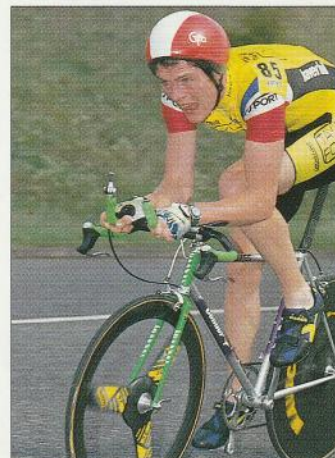
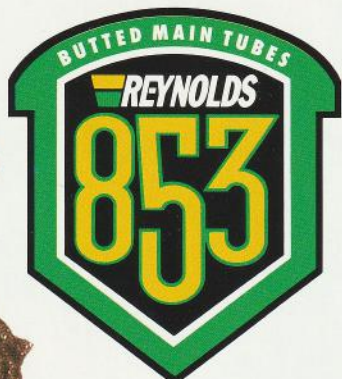


FLUFFYCHICKEN - RETROBIKE

The standard by which others will be measured...



For over sixty years Reynolds have manufactured the highest quality, precision 'butted' manganese molybdenum frame tubes for the world's top cycle riders under the famous brands 531, 653, 731 and 753, whilst other manufacturers have used solely chrome molybdenum steels.

Now, after three years of research, development and extensive product testing with some of the world's leading frame builders, Reynolds introduce a completely new steel frame tube specification that is set to take the cycle world by storm...

Reynolds 853... the standard by which all others will be judged.

Reynolds 853, butted frame tube sets are manufactured from seamless, high strength, lightweight, heat treated, air hardening steel.

Careful control of 853's alloying elements provide enhanced mechanical properties compared with other steel cycle tubes currently available

advantages

Reynolds 853

- Enhanced joint strength • Seamless • Butted
- Lightweight • Improved lateral rigidity
- Responsive • Efficient.

The main advantage of Reynolds 853 is its ability to air harden after the joining process, an attribute absent from other competitive tubing. When frames are constructed using either TIG or high temperature brazing above 850° C (1560° F) the frame joints increase in strength as the frame cools. A normal chrome molybdenum tube in the heat treated condition, jointed using the same method, produces lower strength joints and less laterally rigid frames.

The unique air hardening property of Reynolds 853 provides additional stiffness through reduced microyielding at the joints giving stiffer frames with excellent fatigue strength and responsiveness to be constructed.

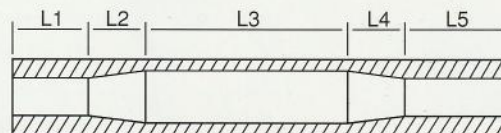
Reynolds 853 also provides the framebuilder with scope for weight savings dependant on frame application or usage.

An additional advantage of 853 is, as the tube surface is so hard, minor denting damage caused by surface impact is significantly reduced.

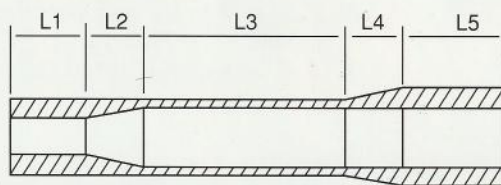
Reynolds 853 product range

PART NO	DESCRIPTION	TUBE PROFILE								APPROX WEIGHT (GRMS)
		DIA.	GAUGE	LENGTH	L1	L2	L3	L4	L5	
AX2000	TUBE	25.4	0.6/0.4/0.6	600	100	50	300	50	100	175
BX2050	TUBE	28.6	0.7/0.4/0.7	635	75	50	280	50	180	240
BX2055	TUBE	28.6	0.7/0.5/0.7	600	40	50	350	50	110	250
BX2060	TUBE	28.6	0.8/0.5/0.8	635	100	50	300	50	135	275
BX2100	TUBE	31.7	0.7/0.5/0.7	635	40	50	350	50	145	280
BX2105	TUBE	31.7	0.7/0.5/0.7	635	75	50	280	50	180	290
BX2110	TUBE	31.7	0.8/0.5/0.8	635	120	50	300	50	115	305
BX2150	TUBE	34.9	0.9/0.6/0.9	635	120	30	320	30	135	390
BX2155	TUBE	34.9	0.8/0.5/0.8	635	120	30	320	30	135	340
CX2200	TUBE	28.6	0.7/0.4 SB	635	125	75	435	-	-	210
CX2220	TUBE	28.6	0.9/0.6/1.2 OB	550	165	50	160	50	125	325
CX2240	TUBE	28.6	0.9/0.6/1.2 OB	635	90	30	340	50	125	340
CX2280	TUBE	31.7	0.9/0.6/1.2 OB	550	165	50	160	50	125	360
DX2300	TUBE	31.7	0.9	220	PLAIN					150
DX2320	TUBE	32.5	1.25	200	PLAIN					190
DX2340	TUBE	36.4	1.2	200	PLAIN					205
FX2500	CHAINSTAY	22.2	0.8/0.6	410	22.2/13.0 TIP. ROUND/OVAL/ROUND					150
FX2510	CHAINSTAY	OV	0.8/0.6	410	17.0 x 29.0 OVAL/ 13.0 TIP. ROUND/OVAL/ROUND					160
FX2550	CHAINSTAY	22.2	0.8/0.6	420	22.2/13.0 TIP. 12° OFFSET SINGLE BEND					160
FX2560	CHAINSTAY	OV	0.8/0.6	420	17.0 x 28.0 OVAL/13.0 TIP. 12° OFFSET SIN. BEND					160
FX2570	CHAINSTAY	24.0	1.0/0.6	420	24.0/13.0 TIP. 12° OFFSET SINGLE BEND					195
GX2600	SEATSTAY	16.0	0.55	560	12.0/16.0/11.0 TIP		DOUBLE TAPER			115
GX2610	SEATSTAY	16.0	0.55	560	16.0/11.0 TIP		SINGLE TAPER			115
GX2650	SEATSTAY	16.0	0.7	580	16.0/11.0 TIP		SINGLE TAPER			150
GX2660	SEATSTAY	19.0	0.7	580	19.0/13.0 TIP		SINGLE TAPER			180

tube butt profiles



* STANDARD BUTT



* OUTSIDE BUTT

(diagrams exaggerated for clarity).

* Reynolds mark this end.

Reynolds 853

The mechanical properties of Reynolds 853 can be altered to suit particular strength level requirements. Unless particularly specified the mechanical properties will be as follows:

U.T.S: 81 - 94 Tsi Elongation: 10% Min
 180 - 210 Ksi Hardness: 400Hv Min
 1250 - 1450 MPa 40HRC Min

After welding or high temperature brazing U.T.S. and Hardness properties in the joints can be significantly higher than those quoted above.

mechanical properties

Reynolds 853

machinability

Reynolds 853

Machining or drilling of tubes in the heat affected zone after welding or brazing is extremely difficult due to the increased strength from the air hardening.

Machining in these areas after welding or brazing is not recommended.

manipulation

Reynolds 853

Reynolds 853 is a high strength material having limited manipulation capacity in the as-supplied form. Any ovaling/flattening or cranking operations that involve significant amounts of material deformation should not be undertaken. Reynolds are able to carry out these operations prior to heat treatment if required. Minor manipulation, i.e. setting or bending to fit can be carried out in the as-supplied heat treated condition.

welding/brazing

Reynolds 853

Reynolds 853 can be welded or brazed using conventional jointing techniques used for other chrome molybdenum tubing currently available. The only rule of welding or brazing is that the jointing operation must be carried out above 850° C (1560° F) otherwise softening of the joints may occur. Reynolds 853 tubing can be welded or brazed to other chrome molybdenum tubes without any deleterious effects.

Silver soldering or low temperature brazing of Reynolds 853 should NOT be undertaken.

Recommended welding wire: 1% or 2% Cr Rod
Recommended braze metal: Per AWS Classification
RBCuZn Type

The above recommendations also apply to the fixing of frame fittings.

Tips on what you **MUST** do with Reynolds 853:

1. Weld or braze the material at a temperature above 850° C (1560° F).
2. Use Tungsten Carbide cutting tools or high speed steel, well lubricated and with a relatively slow feed rate.
3. Allow to cool naturally away from draughts after jointing operations.

Tips on what you **MUST NOT** do with Reynolds 853

1. Attempt to machine or drill in the areas of the heat affected zone after welding or brazing as these areas will be extremely hard.
2. Attempt to undertake severe manipulation of tube section in the as-supplied heat treated condition.
3. Do not joint using silver solder or other low temperature braze below 850° C (1560° F).
4. Force cooling with air, oil or water or any other medium from jointing operations.

frame sets

Reynolds 853

The sets of Reynolds 853 as supplied to the frame builder will contain the four main frame tubes in the new Reynolds 853 material.

A range of seatstays and chainstays in heat treated chrome molybdenum will be available. These will have properties of:

UTS: 62 Tsi Min
138 Ksi Min
950 MPa Min

These tubes are suitable for welding or brazing using the same materials as specified for Reynolds 853.



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