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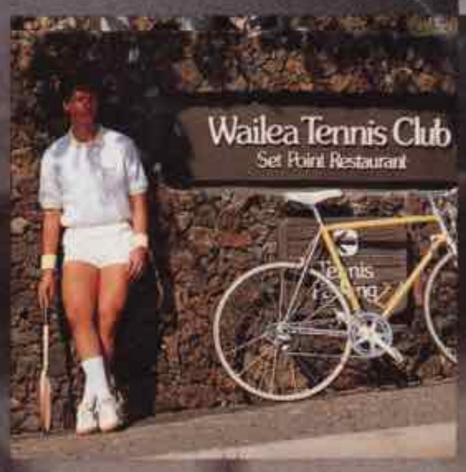




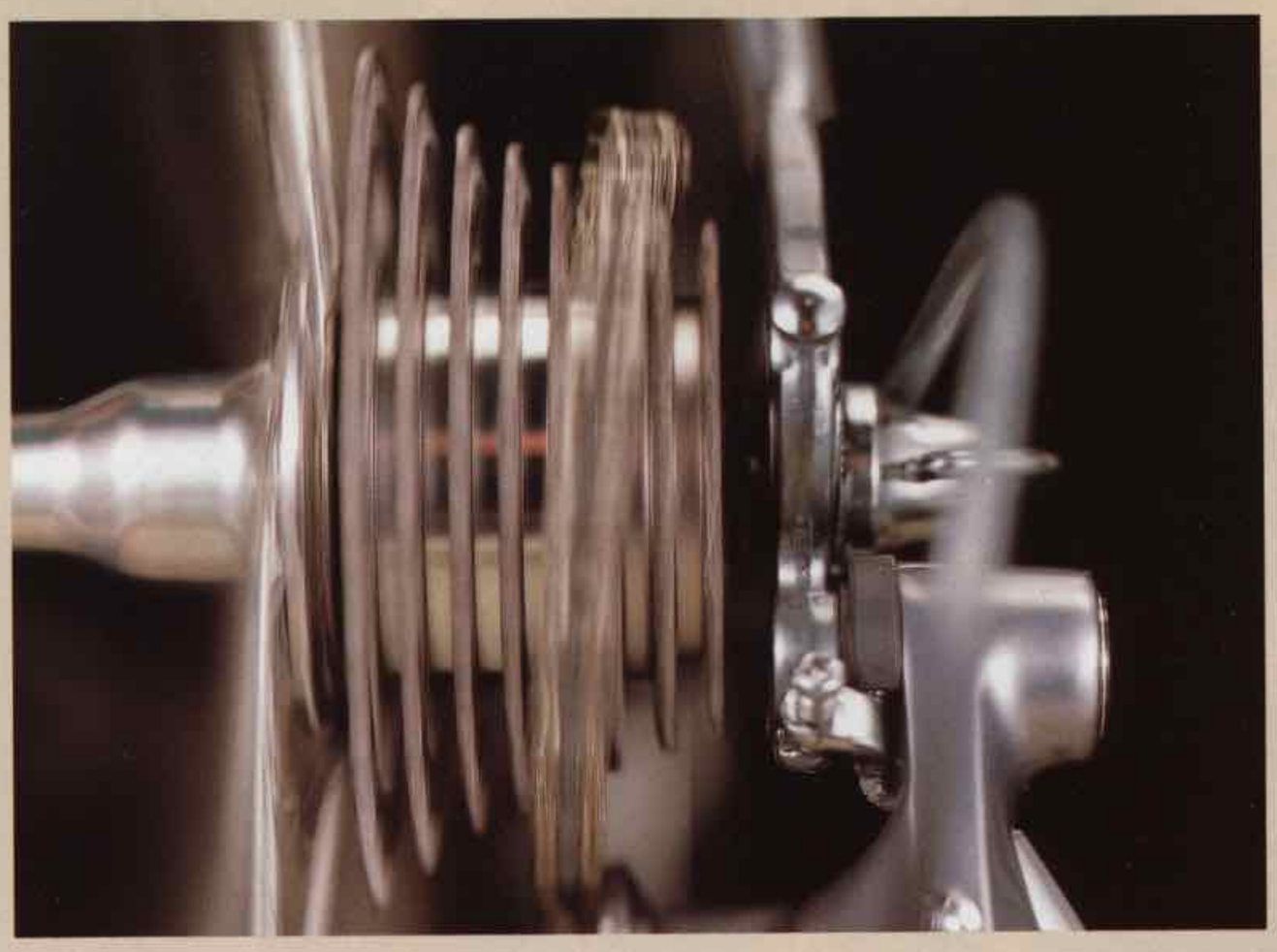
SHIMANO

Bicycle System Components—The Complete Line





SHIMANO



INTEGRATED-8

SIS

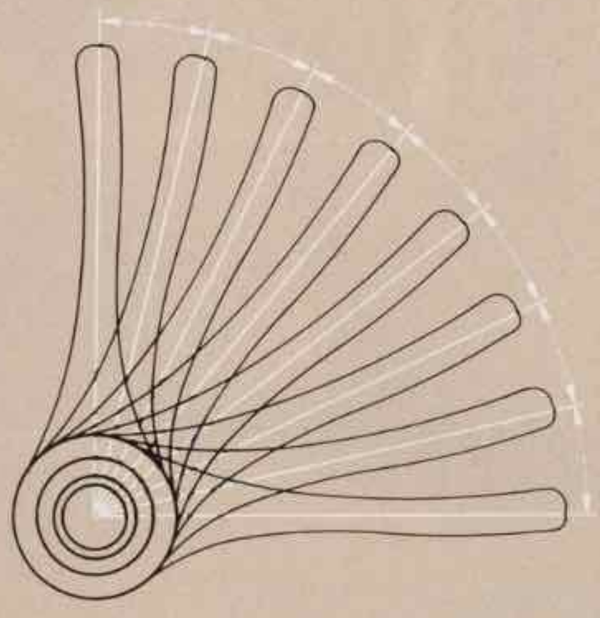
SHIMANO INDEX SYSTEM

8-Speed SIS—A New Standard of Shifting Performance for The Racing Bicycle.

In the world of competitive cycling, the Shimano Index System has become the new standard in shifting speed and precision. SIS responded to the real needs of racing cyclists by providing fast and precise derailleur shifting under the most grueling racing conditions.

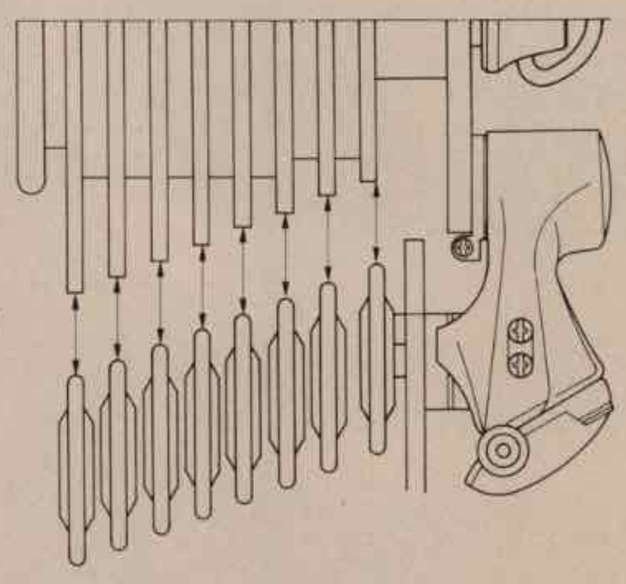
Now Shimano technology once again breaks the performance barrier with new Dura-Ace 8-speed SIS.

8-speed SIS realizes a dual advantage. In addition to offering an improved SIS shifting action, 16-speed gearing means the competitive cyclist can increase performance by adjusting pedaling cadence more precisely to terrain and energy level.



It starts at the shift lever. The 8-speed SIS unit in the lever features a new "pawl-claw" index mechanism that smooths out lever action while still providing a sure and positive feeling.

The new 8-speed Dura-Ace rear derailleur remains totally compatible with Dura-Ace 6- and 7-speed levers and freewheels. A new



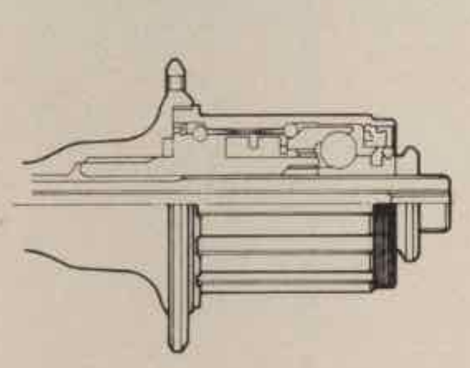


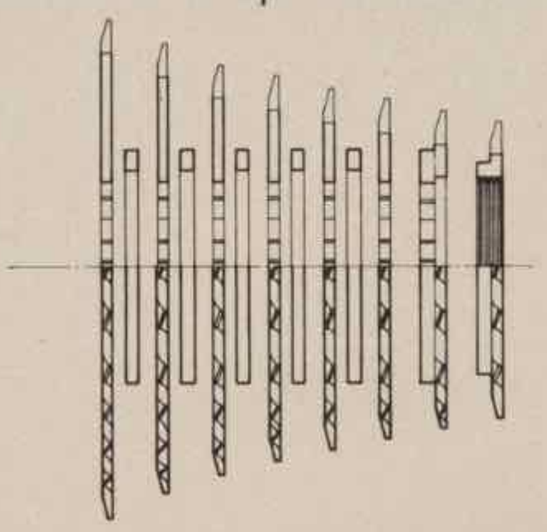
Dura-Ace 8-speed SIS can only be realized when the system consists of the SL-7402 shift lever set, RD-7402 rear derailleur, FH-7402 freehub with CS-7400-8 sprockets, and a narrow type Uniglide chain.



3-step spring adjusting mechanism allows the system to function perfectly with all types of cable routing, even inside the frame. And a redesigned link action now enables the derailleur to be used with a wider variety of dropout types. Blind pulley pivots with full sealing improve appearance, reduce maintenance, and extend service life. The 8-speed derailleur has a soft new aerodynamic shape that further enhances Dura-Ace's high-tech appearance.

Helping to make 8-speed SIS a reality are the unique advantages of the Shimano freehub. 8-speed SIS doesn't affect rear wheel dish. The unique Uni-Balance design of the freehub allows 8-speed SIS to be used with the standard 130mm dropout spacing of conventional 7-speed systems. In fact, the rear wheel dish is actually less than the 7-speed systems of other makers.





The 8-speed SIS freehub features various upgrades such as a hard Delta treatment for increased bearing durability, a new ball-race contact profile with super-precision balls for smoother rotation, and upgraded sealed mechanisms that completely shut out dirt and water.

8-speed SIS is the new state-of-the-art for the racing bicycle's drivetrain. The winning advantage of Dura-Ace just became a little bigger!



HG

HYPERGLIDE

Shimano Shifting Technology Takes Another Step Forward

Introducing Hyperglide! The computer-designed sprocket combination that improves SIS shifting performance.

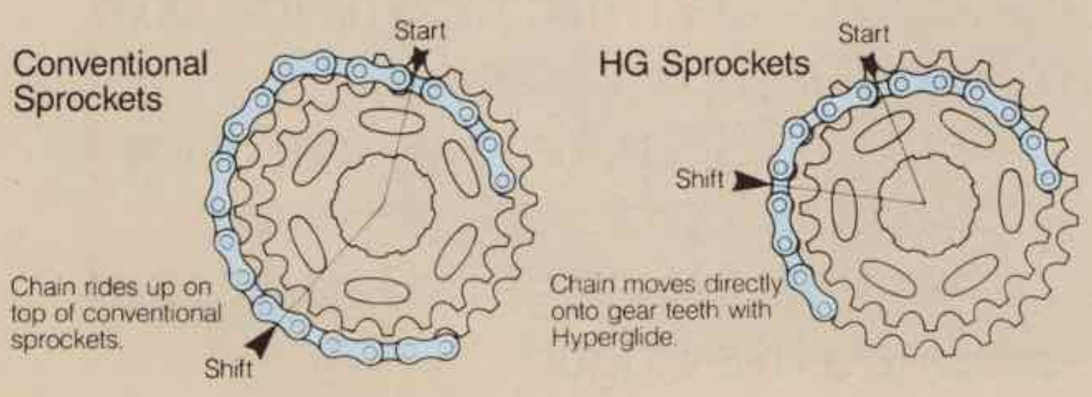
With conventional sprockets, a shift to a lower gear causes the chain to ride up on top of the sprocket's teeth before seating fully on the cog. This 'over-ride' slows down the shift and can even cause the chain to slip on top of the sprocket teeth if enough torque is applied.

The Hyperglide sprocket solves this problem by utilizing carefully designed tooth shapes and sprocket relationships.

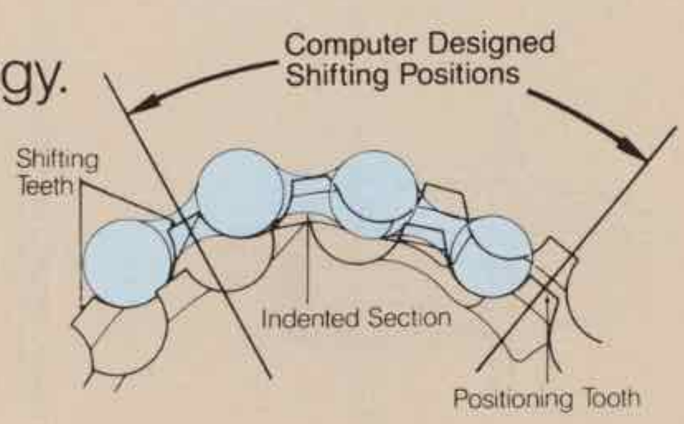
Specially designated 'release' teeth on each gear determine exactly where the chain will first come off the cog when a downshift is initiated. Gears are aligned on the freehub so that the teeth of the smaller and larger sprocket maintain the same chain pitch dimension at the chain release point.

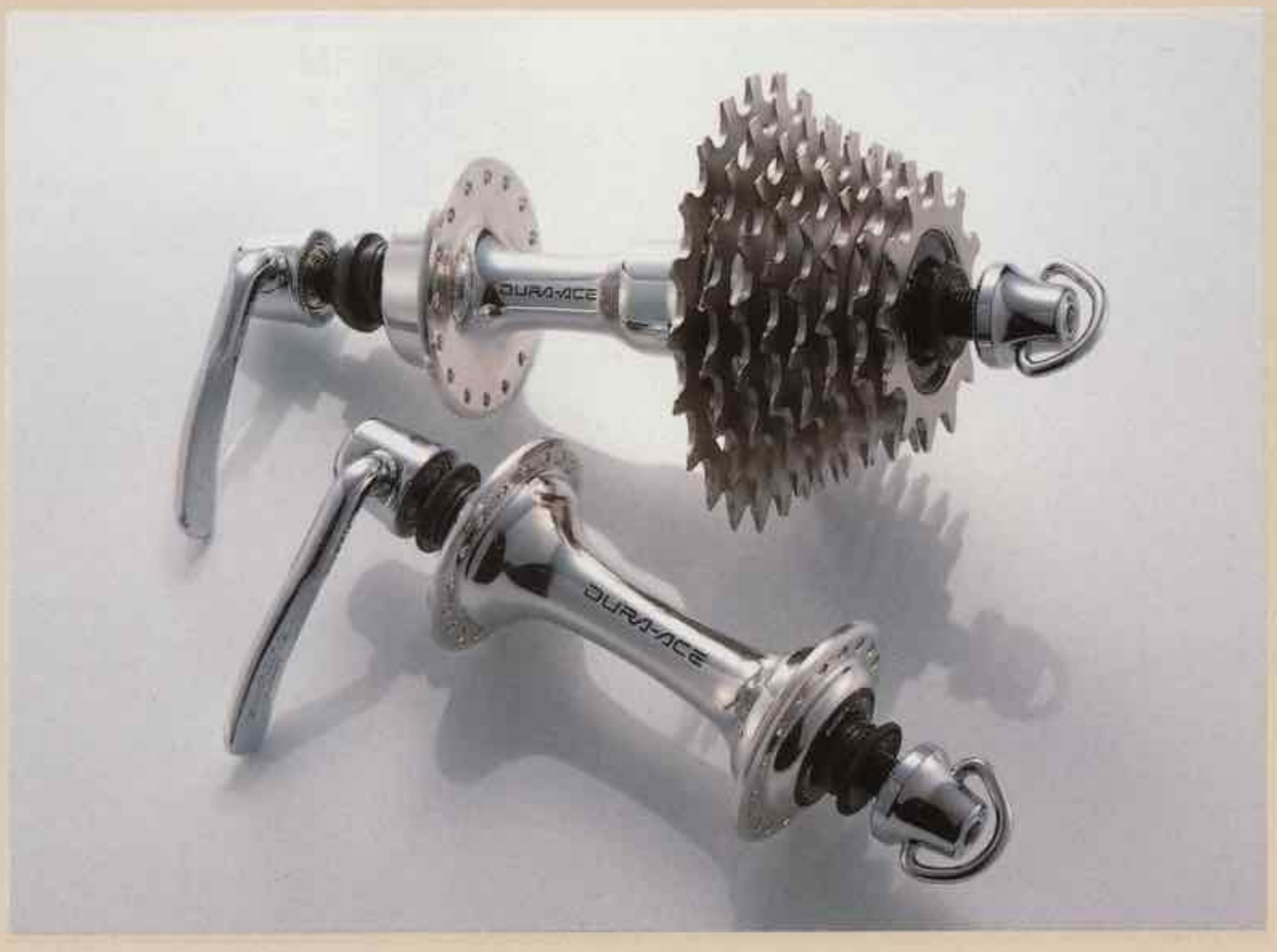
As a result, the chain doesn't ride up on top of the larger gear's teeth. It moves smoothly and directly from cog to cog with minimum hesitation. SIS shifting is faster, quieter, and smoother, even under the most adverse conditions.

On or off the road, Shimano is still the leader in index shifting technology.



U.S. PAT. 4,268,259





THE SHIMANO FREEHUB

An Improved Rear Hub Design

All Shimano system component groups now incorporate the Shimano freehub. With the freehub, the rear hub body and freewheel are integrated into a single unit. This means that hub flanges can be positioned to reduce wheel dish. Right-side axle bearings can be placed closer to the frame dropout to reduce stress and help prevent axle bending and breaking.

The end result is a stronger rear wheel with less dish, a more rigid rear frame triangle, and greater power transfer efficiency for the racing cyclist.

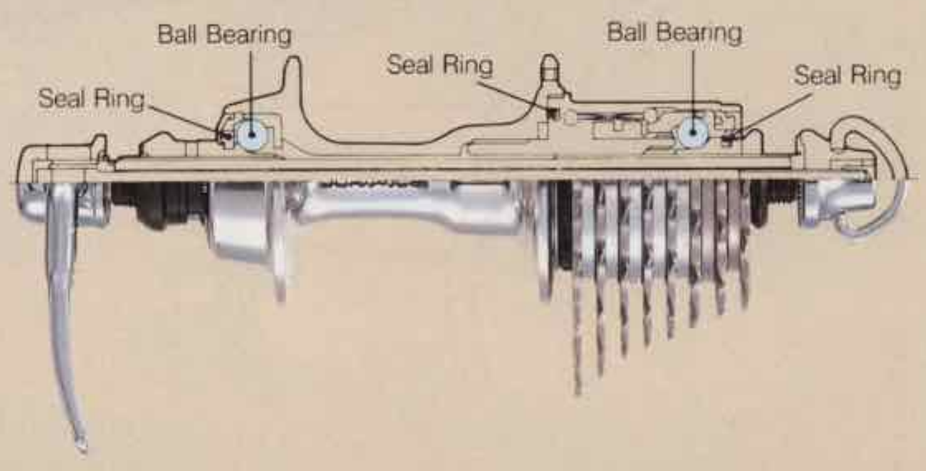


Freehub design has made possible another Shimano performance breakthrough—Dura-Ace 8-speed SIS.

The freehub is the only type of hub that can accommodate an eight-speed sprocket cluster without creating excessive wheel dish. In fact, the amount of dish in a wheel with the Dura-Ace 8-speed freehub is actually less than that of the conventional hubs and 7-speed freewheels of other makers when used with a 130mm dropout width.

Furthermore, with the 8-speed Dura-Ace freehub, only the top gear is thread-mounted. This means gear changes are fast and easy because seven sprockets simply slide off and on the splined body.

The freehub. Another performance-enhancing component from Shimano.



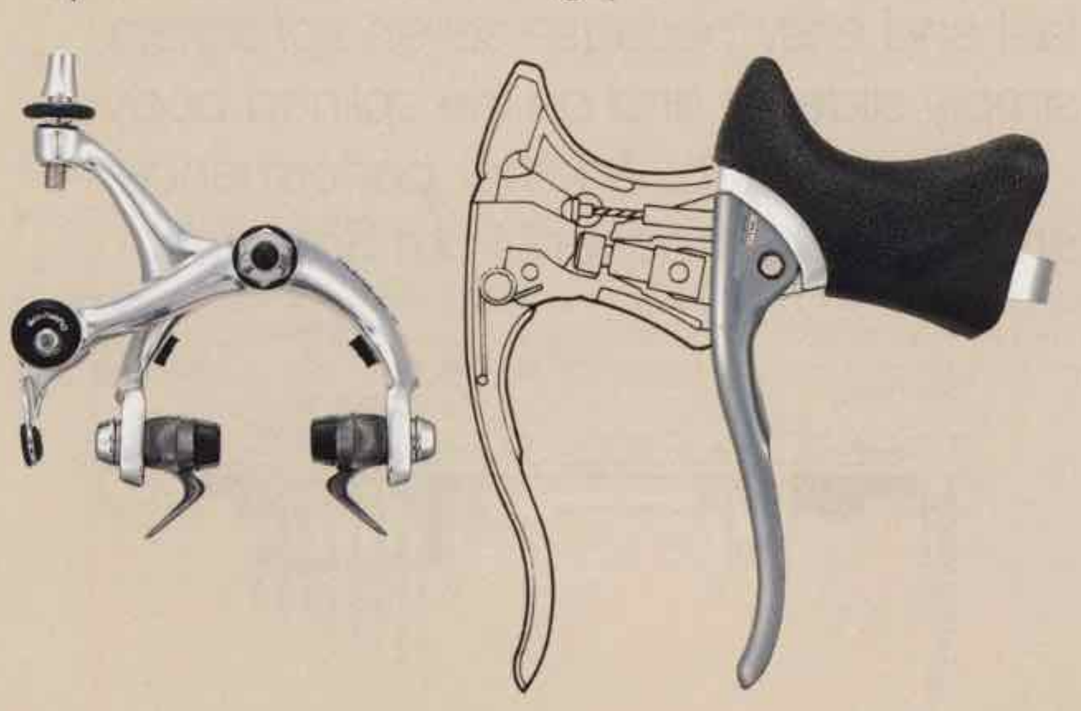


SHIMANO LINEAR RESPONSE

Improved Braking Control

Conventional brake systems have been plagued by excess friction and a stiff unresponsive lever action. As result, many cyclists lack confidence in their ability to use the brakes. It's no wonder when you consider that the bicycle's caliper brakes have undergone little change since they were first invented.

The Shimano Linear Response System offers what is really the first significant improvement in braking performance since the invention of the caliper brake.



SLR incorporates new designs which reduce friction in the lever, cable, and caliper unit. The result is a lively and sensitive "linear response" lever feeling that allows a higher level of braking control.

SLR brake calipers use low-friction thrust washers, resin slider blocks at the spring contacts, and extremely tight manufacturing tolerances. The SLR cable housing incorporates a self-lubricating liner sleeve that lets the cable travel smoothly without binding. The SLR lever utilizes an integral return spring that balances the system and helps realize a highly responsive lever feeling.

SLR is a significant improvement in cycling performance and safety because it allows the cyclist to ride with a greater feeling of confidence.



biopace

Computer-Designed Drive System

Greater Pedaling Efficiency

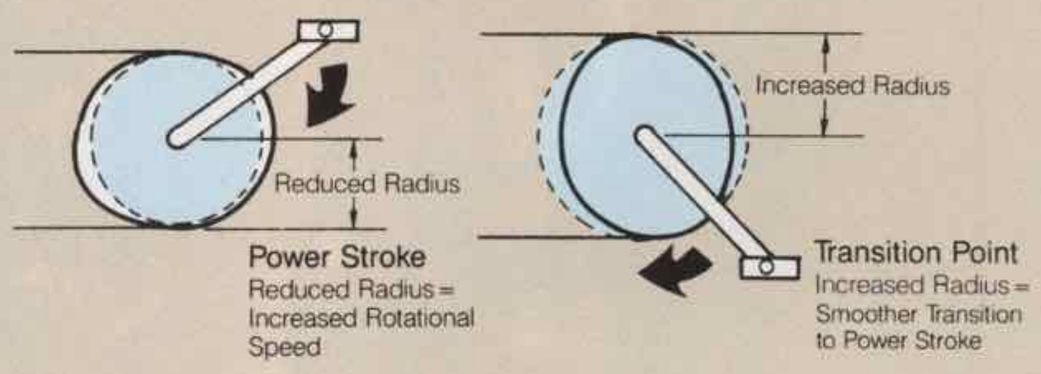
Shimano human-engineering research led to the discovery that the conventional round chainwheel is not the best shape for efficient use of leg power. Computer analysis showed that the natural speed changes the human leg undergoes when walking or jogging were quite different than the pedaling cadence created by a round chainwheel. The scientific conclusion was that the round chainwheel doesn't make efficient use of the leg's energy potential.

Shimano then applied the latest in computer simulation techniques in order to develop a better and more efficient chainwheel. The result is Biopace.

The Biopace shape isn't a simple oval. It's called a "point symmetrical egg curve." This shape creates a pedaling cadence that feels lighter and more natural. And compared to round chainwheels, Biopace actually saves energy. Biopace lets you ride farther and more comfortably with less fatigue and knee strain. And you can climb hills easier too.

Biopace is evolving. Shimano has developed a racing version of Biopace for the Dura-Ace competition component group as well as a high-performance version, HP Biopace, designed specifically for the faster cadences of performance cycling and off-road competition.

No matter which Biopace chainwheel you use, you're riding with the new shape of pedaling efficiency.



DURA-ACE

ROAD



The Unlimited Challenge

Dura-Ace Lets You Aim for the Top

This is it! The most refined professional racing component system available today. Dura-Ace was designed with only one purpose in mind—to give the racing cyclist a winning advantage in competition.

It starts with new 8-speed SIS. With a wider choice of gearing just a click away, you can go for that gear anytime you want, without missing shifts, and without losing concentration on the race.

It continues with the Dura-Ace SLR brake system. A sensitive "linear response" lever feeling that gives you extraordinary control and stopping power.

And it goes on. All the components in the Dura-Ace group have been designed with the same close attention to superior quality, maximum performance, and minimum weight.

The result is a higher level of component function that makes a real difference in competition.

It's the winning advantage of Dura-Ace.



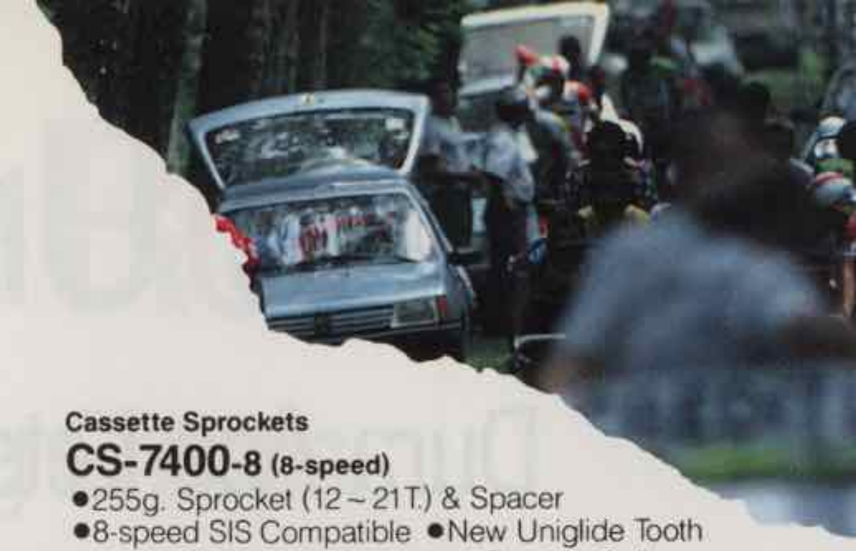


INTEGRATED-8 SIS
SHIMANO INDEX SYSTEM

Your next gear is just a "click" away with the Shimano Index System

SLR
SHIMANO LINEAR RESPONSE

Shimano Linear Response (SLR) provides better modulated braking control with a new light lever feeling





Rear Derailleur

RD-7402

●205g. ●6, 7 & 8-speed SIS Compatible ●Double Servo-Panta Mechanism, Centeron Guide Pulley, Sealed Pulley, Ceramic Pulley, Adjustable Return Spring, Sealed Pivot Axles (O-Ring), Sealed Link Pivots, B-Tension Adjuster, Double Spoke Barrier ●Minimum Rear Sprocket: 12T. ●Maximum Rear Sprocket: 26T. ●Maximum Front & Rear Sprocket Difference: 26T. ●Light Alloy•Color Anodized (Bracket & Plate Body), Light Alloy•Inlaid Epoxy Finish (Right Link), Light Alloy•Anodized Finish (Lift Link, Right & Left Plate)

INTEGRATED-8 DURA-ACE SIS

Shifting Lever

SL-7402-FCAI (8-speed SIS, Brazed-on A Type)

* "C" of Model Number means Italian Type (Fixing Bolt is 5mm. diameter)

●67g. ●8-speed SIS ●SIS-Friction Mode Switch, Light Action Lever, Sealed Mechanism, Human Engineered Design, 30° Off-Set of Lever Stopper, Sealed Outer Casing ●Light Alloy•Buff Finish (Lever) ●For SIS Function, use with RD-7402, FH-7402, CS-7400-8, CN-7400 (narrow type chain) with Shimano SIS Outer Casing with Liner

INTEGRATED-8 DURA-ACE SIS

Shifting Lever

SL-7401-BCAI (7-speed SIS, Band A Type)
SL-7401-FCAI (7-speed SIS, Brazed-on A Type)

●65g. ●7-speed SIS ●Sealed Mechanism, Non-loosening Mechanism, Human Engineered Design ●Light Alloy•Buff Finish (Lever), Steel-Chrome-Plated (Fixing Bolt, Clamp) Zinc•Chrome-Plated (Top-mount Housing) ●Down Tube Lever ●Lever Clamp Diameter: 28.6mm. ●Use SIS with Dura-Ace Rear Derailleur/Freehub/Cassette Sprockets/Shimano SIS Outer Casing with Liner

7-SPEED DURA-ACE SIS

Shifting Lever

SL-7400-BCAI (7-speed SIS, Band A Type)
SL-7400-FCAI (SIS, Brazed-on A Type)

●72g. ●6-speed SIS ●SIS/Friction Changeover, Sealed Mechanism, Non-loosening Mechanism, Human Engineered Desigh ●Light Alloy•Buff Finish (Lever), Steel-Chrome-Plated (Fixing Bolt, Clamp), Zinc-Chrome-Plated (Top-mount Housing) ●Down Tube Lever ●Lever Clamp Diameter: 28.6mm. ●Use SIS with Dura-Ace Rear Derailleur/Freehub/Cassette Sprockets/Shimano SIS Outer Casing with Liner

DURA-ACE SIS

Front Derailleur

FD-7400-B (Band Type)
FD-7400-F (Italian Brazed-on Type)

●93g. (Band Type) ●Sealed Mechanism, Chain Release Dish-out, Helicoil-Secured Cable Fixing Screw, Heat Treated Cable Fixing Bolt ●Maximum: 15T. ●Light Alloy•Anodized Finish (Front & Rear Band). Light Alloy•Color Anodized (Right Link), Light Alloy (Left Link), Heat Treated Steel•Chrome-Plated (Chain Guide, Clamp Bolt) ●Clamp Diameter: 28.6mm.

Freehub

FH-7402 (Rear, 8-speed)
HB-7400-F (Front Hub)

●460g. Rear (w/o Sprocket) ●8-speed SIS Compatible ●Contact-type Sealed Mechanism, Uni-Balance System, Lubrication Ports with Open/Close Indicator, Easy Installation, Stainless Steel Ball Bearings ●Over Lock Nut Dimensions: 130mm. ●Spoke Holes: 28H, 32H, 36H ●Forged Alloy•Anodized Finish (Hub Shell), Resin•Black Finish (Dust Cap), Steel•Chrom-Plated (Quick Release Housing & Nut)

INTEGRATED-8 DURA-ACE SIS

Cassette Sprockets

CS-7400-8 (8-speed)

●255g. Sprocket (12 ~ 21T.) & Spacer ●8-speed SIS Compatible ●New Uniglide Tooth ●Teeth: Threaded Sprocket; 12T. ~ 14T., Spline Sprocket; 14T. ~ 28T. ●Champagne Gold Finish (Sprocket)

●Standard Sprocket Combinations:

8-speed	12, 13, 14, 15, 16, 17, 18, 19T. 12, 13, 14, 15, 16, 17, 19, 21T. 13, 14, 15, 16, 18, 20, 22, 24T. 13, 14, 15, 16, 17, 18, 19, 21T. 13, 14, 16, 18, 20, 22, 24, 26T.

INTEGRATED-8 DURA-ACE SIS

Freehub

FH-7400-6/7 (Rear, 6-speed/7-speed)
HB-7400-F (Front Hub)

●439g. Rear 6 & 7-speed, 126mm. (w/o Sprocket), 228g. Front ●6 & 7-speed SIS Compatible ●Sealed Mechanism, Uni-Balance System, Lubrication Ports with Open/Close Indicator ●Forged Light Alloy• Anodized Finish (Hub Shell), Resin•Black Finish (Dust Cap), Steel•Chrome-Plated (Quick Release Housing & Nut) ●Front 100mm. O.L.D., Rear 126mm., 130mm. O.L.D. ●Spoke Holes: 24H, 28H, 32H, 26H

7-SPEED DURA-ACE SIS

Cassette Sprockets

CS-7400-6/7 (6-speed/7-speed)

●208g. Sprocket (6-speed 13 ~ 21T.) & Spacer, 221g. Sprocket (7-speed 12 ~ 21T.) & Spacer ●6 & 7-speed SIS Compatible ●Champagne Gold Finish (Sprocket) ●Teeth: Threaded Sprocket; 12T. ~ 18T., Spline Sprocket; 13T. ~ 28T.

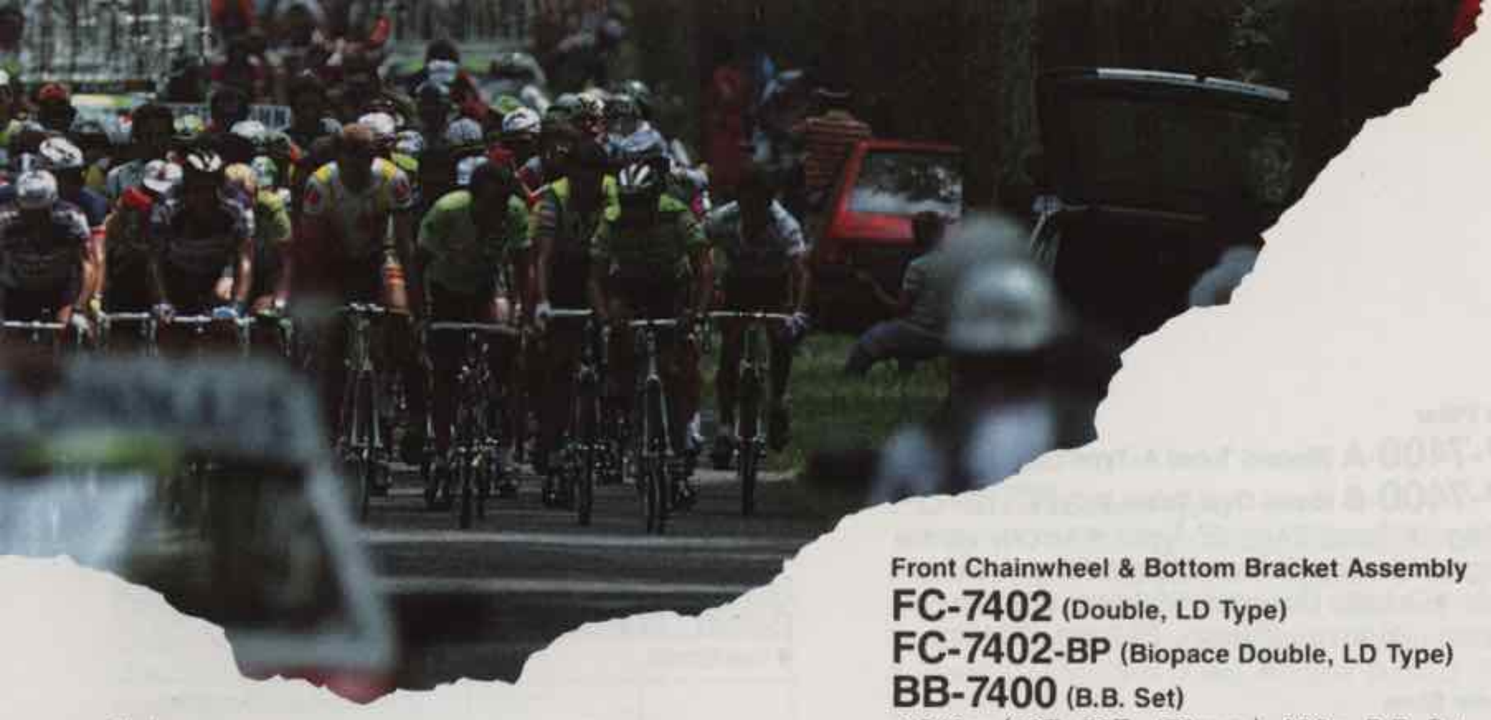
●Standard Sprocket Combinations:

6-speed	12, 13, 14, 15, 16, 17T. 13, 14, 15, 16, 17, 18T. 13, 14, 15, 17, 19, 21T. 13, 15, 17, 19, 21, 23T. 13, 15, 17, 20, 23, 26T.
7-speed	12, 13, 14, 15, 16, 17, 19T. 12, 13, 14, 15, 17, 19, 21T. 13, 14, 15, 16, 17, 19, 21T. 13, 14, 15, 17, 19, 21, 24T. 13, 15, 17, 19, 21, 23, 26T.

7-SPEED DURA-ACE SIS



DURA-ACE
ROAD



Hub

HB-7400-R (Rear Hub)
HB-7400-F (Front Hub)

●315g. Rear, 228g. Front ●Sealed Mechanism, Lubricating Ports with Open/Close ●Forged Light Alloy•Anodized Finish (Hub Shell) ●Resin•Black Finish (Dust Cap) ●Steel•Chrome Plated (Quick Release Housing & Nut) ●Quick Release, One-Piece Front & Rear Hub ●Front: 100mm. O.L., Rear 6-speed, 126mm. O.L. ●Spoke Holes: 28H, 32H, 36H

Multiple Freewheel

MF-7400-6 (6-speed)
MF-7400-7 (7-speed)

●6 or 7-speed SIS Compatible ●Sealed Mechanism, New Uniglide Teeth, Lubricating Port on Freewheel body ●Steel•Champagne Gold Finish ●For 1/2″ × 3/32″ Chain

●Standard Sprocket Combinations:

6-speed	13, 14, 15, 16, 17, 18T. 13, 14, 15, 17, 19, 21T. 13, 15, 17, 19, 21, 23T. 13, 15, 17, 20, 23, 26T.
7-speed	12, 13, 14, 15, 16, 17, 19T. 12, 13, 14, 15, 17, 19, 21T. 13, 14, 15, 16, 17, 19, 21T. 13, 14, 15, 17, 19, 21, 24T. 13, 15, 17, 19, 21, 23, 26T.

7-SPEED DURA-ACE SIS

Dura-Ace Grease

●Special water resistant grease



Front Chainwheel & Bottom Bracket Assembly

FC-7402 (Double, LD Type)
FC-7402-BP (Biopace Double, LD Type)
BB-7400 (B.B. Set)

●643g. (42T., 52T., 170mm.), 292g. B.B. Set ●Computer Aided Design (Crank), Sealed Mechanism (B.B.) ●Light Alloy•Anodized Finish (Crank, Chainring). Light Alloy•Etched-Anodized Finish (Crank Arm Cap), Steel•Chrome-Plated (Fixing Bolt) ●Nickel Cr-Mo Axle ●For 1/2″ × 3/32″ Chain ●Teeth: Inner; 39T.~47T. (Round), 42T. (Biopace), Outer; 48T.~56T. (Round), 52T., 53T. (Biopace) ●Crank Length: 165mm., 170mm., 172.5mm., 175mm., 177.5mm., 180mm. ●Crank Thread: English BC 6/16″ × 20T.P.I. ●Cup Thread: English BC 13.7 × 24T.P.I., French M35 × 1.0, Italian M36 × 24T.P.I. ●B.B. Size: 68-W-112, 70-W-113 ●Bolt Circle Diameter: 130mm. (LD Type)

biopace

UG Chain

CN-7400

●Narrow Type Uniglide Chain, Bushingless Design, Boron Finished Link Pins ●Size: 1/2″ × 3/32″ Chain ●Roller Link Plate; Nickel Finish, Pin Link Plate; Nickel Finish

Pedal

PD-7400

●372g. Pair (Including Toe Clip, L-size) ●34° Road Clearance, Compound Structure of Needle bearing and Cup & Cone, Aerodynamic Design, Sealed Mechanism ●Light Alloy•Buff Finish (Body), Light Alloy•Anodized Finish (Front Plate), Light Alloy Black Solid Anodized Finish, Nickel Cr-Mo Steel•Chrome-Plated/Polished Finish (Axle), Steel-Chrome-Plated or Light Alloy•Anodized Finish (Toe Clip) ●Toe-Clip Size: M, L, LL ●Crank Thread: English BC 9/16 × 20T.P.I.

Clipless Pedal

PD-7401

●416g. (Pedal, Pair), 92g. (Cleat & Hardware) ●34° Road Clearance, Precision Manufactured, Compound Roller and Ball Bearing Axle, Aerodynamic Dust Capless Design, Efficient Sealed Mechanism, Adjustable Cleat Grip Tension, Compatible with Look® Cleats ●Light Alloy (Body), Nickel Cr-Mo Chrome Plated Axle with Precision Ground and Polished Races ●Crank Thread: English BC 9/16 × 20T.P.I.





Brake

BR-7402-49 (Short 49 Type)

●376g. (F & R, 49 Type) ●SLR (Shimano Linear Response) System ●Low Profile Brake Shoe, Spring Sleeve, Thrust Bearing & Coated Pivot Washer, Click & Eccentric Type Quick Release, Computer Aided Design (CAD) ●Front Double Lock Nut Type (Pivot Bolt) ●Forgd Light Alloy•Anodized Finish (Arch), Steel-Chrome-Plated (Pivot Bolt, Quick Release), Light Alloy•Color Anodized Finish (Shoe Holder with Tire Guide)

*For SLR System use BR-7402, BL-7402 and Shimano Outer Cable with Liner.

SLR

Brake Lever

BL-7402 (Aero Type)

●240g. Pair ●SLR (Shimano Linear Response) System ●Aerodynamic Design, Anatomical Design, One-Step Cable Attachment ●Lever Clamp Diameter: 24.2mm. ●High Tech Gray Anodized Finish (Lever)

*For SLR System use BL-7402, BR-7402 and Shimano Outer Calbe with Linear.

SLR

Seat Pillar

SP-7400-A (Round Tube) A-Type
SP-7400-B (Semi Oval Tube) B-Type

●224g. (A-Type), 244g. (B-Type) ●Aerodynamic Design, Hexagon Release ●Light Alloy•Anodized Finish ●Outside Diameter: 25.0mm., 26.4mm., 26.6mm., 26.8mm., 27.0mm., 27.2mm., 27.4mm.

Handle Stem

HS-7400

●252g. (100mm.), 260g. (120mm.) ●Aerodynamic Design, Hexagon Release ●Light Alloy•Anodized Finish ●Extension: 70mm., 80mm., 90mm., 100mm., 110mm., 120mm., 130mm. ●Handle Stem Diameter: 22.2mm. ●Handle Bar Clamp Diameter: 260mm.

Head Parts

HP-7400

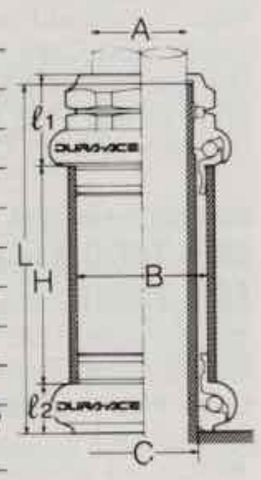
●113g. ●Road Type ●Sealed Mechanism ●Light Alloy•Anodized Finish (Nut, Cup), Light Alloy•Anodized Finish (Cone, Bearing Steel Insertion), Titanium-Plated (Lower Cone) ●Height: Lower Stack 13.0mm., Total Stack 36.3mm.

●Variations:

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/ Italian	BC1 × 24T.	30.2mm.	26.4mm.
French	M25 × P1.0	30.2mm.	26.4mm.

■ Dimensions

ℓ1	22.8mm.
ℓ2	13.5mm.
H	Head Tube Length
L	H + 36.3mm.
A	22.3mm.
B	30.2mm.
	30.0mm. (JIS)
C	26.4mm.
	27.0mm. (JIS)
Thread	BC1" × 24T. (English thread)/ M25 × P1.0 (French thread)

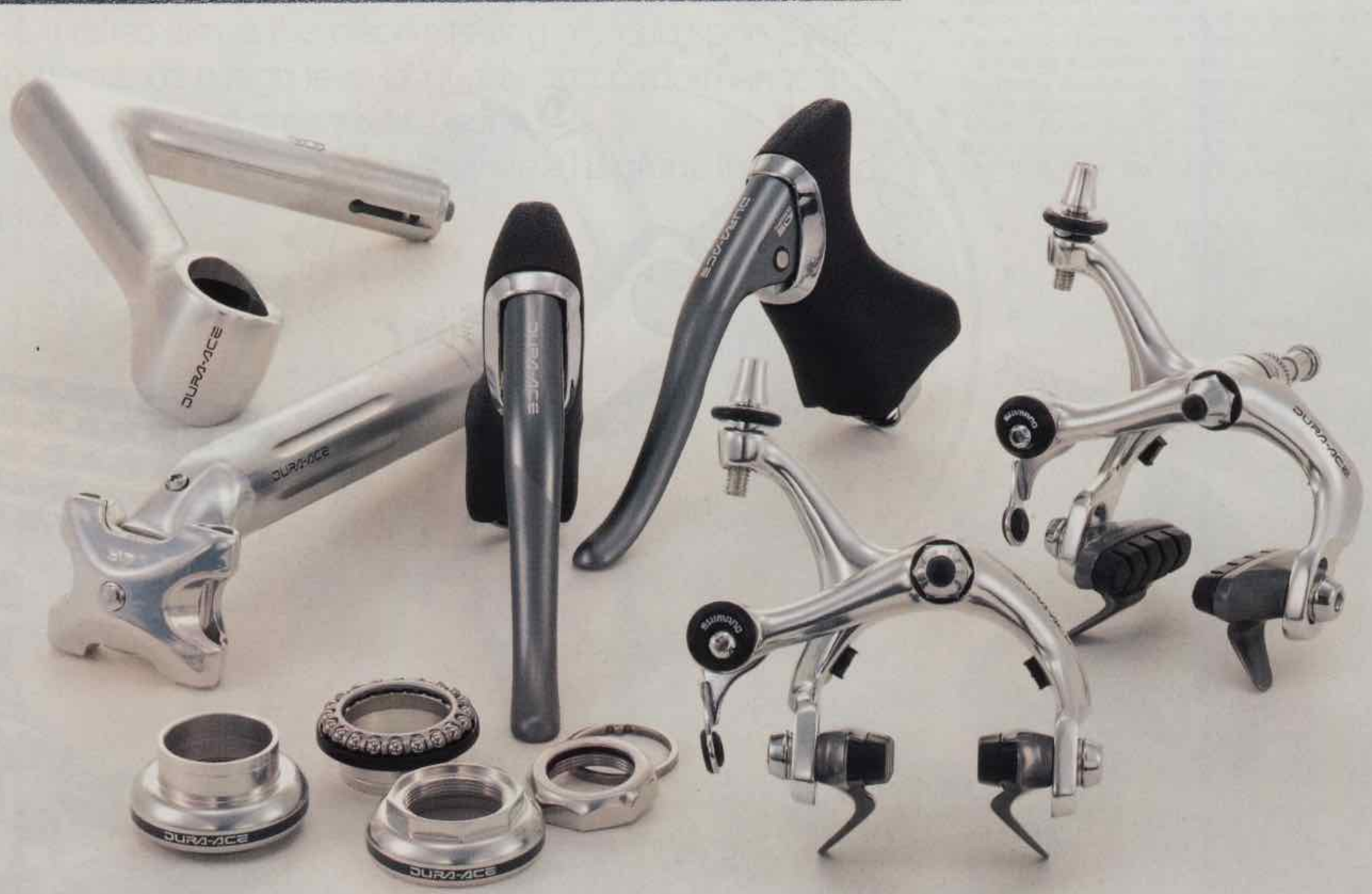




Dura-Ace Brake Shoe Set

(2 shoes)



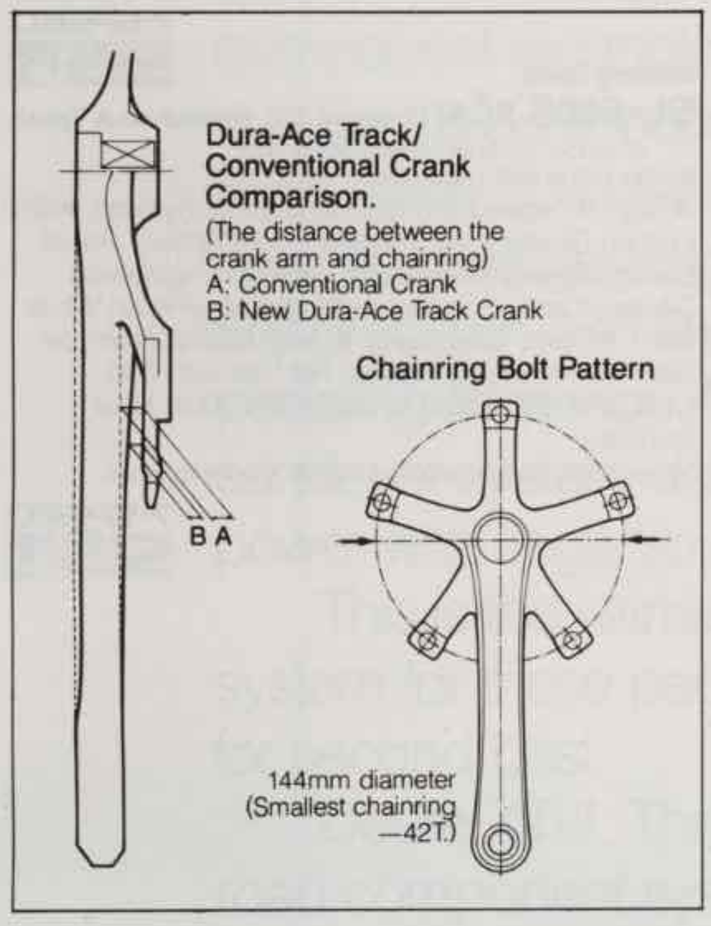


DURA-ACE
ROAD

Front Chainwheel & Bottom Bracket Assembly

FC-7600
BB-7600 (B.B. Set)

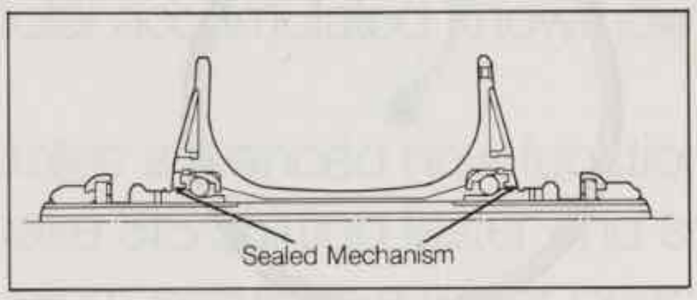
●605g. (48T., 170mm.) 305g. B.B. Set ●Exclusively Designed for the Track, Computer Aided Design (Crank), Removable Sealed Mechanism (B.B) ●Light Alloy•Anodized Finish (Crank, Crank Arm Cap), Light Alloy•Hard Color Anodized Finish (High-Tech Gray), Steel•Chrome-Plated (Fixing Bolt & Nut) ●Nickel Cr-Mo Axle ●Teeth: 44T.~55T. (1/8″ and 3/32″ Available) ●Crank Length: 165mm., 167.5mm., 170mm., 172.5mm., 175mm. ●Crank Thread: English BC 9/16 × 20T.P.I. ●Cup Thread: English BC 1.37 × 24T.P.I., French M35 × 1.0, Italian M36 × 24T.P.I. ●B.B. Size: 68-S-109mm., 70-S-109mm.



Hub

HB-7600 (Large & Small Flange)

●313g. Rear Large Flange w/Lock Ring, 241g. Front Large Flange ●Precision Ground Cones, Diamond-Polished Mirror Finish (Cup & Cone), Sealed Mechanism, Composite-Type Design (Large Flange) ●Forged Light Alloy•Anodized Finish (Hub Body), Poly-Carbonate Resin Composite Hub Flange ●Front: O.L. 100mm., Rear: O.L. 120mm. (One-Side or Both-Side Threaded Type) (Small Flange/Large Flange) ●Sprocket Thread: BC 1.37 × 24T.P.I. (English) ●Lock Ring Thread: BC 1.29 × 24T.P.I. (Left) ●Spoke Holes: 24H, 28H, 32H, 36H ●Spoke Hole Diameter: ∅2.4mm. ●Fork End Slot Width: Front; 9mm. (Hollow Axle), Rear; 10mm. (Hollow Axle)



Sprocket

SS-7600 (Hub Sprocket for Track Model)

●Cr-Mo Steel ●Thread: BC 1.37 × 24T.P.I. (English)
●Standard Sprocket: 1/2″ × 1/8″, 1/2″ × 3/32″
●Teeth: 13T., 14T., 15T., 16T.
●1/2″ × 1/8″ Sprocket

13T.	31g.
14T.	38g.
15T.	44g.
16T.	53g.



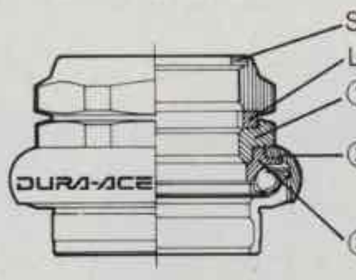
Head Parts

HP-7600

●90g. ●Composite Structure, Sealed Mechanism, Super-Light Weight ●Light Alloy•Anodized Finish (Lock Nut/Upper Cone Nut), High Impact Resin (Upper Cone/Lower Cup Covers), Bearing Steel (Upper & Lower Cup), Die Steel•CVD Finish* (Upper & Lower Cone) ●Height: Lower Stack 11.5mm., Total Stack 30.0mm.
*Titanium Plated
●Variations:

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/ Italian	BC1 × 24T.	30.2mm.	26.4mm.
French	M25 × P1.0	30.2mm.	26.4mm.

Composite Construction



DURA-ACE
TRACK

Performance by Design

A New Look for the Quality Bicycle



SHIMANO INDEX SYSTEM

biopace COMPUTER DESIGNED DRIVE SYSTEM

SLR SHIMANO LINEAR RESPONSE

The high-tech design of the Santé component group creates a new sophisticated image for the performance bicycle.

But the real beauty of Santé lies beneath its elegant form where traditional Shimano quality and advanced functions come into play.

For example, Santé offers click-stop 7-speed SIS shifting, linear feedback SLR brake system, and energy-saving Biopace chainwheels. Crank strength is increased through a smooth aero design with dead-bottom pedal bores. Stainless steel derailleur pivots ride in brass bushings. And the list goes on.

This design integrity, combined with Santé's high-tech look of pure precision, results in the highest level of form and function ever offered in a quality component group.

So if you like to ride fast with style, consider Santé. It's performance by design.

Santé

by SHIMANO

Rear Derailleur

RD-5001 (Short Cage)

RD-5001-LS (Middle Cage)

●191g. (Short Cage) ●6 or 7-speed SIS Compatible, Double Servo-Panta Mechanism, Centeron Guide Pulley, Sealed Mechanism, Ceramic Pulley Bushings, Bronze Pivot Bushings, Stainless Steel Pivot Pins, Double Spoke Barrier, Bracket Tension Adjustment Screw ●Maximum Rear Sprocket: 24T. (Short Cage), 23T. – 28T. (Middle Cage), Minimum Rear Sprocket: 12T., Maximum Front & Rear Sprocket Difference: 24T. (Short Cage), 28T. (Middle Cage) ●Light Alloy•Silver Paint (Bracket & Plate), Light Alloy•Pearl White Paint (Right Link), Light Alloy•High-Tech Gray Paint (Right Pulley Cage), Light Alloy•High-Tech Gray Anodized Finish (Left Link & Left Pulley Cage)

7-SPEED SIS

Shifting Lever

SL-5000-FC*AI (7-speed SIS, Brazed-on A Type)

"C" of Model Number means Italian Type
(Fixing Bolt is 5mm. Diameter)

●70g. ●7-speed SIS (Shimano Index System) ●SIS/Friction Changeover, Integral "Light Action" Assist Spring, Sealed Mechanism, Human Engineered Design, Cable End Cover ●Light Alloy•Pearl White Paint ●Down Tube Lever ●Lever Clamp Diameter: 28.6mm. ●SIS Application: For Use with 600 ULTEGRA (RD-6400) or Santé (RD-5001) Rear Derailleur

*Conversion parts available for other mounting types.

7-SPEED SIS





Front Chainwheel & Bottom Bracket Assembly

FC-5000 (Biopace Double, LD Type)

BB-5000 (B.B. Set)

●689g. (42, 52T., 170mm.), 295g. B.B. Set ●Chainwheel: Low Profile, Flush Surface Design, Biopace Chainrings, Available in 160mm. Crank Length ●B.B. Set: Compact Design, Sealed mechanism, Reduced Friction ●Forged Light Alloy•Pearl White Paint (Crank), Light Alloy•Silver Brown Anodized Finish•Pattern Etching (Chainrings), Resin•Chrome Plated (Crank Cap), Nickel Cr-Mo Steel•Black Arodized Finish (B.B. Axle) ●1/2″ × 3/32″ Chain ●Teeth: Inner (HP Biopace); 42T., Outer (Biopace); 52T, 53T. ●Crank Length: 160mm., 165mm., 170mm., 172.5mm. ●Crank Thread: English BC 9/16″ × 20T.P.I. ●Cup Thread: English BC 1.37 × 24T.P.I., French M35 × 1.0, Italian M36 × 24T.P.I. ●B.B. Size: 68-W-108, 70-W-108 ●Bolt Circle Diameter: 130mm.

(LD Type) biopace-HP

Front Derailleur

FD-5000-B (Band Type)

FD-5000-F (Italian, Brazed-on Type)

●Band Type: 100g. ●Leading Action Pantagraph Mechanism, Rigid Chain Guide, Sealed Mechanism ●Maximun: 14T. ●Light Alloy•Silver Paint (Clamp Band), Lignt Alloy•Pearl White Paint (Right Link) Light Alloy•High Tech Grey Anodized Finish (Left Link), Heat-Treated Steel•Chrome Plated (Chain Guide) ●Clamp Diameter: 28.6mm.



Freehub

FH-5000 (Rear/7-speed)

CS-5000 (Cassette Sprockets)

HB-5000 (Front Hub)

●430g. (Rear w/o Sprockets), 232g. (Front), 233g. (Sprockets 12T. – 21T. & Spacer) ●7-speed SIS Compatible ●Flush Surface Design, Human-Engineered QR Lever, Wider Bearing Placement, Sealed Mechanism, Gum Covered QR Nut, Uniglide Sprockets ●Forged Light Alloy•Pearl Silver Anodized Finish (Hub Shell), Steel•Chrome Plated (Sprockets) ●Teeth: Threaded Sprocket; 12T. – 14T., Spline Sprocket; 13T. – 28T. ●Over Lock Nut Dimensions: Front; 100mm., Rear; 126mm. ●Spoke Holes: 28H, 32H, 36H ●Spoke Hole Diameter: 2.6mm. ●Standard Sprocket Combination:

7-speed	12, 13, 14, 15, 16, 17, 19T. 13, 14, 15, 16, 17, 19, 21T. 13, 14, 15, 17, 19, 21, 24T. 13, 15, 17, 19, 21, 23, 26T. 13, 15, 17, 19, 21, 24, 28T.

7-SPEED SIS

Multiple Freewheel

MF-5000

●410g. (12, 13, 15, 17, 19, 21, 23T.) ●7-speed SIS Compatible ●Compatible with Dura-Ace 7-speed SIS ●Narrow 7-speed SIS Spacing ●Sealed Mechanism, New Uniglide Teeth, Lubricating Port on Freewheel-body ●Steel•Nickel-Chrome Plate (Sprocket) ●For 1/2″ × 3/32″ Chain ●Standard Sprocket Combinations:

7-speed	12, 13, 14, 15, 16, 17, 19T. 12, 13, 15, 17, 19, 21, 23T. 13, 14, 15, 16, 17, 19, 21T. 13, 14, 15, 17, 19, 21, 24T. 13, 15, 17, 19, 21, 23, 26T. 13, 15, 17, 19, 21, 24, 28T.

7-SPEED SIS

Brake

BR-5000-49 (Short 49 Type)

●310g. (F & R, Sunken Pivot Bolt Type) ●SLR (Shimano Linear Response) System, CAD Developed, One-Piece Brake Shoe with Integral Tire Guide, Aerodynamic Form ●Forged Light Alloy•Silver Paint (Caliper Arms) ●Sunken Pivot Bolt Types ●Caliper Reach: 39—49mm. ●For SLR system use BR-5000 with SLR-type brake lever and Shimano Outer Cable with Liner

SLR

Brake Lever

BL-5001 (Aero Type)

BL-5002 (Aero Type, Short Reach)

●266g. (BL-5001, Pair) ●SLR (Shimano Linear Response) System, One-Touch Quick Release, Smooth Contours, Human Engineered Design ●Light Alloy•Pearl White Paint (Lever), Light Alloy (Body) ●Lever Clamp Diameter: 23.8 or 24.2mm. ●Reach: 97.5mm. (BL-5001), 87.5mm. (BL-5002) ●Bracket Cover: White, Gray

SLR

Head Parts

HP-5000

●100g. ●Sealed Mechanism, Compact Design, Composite Materials, Non-Loosening Mechanism ●Light Alloy•Anodized Finish (Nut), Stainless Steel•Pearl White Paint (Upper & Lower Cups), Stainless Steel (Upper & Lower Cone) ●Height: Lower Stack 10.5mm., Total Stack 32.5mm. ●Variations:

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/ Italian	BC1 × 24T.P.I.	30.2mm.	26.4mm.
French	M25 × P1.0	30.2mm.	26.4mm.





Pure Performance

Upgraded Performance Through Human Engineering



SIS SHIMANO INDEX SYSTEM

biopace COMPUTER DESIGNED DRIVE SYSTEM

SLR SHIMANO LINEAR RESPONSE

To get the most out of your racing bike, you need to get the most out of its components.

Meet 600 Ultegra! The evolutionary new racing component system that incorporates the latest advances in Shimano human-engineering technology.

600 Ultegra forms a better man-machine interface while offering a higher level of quality, value, and performance than anything else in it's class.

Among it's many advanced features, 600 Ultegra offers precision 7-speed SIS cassette hub shifting, highly sensitive linear response SLR brake system, energy-saving Biopace chainwheels and a positive-lock cleat and pedal design for greater power transfer efficiency. The front derailleur shift lever has even been offset to allow faster chainwheel shifting!

This is the kind of attention to detail that stands behind the leading edge capability of 600 Ultegra.

That's why we call it Pure Performance.

Rear Derailleur

RD-6400

●216g. ●6 & 7-speed SIS Compatible ●Improved Double Servo-Panta Mechanism, Centeron Guide Pulley, Sealed Mechanism, Ceramic Guide Pulley Bushings, Double Spoke Barrier, Digital Cable Adjust Mechanism ●Minimum Rear Sprocket: 12T. ●Maximum Rear Sprocket: 28T. ●Maximum Front & Rear Sprocket Difference: 28T. ●Light Alloy•Dark Gray Paint (Bracket & Plate Body), Light Alloy•Silver Paint (Right Link), Light Alloy (Pulley Plates & Left Link)

7-SPEED SIS

Shifting Lever

SL-6400-BCAI (SIS, Side-Band A Type)

SL-6400-FCAI (SIS, Mount-Brazed-on A Type)

* "C" of Model Number means Italian Type (Fixing Bolt is 5mm. diameter)

●60g. (SL-6400-FCAI) ●Same Lever for 6 & 7-speed SIS (Shimano Index System), SIS/Friction Changeover, Light Action Mechanism, Lever Interchangeability, Human Engineered Design, Sealed Mechanism ●Light Alloy•Gray Paint ●Down Tube Lever ●Lever Clamp Diameter: 28.6mm. ●Use SIS with RD-6400 Rear Derailleur/FH-6400 Freehub/Shimano UG Chain/Shimano SIS Outer Casing with Liner

7-SPEED SIS

Front Chainwheel & Bottom Bracket Assembly

FC-6400-BP (Biopace Double, LD Type)

BB-6400 (B.B. Set)

●650g. (42T., 52T., 170mm.) ●Low Profile Design, Forged Arm & Spider, Sealed Mechanism, Aerodynamic Profile, Biopace Chainrings (FC-6400-BP) ●10.9 oz. (308g.) B.B. Set ●Light Alloy (Crank & Chainrings) ●For 1/2" × 3/32" Chain ●Teeth: Inner (HP Biopace); 42T., Outer (Biopace); 52, 53T. ●Crank Length: 165mm., 170mm., 172.5mm., 175mm. ●Crank Thread: English BC 9/16" × 20T.P.I. ●Cup Thread: English 1.37 × 24T.P.I., Italian M36 × 24T.P.I. ●B.B. Size: 68-W-113, 70-W-115 ●Bolt Circle Diameter: 130mm. (LD Type)

biopace-HP

Front Derailleur

FD-6400-B (Band Type)

FD-6400-F (Italian, Brazed-on Type)

●104g. (Band Type) ●Leading Action Pantagraph Mechanism, Compact Design, Rigid Chainguide ●Maximum: 14T. ●Light Alloy•Dark Gray Paint (Clamp Band), Light Alloy•Silver Paint (Right Link), Heat Treated Steel•Chrome Plated (Chain Guide)



SHIMANO 600 ULTEGRA



Freehub

FH-6400-6/7 (Rear, 6-speed/7-speed)
HB-6400-F (Front Hub)

●423g. (Rear w/o Sprockets), 212g. (Front) ●6 & 7-speed SIS Compatible ●Compatible with 6 & 7-speed Clusters, Bolt-on Type Freewheel Mechanism, Sealed Mechanism, Burnished Bearing Races, Uni-Balance System ●Light Alloy•Anodized Finish (Hub Shell), Resin•Dark Gray Metallic Finish (Dust Cap) ●Front: 100mm. O.L.D., Rear: 126mm. O.L.D. ●Spoke Holes: 28H, 32H, 36H (Front), 28H, 32H, 36H (Rear) ●Spoke Hole Diameter: 14G

7-SPEED SIS

Cassette Sprockets

CS-6400

●233g. (7-speed Sprockets: 12T.~21T. & Spacer) ●6 & 7-speed SIS Compatible ●For 1/2" × 3/32" Chain (Narrow Type for 7-speeed) ●Steel•Silver Finish (Sprockets)

●Standard Sprocket Combination:

6-speed	13, 14, 15, 16, 17, 18T.	13, 15, 17, 20, 24, 28T.
	13, 14, 15, 17, 19, 21T.	12, 14, 17, 20, 24, 28T.
	13, 14, 17, 19, 21, 23T.	13, 15, 17, 20, 25, 30T.
	13, 15, 17, 19, 21, 24T.	12, 14, 16, 19, 22, 26T.
	13, 15, 17, 20, 23, 26T.	12, 14, 17, 20, 25, 30T.
7-speed	12, 13, 14, 15, 16, 17, 19T.	
	12, 13, 14, 15, 17, 19, 21T.	
	13, 14, 15, 17, 19, 21, 24T.	
	13, 14, 15, 16, 17, 19, 21T.	
	13, 15, 17, 19, 21, 23, 26T.	
	13, 15, 17, 19, 21, 24, 28T.	
	15, 16, 17, 18, 19, 20, 21T.	

7-SPEED SIS

●Teeth:

	6-speed	7-speed
Threaded Sprockets	12—16T. (6S mark)	12—16T. (7S mark)
2nd Gear (spline type) w/spacer	13T. (6S mark)	13T. (7S mark)
Splined Sprockets	14—26T./28T./30T./32T./34T.	
Spacer Width	3.65mm. (Light gray)	2nd—3.30mm. (except 13T.) 3rd to low—3.1mm. (7S mark) (Dark gray)

Head Parts

HP-6400

●100g. ●Compact & Light Weight, New Improved Sealed Mechanism, Burnished & Polished Finish ●Light Alloy (Upper & Lower Cup), Cr-Mo Steel (Races), Stainless Steel (Lower Cone)

●Variations:

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/ Italian	BC1 × 24T.	30.2mm.	26.4mm.

Brake

BR-6400-49 (Short 49 Type)
BR-6400-57 (Long 57 Type)

●360g. (F & R, 49 Type) ●SLR (Shimano Linear Response) System, Thrust Bearing & Coated Pivot Washer, Spring Sleeve, One-Piece & Low Profile Brake Shoe ●Light Alloy

*For SLR system use BR-6400, BL-6400/BL-6401, and Shimano Outer Cable with Liner.

SLR

Brake Lever

BL-6400 (Standard Type)
BL-6401 (Aero Type)
BL-6402 (Aero Type, Short Reach)

●328g. (BL-6401, Pair) ●SLR (Shimano Linear Response) System, Human Engineered Design, Aero Cable Guides ●Light Alloy ●Hooded Lever with Rubber Cover ●Lever Clamp Diameter: 23.8mm.~24.2mm. ●Bracket Cover: Black, White

SLR

Shimano 600 ULTEGRA Brake Shoe Set

(4 shoes)



Pedal

PD-6400

●478g. (Pair Toe Clip L Size) ●Positive Grip Shoe Cleat, Same Road Clearance as Dura-Ace, Aerodynamic Design, Sealed Mechanism, Easy-Maintenance Cartridge Axle, Compound Structure of Resin Bushing and Cup & Cone Bearings ●Light Alloy (Body), Cr-Mo Steel (Axle) ●Crank Thread: BC 9/16 × 20T.P.I. ●Toe Clip Size: M, L, LL

Clipless Pedal

PD-6401

●450g. (Pedal, Pair), 92g. (Cleat & Hardware) ●Precision Manufactured, Compound Roller and Ball Bearing Axle, Aerodynamic Dustcap Less Design, Efficient Sealed Mechanism, Adjustable Cleat Grip Tension, Compatible with Look® Cleats ●Light Alloy (Body), Cr-Mo Steel (Axle) ●Crank Thread: BC 9/16 × 20T.P.I.

Seat Piller

SP-6400-A (Round Tube) A-Type
SP-6400-B (Semi Oval Tube) B-Type

●284g. (SP-6400-B: 27.2mm.) ●Aerodynamic Design, Hexagon Release ●Light Alloy•Anodized Finish ●Outside Diameter: 25.0mm., 27.2mm.

Handle Stem

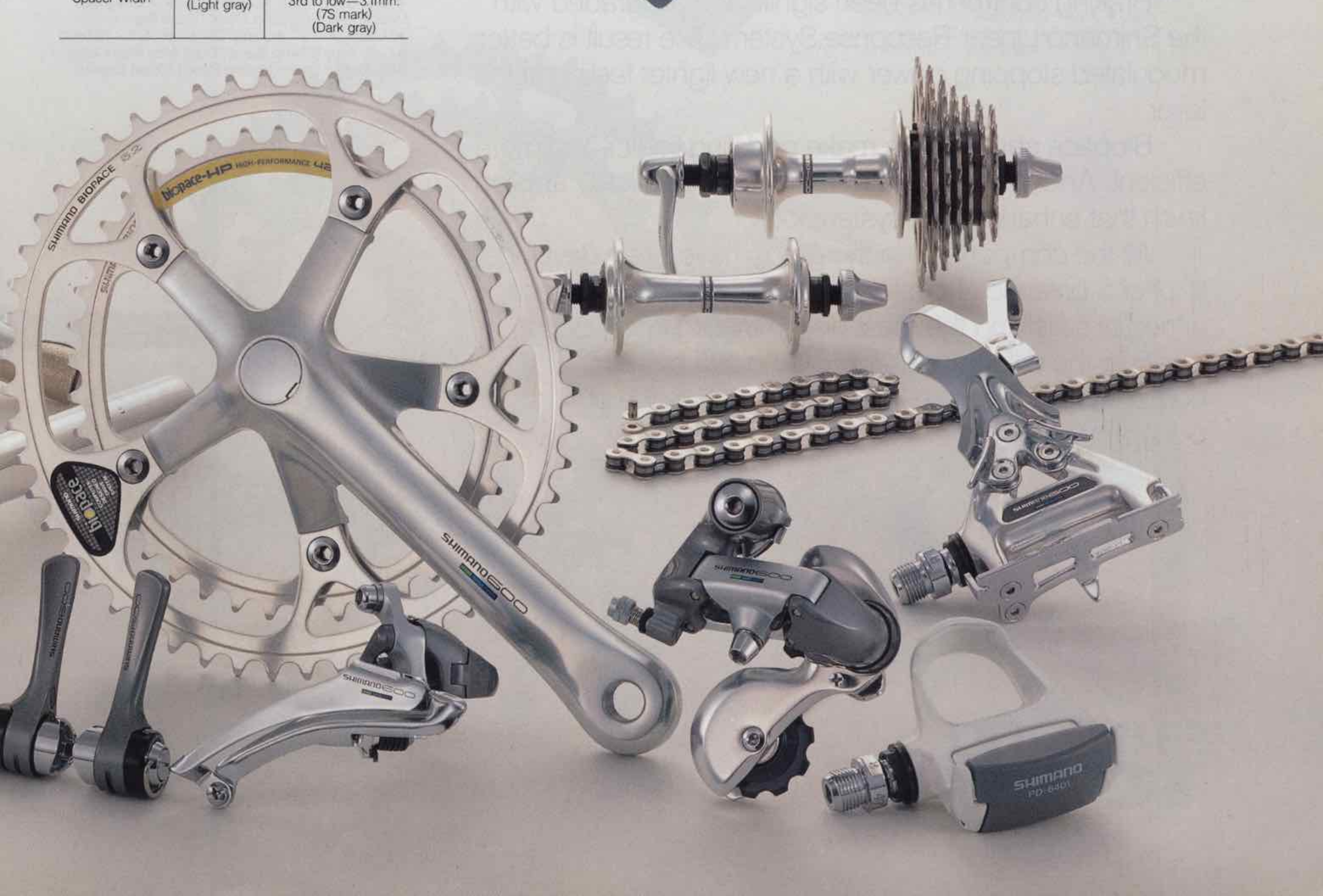
HS-6400

●286g. (100mm.) ●Aerodynamic Design, Hexagon Release ●Light•Alloy Anodized Finish ●Extension: 80mm., 90mm., 100mm., 110mm., 120mm., 130mm. ●Handle Stem Diameter: 22.2mm. ●Handle Bar Clamp Diameter: 25.4mm., 26.0mm.

UG Chain

CN-6208 (Silver)

●Narrow Type Uniglide Chain, Bushingless Design, ●Steel ●Surface Treatment: Roller Link Plate; Black Finish, Pin Link Plate; Silver Finish



The New Generation of Perf

The System Component Group for Sport Cyclists



SIS SHIMANO INDEX SYSTEM

biopace COMPUTER DESIGNED DRIVE SYSTEM

SLR SHIMANO LINEAR RESPONSE

The quality and advanced functions of Shimano 105 bring pro-style performance to the sport cyclist.

Now with 7-speed SIS, Shimano 105 offers state-of-the-art shifting performance with the same number of gear choices as the more expensive groups.

Braking control has been significantly upgraded with the Shimano Linear Response System. The result is better modulated stopping power with a new lighter feeling at the lever.

Biopace chainwheels make pedaling lighter and more efficient. And 105 sports a durable electrostatically applied finish that enhances the system look.

All the components in the group have been developed to offer a balance of quality, durability, and performance aimed at satisfying the most discriminating sport cyclist.

Feel the difference that Shimano 105 system components can make. It's the new generation of performance.

SHIMANO 105

Rear Derailleur 7-SPEED

RD-1051

●257g. ●6 & 7-speed SIS Compatible ●Double Servo Panta Mechanism, Centeron Guide Pulley, Sealed Pivot Axles, Sealed Link Pivots, Sealed Mechanism, Sintered Alloy Guide Pulley Bushing, Double Spoke Barrier, Digital Cable Adjust Mechanism ●Minimum Rear Sprocket: 12T. ●Maximum Rear Sprocket: 28T. ●Maximum Front & Rear Sprocket Difference: 28T. ●Light Alloy (Bracket & Plate Body), Light Alloy (Right Link)

7-SPEED SIS

Shifting Lever

SL-1051-BCAI (SIS, Side-Band A Type)

SL-1051-FCAI (SIS, Mount-Brazed-on A Type)

*"C" of Model Number means Italian Type (Fixing Bolt is 5mm. diameter)

●68g. (SL-1051-FCAI) ●7-speed SIS ●SIS/Friction Changeover, Clutch Spring for Light Action Shifting, Human Engineered Design, Sealed Mechanism ●Light Alloy (Lever) ●Down Tube Lever ●Lever Clamp Diameter: 28.6mm. ●Use SIS with 7-speed SIS Rear Derailleur/7-speed SIS Spaced Freewheel/ Shimano Narrow Type UG Chain/Shimano SIS Casing with Liner

7-SPEED SIS

Front Chainwheel & Bottom Bracket Assembly

FC-1051-BP (Biopace Double, LD Type)

BB-1050 (B.B. Set)

●664g. (42T., 52T., 170mm.), 327g. B.B. Set ●Low Profile & Aerodynamic Design, Biopace Chainring ●Light Alloy (Crank/Chain Ring) ●For 1/2" × 3/32" Chain ●Chainwheel: Inner; 42T., Outer; 52T. ●Crank Length: 162.5mm., 165mm., 170mm., 172.5mm., 175mm. ●Crank Thread: BC 9/16 × 20T.P.I. ●Cup Thread: English BC 1.37 × 24T.P.I., French M35 × 1.0, Italian M36 × 24T.P.I. ●B.B. Size: 68-W-113, 70-W-115 ●Bolt Circle Diameter: 130mm. (LD Type)

biopace

Front Derailleur

FD-1050-B (Band Type)

FD-1050-F (Italian, Brazed-on Type)

●98g. (Band Type) ●Leading Action Pantagraph Mechanism, Upgraded Chain Guide Rigidity ●Maximum: 14T. ●Clamp Diameter: 28.0 ~ 28.6mm. ●Light Alloy (Clamp Band), Light Alloy (Right Link), Heat Treated Steel•Chrome-Plated (Chain Guide)



ormance



7-SPEED

Freehub
FH-1051-6/7 (Rear, 6-speed/7-speed)
CS-1000 (Cassette Sprockets)
HB-1050-F (Front Hub)
●415g. (Rear w/o Sprocket), 218g. (Front), 221g. (6-speed Sprockets 13T.~24T. & Spacer) ●6 & 7-speed SIS Compatible ●Sealed Mechanism, New Uniglide Teeth, Bolt-Secured Cassette Freewheel, Uni-Balance System ●Teeth: Threaded Sprocket: 13T.~15T., Spline Sprocket: 14T.~26T., 28T., 30T., 32T., 34T. ●Front: 100mm. O.L.D., Rear: 126mm. O.L.D. ●Spoke Holes: 32H, 36H ●Spoke Hole Diameter: 14G ●For 1/2" × 3/32" Chain ●Light Alloy (Hub Shell), Resin (Dust Cap), Steel•Silver Finish (Sprocket)
●Standard Sprocket Combination:

6-speed	13, 14, 15, 16, 17, 18T. 13, 14, 15, 17, 19, 21T. 13, 15, 17, 19, 21, 24T. 13, 15, 17, 20, 24, 28T. 13, 15, 18, 21, 25, 30T.
7-speed	13, 14, 15, 16, 17, 19, 21T. 13, 14, 15, 17, 19, 21, 23T. 13, 14, 15, 17, 19, 21, 24T. 13, 15, 17, 19, 21, 23, 26T. 13, 15, 17, 19, 21, 24, 28T.

7-SPEED SIS

Rear Hub
HB-1050-6 (Rear/6-speed)
●327g. ●Sealed Mechanism ●Over Lock Nut Dimensions: 126mm. ●Spoke Holes: 32H, 36H ●Spoke Hole Diameter: 14G ●Light Alloy (Hub Shell), Resin•Dark Gray Metallic Finish (Dust Cap)

Head Parts
HP-1050
●129g. ●Composite Structure, Sealed Mechanism ●High Impact Resin (Upper & Lower Cup Covers), Steel (Nut/Upper & Lower Cup/Upper & Lower Cone), Resin (Seal Ring)
●Variations:

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/ Italian	BC1 × 24T.P.I.	30.2mm.	26.4mm.

Brake
BR-1050-49 (Short 49 Type)
BR-1050-57 (Long 57 Type)
●335g. (F & R, 49 Type) ●SLR (Shimano Linear Response) System, Thrust Bearing & Coated Pivot Washer, Spring Sleeve, One-Piece & Low Profile Brake Shoe ●Light Alloy
*For SLR system use BR-1050, BL-1050/BL-1051/BL-1052, and Shimano Outer cable with Linear.

SLR

Brake Lever
BL-1050 (Standard Type)
BL-1051 (Aero Type)
BL-1052 (Aero Type, Short Reach)
●252g. (BL-1051, Pair) ●SLR (Shimano Linear Response) System, Anatomical Design, Outer Guide for easy cable change (Aero Type) ●Light Alloy ●Hooded Lever with Rubber Cover ●Lever Clamp Diameter: 23.8~24.2mm. ●Bracket Cover: Black, White

SLR

Pedal
PD-1051
●405g. (Pair), 29g. (Pair of Toe Clip L Size)
●Aerodynamic Design, Same Road Clearance as Dura-Ace, Compound Structure of Resin Bushing and Cup & Cone Bearings ●Crank Thread: English BC 9/16 × 20T.P.I. ●Toe Clip Size: M, L, LL ●Light Alloy (Body), Cr-Mo Steel (Axle), Resin

High Performance Brake Shoe Set
(4 shoes)



6-SPEED

Rear Derailleur
RD-1050
●257g. ●6-speed SIS Compatible

Shifting Lever
SL-1050-BCAI (6-speed SIS, Side-Band A Type)
SL-1050-FCAI (6-speed SIS, Mount-Brazed-on A Type)
●68g. ●6-speed SIS (Shimano Index System) ●Use SIS with 6-speed SIS Rear Derailleur/6-speed SIS Spaced Freewheel/Shimano UG Chain/Shimano SIS Casing with Liner

Front Chainwheel & Bottom Bracket Assembly
FC-1050-BP (Biopace Double, LD Type)
BB-1050 (B.B. Set)
●664g. (42, 52T.,170mm.), 327g. B.B. Set
●Chainwheel: Inner; 42T., Outer; 52T., 53T. ●B.B. Size: 68-W-113, 70-W-115

Freehub
FH-1050-6 (Rear, 6-speed)
HB-1050-F (Front Hub)
●415g. (Rear w/o Sprocket), 218g. (Front), 221g. (Sprocket 13T.~24T. & Spacer) ●6-speed SIS Compatible ●Over Lock Nut Dimensions: Front; 100mm., Rear; 126mm.

Brake
BR-1050-49 (Short 49 Type)
BR-1050-57 (Long 57 Type)
●335g. (F & R, 49 Type) ●SLR (Shimano Linear Response) System
*For SLR system use BR-1050, BL-1050/BL-1051, and Shimano Outer Cable with Liner.

Brake Lever
BL-1050 (Standard Type)
BL-1051 (Aero Type)
BL-1052 (Aero Type, Short Reach)
●202g. (BL-1050, Pair), 252g. (BL-1051, Pair) ●SLR (Shimano Linear Response) System ●Lever Clamp Diameter: 23.8~24.2mm. ●Bracket Cover: Brack, White, Brown, Gray, Yellow



Stunning Performance

The System Component Group for the Recreational Cyclist

Exage is a new concept in component groups. It's a bright new component "family" that brings Shimano system component performance to the recreational cyclist.

Exage consists of four distinct sport component groups incorporating all the latest Shimano functions including SIS shifting, SLR brakes, Biopace chainwheels, and rear freehub.

Sport LX leads the pack in both performance and style. Its striking white color treatment enhances the high-performance system component look.

Offering both front and rear SIS, the Exage Sport group takes all the guesswork out of derailleur shifting once and for all.

The Exage Action and Exage Motion groups make advanced Shimano functions and performance more affordable to more cyclists. Consider Exage Motion's rocker-action "Flipper" shift levers that make SIS derailleur shifting easier than ever.

Exage from Shimano. Advanced performance for anybody who rides a bike.



sport LX

High-performance functions with style makes Sport LX an on the road leader.



SHIMANO INDEX SYSTEM

Your next gear is just a "click" away with the Shimano Index System

biopace COMPUTER DESIGNED DRIVE SYSTEM

Computer-designed Biopace chainwheels make pedaling easier through optimum use of leg power.

SLR SHIMANO LINEAR RESPONSE

Shimano Linear Response (SLR) provides better modulated braking control with a new light lever feeling.

EXAGE



EXAGE *sport*

Refined functions and system group appearance create the cost-performance advantage of Exage Sport.

SIS SHIMANO INDEX SYSTEM
SIS FRONT SHIMANO INDEX SYSTEM
biopace COMPUTER DESIGNED DRIVE SYSTEM
SLR SHIMANO LINEAR RESPONSE



EXAGE *ACTION*

6-speed SIS, freehub, SLR, and Biopace mean high-performance functions for more recreational cyclists.

SIS SHIMANO INDEX SYSTEM
SIS FRONT SHIMANO INDEX SYSTEM
biopace COMPUTER DESIGNED DRIVE SYSTEM
SLR SHIMANO LINEAR RESPONSE



EXAGE *MOTION*

6-speed SIS, freehub, SLR, Biopace, and new "Flipper" shift levers make cycling more enjoyable for everyone.

SIS SHIMANO INDEX SYSTEM
biopace COMPUTER DESIGNED DRIVE SYSTEM
SLR SHIMANO LINEAR RESPONSE

SHIMANO

DEORE XT II



The Total Control Off-Road Component System

A New Bench Mark for ATB Performance

Take on the challenge of high performance off-road cycling with Deore XT-II. A product of the Shimano System Approach to component design, Deore XT-II reflects the total accumulated know-how of Shimano off-road component technology.

Deore XT-II incorporates advanced new functions that just don't quit. Hyperglide sprockets make SIS shifting faster and smoother than ever. A new 7-speed gearing system provides a wider gear choice with famous SIS precision. HP Biopace chainrings let you ride all-out with greater pedaling efficiency. And the new SLR U-II Brake/ cantilever system delivers dynamite braking power with fingertip control.

This is the ultimate off-road component system for those people who don't want to settle for second best.

Deore XT-II. The new bench mark in off road component systems.







HYPERGLIDE

Hyperglide sprockets refine SIS shifting performance for the ATB. Computer-designed tooth profiles and sprocket indexing make chain transfer faster and smoother than ever.

SHIMANO INDEX SYSTEM

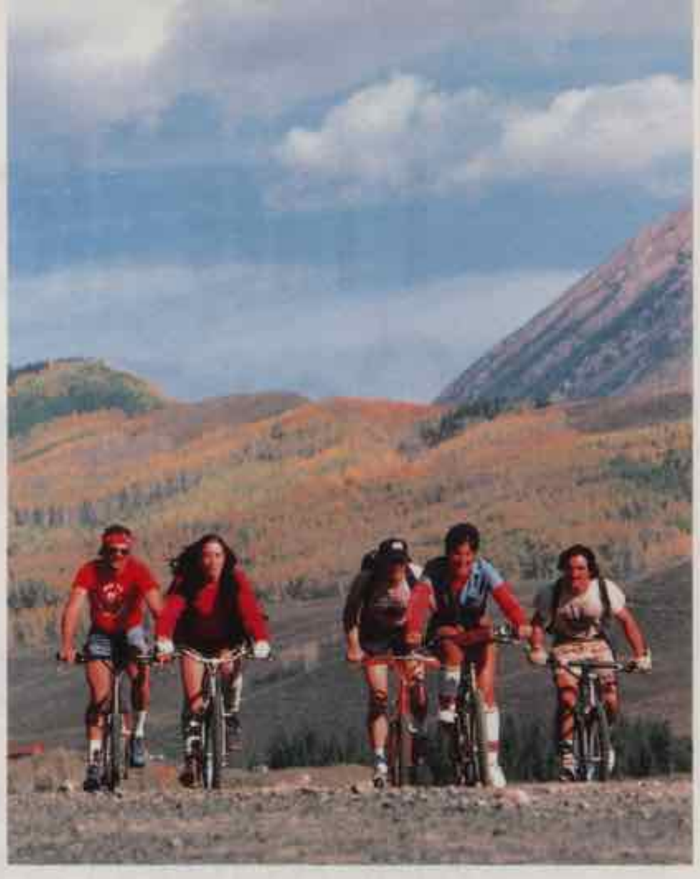
The wider gearing choice of 7-speed SIS means enhanced off-road performance for everybody and a special advantage for competitive ATB cyclists.

COMPUTER DESIGNED DRIVE SYSTEM

Biopace HP means competitive off-road riders can get the performance edge of Biopace at higher pedaling cadences.

SHIMANO LINEAR RESPONSE

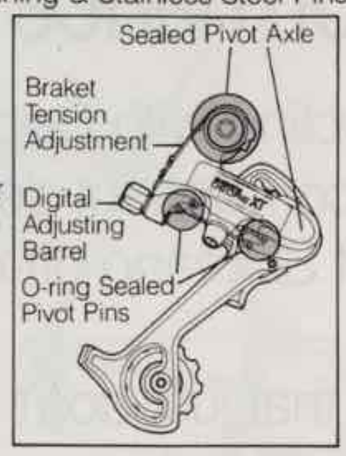
New off-road SLR system with 'two finger' SLR levers gives powerful braking performance with excellent lever response and minimal power input.



Rear Derailleur

RD-M732-SGS (Super Long Cage)

●Super Long: 270g. ●7-speed SIS Compatible ●Double Servo-Panta Mechanism, Centeron Guide Pulley, Ceramic Guide Pulley Bushing, Sealed Pulley, Sealed Pivot Axles, Sealed Link Pivots, Sealed Mechanism, Digital Adjust Mechanism, B-Tension Adjustment Bolt, Brass Bushing & Stainless Steel Pins in Link Pivots, Double Spoke Barrier, Chain Retainer ●Maximum Rear Sprocket: Super Long; 28T.~32T. (Using SFR, SF Fork End) ●Minimum Rear Sprocket: 12T. ●Maximum Front & Rear Sprocket Difference: Super Long: 38T. ●Light Alloy



7-SPEED SIS

Shifting Lever

SL-M732

●182g. ●7-speed SIS ●SIS/Friction one touch switch mode, Light Action Mechanism, Low Profile Design, 3-Step Lever Adjustment, Digital Adjustment Mechanism, Sealed SP Cable Outer Casing, Sealed Cable Guide ●Light Alloy ●Handleber Use ●Lever Clamp Diameter: 22.2mm. ●For SIS Function, use with RD-M732 Rear Derailleur/FH-M732 Freehub/ Shimano SIS-SP Outer Casing with Liner/CN-M732 Narrow Type Chain

7-SPEED SIS

Front Chainwheel & Bottom Bracket Assembly

FC-M730 (High Performance Biopace Triple, MD Type)

BB-M730 (B.B. Set)

●730g. (26T., 36T., 46T., 170mm.), 310g. B.B. Set ●High Performance Biopace Chainrings, Low Profile Design, Computer Aided Design, Sealed Mechanism ●Light Alloy•Anodized Finish ●For 1/2″ × 3/32″ Chain ●Inner 26T., 28T., Middle 36T., 38T., 44T., Outer 46T., 48T., 50T. ●Crank Length: 165mm., 170mm., 175mm., 180mm. ●Crank Thread: English BC 9/16″ × 20T.P.I. ●Cup Thread: English 1.37 × 24T.P.I., Italian M36 × 24T.P.I. ●B.B. Size: 68-T-117.5 (D-3A), 68-T-122.5 (D-3NL), 70-T-117.5 (D-5A) ●Bolt Circle Diameter: Inner; 74mm., Outer & Middle; 110mm. (MD Type)
●Black Chainring Available biopace-HP

Freehub

FH-M732 (Rear, 6-speed/7-speed)

HB-M730-F (Front Hub)

●490g. (Rear w/o Sprockets), 231g. (Front) ●6 & 7-speed SIS Compatible ●7-speed Hyperglide Compatible ●One Piece Forged Hub Body, Ball Race Burnishing, Bolt-Secured Freewheel, Lip-Type Sealed Mechanism, Superior Hub Axle Support, High Strength Freewheel Body, Lubricating Port with Open/Close ●Front: 100mm. O.L.D., Rear: 130mm., 135mm. O.L.D. ●28H, 32H, 36H (Front), 32H, 36H (Rear) ●14G ●Light Alloy•Buff Finish (Black Finish Available)

7-SPEED HG SIS

Cassette Sprockets

CS-M732

●325g. Sprocket (12, 14, 16, 18, 21, 24, 28T.) & Spacer ●7-speed SIS Compatible ●7-speed Hyperglide ●For 1/2″ × 3/32″ Chain ●Steel•CP Finish (Sprocket)
●Standard Sprocket Combinations:

7-speed (Hyperglide)	12, 14, 16, 18, 21, 24, 28T. 13, 15, 17, 20, 23, 26, 30T.

*For HG Function use Hyperglide Compatible Chain (CN-M732/CN-MT62)

7-SPEED HG SIS

Front Derailleur

FD-M732

●116g. (Normal Band Type) ●Trailing Action Pantagraph Mechanism,Rigid Chainguide, New Trapease Mechanism, Narrow Type Chain Compatible, Sealed Link Pivot ●Forged Light Alloy (Right Link), Light Alloy (Clamp Band), Heat Threated Steel•Chrome Plated (Chain Guide)

Capacity (Front gear difference)	FD-MT62-AL (Alpine)	Biopace gear (CR-BP15) .....8T.~24T.
	FD-MT62-HS (Half-step)	Biopace gear (CR-BP15) .....5T.~24T.
Band diameter	Band type.....	Ø28.0~28.6mm.
	EC-type (End-less clamp type)	Ø1-1/4″, 1-3/8″

Head Parts

HP-M730

●110g. ●Off-Road Type ●Sealed Mechanism, Inside Vapor Corrosion Inhibitor Seal Tape for Head Tube, Stainless Steel Lower Cup & Cone ● Light Alloy• Black Anodized Finish (Lock Nut), Steel & Rubber• Black Finish (Upper Cup), Stainless •Black Finish (Lower Cup), Stainless Steel (Lower Cone) ●Height: Lower Stack 11.5mm., Total Stack 33.0mm.
●Variations:

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/ Italian	BC1 × 24T.	30.2mm.	26.4mm.

UG Chain

CN-M732

●Hyperglide Compatible ●Narrow Type Uniglide Chain, Bushingless Design ●Steel ●Roller Link Plate: Black Finish, Pin Link Plate: Silver Finish

HG

Chain Deflector

DF-M730

●9g. ●Keeps the chain from jamming between the tire and chainstay ●Resin

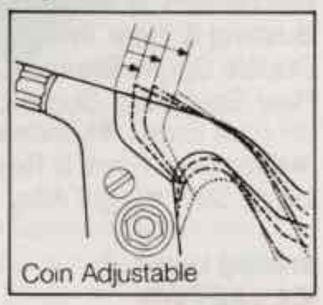


SHIMANO DEORE XT II

Brake Lever

BL-M732 (4-finger Type)
BL-M733 (2-finger Type)

●284g. Pair, 2-finger ●SLR (Shimano Linear Response) System ●Return Spring, Safety Clamp Design, Digital Lever-Reach Adjustment (4 Positions), Cable Adjustment, 2mm. Diameter Inner Cable Available ●Forged Light Alloy ●Lever Clamp Diameter: 22.2mm. ●Color: Black ●Rubber Covers



SLR

U-II Brake

BR-M733

●357g. 1 unit ●SLR (Shimano Linear Response) System ●Sealed Internal Spring Design, Rigid Computer Designed Shape, Spring Tension Adjuster, Internal and Sealed Spring Design, Power Pad Low-Profile Brake Shoe, Power Plate with Shark Tooth ●Light Alloy

*For SLR system use BR-M733/BR-M732, BL-M732/BL-M733, and Shimano Outer Cable with Liner.



SLR

Cantilever Brake

BR-M732

●185g. Pair ●SLR (Shimano Linear Response) System ●Rigid Computer Designed Shape, Sealed Internal Spring Design, Spring Tension Adjuster, Low-Profile Brake Shoe, Anti-Fall-In Shoe, Easy Cable Attachment ●Light Alloy•Buff Finish (Black Finish Available)

*For SLR system use BR-M732/BR-M733, BL-M732/BL-M733, and Shimano Outer Cable with Liner.

SLR

Pedal

PD-M730
PD-M731 (Comp Type)

●412g. (PD-M730 Pair), 363g. (PD-M731 Pair) ●Low Profile Design, Parallelogram Shape (PD-M730), Contact-Type Sealed Mechanism, Stainless Steel Grip Pins, Toe Clip/Reflector Attachable ●Light Alloy (Body & Plate), Cr-Mo Steel (Axle) ●Crank Thread: English BC 9/16" x 20T.P.I.

Seat Pillar Quick-Release

SQ-M730

●73g. ●Easy Operation, Position-Set Spring ●Steel ●Shaft Adjustment Length: 36 ~ 43mm., 26 ~ 33mm. ●Shaft Diameter: ∅6mm. or ∅8mm.

Seat Pillar

SP-M730

●296g. (330mm.) ●High Strength Structure, Light Weight, Long Size ●Cr-Mo Steel ●Outside Diameter: 26.6mm., 26.8mm., 27.0mm. ●Length: 280mm., 330mm.



SHIMANO DEORE XT 6-SPEED

Rear Derailleur

RD-M730-GS (Long Cage)
RD-M730-SGS (Super Long Cage)

●265g. (SGS) ●6-speed SIS Compatible

SIS

Shifting Lever

SL-M730

●191g. ●6-speed SIS ●For SIS Function, use with RD-M730 Rear Derailleur/FH-M730 Freehub/Shimano SIS-SP Outer Casing with Liner

SIS

Front Derailleur

FD-M730

●112g. (Normal Band Type)

Freehub

FH-M730-NT (6-speed Nut type)
FH-M730-QR (6-speed Quick Release type)
HB-M730-F (Front Hub)

●Front: 206g. (Nut type), 231g. (Quick Release type), Rear (w/o Sprockets): 422g. (Nut type), 451g. (Quick Release type), Cassette Sprockets: 270g. (12, 14, 17, 20, 24, 28T.) ●6-speed SIS Compatible ●Front: 100mm. O.L.D., Rear: 126mm., 130mm. O.L.D. ●32H, 36H

SIS

Brake Lever

BL-M730

●317g. Pair ●2mm. Diameter Inner Cable ●Lever Clamp Diameter: 22.2mm.

U-Brake

BR-M731-A

●286g. 1 unit

Cantilever Brake

BR-M730

●190g. Pair



Refined Functions for Rugg

Take On the Great Outdoors with Refined Functions and Enhanced Performance



HYPERGLIDE

SHIMANO INDEX SYSTEM

COMPUTER DESIGNED DRIVE SYSTEM

SHIMANO LINEAR RESPONSE

As a more economical version of the Deore XT-II group, Deore II sacrifices nothing in component function.

Deore II incorporates all the advanced features of Deore XT-II. It takes aim at the discriminating off-road sport cyclist who demands a high level of quality and performance in order to challenge a personal best.

Deore II is the high-performance ATB group that's ready to take on the great outdoors.

Rear Derailleur

RD-MT62-SGS (Super Long Cage)

●Super Long: 310g. ●7-speed SIS Compatible ●Double Servo Panta Mechanism, Centeron Guide Pulley, Sealed Pulley, Sealed Pivot Axles, Sealed Link Pivots, Sealed Mechanism, Digital Adjust Mechanism, B-Tension Adjustment Bolt, Brass Pivot Bushing & Heat Treated Steel Pins in Link Pivots, Double Spoke Barrier, Chain Retainer ●Maximum Rear Sprockets: Super Long; 28T.–32T. (Using SFR, SF Fork Ends) ●Minimum Rear Sprockets: 12T. ●Maximum Front & Rear Sprocket Difference: Super Long; 38T. ●Light Alloy

7-SPEED SIS

Shifting Lever

SL-MT62

●232g. Pair ●7-speed SIS (Shimano Index System) ●SIS/Friction One Touch Switch Mode, Light Action Mechanism, Digital Adjustment Mechanism, Sealed SP Cable Casing, Sealed Cable Guide ●Light Alloy ●Handlebar Use ●Lever Clamp Diameter: 22.2mm. ●For SIS Function, Use with RD-MT62, RD-M732 Rear Derailleur/FH-MT62, FH-M732 Freehub/Shimano SIS-SP Outer Casing with Liner

7-SPEED SIS

Front Chainwheel & Bottom Bracket Assembly

FC-MT60 (High Performance Biopace Triple, MD Type)

BB-MT60 (B.B. Set)

●740g. (28T., 38T., 48T., 170mm.), 320g. B.B. Set ●High Performance Biopace Chainring, Low Profile Design, One-Piece Forged Crank, Computer Aided Design, Sealed Mechanism (B.B. Set) ●Light Alloy• Anodized Finish (Crank & Chain Ring), Cr-Mo Steel• Black Finish (Axle) ●For 1/2″ × 3/32″ Chain ●Teeth: Inner; 26T., 28T., Middle; 36T., 38T., 44T., Outer; 46T., 48T., 50T. ●Crank Length: 170mm., 175mm. ●Crank Thread: BC 9/16″ × 20T.P.I. ●Cup Thread: English BC 1.37 × 24T.P.I. ●B.B. Size: 68-T-117.5 (D-3A), 68-T-122.5 (D-3NL) ●Bolt Circle Diamter: Inner; 74mm., Outer & Middle; 110mm. (MD Type) ●Black Chainring Available

biopace-HP

Freehub

FH-MT62 (Rear, 6-speed/7-speed)

HB-MT62-F (Front Hub)

●450g. (Rear w/o Sprockets), 231g. (Front) ●6 & 7-speed SIS Compatible ●7-speed Hyperglide Compatible ●One Piece Forged Body, Ball Race Burnishing, Bolt-Secured Freewheel, Contact Type Sealed Mechanism, High Strength Freewheel Body ●Front: 100mm. O.L.D., Rear: 130mm,, 135mm. O.L.D. ●Spoke Holes: 32H, 36H ●14G ●Light Alloy (Hub Shell), Cr-Mo Steel• Black Finish (Axle)

7-SPEED SIS



ed Terrain



Cassette Sprockets

CS-MT62

- 325g. Sprocket (7-speed, 13T.~30T.) & Spacer
- 7-speed SIS Compatible
- 7-speed Hyperglide
- For 1/2" × 3/32" Chain
- Steel•Silver Finish (Sprocket)
- Standard Sprocket Combinations:

7-speed	12, 14, 16, 18, 21, 24, 28T.
(Hyperglide)	13, 15, 17, 20, 23, 26, 30T.

*For HG Function use Hyperglide Compatible Chain (CN-MT62/CN-M732)

7-SPEED HG SIS

Front Derailleur

FD-MT62

- 117g. (Normal Band Type)
- Trailing Action Pantagraph Mechanism, New Trapease Mechanism, Rigid Chainguide, Narrow Type Chain Compatible
- Light Alloy (Body & Clamp Band), Heat Treated Steel•Chrome Plated (Chainguide)

Capacity (Front gear difference)	FD-MT62-AL (Alpine)	Biopace gear (CR-BP15) ..... 8T.~24T.
	FD-MT62-HS (Half-step)	Biopace gear (CR-BP15) ..... 5T.~24T.
Band diameter	Band type ..... ∅28.0~28.6mm.	
	EC-type (End-less clamp type) ..... ∅1-1/4", 1-3/8"	

Head Parts

HP-MT60

- 121g.
- Off-Road Type
- Sealed Mechanism, Inside Vapor Corrosion Inhibitor Seal Tape for Head Tube, Stainless Steel Lower Cone
- Steel (Lock Nut), Steel & Rubber•Black Finish (Upper Cup), Steel•Black Finish (Lower Cup), Stainless Steel (Lower Cone)
- Height: Lower Stack 11.5mm., Total Stack 33.5mm.
- Variations:

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/ Italian	BC1 × 24T	30.2mm.	26.4mm.

Brake Lever

BL-MT62 (4-finger Type)
BL-MT63 (2-finger Type)

- 274g. (2-finger Type, Pair)
- SLR (Shimano Linear Response) System,
- Return Spring, Safety Clamp Design, Digital Lever-Reach Adjustment (4 Positions), Cable Adjustment
- Light Alloy
- Lever Clamp Diameter: 22.2mm.
- Rubber Covers (Option)

SLR

U-II Brake

BR-MT63

- 338g. 1 unit
- SLR (Shimano Linear Response) System
- Pre-Load Spring Design, Rigid Computer Designed Shape, Chainstay Mounting Position, Spring Tension Adjuster, Internal and Sealed Spring Design, Power Pad Low-Profile Brake Shoe, Power Plate with Shark Tooth

*For SLR system use BR-MT63/BR-MT62, BL-MT62/BL-MT63, and Shimano Outer Cable with Liner.

SLR

Cantilever Brake

BR-MT62

- 190g. Pair
- SLR (Shimano Linear Response) System
- Rigid Computer Designed Shape, Sealed Internal Spring Design, Spring Tension Adjuster, Low-Profile Brake Shoe, Anti-Fall-In Shoe, Easy Cable Attachment
- Light Alloy

*For SLR system use BR-MT62/BR-MT63, BL-MT62/BL-MT63, and Shimano Outer Cable with Liner.

SLR

Pedal

PD-MT60
PD-MT61 (Comp Type)

- 495g. (PD-MT60 Pair), 442g. (PD-MT61 Pair)
- Low Profile Design, Parallelogram Shape (PD-MT60), Compact Design (PD-MT61), Contact Type Sealed Mechanism, Toe-Clip/Reflector Attachable
- Light Alloy (Body), Steel•Black Finish (Cage), Cr-Mo Steel•Black Finish (Axle)
- Crank Thread: BC 9/16" × 20T.P.I.

UG Chain

CN-MT62

- Hyperglide Compatible
- Narrow Type Uniglide Chain, Bushingless Design
- Steel

HG

SHIMANO DEORE 6-SPEED

Rear Derailleur

RD-MT60

- 311g.
- 6-speed SIS Compatible

SIS

Shifting Lever

SL-MT60

- 210g.
- 6-speed SIS
- For SIS Function, use with RD-MT60, RD-M730 Rear Derailleur/FH-MT60, FH-M730 Freehub/Shimano SIS-SP Outer Casing with Liner

SIS

Front Derailleur

FD-MT60

- 113g. (Normal Band Type)

Freehub

FH-MT60-NT (6-speed, Nut type)
FH-MT60-QR (6-speed, Quick Release type)
HB-MT60-F (Front Hub)

- Front: 206g. (Nut Type), 231g. (Quick Release Type) Rear (w/o Sprockets): 422g. (Nut type), 451g. (Quick Release type), Cassette Sprockets: 270g. (13T.~30T.)
- 6-speed SIS Compatible
- Front: 100mm. O.L.D., Rear: 126mm., 130mm. O.L.D.
- 32H, 36H

SIS

Brake Lever

BL-MT60

- 310g. Pair
- Lever Clamp Diameter: 22.2mm.

U-Brake

BR-MT61-A

- 280g. 1 unit

Cantilever Brake

BR-MT60

- 166g. Pair



Real Beauty in the Rough

A Versatile Family of Off-Road Cycling Groups

Meet Exage! The versatile new off-road component family from Shimano. Exage brings Shimano performance, quality, and advanced functions to a wider range of off-road, trail riding, and cruiser-type bicycles.

The entire Exage family consists of four distinct component groups. Exage groups create bicycles delivering the best balance of cost and performance available in the off-road market today.

Consider top-of-the-line Mountain-LX. With 7-speed SIS, Hyperglide sprockets, Biopace chainrings, and SLR brake system, this hot new component system refuses to take second place. It's strictly high performance that won't strain your budget.

Mountain-LX is followed by Exage Mountain, a performance component group with a toned down surface treatment.

Exage Trail, and Exage Country, each with their own great balance of functions and features, create a whole new level of quality and performance for trail and cruiser type bicycles.

The Exage ATB family from Shimano. Advanced performance features for anybody who rides. On or off the road.



mountain-LX

Super functions make Mountain LX
a high-performance off-road leader



HG HYPERGLIDE

SIS SHIMANO INDEX SYSTEM

biopace COMPUTER DESIGNED DRIVE SYSTEM

SLR SHIMANO LINEAR RESPONSE

EXAGE



EXAGE *mountain*

Triple Biopace chainrings, SLR cantilever/U-Brake, and 6-speed SIS freehub shifting spell performance on or off the road for Exage Mountain.

SIS SHIMANO INDEX SYSTEM

SIS FRONT SHIMANO INDEX SYSTEM

biopace COMPUTER DESIGNED DRIVE SYSTEM

SLR SHIMANO LINEAR RESPONSE



EXAGE *trail*

Front and rear alloy cantilever brakes, 6-speed SIS freehub, and other advanced features translate into high-performance on a budget for Exage Trail.

SIS SHIMANO INDEX SYSTEM

biopace COMPUTER DESIGNED DRIVE SYSTEM

SLR SHIMANO LINEAR RESPONSE



EXAGE COUNTRY

Exage Country introduces Shimano high-performance functions to the entry-level fat tire bicycle.

SIS SHIMANO INDEX SYSTEM

biopace COMPUTER DESIGNED DRIVE SYSTEM

SLR SHIMANO LINEAR RESPONSE

The Shimano Components

Rear Derailleur

RD-R552-SS (Short Cage)

RD-R552-GS (Long Cage)

●290g. (Short Cage), 315g. (Long Cage) ●SIS Compatible ●Double Servo-Panta Mechanism, Double Spoke Barrier, Chain Retainer ●Maximum Rear Sprocket: Short; 28T., Long; 30T. ●Maximum Front & Rear Sprocket Difference: Short; 28T., Long; 36T.

5-SPEED SIS



Shifting Lever

SL-S452

5-SPEED

●106g. ●SIS (Shimano Index System) ●SIS/Friction Mode Switch ●Handle Stem Use ●Use SIS with RD-R552 Rear Derailleur, 5-speed SIS-Type Freewheel or Freehub, UG Chain and SIS Cable

SIS



Shifting Lever

SL-MS55

●203g. ●SIS (Shimano Index System) ●SIS/Friction Mode Switch ●Light Alloy and Resin ●Handleber Use ●Lever Clamp Diameter: 22.2mm. ●Use SIS with an SIS-Compatible Rear Derailleur (excl. Dura-Ace), 6-speed SIS-Type Freewheel or Freehub, UG Chain and SIS-SP Outer Casing with Liner.

SIS



Shifting Lever

SL-S441

●141g. ●SIS (Shimano Index System) ●SIS/Friction Mode Switch, Light Action Shifting ●Light Alloy, Resin, Steel ●Attachment Position: Handlebar ●Lever Clamp Diameter: 22.2mm. ●Use SIS with an SIS-Compatible Rear Derailleur (excl. Dura-Ace), 6-speed SIS-Type Freewheel or Freehub, UG Chain and SIS-SP Outer Casing with Liner.

SIS

Shifting Lever

SL-MS41

●182g. ●SIS (Shimano Index System) ●Light Alloy, Resin and Steel ●Handlebar Use ●Use SIS with an SIS-Compatible Rear Derailleur (excl. Dura-Ace), 6-speed SIS-Type Freewheel or Freehub, UG Chain and SIS-SP Outer Casing with Liner.

SIS

Rear Derailleur

RD-L554-SS (Short Cage)

RD-L554-GS (Long Cage)

RD-L554-SGS (Super Long Cage)

●SIS Compatible ●Double Servo-Panta Mechanism, Cable Saver Arm, Digital Cable Adjust Mechanism, B-Tension Adjust Bolt, Double Spoke Barrier, Chain Retainer ●Maximum Rear Sprocket: Short; 28T., Long; 30T., Super Long; 32T. ●Maximum Front & Rear Sprocket Difference: Short; 28T., Long; 36T., Super Long; 38T.

SIS



Shifting Lever

SL-MS52

●120g. ●SIS (Shimano Index System) ●SIS/Friction Mode Switch ●Handleber Use ●Use SIS with RD-R552 Rear Derailleur, 5-speed SIS-Type Freewheel or Freehub, UG Chain and SIS Cable

SIS



Front Derailleur

FD-Z254

●Leading Action Pantagraph Mechanism, Light Action Mechanism ●Maximum: 14T.



5-SPEED



Front Perailleur

FD-Z255

●Trailling Action Pantagraph Mechanism, New Trapease Mechanism ●Maximum: 22T.



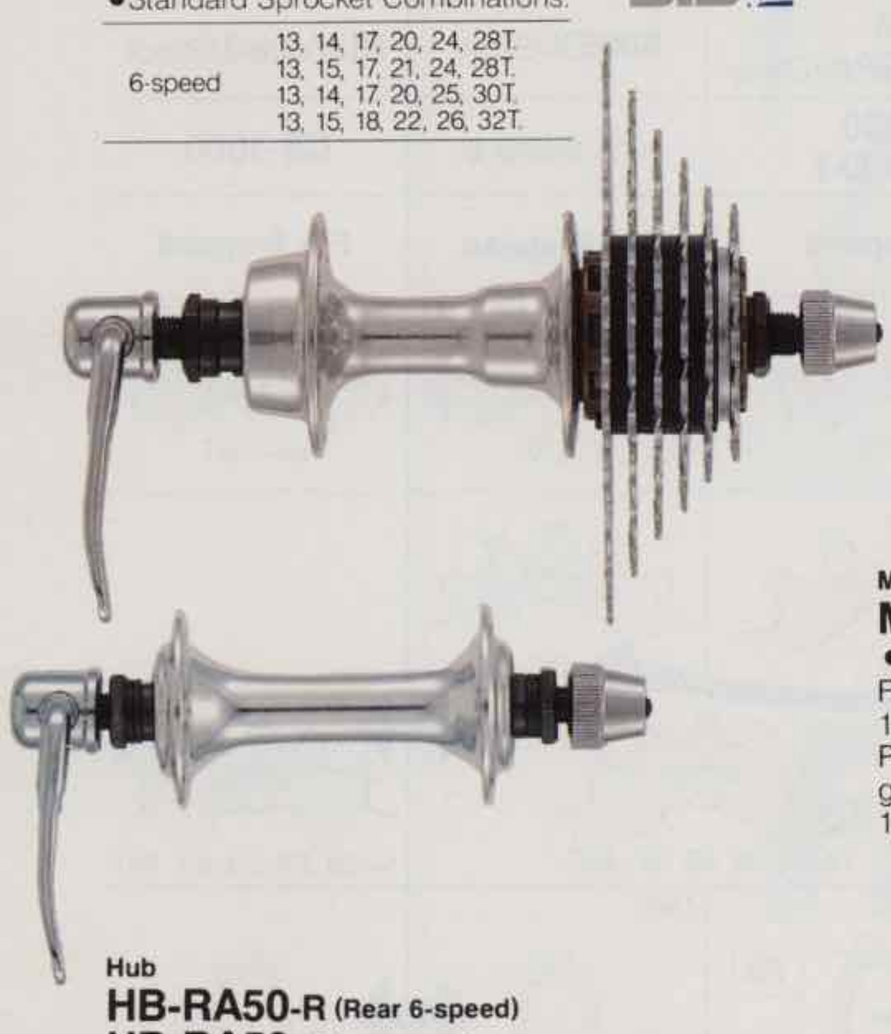


Freehub

FH-RM50 (Rear 6-speed)
CS-1000 (Cassette Sprockets)
HB-RM50-F (Front Hub)

●446g. (Rear QR-Type w/o Cassette Sprockets) 228g. (Front) ●6-speed SIS Compatible ●One Piece Design, Sealed Mechanisms ●Type: Quick Release/Nut Type (Small Flange) ●Front: 100mm. O.L.D., Rear: 126mm., 130mm. O.L.D. ●Spoke Holes: 36H, 32H ●Spoke Hole Diameter: 14G ●Teeth: 13T. – 16T. Top (Threaded), 14T. – 26T., 28T., 30T., 32T. (Spline) ●For 1/2" × 3/32" Chain ●Standard Sprocket Combinations:

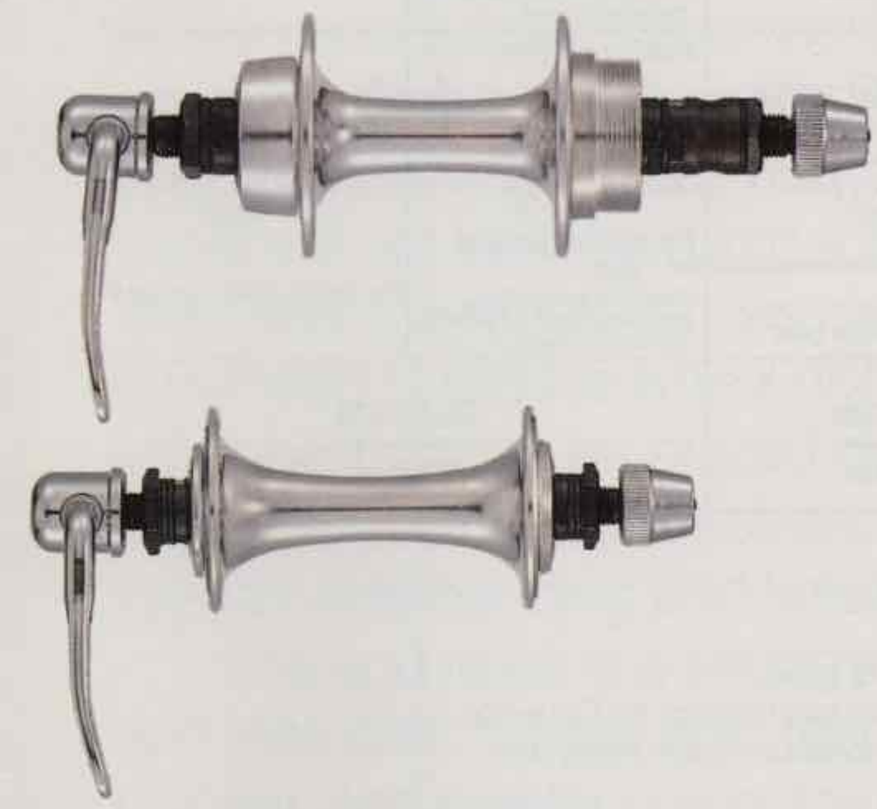
6-speed	13, 14, 17, 20, 24, 28T. 13, 15, 17, 21, 24, 28T. 13, 14, 17, 20, 25, 30T. 13, 15, 18, 22, 26, 32T.



Hub

HB-RA50-R (Rear 6-speed)
HB-RA50-F (Front Hub)

●Sealed Mechanisms, One Piece Design ●Type: Quick Release/Nut Type (Small Flange) ●Spoke Holes: 36H ●Spoke Hole Diameter: 14G



Multiple Freewheel

MF-6208

●386g. (6-speed, 13T. – 23T.) ●New Uniglide Teeth, Sealed Mechanism ●Silver Finish Sprocket ●For 1/2" × 3/32" Chain ●Standard Sprocket Combinations:

6-speed	13, 14, 15, 16, 17, 18T. 13, 14, 15, 17, 19, 21T. 13, 15, 17, 19, 21, 23T. 13, 15, 17, 19, 21, 24T. 13, 15, 17, 20, 23, 26T. 13, 15, 17, 20, 24, 28T. 13, 17, 20, 23, 26, 30T. 13, 16, 19, 22, 26, 32T.



Multiple Freewheel

MF-Z012

●451g. ●6-speed SIS Compatible ●Silver & Brown Finish ●Chain Size: 1/2" × 3/32" Chain ●Thread: BC 1.37 × 24T.P.I. (English) ●Threaded Sprocket for 1st Position: 13T. – 16T. Splined Sprocket for 2nd-3rd gear: 14T. – 20T. Splined Sprocket for 4th-6th gear: 17T. – 24T., 26T., 28T., 30T., 32T., 34T.





The Shimano Freehub System

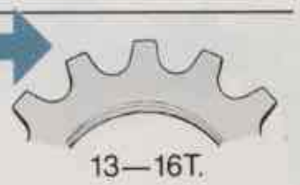
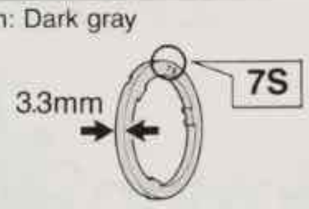
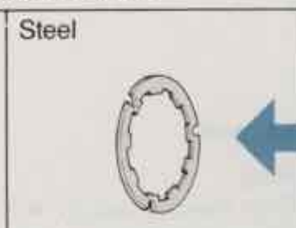
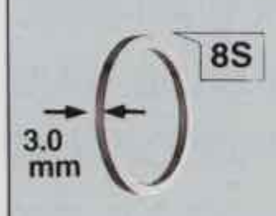
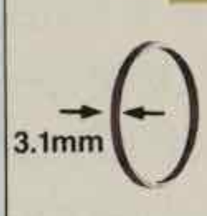
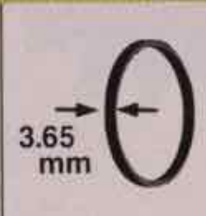
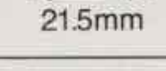
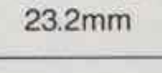
Features:

1. Splined Design—All of the uniglide type SIS sprockets slide on and off the same size spline for quick and easy replacemnt.
(Only the top gear is threaded)

2. Uniglide Tooth Profile—All sprockets incorporate precise-shifting SIS type uniglide twist-tooth profiles.

3. Advantages of Freehub Design—
- Unibalance design reduces wheel dish to make a stronger wheel.
- Bearings are placed closer to the frame dropout for better hub support, less axle flex, and increased power transfer efficiency.

Greater Interchangeability Among the Freehubs

Series	DURA-ACE/Champagne			Santé 600 ULTEGRA/Silver	600EX/Silver	Standard/Black
Model No.	CS-7400-8	CS-7400-7	CS-7400-6	SC-5000 CS-6400-7	CS-6400-6	CS-1000
	For 8-speed	For 7-speed	For 6-speed	For 7-speed	For 6-speed	For 6-speed
Top Gear (threaded gear)	 12—14T.		 12—18T.	 12—16T.	 12—16T.	 13—16T.
Built-In Spacer Type Second Gear	 13—15T.		 13T.	 13T.	 13T.	
Other Spline Gears (including flat type second gear)	 14-26, 28T.			 *2 14-26, 28, 30, 32, 34T.		 *1 *2 14-26, 28, 30, 32, 34T.
Sprocket Spacer A	No Need *3	No Need *3	No Need	Resin: Dark gray  For second gear • Sprocket spacer A is unnecessary if a 13-teeth sprocket is used.	Steel  • Sprocket spacer A is unnecessary if a 12-teeth sprocket is used.	 For top gear
Sprocket Spacer B	Steel: Aluminum color 	Steel: Silver 	Steel: Gray 	Resin: Dark gray  For third gear-low gear	Resin: Light gray  For second gear-low gear • Sprocket spacer B is unnecessary if a 13-teeth sprocket is used.	 For second gear-low gear
Sprocket Fixing Bolt	No Need			 21.5mm	 23.2mm	

⟷ Denotes interchangeability.
➡ Denotes interchangeability if used without sprocket fixing bolt.

* Some 6-speed gears do not have the 6S mark. Some 7-speed and 8-speed gears have only the 7S mark.
* **1:** Standard spline sprockets are interchangeable with Dura-Ace. But do not have high-performance teeth design for Dura-Ace.
* **2:** When using for the second gear on a 6-speed combination or the third gear on a 7-speed combination, screw holes are necessary for use of sprocket fixing bolt (Optional).
* **3:** Because the second gear must be built-in spacer type gear.

Notes:

- For 7-speed or 8-speed a narrow type chain is required. Shimano CN-7400 or CN-6208 is recommended for best performance.
- Spline gears (except built-in spacer type gears) can be used interchangeable on the 6-, 7- and 8-speed combinations.
- Top gears, built-in-type gears, and sprocket spacers are unique for the 6-, 7- and 8-speed combinations.
- The thread dimension of Dura-Ace Top gear is different from other top gears.



The Shimano Freewheel System

Features:

1. Splined Design—All 6-speed freewheels use a thread mounted top gear. The 2nd through 6th gears simply slide on and off for fast and easy replacement.
For 7-speed freewheels, the top two sprockets are thread mounted. The 3rd through 7th sprockets are the spline type.
2. Uniglide Tooth Profile—All freewheels incorporate precise-shifting SIS type Uniglide twist-tooth profiles.
3. Sealed Mechanisms—Dura-Ace, Santé, and 600EX freewheels incorporate efficient O-ring sealing for all-weather durability and a long service life.
4. Easy Maintenance—Dura-Ace, Santé, and 600EX freewheels have an oil port on the body that allows internal lubrication of bearings and pawls simply by removing the sprockets (use oil only).
5. SIS Precision—All 6-speed freewheels use the same precise SIS-type sprocket spacing. 7-speed freewheels (Dura-Ace & Santé) utilize the same narrow-type SIS sprocket spacing.

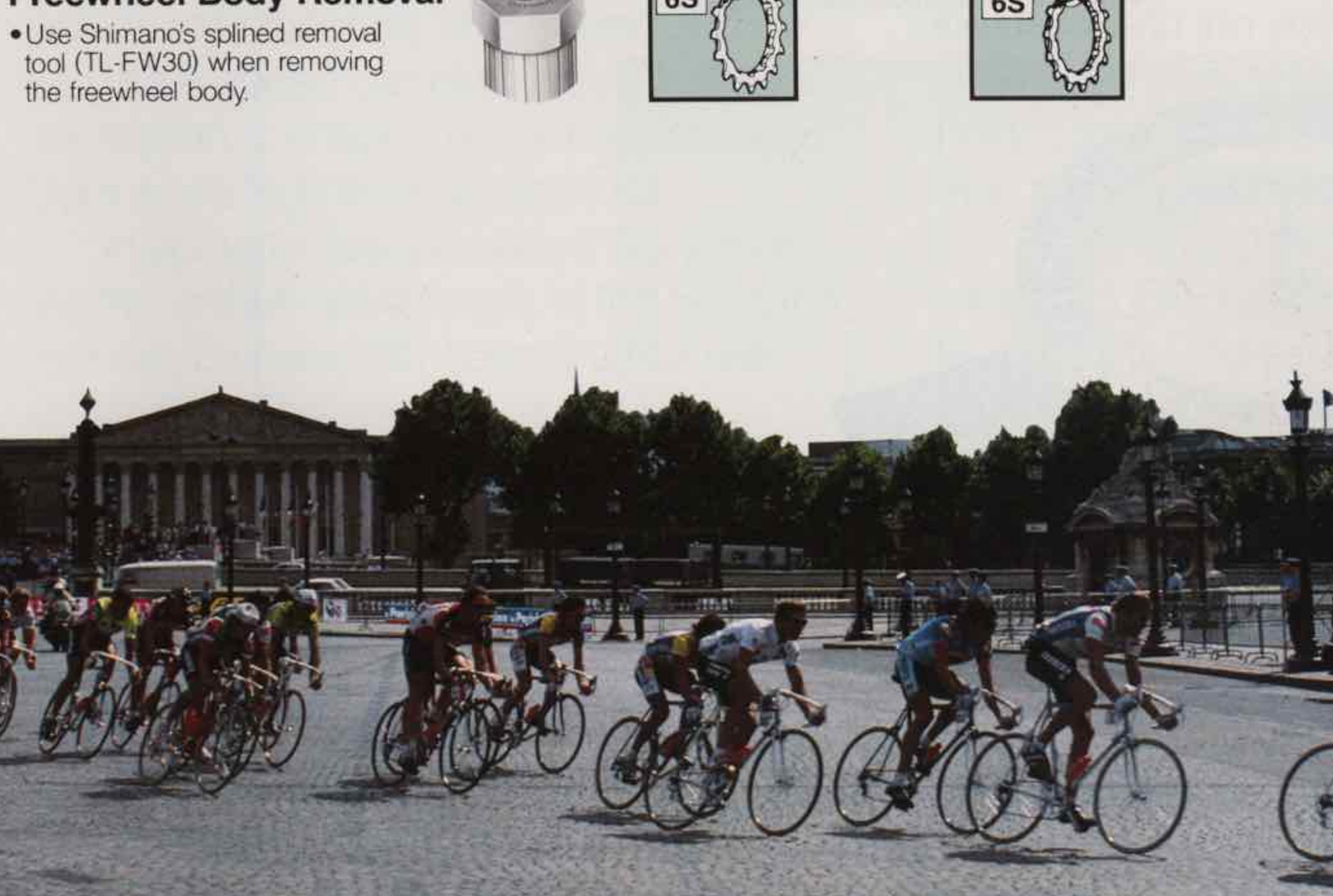
Greater Interchangeability Among the Freewheels

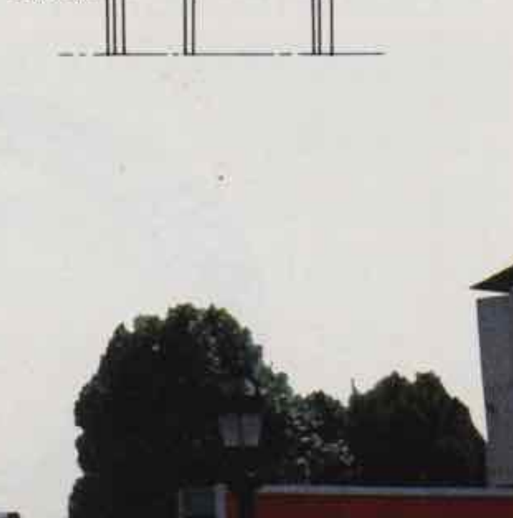
- All-6-speed freewheels are SIS compatible and offer complete sprocket interchangeability. This means freewheel combinations ranging from 13—16T. to 16—34T. are possible from only 28 sprockets and 3 spacer types. The result is maximum flexibility.
- Dura-Ace and Santé narrow-spaced 7-speed SIS freewheels offer complete sprocket interchangeability in a wide selection ranging from 12 to 28 teeth.
- The splined sprockets (excluding built-in spacer types) are completely interchangeable between 6-speed and 7-speed freewheels.

Note: Although the 6 and 7-speed freewheel bodies have the same outer thread dimension (BC40T), differences in sprocket spacing prevent interchangeability of the BC40 threaded sprockets between the two freewheels.

Notes:

- For 7-speed be sure to use Shimano CN-7400, CN-6208 or CN-UG50.
- Spline gears (except built-in spacer type gears) can be used interchangeably on the 6 and 7 speed freewheel bodies.
- Threaded gears, built-in spacer type gears, and gear spacers are unique for the 7 and 6 speed freewheel bodies.
- Some older 6-speed gears (threaded and built-in spacer type gears) do not have the 6S mark.







Freewheel Body Removal

- Use Shimano's splined removal tool (TL-FW30) when removing the freewheel body.

The Shimano Tools & Accessories

Tool
TL-RD10
- Rear Dropout Centering and Dropout Hanger Alignment Tool



Tool
TL-RD20
- Cable Stretch (for SIS cable and SIS-SP cable)



Tool
TL-CN20
- Chain Cutter (for both UG chain and ordinary chain.)



Tool
TL-FW30
- Multiple Freewheel Removal Tool (for MF-7400, MF-Z012)



Tool
TL-FD20
TL-FD21
- Front Derailleur Alignment Tool (for front derailleurs with the SIS mechanism)



"Ask Your Dealer About These and Other Accessory Items with the Shimano Logo."

Tool
TL-CT10
- Cable Cutter (for SIS-SP cable and normal cables, outer casings.)



Water Bottle
- 20.9 oz.

Cycling Cap
- High Ouality Cotton Cycling Cap

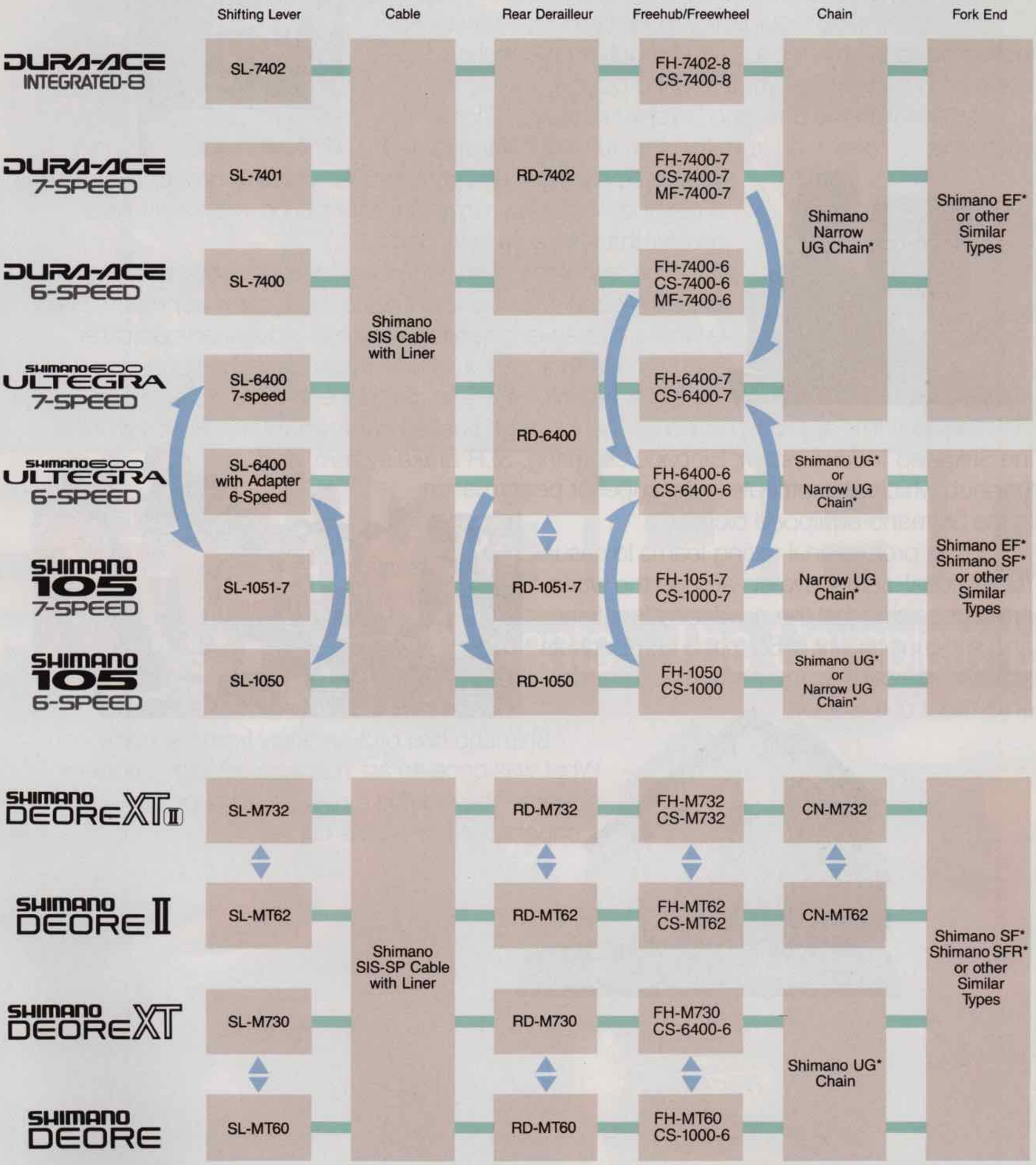
Head Band
- High Ouality 100% Cotton with Elastic

Shop Apron
- Durable 100% cotton shop apron. Perfect for home or shop mechanics. Large pocket and heavy-dury cord tie.

Racing Wheel Covers
- Nylon lined inside surface with water resistent rubberized outer skin.



SIS Combination Chart



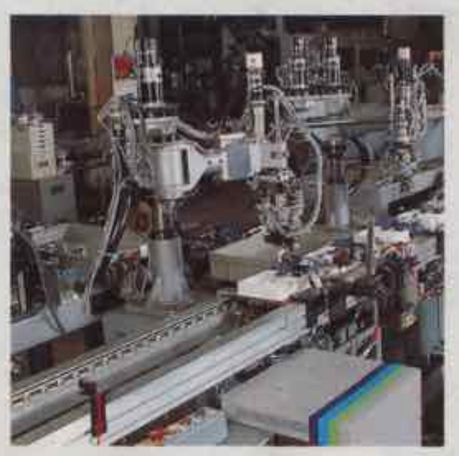
*Our Recommendation

Denotes Component Grouping

Denotes Interchangeability

Shimano Breaking Away

Shimano believes that the true potential of the cyclist can only be realized when man and machine are in complete harmony.



So we've made it our policy to apply today's advanced technologies in an effort to create a better bio-mechanical interface between the cyclist and the bicycle.

It starts with the Shimano "system approach." Each component is designed from the start to be a balanced and integrated member of a complete and unified group. The result is a higher level of synergy. A performance whose whole is greater than the sum of its parts.

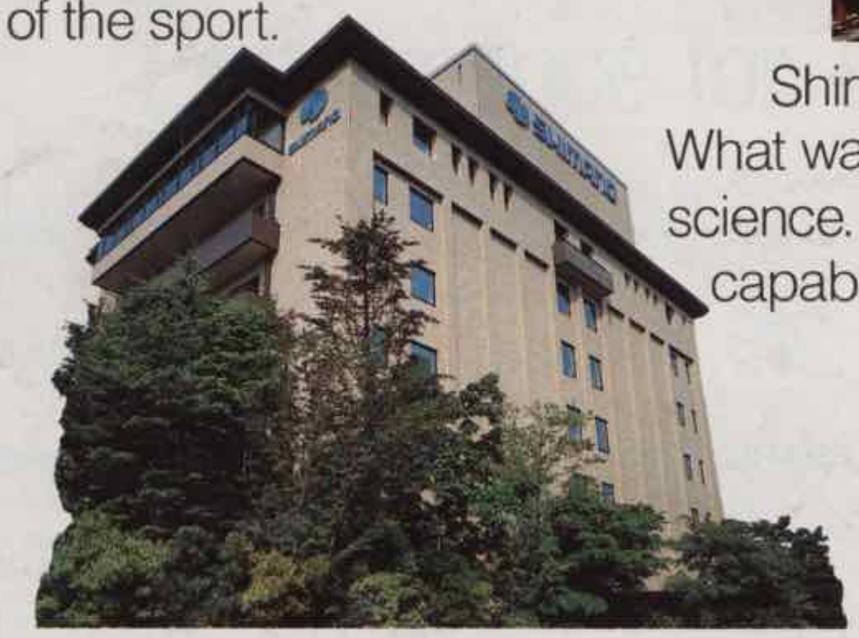


The resources of our extensive research and development program supplement and enhance the system approach. Here is where human-engineering research, advanced computer simulation techniques, and new materials technology are implemented into Shimano components.

This scientific approach to component design has led to important breakthroughs like the Shimano Index System, Biopace chainring, SLR brake system, and Freehub which all contribute to the superior performance of the Shimano-equipped bicycle.



From professional racing teams to casual recreational riders, cyclists around the world are recognizing that the advanced functions and superior quality of Shimano components actually improve cycling performance and enjoyment of the sport.



Shimano has broken away from the pack. What was once an art has evolved into a modern science. The result is a new world of performance capabilities for today's cyclist.

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