Manganese Molybdenum

	Tube Superieur	Tube Diagonal	Tube Selle	Douille de Direction	Fourreau	Montant Conique	Base	Tube Filete de Direction
	Tubo de arriba	Tubo de abajo	Tubo de asiento	Tubo de cabeza	Horquilla	Tirante de sillin	Tirante de cadena	Columna de dirección
	Canna del manubrio	Canna diagonale	Canna del sellino	Canna di testa	Forcella	Supporto de sedile	Supporto della catena	Piatone del manubrio
	Oberrohr	Unterrohr	Satteirohr	Steuerrohr	Gabel-scheiden	Sitzstrebe	Katten-strebe	Gabel-schaftrohr
	Top tube	Down tube	Seat tube	Head tube	Fork	Seatstay	Chainstay	Steering Column
PART NUMBER	**AA101**	**BA112**	**CA102**	**DA151**	**EA715**	**GA665**	**FA587**	**HA121**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**27.5 x 20**	**14.0**	**22.2**	**25.4**
GAUGE	**0.7/0.5 DB**	**0.8/0.5 DB**	**0.7/0.5 SB**	**0.9**	**1.0/0.5**	**0.6**	**0.8/0.6**	**22.31 bore**
LENGTH	**600**	**635**	**635**	**220**	**370**	**575**	**410**	**280**
TIP	**-**	**-**	**-**	**-**	**13.0**	**11 tip 11 top**	**13.0**	**-**
OTHER	**-**	**-**	**-**	**-**	**Rake 14 x 35**	**Double taper**	**Round-oval-round**	**Threaded 24TPI 50mm down**

REF JA808

PART NUMBER	**BA100**	**BA142**	**CA102**	**DA151**	**EB764**	**GA658 DS**	**FA512 DS**	**HB102**
O.D.	**28.6**	**31.75**	**28.6**	**31.75**	**28.6**	**16.0**	**22.2**	**25.4**
GAUGE	**0.7/0.4 DB**	**0.8/0.5 DB**	**0.7/0.5 SB**	**0.9**	**1.1/0.7 SB**	**0.55**	**1.0/0.6 SB**	**1.6/2.3**
LENGTH	**635**	**635**	**635**	**220**	**-**	**580**	**390**	**240**
TIP	**-**	**-**	**-**	**-**	**22**	**11**	**13**	**-**
OTHER	**-**	**-**	**-**	**-**	**Butted-oval 531,Bent for unicrown**	**Single taper**	**Butted Single bend**	**Threaded 24TPI 50mm down**

REF JA850 DS

	Top Tube	Down Tube	Seat Tube	Head Tube	Base Tube	Fork	Seatstay	Chainstay	Steering Column
PART NUMBER	**AA112**	**BA132**	**CA132**	**DA151**	**KA110**	**EA730 DS**	**GA637 DS**	**FA584 DS**	**HA131**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**38.1**	**31.7 x 18**	**16.0**	**22.2**	**25.4**
GAUGE	**0.8/0.5 DB**	**1.0/0.7 DB**	**1.0/0.7 SB**	**0.9**	**1.2**	**1.4/0.9**	**0.9**	**1.2**	**1.6/2.9**
LENGTH	**635**	**635**	**635**	**220**	**760**	**400**	**600**	**440**	**240**
TIP	**-**	**-**	**-**	**-**	**-**	**13.5**	**11**	**13.0**	**-**
OTHER	**2 off**	**3 off**	**2 off**	**-**	**-**	**Supplied rake 15 x 45 domed and slotted**	**Single taper domed and slotted**	**Round-oval round, domed and slotted**	**Threaded 24TPI 50mm down**

REF JA831 DS

Manganese Molybdenum

Chemical Composition

C	0.23 - 0.29%	S	0.045% max
Si	0.15 - 0.35%	P	0.045% max
Mn	1.25 - 1.45%	Mo	0.15 - 0.25%

Recommended Construction

Filler Rod Material should be to specification DIN 8513-L-AG40 Od or U.S.ASTM B260-56T, BAg-la, or AMS 4769A or Mil-S-15395 Class 7 or an equivalent rod with melting range not exceeding 650°C.

Fluxes as recommended by the rod supplier, but should be fluoride based and active at 550°C. Jointing is best done with an oxy-acetylene torch using a small tip and a 'soft' neutral flame. Heat should be concentrated in the lug and not applied to the tube. Simple lug and bottom bracket profiles help in achieving quick clean joints at minimum temperatures. If the material of the lug is thick it should be thinned down beforehand, so that minimum heat input is required.

Forks can be conveniently made in two stages, jointing the fork column to the fork crown as stage one, and then putting in the fork blades. A lower temperature can be used with this method than if the operator attempts to joint the complete fork in one pass.

Removal of flux residue after jointing is best done in a flux removal bath. If shot blowing is used only the finest shot should be employed.

NOTE:

1) Temperature over 700°C will seriously affect the strength of the finished frame.

2) It is important that the post braze cooling should be controlled but not forced. Jointing should be carried out in a workplace free of draughts. When the frame is being assembled the builder should ensure there are no stresses put into the structure and there are adequate tolerances for equipment to be used.

3) Chrome plating is attractive and desirable. It is also a procedure which can reduce the section of thin tubes, because of polishing and can introduce some complex metallurgical and corrosion problems. It is not recommended to be used on 753 frames and the rear stays of 731, 708 and 653, but may be used whenever required on all other Reynolds materials. We do recommend that plated frames and forks should be thoroughly rinsed, inside and out and, stoved at normal paint stoving temperatures for at least 30 minutes to reduce the possibility of problems.

Typical Physical Properties

Ultimate tensile strength: 70 - 83 Tonf/in2
1080 - 1280 N/mm2
157 -186 Ksi

Elongation on 5.56 $\sqrt{A}$: 8% min.

NOTE

A) The steering columns in all 753 sets are 531 material. Butted steering columns can be substituted in JA808 if required.

B) 753 is not recommended for lugless construction, but where builders use the style of construction, outside butted seat tubes are available.

C) Reynolds 753 is available only to approved constructors subject to the inspectorate of TI Reynolds 531 Limited.

REYNOLDS

TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel: 0121 706 5151 Fax: 0121 707 0081

C&A JN18/32/95 Printed in England

Manganese Molybdenum

	Tube Superieur	Tube Diagonal	Tube Selle	Douille de Direction	Fourreau	Montant Conique	Base	Tube Filete de Direction
	Tubo de arriba	Tubo de abajo	Tubo de asiento	Tubo de cabeza	Horquilla	Tirante de sillin	Tirante de cadena	Columna de dirección
	Canna del manubrio	Canna diagonale	Canna del sellino	Canna di testa	Forcella	Supporto de sedile	Supporto della catena	Piatone del manubrio
	Oberrohr	Unterrohr	Satteirohr	Steuerrohr	Gabel-scheiden	Sitzstrebe	Katten-strebe	Gabel-schaftrohr
	Top tube	Down tube	Seat tube	Head tube	Fork	Seatstay	Chainstay	Steering Column
PART NUMBER	**BB320**	**BB325**	**CB320**	**DB151**	**EB708**	**GC658**	**FA591**	**HA121**
O.D.	**28.6**	**31.75**	**28.6**	**31.75**	**27.5 x 20**	**16.0**	**22.2**	**25.4**
GAUGE	**0.7/0.5 DB**	**0.7/0.5 DB**	**0.8/0.5 SB**	**0.9**	**1.0/0.5**	**0.5**	**0.8/0.6**	**22.31 bore**
LENGTH	**635**	**635**	**635**	**220**	**370**	**575**	**410**	**280**
TIP	**-**	**-**	**-**	**-**	**13.0**	**12.0**	**13.0**	**-**
OTHER	**-**	**-**	**-**	**-**	**Straight**	**Single taper**	**Butted/ rib**	**Threaded 24TPI 50mm down**

REF JB 805

For optimum frame performance it is recommended the chainstays are silver soldered into the B.B. shell.

PART NUMBER	**AB301**	**BB301**	**CB301**	**DB151**	**EB708**	**GA665**	**FA587**	**HA121**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**27.5 x 20**	**14.0**	**22.2**	**25.4**
GAUGE	**0.9/0.6 Special sect**	**1.0/0.7 Special sect**	**0.9/0.6 Special sect**	**0.9**	**1.0/0.5**	**0.6**	**0.8/0.6**	**22.31 ID**
LENGTH	**600**	**635**	**635**	**220**	**370**	**575**	**410**	**280**
TIP	**-**	**-**	**-**	**-**	**13**	**11 tip 11 top**	**13**	**-**
OTHER	**-**	**-**	**-**	**-**	**Straight**	**Double taper**	**Round-oval-round**	**Threaded 24TPI 50mm down**

REF JB820

For optimum frame performance it is recommended the chainstays are silver soldered into the B.B. shell.

PART NUMBER	**AB101**	**BB112**	**CB102**	**DB151**	**EB708**	**GA665**	**FA587**	**HA121**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**27.5 x 20**	**14.0**	**22.2**	**25.4**
GAUGE	**0.7/0.5 DB**	**0.8/0.5 DB**	**0.7/0.5 SB**	**0.9**	**1.0/0.5**	**0.6**	**0.8/0.6**	**22.31 bore**
LENGTH	**600**	**635**	**635**	**220**	**370**	**575**	**410**	**280**
TIP	**-**	**-**	**-**	**-**	**13**	**11 tip 11 top**	**13**	**-**
OTHER	**-**	**-**	**-**	**-**	**Straight**	**Double taper**	**Round-oval-round**	**Threaded 24TPI 50mm down**

REF JB810

For optimum frame performance it is recommended the chainstays are silver soldered into the B.B. shell.

PART NUMBER	**AB100**	**BB100**	**CB100**	**DB151**	**EB708**	**GA663**	**FA588**	**HB120**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**27.5 x 20**	**14.0**	**22.2**	**25.4**
GAUGE	**0.7/0.4 DB**	**0.7/0.4 DB**	**0.7/0.4 SB**	**0.9**	**1.0/0.5**	**0.6**	**0.8/0.6**	**22.31 bore**
LENGTH	**600**	**635**	**635**	**220**	**370**	**575**	**410**	**200**
TIP	**-**	**-**	**-**	**-**	**13**	**11 tip 11 top**	**12**	**-**
OTHER	**-**	**-**	**-**	**-**	**Straight**	**Double taper**	**Round-oval-round**	**Threaded 24TPI 50mm down**

REF JB813A

For optimum frame performance it is recommended the chainstays are silver soldered into the B.B. shell.
The set is also available with an oval chainstay - set ref JB813B Chainstay FA589 29.8 x 16.7 oval x 0.8/0.6 x 410

PART NUMBER	**BB100**	**BB142**	**CB102**	**DB151**	**EB764**	**GA658 DS**	**FA512 DS**	**HB120**
O.D.	**28.6**	**31.75**	**28.6**	**31.75**	**28.6**	**16.0**	**22.2**	**25.4**
GAUGE	**0.7/0.4 DB**	**0.8/0.5 DB**	**0.7/0.5 SB**	**0.9**	**1.0/0.7 SB**	**0.55**	**1.0/0.6 SB**	**1.6/2.3**
LENGTH	**635**	**635**	**635**	**220**	**-**	**580**	**390**	**240**
TIP	**-**	**-**	**-**	**-**	**22**	**11**	**13**	**-**
OTHER	**-**	**-**	**-**	**-**	**Butted-oval (531) Bent for unicrown**	**Single taper dome & slot**	**Butted, Single bend dome & slot**	**Threaded 24TPI 50mm down**

REF JB852 DS

For optimum frame performance it is recommended the chain stays are silver soldered into the B.B. shell.

Manganese Molybdenum

Typical Physical Properties

Variable Strength Technology

TUBE	ULTIMATE TENSILE STRENGTH	ELONGATION ON 5.65 √A
Fork blades/ Steerer	45-55 tonf/in2 700-850 N/mm2 100-123 Ksi	10% min
Frame Tubes	48-60 tonf/in2 750-920 N/mm2 110-134 Ksi	10% min
Rear Stays	70-83 tonf/in2 1080-1280 N/mm2 157-186 Ksi	8% min

NB: 1) Where lugless construction is used outside butted seat tubes are available.

2) Butted steering column HB102 is available as an alternative in all sets.

3) For lugless construction a head tube 32.4 x 1.2 is available.

Recommended Construction

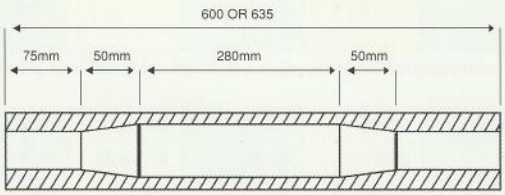
Effective frame building of such thin tube calls for the work to be undertaken by craftsmen builders.

Reynolds 731, 708 and 653 tube sets can be hand brazed using brazing materials that melt at about 850°C to 950°C. However, for optimum performance it is recommended that the rear stays should be silver soldered using a material that melts below 650°C (as recommended for Reynolds 753).

It is important that the post braze cooling should be controlled and not forced. Brazing should be carried out in a workplace free of draughts. When the frame is being assembled the builder should ensure there are no stresses put into the structure and there are sufficient clearances for the equipment to be used.

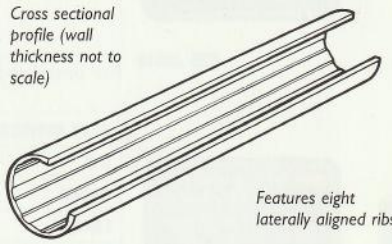
Chrome plating is attractive and desirable. It is also process which can reduce the section of thin tubes, because of polishing and can introduce some complex metallurgical and corrosion problems. It is not recommended to be used on the rearstays of 731,708 and 653, but may be used whenever required on all other un heat treated Reynolds materials. We do recommend that plated frames and forks should be thoroughly rinsed, inside and out and, stoved at normal paint stoving temperatures for at least 30 minutes to reduce the possibility of problems.

Reynolds 653 Tube Butt Profile



Reynolds 731OS Race Tube Butt Profile

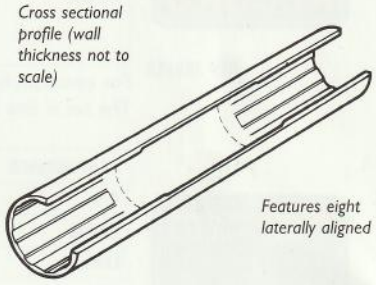
Cross sectional profile (wall thickness not to scale)



Features eight laterally aligned ribs

Reynolds 708 Classic Tube Butt Profile

Cross sectional profile (wall thickness not to scale)



Features eight laterally aligned ribs

REYNOLDS

TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel: 0121 706 5151 Fax: 0121 707 0081

C&A JN18/32/95 Printed in England

Manganese Molybdenum

	Tube Superieur	Tube Diagonal	Tube Selle	Douille de Direction	Fourreau	Montant Conique	Base	Tube Filete de Direction
	Tubo de arriba	Tubo de abajo	Tubo de asiento	Tubo de cabeza	Horquilla	Tirante de sillin	Tirante de cadena	Columna de dirección
	Canna del manubrio	Canna diagonale	Canna del sellino	Canna di testa	Forcella	Supporto de sedile	Supporto della catena	Piatone del manubrio
	Oberrohr	Unterrohr	Satteirohr	Steuerrohr	Gabel-scheiden	Sitzstrebe	Katten-strebe	Gabel-schaftrohr
	Top tube	Down tube	Seat tube	Head tube	Fork	Seatstay	Chainstay	Steering Column
PART NUMBER	**AB111**	**BB122**	**CB122**	**DB151**	**EB708**	**GC656**	**FB592**	**HB102**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**27.5 x 20**	**16.0**	**22.2**	**25.4**
GAUGE	**0.8/0.5 DB**	**0.9/0.6 DB**	**0.8/0.5 SB**	**0.9**	**1.0/0.5**	**0.5**	**0.8**	**1.6/2.3**
LENGTH	**600**	**635**	**635**	**220**	**370**	**575**	**410**	**240**
TIP	**-**	**-**	**-**	**-**	**13**	**11 tip 12 top**	**13**	**-**
OTHER	**-**	**-**	**-**	**-**	**Straight**	**Double taper**	**Round - Oval - Round**	**Threaded 24TPI 50mm down**

REF JB 870

PART NUMBER	**AB131**	**BB132**	**CB132**	**DB151**	**EB465***	**GB637**	**FB500**	**HF102**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**28.5 x 16.5**	**16.0**	**22.2**	**25.4**
GAUGE	**1.0/0.7 DB**	**1.0/0.7 DB**	**1.0/0.7 SB**	**0.9**	**1.2/0.8**	**0.9**	**0.8**	**1.6/2.3**
LENGTH	**600**	**635**	**635**	**220**	**400**	**600**	**440**	**240**
TIP	**-**	**-**	**-**	**-**	**13.0**	**11.0**	**13.0**	**-**
OTHER	**-**	**-**	**-**	**-**	**Straight**	**Single taper**	**Round-oval-round**	**Threaded 24TPI 50mm down**

REF JB872

PART NUMBER	**BB122**	**BB137**	**CB132**	**DB151**	**EB760 DS**	**GB637 DS**	**FB505 DS**	**HB131**
O.D.	**28.6**	**31.75**	**28.6**	**31.75**	**28.6**	**16.0**	**22.2**	**25.4**
GAUGE	**0.9/0.6 DB**	**1.0/0.7 DB**	**1.0/0.7 SB**	**0.9**	**1.2**	**0.9**	**1.2**	**1.6/2.9**
LENGTH	**635**	**635**	**635**	**220**	**-**	**600**	**440**	**240**
TIP	**-**	**-**	**-**	**-**	**14.0**	**11.0**	**13.5**	**-**
OTHER	**-**	**-**	**-**	**-**	**Unicrown style, straight dome & slot**	**Single taper dome & slot**	**Single bend style, dome & slot**	**Threaded 24TPI 50mm down**

REF JB835 DS

PART NUMBER	**BB142**	**BB141**	**CB142**	**DB159**	**EB764**	**GB673**	**FB512**	**HB140**
O.D.	**31.75**	**34.9**	**31.75**	**36.4**	**28.6**	**19.0**	**22.2**	**28.6**
GAUGE	**0.8/0.5 DB**	**0.9/0.6/0.8 TB**	**0.8/0.5 SB**	**1.2**	**1.1/0.7 SB**	**0.7**	**1.0/0.6 SB**	**1.6/2.3**
LENGTH	**635**	**635**	**635**	**220**	**-**	**580**	**390**	**215**
TIP	**-**	**-**	**-**	**-**	**22.0**	**13.0**	**13.0**	**-**
OTHER	**-**	**-**	**-**	**-**	**Butted-oval Bent for Unicrown**	**Single taper**	**Butted single bend**	**Threaded 24TPI 50mm down**

REF JB860

Altenative head tube, DB156, 37.0 x 1.5 x 200mm

PART NUMBER	**TOP TUBE AB112**	**DOWN TUBE BB132**	**SEAT TUBE CB132**	**HEAD TUBE DB151**	**BASE TUBE KB110**	**LATERAL TUBE KB215**	**FORK EB730 DS****	**SEAT STAY GB637 DS**	**CHAIN STAY FB584 DS**	**STEERING HB131**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**38.1**	**13.0**	**31.7 x 18**	**16.0**	**22.2**	**25.4**
GAUGE	**0.8/0.5 DB**	**1.0/0.7 DB**	**1.0/0.7 SB**	**0.9**	**1.2**	**0.9**	**1.4/0.9**	**0.9**	**1.2**	**1.6/2.9**
LENGTH	**635**	**635**	**635**	**220**	**760**	**1600**	**400**	**600**	**440**	**240**
TIP	**-**	**-**	**-**	**-**	**-**	**-**	**13.5**	**11.0**	**13.0**	**-**
OTHER	**2 off**	**-**	**2 off**	**-**		**2 off**	**Supplied rake 15 x 45 domed & slotted**	**Single taper domed & slotted**	**Round-oval round domed & slotted**	**Screwed 24TPI 50mm down**

REF JB831 DS

Manganese Molybdenum

Chemical Composition

C	0.23-0.29%	S	0.045% max
Si	0.15-0.35%	P	0.045% max
Mn	1.25-1.45%	Mo	0.15-0.25%

Typical Physical Properties

Ultimate Tensile Stress: 45-55 Tonf/in^2
700-850 N/mm^2
100-123 Ksi

Elongation on 5.65 $\sqrt{A}$: 10% min

Recommended Construction

Reynolds 531 is entirely suitable for the following manufacturing methods; under normally recognised working practices:

Hand brazing

Hearth brazing

Automatic machine brazing

Before the tubes are assembled the ends should be degreased and cleaned with emery over the area which is inserted into the lug. This ensures that the brazing material makes good contact with the parent metal. (Reynolds 531 Cycle Tubes are sent out free from scale and rust, and protected with an anti-corrosive oil, but if by some mischance during transport or storage some rust should form, this must be completely removed.)

When the tubes are fitted into the lugs, care should be taken that the assembly is not in a state of stress.

Brazing should be carried out in the following clockwise sequence:

(a) bottom bracket

(b) down tube/head tube joint

(c) head tube/top tube joint

(d) top tube/seat tube joint

This sequence obviates the danger of a stress raiser being created at a major shock point.

When brazing frames made from Reynolds 531 Tubing, the joints should be pre-heated, and after brazing the cooling should be controlled and not forced. Brazing must be carried out in a shop free from draughts.

Great care must be taken not to overheat the material, or to heat too large an area of the tube. Overheating will lead to burning or to brass inclusion (where the molten brass or bronze enters the grain of the steel), either of which will make the tube brittle.

Setting, when necessary, should always be done cold.

Most proprietary brazing materials can be used satisfactorily, but we recommend the use of brazing materials with a melting point of about 850°C to 950°C.

NB:

* A fork EB711 27.5 x 20 oval x 1.2/0.8 is available as an alternative

** A fork EB712 27.5 x 20 oval x 1.4/0.9 is available as an alternative

For lugless construction outside butted seat tubes and oversize head tubes are available.

REYNOLDS

TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel: 0121 706 5151 Fax: 0121 707 0081

C&A JN18/32/95 Printed in England

Chrome Molybdenum

	Tube Superieur	Tube Diagonal	Tube Selle	Douille de Direction	Fourreau	Montant Conique	Base	Tube Filete de Direction
	Tubo de arriba	Tubo de abajo	Tubo de asiento	Tubo de cabeza	Horquilla	Tirante de sillin	Tirante de cadena	Columna de dirección
	Canna del manubrio	Canna diagonale	Canna del sellino	Canna di testa	Forcella	Supporto de sedile	Supporto della catena	Piatone del manubrio
	Oberrohr	Unterrohr	Satteirohr	Steuerrohr	Gabel-scheiden	Sitzstrebe	Katten-strebe	Gabel-schaftrohr
	Top tube	Down tube	Seat tube	Head tube	Fork	Seatstay	Chainstay	Steering Column
PART NUMBER	**AC121**	**BC122**	**CC122**	**DB151**	**EC123**	**GC187**	**FC145**	**HB102**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**27.5 x 20**	**14.0**	**22.2**	**25.4**
GAUGE	**0.9/0.6 DB**	**0.9/0.6 DB**	**0.9/0.6 SB**	**0.9**	**1.0/0.7**	**0.6**	**0.8**	**1.6/2.3**
LENGTH	**600**	**635**	**635**	**220**	**370**	**575**	**410**	**240**
TIP	**-**	**-**	**-**	**-**	**13**	**11 tip 11 top**	**12**	**-**
OTHER	**-**	**-**	**-**	**-**	**-**	**Double taper**	**Round - Oval - Round**	**Threaded 24TPI 50mm down**

REF JC827

PART NUMBER	**AF201**	**BC142**	**AF401**	**DC152**	**EC120**	**GC184**	**FB589**	**HF102**
O.D.	**28.6**	**31.75**	**28.6**	**31.75**	**27.5 x 20**	**16.0**	**29.5 x 18**	**25.4**
GAUGE	**0.9/0.6 DB**	**0.8/0.5 DB**	**0.9/0.6 DB**	**1.0**	**0.9**	**0.9**	**0.8/0.6**	**1.6/2.3**
LENGTH	**635**	**635**	**635**	**200**	**400**	**600**	**410**	**240**
TIP	**-**	**-**	**-**	**-**	**13.0**	**11.0**	**13.0**	**-**
OTHER	**-**	**-**	**-**	**-**	**-**	**Single taper**	**oval**	**Threaded 24TPI 50mm down**

REF JC828

PART NUMBER	**AC121**	**BC122**	**CC122**	**-**	**-**	**-**	**-**	**-**
O.D.	**25.4**	**28.6**	**28.6**	**-**	**-**	**-**	**-**	**-**
GAUGE	**0.9/0.6 DB**	**0.9/0.6 DB**	**0.9/0.6 SB**	**-**	**-**	**-**	**-**	**-**
LENGTH	**600**	**635**	**635**	**-**	**-**	**-**	**-**	**-**

PART NUMBER	**AC111**	**BC112**	**CC112**	**DC152**	**EB708**	**GB663**	**FB588**	**HF102**
O.D.	**25.4**	**28.6**	**28.6**	**31.75**	**27.5 x 20**	**14.0**	**22.2**	**25.4**
GAUGE	**0.8/0.5 DB**	**0.8/0.5 DB**	**0.8/0.5 SB**	**1.0**	**1.0/0.5**	**0.6**	**0.8/0.6**	**1.6/2.3**
LENGTH	**600**	**635**	**635**	**200**	**370**	**575**	**410**	**240**
TIP	**-**	**-**	**-**	**-**	**13.0**	**11 tip 11 top**	**13.0**	**-**
OTHER	**-**	**-**	**-**	**-**	**-**	**Double taper**	**Round - oval - round**	**Threaded 24TPI 50mm down**

REF JC822 A

The set is also available with an oval chainstay - set REF JC822B, Chainstay FB589 29.8 x 16.7 oval x 0.8/0.6 x 410mm

PART NUMBER	**BC132**	**KC146**	**CC132**	**DC151**	**EC750 DS**	**GC184 DS**	**FC142 DS**	**HB131**
O.D.	**28.6**	**31.75**	**28.6**	**31.75**	**25.4**	**16.0**	**22.2**	**25.4**
GAUGE	**1.0/0.7 DB**	**1.0**	**1.0/0.7 SB**	**0.9**	**1.2**	**0.9**	**1.2**	**1.6/2.9**
LENGTH	**635**	**635**	**635**	**220**	**-**	**600**	**440**	**240**
TIP	**-**	**-**	**-**	**-**	**14.0**	**11**	**13.5**	**-**
OTHER	**-**	**-**	**-**	**-**	**Unicrown style, straight dome & slot**	**Single taper dome & slot**	**Double bend style, dome & slot**	**Threaded 24TPI 50mm down**

REF JC829 DS

PART NUMBER	**BC137**	**KD150**	**CC137**	**-**	**-**	**-**	**-**	**-**
O.D.	**31.75**	**34.92**	**31.75**	**-**	**-**	**-**	**-**	**-**
GAUGE	**1.0/0.7 DB**	**1.0**	**1.0/0.7 SB**	**-**	**-**	**-**	**-**	**-**
LENGTH	**635**	**635**	**635**	**-**	**-**	**-**	**-**	**-**
OTHER	**-**	**-**	**28.6 available**	**-**	**-**	**-**	**-**	**-**

Chrome Molybdenum

Note: Due to the raw material sizes available to produce 501 we reserve the right to substitute tubes of similar size in 531 or seamless CrMo in these sets. Steering column ref "HB" will always be 531 and "HF" Hi-ten.

Typical Physical Properties (CrMo)

Ultimate Tensile Stress: 45-55 Ton f/in^2
700-850 N/mm^2
100-123 Ksi

Elongation on 5.65 $\sqrt{A}$: 10% min

Recommended Construction

Reynolds 525 and 501 are entirely suitable for the following manufacturing methods; under normally recognised working practices:

Hand brazing

Hearth brazing

Automatic machine brazing

Induction copper brazing

TIG Welding
(provided the tube thickness is sufficient)

Before the tubes are assembled the ends should be degreased and cleaned with emery over the area which is inserted into the lug, this ensures that the brazing material makes good contact with the parent metal.
(Reynolds 501 Cycle Tubes are sent out free from scale and rust, and protected with an anti-corrosive oil, but if by some mischance during transport or storage some rust should form, this must be completely removed).
When the tubes are fitted into the lugs, care should be taken that the assembly is not in a state of stress. Great care must be taken not to overheat the material, or to heat too large an area of the tube. Overheating will lead to burning or to brass inclusion (where the molten brass or bronze enters the grain of the steel), either of which will make the tube brittle. Cooling should be controlled and not forced.
Setting, when necessary, should always be done COLD. Most proprietary brazing materials can be used satisfactorily, but we recommend the use of brazing materials with a melting point of about 850°C to 1100°C.
For lugless construction outside butted seat tubes and oversize head tubes are available.

TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel: 0121 706 5151 Fax: 0121 707 0081

C&A JN18/32/95 Printed in England

500 Chrome Molybdenum

Straight Gauge Welded Tube

	Tube Superieur	Tube Diagonal	Tube Selle	Douille de Direction	Fourreau	Montant Conique	Base	Tube Filete de Direction
	Tubo de arriba	Tubo de abajo	Tubo de asiento	Tubo de cabeza	Horquilla	Tirante de sillin	Tirante de cadena	Columna de dirección
	Canna del manubrio	Canna diagonale	Canna del sellino	Canna di testa	Forcella	Supporto de sedile	Supporto della catena	Piatone del manubrio
	Oberrohr	Unterrohr	Satteirohr	Steuerrohr	Gabel-scheiden	Sitzstrebe	Katten-strebe	Gabel-schaftrohr
	Top tube	Down tube	Seat tube	Head tube	Fork	Seatstay	Chainstay	Steering Column
PART NUMBER	**KD137**	**KD146**	**KD137**	-	-	-	-	-
O.D.	**28.6**	**31.75**	**28.6**	-	-	-	-	-
GAUGE	**1.0**	**1.0**	**1.0**	-	-	-	-	-
LENGTH	**635**	**635**	**635**	-	-	-	-	-
TIP	-	-	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-

REYNOLDS 500 CHROME-MOLY ALL TERRAIN FRAME TUBES

PART NUMBER	**KD146**	**KD150**	**KD146**	-	-	-	-	-
O.D.	**31.75**	**34.92**	**31.75**	-	-	-	-	-
GAUGE	**1.0**	**1.0**	**1.0**	-	-	-	-	-
LENGTH	**635**	**635**	**635**	-	-	-	-	-
TIP	-	-	-	-	-	-	-	-
OTHER	-	-	**28.6 avail.**	-	-	-	-	-

REYNOLDS 500 MAGNUM CR-MO FRAME TUBES

PART NUMBER	**KD127**	**KD137**	**KD137**	-	-	-	-	-
O.D.	**25.4**	**28.6**	**28.6**	-	-	-	-	-
GAUGE	**1.0**	**1.0**	**1.0**	-	-	-	-	-
LENGTH	**600**	**635**	**635**	-	-	-	-	-

REYNOLDS 500 CHROME-MOLY FRAME TUBES

The above sets can be mixed and matched.
Drawn tube is available in 0.9 and 0.8mm wall thickness subject to minimum order.

Chemical Composition

C	0.20-0.26%	Si	0.20-0.30%
Mn	0.50-0.70%	Cr	0.80-1.10%
P	0.04%	Mo	0.15-0.25%
S	0.04%	Ni	0.25% max

Recommended Construction

Reynolds 500 is suitable for manufacture under most recognised working practices such as:
Hand brazing
Hearth brazing
Automatic machine brazing
Induction copper brazing
TIG welding (provided the tube thickness is sufficient)

Great care must be taken not to overheat the material, or to heat too large an area of the tube. Overheating will lead to burning or to brass inclusion (where the molten brass or bronze enters the grain of the steel), either of which will make the tube brittle. Cooling should be controlled and not forced.
Setting, when necessary, should always be done COLD. Most proprietary brazing materials can be used satisfactorily, but we recommend the use of brazing materials with a melting point of about 850° to 1100°C

Typical Physical Properties

Ultimate tensile strength:	557-619 N/mm²
0.2% Proof Strength:	511-557 N/mm²
Elongation on 5.65 √A:	10% min

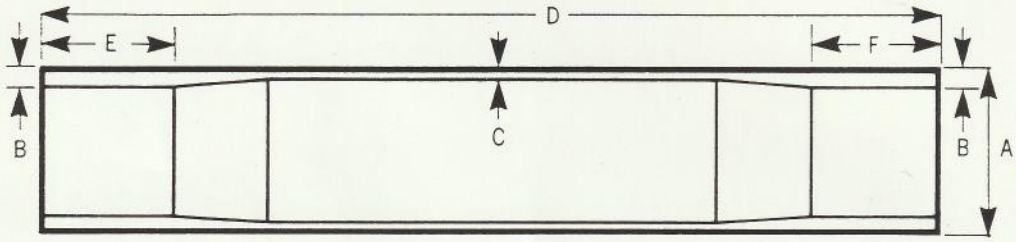
The above sizes are available in long lengths.

REYNOLDS
TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel No 0121 706 5151 Fax No. 0121 707 0081

C&A JN18/32/95 Printed in England

Chrome Molybdenum

Reynolds Cromoly Tube Butt Profiles



REYNOLDS CROMOLY BUTTED FRAME TUBES

REYNOLDS CROMOLY BUTTED ATB FRAME TUBES

Ref	A	B	C	D	E	F
DOUBLE BUTTED						
AF100	25.4	0.9	0.6	600	100	100
AF101	25.4	0.8	0.5	600	100	100
AF200	28.6	1.0	0.7	635	100	100
AF201	28.6	0.9	0.6	635	100	100
AF300	31.75	1.0	0.7	635	100	100
AF301	31.75	0.9	0.6	635	100	100
SINGLE BUTTED						
AF400	28.6	1.0	0.7	635	100	-
AF401	28.6	0.9	0.6	635	100	-

Outside butted seat tubes available from double butted tubes to sizes above, or 28.6 x 0.9/1.3 x 580mm

Other sizes available, subject to minimum order quantities.

Material - Seamless 25 CrMo 4

Typical Physical Properties

Ultimate Tensile Stress: 48 - 58 Tonf/in^2
700 - 900 Nmm^2
100 - 130 Ksi

Elongation on 5.65 $\sqrt{A}$: 10% min

REYNOLDS

TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel: 0121 706 5151 Fax: 0121 707 0081

C&A JN18/32/95 Printed in England

Butted Aluminium

		Tube Superieur	Tube Diagonal	Tube Selle	Douille de Direction	Montant Conique	Base
		Tubo de arriba	Tubo de abajo	Tubo de asiento	Tubo de cabeza	Tirante de sillin	Tirante de cadena
		Canna del manubrio	Canna diagonale	Canna del sellino	Canna di testa	Supporto de sedile	Supporto della catena
		Oberrohr	Unterrohr	Satteirohr	Steuerrohr	Sitzstrebe	Katten-strebe
		Top tube	Down tube	Seat tube	Head tube	Seatstay	Chainstay
RACE	**PART NUMBER**	-	-	-	-	-	-
	O.D.	**31.75**	**34.9**	**31.75**	**38.0**	**19**	**OVAL 27.5 x 20**
	GAUGE	**1.7/1.4 DB**	**1.7/1.4 DB**	**1.9/1.7 SB**	**4.0**	**1.5**	**1.5**
	LENGTH	**600**	**635**	**600**	**200**	**575**	**420**
	TIP	-	-	-	-	**15**	**15**
	OTHER	-	-	-	-	**Single taper**	-

ATB	**PART NUMBER**	-	-	-	-	-	-
	O.D.	**40.0**	**45.0**	**35.0**	**41.0**	**25.0**	**OVAL 36 x 18**
	GAUGE	**1.7/1.4 DB**	**1.7/1.4 DB**	**1.9/1.7 SB**	**4.0**	**1.5**	**1.5**
	LENGTH	**600**	**635**	**600**	**200**	**16.0**	**16.0**
	TIP	-	-	-	-	**560**	**420**
	OTHER	-	-	-	-	-	-

Plain BB Shell 41 x 4 x 70mm included in set.

REYNOLDS 7000 BUTTED ALUMINIUM

Reynolds 7000 Series Aluminium

This material is a 7020 alloy which after cold working and artificially ageing gives the following typical properties.

Ultimate tensile strength:	350 MPa
2% Proof Strength:	290 MPa
Elongation:	10% min

REYNOLDS

TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel: 0121 706 5151 Fax: 0121 707 0081

C&A JN18/32/95 Printed in England

Butted Titanium

		Tube Superieur / Tubo de arriba / Canna del manubrio / Oberrohr / Top tube	Tube Diagonal / Tubo de abajo / Canna diagonale / Unterrohr / Down tube	Tube Selle / Tubo de asiento / Canna del sellino / Satteirohr / Seat tube	Douille de Direction / Tubo de cabeza / Canna di testa / Steuerrohr / Head tube	Montant Conique / Tirante de sillin / Supporto de sedile / Sitzstrebe / Seatstay	Base / Tirante de cadena / Supporto della catena / Kattenstrebe / Chainstay
OS RACE	PART NUMBER	BT101	BT105	CT100	DT102	GT100	FT100
	O.D.	28.6	31.7	28.6	32.4	16	22.2
	GAUGE	1.0/0.7 DB	1.0/0.7 DB	0.9/0.6 DB	1.2	0.9	0.9
	LENGTH	635	635	600	200	600	410
	TIP	-	-	-	-	14.0	15
	OTHER	-	-	Outside Butt	-	Single taper	R.O.R.
REF JT892							

ATB	PART NUMBER	BT101	BT105	CT100	DT105	GT105	FT105
	O.D.	28.6	31.7	28.6	34.0 BORE	19	OVAL
	GAUGE	1.0/0.7 DB	1.0/0.7 DB	0.9/0.6 DB	1.5	0.9	1.2
	LENGTH	635	635	600	200	600	450
	TIP	-	-	-	-	14.0	15
	OTHER	-	-	Outside Butt	-	Single taper	Single bend
REF JT895							

OS ATB	PART NUMBER	BT105	BT110	CT105	DT105	GT105	FT105
	O.D.	31.7	34.0	31.7	34.0 BORE	19	OVAL
	GAUGE	1.0/0.7 DB	0.9/0.6 DB	1.0/0.7 DB	1.5	0.9	1.2
	LENGTH	635	635	635	200	600	450
	TIP	-	-	-	-	14.0	15
	OTHER	-	-	Outside Butt	-	Single taper	Single bend
REF JT898							

Titanium BB Shell threaded English or Italian available.

REYNOLDS 2000 BUTTED TITANIUM

Reynolds 2000 Series Titanium

This material is based on a CP2 grade of Titanium which is cold worked in the butting and tapering process.

Typical Properties

Ultimate tensile strength: 600 MPa
2% Proof strength: 500 MPa
Elongation: 10% min

C&A JN18/32/95 Printed in England

REYNOLDS

TI Reynolds 531 Limited
PO Box 765, Redfern Road, Tyseley,
Birmingham. B11 2BS England
Tel: 0121 706 5151 Fax: 0121 707 0081