



challenge
H A N D M A D E T I R E S





***FEEL THE
HANDMADE
EXPERIENCE***

FEATURES

	Handmade TU blers
	Handmade Tubeless TU bular
	Handmade Tubeless Ready Clincher
	Handmade CL incher
	Vulcanized Tubeless Ready Clincher
	Vulcanized CL incher
	Handmade Construction
	Setaextra / Silk Casing
	Soft Tread, Supple Casing & Sealed Sidewalls
	Seamless Latex Inner Tube
	Puncture Protection System (between tread and casing)
	Puncture Protection System 2 (PPS & 2 nd layer between casing and inner tube)
	TubeLess Ready Construction
	TubeLess TU bular Construction

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TRACK

TIME TRIAL
TRIATHLON

ROAD

GRAVEL
ADVENTURE

CYCLOCROSS

ACCESSORIES

TECH

PRODUCT
SPEC CHART

TRACK (INDOOR)



Elynor & Zoe Bäckstedt, 2018 British National U-17 Madison Champions



Tristan Marguet, Swiss National Team

PISTA

INDOOR TRACK



HTU



SILK SETA extra



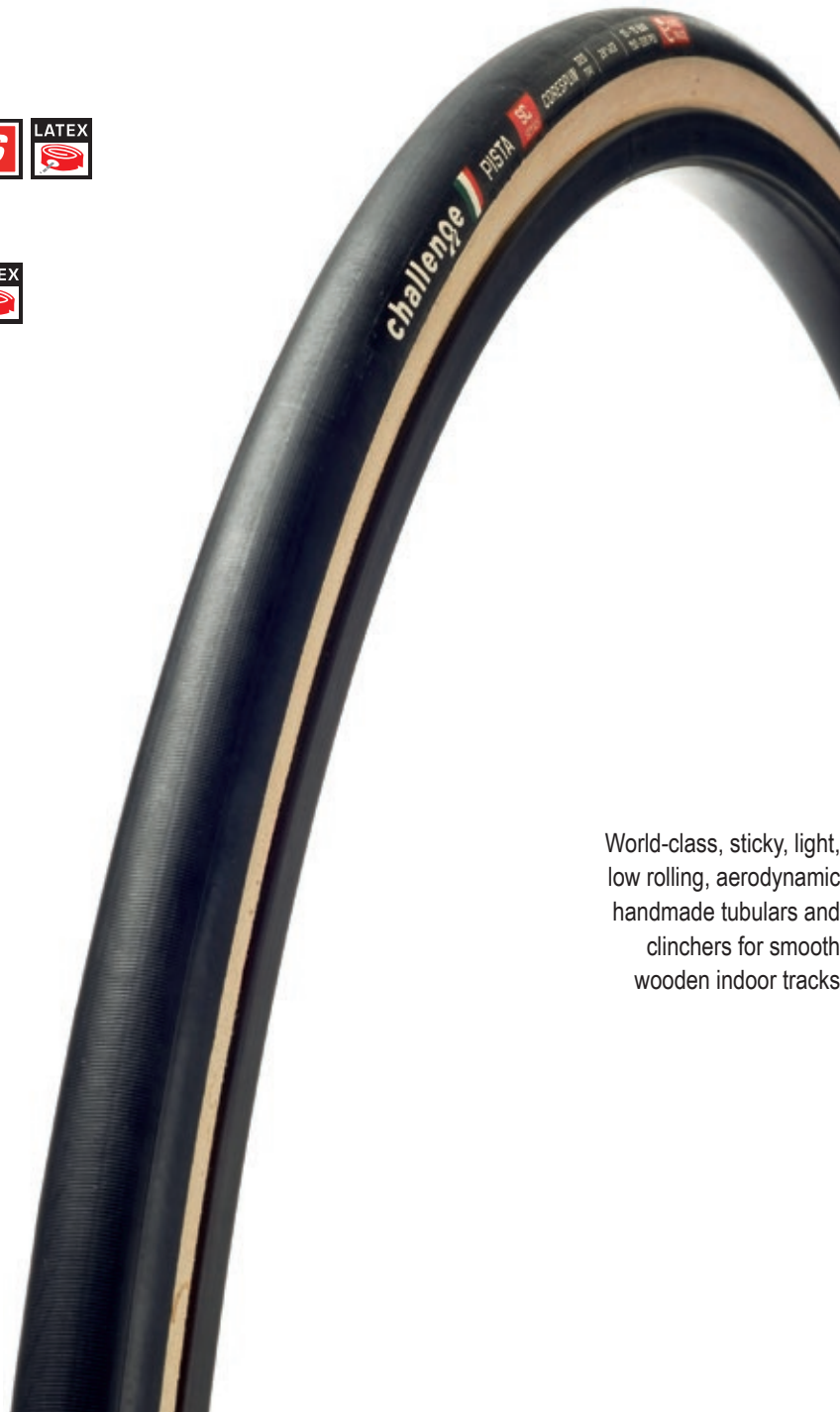
LATEX

HTU



LATEX

HCL



World-class, sticky, light, low rolling, aerodynamic handmade tubulars and clinchers for smooth wooden indoor tracks

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE	WIDTH		ETRTO - Rim BSD	WIDTH								
HANDMADE TUBULARS															
10006	ULTRA	HTU	28"	22	Soft	Black	Cream	1000+	Sealed Silk	Latex	-	-	622	14-20	Handmade
10007	SC	HTU	28"	22	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	-	622	14-20	Handmade
HANDMADE CLINCHERS															
00006	SC	HCL	700	23	Smart	Black	White	320	Sealed Corespun Cotton	-	Aramid	-	622	14-20	Handmade

New products or specifications are highlighted in **RED**.

TRACK

TIME TRIAL TRIATHLON

ROAD

GRAVEL ADVENTURE

CYCLOCROSS

ACCESSORIES

TECH

PRODUCT SPEC CHART

TRACK (OUTDOOR) / TT / TRI / ROAD



Meredith Kessler, 2018 Comeback Triathlete of the Year



Pratt Cycling Team, USA

RECORD

TRACK/TT/TRI/ROAD



Fast rolling, aerodynamic profile, durable enough for outdoor Track, Time Trial, Triathlon and Road Sprints in dry conditions

*Another race where the last worry on my mind was the resilience of the tires . This is a HUGE stress relief as you can imagine in our sport as one mechanical truly puts you out of contention THANK YOU FOR THAT LUXURY!
Meredith Kessler*

PART #	SERIES	SERIESTYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE mm	WIDTH mm		TREAD	CASING						ETRTO - Rim BSD mm	WIDTH mm	
HANDMADE TUBULARS															
10208	PRO	HTU	28"	22	Smart	Black	Red	300	SuperPoly	Latex	-	PPS2	622	14-20	Handmade
10210	PRO	HTU	28"	24	Smart	Black	Red	300	SuperPoly	Latex	-	PPS2	622	14-20	Handmade
HANDMADE CLINCHERS															
00514	PRO	HCL	700	25	Smart	Black	Red	300	SuperPoly	-	Aramid	PPS2	622	16-22	Handmade

New products or specifications are highlighted in RED.

TRACK

TIME TRIAL
TRIATHLON

ROAD

GRAVEL
ADVENTURE

CYCLOCROSS

ACCESSORIES

TECH

PRODUCT
SPEC CHART

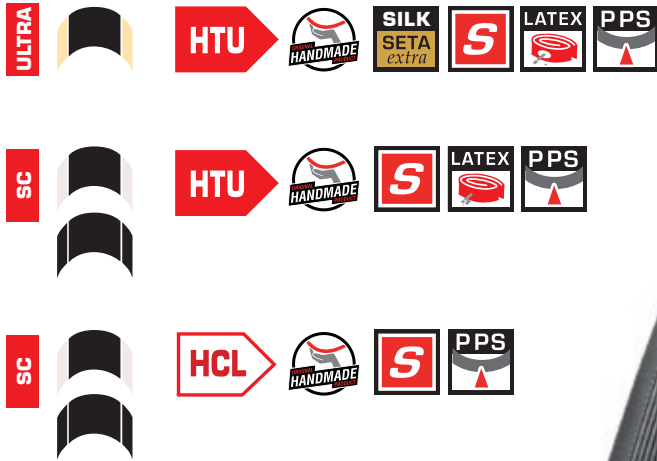


Paola Panzeri, Italy



CRITERIUM

ROAD



World-class, super fast rolling and cornering, comfortable, all-condition road tire

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE mm	WIDTH mm		ETRTO - Rim BSD mm	WIDTH mm								
HANDMADE TUBULARS															
10307	ULTRA	HTU	28"	23	Smart	Black	Cream	1000+	Sealed Silk	Latex	-	PPS	622	14-20	Handmade
10308	ULTRA	HTU	28"	25	Smart	Black	Cream	1000+	Sealed Silk	Latex	-	PPS	622	16-22	Handmade
10325	SC	HTU	28"	23	Smart	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	14-20	Handmade
10330	SC	HTU	28"	25	Smart	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	16-22	Handmade
10331	SC	HTU	28"	25	Smart	Black	Black	320	Sealed Corespun Cotton	Latex	-	PPS	622	16-22	Handmade
HANDMADE CLINCHERS															
00125	SC	HCL	700	25	Smart	Black	White	320	Sealed Corespun Cotton	-	Aramid	PPS	622	16-22	Handmade
00126	SC	HCL	700	25	Smart	Black	Black	320	Sealed Corespun Cotton	-	Aramid	PPS	622	16-22	Handmade

New products or specifications are highlighted in RED.

TRACK

TIME TRIAL TRIATHLON

ROAD

GRAVEL ADVENTURE

CYCLOCROSS

ACCESSORIES

TECH

PRODUCT SPEC CHART

STRADA

ROAD



World-class, fast rolling and cornering, comfortable, maximum control, all-condition road tire

NEW HANDMADE TLR

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE mm	WIDTH mm		TREAD	CASING						ETRTO - Rim BSD mm	WIDTH mm	
HANDMADE TUBULARS															
10520	ULTRA	HTU	28"	25	Smart	Black	Cream	1000+	Sealed Silk	Latex	-	PPS	622	16-22	Handmade
10610	ULTRA	HTU	28"	30	Smart	Black	Cream	1000+	Sealed Silk	Latex	-	PPS2	622	17-24	Handmade
10515	SC	HTU	28"	25	Smart	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	16-22	Handmade
10504	PRO	HTU	28"	25	Smart	Black	Tan	300	SuperPoly	Latex	-	PPS	622	16-22	Handmade
10505	PRO	HTU	28"	25	Smart	Black	Black	300	SuperPoly	Latex	-	PPS	622	16-22	Handmade
HANDMADE TLR CLINCHERS															
00547	PRO	HTLR	700	25	Smart	Black	Tan	300	SuperPoly	HTLR	Aramid	PPS	622	16-22	Handmade
00548	PRO	HTLR	700	25	Smart	Black	Black	300	SuperPoly	HTLR	Aramid	PPS	622	16-22	Handmade
HANDMADE CLINCHERS															
00508	PRO	HCL	700	25	Smart	Black	Tan	300	SuperPoly	-	Aramid	PPS	622	16-22	Handmade
00509	PRO	HCL	700	25	Smart	Black	Black	300	SuperPoly	-	Aramid	PPS	622	16-22	Handmade
VULCANIZED TUBELESS READY															
02204	TLR	VTLR	700	25	Vulcanized	Black	Black	120	Nylon Superlight	TLR	Aramid	-	622	16-22	Vulcanized
VULCANIZED CLINCHERS															
00960	RACE	VCL	700	25	Vulcanized	Black	Black	120	Nylon	-	Aramid	PPS	622	16-22	Vulcanized

New products or specifications are highlighted in RED.

PARIS-ROUBAIX

ROAD

ULTRA		HTU					
SC		HTU					
PRO		HTU					
PRO		HTLR					
PRO		HCL					
RACE		VTLR					
RACE		VCL					



World-class, fast rolling and cornering, comfortable, maximum control, higher volume, all-condition tire for rough or cobbled roads

NEW HANDMADE TLR

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED ETRTO - Rim		CONSTRUCTION
			SIZE mm	WIDTH mm		mm	mm								
HANDMADE TUBULARS															
10625	ULTRA	HTU	28"	27	Smart	Black	Cream	1000+	Sealed Silk	Latex	-	PPS2	622	16-22	Handmade
10620	SC	HTU	28"	27	Smart	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS2	622	16-22	Handmade
10603	PRO	HTU	28"	27	Smart	Black	Tan	300	SuperPoly	Latex	-	PPS2	622	16-22	Handmade
HANDMADE TLR CLINCHERS															
00552	PRO	HTLR	700	27	Smart	Black	Tan	300	SuperPoly	HTLR	Aramid	PPS2	622	16-22	Handmade
HANDMADE CLINCHERS															
00512	PRO	HCL	700	27	Smart	Black	Tan	300	SuperPoly	-	Aramid	PPS2	622	16-22	Handmade
00513	PRO	HCL	700	27	Smart	Black	Black	300	SuperPoly	-	Aramid	PPS2	622	16-22	Handmade
VULCANIZED TUBELESS READY															
02219	TLR	VTLR	700	27	Vulcanized	Black	Brown	120	Nylon Superlight	TLR	Aramid	-	622	16-22	Vulcanized
VULCANIZED CLINCHERS															
00940	RACE	VCL	700	27	Vulcanized	Black	Black	120	Nylon	-	Aramid	PPS	622	16-22	Vulcanized

New products or specifications are highlighted in RED.

TRACK

TIME TRIAL
TRIATHLON

ROAD

GRAVEL
ADVENTURE

CYCLOCROSS

ACCESSORIES

TECH

PRODUCT
SPEC CHART

STRADA BIANCA

ROAD



World-class, fast rolling and cornering, comfortable, maximum control, large volume, all-condition tire for rough, cobbled, dirt or gravel roads

NEW

HANDMADE
TLR

PART #	SERIES	TYPE	ETRTO - Tire SIZE		TREAD RUBBER COMPOUND	COLOR TREAD	COLOR CASING	TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			mm	mm									ETRTO - Rim BSD	mm	
HANDMADE TUBULARS															
10610	ULTRA	HTU	28"	30	Smart	Black	Cream	1000+	Sealed Silk	Latex	-	PPS2	622	17-24	Handmade
10607	PRO	HTU	28"	30	Smart	Black	Tan	260	SuperPoly	Latex	-	PPS2	622	17-24	Handmade
10608	PRO	HTU	28"	30	Smart	Black	Black	260	SuperPoly	Latex	-	PPS2	622	17-24	Handmade
HANDMADE TLR CLINCHERS															
00555	PRO	HTLR	700	30	Smart	Black	Tan	260	SuperPoly	HTLR	Aramid	PPS2	622	17-25	Handmade
HANDMADE CLINCHERS															
00517	PRO	HCL	700	30	Smart	Black	Tan	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
00518	PRO	HCL	700	30	Smart	Black	Black	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
VULCANIZED TUBELESS READY															
02229	TLR	VTLR	700	30	Vulcanized	Black	Brown	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
VULCANIZED CLINCHERS															
01965	RACE	VCL	700	30	Vulcanized	Black	Black	120	Nylon	-	Aramid	PPS	622	17-25	Vulcanized

New products or specifications are highlighted in RED.

ELITE

ROAD



Durable training and racing tire handles rough roads, winter and spring training (or rolled-up as a spare) with comfort and control at a great price

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE	WIDTH		TREAD	CASING						ETRTO - Rim BSD	WIDTH	
			mm	mm									mm	mm	
HANDMADE TUBULARS															
10910	PRO	HTU	28"	23	Smart	Black	Tan	220	Poly	Butyl	-	PPS	622	14-20	Semi-Vulcanized
10911	PRO	HTU	28"	23	Smart	Black	Black	220	Poly	Butyl	-	PPS	622	14-20	Semi-Vulcanized
10912	PRO	HTU	28"	25	Smart	Black	Tan	220	Poly	Butyl	-	PPS	622	16-22	Semi-Vulcanized
10913	PRO	HTU	28"	25	Smart	Black	Black	220	Poly	Butyl	-	PPS	622	16-22	Semi-Vulcanized
HANDMADE TLR CLINCHERS															
00208	PRO	HCL	700	23	Smart	Black	Tan	260	SuperPoly	-	Aramid	PPS	622	14-20	Handmade
00215	PRO	HCL	700	25	Smart	Black	Tan	260	SuperPoly	-	Aramid	PPS	622	16-22	Handmade
00216	PRO	HCL	700	25	Smart	Black	Black	260	SuperPoly	-	Aramid	PPS	622	16-22	Handmade

New products or specifications are highlighted in RED.

TRACK

TIME TRIAL
TRIATHLON

ROAD

GRAVEL
ADVENTURE

CYCLOCROSS

ACCESSORIES

TECH

PRODUCT
SPEC CHART



Steven Le Hyaric, FRA, Paris - Dakar Bicycle Ride

STRADA BIANCA

GRAVEL



World-class, fast rolling and cornering, comfortable, maximum control, large volume, all-condition tire for rough, cobbled, dirt or gravel roads

NEW

TUBELESS TUBULAR

HANDMADE TLR

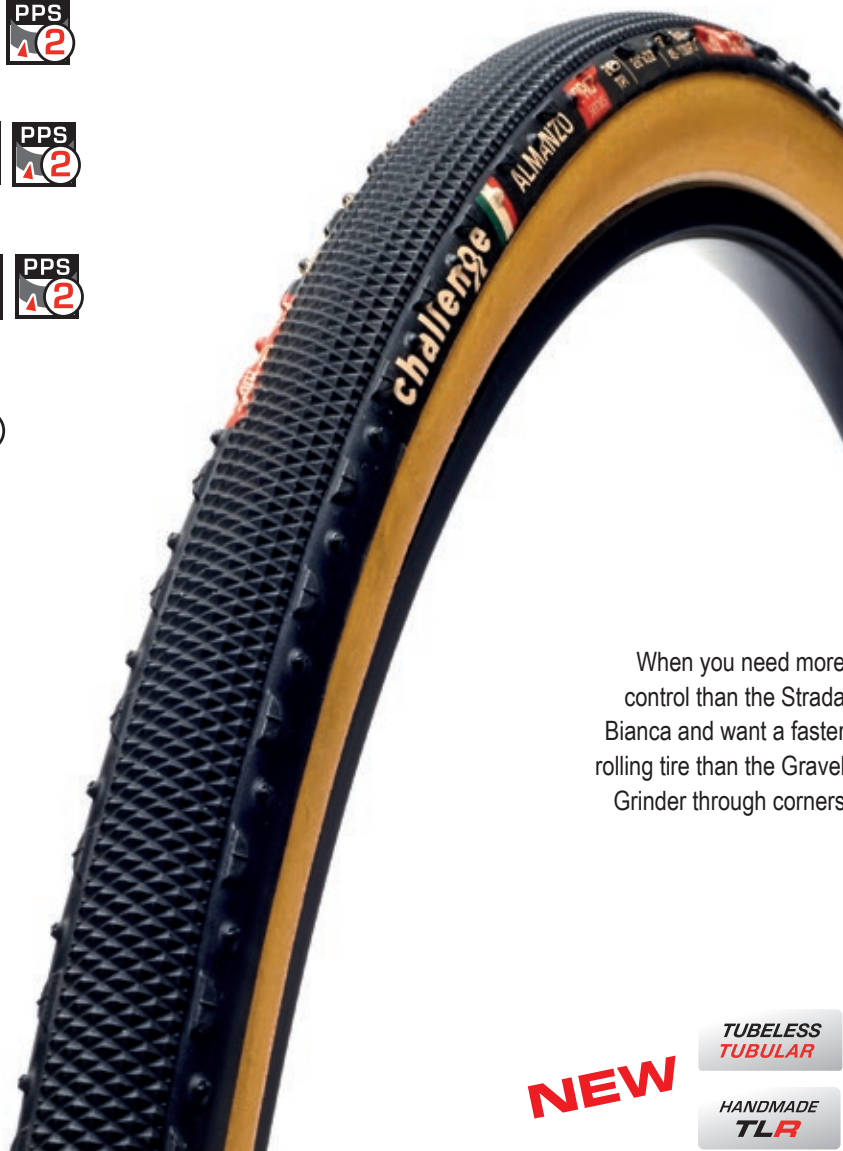
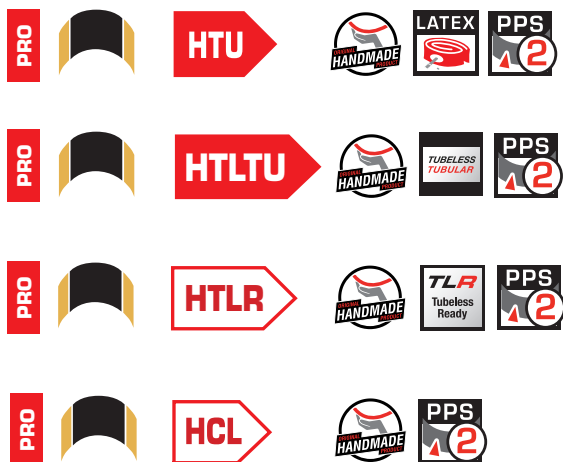
PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING	TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE mm	WIDTH mm								ETRTO - Rim BSD mm	WIDTH mm	
HANDMADE TUBULARS														
10610	ULTRA	HTU	28"	30	Smart	Black Cream	1000+	Sealed Silk	Latex	-	PPS2	622	20-28	Handmade
10607	PRO	HTU	28"	30	Smart	Black Tan	260	SuperPoly	Latex	-	PPS2	622	20-28	Handmade
10608	PRO	HTU	28"	30	Smart	Black Black	260	SuperPoly	Latex	-	PPS2	622	20-28	Handmade
10630	PRO	HTU	28"	36	Smart	Black Tan	260	SuperPoly	Latex	-	PPS2	622	20-28	Handmade
HANDMADE TUBELESS TUBULARS														
10650	PRO	HTLTU	28"	30	Smart	Black Tan	260	SuperPoly	Tubeless	-	PPS2	622	20-28	Handmade
10660	PRO	HTLTU	28"	36	Smart	Black Tan	260	SuperPoly	Tubeless	-	PPS2	622	20-28	Handmade
HANDMADE TLR CLINCHERS														
00555	PRO	HTLR	700	30	Smart	Black Tan	260	SuperPoly	HTLR	Aramid	PPS2	622	17-25	Handmade
00542	PRO	HTLR	700	36	Smart	Black Tan	260	SuperPoly	HTLR	Aramid	PPS2	622	17-25	Handmade
HANDMADE CLINCHERS														
00517	PRO	HCL	700	30	Smart	Black Tan	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
00518	PRO	HCL	700	30	Smart	Black Black	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
00540	PRO	HCL	700	36	Smart	Black Tan	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
00541	PRO	HCL	700	36	Smart	Black Black	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
VULCANIZED TUBELESS READY														
02229	TLR	VTLR	700	30	Vulcanized	Black Brown	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
02089	TLR	VTLR	700	36	Vulcanized	Black Brown	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
02084	TLR	VTLR	700	36	Vulcanized	Black Black	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
VULCANIZED CLINCHERS														
01965	RACE	VCL	700	30	Vulcanized	Black Black	120	Nylon	-	Aramid	PPS	622	17-25	Vulcanized
01959	RACE	VCL	700	36	Vulcanized	Black Black	120	Nylon	-	Aramid	PPS	622	17-25	Vulcanized

New products or specifications are highlighted in RED.

TRACK
TIME TRIAL TRIATHLON
ROAD
GRAVEL ADVENTURE
CYCLOCROSS
ACCESSORIES
TECH
PRODUCT SPEC CHART

ALMANZO

GRAVEL



When you need more control than the Strada Bianca and want a faster rolling tire than the Gravel Grinder through corners

NEW

TUBELESS
TUBULAR

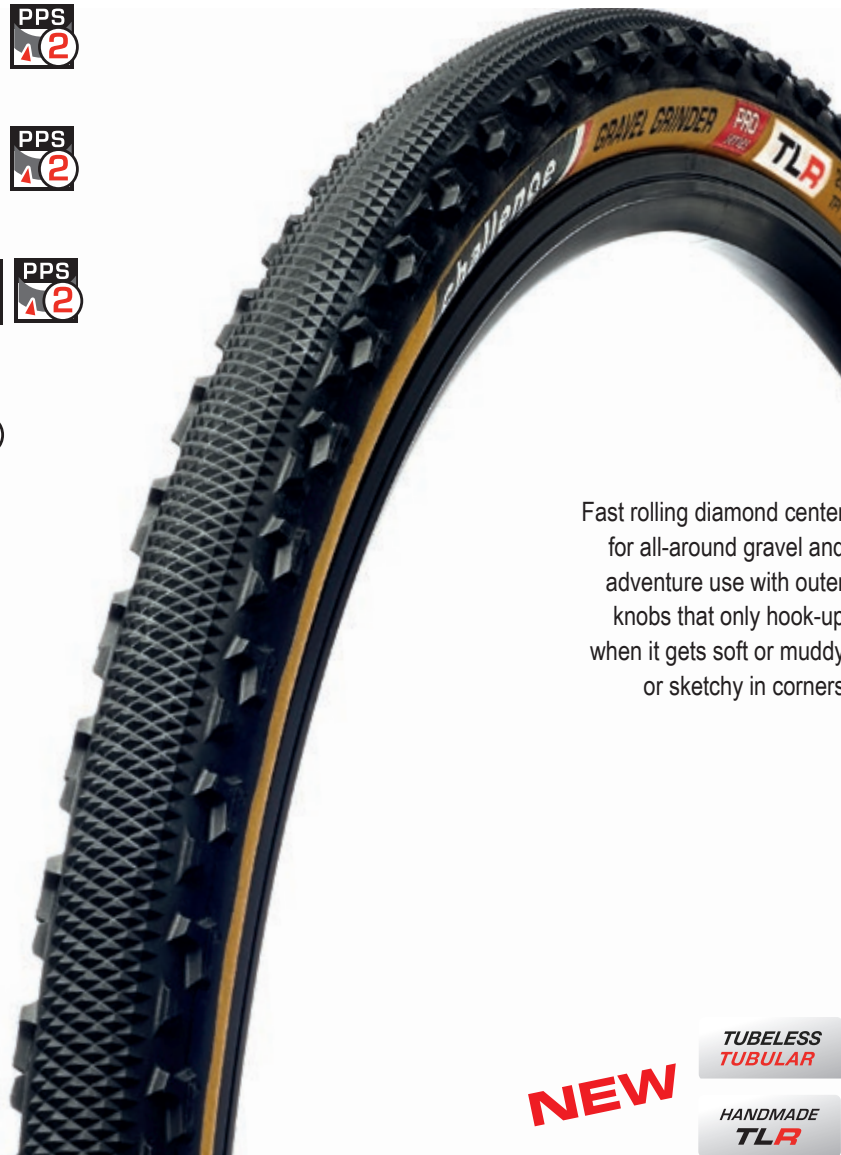
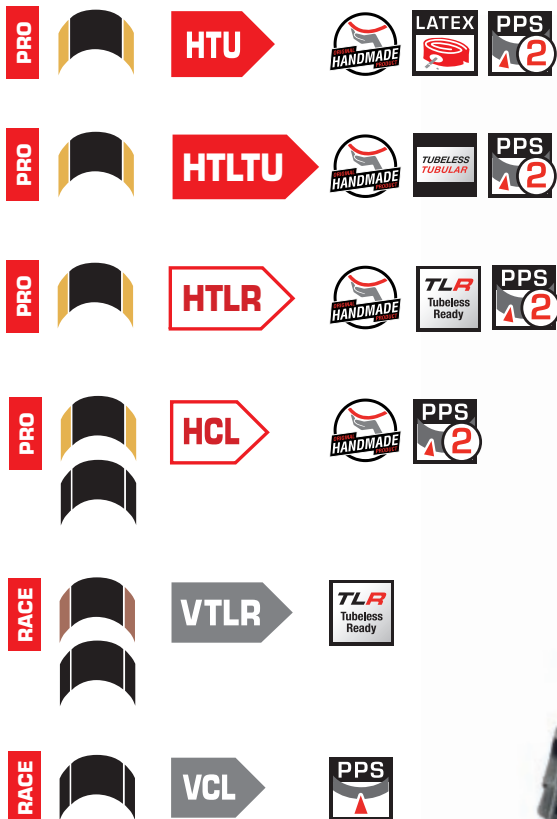
HANDMADE
TLR

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE mm	WIDTH mm		ETRTO - Rim BSD mm	WIDTH mm								
HANDMADE TUBULARS															
11612	PRO	HTU	28"	33	Smart	Black	Tan	260	SuperPoly	Latex	-	PPS2	622	20-28	Handmade
11613	PRO	HTU	28"	33	Smart	Black	Tan	260	SuperPoly	Latex	-	PPS2	622	20-28	Handmade
HANDMADE TUBELESS TUBULARS															
10665	PRO	HTLTU	28"	33	Smart	Black	Tan	260	SuperPoly	Tubeless	-	PPS2	622	20-28	Handmade
HANDMADE TLR CLINCHERS															
00526	PRO	HTLR	700	33	Smart	Black	Tan	260	SuperPoly	HTLR	Aramid	PPS2	622	17-25	Handmade
HANDMADE CLINCHERS															
00524	PRO	HCL	700	33	Smart	Black	Tan	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade

New products or specifications are highlighted in RED.

GRAVEL GRINDER

GRAVEL



Fast rolling diamond center for all-around gravel and adventure use with outer knobs that only hook-up when it gets soft or muddy or sketchy in corners

NEW

TUBELESS TUBULAR

HANDMADE TLR

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING	TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE	WIDTH								ETRTO - Rim	CONSTRUCTION	
			mm	mm								mm	mm	
HANDMADE TUBULARS														
10633	PRO	HTU	28"	33	Smart	Black Tan	260	SuperPoly	Latex	-	PPS2	622	20-28	Handmade
HANDMADE TUBELESS TUBULARS														
10670	PRO	HTLTU	28"	33	Smart	Black Tan	260	SuperPoly	Tubeless	-	PPS2	622	20-28	Handmade
HANDMADE TLR CLINCHERS														
00537	PRO	HTLR	700	33	Smart	Black Tan	260	SuperPoly	HTLR	Aramid	PPS2	622	17-25	Handmade
00532	PRO	HTLR	700	36	Smart	Black Tan	260	SuperPoly	HTLR	Aramid	PPS2	622	17-25	Handmade
HANDMADE CLINCHERS														
00535	PRO	HCL	700	33	Smart	Black Tan	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
00530	PRO	HCL	700	36	Smart	Black Tan	260	SuperPoly	-	Aramid	PPS2	622	17-25	Handmade
VULCANIZED TUBELESS READY														
02049	TLR	VTLR	700	33	Vulcanized	Black Brown	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
02044	TLR	VTLR	700	33	Vulcanized	Black Black	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
02009	TLR	VTLR	700	38	Vulcanized	Black Brown	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
02004	TLR	VTLR	700	38	Vulcanized	Black Black	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
02014	TLR	VTLR	700	42	Vulcanized	Black Black	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
VULCANIZED CLINCHERS														
01938	RACE	VCL	700	38	Vulcanized	Black Black	120	Nylon	-	Aramid	PPS	622	17-25	Vulcanized
01941	RACE	VCL	700	42	Vulcanized	Black Black	120	Nylon	-	Aramid	PPS	622	17-25	Vulcanized

New products or specifications are highlighted in RED.

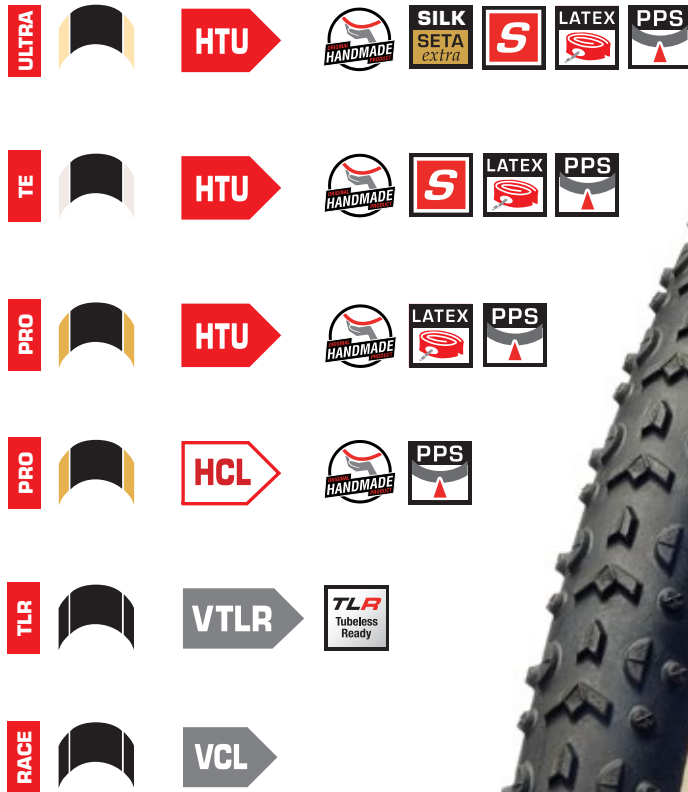
- TRACK
- TIME TRIAL TRIATHLON
- ROAD
- GRAVEL ADVENTURE
- CYCLOCROSS
- ACCESSORIES
- TECH
- PRODUCT SPEC CHART



Ben Tulett, UK, 2x Junior Cyclocross World Champion



Thibau Nys, Belgium, Junior Cyclocross National Champion



The best all-around Cyclocross tire ever created excels in wet or dry, soft packed, rocky and root-infested courses

I've won two World Titles using the Team Edition tubular including the Grifo in Bogense 2019. They give me confidence and the performance advantage I look for when I'm choosing my tires
Tom Pidcock

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	REQUIRED		CONSTRUCTION	
			SIZE mm	WIDTH mm		TREAD	CASING					PPS or PPS2	ETRTO - Rim BSD mm		WIDTH mm
HANDMADE TUBULARS															
11707	ULTRA	HTU	28"	33	Soft	Black	Cream	1000+	Sealed Silk	Latex	-	PPS	622	20-28	Handmade
10851	TE	HTU	28"	30	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	20-28	Handmade
11850	TE	HTU	28"	33	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	20-28	Handmade
11706	PRO	HTU	28"	33	Smart	Black	Tan	300	SuperPoly	Latex	-	PPS	622	20-28	Handmade
HANDMADE CLINCHERS															
00603	PRO	HCL	700	33	Smart	Black	Tan	300	SuperPoly	-	Aramid	PPS	622	17-25	Handmade
VULCANIZED TUBELESS READY															
02054	TLR	VTLR	700	33	Vulcanized	Black	Black	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
VULCANIZED CLINCHERS															
01910	RACE	VCL	700	33	Vulcanized	Black	Black	120	Nylon	-	Aramid	-	622	17-25	Vulcanized
01900	COMP	VCL	700	33	Vulcanized	Black	Black	33	Nylon	-	Wire	-	622	17-25	Vulcanized

New products or specifications are highlighted in **RED**.

BABY LIMUS

CX



The new all-around Cyclocross tire excels in wet sand or sticky mud or dry, fast, packed courses

Baby Limus rolls well on fast sections and works for wet courses where I want more traction. The sidewall are supple yet strong which allows me to simply adjust tire pressure for desired traction I'm looking for.

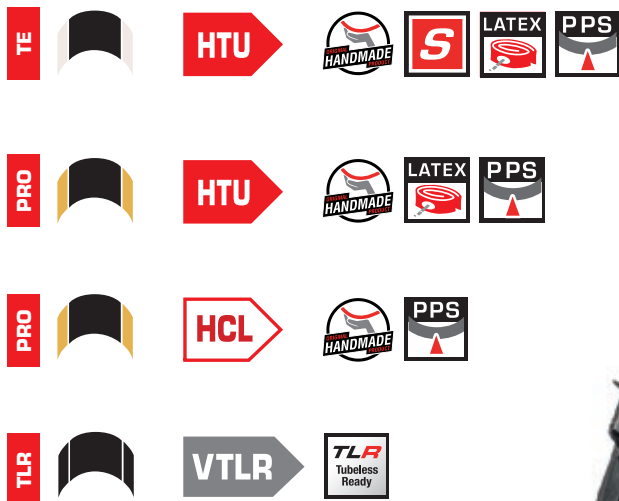
Katie Compton

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE	WIDTH		ETRTO - Rim	BSD						WIDTH	mm	
HANDMADE TUBULARS															
11857	ULTRA	HTU	28"	33	Soft	Black	Cream	1000+	Sealed Silk	Latex	-	PPS	622	20-28	Handmade
11855	TE	HTU	28"	33	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	20-28	Handmade
11715	PRO	HTU	28"	33	Smart	Black	Tan	300	SuperPoly	Latex	-	PPS	622	20-28	Handmade
HANDMADE CLINCHERS															
00616	PRO	HCL	700	33	Smart	Black	Tan	300	SuperPoly	-	Aramid	PPS	622	17-25	Handmade
VULCANIZED CLINCHERS															
01975	RACE	VCL	700	33	Vulcanized	Black	Brown	120	Nylon	-	Aramid	-	622	17-25	Vulcanized
01929	RACE	VCL	700	33	Vulcanized	Black	Black	120	Nylon	-	Aramid	-	622	17-25	Vulcanized

New products or specifications are highlighted in RED.

LIMUS

CX



The ultimate deep, soft mud tire maximizes control when conditions are truly extreme like at the 2018 CX World Championships where it won four of five gold medals

Since my first World Championship in Zolder 2016 I have always ridden Challenge Tires. My two World Championship victories have come on Team Edition Limus and although they have a massive range of five treads, I always fall back to my love of their mud tubulars!
Evie Richards

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	REQUIRED		CONSTRUCTION	
			SIZE mm	WIDTH mm		PPS or PPS2	ETRTO - Rim BSD mm					WIDTH mm			
HANDMADE TUBULARS															
10861	TE	HTU	28"	30	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	20-28	Handmade
11860	TE	HTU	28"	33	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	20-28	Handmade
11720	PRO	HTU	28"	33	Smart	Black	Tan	300	SuperPoly	Latex	-	PPS	622	20-28	Handmade
HANDMADE CLINCHERS															
00620	PRO	HCL	700	33	Smart	Black	Tan	300	SuperPoly	-	Aramid	PPS	622	17-25	Handmade
VULCANIZED TUBELESS READY															
02064	TLR	VTLR	700	33	Vulcanized	Black	Black	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized

New products or specifications are highlighted in RED.

- TRACK
- TIME TRIAL TRIATHLON
- ROAD
- GRAVEL ADVENTURE
- CYCLOCROSS
- ACCESSORIES
- TECH
- PRODUCT SPEC CHART

CHICANE

CX



Super fast rolling tire with maximum control on dry hard pack, wet grass or icy conditions with technical cornering and traversing

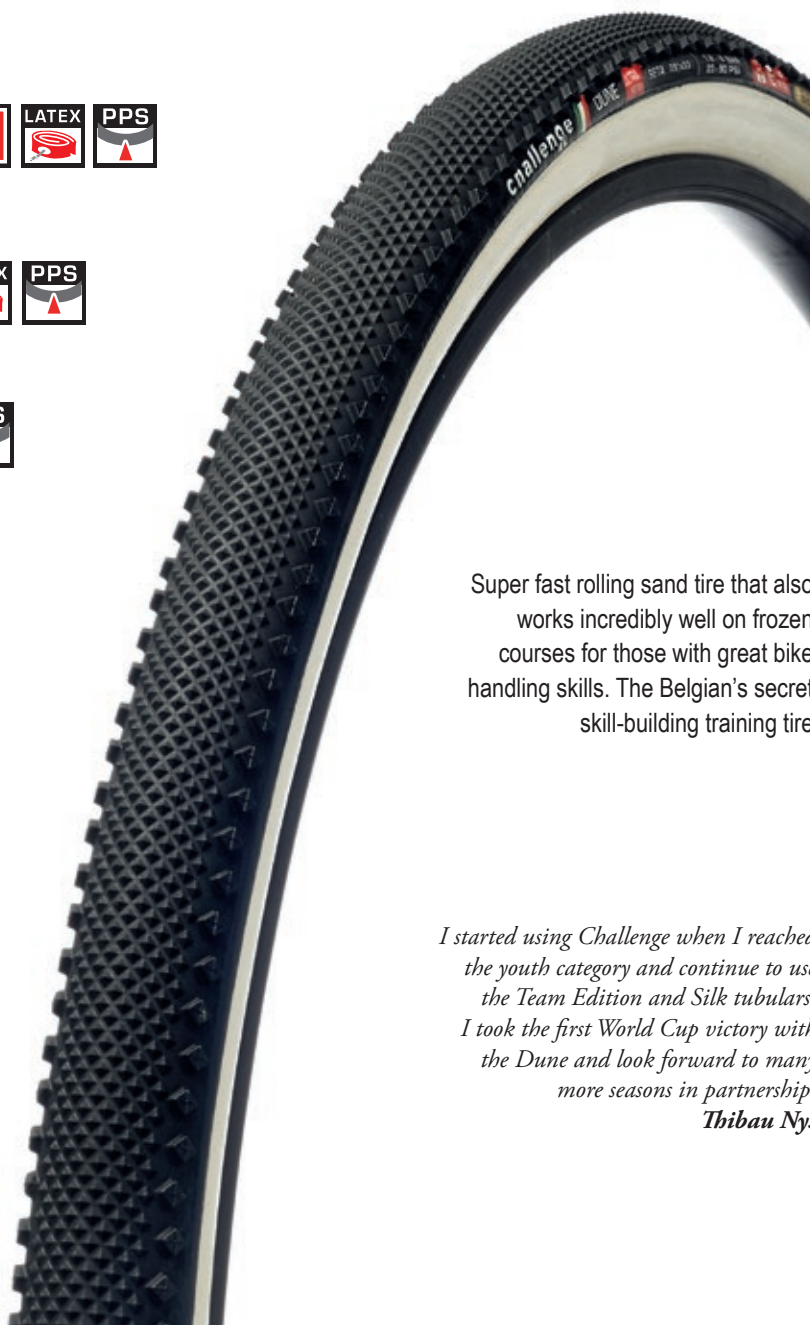
The Chicane Team Edition tubular was a huge part of my World Championship in Bogense. It gave me incredible grip on the corners and a super fast tread on the straights.
Ben Tulett

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED		CONSTRUCTION
			SIZE mm	WIDTH mm		TREAD	CASING						ETRTO - Rim BSD mm	WIDTH mm	
HANDMADE TUBULARS															
11865	TE	HTU	28"	33	Soft	Black	White	320	Sealed Corespun Cotton SuperPoly	Latex	-	PPS	622	20-28	Handmade
11810	PRO	HTU	28"	33	Smart	Black	Tan	300		Latex	-	PPS	622	20-28	Handmade
HANDMADE CLINCHERS															
00710	PRO	HCL	700	33	Smart	Black	Tan	300	SuperPoly	-	Aramid	PPS	622	17-25	Handmade
VULCANIZED TUBELESS READY															
02074	TLR	VTLR	700	33	Vulcanized	Black	Black	120	Nylon Superlight	TLR	Aramid	-	622	17-25	Vulcanized
VULCANIZED CLINCHERS															
01919	RACE	VCL	700	33	Vulcanized	Black	Black	120	Nylon	-	Aramid	-	622	17-25	Vulcanized

New products or specifications are highlighted in RED.

DUNE

CX



Super fast rolling sand tire that also works incredibly well on frozen courses for those with great bike handling skills. The Belgian's secret skill-building training tire

I started using Challenge when I reached the youth category and continue to use the Team Edition and Silk tubulars. I took the first World Cup victory with the Dune and look forward to many more seasons in partnership.
Thibau Nys

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR TREAD CASING		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED ETRTO - Rim		CONSTRUCTION
			SIZE mm	WIDTH mm		mm	mm								
HANDMADE TUBULARS															
11872	ULTRA	HTU	28"	33	Soft	Black	Cream	1000+	Sealed Silk	Latex	-	PPS	622	20-28	Handmade
11870	TE	HTU	28"	33	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	20-28	Handmade
11820	PRO	HTU	28"	33	Smart	Black	Tan	300	SuperPoly	Latex	-	PPS	622	20-28	Handmade
HANDMADE CLINCHERS															
00720	PRO	HCL	700	33	Smart	Black	Tan	300	SuperPoly	-	Aramid	PPS	622	17-25	Handmade

New products or specifications are highlighted in RED.

- TRACK
- TIME TRIAL TRIATHLON
- ROAD
- GRAVEL ADVENTURE
- CYCLOCROSS
- ACCESSORIES
- TECH
- PRODUCT SPEC CHART

KOKSIJDE

CX



Koksijde is a special tire for the dry sand found on the special course in the Belgian coastal town by the same name. It was designed in cooperation with Toon and Thijs Aerts. Thijs and Thibau Nys both won the 2018 Belgian Championships one week after receiving the first samples.

PART #	SERIES	TYPE	ETRTO - Tire		TREAD RUBBER COMPOUND	COLOR		TPI (Threads Per Inch)	CASING MATERIAL	INNER TUBE	BEAD TYPE	PPS or PPS2	REQUIRED ETRTO - Rim		CONSTRUCTION
			SIZE mm	WIDTH mm		TREAD	CASING						BSD mm	WIDTH mm	
HANDMADE TUBULARS															
11871	TE	HTU	28"	33	Soft	Black	White	320	Sealed Corespun Cotton	Latex	-	PPS	622	20-28	Handmade

New products or specifications are highlighted in RED.

ACCESSORIES

ACC



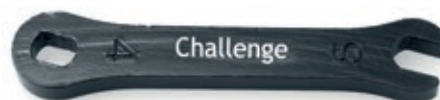
Seamless Latex Inner Tube



Tubeless & Clincher Bead Seating Tool



Professional Rim Cement Suitable for Aluminum & Carbon Wheel



Valve Extender Kits & 4 / 5mm Wrench

PART #	MODEL	PACK	TYPE	CONSTRUCTION	VALVE LENGTH mm	SIZE mm	WIDTH mm	ETRTO mm	VALVE TYPE	VALVE	TUBE
ACCESSORIES											
80001	Latex Tube - Track / TT / Tri / Road		ACC	Seamless	48mm	700	23-28	622	Removable Core	Presta	Latex
80003	Latex Tube - Cross / Gravel / Adventure		ACC	Seamless	48mm	700	30-38	622	Removable Core	Presta	Latex
90001	Universal Rim Cement	Tube 25g	ACC								
90002	Universal Rim Cement	Tin 180g	ACC								
90005	Valve Extender Kit	2 + tool	ACC	Alloy	41.5mm		5.5mm		Removable Core	Presta	
90020	Alloy Valve Extender Kit	2 + tool	ACC	Black Anodized Aluminium	31.5mm		5.5mm		Removable Core	Presta	
90021	Alloy Valve Extender Kit	2 + tool	ACC	Black Anodized Aluminium	41.5mm		5.5mm		Removable Core	Presta	
90022	Alloy Valve Extender Kit	2 + tool	ACC	Black Anodized Aluminium	55.0mm		5.5mm		Removable Core	Presta	
90030	Extender Wrench 4/5mm		ACC	Black Anodized Aluminium						Presta	
90050	Bead Seating Tool		ACC	Nylon fiber injection						Presta	

TRACK

TIME TRIAL
TRIATHLON

ROAD

GRAVEL
ADVENTURE

CYCLOCROSS

ACCESSORIES

TECH

PRODUCT
SPEC CHART

▶ **TIRE CONSTRUCTION BASICS:**

To understand what makes Challenge Handmade tire construction special you must first understand the basics. 98% of the world's bicycle tires are wire bead clinchers made with a nylon casing saturated with synthetic butyl rubber topped by a synthetic butyl rubber tread. Those components are cooked or vulcanized into a horseshoe or U-shaped tire to be mounted on a steel or alloy or carbon clincher rim.

This system maximizes the durability and long life and minimizes the cost of the tire. Car tires, motorcycle tires, airplane tires and giant truck and tractor tires are all made much the same way. Again, this is the cheapest, most cost efficient way to make a durable tire.

▶ **BUTYL RUBBER:**

Butyl rubber is that material you find in bouncy playground balls, bladders of footballs, basketballs and soccer balls (to make them bounce) and cheap, standard bicycle inner tubes. The main attributes of butyl rubber are its inexpensive price and its ability to bounce.

▶ **NYLON CASING:**

Nylon casing is a plastic mesh material that comes in basically three thread counts – 33, 60 and 120 TPI (threads per inch). Nylon thread counts higher than 120 TPI like 180 TPI are really creative marketing stories using a 60 TPI casing wrapped around the wire or aramid bead, overlapping three times under the tread making it 3 x 60 or 180 TPI. This creative marketing/counting system does not make the casing perform better but it does sound better in the magazine, website or catalog.

▶ **VULCANIZED CLINCHERS (VCL):**

To make a standard Vulcanized Clincher (VCL), nylon mesh is dipped in a bath of butyl rubber and then calendared (squeezed) between big steel rollers to create the casing. Because the thread count is so low, there are big spaces between threads to fill with bouncy butyl rubber. The final casing is about 50-70% nylon and 30-50% butyl rubber (higher thread count, less butyl rubber). The casing is combined with a wire or aramid fiber bead and butyl tread rubber and vulcanized into the clincher shape. VCLs are durable but not comfortable or high performance.

Strong, cheap standard nylon/butyl rubber tire systems (VCLs) for cars, trucks, airplanes, tractors and motorcycles may be attractive when you have a sophisticated suspension system and padded seats separating you from road shock. When you have a lightweight, high-performance bicycle where only six or eight kilos of super stiff carbon fiber (wheels, fork, frame, bar, stem, seat post and even saddle shell) highly optimized for efficient power transmission separating you from the road or trail, a bouncy (at low pressure) or stiff (at high pressure) VCL tire system delivers a painful, exhausting and inefficient ride when it is dry - and a quite dangerous ride when it is wet.

▶ **VULCANIZED TUBELESS READY (VTLR):**

The highest level of performance offered by car, truck and motorcycle tire manufacturers is a vulcanized tubeless system. While this is an old technology for cars and trucks, for bicycles it is relatively new and did not even have an internationally accepted design standard (ISO or ETRTO) until last year.

By eliminating the inner tube it is possible to lower the weight and theoretically create a softer, more comfortable, more efficient, lower rolling resistance tire system by running lower tire pressure. The reality is a little different as extra stiff rubber sidewalls needed to seal the air in at lower pressures tends to defeat the whole concept of "soft, supple, high performance" tubeless system.

A tubeless system has a super tight fit on the rim to maintain the seal and can be run without sealant. Most tubeless tires are actually tubeless ready (TLR), able to run tubeless by adding a sealant but also able to be run with an inner tube when assembled and sold to make test rides and a quick sale possible. Regardless of which tubeless system is used, two concerns arise:

1. A tubeless system requires more maintenance than a system with an inner tube. This is not a big problem on a car or truck or motorcycle that you take to a shop for service, but can be a big problem for cyclists out on the road or trail, and 2. It is still impossible to make a tubeless system perform like a handmade tubular system. This is why top pros in every bicycle segment still use tubulars.

Challenge started introducing Vulcanized TubeLess Ready (VTLR) tires last year because the ISO and ETRTO standards for proper VTLR tire and rim fit have finally been completed. These standards ensure your safety and your ability to fit and service the tires with hand tools. Challenge has access to Vulcanized TLR production but the results have been average at best.



Now we explore the special materials and handmade processes our factory use that make our products so special.

► **WHY CHALLENGE HANDMADE TIRES?:**

Challenge Handmade Tires combine all attributes necessary to create the most comfortable, lowest rolling resistance, maximum traction and control tires possible:

- Soft, supple casings
- Soft natural rubber treads formulated with special compounds
- Unique, seamless latex inner tubes
- Special puncture protection systems
- Protective sidewall sealants

► **CHALLENGE HANDMADE TUBULARS, TLR AND CLINCHERS**

Challenge Handmade Tubulars (HTU) and Handmade Clinchers (HCL) and NOW! Handmade Tubeless Ready (HTLR) and even Handmade Tubeless Tubulars (HTLTU) are made 100% in our family-owned factory in Thailand, 90 minutes down the coast from Bangkok. We are in Thailand because that is where our natural rubber and latex is sourced, where we can control the raw materials and where the world's best, incredibly skilled and patient rubber and latex experts work.

► **ROAD (OR TRAIL) SHOCK AND ROLLING RESISTANCE #1:**

Understanding how road shocks are propagated through the bike is also critical. Rolling down the road or trail the bike impacts cracks, holes, roots and rocks perpendicular to the tire surface. The force of these impacts is split into two components - vertical and horizontal.

The **vertical force** is passed up through the wheels, spokes, fork, frame, etc. and into the hands, feet and backside of the rider. These impacts create pain, fatigue, poor traction and cornering therefore reduced control especially in the wet.

Twenty years ago steel or titanium or alloy forks, frames and components would have absorbed at least some of these shocks. Now with all these parts made in carbon fiber optimized for stiff, efficient power transmission, all the shocks are passed into the rider. For 15 minutes these shocks may be OK but after an hour or more, the cumulative impacts are both painful and fatiguing and ultimately dangerous.

The compliance of a properly inflated tire has been measured to be 20 times greater than the entire rest of a modern carbon bike – bringing back some comfort and control where only pain existed. A soft, supple tire (especially a tubular) will protect the rider keeping the tire on the ground to optimize traction and cornering.

The **horizontal force** of impacting these bumps pushes the wheel and bike backward, absorbing energy and forcing the rider to apply more power. This negative force is rolling resistance (Crr).

On a polished indoor track with slick tires at high pressure this rolling resistance is quite small but it grows quickly as even small imperfections on an outdoor concrete track, asphalt road or dirt or gravel trail grow. Crr doubles or quadruples on poorly maintained roads full of cracks and potholes, and doubles again on gravel roads and rocky mountain trails.

► **SILK (SETA) ULTRA S CASINGS:**

The easy way to think of the three types of handmade casings is similar to shirts of the same material. The finest casings, like the finest suits, ties, scarves and shirts, are made of silk. Silk is a strong, soft, natural fiber material but the extreme expense and difficult construction mean this level of quality is priced almost exclusively for World Championship and Olympic competitions.



► **CORESPUN COTTON SC S AND TE S CASINGS:**

Corespun cotton casing tires are prepared for our Service Course S (SC S Track, TT, Tri & Road) and Team Edition S (TE S Cross) tires. Cotton is naturally softer and more supple (like your favorite shirt) than an inexpensive polyester shirt and needs to be treated more carefully. Cotton is more likely to absorb water, stain, mold and rot if not properly washed and dried than more durable polyester or more expensive silk. Cotton benefits most from our S Sealant (see below). Cotton is really the ideal balance of price and performance and therefore is the workhorse casing for professional athletes.



► **CHALLENGE S CASING SEALANT:**

To protect our new Challenge SC S and TE S cotton and Ultra S silk tires we are now applying a special waterproof bead-to-bead coating in our factory. The new sealant keeps the casings lighter, softer and more supple, eliminating hours of extra effort, keeping the tires looking bright and extending their life.

This new Challenge sealing technology replaces the need to immediately seal your tires by hand with Aquaseal® or Aquasure® or a similar sealant. However, after repeated washings with light detergent and a soft brush, you may want to totally clean and dry your tires and re-seal the sensitive sidewalls with Aquaseal® or Aquasure® or a similar sealant.

► **POLYESTER PRO CASINGS:**

Polyester is the least expensive handmade casing. It is a synthetic that is quite strong and impervious to water but not as soft and supple as either cotton or silk. It is far softer and stronger than nylon. We use polyester or SuperPoly (higher tread count polyester) to make our workhorse, more cost efficient Pro level tires.

► **OUR NATURAL RUBBER TREADS:**

Synthetic butyl rubber is cooked and hardened to increase life at the expense of performance, comfort and control. Challenge Handmade natural rubber treads are compounded to add just the right degree of durability without compromising their performance, comfort and control. Our tires may wear out 10 – 20% faster than our competitors but the performance and enjoyment during their lifetime is greatly enhanced which is why they are chosen by so many world class professionals.

► **PPS AND PPS2:**



The Puncture Protection System is one or more special fabric or coating placed between a tire's tread and casing to increase resistance to punctures. Some tires designed for use on rough roads, cobbles and gravel receive PPS2, an additional layer or coating of PPS between the casing and the inner tube.

► **SOFTER S COMPOUND TREADS:**



In addition to "S" for the Sealed sidewalls discussed above, some of our tires utilize a softer durometer tread rubber so the "S" also stands for Softer and more Supple. Our segment dominating Team Edition S Cyclocross tires have been fine-tuned by experienced champions and in 2018 they complimented the skills of four World Champions including Sanne Cant, Eli Iserbyt, Evie Richards and Ben Tullet.

The softer "S" treads are also used on special track tires we have created for Swiss and British Cycling to support their efforts to steadily improve the performances of their world dominating Track programs. Watch for this segment to evolve as more improvements are made during this next Olympic cycle.



► **SEAMLESS LATEX INNER TUBE:**



The final component of the Challenge system is its unique seamless latex inner tube. These tubes are automatically included in all top level Challenge Handmade Tubulars and are the perfect compliment to any clincher but especially Challenge Handmade Clinchers.

Instead of being extruded and joined with an overlap joint like our competitors' latex tubes, our tubes are seamless meaning they have no joint and therefore no extra weight at that joint or weakness in the system. Our tubes are stronger, lighter, super supple, absorb shock and conform to whatever objects impact it.

► **ROLLING RESISTANCE #2:**

The benefit of all these super supple attributes – treads, casings and latex tubes - is to make our soft and supple Handmade tubulars and clinchers optimally deform over road and trail imperfections – greatly reducing rolling resistance. The latest tests by Tom Anhalt, Josh Poertner, Wheel Energy and Tour Germany show that you save up to 3 watts per wheel just by changing from a butyl to latex inner tube. The rest of our products compliment and protect those soft supple tubes.

In summary, the latex tube compliment our soft casings and treads so that when the tire impacts road and trail imperfections, instead of bouncing, sending shock waves up into the rider, bouncing around corners and forcing an extra burst of energy to overcome the extra rolling resistance, the tire absorbs the bump and rolls over it smoothly, as if it wasn't there.

► **IMPORTANT HANDMADE TIRE CARE:**

Challenge Handmade Tires are made with the highest quality materials and processes. Like a fine wine, they must stored and treated with care to have a long life and provide the highest level of performance, comfort and control. After being ridden in mud they should be washed with a light detergent with a soft brush and fully dried prior to being stored in cool, dark, dry room (yes, like a wine cellar). Handmade tires should never be stored wet or for long hours in direct sunlight or high heat (on a terrace, in or on a car or in a shop window).

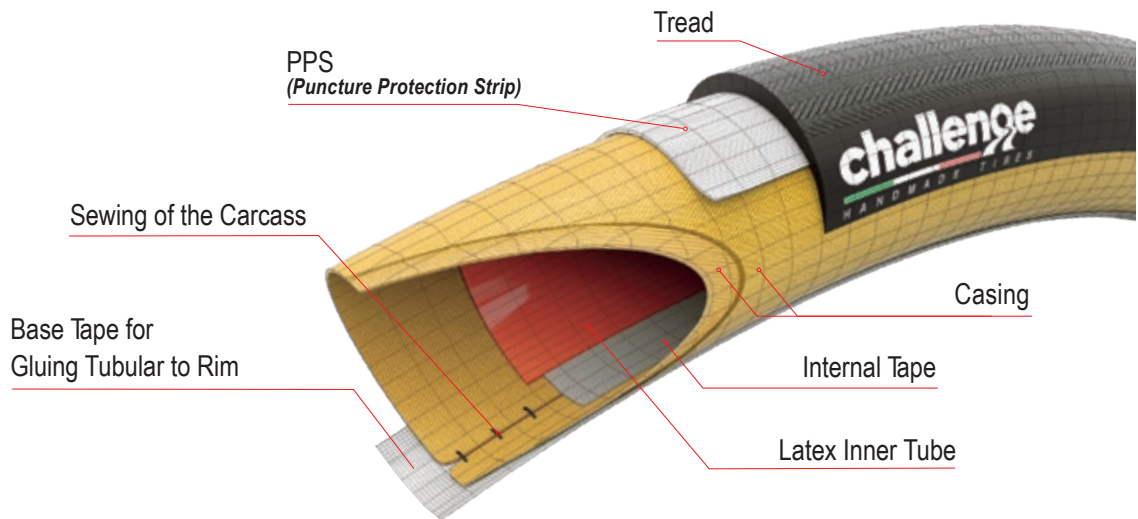
► CHALLENGE HANDMADE TUBULARS (HTU)



Challenge Handmade Tubular (HTU) and now Handmade Tubeless Tubular (HTLTU) Gravel tires perform better than any tubeless system! Handmade Tubulars are still raced by top athletes and teams and win in every cycling segment.

The latex inner tube is cradled inside the high quality silk, cotton or polyester casing that is sewn around a seamless latex inner tube forming a soft protective layer for the delicate tube. A base tape is glued over the sewing for protection and to absorb the adhesive later applied to hold the tubular on the rim. The carcass is mounted on a rim, inflated and a special natural rubber tread is precisely glued on top. Puncture protection layers and sealants can be applied to the finished casing, depending on the tubular's use.

► HANDMADE TUBULAR



► HANDMADE TLR (HTLR) AND HANDMADE CLINCHER (HCL)

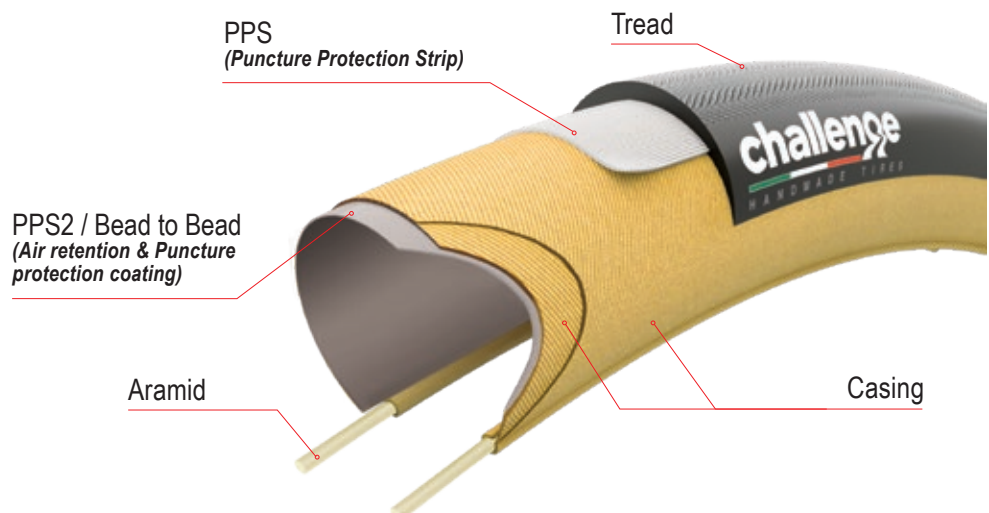


New Handmade TLR (HTLR) and Handmade Clincher (HCL) tires perform better than any vulcanized tubeless system! Challenge Handmade TLR and HCL are made from the same materials and processes as our handmade tubulars but instead of sewing an inner tube inside the casing is wrapped around a aramid bead to form a tire that fits on a clincher rim.

The HTLR is molded flat, not in a horseshoe like a VTLR or VCL. This shape allows the casing to naturally deform over surface imperfections and minimize rolling resistance. A normal vulcanized tubeless tire is molded in a U-shape to make the sidewalls rigid so the system does not “burp” or lose air when it deforms after it encounters a surface imperfection. The new Challenge HTLR is anything but normal. Where VTLR is stiff, high rolling resistance and uncomfortable to ride, the new HTLR maintains the soft supple qualities of all Challenge Handmade tires but sets up with a sealant on TLR wheels.

The unique Challenge Handmade Tubeless system is the closest thing to a high performance Handmade Tubular that you can fit on a tubeless Ready clincher

► HANDMADE TLR



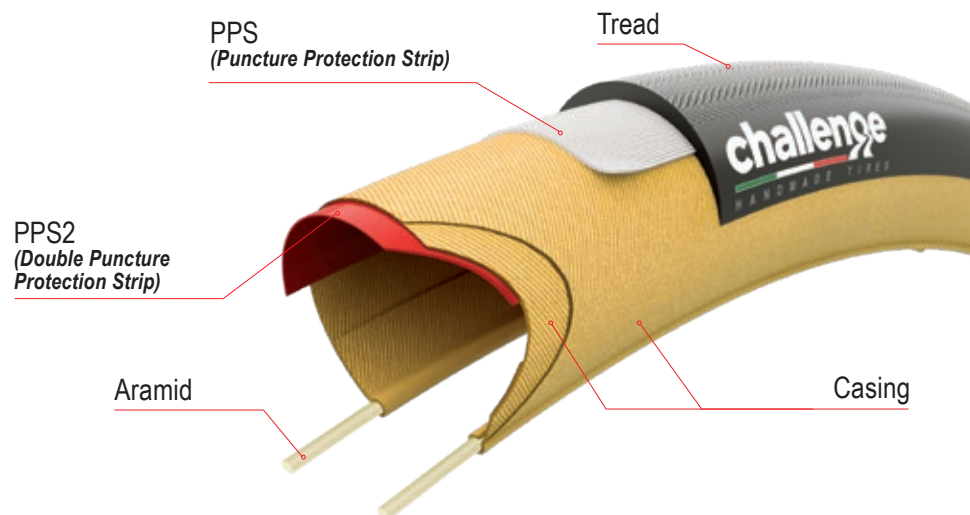
► 2020 TIRE CONSTRUCTION PERFORMANCE ANALYSIS

Performance by Component Acronym >>>>	Handmade Tubular HTU/HTLTU	Handmade Clincher* HCL	Handmade Tubeless HTLR	Vulcanized Tubeless VTLR	Vulcanized Clincher VCL	Notes
Tire						
Tread	9	9	9	10	8	
Casing	10	9	8	6	6	Nothing touches silk and cotton is just behind.
Rolling Resistance	10	9	10	7	6	Real world Crr testing getting more accurate.
Air Retention	8	8	9	9	10	Butyl wins so far but handmade is improving.
Pinch Flat	10	7	8	7	7	Tubulars rarely pinch and they are improving!
Puncture Protection	10	6	8	7	7	Tubulars rarely puncture & they are improving!
Mounting	10	9	7	7	10	New tubular tapes challenge VCL for speed.
Changing	9	9	7	7	10	Classic tire & tube win here but tubs improve!
Plug ability	10	5	10	10	5	HTLTU brings key feature to Tubulars.
Price	10	10	10	10	10	You get what you pay for.
Wheel						
Weight	10	7	7	7	7	Tubular wheels are 10+% lighter.
Strength	10	7	7	7	7	Tubular wheels are 10+% stronger.
Resilience	10	7	7	7	7	Tubular wheels are 10+% more resilient.
Price:	10	7	7	7	7	Tubular wheels are 10+% cheaper to produce.
Tire / Wheel Combo						
Aerodynamics	10	8	8	8	8	New tubular tape delivers added dose of aero.
Weight	10	7	8	7	6	Tubular wheels are 10+% lighter.

Overall Rating: 9.75 7.75 8.125 7.6875 7.5625

By Segment	HTU/HTLTU	HCL	HTLR	VTLR	VCL	Notes
Track	10	7	6	6	5	Low clincher performance with high operating pressures on smooth tracks.
TT	10	8	9.5	8	6	On some courses HTLR is getting closer to tubular performance.
Triathlon	10	8.5	9	8	7	Superior aerodynamics; new tubular tapes make changing a tire simple.
Road	10	7	8	7	6	Proven superior performance & safety. New tubular tape saves the team one mechanic.
Gravel	10	7	8	7	6	Handmade Tubeless Tubulars (HTLTU) add the final piece to the puzzle
Cyclocross	10	7	7	6	5	No clinchers in the Top 100 but changing treads is a benefit if you have only two wheelsets
Mountain XC	10	6	8	8	5	When Nino's Olympic & World's medal count on Tubeless equals his count on Tubulars ...
Mountain DH	8	7	8	10	5	So far medals tell this story ...

► **HANDMADE CLINCHER**



► **OPTIMAL OPERATING PRESSURE (OOP)**

The maximum tire pressure is required by international law (the International Standards Organization or ISO) to be marked on the tire. **This max pressure has nothing to do with the optimal operating pressure!** Max pressure is merely a safe pressure below the pressure where a tire will burst off a correctly designed and built wheel.

The Optimal Operating Pressure (OOP) depends on the course condition, weather condition, rider size and tire size. OOP is critical to minimize rolling resistance while maximizing traction, comfort and control.

If you are riding on an indoor track it is quite easy to find OOP on those 22mm Pista tubulars - just pump them to 12 bar (170psi) and go because rolling resistance is minimal on a polished wood track. As soon as you go outdoors to a concrete track or asphalt road, much less off-road, the situation gets much, much more complicated.

Cyclocross roots ...

The absolute masters of proper tire choice and finding OOP are Belgian cyclocrossers. Every Belgian 'crosser has their personal mechanic who learned the ideal tubular tread, tire size and OOP for a given course and weather condition and knows that OOP is further fine-tuned on race day. They know how to maximize the tire patch for optimum traction, braking and control while minimizing the risk of pinch-flattening.

Intelligent CX racers around the globe are now studying, defining, refining and documenting this tire OOP system (see "The Wyman System") and bringing it home to spread this critical expertise. Understanding the OOP opportunity (OOPportunity?) makes athletes more competitive in their home country and improves their chances in international competitions but only if they have the right tools (a soft, supple, tubular system) that respond to the optimized pressure adjustment.

Passed on to Gravel, Adventure and MTB ...

A tiny but growing group of Gravel and Mountain Bike racers understand that the OOP and Tubular system that works in the dirt, mud, snow and ice for Cross also works for them. This is why over the past six years five MTB World Championships, two Olympic gold and a silver medal have been won on Handmade Mountain Bike Tubulars. Even with all the money spent by huge tire manufacturers and sealant producers on R&D and marketing, tubeless systems have not been successful in elite competitions. Tubeless is a dream while Tubulars continue to deliver real results.

Ultimately widely respected on the Road ...

At the same time understanding OOP is spreading globally in Cyclocross, Gravel and MTB, more and more professional road teams are understanding how critical it is to ride handmade tubulars and properly fine-tune tire pressure on the Road. The eighteen World Tour Road teams all have mechanics who keep a table of tire OOP for each rider (by weight), tire volume and course that has been fine-tuned over many years of competitions and this OOP system is spreading as the secret gets out.

More top Road teams know the OOP equation changes from Strada Bianca to Paris-Roubaix to Tour of Flanders to concrete or asphalt - unserviced by years of recession or paved yesterday for the Tour de France. They know OOP needs to be adjusted for the rain and even more if it is the first rain after weeks or months of dry when oil, gas and exhaust accumulate where traffic is high and roads consequently become slick as ice. When the tire patch is optimally adjusted to keep the soft, supple rubber on the road as much of the time as possible (especially in those corners deformed by heavy vehicles braking), riders can relax, focus and perform there best.

Challenge Handmade Tires with OOP deliver ...

Now, with the help of Challenge Handmade Tires you can better understand what the world's top professional riders, teams and mechanics in every segment - from Track to TT to Road to Cyclocross to Gravel to MTB - have known for years: how the very finest handmade tubulars and clincher tires and tubes can be properly used to provide you with the most comfortable, controllable, highest performance riding you can imagine (and enjoy!).



► **CRITICAL REQUIREMENTS**



WARNING!

Tire and Rim Compatibility

Tire manufacturers, including Challenge, recognize that new clincher rim designs are being introduced, or modified, to accommodate carbon fiber hook beads, wider profiles and tubeless technologies that may not respect internationally accepted standards. Challenge open tubular and vulcanized clincher tires are designed to meet ETRTO (European Tire and Rim Technical Organization) and ISO (International Standards Organization) standards for both clincher hook bead shapes and the tire/rim size compatibility as listed in the chart above. Use of Challenge tires on rims that do not meet these standards, as well as use without a tube (unless specifically marked TLR or VTR), could result in severe injury and is solely the responsibility of the assembling party.

Challenge Handmade Clincher, vulcanized clincher and tubeless ready tires display sizes on the sidewall that are based on ETRTO standards describing the tire width (mm) x tire rim diameter (mm). They also include a "C" for Crotchet (meaning hook in English). Therefore, a tire like the Strada, will include the size 25c-622 which means the tire is 25mm wide and is intended for a 622 bead seat diameter rim with hook bead edges.

ATTENTION!

Tire Pressure

Tire pressure directly influences the comfort, handling, durability and rolling resistance of a bicycle. For example testing has proven that a properly designed and inflated tire provides 20 times more compliance (shock absorption) than a carbon fiber frame, fork and wheel set combined. This tire shock absorption is critical to a safe, enjoyable ride over any distance.

A tire can only operate to its full potential when properly inflated. Each Challenge tire includes an air pressure range. If the air pressure is too low, the risk of punctures, loss of traction and wear increases. A tire that is inflated too high stiffens the ride which adversely affects traction, cornering grip and rolling resistance. Always inflate and maintain tire pressures in the specified range. Please see the Challenge website www.challengetech.it for more specific pressure recommendations based on rider weight, terrain and conditions.

All bicycle tires continually lose pressure and top-level handmade tires may lose air pressure faster than vulcanized clinchers due to the soft supple materials used in their construction being more permeable. For this reason you should check and adjust your tire pressure before each ride.

ATTENTION!

Weight

Challenge's goal is to provide light, durable tires. Occasionally there are small deviations from the weight listed in our catalog. These variations result from tolerances in the tread thickness and other rubberized material that cannot be avoided in the handwork of the manufacturing process. The weight information in the catalog is based on the target weights that were determined in pre-production and during repeated measurements made during production. Deviations of up to 10% of the target weights are possible according to our design tolerances.

2019 CYCLOCROSS CHAMPIONS

2

World
Champions



42

National
Champions



1

European
Champions



2

Pan American
Champions



2020