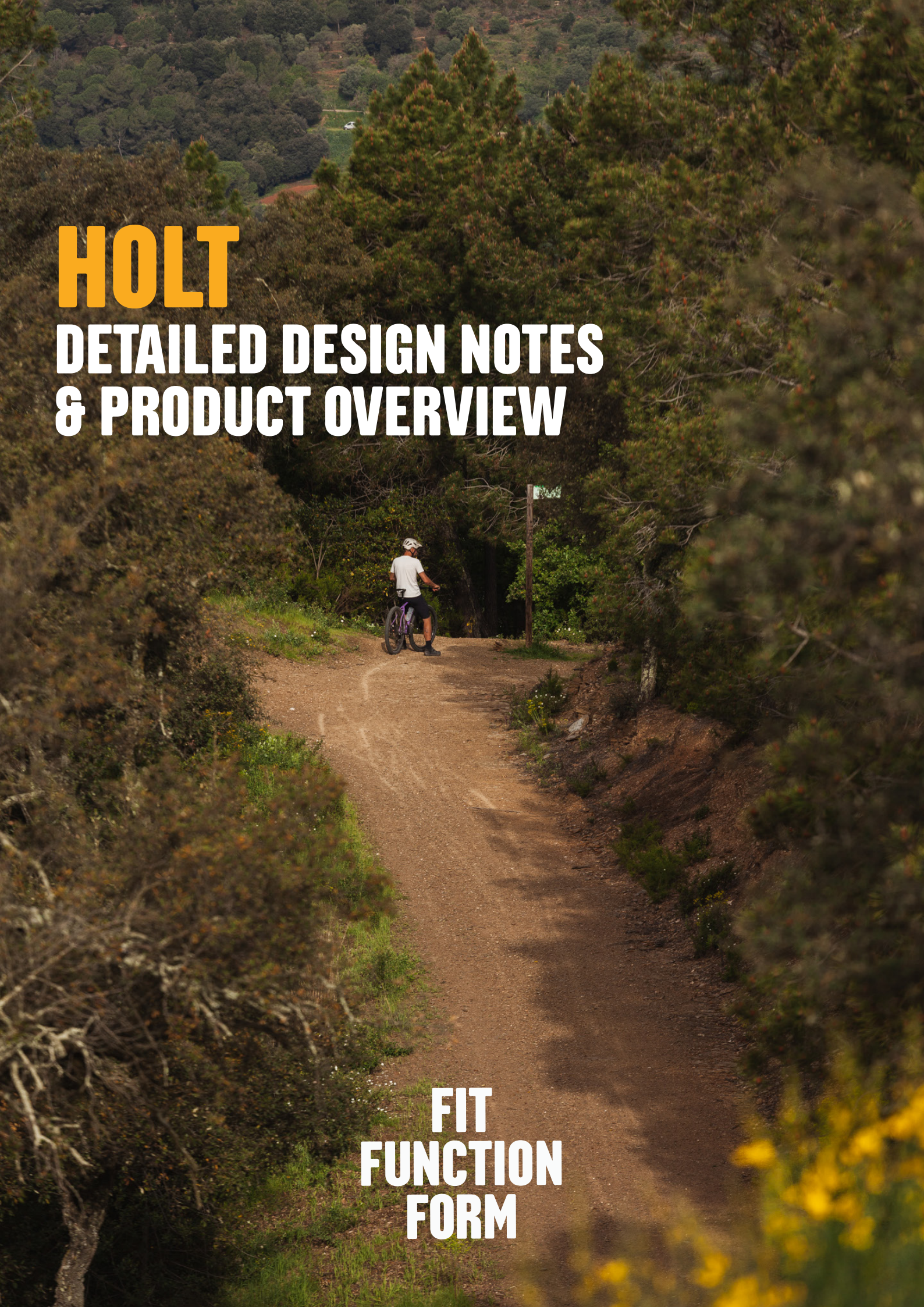


HOLT

DETAILED DESIGN NOTES & PRODUCT OVERVIEW

FIT
FUNCTION
FORM

UNASHAMEDLY XC

Dom Thomas
Co Founder and Bike Designer

Mountain bikes were my first love in cycling. From cross-country to trail riding to downhill racing, I worked my way through the various disciplines over the years. Ultimately, I ended up where I started, riding an XC hardtail. For the best part of the last decade that was a steel (853) 29er, swapping out between a 100mm xc fork and a rigid fork, depending on the season and the terrain. It was a bike that fitted into my life, making the most of the local terrain and being able to ride from the door. It made local riding fun and engaging, it was perfect for a 2 hour blast in the woods on a summer evening, but it was also ideal for the occasional xc race or marathon and bivvying out with friends on an overnighter.

The reason I went back to riding an xc hardtail was that I felt 'over tooled' riding a full suspension trail bike, it numbed out the terrain and the technology & complexity was too often a distraction for me. I enjoyed riding fast, being in an efficient position, picking lines through trails while trying to maintain flow and momentum, knowing the bike wasn't doing all the work. Reliability and simplicity were also important factors, there was simply less to go wrong and it felt like a purer riding experience.

In my opinion steel can excel when making a short travel hardtail. The word 'short' is an important one because as fork travel gets longer you have to use larger diameter tubes (usually with thicker walls) to deal with the increased forces. As the tubes get larger, the frame becomes stiffer, compliance decreases and the advantage of steel (vs other frame materials) becomes less. By opting to make a short travel frame you can reduce tube diameters and focus on maintaining the 'quality of the material', to deliver a ride feel that can only be steel. Compliance, traction, agility, zip, snap, grip, flow - these are the feels I want from a steel XC frame.

The Holt is unashamedly XC and we are delighted with the finished product. We've taken all our learnings from previous models and applied them to an xc bike. As always we've collaborated with Reynolds Technology and Bentley Components, who respectively bring their specific tubing and CNC knowledge to the project. We are making this frame in our European factory and the quality of the fabrication is testament to their experience and craft.

Holt - fast and lively with modern XC geometry.

Thanks for reading and we hope you like it.


DEKON
HUNT
MAXXIS

HOLT - Tech & Specs overview

Place of Manufacture:

- Handmade in Central Europe.

Dimensions:

- Bottom bracket - T47 73mm.
- Seat clamp - 29.8mm or 30.0mm.
- Seat post - 27.2mm.
- Headset specification – Upper: ZS44/28.6
- Headset specification - Lower: EC44/40.
- Rear Axle/hub standard - Boost 148x12mm.
- Axle length - 174mm x 12mm with 1.5mm thread pitch.

Brake/dropout standard (two mounts available):

- Post mount 160mm direct.
- Flat mount 160mm direct.
- Max 180mm rotor rear. Recommend 160mm.
- Replaceable derailleur hanger.

Tyre Clearances:

- 29 x 2.6" - 66mm max width as measured.
- Not compatible with 27.5"/650B.

Chainset & Chainline:

- Single ring (1x) specific.
- 52mm chainline - 34T max ring.
- 55mm chainline - 36T max ring.

Fork compatibility:

- 100-120mm suspension forks.
- 44mm or 51mm offset (see geometry section).
- Rigid fork - recommended axle to crown - 485-505mm.

Cages & Racks:

- 3 x sets bottle mounts.
- Both downtube mounts have triple bosses.
- Rear rack mounts.

Gearing & wiring:

- External cable routing.
- 1x, 2x, 3x guide options.
- Di2 compatible.
- Rear dynamo lighting compatible.

Seat post max insertion (for dropper posts - includes actuator mechanism):

- S - 203mm.
- M - 238mm.
- L - 278mm.
- XL - 338mm.

Torque settings:

- Brake mount - 8Nm.
- Axle - 12Nm.
- Derailleur hanger - 2Nm.
- For seat clamp, post, stem, bars etc - please use makers recommendation.

Weight:

- Painted Medium frame - without bolts, axle or brake mount = 2,258g
- Bolts, rear axle, brake mount, derailleur hanger & brass plates = 180g

TUBING

Reynolds 853 Top Tube - Custom for Fairlight
853 - 28.6mm - 25/32 oval - 0.8/0.5/0.8 with gusset

This is the tube we use on the size 61 Secan and it seemed like the ideal choice for the Holt frame. The tube starts life as a 28.6mm mm round tube and is fully ovalized to 25 x 32mm. The relatively undersized top tubes are critical in providing the excellent comfort of our frames. The stiffness in the horizontal plane is equivalent to that of a 32mm tube, while the narrow 25mm tube in the vertical plane means it provides excellent comfort, effectively flexing as the wheels try to move away from each-other under load. We use a small external gusset on the underside of the top tube. We are still carrying out fatigue tests for the frame and we have also made a 0.9/0.6/0.9 version of the same tube, in case we need to increase strength. As always we try to work as close to the limits as possible, while still making an extremely safe and certified product.

SIZE XL

Reynolds 853 DZB Top Tube - Custom for Fairlight
853 DZB - 31.8mm tapered to 28.6mm - 1.0/0.8/0.5/0.8. 31.8mm headtube end ovalized to 34.8/28.6mm.

On the size XL we use this larger tube to add stiffness for larger riders, especially at the headtube area. The 31.8mm tube is ovalized in the horizontal plane at the headtube and then tapered to 28.6mm to meet the seat tube.

Reynolds 853 DZB Down Tube
853 DZB - 38.1mm - 33/43 oval at BB end - 1.15/0.9/0.6/0.9

The tube starts life as 38.1mm round tube but is ovalized for 320mm at the BB end to become 33 x 43mm. The 43mm horizontal oval at the BB shell adds lateral stiffness. Usually we would vertically ovalise the downtube at the headtube end but there is greater side loading on mountain bikes so we keep the tube round. Arguably on an XC bike a 34.9mm would be sufficient, however as with our other models, the relatively undersized and ovalized top tube means we need to add diameter to the downtube to compensate; it has to be strong. It is the only tube on the frame that is relatively oversized but plays an important part in the ride characteristics. The wall thickness @ 1.15/0.9/0.6/0.9 (with additional external gusset) means we have a strong tube to cope with loading forces from a 120mm fork. The tube is made in a custom length for us by Reynolds and with the custom ovalizing.

4130 CHROMOLY

73mm T47 BB Shell - 50.8mm Diameter - internally relieved.

We are huge advocates of threaded bottom bracket shells and on the Holt we are using a 73mm threaded T47 shell, versus the BSA threaded shells on all our other models.

So why are we using T47? Well in a word (two words actually) 'real estate'. We need the extra diameter so that we can do clever things with the seat tube. We have shifted the seat tube 8mm forward from the BB centerline so that we can achieve our desired tyre clearance without bending the seat tube or increasing the chainstay length. This is explained on the next page.

The BB shell is CNC turned and is internally relieved to reduce the weight. It is only 29g heavier than a 39mm BSA shell.

Reynolds 853 Seat Tube
853 - 28.6mm/29.8mm - 0.9/0.6/1.2

We use a standard butted Reynolds 853 seat tube designed for a 27.2mm seat post. The majority of the tube is 28.6mm in diameter, where as the top section is externally butted to 29.8mm to give the correct inner dimension for the seat post and to provide extra surface area for the top tube and seat stay welds.

It is too easy to start overbuilding a frame and often that starts with the seat tube, for example to fit a 31.6mm post we would need to use a 34.9mm seat tube, for context that is the downtube on a Secan! For the Holt we wanted maximum compliance with a rigid post - and compliance is an important part of this bike. The choice was made easier with a growing number of 27.2mm posts on the market, ranging from 60-125mm drop. If you need 200mm of drop, I would suggest this is the wrong style of bike for your riding.

When running a 29 x 2.6” tyre with a sub 435mm chainstay length the clearance between the tyre and the seat tube becomes an issue. This is usually resolved by curving or bending the seat tube.

We are not huge fans of curved seat tubes. The main reason is that the bending needs to be done before heat treatment and you need sufficient wall thickness so that tube doesn’t deform at the bend. Curving can also present problems for locating bottle mounts on the seat tube. Another consideration is that the more severe the bend, the greater the effect it has on effective seat angle, meaning the seat angle can change at various saddle heights. Of course on some designs a bent seat tube can be the best or only solution.

With the Holt frame we simply move the seat tube forward by 8mm to give us the required clearance. This means we can still use a lightweight butted and heat treated tube without issue. We also move the centerline of the downtube down by 8mm so there is maximum surface area for the respective welds.

This method also means there is marginal effect on effective seat angle. Only 0.2 degrees over 200mm of variation:

- 700mm saddle height = 75.1 degrees
- 800mm saddle height = 75 degrees
- 900mm saddle height = 74.9 degrees

Bottom bracket centre line.

Seat tube centre line; **8mm** forward of BB centre.

The tyre in the picture is a 29 x 2.6” Vittoria Mezcal, measuring true to size (see tyre clearance section later in the document). You can see the clearance created by the offset seat tube. There is 11mm between the tyre and the seat tube. This would only be 3-4mm if the seat tube was centered on the BB shell.

Reynolds 631 CNC'd Head Tube

The headtubes are machined by Reynolds in Birmingham. The tubes actually start off as solid billet and are turned into tubes on a CNC lathe. The headtube is 46.4mm in diameter, apart from at the ends where it is 47.8mm to provide sufficient wall thickness for fitting of the headset cups. The internal measurement is 43.95mm and is designed to accept a 1.5"-1.1/8" steerer tube using a ZS44/28.6 top cup and a EC44/40 bottom cup.

4130 CHROMOLY

14mm 4130 Non-Taper Seat Stays - custom shaped
4130 - 14mm No Taper - 0.8mm wall.

This is the same diameter seat stay that we use on all other Fairlight and along with the top tube and chainstays is an important part of the ride quality of our frames. Made from 4130 non heat-treated steel they are 14mm in diameter and there is no taper. The wall thickness of the tube is 0.8mm. The majority of seat stays [on steel bikes] are 16mm in diameter and taper down to approximately 11-12mm by the time they reach the dropout. This is largely a hangover from when there were limited dropouts on the market and they were designed to accept a certain sized tube. As comfort, compliance and zip are important factors of the Holt we use a narrower 14mm stay. The stays have relatively extreme S bend shaping, so when combined with the flattened chain stays, encourage movement under loading. The wall thickness is still sufficient to cope with loads if using a rack.


FAIRLIGHT

4130 CHROMOLY

19mm 4130 Custom Formed Chain Stays
4130 - 19mm - 0.95mm.

We learnt a lot from the Strael 3.0 chainstays and we've tried to repeat the shaping and forming, but for a cross country bike application; with smaller diameter tubes (for tyre and chainring clearance) and thicker walls (for strength and fatigue resistance).

The chainstay is made from 4130 19mm stock, with a wall thickness of 0.95mm. The forming and shaping is relatively severe and the tubes will experience high loads during riding, so we use a relatively thick wall to minimise the chance of long term fatigue.

The chainstays are extremely wide in the horizontal plane while narrow and flat in the vertical plane. Pedalling forces are horizontal and ground/rider weight forces are vertical so the shaping of the chainstays provides good power transfer but also high levels of comfort; when combined with the s-bend 14mm seat stays. Unlike the Strael chainstays (which are formed in moulds), the forming & shaping of these tubes is done using bending die and radius tooling. They are testament to the skill and craft of the frame builders.

As you can see to the left, the chainstays are located as wide as possible on the BB shell to further resist pedaling forces. Also the tubes are 19mm round (not ovalized) at the weld.

There is a 78mm clearance between the chainstays which allows for clearance for a maximum 29 x 2.6" (66mm width as measured) tyre. The chainstay length is 433mm. A 52mm chainline with work up to 34T chainrings. 36T chainring requires a 55mm chainline.


FAIRLIGHT


FAIRLIGHT

This photo shows how flattened the chainstays are to encourage movement under forces from the ground/ rider weight and thus add comfort.

TYRE CLEARANCE

Clearance with a 29 x 2.35” Vittoria Mezcal tyre.

The tyre measures up at 57.3mm when fully inflated.

Clearance with a 29 x 2.4”
Maxxis Rekon tyre.

The tyre measures up at 57.7mm when fully inflated.

Clearance with a 29 x 2.6”
Maxxis Rekon tyre.

The tyre measures up at 61mm when fully inflated.

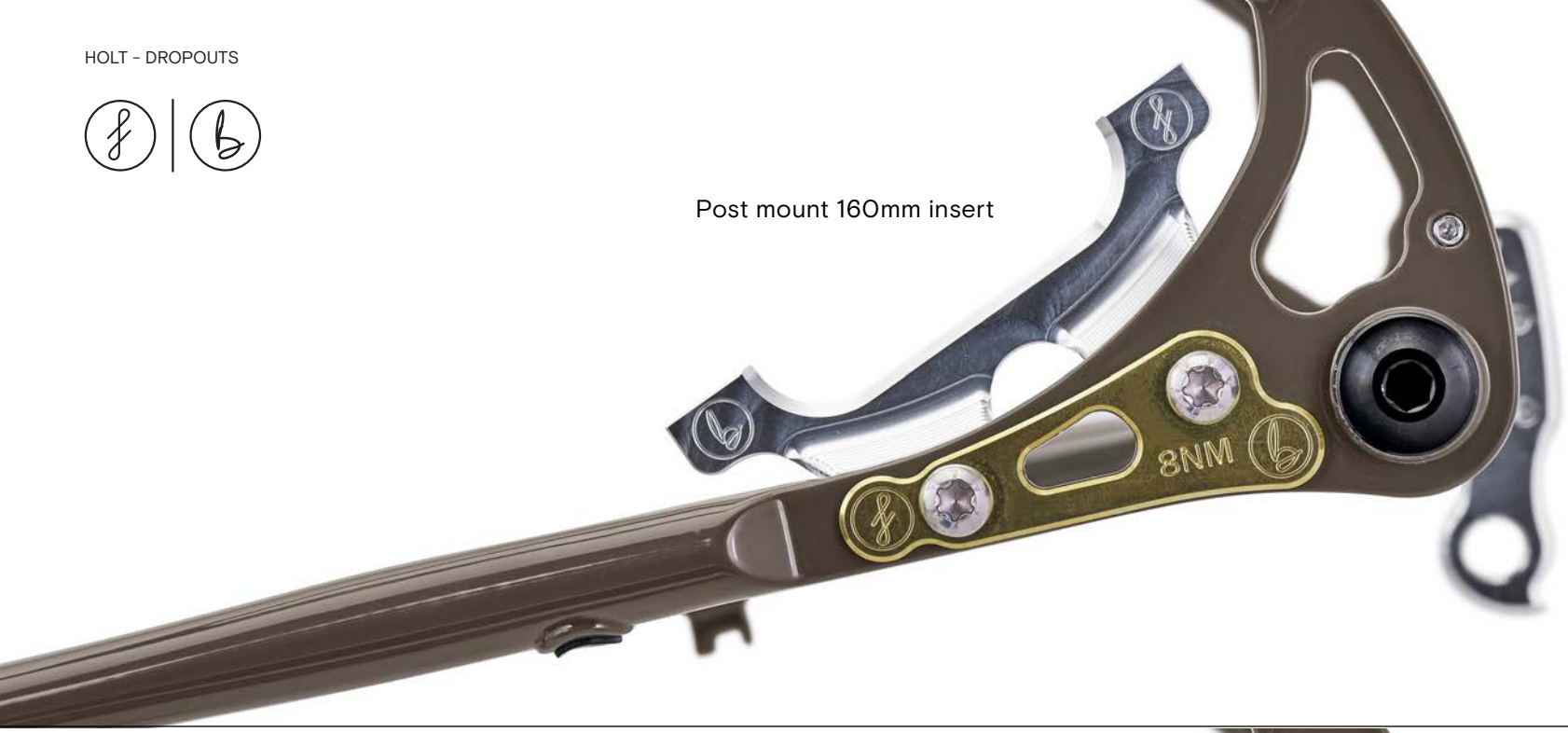
Clearance with a 29 x 2.6”
Vittoria Mezcal tyre.

The tyre measures
up at 65.5mm
when fully inflated.

DROPOUTS

Fairlight x Bentley Utility Drops

For the Holt we developed the Fairlight x Bentley 'Utility Drops'; interchangeable between post mount 160 and flat mount 160. Beautifully simple and beautifully elegant. We reduced complexity through design and then refined it…a lot. When designing the Holt we spent far too long pondering whether the frame should be post mount or flat mount. Post mount was tried and tested on mtb's, but flat mount was gathering momentum on xc bikes. The correct decision was of course the hardest one, it had to fit both to future proof the product. A truly collaborative design process followed between myself and Mark (Mr Bentley) which took months and months. Beyond the decisions of the location of physical mounting points and overall dimensions, was a period of refinement of the aesthetic. Despite the seat stay needing to be tall (to clear the post mount caliper) we wanted that to be almost unnoticeable through usage of cut outs in the steel plate and the correct radius of the dropout top line. To make a simple two bolt design we had to isolate the axle housing and keep them separate from the brake mount. Real estate for the hanger was therefore tight so we came up with a solution to mount the hanger to the back of the dropout. The overall form is simply the outcome of a long process of design. The highlight for us is the small embossed logo in the cut-out window when using the flat mount piece; we just couldn't bear the window would look onto blank metal. For the brake mount inserts we have anodized them silver and used engraving instead of laser etching. The engraved logos feel like makers marks you see on tooling. We use brass plates as washers, providing a beautiful level of detail, with a pleasing contrast between the painted plate, silver mounts and touches of brass. As for the machining of the mounts, hanger and the brass plates, it is all done in the UK by Mark and the quality is insane; unbelievable care given to every edge and surface.



Post mount 160mm insert

Flat mount 160mm insert

Post mount 160mm insert

Flat mount 160mm insert


SNM


SNM


UNASHAMEDLY
XC

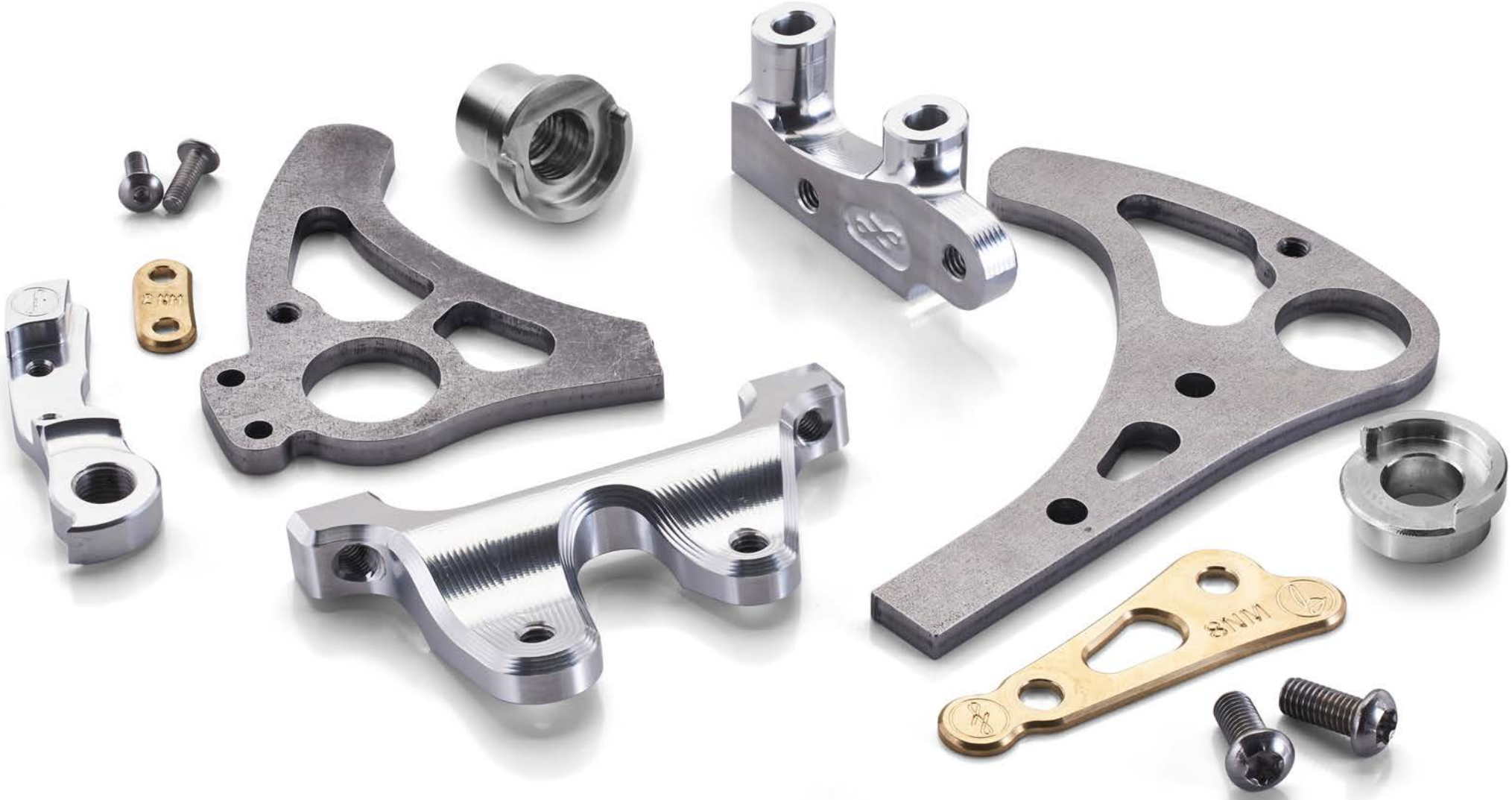
A window to nothing is rather a depressing thing. On the flat mount option the window (cut out) in the steel plate faces directly on to the back of the brake mount piece. We added a CNC embossed logo detail into this space, so there is now a window with a lovely view.


2 NM


FAIRLIGHT


UNASHAMEDLY
XC


2 NM
2 NM
2 NM
2 NM
2 NM
2 NM
8 NM
2 NM


8MM


FAIRLIGHT

CAGE & RACK MOUNTS

The Holt frame has 3 sets of bottle mounts. The mounts on the top and bottom of the downtube, both have triple bosses for use with adventure cages. Two of the bosses on the base of the downtube are supplied with 6mm standoff washers so that an adventure cage can be used in conjunction with the nylon cable guide - as pictured. The standoff washers are made from stainless steel.

The seat tube and downtube bosses are positioned as low as possible to give room for a half frame bag.

There are rack mounts on the seat stays so that a rear rack can be used. One of the benefits of a steel frame is its strength and versatility, so I think a set of rack mounts is always useful to have.

The dropouts have a single set of M5 eyelets so that a rack can be easily installed.

CABLE & WIRE ROUTING

Full Outer Cable Guides

The Holt is our first model where we have designed the frame around full outer housing. We designed a new style cable guide for the frame. We considered all sorts of options and in the end settled for a simple sandwich design, allowing us to keep the cables away from the frame and being able to control the hole sizes in the guide, even when the tube shape changes (through ovalizing). As with the cable guides on our other models, we have used 3D printing to manufacture the parts. It allows us to make several versions without volume constraints, plus the malleability of the material (vs CNC aluminium) has benefits for this application.

The cable guide is printed from two different materials. The bottom part (which is in contact with the frame) is made from 'SLS Flexible TPU', which is a rubber like material, which allows the part to hug the tube and form to it. The top part of the guide is made from SLS nylon, which is the same material we use for the cable guide on our other models. The nylon is strong, but with enough malleability to help it grip the cables when the bolt is tightened. Both materials have excellent chemical and water resistance.

We are continuing to work on specific guides for two cables and three cables, as well as a single cable clip.

SLS Nylon top part. Strong with enough malleabilty to allow different sized cables.

SLS Flexible TPU base part, to hug the tube and protect the paint.

The cable guide is designed so that a cage can be bolted on top of it. The washer sits slightly proud of the surface and the cage contacts that area. As mentioned earlier in the document, 2 x 6mm standoff washers are provided so that all three bosses have the same height.

The cables routing is designed to run quite snugly across the BB shell so we came up with this simple 3D printed tray/ skid-plate design which keeps the cables away from the paint. It is located with two M5 T25 torx bolts and there is a hole in the centre so that the frame drainage hole is not blocked off. The tray is just 1.5mm thick and printed in London by the same company who make our cable guides.

Below the BB tray is the cable clip for securely routing the dropper cable if you are opting to use a dropper post.

We carefully route the cables and hoses so they run completely in line with the chainstays and do not interfere with the tyre clearance or the chainrings.

On the drive side we use braze-on rings to keep the cable as close as possible to the chainstay. Also at the narrowest part of the dimple, a clip style guide (like the disc side) would marginally reduce the tyre clearance.

On the disc side we use braze-on clip style guides. The disc brake hose cannot easily be separated from the caliper without removing the olive and having to re-bleed the system, so with clips the entire system can be easily removed.

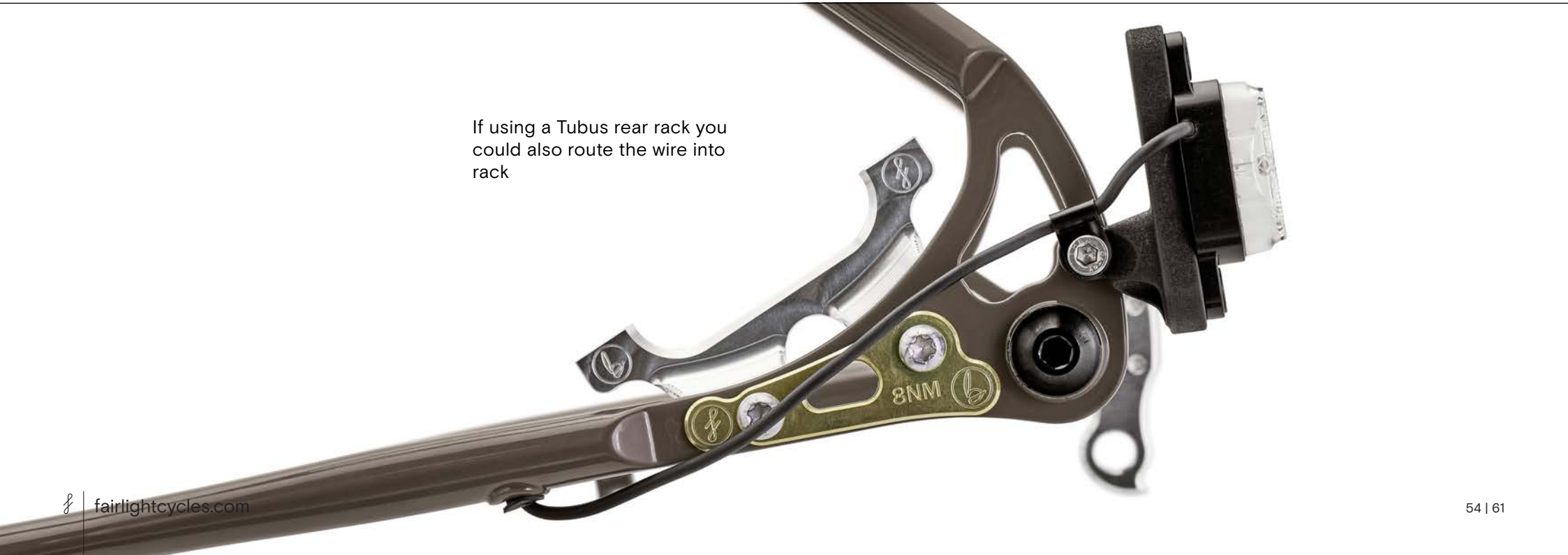
Alternative routing option with wires crossing at the BB.

If running a dropper post, the hose/cable exits at the base of the seat tube.

The frame is supplied with an open grommet (as pictured) as well as a blanking grommet to be installed when running a rigid post.

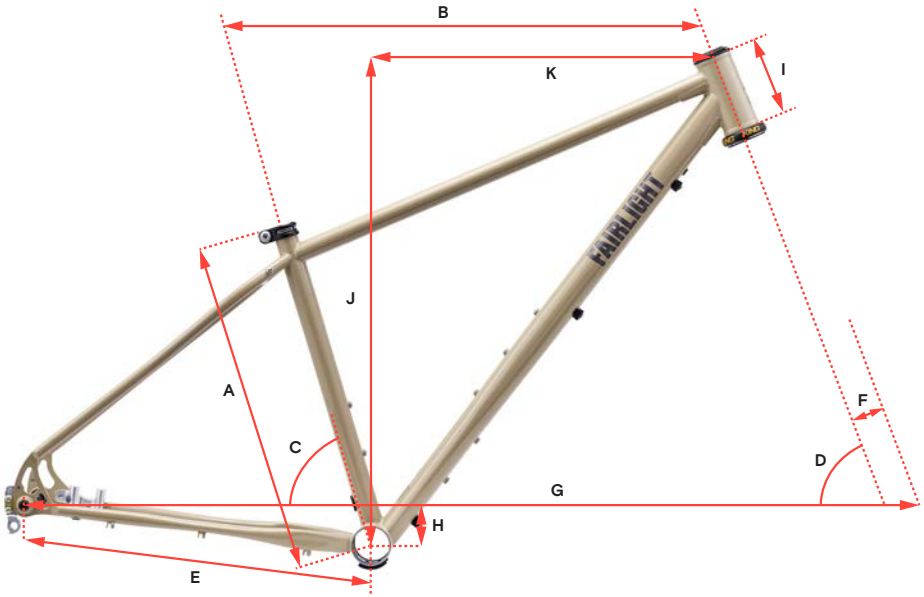
There is a 6mm Di2/Dynamo hole located on the base of the downtube, just above the first cable guide. With rigid fork compatibility the Holt makes a great dirt tourer (or maybe even a commuter in future years) so we felt we should include the option for routing lights internally.

The drive-side hole can also be used for Di2.



If using a Tubus rear rack you could also route the wire into rack

GEOMETRY



Fork axle to crown measurements are based on:
SID SL 100mm with 20% sag = 486mm, SID 110mm with 20% sag = 499mm, SID 120mm with 20% sag = 507mm

	Size	Small			Medium			Large			Extra Large		
	Fork travel	100mm	110mm	120mm	100mm	110mm	120mm	100mm	110mm	120mm	100mm	110mm	120mm
A	Seat Tube (BB to top ST)	385	385	385	420	420	420	460	460	460	520	520	520
B	Effective Top Tube	590	592	593	610	612	613	633	635	636	659	661	662
C	Seat Tube Angle	74.8	74.2	73.83	74.8	74.2	73.83	74.8	74.2	73.83	74.8	74.2	73.83
	Effective Seat Tube Angle - 700mm saddle	75.5	75.1	74.7	75.5	75.1	74.7	75.5	75.1	74.7	75.5	75.1	74.7
	Effective Seat Tube Angle - 800mm saddle	75.4	75	74.6	75.4	75	74.6	75.4	75	74.6	75.4	75	74.6
	Effective Seat Tube Angle - 900mm saddle	75.3	74.9	74.5	75.3	74.9	74.5	75.3	74.9	74.5	75.3	74.9	74.5
D	Head Tube Angle	68.1	67.5	67.1	68.1	67.5	67.1	68.1	67.5	67.1	68.1	67.5	67.1
E	Chainstay Length	433	433	433	433	433	433	433	433	433	433	433	433
F	Fork Offset	44	44	44	44	44	44	44	44	44	44	44	44
G	Wheelbase	1122	1128	1130	1142	1148	1150	1166	1171	1174	1194	1199	1202
H	Bottom Bracket Drop	67	63	60	67	63	60	67	63	60	67	63	60
I	Head Tube Length	100	100	100	100	100	100	110	110	110	130	130	130
J	Stack	606	611	614	606	611	614	615	620	623	634	639	641
K	Reach	432	425	421	451	445	441	472	465	461	491	485	481
	Fork Length - Axle to Crown (see notes above)	486	499	507	486	499	507	486	499	507	486	499	507
	Recommended stem length	40-60mm			50-70mm			50-70mm			60-80mm		
	Size guide - cm	160-172cm			170-180cm			178-188cm			186-195 cm		
	Size guide - feet and inches	5ft 3in - 5ft 8in			5ft 7in - 5ft 11in			5ft 10in - 6ft 2in			6ft 1in - 6ft 5in		

When deciding on geometry it is important to start from a set of known data. Subtle adjustments from a set of known parameters, which themselves evolved from previous learnings. The starting point for the Holt geometry was my 853 29er XC hardtail that I designed in 2011 and which was my main mountain bike for the best part of 10 years. The geometry was relatively progressive for an xc bike at the time and it has aged fairly well. The geometry of that frame is below.

With a 100mm fork sagged at 20% = 485mm axle to crown.

Head angle = 68.5 degrees
Effective seat angle = 74 degrees
BB drop = 62mm
Chainstay length = 435mm
Reach = 425mm
Stack = 605mm

When riding with a rigid fork (@ 470mm) the geometry was as follows:

Head angle = 69.5 degrees
Effective seat angle = 75 degrees
BB drop = 67mm
Chainstay length = 435mm
Reach = 436mm
Stack = 597mm

Using the above as a starting point, here is how I settled on the Holt geometry numbers:

chainstay length - I wanted to keep the chainstay length reasonably short (sub 435mm) whilst also being able to fit 29 x 2.6" tyres and have good mud clearance. With the forming and shaping of the chainstays, as well as the offsetting of the seat tube we were able to achieve a 433mm chainstay with good clearance.

BB drop - I really like the ride characteristics of a low BB and for the above frame i definitely preferred the lower BB that resulted when running a rigid fork (67mm vs 63mm with a 100mm fork). So for the Holt I based the geometry on a 67mm drop when running a 100mm fork, moving to 63mm and 60mm respectively for 110mm and 120mm fork travels.

Effective seat tube angle - When running a rigid fork the seat tube able was a degree steeper and i preferred it like that. I found myself riding less on the tip of the saddle. This was especially true for head down short blasts in the woods. For the Holt I've based it around that 75 degrees number for the mid travel option (110mm), moving to 75.5 and 74,5 respectively for the 100mm and 120mm geometry.

Stack - Stack stays broadly the same, based on the 100mm headtube and a standard external bottom headset cup.

Head angle - When running a 100mm fork the head angle felt good for fast local woodsy riding but when trail riding I felt it would have benefited from being marginally slacker. Decreasing the head angle increases trail and lengthens the wheelbase, the result is an increase in stability. However at the same time I didn't want to lose the xc handling characteristics, so I slackened the head angle by half a degree (with the same travel fork) but also increased the reach to use a shorter stem - see below.

Reach - Firstly I much preferred the 10mm longer reach (435mm vs 425mm) when using the rigid fork. The aim with the Holt that was that by increasing the reach by 10mm (445mm), slackening the headtube by 0.5 degrees and shortening the stem by 10mm, I'd be in the same riding position but with increased stability when descending, as well as on technical climbs. The shorter stem hopefully compensating a little to give familiar steering on flowing local woodland stuff.

Overall I think it is a really good geometry for the sort of real world riding many of us do. There is a definite nod to the XC world but with handling and characteristics that make a fast and efficient trail hardtail, with excellent bike packing capability.

Geometry FAQ

Is there an optimum fork travel?

No. The frame is designed to work with a 100-120mm travel fork. We provide three sets of geometry depending on the fork travel you opt for.

Can I run a rigid fork?

Yes the frame can be run with a rigid fork, we recommend a minimum fork length of 485mm and a maximum of 505mm. Forks such as the Enve Boost Mountain fork or the Whisky No.9 MTN LT Boost fork, would both work well. You can use the axle to crown lengths in the geometry table to calculate the approx geometry with your desired rigid fork.

Do i need to use a 44mm offset fork?

You can use either a 44mm or 51mm offset fork. Ultimately the difference in rake is only 7mm, so while there will be a difference in handling, it will be subtle. The longer offset fork will reduce the trail so the steering will feel a little faster and the steering will feel lighter and overall a little bit more nimble in flowing trails. However wheel flop also increases so it feels more deliberate in corners. The shorter offset fork will give more trail, so will feel a little more stable and cornering should feel less deliberate in the turn. You can run either fork offset and I'm sure you'll be very happy. A direct comparison is the handling of the Secan (50mm offset) vs the Faran (60mm offset).

INCLUDED IN THE BOX

Please Note:

- The frame is supplied with either a flat mount 160 brake mount OR a post mount 160 brake mount. To be chosen at time of ordering. Both brake mounts will also be available as spares parts.
- The derailleur hanger is available as a spare part.
- The axle is available as a spare part.
- As pictured the frame is supplied with grommets for both SON and Supernova wiring.
- As pictured the frame is supplied with a dropper post grommet and a blanking off grommet if running a rigid post.
- We are still working on the 3D printed cable guide designs. There will be versions for two cables/hoses and three cables/hoses.

FIT FUNCTION FORM

mail@fairlightcycles.com

FAIRLIGHT

All Studio Photogrpahy & title pages: Nick Hill @ NMDesign
Riding shots: Lloyd Wright