



WATERFORD 2006

YOUR
AMERICAN
DREAM
BIKE

It's About You -
Your dreams and aspirations
for that perfect bike.
Waterford offers you
compelling, individualized
designs for the road, paths,
streets and trails. These
designs reflect decades of
service to almost every kind
of rider from entry-level
fitness buffs to world-level
competitors.



WATERFORD TECHNOLOGY



UNMATCHED MASTERY OF UNMATCHED STEEL

Waterford uses the best bike building material around.

The alloys: Heat-treated air-hardening steels featuring True Temper OX Platinum and Reynolds 853. Air-hardening steels, introduced only in the past decade in the bicycle business, offer double the strength of regular chromoly, both lug-brazing and TIG-welding friendly. No other tube offers the combination of strength, durability and toughness of our air-hardening alloys.

The designs: Based on our three families of designs, Waterford has created a custom palette of tube options that fit your individual needs while optimizing the performance within each family.

The craftsmanship: Waterford has achieved unmatched mastery of both lug brazing and TIG welding. It's not just the material. It's how it's built.

The fit: Our alloys make it easy to put good fit first.

The result: You get the right combination for you, be it fast acceleration, easy climbing, ride comfort, secure load handling or confident descending. And you get it in a material that will stand the test of time.



Master fabricator Sean Ketterhagen plies his craft.

Waterford Tubing Technologies



Comparison of Downtube Designs

33-SERIES / S3 TECHNOLOGY THE ULTIMATE COMPETITIVE WEAPON



Want to smile like Gary on the front cover? He's one of the growing number of riders who've added an R33 to their arsenal. No other frame has shaken up the attitudes of competitive riders like the R33.

Based on True Temper's S3 technology, the 33-Series models have a 1 1/2" ovalized downtube and 1 1/4" top tube in exceptionally thin dimensions - taking advantage of True Temper's precision butting, seamless tubing and special heat treatment. No other tube on the market draws as much performance out of air-hardening alloys as S3 Technology.

That's why a growing number of race teams depend on and delight from the R33's ride.

No material matches the combination of weight, toughness and ride quality of the R33. It'll make you smile, too.

Former coast to coast record-holder and international kieran racing star Don Mainland's R33. This 58cm frame has a light metallic blue "flade" to candy over light metallic blue.

22-SERIES LUG-BRAZED VIRTUOSITY



Jewelry in motion: Thanks to stainless steel lugs, hand polished to a mirror finish, you can have the look of a classic lug bike with today's performance - made just for you. These Newvex lugs are Waterford's standard stainless steel lug offering.

Before the advent of air-hardening tubes, the only way to extract the best performance from the best steels was lug brazing. No one matched then or matches today the virtuosity and technical achievements of Waterford's lug-brazing.

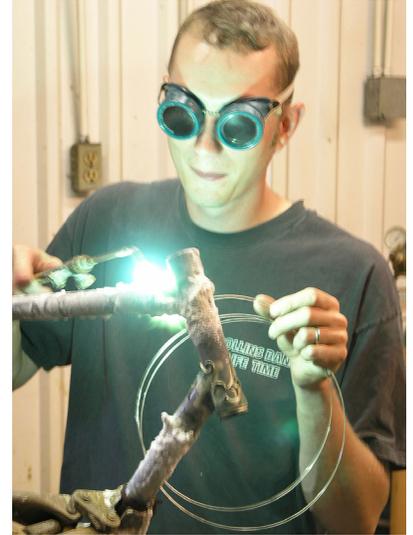
Air-hardening steels represent an advance for lug-brazed technology, thanks to its increased base strength. As a result, Waterford's lug frames continue to get lighter while retaining the same durability you've enjoyed since Waterford's founding.

The classic OS tube design pioneered by Waterford co-founder Marc Muller offers an excellent combination of smoothness and performance.

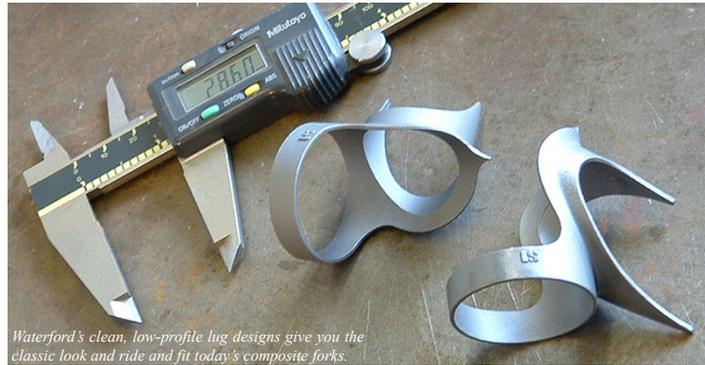
Lug styling options have blossomed thanks to the development of several new lug designs. Waterford can also fabricate individual custom lugsets for special needs - including our individually-commissioned hand-carved lug projects.

You can choose either 1" and 1 1/8" compatible head tubes, letting you can have our classic look with today's technology.

Treat yourself to a high-performance treasure.



Master brazer Dave Wages crafting a custom carved lug bike.



Waterford's clean, low-profile lug designs give you the classic look and ride and fit today's composite forks.

14-SERIES CUSTOM - PERFORMANCE - VALUE

OS2 technology: This tubeset wasn't possible before the advent of our heat-treated air-hardening steels. With performance between that of the 33-Series S3 technology and the classic smoothness of the 22-Series OS is OS2. OS2's excellent acceleration and lightweight design combined with economy and flexibility let us design your dream machine for less than you think.

Waterford's selection of OS2 tube offerings let us offer you a full range of designs from light race designs to inter-continental tourers. Our simple round shapes get the most out of the tube dimensions while allowing you a full range of options.

Jeff Hadjuk's 56cm full touring T-14 in University Green with Gold decals.



WATERFORD DESIGN

COMPETITION DESIGNS

Our competition frame designs reflect decades outfitting local, national and international competitors. Though Waterford includes made-to-measure fit with every Waterford and can customize handling, these geometries provide a solid sample of our design thinking. They assume 33-Series technology.

ROAD RACE/ CRITERIUM COMPACT

Our road/criterium racing geometries provide a short wheelbase and fast, neutral steering allows quick, sure maneuvering and fast acceleration. The compact sizing fits riders with normal and longer torsos.

Size (Theo)	500	520	530	540	550	560	570	580	590	600	620	640
W heel	700	700	700	700	700	700	700	700	700	700	700	700
SeatTube (C-Top)	440	460	470	480	490	500	510	520	530	540	560	580
SeatTube (C to C)	420	440	450	460	470	480	490	500	510	520	540	560
HorizontalTop	515	530	540	550	555	560	565	570	575	580	590	600
Top Tube (C to C)	497	514	526	537	542	547	552	556	561	566	576	586
Head Length	112	112	112	117	125	134	144	153	163	173	191	211
Head Angle	##	##	##	##	##	##	##	##	##	##	##	##
Fork Rake	50	43	43	43	43	43	43	43	43	43	43	43
Trail	56	58	58	55	55	55	55	55	55	55	55	55
Seat Angle	##	##	##	##	##	##	##	##	##	##	##	##
Front Center	576	576	582	581	581	581	586	586	593	598	602	611
C/S Length	405	405	405	405	405	405	405	410	410	410	415	415
W heelbase	971	971	977	976	976	976	981	986	993	998	##	##
Drop	70	70	70	70	70	70	70	70	70	70	70	70
Standover	736	747	751	757	765	774	783	791	801	811	828	847

STAGE RACING COMPACT

Our stage racing geometries provide a short rear-end and stable steering for fast climbing and sure-footed descents. Compact sizing is shown here.

Frame Size	480	500	520	540	550	560	570	580	600	620	640
W heel	650	700	700	700	700	700	700	700	700	700	700
Seat tube (C to C)	400	420	440	460	470	480	490	500	520	540	560
Horiz. Top Tube	500	515	530	550	555	560	565	570	580	590	600
ActualTop Tube	500	497	514	537	542	546	551	555	565	575	585
Head Length	116	112	112	112	123	133	142	150	170	188	208
Head Angle	72	72	73	73	73	73	73	73	73	73	73
Fork Rake	40	50	45	43	43	43	43	43	43	43	43
Trail	56	61	59	58	58	58	58	58	58	58	58
Seat Angle	75	75	75	75	74	74	74	73	73	73	73
Front Center	551	580	583	593	593	593	598	598	608	612	622
C/S Length	395	410	410	415	415	415	415	415	415	420	420
W heel-base	941	980	983	997	997	998	998	##	##	##	##
Drop	40	70	70	70	70	70	70	70	70	70	70
Standover	730	735	747	757	765	773	782	790	810	827	846

TRACK RACING/ POINTS COMPETITION

These track geometries support general purpose competition such as points racing, keirins, etc. Waterford can also design frames for very specific events such as pursuits and sprints.

Waterford also offers road fixed-gear designs for training and development.

Frame Size	500	520	530	540	550	560	570	580	600	620	640
Wheel	700c										
Seat tube (C to C)	482	502	512	522	532	542	552	562	582	602	622
Horiz. Top Tube	515	530	540	550	555	560	565	570	580	590	600
Head Length	99	116	124	132	142	152	162	172	192	212	232
Head Angle	74	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5
Fork Rake	35	30	30	30	30	30	30	30	30	30	30
Trail	62	62	62	62	62	62	62	62	62	62	62
Seat Angle	75.5	75.5	74.5	74	74	74	74	74	74	74	74
Front Center	551	557	559	564	569	574	578	583	593	603	613
C/S Length	395	395	395	395	395	395	395	395	395	395	395
Wheel-base	941	846	947	952	957	962	967	972	982	992	1001
Drop	55	55	55	55	55	55	55	55	55	55	55
Standover	763	782	789	798	807	817	827	837	856	875	894

CYCLOCROSS COMPETITION

Waterford's competition cyclocross geometries offer responsive steering and horizontal top tubes for easier portage.

Frame Size	480	500	520	540	560	580	600	620
W heel	700c							
Seat tube (C to C)	460	480	500	520	540	560	580	600
Horiz. Top Tube	525	540	555	560	570	580	590	600
ActualTop Tube	512	530	549	560	570	580	590	600
Head Length	112	112	112	121	131	150	168	189
Head Angle	71.5	72.5	73	73	73	73	73	73
Fork Rake	50	45	42	42	42	42	42	42
Trail	63	62	62	62	62	62	62	62
Seat Angle	75	75	74	73.5	73	73	72.5	72.5
Front Center	585	587	591	592	596	607	611	627
C/S Length	425	425	430	430	430	430	430	430
W heel-base	999	1002	1014	1012	1022	1027	1031	1041
Drop	70	70	70	70	70	70	70	70
Standover	760	772	783	796	810	829	846	866

TIME TRIAL/ MULTISPORT

Whether road time trials or multisport competition, it's all about achieving an aerodynamic position. The rider is about 85% of the frontal area subject to wind resistance. Our designs let you get the position you need to win.

Frame Size	480	500	520	540	520	540	560	580	600
Wheel	650C	650C	650C	650C	700C	700C	700C	700C	700C
Seat tube (C to C)	460	480	500	520	500	520	540	560	580
Horiz. Top Tube	510	530	550	570	548	570	580	590	600
Head Length	112	132	153	170	112	112	125	143	178
Head Angle	72	72	72	72	73	73	73	73	73
Fork Rake	37	37	37	37	40	40	40	40	40
Trail	62	62	62	62	61	61	61	61	61
Seat Angle	77	77	77	76.5	77	76.5	76	75.5	75.5
Front Center	577	598	620	637	610	626	632	638	649
C/S Length	390	390	390	390	405	405	405	405	405
Wheel-base	961	983	1005	1022	1001	1018	1024	1030	1041
Drop	50	50	50	50	80	80	80	80	80
Standover	729	748	767	788	774	783	798	816	834



ENTHUSIAST DESIGNS

We serve our enthusiast riders with the same passion we do our competition riders. Made to measure fit and a wide range of options let us offer you a design that meets your precise riding needs. Though The geometries below present a solid sample of our design thinking. They assume 22 or 14-Series frame technology.

ROAD SPORT CLASSIC

(RS-33/ RS -22 / RS-14)

The Road Sport Series adapts our legendary road race design for added comfort and easy steering. These geometries provide a classic fit for a classic rider - with horizontal top tubes.

Frame Size	480	500	520	540	560	580	600	620	640	660	680
W heel	650	700	700	700	700	700	700	700	700	700	700
Seat tube (C to C)	466	486	506	526	546	566	586	606	626	646	666
Hor.Top Tube	500	515	530	550	560	570	580	590	600	610	620
ActualTop Tube	500	509	529	550	560	570	580	590	600	610	620
Head Length	116	98	98	110	129	148	168	186	206	226	246
Head Angle	72	72	73	73	73	73	73	73	73	73	73
Fork Rake	40	50	45	42	42	42	42	42	42	42	42
Trail	59	61	60	60	60	60	60	60	60	60	60
Seat Angle	75	75	75	74	74	73	73	73	73	73	73
Front Center	555	579	582	585	591	596	606	610	620	630	639
C/S Length	410	420	420	420	425	430	430	430	430	430	430
W heel-base	961	987	990	994	##	##	##	##	##	##	##
D rop	45	75	75	75	75	75	75	75	75	75	75
Standover	730	755	769	784	802	820	839	857	876	895	914

ROAD SPORT COMFORT GEOMETRIES

(RS-33/ RS -22 / RS-14)

Enthusiasts at all levels are looking for a more comfortable riding position. These geometries let you get the handlebars near the saddle height.

Frame Size	500	520	540	560	580	600	620
W heel	700	700	700	700	700	700	700
Seat tube (C to C)	460	480	500	520	540	560	580
Hor.Top Tube	515	530	550	560	570	580	590
ActualTop Tube	509	529	550	560	570	580	590
Head Length	98	98	110	129	148	168	186
Head Angle	71.5	72.5	73	73	73	73	73
Fork Rake	50	45	42	42	42	42	42
Trail	61	60	60	60	60	60	60
Seat Angle	75	75	74	73.5	73	73	72.5
Front Center	579	582	585	591	596	606	610
C/S Length	420	420	420	425	430	430	430
W heel-base	987	990	994	1004	1014	1024	1029
D rop	75	75	75	75	75	75	75
Standover	755	769	784	802	820	839	857

SPORT TOURING

(ST-33 / ST-22 / ST-14)

The Sport Touring series serves those seeking a lightweight, comfortable and stable ride for randonneuring, distance riding, light touring and commuting.

Size	480	500	520	540	560	580	600	620	640	660	680
Seat Tube (C Top)	470	490	510	530	550	570	590	610	630	650	670
Seat Tube (C to C)	456	476	496	516	536	556	576	596	616	636	656
W heelSize	26"	700	700	700	700	700	700	700	700	700	700
TheoreticalTT	500	515	530	550	560	570	580	590	600	610	620
Head Tube Length	114	98	98	108	127	145	165	184	204	224	244
Head Angle	72	71	72	73	73	73	73	73	73	73	73
Rake	45	53	47	45	45	45	45	45	45	45	45
Trail	58	61	61	60	60	60	60	60	60	60	60
Seat Angle	75	75	75	74	74	73	73	73	73	73	73
Chainstay Length	420	430	430	430	430	435	435	435	435	435	435
D rop	50	80	80	80	80	80	80	80	80	80	80
W heel-base	978	##	##	##	##	##	##	##	##	##	##
SO Height (mm)	729	752	765	780	798	816	835	852	871	891	910

ADVENTURE CYCLE

(T-22 / T-14)

The Adventure Cycle Frameset gives riders a rugged chassis and rock-steady handling to support a wide range of uses from cross-continent unsupported tours to commuting around town. It's ideal when you need to carry lots of cargo.

Frame Size	480	500	520	540	560	580	600	620	640	660	680
W heel	26"	26"	700	700	700	700	700	700	700	700	700
Seat Tube C -Top	455	475	495	515	535	555	575	595	615	635	655
Seat Tube C -Top	441	461	481	501	521	541	561	581	601	621	641
ActualTop Tube	488	508	526	536	546	555	565	575	585	595	600
Head Length	115	135	106	121	137	155	173	193	214	234	254
Head Angle	72	72	72	72	72	72	72	72	72	72	72
Fork Rake	43	43	50	45	45	45	45	45	45	45	45
Trail	62	62	64	64	64	64	64	64	64	64	64
Seat Angle	75	75	75	75	74	73	73	73	73	73	73
Front Center	561	582	604	606	607	607	612	622	632	642	647
C/S Length	430	430	445	445	445	445	445	460	460	460	460
W heel-base	986	##	##	##	##	##	##	##	##	##	##
D rop	49	49	80	80	80	80	80	80	80	80	80
Standover	733	752	775	794	810	827	844	863	882	902	921

OFF-ROAD DESIGNS

In no other area of bike riding do Waterford's materials work better than off-road - where conditions are toughest. Our OS2 Off-Road tubeset turns out to be the ideal tubeset for the trails. This year we're reintroducing our off-road models.

The O-14 is available in either 26" or 29" wheel sizes. You can also order the eccentric bottom bracket/single speed option. The eccentric bottom bracket lets you use disc mount without add-on chain tensioners.

You'll find no better way to compete in cross country events or just to explore the trails.

Size:	13.5"	16"	17.5"	19"	20.5"	17.5"	19"	20.5"	
W heelSize	26in	26in	26in	26in	26in	29in	29in	29in	
ActualSM	343	407	540	560	620	415	465	505	
TheoreticalTT	546	580	600	615	632	600	615	632	
Head Angle	71.5	71.5	71.5	71.5	71.5	71	71	71	
SeatAngle	74	74	74	74	73.5	73	74	73.5	73
Bottom BracketD rop	40	40	40	40	40	43	43	43	
Head Tube Length	93	93	105	124	155	93	93	100	
Chainstay Length	415	415	415	415	415	450	450	450	
W heel-base	1003	1041	1063	1074	1088	1093	1104	1118	
StandoverHeight	717	747	770	797	835	776	799	821	
Measurement in Inches									
Seatmast	13.5	16	17.5	19	20.5	16.5	18.5	20	
TheoreticalTop Tube	20.7	21.3	21.9	22.2	22.4	23.6	24.2	24.9	
Chainstay	16.3	16.3	16.3	16.3	16.3	17.7	17.7	17.7	
W heel-base	39.4	39.4	39.7	39.8	40	43	43.5	44	
SO Height	29.4	29.8	30.4	31.2	31.9	30.6	31.5	32.3	

WATERFORD OPTIONS

THE NOT SO LITTLE DETAILS

Not only can you customize the fit, tubing and handling of your Waterford, you can customize many of the details that dramatically affect the use of your bike. Not all combinations make sense. You can get help from your local Waterford dealer as well as from our web site: waterfordbikes.com.

BRAKING SYSTEMS

Many brake choices have opened up as the range of riding applications expand. Gone is the simple world of road race brakes and canty's. Consider the following options:

- Short reach caliper brakes: These are still the mainstays of the competition road world. They allow for up to some 28C tires but no fenders.
- Long reach calipers: These brakes can fit up to 28C tires with fenders and 32C (1 1/4") tires without.
- Canty brakes: Once found only on mountain bikes, these brakes also appear on the growing number of cyclocross bikes as well as on commuter and touring bikes.
- Disc brakes: An increasing number of disc brakes are appearing on bikes destined for pavement use - especially commuter and touring bikes. For 2006, Waterford is introducing one of the first chainstay mounted disc brake systems. These brakes eliminate rim heating and provide excellent wet weather braking.
- Eccentric Bottom Bracket: The eccentric bottom bracket shell lets us install disc brakes on single speed and Rohloff hub equipped frames while retaining the advantages of vertical dropouts.



Example of our new chainstay disc brake mount.



Example of an eccentric bottom bracket shell.

THE S&S COUPLER SYSTEM

Make your Waterford into a travel bike with the S&S Coupler system. The couplers, mounted on the top and downtube during fabrication, provide a structurally secure way to break your frame down into two pieces that allow your bicycle to fit into a case that airlines will transport at no extra charge. Bicycles stored in the case also transport easily in taxis and other alternate transportation.

Though using the couplers does require some level of mechanical skill, it is handy for:

- Riders who commute by air and want to have a quality ride with them at all times.
- International travelers who face many legs during their journey.
- Riders who want compact storage on boats and personal aircraft.

Check with us or with your Waterford dealer for size limitations.



Example of S&S couplers, which let you make your Waterford an ideal travel bike.

OTHER BRAZE-ONS AND LOADING

Waterford offers braze-ons to support a wide array of accessories to support all sorts of loads from easy day rides to support the world expeditions, including:

- A wide range of cable routings.
- Fender eyelets plus multiple mounting systems.
- Pump peg and chain hanger.
- Rear rack mounts to fit the most popular racks.
- Front racks for several popular racks plus custom rack mounting. For expected loads over 20 pounds, we recommend the Adventure Cycle for its beefy tubes and load-handling.





WATERFORD STYLING

No one buys a fine bike just for the paint job. The quality of Waterford's finishes match the quality of the frame underneath. Our finishes in fact start with the quality of our metal finishing and follow through to the buffing of the clearcoat. Every Waterford gets special handling including:

- √ Phosphatizing surface preparation.
- √ Tough polyurethane primer.
- √ Show-car base and top coats. Waterford offers hundreds of color choices using PPG top quality Concept paint systems.
- √ Your choice of over a dozen decal color combinations.
- √ Extra-hard polyurethane clearcoat over decal.
- √ Hand-buffing before shipment.



SPECIAL EFFECTS

Make your Waterford a unique statement about yourself. Waterford offers an astounding array of classic and unique special effects. Some special effects, like Waterford's Harlequin and Luminescence Series, must be seen to be believed. Here's a sampling of other special effects.

Fades: Waterford offers a wide variety of fades with two and three or more colors.

Flades: Our unique Flade jobs combine the classic fade with flames.

Lightning Bolts: Electrify everyone oogling your bike with this fun theme.



Wings: Part art deco, part patriot, our Wings mask lets you create a wide range of looks.

Marble: Give your bike texture with our marble effect.

SPECIAL SERVICES



Whether it's pinstriping, names, special decals and artwork, creative themes or any styling dream, you can rely on Waterford to find a way to express yourself.



Ron the pinstriper adds another name to a frame. Below is a sample.

Larry Moore

REFINISHING SERVICES

We recognize your long-term investment in your frameset and provide complete repair and restoration services for your Waterford, Gunnar and Schwinn Paramount. Waterford also re-finishes a number of fine brands including Raleigh, Colnago, Eddy Merckx, Kestrel, Bianchi and many others. Our services include complete period decals for Paramounts going all the way back to the 1930's and period decals for many other brands.

Refinish services include quality chemical stripping (preserving any chrome plating) and the quality finish provided on today's Waterfords.

For more information and photos, visit waterfordbikes.com