

TUBE SETS

2021 CATALOGUE
MADE IN ITALY





The Soul of Cycling since 1919

#ColumbusTubing

#Steelisreal



In 1919, as Europe emerged from the ashes of the Great War, a twenty-seven year old Angelo Luigi 'A.L.' Colombo signed the lease on a small factory and so began the production of steel tubes. With demand for bicycles running high, their makers were amongst his first customers – Edoardo Bianchi, Umberto Dei, Atala, Giovanni Maino. With his tubing well-proven in the bicycle industry, Angelo Luigi saw strength in creativity and diversity and was soon supplying material for the tubular frames of seaplanes and road vehicles, as well as for furniture and ski-poles. Italy was at the forefront of aviation in the 1920s, and Colombo enjoyed a strong relationship with Caproni, manufacturing the tubing that formed the backbone of their famous aircraft. In 1927 Colombo became part of aviation history, with De Pinedo and Balbo's transatlantic planes having airframes constructed from Colombo tubing – the same tubing that was, at that time, used to fabricate race-winning Moto Guzzi motorcycle chassis.

To give increased strength and reduced weight, Colombo began experimenting with 'butted' tubes – with variable wall thickness along their length.

Three years later, in 1930, Angelo Luigi created the brand name 'Columbus', which was initially only associated with tubular chromed-steel furniture. After an initial trial period, in which Columbus exhibited at the VI Triennale in Milan, Angelo Luigi obtained exclusivity of supply to EMBRU for the production of Marcel Breuer's iconic furniture designs. Shortly afterwards, Columbus furniture was in high demand – for offices, universities and schools as well as homes. The best rationalist architects of the time - Figini, Pollini, Terragni, Pagano, Pucci,

Faccioli - crafted designs for Columbus, bringing innovation to the furniture industry and further reinforcing the reputation of Columbus as leaders in modernist design. Later in the 1930s, the Columbus name, along with 'Aelle' and 'Tenax' was first applied to special sets of bicycle tubes – the Columbus tubes being drawn from Chrome Molybdenum steel and the fork blades being elliptical, laying down standard characteristics that remain commonplace to this day. Never satisfied, Colombo worked to the maxim "Curiosity is a prelude to knowledge" and continued to experiment in the fields of mechanics and metallurgy.

Colombo even designed and built their own butting machines to manufacture the tubes with tapering wall thickness – reinforcing the tubes at the joints where stresses are greatest.

Colombo supplied tubes for racing car chassis, and Colombo's son, Gilberto, designed chassis for the immortal Italian manufacturers Lancia, Maserati and Ferrari. Fangio ('El Maestro'), Ascari and 'Gigi' Villorosi were carried to victory on Colombo chassis. Some of the tube profiles created at this time will find their application onto bicycle frames in the following years.

'Columbus', a new company dedicated to the development and production of specialist tubes for bicycle frames, is formed in 1977. Antonio Colombo, youngest son of Angelo Luigi, leaves his position as President of A.L. Colombo to devote himself entirely to the new-born Columbus. Extensive experience gained from cycle, aircraft and automobile testing was the driving force of the business: Columbus, reinforced by the fact that the

Italian artisans who use Columbus tubes are admired and known all over the world, were determined to conquer international markets. Since that time continuous uninterrupted research, highlighting the parts of the frame subjected to the highest stress, has helped to improve stiffness and strength and increase resistance to deformation and breakage. Among the notable innovations are the taper-gauge elliptical fork blades, the conical helix tube butting, 'Air' – the first fully-aerodynamic tube set, and 'Max' – offering the advantages of differing oversize tube profiles to bicycle designers and riders. Parallel to an increasingly diverse production line, manufacturing 900 different types of tubes all of controlled origin and guaranteed quality, comes a growing competitive sector. For record attempts on the track, Columbus have developed super-light tube sets for the greatest champions: Coppi, Anquetil, Baldini, Rivière, Bracke, Ritter, Merckx, Moser, Oersted. The doctrine of intelligent experimentation and technological progress continues to be the main focus of the new Columbus, independent from A.L. Colombo since 1978. From research conducted in collaboration with the most prestigious research institutions, and through sophisticated tests carried out on the road and in the laboratory, Columbus continues to develop new materials and designs; new tube sets used by the top riders: from Gimondi to Merckx, Hinault to Argentin, Lemond and Roche, till nowadays new-generation hi-performance oversized steel tube-sets and carbon fibre monocoque forks, frames and components.



XCr

**Stainless,
Seamless,
Performance**

- The jewel of the crown, top-range tubeset
- The only biphasic stainless seamless tube family available in the cycling industry
- Tripled & Double butted tube reinforces
- High corrosion resistance in long-term periods in every use and weather condition
- Seamless-technology, improved stiffness and mechanical properties
- Reduced thickness, up to 0.4mm for an extremely reduced weight
- Exceptional resistance to Stress Corrosion Cracking
- No need to be painted or clear-coated after polishing
- Ultra smooth surface ($R_a < 0,4$)
- Excellent weldability
- Made in Italy



SPIRIT HSS

High Strength Shaped

- Triple butted OMNICROM alloy
- Cold-Drawn Seamless Tube
- Exceptional mechanical properties
- Special HSS shaping, designed to optimize tube strength according to the orientation of its local solicitations
- High tensile strength, superior resilience and incredible fatigue resistance
- Visual Quality Control inspection and hand marking of each tube
- Unpaired strength/weight ratio
- Made in Italy



SPIRIT

**Top-Performance
Road-Race**

- Triple butted OMNICROM alloy
- Cold-Drawn Seamless Tube
- Reduced thickness, up to 0.38mm
- Exceptional mechanical characteristics
- High tensile strength, superior resilience and incredible fatigue resistance
- Excellent tube-surface finishing and highly controlled alloy-composition, regular and close to nominal, for an excellent weld bead
- Visual Quality Control inspection and marking of each tube
- Incomparable strength/weight ratio
- Made in Italy



LIFE

**Over-size,
Lightness,
Resistance**

- Triple butted OMNICROM alloy
- Cold-Drawn Seamless Tube
- Wide range and great freedom in frame-design & tubeset-composition
- Excellent resistance/weight ratio, wide range of shapes & bends
- Over-sized tubes available for the DT (Ø42mm) and the ST (Ø35mm)
- Exceptional mechanical characteristics
- High breaking load, superior tenacity and incredible fatigue endurance
- Wide range of specifications: road-race, gravel, urban and mtb
- Made in Italy



MAX

**The Revolutionary
Tubeset**

- Triple butted OMNICROM alloy
- Cold-Drawn Seamless Tube
- The very first and only original patented non-round tubeset of the cycling history
- Tubes shapes oriented according to localized specific stress-direction
- Elliptical and oriented oversized sections for an increased momentum of inertia
- Maximized stiffness, reduced thickness, weight and power-dispersion
- Made in Italy



SL

**Super Leggera -
The 'Soul of Cycling'**

- Double butted OMNICROM alloy
- The most famous Columbus round set
- Hi-performance, imperial dimensions
- Exclusive laminated tapered fork blades swaged on shaped-mandrels for an improved structure and lightness
- Wide range with multiple diameters and thicknesses and reinforces
- Meets both lugged and Tig-welded frame needs
- Evergreen specifications updated to new technologies and alloys
- Double butted seamless tubes, cold worked and stress relieved
- Made in Italy



ZONA

**All-Purpose
Hi-Resistance
tubes family**

- Triple / Double butted 25CrMo4 alloy seamless tubeset
- Moderate weight and high strength
- Multiple possible shapes, triangle & stays
- Increased wall-thicknesses and butted lengths in strategic tube areas
- Perfect solution for offroad and training purpose
- Great to mix with lighter Columbus sets for an improved resistance
- Good resistance to heating during welding process
- Great reliability and fatigue life
- Made in Italy



CROMOR

**Resistance, Reliability,
Duration**

- Double & Single butted Cromor alloy
- Competitive and easy to weld & braze
- The legendary Columbus tubeset
- The ABC of framebuilding art
- Reinforced in the welding/junctions areas up to 0.8/0.9/1.2mm
- Tubes with reduced thickness up to 0.5/0.6mm
- Top reliability even in the most demanding and stressing conditions
- Long-lasting properties and performance even after heavy-duty use
- Improved performances with multiple cold-drawn & stress-relief processes
- Full-set made in Italy. 'Tre-Tubi' composition available ex-Asia for OE productions

Tubesets





XCr è un acciaio speciale inossidabile dalla formulazione innovativa. Caratteristica esclusiva ed unica nel settore del ciclo della nuova serie XCr Columbus, sono i tubi inossidabili senza saldatura, realizzati partendo da una billetta forata meccanicamente e trafilata a freddo innumerevoli volte fino ad ottenere ridottissimi spessori finali. In questo modo le elevate caratteristiche meccaniche dei tubi sono uniformi e costanti su tutta la sezione circolare del tubo. Grazie alla particolare composizione chimica di questa nuova lega, la struttura cristallina non viene alterata durante il processo di saldatura del telaio, garantendo le massime prestazioni anche nei punti di giunzione. Caratteristiche meccaniche: UTS=1450MPa, Ys=1000MPa, Ap5: >10% Materiale d'apporto suggerito per saldatura TIG: APX4S Materiale d'apporto per saldobrasatura: T99 (Ag 56% Cu 22% - Zn 17%)

XCr is an innovative, high grade, stainless seamless steel tubing set. Exclusive and unique characteristic for the whole bike industry of the new Columbus XCr set, is that the stainless steel tubes are seamless, made starting from a solid billet, machine-perforated and cold drawn countless times, to obtain the final required thickness. In this way the very high mechanical characteristics are uniform and constant in the whole round section of the tube. Thanks to the special chemical composition of this new alloy, the grain structure is not altered by welding during the frame construction. The maximum characteristics are granted also in the joint areas. Mechanical characteristics: UTS=1450MPa Ys=1000MPa, Ap5: >10% Suggested filler material for TIG welding: APX4S Suggested material for brazing: T99 (ag 56% Cu 22% - Zn 17%)



COLUMBUS Omnicrom

NEW!

A distanza di 30 anni dagli studi fatti da Columbus e l'Istituto di Saldatura di Parigi che portarono a brevettare le leghe Cyclax e Nivacrom, siamo oggi ad un nuovo traguardo nella storia degli acciai ad alta prestazione, siamo oggi pronti per presentare OMNICROM.

Le performance del telaio in acciaio sono direttamente influenzate dalle caratteristiche e qualità dei materiali e componenti utilizzati: senza sottovalutare la bontà della geometria e del progetto, grande importanza è da attribuirsi alla qualità dei tubi e della saldatura, con speciale riferimento alle ripercussioni che essa ha sui tubi utilizzati.

Columbus da sempre presta particolare attenzione alla resistenza dei propri tubi agli stress termici e alle trasformazioni che avvengono durante la fase di saldatura. Con l'introduzione di OMNICROM, Columbus inaugura una nuova era del tubo in acciaio: prestazioni senza precedenti e grandissima capacità di lavorazione.

OMNICROM è il punto di arrivo di un lungo percorso. Tutto parte dalle più aggiornate leghe di acciaio al Cromo-Molibdeno con basso tasso di Carbonio, utilizzate nel moderno ambito aeronautico, figlie delle prime ricerche delle acciaierie AL Colombo. Dall'esperienza sviluppata negli anni da Columbus nel campo delle competizioni motor e ciclo con leghe cromolly, OMNICROM si arricchisce dei benefici del Vanadio e di un accurato controllo del processo produttivo: la miglior scelta per il rider, la miglior scelta per il telaista.

Caratteristica distintiva di OMNICROM sono la strettissima tolleranza nella composizione della lega, affinata e rifusa per garantire la regolarità della struttura, la resistenza allo snervamento, l'ottima saldabilità e l'elevata resilienza.

La purezza dell'acciaio OMNICROM si traduce in assenza di inclusioni, tramite un attento controllo degli elementi del metallo, annullando eventuali comportamenti anomali della lega, dovuti ad impurità ed irregolarità presenti nella struttura del cristallo.

30 years have passed since Columbus and The Institute of Welding of Paris collaborated on a research study which led to obtaining patents on Cyclax and Nivacrom alloys. Today marks a new milestone in the history of high-performance alloys. Today we present OMNICROM.

The performance of a steel frame is, undoubtedly, directly influenced by the characteristics and quality of the materials and components used: in combination with the quality of the geometries and the project, big importance belongs to the quality of the material and of the welds, with particular attention paid to the effect they have on the tubes used for the realization of the frame.

Columbus has always paid particular attention to the resistance the tubes have to the thermal stress and transformations they are typically exposed during the welding phase. With the introduction of OMNICROM, Columbus ushers forth a new era of steel tubing; unprecedented performance and excellent processing capacity.

OMNICROM is the culmination of a long journey.

It all starts with the latest low-carbon Chromium-Molybdenum Steel alloys used today in the aerospace industry, descendants of the first research done at AL Colombo's steel mill.

Putting to use all the experience Columbus has gained within the competitive motorcycle and cycling industry developing Chromoly alloys, OMNICROM benefits from being enriched with Vanadium combined with a highly controlled production process: the best choice for riders, the best choice for framebuilders.

OMNICROM's distinctive features are the strict tolerance of the alloy composition, refined and re-fused to grant the regularity of the structure, an increased yield strength, excellent weldability and elevated resilience.

OMNICROM's purity translates into excluding inclusions, through careful control of the metal elements, eliminating any abnormal behavior of the alloy caused by these impurities and consequently irregularities within the crystal structure.



COLUMBUS Omnicrom

La centenaria esperienza di Columbus nei processi di trafilatura a freddo, assieme alle straordinarie proprietà di OMNICROM, permettono di raggiungere un'elevata regolarità della struttura cristallina del metallo. Il controllo della lega sin dal momento della solidificazione in colata, si traduce in maggiore capacità di assorbire il calore e lo stress della saldatura e mantenere stabili e inalterate le proprietà meccaniche anche dopo saldatura.

OMNICROM si lavora con grande facilità, ha un comportamento regolare e prevedibile durante la saldatura, si presta a realizzazioni TIG, saldo-brasatura fillet e a congiunzioni, grazie all'elevata temperatura di transizione ($Ac3=980^\circ$) che ne preserva inalterata struttura e performance anche dopo le lavorazioni più esasperate.

Le prestazioni di OMNICROM sono superiori agli acciai sino ad oggi brevettati da Columbus, grazie alla speciale composizione della lega, e all'innalzamento delle proprietà meccaniche ottenuto tramite la maggior deformabilità a freddo del tubo, realizzata per trafilatura, ottenuta grazie alle qualità di questa speciale lega.

Caratteristiche meccaniche:

UTS=1300MPa, $Y_s \geq 920$ MPa, $Ap_5 > 15\%$.

Materiale d'apporto per TIG:

OK TIGROD 13.12 (AWS 5.28 ER 80S-G)

Materiale d'apporto per saldobrasatura:

Castoline Silver Alloy 38230

Columbus OMNICROM è utilizzato nei triangoli Spirit, Spirit HSS, Max, SL e Life.

The extraordinary properties of OMNICROM and a century of experience in cold drawing steel allows Columbus to achieve an elevated degree of crystal structure regularity. The crystal structure is controlled since casting solidification and grants a greater capacity to absorb the heat and stress of the welding process, maintaining the tube's mechanical properties stable and unaltered.

Thanks to its high transition temperature ($Ac3=980^\circ$), OMNICROM is easy to work with. It has a smooth, predictable behavior during welding and lends itself perfectly to TIG welding, as well as fillet and lug brazing maintaining an unaltered structure and performance even after undergoing the most extreme processes.

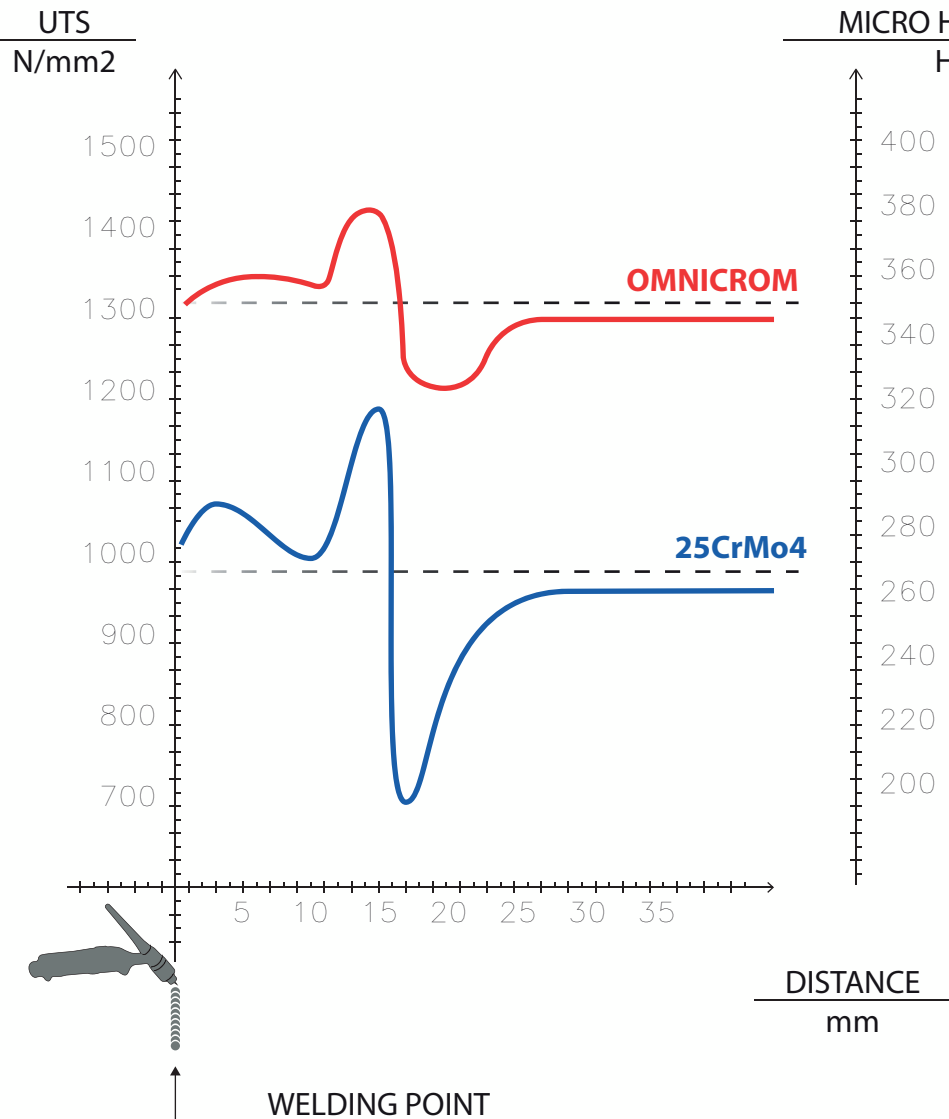
OMNICROM's performance is superior to steel alloys patented up to this day by Columbus. This superior performance is thanks to the special alloy composition and improved mechanical properties, which are obtained through the increased plastic deformation of the tubing achieved through cold-drawing, made possible thanks to a special alloy formula.

Mechanical characteristics: UTS=1300MPa, $Y_s \geq 920$ MPa, $Ap_5 > 15\%$.

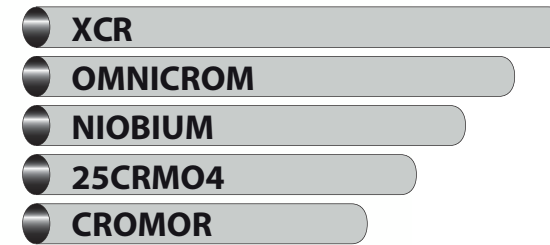
Suggested material for TIG welding: OK TIGROD 13.12 (AWS 5.28 ER 80S-G)

Suggested material for brazing: Castoline Silver Alloy 38230

Columbus OMNICROM is utilized for the production of the Spirit, Spirit HSS, Max, SL and Life main-triangles.



MECHANICAL CHARACTERISTICS COMPARISON OF COLUMBUS TUBES



THE VALUES ARE FOR HOMOGENEOUS SECTIONS
OF COLD-DRAWN STRESS-RELIEVED TUBING
FROM THE MAIN TRIANGLE

	N/mm ²
XCR	1450
OMNICROM	1300
NIOBIUM	1250
25CRMO4	900
CROMOR	750

The new Omnicrom alloy will soon be featured on all the Columbus top-range main-triangles, including Spirit, Spirit HSS, SL, MAX, and Life tubesets.



COLUMBUS 25CrMo4

Acciaio 25CrMo4 senza saldatura: grazie al Cromo l'acciaio resiste egregiamente al surriscaldamento dovuto alla saldatura, infatti, i grani non si ingrossano e le prestazioni meccaniche non vengono alterate. Brasatura o saldatura sono dunque ben sopportate. Questo acciaio, allo stato crudo malleabile, garantisce elevate caratteristiche meccaniche.

Caratteristiche meccaniche: UTS=900MPa, Ys=800MPa, Ap5 =12%

Materiale d'apporto per saldatura TIG: OKTIGROD 13.12 (AWS 5.28 ER 80S-G)

Materiale d'apporto per saldobrasatura: Castoline Silver Alloy 38230

Columbus 25CrMo4 è utilizzato nelle serie tubi Zona, 29r e FAT.

25CrMo4 seamless steel: the chemical composition of this steel, specifying a higher percentage of Chromium, gives to the material good resistance properties to overheating. The formation of carbides prevents the grain enlargement: the steel maintains its properties during brazing and welding, even in the malleable raw state it features excellent mechanical characteristics.

Mechanical characteristics: UTS=900MPa, Ys=800MPa, Ap5 =12%

Suggested filler material for TIG welding: OKTIGROD 13.12 (AWS 5.28 ER 80S-G)

Suggested material for brazing: Castoline Silver Alloy 38230

Columbus 25CrMo4 is utilized for the production of the Zona, 29r and FAT tubesets.



COLUMBUS Cromor

Columbus Cromor e' un acciaio 25CrMo4, saldato e trafilato a freddo su mandrini sagomati a spessore variabile.

Cromor e' prodotto partendo da uno sbozzato calibrato che ha già a sua volta subito due passaggi di trafilatura, prima di essere rinforzato a spessore variabile.

Caratteristiche meccaniche: UTS=750MPa, Ys=700MPa, Ap5 ≥ 12%

Materiale d'apporto per saldatura TIG: OK TIGROD 13.12 (AWS 5.28 ER 80S-G)

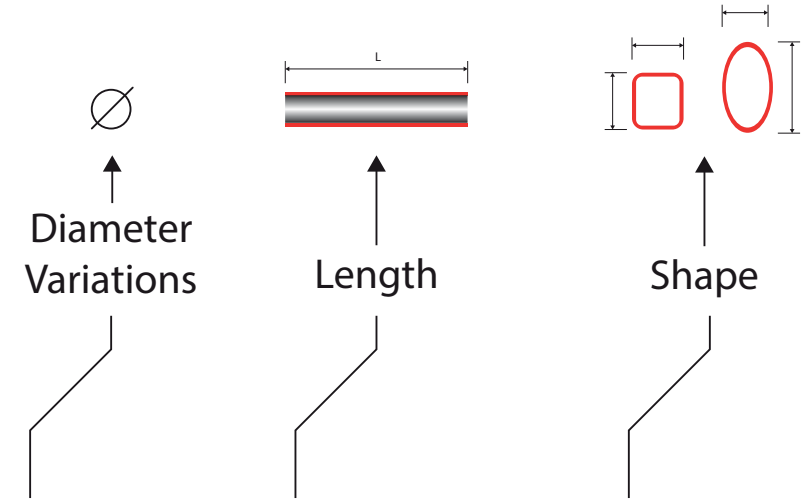
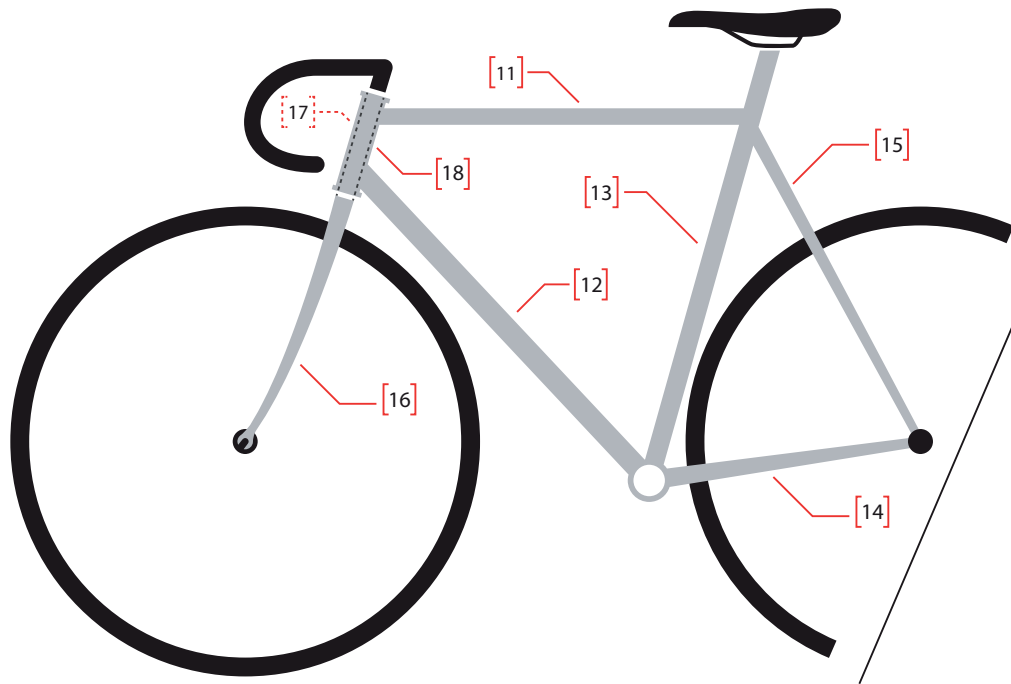
Materiale d'apporto per saldobrasatura: Castoline Silver Alloy 38230

Columbus Cromor is a 25CrMo4 steel, seamed and cold drawn, butted to variable thicknesses using shaped mandrills. Cromor steel is produced starting from a calibrated tube which has already received two drawing processes, before being reinforced in all the possible variable thickness offered by the range.

Mechanical characteristics: UTS=750MPa, Ys=700MPa, Ap5 ≥ 12%

Suggested material for TIG welding: OK TIGROD 13.12 (AWS 5.28 ER 80S-G)

Suggested material for brazing: Castoline Silver Alloy 38230



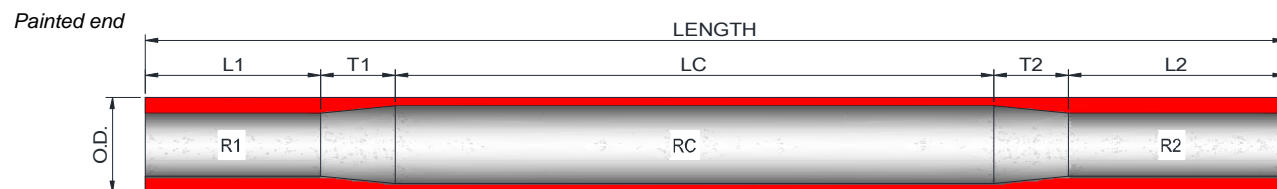
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Family	ITA	ENG	Variations
XCR XCr	11 - TO	11 - TT	
SP Spirit	12 - TQ	12 - DT	
SL HSS/SL	13 - TV	13 - ST	
SLF Life/HSS	14 - PO	14 - CS	
ZON Zona	15 - PV	15 - SS	
CR/CX Cromor	16 - FF	16 - FB	
FBR Disc Blade	17 - CN	17 - FS	
	18 - ST	18 - HT	

Columbus Bicycle Steel Tubes are hi-precision tubes manufactured using a cold-drawing hardening process, subject to a final stress-relieve heat treatment in order to release the internal tensions and optimize the crystalline structure of the alloy and its elements.

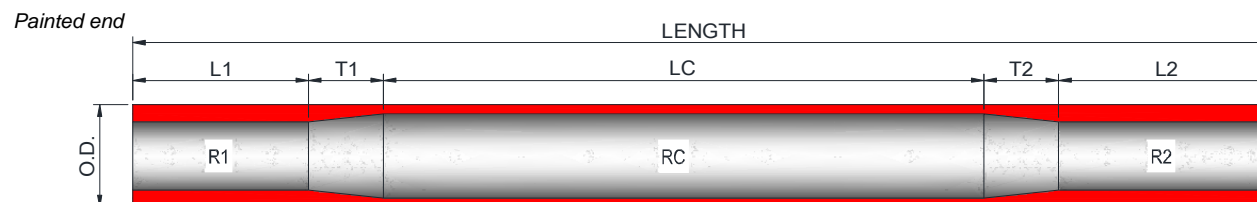


MAIN TUBES - double / triple butted



CODE	O.D.	LENGHT	BUTT TH. PROFILE			BUTT LENGTHS					FAMILY	
			R1	RC	R2	L1	T1	LC	T2	L2		
XCRL11570	31,7	570	0,6	0,4	0,6	40	40	330	40	120	XCr	
XCRL11600	31,7	600	0,6	0,4	0,6	40	40	380	40	100	XCr	
XCRL11600W			= XCRL11600 + "W" shape									XCr
XCRS11600	31,7	600	0,7	0,5	0,7	60	40	350	40	110	XCr	
XCRL12650	35	650	0,65	0,45	0,65	40	40	430	40	100	XCr	
XCRS12670	35	670	0,7	0,5	0,7	60	40	385	40	145	XCr	
XCRA12670	38	670	0,65	0,45	0,65	40	40	450	40	100	XCr	
XCRA12670Z			= XCRA12670 + "Z" shape									XCr
XCRA12670MAX			= XCRA12670 + "MAX" bi-oval shape									XCr
XCRG12670	42	670	0,6	0,45	0,6	60	40	410	40	120	XCr	
XCRC11600	28,6	600	0,75	0,45	0,75	100	40	320	40	100	XCr	
XCRC12650	31,7	650	0,75	0,45	0,75	100	40	320	40	150	XCr	
SPTL11570	31,7	570	0,6	0,4	0,6	50	40	370	40	70	Spirit	
SPTL11570112AW			= SPTL11570 + "AW" 27x33,5mm shape									Spirit
SPLM12625B	31,7	625	0,8	0,5	0,8	70	40	380	40	95	Spirit	
SPTA12635	38	635	0,6	0,4	0,6	50	40	425	40	80	Spirit	
SPTA12635112AZ			= SPTA12635 + "AZ" shape									Spirit
SPLM11600	28,6	600	0,75	0,45	0,75	100	40	320	40	100	Spirit FL	
SPLM12650	31,7	650	0,75	0,45	0,75	100	40	350	40	120	Spirit FL	
SPKI11580	25,4	580	0,8	0,5	0,8	55	30	305	30	160	Spirit Keirin	
SPKI12640	28,6	640	0,8	0,5	0,8	90	30	390	30	100	Spirit Keirin	
SL2I11600	25,4	600	0,8	0,5	0,8	100	40	320	40	100	SL	
SL2I12650	28,6	650	0,8	0,5	0,8	100	40	320	40	150	SL	

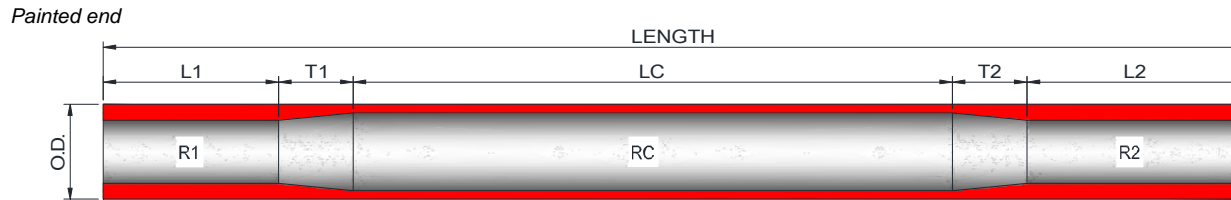
MAIN TUBES - double / triple butted



CODE	O.D.	LENGHT	BUTT TH. PROFILE			BUTT LENGTHS				FAMILY	
SLFL11600125*	31,7 / 28,6	600	0,65	0,45	0,65	40	40	380	40	100	Spirit HSS
SLFL11600OV125*			= SLFL11600125 + ovalized HT side 28,7x34,6mm								
SLFL11560125*	31,7 / 28,6	560	0,65	0,45	0,65	40	40	340	40	100	Spirit HSS
SLFL11560OV125*			= SLFL11560125 + ovalized HT side 28,7x34,6mm								
SLFG11600	35	600	0,65	0,45	0,65	60	40	385	40	75	Spirit HSS
SLFG11600125*	35 / 31,7	600	0,65	0,45	65	60	40	385	40	75	Spirit HSS
SLFG12640	44	640	0,6	0,45	0,6	50	40	360	40	150	Spirit HSS
SLFG12670	44	670	0,6	0,45	0,6	90	40	380	40	120	Spirit HSS
SLFG12670GX			= SLFG1270 + "GX" shape								
SLFG12670HX			= SLFG1270 + "HX" shape								
SLFG12670Y01			= SLFG1270 + "YO1" shape								
SLFM11600	28,6	600	0,7	0,45	0,7	50	40	370	40	100	Life
SLFL11560	31,7	560	0,65	0,45	0,65	40	40	340	40	100	Life
SLFL11560W01			= SLFL11560 + "W01" shape								
SLFL11560112AW			= SLFL11560 + "112AW" shape								
SLFL11600	31,7	600	0,65	0,45	0,65	40	40	380	40	100	Life
SLFL11600W01			= SLFL11600 + "W01" shape								
SLFL11600112AW			= SLFL11600 + "112AW" shape								
SLFM12650125*	31,7 / 28,6	650	0,65	0,45	0,65	60	40	360	40	150	Life
SLFM12630	31,7	630	0,7	0,45	0,7	70	40	380	40	100	Life
SLFL12650	35	650	0,65	0,45	0,65	60	40	390	40	120	Life
SLFA12670	38	670	0,65	0,45	0,65	40	40	450	40	100	Life
SLFA12670131			= SLFA12670 + "MAX" bi-oval shape								
EL0M12600	31,7	600	0,7	0,4	0,7	100	40	320	40	100	EL Oversize
XNVL12650	35	650	0,8	0,5	0,8	125	45	310	45	125	EL Oversize
MAXL11600	31,7	600	0,7	0,4	0,7	100	40	320	40	100	MAX
			TT double oval shaped 37,6x26,1mm								
MAXL12650	35	650	0,8	0,5	0,8	125	45	310	45	125	MAX
			DT bi-oval oval shaped 40,3x30mm								

(*): Tapered tubes. Thickness before tapering.

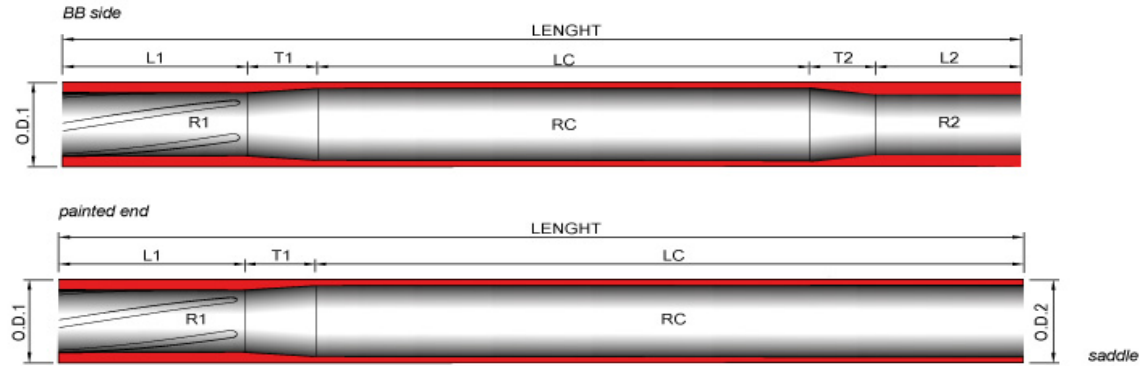
MAIN TUBES - double / triple butted



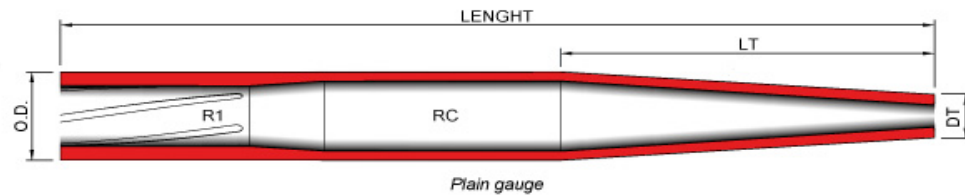
CODE	O.D.	LENGHT	BUTT TH. PROFILE			BUTT LENGTHS					FAMILY
			R1	RC	R2	L1	T1	LC	T2	L2	
ZONM12650	31,7	650	0,7	0,5	0,7	60	40	360	40	150	29'r
ZONL12750001	35	750	0,8	0,5	0,8	125	40	340	40	205	29'r
ZONA12750	38	750	0,7	0,5	0,7	60	40	410	40	200	29'r
ZONA12750001	38	750	1	0,5	0,8	270	40	300	40	100	29'r
ZONA12750001110E**	38	750	1	0,5	0,8	270	40	300	40	100	29'r
ZONH12750	42	750	0,7	0,5	0,7	60	40	410	40	200	29'r
ZONI11600	25,4	600	0,8	0,6	0,8	100	40	320	40	100	Zona
ZONM11600	28,6	600	0,7	0,5	0,7	50	40	370	40	100	Zona
ZONM11560	28,6	560	0,7	0,5	0,7	50	40	330	40	100	Zona
ZONM11600001	28,6	600	0,8	0,5	0,8	95	40	320	40	105	Zona
ZONI12650	28,6	650	0,8	0,6	0,8	100	40	320	40	150	Zona
ZONL11600	31,7	600	0,7	0,5	0,7	60	40	350	40	110	Zona
ZONL11560	31,7	560	0,7	0,5	0,7	60	40	310	40	110	Zona
ZONM12670	31,7	670	0,8	0,5	0,8	100	40	370	40	120	Zona
ZONL12670	35	670	0,7	0,5	0,7	60	40	410	40	120	Zona
ZONL12670001	35	670	0,8	0,5	0,8	125	40	340	40	125	Zona
ZONA12670	38	670	0,7	0,5	0,7	60	40	410	40	120	Zona
ZONA12670112AE			= ZONA12670 + "112AE" shape (30 x 46)								Zona
ZONH12670	42	670	0,7	0,5	0,7	60	40	410	40	120	Zona
ZONH12670112AF			= ZONH12670 + "112AF" shape (31 x 52)								Zona
ZONH12670112L			= ZONH12670 + "112L" shape (32 x 51)								Zona
CRMI11600	25,4	600	0,9	0,6	0,9	95	60	230	60	155	Cromor
CRMI12640	28,6	640	0,9	0,6	0,9	85	60	320	60	115	Cromor
CRRM11600	28,6	600	0,9	0,6	0,9	85	60	280	60	115	Cromor
CRMM12640	31,8	640	0,9	0,6	0,9	85	60	320	60	115	Cromor

(*): Tapered tubes. Thickness before tapering. (**): Bended DT for MTB fork clearance.

SLX PROJECT



MAIN-TUBES CODES	O.D.	LENGHT	BUTT TH. PROFILE			BUTT LENGTHS					FAMILY
			R1	RC	R2	L1	T1	LC	T2	L2	
SLXI112650	28,6	650	0,9*	0,6	0,9	105	50	270	50	175	SLX
SLXI113635	28,6	635	0,8*		0,6	150	50	435			SLX

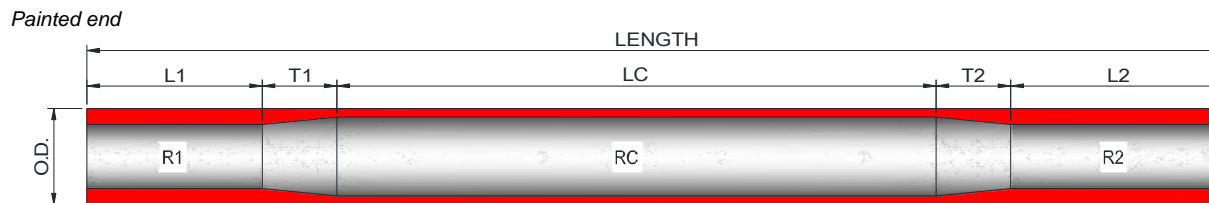


CHAINSTAY CODE	O.D.	LENGHT	THICKNESS*							FAMILY
			R1	RC		oval	LT	DT		
SLXI14OV410	22,2	410	0,8*	0,6		100		297,5	12,5	SLX

(*) plus 0,2mm of additional SLX spiral-reinforce

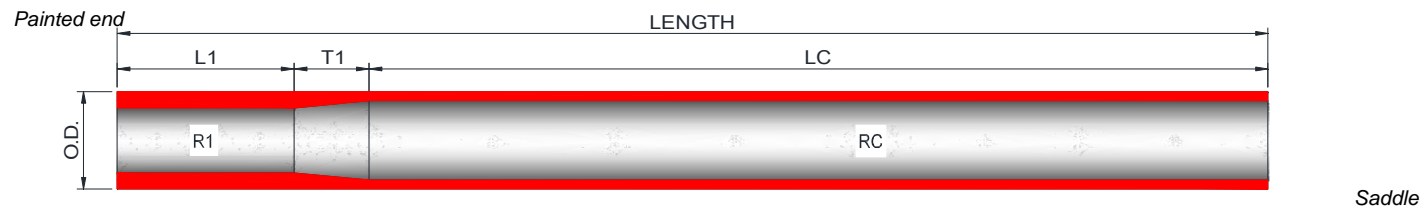
The original SLX tubeset is only available as a 8-tubes full-set, featuring the special SLX downtube, seat-tube and chainstays, completed by the 25.4mm SL top-tube, SL seat-stays and 31,7mm steerer.

SEAT TUBES - double / triple butted



CODE	O.D.	LENGHT	BUTT TH. PROFILE			BUTT LENGTHS					FAMILY
			R1	RC	R2	L1	T1	LC	T2	L2	
XCRM13650A	33	650	0,65	0,45	0,65	100	40	270	40	200	XCr
735FD33			<i>Columbus CNC aluminum front derailleur clamp ø33 for XCRM13650A tube</i>								
SPT113620	28,6	620	0,7	0,4	0,6	175	40	295	40	70	Spirit
SLF113560	28,6	560	0,75	0,4	0,6	130	30	210	30	160	Life
SLF113635	28,6	635	0,75	0,4	0,6	130	30	285	30	160	Life

SEAT TUBES - single butted



CODE	O.D.	LENGHT	BUTT TH. PROFILE		BUTT LENGTHS			FAMILY
			R1	RC	L1	T1	LC	
XCRC13635	28,6	635	0,8	0,6	150	40	445	XCr
XCRM13635	31,7	635	0,7	0,5	100	40	495	XCr
XCRS13650	31,7	650	0,7	0,5	150	40	460	XCr
SPLI13635	28,6	635	0,8	0,6	150	40	445	Spirit FL
SPKI13635	28,6	635	0,8	0,6	150	40	445	Spirit Keirin
SL2I13635	28,6	635	0,8	0,6	150	40	445	SL
SLFL13635	35	635	0,7	0,5	135	40	460	Life
SLFM13635	31,7	635	0,8	0,5	150	40	445	Life
MAXL13635*	31,7 / 28,6	635	0,8	0,5	150	40	445	MAX
ZONI13635	28,6	635	0,8	0,6	150	40	445	Zona
ZONM13635	31,7	635	0,8	0,6	150	40	445	Zona
CRMI13640	28,6	640	0,9	0,6	95	70	475	Cromor

(*): Tapered at saddle side, oval 37,2 x 26,4 at BB side, thickness before tapering

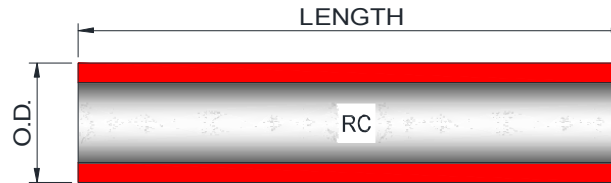
SEAT TUBES - external butted



CODE	O.D.	O.D.2	LENGHT	BUTT TH. PROFILE			BUTT LENGTHS					FAMILY	
				R1	RC	R2	L1	T1	LC	T2	L2		
SLFM13520001	31,7	32,5	520	0,7	0,5	0,9	160	40	170	40	110	Spirit HSS	
SLFM13580001	31,7	32,5	580	0,7	0,5	0,9	160	40	240	40	100	Spirit HSS	
SLFM13635001	31,7	32,5	635	0,7	0,5	0,9	160	40	315	40	80	Spirit HSS	
SLFM13710001	31,7	32,5	710	0,7	0,5	0,9	160	40	240	40	230	Spirit HSS	
ZBSRID27,2				<i>Alloy reduction sleeve for 27,2mm seat-tube pre-slotted</i>									
ZBSRIDSP27,2				<i>Alloy reduction sleeve for 27,2mm seat-tube non-slotted</i>									
SLFI13520001	28,6	29,4	520	0,8	0,6	1	150	40	210	40	80	Life	
SLFI13635001	28,6	29,4	635	0,8	0,6	1	150	40	325	40	80	Life	
ZON113550	28,6	29,8	550	0,8*	0,6	1,2	245	40	150	40	75	29'r	
ZON113550110F				= ZON113550 + R800 bend for rear wheel clearance									29'r
ZON113620	28,6	29,8	620	0,8*	0,6	1,2	245	40	220	40	75	Zona	
ZON113640	28,6	29,8	640	0,8*	0,6	1,2	245	40	220	40	95	Zona	
ZON113520002	31,7	32,5	520	0,7	0,5	0,9	160	40	170	40	110	Zona	
ZON113580002	31,7	32,5	580	0,7	0,5	0,9	160	40	240	40	100	Zona	
ZON113635002	31,7	32,5	635	0,7	0,5	0,9	160	40	315	40	80	Zona	
ZON113715	28,6	29,4	715	0,8	0,6	1	150	40	215	40	270	Zona	
ZON113560001	32,7	33,5	560	0,7	0,5	0,9	160	40	240	40	80	Zona	
ZON113635001	32,7	33,5	635	0,7	0,5	0,9	160	40	315	40	80	Zona	
ZON113550002	32,7	32,9	550	0,7	0,5	0,9	245	40	145	40	80	Zona	
ZON113550001	32,7	33,5	550	0,7	0,5	0,9	245	40	145	40	80	Zona	
735FD33				<i>Columbus CNC aluminum front derailleur clamp ø33 for ZON113635001 & ZON113550001 tubes</i>									

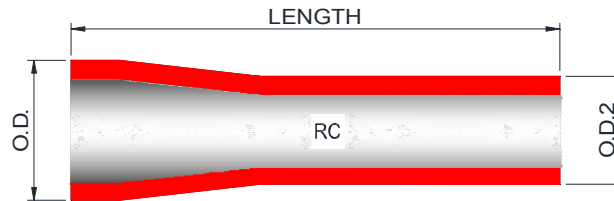
(*): Thickness can be 1,05mm in the first 15mm of R1

HEAD TUBES



CODE	O.D.	LENGHT	BUTT TH. PROFILE RC	FAMILY
XCRC18250	31,7	250	1	XCr
XCRK18250	36	250	1,1	XCr
XCRK18600	36	600	1,1	XCr
ZXCRCALUP			<i>36mm AISI 316L braze-on cup for integrated headset - upper - O.D. 45mm</i>	
ZXCRCALDOWN			<i>36mm AISI 316L braze-on cup for integrated headset - lower - O.D. 45mm</i>	
XCRH18240	38	240	0,8	XCr
ZXCRCAL38UP			<i>38mm AISI 316L braze-on cup for integrated headset - upper - O.D. 45mm</i>	
ZXCRCAL38DOWN			<i>38mm AISI 316L braze-on cup for integrated headset - lower - O.D. 45mm</i>	
XCRX18250	46	250	1,1	XCr
CYRA18600	38	600	0,8	Spirit
CYRA18240	38	240	0,8	Spirit
ZCALA28.6UP			<i>38mm steel braze-on cup for integrated headset - upper - 42mm x 45° - O.D. 45mm</i>	
ZCALA28.6DOWN			<i>38mm steel braze-on cup for integrated headset - lower - 42mm x 45° - O.D. 45mm</i>	
CYRG18600	46	600	1,1	Spirit HSS
CYRG18240	46	240	1,1	Spirit HSS
SL0118600	31,7	600	1	SL
CYRK18600	36	600	1,1	Zona
CYRK18200	36	200	1,1	Zona
CYRH18600	32,4	600	1,3	Zona
CRMI18600	31,7	600	1	Cromor

TAPERED HEAD TUBES



CODE	O.D.	O.D.2	LENGHT	THICKNESS* RC	FAMILY
CYRT18250	56	46	250	1	Spirit HSS
ZCALT46UP				<i>Braze-on cup for integrated headset - upper - 42mm x 45°</i>	Spirit HSS
ZCALT56DOWN				<i>Braze-on cup for integrated headset - lower - 52mm x 45</i>	Spirit HSS
CYRG18245001	46	36	245	1,1	Spirit HSS
XGRU18250	52	46	250	1,1	XCr
ZCALX46UP				<i>Stainless Braze-on cup for integrated headset - upper - 42mm x 45°</i>	XCr
ZCALX52DOWN				<i>Stainless Braze-on cup for integrated headset - lower - 49mm x 45°</i>	XCr

(*): Thickness before tapering

OTHER PARTS

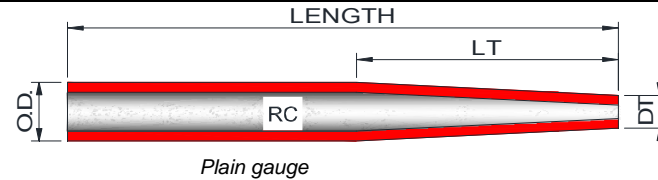
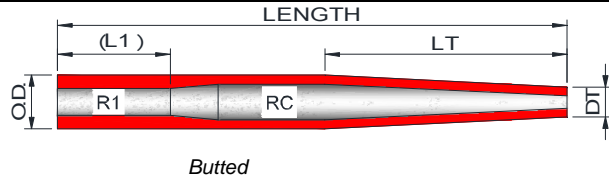
CODE	O.D.	LENGHT	FAMILY
ZSMJXCR	40	68	<i>Hinox BB shell - english thread - Ø40mm X 68mm</i> XCr
ZXCRROD			<i>Welding rod for XCR Ø 1mm L.1000mm</i> XCr
ZXCRROD16			<i>Welding rod for XCR Ø 1,6mm L.1000mm</i> XCr



EXPANDERS, HEADSETS, AXLES

COLUTPR	COLUMBUS STAR-NUT for 1-1/8" Aluminum-Steerer Forks
KGAPCAP25.4C	COLUMBUS EXPANDER for 1" Carbon-Steerer Forks
KGAPCAP28.6C	COLUMBUS EXPANDER for 1-1/8" Carbon-Steerer Forks (Length 40mm)
KGAPCAP28.6CL	COLUMBUS EXPANDER for 1-1/8" Carbon-Steerer Forks (Length 60mm)
KGAPCAP28.6CLCR	COLUMBUS EXPANDER for 1-1/8" Carbon-Steerer Forks (Length 60mm - Dynamo Internal Routing)
ZV7STEERKITF	COLUMBUS COMPASS Integrated HeadSet 1-1/2" CARBON
ZV7STEERKITG	COLUMBUS COMPASS Integrated HeadSet 1-1/2" CARBON CERAMIC
733SS30	COLUMBUS COMPASS Integrated HeadSet 1-1/4" CARBON
ZV7STEERKITH	COLUMBUS COMPASS Integrated HeadSet 1-1/8" CARBON
ZV7STEERKITI	COLUMBUS COMPASS Integrated HeadSet 1-1/8" CARBON CERAMIC
733SSSIX	COLUMBUS COMPASS Integrated HeadSet 1-1/2" MTB
737SS34	COLUMBUS COMPASS External HeadSet 1-1/4" TAPERED
737SS44	COLUMBUS COMPASS Semi-Integrated HeadSet 1-1/4" CYLINDRIC
737SS47	COLUMBUS COMPASS Semi-Integrated HeadSet 1-1/2" CYLINDRIC
737TA119	COLUMBUS 12mm Thru-Axle compatible with Columbus Futura Disc / Futura Gravel Forks
738TA132L15	COLUMBUS 12mm Thru-Axle compatible with Columbus Futura Cross Fork
737LECO1	COLUMBUS 12mm Switch-Lever allen-key for COLUMBUS 12mm Forks Thru-Axles

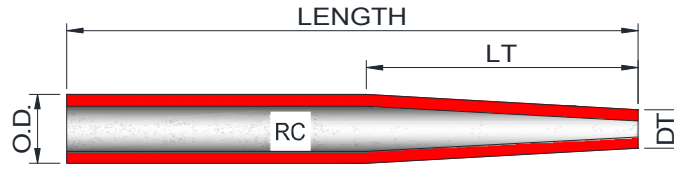
CHAIN STAYS



CODE	O.D.	LENGHT	THICKNESS*		oval	LT	DT	FAMILY
			R1	RC				
XCR114OV410	24	410		0,7	Round / oval	250	13,6	XCr
XCR114OV410001	24	410		0,7	18 x 28,5	250	13,6	XCr
XCR 114OV425133CR**	24	425		0,7	18 x 28,5	250	13,6	XCr
XCRC114OV410001	24	410		0,7	18 x 28,5	290	12,5	XCr
SL0114OV	22,2	410		0,7	Round / oval	300	12,5	SL
SLF114OV410	24	410	0,7(100)	0,5	16 x 30	80	13,2	Life
SLF114OV410133E	24				= SLF114OV410 + Road "S" bend			Life
SLF114OV410133CR****	24	410	0,8 (150)	0,6	16 x 30	80	13,2	Life
SLF114OV410001	24	410	0,7(100)	0,5	16 x 30	290	12,5	Life
SLF114OV4101112AJ					= SLF114OV410001 + Shape "AJ" 18 x 25.6			Life
SLF114OV410001133E					= SLF114OV410001 + Road "S" bend			Life
SLF114OV410001133CR	24	410	0,8 (150)	0,6	16 x 30	290mm Taper - Cyclocross "S" bend	12,5	Life
SLF114OV450DX	24	450		0,9	16 x 30	150mm taper - Road Disc bend	16	Disc
SLF114OV450SX	24				= SLF14OV450DX + Flat Mount Lug Squash			Disc
SLF114OV450DX001	24	450		0,9	16 x 30	150mm taper - Gravel Disc bend	16	Disc
SLF114OV450SX001	24				= SLF14OV450DX001 + Flat Mount Lug Squash			Disc
739DBE53					Stainless Steel Flat Caliper Disc Clamp Mount (for -SX and -SX001 chainstays)			Disc
MAXL14OV	28	410		0,6	18,5 x 36	230	14	MAX
ZONI14TO410	22,2	410		0,7	Round	300	12,5	Zona
ZONI14OV410	22,2	410		0,7	Round/Oval 17 x 26	300	12,5	Zona
MMXI14OV410	22,2	410		0,7	17,7 X 26	300	12,5	MAX
ZONI14TO420SX	22,2	420		0,7	Pressed	160	16	Zona
ZONI14OV420DX	22,2	420		0,7	19,5 x 25,5	160	16	Zona
ZON114TO425	24	425	0,8 (130)	0,6		290	12,5	Zona
ZON114OV425	24	425	0,8 (130)	0,6	16 x 30	290	12,5	Zona
ZON114V10425					= ZON114OV425 + 10° single bend			Zona
ZON114V12425					= ZON114OV425 + 12° single bend			Zona
ZON114OV425133					= ZON114OV425 + MTB "S" bend			Zona
ZON114OV425133CR					= ZON114OV425 + Cyclocross "S" bend			Zona
ZON114OV425133E					= ZON114OV425 + Road "S" bend			Zona
ZON114OV470FAT	24	470		0,9	20 x 27	290	12,5	Zona
ZON114OV440	24	440	0,9 (150)	0,6	16 x 30	290	12,5	Zona
ZON114OV440C10					= ZON114OV440 + 10° single bend			Zona
ZON114OV44029					= ZON114OV440 + 29° double bend			29r
ZON114OV47029***	24	470		0,9	16 x 30	290	12,5	29r
CRMI14OV	22,2	410		0,8	17 x 26	260	12,5	Cromor
CRM114OV	24	425		0,8	16 x 30	290	12,5	Cromor

(*): Thickness before tapering. (**): Cyclocross "S" bend. (***): Triple bended for 29" tire clearance. (****): Cyclocross "S" bend.

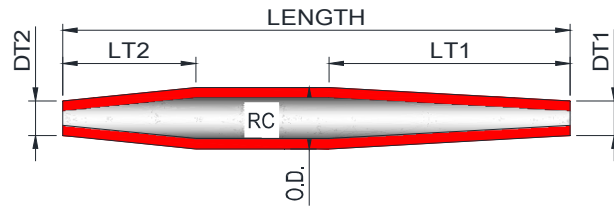
SEAT STAYS



CODE	O.D.	LENGHT	THICKNESS*		LT	DT	FAMILY	
			RC	oval				
XCR615560	16	560	0,5		80	12,5	XCr	
XCR615560133CR				= XCR615560 + Cyclocross "S" bend			XCr	
XCRC615560	16	560	0,7		290	12,5	XCr	
FCK415600	14	600	0,7		300	10,5	Spirit Keirin	
SL0415560	14	560	0,7		300	10,5	SL	
SLF715560	17	560	0,5		80	11,8	Life	
SLF715560133E				= SLF715560 + Road "S" bend			Life	
SLF715560112AI				= SLF715560 + Shape "112AI" 15 x 19 (shaped 230mm from the tip)			Life	
SLF715560001112AI	17	560	0,5	Shape "112AI" 15 x 19 full lenght		200	12,5	Life
SLF715OV560	17	560	0,5		12,5 x 20	190	12,5	Life
MAX615OV560	16	560	0,7		12,5 x 18	300	12,5	MAX
ZON615560	16	560	0,7		300	12,5	Zona	
ZON615560133				= ZON615560 + MTB "S" bend			Zona	
ZON615560133CR				= ZON615560 + Cyclocross "S" bend			Zona	
ZON615560133E				= ZON615560 + Road "S" bend			Zona	
ZON915560	19	560	0,6		250	12,5	Zona	
ZON915560133				= ZON915560 + MTB "S" bend			Zona	
ZON915560133CR				= ZON915560 + Cyclocross "S" bend			Zona	
ZON915560133E				= ZON915560 + Road "S" bend			Zona	
ZON91556029				= ZON915560 + 29" Double bend			29'r	
ZON915560FAT	19	560	0,6		250	12,5	Zona	
CRM415560	14	560	0,8		300	10,5	Cromor	
CRM615560	16	560	0,8		300	12,5	Cromor	

(*): Thickness before tapering (**): Double bended for 29" tire clearance

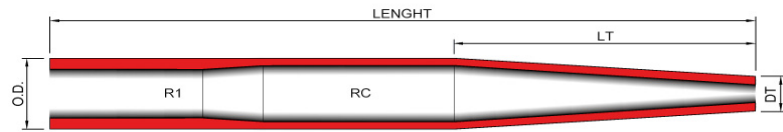
BICONICAL SEAT STAYS



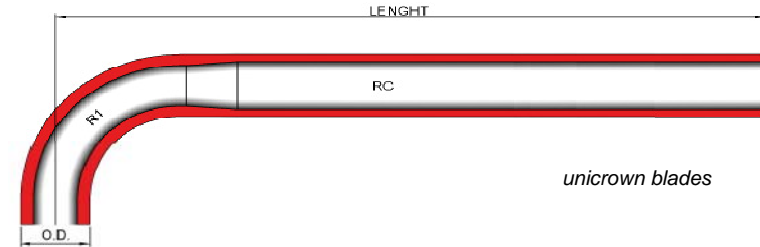
CODE	O.D.	LENGHT	THICKNESS*				FAMILY	
			RC	DT2	LT2	LT1		DT1
SL0415550101	14	550	0,7	10,8	140	300	10,5	SL
SL0415500101	14	500	0,7	10,8	140	300	10,5	SL
SL0615550101	16	550	0,7	10,8	140	300	12,5	SL
SL0615500101	16	500	0,7	10,8	140	300	12,5	SL
CRM415550101	14	550	0,8	10,8	140	300	10,5	Cromor
CRM415500101	14	500	0,8	10,8	140	300	10,5	Cromor
CRM615550101	16	550	0,8	10,8	140	300	12,5	Cromor
CRM615500101	16	500	0,8	10,8	140	300	12,5	Cromor

(*): Thickness before tapering

FORK BLADES



plain-gauge/butted straight blades



unicrown blades

CODE	O.D.	LENGHT	THICKNESS			oval	R1	T1	LT Taper Length	DT Tip Ø	FAMILY
			R1	RC	R2						
SL0116V1**	24	390		0,9		28x19	100		290	12,5	SL
SL0116T1**	24	390		0,9			100		290	12,5	SL
MAXL16V2390*	28	390	0,9		0,6	***	120	40	230	14	MAX
CRMI16V1*	24	390		0,9		28x19	100		290	12,5	Cromor
CRMI16T1*	24	390		0,9			100		290	12,5	Cromor
CRMI16V1450*	24	450		0,9		28x19	120		290+40	12,3	Cromor
FBRL16T520DSK	28,6	520	1,2		1		220	40		28,6	Disc
FBRL16T520DSK001	28,6	520	1,2		1		220	40	275	18,3	Disc
FBRL16U400DSK****	28,6	400	1,2		1		220	40		28,6	Disc
FBRL16U440DSK001****	28,6	440	1,2		1		220	40	275	18,3	Disc
FBRN16T465DSK	25,4	465	1,2		0,9		200	40		25,4	Disc
FBRN16T465DSK001	25,4	465	1,2		0,9		200	40	220	14	Disc
FBRN16U410DSK****	25,4	465	1,2		0,9		200	40		25,4	Disc
FBRN16U410DSK001****	25,4	465	1,2		0,9		200	40	140	18	Disc
FBRN16U410DSK002****	25,4	465	1,2		0,9		200	40	220	14	Disc

(*):Thickness before tapering. (**):Laminated fork blade with constant thickness. (***):MAX shape 35,8 x 18,5. (****) Unicrown

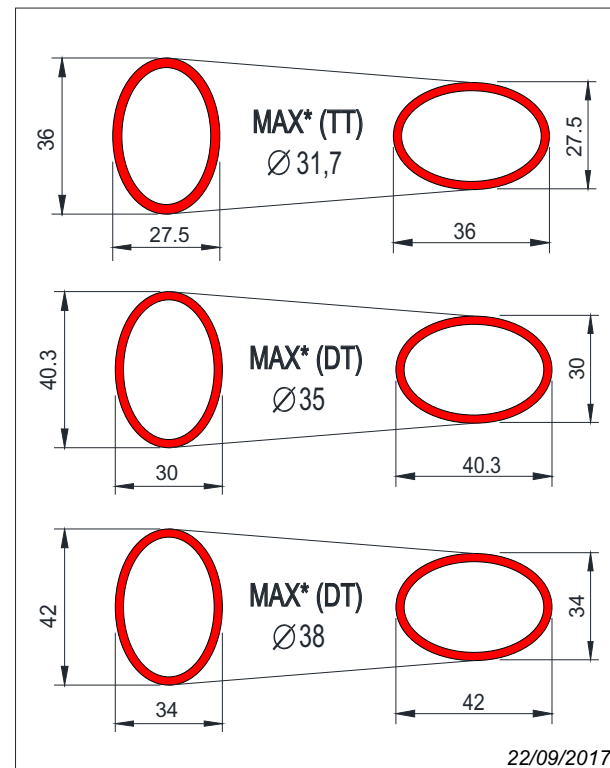
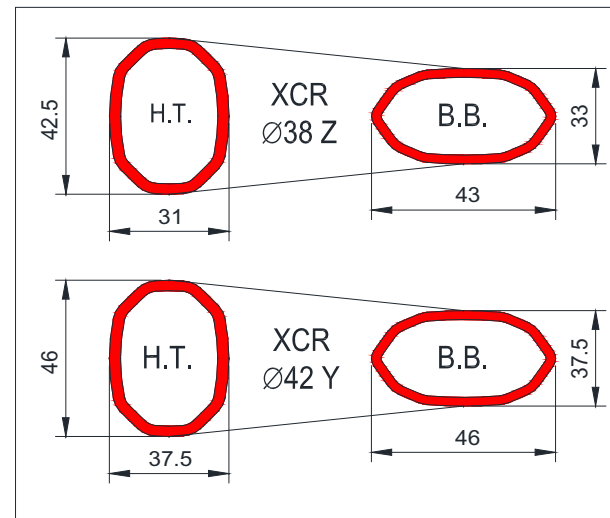
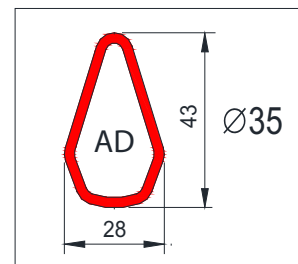
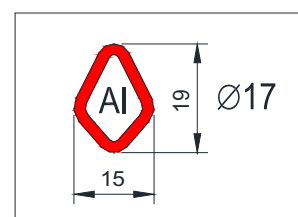
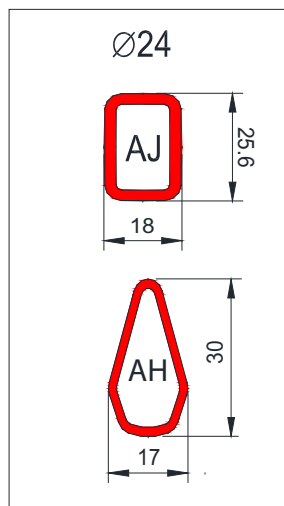
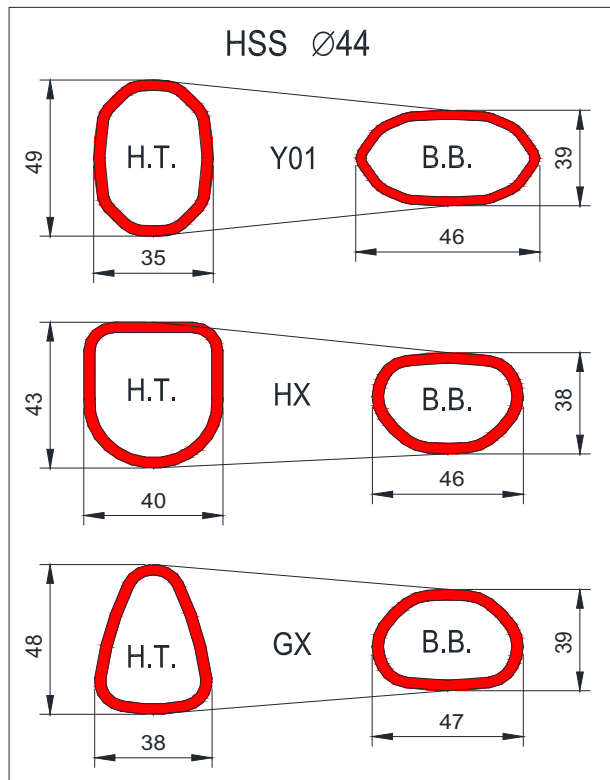
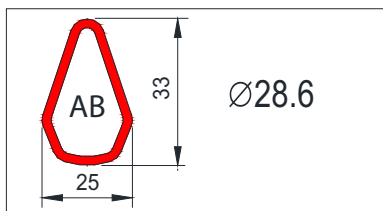
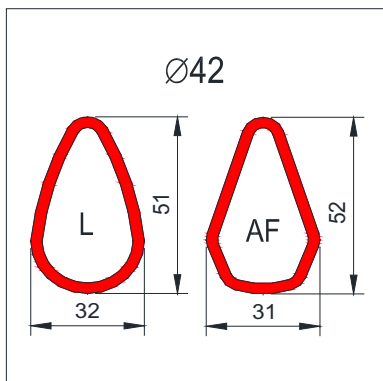
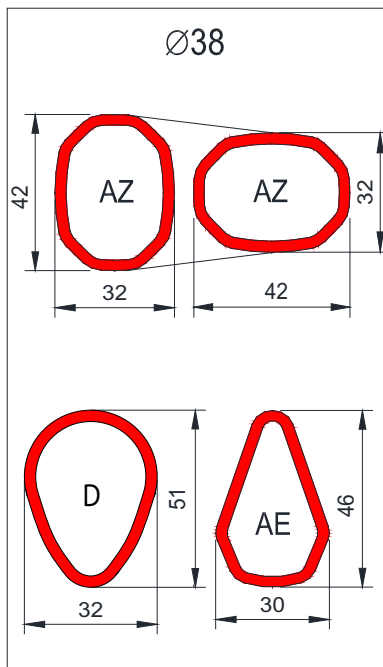
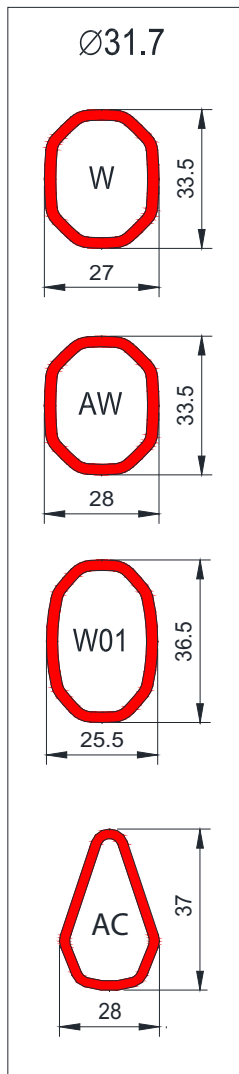
FORK STEERERS

CODE	O.D.	LENGHT	THICKNESS		
			R1	RC	
BRNI17180	25,4	180	2,3	1,55	Threaded, with helicoidal reinforcement
BRNI17210	25,4	210	2,3	1,55	Threaded, with helicoidal reinforcement
BRNI17240	25,4	240	2,3	1,55	Threaded, with helicoidal reinforcement
BRNI17270	25,4	270	2,3	1,55	Threaded, with helicoidal reinforcement
BRNI17300	25,4	300	2,3	1,55	Threaded, with helicoidal reinforcement
BRNI17320TL	25,4	320	2,3	1,55	Threadless, with helicoidal reinforcement
BRNM17350TL	28,6	350	2	1,55	Threadless, with helicoidal reinforcement
SPTZ17320	28,6	320	2	1,2	Threadless

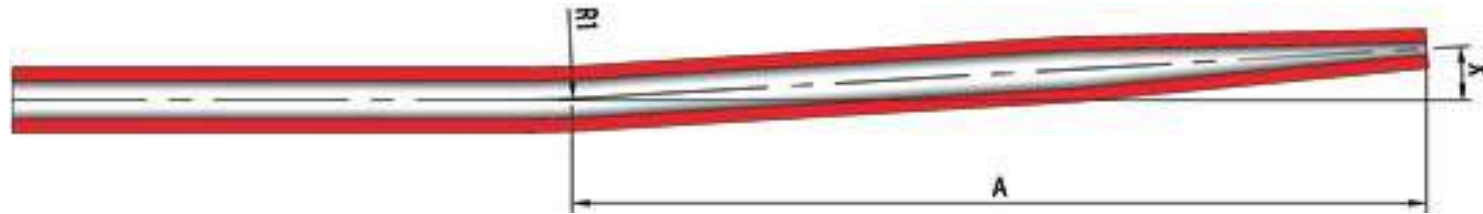
Sagomature & Curve Shapes & Bends



SHAPES

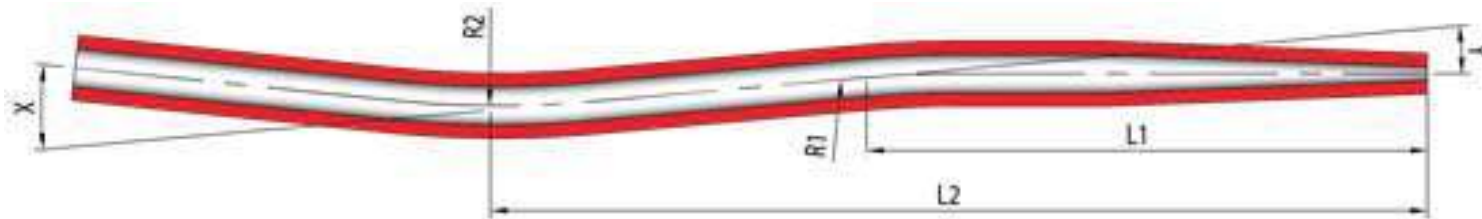


CHAIN STAYS single bend



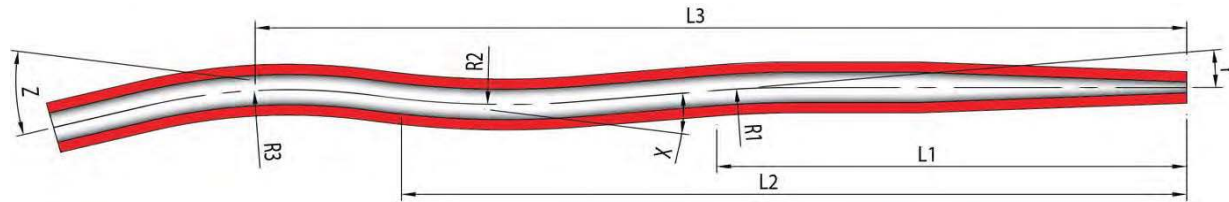
CODE	L1	L2	L3	R1	R2	R3	X	Y	Z	FAMILY
ZON114V10425	300			320			10°			Zona
ZON114V12425	300			320			12°			Zona
ZON114OV440C10	300			320			10°			Zona

CHAIN STAYS double bend



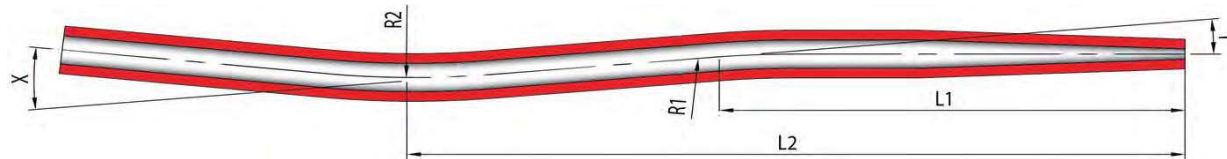
CODE	L1	L2	L3	R1	R2	R3	X	Y	Z	FAMILY
XCR 114OV425133CR**	150	310		320	320		5°	5°		XCR
SLF114OV410133E	150	310		320	320		4°	8°		Life
SLF114OV410133CR	150	310		320	320		8°	8°		Life
SLF114OV410133E	150	310		320	320		4°	8°		Life
SLF114OV410001133CR	150	310		320	320		8°	8°		Life
ZON114OV425133	150	310		230	230		12°	8°		Zona
ZON114OV425133CR	150	310		320	320		8°	8°		Zona
ZON114OV425133E	150	310		320	320		4°	8°		Zona
ZON114OV44029	150	345		230	230		12°	8°		29'r
ZON114OV470FAT	150	350		230	150		20°	7°		FAT

CHAIN STAYS Triple bend



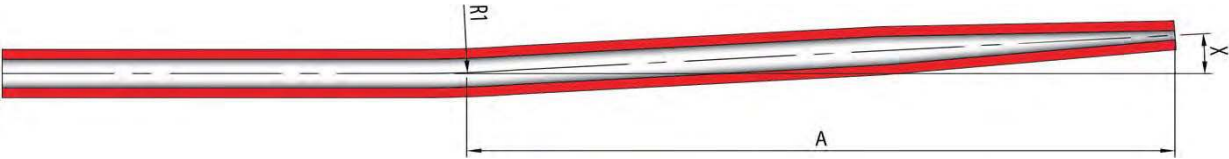
CODE	L1	L2	L3	R1	R2	R3	X	Y	Z	FAMILY
ZON114OV47029	150	330	420	230	230	230	15°	7°	15°	29'r

SEAT STAYS double bend



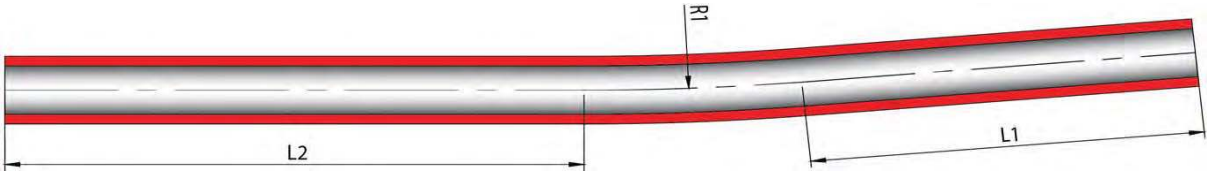
CODE	L1	L2	L3	R1	R2	R3	X	Y	Z	FAMILY
XCR615560133CR	210	335		250	250		8°	8°		XCR
SLF715560133E	210	330		320	320		4°	8°		Life
ZON615560133	220	335		320	320		15°	8°		Zona
ZON615560133CR	210	335		250	250		8°	8°		Zona
ZON615560133E	210	330		320	320		4°	8°		Zona
ZON915560133	220	335		250	250		15°	8°		Zona
ZON915560133CR	210	335		250	250		8°	8°		Zona
ZON915560133E	210	330		250	250		4°	8°		Zona
ZON91556029	220	345		250	250		18°	8°		29'r

SEAT STAYS single bend



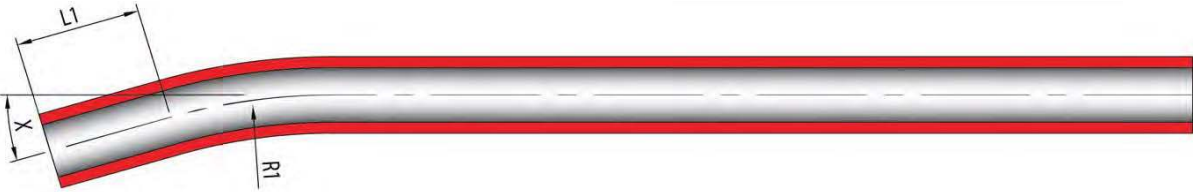
CODE	L1	R1	X	FAMILY
ZON915560FAT	345	250	18°	FAT

SEAT TUBE single bend



CODE	L1	L2	L3	R1	R2	R3	X	Y	Z	FAMILY
ZON113550110F	290	70		800						29'r

DOWN TUBE Single bend



CODE	L1	L2	L3	R1	R2	R3	X	Y	Z	FAMILY
ZONA12750001110E	30			150			25°			29'r



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