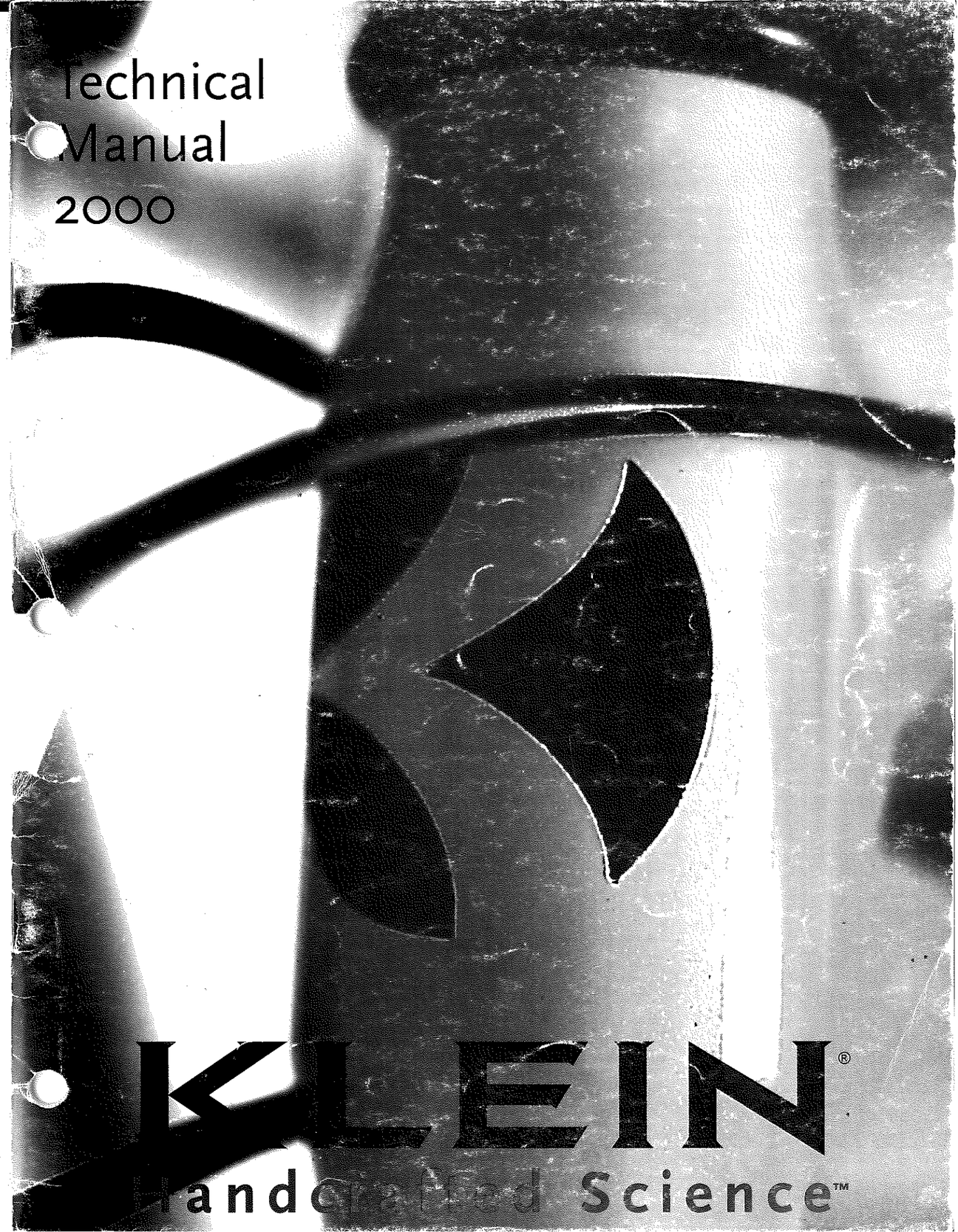
Technical Manual 2000



KLEIN®

Handcrafted Science™

The importance of good fit

Its an easy concept to grasp: for a bike to be comfortable, it must fit well.

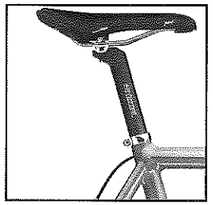
Good fit is also a major part of performance. With a poor fit, the rider's weight balance may be off, degrading handling. If the rider is not correctly positioned for power, a bike may feel (and be) slow. And an uncomfortable cyclist wastes a great deal of muscle energy coping with the discomfort, slowing them and bringing on early fatigue.

A slow, poor handling bike that is uncomfortable makes for an unhappy cyclist. Or worse, an ex-cyclist. If we're lucky, this sad cyclist may stick with it long enough to perhaps find another bike that makes them happier, or another shop who will correctly fit them to their existing bike. In each case way we both stand to lose.

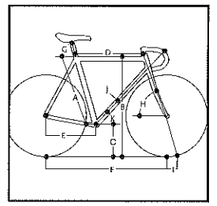
Old fitting methods



Some people still use standover clearance to size bikes. It wasn't many years ago that almost all bikes had horizontal top tubes. If we assume that those bikes had a fairly narrow range of bottom bracket heights, and that all stems were pretty similar in the amount of height adjustment they offered, that meant that the top tube could be used as an indicator of handlebar height, as well as seat height. Even so, standover did not take into account reach, an important part of fit that accounts for the distance from the saddle to the handlebars. Especially with modern frame design, standover can't tell us where either the seat or the handlebar goes. So standover only sort of worked as a fitting guide in the past, and for modern bikes doesn't work at all.



Another old bike fitting maxim was that to correctly fit a racer on a road bike, there should be about four inches of seatpost showing, and the top of the stem should be no lower than two inches below the top of the saddle. While this may not be universally true, it brings up several important points in bike fitting that are largely overlooked today. This 'four inches of post' fit rule is for a road racer, who (may) be comfortable in a bent over, aero position. The average cyclist is likely to be more comfortable with their bars even with the top of their saddle. With sloping top tubes, wildly varying saddle designs, and modern stem configurations, this method can't tell us where the seat or bars go either, so the seatpost rule can't be used.



Some people use a geometry chart to fit bikes. Since most geometry charts don't list head tube length or the fork's axle-to-crown dimensions, there is no way to know how high the handlebars are. The charts usually list seattube angle and top tube length, but without some complex math you can't know the relationship of the bars to the bottom bracket. And all those angles don't tell you much either. As an example, varying the seattube angle a degree effectively changes the top tube length by around a centimeter (depending on frame size)without actually moving the rider any closer or further from the bars. So basically, standard geometry charts tell you very little about a bike's fit.

Fitting modern bikes

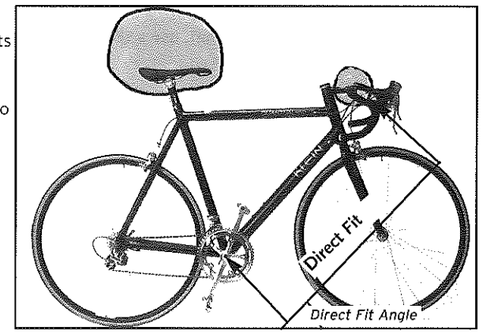
Today's bikes have lots of bottom bracket height variation, they use sloping top tubes, and many of them use Ahead or Airheadset™ type stems with varying rise, or riser bars. But talking about where the frame tubes are overlooks what's really important in bike fit; the location of the rider contact points of hands, feet, and seat. If these points are correct, the bike will be comfortable, the rider more efficient, and assuming they are properly balanced over the wheels the bike will handle its best.

If you force a rider into an uncomfortably bent-over position, their back will curve excessively and cut off their breathing. A stiff neck may prevent them from seeing the road well, and since head position is important to balance they may have problems steering. If they place too much weight on their hands, they may fatigue early or suffer from excessive pressure on their hand tissues. Basically, having a poorly fitted bike is a pain.

Direct Fit

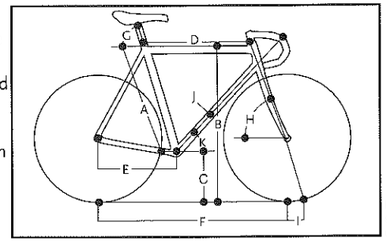
To properly fit a rider, you have to define the location of the three points of contact: the seat, the hands, and the feet. On a bike, these points correspond to the saddle, the grips (or top of the lever hoods on a road bike) and the pedals. To make the pedal location easier to locate, and since there is scant variation in crank length, we use the bottom bracket to reference foot position.

Of the three points on the bike, the hardest to adjust is the bottom bracket, having no adjustability. Next is the grips which have limited adjustability, even if parts are substituted.



The part with the most adjustment is the saddle, which can be moved up and down, or back and forth, a great deal. Since the seat has the widest range of adjustment and is the easiest to adjust, seat tube length should be the least of our worries in selecting frame size.

Since the hardest part of bike fit to adjust is the relationship between the bottom bracket and handlebars, the most efficient way to fit a bike should be to choose a bike with a frame design and size that places the handlebars where the customer wants them. In Klein's new Direct Fit system, we define this relationship in both distance and angle. For those of you who have sold Kleins for some time, you will remember that Klein ATBs used to be sized in inches corresponding to an imaginary horizontal line from the top of the head tube. Direct Fit is based on the same principle: hand position above the bottom bracket is critical for good fit.



Direct Fit Geometry Details on Page 23.

Defining a good fit

We've all seen the pictures of Greg LeMond time trialing in the Tour de France. His back is so flat he could balance dinner service for four without spilling the Perrier. This obviously worked for Greg, but most cyclists don't have that kind of flexibility.

When looking at a cyclists positions, we don't go by leg length or where the knee is over the pedal. Instead, we look for body shapes. Here we'll discuss those shapes in terms of the appropriate adjustments. Also bear in mind the needs of the customer; their fitness, experience, age, sex, and personal riding style. Each person is different, so there really are no rules, just guidelines.

Since the seat has the most adjustment, we may as well make those adjustments first. The fore/aft adjustment must be made in conjunction with seat height. As you move the saddle in any direction, it will effect the angles of the lower limbs. Start with the saddle level, or slightly nose-down.

- Seat height

The foot (from ball to heel) should be flat at the bottom of the pedal stroke, with a slight bend in the knee. Check that the rider does not roll their hips side to side when they pedal. For novice riders, those without a lot of cycling fitness, or inexperienced off-road riders, go slightly lower. Runners may find a higher position allows them better usage of their running-trained muscles.

- Seat fore/aft

On an average rider of average build on some bikes, the KOPS (Knee Over Pedal Spindle) rule may work. But don't feel tied to this. There are a lot of reasons why. Consider two riders of exactly the same proportions and skill level, except one has small feet and the other has large feet; using the KOPS method would put very different angles in their ankles, knees and hips. Now consider two riders with exactly the same leg dimensions, except one has a lean physique with a lot of shoulder mass, while the other has more girth at the hips and stomach; the difference in their center of gravity will make the bike handle differently. And consider a road racer who wants to take up mountain bikes; to use those well trained cycling muscles for power they need to maintain similar angles and range of motion, so as they rotate their upper body into a mountain bike position, they need to rotate their lower body as well which moves their knees back.

So when considering fore/aft position, adjust for center of gravity and handling. Look at the angle between the torso and thigh at both the bottom and the top of the pedal stroke. Watch the rider transition between sitting and standing on the bike; it should be natural when standing to move forward of the saddle. Consider their foot size. And take into account the balance between the seat and bars; if they complain of excess hand pressure, one way to alleviate it is to move them back on the bike, putting more weight on the saddle. Re-check the seat height.

- Handlebar height

The back should be mostly straight, with no sudden curves. Any sudden curves indicate the bar needs to be raised. Lower back pain generally means the same thing, although lower back pain also comes from excessive saddle height.

Generally, the handlebars should be lowered as far as they can go without being too low as indicated above.

- Stem length

Arms should be slightly bent at the elbow. This allows the muscles to work as shock absorbers and prevents the ground from steering the bike by transmitting shock directly to the rider's torso. Elbow should be forward of the shoulder, allowing the arms and torso to form an 'arch' between the bars and saddle.

If the elbow is too far rearward, use a longer stem. If the shoulders roll forward (toward the middle of the chest) from their normal orientation (like when standing), use a shorter stem.

Determining what bike will fit

We've now defined the three fit dimensions to meet our goal of fitting the customer comfortably. To realize this goal, we need to have tools. We have provided you in the following pages with Klein Direct Fit information on all models, as well as a comparison to models from a popular bike brand, Trek. We even show some of the variations possible by changing stem lengths, rises, and spacer stacks on our year 2000 models.

Fine tuning

The Direct Fit chart only gets you to frame size. Past this recommendation, we leave it to your expertise to determine if the customer needs additional fitting. At this point, saddles may be changed to personal preference. Stems and seatposts can be raised and lowered, or parts changed to accommodate additional adjustment. With the Direct Fit chart getting you this far so fast, you will have more time for that personal, expert touch that defines you as the service oriented bike dealer in your area.

Other Direct Fit details

One of the problems for an active cyclist is getting both their road and mountain bikes to fit right. The problem is that most riders sit differently on a road bike than on a mountain bike. On a road bike, aerodynamics are very important and the terrain (pavement) is fairly consistent. On a mountain bike, handling and control are more important and the terrain is pretty unpredictable. With these differences, riders generally lean over more on road bikes than on mountain bikes. However, if a person is trained to pedal efficiently on one bike, they need to mirror the angles of their joints, and the range of motion of their muscles, on both bikes. To do this, use the Direct Fit from one bike and apply it to the other. By rotating the rider about the bottom bracket, their musculature can be used in much the same way on two very different bikes.

Its normal to find slight variations in Direct Fit measurements, since stems come in large increments. Variations in Direct Fit of less than 10mm are probably not noticeable to most riders.

Final adjustments (a disclaimer)

Like all sizing systems, ours is not 100%. There is enough variance in both human anatomy and riding styles that some people won't quite fit our recommendations. Any system which is based on body dimensions is going to fail, for the simple reason that length of limbs is not the only factor in fitting a bike.

- Flexibility is very important to bike fitting. Even some very fit racers cannot touch the floor with their knees locked. They certainly won't find it comfortable to be in a laid-out, aero position for long. Consider the lack of flexibility of Joe Average, and the aero position is intolerable.
- Cycling familiarity. If a rider hasn't spent a lot of time on a bike, they may find it difficult to balance when bent over.
- Body weight effects position. If a rider is, ummmm, stout, those bars can be hard to reach.
- A fitter rider may be able to ride a higher saddle position more comfortably.
- People vary. Different people of the same height can have different length of limbs. People of similar dimensions can have differing muscle attachments. Varying levels of strength or fitness can mean the same person may not be comfortable with their racing position after a long layoff from cycling.

These are just a few of many more variables. The important thing is not that Direct Fit eliminates the need for custom fitting. Direct Fit just better describes how a bike fits, giving a basis for picking the right frameset in the first place.

Confusion over Klein fit

Some of our dealers have had a hard time picking the right size of Klein bike. Stuck in the land of seat tube lengths, it can be bewildering finding the right bike. So here we give the comparison of Direct Fit of Klein platforms to a few popular Trek models.

Quantum	51	53	55	57	59	61	
	765	797	834	854	883	902	
	43.1	42.9	41.9	42.5	42.6	43.0	
Trek 5200	50	52	54	56	58	60	62
	767	791	802	835	850	884	898
	47.1	44.9	44.7	43.7	44.9	44.5	45.6
Mantra	S	M	L	XL			
	802	832	866	898			
	47.2	43.3	42.4	44.0			
Attitude Comp	XS	S	M	L	XL		
	773	813	839	860	907		
	53.3	50.6	47.5	47.4	48.5		
Trek 7000	XS	S	M	L	XL		
	770	801	832	851	882		
	53.6	49.7	48.9	49.2	49.2		

You can also measure other brands or models of bikes in your store for comparison. These dimension are calculated from the center of the bottom bracket to the center of the hand position- the grips on a mountain bike, or the bars just behind the lever hoods on a road bike. All you need is a metric tape measure and a $1.99 protractor. The Direct Fit angle is easy to measure by placing the protractor on the floor and pulling a string from the protractor, through the centerline of the bottom bracket, to the hand position.

All dimension are given with the bars in the highest position, with all spacers under the stem.

Suspension bikes should be measured in a sagged position.

Comparing size ranges with parts variations

Here's what's possible in adapting the Direct Fit by changing a few parts or moving spacers. There are even more adjustments possible, such as riser bars. Note that these changes can create the equivalent of the next bike size.

Quantum (spec)	51	53	55	57	59	61
Stem length	80	90	110	110	120	120
Stem angle	0	0	0	0	0	0
Spacers	25	25	25	25	25	25
	765	797	834	854	883	902
	43.1	42.9	41.9	42.5	42.6	43.0
(small setup)						
Stem length	60	70	70	90	90	100
Stem angle	-17	-17	-17	-17	-17	-17
Spacers	0	0	0	0	0	0
	723	753	773	805	826	851
	40.1	39.7	40.1	39.0	39.8	39.5
(large setup)						
Stem length	90	110	120	130	140	150
Stem angle	0	0	0	0	0	0
Spacers	25	25	25	25	25	25
	773	814	842	870	899	927
	42.4	41.6	41.3	41.3	41.4	41.2

Mantra (spec)	S	M	L	XL
Stem length	105	120	135	135
Stem angle	7	7	7	7
Spacers	25	25	25	25
	802	832	866	898
	47.2	43.3	42.4	44.0
(small setup)				
Stem length	75	90	105	105
Stem angle	7	7	7	7
Spacers	0	0	0	0
	761	791	826	858
	46.4	42.3	41.4	43.1
(large setup)				
Stem length	120	135	150	150
Stem angle	15	15	15	15
Spacers	25	25	25	25
	822	852	888	920
	48.2	44.5	43.8	45.3

Attitude Comp (spec)XS	S	M	L	XL	
Stem length	90	105	120	120	135
Stem angle	15	15	15	15	15
Spacers	25	25	25	25	25
	773	813	839	860	907
	53.3	50.6	47.5	47.4	48.5
(small setup)					
Stem length	75	90	105	105	105
Stem angle	7	7	7	7	7
Spacers	0	0	0	0	0
	740	780	806	827	859
	50.7	47.7	44.3	44.2	46.1
(large setup)					
Stem length	105	120	135	150	150
Stem angle	15	15	15	15	15
Spacers	25	25	25	25	25
	787	827	853	889	921
	52.7	50.0	47.0	46.4	48.0

Overall body height compared to Direct Fit dimensions

To make this system easy to use, we rely on overall body height. At first glance, this may seem inaccurate or oversimplified. Here's why we chose to use it this way.

1. Most customers already know how tall they are. You don't have to measure them, which takes time and may invade their sense of privacy.

2. Measuring body dimensions requires skill and training. Even with both, two different people may measure the same person differently. Another factor is clothing and body weight. Its easy to find specific points on a person with low body fat. It can be much more difficult on someone of higher body fat.

3. As explained earlier, as riders grow older, more experienced, or change fitness levels, their bodies change. These changes require their position to change. But the length of their limbs probably has not changed. So physical measurements are not an accurate method of adjusting bikes anyway.

So lets keep it simple. Ask them how tall they are. Ask them what kind of riding they want to do. Then look on the chart to see what Direct Fit dimension comes closest. Adjust according to their experience level, fitness, and age. And remember that custom fitting the right size frame is much easier than trying to fit someone on a too small or too large frame.

For a given level of rider, the Direct Fit measurement should be the same whether on a road bike with drop bars, or a mountain bike. But for two riders of the same height of differing riding styles, a more upright position will measure longer by about 5mm per degree. As an example, a 5'6" racer may fit a 44 degree bike of 790mm. But a 5'8 casual rider on a 50 degree bike should try a 820mm Direct Fit. Also note that women, due to their different body structure, may find it more comfortable to ride bikes with a higher angle.

Most people will fit more than one frame size. When faced with a choice, don't fall for the old "buy the smallest bike you can ride". Instead, focus on finding the bike that puts the handlebars in the customers preferred position. Remember that a higher (larger) Direct Fit Angle means a more upright position.

	Racer (40-48° angle)	Recreational (over 50° angle)
4'8"	<720	<750
4'10"	700-735	725-760
5'	720-750	740-780
5'2"	735-765	755-795
5'4"	745-780	775-810
5'6"	765-800	790-830
5'8"	805-840	805-870
5'10"	825-865	825-895
6'	845-890	865-920
6'2"	875-910	890-940
6'4"	885-930	910+
6'6"	905+	

Our Price: $_____

Attitude

Main tubes	Klein Power tubing			
Stays	Klein Gradient aluminum			
Fork	Rock Shox Judy XC	80mm travel		
Headset	Dia-Compe SE-1 Aheadset	25.4/34.0/30.0, 25.5mm stack		
Handlebars	ICON Onyx, 6061, 5° bend	25.4mm clamp diameter		
Stem	ICON Onyx, direct connect	41.0mm steerer clamp height		
Grips	Bontrager Ergo			
Shifters	Shimano Deore RapidFire+			
Front derailleur	Shimano Deore	Down pull, 34.9 mm/ 1 3/8"		
Rear derailleur	Shimano Deore LX SGS			
Brakes	Lee Chi TX22 direct pull			
Brake levers	Lee Chi LV77E, direct pull			
Crankset	ICON Onyx, 4 arm 44/32/22	64/104 mm bolt hole circle		
Bottom bracket	Shimano BB-LP27	73 x 113		
Pedals	Bontrager RE-1, clipless	9/16" axle		
Cassette	Shimano HG50 11-32	9spd		
Chain	Shimano HG72	108 length, 9 speed		
Front wheel	Bontrager Superstock	Velox 19mm rimstrip		
Front tire	Bontrager Super-X, folding	49/48		
Rear wheel	Bontrager Superstock	Velox 22mm rimstrip HyperGlide cassette, 8/9spd, 135mm O.L.D.		
Rear tire	Bontrager Super-X, folding	47/46		
Tubes	Presta valve, ultra light			
Spokes	DT 14G stainless	24 spoke Radial Front 254	28 spoke 3x / radial Rear 267/251 rear (D/ND)	
Saddle	SDG Satellite Comp, CrMo			
Seatpost	SP-312 alloy micro-adjust	31.6mm diameter		
Seat binder	Alloy w/integral bolt	36.4 clamp diameter		
Additionals	3 water bottle mounts, CCD, replaceable derailleur hanger			
Colors	Light Blue / Black fork • Black decal			

		S	M	L	XL
Frame sizes		S	M	L	XL
Direct Fit		808	838	859	906
Fit angle		51.1	47.4	47.3	48.4
Handlebar width		580	580	580	580
Stem length		105	120	120	135
Stem angle		15	15	15	15
Crank length		170	175	175	175
Seatpost length		320	370	370	370
Steerer, mm		193	193	213	253
Fork length		442 mm axle-crown race			
Head angle		70.8	71.3	71.4	71.4
Seat angle		72.8	72.8	72.8	72.8
MM	Standover	707	739	775	818
	Seat tube	400	445	489	533
	Head tube	105	105	125	165
	Eff top tube	574	595	611	627
	Reach	642	683	699	727
	Chainstays	417	417	417	417
	BB height	295	300	303	305
	Offset	42	42	42	42
	Trail	72	69	69	69
	Wheelbase	1037	1055	1072	1090
IN	Standover	27.8	29.1	30.5	32.2
	Seat tube	15.7	17.5	19.3	21.0
	Head tube	4.1	4.1	4.9	6.5
	Eff top tube	22.6	23.4	24.1	24.7
	Reach	25.3	26.9	27.5	28.6
	Chainstays	16.4	16.4	16.4	16.4
	BB height	11.6	11.8	11.9	12.0
	Offset	1.7	1.7	1.7	1.7
	Trail	2.9	2.7	2.7	2.7
	Wheelbase	40.8	41.5	42.2	42.9

	22	32	44
11	52	76	105
12	48	70	96
14	41	60	82
16	36	52	72
18	32	47	64
21	27	40	55
24	24	35	48
28	21	30	41
32	18	26	36

26.5 lb.
12.03 kg

Attitude Comp

Our Price: $ _____

Main tubes	Klein Gradient aluminum		
Stays	Klein Gradient aluminum		
Fork	Manitou SX	80mm travel	
Headset	Dia-Compe SA Aheadset, alloy	25.4/34.0/30.0, 27.0mm stack	
Handlebars	ICON Onyx, 6061, 5° bend	25.4mm clamp diameter	
Stem	ICON Onyx, direct connect	41.0mm steerer clamp height	
Grips	Bontrager Ergo		
Shifters	Shimano Deore LX RapidFire+		
Front derailleur	Shimano Deore LX	Down pull, 34.9 mm/ 1 3/8"	
Rear derailleur	Shimano Deore XT SGS		
Brakes	Avid Single Digit 10, direct pull		
Brake levers		Integrated brake/shift	
Crankset	ICON Onyx, 4 arm 44/32/22	64/104 mm bolt hole circle	
Bottom bracket	Shimano BB-UN52	73 x 113	
Pedals	Bontrager RE-1, clipless	9/16" axle	
Cassette	Shimano HG70 11-32	9spd	
Chain	Shimano HG72	108 length, 9 speed	
Front wheel	Bontrager Superstock	Velox 19mm rimstrip	
Front tire	Bontrager Super-X, folding	49/48	
Rear wheel	Bontrager Superstock	Velox 22mm rimstrip HyperGlide cassette, 8/9spd, 135mm O.L.D.	
Rear tire	Bontrager Super-X, folding	47/46	
Tubes	Presta valve, ultra light		
Spokes	DT 14G stainless	24 spoke Radial Front 254	28 spoke 3x / radial Rear 267/251 rear (D/ND)
Saddle	SDG Satellite Comp, CrMo		
Seatpost	ICON Onyx, 6061	31.6mm diameter	
Seat binder	Alloy w/integral bolt	36.4 clamp diameter	
Additionals	3 water bottle mounts, CCD, replaceable derailleur hanger		
Colors	Yellow/Red Linear / Red fork • Black logo		

	22	32	44
11	52	76	105
12	48	70	96
14	41	60	82
16	36	52	72
18	32	47	64
21	27	40	55
24	24	35	48
28	21	30	41
32	18	26	36

25.3 lb.
11.46 kg.

	XS	S	M	L	XL
Frame sizes					
Direct Fit	773	813	839	860	907
Fit angle	53.3	50.6	47.5	47.4	48.5
Handlebar width	580	580	580	580	580
Stem length	90	105	120	120	135
Stem angle	15	15	15	15	15
Crank length	170	170	175	175	175
Seatpost length	270	270	350	350	350
Steerer, mm	179	194	194	214	254
Fork length	442 mm axle-crown race				
Head angle	70.2	70.8	71.3	71.4	71.4
Seat angle	72.8	72.8	72.8	72.8	72.8
Standover	673	707	739	775	818
Seat tube	356	400	445	489	533
Head tube	90	105	105	125	165
Eff top tube	551	574	595	611	627
Reach	605	648	682	699	727
Chainstays	417	417	417	417	417
BB height	290	295	300	303	305
Offset	38	38	38	38	38
Trail	80	77	74	73	73
Wheelbase	1017	1037	1055	1072	1090
Standover	26.5	27.8	29.1	30.5	32.2
Seat tube	14.0	15.7	17.5	19.3	21.0
Head tube	3.5	4.1	4.1	4.9	6.5
Eff top tube	21.7	22.6	23.4	24.1	24.7
Reach	23.8	25.5	26.9	27.5	28.6
Chainstays	16.4	16.4	16.4	16.4	16.4
BB height	11.4	11.6	11.8	11.9	12.0
Offset	1.5	1.5	1.5	1.5	1.5
Trail	3.2	3.0	2.9	2.9	2.9
Wheelbase	40.0	40.8	41.5	42.2	42.9

Attitude Race

Our Price: $ _____

Main tubes	Klein Gradient aluminum		
Stays	Klein Gradient aluminum		
Fork	Manitou Mars	80mm travel	
Headset	Dia-Compe SA Aheadset, alloy	25.4/34.0/30.0, 27.0mm stack	
Handlebars	ICON Graphite, 2014, 7° bend	25.4mm clamp diameter	
Stem	ICON Graphite, direct connect	39.5mm steerer clamp height	
Grips	Bontrager Ergo		
Shifters	Shimano Deore LX RapidFire+		
Front derailleur	Shimano Deore LX	Down pull, 34.9 mm/ 1 3/8"	
Rear derailleur	Shimano XTR		
Brakes	Avid Single Digit 20, direct pull r		
Brake levers		Integrated brake/shift	
Crankset	ICON Graphite, 4 arm 44/32/22	64/104 mm bolt hole circle	
Bottom bracket	Shimano BB-UN52	73 x 113	
Pedals	Time Atac, clipless	9/16" axle	
Cassette	Shimano HG70 11-32	9spd	
Chain	Shimano HG72	108 length, 9 speed	
Front wheel	Bontrager Race	Velox 19mm rimstrip	
Front tire	Bontrager Super-X, 127tpi, folding	49/48	
Rear wheel	Bontrager Race	Velox 22mm rimstrip HyperGlide cassette, 8/9spd, 135mm O.L.D.	
Rear tire	Bontrager Super-X, 127tpi, folding	47/46	
Tubes	Presta valve, ultra light		
Spokes	DT 14/15G butted stainless, alloy nips	24 spoke Radial Front 255	28 spoke 3x / radial Rear 267/251 rear (D/ND)
Saddle	SDG Satellite Comp, CrMo/leather		
Seatpost	ICON Graphite, 2014	31.6mm diameter	
Seat binder	Alloy w/integral bolt	36.4 clamp diameter	
Additionals	3 water bottle mounts, CCD, replaceable derailleur hanger		
Colors	Dark Blue/Light Blue Linear / Blue fork • White logo		

	22	32	44
11	52	76	105
12	48	70	96
14	41	60	82
16	36	52	72
18	32	47	64
21	27	40	55
24	24	35	48
28	21	30	41
32	18	26	36

24.5 lb.
11.12 kg.

		S	M	L	XL
Frame sizes					
Direct Fit		803	832	853	899
Fit angle		49.7	45.8	45.8	46.7
Handlebar width		580	580	580	580
Stem length		105	120	120	135
Stem angle		7	7	7	7
Crank length		170	175	175	175
Seatpost length		270	350	350	350
Steerer, mm		193	193	213	253
Fork length		442 mm axle-crown race			
Head angle		70.8	71.3	71.4	71.4
Seat angle		72.8	72.8	72.8	72.8
MM	Standover	707	739	775	818
	Seat tube	400	445	489	533
	Head tube	105	105	125	165
	Eff top tube	574	595	611	627
	Reach	649	691	707	736
	Chainstays	417	417	417	417
	BB height	295	300	303	305
	Offset	38	38	38	38
	Trail	77	74	73	73
	Wheelbase	1037	1055	1072	1090
IN	Standover	27.8	29.1	30.5	32.2
	Seat tube	15.7	17.5	19.3	21.0
	Head tube	4.1	4.1	4.9	6.5
	Eff top tube	22.6	23.4	24.1	24.7
	Reach	25.6	27.2	27.8	29.0
	Chainstays	16.4	16.4	16.4	16.4
	BB height	11.6	11.8	11.9	12.0
	Offset	1.5	1.5	1.5	1.5
	Trail	3.0	2.9	2.9	2.9
	Wheelbase	40.8	41.5	42.2	42.9

Adroit Race

Our Price: $ _____

Main tubes	Klein Gradient aluminum			
Stays	Klein Gradient aluminum			
Fork	Manitou Mars C	80mm travel		
Headset	Klein Airheadset	33.3/ 1.75-2" /39.7, 0mm stack		
Handlebars	Klein MC3, 2014, 9° bend	25.4mm clamp diameter		
Stem	Klein MC3	45.0mm steerer clamp height		
Grips	Bontrager Ergo			
Shifters	Shimano Deore XT RapidFire SL			
Front derailleur	Shimano Deore XT	Down pull, 34.9 mm/ 1 3/8"		
Rear derailleur	Shimano XTR SGS			
Brakes	Avid Single Digit 25, linear pull			
Brake levers		Integrated brake/shift		
Crankset	ICON Sterling, 4 arm 44/32/22	64/104 mm bolt hole circle		
Bottom bracket	Shimano BB-UN72	73 x 113		
Pedals	Time Atac, clipless	9/16" axle		
Cassette	Shimano XT 11-34	9spd		
Chain	Shimano HG72	108 length, 9 speed		
Front wheel	Bontrager Race Modified	Velox 19mm rimstrip		
Front tire	Bontrager Super-X, 127tpi, folding	49/48		
Rear wheel	Bontrager Race Modified	Velox 22mm rimstrip		
		HyperGlide cassette, 8/9spd, 135mm O.L.D.		
Rear tire	Bontrager Super-X, 127tpi, folding	47/46		
Tubes	Presta valve, ultra light			
Spokes	DT 14/15G butted stainless, alloy nips	24 spoke Radial Front	28 spoke 3x / radial Rear	
		255	267/251 rear (D/ND)	
Saddle	SDG Satellite Comp, CrMo/leather			
Seatpost	Thomson Elite	31.6mm diameter		
Seat binder	Alloy w/integral bolt	36.4 clamp diameter		
Additionals	3 water bottle mounts, CCD, replaceable derailleur hanger			
Colors	Black / Red fork • Red logo			

	S	M	L	XL
Frame sizes				
Direct Fit	797	827	848	894
Fit angle	49.6	45.5	45.5	46.5
Handlebar width	580	580	580	580
Stem length	105	120	120	135
Stem angle	6	6	6	6
Crank length	170	175	175	175
Seatpost length	330	330	330	330
Steerer, mm	193	193	213	253
Fork length	442 mm axle-crown race			
Head angle	70.8	71.3	71.4	71.4
Seat angle	72.8	72.8	72.8	72.8
MM Standover	707	739	775	818
Seat tube	400	445	489	533
Head tube	105	105	125	165
Eff top tube	574	595	611	627
Reach	647	690	706	735
Chainstays	417	417	417	417
BB height	295	300	303	305
Offset	38	38	38	38
Trail	77	74	73	73
Wheelbase	1037	1055	1072	1090
IN Standover	27.8	29.1	30.5	32.2
Seat tube	15.7	17.5	19.3	21.0
Head tube	4.1	4.1	4.9	6.5
Eff top tube	22.6	23.4	24.1	24.7
Reach	25.5	27.1	27.8	29.0
Chainstays	16.4	16.4	16.4	16.4
BB height	11.6	11.8	11.9	12.0
Offset	1.5	1.5	1.5	1.5
Trail	3.0	2.9	2.9	2.9
Wheelbase	40.8	41.5	42.2	42.9

	22	32	44
11	52	76	105
13	44	65	89
15	38	56	77
17	34	49	68
20	29	42	58
23	25	36	50
26	22	32	44
30	19	28	38
34	17	25	34

23.8 lb.
10.78 kg.

Our Price: $ _____

Adroit Pro

Main tubes	Klein Gradient aluminum			
Stays	Klein Gradient aluminum			
Fork	Manitou Mars CL	80mm travel		
Headset	Klein Airheadset	33.3/ 1.75-2" /39.7, 0mm stack		
Handlebars	Klein MC3, 2014, 9° bend	25.4mm clamp diameter		
Stem	Klein MC3	45.0mm steerer clamp height		
Grips	Bontrager Ergo			
Shifters	Shimano XTR RapidFire SL			
Front derailleur	Shimano XTR	Down pull, 34.9 mm/ 1 3/8"		
Rear derailleur	Shimano XTR SGS			
Brakes	Avid Single Digit Mag, linear pull			
Brake levers		Integrated brake/shift		
Crankset	Shimano XTR 4 arm 46/34/24	Splined/112/68 mm bolt hole circle		
Bottom bracket	Shimano XTR, cartridge	73 x 112.5		
Pedals	Time Atac Carbon, clipless	9/16" axle		
Cassette	Shimano XTR 12-34	9spd		
Chain	Shimano Dura-Ace	108 length, 9 speed		
Front wheel	Bontrager Race Lite	Velox 19mm rimstrip		
Front tire	Bontrager Super-X, 127tpi, folding	49/48		
Rear wheel	Bontrager Race Lite	Velox 22mm rimstrip		
		HyperGlide cassette, 8/9spd, 135mm O.L.D.		
Rear tire	Bontrager Super-X, 127tpi, folding	47/46		
Tubes	Presta valve, ultra light			
Spokes	DT Revolution 14/17G, alloy nips	24 spoke Radial Front	28 spoke 3x / radial Rear	
		252	267/251 rear (D/ND)	
Saddle	SDG Satellite Comp, Ti/leather			
Seatpost	Thomson Elite	31.6mm diameter		
Seat binder	Alloy w/integral bolt	36.4 clamp diameter		
Additionals	3 water bottle mounts, CCD, replaceable derailleur hanger			
Colors	Orange/Red Linear / Red fork • Black logo			

	S	M	L	XL
Frame sizes				
Direct Fit	797	827	848	894
Fit angle	49.6	45.5	45.5	46.5
Handlebar width	580	580	580	580
Stem length	105	120	120	135
Stem angle	6	6	6	6
Crank length	170	175	175	175
Seatpost length	330	330	330	330
Steerer, mm	193	193	213	253
Fork length	442 mm axle-crown race			
Head angle	70.8	71.3	71.4	71.4
Seat angle	72.8	72.8	72.8	72.8
MM Standover	707	739	775	818
Seat tube	400	445	489	533
Head tube	105	105	125	165
Eff top tube	574	595	611	627
Reach	647	690	706	735
Chainstays	417	417	417	417
BB height	295	300	303	305
Offset	38	38	38	38
Trail	77	74	73	73
Wheelbase	1037	1055	1072	1090
IN Standover	27.8	29.1	30.5	32.2
Seat tube	15.7	17.5	19.3	21.0
Head tube	4.1	4.1	4.9	6.5
Eff top tube	22.6	23.4	24.1	24.7
Reach	25.5	27.1	27.8	29.0
Chainstays	16.4	16.4	16.4	16.4
BB height	11.6	11.8	11.9	12.0
Offset	1.5	1.5	1.5	1.5
Trail	3.0	2.9	2.9	2.9
Wheelbase	40.8	41.5	42.2	42.9

	24	34	46
11	57	81	110
13	48	69	93
15	42	59	80
17	37	52	71
20	31	45	60
23	27	39	52
26	24	34	46
30	21	30	40
34	19	26	35

22.3 lb.
10.10 kg.

Mantra

Our Price: $ _____

Main tubes	Klein Gradient aluminum			
Stays	Klein Gradient aluminum			
Fork	Manitou SX	80mm travel		
Rear shock	Fox Float, air/oil	2.5" stroke, 178mm rear wheel travel		
		7.875" eye to eye,7/8" ends		
Headset	Dia-Compe SA Aheadset, alloy	25.4/34.0/30.0, 27.0mm stack		
Handlebars	ICON Graphite, 2014, 7° bend	25.4mm clamp diameter		
Stem	ICON Graphite, direct connect	39.5mm steerer clamp height		
Grips	Bontrager Ergo			
Shifters	Shimano Deore LX RapidFire+			
Front derailleur	Shimano Deore LX	Down pull, Plate style		
Rear derailleur	Shimano Deore XT SGS			
Brakes	Avid Single Digit 10, direct pull			
Brake levers		Integrated brake/shift		
Crankset	ICON Onyx, 4 arm 44/32/22	64/104 mm bolt hole circle		
Bottom bracket	Shimano BB-UN52E	73 x 113		
Pedals	Bontrager RE-1, clipless	9/16" axle		
Cassette	Shimano HG70 11-32	9spd		
Chain	Shimano HG72	108 length, 9 speed		
Front wheel	Bontrager Superstock	Velox 19mm rimstrip		
Front tire	Bontrager Super-X, folding	49/48		
Rear wheel	Bontrager Superstock	Velox 22mm rimstrip		
		HyperGlide cassette, 8/9spd, 135mm O.L.D.		
Rear tire	Bontrager Super-X, folding	47/46		
Tubes	Presta valve, ultra light			
Spokes	DT 14G stainless	24 spoke Radial Front	28 spoke 3x / radial Rear	
		254	267/251 rear (D/ND)	
Saddle	SDG Satellite Comp, CrMo			
Seatpost	ICON Graphite, 2014	31.6mm diameter		
Seat binder	Alloy w/integral bolt	37.4 clamp diameter		
Additionals	1 water bottle mount, CCD, replaceable derailleur hanger, shock pump			
Colors	Black / Black fork • Red logo			

	S	M	L	XL
Frame sizes				
Direct Fit	802	832	866	898
Fit angle	47.2	43.3	42.4	44.0
Handlebar width	580	580	580	580
Stem length	105	120	135	135
Stem angle	7	7	7	7
Crank length	170	175	175	175
Seatpost length	350	350	350	350
Steerer, mm	193	193	213	253
Fork length	442 mm axle-crown race			
Head angle	71.2	71.7	71.8	71.8
Seat angle	73.2	73.2	73.2	73.2
MM Standover	726	738	778	791
Seat tube	444	448	489	533
Head tube	105	105	125	165
Eff top tube	573	594	610	626
Reach	649	690	720	736
Chainstays	417	417	417	417
BB height	310	315	319	323
Offset	38	38	38	38
Trail	74	71	70	70
Wheelbase	1042	1062	1076	1095
IN Standover	28.6	29.1	30.6	31.1
Seat tube	17.5	17.6	19.3	21.0
Head tube	4.1	4.1	4.9	6.5
Eff top tube	22.6	23.4	24.0	24.6
Reach	25.5	27.2	28.4	29.0
Chainstays	16.4	16.4	16.4	16.4
BB height	12.2	12.4	12.6	12.7
Offset	1.5	1.5	1.5	1.5
Trail	2.9	2.8	2.8	2.8
Wheelbase	41.0	41.8	42.4	43.1

	22	32	44
11	52	76	105
12	48	70	96
14	41	60	82
16	36	52	72
18	32	47	64
21	27	40	55
24	24	35	48
28	21	30	41
32	18	26	36

27.0 lb.
12.26 kg.

Our Price: $ _____

Mantra Comp

Main tubes	Klein Gradient aluminum			
Stays	Klein Gradient aluminum			
Fork	Manitou Mars	80mm travel		
Rear shock	Fox Float R, air/oil	2.5" stroke, 178mm rear wheel travel		
		7.875" eye to eye,7/8" ends		
Headset	Dia-Compe SA Aheadset, alloy	25.4/34.0/30.0, 27.0mm stack		
Handlebars	ICON Graphite, 2014, 7° bend	25.4mm clamp diameter		
Stem	ICON Graphite, direct connect	39.5mm steerer clamp height		
Grips	Bontrager Ergo			
Shifters	Shimano Deore LX RapidFire+			
Front derailleur	Shimano Deore LX	Down pull, Plate style		
Rear derailleur	Shimano XTR SGS			
Brakes	Avid Single Digit 20, direct pull			
Brake levers		Integrated brake/shift		
Crankset	ICON Graphite, 4 arm 44/32/22	64/104 mm bolt hole circle		
Bottom bracket	Shimano BB-UN52E	73 x 113		
Pedals	Time Atac, clipless	9/16" axle		
Cassette	Shimano HG70 11-32	9spd		
Chain	Shimano HG72	108 length, 9 speed		
Front wheel	Bontrager Race	Velox 19mm rimstrip		
Front tire	Bontrager Super-X, folding	49/48		
Rear wheel	Bontrager Race	Velox 22mm rimstrip		
		HyperGlide cassette, 8/9spd, 135mm O.L.D.		
Rear tire	Bontrager Super-X, folding	47/46		
Tubes	Presta valve, ultra light			
Spokes	DT 14/15G butted stainless, alloy nips	24 spoke Radial Front	28 spoke 3x / radial Rear	
		255	267/251 rear (D/ND)	
Saddle	SDG Satellite Comp, CrMo/leather			
Seatpost	ICON Graphite, 2014	31.6mm diameter		
Seat binder	Alloy w/integral bolt	37.4 clamp diameter		
Additionals	1 water bottle mount, CCD, replaceable derailleur hanger, shock pump			
Colors	Mediterranean Blue / Manitou Blue fork • Manitou Blue logo			

	S	M	L	XL
Frame sizes				
Direct Fit	802	832	866	898
Fit angle	47.2	43.3	42.4	44.0
Handlebar width	580	580	580	580
Stem length	105	120	135	135
Stem angle	7	7	7	7
Crank length	170	175	175	175
Seatpost length	350	350	350	350
Steerer, mm	193	193	213	253
Fork length	442 mm axle-crown race			
Head angle	71.2	71.7	71.8	71.8
Seat angle	73.2	73.2	73.2	73.2
MM Standover	726	738	778	791
Seat tube	444	448	489	533
Head tube	105	105	125	165
Eff top tube	573	594	610	626
Reach	649	690	720	736
Chainstays	417	417	417	417
BB height	310	315	319	323
Offset	38	38	38	38
Trail	74	71	70	70
Wheelbase	1042	1062	1076	1095
IN Standover	28.6	29.1	30.6	31.1
Seat tube	17.5	17.6	19.3	21.0
Head tube	4.1	4.1	4.9	6.5
Eff top tube	22.6	23.4	24.0	24.6
Reach	25.5	27.2	28.4	29.0
Chainstays	16.4	16.4	16.4	16.4
BB height	12.2	12.4	12.6	12.7
Offset	1.5	1.5	1.5	1.5
Trail	2.9	2.8	2.8	2.8
Wheelbase	41.0	41.8	42.4	43.1

	22	32	44
11	52	76	105
12	48	70	96
14	41	60	82
16	36	52	72
18	32	47	64
21	27	40	55
24	24	35	48
28	21	30	41
32	18	26	36

26.0 lb.
11.80 kg.

Mantra Race

Our Price: $ _____

Main tubes	Klein Hexcel carbon fiber composite		
Stays	Klein Gradient aluminum		
Fork	Manitou Mars C	80mm travel	
Rear shock	Fox Float R, air/oil	2.5" stroke, 178mm rear wheel travel 7.875" eye to eye,7/8" ends	
Headset	Klein Airheadset	33.3/ 1.75-2" /39.7, 0mm stack	
Handlebars	Klein MC3, 2014, 9° bend	25.4mm clamp diameter	
Stem	Klein MC3	45.0mm steerer clamp height	
Grips	Bontrager Ergo		
Shifters	Shimano Deore XT RapidFire SL		
Front derailleur	Shimano Deore XT	Down pull, Plate style	
Rear derailleur	Shimano XTR SGS		
Brakes	Avid Single Digit 25, direct pull		
Brake levers		Integrated brake/shift	
Crankset	ICON Sterling, 4 arm 44/32/22	64/104 mm bolt hole circle	
Bottom bracket	Shimano BB-UN72E	73 x 110	
Pedals	Time Atac, clipless	9/16" axle	
Cassette	Shimano XT 11-34	9spd	
Chain	Shimano HG72	108 length, 9 speed	
Front wheel	Bontrager Race Modified	Velox 19mm rimstrip	
Front tire	Bontrager Revolt ST-2, 127tpi, folding	49/48	
Rear wheel	Bontrager Race Modified	Velox 22mm rimstrip HyperGlide cassette, 8/9spd, 135mm O.L.D.	
Rear tire	Bontrager Revolt ST-2, 127tpi, folding	47/46	
Tubes	Presta valve, ultra light		
Spokes	DT 14/15G butted stainless, alloy nips	24 spoke Radial Front 255	28 spoke 3x/Radial Rear 267/251 rear (D/ND)
Saddle	SDG Satellite Comp, CrMo/leather		
Seatpost	Thomson Elite	31.6mm diameter	
Seat binder	Alloy w/integral bolt	39.85 clamp diameter	
Additionals	1 water bottle mount, CCD, replaceable derailleur hanger, shock pump		
Colors	Silver Cloud / Red fork • Red logo		

	22	32	44
11	52	76	105
13	44	65	89
15	38	56	77
17	34	49	68
20	29	42	58
23	25	36	50
26	22	32	44
30	19	28	38
34	17	25	34

25.0 lb.
11.35 kg.

	S	M	L	XL
Frame sizes				
Direct Fit	796	826	861	893
Fit angle	47.1	43.0	42.0	43.6
Handlebar width	580	580	580	580
Stem length	105	120	135	135
Stem angle	6	6	6	6
Crank length	170	175	175	175
Seatpost length	290	330	370	410
Steerer, mm	193	193	213	253
Fork length	442 mm axle-crown race			
Head angle	71.2	71.7	71.8	71.8
Seat angle	73.2	73.2	73.2	73.2
MM Standover	726	738	778	791
MM Seat tube	444	448	489	533
MM Head tube	105	105	125	165
MM Eff top tube	573	594	610	626
MM Reach	647	689	719	735
MM Chainstays	417	417	417	417
MM BB height	310	315	319	323
MM Offset	38	38	38	38
MM Trail	74	71	70	70
MM Wheelbase	1042	1062	1076	1095
IN Standover	28.6	29.1	30.6	31.1
IN Seat tube	17.5	17.6	19.3	21.0
IN Head tube	4.1	4.1	4.9	6.5
IN Eff top tube	22.6	23.4	24.0	24.6
IN Reach	25.5	27.1	28.3	28.9
IN Chainstays	16.4	16.4	16.4	16.4
IN BB height	12.2	12.4	12.6	12.7
IN Offset	1.5	1.5	1.5	1.5
IN Trail	2.9	2.8	2.8	2.8
IN Wheelbase	41.0	41.8	42.4	43.1

Mantra Pro

Our Price: $ _____

Main tubes	Klein Hexcel carbon fiber composite		
Stays	Klein Gradient aluminum		
Fork	Manitou Mars CL	80mm travel	
Rear shock	Cane Creek AD-10, air/air	2.5" stroke, 178mm rear wheel travel 7.875" eye to eye,7/8" ends	
Headset	Klein Airheadset	33.3/ 1.75-2" /39.7, 0mm stack	
Handlebars	Klein MC3, 2014, 9° bend	25.4mm clamp diameter	
Stem	Klein MC3	45.0mm steerer clamp height	
Grips	Bontrager Ergo		
Shifters	Shimano XTR RapidFire SL		
Front derailleur	Shimano XTR	Down pull, Plate style	
Rear derailleur	Shimano XTR SGS		
Brakes	Avid Single Digit Mag, linear pull		
Brake levers		Integrated brake/shift	
Crankset	Shimano XTR 4 arm 46/34/24	Splined/112/68 mm bolt hole circle	
Bottom bracket	Shimano XTR	73 x 116	
Pedals	Time Atac Carbon, clipless	9/16" axle	
Cassette	Shimano XTR 12-34	9spd	
Chain	Shimano Dura-Ace	108 length, 9 speed	
Front wheel	Bontrager Race Lite	Velox 19mm rimstrip	
Front tire	Bontrager Super-X, 127tpi, folding	49/48	
Rear wheel	Bontrager Race Lite	Velox 22mm rimstrip HyperGlide cassette, 8/9spd, 135mm O.L.D.	
Rear tire	Bontrager Super-X, 127tpi, folding	47/46	
Tubes	Presta valve, ultra light		
Spokes	DT Revolution 14/17G, alloy nips	24 spoke Radial Front 252	28 spoke 3x/Radial Rear 267/251 rear (D/ND)
Saddle	SDG Satellite Comp, Ti/leather		
Seatpost	Thomson Elite	31.6mm diameter	
Seat binder	Alloy w/integral bolt	39.85 clamp diameter	
Additionals	1 water bottle mount, CCD, replaceable derailleur hanger, shock pump		
Colors	Silver/Blue Linear / Red fork • Red logo		

	24	34	46
12	52	74	101
14	45	64	86
16	39	56	75
18	35	50	67
20	31	45	60
23	27	39	52
26	24	34	46
30	21	30	40
34	19	26	35

24.0 lb.
10.90 kg.

	S	M	L	XL
Frame sizes				
Direct Fit	796	826	861	893
Fit angle	47.1	43.0	42.0	43.6
Handlebar width	580	580	580	580
Stem length	105	120	135	135
Stem angle	6	6	6	6
Crank length	170	175	175	175
Seatpost length	290	330	370	410
Steerer, mm	193	193	213	253
Fork length	442 mm axle-crown race			
Head angle	71.2	71.7	71.8	71.8
Seat angle	73.2	73.2	73.2	73.2
MM Standover	726	738	778	791
MM Seat tube	444	448	489	533
MM Head tube	105	105	125	165
MM Eff top tube	573	594	610	626
MM Reach	647	689	719	735
MM Chainstays	417	417	417	417
MM BB height	310	315	319	323
MM Offset	38	38	38	38
MM Trail	74	71	70	70
MM Wheelbase	1042	1062	1076	1095
IN Standover	28.6	29.1	30.6	31.1
IN Seat tube	17.5	17.6	19.3	21.0
IN Head tube	4.1	4.1	4.9	6.5
IN Eff top tube	22.6	23.4	24.0	24.6
IN Reach	25.5	27.1	28.3	28.9
IN Chainstays	16.4	16.4	16.4	16.4
IN BB height	12.2	12.4	12.6	12.7
IN Offset	1.5	1.5	1.5	1.5
IN Trail	2.9	2.8	2.8	2.8
IN Wheelbase	41.0	41.8	42.4	43.1

Quantum

Our Price: $ _____

Main tubes	Klein Gradient aluminum						
Stays	Klein Gradient aluminum						
Fork	ICON Air Rail						
Headset	Cane Creek Aheadset	22.2/30.2/26.4, 26.5mm stack					
Handlebars	ICON Onyx, ergo bend	26.0mm clamp diameter					
Stem	ICON Graphite, direct connect	39.5mm steerer clamp height					
Grips	ICON Powercork						
Shifters	Shimano 105 STI	Flite Deck compatible					
Front derailleur	Shimano 105	Braze-on type w/34.9mm clamp					
Rear derailleur	Shimano 105						
Brakes	Shimano 105						
Brake levers		Integrated brake/shift					
Crankset	Shimano 105 53/39	130 mm bolt hole circle					
Bottom bracket	Shimano 105	68 x 109.5					
Pedals	-	9/16" axle					
Cassette	Shimano HG70 12-25	9spd					
Chain	Shimano HG72	108 length, 9 speed					
Front wheel	Rolf Vector	Velox 16mm rimstrip					
Front tire	Michelin Axial Pro, folding	700 x 23c					
Rear wheel	Rolf Vector	Velox 16mm rimstrip					
		HyperGlide cassette, 8/9spd, 130mm O.L.D.					
Rear tire	Michelin Axial Pro, folding	700 x 23c					
Tubes	Presta valve, 48mm stem						
Spokes	DT 14/15G butted stainless	20 spoke Radial Front			24 spoke 2x Rear		
		278			288/287 rear (D/ND)		
Saddle	Selle Italia Flite, Gel, Ti/leather						
Seatpost	ICON Graphite, 2014	31.6mm diameter					
Seat binder	Alloy w/integral bolt	36.4 clamp diameter					
Additionals	2 water bottle mounts						
Colors	Blastberry • Metallic Silver logo						

Frame sizes	51	53	55	57	59	61	
Direct Fit	765	797	834	854	883	902	
Fit angle	43.1	42.9	41.9	42.5	42.6	43.0	
Handlebar width	400	420	420	440	440	440	
Stem length	80	90	110	110	120	120	
Stem angle	0	0	0	0	0	0	
Crank length	170	172.5	172.5	172.5	175	175	
Seatpost length	270	270	270	270	270	270	
Steerer, mm	178	200	223	244	268	288	
Fork length	370 mm axle-crown race						
Head angle	73.5	73.5	73.5	74.0	74.0	74.0	
Seat angle	74.0	74.0	74.0	74.0	74.0	74.0	
MM Standover	757	777	800	823	843	866	
Seat tube	539	559	571	597	616	635	
Head tube	91	113	136	157	181	201	
Eff top tube	535	547	559	571	583	595	
Reach	595	622	654	666	688	700	
Chainstays	414	414	414	414	414	414	
BB height	267	267	272	274	277	279	
Offset	47	47	43	43	43	43	
Trail	51	51	56	53	53	53	
Wheelbase	975	987	1000	1008	1023	1033	
IN Standover	29.8	30.6	31.5	32.4	33.2	34.1	
Seat tube	21.2	22.0	22.5	23.5	24.3	25.0	
Head tube	3.6	4.4	5.4	6.2	7.1	7.9	
Eff top tube	21.1	21.5	22.0	22.5	23.0	23.4	
Reach	23.4	24.5	25.7	26.2	27.1	27.6	
Chainstays	16.3	16.3	16.3	16.3	16.3	16.3	
BB height	10.5	10.5	10.7	10.8	10.9	11.0	
Offset	1.9	1.9	1.7	1.7	1.7	1.7	
Trail	2.0	2.0	2.2	2.1	2.1	2.1	
Wheelbase	38.4	38.9	39.4	39.7	40.3	40.7	

	39	53
12	86	117
13	79	108
14	74	100
15	69	93
17	61	82
19	54	74
21	49	67
23	45	61
25	41	56

19.0 lb.
8.63 kg.

Our Price: $ _____

Quantum T

Main tubes	Klein Gradient aluminum						
Stays	Klein Gradient aluminum						
Fork	ICON Air Rail						
Headset	Cane Creek Aheadset	22.2/30.2/26.4, 26.5mm stack					
Handlebars	ICON Onyx, ergo bend	26.0mm clamp diameter					
Stem	ICON Graphite, direct connect	39.5mm steerer clamp height					
Grips	ICON Powercork						
Shifters	Shimano 105 STI	Flite Deck compatible					
Front derailleur	Shimano 105 T	Braze-on type w/34.9mm clamp					
Rear derailleur	Shimano 105 GS						
Brakes	Shimano 105						
Brake levers		Integrated brake/shift					
Crankset	Shimano 105 52/42/30	74/130 mm bolt hole circle					
Bottom bracket	Shimano 105	68 x 118					
Pedals	-						
Cassette	Shimano HG70 12-25, 9spd						
Chain	Shimano HG72	108 length, 9 speed					
Front wheel	Rolf Vector	Velox 16mm rimstrip					
Front tire	Michelin Axial Pro, folding	700 x 23c					
Rear wheel	Rolf Vector	Velox 16mm rimstrip					
		HyperGlide cassette, 8/9spd, 130mm O.L.D.					
Rear tire	Michelin Axial Pro, folding	700 x 23c					
Tubes	Presta valve, 48mm stem						
Spokes	DT 14/15G butted stainless	20 spoke Radial Front			24 spoke 2x Rear		
		278			288/287 rear (D/ND)		
Saddle	Selle Italia Flite, Gel, Ti/leather						
Seatpost	ICON Graphite, 2014	31.6mm diameter					
Seat binder	Alloy w/integral bolt	36.4 clamp diameter					
Additionals	2 water bottle mounts						
Colors	Blastberry • Metallic Silver logo						

Frame sizes	51	53	55	57	59	61	
Direct Fit	765	797	834	854	883	902	
Fit angle	43.1	42.9	41.9	42.5	42.6	43.0	
Handlebar width	400	420	420	440	440	440	
Stem length	80	90	110	110	120	120	
Stem angle	0	0	0	0	0	0	
Crank length	170	170	175	175	175	175	
Seatpost length	270	270	270	270	270	270	
Steerer, mm	178	200	223	244	268	288	
Fork length	370 mm axle-crown race						
Head angle	73.5	73.5	73.5	74.0	74.0	74.0	
Seat angle	74.0	74.0	74.0	74.0	74.0	74.0	
MM Standover	757	777	800	823	843	866	
Seat tube	539	559	571	597	616	635	
Head tube	91	113	136	157	181	201	
Eff top tube	535	547	559	571	583	595	
Reach	595	622	654	666	688	700	
Chainstays	414	414	414	414	414	414	
BB height	267	267	272	274	277	279	
Offset	47	47	43	43	43	43	
Trail	51	51	56	53	53	53	
Wheelbase	975	987	1000	1008	1023	1033	
IN Standover	29.8	30.6	31.5	32.4	33.2	34.1	
Seat tube	21.2	22.0	22.5	23.5	24.3	25.0	
Head tube	3.6	4.4	5.4	6.2	7.1	7.9	
Eff top tube	21.1	21.5	22.0	22.5	23.0	23.4	
Reach	23.4	24.5	25.7	26.2	27.1	27.6	
Chainstays	16.3	16.3	16.3	16.3	16.3	16.3	
BB height	10.5	10.5	10.7	10.8	10.9	11.0	
Offset	1.9	1.9	1.7	1.7	1.7	1.7	
Trail	2.0	2.0	2.2	2.1	2.1	2.1	
Wheelbase	38.4	38.9	39.4	39.7	40.3	40.7	

	30	42	52
12	66	93	115
13	61	85	106
14	57	79	98
15	53	74	92
17	47	65	81
19	42	58	72
21	38	53	65
23	35	48	60
25	32	44	55

19.5 lb.
8.85 kg.

Quantum Race

Our Price: $ _____

Main tubes	Klein Gradient aluminum		
Stays	Klein Gradient aluminum		
Fork	ICON Air Rail		
Headset	Cane Creek Aheadset	22.2/30.2/26.4, 26.5mm stack	
Handlebars	ICON Sterling, 7075, ergo bend	26.0mm clamp diameter	
Stem	ICON Graphite, direct connect	39.5mm steerer clamp height	
Grips	ICON Powercork		
Shifters	Shimano Ultegra STI	Flite Deck compatible	
Front derailleur	Shimano Ultegra	Braze-on type w/34.9mm clamp	
Rear derailleur	Shimano Ultegra		
Brakes	Shimano Ultegra		
Brake levers		Integrated brake/shift	
Crankset	Shimano Ultegra 53/39	130 mm bolt hole circle	
Bottom bracket	Shimano Ultegra	68 x 109.5	
Pedals	-		
Cassette	Shimano Ultegra 12-25	9spd	
Chain	Shimano HG92	108 length, 9 speed	
Front wheel	Rolf Vector Comp	Velox 16mm rimstrip	
Front tire	Michelin Axial Pro, folding	700 x 23c	
Rear wheel	Rolf Vector Comp	Velox 16mm rimstrip	
		HyperGlide cassette, 8/9spd, 130mm O.L.D.	
Rear tire	Michelin Axial Pro, folding	700 x 23c	
Tubes	Presta valve, 48mm stem		
Spokes	DT Aero 2.0/1.3	18 spoke Radial Front	20 spoke 2x Rear
		270	290/288 rear (D/ND)
Saddle	Selle Italia Flite, Gel, Ti/leather		
Seatpost	ICON Graphite, 2014	31.6mm diameter	
Seat binder	Alloy w/integral bolt	36.4 clamp diameter	
Additionals	2 water bottle mounts		
Colors	Silver Cloud • Metallic Silver logo		

	39	53
12	86	117
13	79	108
14	74	100
15	69	93
17	61	82
19	54	74
21	49	67
23	45	61
25	41	56

18.5 lb.
8.40 kg.

Frame sizes	51	53	55	57	59	61
Direct Fit	765	797	834	854	883	902
Fit angle	43.1	42.9	41.9	42.5	42.6	43.0
Handlebar width	400	420	420	440	440	440
Stem length	80	90	110	110	120	120
Stem angle	0	0	0	0	0	0
Crank length	170	172.5	172.5	172.5	175	175
Seatpost length	270	270	270	270	270	270
Steerer, mm	178	200	223	244	268	288
Fork length	370 mm axle-crown race					
Head angle	73.5	73.5	73.5	74.0	74.0	74.0
Seat angle	74.0	74.0	74.0	74.0	74.0	74.0
MM Standover	757	777	800	823	843	866
Seat tube	539	559	571	597	616	635
Head tube	91	113	136	157	181	201
Eff top tube	535	547	559	571	583	595
Reach	595	622	654	666	688	700
Chainstays	414	414	414	414	414	414
BB height	267	267	272	274	277	279
Offset	47	47	43	43	43	43
Trail	51	51	56	53	53	53
Wheelbase	975	987	1000	1008	1023	1033
IN Standover	29.8	30.6	31.5	32.4	33.2	34.1
Seat tube	21.2	22.0	22.5	23.5	24.3	25.0
Head tube	3.6	4.4	5.4	6.2	7.1	7.9
Eff top tube	21.1	21.5	22.0	22.5	23.0	23.4
Reach	23.4	24.5	25.7	26.2	27.1	27.6
Chainstays	16.3	16.3	16.3	16.3	16.3	16.3
BB height	10.5	10.5	10.7	10.8	10.9	11.0
Offset	1.9	1.9	1.7	1.7	1.7	1.7
Trail	2.0	2.0	2.2	2.1	2.1	2.1
Wheelbase	38.4	38.9	39.4	39.7	40.3	40.7

Our Price: $ _____

Quantum Race T

Main tubes	Klein Gradient aluminum		
Stays	Klein Gradient aluminum		
Fork	ICON Air Rail		
Headset	Cane Creek Aheadset	22.2/30.2/26.4, 26.5mm stack	
Handlebars	ICON Sterling, 7075, ergo bend	26.0mm clamp diameter	
Stem	ICON Graphite, direct connect	39.5mm steerer clamp height	
Grips	ICON Powercork		
Shifters	Shimano Ultegra STI	Flite Deck compatible	
Front derailleur	Shimano Ultegra T	Braze-on type w/34.9mm clamp	
Rear derailleur	Shimano Ultegra GS		
Brakes	Shimano Ultegra		
Brake levers		Integrated brake/shift	
Crankset	Shimano Ultegra 52/42/30	74/130 mm bolt hole circle	
Bottom bracket	Shimano Ultegra	68 x 118	
Pedals	-		
Cassette	Shimano Ultegra 12-25	9spd	
Chain	Shimano HG92	108 length, 9 speed	
Front wheel	Rolf Vector Comp	Velox 16mm rimstrip	
Front tire	Michelin Axial Pro, folding	700 x 23c	
Rear wheel	Rolf Vector Comp	Velox 16mm rimstrip	
		HyperGlide cassette, 8/9spd, 130mm O.L.D.	
Rear tire	Michelin Axial Pro, folding	700 x 23c	
Tubes	Presta valve, 48mm stem		
Spokes	DT Aero stainless, alloy nips	18 spoke Radial Front	20 spoke 2x Rear
		270	290/288 rear (D/ND)
Saddle	Selle Italia Flite, Gel, Ti/leather		
Seatpost	ICON Graphite, 2014	31.6mm diameter	
Seat binder	Alloy w/integral bolt	36.4 clamp diameter	
Additionals	2 water bottle mounts		
Colors	Silver Cloud • Metallic Silver logo		

	30	42	52
12	66	93	115
13	61	85	106
14	57	79	98
15	53	74	92
17	47	65	81
19	42	58	72
21	38	53	65
23	35	48	60
25	32	44	55

19.0 lb.
8.63 kg.

Frame sizes	51	53	55	57	59	61
Direct Fit	765	797	834	854	883	902
Fit angle	43.1	42.9	41.9	42.5	42.6	43.0
Handlebar width	400	420	420	440	440	440
Stem length	80	90	110	110	120	120
Stem angle	0	0	0	0	0	0
Crank length	170	172.5	172.5	172.5	175	175
Seatpost length	270	270	270	270	270	270
Steerer, mm	178	200	223	244	268	288
Fork length	370 mm axle-crown race					
Head angle	73.5	73.5	73.5	74.0	74.0	74.0
Seat angle	74.0	74.0	74.0	74.0	74.0	74.0
MM Standover	757	777	800	823	843	866
Seat tube	539	559	571	597	616	635
Head tube	91	113	136	157	181	201
Eff top tube	535	547	559	571	583	595
Reach	595	622	654	666	688	700
Chainstays	414	414	414	414	414	414
BB height	267	267	272	274	277	279
Offset	47	47	43	43	43	43
Trail	51	51	56	53	53	53
Wheelbase	975	987	1000	1008	1023	1033
IN Standover	29.8	30.6	31.5	32.4	33.2	34.1
Seat tube	21.2	22.0	22.5	23.5	24.3	25.0
Head tube	3.6	4.4	5.4	6.2	7.1	7.9
Eff top tube	21.1	21.5	22.0	22.5	23.0	23.4
Reach	23.4	24.5	25.7	26.2	27.1	27.6
Chainstays	16.3	16.3	16.3	16.3	16.3	16.3
BB height	10.5	10.5	10.7	10.8	10.9	11.0
Offset	1.9	1.9	1.7	1.7	1.7	1.7
Trail	2.0	2.0	2.2	2.1	2.1	2.1
Wheelbase	38.4	38.9	39.4	39.7	40.3	40.7

Quantum Pro

Our Price: $_____

Main tubes	Klein Gradient aluminum					
Stays	Klein Gradient aluminum					
Fork	Klein Aeros Carbon					
Headset	Klein Airheadset	27.0/1.5-1.75"/33.4, 0mm stack				
Handlebars	ICON Sterling, 7075, ergo bend	26.0mm clamp diameter				
Stem	Klein MC3	39.5mm steerer clamp height				
Grips	ICON Powercork					
Shifters	Shimano Dura-Ace STI	Flite Deck compatible				
Front derailleur	Shimano Dura-Ace	Braze-on type w/34.9mm clamp				
Rear derailleur	Shimano Dura-Ace					
Brakes	Shimano Dura-Ace					
Brake levers		Integrated brake/shift				
Crankset	Shimano Dura-Ace 53/39	130 mm bolt hole circle				
Bottom bracket	Shimano Ultegra	68 x 109.5				
Pedals	-					
Cassette	Shimano Dura-Ace 12-23	9 spd				
Chain	Shimano Dura-Ace	108 length, 9 speed				
Front wheel	Rolf Vector Pro	Velox 16mm rimstrip				
Front tire	Michelin Axial Pro, folding	700 x 23c				
Rear wheel	Rolf Vector Pro	Velox 16mm rimstrip HyperGlide cassette, 8/9spd, 130mm O.L.D.				
Rear tire	Michelin Axial Pro, folding	700 x 23c				
Tubes	Presta valve, 48mm stem					
Spokes	DT Blades, locking alloy nips	14 spoke Radial Front 280	16 spoke 1x Rear 286/284 rear (D/ND)			
Saddle	Selle Italia Flite, Gel, Ti/leather					
Seatpost	Thomson Elite	31.6mm diameter				
Seat binder	Alloy w/integral bolt	36.4 clamp diameter				
Additionals	2 water bottle mounts					
Colors	Orange/Red Linear • Black logo					

	39	53
12	86	117
13	79	108
14	74	100
15	69	93
16	64	88
17	61	82
19	54	74
21	49	67
23	45	61

18.0 lb.
8.17 kg.

Frame sizes		53	55	57	59	61
Direct Fit		793	827	847	876	896
Fit angle		44.2	41.6	42.2	42.2	42.8
Handlebar width		420	420	440	440	440
Stem length		90	110	110	120	120
Stem angle		6	0	0	0	0
Crank length		172.5	172.5	172.5	175	175
Seatpost length		287	287	287	287	287
Steerer, mm		196	218	239	262	284
Fork length		370 mm axle-crown race				
Head angle		73.5	73.5	74.0	74.0	74.0
Seat angle		74.0	74.0	74.0	74.0	74.0
MM	Standover	777	800	823	843	866
	Seat tube	559	571	597	616	635
	Head tube	113	135	156	179	201
	Eff top tube	547	559	571	583	595
	Reach	612	652	664	686	698
	Chainstays	414	414	414	414	414
	BB height	267	272	274	277	279
	Offset	38	38	38	38	38
	Trail	61	61	58	58	58
	Wheelbase	987	1000	1008	1023	1033
IN	Standover	30.6	31.5	32.4	33.2	34.1
	Seat tube	22.0	22.5	23.5	24.3	25.0
	Head tube	4.4	5.3	6.1	7.0	7.9
	Eff top tube	21.5	22.0	22.5	23.0	23.4
	Reach	24.1	25.7	26.1	27.0	27.5
	Chainstays	16.3	16.3	16.3	16.3	16.3
	BB height	10.5	10.7	10.8	10.9	11.0
	Offset	1.5	1.5	1.5	1.5	1.5
	Trail	2.4	2.4	2.3	2.3	2.3
	Wheelbase	38.9	39.4	39.7	40.3	40.7

Our Price: $_____

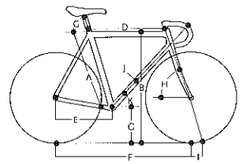
Main tubes	
Stays	
Fork	
Rear shock	
Headset	
Handlebars	
Stem	
Grips	
Shifters	
Front derailleur	
Rear derailleur	
Brakes	
Brake levers	
Crankset	
Bottom bracket	
Pedals	
Cassette	
Chain	
Front wheel	
Front tire	
Rear wheel	
Rear tire	
Tubes	
Spokes	
Saddle	
Seatpost	
Seat binder	
Additionals	
Colors	
Frame sizes	
Direct Fit	
Fit angle	
Handlebar width	
Stem length	
Stem angle	
Crank length	
Seatpost length	
Steerer, mm	
Fork length	
Head angle	
Seat angle	
MM Standover	
Seat tube	
Head tube	
Eff top tube	
Reach	
Chainstays	
BB height	
Offset	
Trail	
Wheelbase	
IN Standover	
Seat tube	
Head tube	
Eff top tube	
Reach	
Chainstays	
BB height	
Offset	
Trail	
Wheelbase	

Our Price: $_____

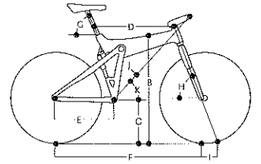
	Main tubes	
	Stays	
	Fork	
	Rear shock	
	Headset	
	Handlebars	
	Stem	
	Grips	
	Shifters	
	Front derailleur	
	Rear derailleur	
	Brakes	
	Brake levers	
	Crankset	
	Bottom bracket	
	Pedals	
	Cassette	
	Chain	
	Front wheel	
	Front tire	
	Rear wheel	
	Rear tire	
	Tubes	
	Spokes	
	Saddle	
	Seatpost	
	Seat binder	
	Additionals	
	Colors	
	Frame sizes	
	Direct Fit	
	Fit angle	
	Handlebar width	
	Stem length	
	Stem angle	
	Crank length	
	Seatpost length	
	Steerer, mm	
	Fork length	
	Head angle	
	Seat angle	
MM	Standover	
	Seat tube	
	Head tube	
	Eff top tube	
	Reach	
	Chainstays	
	BB height	
	Offset	
	Trail	
	Wheelbase	
IN	Standover	
	Seat tube	
	Head tube	
	Eff top tube	
	Reach	
	Chainstays	
	BB height	
	Offset	
	Trail	
	Wheelbase	

Frame Geometries

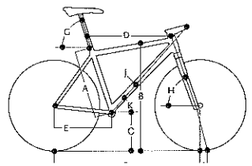
	Size	Seat Tube Center to Top (in./cm)	Top Tube Standover (in./cm)	Bottom Bracket (in./cm)	Effective Top Tube Length (in./cm)	Chainstay Length (in./cm)	Wheelbase (in./cm)	Fork Rake (in./cm)	Fork Travel (mm)	Seat Tube Angle	Head Tube Angle	Trail (in./cm)
		A	B	C	D	E	F			G	H	I
Mantra	S	N/A	28.6/72.6	12.2/31.0	22.7/57.3	16.4/41.7	41.1/104.3	1.5/3.8	80.0	64.6°	71.2°	2.9/7.3
Mantra Comp	M	N/A	29.0/73.8	12.4/31.5	23.4/59.4	16.4/41.7	41.8/106.2	1.5/3.8	80.0	66.1°	71.7°	2.8/7.1
	L	N/A	30.6/77.8	12.6/31.9	24.0/61.0	16.4/41.7	42.4/107.6	1.5/3.8	80.0	65.1°	71.8°	2.7/6.9
	XL	N/A	30.6/77.8	12.7/32.3	24.7/62.6	16.4/41.7	43.1/109.5	1.5/3.8	80.0	66.4°	71.8°	2.7/6.9
Mantra Race	M	N/A	29.0/73.8	12.4/31.5	23.4/59.4	16.4/41.7	41.8/106.2	1.5/3.8	80.0	66.1°	71.7°	2.8/7.1
Mantra Pro	L	N/A	30.6/77.8	12.6/31.9	24.0/61.0	16.4/41.7	42.4/107.6	1.5/3.8	80.0	65.1°	71.8°	2.7/6.9
	XL	N/A	31.2/79.1	12.7/32.3	24.7/62.6	16.4/41.7	43.1/109.5	1.5/3.8	80.0	66.4°	71.8°	2.7/6.9
Attitude*	XS	14.0/35.6	26.3/66.9	11.3/28.8	21.7/55.0	16.4/41.7	40.7/103.4	1.5/3.8	70.0	73.2°	70.7°	3.0/7.6
Attitude Comp	S	15.8/40.0	27.7/70.3	11.5/29.2	22.6/57.3	16.4/41.7	41.3/104.8	1.5/3.8	70.0	73.2°	71.2°	2.9/7.3
Attitude Race	M	17.5/44.5	28.9/73.5	11.7/29.7	23.4/59.4	16.4/41.7	41.8/106.1	1.5/3.8	70.0	73.2°	71.7°	2.8/7.0
Adroit Race	L	19.3/48.9	30.4/77.2	11.8/30.0	24.0/61.0	16.4/41.7	42.1/106.9	1.5/3.8	70.0	73.2°	71.8°	2.7/6.9
Adroit Pro	XL	21.0/53.3	32.1/81.5	11.9/30.3	24.7/62.6	16.4/41.7	42.5/107.9	1.5/3.8	70.0	73.2°	71.8°	2.7/6.9
Quantum	51cm	21.2/53.9	29.8/75.7	10.5/26.7	21.1/53.5	16.3/41.4	38.1/96.8	1.9/4.7	N/A	74.0°	73.5°	N/A
Quantum Race	53cm	22.0/55.9	30.6/77.7	10.6/26.9	21.5/54.7	16.3/41.4	38.6/98.0	1.9/4.7	N/A	74.0°	73.5°	N/A
	55cm	22.5/57.1	31.5/80.0	10.7/27.2	22.0/55.9	16.3/41.4	39.1/99.3	1.7/4.3	N/A	74.0°	73.5°	N/A
	57cm	23.5/59.7	32.4/82.3	10.8/27.4	22.5/57.1	16.3/41.4	39.4/100.1	1.7/4.3	N/A	74.0°	74.0°	N/A
	59cm	24.3/61.6	33.2/84.3	10.9/27.7	23.0/58.3	16.3/41.4	40.0/101.6	1.7/4.3	N/A	74.0°	74.0°	N/A
	61cm	25.0/63.5	34.1/86.6	11.0/27.9	23.4/59.5	16.3/41.4	40.4/102.6	1.7/4.3	N/A	74.0°	74.0°	N/A
	63cm	25.5/64.8	34.8/88.4	11.0/27.9	23.9/60.7	16.3/41.4	40.9/103.9	1.7/4.3	N/A	74.0°	74.0°	N/A
Quantum Pro	51cm	21.2/53.9	29.8/75.7	10.5/26.7	21.1/53.5	16.3/41.4	38.4/97.5	1.5/3.8	N/A	74.0°	73.5°	N/A
	53cm	22.0/55.9	30.6/77.7	10.6/26.9	21.5/54.7	16.3/41.4	38.9/98.7	1.5/3.8	N/A	74.0°	73.5°	N/A
	55cm	22.5/57.1	31.5/80.0	10.7/27.2	22.0/55.9	16.3/41.4	39.4/100.0	1.5/3.8	N/A	74.0°	73.5°	N/A
	57cm	23.5/59.7	32.4/82.3	10.8/27.4	22.5/57.1	16.3/41.4	39.7/100.8	1.5/3.8	N/A	74.0°	74.0°	N/A
	59cm	24.3/61.6	33.2/84.3	10.9/27.7	23.0/58.3	16.3/41.4	40.3/102.3	1.5/3.8	N/A	74.0°	74.0°	N/A
	61cm	25.0/63.5	34.1/86.6	11.0/27.9	23.4/59.5	16.3/41.4	40.7/103.3	1.5/3.8	N/A	74.0°	74.0°	N/A
	63cm	25.5/64.8	34.8/88.4	11.0/27.9	23.9/60.7	16.3/41.4	41.2/104.6	1.5/3.8	N/A	74.0°	74.0°	N/A



Quantum Series frame Line drawings correspond to chart dimensions.



Mantra Series frame Line drawings correspond to chart dimensions.



Attitude and Adroit frame Line drawings correspond to chart dimensions.

Direct Fit (mm)/Direct Fit Angle (J and K)

	XS(51)	S(53)	M(55)	L(57)	XL(59)	(61)
Mantra	N/A	802/47.3°	832/43.4°	867/42.4°	899/44°	N/A
Mantra Comp	N/A	803/47.4°	833/43.5°	868/42.6°	900/44.1°	N/A
Mantra Race	N/A	795/47°	826/43°	860/42°	892/43.6°	N/A
Mantra Pro	N/A	795/47°	826/43°	860/42°	892/43.6°	N/A
Attitude*	N/A	810/51.2°	840/47.6°	861/47.5°	908/48.5°	N/A
Attitude Comp	775/53.4°	815/50.8°	841/47.7°	862/47.6°	909/48.6°	N/A
Attitude Race	N/A	804/49.9°	833/46°	854/45.9°	900/46.9°	N/A
Adroit Race	N/A	798/49.7°	828/45.7°	849/45.6°	895/46.6°	N/A
Adroit Pro	N/A	798/49.7°	828/45.7°	849/45.6°	895/46.6°	N/A
Quantum	765/43.1°	797/42.9°	834/41.9°	854/42.5°	883/42.6°	902/43°
Quantum T	765/43.1°	797/42.9°	834/41.9°	854/42.5°	883/42.6°	902/43°
Quantum Race T	762/42.6°	794/42.4°	831/41.4°	851/42.1°	880/42.1°	899/42.6°
Quantum Race	762/42.6°	794/42.4°	831/41.4°	851/42.1°	880/42.1°	899/42.6°
Quantum Pro	N/A	793/44.2°	827/41.6°	847/42.2°	876/42.2°	896/42.8°

*Attitude is not available in the U.S. market.

Direct Fit (J) The distance from the center of the bottom bracket spindle to the rider's hand position.

Direct Fit Angle (K) The angle created by the "direct fit" line and the horizontal line of the ground.

Visit your Klein dealer for more information about Klein's Direct Fit program or visit our web site at www.kleinbikes.com.