on the lugs to reduce galling]. The clever design is self-aligning and self-adjusting and has absolutely no movement.

S & S Machine's have obviously subjected the couplings to strenuous tests. The full details of these tests may be viewed on their website www.sandsmachine.com.

Briefly they have demonstrated that a tube fitted with a BTC is:

- A.** Stronger in torsion, **B.** Stronger in tension, **C.** Resists bending more than a tube without a BTC fitted

The Thorn Raven Nomad will fit inside a 26" x 26" x 10" [661 x 661 x 254mm] case.

An S & S-coupled cycle will not only fit inside most cars and taxis, but may also be transported on trains and coaches. There is obviously less chance of such a machine being damaged during air travel.

The lugs have a jewel-like quality which actually enhances the appearance of the frame. As you can see, these couplings are of extremely high quality and high tech and, because they are made in the land of

litigation, BTCs when built into a frame are perfectly aligned, strong, lightweight, durable, reliable and undetectable in use.



S & S Hard bike case [made by Sonosonics]. A high quality case perfect for transporting a Thorn Raven Nomad. Dimensions: 661 x 661 x 254mm [26" x 26" x 10"] Weight: 7.10kg



Tyre choice

Andy Blance writes...

In my opinion there are only a few tyres worth considering for touring use.

[1] The Panaracer 1.5 Hi-Road is a long-term favorite of ours and although they are very lightweight and superbly responsive, we have supplied literally thousands of these tyres for tandem use and we have never had one fail. They are ideal for sporty, performance use such as spring and summer Audax rides. They collect few punctures, despite not having a puncture-resistant casing.

[2] A folding version of the above is available, which saves a few ounces per wheel, giving a small but noticeable gain in performance. I would have no hesitation whatsoever in recommending this tyre (or the non folding version) for heavy touring, as long as fairly descent quality tarmac could be relied on for the duration of the trip.

[3] The Panaracer Pasela 1.75" is another favorite tyre, it is a little heavier than the Hi-Road, which makes it marginally less sporty but, on the other hand, it is more comfortable, it has superior wet road grip and

a small amount of off road potential. It is very reliable and, thanks to its puncture resistant strip, it almost never punctures. It is capable of higher mileages than the Hi-Road. I would still classify the 1.75" Pasela as a performance touring tyre.

[4] Panaracer has recently introduced a 1.5" version of the Pasela Tourguard. The tyre appears to be every bit as reliable as the 1.75" Pasela, the sporty rider may appreciate the small but noticeable weight reduction and it may make sense for use on better quality roads. It appears to be only marginally less sporty than the 1.5" Hi-Road, it is certainly more puncture resistant and its wet weather grip is superior too.

[5] There is a folding version of the 1.5" Pasela Tourguard available, this saves a useful 80g. This tyre, being lightweight, folding up small and being very durable, would also make a useful emergency spare tyre for all but the most extreme of adventures.

[6] The 2.0" Schwalbe Hurricane. Although this is no lightweight, at around 600g, it rolls well on the road, the two inch air pocket gives great comfort, the deep tread gives genuine off-road capability when required... we like this tyre, although we have not had enough time to get very many miles in on it, the Hurricane

comes highly recommended by many lightweight adventure tourists.

[7] The 2.0" Schwalbe Marathon XR is a folding tyre. It is much heavier than a Pasela or a Hurricane and consequently feels much less sporty. It is very comfortable, it grips in all conditions and has some real (dry condition) off road potential. It is perhaps "too much tyre" for good surfaces, but the Marathon XR is really at home on dirt (or gravel) roads. I have never been unfortunate enough to puncture one.

[8] There is a 2.25" version of the Marathon XR, which I would seriously recommend for adventure touring... it is just possible to fit mudguards with adequate clearances for clean roads to a Raven Tour, when using this tyre... but leaving mudguards behind is a better option and generally not a problem for most adventure tourists. The Marathon XR tyres are capable of seriously high mileages and they are currently the ultimate tyre in terms of reliability. A good recommendation is to use 1.75" Paselas, with mudguards, when in the UK and leave the mudguards behind and fit Schwalbe Marathon XR 2.25" tyres for big holidays.

[9] Schwalbe Smart Sam 2.25" Alpencross. When traveling extensively on really poor gravel

roads [as you would have to in South America] the front tyre is inclined to "wash out", especially in conditions of high side winds. The fitting of a 2.25" Schwalbe Smart Sam Alpencross tyre, to the front, makes a significant improvement to the bike's stability and maneuverability.

The Smart Sam rolls almost as well as the Marathon but its more aggressive tread and more pronounced side lugs bite more effectively into the "Ripio". We don't feel that, for expedition use, the Smart Sam would stand up to the exceptionally high loadings, encountered by a rear tyre, as well as a Marathon and, in any case, the Marathon performs really well on the Ripio as a rear tyre.

The Smart Sam is very good on smooth tarmac too; there is only the slightest trace of road buzz in these situations. The front brake can be applied as hard as you like on dry tarmac and only the faintest sensation of squirm can be felt from the tread. We do advise a little caution when cornering hard in the wet, especially where diesel spills may be encountered. If you are traveling in remote areas (Himalayas or South America) consider using 2.25" Marathons and taking a 2.25" Smart Sam Alpencross as a spare.

Choosing mudguards

It can be quite tricky and time-consuming to fit a pair of mudguards properly and once properly fitted it is impossible to increase the clearances by very much, therefore we need to know which size tyre size you want the mudguards to fit around. Without this information the mechanic

building the bike will assume that the mudguards are to suit the tyres chosen in the specification... this may not be the case.

For example, you may specify the bike with 1.5" Hi road tyres but you may have every intention of fitting 2.0" Schwalbe tyres for heavier use some time in the future... if we make the guards fit the 1.5" tyres, you won't be able to fit 2.0" tyres. If we supply the machine with [wider] mudguards which are set to fit 2.0" tyres you

will be able to fit either tyre but the machine will not look as attractive (or as well set up) when the 1.5" tyres are being used.

Also, when choosing mudguards to fit 1.75" tyres you have two options; you can have 45mm wide mudguards, which look very sporty and are very aerodynamic (being only just wider than the tyre) but these 'guards produce quite close clearances between the sides of the tyres and the mudguard stays. Alternatively

you can choose less sporty (and less aerodynamic) 55mm mudguards... these require less maintenance to prevent rubbing on the stays and of course they also do a better job of guarding against flying mud. The same issues are also involved in selecting mudguards for 2.0" tyres... i.e. you could have 55mm or 65mm guards.

The choice is yours!



Thorn tungsten carbide coated rims.

A high quality V brake system is much easier to maintain and can be much more efficient than a hydraulic disc brake system. The rims are a very important part of such a system.

We have sourced top quality rims, with the braking surfaces coated with Tungsten Carbide, which provide a reliable braking surface (wet or dry). This surface is also very hard wearing; Tungsten Carbide is used for the cutting surfaces of machine tools! The braking surface, on our rims, is applied as a jet at unbelievably high speeds (apparently 5 times the speed of sound!), which causes the Carbide particles to become permanently embedded into and fuse with, the aluminium. Our own tests have shown that this surface also dissipates heat

efficiently and the rims run very cool under prolonged braking.

Our Carbide rims also have a considerably thickened extrusion, where the spoke holes are drilled, which allows the holes to be drilled at the perfect angle for very large flange hubs, such as Rohloff.

We are convinced that these rims will prove to be perfect for use on Rohloff touring bikes and tandems...a long service life with great reliability is assured.

Please note: conventional brake blocks disappear at an alarming rate, especially whilst the high spots are being polished off a new rim; we have sourced and tested some special brake blocks, made by Swisstop, which must be used with these rims, especially when they are new! Once this "polishing smooth" process is complete, it is likely that ordinary blocks could be used once again if required. The rims are also very clean running and do not exhibit the

black muck, which gets onto your hands and clothes with conventional alloy rims.

There may be some distressing squealing from the rims when they are new, this soon vanishes with normal brake use but, if you find it particularly annoying, you can dramatically speed the process up with the application of some mud on the brake surfaces and a few runs down a steep hill with the brakes on.



Swisstop Blue brake pads...
for Thorn Tungsten Carbide rims

Tungsten Carbide (CSS) rims

Heavy duty Andra 30 CSS
available with Rohloff-specific drilling
weight 686g width 24mm. These rims are the best available choice for heavy touring, long tours or simply for the longest possible service life.

Lighter weight Grizzly CSS
Available with eyelets aligned for Rohloff
weight 520g width 24mm.
These rims are also strong enough for heavy loads and for long tours. They are especially suitable for lighter riders, for use on less demanding terrain or for more performance oriented cycle touring





Stop Press! We have just completed extensive testing of **Schwalbe Marathon Supreme 2.0" tyres** on the very mixed (!) surfaces found on Southern India's roads. These "deeply grooved slick" tyres are exceptionally quick and reassuring on broken tarmac and almost as quick as 1.75" Pasetas on smooth tarmac. Although they have no side knobs to "bite", they will cope with short sections of loose surface (sand, road ballast, mud etc.) as long as care is taken to keep the cycle as upright as possible. Whilst these tyres would be a liability on Ripio (or many bridleways!) and they would be a bit too heavy on a sporty bike, they are probably perfect for most peoples' general touring in the UK and Europe and especially suitable where poor roads, Sustrans routes and canal tow paths are combined with sections of perfect surface.



Ooooh, that water's cold!



Why the bikes are called Ravens

Rohloff have long used the raven as their logo; we asked their permission to use their artwork and the name 'Raven' on our new, Rohloff-specific bike, and Rohloff were kind enough to grant us permission. Had Rohloff used a wild boar as their logo, we would not have asked to use the name.

We admire ravens because they are considered to be the most intelligent of birds, they are also very social birds and in the wild they are only to be found high up in the mountains. We like to think that fellow cyclists are intelligent, social creatures and cycling is usually at its best in the mountains.

Find out for yourself why so many of our customers own more than one Thorn bike!



100 day money back

if not delighted guarantee on all new complete Raven cycles

Buy a Nomad S&S, ride it for 100 days and, if you are not totally delighted, upon its return we will refund the purchase price.

Offer on complete bikes only.



Cycle Touring
by Thorn



**To read “Andy and Fiona’s adventures in south America”
Visit our website and look for downloads**

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