Designed and manufactured in the U.K.

goldtec

Available from:

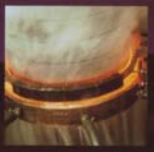
Goldtec Cycle Components Ltd.,
Van Road, Caerphilly,
Mid Glamorgan, United Kingdom,
CF83 3EL.
Tel: +44 (0) 1222 852700
Fax: +44 (0) 1222 861900

goldtec

PROTECT THE ENVIRONMENT

The design brief at Goldtec Cycle Components is to produce, using computer aided technologies, the finest aftermarket cycle components from the best available materials.
Each part of every component produced by Goldtec has been researched and tested thoroughly, and the material used carefully selected for the optimum strength or stiffness to weight ratio possible, designed and CNC machined from aerospace grade alloys to aerospace tolerances.
All parts of the bicycle drivetrain, subjected to wear, cause friction - and this friction slows down the rider. Goldtec has brought high technology coatings into the world of cycling. By coating all wear parts of the Goldtec drivetrain with Titanium Nitride we have drastically reduced the coefficient of friction of the surfaces of these parts. The end product achieves less wear, extends component life, minimises energy loss and improves speed potential.

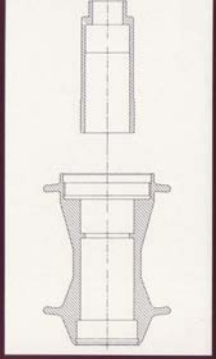
Titanium Nitride has only been available to specialist applications in aerospace, high speed cutting tools and formula one racing cars - where light weight, durability and high strength are paramount.
Titanium Nitride is a solid compound of Titanium and Nitrogen, it is made by vaporising Titanium and reacting it with a plasma containing nitrogen - this is then deposited molecule by molecule onto the surface of the component being coated. The coating process used solely at Goldtec results in an incredibly smooth and hard surface: almost featureless and more than three times harder than the hardest tool steel.



Gold is the natural colour of the compound Titanium Nitride when it is deposited on a polished metallic surface. Applied to materials such as stainless steel and titanium it will never corrode!

Quality is a word taken very seriously at Goldtec. The parent company is one of the most specialised heat treatment companies in the U.K. and is fully accustomed to aircraft standards and quality control procedures.

ALWAYS WEAR A HELMET



goldtec

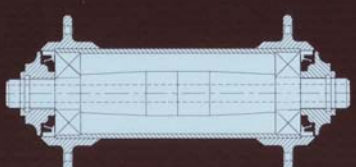
CONTENTS

MTB Suspension Hub - 158G

- The Goldtec front suspension hub is designed to provide years of trouble free performance when used with suspension or rigid mountain bike forks.
- German (INA) corrosion resistant high load capacity sealed cartridge bearings are located accurately on the axle to minimise axle flex and prevent any unnecessary preload on the bearing races.
- High Strength 2014 T6 aluminium is used for the flanges which are angled slightly in towards the centre of the hub to reduce unnecessary bending moments in the flanges.
- The oversized axle is CNC machined hollow from aerospace grade 7075 aluminium. It is stiffest in the centre of the hub where the greatest bending moments occur. M6 threads are rolled in the ends so it can accept skewers or lightweight titanium bolts.
- Highly effective rubber lip seals provide maximum protection for the bearings to prevent any dirt or water ingress.
- Knurled 19mm end spacers are fitted as standard, with 25mm spacers available as an option. Nickel plated knurled steel washers are fitted onto the end spacers to provide extra grip against alloy fork dropouts.

Colours and Finishes of Goldtec Hubs

Standard drillings of all Goldtec hubs are 28, 32 or 36 holes with custom drillings available to special order. Our hubs are available with polished titanium or polished TiN coating (gold) on the bodies. Flanges are available in Black, Silver, Red or Blue anodised colours.



Road Hub - 140g

- The bearing arrangement of the Goldtec front road hub is essentially the same as the rear hub, that is it uses the unique ball/needle roller bearing combination. The sealed cartridge ball bearing locates the axle to the hub body while allowing the axle to move freely in the needle roller race. This counters the destructive effects of side vibration on the ball bearing, which is a majorcause of bearing failure.
- Aerospace grade 7075 aluminium is used for the hollow axle and flanges of the hub to reduce weight to a minimum while maintaining strength and avoiding fatigue failure.
- The hub body is CNC machined from Titanium alloy increasing the overall stiffness of the hub. Goldtec's single point 'Total Loss Oiling' system is used on this hub, the oil neutralises and picks up any contaminants in the hub, and deposits them outside the hub body.

Goldtec Titanium Axle Bolts

All titanium bolts supplied by Goldtec are coated with Titanium Nitride, this coating prevents the threads on the bolts galling and cold welding to the threads on the mating part permitting the bolts to be undone easily if required! Titanium bolts are suited to use in highly stressed applications where weight saving is of importance.

The bolts come complete with aluminium end caps that have knurled steel washers bonded to them. The heads of these bolts are forged, with the threads being cold rolled. These are lighter and far stronger than any skewer available as you have at least twice the amount of thread attaching your wheel to your frame. They can be removed easily with a 5mm Allen key. Bolts also provide the added benefit of some theft resistance over quick release skewers.

Four bolt set - 31.3g
(Includes AL Caps)

The Goldtec Rear Hub - Patent number 2264337

Many high technology features and materials have been combined to produce the unique Goldtec rear hub which is **simple by design** and the strongest and stiffest light weight rear hub available today. There is an 8 speed design for road and cross country racing and now a 7 speed version with reduced dishing to allow you to build the strongest possible wheel for downhilling and trials riding. The Goldtec 7 speed hub is designed to be used with sprocket cassettes spaced for 8 speed derailleurs. This allows us to reduce dishing to an absolute minimum and you to use 8 speed shifters and rear mechs.

THE ULTIMATE AXLE

The axle is CNC machined from hollow 3/4CroMo alloy steel to a diameter of 12mm with M6 threads rolled in the ends. This is then through hardened and tempered to give a **one piece** axle which is far stiffer and stronger than any aluminium or titanium axle on the market. Bearing seats and races are then ground to ±0.004mm to ensure accurate bearing alignment which is a major factor in obtaining the maximum bearing life.

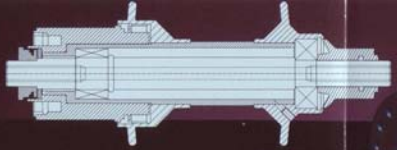
UNIQUE BEARING ARRANGEMENT

A unique ball bearing and needle roller bearing combination is used for optimum load carrying and extremely low rolling resistance. The needle roller bearing is positioned directly under the cassette carrier, the inner race for the needle rollers is actually the hardened and ground surface of the axle itself.

The use of needle rollers in the design requires inbuilt clearances which result in slight sideplay at the wheel rim of 0.2 - 0.4mm. The benefits of this endfloat are zero bearing preload which gives you the maximum lifespan of your bearings and a truly freespinning hub.

ONE PIECE HUB BODY

The Grade 5 titanium hub body extends the full length of the hub in one piece, to support the cassette carrier as a Titanium Nitride coated bearing surface. The body is light as well being very strong and adds to the overall stiffness of the hub.



BEARINGLESS FREEWHEEL

The unique design of the freewheel mechanism permits you to remove and replace, or swap, the cassette carrier without any tools. This makes cleaning and maintenance a simple and easy task. The cassette carrier is CNC machined from Grade 5 titanium and is coated with a nickel/PTFE composite bearing surface. There are no ball bearings for the freewheel function! (ball bearings are not required here as the freewheel only rotates under essentially zero-load situations.

The cassette carriers are available to suit Shimano, Campagnolo or Goldtec's own Microdrive sprockets. The 7 speed hub uses a 7075 cassette carrier with a hard anodised/PTFE composite coating. The aluminium splines are reinforced with a hardened steel rib to help prevent deformation caused by single sprockets.

TOTAL LOSS OILING SYSTEM

To ensure optimum performance and long term reliability, Goldtec has introduced the 'Total Loss Oiling System' for the rear hub. At Goldtec we found that it was impossible to develop a free rolling hub that was perfectly sealed against dirt and water ingress. Oil offers two major advantages over traditional grease lubrication; it offers much lower rolling resistance than grease and it is able to flush any contamination from inside the hub without having to disassemble it. Goldtec's own oil contains an agent that renders any water that may have got into the hub harm less. As the hub spins the oil/contaminant mixture is forced out of the hub via the specially designed one way rubber lip seals.

8 SPEED - 340g

7 SPEED - 305g

Goldtec TiN coated Titanium sprockets

Laser Cut Ti Sprockets

Goldtec sprockets are made exclusively from Grade 5 Titanium (Ti6%Al4%V alloy). This is a high strength aerospace grade material.

The sprockets are cut using a CNC controlled CO_2 laser. The roller seats on the sprockets are also hardened to provide added wear resistance.

The teeth on Goldtec sprockets now have CNC ground profiles to promote upshifting and downshifting. The sprockets change cleanly and accurately with a single indexed gear change

TIN COATING

Goldtec cassettes are extremely light in weight and should last significantly longer than equivalent titanium cassettes. The rate of tooth wear has been greatly decreased, and the friction losses caused by chain to tooth drag have been minimised by coating the sprockets with Titanium Nitride. This also gives the sprockets the startling gold colour of TiN.

CNC'D SPIDER

A CNC machined spider is provided on cassettes with large diameter sprockets (11-28 and 11-30 ratios) to reduce the amount of flex created during poor chain alignment conditions.

Goldtec cassettes are available in 7 or 8 speed clusters to suit the Hyperglide spline.

MTB ratios

11-24	11,12,13,14,16,18,21,24	127g
11-26	11,12,14,16,18,21,24,26	198g
12-28	12,13,14,16,18,21,24,28	205g
11-30	11,13,15,17,20,23,26,30	225g
12-30	12,13,15,17,20,23,26,30	230g

Road ratios

11-19	11,12,13,14,15,16,17,19	105g
11-21	11,12,13,14,15,17,19,21	118g
11-24	11,12,13,15,17,19,21,24	127g
12-21	12,13,14,15,16,17,19,21	125g
12-24	12,13,14,15,17,19,21,24	135g

The two smallest sprockets of each set have built in spacers for extra strength.

Goldtec Microdrive

These sprockets are available in 7 or 8 speed cassettes. The design of the Goldtec rear hub permits the use of a dedicated cassette carrier which can take a **nine tooth sprocket.** Using nine up sprocket ratios (9 - 16t and 9 - 21t standards) and consequently smaller chainrings, significantly less chain is required. The size reductions of these drivetrain components can result in a weight reduction of up to 500g when compared to a top of the range racing set up which would give you equivalent ratios.

These 9-up cassettes are also highly suited to use on small wheeled bicycles where reduced wheel diameter usually reduces the amount of usable gearing available.

Modified Dura-Ace derailleurs are available from Goldtec to provide accurate shifting performance with such small sprockets.

Microdrive sprockets have regularly lasted for more than 10,000 miles of road use with regular chain changes.

Microdrive ratios

Race	9 - 16t (9,10,11,12,13,14,15,16t)	97g
Touring	9 - 21t (9,10,11,13,15,17,19,21t)	144g
Mountain	9 - 28t (9,10,11,13,15,17,20,24,28t)	182g

18 and 20 tooth sprockets are also available.

9 and 10 tooth sprockets have built in spacers for

Goldtec Titanium Chainrings

These grade 5 titanium chainrings are the strongest and most durable chainrings available today. They outlast aluminium chainrings by over ten times. Shifting performance is enhanced by machined changing positions and stainless steel lifting pins. All of our chainrings are coated with Titanium Nitride to reduce friction and extend the life of the chain and chainrings.

MTB Chainrings from Goldtec are incredibly durable and lightweight. The Titanium Nitride coating reduces chainsuck to a minimum.

Chainring	Inner	Middle	Outer
Compact (XT)	20, 22, 24	30, 32, 34	40, 42, 44
Standard (XTR)	24, 26	36	46
Example Weights	22t - 30g	32t - 42g	42t - 75g

TRIALS riders will be used to regularly destroy both steel and aluminium granny rings. Goldtec titanium granny rings are stronger and more durable than either of these, the extra life gained from using Goldtec granny rings far outweighs the extra cost incurred initially. Titanium granny gear protection discs are also available.

ROAD riders will benefit from light weight, durability and low friction in poor chainline conditions from Goldtec Titanium Nitride coated chainrings.
Chainrings are designed to fit Shimano road chainsets.

Inner	39t, 42t
Outer	52t, 53t

Goldtec Microdrive chainrings do not require aluminium spiders as they are bolted directly to the crank arms. This feature provides direct drive characteristics. By using the Goldtec microdrive sprockets the number of teeth on the chainrings can be reduced to obtain standard road ratios.

Race	39t inner, 39t outer
Club	37t inner, 39t outer
Cruiser	35t inner, 34t outer

Race with RS2 crank 512g

Middleburn provide the cranks for Goldtec chainsets, these are some of the lightest production cranks available and are CNC machined from high strength, fatigue resistant 7075 aluminium.
RS2 cranks are used for the Goldtec Microdrive chainsets, recommended BB length is 115mm
RS2 cranks are used for Goldtec Road chainsets, recommended BB length is 107mm
RS2 cranks for Compact or standard MTB use a recommended BB length of 122mm
RS3 cranks for Compact or standard MTB use a recommended BB length of 106mm
All these bottom bracket lengths are recommended lengths only, as the exact spindle length will depend on the brand of bottom bracket used.
Crank lengths available as standard are 170mm and 175mm. RS2 cranks are available in black and silver. RS3 cranks are available in silver only.

TIN coated Titanium Self Extract Crank bolts are also available with the cranks, these come complete with a aluminium cap and a copper bearing. Once these have been fitted you will only need a 6mm Allen key to fit and remove your cranks.

Specifications are subject to change without notice due to product modification and improvement.