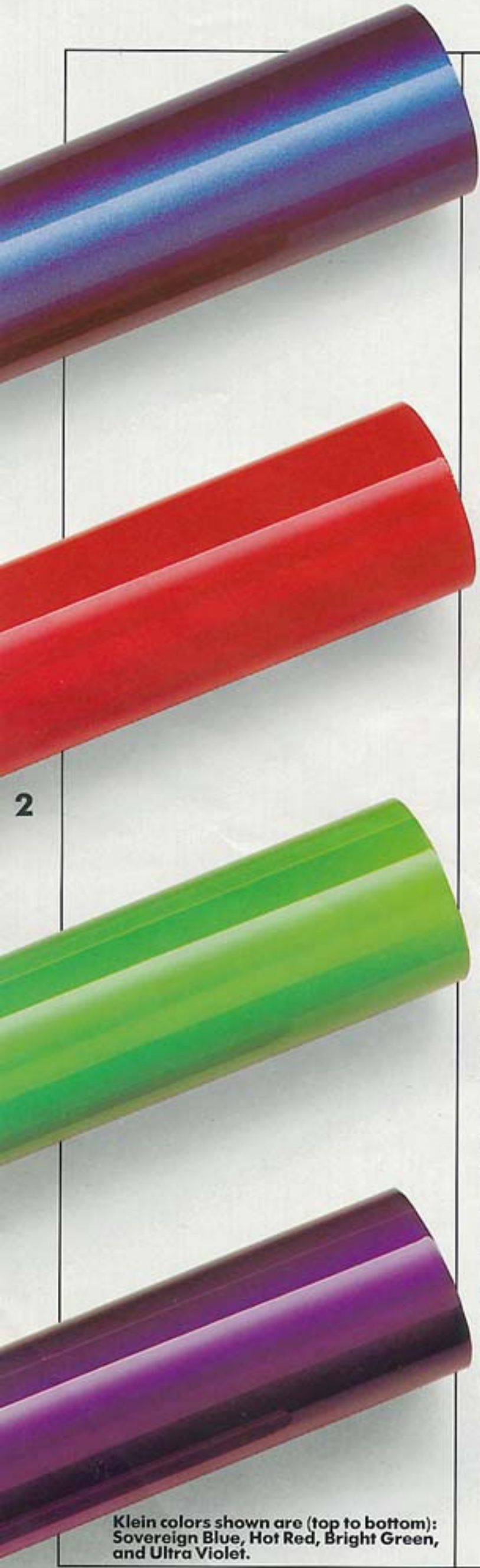
# KLEIN
# 1990





Klein colors shown are (top to bottom): Sovereign Blue, Hot Red, Bright Green, and Ultra Violet.

# THE LAST BIKE YOU'LL EVER BUY.

Recognized as the industry leader in aluminum frame technology, Klein offers you the ultimate ride. And the pure satisfaction of owning the best.

How can a small company in the woods of southwest Washington be leading the pack in something as competitive as the bicycle industry? Easy. The answer's in the innovator, Gary Klein. What began as an engineering project at MIT in 1975 has become not just a super fast, lightweight, responsive bicycle but the standard by which other lightweight bikes are evaluated. So far nothing else even comes close.

## THE SHORTEST DISTANCE BETWEEN TWO POINTS IS A KLEIN.

Klein's oversize Aluminum Power Tubing® not only provides an incredibly lightweight bicycle, it offers as much as 65% greater stiffness when compared to the traditional chrome molybdenum steel frame. In fact, Klein has a stiffness-to-weight ratio previously thought impossible. That means there's very little energy-wasting flex or wobble in the frame, and the rider benefits from a more efficient transfer of energy to pure forward motion. In a word, performance. Hit the pedals and blast ahead.

In addition, Klein frames are perfectly aligned. Perfectly. So every part of your bicycle is headed in exactly the same direction. Sounds simple enough, doesn't it? But, like other exotics, the high-strength aluminum Klein frame cannot be safely realigned at the dealer. So we build it right, or we reject it. Klein frames are straight. Guaranteed.

## DOING THINGS THE HARD WAY MAKES AN EASIER RIDE.

While larger manufacturers strive for ways to do things more quickly, and less expensively, we just keep doing things better. All our Aluminum Power Tubing® is heat treated, to create a uniform, and therefore stronger, grain structure and to eliminate any weaknesses or stresses from the welding process.

Every Klein has an extended (75 mm vs. the standard 68 mm) and offset bottom bracket which increases the power train rigidity and decreases both the rolling resistance and stress on the bearings and spindle. The sealed bearings are directly press fit into the precision-bored bottom bracket, creating a long life, maintenance-free unit.

A Klein frame begins with precision mitering in elaborate jigs to align every tube. The high penetration welding goes through the parent metal. Each weld is smooth, with no gaps between the weld and the tubing joint. None.

Even the paint job is superior. Multiple coats of Durethane enamel give every Klein a bright, glossy, tough finish that will last for years. And keep your bike looking new.

From frame alignment to final finish, Kleins are built right in the first place. That's why they come with a limited lifetime, one million mile warranty. And they're engineered to make every mile a special riding experience.



Gary Klein




# ATTITUDE

This is it. Top of the line. Klein's winning Attitude,™ the ultimate off-road racing bike, is the latest breakthrough from the recognized pioneer in aluminum frames.

Check the supersized "25" headset. Its inner diameter of 1-9/16" is more than 50 percent larger than the traditional 1". This revolutionary new headset along with the fork and bar & stem combination make up Klein's new Ride Control System™ for more steering control and increased shock absorption at the front end. Incredibly responsive. Floats easily over rough terrain.

Fast and efficient. Features rear cantilever brake mounts, horizontal rear dropouts, and 135 mm rear axle spacing. Available in 18, 20, or 22 inches. Multiple coats of Klein's Durethane paint process bring the Attitude™ to a gleaming Bright Green, White, and Magenta fade.

Choose your weapon: The Attitude™ XT weighs in at 23.75 pounds. For more competitive riders, the Attitude™ Super Light comes in at only 21.5 pounds. Or the Attitude™ Team Issue, featuring the new Campagnolo Centaur group, and weighing a mere 23.5 pounds.

**"GARY KLEIN MAKES SOME OF THE FINEST HANDBUILT ALUMINUM BIKES IN THE WORLD."** *MOUNTAIN & CITY BIKING*

Suggested retail prices for complete bicycles:
Attitude XT 10,896
Attitude Team-Issue ~~9,764~~ 10,669
Attitude Super-Light 9,761
*See page 5 for components*




Suggested Retail Price for Attitude frame alone




# PINNACLE ELITE

Some people want it all. A bike for touring, racing, and general use. Here it is. The Pinnacle Elite is an exceptional climber and descender. The efficiency and responsiveness make it ideal for every riding situation.

The three-color Durethane paint fade, called Backfire, is as unique as the bike. The joints are smooth and elegant. Features include rear cantilever brake mounts, front and rear eyelets for rack mounts, and 135 mm rear axle spacing.

The Pinnacle Elite, available in 18, 20 or 22 inches weighs 24.5 pounds.

11, 12 3

Suggested retail price for complete bicycle:
Pinnacle Elite XT

*See page 5 for components*




Suggested retail price for Pinnacle Elite frameset
Available with 135mm or 130mm rear axle spacing.

**"A WORLD-CLASS BIKE WITH OVERSIZE ALUMINUM TUBING, BUILT BY THE GUYS WHO PERFECTED THAT TECHNOLOGY."** ***BICYCLE GUIDE***




# PINNACLE

When you're ready for the finest all-purpose mountain bike, for fun, for fitness, this is it. Klein's Pinnacle provides the ride and handling of our mountain racers, but at an attractive price.

Special features, too: rear cantilever brake mounts, front and rear eyelets for rack mounts, and 135 mm rear axle spacing.

The Pinnacle is available in Flare or Bright Green, and in 18, 20 or 22 inches. With the Suntour XCD component package, the weight is 25.6 pounds. Also available with Deore DX (25 pounds) or Deore XT (24.5 pounds).

## MOUNTAIN BIKES

Pinnacle, Rascal, Pinnacle Elite and Attitude

| Component | XCD | DX | XT | Attitude Team Issue |
|---|---|---|---|---|
| Brake Set | Dia Compe 986 Cantilever (F) & (R) | Deore DX (F) Dia Compe 986 Cantilever (R) | Deore XT (F) Dia Compe 986 Cantilever (R) | Centaur |
| Chain | XCD | DX | XT | Regina |
| Crankset | XCD 26x36x46 | DX 26x36x46 | XT 26x36x46 | Centaur 26x36x46 |
| Front Derailleur | XCD | DX Super Glide | XT Super Glide | Centaur |
| Rear Derailleur | XCD Accushift | DX STI | XT STI | Centaur |
| Handlebars | Sakae MTB | Klein | Klein | Klein |
| Stem | Sakae MTB | Klein | Klein | Klein |
| Headset | DX | DX | XT | Centaur |
| Hubs | XCD | DX | XT | Centaur |
| Quick Release | XCD | DX | XT | Centaur |
| Rims | Campagnolo Kappa | Campagnolo Kappa | Campagnolo Kappa | Campagnolo Kappa |
| Spokes | Wheelsmith stainless | Wheelsmith stainless | Wheelsmith stainless | Wheelsmith stainless |
| Tires | Ground control | Ground control | Ground control S | Ground control S |
| Freewheel | XCD Cassette 13-28, 7 spd. | DX Cassette 12-28, 7 spd. | XT Cassette 12-28, 7 spd. | Regina 12-28, 7 spd. |
| Pedals | Sakae Low Fat | DX | XT | Centaur |
| Toeclips | Not included | DX | XT | Centaur |
| Toestraps | Not included | Binda | Binda | Centaur |
| Saddle | Avocet Gelflex | Avocet Gelflex | Avocet Gelflex | Avocet Gelflex |
| Seat Post | XCD | XT | XT | Centaur |
| Water Bottle | Klein | Klein | Klein | Klein |
| W.B. Cage | Specialized mt. | Specialized mt. | Specialized mt. | Specialized mt. |

Specifications are subject to change without notice.

Suggested retail price for complete bicycles:
Pinnacle XCD 11622
Pinnacle DX 11,350
Pinnacle XT 11'123

*See chart for components*



Suggested retail price for Pinnacle frameset
Available with 135mm or 130mm rear axle spacing.




# RASCAL

Radical racing geometry makes the Rascal an aggressive mountain bike. Unsurpassed climbing and descending capability. Features rear cantilever brake mounts, horizontal rear dropouts, and 135 mm rear axle spacing.

Available in 18, 20 or 22 inches, the Rascal weighs 24.5 pounds. Klein's unsurpassed multiple coats of Durethane will keep your Rascal looking new. The paint is a new Magenta/Black fade combination.

11,123

**"KLEIN. THE ULTIMATE STATUS SYMBOL, AND NOT INCIDENTALLY, THE WORLD'S BEST-ENGINEERED BIKE."** *BICYCLING MAGAZINE*

Suggested retail price for complete bicycle:
Rascal-XT

*See page 5 for components*




Suggested retail price for Rascal frameset




# KIRSTEN

Specially designed for a smaller person, the Kirsten is a true performance bike. It has all the speed and handling you expect from a Klein. The frame geometry has been designed to maximize the power and skill of a smaller, lighter rider, using 700c front and rear wheels.

Kirsten is available in 47 or 50 cm. Select either Hot Red or Sovereign Blue.

The Kirsten Sport weighs in at 19.7 pounds. The Kirsten Super Sport is 19.5 pounds. And the Kirsten Delux Sport is a mere 19.3 pounds.

Suggested retail prices for complete bicycles:
Kirsten Sport (105 group) 8,944
Kirsten Super Sport (Ultegra) 8853
Kirsten Delux Sport (Dura Ace or Chorus) 8742

*See page 8 for components*



Suggested retail price for Kirsten frameset

**On every Klein, the sealed bearings are directly press fit into the precision-bored bottom bracket, creating a long life, maintenance-free unit.**




# QUANTUM

The racer's choice. A proven winner that offers peak performance at a terrific price.

Precision alignment ensures top efficiency, translating the rider's energy into pure forward motion. Instantly responsive for very aggressive riding.

Popular with successful triathletes, biathletes, and road racers, the Quantum is available in 51, 53, 55, 57, 59, 61 or 63 cm. Choose the Hot Red or Ultra Violet Durethane paint job.

The Quantum Race is 20.5 pounds, the Quantum Super Race just 19.6 pounds. Or the featherweight Quantum Delux Race, just 19.3 pounds.

Suggested retail prices for complete bicycles:
Quantum Race (105 group) 9307
Quantum Super Race (Ultegra) 8898
Quantum Delux Race (Dura Ace or Chorus) 8,742

*See chart for components*



Suggested retail price for Quantum frameset

## ROAD BIKES

Quantum, Performance and Kirsten

| Component | 105 | Ultegra | Dura Ace | Chorus |
|---|---|---|---|---|
| Brake Set | 105 | Ultegra Aero | Dura Ace | Chorus |
| Chain | 105 | Ultegra | Dura Ace | Sedis |
| Crankset | 105<br>42 x 53 | Ultegra<br>42 x 53 | Dura Ace<br>42 x 53 | Chorus<br>42 x 53 |
| Front Derailler | 105<br>(with hinge clamp) | Ultegra<br>(with hinge clamp) | Dura Ace<br>(with hinge clamp) | Chorus |
| Rear Derailler | 105 | Ultegra | Dura Ace SIS | Chorus |
| Shift Levers | 105 | Ultegra | Dura Ace SIS | Chorus<br>Syncro II |
| Handlebars | Sakae FX | Sakae FX | Cinelli | Cinelli |
| Stem | Sakae FX | Sakae FX | Cinelli 1/A | Cinelli 1/A |
| Headset | 105 | Ultegra | Dura Ace | Chorus |
| Hubs | 105 | Ultegra | Dura Ace | Chorus |
| Quick Release | 105 | Ultegra | Dura Ace | Chorus |
| Rims | Campagnolo<br>(clincher) | Campagnolo<br>(clincher) | Campagnolo<br>(tubular) | Campagnolo<br>(tubular) |
| Spokes | Wheelsmith<br>stainless | Wheelsmith<br>stainless | Wheelsmith<br>stainless | Wheelsmith<br>stainless |
| Tires | Specialized Turbo<br>(wire) | Specialized Turbo<br>(wire) | Specialized<br>(tubular) | Specialized<br>(tubular) |
| Freewheel | 105<br>Cassette<br>13-23, 7 spd. | Ultegra<br>Cassette<br>13-23, hyper<br>glide, 7 spd. | Dura Ace<br>Cassette<br>12-21, 8 spd. | Suntour<br><br>12-21, 8 spd. |
| Pedals | Not included | Not included | Not included | Not included |
| Saddle | Avocet Gelflex | Avocet Gelflex | San Marco Regal | San Marco Regal |
| Seat Post | American<br>Classic | Ultegra | Dura Ace | Chorus |
| Water Bottle | Klein | Klein | Klein | Klein |
| W.B. Cage | Specialized | Specialized | Specialized | Specialized |

Specifications are subject to change without notice.




# PERFORMANCE

Take off on Klein's Performance, the bike that's ideal for long distance racing and excellent for touring and fitness riding. The slightly relaxed geometry offers a comfortable ride with racing performance and efficiency. The handling and responsiveness are exceptional, because the alignment is perfect on every Klein. Small wonder Klein can offer a limited lifetime or million mile warranty.

Performance is available in 52, 54, 56, 58, 60, or 62 cm. The color is Sovereign Blue.

The weights vary with the component packages, as follows: Performance Sport is 20.5 pounds. Performance Super Sport is 19.6 pounds. And the Performance Delux Sport is 19.3 pounds.

**"THE BIKES WERE WORKS OF ART."** *BICYCLE GUIDE*

Suggested retail prices for complete bicycles:
Performance Sport (105 group) 9,307
Performance Super Sport (Ultegra) 8,898
Performance Delux Sport (Dura Ace or Chorus) 8,742

*See page 8 for components*



Suggested retail price for Performance frame

# KLEIN'S CUSTOM FRAMESETS

**ALL CUSTOM-FITTED FRAMESETS INCLUDE AS STANDARD:**

Side-mounted down tube shift levers, heavy-duty, precision-sealed bearing bottom bracket assembly, all cable guides, one water bottle mount and custom fitted color-matched pump. Finished with durable Durethane polyurethane enamel in Sovereign Blue, Hot Red, Ultra Violet, Flare or Bright Green.

### CRITERIUM.

Frameset only (51-68cm)

Gary Klein personally supervises the custom fitting and choice of components for every Criterium built. And, after a meticulous final inspection, his written approval accompanies each completed frame. Body measurements and riding style are analyzed for a perfect fit.

### TEAM SUPER.

Frameset only (51-68cm)

The Team Super represents the highest quality, custom-fitted frame Klein can produce. Any flaw in the finish is cause for rejection. Nothing is spared in the design and construction of this frame. In addition to all the Criterium features, Boron fiber is used in the chainstays, seat stays and front fork blades for its shock-absorbing characteristics and power-train rigidity. Since Boron composites absorb high frequency shock many times better than conventional materials, the Team Super has an exceptionally smooth ride.

### ADVANTAGE.

Frameset only (46-70cm)

Gary Klein personally reviews the fitting and choice of components for the Advantage. His final inspection approval accompanies each custom-fitted frame.

### STAGE.

Frameset only (46-70cm)

The Stage represents the ultimate in comfort and performance. It's the frame for individuals who demand the very best the world has to offer, not only in ride and handling, but in aesthetics as well.

In addition to all the Advantage features, Boron fiber reinforcements are used in chainstays, seat stays and front fork blades to further enhance the properties of the frame. Boron fiber, per weight, is the strongest, stiffest structural material in the world, absorbing high frequency shock many times better than conventional materials. Truly, the best bicycle available.




## CUSTOM FRAMESET OPTIONS

Custom color in Durethane polyurethane enamel *(includes color chart and touch-up paint)*
Pearl, Candy Apple or Backfire™ finish
Touch-up paint, standard colors
- Single color
- Two-color fade
- Three-color fade

Color chart
Internally routed rear brake cable *(inside top tube)*
Aero Wishbone Seat Stay
Aero 24-inch front wheel sloping top tube
Computers *(prices do not include computer)*
- Sensor mounts Cadence, Rear Wheel
- Wire holes Cadence, Rear Wheel
- Wires Installed Cadence, Rear Wheel

Bar control stops, in lieu of down tube levers
Replacement front fork for Advantage or Criterium
Replacement front fork for Stage or Team Super
Replacement frame-fitted pump, ready for painting

### WATER BOTTLES, MOUNTS AND CAGES

Extra mounts for additional water bottle
Color-matched alloy cage and Klein water bottle

### FRONT DERAILLEURS (1¼")

Superbe Pro endless band clamp
Campagnolo Chorus/Victory
Shimano Deore XT
Braze-on Boss for Campagnolo style
Shimano Hinge Clamp for braze-on style

### SEATPOSTS

American Classic 180mm, 27.4mm 8 oz.
Campagnolo C-Record 180mm

### OTHER COMPONENTS

Rear rack mounts
Campy Nuovo or Super Record triple conversion – machining only
Machining, chainring 24, 26, 28 & 30T; and hardware
Internal routing of rear brake cable through handlebars for Aero Brake Levers
Bottom bracket spindles 113, 117, 119, 121, 125, 130, 135
Bottom bracket bearings, precision, sealed, pr.
Refinish custom framesets *(in standard color)*
Klein cycling caps, white or yellow

# OPTIONS

**For Quantum, Performance, Kirsten, Pinnacle, Rascal, Pinnacle Elite and Attitude models.**

The following options are available when ordering. Special color or frame modifications may delay delivery by an additional three weeks.

Touch-up paint, standard colors
- Single color
- Two-color fade
- Three-color fade

Color chart
Painting front fork

Custom Low Rider, Rack mounts on front fork *(requires painting)* Mountain bikes only
Refinish in standard single color
Refinish in standard 2-color fade
Refinish in standard 3-color fade

## OTHER COMPONENTS & ACCESSORIES

Klein water bottle and cage
Campy Nuovo or Super Record triple conversion – machining only
Machining, chainring 24, 26, 28 & 30T, and hardware
Klein bottom bracket Installation tool kit
Bottom bracket spindles 113, 117, 119, 121, 125, 130, 135
Bottom bracket bearings, precision, sealed, pr.
Klein cycling caps, white or yellow

## FRONT DERAILLEURS (1¼")

Suntour Superbe Pro
Campagnolo Chorus/Victory
Campagnolo Centaur
Suntour 9000
Shimano Deore XT
Shimano Hinge Clamp for braze-on style

## SEATPOSTS

American Classic
180mm, 27.4mm 6.0 oz.
American Classic
280mm, 27.2mm 10.7 oz.
IRD Custom 355mm, 27.2mm 9.7 oz.

## NEW FOR 1990

Mission Control™
- painted
- unpainted

Chain Control Device Kit *(fits Klein models only)*

## ACCESSORIES

Klein and Giordana have combined their talents to offer you Italy's finest riding apparel.
- Thermal jackets (sizes 2-6)
- Short sleeve cycling jerseys (sizes 2-6)
- Long sleeve cycling jerseys (sizes 2-6)
- Cycling shorts (sizes 2-6)

These brilliantly-colored, quality, fashionable garments are distributed by Gita Sporting Goods and handled by Klein dealers.

Klein T-shirts by Balance Ltd.
- Tank-tops
- Short sleeve T
- Long sleeve T
- Polo pique knit
- Sweatshirt

Klein Corporation tries to maintain an inventory of framesets, options, and bicycles so that orders can be shipped immediately. From time to time, demand is so overwhelming that the production is unable to keep up. Your dealer can contact the factory at (206) 262-3305 for availability of any specific items. Prices and specifications subject to change without notice.



**Multiple coats of Durethane enamel give every Klein a bright, glossy, tough finish. Shown here (bottom to top): Magenta/ Black Fade, Bright Green/White/Magenta Fade, and Backfire.**

# NEW IN 1990.

## INTRODUCING MISSION CONTROL™, KLEIN'S NEW LIGHTWEIGHT, ONE-PIECE BAR AND STEM.

For all Klein riders who want to lose weight: our new Mission Control™ (MC for short) bar and stem is 1/3 pound lighter than other lightweights of comparable size. That's lighter than the Answer Taperlight bar and Tioga T-Bone stem combination.

Crafted from strong, shock-absorbing T6 heat-treated aircraft aluminum and complete with titanium hardware, this new component at a supersized 1-1/4" is standard on our new Attitude™. All 1990 Klein mountain bikes will come with Mission Control™ at the 7/8" size and it is an option on the Pinnacle XCD. This 7/8" is also available for retrofit on existing Klein bikes.

The bar measures a full 580mm. The steerer insertion, at 120mm, is 40mm longer than the T-Bone, providing the rider a generous height adjustment. The longer anti-slip clamping wedge distributes pressure more evenly, so you can have a tighter grip with less force.



## ALSO NEW: OUR SIMPLE CHAIN CONTROL DEVICE THAT PREVENTS CHAIN SUCK.

Keep your chain where it belongs and yourself out of trouble without sacrificing speed. Klein's new Chain Control Device (U.S. Patent applied for) is specially engineered for Klein bicycles and is standard on all 1990 mountain bikes. It is also available as a kit for retrofit on all previous Klein models.

Designed to enhance performance and safety, the small black Chain Control Device under the chain stay keeps the chain from slipping up between the chain ring and chain stay by sweeping it clean and avoiding the problem.

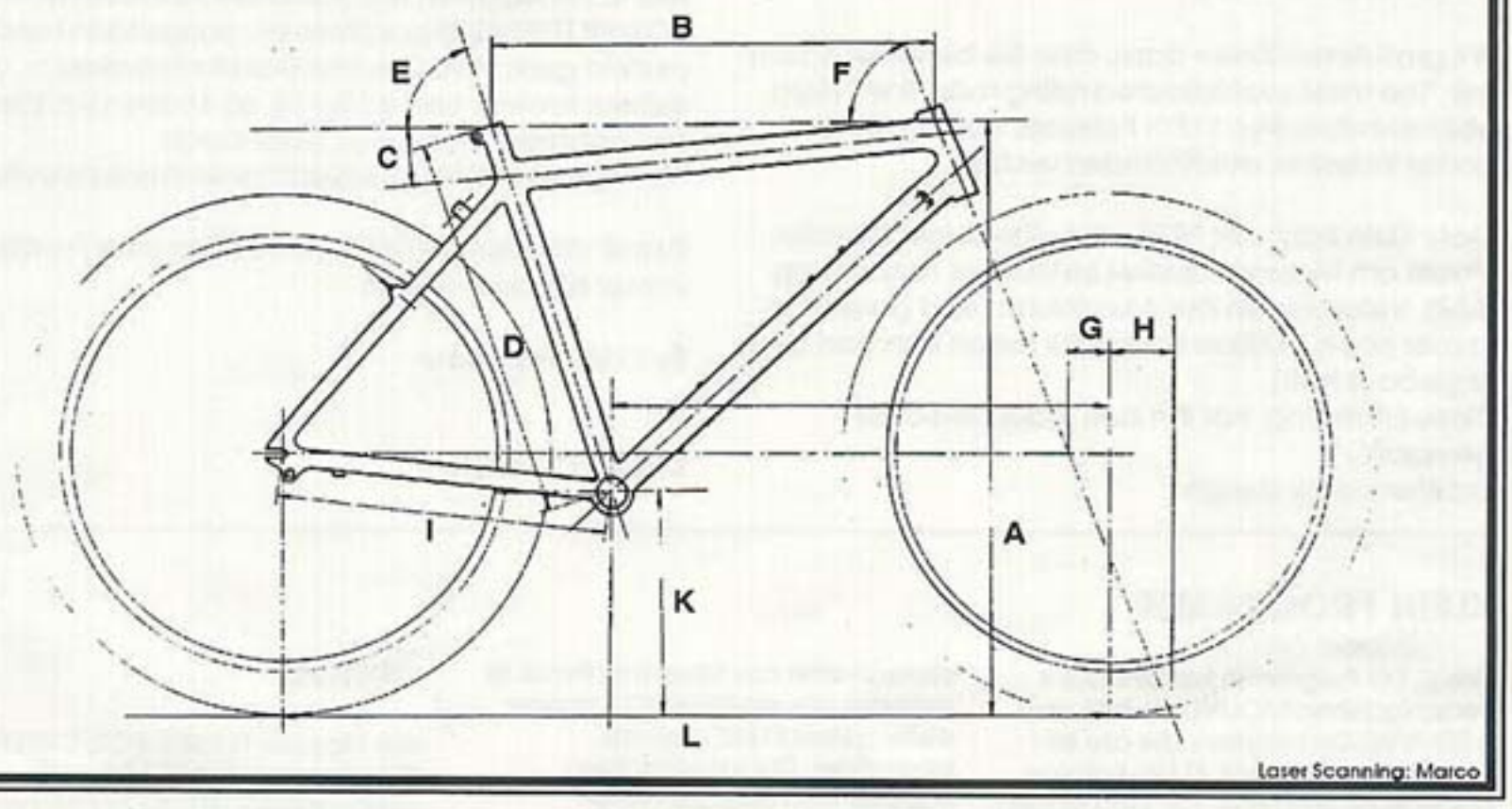


KLEIN

Klein Bicycle Corporation
118 Klein Road, Chehalis, Washington 98532

# GEOMETRIE

KLEIN BICYCLES, U.S.A.




## EIN WORT ZUR GEOMETRIE IM ALLGEMEINEN

Nicht alle lesen Zahlen wie Krimis, deshalb die folgenden Ergänzungen zur Geometrie.
Gary Kleins oberstes Ziel ist es, eine effiziente Machine zu konstruieren. Die Voraussetzung dazu ist ein Rahmen mit minimalen Energieverlusten. Das heisst, die Anatomie der Fahrerin, der beabsichtigte Einsatz und das Bike müssen perfekt aufeinander abgestimmt sein. Das Resultat davon ist ein Bike, dessen Handling so problemlos ist, als wäre es der eigene Körper.
Ein KLEIN hat eine sogenannte "moderne Geometrie", damit sind relativ steile Sitzrohr- (E) und Steuerrohr- (F) Winkel in Verbindung mit kurzen Kettenstreben (I) und langem Oberrohr (B), gemeint.
Ein Steuerrohrwinkel von 71 Grad bringt ein sehr lebendiges Lenkverhalten und somit präzise Kontrolle in technischem Gelände, besonders in extremen Steigungen. Schnelle Abfahrten verlangen andererseits gute fahrtechnische Voraussetzungen.
Das Bike wird gefühlsmässig härter, je steiler der Steuerwinkel ist.
Zur Steuerung gehören aber auch Gabel und Vorbau/Lenker. Die Gabel bestimmt die Gabelbiegung (G) und zusammen mit dem Steuerwinkel den Nachlauf. Je länger der Nachlauf, desto spurstabiler das Bike. Das Abwärtsrasen wird einfacher und aufwärts (noch) schwieriger, weil die Lebendigkeit gelitten hat. Und diese wird noch geringer, je länger der Vorbau ist.
Umgekehrt wird ein Bike extrem lebendig und hart, wenn ein steiler Steuerrohrwinkel (F) mit einem kurzen Vorbau und einer Gabel mit wenig Biegung kombiniert wird.
Allenfalls überfordernd lebendig.
Ein Sitzrohrwinkel (E) von 73 Grad erleichtert das Umsteigen vom "im Sattel sitzen", zum "Wiegetritt".
Ausserdem wird die Fahrerin direkter über die Pedalen positioniert und erleichtert so den Wechsel der Trittfrequenzen und das Fahren im technischen Gelände, vorallem bergaufwärts.
Abwärtsfahren wird konsequenterweise schwieriger. Die Winkel sind aber nur die Hälfte der Wahrheit.
Kurze Kettenstreben (I) verbessern die Hinterradtraktion und dadurch die Kletterfähigkeit an radikalen Steigungen.
Das lange Oberrohr (B) positioniert die Fahrerin niedriger, und senkt den Schwerpunkt des Körpers. Die Bewegungsfreiheit zwischen Sattel und Lenker ist grösser, die Gleichgewichtsfindung wird erleichtert.
Nun, da offenbar alle Designelemente mit Vor- und Nachteilen verbunden sind und mit grosser Sicherheit die meisten LeserInnen Mühe haben, die Zahlen für sich ideal zu kombinieren, bleibt die Frage nach der idealen Position auf dem Bike.
Das vollkommene Bike erlaubt dem Fahrer, sich aus einer neutralen Sitzposition heraus vorwärts und rückwärts frei zu bewegen und sich so dem wechselnden Gelände anzupassen. Diese Möglichkeiten der Gewichtsverlagerungen sind ein direktes Resultat des Rahmendesigns. Deshalb ist ein Rahmen, bzw. das komplette Bike, wie ein Massanzug. Wenn Du Dich auf dem Velo wohlfühlen willst und alle Aspekte optimal harmonieren sollen, müssen alle Teile individuell auf den Fahrer, respektive die Fahrerin abgestimmt worden sein.
Ein KLEIN wird deshalb vom KLEIN Spezialisten individuell aufgebaut. (Siehe 1. Umschlagseite).

**Ein KLEIN Mountain-Bike hat eine sogennante moderne Rahmen-Geometrie.**

© MTB CYCLETECH Page Maker: Klein Prospekt 1990

# GEOMETRIE

## MOUNTAIN-BIKES

| Rahmen grösse (Zoll/cm) | A Oberrohr- höhe (cm) | B Oberrohr- länge (cm) | C Oberrohr- neigung (Grad) | D Sitzrohr- länge (cm) | E Sitzrohr- winkel (Grad) | F Steuer- rohr- winkel | G Gabel Biegung (cm) | H Nachlauf (cm) | I Ketten- streben- länge | K Tretlager- höhe (cm) | Rad- stand (cm) | Typische Kurbel- länge | Typische Körper- grösse Racing | Typische Körper- grösse Touring |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mountain Klein** | | | | | | | | | | | | | | |
| 19 Zoll | 69,9 | 54,2 | 11 | 45 | 71 | 69 | 5 | | 44,5 | 29 | 106,7 | 17 | 170 | 160 |
| 21 Zoll | 74,2 | 56,5 | 7 | 51 | 71 | 69 | 5 | | 44,5 | 29,5 | 108,7 | 17,5 | 180 | 175 |
| 23 Zoll | 81,8 | 58,2 | 7 | 58 | 71 | 69 | 5 | | 44,5 | 30 | 110,9 | 18 | 190 | 185 |
| **Pinnacle und Pinnacle Elite** | | | | | | | | | | | | | | |
| 18 Zoll | 68,8 | 52,6 | 15 | 42 | 72 | 70 | 4,4 | | 43 | 29,2 | 103,1 | 170 | 165 | 155 |
| 20 Zoll | 74,2 | 55,7 | 8 | 49 | 72 | 70 | 4,4 | | 43 | 29,7 | 105,9 | 175 | 175 | 165 |
| 22 Zoll | 80 | 57,5 | 7,3 | 54 | 72 | 70 | 4,4 | | 43 | 30,2 | 107,9 | 180 | 185 | 175 |
| **Rascal und Rascal Elite** | | | | | | | | | | | | | | |
| 18 Zoll | 68,8 | 53,2 | 15 | 42 | 72,5 | 70 | 4,4 | | 43 | 29,2 | 103,6 | 170 | 165 | 155 |
| 20 Zoll | 74,6 | 56,2 | 8 | 49 | 72,5 | 71 | 4,4 | | 43 | 29,7 | 104,9 | 175 | 175 | 165 |
| 22 Zoll | 80,3 | 58,1 | 7,5 | 54 | 72,5 | 71 | 4,4 | | 43 | 30,2 | 106,9 | 180 | 185 | 175 |
| **Attitude** | | | | | | | | | | | | | | |
| 18 Zoll | 68,8 | 54 | 15 | 42 | 72,5 | 70 | 4 | 7 | 42,3 | 29,2 | 103,2 | 170 | 165 | |
| 20 Zoll | 74,6 | 58,1 | 8 | 49 | 73 | 71,5 | 4 | 6,5 | 42,3 | 29,7 | 105,7 | 175 | 175 | |
| 22 Zoll | 80,3 | 59,2 | 7,5 | 54 | 73 | 71,5 | 4 | 6,5 | 42,3 | 30,2 | 106,9 | 180 | 185 | |

## RENNVELOS

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Quantum und Quantum Elite** | | | | | | | | | | | | | |
| 51 cm | 75,7 | 53,5 | 0 | 74 | 73,5 | 3,8 | | 41,4 | 26,7 | 96,8 | 165 | 163 | 160 |
| 53 cm | 77,7 | 54,7 | 0 | 74 | 73,5 | 3,8 | | 41,4 | 26,9 | 98,0 | 167,5 | 167 | 165 |
| 55 cm | 80,0 | 55,9 | 0 | 74 | 73,5 | 3,8 | | 41,4 | 27,2 | 99,3 | 170 | 173 | 170 |
| 57 cm | 82,3 | 57,1 | 0 | 74 | 74 | 3,8 | | 41,4 | 27,5 | 100,0 | 172,5 | 178 | 175 |
| 59 cm | 84,3 | 58,3 | 0 | 74 | 74 | 3,8 | | 41,4 | 27,7 | 101,6 | 175 | 183 | 180 |
| 61 cm | 86,6 | 59,5 | 0 | 74 | 74 | 3,8 | | 41,4 | 27,9 | 102,6 | 177,5 | 188 | 185 |
| 63 cm | 88,4 | 60,7 | 0 | 74 | 74 | 3,8 | | 41,1 | 27,9 | 103,9 | 180 | 193 | 190 |
| **Performance und Performance Elite** | | | | | | | | | | | | | |
| 52 cm | 76,5 | 54,2 | 0 | 74 | 72 | 4,4 | | 45,7 | 25,9 | 103,4 | 165 | | 160 |
| 54 cm | 78,4 | 55,2 | 0 | 74 | 72 | 4,4 | | 45,7 | 26,2 | 104,4 | 167,5 | | 165 |
| 56 cm | 80,8 | 56,2 | 0 | 74 | 72,5 | 3,8 | | 45,7 | 26,4 | 104,6 | 170 | | 170 |
| 58 cm | 83,0 | 57,2 | 0 | 74 | 72,5 | 3,8 | | 45,7 | 26,6 | 105,7 | 172,5 | | 175 |
| 60 cm | 85,4 | 58,2 | 0 | 74 | 72,5 | 3,8 | | 45,7 | 26,9 | 107,2 | 175 | | 180 |
| 62 cm | 87,4 | 59,2 | 0 | 74 | 72,5 | 3,8 | | 45,7 | 27,2 | 108,2 | 177,5 | | 185+ |
| **Kirsten** | | | | | | | | | | | | | |
| 47 cm | 69,3 | 49,0 | 14 | 74 | 71 | 5,0 | | 42,6 | 25,65 | 97,5 | 165 | 150 | 145 |
| 50 cm | 69,3 | 49,0 | 14 | 74 | 71 | 5,0 | | 42,6 | 25,65 | 97,5 | 170 | 155 | 150 |
| **Team Super** | | | | | | | | | | | | | |
| 51 cm | 75,4 | 52,8 | | 72,5 | 72,3 | 3,8 | | 41,4 | 26,9 | 95,0 | 165 | 163 | 155 |
| 51 cm | 75,7 | 53,8 | | 74 | 73,5 | 3,8 | | 41,4 | 26,7 | 96,8 | 165 | 163 | 158 |
| 53 cm | 77,7 | 54,7 | | 74 | 73,5 | 3,8 | | 41,4 | 26,9 | 98,0 | 167,5 | 168 | 165 |
| 55 cm | 80,0 | 55,9 | | 74 | 73,5 | 3,8 | | 41,4 | 27,1 | 99,3 | 170 | 173 | 170 |
| 57 cm | 82,0 | 55,9 | | 72,5 | 73,6 | 3,8 | | 41,4 | 27,7 | 97,3 | 172,5 | 178 | 173 |
| 57 cm | 82,3 | 57,1 | | 74 | 74 | 3,8 | | 41,4 | 27,4 | 100,1 | 172,5 | 178 | 175 |
| 59 cm | 84,3 | 56,9 | | 72,5 | 74 | 3,8 | | 41,4 | 27,9 | 98,0 | 175 | 183 | 178 |
| 59 cm | 84,3 | 58,3 | | 74 | 74 | 3,8 | | 41,4 | 27,7 | 101,6 | 175 | 183 | 180 |
| 61 cm | 86,1 | 57,7 | | 72,5 | 74,2 | 3,8 | | 41,4 | 27,9 | 98,6 | 177,5 | 188 | 183 |
| 61 cm | 86,6 | 59,5 | | 74 | 74 | 3,8 | | 41,4 | 27,9 | 102,6 | 177,5 | 188 | 185 |
| 63 cm | 88,4 | 60,7 | | 74 | 74 | 3,8 | | 41,4 | 27,9 | 103,9 | 180 | 193 | 190 |
| 65 cm | 90,4 | 61,9 | | 74 | 74 | 3,8 | | 41,4 | 27,9 | 105,2 | 180 | 198 | 195 |
| 68 cm | 93,2 | 63,7 | | 74 | 74 | 3,8 | | 41,4 | 27,9 | 106,9 | 180 | 203 | 200 |
| **Stage und Advantage** | | | | | | | | | | | | | |
| 46 cm | 68,6 | 51,2 | | 74 | 72 | 3,8 | | 41,9 | 24,4 | 97,0 | 162,5 | 150 | 145 |
| 47 cm | 69,3 | 49,0 | 14 | 74 | 71 | 5,0 | | 42,6 | 25,6 | 97,5 | 165 | 155 | 148 |
| 48 cm | 71,1 | 52,2 | | 74 | 72 | 3,8 | | 41,9 | 24,9 | 98,3 | 162,5 | 155 | 150 |
| 50 cm | 73,7 | 53,2 | | 74 | 72 | 3,8 | | 41,9 | 25,4 | 99,6 | 165 | 160 | 155 |
| 50 cm | 69,4 | 49,0 | 14 | 74 | 71 | 5,0 | | 42,6 | 25,6 | 97,5 | 170 | 158 | 155 |
| 52 cm | 76,5 | 45,2 | | 74 | 72 | 4,5 | | 45,7 | 25,9 | 103,4 | 165 | 165 | 160 |
| 54 cm | 78,4 | 55,2 | | 74 | 72 | 4,5 | | 45,7 | 26,2 | 104,4 | 167,5 | 170 | 165 |
| 56 cm | 80,8 | 56,2 | | 74 | 72,5 | 3,8 | | 45,7 | 26,4 | 104,6 | 170 | 175 | 170 |
| 58 cm | 83,1 | 57,2 | | 74 | 72,5 | 3,8 | | 45,7 | 26,7 | 105,7 | 172,5 | 180 | 175 |
| 60 cm | 85,3 | 58,2 | | 74 | 72,5 | 3,8 | | 45,7 | 27,0 | 107,2 | 175 | 185 | 180 |
| 62 cm | 87,4 | 59,2 | | 74 | 72,5 | 3,8 | | 45,7 | 27,2 | 108,2 | 177,5 | 190 | 185 |
| 64 cm | 89,4 | 60,2 | | 74 | 72,5 | 3,8 | | 45,7 | 27,4 | 109,2 | 180 | 195 | 190 |
| 66 cm | 91,7 | 61,2 | | 74,5 | 72,5 | 3,8 | | 45,7 | 27,4 | 110,7 | 180 | 200 | 195 |
| 68 cm | 93,5 | 62,2 | | 74,5 | 72,5 | 3,8 | | 45,7 | 27,4 | 112,0 | 180 | 205 | 200 |
| 70 cm | 94,0 | 63,2 | | 74,5 | 72,5 | 3,8 | | 45,7 | 27,4 | 113,0 | 180 | 210 | 205 |

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# KLEIN BICYCLES 1990

Liebe KLEIN Fahrerin

Wir gratulieren Ihnen dazu, dass Sie bereit sind, sich mit "the most sophisticated riding machine", dem hochentwickelten KLEIN Fahrrad, Vorbild für die ganze Industrie, auseinanderzusetzen.

Gary Klein baut seit 1975, als Folge seiner Bicycle-Studie am Massachusettes Institute of Technology (MIT), Velorahmen aus Aluminium. (Und garantiert immer noch 1 Million Meilen für jeden Rahmen den er gebaut hat!)
Diese Erfahrung hat ihn zum Industrieleader gemacht.
Excellence by design.

Alle KLEIN Rahmen sind mit KLEIN ALUMINIUM POWER TUBING © geschweisst, ausgehärtet und perfekt gerichtet. Das Resultat ist ein Rahmen, der extrem leichter und steifer ist, als konventionelle Stahlrahmen. Energieverluste durch Tretlagerflexibilität werden praktisch unbedeutend.

Damit die kürzeste Distanz zwischen zwei Punkten immer ein KLEIN bleibt.

Ihr KLEIN Importeur

MTB CYCLETECH

## KLEIN PROGRAMM

Das KLEIN Programm besteht aus 4 verschiedenen MOUNTAIN-BIKE und 3 RENNVELO-Modellen, die alle im (englischen) Original KLEIN-Katalog abgebildet und untenstehend einzeln beschrieben sind.

### ATTITUDE

Das meistdiskutierte Velokonzept während der welt-grössten Mountain-Bike Ausstellung in Anaheim in California, USA.
Mit dem SUPERSIZE™ Steuersatz und RIDE CONTROL SYSTEM™ bringt KLEIN buchstäblich eine Dimension in die Oversize-Diskussion, welche diese praktisch überflüssig macht.
For Racing Only.
Ein reinrassiges Racing Bike
Gewicht: Shimano XT Ausrüstung 11,0 kg (20 Zoll Rahmen).
(Mit einer speziellen Komponenten-auswahl lässt sich das Gewicht problemlos auf (weit) unter 10 kg reduzieren.

### PINNACLE

Ein Bike für alle, die alles wollen. Das Mountain-Touring Bike, das Racing-Bike, das Fitness-Bike, das Super-Sano-Bike. Das Original. Das Vorbild. Am PINNACLE ELITE wurde im Unterschied zum PINNACLE auch die Schweiss-nähte an den Ausfallenden ver-schliffen. Der ELITE FINISH ™ist der einzige Unterschied zum PINNACLE.

### RASCAL

Rascal heisst auf deutsch Scheim, Schalk, Original. Irgendwie beschreibt dieser Name das Modell treffend. Es sieht aus wie ein PINNACLE ist aber steiler gebaut und deshalb lebendiger. Die waagrechten Ausfallenden erlauben einen superkurzen Hinterbau, was extreme Kletterfähigkeit bedeutet.

### MOUNTAIN-KLEIN

Mit diesem Modell hat Gary vor 6 Jahren die damals an einer Hand abzählbaren Bikehersteller schockiert. Oversized (überdicke Rohre), Aluminium, abfallendes Oberrohr. Alles Design-Aspekte die heute von allen sogenannten Herstellern imitiert werden.

### KIRSTEN

Ein agiles Rennvelo für kleinere Leute. Klein gebaut, superleicht und trotzdem mit ausgewachsenen 700C Rädern.

### QUANTUM

Das erste KLEIN Aluvelo. Seit 1975 im Programm. Das sind 16 Jahre! Niemand hat mehr Erfahrung im OS Aluvelobau. Das QUANTUM bürgt dafür.

### PERFORMANCE

Etwas weniger steil und länger gebaut als das Quantum und also das ideale Velo für Fahrradtouren. Die unvergleichliche Rahmen-Stabilität erlaubt sicheren Gepäcktransport, ohne Schlingern.

### CUSTOM

Die Modelle TEAM SUPER, CRITERIUM, STAGE und ADVANTAGE sind sogenannte CUSTOM Rennfahrräder. Das heisst diese Velos werden nach den detaillierten Angaben des Kunden produziert, sind mit BORON-Fasern verstärkt, haben einen SUPER ELITE FINISH™ und das Hinterrad-bremskabel ist im Oberrohr innenverlegt.

## KLEIN SYSTEM

Jedes KLEIN Velo wird aus 3 Modulen (A, B, C) individuell aufgebaut. Erst die Kombination dieser 3 Module ergibt ein komplettes, fahrbares Velo. STANDARD Velos haben wir auf der letzten Seite SPEZIFIKATIONEN 1990 zusammengestellt.
Individuelle Abänderungen sind möglich. Fragen Sie Ihren KLEIN Fachhändler und Spezialisten.

### A MODUL

Rahmen und Gabel inklusive KLEIN-Tretlager.

### B MODUL

Gruppe (z.B SHIMANO DEORE XT) oder individuelle Zusammenstellung.

### C MODUL

Satz (z.B. Rennsatz). Zum Satz gehört alles, was nicht in der Gruppe eingeschlossen ist.

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# SPEZIFIKATIONEN

## MOUNTAIN-BIKES

| MODELL | MOUNTAIN | PINNACLE DX | PINNACLE XT | RASCAL | ATTITUDE |
|---|---|---|---|---|---|
| Rahmen | KLEIN Aluminium | KLEIN Aluminium | KLEIN Aluminium | KLEIN Aluminium | KLEIN Aluminium |
| Gabel | CroMoly | CroMoly | CroMoly | CroMoly | Aluminium |
| Steuersatz | Shimano DX | Shimano Dx | Shimano XT | Shimano XT | KLEIN Supersize |
| Tretlager | KLEIN | KLEIN | KLEIN | KLEIN | KLEIN |
| Kurbeln | Shimano DX | Shimano DX | Shimano XT | Shimano XT | Shimano XT |
| Übersetzung | 24-36-46 rund | 24-36-46 rund | 24-36-46 rund | 24-36-46 rund | 24-36-46 rund |
| Pedalen | Shimano DX | Shimano DX | Shimano XT | Shimano XT | Shimano XT |
| Wechsel | Shimano DX | Shimano DX | Shimano XT | Shimano XT | Shimano XT |
| Umwerfer | Shimano DX | Shimano DX | Shimano XT | Shimano XT | Shimano XT |
| Kette | Shimano HG 70 | Shimano HG 70 | Shimano HG 90 | Shimano HG 90 | Shimano HG 90 |
| Schalthebel | Shimano DX STI | Shimano DX STI | Shimano XT STI | Shimano XT STI | Shimano XT STI |
| Bremsen | Shimano DX Canti | Shimano DX Canti | Shimano XT Canti | Shimano XT Canti | Shimano XT Canti |
| Bremshebel | Shimano DX STI | Shimano DX STI | Shimano XT STI | Shimano XT STI | Shimano XT STI |
| Naben | Shimano DX 32 Loch | Shimano DX 32 Loch | Shimano XT 32 Loch | Shimano XT 32 Loch | Shimano XT 32 Loch |
| Freilauf | Shimano HG | Shimano HG | Shimano HG | Shimano HG | Shimano HG |
| Sattel QR | Shimano | Shimano | Shimano | Shimano | Shimano |
| Lenker | Nitto Bullmoose Alu | Tioga Alu | Tioga Prestige II | SALSA CroMoly | KLEIN Alu |
| Vorbau | Nitto Bullmoose Alu | Tioga T-Bone | Tioga T-Bone | SALSA Pro Moto | KLEIN Alu |
| Sattel | MTB CYCLETECH | MTB CYCLETECH | MTB CYCLETECH | MTB CYCLETECH | MTB CYCLETECH |
| Sattelstütze | Strong 350 mm | Strong 350 mm | Shimano XT 330 mm | Tioga Prestige 350 | Tioga Prestige 350 mm |
| Griffe | Grab-On | Grab-On | Grab-On | Grab-On | Grab-On |
| Felgen | SUN C-20 | SUN C-20 | SUN C-16 | SUN-C 16 | SUN-C 16 |
| Schlauch | Specialized | Specialized | Specialized | Specialized | Specialized |
| Pneu | TIOGA FJ Nephew | TIOGA Farmer John | TIOGA Muddawg | TIOGA Muddawg | TIOGA Muddawg |
| Grössen | 19, 21, 23 Zoll | 18, 20, 22 Zoll | 18, 20, 22 Zoll | 18, 20, 22 Zoll | 18, 20, 22 Zoll |
| Farbe | schwarz | rot oder grün | rot oder grün | magenta/schwarz | rot/grün/weiss |
| Gewicht | 11,8 kg | 11,4 kg | 11,2 kg | 11,2 kg | 10,7 kg |
| Preis | Fr. 2'390.-- | Fr. 2'580.-- | Fr. 2'980.-- | Fr. 3'280.-- | Fr. 4'280.-- |

## RENNVELOS

| MODELL | QUANTUM 105 | QUANTUM U | KIRSTEN | PERFORMANCE | TEAM SUPER |
|---|---|---|---|---|---|
| Rahmen | KLEIN Aluminium | KLEIN Aluminium | KLEIN Aluminium | KLEIN Aluminium | KLEIN Aluminium Boron verstärkt |
| Gabel | Aluminium | Aluminium | Aluminium | CroMoly | Aluminium |
| Steuersatz | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano Deore XT | Shimano Dura Ace |
| Tretlager | KLEIN | KLEIN | KLEIN | KLEIN | KLEIN |
| Kurbeln | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano Deore XT | Shimano Dura Ace |
| Übersetzung | nach Wunsch | nach Wunsch | nach Wunsch | nach Wunsch | nach Wunsch |
| Pedalen | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano Deore XT | Shimano DA/Look |
| Wechsel | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano Deore XT | Shimano Dura Ace |
| Umwerfer | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano Deore XT | Shimano Dura Ace |
| Kette | Shimano | Shimano | Shimano | Shimano HG 90 | Shimano Dura Ace |
| Schalthebel | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano XT STI | Shimano Dura Ace STI |
| Bremsen | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano 105 SC | Shimano Dura Ace STI |
| Bremshebel | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano XT STI | Shimano Dura Ace STI |
| Naben | Shimano 105 SC | Shimano Ultegra | Shimano 105 SC | Shimano Deore XT | Shimano Dura Ace |
| Freilauf | Shimano 105 HG | Shimano Ultegra | Shimano 105 HG | Shimano XT HG | Shimano Dura Ace |
| Lenker | Mavic | Mavic | Mavic | SALSA | Mavic |
| Vorbau | Mavic 365 | Mavic 365 | Mavic 365 | SALSA Pro Moto | Mavic 370 |
| Sattel | MTB CYCLETECH | MTB CYCLETECH | MTB CYCLETECH | MTB CYCLETECH | San Marco Rolls |
| Sattelstütze | Shimano | Shimano | Shimano | Shimano XT | Shimano Aero 7400 |
| Griffe | Bikeribbon | Bikeribbon | Bikeribbon | Grab-On | Bikeribbon |
| Felgen | Mavic MA-2 | MAVIC MA-40 | MAVIC MA-2 | MAVIC MA 40 | MAVIC Open 4 CD |
| Schlauch | Specialized | Specialized | Specialized | Specialized | Specialized |
| Pneu | Specialized Turbo | Specialized Turbo | Specialized Turbo | TIOGA Greyhound | Specialized Turbo |
| Grössen | 51-63 alle 2 cm | 51-63 alle 2 cm | 47 und 50 cm | 52-62 alle 2 cm | 51-68 alle 2 cm |
| Farbe | rot oder violett | rot oder violett | rot oder blau | blau | rot |
| Gewicht | 8,9 kg | 8,7 kg | 8,7 kg | 9,4 kg | 8,5 kg |
| Preis | 2'380.-- | 2'680.-- | 2'380.-- | 3'280.-- | 6'380.-- |

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