



YOUR
NEXT
BIKE

FOX



SCOTT

STIFFNESS

WEIGHT

ADDICT

FDI

**plasma
3**

AERODYNAMICS

Perfect Bike

Improve road frame
aerodynamic performance

Different target and priorities
compared to time trial

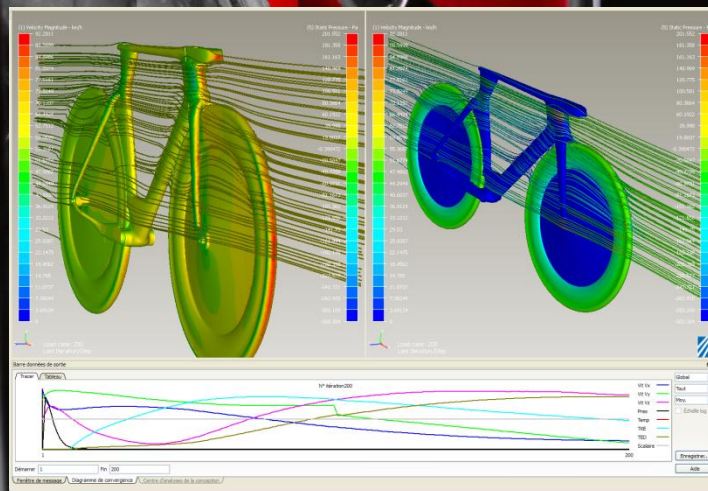
Meet the specific performance
criteria of road use

FDI

SCOTT



Our background knowledge and expertise in the conception of both ultralight racing and aerodynamic time trial bikes gives us a strong base from which to meet this new challenge



F01

SCOTT



YOUR
NEXT
BIKE

AERO

FOX

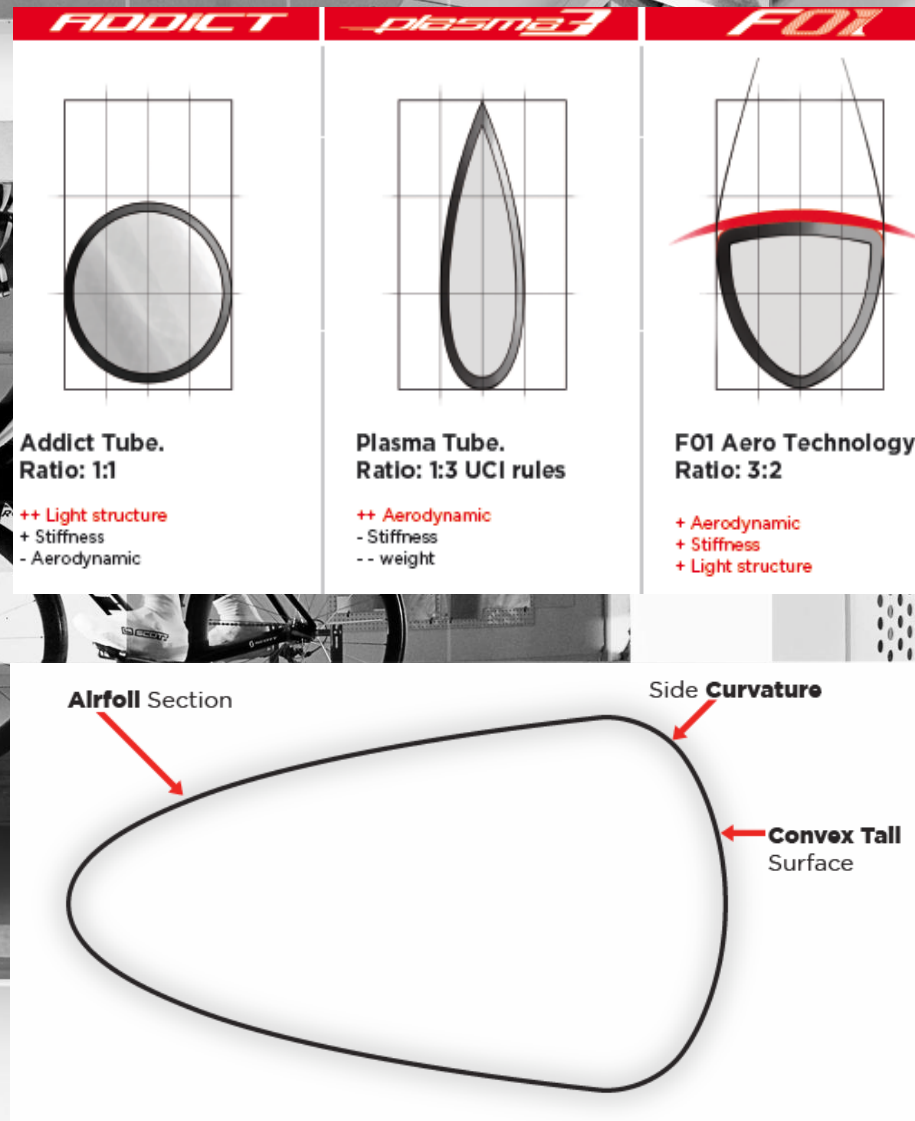


SCOTT



The bicycle specific F01 tube shape maximizes aerodynamic efficiency at lower air speeds.

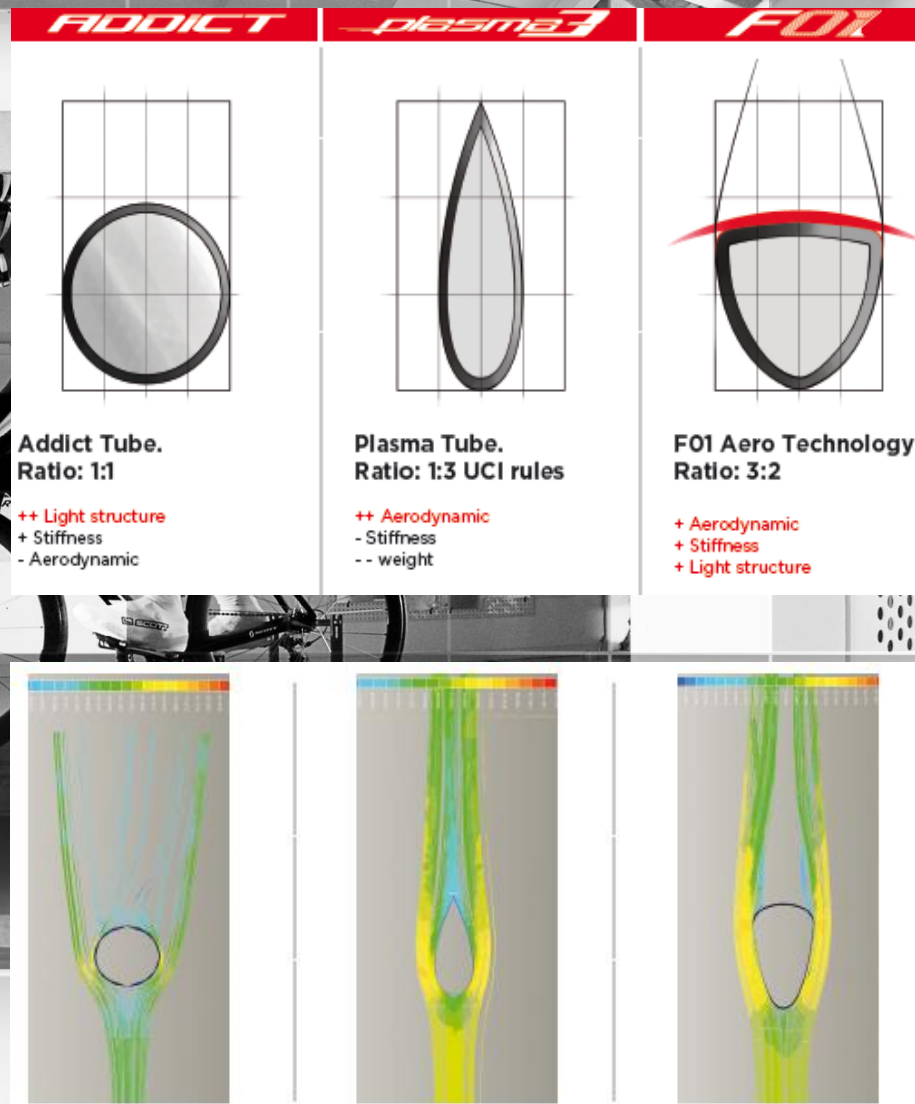
By implementing original, yet UCI compliant ratios, and removing the trailing edge found on a typical airfoil, Scott engineers were able to increase frame strength and compliance while simultaneously lowering the overall weight





Computational Fluid Dynamics study allows us to make a precise analysis and optimization of our new, patent pending, aero shape concept

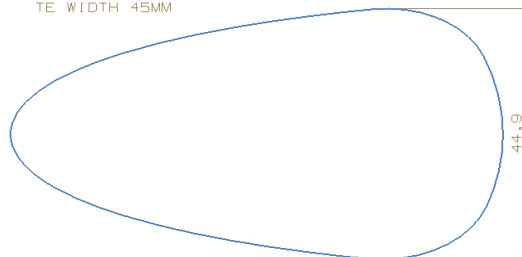
A NACA 4 digit profile was adapted to fit our bicycle specific requirements - low wind speed and turbulent flow





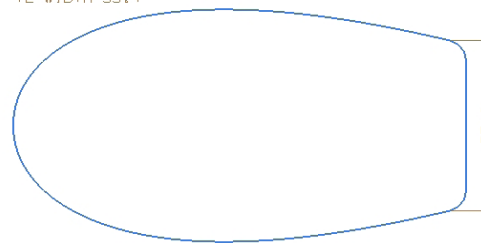
High ratio/ short tail

TYPE 6 - 9:1 DT
TE WIDTH 45MM



Lower ratio/ longer tail

TYPE 10 - 2.95:1 DT
TE WIDTH 33.4



The shape parameters of the leading edge, rear surface and side transition were all finely tuned to decide the best profile shape for each individual frame tube

Our key targets were to maintain flow continuity and reduce drag

airfoil ratio	tail surface	side curvature	relative drag coefficient
9:1	convex	15	1.000
9:1	convex	10	1.243
9:1	convex	5	1.219
9:1	flat	15	1.081
9:1	flat	10	1.230
9:1	flat	5	1.321
9:1	concave	15	1.216
9:1	concave	10	1.234
9:1	concave	5	1.449
Standard round section			3.524

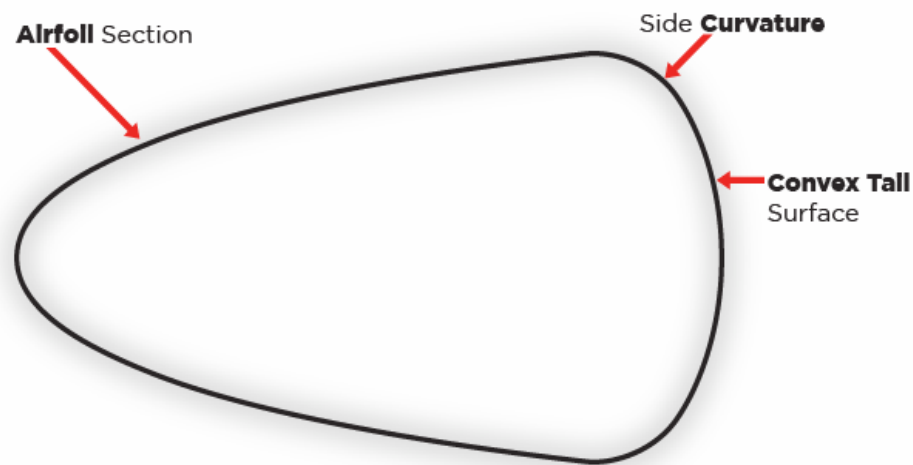


Fx - Drag Force in Newtons - Range of Angles (Degrees)											
Test Type	0		5		10		15				
1 Type 6	1.6458	1.4357	1.6237	1.6235	1.4494	1.5278	1.6902	1.6179		1.5568	1.8048
2 Type 8	1.4239	1.7407	1.6476	1.4011	1.7898		1.2677	2.0750		1.3122	2.3746
3 Type 10	1.3344	1.5310		1.2677	1.7031		1.9349	1.8553	1.7900	2.0505	2.1461
4 Type 11	1.7125	1.5008		1.7570	1.6159		1.9348	1.9128		2.0470	2.1408
5 Type 12	1.9153	1.5429		1.9794	1.5740		1.8904	1.6500		2.0416	2.0481

Fz - Side Force in Newtons - Range of Angles Degrees)											
Test Type	5		10		15						
1 Type 6	-0.0445	0.3486	0.0269	1.0675	0.2039	1.8714	2.1795	2.4955		4.5147	3.6000
2 Type 8	-0.1112	0.1670	0.1822	1.7570	1.5261		3.4694	2.8400		4.7371	3.3947
3 Type 10	1.6902	0.1250		3.1136	1.0870		0.3336	2.0466	1.6100	0.3558	3.1270
4 Type 11	0.3336	0.0280		-0.6227	0.5043		-0.1334	1.5200		2.8912	2.3354
5 Type 12	-0.0890	0.0343		0.5338	0.1260		0.9786	1.1831		0.0667	1.6293

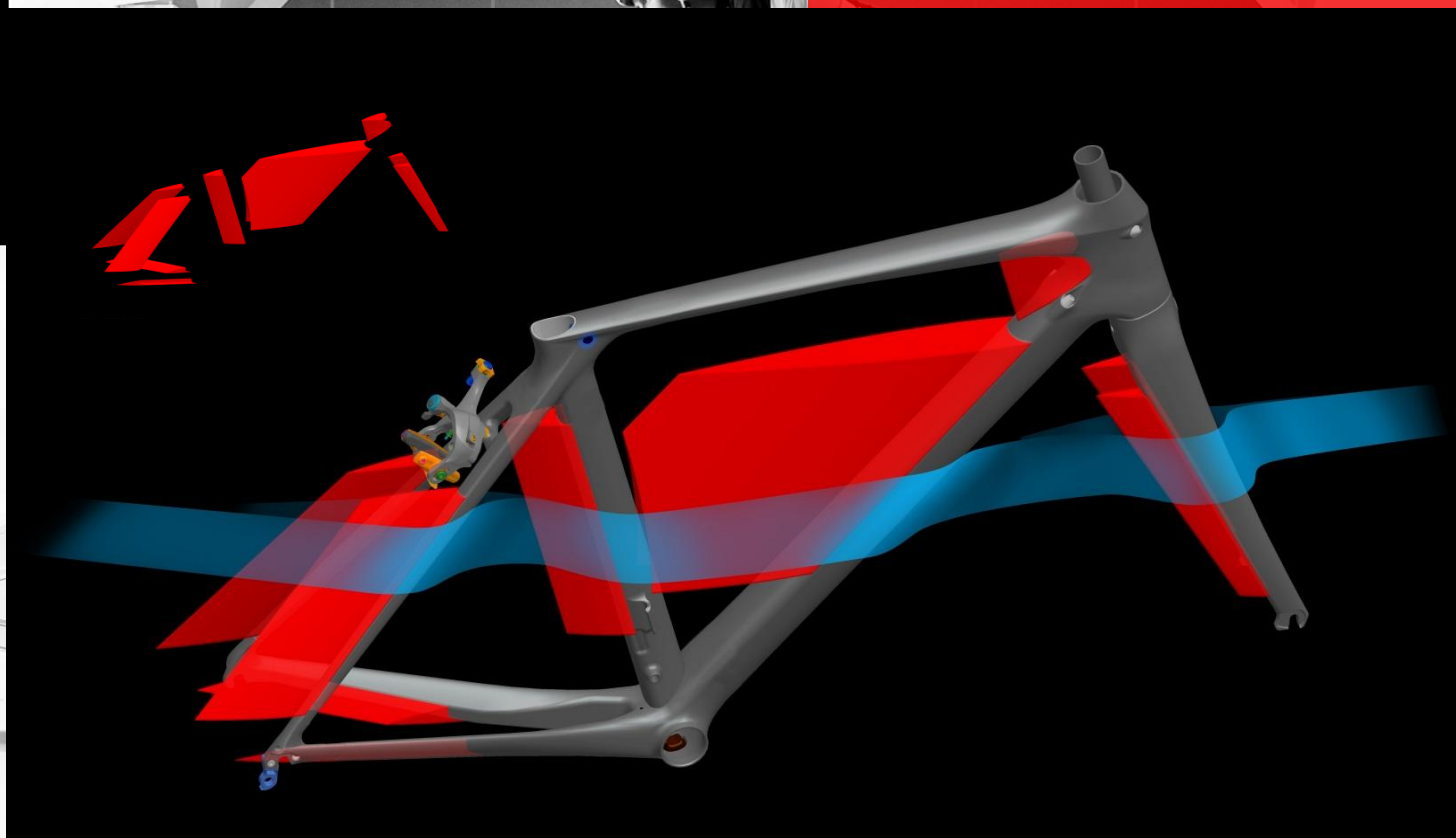
Wind tunnel validation

First step of measurement to confirm tube shapes efficiency





Improve road frame aerodynamic performance



FOL





YOUR
NEXT
BIKE

CONCEPT

AERO

FOX


SCOTT

Bottom Bracket

The BB construction adds lateral stiffness without increasing wall thickness. The new BB moulding smoothly disperses loads into the mainframe, halving the stress in this crucial junction.

The form reduces turbulence, creating an additional aero benefit.

F01

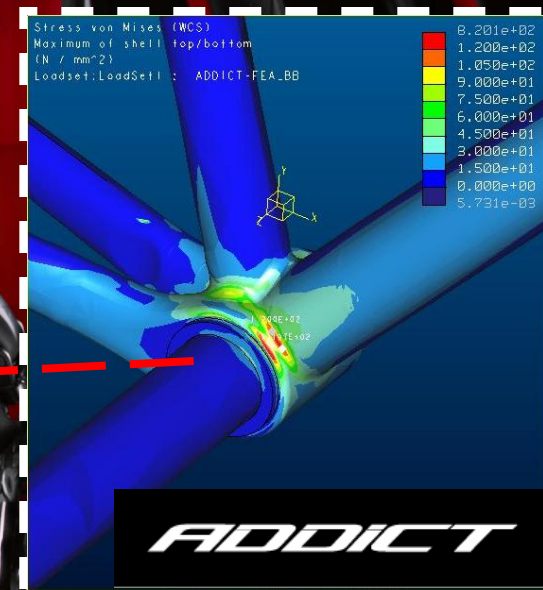
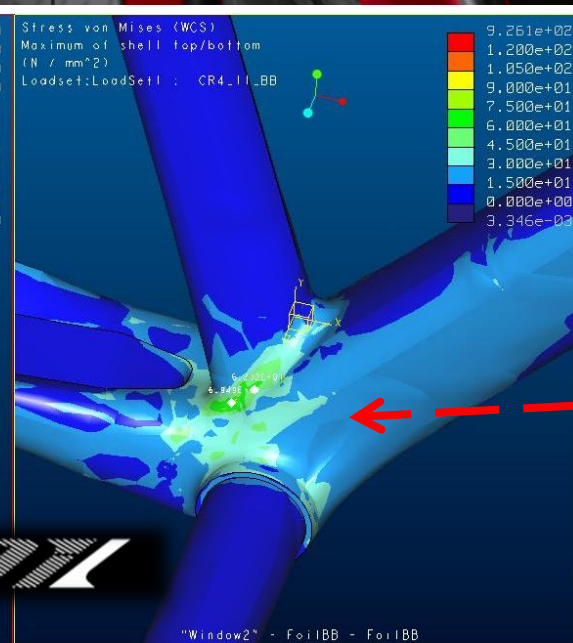
SCOTT

Bottom Bracket STIFFNESS

Maximum stress is 50% less
than addict

Weight reduction -30grs

BB Stiffness +10%



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Bottom Bracket AERO

Smooth transition creates
continuity between the DT and
CST

Uninterrupted air flow

F01

SCOTT

Bottom Bracket Construction

IMP process

Hollow shell

Integrated BB guide



F01

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Seatstays/ SeatTube LUG

Continuity between TT and SST

Integrated Seat clamp hidden
from the wind

Reduced turbulence creates an
additional aero benefit

FOL

SCOTT

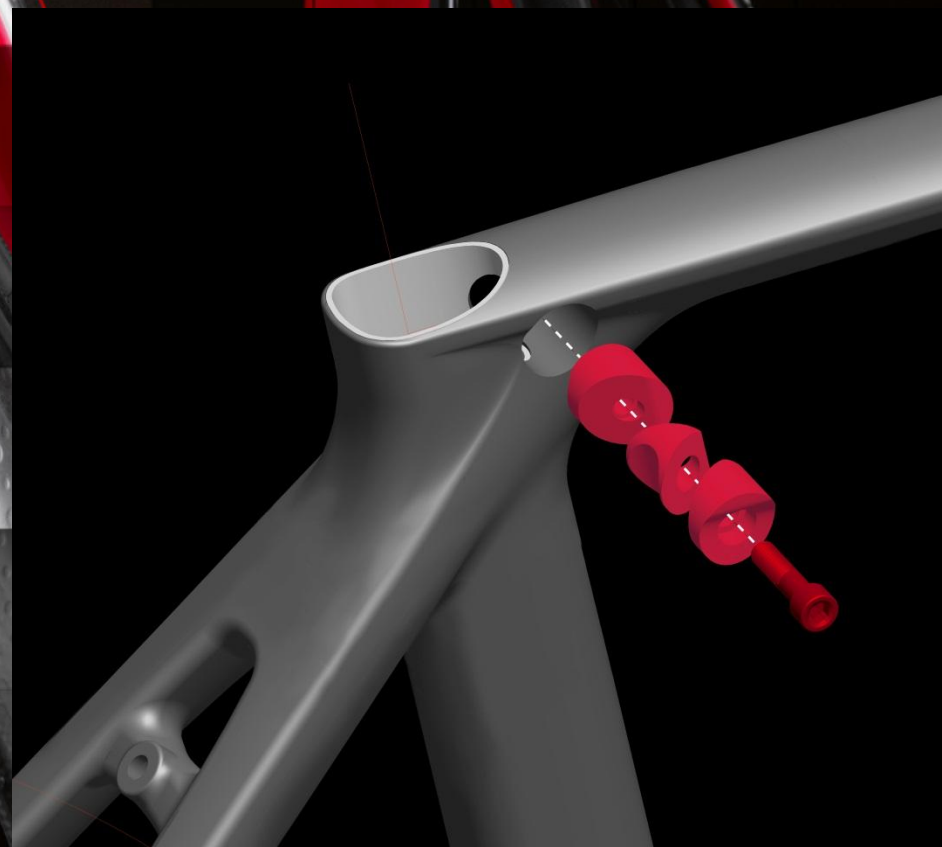
Seatstays/ SeatTube Clamp

Wedge clamping technology

Specific seat post using F01
Aero shape

Sand blasted finish on contact
area

Titanium bolt



F01

SCOTT

Seat Post

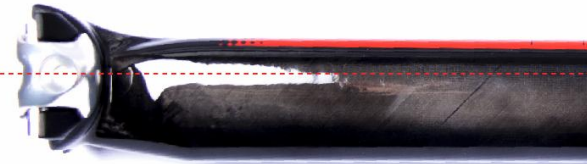
F01 profile

Ritchey saddle clamp

High friction surface finish



0 offset



25 offset



F01


SCOTT

HeadTube/Fork

Aerodynamic HT

Fork to HT continuity
maintained

1 1/4 oversized fork crown

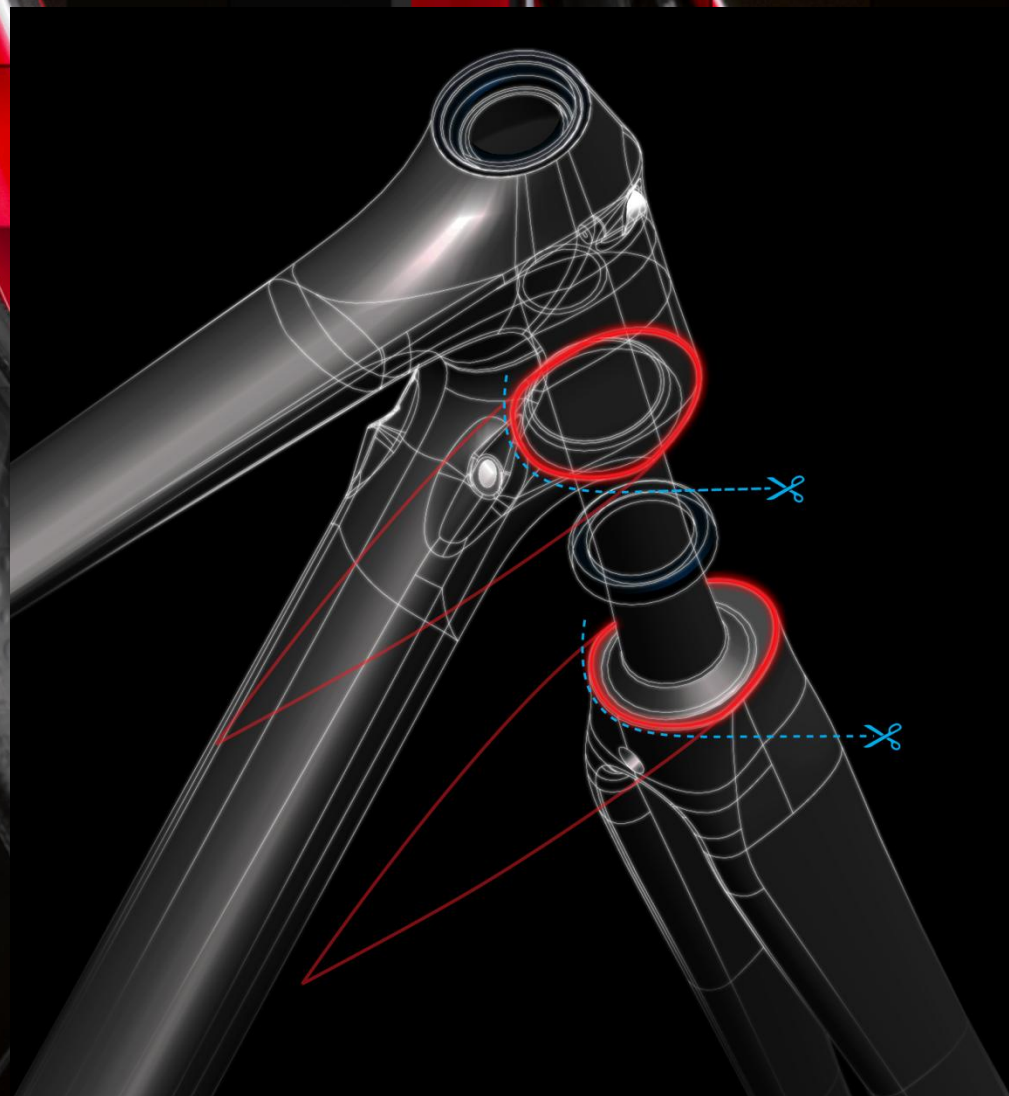
TT profile leading edge is
continued around the HT -
the F01 nose

F01


SCOTT

HeadTube

Direct bearing assembly
F01 shape leading edge
Perfect fit



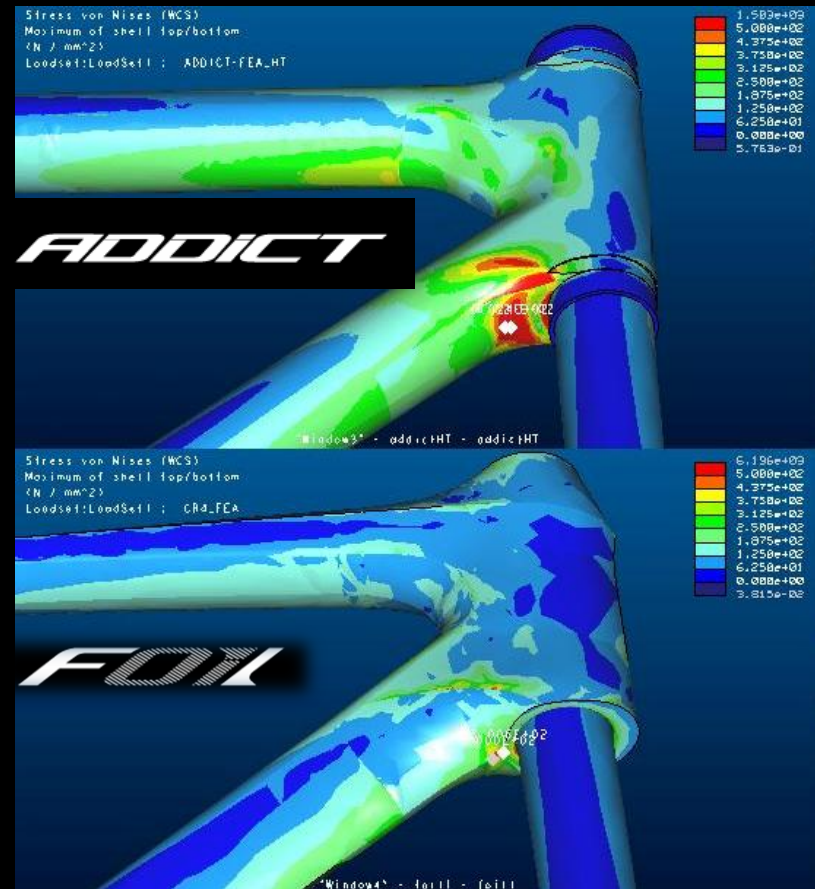
F01


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HeadTube

Stress reduction -20%

Direct bearing integration



FOIL

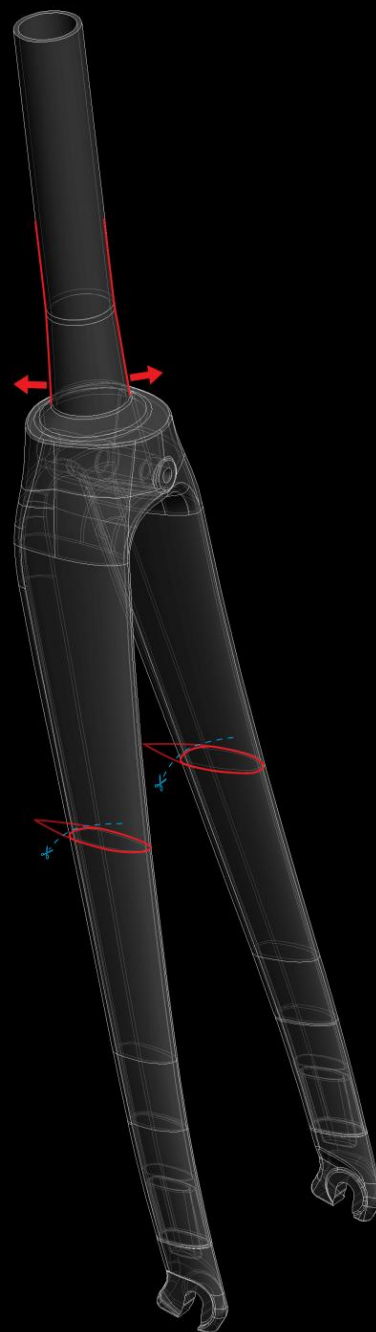
SCOTT

Fork

3:1 Leg profile

F01 Crown profile

F01




SCOTT

ChainStays CONCEPT

Smooth transition-continuity between DT and CST

Air flow continuity

Profile based on F01 cross section with -4° yaw orientation - 7:1 truncated



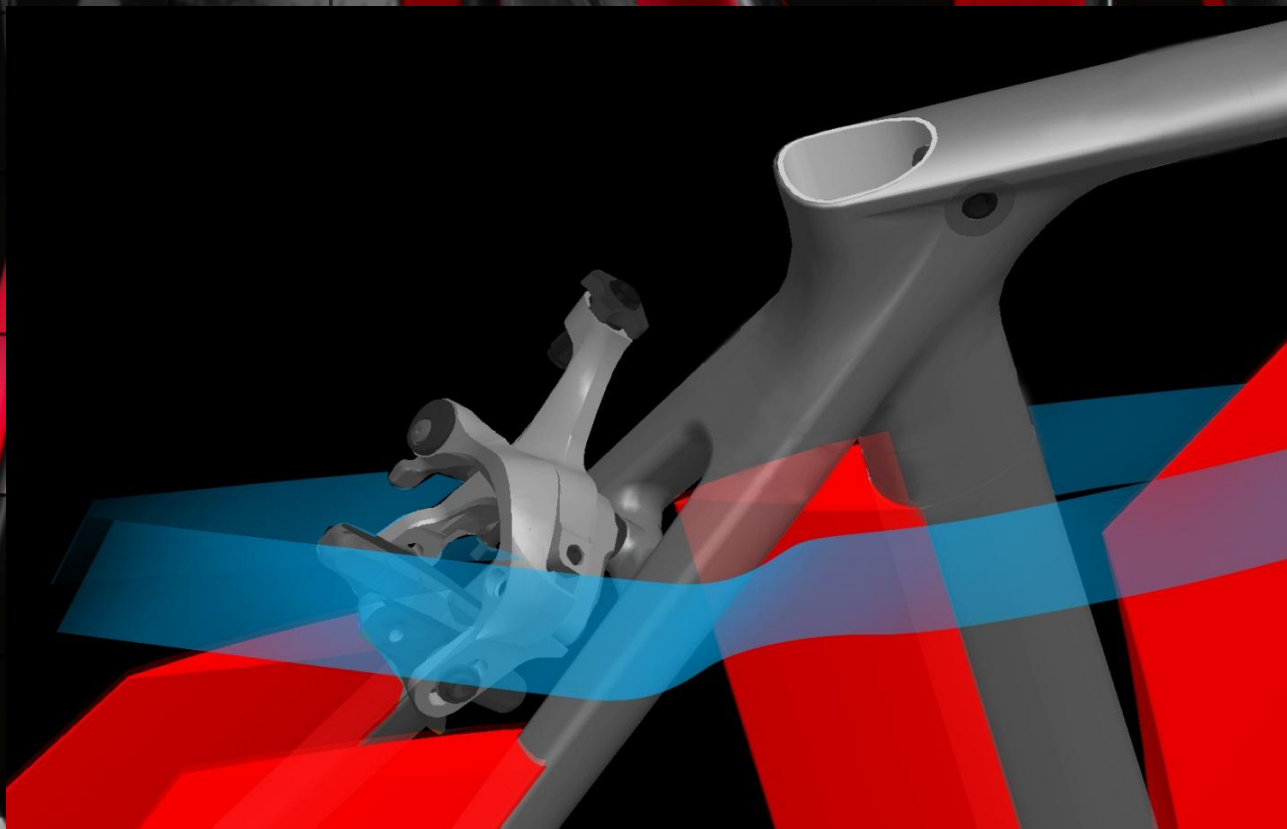
F01


SCOTT

SeatStays CONCEPT

SST hide the Rear brake and
create a fairing effect

Air flow continuity & drag
reduction



F011


SCOTT

INTERNAL CABLE ROUTING

Mechanical version

Fully internal cable routing

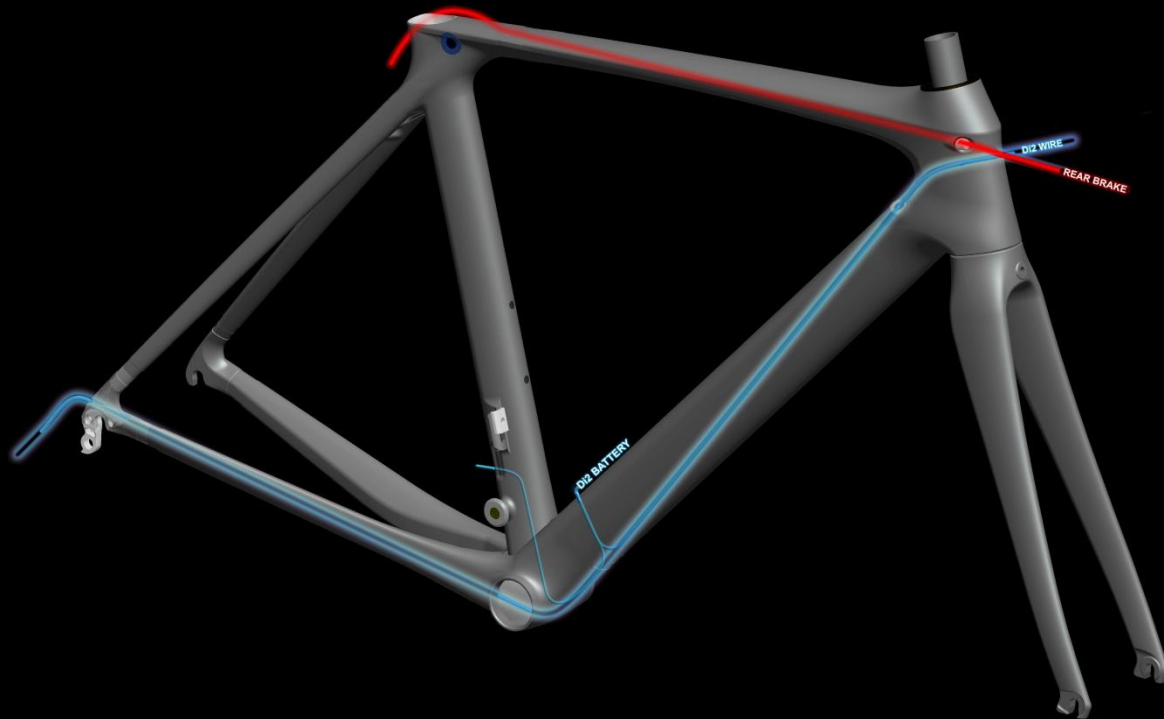


FDI


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INTERNAL CABLE ROUTING

Di2 version



F01

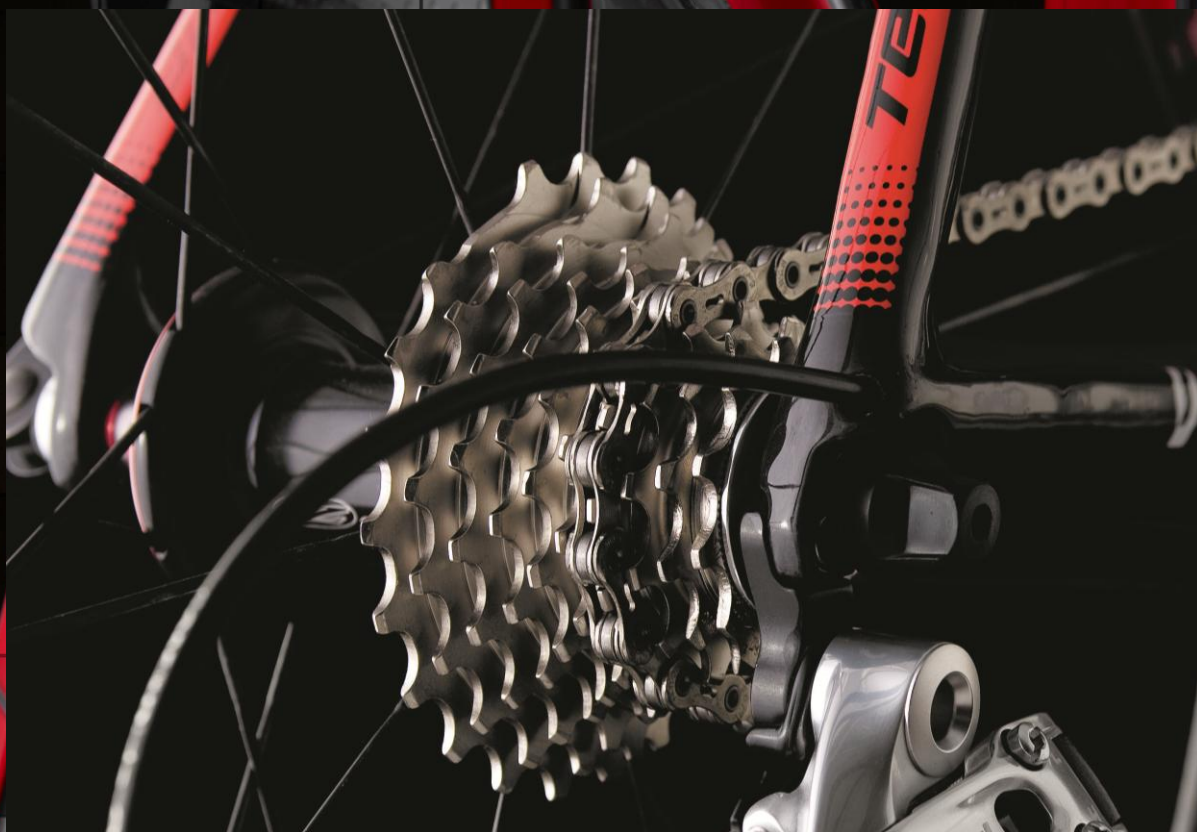

SCOTT

INTERNAL CABLE ROUTING

Female connection

Internal Rear DO cable stop

Smooth Design integration



FOL


SCOTT

INTERNAL CABLE ROUTING

Integrated cable stops

Weight saving

Free internal cables



F01

SCOTT



**YOUR
NEXT
BIKE**

CONCEPT

AERO

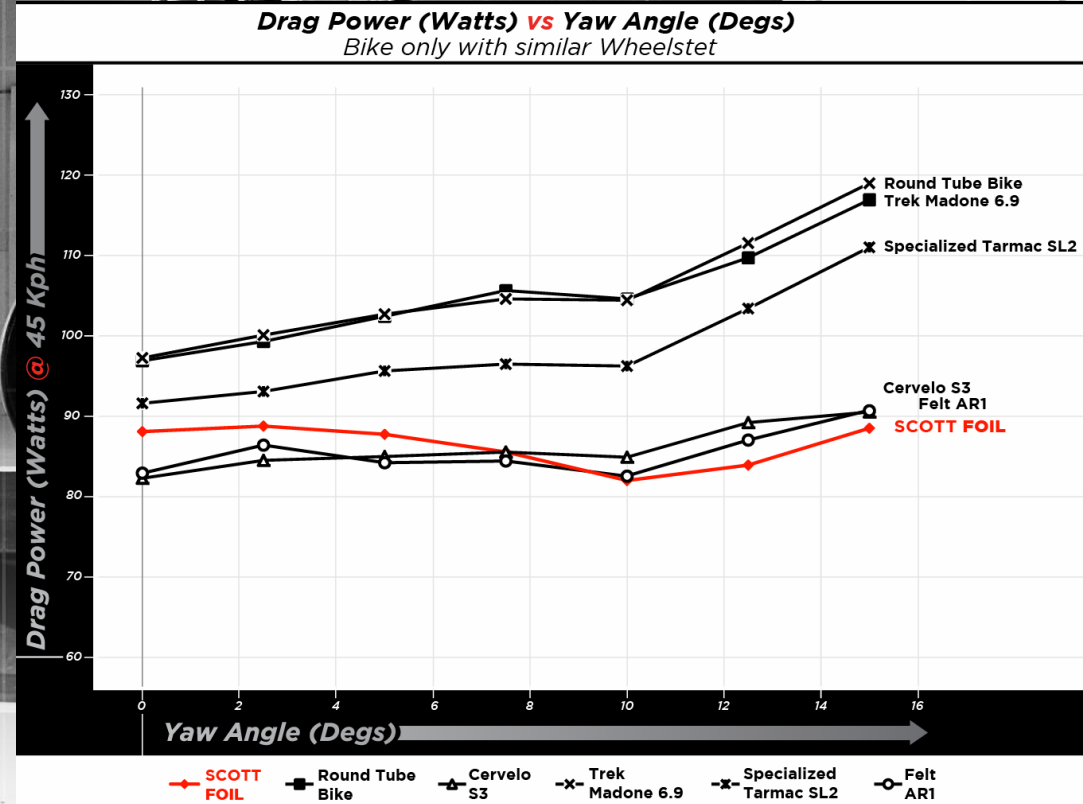
TESTS

FOX


SCOTT

AERODYNAMIC

Get some comparison with aero frames and no-aero frames. FOIL is definitely playing on the Aero group.

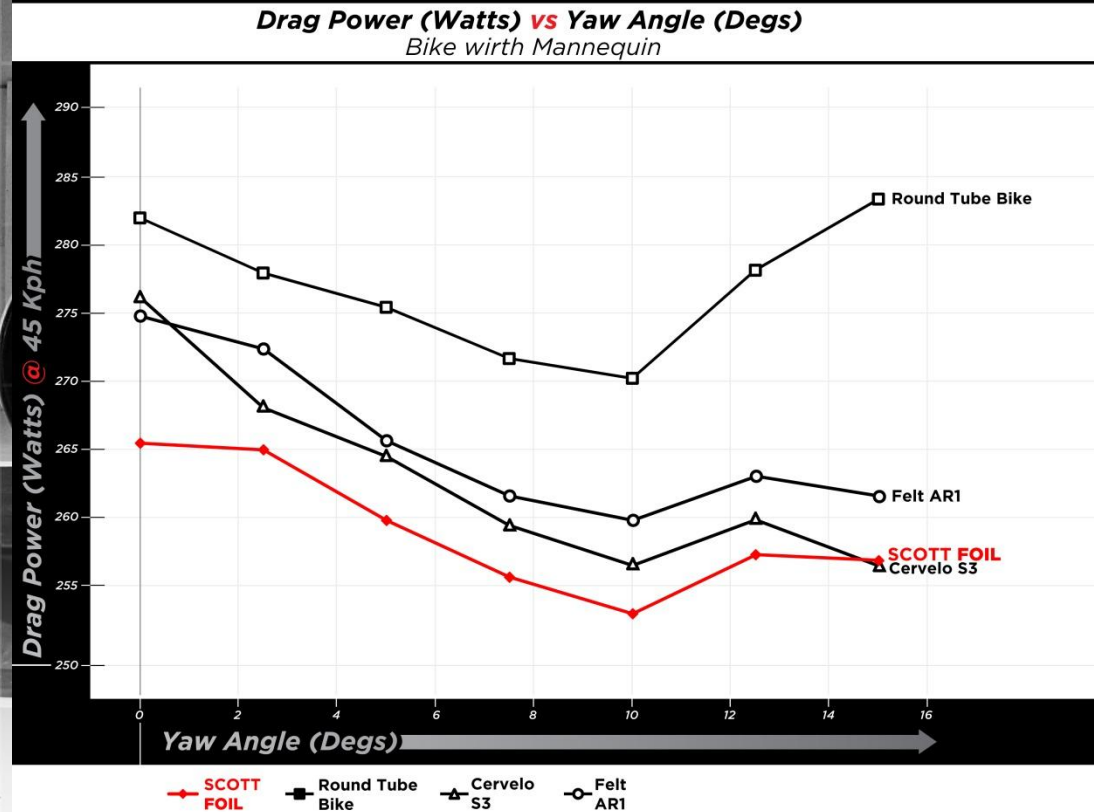


FOIL

SCOTT

AERODYNAMIC

Best aerodynamic
bike over the
complete yaw
range



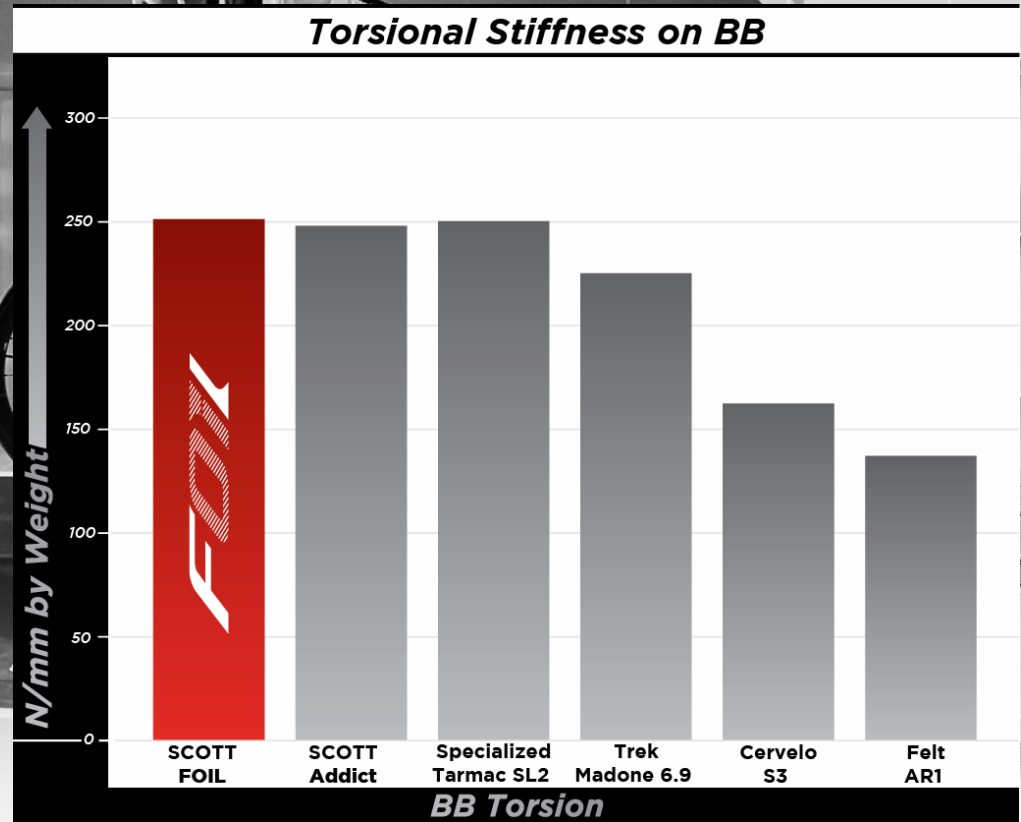
FOIL


SCOTT

Bottom Bracket STIFFNESS

As stiff as the
best road bikes

60% stiffer than
competitors aero
models



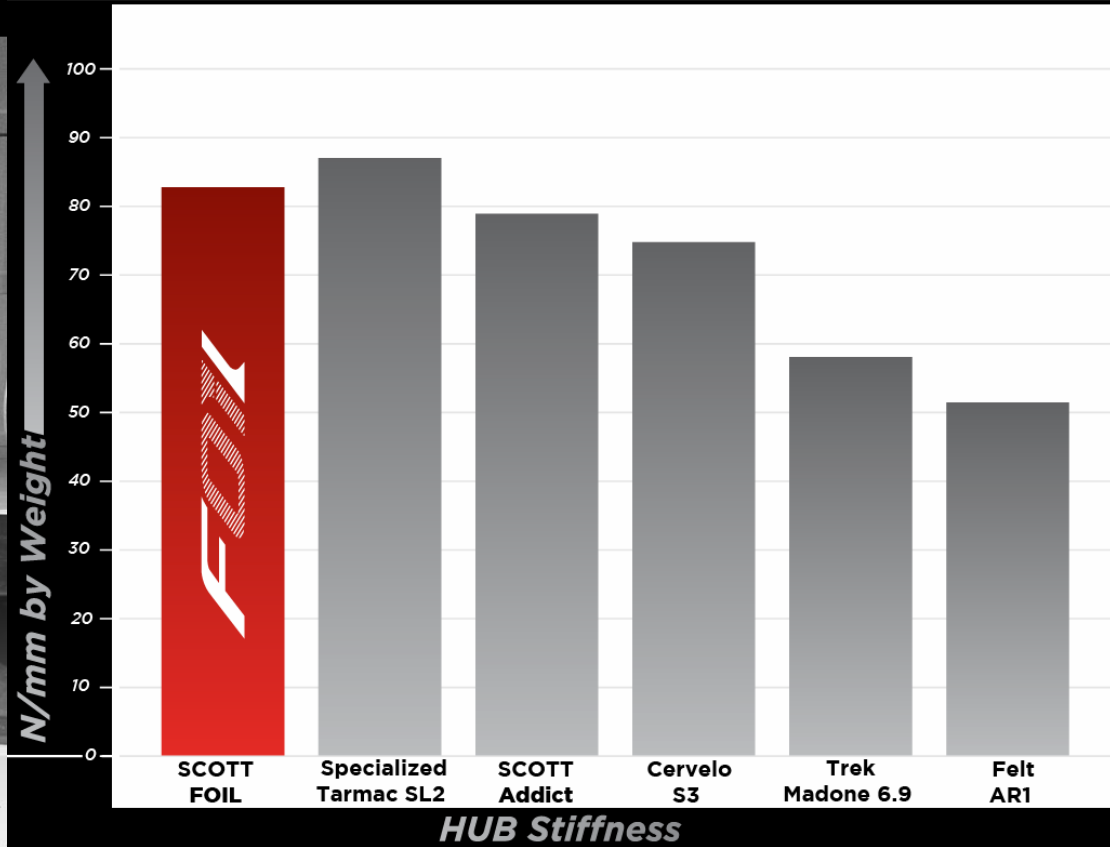
FOIL

SCOTT

HUB STIFFNESS



Stiffness on HUB



FOIL

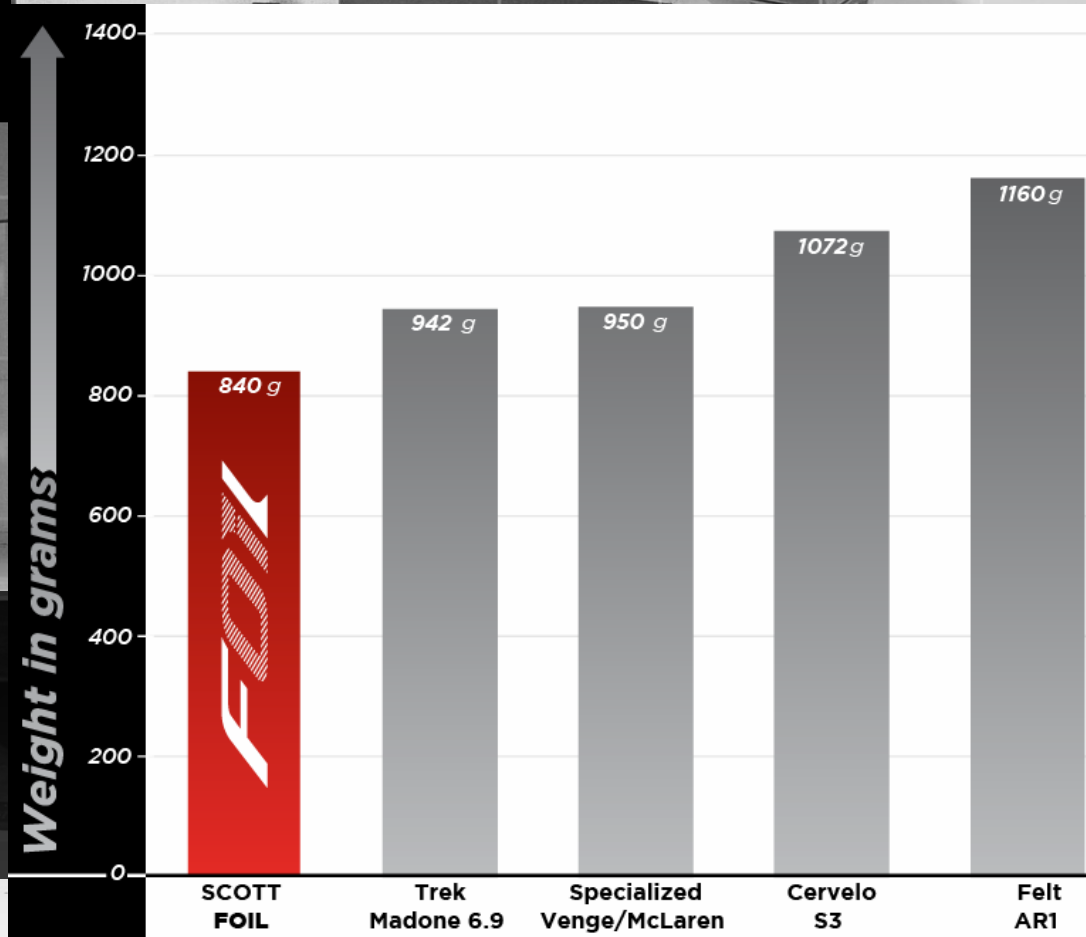

SCOTT

WEIGHT

Lightest Aero
frame on the
market.

Achieves a
balance of
Aerodynamics and
design without
compromise

840 GRAMS
Frame only



FOIL

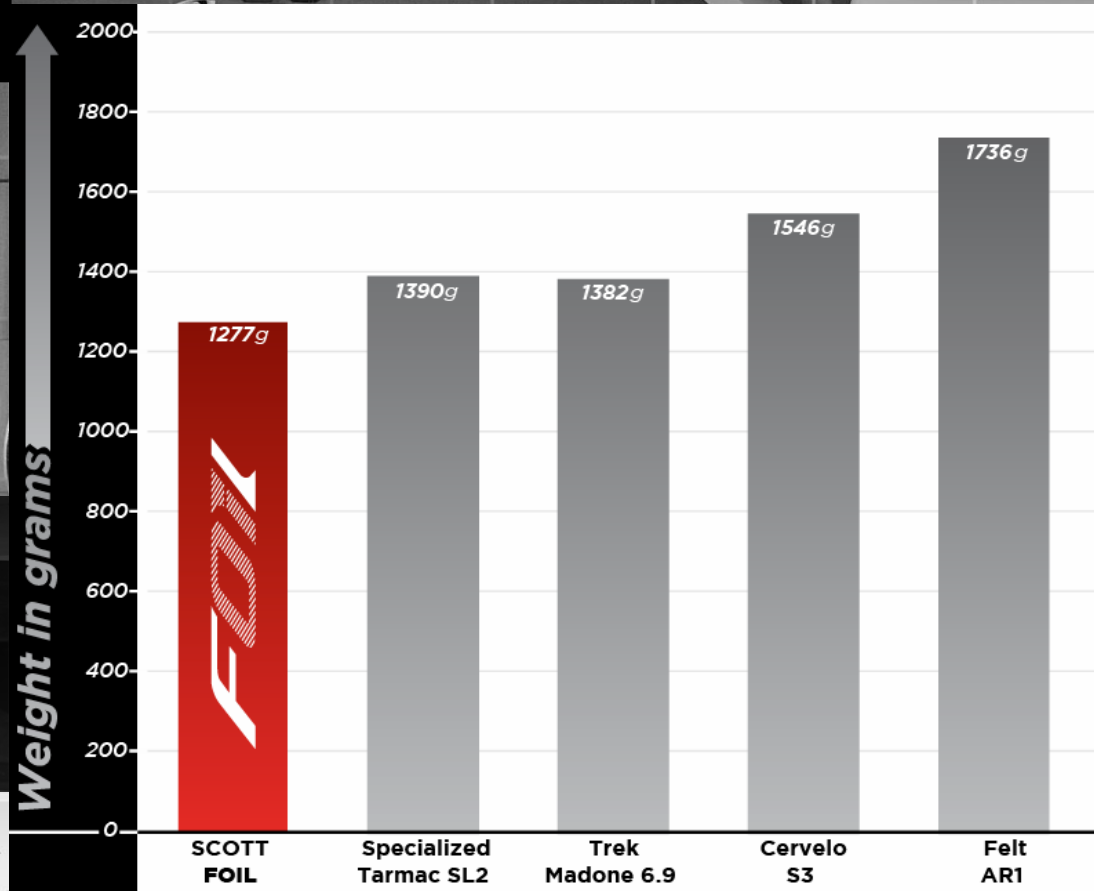
SCOTT

WEIGHT

Only 5% heavier
than Addict,

Lightest Aero
frame on the
market.

1277 GRAMS
Frame
kit(including, frame
, fork, seat post)



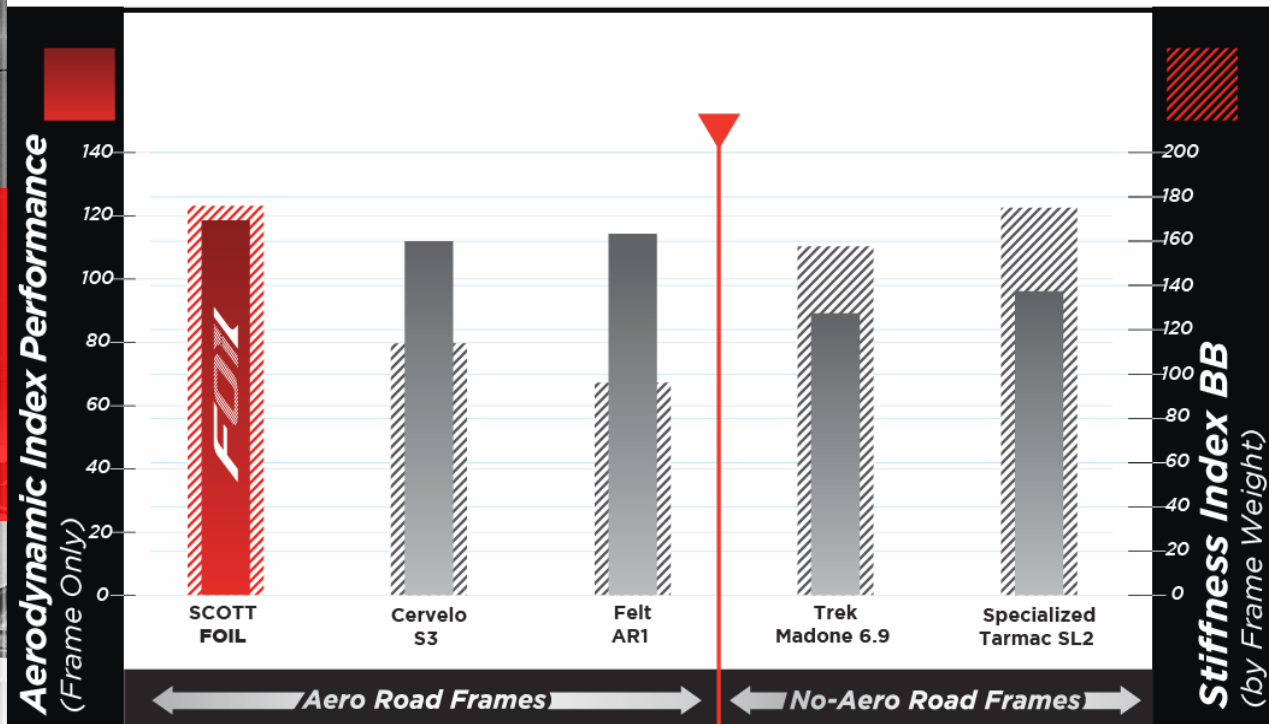
FOIL

SCOTT

PERFECT BIKE

FOIL stands alone in the Aero racing bike providing Aero, stiffness, lightness: The Perfect Ratio.

Aerodynamic Index *in relation with* Stiffness *to* Weight Index



FOIL

SCOTT



**YOUR
NEXT
BIKE**

**STIFF
+10%**

**AERO
+20%**

**LIGHT
840g**

FOIL


SCOTT