

INSPIRED BY NEWTON FIRST EDITION 2009

TECHNICAL CARBON

*i*  
*isaac*



**TECHNICAL CARBON SOLUTIONS** 04 MATERIAL ADVANTAGES | GETTING IN SHAPE | VALUES | 08 TESTING TESTING TESTING | ATTENTION TO DETAIL | **THE TECHNICAL CARBON COLLECTION** 14 ULTRA SONIC | 16 SONIC | 18 FORCE | 20 PASCAL | **TRIATHLON & TIME TRIAL** 23 JOULE AEROTIC PRO | 25 JOULE AEROTIC | 27 EFFICIENCY | **MOUNTAINBIKES** 28 IMPACT | **FACTS** 30 OVERVIEW | 34 GEOMETRY | **ISAAC BRAND** 36 NEWTON | 40 HISTORY | A PHILOSOPHY | 42 EXCLUSIVITY 45 THE MAKING OF ISAAC | TRIATHLON RACE KIT | CRASH REPLACEMENT



## MATERIAL ADVANTAGES

Whilst Isaac's original innovations and concepts, such as 'Dual Diameter Steerer' and 'Asymmetrical Head Set' are being adopted across the entire high-end cycle industry, Isaac continues to innovate and inspire. Isaac's latest advance is a unique 'Synthetic Sphere' reinforced epoxy resin, delivering improved impact resistance. This has been developed in conjunction with post-graduate physicists at a Japanese university, and is currently exclusive to Isaac. High tenacity aramid composites are known for their unique combination of properties, and can be found in numerous military applications, such as armour and combat aircraft seats, where maximum protection against bullet and fragment penetration must be provided with minimum weight. Isaac has applied aramid technology to the new Ultra Sonic. This heralds the first use of this particular ballistic aramid material, with its distinctive weave and colouring, in a wholly civilian application.



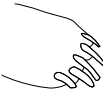




## GETTING IN SHAPE




Whilst materials play a vital role in the mechanical properties of any structure, it is shape that primarily dictates performance characteristics. Radius, section, profile and diameter - these are the key elements. Isaac matches form to material, in consideration of specific application. Isaac's familiar oversize sections, continuous profiles and relaxed radii have real purpose. These distinctive forms optimise the characteristics and properties of the material, to provide outstanding mechanical performance. These same concepts are commonly found in nature, the result of biology's own highly dedicated R&D project, otherwise known as evolution. Isaac describes its dimensional protocols as 'Natural Forms', and the outstanding properties of nature's structures cannot be denied.





# NATURAL FORMS

<b>STRONG LIKE AN EGG</b>	
Isaac ‘head tube’ and bottom bracket areas are elliptically shaped – a bit like an egg. An egg shell has immense strength, mainly due to its elliptical form.	
<b>STURDY LIKE A TREE</b>	
Isaac’s original ‘DDS’ dual diameter steerer has a larger diameter at the base – like a tree. Isaac’s Asymmetrical Headset, with it’s oversize lower bearing, better handles loads and stresses. Isaac’s Dual Diameter System increases efficiency and improves handling and makes a contribution to safety, all without a weight penalty.	
<b>HARD INTERFACES</b>	
Isaac frames have robust component-interfaces of hard-wearing aluminium alloy so that components can be attached with confidence. All Isaac frames also have an aluminium replaceable rear gear hanger.	
<b>NATURAL FORMS</b>	
Isaac road frames use rounded ‘tube’ sections. Rounded tubes are the most resistant to torsion, give optimum mechanical performance - and reduce stress risers. Natural structural members have soft, rounded shapes for these very reasons.	
<b>STRONG OUTER JACKET</b>	
Isaac frames have a structural ‘skin’ of continuous, woven carbon in the outer layer – with aramid reinforcements in the Ultra Sonic. The woven layer adds strength and gives protection. Many natural structures have a tough outer layer for the same reasons.	
<b>THE HUMAN ELEMENT</b>	
The vast majority of Isaac’s production processes are carried out totally by hand. The specific detail of Isaac’s carbon lay-up technique relies on the input of many highly-skilled technicians. All Isaac frames are therefore truly hand crafted.	
<b>SPECIFIC MATERIALS</b>	
Carbon composites mimic natural high-performance materials such as timber. Isaac makes clear distinctions regarding the exact materials used. Specific grades give the precise properties which Isaac can then fully exploit.	

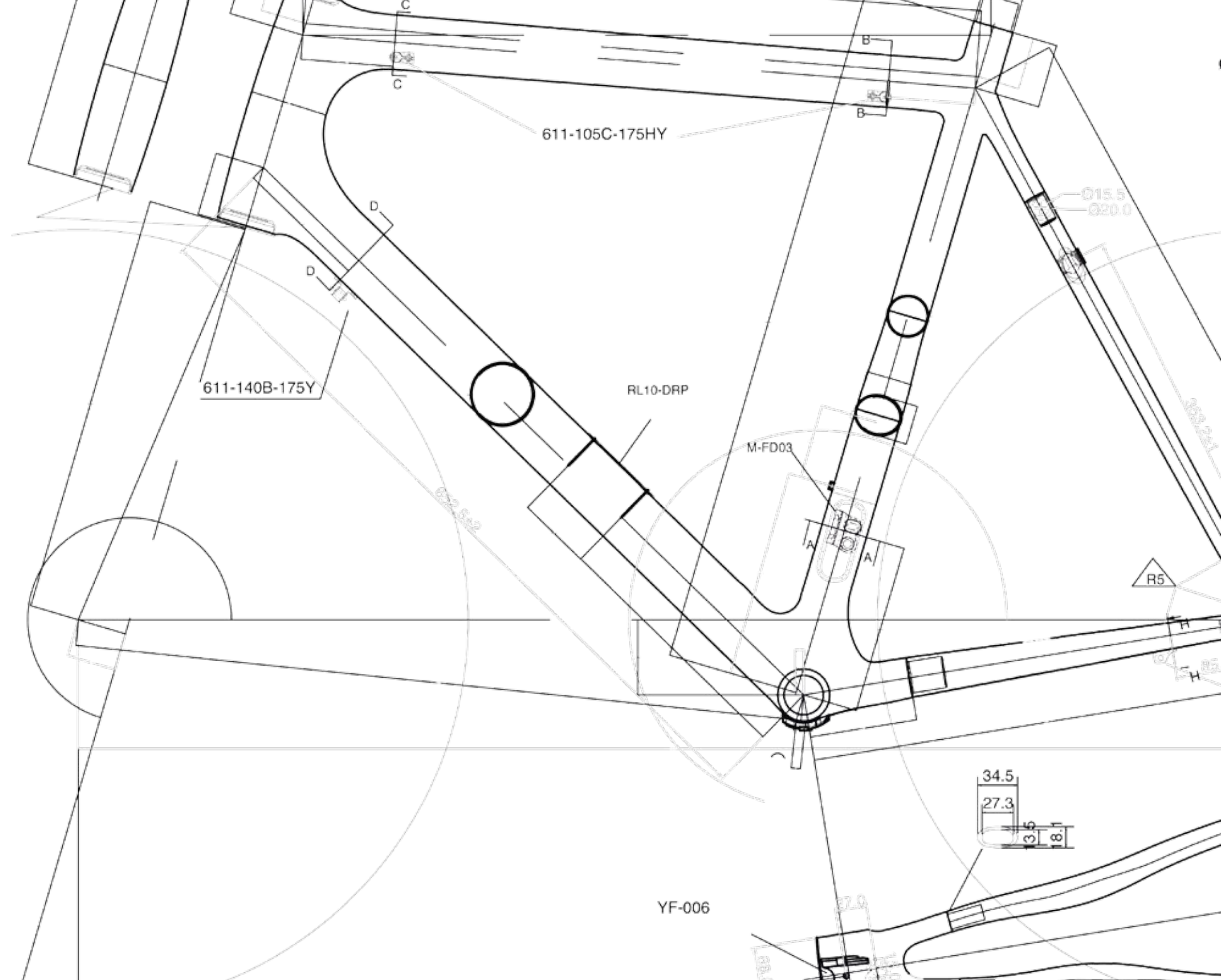
	<b>LIGHT AND TOUGH</b>
	Isaac frames are amongst the world’s lightest, yet conform to the most stringent fatigue standards in the entire industry. Low weight is of little use without the necessary strength and practical robustness.
	<b>THE CONSIDERED SOLUTION</b>
	Because carbon composite structures are not restricted by traditional material conventions, they can be design-engineered to a far greater extent. This allows vastly increased scope for Isaac’s considered and truly intelligent innovation.
	<b>CONTINUOUS MATERIAL</b>
	Monocoque means ‘one shell’. The main triangle of every Isaac frame is made in one continuous piece. Isaac forks are also monocoque structures. Natural structural members do not have joints. Any joint , and the resulting material discontinuity, promotes weakness.
<b>E2S</b>	<b>ENGINEERED TO SIZE</b>
	In most frames, a standard, identical tube set, optimised for an ‘average’ size frame, is be used to build every size of frame. The result being that smaller frames have a much greater Stiffness To Weight Ratio – leading to jarring harshness. Large frames, by contrast, are ‘soft’ and inefficient. Isaac’s composite engineering aims to provide a more consistent STW across the size range. Size-specific shaping of the frame, and lay-up of the material, results in improved efficiency for larger frames and increased comfort in the smaller ones. Isaac frames are truly ‘Engineered To Size’. Isaac also makes a contribution to comfort in its road frames by using a standard sized seat post – with an oversize diameter in only the largest frame sizes.
<b>DDS</b>	<b>DUAL DIAMETER SYSTEM</b>
	Isaac developed the dual diameter steerer in 2001. It is an original Isaac innovation, and a feature of every Isaac frameset. However, this concept is not just about providing additional strength and stability to the fork column. There is also the asymmetrical headset - the oversize lower bearing of which is more resistant to stress, impact and wear. Isaac’s Dual Diameter System improves handling, efficiency, safety and reliability. It is hardly surprising that DDS has been described as the most significant bicycle design innovation of the twenty first century.



Ultrasonic Modell 2009

# TESTING TESTING TESTING

Exhaustive testing is a way of life at Isaac. Virtual prototypes are tested as computer models using Finite Element Analysis. Aerodynamic forms are fine tuned using Computational Fluid Dynamics ahead of further testing of solid resin mock-ups in a low-speed wind tunnel. Raw materials are tested. Physical prototypes are subjected to static load and kinetic fatigue testing. Initial production frame samples are fatigue test certified, independently by EFB. Each and every series production frame unit is static load tested twice at the factory – once for front triangle torsion and again for rear end lateral stiffness - before finishing. Every frame and fork is then tested again, with a series of static load resistance tests, just prior to individual packing and distribution – with the final figures recorded against frame numbers for future individual reference. The testing is relentless. Nobody tests like Isaac.





## ATTENTION TO DETAIL

No Isaac frame or fork contains just one grade of carbon. Different materials are selected, depending on their specific characteristics, for different areas of each frame. The outermost layer of Isaac frames is a continuous woven layer. This covers the complex patchwork of uni-directional prepreg carbon below. The wall thickness in an Isaac frame is also specified to meet particular demands, with more material placed in areas of high stress, and less material in the lightly loaded areas. Finite Element Analysis is used to model stresses in a virtual prototype, so that the structure can be fully optimised for the most advantageous performance. As an example, the Ultra Sonic monocoque is hand laid, with many of the prepreg pieces cut to shape by hand. Seven different types of material are used, in laminations between two and fifteen layers thick. The Ultra Sonic comprises over one thousand separate elements, and can take two hundred hours to produce.







## ULTRASONIC

There is a particular joy in rare indulgences that lift a man’s soul. The Isaac Ultra Sonic is just such a luxury, and features a complex monocoque structure, hand-laid with seven different types of material, each engineered for a specific purpose in the quest for low weight with high strength. The sensual form is headlined by an ultra-fine weave glimpsed through tinted lacquer, and punctuated by extremities reinforced with a red ballistic aramid material, previously reserved for military applications. The Ultra Sonic is perhaps far better than it needs to be, but therein lies its obvious appeal.

ISAAC MODEL		ULTRASONIC				
SIZE	51 – 60	FRAME WEIGHT (G)	860±50 (54cm)	CARBON QUALITY	440 GPa	
SEATPOST	E2S (Size 51-55.5 : 27,2 mm / Size 57-60: 31,6 mm)			FORK WEIGHT (G)	375±15	
HEADSET	DDS Dual Diameter System ( 1 ¼” combined with 1 1/8”)			OPTIONS		
COLOUR 1	white	COLOUR 2	carbon-black			
ISAAC TECHNICAL CARBON COLLECTION			2009			



## SONIC

The choice of elite road race teams across the globe, Sonic is the star performer – and one tough cookie. A complex lay-up, featuring High Modulus fibres and Isaac’s unique high-impact resin, provides lateral and torsional resistance with cosseting vertical compliance. All of Isaac’s design innovations are present. This is the bike that remains silky smooth on the run-in, but becomes pin-sharp in the sprint. Are you good enough? Engineered for strength, lightness, efficiency and comfort, the Sonic delivers your aggression through focussed speed and agility.

ISAAC MODEL		SONIC	
SIZE	51 – 60	FRAME WEIGHT (G)	970±50 (54cm)
SEATPOST		CARBON QUALITY	360 GPa
E2S (Size 51-55.5 : 27,2 mm / Size 57-60 : 31,6 mm)		FORK WEIGHT (G)	400±15
HEADSET	DDS Dual Diameter System ( 1 ¼” combined with 1 1/8”)		OPTIONS
COLOUR 1	white	COLOUR 2	
		carbon-black	
ISAAC TECHNICAL CARBON COLLECTION		2009	

# FORCE

With a brand new mould form, the Force delivers a unique balance of essential qualities. Efficiency, weight, comfort and value are harmonised. Light and tough, this is the Isaac for the dedicated racer or sportive rider. A dual diameter steerer, with a stable asymmetrical headset, makes the Force corner as if on rails. And, its light weight and high stiffness pay dividends in the mountains. Importantly, the geometry and lay-up have been engineered so as not to punish or fatigue, for all-day comfort in the saddle.

ISAAC MODEL		FORCE		
SIZE	48 – 60	FRAME WEIGHT (G)	1150±50 (55.5 cm)	
SEATPOST	27,2 mm		CARBON QUALITY	320 GPa
HEADSET	DDS Dual Diameter System ( 1 ¼” combined with 1 1/8”)		FORK WEIGHT (G)	410±50
COLOUR 1	white/silver	COLOUR 2	OPTIONS	
ISAAC TECHNICAL CARBON COLLECTION		2009		





# PASCAL

Everything you have come to expect from Isaac – in a surprisingly accessible package. This year the Pascal wears a sharp new suit, and will stand out as the best groomed in any crowd. The Pascal punches well above its weight, and comprises a full range of design and material innovations, including a full monocoque in aerospace carbon, Isaac’s original dual diameter steerer concept, CNC machined aluminium interfaces, and exclusive high-impact resin technology. Everything about the Pascal’s specification is truly high-end – except for the price.

ISAAC MODEL		PASCAL		
SIZE	51 – 60	FRAME WEIGHT (G)	1350±50 (55.5cm)	
SEATPOST	27,2 mm		CARBON QUALITY	265 GPa
HEADSET	DDS Dual Diameter System ( 1 ¼” combined with 1 1/8”)		FORK WEIGHT (G)	440±20
COLOUR 1	black/white	COLOUR 2	OPTIONS	
ISAAC TECHNICAL CARBON COLLECTION		2009		







## JOULE AEROTIC PRO


A refinement of Isaac’s ground-breaking Joule-Aerotic, the new Pro includes refinements that raise the bar. Wind cheating aerodynamics, class leading efficiency, and the necessary monocoque comfort for those gruelling long distance events. A new XXS version, giving five sizes in total, provides for all statures – and each frameset is supplied with an exclusive pack of three seat clamp units, to allow any position you choose. Isaac’s Joule-Aerotic Pro sets the new standard in lone-effort, aero race frames.

ISAAC MODEL		JOULE AEROTIC PRO	
SIZE	XXS – L	FRAME WEIGHT (G)	1390±50 (M)
SEATPOST		Internal (delivered inclusive Triatlon-Kit)	CARBON QUALITY 440 GPa
HEADSET		DDS Dual Diameter System ( 1 ¼” combined with 1 1/8”)	
COLOUR 1	carbon/silver	COLOUR 2	black/white
ISAAC TECHNICAL CARBON COLLECTION		2009	
OPTIONS			



## JOULE AEROTIC

Speed – with practical versatility. The wind is a classy opponent, but Isaac’s Joule Aerotic gives you the means to beat it fair and square. The bold and purposeful Joule-Aerotic has been voted the most desirable aero bike, by magazine readers, time and again during the past two seasons. Amongst continuing competition success, it also scored a fifth place in Hawaii. With the latest version, all the original innovations and features are present – with the added practicality of a removable seat post and an additional XXS size option.

ISAAC MODEL		JOULE AEROTIC	
SIZE	XXS – L	FRAME WEIGHT (G)	1450+/-40 (M)
SEATPOST		CARBON QUALITY	360 GPa
External (compatible with the Triathlon-Kit)		FORK WEIGHT (G)	420±20
HEADSET	DDS Dual Diameter System ( 1 ¼" combined with 1 1/8")		<div>OPTIONS</div> 
COLOUR 1	white/black	COLOUR 2	
ISAAC TECHNICAL CARBON COLLECTION		2009	



## EFFICIENCY

Based on Isaac’s original aero recipe, the Efficiency serves up a plate full of satisfying performance with every ride. Isaac’s staple ingredients are all represented - gimmick-free fitness for purpose, a lack of bloating bulk, chewy mechanical resistance, an easily digestible wind-tunnel form - plus the succulent tenderness that only an advanced true-monocoque can deliver. With understated flavours – just lightly spiced – the Isaac Efficiency is a sophisticated dish indeed; not too rich but never bland.

ISAAC MODEL		EFFICIENCY	
SIZE	XS – L	FRAME WEIGHT (G)	1390+/-40 (M)
SEATPOST	External	CARBON QUALITY	320 GPa
HEADSET	DDS Dual Diameter System ( 1 ¼” combined with 1 1/8”)		FORK WEIGHT (G)
COLOUR 1	black	COLOUR 2	480±20
ISAAC TECHNICAL CARBON COLLECTION		2009	



# IMPACT

You live for the trail, so why isolate yourself from it with a mushy, clunky boat-anchor of a bike? Surely, you deserve the best, and are worthy of an Impact. Sharp in the singletrack, light on the climbs, solid when descending, the Impact inspires cool confidence and effortless speed. A complex monocoque chassis, laid-up by hand with the finest materials, triangulates resistance, compliance and weight equilaterally. Nothing is so beautifully and finely balanced. Perhaps this is why the Impact is a popular basis for so many sub-eight kilo exotic build ups.

ISAAC MODEL		IMPACT		
SIZE	16,5" – 20,5"	FRAME WEIGHT (G)	1290+/-40 (19")	
SEATPOST	31.6 mm		CARBON QUALITY	320 GPa
HEADSET	DDS Asymmetrical Headset ( 1 ¼" combined with 1 1/8")		FORK WEIGHT (G)	-
COLOUR 1	carbon-black	COLOUR 2	OPTIONS	
ISAAC TECHNICAL CARBON COLLECTION		2009		







ULTRASONIC
APPROX. 880g FRAME WEIGHT (SIZE 54)
DEvised FOR ULTRA LIGHT WEIGHT
TRUE MONOCOQUE FRAME WITH 1K LAYER
ULTRAHIGH MODULUS REINFORCED CARBON 440 GPa
THINNER HEADTUBE, MORE AERODYNAMIC
NEW ISAAC MONOCOQUE FORK WITH DUAL-DIAMETER STEERER
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
E2S (SIZE 51-55.5:27,2 mm / SIZE 57-60:31,6 mm)

*isaac*  
TECHNICAL CARBON

ULTRAHIGH MODULUS  
REINFORCED CARBON  
**440 GPa**

OPTIMISED HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



SONIC
APPROX. 970g FRAME WEIGHT (SIZE 54)
DEvised FOR LOW WEIGHT AND HIGH STRENGHT
TRUE MONOCOQUE FRAME WITH 3K LAYER
HIGH MODULUS CARBON 360 GPa
THINNER HEADTUBE, MORE AERODYNAMIC
NEW ISAAC MONOCOQUE FORK WITH DUAL-DIAMETER STEERER
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
E2S (SIZE 51-55.5:27,2 mm / SIZE 57-60:31,6 mm)

*isaac*  
TECHNICAL CARBON

HIGH MODULUS  
CARBON  
**360 GPa**

SYSTEMATIC HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



FORCE
APPROX. 1150 g (55,5 cm)
DEvised FOR BALANCED CHARACTERISTICS
TRUE MONOCOQUE FRAME
INTERMEDIATE CARBON 320 GPa
ISAAC MONOCOQUE FORK WITH DUAL-DIAMETER STEERER
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
ISAAC MONOCOQUE 27.2 mm SEAT POST

*isaac*  
TECHNICAL CARBON

INTERMEDIATE  
CARBON  
**320 GPa**

SYSTEMATIC HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



PASCAL
APPROX. 1350 g (55,5 cm)
HIGH PERFORMANCE-TO-COST RATIO
TRUE MONOCOQUE FRAME
HIGH STRENGHT CARBON 265 GPa
ISAAC MONOCOQUE FORK WITH DUAL-DIAMETER STEERER
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
ISAAC MONOCOQUE 27.2 mm SEAT POST

*isaac*  
TECHNICAL CARBON

HIGH STRENGTH  
CARBON  
**265 GPa**

ASSURED HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



JOULE AEROTIC PRO
APPROX. 1390 g (M)
DEVISED FOR MAXIMUM SPEED
TRUE MONOCOQUE FRAME
ULTRA HIGH MODULUS REINFORCED CARBON 440 GPa
ISAAC MONOCOQUE FORK WITH DUAL-DIAMETER STEERER
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
ISAAC INTEGRATED SEAT POST DESIGN – DELIVERED WITH TRIATLON RACE KIT
INTERNAL CABLE ROUTING

*isaac*  
TECHNICAL CARBON

ULTRAHIGH MODULUS  
REINFORCED CARBON  
**440 GPa**

OPTIMISED HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



JOULE AEROTIC
APPROX. 1450g (M)
DEVISED FOR MAXIMUM SPEED
TRUE MONOCOQUE FRAME
ULTRA HIGH MODULUS REINFORCED CARBON 360 GPa
ISAAC MONOCOQUE FORK WITH DUAL-DIAMETER STEERER
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
ISAAC EXTERNAL SEATPOST-KIT, COMPATIBLE WITH THE TRIATHLON-KIT
INTERNAL CABLE ROUTING

*isaac*  
TECHNICAL CARBON

HIGH MODULUS  
CARBON  
**360 GPa**

SYSTEMATIC HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



EFFICIENCY
APPROX. 1390 g (M)
DEVISED FOR LOW WEIGHT AND HIGH STRENGHT
TRUE MONOCOQUE FRAME
INTERMEDIATE CARBON 320 GPa
ISAAC MONOCOQUE FORK WITH DUAL-DIAMETER STEERER
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
ISAAC EXTERNAL SEATPOST DESIGN
INTERNAL CABLE ROUTING

*isaac*  
TECHNICAL CARBON

INTERMEDIATE  
CARBON  
**320 GPa**

SYSTEMATIC HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



IMPACT
APPROX. 1290 g (19")
DEVISED FOR LOW WEIGHT AND HIGH STRENGHT
TRUE MONOCOQUE FRAME
HIGH MODULUS CARBON 320 GPa
FSA ORBIT-CARBON ASYMMETRICAL INTEGRATED HEADSET
CANTILEVER AND DISC BRAKE COMPATIBLE

*isaac*  
TECHNICAL CARBON

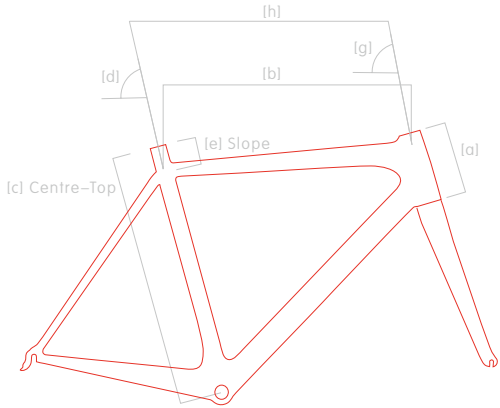
HIGH MODULUS  
CARBON  
**320 GPa**

SYSTEMATIC HAND LAY-UP  
PRESSURE-MODULED MONOCOQUE

ANGLO-GERMAN ENGINEERING



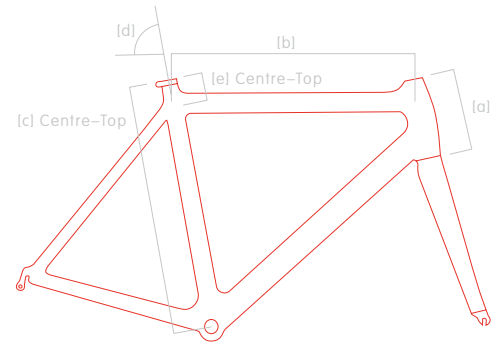
ROAD



ULTRA SONIC  
SONIC

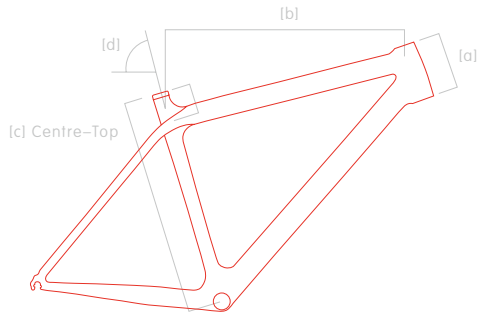
Size	[a] Head- Tube Length	[b] Top-Tube Length (HORIZONTAL)	[h] Top-Tube Length (SLOPE)	[c] Seat-Tube Length (C to T)	[d] Seat- Tube Angle	[g] Head- Tube Angle	[e] Slope
51	144 mm	528 mm	514 mm	510 mm	74.5°	72.5°	62 mm
54	160 mm	545 mm	531.6 mm	540 mm	74°	73°	60 mm
55.5	176.5 mm	560 mm	546.5 mm	555 mm	74°	73°	59 mm
57	189 mm	570 mm	557 mm	570 mm	73.5°	73.5°	63 mm
60	214 mm	598 mm	583.2 mm	600 mm	73.5°	73.5°	58 mm

FORCE  
PASCAL



Size	[a] Head Tube	[b] Top Tube	[c] Seat Tube	[d] Angle	[e] Slope	Inseam Length
48 (Force)	124 mm	510 mm	480 mm	75.0°	30 mm	- 79
51	144 mm	525 mm	510 mm	74.5°	30 mm	77 - 82
54	164 mm	545 mm	540 mm	74.0°	35 mm	80 - 83
55.5	176.5 mm	557.5 mm	555 mm	74.0°	35 mm	82 - 85
57	189 mm	570 mm	570 mm	73.5°	40 mm	84 - 87
58.5	201.5 mm	582.5 mm	585.0 mm	73.5°	40 mm	86 - 89
60	214 mm	595 mm	600 mm	73.5°	45 mm	88 - 93

IMPACT



Size	[a] Head Tube	[b] Top Tube	[c] Seat Tube	[d] Angle	[e] Slope	Inseam Length
16,5	115 (125) mm	520 mm	405 mm	73,5°	60 mm	–
17.5	125 mm	540 mm	445 mm	73.5°	55 mm	77 - 85
19	135 mm	570 mm	485 mm	73.5°	55 mm	82 - 87
20.5	145 mm	590 mm	525 mm	73.5°	55 mm	86 - 93

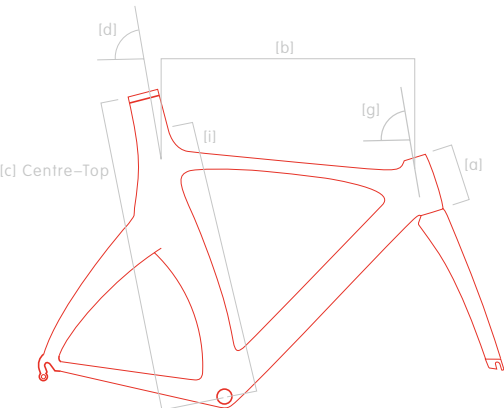
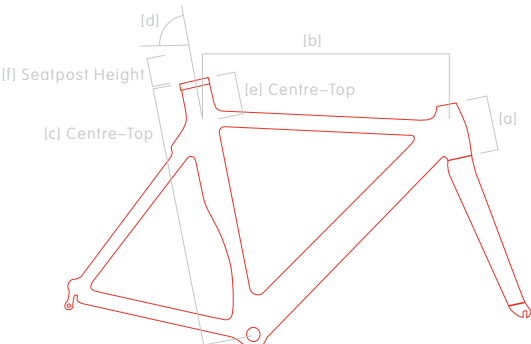
EFFICIENCY

Size	[a] Head Tube	[b] Top Tube	[c] Seat Tube	[d] Angle	[e] Extension	[f] BB to Saddle Rail	Inseam Length
XS	116mm	525mm	510mm	76.0°	50mm	min 630mm - max 760mm	- 83
S	116mm	539mm	540mm	76.0°	50mm	min 660mm - max 790mm	80 - 86
M	135mm	557mm	560mm	76.0°	50mm	min 680mm - max 810mm	84 - 88
L	158mm	575mm	580mm	76.0°	50mm	min 700mm - max 830mm	88 - 95

JOULE AEROTIC PRO\*  
JOULE AEROTIC\*

Size	[a] Head Tube Length	[b] Top Tube Length (HORIZONTAL)	[c] Seat Tube Length (C to T)  (ONLY JOULE AEROTIC PRO)	[d] Seat Tube Angle	[g] Head Tube Angle
XXS	90 mm	515 mm	700 mm	76,5°	72°
XS	100 mm	520 mm	760 mm	76°	72°
S	100 mm	539 mm	780 mm	76°	72°
M	135 mm	557 mm	800 mm	76°	73°
L	158 mm	575 mm	800 mm	76°	73°

TRIATHLON/  
TIMETRIAL



MTB

The given inseam measurements are approximate suggestions only. They are provided to give a simple overview of sizing. A complete geometrical diagram for each model and size can be found at [www.isaac-carbon.com](http://www.isaac-carbon.com). Isaac recommends use of the Bikefitting system for a correct determination of specific frame size and optimum cycling position. [www.bikefitting.com](http://www.bikefitting.com)

**\* Joule Aerotic Pro and Joule Aerotic are available in five sizes. The max./min. saddle height dimensions, and complete geometrical data, can be found at [www.isaac-carbon.com](http://www.isaac-carbon.com)**



ISAAC BRAND





## NEWTON

Irrational thinking, prejudice, superstition and dogma - there has always been a lot of it about. Isaac Newton was the man who cut through the nonsense, and brought proven reason and order to our understanding of everything. Newton was a true philosopher who showed, once and for all, that there is a physical truth, and an unvarying set of rules that govern all matter. Isaac has not only taken Newton's name, but also his philosophy and idealism. Isaac has ignored convention and challenged the accepted norms, to deliver a range of frames that have been proven, time and again, to provide superior performance.

## HISTORY

Tradition can provide a concrete barrier against advancement. There are no such obstacles at Isaac, which began in 2001, at the very dawn of carbon monocoque technology. Isaac was a true pioneer. As one of the few brands to work purely in carbon, Isaac blazed a trail of innovation at the head of a revolution. Isaac looks only ahead, and invests little value in the retrospective. Isaac takes history as a resource of valuable experience to learn from, rather than a method of self-congratulation.

## A PHILOSOPHY

Whilst a man may covet a special watch or a sleek car, he shares a much more intimate relationship with his competition bicycle. As with any really worthwhile liaison, there should be excitement, passion, fascination, obsession, loyalty, trust, care, toil and pain. Whilst Isaac is dedicated to mechanical performance and technical detailing, the consideration of emotion is primarily important. An Isaac feels special, and rewards like no other. Isaac's philosophy, its very reason for being, is to deliver the rare mix of emotions that come from that elusive, perfect ride.



## EXCLUSIVITY

Isaac makes frames totally by hand, one at a time. There is no automation or pre-fabrication. This limits production capacity, and only a finite quantity of each model will be produced per season. You will not see Isaac in every bike shop, because not every retailer meets Isaac's exacting standards for quality of expertise, experience and service. Isaac does not produce mundane, utility or leisure machines. Every item that bears the Isaac name is a true high-end, competition product, conceived from the outset to optimise your sporting performance.







## THE MAKING OF ISAAC

Every Isaac frame is a true monocoque, with a continuous, one-piece, front triangle. There is only one way to make a monocoque frame, and that is by hand. So, Isaac's dedicated production facility is a quiet place. There are no surly machines; just dextrous and dedicated human fingers, cutting carbon prepreg with hand shears and laying it - as strictly dictated by a detailed production plan - over cores and into moulds. Carbon monocoque production is a magical process, whereby limp and sticky fabric patches are shaped, arranged, assembled, inflated, pressed, cured and bonded into a finished structure with truly amazing mechanical properties. The transformation, and the finished product, is little short of miraculous.





## TRIATHLON RACE KIT

An exclusive boxed kit, containing three alternative seat clamp units, is supplied with every Joule Aerotic Pro frameset. The standard, long clamp gives full adjustment. The short clamp saves weight and allows a lower position. The cranked clamp gives an effective seat angle of seventy eight degrees. This set is available as an accessory for the Joule Aerotic.

## CRASH REPLACEMENT

An exclusive service for an exclusive brand – Isaac Crash Replacement. Crashing hurts and, when the scrapes and bruises have healed, replacing a frame can really hurt! So, we have devised a scheme to soften the blow somewhat. Damage your Isaac frame set in a mishap within two years of purchase, and get a replacement frame set at around half price. We sincerely hope that you never need this service. But unfortunately, just sometimes, the unthinkable does happen.

Terms and conditions apply. Please go to [www.isaac-carbon.com](http://www.isaac-carbon.com) for more details.



ISAAC International Ltd.  
Head Office  
  
Fort Fareham  
Hants PO14 1FD  
England  
isaac-carbon.com

ISAAC recommends:



Please ensure that the appropriate Isaac manual or instruction sheet is provided by the retailer when purchasing any Isaac product. Frame sets are supplied with an owner’s manual, and all other products are supplied with an instruction sheet. It is important that the instructions are read and understood by the consumer, prior to use of the product. As with any complete cycle or cycle part, failure to follow the instructions for correct fitting procedures and/or conditions of use could result in an accident. Please retain any manual or instruction sheet for future reference.

Isaac products have been developed and manufactured with great care for the purpose of competition and training cycling appropriate to their specific type. Under European (EU) consumer law the purchaser has full statutory warranty rights within the first two years of purchase.

For frames only, Isaac International Limited offers a further warranty extension period of an additional three years. Thus giving a total of five years warranty cover (from date of retail purchase), against failure of the frame due to defects in materials or workmanship. The manufacturer’s extended warranty is offered in addition to the consumer’s statutory rights, which remain unaffected. The manufacturer’s extended warranty is subject to specific limitations, terms, and conditions. The extended warranty offer applies only to the original retail purchaser (the consumer) on completion/submission of the extended Warranty Registration Form, to be found on the Isaac website: [www.isaac-carbon.com](http://www.isaac-carbon.com).

This warranty is not transferable. Statutory consumer legislation may be different in non-EU markets. Specifications shown in this brochure are based upon the latest available information at the time of printing. The colours and finishes reproduced in this brochure are subject to the limitations of the printing process and may vary from the actual colour and paint finish. In line with our policy of continual product improvement Isaac Ltd. reserves the right to make changes at any time, without notice, to prices, colours, material, design, shape, specifications and models, and to discontinue items.

Bike build equipment shown in this brochure is a suggestion only. Complete bike specifications and options may vary from country to country. Please check with your Authorised Isaac Stockist or Isaac National Distributor for full details of bike build options. Isaac operates a continuous development programme and reserves the right to amend specifications without prior notice. Quoted weights and dimensions are taken from actual sample products and may vary within accepted tolerances.

© Isaac International Limited 2008/2009. All rights reserved.  
Isaac designs, innovations and trademarks are protected by the appropriate international patents, registration and statutory copyright law. For consumer enquiries please contact your local dealer or national distributor.



**ISAAC International Ltd.**

Sales & Marketing / Marketing / International Distribution

Marienberger Straße 6c  
38122 Braunschweig / Germany  
tel +49(0)531/87609-30  
fax +49(0)531/87609-31  
sales@isaac-carbon.com

To find your local stockist please visit **isaac-carbon.com**

Price 2.50 EUR | Your authorised ISAAC Stockist