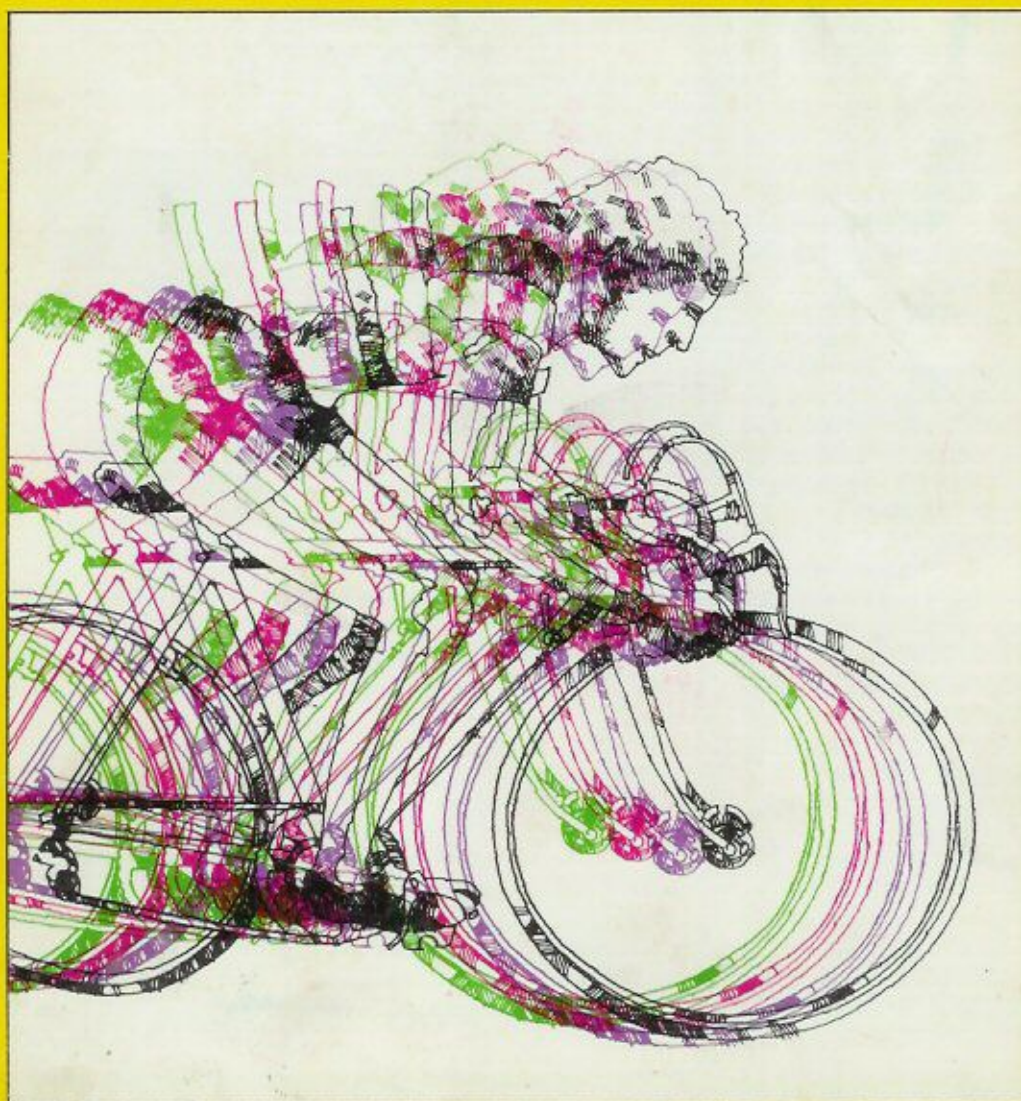


TI REYNOLDS

REYNOLDS 531, 531 SL & 753
BUTTED CYCLE FRAME TUBES
FORK BLADES AND STAYS





For 80 years, TI Reynolds has set standards in the production of cycle frame tubing to which all others have aspired. As a company we have been around since 1898, though there have been a couple of name changes along the way, the latest being when Reynolds Tube Company became TI Reynolds in 1977.

Since 1928 the company has been a member of Tube Investments, and can employ all the group's technical, engineering and financial resources to ensure continuous product development to meet customers' changing requirements.

Bicycle builders throughout the world specify Reynolds tubing for their finest lightweight machines. Bicycles made of Reynolds 531 tubing have consistently won the world's major cycle races, including the World Championships and the Tour de France, the most gruelling of them all.

In 1975 we introduced two completely new cycle tubes developed by Reynolds engineers for top class competitive racing—Reynolds 531SL and Reynolds 753. These are designed to complement the Reynolds 531 range, which still remains unsurpassed for the majority of applications.

The complete range of Reynolds 531, 531SL and 753 is covered in this catalogue and is easily identified in the index opposite.

The Butting Process

Butting was invented by Reynolds—the company who also made modern lightweight cycles possible with the introduction of Reynolds 531 tubing. A butted tube is a cold drawn seamless tube, thickened at each end, where the stresses are greatest, whilst the outside diameter remains constant. The thinner portion in the middle of the tube saving weight and ensuring a resilient, responsive frame.

Ordering

The standard range of components shown in this catalogue is comprehensive enough to meet the requirements of most manufacturers for their range of lightweight cycles. However, should you have a large enough requirement for a component outside our standard range, we shall be happy to discuss your requirements.

Orders placed direct with TI Reynolds are subject to a minimum order quantity. Smaller quantities may be obtained through stockists. Details of the above are available on application.

Further Information

Technical Data Sheets covering the composition, physical properties and manipulation and brazing techniques for Reynolds 531, Reynolds 531SL and Reynolds 753 will gladly be supplied on request. 'Top Tubes'—a booklet describing the development of Reynolds' famous cycle tubing—is also available on request from the address on the back cover of this brochure.

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Butted frame tubes



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REYNOLDS TRANSFERS



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1 & 2. Probably the best known bicycle transfers in the world! A bicycle with either is a real thoroughbred, built with REYNOLDS 531 BUTTED frame tubes, BUTTED steerer, TAPER-GAUGE fork blades and plain gauge head tube and stays.

3. This is a special version of the top REYNOLDS 531 transfer, designed for a specific market. It bears exactly the same significance as the normal English and French versions.

4 & 5. These are used only in conjunction with the three top-grade REYNOLDS 531 transfers, as appropriate.

6. The top tube, seat tube and down tube of a bicycle with this transfer are REYNOLDS 531 BUTTED tubes, with a plain gauge REYNOLDS 531 head tube. Stays and fork blades may not be of Reynolds' manufacture.

7. The top tube, seat tube and down tube of a bicycle with this transfer are REYNOLDS 531 BUTTED tubes. Head tube, stays and fork blades may not be of Reynolds' manufacture.

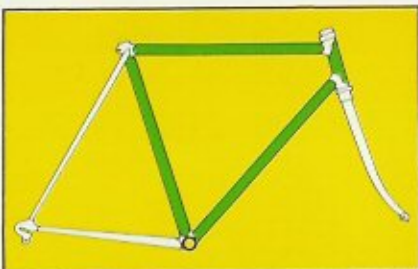
8 & 9. BUTTED frame tubes and steerer, TAPER-GAUGE fork blades, plain gauge head tube and stays, all made from very light gauge REYNOLDS 531 SPECIAL LIGHTWEIGHT tube ('EL' is an abbreviation for 'Extra Léger'—the French equivalent of 'Special Lightweight').

10 & 11. Used only in conjunction with the 'Special Lightweight' frame transfer and applied to the REYNOLDS 531 SPECIAL LIGHTWEIGHT fork blades.

12 & 13. These transfers show that REYNOLDS 753 tube is used throughout—BUTTED for frame tubes, TAPER-GAUGE fork blades and plain-gauge head tube, steerer and stays.

14 & 15. These are used only in conjunction with REYNOLDS 753 frame transfers, and are applied to the REYNOLDS 753 TAPER-GAUGE fork blades near the crown.

BUTTED FRAME TUBES



Reynolds Double Butted Frame Tubes are supplied to a standard length, but to allow for shortening to suit manufacturers' frame designs, one end is made with a longer butt. All adjustments to length should be made to this end, which is unmarked. The end with the shorter butt is stamped with an identification mark, such as Reynolds 531 D/Butted 21/24. This marked end should not be shortened in any way. Seat tubes, which are single-butted, should also only be shortened at the unmarked end.

TOP TUBE

26 mm or 25.4 mm (1") o/d \times 1.0/0.7 mm or 0.8/0.5 mm (19/22 or 21/24 gauge) \times 600 or 635 mm long. Double butted.

BOTTOM TUBE

28 mm or 28.6 mm (1.125") o/d \times 1.0/0.7 mm or 0.9/0.6 mm 19/22 or 20/23 gauge) \times 635 or 650 mm long. Double butted.

SEAT TUBE

28 mm or 28.6 mm (1.125") o/d \times 1.0/0.7 mm or 0.8/0.5 mm (19/22 or 21/24 gauge) \times 635 or 650 mm long. Single butted.

TOLERANCES

Butted frame tubes are made to a tolerance on diameter of +0.03 mm / -0.13 mm (+0.001" / -0.005").

HEAD TUBE

31.7 mm \times 20 g or 32 mm \times 19 g in lengths: 150, 170, 220, 320, 635 mm.

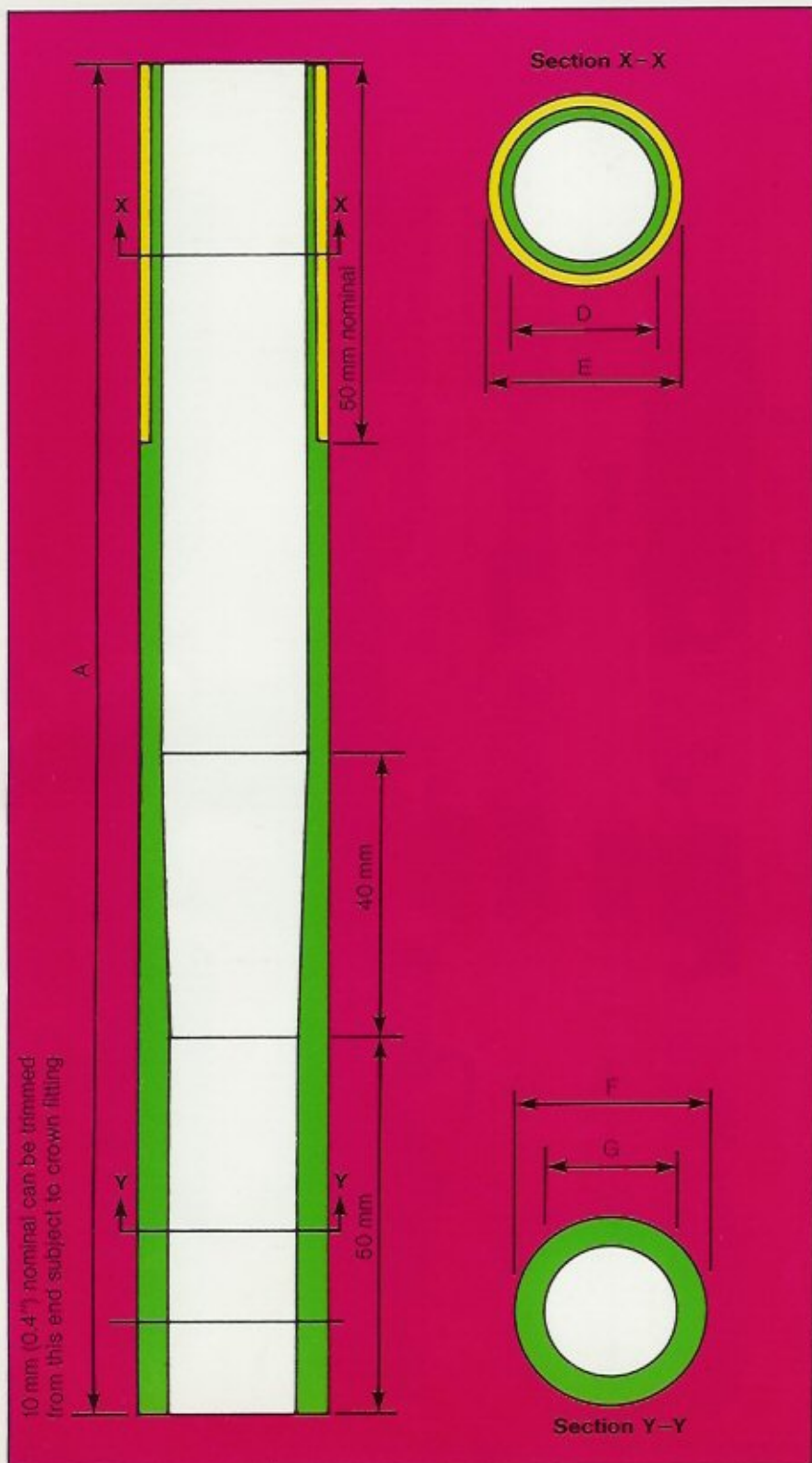
TUBES FOR THE LARGER FRAME

Butted frame tubes are also available in lengths up to 760 mm in 19/22 gauge for larger frames. The double butted top tube and down tube have a 127 mm butt and the single butted seat tube a 203 mm butt at the marked end. Further details available on request.

Diagram and gauge exaggerated for clarity



BUTTED STEERING COLUMNS



Reynolds 531 butted steering columns give strength where most needed—at the joint with the fork crown—while keeping weight to a minimum.

RANGE OF LENGTHS (A)

180 mm,	200 mm,
220 mm,	240 mm,
260 mm,	280 mm,
300 mm,	

Tolerance on length $-0 +1.50$ mm.

METRIC STANDARD

D	22.0 mm
E	25.0 mm
F	25.0 mm
G	20.4 mm

Supplied plain or screwed 1 mm pitch cycle thread.

IMPERIAL STANDARD

D	22.3 mm (0.878")
E	25.4 mm (1")
F	25.4 mm (1")
G	20.8 mm (0.819")

Supplied plain or screwed 24 TPI cycle thread.

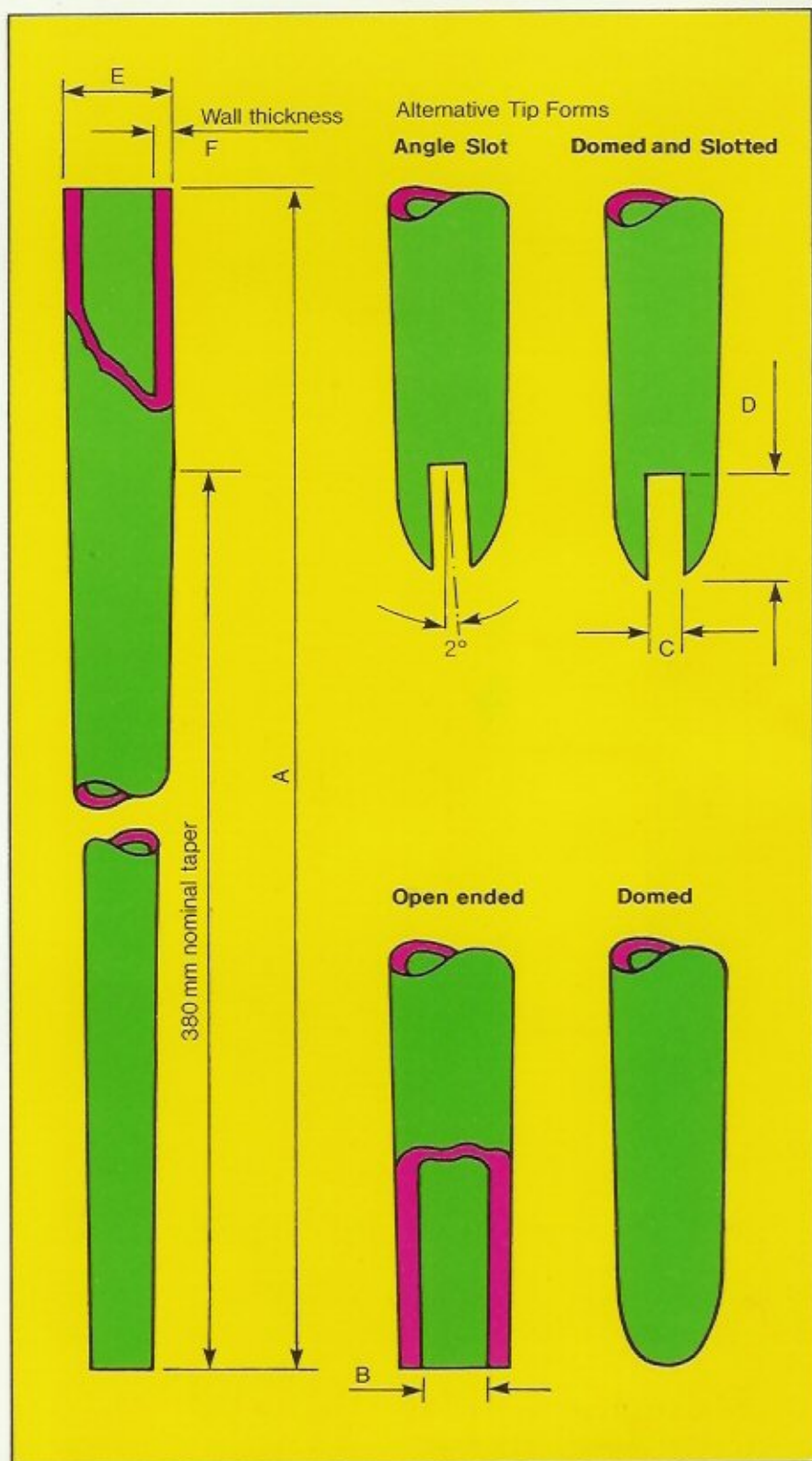
SEAT STAYS



Reynolds 531 seat stays are made with a standard length of taper and are available in a range of lengths and tip forms to satisfy all normal cycle design requirements.

RANGE

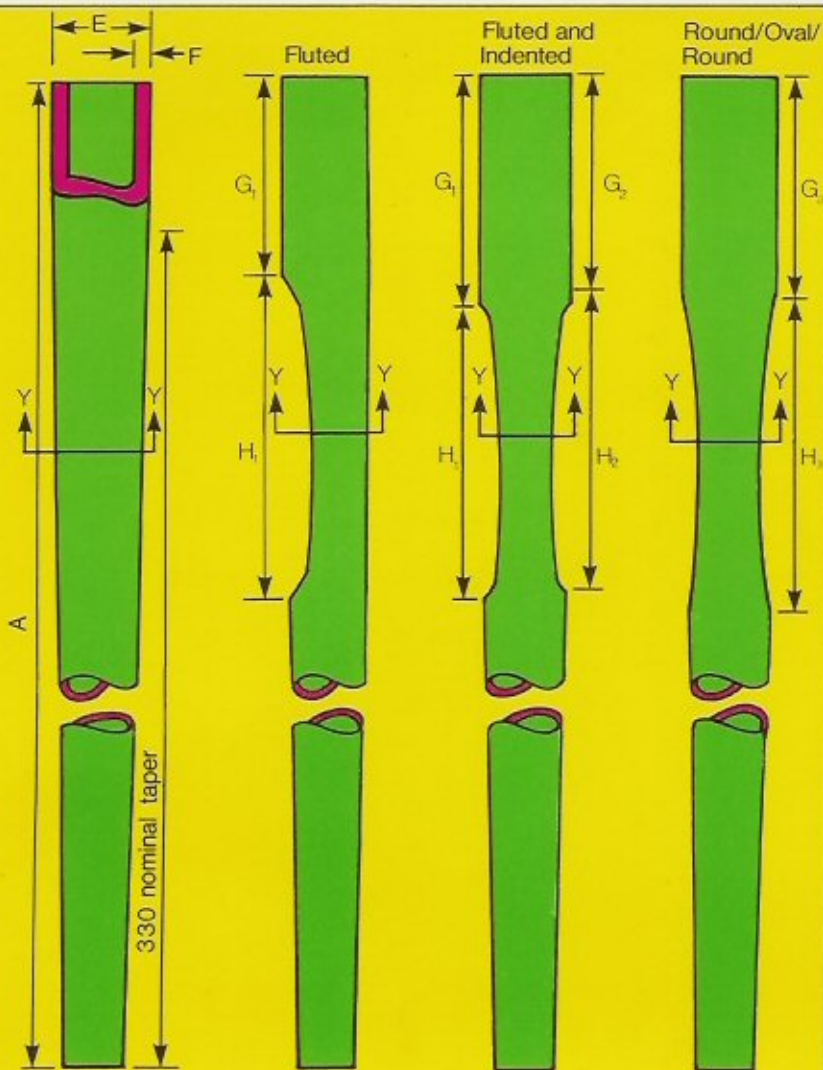
A	550, 600, 625 mm
B	8 mm
C	5 mm
D	10 or 15 mm
E	13, 14 or 16 mm
F	0.9 mm



CHAIN STAYS



The standard range of Reynolds 531 chain stays covers all popular types—round throughout, fluted, fluted and indented, round/oval/round, all made to the same exacting standards as other Reynolds 531 cycle components.



Section Y-Y



Alternative Tip Forms



Domed and Slotted

Angle Slot

Open ended

Domed

RANGE

Round

A	380, 400, 440 mm
B	9 mm
C	5 mm
D	10 or 15 mm
E	22 or 22.2 mm
F	0.8 mm

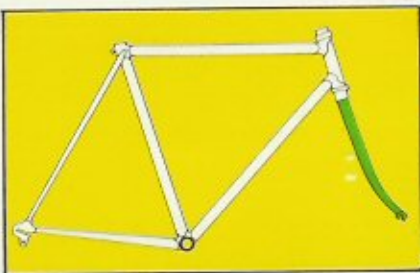
The above stays can be fluted or fluted and indented to the following 3 standard positions.

1	G ₁ 115	H ₁ 90	G ₂ 100	H ₂ 60
2	G ₁ 80	H ₁ 50	G ₂ 50	H ₂ 80
3	G ₁ 70	H ₁ 30	G ₂ 60	H ₂ 30

Or to the following Round Oval Round Positions

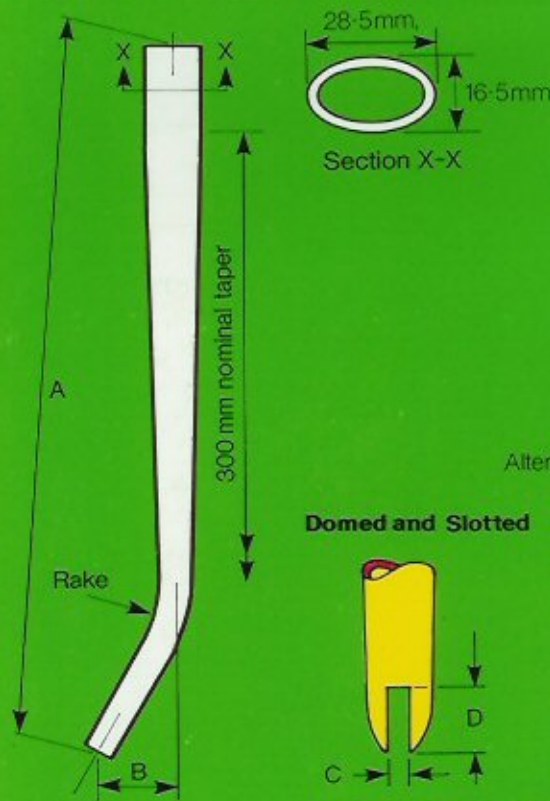
4	G ₃ 50 mm,	H ₃ 70 mm
5	G ₃ 75 mm,	H ₃ 70 mm

TAPER GAUGE FORK BLADES



TI Reynolds can supply a range of taper gauge oval and track fork blades to meet differing requirements, all of which can be supplied straight or bent to the standards patterns indicated. Reynolds 531 oval taper gauge fork blades are available in Continental Oval configuration and New Continental Oval configuration, introduced in 1977. The Continental Oval is made from a tube single butted 18/21 g and the New Continental Oval from 19/24 g, with a long gradual change of gauge, for lightness and to ensure that when the tube is tapered the fork has the necessary resilience at the rake while maintaining its strength at the crown. Reynolds 531 taper gauge track fork blades are designed to combat the tremendous stresses developed in track racing, and embody the same taper gauge principle as the standard forks. They are made from 22 mm diameter (17/20 g) tube.

Continental Oval

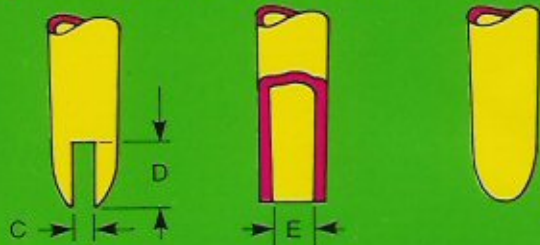


Alternative Tip Forms

Domed and Slotted

Open ended

Domed



Rakes Available

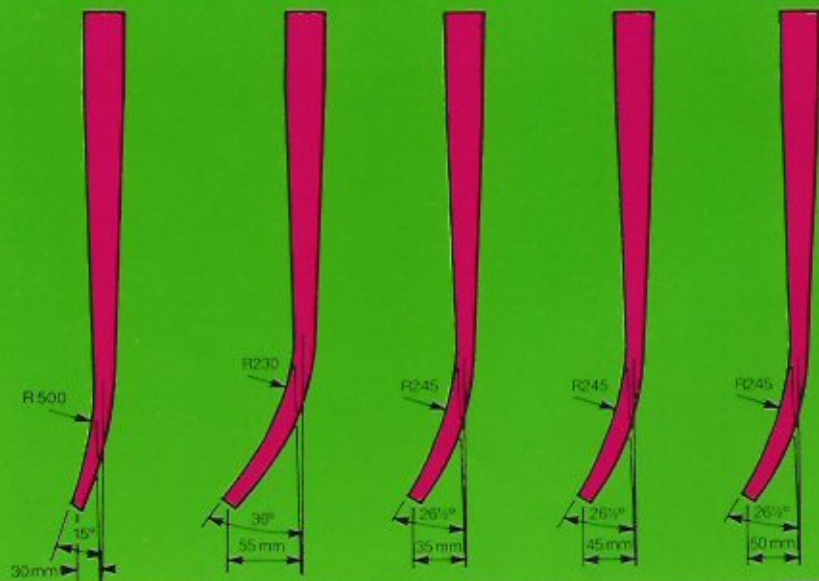
Rake 16

Rake 12

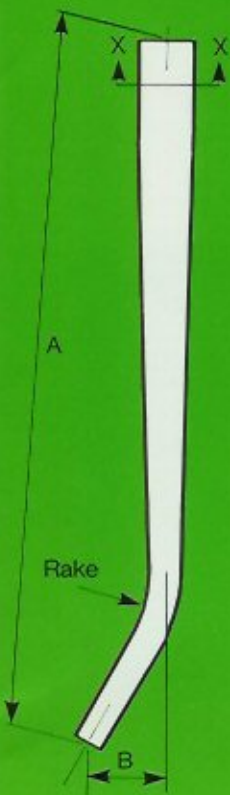
Rake 15

Rake 15

Rake 15



New Continental Oval



Section X-X

Two standard patterns of New Continental Oval Fork blade are available.

STYLE A

Length (A) 370 mm with 10 mm bore tip (E) Straight or bent
Rake 15 × 45 mm or 16 × 30 mm

STYLE B

Length (A) 400 mm with 11.6 mm bore tip (E) Straight or bent
Rake 15 × 45 mm or 16 × 30 mm

Both of the above can be supplied open ended or domed and slotted to the following:

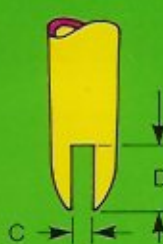
C	5 mm
D	10 or 15 mm

Rakes Available

Rake 15

Rake 16

Domed and Slotted



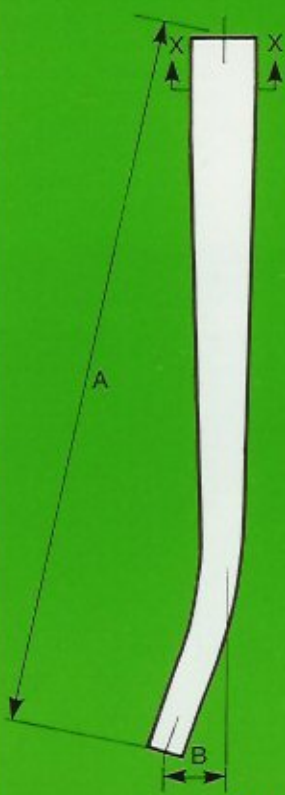
Open ended



Domed



Track Fork Blades



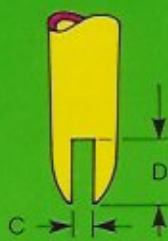
Section X-X

Track Fork Blades

A	350, 370 or 400 mm
B	See Rake Diagram
C	5 mm
D	10 or 15 mm
E	9 or 10 mm
F	22 mm

Alternative Tip Forms

Domed and Slotted



Rakes Available

Rake 13

Rake 14

Rake 16



Open ended



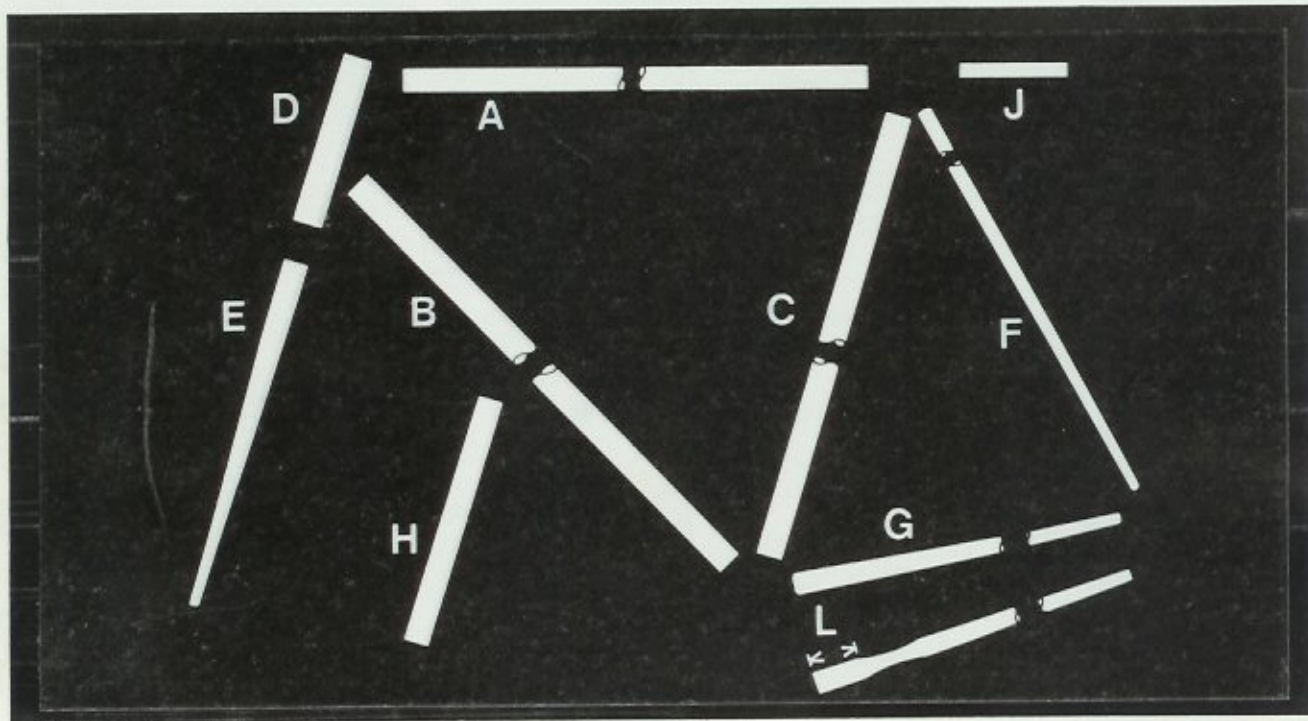
Domed





REYNOLDS 531 SL

Reynolds 531SL (Special Lightweight) tube was introduced in 1975. These tube sets are designed for the top grades of racing cycles, having tube wall thicknesses less than standard, but not as thin as Reynolds 753. They are supplied only in complete boxed sets. Detail set drawings are available on request. Sets are packed in individual boxes complete with transfers.



		STANDARD 850	STANDARD 851 *
A	TOP TUBE	25.4 × 22/24 DB × 635 mm	26 × 22/24 DB × 635 mm
B	DOWN TUBE	28.6 × 21/24 DB × 635 mm	28 × 21/24 DB × 635 mm
C	SEAT TUBE	28.6 × 22/24 SB × 635 mm	28 × 22/24 SB × 635 mm
D	HEAD TUBE	31.7 mm × 20g × 220mm	32 mm × 19g × 220mm
E	NEW CONTINENTAL OVAL FORK	27.5 × 20 mm length 397 mm tip 13.5 mm o.d. (Straight)	27.5 × 20 mm length 397 mm tip 13.5 mm o.d. (Straight)
F	SEAT STAY	16 mm dia. × 24g Length 600mm. Tip 10mm o.d.	16 mm dia. × 24g Length 600mm. Tip 10mm dia.
G	CHAIN STAY Round Oval Round Pattern	22.2 mm dia. × 23g × 440mm long Tip 11mm o.d. Dim'n. 'L' = 90mm	22 mm dia. × 23g × 440mm long Tip 11 mm o.d. Dim'n. 'L' = 90mm
H	STEERING COLUMN	25.4 mm o.d. × 16/13g × 240mm long Screwed 24 TPI × 50mm down	25 mm dia. × 16/13g × 240mm long Screwed 1mm pitch × 50mm down
J	BRIDGE TUBE	12mm o.d. × 20g × 100mm long	12 mm o.d. × 20g × 100mm long

* All forks and stays in this set are supplied with domed ends.

REYNOLDS 753

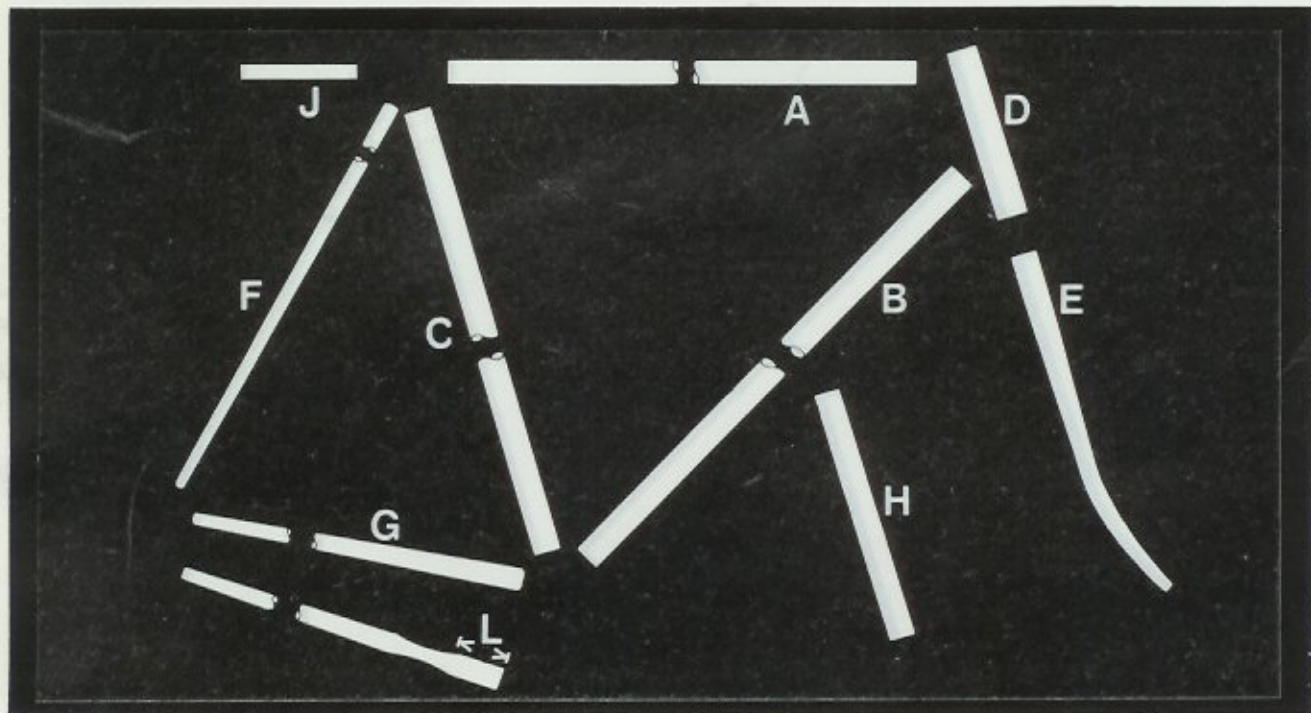
Reynolds 753 is a special manganese molybdenum steel cycle tube that has been developed by Reynolds engineers for use in the very highest echelons of competitive cycle racing. Its extraordinary physical properties make it 50% stronger than even Reynolds 531, and frames made from this tubing are extremely light; and have considerably better torsional rigidity than frames in materials such as titanium, carbon fibre or aluminium alloy. Reynolds 753 has been introduced to

complement Reynolds 531. The walls of Reynolds 753 tubing are so thin that design of frame, choice of lugs, welding techniques and other aspects are absolutely critical – and the finished frames are intended for special purpose use.

Reynolds 753 tubing is supplied only in complete boxed sets together with appropriate transfers. The three alternative set details are provided in the chart below. Reynolds 753 is only available to approved builders.



Details of approval procedure together with detail drawings are available on request.



		STANDARD 801	STANDARD 802 *	STANDARD 804 *
A	TOP TUBE	26 mm × 22/28DB – × 620 mm	26 mm × 22/28DB – × 620 mm	26 mm × 22/28DB × 620 mm
B	DOWN TUBE	28 mm × 21/24DB × 620 mm	28 mm × 21/24DB × 620 mm	28 mm × 22/26DB × 620 mm
C	SEAT TUBE	28 mm × 22/28SB × 620 mm	28 mm × 22/28SB × 620 mm	28 mm × 22/28SB × 620 mm
D	HEAD TUBE	32 mm × 20g – 220 mm	32 mm × 20g × 220 mm	32 mm × 20g × 220 mm
E	NEW CONTINENTAL OVAL FORK Bent Rake 15, with 40 mm offset	27.5 × 20 mm, Length 370 mm Tip 12 mm o.d.	27.5 mm × 20 mm, Length 370 mm Tip 12 mm o.d.	27.5 mm × 20 mm, Length 370 mm Tip 12 mm o.d.
F	SEAT STAY	16 mm dia. × 26g Length 600 mm, Tip 10 mm o.d.	16 mm dia. × 26g Length 600 mm, Tip 10 mm o.d.	16 mm dia. × 26g Length 600 mm, Tip 10 mm o.d.
G	CHAIN STAY Round Oval Round Pattern	22 mm dia. × 23g × 400 mm long Tip 11 mm o.d. Dim'n. 'L'=50 mm	22 mm dia. × 23g × 400 mm long Tip 11 mm o.d. Dim'n. 'L'=75 mm	22 mm dia. × 23g × 400 mm long Tip 11 mm o.d. Dim'n. 'L' = 75 mm
H	STEERING COLUMN	25.4 mm o.d. × 22.31 mm i.d. 280 mm long Screwed 24 TPI × 50 mm down.	25 mm o.d. × 22.16 mm i.d. 280 mm long Screwed 1 mm pitch × 50 mm down.	25 mm o.d. × 22.16 mm i.d. 280 mm long Screwed 1 mm pitch 50 mm down
J	BRIDGE TUBE	12 mm o.d. × 20g × 100 mm long	12 mm o.d. × 20g × 100 mm long	12 mm o.d. × 20g × 100 mm long

* All forks and stays in this set are supplied with domed ends.

Reynolds 531: Only we can make it.



a TI Steel Tube Division Company

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