

'92

SHIMANO BICYCLE
SYSTEM COMPONENT

DEALERS' PRODUCT MANUAL

SHIMANO

NEW PRODUCTS FOR 1992

New Component Groups...

Shimano XTR

The last word in a competitive mountain bike component group—super-light, strong, and compact, the new Shimano XTR component series offers Dura-Ace level performance for the racing mountain bike. Compact design realizes a more integrated bicycle look with the 8-speed HG freehub. Shimano XTR gives the off-road racer or mountain bike enthusiast the ultimate in state of the art off-road performance.



600 ULTEGRA WITH SHIMANO TOTAL INTEGRATION

Positioned between the Dura-Ace and Shimano 105, 600 Ultegra is a high quality component group aimed at the discriminating amateur racer. New for 1992, 600 Ultegra features the Shimano Total Integration Dual-Control Lever. Just like the latest Dura-Ace group, 600 Ultegra now lets you shift gears and brake from the same lever without removing hands from the bars. Also new is an 8-speed HG freehub.



Shimano 70GS

The all terrain bike is becoming increasingly popular around the world. Featuring easy operation and the latest Shimano functions, the 70GS series of all terrain bike components provides Shimano Total Integration performance at our most affordable price. Including a ratchet-action Rapidfire shifting system, the 70GS components spell real value and performance for the entry level ATB rider.



200CX/500CX COMPONENTS

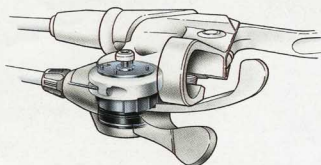
Hybrid bikes use wide section 700C tires, triple chainwheels, and flat bars. The result is the upright riding position and gear selection of a mountain bike with handling and response that's more like a lightweight road bike. The new 200CX and 500CX components were specifically designed for these hybrid bicycles.



New Functions...

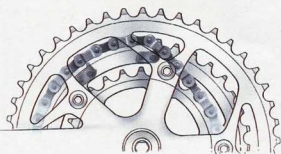
RAPIDFIRE PLUS

Rapidfire Plus greatly reduces fatigue of the thumb during repeated shifting by allowing the rider to use the thumb for the main lever only, and use the index finger to operate the release lever. While the Rapidfire ratchet mechanism remains the same, the high-performance 2-finger brake lever features reduced weight and a new metal bushing for a smoother and more precise action.



SHIMANO HYPERDRIVE

Shimano Hyperdrive is just like an SIS system for the front derailleur. By using special pick up teeth on the middle chainring Hyperdrive makes the once difficult shift from the small to the middle chainring as light and easy as HG. The newly profiled front derailleur makes the middle to large chainring shifts fast and precise. A new sealed cartridge bottom bracket makes assembly easy, and there's no need to adjust bearings. The bottom bracket axle has been shortened to realize a more flat and rigid chainwheel. Crank arms fit into the bearing cups for a better seal.



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Shimano XTR signals a new level of refinement and performance for the competition off-road component group.

The "R" stands for "race." In the world of off-road bicycle racing, the difference between victory and defeat is often measured in fractions of a second. Shimano XTR was designed to give competitive off-road riders every possible advantage in their quest for victory. From the new 8-speed freehub to highly modulated SLR Plus braking, Shimano XTR was specifically developed to improve performance, reduce weight, and provide a higher level of durability and function than ever before. If you're not satisfied with second best, you need Shimano XTR.

● Rapidfire Plus Lever Set (ST-M900-8)

New Rapidfire Plus lever set allows both the thumb and index finger to be used to shift gears. Featuring 8-speed capability, four gears can be shifted in one stroke.



The brake lever utilizes servo-wave design for more sensitive and powerful braking.

● Shimano HyperDrive

SIS type chainwheel shifting has been realized through a special pickup front derailleur which insures that the chain takes the shortest path from the smaller to the larger chainwheel. Cartridge-type



bottom bracket simplifies adjustment, reduces maintenance and extends service life.

● Light Weight Design

All excess material has been carefully removed from the components in order to lighten weight without reducing strength. Hollow construction has also been used to reduce weight to meet design targets.



8-Speed SIS

New 8-speed SIS for the MTB now gives a wider gear selection with the simple push button shifting action of Rapidfire.

New Rapidfire Plus feature utilizes a thumb operated main lever and a index finger operated release lever to help reduce shifting fatigue.



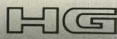
SLR Plus

The servo-wave mechanism in the SLR brake lever provides maximum brake pad movement with minimal lever travel after which the power multiplication factor increases to provide strong, sure, controllable stops.

Shimano HyperDrive

Shimano HyperDrive

Shimano HyperDrive, a new crank, chainwheel, and front derailleur shifting system that finally takes the guesswork out of chainwheel shifting. Triple chainwheel shifts are especially fast, smooth, and error free. A cartridge bottom bracket increases durability.



8-Speed HG Sprockets

Shimano XTR's new 8-speed gear cassette features HG sprockets. HG sprockets realize fast and smooth shifts, regardless of pedal torque or cadence, and have become known as the state-of-the-art shifting system for the off-road bike. New spider-type boss reduces freewheel weight.



8-Speed Freehub

Rear hub and freewheel are combined to form a stronger unit in the famous Shimano freehub design, now featuring an 8-sprocket cassette for the wider gear selection needed in competition.



SHIMANO XTR

SHIMANO
TOTAL
INTEGRATION



Seat Post
SP-M900



Sealed Cartridge Bottom Bracket
BB-UN90



Front Hub
HB-M900-F



Seat Post Quick Release
SQ-M900



Cantilever Brakes
BR-M900



Freehub
FH-M900



Front Derailleur
FD-M900



Rear Derailleur
RD-M900



Front Chainwheel
FC-M900



Spider Gear
Cassette Sprockets
CS-M900-8



Chain
CN-7401



Head Parts
HP-M900



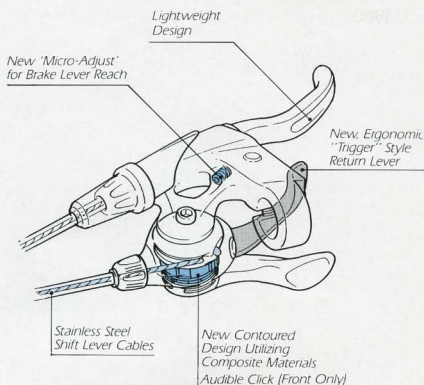
Rapidfire Plus Lever Set
ST-M900-8



Rapidfire Plus

ST-M900-8 (Servo-Wave, 2-Finger)

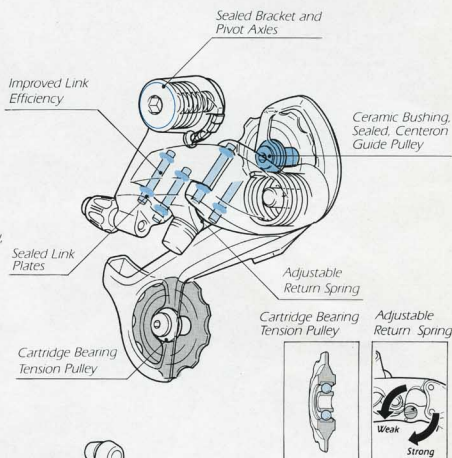
Weight	411g. (Pair)
Compatibility	Shimano Total Integration Compatible, SHD (Shimano Hyper Drive) Compatible, SLR (Shimano Linear Response) PLUS Compatible, 8-speed SIS Compatible
Features	Lightweight Design, New Ergonomic "Trigger" Style Return Lever (RAPIDFIRE-PLUS), Handlebar Grip Thickness Limited to 5mm. or Less (RAPIDFIRE-PLUS), New Contoured Design Utilizing Composite Materials, Stainless Steel Shift Lever Cables, Audible Click (for Front Shifting Only), New "Micro-Adjust" for Brake Lever Reach 22.2mm, Aluminum-Titanium Paint Finish (Bracket), Forged Aluminum-Anodized Finish (Lever)
Lever Clamp Diameter	
Material & Finish	
Note	Use with SLR outer casing with liner (Brake Lever) and SIS-SP sealed outer casing with liner (Shifting Lever)



Rear Derailleur

RD-M900 (Middle Cage)

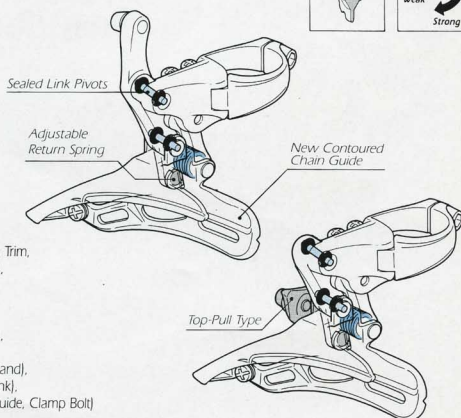
Weight	230g
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible
Features	Lightweight Design, Sealed Link Plates, Cartridge Bearing Tension Pulley, Improved Link Efficiency, Ceramic Bushing, Sealed, Centeron Guide Pulley, Sealed Bracket and Pivot Axes, Double Spoke Barrier, Adjustable Return Spring, Chain Retainer
Capacity	Maximum Rear Sprocket: 32T, Minimum Rear Sprocket: 12T, Front Difference: 22T, Total Capacity: 33T
Material & Finish	Aluminum-Anodized Finish



Front Derailleur

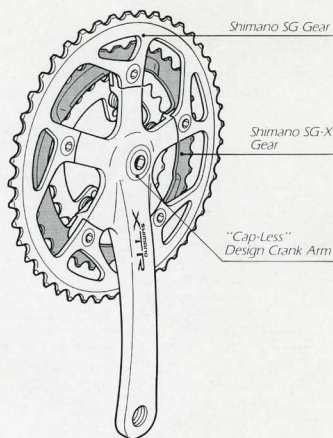
FD-M900 (Band Type)**FD-M901** (Top-Pull Type)

Weight	118g. (Band Type)
Compatibility	Shimano Total Integration Compatible, SHD (Shimano Hyper Drive) Compatible, Shimano SG Gear Compatible, Narrow Type Chain Compatible
Features	Trailing Action Pantograph Mechanism, Adjustable Return Spring, Sealed Mechanism (Rubber Seals Utilized), New Contoured Chain Guide, (Eliminates the Need for Middle Chain Ring Trim, Easier to Assemble onto Frame and Adjust), New Trapeze Mechanism, Sealed Link Pivots
Capacity	24T. (Biopace HP), 26T. (Round)
Clamp Diameter	Ø28.6mm., 31.8mm., 34.9mm. (Band Type), Ø31.8mm. (EC Type)
Material & Finish	Aluminum-Anodized Finish (Front & Rear Band), Aluminum-Anodized Finish (Right & Left Link), Heat-Treated Steel-Chrome-Plated (Chain Guide, Clamp Bolt)



FC-M900 (SHD Triple, MD Type)

Weight	680g. (46T, 36T, 26T, 175mm.)
Compatibility	Shimano Total Integration Compatible, SHD (Shimano Hyper Drive) Compatible, Narrow Type Chain Compatible
Features	Shimano SG-X Gear (Middle), Shimano SG Gear (Top, Low), Super Low Profile Design, "Cap-Less" Design Crank Arm
Chain Size	1/2" x 3/32"
Teeth Combination	48T x 36T x 26T, 46T x 36T x 26T, (Round SG)
Crank Length	165mm., 170mm., 175mm., 180mm.
Crank Thread	English BC 1.37 x 24TPI., Italian M36 x 24TPI.
BB	BB-UN90 Only
Material & Finish	Cold Forged Aluminum•Titanium Color Anodized Finish (Crank), Aluminum•Anodized Finish (Chainring)

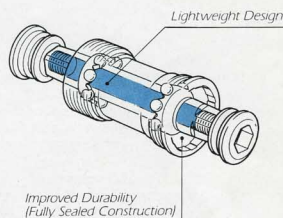


Sealed Cartridge Bottom Bracket

BB-UN90

Weight	255g.
Compatibility	SHD (Shimano Hyper Drive) Compatible
Features	"Easy Assembly" Construction, Improved Durability (Fully Sealed Construction), Maintenance Free Construction, Lightweight Design

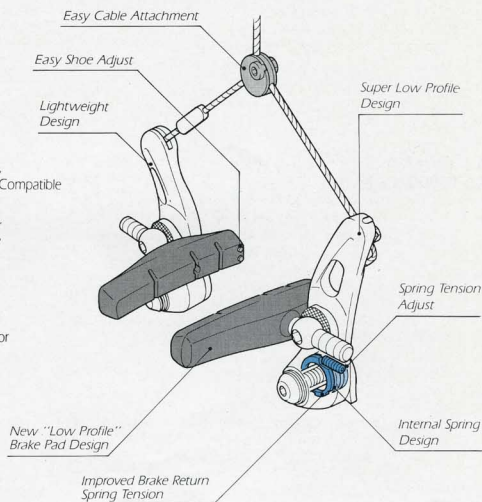
Specifications					
Chain Line		47.5mm.		50mm.	
Spindle Length		107mm.		113mm.	
Shell Width	68 (BC)	70 (M36)	73 (BC)	68 (BC)	70 (M36)
Spindle Marking		MM107		LL113	



Cantilever Brake

BR-M900-F/R

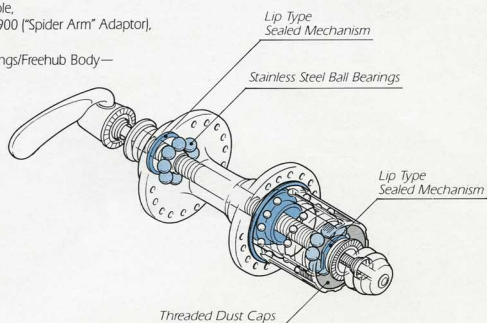
Weight	340g. (Pair)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) PLUS Compatible
Features	Lightweight Design, New "Low Profile" Brake Pad Design, Improved Brake Return Spring Tension, Super Low Profile Design, Easy Cable Attachment, Spring Tension Adjust, Easy Shoe Adjust, Internal Spring Design
Material & Finish	Cold Forged Aluminum•Titanium Color Anodized Finish
Note	BR-M900 must be used as a set with ST-M900 and the Shimano SLR outer cable.



Freehub

FH-M900 (8-speed)

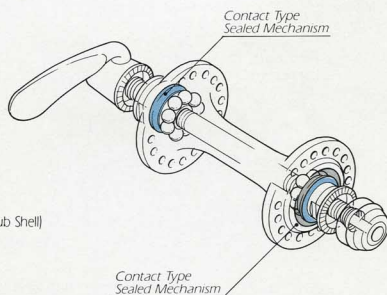
Weight	454g. (with Quick Release)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible with CS-M900 ("Spider Arm" Adaptor), HG Gear Compatible
Features	Improved Seals (Left and Right Bearings/Freehub Body— Hub Shell Connection), Stainless Steel Ball Bearings, Lightweight Design, 6.55mm. Wheel Dish, Threaded Dust Caps
Over Lock Nut Dimensions	135mm.
Axle Length	146mm.
Axle Thread	10mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	45
Material & Finish	Aluminum-Titanium Color Anodized Finish (Hub Shell)



Front Hub

HB-M900-F

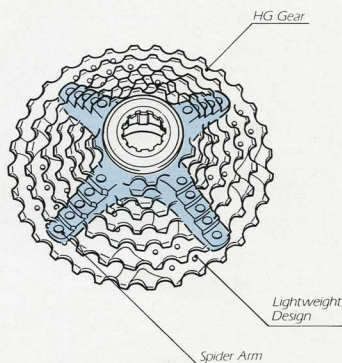
Weight	214g. (with Quick Release)
Features	Lightweight Design, Contact Type Sealed Mechanism, Stainless Steel Ball Bearings, Precision Machined and Polished Bearing Surfaces, Lightweight Quick Release Lever
Over Lock Nut Dimensions	100mm.
Axle Length	108mm.
Axle Thread	9mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	38
Material & Finish	Aluminum•Buff Anodized Finish (Hub Shell)



Cassette Sprockets

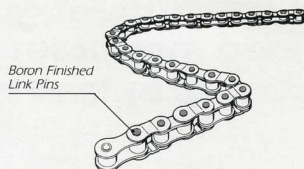
CS-M900-8 (8-speed)

Weight	332g. (Sprocket P Group & Spacer)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible
Features	8-speed HG, Lightweight "Spider Arm" Design, Improved Gear Pitch Consistency For 1/2" x 3/32" Chain (Narrow Type Chain)
Chain Size	P 12, 14, 16, 18, 21, 24, 28, 32T
Sprocket Combinations	Q 12, 13, 14, 16, 18, 21, 24, 28T



HG Chain
CN-7401

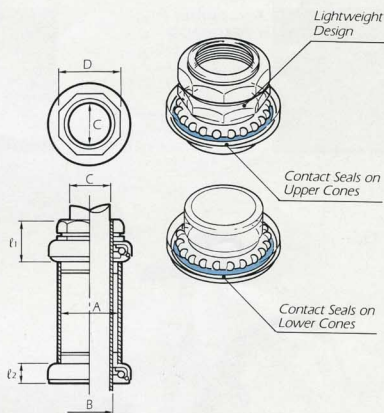
Weight	325g (114 Link)
Compatibility	Shimano Total Integration Compatible
Features	Narrow Type HG Chain, Boron Finished Link Pins
Size	1/2" x 3/32"
Material & Finish	Nickel Finish (Roller Link Plate, Pin Link Plate)



Head Parts
HP-M900
HP-M901
HP-M902

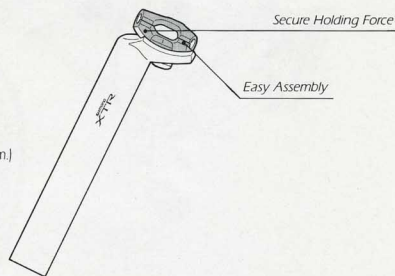
Weight	119g (HP-M900)
Type	Off-Road Type
Features	Lightweight Design, Contact Seals on Both Upper and Lower Cones
Material & Finish	Aluminum (Locknut, Both Upper and Lower Cap)
Variation & Dimensions	

Type	HP-M900	HP-M901	HP-M902
Thread	BC 1" x 24T	M25 x P1.0	BC 1-1/8" x 26T
A	30.2mm	30.2mm	34.0mm
B	26.4mm	26.4mm	30.0mm
C	22.1mm	25.5mm	28.7mm
D	32.0mm	36.0mm	40.0mm
t ₁	22.8mm	22.8mm	27.3mm
t ₂	11.5mm	11.5mm	13.0mm



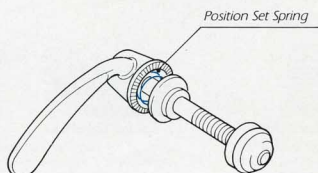
Seat Post
SP-M900

Weight	270g
Features	High Strength Structure, Lightweight Design, Easy Assembly, Secure Holding Force
Outside Diameter	26.6mm, 26.8mm, 27.0mm, 27.2mm
Length	280mm, 330mm, 360mm. (Only available in 27.2mm.)
Material	Cr-Mo Tubing



Seat Post Quick Release
SQ-M900

Weight	66g
Features	Lightweight Design, Easy Operation, Position Set Spring
Shaft Adjustment Length	36—43mm, 26—33mm
Shaft Diameter	Ø6mm, Ø8mm
Material	Steel-Chrome Plated



The component group that originally defined mountain bike performance continues to lead the pack.

For years, Shimano XT has been the bench mark off-road component group. For 1992, Shimano XT offers refinements that secure its position as one of the best off-road component groups available that's number one in performance and quality. Rugged construction stands up to the worst off-road abuse, sealed mechanisms keep out water and mud, and rigid design increases power transfer efficiency. Refined control functions help realize the full performance potential of every rider. The overall result is a greater competitive edge for the Shimano XT rider.



●Rapidfire Plus (ST-M095)

Similar to the XTR lever set, the Deore XT Rapidfire Plus lever set allows shifting with both the thumb and first finger in a 7-speed SIS system. Multiple shifts of up to four gears can be executed with one lever stroke.



●Front Derailleur (FD-M736)

The Deore XT front derailleur is a new "top pull" type similar to the XTR derailleur. The top-pull design, for top tube cable routing, helps reduce the adverse affect of mud and dirt on derailleur operation.



7-Speed SIS

Shimano XT's 7-speed SIS gives a wide gear selection with the simple push button shifting action of Rapidfire Plus. New Rapidfire Plus feature allows use of thumb and index finger to shift in order to help reduce shifting fatigue.



SLR Plus

The servo-wave mechanism in the SLR brake lever provides maximum brake pad movement with minimal lever travel after which the power multiplication factor increases to provide strong, sure, controllable stops.



Shimano SG

Shimano SG chainwheel features strategically positioned contours and cutouts that guide the chain smoothly and quickly from gear to gear.

Biopace

The computer designed shape of Biopace creates a pedaling cadence that approximates the natural movement of the leg when walking. The result is less fatigue, more stamina, and a more natural pedaling feeling.



7-Speed HG Sprockets

Shimano XT's 7-speed gear cassette features HG (Hyperglide), which realize fast and smooth shifts regardless of pedal torque or cadence. SIS with HG is now known as the state-of-the-art shifting system for the off-road bike.



7-Speed Freehub

Shimano XT combines the rear hub and freewheel into a stronger unit as a result of the famous Shimano freehub design. The freehub increases wheel strength, durability, and improves power transfer efficiency.

SHIMANO DEORE XT

SHIMANO
TOTAL
INTEGRATION



Seat Post
SP-M730



Pedal Sets
PD-M735



Chain Deflector
DF-M730

Cassette Sprockets
CS-HG90-7



Rapidfire Lever Set
ST-M092



Freehub
FH-M732



Front Hub
HB-M730-F



Chain
CN-HG91



Seat Post
Quick Release
SQ-M730



Rapidfire Plus
Lever Set
ST-M095



Sealed Cartridge Bottom Bracket
BB-UN70



Cantilever Brake
BR-M734

Front Derailleur
FD-M735



Front Chainwheel
FC-M730-SG

Rear Derailleur
RD-M735



Oversize Head Parts
HP-M736

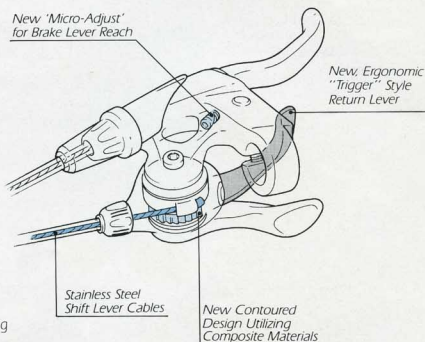


SPD Pedal Set
PD-M737



ST-M095 (Servo-Wave, 2-Finger)

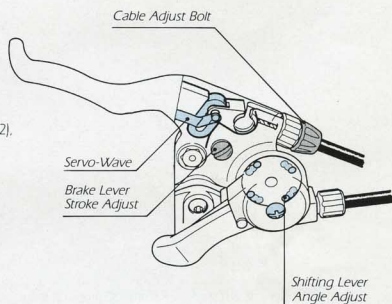
Weight	411g. (Pair)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) PLUS Compatible, 7-speed SIS Compatible
Features	Lightweight Design, New, Ergonomic "Trigger" Style Return Lever (RAPIDFIRE-PLUS), Handlebar Grip Thickness Limited to 5mm, or Less (RAPIDFIRE-PLUS) New Contoured Design Utilizing Composite Materials, Stainless Steel Shift Lever Cables, New "Micro-Adjust" for Brake Lever Reach 22.2mm.
Lever Clamp Diameter	22.2mm.
Material & Finish	Aluminum-Black Anodized Finish (Bracket), Forged Light Alloy-Black Paint Finish (Lever)
Note	For SLR & SIS function, use for SLR outer casing with liner (Brake Lever) and SIS-SP sealed outer casing with liner (Shifting Lever).



Rapidfire

ST-M092 (Servo-Wave, 2-Finger)**ST-M090** (4-Finger)

Weight	550g. (ST-M092)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) PLUS Compatible (ST-M092), 7-speed SIS Compatible
Features	Dual Repeat Function, Brake Lever Stroke Adjust, Shifting Lever Angle Adjust, Light Action Lever 22.2mm.
Lever Clamp Diameter	22.2mm.
Material & Finish	Aluminum-Anodized Finish (Bracket & Lever)
Note	For SLR & SIS function, use for SLR outer casing with liner (Brake Lever) and SIS-SP sealed outer casing with liner (Shifting Lever).



Shifting Lever

SL-M732

Weight	182g.
Features	7-speed SIS, SIS-Friction Mode Switch, Light Action Lever, Low Profile Design, 3-Step Lever Adjust, Digital Cable Adjust

Lever Clamp Diameter 22.2mm.

Material & Finish Aluminum-Anodized Finish (Bracket),
Aluminum-Buff Finish (Lever)

Attachment Position Handlebar



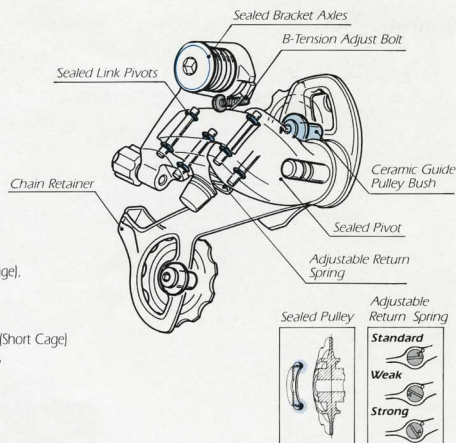
Rear Derailleur

RD-M735-SGS [Super Long Cage]**RD-M735-SS** [Short Cage]

- Weight** 270g. (Super Long Cage), 250g. (Short Cage)
- Compatibility** Shimano Total Integration Compatible.
6, 7-speed SIS Compatible
- Features** Adjustable Return Spring,
Sealed Link Pivots,
Sealed Pulley,
Sealed Pivot & Bracket Axles (O-Rings),
Double Servo-Panta Mechanism,
B-Tension Adjust Bolt,
Double Spoke Barner,
Chain Retainer (Super Long Cage),
Chain Retainer (Super Long Cage),
Maximum Rear Sprocket: 32T. (Super Long Cage),
28T. (Short Cage)
- Capacity** Minimum Rear Sprocket: 12T,
Front Difference: 20T. (Super Long Cage)
Total Capacity: 38T. (Super Long Cage), 28T. (Short Cage)

Material & Finish

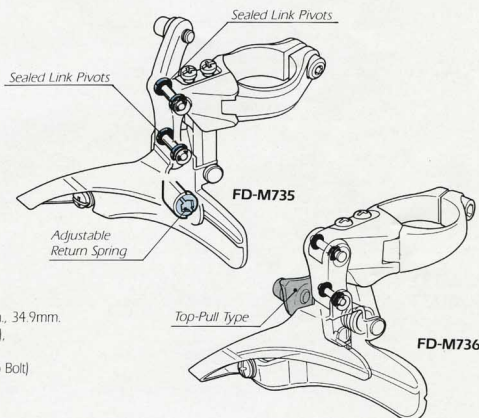
Aluminum•Buff Finish (Bracket & Pulley Body),
Aluminum•Anodized Finish (Right Link),
Aluminum•Barrel Finish (Left Link)



Front Derailleur

FD-M735 (Normal Band Type)**FD-M736** (Top-Pull Type)

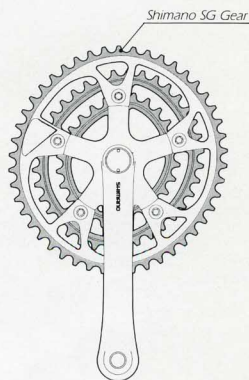
- Weight** 116g. (Normal Band Type)
- Compatibility** Shimano Total Integration Compatible,
Shimano SG Gear Compatible
- Features** Narrow Type Chain Compatible
Trailing Action Pantograph Mechanism,
Adjustable Return Spring,
Rigid Chain Guide,
New Trapeze Mechanism,
Sealed Link Pivots
- Capacity** 24T. (Biopace HP), 26T. (Round)
- Clamp Diameter** Ø28.0mm — 28.6mm, 30.0mm, 31.8mm, 34.9mm.
- Material & Finish** Aluminum•Buff Finish (Front & Rear Band),
Aluminum•Anodized Finish (Right Link),
Steel•Chrome-Plated (Chain Guide, Clamp Bolt)



Front Chainwheel & Bottom Bracket Assembly

FC-M730-SG (Shimano SG Triple, MD Type)**BB-UN70** (B.B. Set)

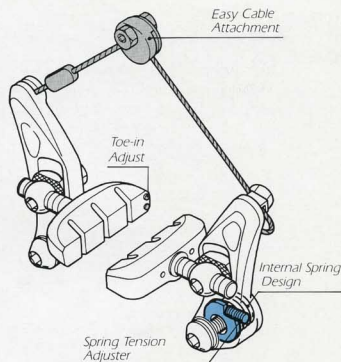
- Weight** 730g. (46T, 36T, 26T, 170mm.)
- Compatibility** Shimano Total Integration Compatible,
Narrow Type Chain Compatible
- Features** Shimano SG Gear
- Chain Size** 1/2" x 3/32"
- Teeth Combination** 48T.x38T.x28T, 46T.x36T.x26T. (Biopace SG),
48T.x38T.x28T, 46T.x36T.x24T. (Round SG)
- Crank Length** 165mm., 170mm., 175mm., 180mm.
- Crank Thread** English BC 9/16" x 20 T.P.I.
- Material & Finish** Aluminium•Anodized Finish (Crank, Chaining)
Aluminium•Black Finish Available (Chaining)



Cantilever Brake

BR-M734

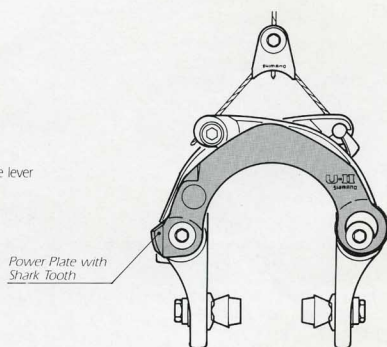
Weight	172g (Pair)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) PLUS Compatible
Features	Super Low Profile Design, Easy Cable Attachment, Spring Tension Adjuster, Easy Shoe Adjust, Internal Spring Design
Material & Finish	Aluminum•Buff Finish (Black Finish Available)
Note	BR-M734 must be used as a set with ST-M092 and the Shimano SLR outer cable. No other combination can be used.



U-11 Brake

BR-M733

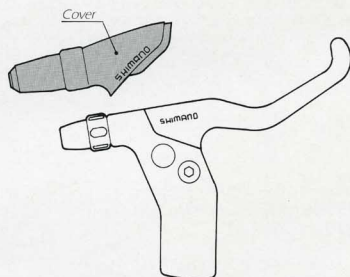
Weight	375g (1 Unit)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible
Feature	Power Plate with Shark Tooth
Material & Finish	Forged Aluminum•Anodized Finish
Note	For SLR system use with SLR compatible brake lever and Shimano SLR outer cable with liner.



Brake Lever

BL-M732 (4-Finger)**BL-M733** (2-Finger)

Weight	284g (Pair, 2-Finger)
Compatibility	SLR (Shimano Linear Response) Compatible
Features	Return Spring, Digital Lever-Reach Adjustment (4-Positions) 22.2mm.
Lever Clamp Diameter	22.2mm.
Material & Finish	Aluminum•Anodized Finish (Bracket & Lever)
Note	For SLR system use with SLR compatible brake and Shimano SLR outer cable with liner.



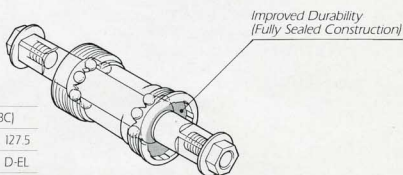
Sealed Cartridge Bottom Bracket

BB-UN70

Weight	287g (122.5mm.)
Features	"Easy Assembly" Construction, Improved Durability (Fully Sealed Construction), Maintenance Free Construction, Lightweight Design

Specifications

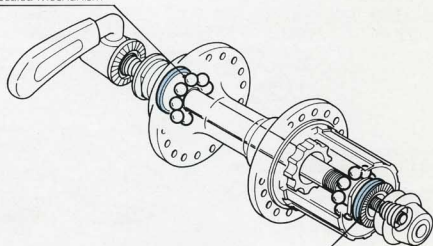
Shell Width	68 (BC)	70 (M36)	73 (BC)
Spindle Length	122.5	127.5	122.5
Spindle Marking	D-NL	D-EL	D-NL



Freehub

FH-M732 (7-speed)

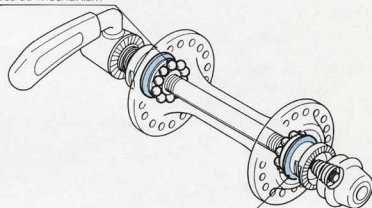
Weight	490g. (with Quick Release)
Compatibility	Shimano Total Integration Compatible, 7-speed SIS Compatible
Features	Lip Type Sealed Mechanism, HG/UG Convertible Type, Uni-Balance System,
Over Lock Nut Dimensions	135mm., 130mm. (Quick Release Type), 135mm., 130mm. (Nut Type)
Axle Length	146mm., 141mm. (Quick Release Type), 185mm., 180mm. (Nut Type)
Axle Thread	10mm.
Spoke Holes	32H., 36H.
Hole PCD	45
Material & Finish	Aluminum•Buff Finish (Hub Shell)

Lip Type
Sealed MechanismLip Type
Sealed Mechanism

Front Hub

HB-M730-F

Weight	213g. (with Quick Release)
Feature	Lip Type Sealed Mechanism
Over Lock Nut Dimensions	100mm.
Axle Length	108mm. (Quick Release Type), 142mm. (Nut Type)
Axle Thread	9mm.
Spoke Holes	32H., 36H.
Hole PCD	38
Material & Finish	Aluminum•Buff Finish (Hub Shell)

Lip Type
Sealed MechanismLip Type
Sealed Mechanism

Cassette Sprockets

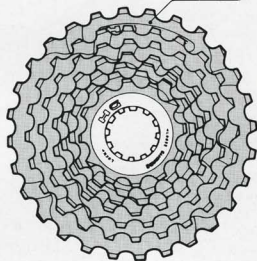
CS-HG90-7 (7-speed)

Weight	325g. (Sprocket I Group & Spacer)
Compatibility	Shimano Total Integration Compatible, 7-speed SIS Compatible
Feature	7-speed HG
Chain Size	1/2" x 3/32" (Narrow Type Chain)
Material & Finish	Steel•Chrome Plated

Sprocket Combinations

E	12, 14, 16, 18, 21, 24, 28T
F	14, 16, 18, 21, 24, 28, 32T
G	13, 15, 17, 20, 23, 26, 30T
H	13, 15, 17, 19, 21, 23, 26T
I	13, 14, 15, 17, 19, 21, 23T
J	13, 14, 15, 16, 17, 19, 21T
K	13, 15, 17, 20, 24, 29, 34T
L	12, 13, 14, 15, 17, 19, 21T
M	13, 15, 17, 19, 21, 24, 28T

HG Gear



HG Chain

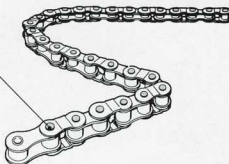
CN-HG90

Compatibility	Shimano Total Integration Compatible
Feature	Narrow Type HG Chain
Size	1/2" x 3/32"
Material & Finish	Black Finish (Roller Link Plate), Silver Finish (Pin Link Plate)

HG Chain

CN-HG91

Compatibility	Shimano Total Integration Compatible
Feature	Narrow Type HG Chain
Size	1/2" x 3/32"
Material & Finish	Silver Finish (Roller & Pin Link Plate)

Cromizing
Treatment Link Pins

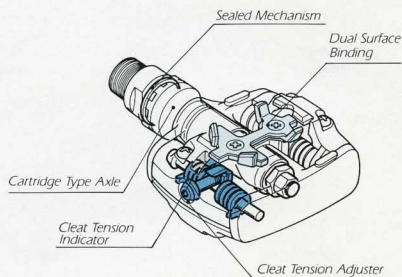
SPD Pedal

PD-M737**Weight
Features**

450g (Pair)
 SPD (Shimano Pedaling Dynamics) Cleats System
 Cartridge Type Axle,
 Cleat Tension Indicator,
 Dual Surface Binding,
 Cleat Tension Adjuster,
 31° Road Clearance,
 Sealed Mechanism

**Crank Thread
Material & Finish**

English BC 9/16" x 20T.P.I.
 Aluminium-Black Finish (Body),
 Cr-Mo Steel (Axle)



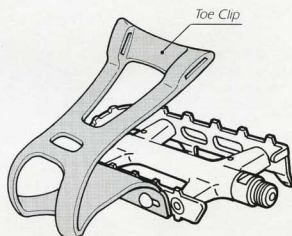
Pedal

PD-M735**Weight
Features**

295g (Pair)
 32° Road Clearance,
 Super Low Profile Design,
 Parallelogram Shape,
 Contact Type Sealed Mechanism,
 Stainless Steel Grip Pin,
 Toe Clip/Reflector Attachable

**Crank Thread
Material & Finish**

English BC 9/16" x 20T.P.I.
 Aluminium (Body),
 Aluminium-Anodized Finish (Plate),
 Resin (Toe Clip)



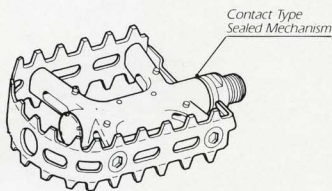
Pedal

PD-M730**Weight
Features**

412g (Pair)
 26° Road Clearance,
 Low Profile Design,
 Parallelogram Shape,
 Contact Type Sealed Mechanism,
 Stainless Steel Grip Pin,
 Toe Clip/Reflector Attachable

**Crank Thread
Material & Finish**

English BC 9/16" x 20T.P.I.
 Aluminium (Body),
 Aluminium-Anodized Finish (Plate)



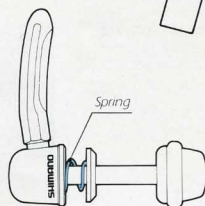
Seat Post
SP-M730

Weight	296g (330mm)
Features	High Strength Structure, Light Weight, Long Size
Outside Diameter	26.6mm., 26.8mm., 27.0mm., 27.2mm.
Length	280mm., 330mm.
Material	Cr-Mo Steel



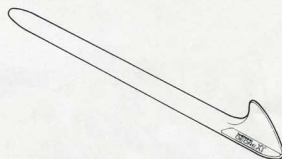
Seat Post Quick Release
SQ-M730

Weight	79g.
Features	Easy Operation, Position Set Spring
Shaft Adjustment Length	36—43mm., 26—33mm.
Shaft Diameter	Ø6mm., Ø8mm.
Material	Steel-Chrome-Plated Finish



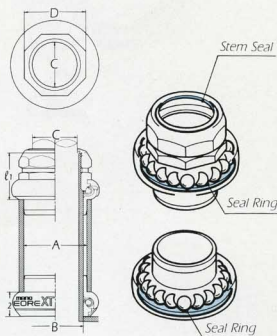
Chain Deflector
DF-M730

Weight	9g.
Features	Keeps the Chain from jamming between the Tire & Chainstay
Material	Resin



Head Parts
HP-M735
HP-M736
HP-M737

Weight	110g. (HP-M735), 149g. (HP-M736), 155g. (HP-M737)
Type	Off-Road Type
Feature	Sealed Mechanism
Material & Finish	Aluminum-Anodized Finish (Nut), Steel (Upper Cup), Stainless Steel •Black Finish (Lower Cup)



Variation & Dimensions

Type	HP-M735	HP-M736	HP-M737
Thread	BC1" × 24T.	M25 × P1.0	BC1-1/8" × 26T.
A	30.2mm.	30.2mm.	34.0mm.
B	26.4mm.	26.4mm.	30.0mm.
C	22.1mm.	25.5mm.	28.7mm.
D	32.0mm.	36.0mm.	40.0mm.
e ₁	22.0mm.	22.0mm.	27.3mm.
e ₂	11.5mm.	11.5mm.	13.0mm.

Quality plus a full range of advanced Shimano functions for the general-purpose mountain bike.

Everyone from casual off-road enthusiasts to aspiring racers will appreciate the rugged quality and performance of Shimano DX components. Shimano DX offers most of the functions of Shimano XT but in a more affordable package. And Shimano DX's unified black color treatment makes any mountain bike look as good as it goes.



●Seat Post (SP-M650)

A new seat pillar has been added to the popular Deore DX series to offer a more complete component system. The seat pillar features a natural silver finish.



●Front Derailleur (FD-M651)

New "top-pull" front derailleur design resists buildup of mud and dirt for a more reliable performance off the road.



7-Speed SIS

Shimano DX's 7-speed SIS gives you a wide gear selection. A simple push of the under-bar Rapidfire lever gets the gear you need without the need to change your grip on the bars.



SLR (Shimano Linear Response)

Shimano Linear Response technology reduces friction throughout the brake system to provide strong stops and a feeling of sensitive response at the lever. The result is upgraded braking control and a greater feeling of confidence.



Shimano SG

The Shimano SG chainwheel features strategically positioned contours and cutouts that guide the chain smoothly and quickly from gear to gear.



7-Speed HG Sprockets

Shimano DX's 7-speed gear cassette features HG sprockets. The special tooth contours of HG sprockets realize fast and smooth shifts regardless of pedal torque or cadence. It's the state-of-the-art shifting system for the off-road bike.



7-Speed Freehub

Shimano DX combines the rear hub and freewheel into a single unit—the famous Shimano freehub. The result is increased wheel strength, upgraded durability, and improved power transfer efficiency.

SHIMANO DEORE DX

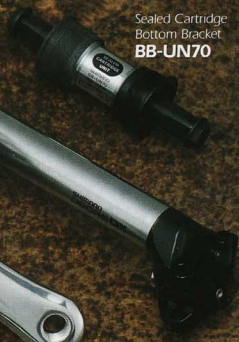
SHIMANO
TOTAL
INTEGRATION



Front Chainwheel
FC-MT60-SG



Sealed Cartridge
Bottom Bracket
BB-UN70



Pedal Sets
PD-M650



Low Profile
Cantilever Brake
BR-M650



Front Derailleur
FD-M650



Top Pull
Front Derailleur
FD-M651



Rapidfire Lever Set
ST-M071



Rear Derailleur
RD-M650



Cassette Sprockets
CS-HG70



Head Parts
HP-M650



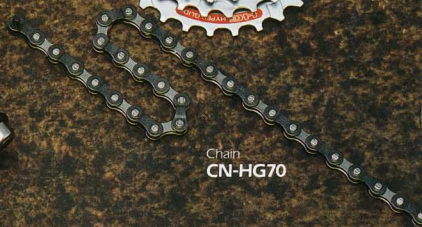
Front Hub
HB-M650-F



Freehub
FH-M650



Chain
CN-HG70



Rapidfire

ST-M071 (2-Finger)

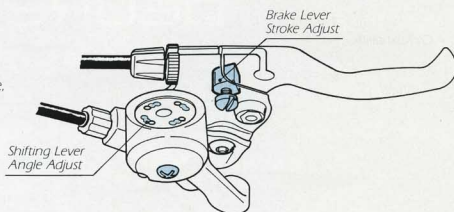
ST-M070 (4-Finger)

Weight 535g. (ST-M071)
Compatibility Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible, 7-speed SIS Compatible
Features Dual Repeat Function, Brake Lever Stroke Adjust, Shifting Lever Angle Adjust, Light Action Lever

Lever Clamp Diameter 22.2mm

Material & Finish Aluminum•Anodized Finish (Bracket), Aluminum•Paint Finish (Lever)

Note For SLR & SIS function, use for SLR outer casing with liner (Brake Lever) and SIS-SP sealed outer casing with liner (Shifting Lever).



Shifting Lever

SL-MT62

Weight 232g.
Features 7-speed SIS, SIS-Friction Mode Switch, Light Action Lever, Low Profile Design, 3-Step Lever Adjust, Digital Cable Adjust

Lever Clamp Diameter 22.2mm

Material & Finish Steel•Paint Finish (Bracket), Aluminum•Barrel Finish (Lever)

Attachment Position Handlebar

SIS-Friction Mode Switch



Rear Derailleur

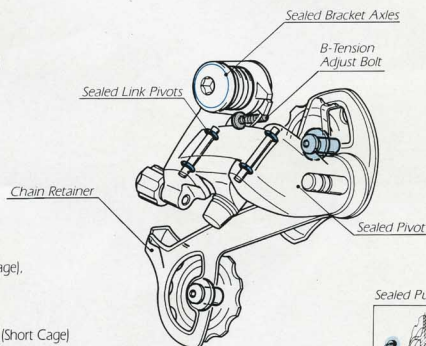
RD-M650-SGS (Super Long Cage)

RD-M650-SS (Short Cage)

Weight 320g. (Super Long Cage), 257g. (Short Cage)
Compatibility Shimano Total Integration Compatible, 6, 7-speed SIS Compatible
Features Sealed Link Pivots, Sintered Alloy Guide Pulley, Centeron Guide Pulley, Sealed Tension Pulley, Sealed Pivot & Bracket Axes (O-Rings), Double Servo-Pantia Mechanism, B-Tension Adjust Bolt, Double Spoke Barrier, Chain Retainer (Super Long Cage)
Capacity Maximum Rear Sprocket: 32T. (Super Long Cage), 28T. (Short Cage)
 Minimum Rear Sprocket: 12T.
 Front Difference: 20T.
 Total Capacity: 38T. (Super Long Cage), 28T. (Short Cage)

Material & Finish

Aluminum•Barrel Finish (Bracket & Plate Body), Aluminum•Paint Finish (Right Link), Steel•Pearl Bright Finish (Left Link)



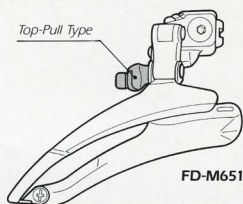
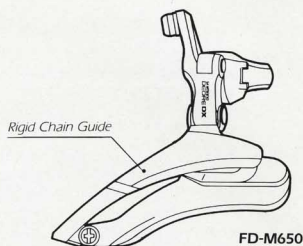
Sealed Pulley



Front Chainwheel

FC-MT60-SG (Shimano SG Triple, MD Type)

Weight	740g (48T, 38T, 28T, 170mm.)
Compatibility	Shimano Total Integration Compatible, Narrow Type Chain Compatible
Features	Shimano SG Gear
Chain Size	1/2" x 3/32"
Teeth Combination	48T.x38T.x28T, 46T.x36T.x26T (Biopace SG), 48T.x38T.x28T, 46T.x36T.x24T (Round SG)
Crank Length	170mm, 175mm
Crank Thread	English BC 9/16" x 20 T.P.I.
Material & Finish	Aluminium-Barrel Finish (Crank), Aluminium-Anodized Finish (Chaining)

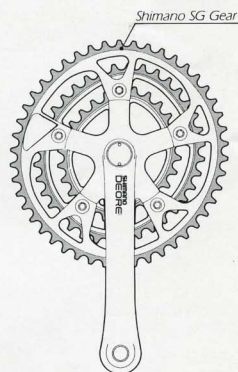


Front Chainwheel

FC-MT60-SG (Shimano SG Triple, MD Type)

Weight	740g (48T, 38T, 28T, 170mm.)
Compatibility	Shimano Total Integration Compatible, Narrow Type Chain Compatible
Features	Shimano SG Gear,
Chain Size	1/2" x 3/32"
Teeth Combination	48T x 38T x 28T, 46T x 36T x 26T (Biopace SG), 48T x 38T x 28T, 46T x 36T x 24T (Round SG)
Crank Length	170mm., 175mm.
Crank Thread	English BC 9/16" x 20T.P.I.

Material & Finish	Aluminum-Barrel Finish (Crank), Aluminum-Anodized Finish (Chaining)
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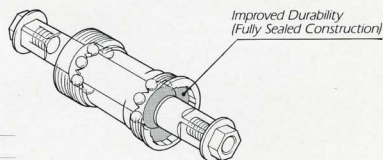


Sealed Cartridge Bottom Bracket

BB-UN70

Weight	287g (122.5mm.)
Features	"Easy Assembly" Construction Improved Durability (Fully Sealed Construction) Maintenance Free Construction Lightweight Design

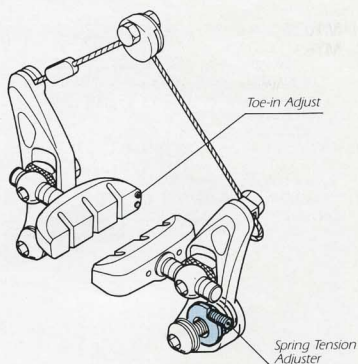
Specifications	Light Weight Design							
	Shell Width		68 (BC)		70 (M36)		73 (BC)	
	Spindle Length		122.5	127.5	122.5	127.5	122.5	127.5
	Spindle Marking		D-NL	D-EL	D-NL	D-EL	D-NL	D-EL



Cantilever Brake

BR-M650

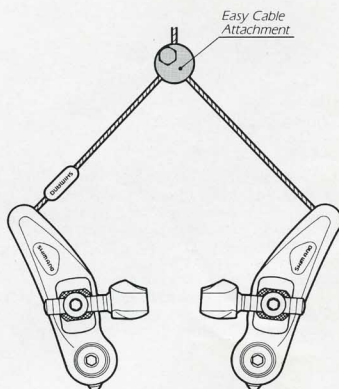
Weight	199g. (Pair)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible
Features	Super Low Profile Design, Easy Cable Attachment, Spring Tension Adjuster
Material & Finish	Aluminum+Buff Finish (Black Finish Available)
Note	For SLR system use with SLR compatible brake lever and Shimano SLR outer cable with liner.



Cantilever Brake

BR-M651

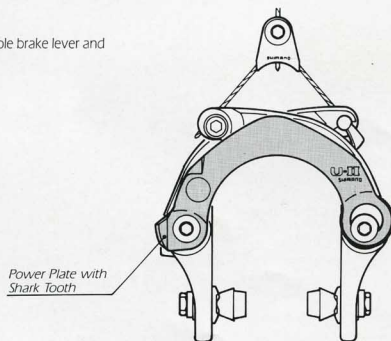
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible
Features	Low Profile Design, Easy Cable Attachment, Spring Tension Adjuster
Material & Finish	Aluminum+Barrel Finish
Note	For SLR system use with SLR compatible brake lever and Shimano SLR outer cable with liner.



U-III Brake

BR-MT63

Weight	338g. (1 Unit)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible
Features	Spring Tension Adjuster, Power Plate with Shark Tooth
Material & Finish	Forged Aluminium+Anodized Finish
Note	For SLR system use with SLR compatible brake lever and Shimano SLR outer cable with liner.



Brake Lever

BL-MT62 (4-Finger)

BL-MT63 (2-Finger)

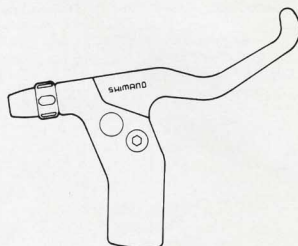
Weight	274g. (Pair, 2-Finger)
Compatibility	SLR (Shimano Linear Response) Compatible
Features	Return Spring, Safety Clamp Design, Digital Lever-Reach Adjustment (4-Positions)

Lever Clamp Diameter

Material & Finish

Note

22.2mm.
Aluminium-Black Finish (Bracket),
Aluminium-Anodized Finish (Lever)
For SLR system use with SLR compatible brake and Shimano SLR outer cable with liner.



Freehub

FH-M650 (7-speed)

Weight	445g. (with Quick Release)
Compatibility	Shimano Total Integration Compatible, 7-speed SIS Compatible, HG Gear Compatible
Features	Lip Type Sealed Mechanism, HG/UG Compatible Type, Uni-Balance System

Over Lock Nut Dimensions

Axle Length

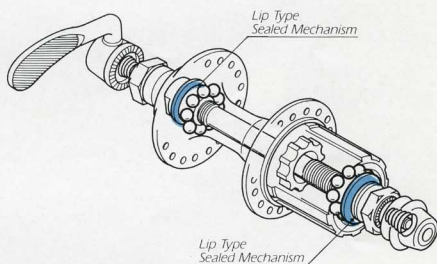
Axle Thread

Spoke Holes

Hole PCD

Material & Finish

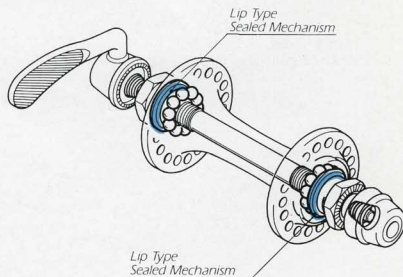
135mm., 130mm. (Quick Release Type),
135mm., 130mm. (Nut Type)
146mm., 141mm. (Quick Release Type),
185mm., 180mm. (Nut Type)
10mm.
32H, 36H
45
Aluminum-Anodized Finish (Hub Shell)



Front Hub

HB-M650-F

Weight	231g. (with Quick Release)
Feature	Lip Type Sealed Mechanism
Over Lock Nut Dimensions	100mm.
Axle Length	108mm. (Quick Release Type), 142mm. (Nut Type)
Axle Thread	9mm.
Spoke Holes	32H, 36H
Hole PCD	38
Material & Finish	Aluminum-Anodized Finish (Hub Shell)

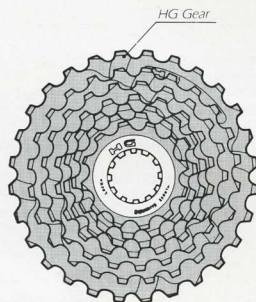


Cassette Sprockets

CS-HG70 (7-speed)

Weight	325g. (Sprocket E Group & Spacer)
Compatibility	Shimano Total Integration Compatible. 7-speed SIS Compatible
Feature	7-speed HG
Chain Size	1/2" x 3/32" (Narrow Type Chain)
Material & Finish	Steel-Silver Finish
Sprocket Combinations	

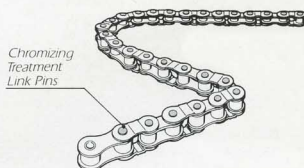
E	12, 14, 16, 18, 21, 24, 28T
F	14, 16, 18, 21, 24, 28, 32T
G	13, 15, 17, 20, 23, 26, 30T
H	13, 15, 17, 19, 21, 23, 26T
I	13, 14, 15, 17, 19, 21, 23T
J	13, 14, 15, 16, 17, 19, 21T
K	13, 15, 17, 20, 24, 29, 34T
L	12, 13, 14, 15, 17, 19, 21T
M	13, 15, 17, 19, 21, 24, 28T



HG Chain

CN-HG70

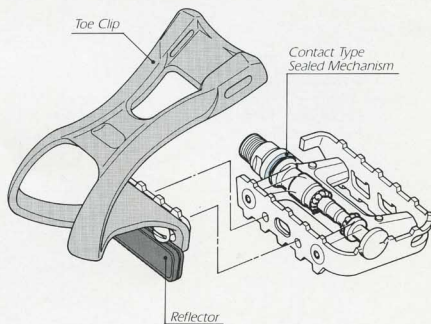
Weight	325g. (114 Link)
Compatibility	Shimano Total Integration Compatible
Features	Narrow Type HG Chain, Chromizing Treatment Link Pins
Size	1/2" x 3/32"
Material & Finish	Gray Finish (Roller Link Plate), Black Finish (Pin Link Plate)



Pedal

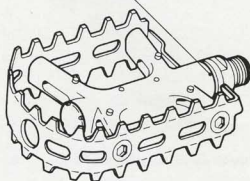
PD-M650

Weight	385g. (Pair)
Features	32° Road Clearance, Super Low Profile Design, Parallelogram Shape, Contact Type Sealed Mechanism, Steel Grip Pin, Toe Clip/Reflector Attachable
Crank Thread	English BC 9/16" x 20 T.P.I.
Material & Finish	Aluminium (Body), Steel-Anodized Finish (Plate), Resin (Toe Clip)



PD-MT60

Weight	412g. (Pair)
	26° Road Clearance,
Features	Low Profile Design,
	Parallelogram Design,
Crank Thread	Contact Type Sealed Mechanism,
	Steel Grip Pin,
Material & Finish	Toe Clip/Reflector Attachable
	English BC9/16" x 20TPI.
	Aluminium (Body),
	Steel-Anodized Finish (Plate)

Contact Type
Sealed Mechanism

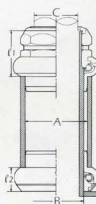
Head Parts

HP-M650**HP-M651**

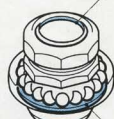
Weight	121g. (HP-M650), 149g. (HP-M651)
	Off-Road Type
Feature	Sealed Mechanism
Material & Finish	Steel-Black Finish

Variation & Dimensions

Type	HP-M650		HP-M651
Thread	BC1" x 24T.	M25 x P1.0	BC1-1/8" x 26T.
A	30.2mm.	30.2mm.	34.0mm.
B	26.4mm.	26.4mm.	30.0mm.
C	22.1mm.		25.5mm.
D	32.0mm.		36.0mm.
ℓ1	22.0mm.		22.0mm.
ℓ2	11.5mm.		11.5mm.



Stem Seal



Seal Ring



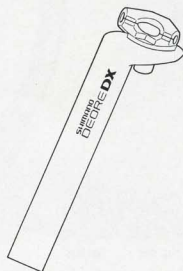
Seal Ring

Seat Post

SP-M650

Weight	325g. (360mm.)
	High Strength Structure,
Features	Light Weight,
	Long Size

Outside Diameter	26.6mm., 26.8mm., 27.0mm., 27.2mm.
	280mm., 330mm., 360mm.
Length	
Material	Cr-Mo Steel-Pearl Bright Finish



The advanced performance of Shimano Total Integration in an all-purpose mountain bike component group.

Deore LX brings both quality and performance to the entry level mountain bike. The Deore LX components include a full range of advanced Shimano functions, including Rapidfire shifting, plus a feeling of easy control that enhances safety and performance.

New riders and experienced off-riders alike will appreciate the full grip 3-finger brake levers, completely sealed mechanisms that keep out dirt and water, and Deore LX's other advanced features.

●Cantilever Brakes (BR-C510-B)

This new cantilever brake was designed as a hybrid bicycle brake when the Deore LX group is assembled to a hybrid bicycle. Featuring smaller cantilever arms than the standard MTB brakes, the BR-C510-B brakeset also utilizes a shorter bridge wire to cable stop length.



●SPD Pedal (PD-M525)

This is a more casual and economical version of the SPD pedal. It is double sided and uses the same cleat as the top of the line PD-M737. Reflectors are available as an option.



●Head Parts (HP-R501)

This new headset is an oversize (1-1/8") version of the HP-R500 model. Available in black only.



7-Speed SIS

Deore LX features 7-speed SIS that gives the same wide gear selection as the high end groups. The simple push-only action of the under-bar Rapidfire lever gets the gear you need without forcing you to release or change your grip on the bars.



SLR (Shimano Linear Response)

Shimano Linear Response technology reduces friction throughout the brake system to provide a feeling of sensitive response at the lever. The result is upgraded braking control and a greater feeling of confidence.



Shimano SG

This is the new standard in chainwheel shifting. The Shimano SG chainwheel features strategically positioned contours and cutouts that guide the chain smoothly and quickly from chainwheel to chainwheel.



Biopace

The computer designed shape of Biopace creates a pedaling cadence that approximates the natural movement of the leg when walking. The result is less fatigue, increased stamina, less knee strain, and a more natural pedaling feeling.



7-Speed HG Sprockets

Deore LX's 7-speed gear cluster features HG sprockets. The special tooth contours of HG sprockets help provide fast and smooth shifts regardless of pedal torque. SIS with HG sprockets is the recognized state-of-the-art shifting system for the off-road bike.



7-Speed Freehub

Deore LX combines the rear hub and freewheel into a single unit. The rigid freehub design results in increased wheel strength, upgraded durability, and improved power transfer efficiency.



SHIMANO DEORE LX

SHIMANO
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INTEGRATION



Sealed Cartridge Bottom Bracket
BB-UN50



Pedal Set
PD-M550



Cantilever Brake
BR-M651



Cassette Sprockets
CS-HG70

Chain
CN-HG70

Front Hub
HB-M550-F



Freehub
FH-M550



Front Chainwheel
FC-M550-SG



SPD Pedal Set
PD-M52S



Oversize
Head Parts
HP-R501



Rear Derailleur
RD-M550-SGS



Rear Derailleur
RD-M550-GS



Radiant Lever Set
ST-M060-S

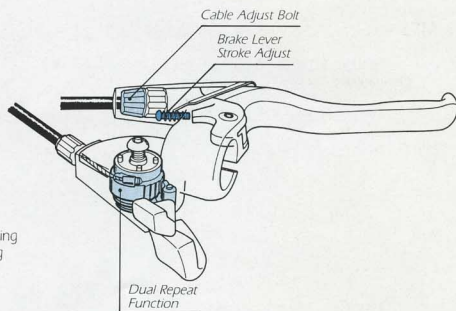


Front Derailleur
FD-M550



ST-M060-S (3-Finger)

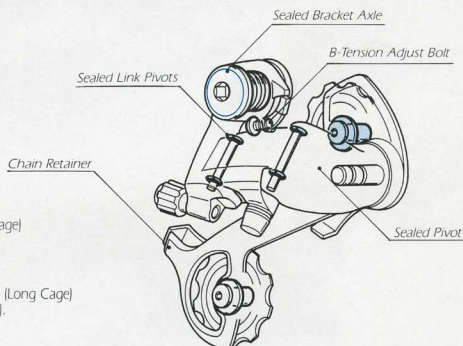
Weight	588g (Pair)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible, 7-speed SIS Compatible
Features	Dual Repeat Function, Brake Lever Stroke Adjust, Light Action Lever
Lever Clamp Diameter	22.2mm
Material & Finish	Aluminum+Paint Finish (Bracket), Steel+Zinc Plated & Resin-Molding (Lever)
Note	For SLR & SIS function, use with SLR outer casing with liner (Brake Lever) and SIS-SP outer casing with liner (Shifting Lever).



Rear Derailleur

RD-M550-SGS (Super Long Cage)**RD-M550-GS** (Long Cage)

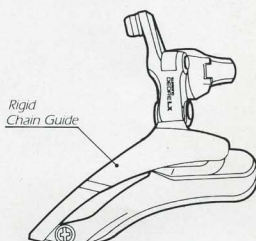
Weight	320g (Super Long Cage)
Compatibility	Shimano Total Integration Compatible, 6, 7-speed SIS Compatible
Features	Sealed Link Pivots, Centerion Guide Pulley, Sealed Pivot & Bracket Axes, Double Servo-Panta Mechanism, B-Tension Adjust Bolt, Double Spoke Barrier, Chain Retainer (Super Long Cage)
Capacity	Maximum Rear Sprocket: 32T (Super Long Cage) 30T (Long Cage) Minimum Rear Sprocket: 12T Front Difference: 20T Total Capacity: 38T (Super Long Cage), 36T (Long Cage)
Material & Finish	Aluminum+Barrel Finish (Bracket & Plate Body), Aluminum+Paint Finish (Right Link), Steel+Pearl Bright Finish (Left Link)



Front Derailleur

FD-M550

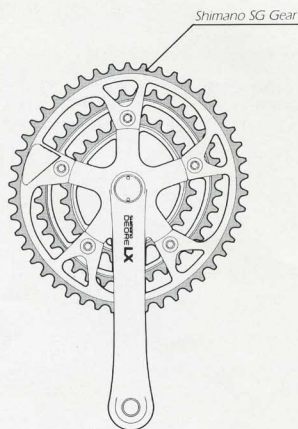
Weight	119g (Normal Band Type)
Compatibility	Shimano Total Integration Compatible, Shimano SG Gear Compatible, Narrow Type Chain Compatible
Features	Trailing Action Pantograph Mechanism, Top-Pull Type Available, Rigid Chain Guide, New Trapeze Mechanism
Capacity	24T (Biopace HP), 26T (Round)
Clamp Diameter	28.0mm, 28.6mm, 30.0mm, 31.8mm, 34.9mm
Material & Finish	Aluminum+Barrel Finish (Front & Rear Band), Aluminum+Paint Finish (Right Link), Steel+Chrome-Plated (Chain Guide, Clamp Bolt)



Front Chainwheel

FC-M550-SG (Shimano SG Triple, MD Type)

Weight	752g. (28T, 38T, 48T, 170mm.)
Compatibility	Shimano Total Integration Compatible, Narrow Type Chain Compatible
Features	Shimano SG Gear
Chain Size	1/2" x 3/32"
Teeth Combination	48 T.x 38 T.x 28 T., 46 T.x 36 T.x 26 T. (Biopace SG), 48 T.x 38 T.x 28 T., 46 T.x 36 T.x 24 T. (Round SG)
Crank Length	170mm, 175mm.
Crank Thread	English BC 9/16" x 20 T.P.I.
Material & Finish	Aluminium-Barrel Finish (Crank) Aluminium-Anodized Finish (Chainring)



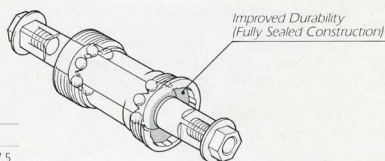
Sealed Cartridge Bottom Bracket

BB-UN50

Weight	323g. (122.5mm.)
Features	"Easy Assembly" Construction Improved Durability (Fully Sealed Construction) Maintenance Free Construction Lightweight Design

Specifications

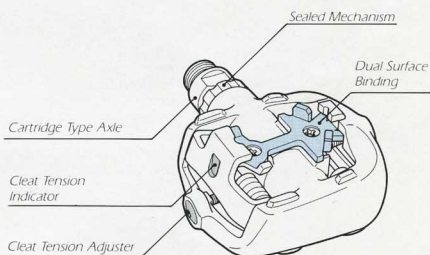
Shell Width	68 [BC]	70 [M36]	73 [BC]
Spindle Length	122.5	127.5	122.5
Spindle Marking	D-NL	D-EL	D-NL



SPD Pedal

PD-M525

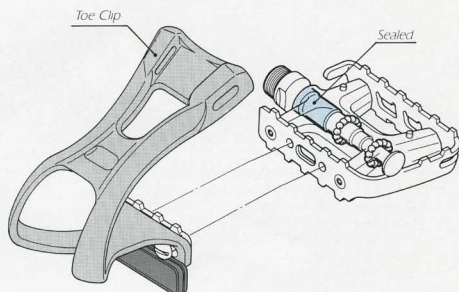
Weight	478g. (Pair)
Features	SPD (Shimano Pedaling Dynamics) Cleats System, Cartridge Type Axle, Cleat Tension Indicator, Dual Surface Binding, Cleat Tension Adjuster, 31° Road Clearance, Sealed Mechanism
Crank Thread	English BC 9/16" x 20T.P.I.
Material & Finish	Aluminium-Black Finish (Body), Cr-Mo Steel (Axle)



Pedal

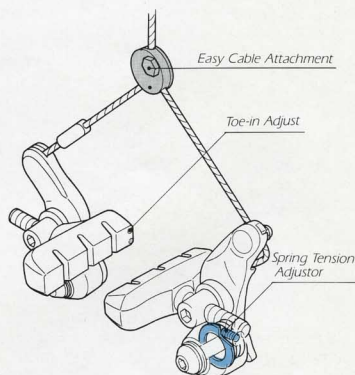
PD-M550

Weight	326g. (Pair)
Features	30° Road Clearance, Super Low Profile Design, Parallelogram Shape, Toe Clip/Reflector Attachable
Crank Thread	English BC 9/16" x 20T.P.I.
Material & Finish	Resin (Body), Steel-Anodized Finish (Plate), Resin (Toe Clip)



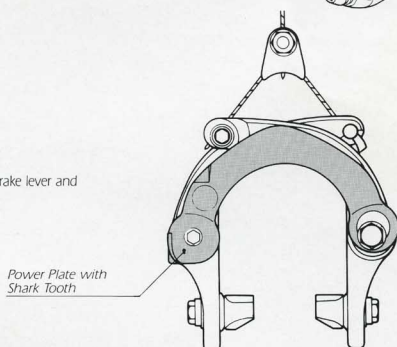
Cantilever Brake **BR-C510-B**

Weight	202g. (Pair)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible
Features	Super Low Profile Design, Easy Cable Attachment, Spring Tension Adjuster
Material & Finish	Aluminum-Paint Finish
Note	For SLR system use with SLR compatible brake lever and Shimano SLR outer casing with liner.



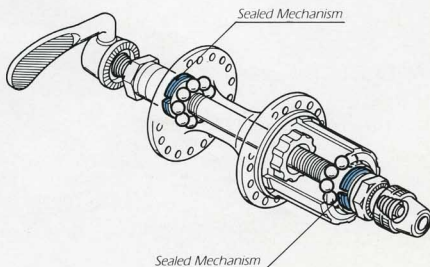
U-11 Brake **BR-M453** **BR-M452**

Weight	368g. (1 Unit, BR-M453)
Compatibility	Shimano Total Integration Compatible, SLR (Shimano Linear Response) Compatible
Features	Spring Tension Adjuster, Power Plate with Shark Tooth
Material & Finish	Aluminum-Barrel Finish
Note	For SLR System use with SLR Compatible brake lever and Shimano SLR outer cable with liner.



Freehub **FH-M550** (7-speed)

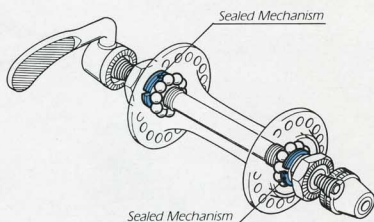
Weight	445g. (with Quick Release)
Compatibility	Shimano Total Integration Compatible, 7-speed SIS Compatible
Features	Sealed Mechanism, HG/UG Compatible Type, Uni-Balance System
Over Lock Nut Dimensions	135mm., 130mm.
Axle Length	146mm., 141mm. (Quick Release Type), 185mm., 180mm. (Nut Type)
Axle Thread	10mm.
Spoke Holes	32H, 36H
Hole PCD	45
Material & Finish	Aluminum-Polish Finish (Hub Shell)



Front Hub

HB-M550-F

Weight	230g. (with Quick Release)
Feature	Sealed Mechanism
Over Lock Nut Dimensions	100mm.
Axle Length	108mm. (Quick Release Type). 140mm. (Nut Type)
Axle Thread	9mm.
Spoke Holes	32H, 36H
Hole PCD	38
Material & Finish	Aluminum-Polish Finish (Hub Shell)



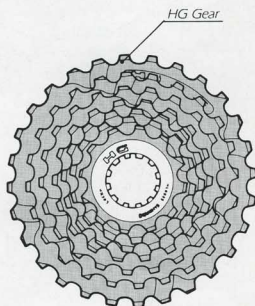
Cassette Sprockets

CS-HG70 (7-speed)

Weight	325g. (Sprocket E Group & Spacer)
Compatibility	7-speed SIS Compatible
Feature	7-speed HG
Chain Size	1/2" x 3/32" (Narrow Type Chain)
Material & Finish	Steel-Silver Finish

Sprocket Combinations

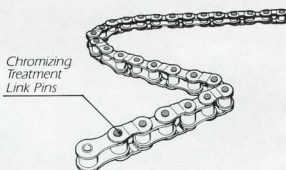
E	12, 14, 16, 18, 21, 24, 28T
F	14, 16, 18, 21, 24, 28, 32T
G	13, 15, 17, 20, 23, 26, 30T
H	13, 15, 17, 19, 21, 23, 26T
I	13, 14, 15, 17, 19, 21, 23T
J	13, 14, 15, 16, 17, 19, 21T
K	13, 15, 17, 20, 24, 29, 34T
L	12, 13, 14, 15, 17, 19, 21T
M	13, 15, 17, 19, 21, 24, 28T



HG Chain

CN-HG70

Weight	325g. (114 Link)
Compatibility	Shimano Total Integration Compatible
Features	Narrow Type HG Chain, Chromizing Treatment Link Pins
Size	1/2" x 3/32"
Material & Finish	Gray Finish (Roller Link Plate), Black Finish (Pin Link Plate)



Head Parts

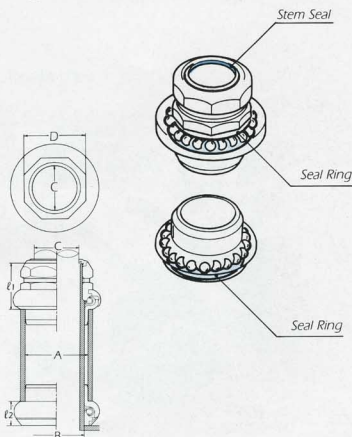
HP-R500

HP-R501

Weight	121g. (HP-R500)
Feature	Sealed Mechanism
Material	Steel (Lock Nut), Resin (Upper & Lower Cup)
Color	White, Silver, Black (HP-R500) Black (HP-R501)

Variation & Dimensions

Type	HP-R500	HP-R501
Thread	BC1" x 24T.	M25 x P1.0
A	30.2mm.	30.2mm.
B	26.4mm.	30.0mm.
C	22.3mm.	25.5mm.
D	32.0mm.	36.0mm.
ℓ ₁	22.0mm.	22.0mm.
ℓ ₂	11.5mm.	11.5mm.



EXAGE LX

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Exage 500LX

Model No.	Specifications	Features	Material•Finish	Note																																	
Rear Derailleur RD-M500 -SGS (Super Long Cage) RD-M500 -GS (Long Cage)	6 & 7-speed SIS Compatible Max. Rear Sprocket: 32T (SGS), 30T (GS) Min. Rear Sprocket: 12T (SGS, GS) Front Difference: 20T (SGS, GS) Total Capacity: 38T (SGS), 36T (GS) 329g (SGS)	Cable Saver Arm Double Servo-Panta Mechanism Centerion Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing Chain Retainer	Bracket Body: Aluminum+Paint Finish Right Link: Steel+Paint Finish Left Link: Steel+Pearl Bright Finish Plate Body: Aluminum+Paint Finish	SIS Compatible Detachable Bracket Available																																	
Front Derailleur FD-M500-B (Band Type) FD-M500 (EC Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 24T (Biopace HP) 26T (Round) Band Diameter: ø28.0—ø28.6, ø30.0, ø31.8mm, (Band Type) ø28.0—ø28.6, ø30.0, ø31.8, ø34.9mm, (EC Type) 118g (Band Type)	Trailing Action Pantograph Mechanism Rigid Chainguide New Trapeze Mechanism	Front Band: Aluminum+Paint Finish Rear Band: Aluminum+Paint Finish Right Link: Aluminum+Paint Finish Chainguide: Chrome Plated																																		
Rapidfire ST-M050-S (3-finger)	7-speed SIS Compatible SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm	Dual Repeat Function Light Action Lever Anatomical Design Brake Lever Stroke Adjust Brake Lever Cable Adjust	Bracket: Aluminum+Paint Finish Lever: Steel+Zinc Plated Resin+Molding	Use with Shimano SIS-SP Cable with Liner																																	
Cantilever Brake BR-M501 (Middle Size) BR-M502 (Large Size)	SLR (Shimano Linear Response) Compatible 204g (BR-M501, Pair) 216g (BR-M502, Pair)	Rigid Computer Designed Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster	Aluminum+Barrel Finish	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																																	
U-I Brake BR-M453 (with Booster)	SLR (Shimano Linear Response) Compatible 368g (1 unit)	Pre-Road Spring Design Sealed Internal Spring Design Rigid Computer Designed Shape Spring Tension Adjuster	Aluminum+Barrel Finish	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																																	
Front Chainwheel FC-M500-SG (Shimano SG Gear Triple MD Type) Bottom Bracket Assembly BB-M550 Sealed Cartridge Bottom Bracket BB-CS20	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm, 175mm Teeth: <table><tr><th></th><th>Biopace SG</th><th>Round SG</th></tr><tr><td>Top</td><td>48T</td><td>48T, 46T</td></tr><tr><td>Middle</td><td>38T</td><td>38T, 36T</td></tr><tr><td>Low</td><td>28T</td><td>28T, 24T</td></tr></table> Crank Thread: English BC 9/16" × 20TPI Cup Thread: English BC 1.37 × 24TPI French M35 × 10 (BB-M550 Only) Italian M36 × 24TPI 75g (28T, 38T, 48T, 170mm) 339g (BB Set BB-M550)		Biopace SG	Round SG	Top	48T	48T, 46T	Middle	38T	38T, 36T	Low	28T	28T, 24T	Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Aluminum+Barrel Finish Chain Ring: Aluminum+Anodised Finish	Spindle: BR-M550 <table><tr><th>Mark</th><th>D-SNL</th><th>D-3NL</th></tr><tr><td>Width</td><td>70</td><td>68</td></tr><tr><td>Length</td><td colspan="2">122.5</td></tr></table> Spindle: BB-CS20 <table><tr><th>Mark</th><th>D-EL</th></tr><tr><td>Width</td><td>73 (BC) 68 (BC)</td></tr><tr><td>Length</td><td>127.5</td></tr></table> <table><tr><th>Mark</th><th>D-NL</th></tr><tr><td>Width</td><td>73 (BC) 70 (36) 68 (BC)</td></tr><tr><td>Length</td><td>122.5</td></tr></table>	Mark	D-SNL	D-3NL	Width	70	68	Length	122.5		Mark	D-EL	Width	73 (BC) 68 (BC)	Length	127.5	Mark	D-NL	Width	73 (BC) 70 (36) 68 (BC)	Length	122.5
	Biopace SG	Round SG																																			
Top	48T	48T, 46T																																			
Middle	38T	38T, 36T																																			
Low	28T	28T, 24T																																			
Mark	D-SNL	D-3NL																																			
Width	70	68																																			
Length	122.5																																				
Mark	D-EL																																				
Width	73 (BC) 68 (BC)																																				
Length	127.5																																				
Mark	D-NL																																				
Width	73 (BC) 70 (36) 68 (BC)																																				
Length	122.5																																				
Freehub FH-HG50	7-speed SIS Compatible UG/HG Compatible Type Spoke Holes: 36H, 32H Hole PCD: 45 <table><tr><th></th><th>135</th><th>130</th></tr><tr><td>OLD</td><td></td><td></td></tr><tr><td>Axle Length</td><td>146</td><td>141</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release/Nut</td></tr></table> Axle Thread: 10mm 435g (7-speed w/Quick Release)		135	130	OLD			Axle Length	146	141	Mounting Type	Quick Release/Nut		Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																						
	135	130																																			
OLD																																					
Axle Length	146	141																																			
Mounting Type	Quick Release/Nut																																				
Front Hub HB-RM50-F	Spoke Holes: 36H, 32H Hole PCD: 38 <table><tr><th></th><th>100</th></tr><tr><td>OLD</td><td></td></tr><tr><td>Axle Length</td><td>108</td></tr><tr><td>Mounting Type</td><td>Quick Release</td></tr></table> Axle Thread: 9mm 228g		100	OLD		Axle Length	108	Mounting Type	Quick Release	Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																										
	100																																				
OLD																																					
Axle Length	108																																				
Mounting Type	Quick Release																																				
Cassette Sprockets CS-HG50 (7-speed)	7-speed SIS Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket 1 Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T F 14, 16, 18, 21, 24, 28, 32T G 13, 15, 17, 20, 23, 26, 30T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T K 13, 15, 17, 20, 24, 29, 34T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T																																	
Chain CN-HG50	7-speed SIS Compatible 7-speed HG Compatible Narrow Type Chain (11/2" × 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushless Design	Roller Link Plate: Steel+Black Finish Pin Link Plate: Steel+Black Finish																																		
Pedal PD-M450	MTB Type Crank Thread: English BC 9/16" × 20TPI Toe Clip Locking System: 2-screw 518g (Pair)	30° Road Clearance Sealed Mechanism Low Profile Design Reflector (Option)	Body: Resin Plate: Steel+Paint Finish																																		
Head Parts HP-R500 HP-R501 (1-1/8")																																					

See Page 28

Exage 400LX

Model No.	Specifications	Features	Material-Finish	Note
Rear Derailleur RD-M400-SGS (Super Long Cage) RD-M400-GS (Long Cage) RD-M400-SS (Short Cage)	6 & 7-speed S/S Compatible Max. Rear Sprocket: 32T (SGS), 30T (GS) 28T (SS) Min. Rear Sprocket: 12T (SGS, GS, SS) Front Difference: 20T (SGS, GS), 13T (SS) Total Capacity: 38T (SGS), 36T (GS), 28T (SS) 330g (Super Long Cage)	Cable Saver Arm Double Servo-Panta Mechanism Centerion Guide Pulley Double-Spoke Barrier B-Tension Adjust Bolt Sealed Pivot Axle Sealed Link Pivot Heat-Treated Steel in Link Pivot Sintered Alloy Guide Pulley Bushing Chain Retainer (GS, SGS Type)	Bracket Body: Aluminum-Barrel Finish Right Link: Steel+Paint Finish Left Link: Steel+Zinc Plated Plate Body: Aluminum-Barrel Finish	Rivet Type Bracket Available S/S Compatible Detachable Bracket Available
Front Derailleur FD-M400-B (Band Type) FD-M400 (EC Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 24T (Bopace HP) 26T (Round) Band Diameter: ø220—ø286, ø300, ø318mm (Band Type) ø280—ø286, ø300, ø349mm (EC Type) Stroke (CL=47.5): 35—55 132g (Band Type)	Trailing Action Pantograph Mechanism Rigid Change Guide Sealed Mechanism New Trapeze Mechanism	Front Band: Steel+Pearl Bright Finish Rear Band: Aluminum-Barrel Finish Right Link: Aluminum+Paint Finish Change Guide: Chrome Plated	
Rapidfire ST-M050-S (3-finger)	7-speed S/S Compatible SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm	Dual Repeat Function Light Action Lever Anatomical Design Brake Lever Stroke Adjust Brake Lever Cable Adjust	Bracket: Aluminum+Paint Finish Lever: Steel+Zinc Plated Resin+Molding	Use with Shimano S/S SP Cable with Liner
Can'tilever Brake BR-M201 BR-M352 (For Short Frame, Rear Only)	SLR (Shimano Linear Response) Compatible	Rigid Computer Designed Shape Sealed Internal Spring Design Spring Tension Adjuster Low Profile Brake Shoe	Steel & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner
Front Chainwheel FC-M400-SG (Shimano SG Gear, Triple MD Type) Bottom Bracket Assembly BB-M550 Sealed Cartridge Bottom Bracket BB-CS20	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm, 175mm Teeth: — Bopace SG Top 48T Middle 38T Low 28T Crank Thread: English BC 9/16" × 20T.P.I. Cup Thread: English BC 1.37 × 24T.P.I. French M35 × 1.0 (BB-M550 Only) Italian M36 × 24T.P.I. 763g (28T, 38T, 48T, 170mm) 339g (BB Set BB-M550)	Computer Aided Design (Crank) Sealed Mechanism (B.B.)	Crank Arm: Aluminum+Barrel Finish Chain Ring: Steel+Paint Finish	Spindle: BR-M550 Mark D-SNL D-3NL Width 70 68 Length 122.5 Spindle: BB-CS20 Mark D-EL Width 73 (BC) 68 (BC) Length 127.5 Mark D-NL Width 73 (BC) 70 (36) 68 (BC) Length 122.5
Freehub FH-HG50	7-speed S/S Compatible UG/HG Compatible Type Sprocket Holes: 36H, 32H Hole PCD: 45 O.D. 135 130 Axle Length 146 141 Mounting Type Quick Release/Nut Axle Thread: 10mm, 435g (7-speed w/Quick Release)	Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish	
Front Hub HB-RM50-F	Sprocket Holes: 36H, 32H Hole PCD: 38 O.D. 100 Axle Length 108 Mounting Type Quick Release Axle Thread: 9mm, 228g	Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish	
Cassette Sprockets CS-HG50 (7-speed)	7-speed S/S Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket I Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Cassette-Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T F 14, 16, 18, 21, 24, 28, 32T G 13, 15, 17, 20, 23, 26, 30T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T K 13, 15, 17, 20, 24, 29, 34T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T
Chain CN-HG50	7-speed S/S Compatible 7-speed HG Compatible Narrow Type Chain (1/2" × 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushingsless Design	Roller Link Plate: Steel+Black Finish Pin Link Plate: Steel+Black Finish	
Pedal PD-M350	MTB Type Crank Thread: English BC 9/16" × 20T.P.I. Toe Clip Locking System: 2-screw, 445g (Pair)	26° Road Clearance Sealed Mechanism Low Profile Design Reflector	Body: Resin+Paint Finish Plate: Steel+Paint Finish	
Head Parts HP-R500 HP-R501 (1-1/8")				

See Page 28

Exage 300LX

Model No.	Specifications	Features	Material-Finish	Note																													
Rear Derailleur RD-M300-sgs (Super Long Cage) RD-M300-GS (Long Cage)	6 & 7-speed SIS Compatible Max. Rear Sprocket: 32T (SGS), 30T (GS) Min. Rear Sprocket: 12T (SGS, GS) Front Difference: 20T (SGS, GS) Total Capacity: 38T (SGS), 36T (GS) 319g (Super Long Cage)	Cable Saver Arm Double Servo-Panta Mechanism Centeron Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing Chain Retainer	Bracket Body: Aluminum-Barrel Finish Right Link: Steel+Zinc Plated Resin-Molding Left Link: Steel+Zinc Plated Plate Body: Resin-Molding	Rivet Type Bracket Available SIS Compatible Detachable Bracket Available																													
Front Derailleur FD-M300-B (Band Type) FD-M300 (EC Type) FD-M301 (Pull-Trip Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 24T (Biopace HP) 26T (Round) Band Diameter: ø28.0—ø28.6, ø30.0, ø31.8mm (Band Type) ø28.0—ø28.6, ø30.0, ø34.9mm (EC Type) Stroke (CL=47.5): 35—55 135g (Band Type)	Trailing Action Pantograph Mechanism Rigid Chainguide New Trapezoid Mechanism Pull-Up Type (FD-M301)	Front Band: Steel+Pearl Bright Finish Rear Band: Aluminum-Barrel Finish Right Link: Steel+Paint Finish Chainguide: Chrome Plated																														
Rapidfire ST-M050-S (3-finger)	7-speed SIS Compatible SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm	Dual Repeat Function Light Action Lever Anatomical Design Brake Lever Stroke Adjust Brake Lever Cable Adjust	Bracket: Aluminum+Paint Finish Lever: Steel+Zinc Plated Resin-Molding	Use with Shimano SIS-SP Cable with Liner																													
Cantilever Brake BR-M201	SLR (Shimano Linear Response) Compatible	Rigid Computer Designed Shape Sealed Internal Spring Design Spring Tension Adjuster Low Profile Brake Shoe	Steel & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																													
Front Chainwheel FC-M300-SG (Shimano SG Gear, Triple MD Type) Bottom Bracket Assembly BB-M550 Sealed Cartridge Bottom Bracket BB-CS20	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm, 175mm. Teeth: <table><tr><td></td><td>Biopace SG</td></tr><tr><td>Top</td><td>48T</td></tr><tr><td>Middle</td><td>38T</td></tr><tr><td>Low</td><td>28T</td></tr></table> Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 13T x 24TPI French M35 x 1.0 (BB-M550 Only) Italian M36 x 24TPI 756g (28T, 38T, 48T, 170mm.) 339g (BB Set BB-M550)		Biopace SG	Top	48T	Middle	38T	Low	28T	Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Aluminum-Barrel Finish Chain Ring: Steel+Paint Finish	Spindle: BR-M550 <table><tr><td>Mark</td><td>D-5NL</td><td>D-3NL</td></tr><tr><td>Width</td><td>70</td><td>68</td></tr><tr><td>Length</td><td colspan="2">122.5</td></tr></table> Spindle: BB-CS20 <table><tr><td>Mark</td><td>D-EL</td></tr><tr><td>Width</td><td>73 (BC) 68 (BC)</td></tr><tr><td>Length</td><td>127.5</td></tr></table> <table><tr><td>Mark</td><td>D-NL</td></tr><tr><td>Width</td><td>73 (BC) 70 (36) 68 (BC)</td></tr><tr><td>Length</td><td>122.5</td></tr></table>	Mark	D-5NL	D-3NL	Width	70	68	Length	122.5		Mark	D-EL	Width	73 (BC) 68 (BC)	Length	127.5	Mark	D-NL	Width	73 (BC) 70 (36) 68 (BC)	Length	122.5
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Freehub FH-HG50	7-speed SIS Compatible UGH-B Compatible Type Sprocket Holes: 36H, 32H Hole PCD: 45 <table><tr><td>O.L.D.</td><td>135</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release Nut</td></tr></table> Axle Thread: 10mm 435g (7-speed w/Quick Release)	O.L.D.	135	130	Axle Length	146	141	Mounting Type	Quick Release Nut		Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																					
O.L.D.	135	130																															
Axle Length	146	141																															
Mounting Type	Quick Release Nut																																
Front Hub HB-RM50-F	Sprocket Holes: 36H, 32H Hole PCD: 38 <table><tr><td>O.L.D.</td><td>100</td></tr><tr><td>Axle Length</td><td>108</td></tr><tr><td>Mounting Type</td><td>Quick Release</td></tr></table> Axle Thread: 9mm 228g	O.L.D.	100	Axle Length	108	Mounting Type	Quick Release	Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																								
O.L.D.	100																																
Axle Length	108																																
Mounting Type	Quick Release																																
Cassette Sprockets CS-HG50 (7-speed)	7-speed SIS Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket II Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T F 14, 16, 18, 21, 24, 28, 32T G 13, 15, 17, 20, 23, 26, 30T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T K 13, 15, 17, 20, 24, 29, 34T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T																													
Chain CN-HG50	7-speed SIS Compatible 7-speed HG Compatible Narrow Type Chain (1/2" x 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushingsless Design	Roller Link Plate: Steel+Black Finish Pin Link Plate: Steel+Black Finish																														
Pedal PD-M350	MTB Type Crank Thread: English BC 9/16" x 20TPI Toe Clip Locking System: 2-screw 445g (Pair)	26° Road Clearance Sealed Mechanism Low Profile Design Reflector	Body: Resin+Paint Finish Plate: Steel+Paint Finish																														
Head Parts HP-R500 HP-R501 (1-1/8")																																	

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See Page 28



Shimano 200GS

Model No.	Specifications	Features	Material-Finish	Note																													
Rear Derailleur RD-M200-SGS (Super Long Cage) RD-M200-GS (Long Cage)	6 & 7-speed S/S Compatible Max. Rear Sprocket: 32T (SGS), 30T (GS) Min. Rear Sprocket: 12T (SGS, GS) Front Difference: 20T (SGS, GS) Total Capacity: 38T (SGS), 36T (GS) 323g (Super Long Cage)	Double Servo-Panta Mechanism Centeron Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing Chain Retainer	Bracket Body: Aluminum-Barrel Finish Right Link: Steel+Paint Finish Left Link: Steel-Zinc Plating Plate Body: Resin+Molding	Brazed-on Type Available Rivet Type Bracket Available S/S Compatible Detachable Bracket Available																													
Front Derailleur FD-M201-B (Band Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 24T (Biopace HP) 26T (Round) Band Diameter: $\phi 28.0 - \phi 28.6$ mm Stroke (CL=47.5): 34—54	Rigid Chainguide Trapezoid Mechanism Sealed Mechanism	Front Band: Steel+Paint Finish Rear Band: Steel+Zinc Plated Resin+Molding Right Link: Steel+Zinc Plated Resin+Molding Chainguide: Chrome Plated																														
Rapidfire ST-M020	7-speed S/S Compatible Lever Clamp Diameter: 22.2mm 190g (Pair)	Dual Repeat Function Digital Cable Adjust	Bracket: Steel+Paint Finish Lever: Steel+Zinc Plated Resin+Molding	Use with Shimano S/S-SP Cable with Liner Without Brake Lever																													
Shifting Lever SL-M201 (7-speed)	7-speed S/S Compatible Lever Clamp Diameter: 22.2mm 154g (Pair)	Sealed Mechanism Anatomical Design	Bracket: Steel+Paint Finish Lever: Resin+Molding	Use with Shimano S/S-SP Cable with Liner																													
Cantilever Brake BR-M200 (Standard Type) BR-M201 (Low Profile Type)	SLR (Shimano Linear Response) Compatible 235g (BR-M201)	Rigid Computer Designed Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster (BR-M201)	Steel & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																													
Cantilever Brake BR-C200-B (Low Profile Type)	SLR (Shimano Linear Response) Compatible	Rigid Computer Designed Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster	Steel & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																													
Brake Lever BL-M200-S (3-finger Type) BL-M201 (3-finger Type)	SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm 265g (BL-M200-S)	Digital Cable Adjust Stroke Adjust	Bracket: Steel+Resin Covered & Resin Lever: Steel+Zinc Plated Resin+Molding	3-finger BL-M200-S Brake Lever must be used with SL-M200 or SL-M201 Shift Levers																													
Front Chainwheel FC-M202-SG (Shimano SG Gear, Triple Rivet Type) FC-M202-CG (w/Chain Guard) Bottom Bracket Assembly BB-M200 Sealed Cartridge Bottom Bracket BB-CS10	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm Teeth: <table><tr><td></td><td>Biopace</td></tr><tr><td>Top</td><td>48T</td></tr><tr><td>Middle</td><td>38T</td></tr><tr><td>Low</td><td>28T</td></tr></table> Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 1.37 x 24TPI French M35 x 1.0, Italian M36 x 24TPI 756g (28T, 38T, 48T, 170mm)		Biopace	Top	48T	Middle	38T	Low	28T	Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Steel+Resin Molding Chain Ring: Steel+Paint Finish	Spindle: BB-M200 <table><tr><td>Mark</td><td>D-5NL</td><td>D-3NL</td></tr><tr><td>Width</td><td>70</td><td>68</td></tr><tr><td>Length</td><td>122.5</td><td></td></tr></table> Spindle: BB-CS10 <table><tr><td>Mark</td><td>D-EL</td></tr><tr><td>Width</td><td>73 [BC] 68 [BC]</td></tr><tr><td>Length</td><td>127.5</td></tr></table> <table><tr><td>Mark</td><td>D-NL</td></tr><tr><td>Width</td><td>73 [BC] 70 [36] 68 [BC]</td></tr><tr><td>Length</td><td>122.5</td></tr></table>	Mark	D-5NL	D-3NL	Width	70	68	Length	122.5		Mark	D-EL	Width	73 [BC] 68 [BC]	Length	127.5	Mark	D-NL	Width	73 [BC] 70 [36] 68 [BC]	Length	122.5
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Freehub FH-HG50	7-speed S/S Compatible UGHG Compatible Type Spoke Holes: 36H, 32H Hole PCD: 45 <table><tr><td>O.L.D</td><td>135</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release/Nut</td></tr></table> Axle Thread: 10mm 435g (7-speed w/Quick Release)	O.L.D	135	130	Axle Length	146	141	Mounting Type	Quick Release/Nut		Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum-Dia-Cut Finish																					
O.L.D	135	130																															
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Freehub FH-HG20	7-speed S/S Compatible UGHG Compatible Type Spoke Holes: 36H Hole PCD: 45 <table><tr><td>O.L.D</td><td>135</td><td>130</td><td>135</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td><td>170</td><td>180</td></tr><tr><td>Mounting Type</td><td colspan="4">Quick Release Nut</td></tr></table> Axle Thread: M10 425g (7-speed w/Quick Release)	O.L.D	135	130	135	130	Axle Length	146	141	170	180	Mounting Type	Quick Release Nut				Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum-Dia-Cut Finish															
O.L.D	135	130	135	130																													
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Front Hub HB-RM50-F Cassette Sprockets CS-HG50 (7-speed) Chain CN-UG50 Pedal PD-M350																																	
Head Parts HP-R500 HP-R501 (1-1/8")																																	

See Page 32

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Shimano 100GS

Model No.	Specifications	Features	Material•Finish	Note																													
Rear Derailleur RD-M100-GS (Long Cage)	6 & 7-speed SIS Compatible Max. Rear Sprocket: 30T Min. Rear Sprocket: 12T Front Difference: 20T Total Capacity: 36T	Double Servo-Panta Mechanism Centerion Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing Chain Retainer	Bracket Body: Steel+Zinc Plated Resin-Molding Right Link: Steel+Chrome Plated Left Link: Steel+Zinc Plated Plate Body: Resin-Molding	Braced-on Type Available Rivet Type Bracket Available SIS Compatible Detachable Bracket Available																													
Front Derailleur FD-M100-B (Band Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 20T (Biopace HP) 22T (Round) Band Diameter: 428.0—428.6mm Stroke (CL=47.5): 34—54	Rigid Changguide	Front Band: Steel+Zinc Plated Rear Band: Steel+Zinc Plated Resin-Molding Changguide: Chrome Plated																														
Rapidfire ST-M010	7-speed SIS Compatible Lever Clamp Diameter: 22.2mm	Dual Repeat Function Digital Cable Adjust	Bracket: Steel+Paint Finish Lever: Steel+Zinc Plated Resin-Molding	Use with Shimano SIS-SP Cable with Liner Without Brake Lever																													
Shifting Lever SL-M100 (7-speed)	7-speed SIS Compatible Lever Clamp Diameter: 22.2mm	Anatomical Design	Bracket: Steel+Zinc Plated Lever: Resin-Molding	Use with Shimano SIS-SP Cable with Liner																													
Cantilever Brake BR-M100 (Low Profile Type)	SLR (Shimano Linear Response) Compatible	Rigid Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster	Steel & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																													
Brake Lever BL-M101 (3-finger Type)	SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm	Digital Cable Adjust Stroke Adjust Anatomical Design	Bracket: Steel+Resin Covered & Resin Lever: Steel+Resin Coated & Resin	Use with Shimano SLR Outer Cable with Liner																													
Front Chainwheel FC-M102-SG (Shimano SG Gear, Triple Rivet Type) FC-M102-CG (w/Chain Guard) Bottom Bracket Assembly BB-M200 Sealed Cartridge Bottom Bracket BB-CS10	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm. Teeth: <table><tr><td></td><td>Biopace</td></tr><tr><td>Top</td><td>48T</td></tr><tr><td>Middle</td><td>38T</td></tr><tr><td>Low</td><td>28T</td></tr></table> Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 1.37 x 24TPI French M35 x 1.0, Italian M36 x 24TPI 756g (28T, 38T, 48T, 170mm.)		Biopace	Top	48T	Middle	38T	Low	28T	Computer Aided Design (Crank) Sealed Mechanism (BB.)	Crank Arm: Steel/Resin Molded Chain Ring: Steel+Paint Finish	Spindle: BB-M200 <table><tr><td>Mark</td><td>D-5NL</td><td>D-3NL</td></tr><tr><td>Width</td><td>70</td><td>68</td></tr><tr><td>Length</td><td colspan="2">122.5</td></tr></table> Spindle: BB-CS10 <table><tr><td>Mark</td><td>D-EL</td></tr><tr><td>Width</td><td>73 (BC) 68 (BC)</td></tr><tr><td>Length</td><td>127.5</td></tr></table> <table><tr><td>Mark</td><td>D-NL</td></tr><tr><td>Width</td><td>73 (BC) 70 (36) 68 (BC)</td></tr><tr><td>Length</td><td>122.5</td></tr></table>	Mark	D-5NL	D-3NL	Width	70	68	Length	122.5		Mark	D-EL	Width	73 (BC) 68 (BC)	Length	127.5	Mark	D-NL	Width	73 (BC) 70 (36) 68 (BC)	Length	122.5
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Freehub FH-HG50	7-speed SIS Compatible USHG Compatible Type Sprocket Holes: 36H, 32H Hole PCD: 45 <table><tr><td>OLD</td><td>135</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release/Nut</td></tr></table> Axle Thread: 10mm 435g (7-speed w/Quick Release)	OLD	135	130	Axle Length	146	141	Mounting Type	Quick Release/Nut		Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																					
OLD	135	130																															
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Freehub FH-HG20	7-speed SIS Compatible HG Compatible Type Sprocket Holes: 36H Hole PCD: 45 <table><tr><td>OLD</td><td>135</td><td>130</td><td>135</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td><td>185</td><td>180</td></tr><tr><td>Mounting Type</td><td colspan="4">Quick Release Nut</td></tr></table> Axle Thread: M10 425g (7-speed w/Quick Release)	OLD	135	130	135	130	Axle Length	146	141	185	180	Mounting Type	Quick Release Nut				Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish															
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Front Hub HB-RM50-F	Sprocket Holes: 36H, 32H Hole PCD: 38 <table><tr><td>OLD</td><td>100</td></tr><tr><td>Axle Length</td><td>108</td></tr><tr><td>Mounting Type</td><td>Quick Release</td></tr></table> Axle Thread: 9mm 228g	OLD	100	Axle Length	108	Mounting Type	Quick Release	Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																								
OLD	100																																
Axle Length	108																																
Mounting Type	Quick Release																																
Cassette Sprockets CS-HG50 (7-speed)	7-speed SIS Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket 1 Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations. E 12, 14, 16, 18, 21, 24, 28T F 14, 16, 18, 21, 24, 28, 32T G 13, 15, 17, 20, 23, 26, 30T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T K 13, 15, 17, 20, 24, 29, 34T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T																													
Chain CN-HG50 Pedal PD-M350 Head Parts HP-R500 HP-R501 (1-1/8")	See Page 32																																
See Page 32																																	

Shimano 70GS

Model No.	Specifications	Features	Material-Finish	Note																				
Rear Derailleur RD-TY70-GS (Long Cage) RD-TY70-SS (Short Cage)	6-speed SIS Compatible Long Cage: Max. Rear Sprocket: 28T Min. Rear Sprocket: 14T Front Difference: 20T Total Capacity: 34T Short Cage: Max. Rear Sprocket: 24—28T Min. Rear Sprocket: 14T Front Difference: 13T Total Capacity: 28T	Double Servo-Panta Mechanism Centeron Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing Chain Retainer	Bracket Body: Steel+Zinc Plated Right Link: Steel+Paint Finish Left Link: Steel+Zinc Plated Plate Body: Resin+Zinc Plated	Brazed-on Type Available Rivet Type Bracket Available																				
Front Derailleur FD-TY70-B (Band Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 20T (Biopace HP) 22T (Round) Band Diameter: $\phi 28.0$ — $\phi 28.6$ mm. Stroke (CL=47.5): 34—54	Rigid Chainguide	Front Band: Steel+Zinc Plated Rear Band: Steel+Zinc Plated Right Link: Steel+Zinc Plated Resin-Molding Chainguide: Chrome Plated																					
Rapidfire ST-M007	7-speed SIS Compatible Use Triple Chainwheel Lever Clamp Diameter: 22.2mm	Dual Repeat Function Digital Cable Adjust (Front Only)	Bracket: Steel+Paint Finish Lever: Steel+Zinc Plated Resin-Molding	Use with Shimano SIS Cable (Front Side) & SIS-SP Cable (Rear Side) with Liner (Without Brake Lever)																				
Shifting Lever SL-TY70 (6-speed)	6-speed SIS Compatible Lever Clamp Diameter: 22.2mm. 240g.	Anatomical Design	Bracket: Steel+Zinc Plated Lever: Resin-Molding	Use with Shimano SIS & SIS-SP Cable with Liner																				
Cantilever Brake BR-TY70 (Low Profile Type)	SLR (Shimano Linear Response) Compatible	Rigid Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster	Steel & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																				
Brake Lever BL-TY70 (3-finger type)	SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm. 237g.	Digital Cable Adjust Stroke Adjust Anatomical Design	Bracket: Steel+Resin Covered & Resin Lever: Steel+Resin Coated & Resin	Use with Shimano SLR Outer Cable with Liner																				
Front Chainwheel FC-TY70-SG (Shimano SG Gear, Triple Rivet Type) FC-TY70-CG (w/Chain Guard) Sealed Cartridge Bottom Bracket BB-CS10	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm. Teeth: <table><tr><td></td><td>Biopace</td></tr><tr><td>Top</td><td>48T</td></tr><tr><td>Middle</td><td>38T</td></tr><tr><td>Low</td><td>28T</td></tr></table> Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 1/37" x 24TPI French M35 x 1.0, Italian M36 x 24TPI.		Biopace	Top	48T	Middle	38T	Low	28T	Computer Aided Design (Crank) Sealed Mechanism (B.B.)	Crank Arm: Steel+Resin Molding Chain Ring: Steel+Paint Finish	Spindle: BB-CS10 <table><tr><td>Mark</td><td>D-EL</td></tr><tr><td>Width</td><td>73 [BC] 68 [BC]</td></tr><tr><td>Length</td><td>127.5</td></tr></table> <table><tr><td>Mark</td><td>D-NL</td></tr><tr><td>Width</td><td>73 [BC] 70 [36] 68 [BC]</td></tr><tr><td>Length</td><td>122.5</td></tr></table>	Mark	D-EL	Width	73 [BC] 68 [BC]	Length	127.5	Mark	D-NL	Width	73 [BC] 70 [36] 68 [BC]	Length	122.5
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Length	122.5																							
Multiple Freewheel MF-HG20 (6-speed)	6-speed SIS Compatible 6-speed HG 460g (Sprocket Y Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Sprocket Combinations: <table><tr><td>X</td><td>14, 16, 18, 20, 22, 24T</td></tr><tr><td>Y</td><td>14, 16, 18, 21, 24, 28T</td></tr><tr><td>Z</td><td>14, 17, 20, 24, 28, 32T</td></tr></table>	X	14, 16, 18, 20, 22, 24T	Y	14, 16, 18, 21, 24, 28T	Z	14, 17, 20, 24, 28, 32T														
X	14, 16, 18, 20, 22, 24T																							
Y	14, 16, 18, 21, 24, 28T																							
Z	14, 17, 20, 24, 28, 32T																							
Chain CN-UG50	7-speed SIS Compatible Narrow Type Chain (1/2" x 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushings Design	Roller Link Plate: Steel+Black Finish Pin Link Plate: Steel+Black Finish																					
Pedal PD-M350	MTB Type Crank Thread: English BC 9/16" x 20TPI Toe Clip Locking System: 2-screw 445g (Pair)	26° Road Clearance Sealed Mechanism Low Profile Design Reflector	Body: Resin+Paint Finish Plate: Steel+Paint Finish																					
Head Parts HP-R500 HP-R501 (1-1/8")	Height: Upper Cone 22.0mm, Lower Cone 11.5mm. 121g Variation: <table><tr><td></td><td></td><td>Press Race Diameter</td></tr><tr><td></td><td></td><td>Upper Cone & Lower Cap</td><td>Lower Cone</td></tr><tr><td>English/Italian</td><td>BC1 x 24T</td><td>30.2mm</td><td>26.4mm</td></tr><tr><td>French</td><td>M25 x P1.0</td><td>30.2mm</td><td>26.4mm</td></tr></table>			Press Race Diameter			Upper Cone & Lower Cap	Lower Cone	English/Italian	BC1 x 24T	30.2mm	26.4mm	French	M25 x P1.0	30.2mm	26.4mm	Sealed Mechanism	Lock Nut: Steel+Pearl Bright Finish Upper Cup: Resin Lower Cup: Resin Color: White, Silver, Black						
		Press Race Diameter																						
		Upper Cone & Lower Cap	Lower Cone																					
English/Italian	BC1 x 24T	30.2mm	26.4mm																					
French	M25 x P1.0	30.2mm	26.4mm																					

The competitive advantage of Dura-Ace continues to grow.

Dura-Ace is Shimano's top line road racing component group. The refined functions of Dura-Ace provide a much needed competitive edge in the world of professional road racing where the difference between victory and defeat is often measured in fractions of a second. Now featuring Shimano Total Integration, Dura-Ace offers the racing cyclist the additional advantage of being able to steer, brake, and shift gears from the same hand position on the bars. When Dura-Ace is in the peloton, the others are just racing for second place.



8-Speed SIS

Eight-speed SIS gives a wider gear selection with Shimano Index System precision. Just a tap on the Dual-Control Lever (dual-purpose braking and shifting lever) delivers the desired gear without removing hands from the bars.



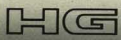
Super SLR

Side pull SLR caliper features offset pivot points that increase the power multiplication factor. The result is increased stopping power under highly modulated control.



Shimano SG

Chainwheels feature Shimano SG design. Cutouts and special contours guide the chain quickly and smoothly from one chainwheel to the next. It's the closest thing yet to SIS performance for the front derailleur.



8-Speed HG Sprockets

Dura-Ace's 8-speed gear cassette utilizes HG sprockets. Hyperglide means that the sprockets are computer-profiled and strategically positioned to provide fast, direct, and smooth chain transfer between cogs—regardless of pedal torque or cadence.



8-Speed Freehub

The rear hub and freewheel assembly are combined to form a rigid single piece unit called the freehub. The freehub provides for a stronger rear wheel, less spoke breakage, decreased rim offset, and increased power transfer efficiency.

DURA-ACE

ROAD

SHIMANO
TOTAL
INTEGRATION

Bar End Shift Lever Set
SL-B550-8

Handle Stem
HS-7400

Seat Post
SP-7400

Freehub for Disk Wheels
FH-7463-HG

Pedal Set
PD-7400

Brake Lever Set
BL-7402

Front Hub
HB-7400-F

Shift Lever Set
SL-7402-8

Freehub
FH-7403-HG

Cassette Sprockets
CS-7401-HG

Clipless Pedal Set
PD-7401

Front Chainwheel
FC-7402-SG

Chain
CN-7401

Dual Control Lever Set
ST-7400

Dual Pivot Brake
BR-7403

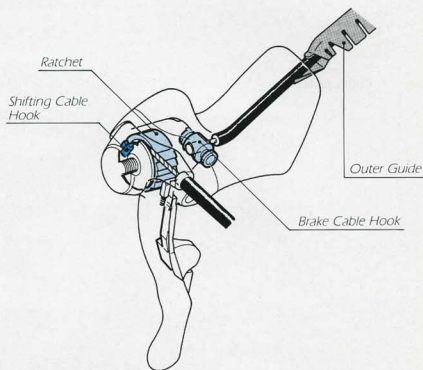
Front Derailleur
FD-7403

Rear Derailleur
RD-7402

Head Parts
HP-7400

ST-7400

Weight	560g. (Pair)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible, Super-SLR Compatible
Features	Light Action Lever, Sealed Mechanism, Aerodynamic Design, Anatomical Design
Lever Clamp Diameter	23.8mm.—24.2mm.
Material & Finish	Aluminum-Chrome Plated (Bracket), Forged Aluminum-Anodized Finish (Lever)
Note	For SIS Function, use for SIS-SP outer casing with liner (Lever Side) and SIS sealed outer casing with liner (Rear Side). ST-7400 must be used as a set with BR-7403 and the Shimano SLR outer casing with liner. No other combination can be used.

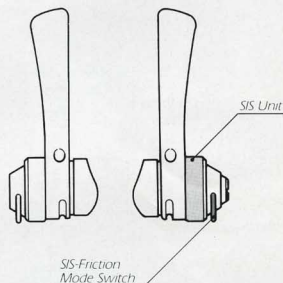


Shifting Lever

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

“C” Model Number means Italian Type (Fixing Bolt is 5mm. Diameter)

Weight	67g.
Features	8-speed SIS, SIS-Friction Mode Switch, Light Action Lever, Sealed Mechanism, Human Engineered Design, 30° Off-set of Lever Stopper, Sealed Outer Casing
Lever Clamp Diameter	28.6mm.
Material & Finish	Aluminum-Paint Finish (Lever), Resin-Chrome Plated (Top-mount Housing)
Attachment Position	Down Tube
Note	For SIS Function, use with Dura-Ace Rear Derailleur/Freehub/ Cassette Sprockets/Shimano SIS outer casing with liner.

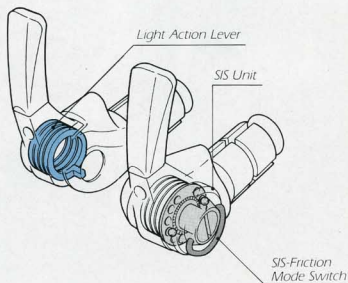


Shifting Lever

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

“C” Model Number means Italian Type (Fixing Bolt is 5mm. Diameter)

Weight	65g. (SL-7401-FCBI)
Features	7-speed SIS, SIS-Friction Mode Switch, Sealed Mechanism, Human Engineered Design, 30° Off-set Lever Stopper, Sealed Outer Casing
Lever Clamp Diameter	28.6mm.
Material & Finish	Aluminum-Paint Finish (Lever), Resin-Molding (Top-mount Housing)
Attachment Position	Down Tube
Note	For SIS Function, use with Dura-Ace Rear Derailleur/Freehub/ Cassette Sprockets/Shimano SIS outer casing with liner.



Shifting Lever

SL-B550-8

Weight	183g.
Features	8-speed SIS, SIS-Friction Mode Switch, Light Action Lever, Sealed Mechanism, Human Engineered Design, Sealed Outer Casing
Bar Inner Diameter	19.0mm.—22.0mm.
Material & Finish	Aluminum-Buff Finish (Lever)
Attachment Position	Bar End
Note	For SIS Function, use with Dura-Ace Rear Derailleur/Freehub/ Cassette Sprockets/Shimano SIS-SP outer casing with liner.

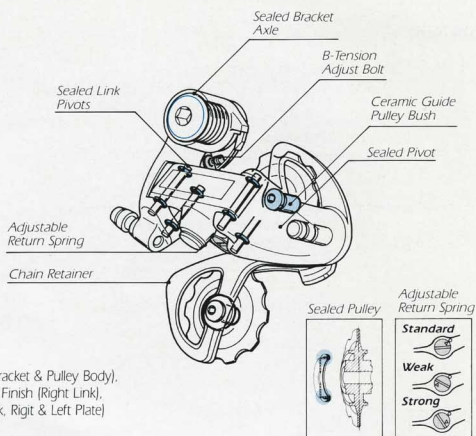
Rear Derailleur
RD-7402

Weight 209g
Compatibility Shimano Total Integration Compatible,
6, 7 & 8-speed SS Compatible

Features Adjustable Return Spring,
Sealed Link Pivots,
Sealed Guide Pulley,
Ceramic Guide Pulley Bush,
Sealed Tension Pulley,
Ceramic Tension Pulley Bush,
Sealed Pivot & Bracket Axes (O-Rings),
Double Servo-Panor Mechanism,
B-Tension Adjust Bolt,
Double Spoke Barrier,
Chain Retainer

Capacity Maximum Rear Sprocket: 26T,
Minimum Rear Sprocket: 12T,
Front Difference: 14T,
Total Capacity: 26T.

Material & Finish Forged Aluminum•Color Anodized Finish (Bracket & Pulley Body),
Forged Aluminum•Inlaid Epoxy & Anodized Finish (Right Link),
Forged Aluminum•Anodized Finish (Left Link, Right & Left Plate)



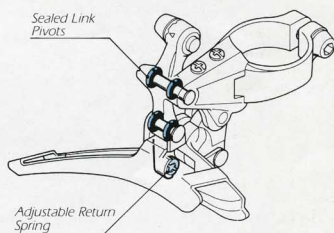
Front Derailleur
FD-7403-B (Band Type)
FD-7403-F (Italian Brased-on A Type)

Weight 93g (Band Type)
Compatibility Shimano Total Integration Compatible,
Shimano SG Gear Compatible,

Features Narrow Type Chain Compatible
Sealed Link Pivots,
Rigid Chain Guide,
Adjustable Return Spring

Capacity 15T,
Clamp Diameter 28.0mm.—28.6mm.

Material & Finish Forged Aluminum•Anodized Finish (Front & Rear Band),
Forged Aluminum•Color Anodized (Right Link),
Forged Aluminum (Left Link),
Steel-Chrome-Plated (Chain Guide, Clamp Bolt)



Front Chainwheel & Bottom Bracket Assembly
FC-7402-SG (Shimano SG, Double, LD Type)
BB-7400 (BB Set)

Weight 643g (42T, 52T, 170mm.), 292g. (BB Set)
Compatibility Shimano Total Integration Compatible,
Narrow Type Chain Compatible

Features Shimano SG Gear,
Sealed Mechanism (BB.)

Chain Size 1/2" x 3/32"

Teeth Combination A-53 x 42, A-52 x 42, B-53 x 39 (Round SG)

Crank Length 165mm., 167.5mm., 170mm., 172.5mm., 175mm., 177.5mm., 180mm.

Crank Thread English BC 9/16" x 20TPI

Cut Thread English BC 1.37 x 24TPI, French M35 x 1.0, Italian M36 x 24TPI

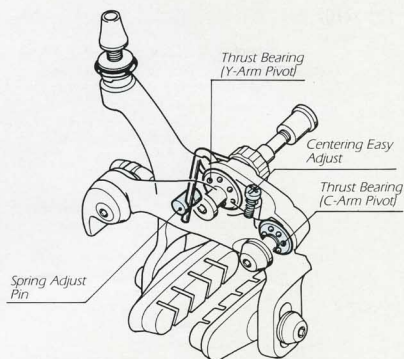
B.B. Size 70-W-113, 68-W-112

Material & Finish Forged Aluminum•Anodized Finish (Crank, Chainring),
Aluminum•Etched-Anodized Finish (Crank Arm Cap),
Nickel Cr-Mo Axle



BR-7403-49 (Short 49 Type)

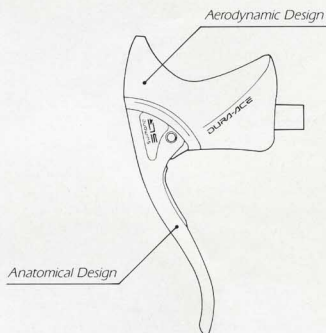
Weight	432g. (F & R)
Compatibility	Shimano Total Integration Compatible, Super SLR (Shimano Linear Response) Compatible
Features	Easy Adjust, Low Profile Brake Shoe, Spring Adjust Pin, Click & Eccentric Type Quick Release, Thrust Bearing & Coated Pivot Washer Forged Aluminum-Anodized Finish (Arch), Aluminum-Color Anodized Finish (Shoe Holder with Tire Guide)
Material & Finish	



Brake Lever

BL-7402 (Aero Type)

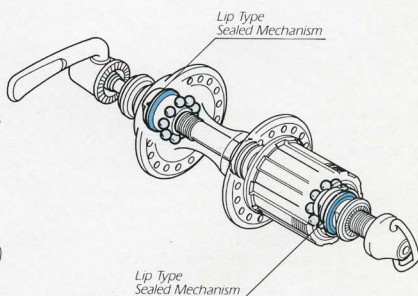
Weight	240g. (Pair)
Compatibility	SLR (Shimano Linear Response) Compatible
Features	Aerodynamic Design, Anatomical Design, 23.8mm., 24.2mm. Lever Stroke 88mm. Aluminum-Chrome-Plated (Bracket), Soft Resin (Cover)
Lever Clamp Diameter	
Lever Stroke	
Material & Finish	
Color (Bracket Cover)	Black, White
Note	For SLR system use with SLR compatible brake and Shimano SLR outer cable with liner.



Freehub

FH-7403-HG (8-speed)

Weight	439g. Rear (with Quick Release)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible, HG Gear Compatible, Lip type Sealed Mechanism, Uni-Balance System, Lubrication Ports with Open/Closed Indicated, Stainless Steel Ball Bearings
Features	
Over Lock Nut Dimensions	130mm.
Axle Length	141mm.
Axle Thread	10mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	44
Chain Line	42.65mm.
Material & Finish	Forged Aluminum-Anodized Finish (Hub Shell)

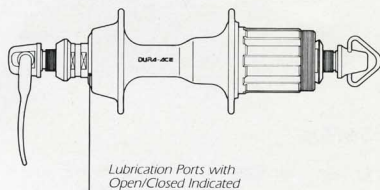


Freehub

FH-7402-8 (8-speed)

Weight	460g. Rear (with Quick Release)
Compatibility	8-speed SIS Compatible
Features	Lip Type Sealed Mechanism, Uni-Balance System, Lubrication Ports with Open/Closed Indicated, Stainless Steel Ball Bearings

Over Lock Nut Dimensions	130mm.
Axle Length	141mm.
Axle Thread	10mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	44
Chain Line	42.65mm.
Material & Finish	Forged Aluminum•Anodized Finish (Hub Shell)



Freehub

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

Weight	439g. Rear (with Quick Release)
Compatibility	7 & 6-speed SIS Compatible
Features	Lip Type Sealed Mechanism, Uni-Balance System, Lubrication Ports with Open/Closed Indicated, Stainless Steel Ball Bearings

Over Lock Nut Dimensions	126.5mm.
Axle Length	137mm.
Axle Thread	10mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	44
Chain Line	42.6mm. (7-speed), 42.95mm. (6-speed)
Material & Finish	Forged Aluminum•Anodized Finish (Hub Shell)

Stainless Steel Ball Bearings

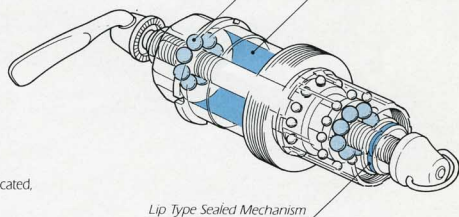
Hollow Construction

Freehub for Disk Wheels

FH-7463-HG (8-speed)

Weight	646g. (with Quick Release)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible HG Gear Compatible
Features	Exclusively Designed for Disk Wheels, Lip Type Sealed Mechanism, Uni-Balance System, Lubrication Ports with Open/Closed Indicated, Stainless Steel Ball Bearings

Over Lock Nut Dimensions	130mm.
Axle Length	141mm.
Chain Line	42.65mm.
Material & Finish	Aluminum•Buff-Anodized Finish (Hub Shell)

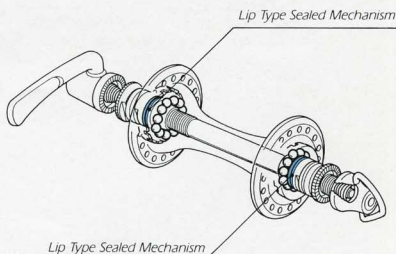


Front Hub

HB-7400-F

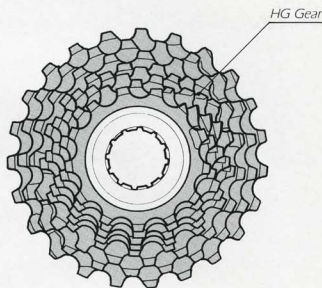
Weight	228g. (with Quick Release)
Features	Lip Type Sealed Mechanism, Easy Installation, Stainless Steel Ball Bearings

Over Lock Nut Dimensions	100mm.
Axle Length	108mm.
Axle Thread	9mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	38
Material & Finish	Forged Aluminum•Anodized Finish (Hub Shell)



CS-7401-8 (8-speed HG)

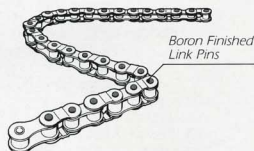
Weight	255g. (Sprocket S Group & Spacer)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible, Narrow Type Chain Compatible
Feature	8-speed HG
Material & Finish	Steel-Champagne Gold Finish (Sprocket)
Sprocket Combinations	S 12, 13, 14, 15, 16, 17, 19, 21T T 13, 14, 15, 16, 17, 19, 21, 23T U 12, 13, 14, 15, 17, 19, 21, 23T V 13, 14, 15, 17, 19, 21, 23, 26T W 12, 13, 15, 17, 19, 21, 23, 25T



HG Chain

CN-7401

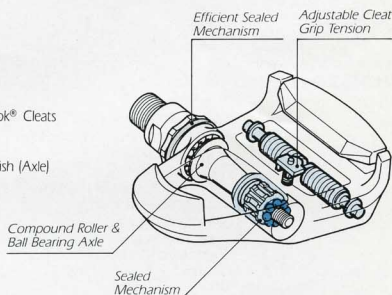
Compatibility	Shimano Total Integration Compatible
Features	Narrow Type HG Chain, Boron Finished Link Pins
Size	1/2" x 3/32"
Material & Finish	Nickel Finish (Roller Link Plate, Pin Link Plate)



Clipless Pedal

PD-7401

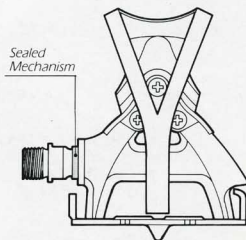
Weight	416g. (Pedal, Pair), 92g. (Cleat & Hardwear)
Features	34° Road Clearance, Compound Roller & Ball Bearing Axle, Aerodynamic Dustcapless Design, Efficient Sealed Mechanism, Adjustable Cleat Grip Tension, Compatible Look® Cleats
Crank Thread	English BC 9/16" x 20TPI
Material & Finish	Forged Aluminum-Paint Finish (Body), Nickel Cr-Mo Steel-Crome-Plated Polished Finish (Axle)



Pedal

PD-7400

Weight	372g. (Pair, Including Toe Clip Size L)
Features	34° Road Clearance, Compound Structure of Needle Bearing and Cup & Cone, Aerodynamic Design, Sealed Mechanism
Toe Clip Size	M, L, LL
Crank Thread	English BC 9/16" x 20TPI
Material & Finish	Aluminum-Buff Finish (Body), Aluminum-Anodized Finish (Front Plate), Aluminum-Black Solid Anodized Finish (Rear Plate), Nickel Cr-Mo Steel-Crome-Plated/Polished Finish (Axle), Steel Chrome-Plated or Light Alloy-Anodized Finish (Toe Clip)

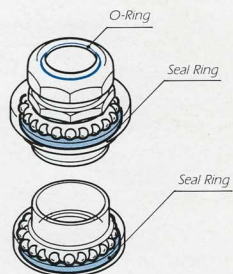
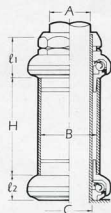


Head Parts
HP-7400

Weight	113g
Type	Road Type
Feature	Sealed Mechanism
Height	Upper Cone 22.8mm., Lower Cone 13.5mm.
Material & Finish	Forged Aluminum•Anodized Finish (Nut, Cup, Upper Cone), Titanium-Plated (Lower Cone), Bearing Steel Insertion

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

ℓ_1	22.8mm.
ℓ_2	13.5mm.
H	Head Tube Length
A	22.3mm.
B	30.2mm./30.0mm. (JIS)
C	26.4mm./27.0mm. (JIS)
Thread	BC 1" x 24T (English, Italian Thread)/ M25" x P1.0 (French Thread)

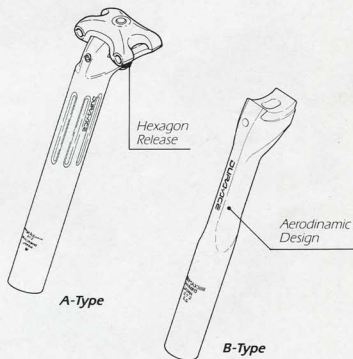


Seat Post

SP-7400-A (Round Tube, A Type)

SP-7400-B (Semi Oval Tube, B Type)

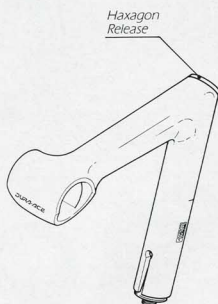
Weight	224g. (A Type), 244g. (B Type)
Features	Aerodynamic Design, Hexagon Release
Outside Diameter	25.0mm., 26.0mm., 26.2mm., 26.4mm., 26.6mm., 26.8mm., 27.0mm., 27.2mm., 27.4mm.
Material & Finish	Aluminum•Anodized Finish



Handle Stem

HS-7400

Weight	280g. (100mm.)
Features	Aerodynamic Design, Hexagon Release
Extension	70mm., 80mm., 90mm., 100mm., 110mm., 120mm., 130mm.
Handle Stem Diameter	22.2mm.
Handlebar Clamp Diameter	26.0mm.
Material & Finish	Aluminum•Anodized Finish



DURA-ACE

TRACK

Like Dura-Ace road, Dura-Ace Track was designed to give the racer a fraction-of-a-second advantage that can spell the difference between victory and defeat in the highly competitive world of track racing. Besides offering great durability and rigidity, Dura-Ace Track features highly sophisticated mechanics, like diamond polished bearing races for example. As a result, the Dura-Ace Track racer is assured of the highest power transfer efficiency—the key to converting leg power into go power on the track.

Bottom Bracket Set
BB-7600



Front Chainwheel
FC-7600



Small Flange Hub
HB-7600



Large Flange Hub
HB-7600



Sprockets
SS-7600

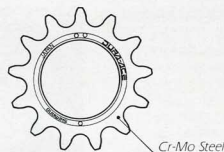
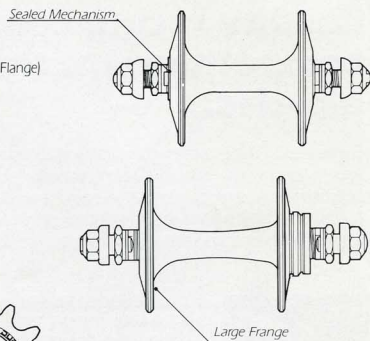


Head Parts
HP-7600



Hub
HB-7600 (Large & Small Flange)

Weight	313g. (Rear Large Flange w/Lock Ring), 241g. (Front Large Flange)
Features	Precision Ground Cones, Diamond-Polished Mirror Finish (Cup & Cones), Sealed Mechanism, Composite-Type Design (Large Flange)
Over Lock Nut Dimensions	Front: 100mm., Rear: 120mm. (One-Side or Both-Side Threaded Type, Small Flange/Large Flange)
Spoke Holes	24H, 28H, 32H, 36H
Spoke Hole Diameter	Ø2.4mm.
Material & Finish	Forged Aluminum-Anodized Finish (Hub Body), Poly-Carbonate Resin Composite Hub Shell
Fork End Slot Width	Front: 9mm. (Hollow Axle), Rear: 10mm. (Hollow Axle)



Sprocket
SS-7600 (Hub Sprocket for Track Model)

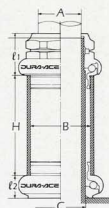
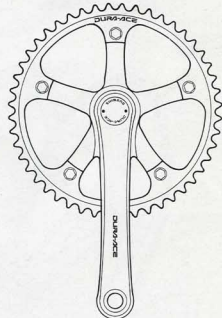
Thread	BC 1.37 x 24TPI. (English)
Standard Sprocket	1/2" x 1/8", 1/2" x 3/32"
Teeth	13T, 14T, 15T, 16T.
Material & Finish	Cr-Mo Steel
Weight	1/2" x 1/8" Sprocket:

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

Front Chainwheel & Bottom Bracket Assembly

FC-7600
BB-7600 (BB. Set)

Weight	605g. (48T., 170mm.), 305g. (BB. Set)
Features	Exclusively Designed for Track, Computer Aided Design (Crank), Removable Sealed Mechanism (BB.)
Use	For 1/8" & 3/32" Chain
Teeth	42T—55T
Crank Length	165mm., 167.5mm., 170mm., 172.5mm., 175mm.
Crank Thread	English BC 9/16" x 20TPI.
Cup Thread	English BC 1.37 x 24TPI., French M35 x 1.0, Italian M36 x 24TPI.
B.B. Size	68-S-109, 70-S-109
B.B. Axle Length	109
Material & Finish	Aluminum-Anodized Finish (Crank, Crank Arm Cap), Aluminum-High-Tech Grey Anodized Finish (Chaining), Steel-Chrome-Plated (Fixing Bolt), Nickel Cr-Mo Axle



Head Parts
HP-7600

Weight	90g.
Type	Track Type
Features	Composit Structure, Sealed Mechanism, Super Light Weight
Height	Upper Cone 19.5mm., Lower Cone 11.5mm.
Material & Finish	Aluminum-Anodized Finish (Nut, Upper Cone), High Impact Resin (Upper Cone, Lower Cup Covers), Bearing Steel (Upper & Lower Cup), Die Steel-Titanium Plated (Upper & Lower Cone)

Variation

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

Dimensions

ℓ ₁	19.5mm.
ℓ ₂	11.5mm.
H	Head Tube Length
A	22.0mm.
B	30.2mm.
C	26.4mm.
Thread	BC 1" x 24T. (English, Italian Thread)/ M25" x P1.0 (French Thread)

Quality racing components for competition machines and the best sport bicycles.

Shimano 600 Ultegra offers the quality and high-style appearance that upgrades the value and performance of the quality entry level racing bicycle. Features include increased durability, an 8-speed freehub, polished bearing races, compact aerodynamic design, and a high-tech pearl grey color treatment. New for 600 Ultegra 1992 is Shimano Total Integration – the breakthrough control system that allows the cyclist to both shift gears and brake without releasing the handlebars.



● Dual-Control Lever (ST-6400)

This new Dual-Control lever brings the hands-on performance of Shimano Total Integration to the 600 Ultegra group. Featuring 8-speed and Super SLR compatibility, the 600 Ultegra Dual-Control Lever brings pro-performance to amateur racers.



● 8-Speed SIS

The 8-speed SIS system is now available with 600 Ultegra. In addition to the ST-6400 Dual-Control lever, the system features the FH-6402-HG freehub, RD-6401 rear derailleur, and CN-HG91 chain and CS-HG90-8 cassette.



8-Speed SIS

Eight-speed SIS gives a wider gear selection with Shimano Index System precision. Just a tap on Ultegra's Dual-Control Lever (dual-purpose braking and shifting lever) delivers the desired gear without removing hands from the bars.



Super SLR

Side pull SLR caliper features offset pivot points that increase the power multiplication factor. The result is increased stopping power with highly sensitive control.



Shimano SG

Ultegra's chainwheels feature Shimano SG design. Cutouts and special contours guide the chain quickly and smoothly from one chainwheel to the next. It's the closest thing yet to SIS performance for the front derailleur.



Biopace

The computer designed shape of Biopace creates a more natural pedaling cadence. The result is less fatigue, increased stamina, and a more natural pedaling feeling.



8-Speed HG Sprockets

600 Ultegra's 8-speed gear cluster utilizes HG sprockets. HG means that the sprockets are computer-profiled and strategically positioned to provide fast, direct, and smooth chain transfer between cogs—regardless of pedal torque or cadence.



8-Speed Freehub

600 Ultegra's rear hub and freewheel assembly are combined to form a rigid single piece unit called the freehub which results in a stronger rear wheel, less spoke breakage, decreased rim offset, and increased power transfer efficiency.



SHIMANO 600 ULTEGRA

SHIMANO
TOTAL
INTEGRATION

Pedal Set
PD-6400

Clipless Pedal Set
PD-6402

Freehub
FH-6402-HG

Chain
CN-HG91

Sealed Cartridge
Bottom Bracket
BB-UN70

Head Parts
HP-6400

Rear Derailleur
RD-6401

Front Derailleur
FD-6401

Front Hub
HB-6400-F

Front Chainwheel
FC-6400-SG

Cassette sprockets
CS-HG90-8

Handle Stem
HS-6400

Seat Post
SP-6400

Brake Lever Set
BL-6403

Dual Pivot Brake
BR-6403

Dual Control Lever Set
ST-6400

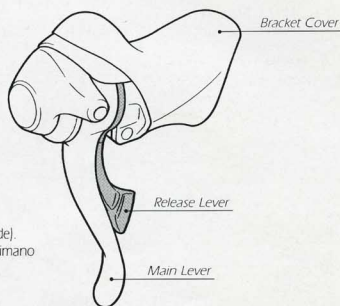
Bar End Shift Lever Set
SL-BS64-8

Shift Lever Set
SL-6401-8



Dual Control Lever
ST-6400

Weight	542g
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible, Super-SLR Compatible
Features	Light Action Lever, Sealed Mechanism, Aerodynamic Design, Anatomical Design
Lever Clamp Diameter	23.8mm—24.2mm
Material & Finish	Aluminum-Barrel Finish (Bracket), Aluminum-Paint Finish (Lever)
Note	For SIS function, use for SIS-SP outer casing with liner (Lever Side) and SIS sealed outer casing with liner (Rear Side). ST-6400 must be used as a set with BR-6403 and the Shimano SLR outer casing with liner. No other combination can be used.

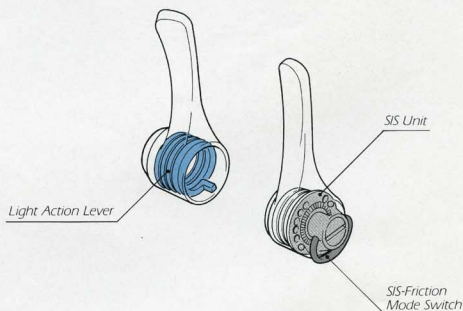


Shifting Lever

SL-6401-FCAI (8-speed SIS, Brazed-on A Type)

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

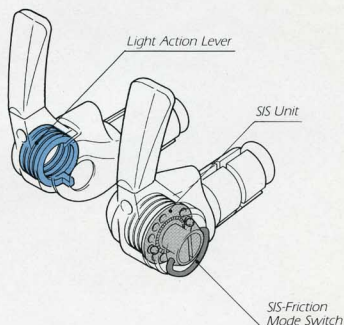
Weight	72.5g
Features	8-speed SIS, SIS-Friction Mode Switch, Light Action Lever, Sealed Mechanism, Human Engineered Design, 30° Off-set of Lever Stopper, Sealed Outer Casing
Lever Clamp Diameter	28.6mm
Material & Finish	Aluminum-Gray Paint Finish (Lever)
Attachment Position	Down Tube



Shifting Lever

SL-BS64-8

Weight	180g (Pair)
Features	8-speed SIS, SIS-Friction Mode Switch, Light Action Lever, Sealed Mechanism, Human Engineered Design, Sealed Outer Casing
Bar Inner Diameter	19.0mm—22.0mm
Material & Finish	Aluminum-Gray Paint Finish (Lever)
Attachment Position	Bar End
Note	The SL-BS64-8 is exclusively designed for Shimano 600 Ultegra 8-speed system. Use in combination with the rear derailleur RD-6401.



Shifting Lever

SL-BS50

Weight	183g
Compatibility	6 & 7-speed SIS Compatible, SIS-Friction Mode Switch,
Features	Light Action Lever, Sealed Mechanism, Human Engineered Design, Sealed Outer Casing
Bar Inner Diameter	19.0mm—22.0mm
Material & Finish	Aluminum-Bluff Finish (Lever)
Attachment Position	Bar End

Shifting Lever

SL-6400-FCAI [6 & 7-speed SIS, Brazed-on A Type]

SL-6400-BCAI [6 & 7-speed SIS, Side Band A Type]

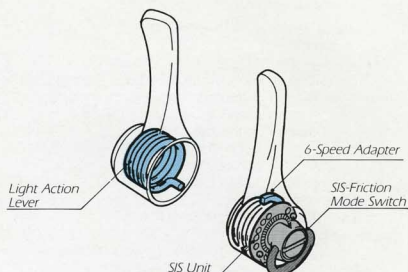
***C** of Model Number means Italian Type (Fixing Bolt is 5mm. Diameter)

Weight 60g. (SL-6400-FCAI)
Features Same Lever for 6 & 7-speed SIS,
 SIS-Friction Mode Switch,
 Sealed Mechanism,
 30° Off-set of Lever Stopper (Front),
 Light Action Lever (Front),
 Lever Interchangeability,
 Human Engineered Design

Lever Clamp Diameter 28.6mm.

Material & Finish Aluminum-Gray Paint Finish (Lever)

Attachment Position Down Tube



Rear Derailleur

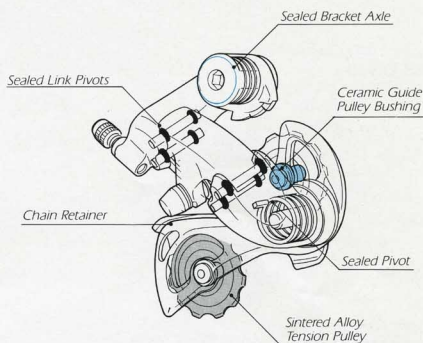
RD-6401

Weight 215g.
Compatibility Shimano Total Integration Compatible,
 6, 7 & 8-speed SIS Compatible

Features Sealed Link Pivots,
 Sealed Guide Pulley,
 Ceramic Guide Pulley Bushing,
 Sealed Tension Pulley,
 Sintered Alloy Tension Pulley Bushing,
 Sealed Pivot & Bracket Axes,
 Double Servo-Panta Mechanism,
 Centeron Guide Pulley,
 B-Tension Adjust Bolt,
 Double Spoke Barrier,
 Chain Retainer

Capacity Maximum Rear Sprocket: 28T,
 Minimum Rear Sprocket: 12T,
 Front Difference: 13T,
 Total Capacity: 28T.

Material & Finish Aluminum-Dark Gray Paint Finish (Bracket & Plate Body),
 Aluminum-Silver Paint (Right Link),
 Aluminum-Barrel Finish (Pulley Plate & Left Link)



Front Derailleur

FD-6401-B (Band Type)

FD-6401-F (Italian Brazed-on A Type)

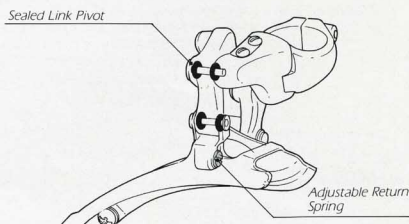
Weight 107g. (Band Type)
Compatibility Shimano Total Integration Compatible,
 Shimano SG Gear Compatible,
 Narrow Type Chain Compatible

Features Adjustable Return Spring,
 Leading Action Pantograph Mechanism,
 Rigid Chain Guide, New Trapes Mechanism,
 Sealed Link Pin, Compact Design

Capacity 14T.

Clamp Diameter 28.6mm.

Material & Finish Aluminum-Silver Paint Finish (Right Link),
 Aluminum-Dark Gray Paint Finish (Front & Rear Band),
 Steel-Chrome-Plated (Chain Guide, Clamp Bolt)



Front Chainwheel & Bottom Bracket Assembly
FC-6400-SG (Shimano SG Double, LD Type)
BB-6400 (B.B. Set)

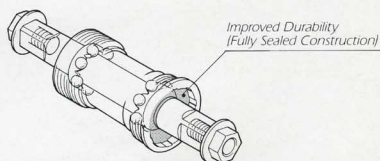
Weight	650g (42T, 52T, 170mm), 293g (B.B. Set)
Compatibility	Shimano Total Integration Compatible, Narrow Type Chain Compatible
Features	Shimano SG Gear, Sealed Mechanism (B.B.)
Chain Size	1/2" x 3/32"
Teeth Combination	52 x 42 (Biopace SG), 53 x 42, 52 x 42 (Shimano SG)
Crank Length	165mm, 167.5mm, 170mm, 172.5mm, 175mm
Crank Thread	English BC 9/16" x 20TPI
Cup Thread	English BC 1.37 x 24TPI, French M35 x 1.0, Italian M36 x 24TPI
B.B. Size	70-W-115, 68-W-113
Material & Finish	Aluminum-Anodized Finish (Crank, Chainring), Nickel Cr-Mo Axle



Sealed Cartridge Bottom Bracket
BB-UN70

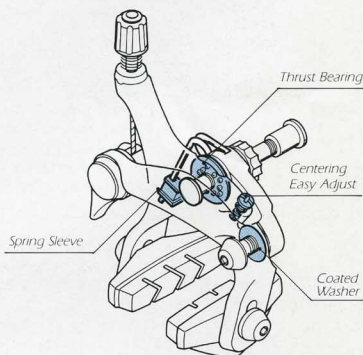
Weight	287g (122.5mm)
Features	"Easy Assembly" Construction Improved Durability (Fully Sealed Construction) Maintenance Free Construction Lightweight Design

Specifications	Shell Width	68 (BC)	70 (M36)
	Spindle Length	115	115
	Spindle Marking	D-H	D-H



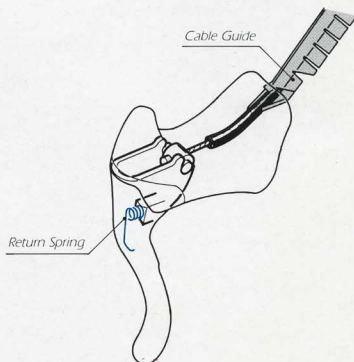
Dual Pivot Brake
BR-6403-49 (Short 49 Type)

Weight	424g (F&R, 49 Type)
Compatibility	Shimano Total Integration Compatible, Super SLR (Shimano Linear Response) Compatible
Features	Thrust Bearing (Y-Arm Pivot), Coated Washer (C-Arm Pivot), Spring Sleeve, Click & Eccentric Type Quick Release, Easy Adjust
Material & Finish	Forged Aluminum-Paint Finish (Arch), Steel-Chrome-Plated (Pivot Bolt, Quick Release)
Note	BR-6403 must be used as a set with ST-6400 or BL-6403 and the Shimano SLR outer cable with liner. No other combination can be used.



Brake Lever
BL-6403 (Aero Type)

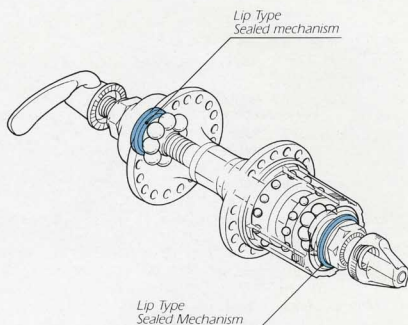
Weight	272g (Pair)
Compatibility	Super SLR (Shimano Linear Response) Compatible
Features	Return Spring, Cable Guide, Aerodynamic Design, Anatomical Design
Lever Clamp Diameter	23.8mm.—24.2mm.
Lever Stroke	84mm.
Material & Finish	Aluminum-Paint Finish (Lever), Aluminum-Barrel Finish (Bracket), Soft Resin (Cover)
Bracket Cover	Black, White
Note	BL-6403 must be used as a set with BR-6403 and the Shimano SLR outer cable with liner. No other combination can be used.



Freehub

FH-6402-HG (8-speed)

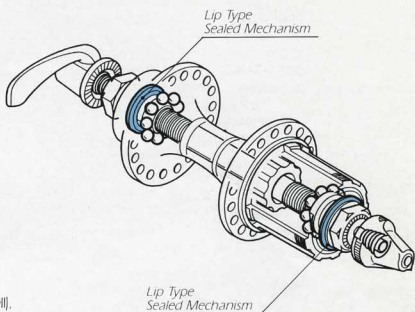
Weight	426g. (with Quick Release)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible, HG Gear Compatible
Features	Lip Type Sealed Mechanism, Uni-Balance System
Over Lock Nut Dimensions	130mm.
Axle Length	141mm.
Axle Thread	10mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	45
Chain Line	42.2mm.
Material & Finish	Aluminum•Buff & Anodized Finish (Hub Shell) Resin•Black Finish (Dust Cap), Steel•Chrome-Plated (Quick Release Housing)



Freehub

FH-6401-HG (7-speed)

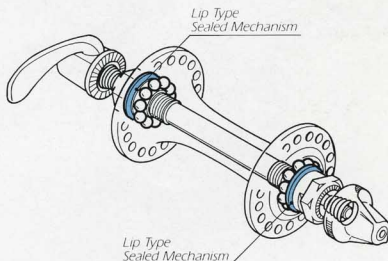
Weight	423g. (with Quick Release)
Compatibility	7-speed SIS Compatible, HG Gear Compatible
Features	UG/HG Convertible Type, Lip Type Sealed Mechanism, Uni-Balance System, One-Piece Forged Hub Body
Over Lock Nut Dimensions	126mm.
Axle Length	137mm.
Axle Thread	10mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	45
Chain Line	41.2mm.
Material & Finish	Forged Aluminum•Buff Anodized Finish (Hub Shell), Resin•Black Finish (Dust Cap), Steel•Chrome-Plated (Quick Release Housing)



Front Hub

HB-6400-F

Weight	212g. (with Quick Release)
Features	Lip Type Sealed Mechanism, One-Piece Forged Hub Body
Over Lock Nut Dimensions	100mm.
Axle Length	108mm.
Axle Thread	9mm.
Spoke Holes	28H, 32H, 36H
Hole PCD	38
Material & Finish	Forged Aluminum•Anodized Finish (Hub Shell)

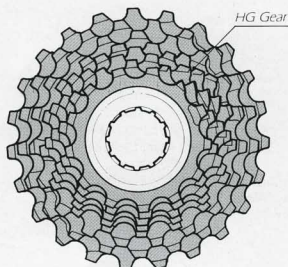


Cassette Sprockets

CS-HG90-8 (8-speed)

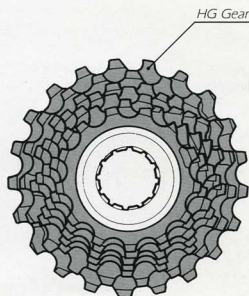
Weight	250g. (Sprocket S Group & Spacer)
Compatibility	Shimano Total Integration Compatible, 8-speed SIS Compatible
Feature	8-speed HG
Use	For 1/2" x 3/32" Chain (Narrow Type Chain)
Material & Finish	Steel•Chrome Plated
Sprocket Combinations	

S	12, 13, 14, 15, 16, 17, 19, 21T
T	13, 14, 15, 16, 17, 19, 21, 23T
U	12, 13, 14, 15, 17, 19, 21, 23T
V	13, 14, 15, 17, 19, 21, 23, 26T
W	12, 13, 15, 17, 19, 21, 23, 25T



Cassette Sprockets
CS-HG90 (7-speed)

Weight	286g. (Sprocket 1 Group & Spacer)
Compatibility	7-speed SIS Compatible
Feature	7-speed HG
Chain Size	1/2" x 3/32" (Narrow Type Chain)
Material & Finish	Steel-Chrome Plated
Sprocket Combinations	E 12, 14, 16, 18, 21, 24, 28T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T



Cassette Sprockets
CS-6400-6/7

Weight	223g. (7-speed Sprocket 12—21T. & Spacer)
Compatibility	6 & 7-speed SIS Compatible
Feature	New Unglide Teeth
Chain Size	1/2" x 3/32" Chain (Narrow Type Chain)
Material & Finish	Steel-Silver Finish (Sprocket)
Standard Sprocket Combinations	

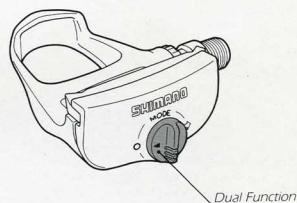
6-speed	13, 14, 15, 16, 17, 18T. 13, 14, 15, 17, 19, 21T. 13, 14, 17, 19, 21, 23T. 13, 15, 17, 19, 21, 24T. 13, 15, 17, 20, 23, 26T. 13, 15, 17, 20, 24, 28T. 12, 14, 17, 20, 24, 28T. 13, 15, 17, 20, 25, 30T. 12, 14, 16, 19, 22, 26T. 12, 14, 17, 20, 25, 30T.
7-speed	12, 13, 14, 15, 16, 17, 19T. 12, 13,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

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)
Spline Sprockets	14—26T./28T./30T./32T./34T.	
Spacer Width	3.65mm. (Light Gray)	2nd—3.30mm. (except 13T.) 3rd to low—3.15mm. (7S mark) (Dark Gray)

Clipless Pedal
PD-6402

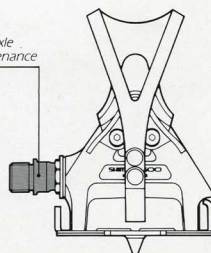
Weight	450g. (Pedal, Pair), 92g. (Cleat & Hardware)
Features	Dual Function. 34° Road Clearance. Easy Maintenance Cartridge Axle. Aerodynamic Dustcupless Design. Efficient Sealed Mechanism. Adjustable Cleat Grip Tension. Compatible Look® Cleats. Low-Profile Design. English BC 9/16" x 20TPI.
Crank Thread	English BC 9/16" x 20TPI.
Material & Finish	Aluminum (Body). Cr-Mo Steel (Axle).



Pedal
PD-6400

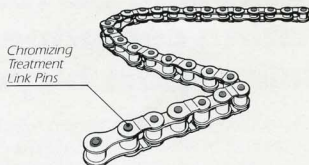
Weight	478g. (Pair, Including Toe Clip Size L)
Features	Positive Grip Shoe Cleat. 34° Road Clearance. Easy-Maintenance Cartridge Axle. Compound Structure of Resin Bushing and Cup & Cone Bearings. Aerodynamic Design. Sealed Mechanism
Toe Clip Size	M, L, LL
Crank Thread	English BC 9/16" x 20TPI.
Material & Finish	Aluminum (Body). Aluminum-Anodized Finish (Front Plate). Cr-Mo Steel (Axle). Steel-Chrome-Plated or Aluminum-Anodized Finish (Toe Clip)

Cartridge Axle
Easy-Maintenance



HG Chain CN-HG90/-HG91

Weight	326g. (110 Link)
Compatibility	Shimano Total Integration Compatible
Features	Narrow Type HG Chain, Bussingless Design, Chrome Treatment Link Pins
Size	1/2" x 3/32"
Material & Finish	Silver Finish (Roller & Pin Link Plate)

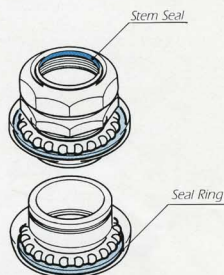
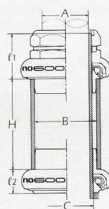


Head Parts HP-6400

Weight	100g.
Features	Road Type Compact & Light Weight, Sealed Mechanism, Burnished & Polished Finish
Material & Finish	Aluminum (Upper & Lower Cup), Cr-Mo Steel (Races), Stainless Steel (Lower Cone)
Height Variation	Upper Cone: 22.0mm., Lower Cone: 11.5mm.

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

Dimensions	t ₁	22.0mm.
	t ₂	11.5mm.
	H	Head Tube Length
	A	22.3mm.
	B	30.2mm.
	C	26.4mm.
	Thread	BC 1" x 24T (English Thread)/ M25" x P1.0 (French Thread)

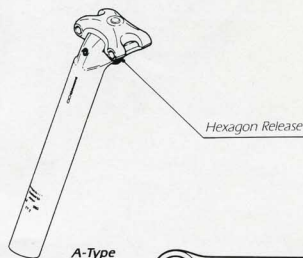


Seat Post

SP-6400-A (Round Tube, A Type)

SP-6400-B (Semi Oval Tube, B Type)

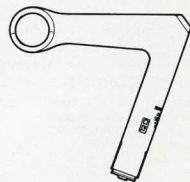
Weight	284g. (B Type, 27.2mm.)
Features	Aerodynamic Design, Hexagon Release
Shaft Adjustment Length	25.0mm. — 27.2mm.
Material & Finish	Aluminum-Anodized Finish



Handle Stem

HS-6400

Weight	286g. (100mm.)
Features	Aerodynamic Design, Hexagon Release
Extension	80mm., 90mm., 100mm., 110mm., 120mm., 130mm.
Handle Stem Diameter	22.2mm.
Handlebar Clamp Diameter	25.4mm., 26.0mm.
Material & Finish	Aluminum-Anodized Finish



Beauty and performance combine in an exciting component group for the quality sport bicycle.

The Shimano 105SC components were developed to offer both performance and stylish appearance. Quality construction and a full range of advanced Shimano functions make 105SC a high-performance component group. Compact aerodynamic design and a striking color treatment make the 105SC-equipped bicycle a beautiful machine. Shimano 105SC offers the quality and appearance that appeals to beginners, triathletes, dedicated sportsmen – anyone who appreciates a quality performance-oriented bicycle.



7-Speed SIS

105SC features 7-speed SIS that gives a wider pro-type gear selection with Shimano Index System precision. Anybody can shift gears quickly and accurately thanks to the click-stop accuracy of SIS shifting.



Super SLR

105SC's side pull SLR calipers feature offset pivot points that increase the power multiplication factor. The result is increased stopping power with a feeling of highly modulated control.



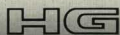
Shimano SG

Chainwheels feature Shimano SG design. Tooth cutouts and special contours guide the chain quickly and smoothly from one chainwheel to the next. It's the closest thing yet to SIS performance for the front derailleur.



Biopace

The computer designed shape of Biopace creates a more natural pedaling cadence. The result is less fatigue, increased stamina, and a more natural pedaling feeling.



7-Speed HG Sprockets

105SC's 7-speed gear cassette uses HG sprockets. HG means that the sprockets are computer-profiled and strategically positioned to provide fast, direct, and smooth chain transfer between cogs—regardless of pedal torque or cadence.



7-Speed Freehub

The rear hub and freewheel assembly are combined in a rigid single piece freehub. The freehub creates a stronger rear wheel, reduces spoke stress, decreases rim offset, and increases power transfer efficiency.

SC



Pedal Set
PD-1055

Clipless Pedal Set
PD-1056



Sealed Cartridge Bottom Bracket
BB-UN70



Freehub
FH-1055-HG



Front Hub
HB-1055-F



Cassette Sprockets
CS-HG70



Chain
CN-HG90



Head Parts
HP-1055



Shift Lever Set
SL-1055



Front Chainwheel
FC-1055-SG



Rear Derailleur
RD-1055



Front Derailleur
FD-1055



Dual Pivot Brake
BR-1055



Brake Lever Set
BL-1055



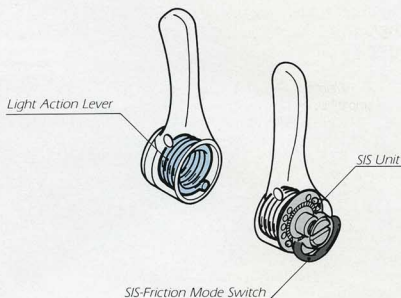
Shifting Lever

SL-1055-FCAI (7-speed SIS, Brazed-on A Type)

SL-1055-BCAI (7-speed SIS, Side Band A Type)

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

Weight	70g. (SL-1055-FCAI)
Features	7-speed SIS, SIS-Friction Mode Switch, 30° Off-set of Lever Stopper (Front), Light Action Lever (Front), Sealed Mechanism, Human Engineered Design
Lever Clamp Diameter	28.6mm.
Material & Finish	Aluminum+Enamel Finish (Lever)
Attachment Position	Down Tube



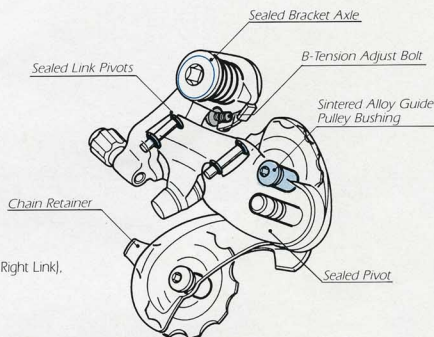
Rear Derailleur

RD-1055

Weight	247g.
Compatibility	6 & 7-speed SIS Compatible
Features	Sealed Link Pivots, Sintered Alloy Guide Pulley Bushing, Sealed Pivot & Bracket Axle, Double Servo-Panta Mechanism, B-Tension Adjust Bolt, Double Spoke Barrier, Chain Retainer

Capacity	Maximum Rear Sprocket: 28T. Minimum Rear Sprocket: 12T. Front Difference: 13T. Total Capacity: 28T.
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Material & Finish	Aluminum+Enamel Finish (Bracket & Plate Body & Right Link), Steel+Pearl Bright Finish (Left Link)
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Front Derailleur

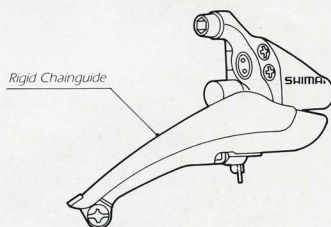
FD-1055-B (Band Type)

FD-1055-F (Italian Brazed-on A Type)

Weight	105g. (Band Type)
Compatibility	Shimano SG Compatible, Narrow Type Chain Compatible
Features	Leading Action Pantograph Mechanism, Compact Design, Rigid Chainguide, Sealed Mechanism

Capacity	14T.
Clamp Diameter	28.0mm. — 28.6mm.

Material & Finish	Aluminum+Enamel Finish (Right Link, Front & Rear Band), Steel+Pearl Bright Finish (Chain Guide)
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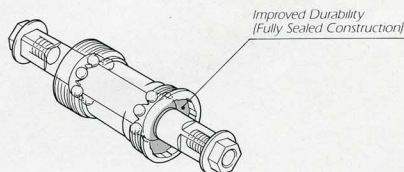


Sealed Cartridge Bottom Bracket

BB-UN70

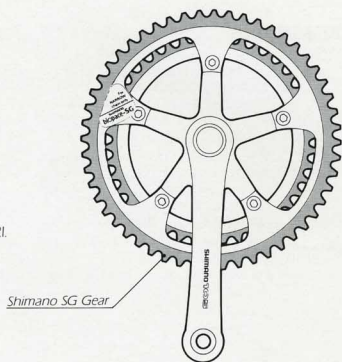
Weight	287g. (122.5mm.)
Features	"Easy Assembly" Construction Improved Durability (Fully Sealed Construction) Maintenance Free Construction Lightweight Design

Specifications	Shell Width	68 (BC)	70 (M36)
	Spindle Length	115	115
	Spindle Marking	D-H	D-H



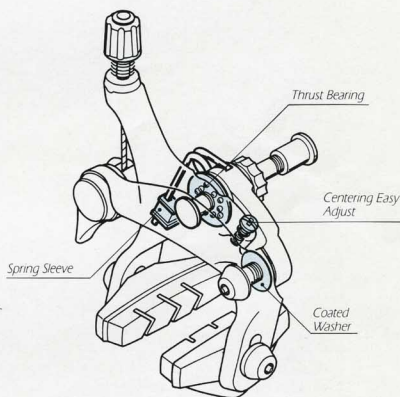
Front Chainwheel & Bottom Bracket Assembly
FC-1055-SG (Shimano SG Double, LD Type)
BB-1055 (BB Set)

Weight	710g. (42T., 52T., 170mm.), 340g. (BB. Set)
Compatibility	Narrow Type Chain Compatible
Features	Shimano SG Gear, Sealed Mechanism (BB.)
Chain Size	1/2" x 3/32"
Teeth Combination	52 x 42 (Biopace SG), 53 x 42, 52 x 42 (Shimano SG)
Crank Length	165mm., 167.5mm., 170mm., 172.5mm., 175mm.
Crank Thread	English BC 9/16" x 20TPI.
Cup Thread	English BC 1.37 x 24TPI., French M35 x 1.0, Italian M36 x 24TPI.
BB. Size	70-W-115, 68-W-113
Material & Finish	Aluminum+Enamel Finish (Crank), Aluminum+Anodized Finish (Chainring), Nickel Cr-Mo Axle



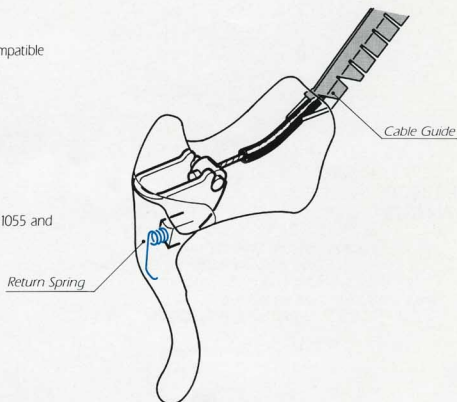
Dual Pivot Brake
BR-1055-49 (Short 49 Type)
BR-1055-57 (Long 57 Type)

Weight	360g. (F & R, 49 Type)
Compatibility	Super SLR (Shimano Linear Response) Compatible
Features	Thrust Bearing (Y-Arm Pivot), Coated Washer (C-Arm Pivot), One-Piece & Low Profile Brake Shoe, Spring Sleeve, Click & Eccentric Type Quick Release, Easy Adjust
Material & Finish	Aluminum+Enamel Finish (Arch)
Note	BR-1055 must be used as a set with BL-1055 and the Shimano SLR outer cable with Liner. No other combination can be used.



Brake Lever
BL-1055 (Aero Type)

Weight	252g. (Pair)
Compatibility	Super-SLR (Shimano Liner Response) Compatible
Features	Return Spring, Human Engineered Design, Aerodynamic Design
Lever Clamp Diameter	23.8mm.—24.2mm.
Lever Stroke	84mm.
Material & Finish	Aluminum+Enamel Finish (Lever), Aluminum+Barrel Finish (Bracket), Soft Resin (Cover)
Color (Bracket Cover)	Black, White
Note	BL-1055 must be used as a set with BR-1055 and the Shimano SLR outer cable with Liner. No other combination can be used.



HH-1055-HG (7-speed)

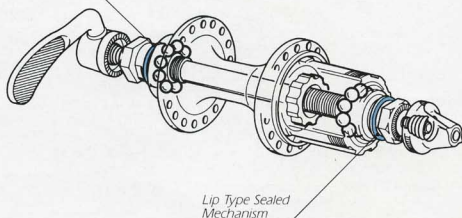
Weight 415g. (w/Quick Release)
 Compatibility 7-speed SIS Compatible
 Features HG/UG Convertible Type,
 Lip Type Sealed Mechanism,
 Uni-Balance System,
 One-Piece Forged Hub Body

Over Lock Nut Dimensions

Axle Length 126mm,
 137mm,
 Axle Thread 10mm,
 Spoke Holes 32H, 36H
 Hole PCD 45
 Chain Line 41.2mm.

Material & Finish Aluminum•Anodized Finish (Hub Shell)

Lip Type Sealed Mechanism

**HB-1055-F**

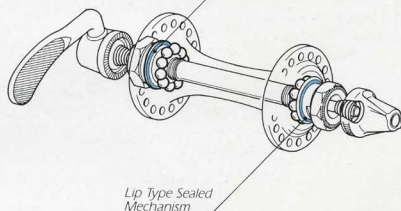
Weight 216g. (with Quick Release)
 Features Lip Type Sealed Mechanism,
 One-Piece Forged Hub Body

Over Lock Nut Dimensions

Axle Length 100mm., 96mm.,
 108mm., 104mm.
 Axle Thread 9mm.
 Spoke Holes 32H, 36H
 Hole PCD 38

Material & Finish Aluminum•Anodized Finish (Hub Shell)

Lip Type Sealed Mechanism

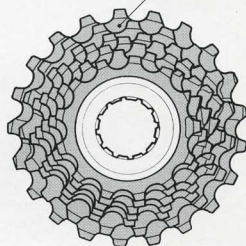
**CS-HG70** (7-speed)

Weight 286g. (Sprocket I Group & Spacer)
 Compatibility 7-speed SIS Compatible
 Feature 7-speed HG
 Chain Size 1/2" x 3/32" (Narrow Type Chain)
 Material & Finish Steel•Silver Finish

Sprocket Combinations

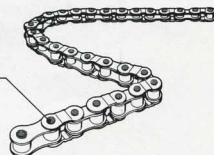
E 12, 14, 16, 18, 21, 24, 28T.
H 13, 15, 17, 19, 21, 23, 26T.
I 13, 14, 15, 17, 19, 21, 23T.
J 13, 14, 15, 16, 17, 19, 21T.
L 12, 13, 14, 15, 17, 19, 21T.
M 13, 15, 17, 19, 21, 24, 28T.

HG Chain

**CN-HG70**

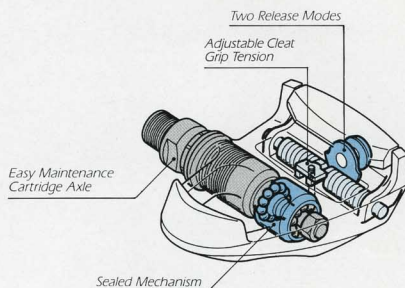
Features Narrow Type HG Chain,
 Chromizing Treatment Link Pins
 Size 1/2" x 3/32"
 Material & Finish Steel•Gray Finish (Roller Link Plate),
 Steel•Black Finish (Pin Link Plate)

Chromizing Treatment Link Pins



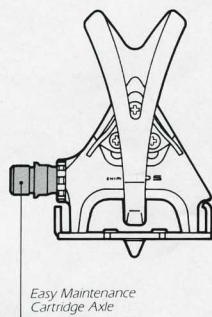
Clipless Pedal
PD-1056

Weight 460g (Pedal, Pair), 105g (Cleat & Hardware).
Features 34° Road Clearance,
Two Release Modes,
Easy Maintenance Cartridge Axle,
Aerodynamic Dustcap-less Design,
Adjustable Cleat Grip Tension,
Sealed Mechanism,
Low-Profile Design,
Compatible Look® Cleats
Crank Thread English BC 9/16" × 20TPI.
Material Aluminum (Body),
Cr-Mo Steel



Pedal
PD-1055

Weight 433g (Pair, Including Toe Clip Size L).
Features 34° Road Clearance,
Easy Maintenance Cartridge Axle,
Aerodynamic Design,
Sealed Mechanism
Toe Clip Size M, L, LL
Crank Thread English BC 9/16" × 20TPI.
Material & Finish Aluminum (Body),
Steel (Front Plate),
Cr-Mo Steel (Axle),
Resin+Dark Gray (Toe Clip)



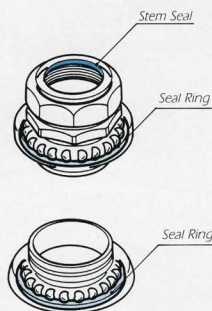
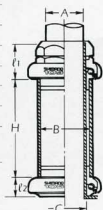
Head Parts
HP-1055

Weight 101g.
Type Road Type
Features Sealed Mechanism
Material & Finish Aluminum+Silver Finish (Upper & Lower Cup),
Cr-Mo Steel (Races),
Stainless Steel (Lower Cone)
Height Upper Cone: 21.2mm., Lower Cone: 11.5mm.
Variation

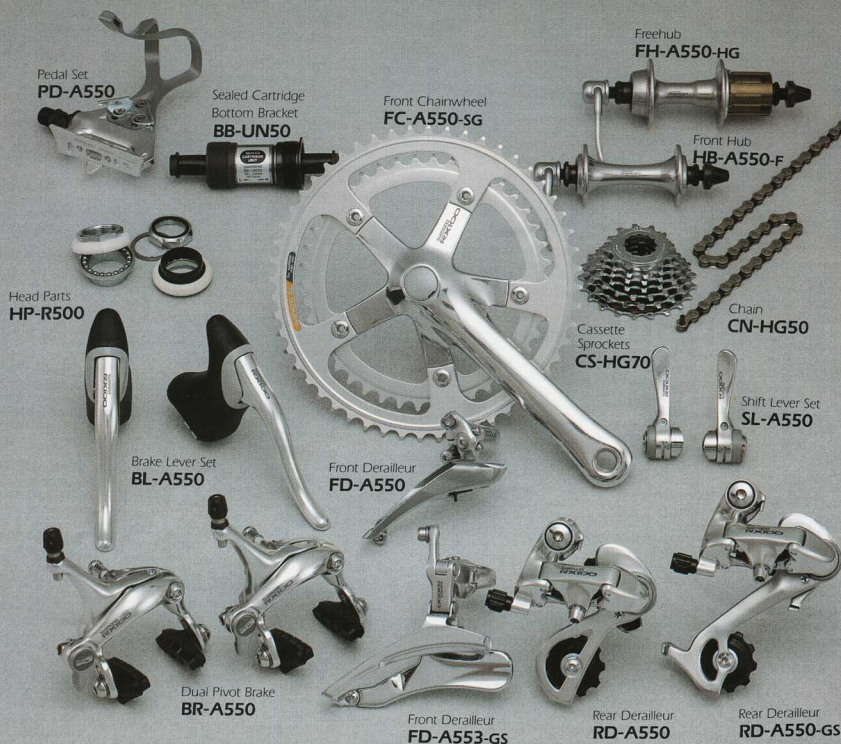
Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/Italian	BC1 × 24T.	30.2mm.	26.4mm.
French	M25 × P1.0	30.2mm.	26.4mm.

Dimensions

ℓ_1	21.2mm.
ℓ_2	11.5mm.
H	Head Tube Length
A	22.3mm.
B	30.2mm.
C	26.4mm.
Thread	BC 1" × 24T. (English Thread)/ M25 × P1.0 (French Thread)



SHIMANO RX100



Shimano RX100

Model No.	Specifications	Features	Material•Finish	Note
Rear Derailleur RD-A550-GS (Long Cage) RD-A550-ss (Short Cage)	6 & 7-speed SS Compatible Long Cage: Max. Rear Sprocket: 30T Min. Rear Sprocket: 12T Front Difference: 20T Total Capacity: 36T Short Cage: Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T Front Difference: 13T Total Capacity: 28T 280g (Short Cage)	Double Servo-Pantograph Mechanism Centeron Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Pivot Axle Sealed Link Pivot Sintered Alloy Guide Pulley Bushing	Bracket Body: Aluminum•Barrel Finish Right Link: Aluminum•Barrel Finish Left Link: Steel•Pearl Bright Finish Plate Body: Aluminum•Barrel Finish	SS Compatible Detachable Bracket Available
Front Derailleur FD-A550-B (Band Type) FD-A550-F (Italian Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 14T Band Diameter: $\phi 28.0\text{mm}$ — $\phi 28.6\text{mm}$ Stroke (w/ $\phi 28.6\text{mm}$ Band): 37—51 100g (Band Type)	Leading Action Pantograph Mechanism Rigid Chainguide Compact Design	Front Band: Aluminum•Barrel Finish Rear Band: Aluminum•Barrel Finish Right Link: Aluminum•Barrel Finish Chain Guide: Steel•Pearl Bright Finish	Boxed on Type Available
Front Derailleur FD-A553-GS (Band Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 24T (Bespoke HP) 26T (Round) Band Diameter: $\phi 28.0\text{mm}$ — $\phi 28.6\text{mm}$ Stroke (w/ $\phi 28.6\text{mm}$ Band): 37—51 121g	Leading Action Pantograph Mechanism Rigid Chainguide Compact Design	Front Band: Aluminum•Barrel Finish Rear Band: Aluminum•Barrel Finish Right Link: Aluminum•Barrel Finish Chain Guide: Chrome Plated	

Shimano RX100

Model No.	Specifications	Features	Material•Finish	Note																																						
Shifting Lever SL-A550-FCAI (Braze-on A Type) SL-A550-BCAI (Side Band A Type) SL-A550-T-FCAI (Braze-on A Type for Triple Chainwheel) SL-A550-T-BCAI (Side Band A Type for Triple Chainwheel)	7-speed SIS Down Tube Lever Lever Clamp Diameter: 28.6mm. 72g. (SL-A550-FCAI)	SIS-Friction Mode Switch Light Action Lever Sealed Mechanism 30° Off set of Lever Stop (Except for SL-A550-T)	Aluminum•Paint Finish	[C] means Italian Type Fixing Bolt is 5mm. Diameter																																						
Dual Pivot Brake BR-A550-49 (Short 49 Type) BR-A550-57 (Long 57 Type)	Super-SLR (Shimano Linear Response) Compatible Sunkin Bolt Type: Front: 27.5mm. Rear: 12.8mm. Nut Type: Front: 47.0mm. Rear: 30.0mm. 348g. (F & R, 49 Type)	Easy Adjust With Synchronizer Spring Sleeve Coated Pivot Washer One Piece & Low Profile Brake Shoe	C-Arm: Aluminum•Anodized Finish Y-Arm: Aluminum•Anodized Finish Gate: Aluminum•Anodized Finish	BR-A550 must be used as a set with BL-A550 and the Shimano SLR Outer Cable. No other combination can be used.																																						
Brake Lever BL-A550 (Aero Type)	Super-SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 23.8mm.—24.2mm. Lever Stroke: 84 252g. (Pair)	Aerodynamic Design	Lever: Aluminum•Anodized Finish Bracket: Aluminum•Barrel Finish Cover: Soft Resin•Molding Black, White	BL-A550 must be used as a set with BR-A550 and the Shimano SLR Outer Cable. No other combination can be used.																																						
Front Chainwheel FC-A550-SG (Shimano SG Double, LD Type) FC-A550-T (Shimano SG Triple, LD Type) Bottom Bracket Assembly BB-A550 Sealed Cartridge Bottom Bracket BB-UN50	Narrow Type Chain Compatible Crank Length: 165mm. (Double Only) 170mm. Teeth: <table><tr><td></td><td colspan="2">FC-A550-SG</td><td>FC-A550-T</td></tr><tr><td></td><td>Biopace SG</td><td>Round SG</td><td>Round SG</td></tr><tr><td>Top</td><td>52T</td><td>53T</td><td>52T</td></tr><tr><td>Middle</td><td>—</td><td>—</td><td>42T</td></tr><tr><td>Low</td><td>42T</td><td>42T</td><td>42T</td></tr></table> Crank Thread: English BC 9/16" × 20TPI. Cup Thread: English BC 1.37 × 24TPI. French M35 × 1.0, Italian M36 × 24TPI. 700g. (42T, 52T, 170mm.) 327g. (BB-A550) 323g. (BB-UN50, 122.5mm.)		FC-A550-SG		FC-A550-T		Biopace SG	Round SG	Round SG	Top	52T	53T	52T	Middle	—	—	42T	Low	42T	42T	42T	Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Aluminum•Barrel Finish Chain Ring: Aluminum•Anodized Finish	Spindle: BB-A550 <table><tr><td>Mark</td><td>3H</td><td>5H</td></tr><tr><td>Width</td><td>70</td><td>68</td></tr><tr><td>Length</td><td>115</td><td>113</td></tr></table> Spindle: BB-UN50 <table><tr><td>Mark</td><td colspan="2">D-H</td></tr><tr><td>Width</td><td>70 (36)</td><td>68 (BC)</td></tr><tr><td>Length</td><td colspan="2">115</td></tr></table>	Mark	3H	5H	Width	70	68	Length	115	113	Mark	D-H		Width	70 (36)	68 (BC)	Length	115	
	FC-A550-SG		FC-A550-T																																							
	Biopace SG	Round SG	Round SG																																							
Top	52T	53T	52T																																							
Middle	—	—	42T																																							
Low	42T	42T	42T																																							
Mark	3H	5H																																								
Width	70	68																																								
Length	115	113																																								
Mark	D-H																																									
Width	70 (36)	68 (BC)																																								
Length	115																																									
Freehub FH-A550	7-speed SIS Compatible UGHG Compatible Type Spoke Holes: 36H, 32H. Hole PCD: 45 <table><tr><td>OLD</td><td>126</td></tr><tr><td>Axle Length</td><td>137</td></tr></table> Mounting Type: Quick Release Axle Thread: 10mm. 420g.	OLD	126	Axle Length	137	Uni-Balance System Resin Sealed Mechanism One-Piece Forged Hub Body	Aluminum•Polish Finish																																			
OLD	126																																									
Axle Length	137																																									
Front Hub HB-A550-F	Spoke Holes: 36H, 32H. Hole PCD: 38 <table><tr><td>OLD</td><td>100</td></tr><tr><td>Axle Length</td><td>108</td></tr></table> Mounting Type: Quick Release Axle Thread: 9mm. 202g.	OLD	100	Axle Length	108	Resin Sealed Mechanism One-Piece Forged Hub Body	Aluminum•Polish Finish																																			
OLD	100																																									
Axle Length	108																																									
Cassette Sprockets CS-HG70 (7-speed)	7-speed SIS Compatible 7-speed HG Gear Use Narrow Type Chain 288g. (Sprocket 1 Group)		Steel•Silver Finish	Cassette Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T F 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T																																						
Chain CN-HG70	7-speed SIS Compatible 7-speed HG Compatible Narrow Type Chain (11/2" × 3/32") 325g. (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushingsless Design	Roller Link Plate: Steel•Gray Finish Pin Link Plate: Steel•Black Finish																																							
Pedal PD-A550	Crank Thread: English BC 9/16" × 20TPI. Toe Clip Size: M, L, LL Toe Clip Locking System: 3-screw 400g. (Pair, including Toe Clip Size L)	32° Road Clearance Easy-Maintenance Cartridge Axle Sealed Mechanism Aero Dynamic Design Reflector (Option)	Body: Aluminum•Barrel Finish Toe Clip: Resin																																							
Head Parts HP-R500	Height: Upper Cone 22.0mm. Lower Cone 11.5mm. 121g. Variation: <table><tr><td></td><td colspan="2">Press Race Diameter</td></tr><tr><td></td><td>Upper Cone & Lower Cap</td><td>Lower Cone</td></tr><tr><td>English/Italian</td><td>BC1 × 24T</td><td>30.2mm.</td><td>26.4mm.</td></tr><tr><td>French</td><td>M25 × P10</td><td>30.2mm.</td><td>26.4mm.</td></tr></table>		Press Race Diameter			Upper Cone & Lower Cap	Lower Cone	English/Italian	BC1 × 24T	30.2mm.	26.4mm.	French	M25 × P10	30.2mm.	26.4mm.	Sealed Mechanism	Lock Nut: Steel•Pearl Bright Finish Upper Cup: Resin Lower Cup: Resin Color: White, Silver, Black																									
	Press Race Diameter																																									
	Upper Cone & Lower Cap	Lower Cone																																								
English/Italian	BC1 × 24T	30.2mm.	26.4mm.																																							
French	M25 × P10	30.2mm.	26.4mm.																																							

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EXAGE 500EX

Model No.	Specifications	Features	Material-Finish	Note
Rear Derailleur RD-A500	6 & 7-speed SS Compatible Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T Front Difference: 13T Total Capacity: 28T 279g	Double Servo-Panta Mechanism Centerion Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing	Bracket Body: Aluminum+Paint Finish Left Link: Aluminum+Paint Finish Right Link: Steel+Pearl Bright Finish Plate Body: Aluminum+Paint Finish	SS Compatible Detachable Bracket
Front Derailleur FD-A500-B (Band Type) FD-A500-F (Italian Type)	Narrow Type Chain Compatible Total Capacity: 11T Band Diameter: $\phi 28.0\text{mm}$ — $\phi 28.6\text{mm}$ Stroke [w/28.6mm Band]: 37—51 115g (Band Type)	Loading Action Pantograph Mechanism Rigid Chainguide Compact Design	Front Band: Steel+Paint Finish Rear Band: Aluminum+Paint Finish Right Link: Aluminum+Paint Finish Chainguide: Chrome Plated	Brazed-on Type Available
Shifting Lever SL-A500-FCAI (Brazed-on A Type) SL-A500-BCAI (Side Band A Type)	7-speed SS Down Tube Lever Lever Clamp Diameter: 28.6mm 76g (SL-A500-FCAI)	SS-Friction Mode Switch Light Action Lever Sealed Mechanism	Aluminum+Paint Finish	(C) means Italian Type Fixing Bolt is 5mm Diameter
Dual Pivot Brake BR-A500-49 (Short 49 Type) BR-A500-57 (Long 57 Type)	Super SLR (Shimano Linear Response) Compatible Sunken Bolt Type: Front: 27.5mm Rear: 12.8mm Nut Type: Front: 47.0mm Rear: 30.0mm 326g (F & R 49 Type)	Easy Adjust With Synchronizer Spring Sleeve Coated Pivot Washer One Piece & Low Profile Brake Shoe	C-Arm: Aluminum+Paint Finish Y-Arm: Aluminum+Paint Finish Gate: Aluminum+Barrel Finish	BR-A500 must be used as a set with BL-A500 and the Shimano SLR Outer Cable. No other combination can be used
Brake Lever BL-A500 (Aero Type)	Super SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 23.8mm — 24.2mm Lever Stroke: 84 258g (BL-A500, Pair)	Aerodynamic Design	Lever: Aluminum+Anodized Finish Bracket: Aluminum+Barrel Finish Cover: Soft Resin+Molding Black, White	BL-A500 must be used as a set with BR-A500 and the Shimano SLR Outer Cable. No other combination can be used
Front Chainwheel FC-A500-BP (Biopace Double, LD Type) Bottom Bracket Assembly BB-A200 Sealed Cartridge Bottom Bracket BB-CS20	Narrow Type Chain Compatible Crank Length: 165mm, 170mm Cup Thread: English BC 137 x 24TPI Teeth: Top 50T, 52T, 53T Low 40T, 42T Crank Thread: English BC 9/16" x 20TPI Italian M36 x 1.0 (BB-A200 Only) Italian M36 x 24TPI 720g (42T, 52T, 170mm) 333g (BB Set BB-A500)	Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Aluminum+Barrel Finish Chain Ring: Aluminum+Anodized Finish	Spindle: BB-A200 Mark D-3H D-5H Width 70 68 Length 115 113 Spindle: BB-CS20 Mark D-H Width 70 (36) 68 (BC) Length 115
Freehub FH-HG50	7-speed SS Compatible UGH-IG Compatible Type Sprocket Holes: 36H, 32H Hole PCD: 45 O.D. 126 Axle Length 137 Mounting Type Quick Release/Nut Axle Thread: 10mm 435g (7-speed w/Quick Release)	Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish	
Front Hub HB-RM50-F	Sprocket Holes: 36H, 32H Hole PCD: 38 O.D. 100 Axle Length 108 Mounting Type Quick Release Axle Thread: 9mm 228g	Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish	
Cassette Sprockets CS-HG50 (7-speed)	7-speed SS Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket I Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T
Chain CN-HG50	7-speed SS Compatible 7-speed HG Compatible Narrow Type Chain (1/2" x 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushless Design	Roller Link Plate: Steel+Black Finish Pin Link Plate: Steel+Black Finish	
Pedal PD-A550	Crank Thread: English BC 9/16" x 20TPI Toe Clip Size: M, L, LL Toe Clip Locking System: 3-screw 407g (Pair, including Toe Clip Size L)	32° Road Clearance Easy-Maintenance Cartridge Axle Sealed Mechanism Aero Dynamic Design Reflector (Option)	Body: Aluminum+Barrel Finish Toe Clip: Resin	
Head Parts HP-R500	Lower Cone 11.5mm. 12T Variation: Press Race Diameter Upper Cone & Lower Cap Lower Cone English/Italian BC1 x 24T 30.2mm 26.4mm French M25 x P1.0 30.2mm 26.4mm		Upper Cup: Resin Lower Cup: Resin Color: White, Silver, Black	

Exage 400EX

Model No.	Specifications	Features	Material•Finish	Note
Rear Derailleur RD-A400	6 & 7-speed S5 Compatible Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T Front Difference: 13T Total Capacity: 28T 278g	Double Servo-Panta Mechanism Centeron Guide Pulley Double Spoke Barrier 8-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing	Bracket Body: Aluminum•Barrel Finish Right Link: Steel•Paint Finish Left Link: Steel•Zinc Plated Plate Body: Aluminum•Barrel Finish	S5 Compatible Detachable Bracket
Front Derailleur FD-A400-B (Band Type) FD-A400-F (Italian Type)	Narrow Type Chain Compatible Total Capacity: 14T Band Diameter: $\phi 28.0\text{mm}$ — $\phi 28.6\text{mm}$ Stroke (w/ $\phi 28.6\text{mm}$ Band): 37—51 113g (Band Type)	Loading Action Paratragraph Mechanism Rigid Chainguide Compact Design	Front Band: Steel•Pearl Bright Finish Rear Band: Aluminum•Barrel Finish Right Link: Aluminum•Paint Finish Chainguide: Chrome Plated	Braze-on Type Available
Shifting Lever SL-A400-FCAI (Braze-on A Type) SL-A400-BCAI (Side Band A Type)	7-speed S5 Down Tube Lever Lever Clamp Diameter: 28.6mm 71g (SL-A400-FCAI)	S5-Friction Mode Switch Light Action Lever Sealed Mechanism	Aluminum•Barrel Finish	(IC) means Italian Type Fixing Bolt is 5mm Diameter
Caliper Brake BR-A350-49 (Short 49 Type) BR-A350-57 (Long 57 Type)	SLR (Shimano Linear Response) Compatible Sunken Bolt Type: Front: 27.5mm Rear: 12.8mm Nut Type: Front: 47.0mm Rear: 30.0mm 310g (F & R, 49 Type)	Spring Sleeve Coated Pivot Washer One Piece & Low Profile Brake Shoe	C-Arm: Aluminum•Paint Finish Y-Arm: Aluminum•Paint Finish	For SLR System use with SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner
Brake Lever BL-A351 (Aero Type)	SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 23.8mm — 24.2mm Lever Stroke: 88 302g (BL-A351, Pair)	With Quick Release Aerodynamic Design	Lever: Aluminum•Anodized Finish Bracket: Steel•Zinc Plated Cover: Soft Resin•Molding Black, White	For SLR System use with SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner
Front Chainwheel FC-A400-BP (Biopace Double, LD Type) Bottom Bracket Assembly BB-A200 Sealed Cartridge Bottom Bracket BB-CS10	Narrow Type Chain Compatible Crank Length: 165mm, 170mm Teeth: Top 52T, Low 42T Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 1.37 x 24TPI French M35 x 1.0 (BB-A200 Only) Italian M36 x 24TPI 720g (42T, 52T, 170mm) 333g (BB, Set BB-A200)	Sealed Mechanism (BB.)	Crank Arm: Aluminum•Barrel Finish Chain Ring: Steel•Paint Finish	Spline: BB-A200 Mark D-3H D-5H Width 70 68 Length 115 113 Spline: BB-CS10 Mark D-H Width 70 (36) 68 (BC) Length 115
Freehub FH-HG50	7-speed S5 Compatible UG/HG Compatible Type Spoke Holes: 36H, 32H Hole PCD: 45 O.L.D. 126 Axle Length 137 Mounting Type Quick Release/Nut Axle Thread: 10mm 435g (7-speed w/Quick Release)	Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum•Dia-Cut Finish	
Front Hub HB-RM50-F	Spoke Holes: 36H, 32H Hole PCD: 38 O.L.D. 100 Axle Length 108 Mounting Type Quick Release Axle Thread: 9mm 228g	Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum•Dia-Cut Finish	
Cassette Sprockets CS-HG50 (7-speed)	7-speed S5 Compatible Use Narrow Type Chain 268g (Sprocket I Group)		Steel•Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T
Chain CN-HG50	7-speed S5 Compatible 7-speed HG Compatible Narrow Type Chain (1/2" x 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushingsless Design	Roller Link Plate: Steel•Black Finish Pin Link Plate: Steel•Black Finish	
Pedal PD-A550	Crank Thread: English BC 9/16" x 20TPI Toe Clip Size: M, L, LL Toe Clip Locking System: 3-screw 407g (Pair, Including Toe Clip Size L)	32° Road Clearance Easy Maintenance Cartridge Axle Sealed Mechanism Aerodynamic Design Reflector (Option)	Body: Aluminum•Barrel Finish Toe Clip: Resin	
Head Parts HP-R500	Height: Upper Cone 22.0mm, Lower Cone 11.5mm 121g Variation: English/Italian BC1 x 24T 30.2mm 26.4mm French M25 x P1.0 30.2mm 26.4mm	Sealed Mechanism	Lock Nut: Steel•Pearl Bright Finish Upper Cup: Resin Lower Cup: Resin Color: White, Silver, Black	

Exage 300EX

Model No.	Specifications	Features	Material-Finish	Note															
Rear Derailleur RD-A300	6 & 7-speed S5 Compatible Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T Front Difference: 13T Total Capacity: 28T 282g	Cable Saver Arm Double Servo-Panta Mechanism Centeron Guide Pulley Double Spoke Barner B-Tension Adjuster Sealed Mechanism Sintered Alloy Guide Pulley Bushing	Bracket Body: Aluminum+Barrel Finish Right Link: Aluminum+Paint Finish Left Link: Steel+Zinc Plated Plate Body: Resin+Molding	S5 Compatible Detachable Bracket															
Front Derailleur FD-A300-B (Band Type) FD-A300-F (Italian Type)	Narrow Type Chain Compatible Total Capacity: 14T Band Diameter: 628.0mm — 628.6mm Stroke (w/628.6mm Band): 37—51 123g (Band Type)	Loading Action Pantograph Mechanism Rigid Chainguide Compact Design Cable Stopper	Front Band: Steel+Pearl Bright Finish Rear Band: Steel+Pearl Bright Finish Right Link: Steel+Zinc Plated Resin+Molding Chainguide: Chrome Plated																
Shifting Lever SL-A400-FCAl (Brazen on A Type) SL-A400-BCAl (Side Band A Type)	7-speed S5 Down Tube Lever Lever Clamp Diameter: 28.6mm. 76g (SL-A400-FCAl)	S5-Friction Mode Switch Light Action Lever Sealed Mechanism	Aluminum+Barrel Finish	(C) means Italian Type Fixing Bolt is 5mm. Diameter															
Caliper Brake BR-A250-49 (Short 49 Type) BR-A250-57 (Long 57 Type)	SLR (Shimano Linear Response) Compatible Sunkin Bolt Type: Front: 27.5mm. Rear: 12.8mm Nut Type: Front: 47.0mm. Rear: 30.0mm. 313g (F & R 49 Type)	Spring Sleeve Coated Pivot Washer One Piece & Low Profile Brake Shoes	C-Arm: Aluminum+Paint Finish Y-Arm: Aluminum+Paint Finish	For SLR System use with SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner															
Brake Lever BL-A251 (Aero Type)	SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 23.8mm — 24.2mm. Lever Stroke: 88 310g (BL-A251, Pair)	With Quick Release Aerodynamic Design Extension Lever (Option)	Lever: Aluminum+Barrel Finish Bracket: Steel+Zinc Plated Cover: Soft Resin+Molding Black, White	For SLR System use with SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner															
Front Chainwheel FC-A300-BP (Biopace Double, LD Type) Bottom Bracket Assembly BB-A200 Sealed Cartridge Bottom Bracket BB-CS10	Narrow Type Chain Compatible Crank Length: 165mm, 170mm Teeth: Top 52T, Low 42T Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 1.37 x 24TPI French M35 x 1.0 (BB-A200 Only) Italian M36 x 24TPI 720g (42T, 52T, 170mm.) 333g (BB Set BB-A200)	Sealed Mechanism (BB)	Crank Arm: Aluminum+Barrel Finish Chain Ring: Steel+Paint Finish	Spindle: BB-A200 <table><tr><td>Mark</td><td>D-3H</td><td>D-5H</td></tr><tr><td>Width</td><td>70</td><td>68</td></tr><tr><td>Length</td><td>115</td><td>113</td></tr></table> Spindle: BB-CS10 <table><tr><td>Mark</td><td>D-H</td></tr><tr><td>Width</td><td>70 (36) 68 (BC)</td></tr><tr><td>Length</td><td>115</td></tr></table>	Mark	D-3H	D-5H	Width	70	68	Length	115	113	Mark	D-H	Width	70 (36) 68 (BC)	Length	115
Mark	D-3H	D-5H																	
Width	70	68																	
Length	115	113																	
Mark	D-H																		
Width	70 (36) 68 (BC)																		
Length	115																		
Freehub FH-HG50	7-speed S5 Compatible UGHG Compatible Type Spoke Holes: 36H, 32H. Hole PCD: 45 <table><tr><td>O.L.D.</td><td>126</td></tr><tr><td>Axle Length</td><td>137</td></tr><tr><td>Mounting Type</td><td>Quick Release/Nut</td></tr></table> Axle Thread: 10mm 435g (7-speed w/Quick Release)	O.L.D.	126	Axle Length	137	Mounting Type	Quick Release/Nut	Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish										
O.L.D.	126																		
Axle Length	137																		
Mounting Type	Quick Release/Nut																		
Front Hub HB-RM50-F	Spoke Holes: 36H, 32H. Hole PCD: 38 <table><tr><td>O.L.D.</td><td>100</td><td>96</td></tr><tr><td>Axle Length</td><td>108</td><td>104</td></tr><tr><td>Mounting Type</td><td>Quick Release</td><td></td></tr></table> Axle Thread: 9mm 228g	O.L.D.	100	96	Axle Length	108	104	Mounting Type	Quick Release		Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish							
O.L.D.	100	96																	
Axle Length	108	104																	
Mounting Type	Quick Release																		
Cassette Sprockets CS-HG50 (7-speed)	7-speed S5 Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket 1 Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T															
Chain CN-HG50	7-speed S5 Compatible 7-speed HG Narrow Type Chain (1/2" x 3/32") 335g (11/14 Link)	Chromizing Treatment Link Pin Connecting Pin Bushingsless Design	Roller Link Plate: Steel+Black Finish Pin Link Plate: Steel+Black Finish																
Pedal PD-A550	Crank Thread: English BC 9/16" x 20TPI Toe Clip Size: M, L, LL Toe Clip Locking System: 3-screw 407g (Pair, Including Toe Clip Size L)	32° Road Clearance Easy Maintenance Cartridge Axle Sealed Mechanism Aero Dynamic Design Reflector (Option)	Body: Aluminum+Barrel Finish Toe Clip: Resin																
Head Parts HP-R500	Height: Upper Cone 22.0mm, Lower Cone 11.5mm. 121g Variation: <table><tr><td></td><td colspan="2">Press Race Diameter</td></tr><tr><td></td><td>Upper Cone & Lower Cap</td><td>Lower Cone</td></tr><tr><td>English/Italian</td><td>BC1 x 24T</td><td>30.2mm 26.4mm</td></tr><tr><td>French</td><td>M25 x P1.0</td><td>30.2mm 26.4mm</td></tr></table>		Press Race Diameter			Upper Cone & Lower Cap	Lower Cone	English/Italian	BC1 x 24T	30.2mm 26.4mm	French	M25 x P1.0	30.2mm 26.4mm	Sealed Mechanism	Lock Nut: Steel+Pearl Bright Finish Upper Cup: Resin Lower Cup: Resin Color: White, Silver, Black				
	Press Race Diameter																		
	Upper Cone & Lower Cap	Lower Cone																	
English/Italian	BC1 x 24T	30.2mm 26.4mm																	
French	M25 x P1.0	30.2mm 26.4mm																	

EXAGE 500CX

500CX—Flexibility and quality for hybrid and city bicycles.

Front Hub
HB-RM50-F

Freehub
FH-HG50

Cassette Sprockets
CS-HG50

Chain
CN-HG50

Pedal Sets
PD-M450

Sealed Cartridge Bottom Bracket
BB-UN50

Front Chainwheel
FC-M500-c

Front Chainwheel
with Chain Guard
FC-M500-c

Cantilever Brake
BR-C510

Head Parts
HP-R500

Rapidfire Lever Set
ST-M050-c

Rear Derailleur
RD-M500-c

Front Derailleur
FD-M500-c



Exage 500CX

Model No.	Specifications	Features	Material-Finish	Note																										
Rear Derailleur RD-M500-C-SGS (Super Long Cage)	6 & 7-speed SIS Compatible Max. Rear Sprocket: 32T Min. Rear Sprocket: 12T Front Difference: 20T Total Capacity: 38T 319g	Cable Saver Arm Double Servo-Panta Mechanism Centeron Guide Pulley Double Spoke Barrier B-Tension Adjuster Sealed Mechanism Sintered Alloy Guide Pulley Bushing Chain Retainer	Bracket Body: Aluminum+Paint Finish Right Link: Steel+Paint Finish Left Link: Resin+Pearl Bright Finish Plate Body: Aluminum+Paint Finish	Brazed-on Type Available SIS Compatible Detachable Bracket Available																										
Front Derailleur FD-M500-C (Band Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 24T (Biospace HP) 26T (Round) Band Diameter: ø28.0—ø28.6mm, ø31.8mm, ø34.9mm, 121g	Trailing Action Pantograph Mechanism Rigid Change Guide New Trapeze Mechanism	Front Band: Aluminum+Paint Finish Rear Band: Aluminum+Paint Finish Right Link: Aluminum+Paint Finish Change Guide: Chrome Plated	Chainstays Angle (63°—66°)																										
Rapidfire ST-M050-C (3-finger)	7-speed SIS Compatible SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm 582g (Pair)	Dual Repeat Function Light Action Lever Anatomical Design Brake Lever Stroke Adjust Brake Lever Cable Adjust	Bracket: Aluminum+Paint Finish Lever: Steel+Paint Finish Resin+Molding	Use with Shimano SIS-SP Cable with Liner																										
Cantilever Brake BR-C510 BR-C510-B	SLR (Shimano Linear Response) Compatible 202g (BR-C510, Pair)	Rigid Computer Designed Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster	BR-C510: Aluminum+CX Cosmetic Paint Finish BR-C510-B: Aluminum+Barrel Finish	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																										
Front Chainwheel FC-M500-C-SG (Shimano SG Gear, Triple MD Type) Sealed Cartridge Bottom Bracket BB-UN50 BB-CS20	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm, 175mm Teeth: <table><tr><td></td><td>Round SG</td></tr><tr><td>Top</td><td>50T</td></tr><tr><td>Middle</td><td>40T</td></tr><tr><td>Low</td><td>30T</td></tr></table> Crank Thread: English BC 9/16" × 20TPI Cup Thread: English BC 1.37" × 24TPI Italian M36 × 24TPI 784g (170mm), 323g (BB-UN50, 122.5mm)		Round SG	Top	50T	Middle	40T	Low	30T	Computer Aided Design (Crank) Sealed Mechanism (B.B.)	Crank Arm: Aluminum+Barrel Finish Chain Ring: Aluminum+Anodized Finish	Sprocket: BB-UN50/BB-CS20 <table><tr><td>Mark</td><td colspan="2">D-EL</td></tr><tr><td>Width</td><td>73 (BC)</td><td>68 (BC)</td></tr><tr><td>Length</td><td colspan="2">127.5</td></tr></table> <table><tr><td>Mark</td><td colspan="2">D-NL</td></tr><tr><td>Width</td><td>73 (BC)</td><td>70 (36) 68 (BC)</td></tr><tr><td>Length</td><td colspan="2">122.5</td></tr></table>	Mark	D-EL		Width	73 (BC)	68 (BC)	Length	127.5		Mark	D-NL		Width	73 (BC)	70 (36) 68 (BC)	Length	122.5	
	Round SG																													
Top	50T																													
Middle	40T																													
Low	30T																													
Mark	D-EL																													
Width	73 (BC)	68 (BC)																												
Length	127.5																													
Mark	D-NL																													
Width	73 (BC)	70 (36) 68 (BC)																												
Length	122.5																													
Freehub FH-HG50	7-speed SIS Compatible UGIHG Compatible Type Spoke Holes: 36H, 32H Hole PCD: 45 <table><tr><td>OIL D.</td><td>135</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release/Nut</td></tr></table> Axle Thread: 10mm 435g (7-speed w/Quick Release)	OIL D.	135	130	Axle Length	146	141	Mounting Type	Quick Release/Nut		Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																		
OIL D.	135	130																												
Axle Length	146	141																												
Mounting Type	Quick Release/Nut																													
Front Hub HB-RM50-F	Spoke Holes: 36H, 32H Hole PCD: 38 <table><tr><td>OIL D.</td><td>100</td><td>96</td></tr><tr><td>Axle Length</td><td>108</td><td>104</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release</td></tr></table> Axle Thread: 9mm 228g	OIL D.	100	96	Axle Length	108	104	Mounting Type	Quick Release		Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum+Dia-Cut Finish																		
OIL D.	100	96																												
Axle Length	108	104																												
Mounting Type	Quick Release																													
Cassette Sprockets CS-HG50 (7-speed)	7-speed SIS Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket 1 Group)		Steel+Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations: E 12, 14, 16, 18, 21, 24, 28T F 14, 16, 18, 21, 24, 28, 32T G 13, 15, 17, 20, 23, 26, 30T H 13, 15, 17, 19, 21, 23, 26T I 13, 14, 15, 17, 19, 21, 23T J 13, 14, 15, 16, 17, 19, 21T K 13, 15, 17, 20, 24, 29, 34T L 12, 13, 14, 15, 17, 19, 21T M 13, 15, 17, 19, 21, 24, 28T																										
Chain CN-HG50	7-speed SIS Compatible 7-speed HG Compatible Narrow Type Chain (1/2" × 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushingsless Design	Roller Link Plate: Steel+Black Finish Pin Link Plate: Steel+Black Finish																											
Pedal PD-M450	ATB Type Crank Thread: English BC 9/16" × 20TPI Toe Clip Locking System: 2-screw 518g (Pair)	30° Road Clearance Sealed Mechanism Low Profile Design Reflector (Option)	Body: Resin Plate: Steel+Paint Finish																											
Head Parts HP-R500	Height: Upper Cone 22.0mm Lower Cone 11.5mm 121g Variation: <table><tr><td></td><td colspan="2">Press Race Diameter</td></tr><tr><td></td><td>Upper Cone & Lower Cap</td><td>Lower Cone</td></tr><tr><td>English/Italian</td><td>BC1 × 24T</td><td>30.2mm 26.4mm</td></tr><tr><td>French</td><td>M25 × P1.0</td><td>30.2mm 26.4mm</td></tr></table>		Press Race Diameter			Upper Cone & Lower Cap	Lower Cone	English/Italian	BC1 × 24T	30.2mm 26.4mm	French	M25 × P1.0	30.2mm 26.4mm	Sealed Mechanism	Lock Nut: Steel+Pearl Bright Finish Upper Cup: Resin Lower Cup: Resin Color: White, Silver, Black															
	Press Race Diameter																													
	Upper Cone & Lower Cap	Lower Cone																												
English/Italian	BC1 × 24T	30.2mm 26.4mm																												
French	M25 × P1.0	30.2mm 26.4mm																												

SHIMANO 200CX

200CX—A great cost-performance value component group for the casual bicycle.



Shimano 200CX

Model No.	Specifications	Features	Material•Finish	Note															
Rear Deraillieur RD-M200-C-SGS (Super Long Cage)	6 & 7-speed S/S Compatible Max. Rear Sprocket: 32T Min. Rear Sprocket: 12T Front Difference: 20T Total Capacity: 38T 310g	Double Servo-Panta Mechanism Centerion Guide Pulley Double Spike Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing Chain Retainer	Bracket Body: Aluminum•Barrel Finish Right Link: Steel•Paint Finish Left Link: Steel•Zinc Plated Plate Body: Resin•Molding	Braze-on Type Available Rivet Type Bracket Available S/S Compatible Detachable Bracket															
Front Deraillieur FD-M202-C (Band Type)	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 24T (Biopace HP) 26T (Round) Band Diameter: ø28.0mm—ø28.6mm Stroke (CL=47.5): 35—55 144g	Rigid Changguide Trapezoid Mechanism Sealed Mechanism	Front Band: Steel•Pearl Bright Finish Rear Band: Aluminum•Barrel Finish Right Link: Steel•Paint Finish Changguide: Chrome Plated	Chainstays Angle (63°—66°)															
Rapidfire ST-M202-c	7-speed S/S Compatible Lever Clamp Diameter: 22.2mm	Dual Repeat Function Digital Cable Adjust	Bracket: Steel•Paint Finish Lever: Steel•Zinc Plated Resin•Molding	Use with Shimano S/S-SP Cable with Liner Without Brake Lever															
Cantilever Brake BR-C200 BR-C200-B	SLR (Shimano Linear Response) Compatible	Rigid Computer Designed Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster	BR-C200: Steel & Resin•CX Cosmetic Paint Finish BR-C200-B: Steel & Resin•Black Finish	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner															
Brake Lever BL-M201-C (3-finger Type)	SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm	Digital Cable Adjust Stroke Adjust	Bracket: Steel•Resin Covered & Resin Lever: Steel•Resin Covered & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner															
Front Chainwheel FC-M202-C (Shimano SG Gear, Triple Rivet Type) Sealed Cartridge Bottom Bracket BB-CS10	Shimano SG Gear Narrow Type Chain Compatible Crank Length: 170mm Teeth: <table><tr><td></td><td>Biopace</td></tr><tr><td>Top</td><td>48T</td></tr><tr><td>Middle</td><td>38T</td></tr><tr><td>Low</td><td>28T</td></tr></table> Crank Thread: English BC 9/16"×20TPI Cup Thread: English BC 1.37"×24TPI Italian M36×24TPI		Biopace	Top	48T	Middle	38T	Low	28T	Computer Aided Design (Crank) Sealed Mechanism (B.B.)	Crank Arm: Aluminum•Paint Finish Chain Ring: Steel•Paint Finish	Spindle: Mark: D-EL Width: 73 (BC) 68 (BC) Length: 127.5 Mark: D-NL Width: 73 (BC) 70 (36) 68 (BC) Length: 127.5							
	Biopace																		
Top	48T																		
Middle	38T																		
Low	28T																		
Freehub FH-HG50	7-speed S/S Compatible UG/HG Compatible Type Spoke Holes: 36H, 32H Hole PCD: 45 <table><tr><td>OLD</td><td>135</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release/Nut</td></tr></table> Axle Thread: 10mm 435g (7-speed w/Quick Release)	OLD	135	130	Axle Length	146	141	Mounting Type	Quick Release/Nut		Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum•Dia-Cut Finish							
OLD	135	130																	
Axle Length	146	141																	
Mounting Type	Quick Release/Nut																		
Freehub FH-HG20	7-speed S/S Compatible HG Compatible Type Spoke Holes: 36H Hole PCD: 45 <table><tr><td>OLD</td><td>135</td><td>130</td><td>126</td><td>130</td></tr><tr><td>Axle Length</td><td>146</td><td>141</td><td>137</td><td>180</td></tr><tr><td>Mounting Type</td><td colspan="4">Quick Release Nut</td></tr></table> Axle Thread: M10 425g (7-speed w/Quick Release)	OLD	135	130	126	130	Axle Length	146	141	137	180	Mounting Type	Quick Release Nut				Uni-Balance System Resin Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum•Dia-Cut Finish	
OLD	135	130	126	130															
Axle Length	146	141	137	180															
Mounting Type	Quick Release Nut																		
Front Hub HB-RM50-F	Spoke Holes: 36H, 32H Hole PCD: 38 <table><tr><td>OLD</td><td>100</td><td>96</td></tr><tr><td>Axle Length</td><td>108</td><td>104</td></tr><tr><td>Mounting Type</td><td colspan="2">Quick Release</td></tr></table> Axle Thread: 9mm 228g	OLD	100	96	Axle Length	108	104	Mounting Type	Quick Release		Sealed Mechanism (Choice) One-Piece Forged Hub Body	Aluminum•Dia-Cut Finish							
OLD	100	96																	
Axle Length	108	104																	
Mounting Type	Quick Release																		
Cassette Sprockets CS-HG50 (7-speed)	7-speed S/S Compatible 7-speed HG Use Narrow Type Chain 268g (Sprocket 1 Group)		Steel•Brown Finish & Silver Finish (Low Gear)	Cassette Sprocket Combinations: E 12 14 16 18 21 24 28T F 14 16 18 21 24 28 32T G 13 15 17 20 23 26 30T H 13 15 17 19 21 23 26T I 13 14 15 17 19 21 23T J 13 14 15 16 17 19 21T K 13 15 17 20 24 29 34T L 12 13 14 15 17 19 21T M 13 15 17 19 21 24 28T															
Chain CN-HG50	7-speed S/S Compatible 7-speed HG Compatible Narrow Type Chain (11/2"×3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushings Design	Roller Link Plate: Steel•Black Finish Pin Link Plate: Steel•Black Finish																
Pedal PD-M350	ATB Type Crank Thread: English BC 9/16"×20TPI Toe Clip Locking System: 2-screw 445g (Pair)	26° Road Clearance Sealed Mechanism Low Profile Design Reflector	Body: Resin•Paint Finish Plate: Steel•Paint Finish																
Head Parts HP-R500																			

See Page 68

See Page 68

YOUTH PACKAGE COMPONENTS

Advanced Shimano functions make cycling more enjoyable and safer for young cyclists.



Pedal Set
PD-M350



Sealed Cartridge Bottom Bracket
BB-CS20



Head Parts
HP-R500



Multiple Freewheel
MF-HG20



Chain
CN-UG50



Rear Derailleur
RD-TY70-ss



Brake Lever Set
BL-TY70-s



Cantilever Brake
BR-TY70



Rapidfire Shift Lever Set
ST-M007-w



Front Derailleur
FD-TY20-s

YOUTH PACKAGE

Model No.	Specifications	Features	Material-Finish	Note																		
Rear Derailleur RD-TY70-SS (Short Cage)	6-speed SS Compatible Max. Rear Sprocket: 24 – 28T Min. Rear Sprocket: 14T Front Difference: 13T Total Capacity: 28T	Double Servo-Panta Mechanism Centeron Guide Pulley Double Spoke Barrier B-Tension Adjust Bolt Sealed Mechanism Sintered Alloy Guide Pulley Bushing	Bracket Body: Steel-Zinc Plated Right Link: Steel-Paint Finish Left Link: Steel-Zinc Plated Plate Body: Zinc Plated	Rivet Type Bracket Available SS Compatible Detachable Bracket																		
Front Derailleur FD-TY20-S For children's bicycle only.	Shimano SG Gear Compatible Narrow Type Chain Compatible Total Capacity: 14T (Round) Band Diameter: ø 28.0mm – ø 28.6mm. Stroke (CL = 43.5): 34 – 54	Rigid Chainguide Cable Stopper	Front Band: Steel-Zinc Plated Rear Band: Steel-Zinc Plated Right Link: Steel-Paint Finish Resin-Molding Chainguide: Chrome Plated	Double Chainwheel Use																		
Rapidfire ST-M007-W	Double Chainwheel Use Lever Clamp Diameter: 22.2mm.	Dual Repeat Function Digital Cable Adjust (Front Only)	Bracket: Steel-Paint Finish Lever: Steel-Zinc Plated Resin-Molding	Use with Shimano SIS Cable with Liner Without Brake Lever Left Lever Only																		
Cantilever Brake BR-TY70 (Low Profile Type)	SLR (Shimano Linear Response) Compatible	Rigid Shape Sealed Internal Spring Design Easy Cable Attachment Spring Tension Adjuster	Steel & Resin	For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano SLR Outer Cable with Liner																		
Brake Lever BL-TY70-S (3-finger Type) For children's bicycle only.	SLR (Shimano Linear Response) Compatible Lever Clamp Diameter: 22.2mm. 237g.	Digital Cable Adjust Stroke Adjust Anatomical Design	Bracket: Steel-Resin Covered & Resin Lever: Steel-Resin Covered & Resin	Use with Shimano SLR Cable with Liner																		
Front Chainwheel FC-M100-W (Shimano SG Gear, Double Rivet Type) Sealed Cartridge Bottom Bracket BB-CS20 BB-CS10	Shimano SG Gear Compatible Narrow Type Chain Compatible Crank Length: 150mm. Teeth: <table><tr><td colspan="2">Biopace SG</td></tr><tr><td>Top</td><td>44T</td></tr><tr><td>Low</td><td>32T</td></tr></table> Crank Thread: English BC 9/16" x 20 TPI. Cup Thread: English BC 1.37 x 24 TPI. Italian M36 x 24 TPI.	Biopace SG		Top	44T	Low	32T	Computer Aided Design (Crank) Sealed Mechanism (B.B.)	Crank Arm: Steel-Resin Molding Chain Ring: Steel-Paint Finish	Spindle: <table><tr><td>Mark</td><td>D-H</td></tr><tr><td>Width</td><td>70 (36) 68 (BC)</td></tr><tr><td>Length</td><td>115</td></tr></table>	Mark	D-H	Width	70 (36) 68 (BC)	Length	115						
Biopace SG																						
Top	44T																					
Low	32T																					
Mark	D-H																					
Width	70 (36) 68 (BC)																					
Length	115																					
Multiple Freewheel MF-HG20 (6-speed)	6-speed SIS Compatible 6-speed HG 460g (Sprocket Y Group)		Steel-Brown Finish & Silver Finish (Low Gear)	Sprocket Combinations: <table><tr><td>X</td><td>14, 16, 18, 20, 22, 24T</td></tr><tr><td>Y</td><td>14, 16, 18, 21, 24, 28T</td></tr><tr><td>Z</td><td>14, 17, 20, 24, 28, 32T</td></tr></table>	X	14, 16, 18, 20, 22, 24T	Y	14, 16, 18, 21, 24, 28T	Z	14, 17, 20, 24, 28, 32T												
X	14, 16, 18, 20, 22, 24T																					
Y	14, 16, 18, 21, 24, 28T																					
Z	14, 17, 20, 24, 28, 32T																					
Chain CN-UG50	Narrow Type Chain (1/2" x 3/32") 335g (114 Link)	Chromizing Treatment Link Pin Connecting Pin Bushings Design	Roller Link Plate: Steel-Black Finish Pin Link Plate: Steel-Black Finish																			
Pedal PD-M350	MTB Type Crank Thread: English BC 9/16" x 20 TPI. Toe Clip Locking System: 2-screw 445g (Pair)	26" Road Clearance Sealed Mechanism Low Profile Design Reflector	Body: Resin-Paint Finish Plate: Steel-Paint Finish																			
Head Parts HP-R500 HP-R501 (1-1/8")	Height: Upper Cone 22.0mm. Lower Cone 11.5mm. 121g. Variation:	Sealed Mechanism	Lock Nut: Steel-Pearl Bright Finish Upper Cup: Resin Lower Cup: Resin Color: HP-R500: White, Silver, Black HP-R501: Black																			
				<table><tr><td></td><td colspan="2">Press Race Diameter</td></tr><tr><td></td><td>Upper Cone & Lower Cap</td><td>Lower Cone</td></tr><tr><td>English/Italian</td><td>BC1 x 24T</td><td>30.2mm.</td><td>26.4mm.</td></tr><tr><td></td><td>BC1-1/8" x 26T</td><td>34.0mm.</td><td>30.0mm.</td></tr><tr><td>French</td><td>M25 x P1.0</td><td>30.2mm.</td><td>26.4mm.</td></tr></table>		Press Race Diameter			Upper Cone & Lower Cap	Lower Cone	English/Italian	BC1 x 24T	30.2mm.	26.4mm.		BC1-1/8" x 26T	34.0mm.	30.0mm.	French	M25 x P1.0	30.2mm.	26.4mm.
	Press Race Diameter																					
	Upper Cone & Lower Cap	Lower Cone																				
English/Italian	BC1 x 24T	30.2mm.	26.4mm.																			
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French	M25 x P1.0	30.2mm.	26.4mm.																			

Getting Closer to the Cyclist

Shimano is bringing the bicycle closer to the cyclist. We are continually refining the bicycle in ways that significantly improve our ability to move faster, farther, and with greater ease under our own power. Shimano continues to pursue advanced concepts in human engineering in order to better interface the cyclist and the bicycle.

At the heart of the Shimano design philosophy lies Shimano Total Integration and Shimano Pedaling Dynamics. These two concepts have integrated the bicycle's control functions and created a more natural and versatile interface between the man and the machine. A wide range of advanced Shimano innovations have been incorporated under these themes, features like the Shimano Index System (SIS) which allows anybody to shift gears skillfully, Shimano Linear Response brakes (SLR) that upgrade braking power and control, Biopace chainwheels which provide a more natural and comfortable pedaling cadence, and HG sprockets which enhance SIS shifting, especially for off-road bicycles. And these are just a few.

Shimano bicycle components increase the safety, efficiency, and performance of the bicycle—benefits appreciated by all cyclists, from casual weekend riders to professional racers.

This is how Shimano is bringing the bicycle closer to the cyclists. It's the result of a design philosophy based on creating the most ergonomically efficient relationship between the man and the machine.

Now you can steer, brake, and shift gears without ever taking your hands off of the handlebars.

Traditionally, racing bicycles and many lightweight sport bikes used downtube shift levers that force you to let go of the handlebar in order to shift. This makes it difficult to shift while braking, cornering, or climbing without losing speed and balance. But there are times when being able to shift gears during these maneuvers can result in a real advantage – whether riding in competition or not.

The conventional off-road bicycle has its shift levers mounted on top of the handlebars a position which forces the rider to change or loosen the grip on the bar in order to shift. This results in a certain amount of instability, loss of speed, and diverted attention when shifting.

Shimano took on the challenge of developing a more “rider friendly” bicycle control system that would allow the cyclist to freely apply the brakes and shift gears during any cycling maneuver.

That system is Shimano Total Integration. Shimano Total Integration combines the advanced functions of SIS, HG sprockets, Shimano SG chainrings, and SLR brakes. The result is a dramatic improvement in bicycle control from being able to shift and brake from one hand position. This means you can shift while cornering, climbing, and even while sprinting out of the saddle – without losing speed, balance, or concentration.



SHIMANO
TOTAL
INTEGRATION



SIS

GEAR SHIFTING

SLR

BRAKING SYSTEM

RAPIDFIRE

Rapidfire and Rapidfire Plus set the new standard in off-road shifting performance.

●Just what is Rapidfire and Rapidfire Plus?

Rapidfire and Rapidfire Plus are Shimano's off-road shifting systems that place the shift levers under the handlebar. This allows cyclists to shift gears without changing hand position or releasing their grip on the handlebars. The Dual-Repeat ratchet action means that the levers always return to the same position. So up-shifting and down-shifting are executed with the movement always with the lever in the same position. Rapidfire Plus uses the index finger tool

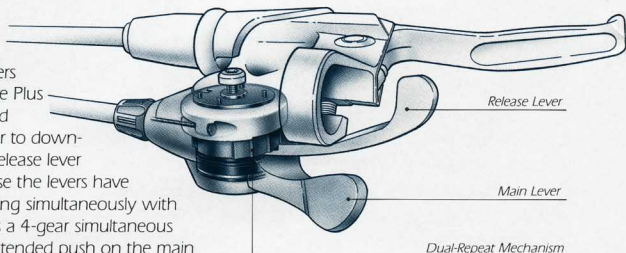
●How it Works?

Rapidfire and Rapidfire Plus use a main lever and release lever. The Rapidfire levers are shifted with the thumb (the Rapidfire Plus lever is shifted with both the thumb and index finger.) Simply push the main lever to downshift (to a larger sprocket), or push the release lever to upshift (to a smaller sprocket). Because the levers have a 90° stroke, up to 6 gears can be shifting simultaneously with one extended push (XTR version allows a 4-gear simultaneous shift). For the front derailleur, a single extended push on the main lever will downshift the chain from the large chainring to the middle, another push will downshift to the small chainring. The lever is always in the same position, right under your thumb, as a result of the dual-repeat mechanism.

●Advantages

Thanks to the under-bar lever position and the Dual-Repeat mechanism, cyclists can shift Rapidfire without releasing or loosening their grip on the handlebars. This gives them the added flexibility to shift anytime—while traversing rough terrain, on downhills, uphill, or in extreme maneuvers where they can't afford to release their grip or change hand position. The result is upgraded safety, performance, and flexibility in bicycle control.

XTR	DEORE XT	DEORE DX	DEORE LX
500LX	400LX	300LX	—
200GS	100GS	70GS	—
DURA-ACE	600 ULTEGRA	105SC	RX100
500EX	400EX	300EX	—



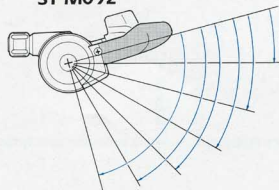
RAPIDFIRE PLUS

XTR	DEORE XT	DEORE DX	DEORE LX
500LX	400LX	300LX	—
200GS	100GS	70GS	—
DURA-ACE	600 ULTEGRA	105SC	RX100
500EX	400EX	300EX	—

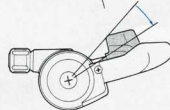
ST-M092

Downshifting

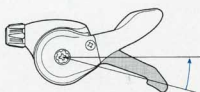
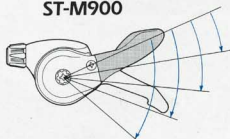
Downshifting can be done up to 6 gears at a time (4 gears with XTR lever) depending on the length of the lever stroke.



Upshifting

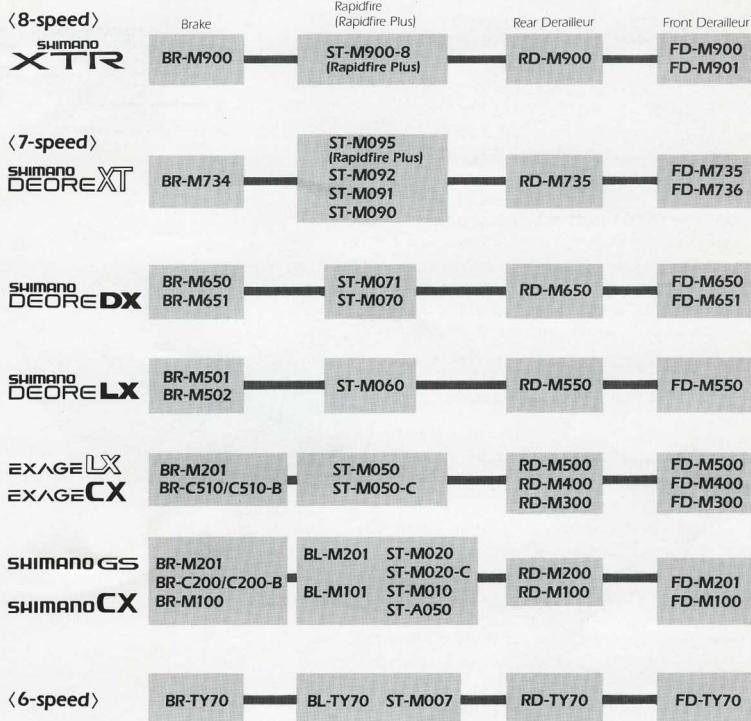


ST-M900



Some tips on Rapidfire applications...

Rapidfire Combination Chart



Brake Cables for Use with Rapidfire Levers

Rapidfire	Inner	Outer	Inner End/Outer Cap	Option
ST-M900	Ø1.6mm	Ø5.0mm		
ST-M095	Ø1.6mm	Ø5.0mm		
ST-M092	Ø2.0mm	Ø6.0mm		
ST-M091	Ø2.0mm	Ø6.0mm		
ST-M090	Ø2.0mm	Ø6.0mm		
ST-M071	Ø1.6mm	Ø5.0mm		
ST-M070	Ø1.6mm	Ø5.0mm		
ST-M060	Ø1.6mm	Ø5.0mm		
ST-M050	Ø1.6mm	Ø5.0mm		

Dual Control Lever

Shimano Total Integration redefines the racing bicycle.

● Just what is the "Dual Control Lever"?

The Shimano Dual Control Lever is used on road bikes in order to combine the braking and shifting functions. The brake lever (called the main lever) actually has two functions – it now shifts the derailleur as well as applying the brakes. You brake in the conventional way, but when you push the main lever toward the center of the bicycle, you shift the rear derailleur to a larger sprocket, or shift the front derailleur to the large chainring.

● How does the Dual Control Lever work?

Just push the Dual Control Lever sideways, toward the center of the bike, to downshift one gear. There's a smaller lever behind it called the "release lever." Push the right side release lever and it "releases" the shift cable, allowing the derailleur to "upshift" to the next higher gear. Push the left side release lever to downshift the front derailleur to the small chainring. Furthermore, the main lever upshifts with a ratchet action, so it always returns to the same position for the next shift.

● What are the benefits for the rider?

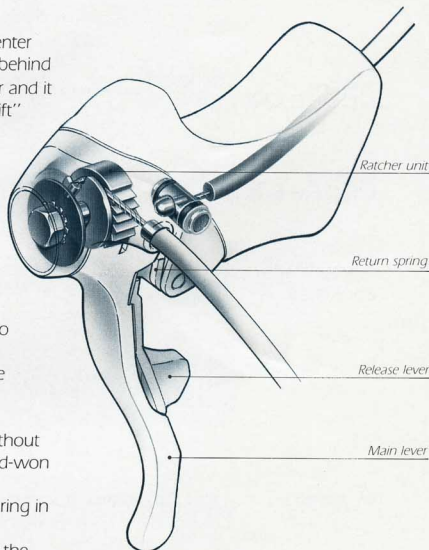
The ability to shift quickly and accurately has always been an important factor in bicycle racing. Being in the wrong gear at the wrong time has caused many a rider to lose a race or finish poorly. Shimano Total Integration has eliminated the adverse effect that shifting can have on the performance of a competitive cyclist.

With Shimano Total Integration you can...

- ...shift fast and precisely under maximum pedal loads without letting go of the handlebar and without giving up hard-won speed.
- ...shift into in the best gear to exit a turn while still coming in order to save valuable seconds acceleration.
- ...instantly get the best gear when climbing, in or out of the saddle, without releasing the bars and without letting up on pedal speed.
- ...quickly shift into the best gear without letting go of the bars when riding on bad roads.

For the first time, Shimano Total Integration gives the racing cyclist total freedom in gear selection regardless of maneuver, road or race conditions. Furthermore, it reduces rider indecision, lessens fatigue, and provides a significant competitive advantage for the racing cyclist.

XTR	DEORE XT	DEORE DX	DEORE LX
500LX	400LX	300LX	—
200GS	100GS	70GS	—
DURA-ACE	600 ULTEGRA	105SC	RX100
500EX	400EX	300EX	—



Downshift



Upshift



Brake

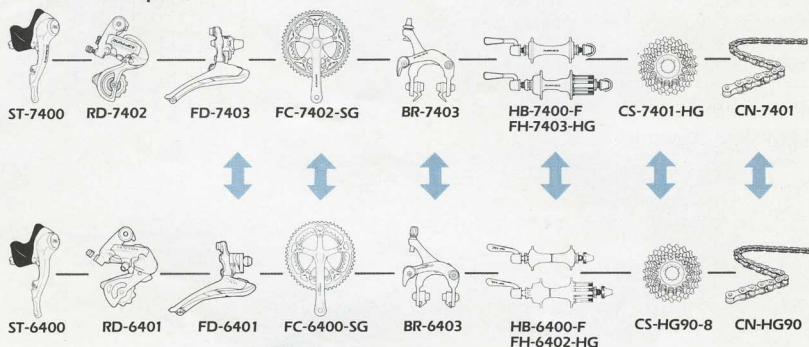


The main lever lets you downshift up to 3 gears simultaneously with a single stroke.

Some tips on dual control lever applications...

Component Combinations and Interchangeability

DURA-ACE 8-Speed



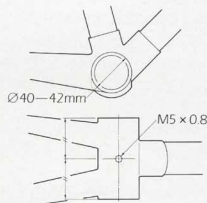
Applicable Shifting Cables

- Inner cable..... Ø1.2mm
- SIS sealed outer casing ①..... Ø5mm
SHIMANO SIS
- SIS-SP outer casing ②..... Ø5mm
SHIMANO SIS SP



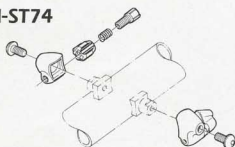
Recommended Small Parts

Cable Guides: **SM-SP55**
SM-SP25
SM-SP15
SM-SP16



Cable guides are made of a special material in order to repel mud, water, sand, grit etc. The use of a cable guide is recommended to promote smooth cable movement and precise shifting operation.

Outer Stopper: **SM-ST74**



Installing an Outer Stopper allows the derailleur cable tension to be easily adjusted at a location away from the rear derailleur cable adjusting barrel. Cable tension can also be adjusted while riding.

The indexed shifting system that continues to define the state of the art.

● Just what is the Shimano Index System?

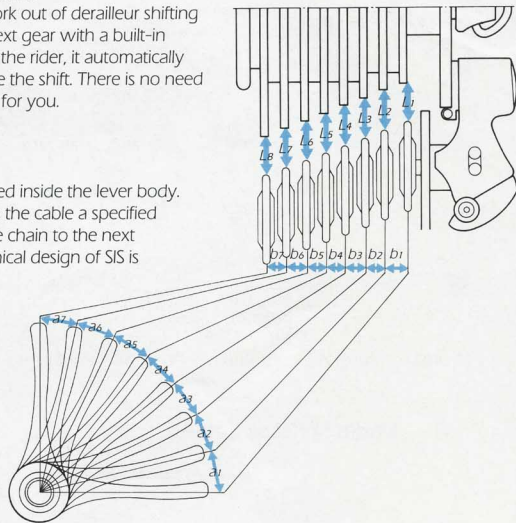
The Shimano Index System takes the guesswork out of derailleur shifting by using a shift lever that guides you to the next gear with a built-in index action. Once the shift lever is moved by the rider, it automatically falls into the next indexed position to complete the shift. There is no need to "adjust" or "trim" the derailleur. SIS does it all for you.

● How does SIS work?

SIS utilizes a ratchet action indexing unit installed inside the lever body. One index movement of the shift lever moves the cable a specified amount and operates the derailleur to shift the chain to the next sprocket. While simple in concept, the mechanical design of SIS is more complex.

For example, the cable must travel a different amount for each shift due to the changing relationship between lever angle ($a_1 \sim a_7$), guide pulley position ($b_1 \sim b_7$), and sprocket position ($L_1 \sim L_8$).

Cable travel is not constant due to the pivotal action of the dual-pivot parallelogram derailleur which converts a diminishing arc into constant linear intervals. Further complicating the matter are different sprocket sizes and the need to keep the guide pulley as close as possible to each sprocket as it traverses the cluster. The heart of SIS is the indexing unit in the shift lever which must compensate for the changing geometry of the rear derailleur at each shift point.

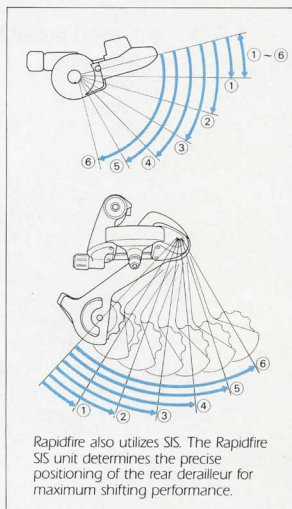


● What are the benefits to the rider?

With SIS, shifting performance no longer depends on the skill of the rider to manipulate the shift lever. SIS makes derailleur shifting just like using pushbuttons to select a pre-programmed station on the radio. Compare this to conventional shifting systems which are like tuning that same radio using a rotating tuning knob.

SIS is a significant advantage for competitive cyclists because it frees you to shift without diverting attention from the race and without slowing you down.

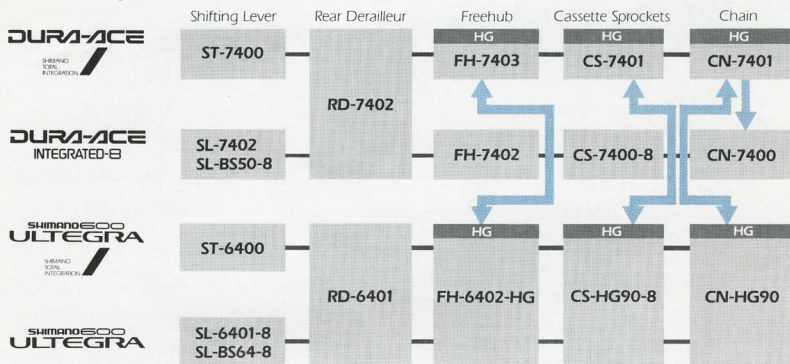
While SIS is a great performance aid for racing cyclists, it also helps all cyclists. Freed from the inconvenience of searching for gears and adjusting the derailleur, casual and sport cyclists alike find that SIS makes cycling a lot safer and more enjoyable.



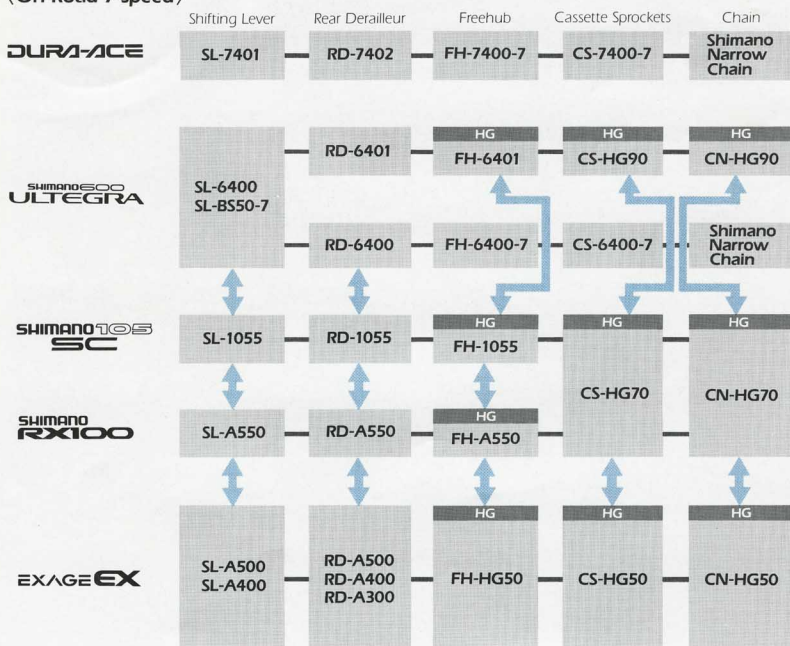
Some Tips on SIS applications...

■ Combination & Interchangeability

〈On-Road 8-speed〉



〈On-Road 7-speed〉

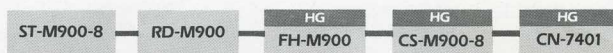


Some Tips on SIS applications...

Combination & Interchangeability

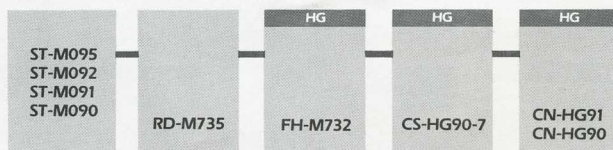
<MTB 8-speed>

SHIMANO
XTR

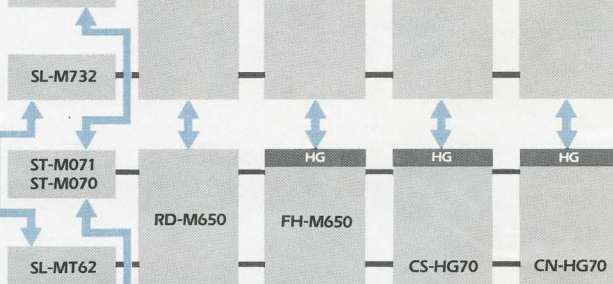


<MTB 7-speed>

SHIMANO
DEORE XT



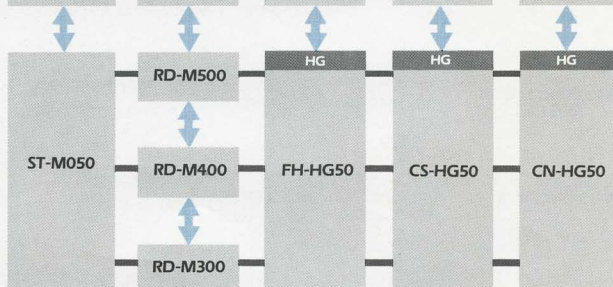
SHIMANO
DEORE DX



SHIMANO
DEORE LX



EXAGE **LX**



A significant improvement of rear hub design.

●Just what is the freehub?

The freehub integrates the rear hub and freewheel mechanism into a single unit design. Cassette sprockets slip on and off the splined freehub for fast and easy gear changes.

●How does the freehub work?

Besides integrating the hub body and freewheel into a single unit, the freehub features "unibalanced" design which helps to reduce rim offset, often called "rear wheel dish". With reduced dish, spoke tensioning can be more uniform to make a stronger wheel. In addition, freehub design allows the right side hub bearing to be positioned closer to the right dropout where the axle is supported. This greatly reduces the load on the axle and just about eliminates bent axles.

Compare the Difference In Rim Offset



Rim offset with conventional rear hub.



Reduced rim offset with Shimano freehub.

●What are the benefits to the rider?

The freehub is the heart of a stronger and better performing rear wheel which contributes to cycling performance and safety. A freehub wheel also results in extended spoke life, greater stiffness, and increased power transmission efficiency. Furthermore, Shimano offers an 8-speed freehub which does not increase the amount of dish over 7-speed types.

Some tips on Freehub applications...

■Greater Interchangeability Among the Freehubs

Series	DURA-ACE/Champagne			600 ULTEGRA/Silver	600EX/Silver	Standard/Black
Model No.	CS-7400-8	CS-7400-7	CS-7400-6	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)						
Built-In Spacer Type Second Gear						
Other Spline Gears (including flat type second gear)						
Sprocket Spacer A	No Need*3	No Need*3	No Need	Resin: Dark gray 3.2mm For second gear *Sprocket spacer A is unnecessary if a 13 tooth sprocket is used.	Steel 3.2mm *Sprocket spacer A is unnecessary if a 12 tooth sprocket is used.	For top gear
Sprocket Spacer B	Aluminum Silver 3.0mm 	Steel: Silver 3.1mm 	Steel: Gray 3.65mm 	Resin: Dark gray 3.15mm For third gear-low gear	Resin: Light gray 3.7mm For second gear-low gear *Sprocket spacer B is unnecessary if a 13 tooth sprocket is used.	For second gear-low gear
Sprocket Fixing Bolt		No Need				

↔ Denotes interchangeability.
⇒ Denotes interchangeability if used without sprocket cassette through-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 the high-performance tooth profile.
- 2: Sprockets used as a 2nd gear on a 6-speed freehub, or a 3rd gear on a 7-speed freehub, must have cassette-type through-bolt holes if cassette mounting is used.
- 3: Spacer unnecessary because the 2nd gear is a built-in spacer type.

Smoother shifting under any pedaling condition.

● Just what are HG sprockets?

HG sprockets have been computer-designed to upgrade SS shifting performance through smoother, faster, and more positive chain transfer on the freewheel. Strategic sprocket positioning and special profiles guide the chain directly from cog to cog with minimal override and no slipping. For 1992, HG sprockets are available in a new "spider" design. The five largest cogs are mounted to a cone-shaped spider which allows a higher level of precision in sprocket spacing, reduces weight, and increases rigidity and power transfer efficiency.

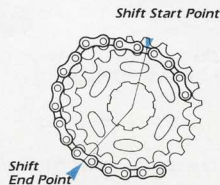
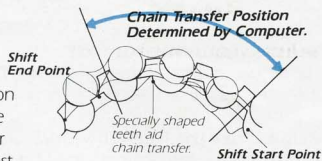
● How do the HG sprockets work?

When shifting gears with conventional sprockets, the chain rides on top of the sprocket teeth and sometimes slides over the teeth before fully engaging. This slows down chain transfer between the sprockets and results in sloppy, imprecise shifts.

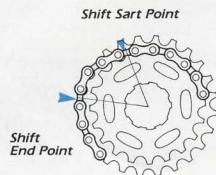
HG gears use specially shaped teeth and indexed sprocket positioning determined by computer. This allows the chain to move directly from one cog to the next without override and without slipping. Specified chain release and pickup points on the sprockets assure that the chain shifts quickly from one sprocket to the next only at the designated shift points.

● What are the benefits for the rider?

The main advantage of HG sprockets is quick and precise shifting under any pedaling load or cadence. In other words, gears can be changed quickly and accurately anytime without letting up on pedal pressure. HG sprockets realize faster, smoother, and more crisp shifts that are not affected by chain tension.



Conventional Sprockets:
Chain rides on top of larger gear teeth before engaging teeth.



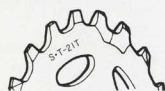
HG Sprockets:
Chain directly engages teeth
on larger sprocket.

Some tips on HG sprocket applications...

Sprocket Interchangeability

Cautionary Points:

- HG gears should always be used in complete sets.
- Sprockets enclosed in boxes are interchangeable (when cassette binder bolts are not utilized).
- Some sprockets which are compatible with multiple sprocket groups are marked with letters denoting those groups.



CS-7401/CS-HG90-8

S	12	13	14	15	16	17	19	21	
T		13	14	15	16	17	19	21	23
U	12	13	14	15		17	19	21	23
V		13	14	15		17	19	21	23
W	12	13		15		17	19	21	23

CS-HG90/CS-HG70/CS-HG50

E	12		14		16		18		21		24		28	
F			14		16		18		21		24		28	
G														32
K		13		15		17		20		23		26		30
M		13		15		17		20		24		29		34
H		13		15		17	19		21		24		28	
L	12	13	14	15		17		19		21	23		26	
I		13	14	15		17		19		21	23			
J		13	14	15	16	17		19		21				

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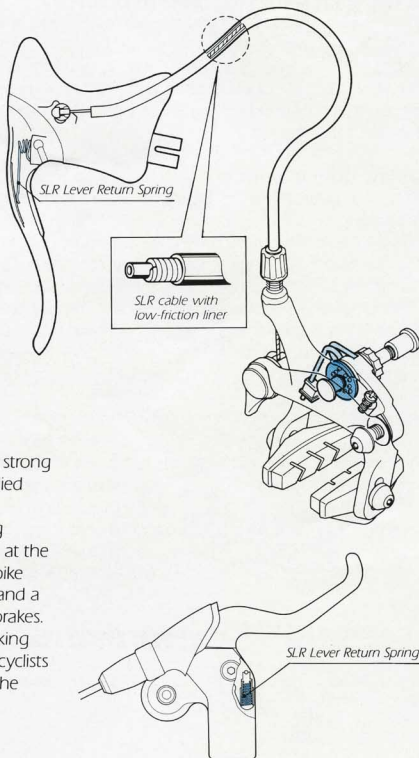
Increased braking power with a more sensitive feeling of control.

●Just what is the "Shimano Linear Response"?

SLR utilizes special designs which eliminate a significant amount of friction from the levers, cables, and calipers of the brake system. The result is upgraded braking performance through a highly responsive lever feeling and strong, easily modulate stopping power.

●How does SLR work?

SLR uses a return helper spring in the brake lever itself. Because the return movement of the lever action is not completely dependent on the strength of the spring at the caliper, a weaker caliper spring can be used. A thrust bearing and coated washer are used between the caliper arms, and a brake cable with a low-friction liner are also utilized to further reduce friction in the system. The result is a lighter and lively lever feeling and a more balanced system. Braking power is more efficiently transmitted to the wheel with greater feedback returned to the lever.



●What are the benefits of SLR to the rider?

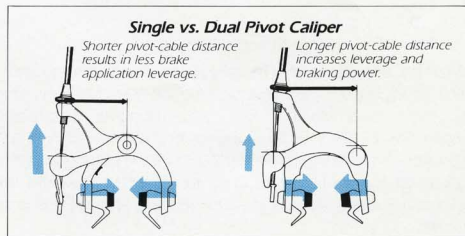
Balanced braking performance means a lot more than just strong braking power. If braking power cannot be effectively applied with optimum control, the brake system is inefficient and potentially dangerous. SLR delivers a higher level of braking control through a highly sensitive "linear response" feeling at the lever. Power input at the lever is efficiently converted into bike stopping power. You get improved stopping performance and a greater feeling of confidence in your ability to control the brakes. Racing cyclists use SLR to dive deeper into turns before braking and to finely control descending speeds. Sport and casual cyclists ride with more confidence and enjoyment knowing that the brakes will always respond predictably.



Super SLR enhances the braking power of Shimano Linear Response.

●Just what is Super SLR?

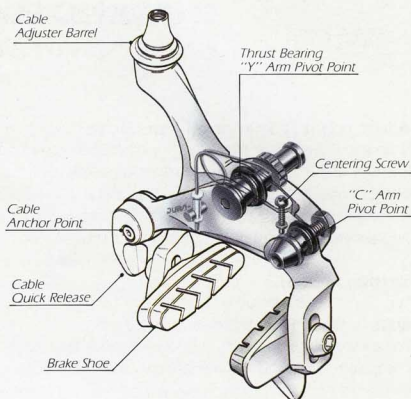
Super SLR is a new type of sidepull brake caliper and lever. What makes the Super SLR caliper different is that it has an individual pivot point for each caliper arm. These separate pivot points increase the power multiplication factor which results in more braking power.



●How does Super SLR work?

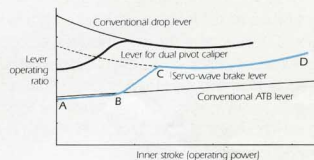
The main parts of the sidepull caliper are the "Y" arm and the "C" arm (named for their basic shape). With conventional brakes, both arms pivot on the same point. The Super SLR caliper, however, gives the "C" arm its own pivot point that's separate from the "Y" arm in order to increase leverage. The result is that the pressure applied to the rim increases in relation to the pressure applied at the lever. Furthermore, the increase in braking leverage at the "C" arm is transferred to the "Y" arm so that the increased leverage is applied equally between the two caliper arms.

The increased power multiplication factor causes the shoes to move a shorter distance in relation to lever travel. To compensate for this shortened caliper movement, the Super SLR brake lever has been designed to provide a 2-phase action. The 1st phase quickly brings the brake shoes into contact with the rim, while the 2nd phase applies increased leverage to enhance braking power.



●What are the benefits for the rider?

The benefit of Super SLR is that it provides the cyclist with greater braking power without the need to squeeze the lever harder. Coupled with the highly sensitive SLR mechanism, Super SLR provides even more braking power that can be easily modulated at the lever with a secure feeling of control. Super SLR is a significant improvement in overall braking performance.



The ultimate in off-road braking performance.

●Just what is Shimano Linear Response Plus?

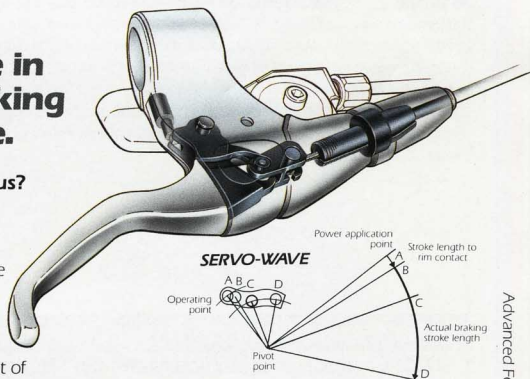
SLR Plus is a new high performance braking system for the off-road bicycle. The heart of the system is the "servo-wave" brake lever which actually increases the power multiplication advantage as the lever is pulled.

●How does the SLR Plus work?

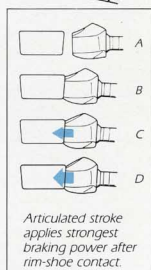
SLR Plus utilizes a unique cam-type cable holder and servo-wave link. As the lever is pulled, the pivot point of the servo-wave link changes its position in relation to the cable holder. This results in a faster shoe-rim contact time and an increase in lever output when it's really needed—after the brake shoes come into contact with the rim.

●What are the benefits to the rider?

In off-road riding, there are many times when you've got to keep a firm grip on the bars while braking hard. Yet this makes it difficult to steer and use the brakes simultaneously when going over rough terrain. SLR Plus helps reduce fatigue and increase control with a soft modulated lever action. More lever travel is provided in the range where the brakes are in actual contact with the rim. The end result is that it becomes easier to maintain braking power and control, especially over rough terrain.



A-B stroke brings shoes quickly into contact with rim. B-C stroke slows cable take-up. C-D stroke increases power multiplication factor for super-strong but easily modulated braking power.



Articulated stroke applies strongest braking power after rim-shoe contact.

SHIMANO HYPERDRIVE

●Just what is Shimano HyperDrive?

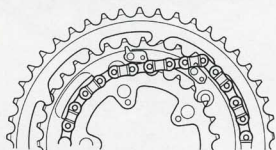
Shimano HyperDrive consists of upgraded designs for the crankset, front derailleur, bottom bracket, and left-side Rapidfire shift lever which now features an SIS-type click-stop shifting action. Shimano HD improves chainwheel shifting smoothness, speed, and responsiveness. These four components must always be used together in order to realize the full benefits of the HyperDrive function.

●How does HyperDrive work?

Shimano SG chainwheels, introduced previously, were designed by computer to pick up and release the chain at specific points on the chainring in order to make chainwheel shifting faster and more precise. HyperDrive was designed especially for triple chainwheels in order to provide clean and crisp shifts, especially from the small chainring to the middle chainring. HyperDrive utilizes "leading teeth," lateral projections positioned below the middle chainring teeth at the shifting location. These leading teeth help to pick up and guide the chain to the middle chainring. HyperDrive uses an index detent (along with an audible click) in the Rapidfire shifting lever to provide a front chainwheel shifting action which is much like SIS.

●What are the benefits of HyperDrive to the cyclist?

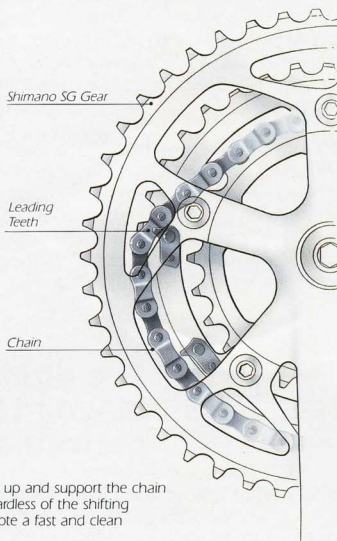
HyperDrive allows the cyclist to execute the traditionally difficult low-middle chainwheel shift without the need to overshift, feel the gear into place, or adjust the derailleur to prevent rubbing after the shift is made. Just like SIS, HyperDrive now makes possible front chainwheel shifting that's fast, accurate, and foolproof. Racers will especially appreciate the speed and accuracy of HyperDrive shifting.



- Leading teeth pick up and support the chain between links regardless of the shifting condition to promote a fast and clean chainwheel shift.

XTR	DEORE XT	DEORE DX	DEORE LX
500LX	400LX	300LX	—
200GS	100GS	70GS	—
DURA-ACE	600 ULTEGRA	105SC	RX100
500EX	400EX	300EX	—

- Leading teeth on the side of the middle chainring help guide the chain to the pick up teeth.



Some tips on Shimano HyperDrive applications...

■The Components Which Make Up Shimano HyperDrive

ST-M900

Left Rapidfire lever set

FD-M900/M901

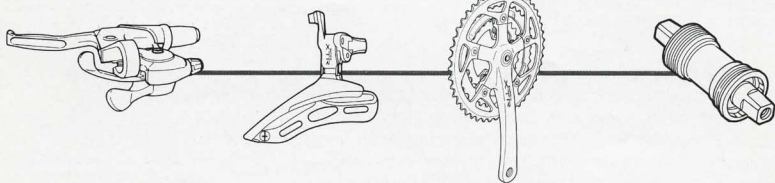
Front derailleurs

FC-M900

Front chainwheel

BB-UN90

Sealed cartridge bottom bracket



Single piece Bottom Bracket completely eliminates parts assembly and difficult adjustment procedures.

●Just what is the cartridge bottom bracket?

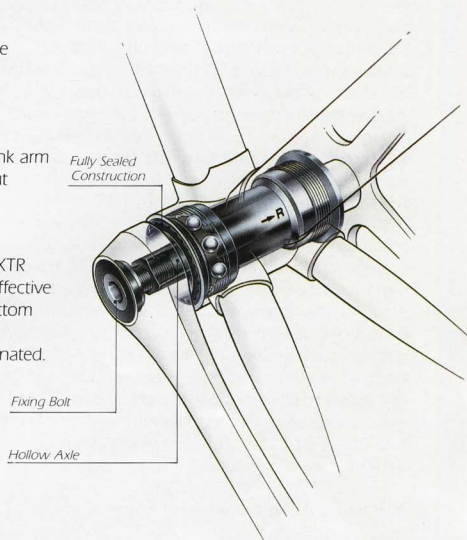
The separate ball bearings, cups, water seal, and axle of the conventional bottom bracket have been combined in a single integrated cartridge-type unit which eliminates the need for bearing adjustment and makes installation simple.

●How does it work?

The XTR cassette bottom bracket is designed so that the crank arm actually extends into the bearing cup of the XTR cartridge bottom bracket, it forms an additional and highly effective seal against the invasion of water, mud, and dirt into the bottom bracket bearings. Furthermore, bottom bracket installation is simplified and the need to adjust bearings is completely eliminated. Durability is also significantly upgraded.

●What are the benefits for the cyclist?

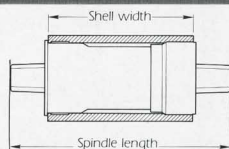
Because the crank arm extends into the bearing cup of the XTR cartridge bottom bracket, it forms an additional and highly effective seal against the invasion of water, mud, and dirt into the bottom bracket bearings. Furthermore, bottom bracket installation is simplified and the need to adjust bearings is completely eliminated. Durability is also significantly upgraded.



Some tips on Sealed Cartridge Bottom Bracket applications...

■ Product specifications

Note: Please make sure to use the BB-UN90 together with the front chainwheel (FC-M900) as a set. Other combinations are not possible.



Model No.	Type	Chain line	Spindle length	Shell width	Bottom bracket cup thread dimensions	Stamped marking
BB-UN90	Triple	47.5	107	68	BC 1.37 × 24T	MM107
				70	M36 × 24T	MM107
				73	BC 1.37 × 24T	MM107
		50	113	68	BC 1.37 × 24T	LL113
				73	BC 1.37 × 24T	LL113
BB-UN70 BB-UN50 BB-CS20 BB-CS10	Double	43.5	115	68	BC 1.37 × 24T	D-H
				70	M36 × 24T	D-H
	Road Triple	45	122.5	68	BC 1.37 × 24T	D-NL
				70	M36 × 24T	D-NL
	MTB Triple	47.5	127.5	73	BC 1.37 × 24T	D-NL
				68	BC 1.37 × 24T	D-EL
		50		73	BC 1.37 × 24T	D-EL

Notice: Please check the size of each screw prior to assembly.

(mm)

A new standard in chainwheel shifting performance.

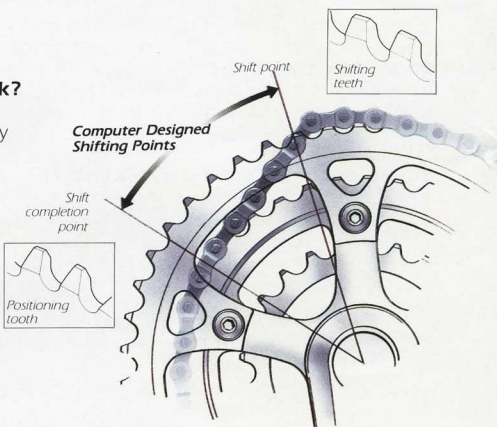
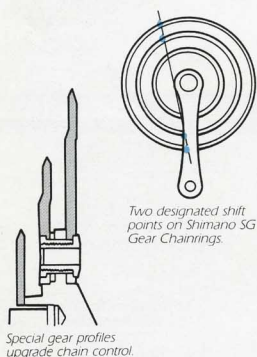
●Just what is the Shimano SG Chainwheels?

The Shimano SG Chainwheels utilizes a special design which has evolved from the computer-designed HG sprockets. The Shimano SG Chainwheel was developed to reduce shifting shocks and makes chainwheel shifting smoother and more reliable than ever before.

●How does the Shimano SG Chainwheel work?

Shifting from the large chainring to a smaller one under a heavy pedal load creates a shock as the chain suddenly releases. This shock and often results in a thrown chain or a messy grinding shift onto the small chainring. The Shimano SG Chainwheel solves this problem by using special chain release and pickup teeth at the two points on the chainwheel where pedal pressure is lightest. This helps the chain to transfer smoothly and positively without any abrupt shocks and without flying off of the chainwheel.

The Shimano SG Chainwheel works equally well on Biopace and normal round chainrings by promoting fast and smooth shifts because the chain transfers quickly and directly without riding on top of the gear teeth.



●What are the benefits for the rider?

Because the pickup and release points on the chainwheels are carefully positioned in relation to each other, the chain moves quickly and directly from one chainwheel to the other. Dropped chains, grinding, and late engagement are all but eliminated. The result is a great improvement in shifting speed and reliability. For example, racing cyclists can shift without letting up on pedal pressures. Off-road cyclists can shift with more confidence knowing that they're not going to throw a chain or miss a shift. All cyclists will find riding the bike more fun due to the greater feeling of shifting control that the Shimano SG Chainwheel offers.

	Model	Biopace SG	Round SG
RACING	FC-7402-SG	—	*A-53 x 42 *A-52 x 42 *B-53 x 39
	FC-6400-SG FC-1055 FC-A550	52 x 42	53 x 42 52 x 42
	FC-M900 Shimano Hyperdrive	—	48 x 36 x 26 46 x 36 x 26 w/SG-X Middle Gear
	FC-M730-SG	48 x 38 x 28 46 x 36 x 26	48 x 38 x 28 46 x 36 x 24
MTB	FC-MT60-SG FC-M550 FC-M500	48 x 38 x 28 46 x 36 x 26	48 x 38 x 28 46 x 36 x 24
	FC-M400 FC-M300	48 x 38 x 28	50 x 40 x 30
	FC-M200 FC-M202-SG FC-M100 FC-M102-SG FC-TY70-SG	48 x 38 x 28	—
	FC-M500-C	—	50 x 40 x 30
	FC-A550-T	—	52 x 42 x 30
	FC-M202-C	48 x 38 x 28	—
	FC-M100-W	—	44 x 32
CROSS	FC-M500-C	—	50 x 40 x 30
	FC-A550-T	—	52 x 42 x 30
	FC-M202-C	48 x 38 x 28	—

*If the inner is 42, A-53 or A-52 should be used for the outer;
if the inner is 39, B-53 should be used for the outer.

Creating a more rider-friendly pedaling action.

●Just what is Biopace?

Traditional round chainrings force the leg to maintain an constant pedaling cadence. This actually fights the leg's natural tendency to change speed during the pedaling motion. Biopace is a non-round chainwheel which has been ergonomically designed to create a more natural pedaling cadence that takes into account the normal changes of the leg when pedaling.

●How does Biopace work?

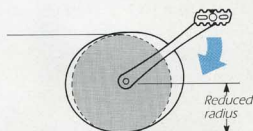
The Biopace concept was born when Shimano used a computer to analyze the pedaling motion with a round chainring. Computer analysis demonstrated that leg power was not being efficiently utilized. With the computer's help, Shimano found that a round chainring forces the leg to conform to a constant rotational speed. This fights the natural tendency of the leg to slow down at the top and bottom of the pedal stroke as it does when walking or running. It became apparent that a variable-speed pedaling cadence in harmony with the natural speed changes of the leg would be a more efficient way to pedal.

Biopace does exactly this. The special shape of the Biopace chainring increases the chainwheel radius to slow down the leg at the top and bottom of the pedal stroke. The radius is decreased and the down and upstroke phases of the pedaling cycle to help the leg move faster. In this way, Biopace creates a more natural riding movement.

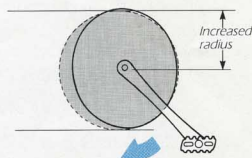
●What are the benefits for the rider?

Because the Biopace chainwheel uses energy more efficiently, you can ride farther with less fatigue. Computer calculations disclosed that a Biopace chainring can actually reduce energy demands up to 3 percent for a given distance.

Besides saving energy and increasing stamina, Biopace reduces stress on the knees and makes for a more comfortable pedaling feeling. Biopace chainrings are also available in performance versions designed for the faster pedaling cadences of performance oriented cyclists.

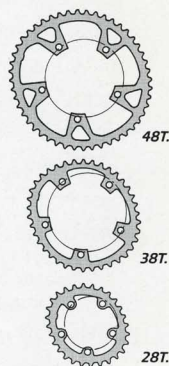


Chainwheel Radius is Reduced During the Downstroke.

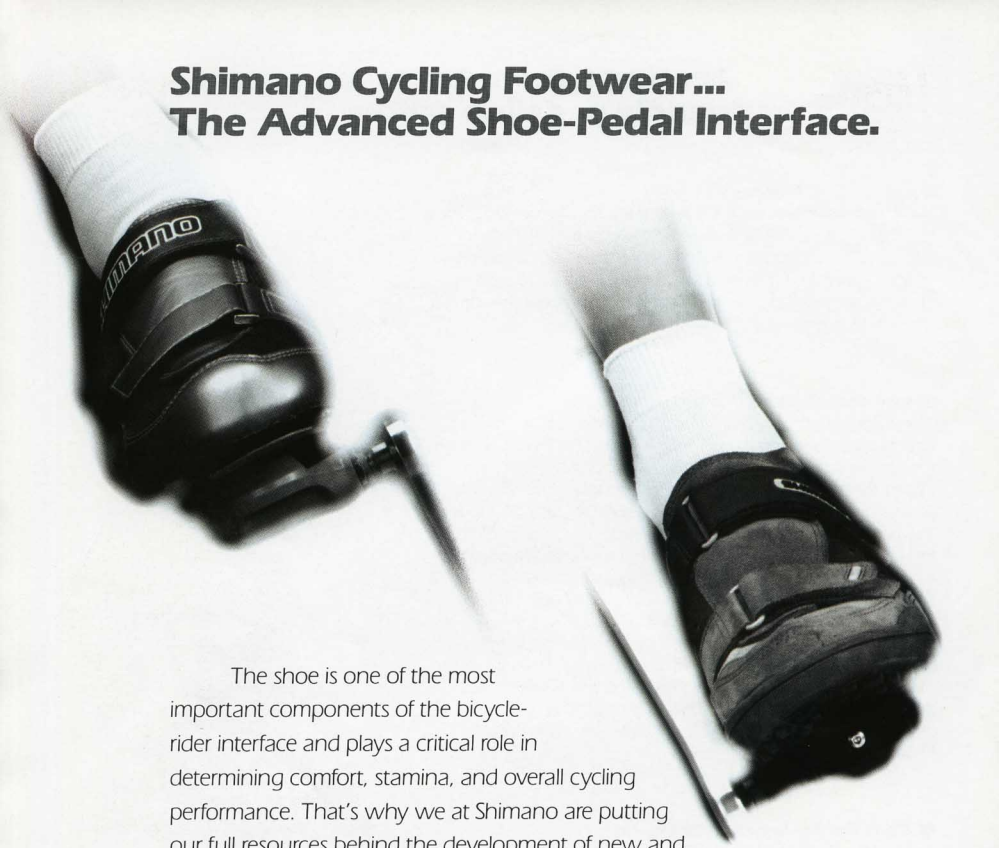


Chainwheel Radius is Increased During the Upstroke.

Individual Designed Chainrings According to Function



Shimano Cycling Footwear... The Advanced Shoe-Pedal Interface.



The shoe is one of the most important components of the bicycle-rider interface and plays a critical role in determining comfort, stamina, and overall cycling performance. That's why we at Shimano are putting our full resources behind the development of new and better cycling footwear.

For example, the SH-R200 professional racing shoe takes advantage of the latest in new materials technology to provide maximum strength and rigidity at minimum weight. The SH-R110 and SH-T110 racing shoes offer excellent cost-performance value for racers and sport cyclists alike. The SPD (Shimano Pedaling Dynamics) system allows mountain bike riders and touring cyclists to get clipless pedaling performance from a shoe that's safe and comfortable to walk in. The SH-A100 shoe combines SPD's on/off bike capability with a lightweight racing-type design that gives off-road riders, sport and fitness cyclists alike more freedom to walk in their cycling shoes.

This is the Shimano cycling footwear line-up—advanced cycling technology that enhances the performance and enjoyment of cycling for anyone who rides a bike.

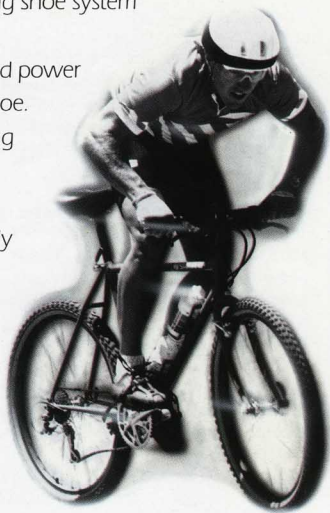
The "Bike-it or Hike-it" Shoe-Pedal Interface.



Shimano Pedaling Dynamics is a new type of cycling shoe and pedal system which creates a more versatile foot-pedal interface between the cyclist and bicycle. This is because SPD is the first cycling shoe system that works both on and off the bike.

On the bike, SPD gives you the pedaling stability and power transfer efficiency of a high performance clipless cycling shoe. Off the bike, SPD becomes a comfortable sure-footed hiking shoe that gives excellent traction on any surface thanks to its treaded rubber sole recessed cleat.

The original line of SPD shoes was designed primarily for off-road cyclists. SPD now includes a new lightweight racing-style shoe that brings SPD versatility to on-road cyclists as well.



A versatile application shoe-pedal interface with special benefits for the off-road cyclist.

●Just what is Shimano Pedaling Dynamics?

Shimano Pedaling Dynamics (SPD) is a new type of cycling footwear which really does two jobs. It's a high-performance clipless pedaling system, yet the SPD shoe lets you walk securely and comfortably off of the bike, on any surface, because there's no cleat interference with the ground.

●How does SPD work?

All SPD shoes feature a unique design. The cleat is recessed into the outer sole so it doesn't protrude and interfere with walking. When you get on your bike, the cleat secures into the SPD pedal to provide a stable clipless pedaling interface and highly efficient pedaling action. Off-road SPD shoes feature an outer sole with an aggressive tread pattern that makes them excellent hiking shoes as well. The new lightweight SPD racing/fitness shoe uses the same recessed cleat design but with a smoother textured outer sole. Any SPD shoe provides clipless pedaling performance and the ability to walk safely and comfortably on any type of surface.

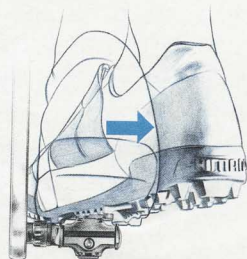
Just step onto the pedal to engage the cleat locking mechanism. Release is through a simple twist-out movement. The open architecture design prevents mud buildup and the cleat binding mechanism is incorporated on both sides of the pedal for easy entry without pedal flipping.

●What are the benefits for the rider?

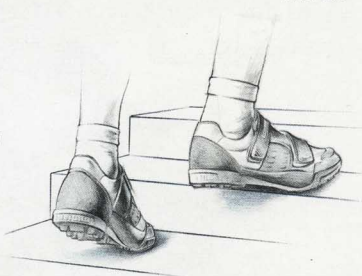
The main benefit to the rider is that SPD provides more versatility without sacrificing performance. On the bike, you get the same power transfer efficiency as if you were wearing a clipless racing shoe. Yet off the bike you can walk safely and comfortably just like you would wearing hiking shoes.

This is a real advantage in off-road riding, and especially off-road competition, when you often have to get off the bike to take on really rugged terrain on foot. But SPD also gives you the freedom to get off the bike to rest, explore, or walk a bit. While SPD is the best shoe-pedal system for off-road competition, it's also great for touring and sport cycling.

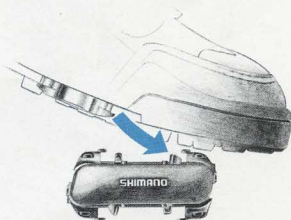
SPD gives you competition-level clipless pedaling efficiency on the bike. SPD also gives you the freedom to get off the bike and walk comfortably and safely. This versatility is the real advantage of SPD.



Twist-out



Recessed cleat



Step-in

Some tips on SPD applications... (PD-M737/PD-M525)

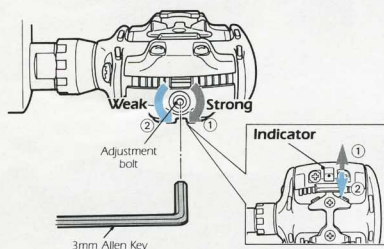
■ Cautions during use

- Place one foot on the ground, practice engaging and disengaging from the pedal a number of times until you get used to it and then start to ride.
- First ride on the level ground and go to off-road riding only when you are used to engaging and disengaging from the pedal.
- First adjust the retention force of the pedal to suit yourself and then begin cycling.
- Use a lesser retention force when cycling in adverse conditions.
- Keep the cleat area and pedal clear of foreign matter to ensure proper engagement/disengagement.

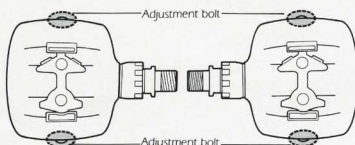
■ Adjusting plate spring tension

The tension of the spring is adjusted for each pedal (top & bottom) with the adjustment bolt in the rear. It gets stronger when turned clockwise and weaker when turned counterclockwise.

At this time, the indicator positioned below the adjustment bolt displays spring tension.



There are adjustment bolts in four places for each pair of pedals. Check the position of the indicator and the number of turns of the adjustment bolt so the spring tension is the same in all four positions.

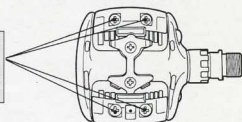


There may be unexpected trouble due to the different feeling when engaging and disengaging on the right & left and top & bottom if there is a difference in the spring tension.

The spring tension changes in 3 steps with one turn of the adjustment bolt. The adjustment bolt turns nine complete turns. When it is turned all the way in the strong direction it suddenly becomes hard to turn. Do not turn it beyond that point. When turning in the weak direction, do not turn it any further when the end of the adjustment bolt comes to the spring plate position.



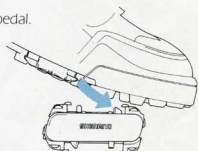
Be sure not to loosen these bolts.



■ Use

• Engaging

Press the cleat into the pedal.

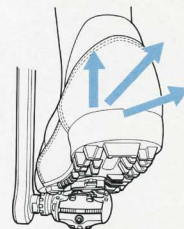
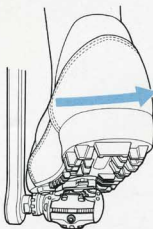


• Disengagement

If a certain type of cleat is set, the disengagement mode can be selected. Make sure about the marking or color of the cleat.

SM-SH50 (black):
single release mode.
Remove by twisting your heel to the outside.

SM-SH55 (silver):
multiple release mode.
Remove by twisting your heel to any direction.



Place one foot on the ground and practice engaging and disengaging a number of times. Give yourself enough time to get used to it.

Racing Footwear

SH-R200

The ultimate lightweight racing shoe for all-out competition and the most discriminating fitness and sport riders.

Weight	430g. (pair/size 39)
Materials	Upper: Vectran/synthetic leather Sockliner: Cambrelle/EVA Out-sole: Carbon graphite fiber
Size	39-47 in 1/2 sizes, 48 (18 sizes)
Color	Silver



Racing/Performance Footwear

SH-R110

A lightweight racing-type shoe with a professional look—great for all levels of road racing as well as performance-minded sport cyclists.

Weight	643g. (pair/size 43-1/2 with cleat)
Material	Upper: Non-stretch synthetic leather Sockliner: Cambrelle/EVA Out-sole: High-impact resin
Size	36-48 (no half sizes)
Color	Bright Silver



Racing/Performance Footwear

SH-T110

A lightweight racing-type shoe that lends itself well to a wide range of competitive cycling styles—from real racing to fitness cycling and casual competition.

Weight	657g. (pair/size 43-1/2 with cleat)
Material	Upper: Polyurethane split leather and breathable nylon mesh Sockliner: Cambrelle/EVA Out-sole: High-impact resin
Size	36-48 (no half sizes)
Color	Black w/bright silver straps



SH-R200

The racing shoe for those who take their on-bike performance seriously.

If you're serious about performance cycling, this shoe could be the most valuable component on your bike. The SH-R200 was designed with one goal in mind—to win. No expense was spared to make it Shimano's top footwear performer. Non-stretch Vectran mesh, rigid lightweight carbon fiber sole, outer sole air intake vents, and other advanced features give the SH-R200 a real competitive advantage.



FEATURES

BENEFITS

- | | |
|--------------------------------------|---|
| 1. Air intake vents | 1. Front air vents provide flow-thru ventilation for cooling and comfort. |
| 2. 3-point skid pads | 2. Provide a non-slip walking surface when off the bike. |
| 3. Adjustable cleat mount | 3. 7mm of cleat adjustment assure desired positioning for rider. |
| 4. Full carbon graphite fiber sole | 4. Great strength and high rigidity with minimum weight for more efficient pedaling. |
| 5. Rubber protector pads | 5. Protects carbon fiber sole when walking off the bike. |
| 6. Water repellant leather treatment | 6. Special treatment protects from water to significantly extend service life. |
| 7. "Bullet-proof" Vectran mesh | 7. Super-strong non-stretch Vectran nylon mesh will not distort under high pedaling pressures. |
| 8. Double hook and loop type straps | 8. Distributes stress over wide area of foot to lessen fatigue while providing a comfortable foot-hugging fit. |
| 9. Cambrelle & EVA inner sole | 9. Provides a strong yet comfortable and breathable cradle for the foot. Helps wick away moisture and lessen fatigue. |
| 10. Reflectors | 10. Generous reflector treatment enhances safety through greater night visibility. |

SPD Footwear
SH-M200

Designed to withstand high pedaling loads and take all the punishment of off-road competition, this is the SPD shoe for top level off-road competition as well as all serious ATB riding.

Weight	804g. (pair/size 43 w/o cleat)
Material	Upper: Non-stretch synthetic leather and Cordura nylon Sockliner: Cambrelle/EVA Out-sole: Rubber (treaded)
Size	36-48 (no half sizes)
Color	Black, Blue & Orange



SPD Footwear
SH-M100

The high-performance SPD shoe for off-road racing, heavy-duty dirt riding, touring, and other serious cycling styles.

Weight	680g. (pair with cleat/size 39)
Material	Upper: Nylon/leather/cambrelle Sockliner: Cambrelle/EVA Midsole: Glass fiber/nylon Out-sole: Rubber Heel counter: EVA
Size	36, 37-47 in 1/2 sizes, 48 (23 sizes)
Color	Gray



SPD Footwear
SH-M050

The general-purpose SPD shoe for everything from off-road riding to touring and general fitness cycling.

Weight	820g. (pair without cleat/size 39)
Material	Upper: Nylon/leather Sockliner: Cambrelle/EVA Midsole: Glass fiber/nylon Out-sole: Rubber
Size	36, 37-47 in 1/2 sizes, 48 (23 sizes)
Color	Gray & blue Violet & green Pink & gray



SPD Footwear
SH-M030

An economical off-road and touring shoe that brings SPD performance within the reach of just about everybody. Slightly more flexible midsole makes the SH-M030 a very comfortable shoe to walk in.

Weight	810g. (pair/size 43 w/o cleat)
Material	Upper: Split leather & breathable nylon mesh Out-sole: Rubber (hiking tread design)
Size	36-48 (no half sizes)
Color	Light Gray



SH-M200

The SH-M200 is the top-of-the-line SPD shoe for all-out off-road competition and all serious ATD riders who insist on the best. Not limited to off-road competition, the SH-M200 is also a great shoe for touring.



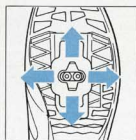
FEATURES

1. **High-traction low-cut tread pattern**
2. **Recessed cleat**
3. **Glass fiber/nylon midsole**
4. **EVA heel counter**
5. **3-dimensionally formed nylon mesh upper panels**
6. **Double hook and loop type straps**
7. **Cambrelle & EVA sockliner**
8. **Ankle pad**
9. **Reflective tab**

BENEFITS

1. Provides excellent grip on all standard pedals and ground surfaces.

2.



3. Creates rigid platform for high pedaling efficiency and prevents foreign objects from penetrating through to the foot.
4. Protects heel from shocks and foreign objects.
5. Allows shoe to fit more naturally to foot contours for increased pedaling efficiency, comfort, and stamina.
6. Use of two hook and loop type straps and laces better makes for a snug fit for enhanced pedaling efficiency on the upstroke.
7. Helps wick away moisture and absorb shocks and vibration to reduce fatigue.
8. Protects ankle while helping shoe conform to ankle contours.
9. Helps cyclists be seen at night for greater safety.



Locks into SPD pedal for more pedaling power yet doesn't interfere with walking. Can be adjusted 20mm front-rear and 5mm side to side (cleat included with pedal set).

SPD Footwear
SH-A100

SPD versatility in a new lightweight sport riding shoe.

Weight	780g. (pair/size 43 w/o cleat)
Material	Upper: Breathable nylon mesh Out-sole: Rubber
Size	36-48 (no half sizes)

NEW



SPD Pedal
PD-A525

Weight	390g. (pedal only)
Materials	Body: Aluminum White/Purple Paint Finish
Binding mechanism:	Steel/Aluminum
Axis:	Cro-moly
Cleat:	Steel
Crank Thread	BC 9/16" x 20TPI.

NEW



SH-A100

"Hike-it or bike-it" versatility in a reasonably priced lightweight cycling shoe that's also part of the SPD system. The SH-A100 offers lightweight, racing-type styling, and on/off bike versatility for a wide range of cyclists including off-road riders, tourists, fitness, and sport riders alike.



FEATURES

1. Extra long double-strap binding
2. Split leather nylon racing-type mesh upper
3. Rubber sole
4. Contoured insole
5. ReflectORIZED heel and side panels
6. Recessed cleat nuts

BENEFITS

1. Provides a foot-hugging fit that is more efficient and comfortable.
2. Split leather nylon upper breathes yet resists stretching. Ventilates foot while providing good upstroke pedaling efficiency.
3. Textured rubber sole for safe and secure walking.
4. Contoured insole follows natural shape of foot for a more comfortable fit on and off the bike.
5. Provide greater visibility and safety for night cycling.
6. Recessed cleat nuts don't protrude from sole—maintain walkability with or without cleats mounted.

FOOTWEAR ACCESSORY ITEMS

Small Parts

SM-SH24

Shimano Design—Look
Compatible Cleat w/Hardware
Code No. 40B9811



Small Parts

SM-SH50 (black)

SPD Cleat w/Hardware
Single release mode
Code No. 4249801

SM-SH55 (silver)

Multiple release mode
Code No. 4249805



Shimano CYCLING FOOTWEAR

INSOLE

SIZE

36—38-1/2

39—40-1/2

41—42-1/2

43—44-1/2

45—46-1/2

47—48



Reflector

SM-PD20

(for PD-M737, PD-M525)



Reflector

SM-PD30 (for PD-A525)



SMALL PARTS & TOOLS

Tool

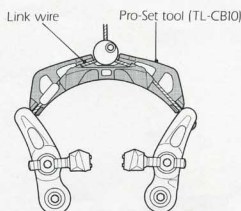
TL-CB10

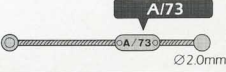
Pro-Set Tool for Cantilever Brakes.

This Pro-Set tool is for the correct and quick installation of the cantilever brake.

■ Combinations

The Pro-Set tool and link wire are different for each cantilever brake model. Combine the parts correctly.



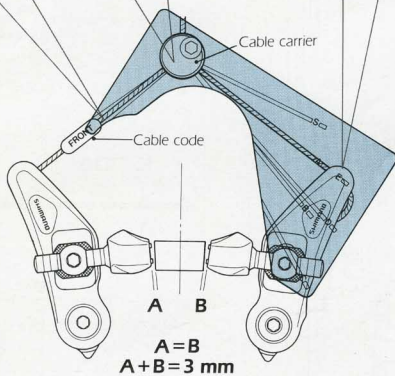
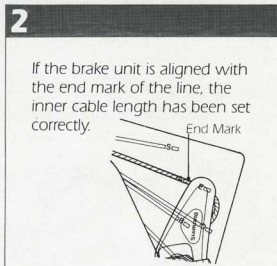
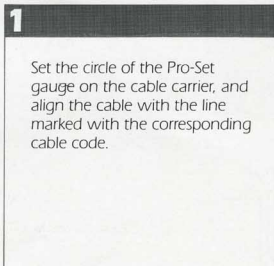
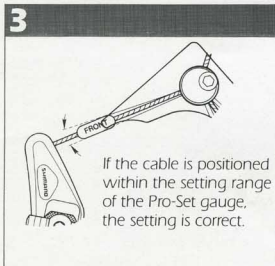
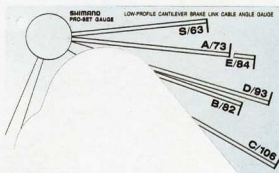
Type	Pro-Set Tool (TL-CB10)	Link Wire	Cantilever Brake
A	Color: Blue  A/73	 Ø 2.0mm	BR-M734 Front BR-M650 Front
		 Ø 1.6mm	BR-M900 BR-M201 BR-M651 BR-C200 BR-M501 BR-C200-B BR-M502 BR-M100 BR-C510 BR-TY70 BR-C510-B BR-M352 Rear
B	Color: Violet  B/82	 Ø 2.0mm	BR-M734 Rear BR-M650 Rear
		 Ø 1.6mm	BR-M501 Rear
C	Color: Yellow  C/106	 Ø 1.6mm	BR-M651 BR-M502 BR-M201 BR-M100 BR-TY70
D	Color: Orange  D/93	 Ø 1.6mm	BR-M651 BR-M502 BR-M201 BR-M100 BR-TY70
E	Color: Green  E/84	 Ø 1.6mm	BR-M352 Rear
S	Color: Pink  S/63	 Ø 1.6mm	BR-C510 Rear BR-C510-B Rear BR-C200 Rear BR-C200-B Rear

Tool

TL-CB15

Pro-Set Gauge for Cantilever Brakes.

The Pro-Set gauge is provided for checking a correct cable setting without difficulty.



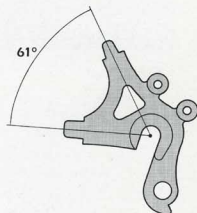
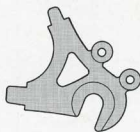
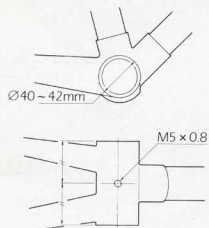
Small Parts

SM-SP55 **SM-MT55**
SM-SP25 **SM-MT25**
SM-SP15 **SM-MT15**



Small Parts

FE-SF25
MTB Type Fork Ends
8-Speed Compatible



SMALL PARTS & TOOLS

Tool

TL-UN52

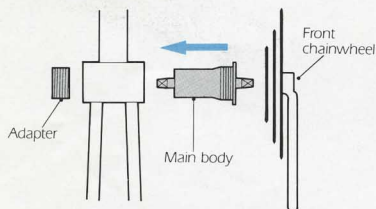
Bottom Bracket Installation Tool for BB-UN90, BB-UN70, BB-UN50, BB-CS20 and BB-CS10.



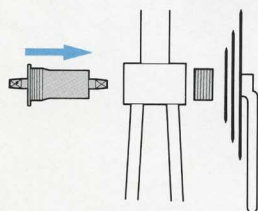
Tightening torque:
300—400kgfcm [260—350 in.lbs.]

Install by using the special tool TL-UN52. First install the main body, then the adapter.

Note: Direction of insertion depends on the model.



BB-UN90/UN70/UN50



BB-CS20/CS10

The frame, main unit, adapter and screws should not be greased for assembly.

Tool

TL-HG15

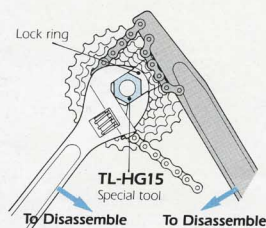
Lock Ring Tool for HG Sprockets



- For installation of the HG sprocket, use the special tool (TL-HG15) to tighten the lock ring.

Tightening torque:
300—500 kgfcm
[260—430 in.lbs.]

- To replace the HG sprocket, use the special tool (TL-HG15) and the rear sprocket removal tool to remove the lock ring.

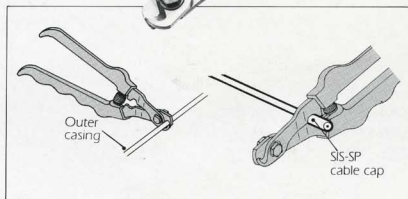


Tool

TL-CT10

Cable Cutter

Used to cut outer casings, inner cables, and to hold the cable cap.



Tool

TL-CN21

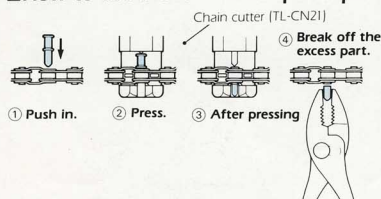
Chain Cutter

HG chain must use this chain cutter.



*Reinforced Special Pin for HG compatible chain

■How to use the reinforced special pin



Tool

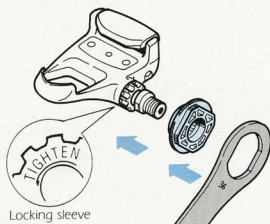
TL-PD40

Pedal Axle Unit Removal Tool

for PD-1056, PD-1055, PD-A550 and SPD Pedal.



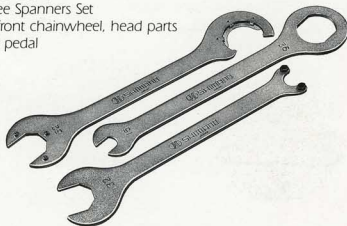
Attach the special tool (TL-PD40) to the locking sleeve, and then use the wrench (TL-FC30) to remove. The direction to turn the locking sleeve (to tighten) is indicated on each locking sleeve. To remove the axle unit, turn the locking sleeve in the opposite direction.



Tool

TL-FC30

Three Spanners Set
for front chainwheel, head parts
and pedal



Tool

TL-FC10

Cotterless Crank Extractor



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Tel. 07 11-258 80

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