

# Datasheet

all data at your own risk etc

misc.		
insertion depth handlebarstem	50 mm: expander must not deform the threadarea	
insertion depth seatpost	min 10 mm below toptube, min. 60 mm in seattube	
chainwear limit	1% max (=pindiameter on 20 links (10" nominal)	
radial spoking	radial spoking voids the guarantee on Shimano hubs.	
crankset boltcircles		
BCD	Type	Rem.
5 x 50.4 mm	TA cyclotouriste ea.	
5 x 56 mm	inner chainring microdrive (Sachs, Sugino, TA)	20-22 T
5 x 58 mm	inner chainring microdrive shimano	20-24 T
5 x 74 mm	inner chainring ATB	24 to 36T
5 x 80 mm	inner chainring french	
5 x 86 mm	Stronglight	
5 x 94 mm	Shimano microdrive outer chainring	from 30 T
5 x 95 mm	Shimano STX	
5 x 110 mm	ATB-pitch, Shimano, Suntour, Sachs etc,	
5 x 116 mm	Campagnolo Victory	
5 x 122 mm	Nervar- Stronglight	
5 x 130 mm	Japan road, ie Suntour, Sachs, Shimano, Sakae, TA...	min 38T
5 x 135 mm	Modern Campagnolo (+ Sachs new succes)	
5 x 143 mm	Thun	
5 x 144 mm	Old Campagnolo Record and copies	
5 x 151 mm	Old Campa track	
threadsizes		
axle fronthub	9 mm x 26 tpi (ita)	
axle fronthub	9mm x 1 ( JIS)	
axle rearhub	10 x 1 (JIS)	
axle rearhub	10 x 26 tpi (ita.)	
bracket	bsc 1.37" x 24 tpi (English, 68 mm wide , RH cup LH thread)	
bracket	ita. 36mm x 24 tpi (Italian 70 mm wide)	
crankpuller	22 x 1 (Old TA was 23 x 1 , Stronglight 23.35 x 1 (will strip with TA!))	
dropout eye for rear derailleur	10 x 26 tpi = 10 x 1.0 mm	
freewheel on hub	BSC 1.37" x 24 (rare 34.7 x 1 or 35mm x 24tpi)	
headset 1 1/4"	1 1/4 x 26 tpi	
headset 1 1/8"	1 1/8 x 26 tpi	
headset 1"	BSC 1" x 24 tpi	
headset 25 mm	M 25 x P 1.0 (French)	
lockring for trackcog	1.32" x 24 tpi L (Ita.)	
lockring for trackcog	1.29" x 24 tpi L (JIS)	

pedals	M14 x 1.25 (French)	
pedals	BSC 9/16" x 20 tpi (LH pedal LH thread)	
trackcog on hub	BSC 1.37 x 24 tpi	
<b>tightening torques</b>		
axle skewer	position lever // axle, tighten adjuster to remove play, close handle (90 degrees)	
brakeblock clampnut (m6)	8-9 Nm	
brakeblock sidepullbrake	5-7 Nm	
brakecable clampbolt	5-8 Nm	
brakelever to dropbar	6-8 Nm	
cableadjuster to shifterboss	2 Nm	
cantilever mounting bolt (m6)	5-7 Nm	
central brakebolt to frame (sidepull)	8-10 Nm	
centrale screw bar con	3 Nm	
chainring bolt	5-7 Nm	
crankbolt	35-50 Nm (standard square axle, Shimano spline)	
derailleur cable clampbolt	5-7 Nm	
derailleur to dropout	8-10 Nm	
expander bar con	5-6 Nm ( turn CCW to tighten)	
HG cassette lockring	30-50 Nm	
hollow bolt cassette freewheel to hub	35-50 Nm (10 mm inbus)	
m5x 0.8 bolt	5-7 Nm	
m6 x 1.0 bolt	6-8 Nm	
pedal to crank	35 Nm	
shimano bracketunits	50-70 Nm (30-40 Nm for plastic)	
SPD cleat to shoe	5-6 Nm	
SRAM gripshift clampbolt	1.5 Nm	
STI lever to dropbar	6-8 Nm	
STI ratchet to brakecable bracket	4-5 Nm	
suspensionfork crown bolts m5	12 Nm (Rond WP)	
suspensionfork crown bolts m6	9 Nm (RST)	
<b>fits and framedimensions</b>		
ahead stem over steerer	25.4mm, 28.6 mm of 31.8 mm	
axle width fronthub	100 mm (also 70mm =TT, 90mm= childrensbike, 110mm=downhill)	
axle width rearhub (road)	130mm ( 5 speed = 120, 6 speed 126 mm)	
axle width rearhub (MTB)	135mm (early bikes also 130mm)	
axle width rearhub (Tandem)	140-145-160 mm	
bottlecage nuts CoC	63.5 mm (2.5")	
braze-on frontchanger (middle to center bracket)	150 mm (depending on chainwheelsize and front changer)	
cantilevermount CoC	46-56mm + rimwidth	
cantilevermount height	R rim - 26 mm (for average forkrake )	

Dropbar diameter (clamp)	measure! can vary from 25.0 to 26.4 (within the same brand)	
dropbar diameter (grip)	24 mm	
dropout thickness	3.5 min	
dynamohook		
lower bottlecage-nut to bracketcenter	195 mm (bottomtube)	
lower bottlecage-nut to bracketcenter	200mm (seattube)	
lower headset to steerer (1 1/4")	33.0 mm	
lower headset to steerer (1 1/8")	30.0 mm	
lower headset to steerer (1", 25mm)	26.4 mm (JIS= 27)	
MTB bar diameter (clamp)	25.4 mm	
MTB bar diameter (grip)	22 mm	
OS headtube, ID	34.0 mm	
quill in steerer	22.2mm, 25.4mm of 28.6 mm (old French = 22mm!)	
racingnumber (road, NL)	100 x 70 mm (drilled 10 mm from top)	
seatpost	ID - 0.2 mm	
standard headtube, ID	30.2 mm (JIS = 30.0 mm)	
XL OS headtube, ID	37.0 mm	
<b>rims and tyres (some popular sizes)</b>		
Size	ETRTO	Rmax with tyre [mm]
12 1/2 x 1.75	44-203	148
14 x 1 3/8	37-298	189
16 x 1.75	44-305	194
18 x 1.75	44-355	219
16 x 1.1/4 (Moulton AM)	32-369	219
20 x 1.75 x 2 (BMX)	44-406	244
500A	32-440	257
20 x 1 3/8	32-451	260
24 x 1.75	44-507	295
26 x 1.75 (mtb)	44-559	321
26 x 1 1/2 (race)	20-571	310
700c (28" race)	23-622	338
27" x 1 3/8	35-630	347
<b>conversions</b>		
<b>lenght</b>		
0.001" (thou)	0.025 mm	
1/16 "	1.6mm ( say it out loud:one sixteenth of an inch...)	
7/8"	22.2 mm	
1" (1 inch)	25.4 mm	
1 1/8"	28.6 mm	
1 1/4"	31.8 mm	
1 3/8"	34.9 mm	

1' (1 foot)	305 mm (12")	
13G (gauge)	2.2 mm	
14G	2.0 mm	
15G	1.8 mm	
16G	1.6 mm	
<b>weights</b>		
1 lbs (pound)	454 grams	
1 st. (stone)	6.35 kg (12 lbs)	
1 cc steel	7.9 grams	
1 cc aluminium	2.7 grams	
1 cc titanium	4.5 grams	
1 cc magnesium	1.8 grams	
1 m <sup>2</sup> sheetsteel	7.8 kgs / mm thickness	
<b>volume</b>		
1 fl oz.	28 cc	
1 pnt (pint)	0.568 L	
1 quart	1.14 L	
1 gallon (us)	3.79 L	
1 gallon (UK)	4.55.L	
<b>speed etc</b>		
1 m/s	3.6 km/h	
1 mph	1.6 km/h	
wheelcircumference	3.1415 x Diameter	
gearing (continental, meters)	Gearinches x 0.0798	
gearing (continental, meters)	wheelcircumference x teeth chainring/cog	
gearinches	wheeldiameter ["] x teeth chainring/cog	
<b>Misc.</b>		
100000 psi	700 N/mm <sup>2</sup>	
10 psi	0.69 bar	
temp Celcius	5/9 x (temp Fahr. -32)	
100 watts	0.136 Hp	
10 N	'1 kg'	
<b>Yield strengths</b>	<b>(typical values after welding)</b>	
mild steel	370 N/mm <sup>2</sup>	
stainless steel (aisi 304)	195 N/mm <sup>2</sup>	
25crmo4	700 N/mm <sup>2</sup>	
Nivacrom	1030 N/mm <sup>2</sup>	
AA 7020 T6	230 N/mm <sup>2</sup>	
AA 6061 T6	110 N/mm <sup>2</sup>	
TiAl3V2.5	600 N/mm <sup>2</sup>	