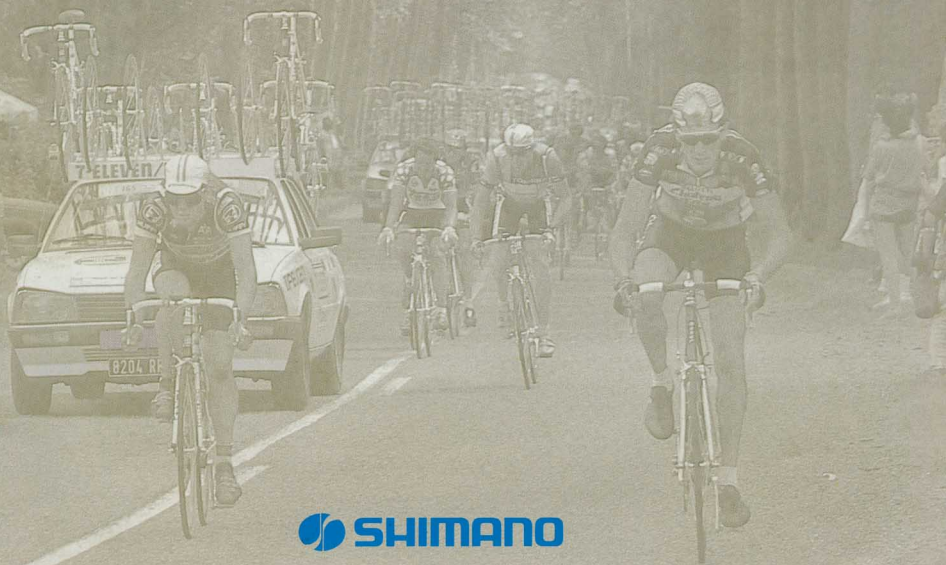


SHIMANO
BICYCLE
SYSTEM
COMPONENTS

DEALERS' 1990 PRODUCT MANUAL



 SHIMANO

Getting Closer to the Cyclist

It's no overstatement to say that man's dream of traveling faster, to move swiftly through the environment, was one of the impulses behind the invention of the bicycle. As we approach the 21st century, the bicycle is being refined in a way that significantly improves its ability to move us faster, farther, and with greater ease and enjoyment.

Shimano is one of the leading forces in the advancement of cycling technology which is making the bicycle a more enjoyable and efficient vehicle than ever before.

For example, Shimano pioneered the "system component" concept which integrates the functions of all the bicycle's components to form a higher-performing synergistic whole. Shimano biomechanical engineering assures that the human element and the machine are joined in the most efficient manner. And aerodynamic design contributes to greater energy savings.

One example of the way, Shimano has applied the science of biomechanics is Biopace, a computer-designed chainring that improves pedalling efficiency and enjoyment.

The Shimano Index System (SIS) allows virtually anybody to shift the bicycle's derailleur quickly and accurately without experience or practice.



Hyperglide sprockets and Superglide chainrings enhance SIS shifting with faster and more positive chain movement from gear to gear.

Shimano Linear Response brake systems (SLR) make braking safer and more effective by eliminating friction and providing a more sensitive feeling of control at the lever.

These advanced functions have played a key role in the development of Shimano Total Integration (STI), a breakthrough design concept which places all of the bicycle's control functions under the cyclist's hands on the handlebars.

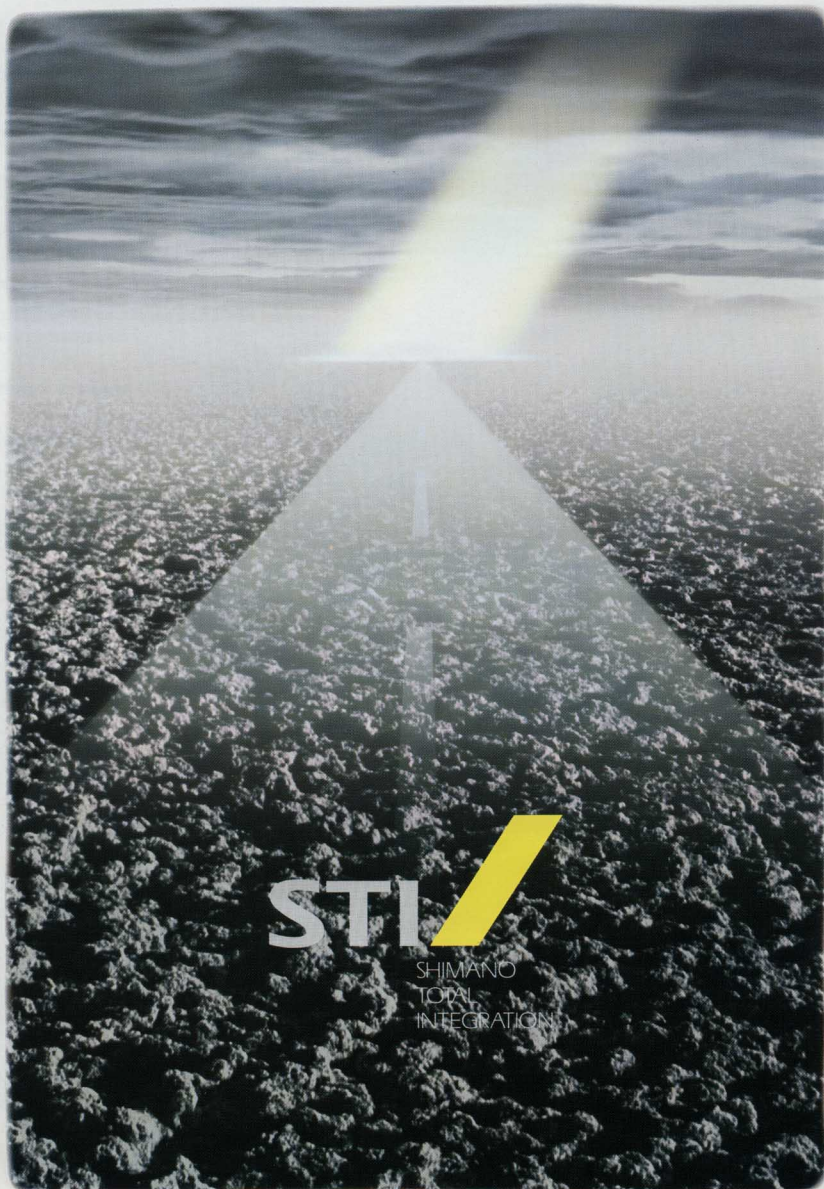
These are the ways in which Shimano is adapting the bicycle to the cyclist. It's the result of a development policy stressing the creation of a more comfortable and efficient relationship between the man and the machine.

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STI DEVELOPMENT CONCEPT



STI 
SHIMANO
TOTAL
INTEGRATION

Shimano Total Integration...

A new relationship between the cyclist and the bicycle

Shimano Total Integration, STI, means that the main control functions of steering, braking and shifting gears can now be executed without ever removing hands from the handlebars. It's a breakthrough in bicycle component technology which promises a whole new generation of riding convenience and performance, for all cyclists.

STI is not a development which stands alone. It's the cumulative result of years of research and development. SIS for example. SIS's click-stop shifting action makes derailleur shifting fast, accurate and foolproof. SIS also increased overall cycling performance for racing cyclists, sport riding enthusiasts, and casual cyclists alike.

SIS has been further refined with Hyperglide sprockets and Superglide chainwheels which help to speed up and smooth out chain movement during shifting.

Yet with all the advantages SIS offers, there is still a problem in shifting gears. On-road bicycles place the shifting lever on the frame's downtube. This means that you must let go of the handlebar in order to shift. Of course, there are many times when you need to shift but can't afford to release the handlebars. Speed, concentration, and balance are often sacrificed in order to shift the derailleur.

The same problem exists for off-road bicycles which use a thumb shifter mounted on top of the bars. Your grip must be released in order to operate the thumb shifter to change gears. Needless to say, this can make the bike difficult to control when you need to shift while riding through rough and changing terrain.

Shimano has solved this final impediment to total bicycle control with the STI concept. STI places all of the bicycle's control functions, for both on- and off-road bicycles, directly under the cyclist's hands while the rider continues to grip handlebars. With STI you can steer, brake, and shift gears—always keeping a firm grip on the bars. STI is a great leap forward in cycling convenience and performance.

SIS, SLR, Hyperglide, Superglide...

Advanced component technology supporting STI

STI has been made possible through the high level of refinement offered by its supporting functions of SIS, Hyperglide sprockets, Superglide chainrings, and SLR brake technology.

Through the careful integration of these advanced functions, STI finally realizes a complete bicycle control system in which any desired control function can be executed instantly and directly without affecting other areas of control. In other words, STI lets you shift gears, brake, and steer the bicycle without any sacrifice in stability or concentration.

STI even lets you shift gears during extreme maneuvers, while cornering or braking for example a significant advantage for the racing and performance-oriented cyclist. This new level of cycling control has been made possible by the continuing evolution of Shimano's advanced component functions.

STI is a standard feature on all Shimano off-road component groups for 1990 and will be available on road component groups in the near future.

This is how Shimano is bringing the bicycle closer to the real needs of the cyclist.



OFF-ROAD STI

A Whole New World of Cycling Control from Shimano Total Integration.



Cycling enjoyment and performance have a great deal to do with control. The less energy and concentration expended controlling the bicycle, the more enjoyable and safer the cycling experience becomes. And there's also the additional benefit of increased performance.

Correct. That's what Shimano Total Integration is all about. We think that shifting gears shouldn't be part of the challenge of off-road riding.

The new STI system significantly upgrades control by letting you shift gears with a quick one-punch action through levers conveniently mounted under the bars. This means you never have to change hand position or release the bars to shift.

The benefits of STI are really significant. You get the gear you need exactly when you need it, in any terrain. You don't have to slow down, lose concentration, or adjust your hand position on the bars. STI is a total advance in safety, convenience and performance.

STI gives you greater confidence in your ability to control the bicycle plus a cycling experience that's more fun than ever.



OFF-ROAD STI

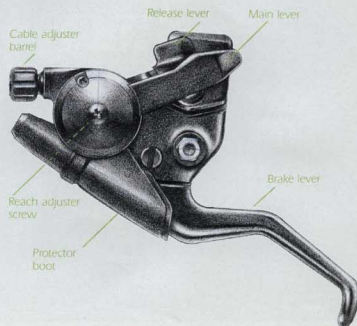
RAPIDFIRE

DUAL REPEAT FUNCTION



Keep your grip while you shift. Off-road STI Rapidfire lever uses two ratchet-action push levers mounted conveniently under the bar in front of the thumb. Shift one gear at a time, or shift down the entire gear block with a full stroke push. (ST-M090, ST-M091, ST-M070, ST-M071) Release (upshift) lever lets you shift up the sprocket cluster with the same capability.

Shift triple front chainwheels with the same precise STI action, 1 or 2 gears at a time. Trimming adjustment eliminates chain rub.



Enhanced Control and Safety for the All-terrain Bicycle

The current design of the off-road shifting system utilizes a thumb-type shifter placed on top of the bars near the grip. While the shift lever is located near the hand position, the hand must still be released from the grip in order to shift gears. Of course, this results in a certain loss of control and balance, and makes shifting almost impossible when traversing rough and changing terrain.

Shimano tackled the problem and found that there was a much better place to put the off-road shift lever—under the bar, directly in front of the thumb when the hand is in the normal bar-gripping position.

But that's not all. A new type of dual repeat function lever was developed in which only a simple "punching" movement of the thumb is needed to both downshift and upshift. The result is a significantly easier and faster shifting action which allows the rider to maintain a firm grip on the bars at all times.

Off-road STI frees the rider to shift instantly whenever the situation demands—something which is especially important for the off-road riding style. STI not only improves performance, but gives the off-road rider a refreshing new feeling of confidence and control.

Off-road STI has been made possible by continuing refinements in SIS shifting technology, Hyperglide sprockets, Superglide chainrings, and sensitive SLR braking performance.

Off-road STI will be introduced as standard equipment on all Shimano off-road component systems for 1990, from the top line Deore XT-II group to the versatile Exage family. STI also signals a new era in off-road cycling.

1 Let your thumb shift while you keep your grip...

The biomechanical design of STI's Rapid Fire levers, placed under the bar, lets you keep your grip while shifting with a fast repeat-action movement of the thumb only.

2 Get the gear you need exactly when you need it...

With STI there's no need to reach for the shift lever—it's always there, right under your thumb. This means you can instantly punch in the gear you want exactly when you need it, without changing hand position or diverting attention from the trail ahead.

3 A "thumb only" one-punch shifting action...

STI's dual-action lever gives you one lever for upshifting and one for down shifting. Both levers work with the same positive repeat action. One punch of your thumb gives you either a higher or lower gear—shifting can't be any easier.



THESE ARE THE ADVANCED FUNCTIONS THAT MADE STI A REALITY...



Fast and smooth shifting, even under high chain loads.

When shifting with conventional sprockets, the chain can occasionally slip over the gear teeth or ride on top of the teeth before completing the shift. This problem is made even worse when a shift is attempted under high chain loads.

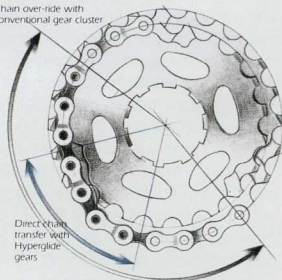
Hyperglide sprockets were developed in order to solve these long standing shifting problems.

Shimano made extensive use of the computer in the development of Hyperglide. Hyperglide works by controlling chain movement between sprockets so that the chain moves quickly and directly from one sprocket to the next. It's done through special tooth profiles designed to positively release and pickup the chain, and the strategic indexing of the sprockets in relation to each other.

The result is significantly upgraded shifting performance that helps make STI a reality. Hyperglide shifts are fast and clean, even when there's high torque applied to the chain as when climbing or sprinting.

Hyperglide sprockets are standard equipment on all Shimano component groups for 1990.

Chain over-ride with conventional gear cluster



Significantly improved chainwheel shifting

The same technology applied to the Hyperglide sprocket has been applied in the development of the Superglide chainring in order to solve the problems inherent in chainwheel shifting.

The main chainwheel shifting problem occurs when shifting to the inner chainring while applying pressure to the pedals, such as when trying to shift when climbing. Strong pressure on the chain makes it difficult for the chain to separate from the large chainring. And when the chain does shift, many times it misses the inner chainring or fails to engage quickly.

The unique computer-aided design of the Superglide chainring features a special tooth profile that lets the chain release only at the two points of lowest pressure on the chainring. Shifting shock is eliminated. Chainwheel shifting becomes smoother, faster, and much more precise.

Superglide chainrings are available in both round and Biopace types. They make a significant contribution to the advanced performance of the STI system.

1. Chain shifting shock eliminated

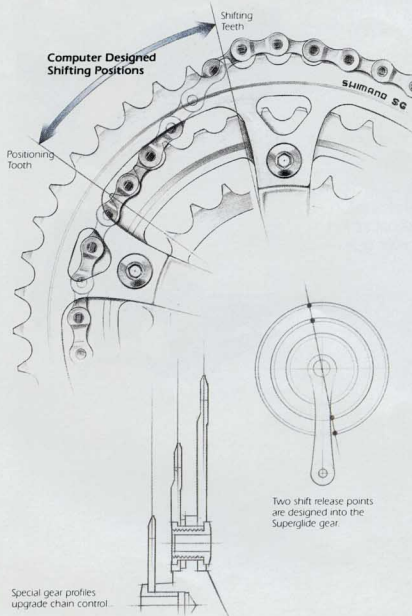
Shifting shock and hesitation are completely eliminated, even during high pedal loads.

2. Chain throwing eliminated

Superglide's specifically designated chain release and pickup points enhance chain control to realize much more precise chainwheel shifting.

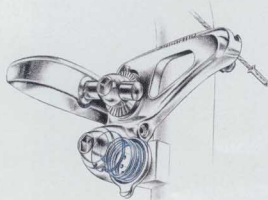
3. Smoother chain movement

Superglide's controlled chain movement prevents damage to chainwheels while providing a much smoother shifting action.





Improved braking power with more sensitive lever control



At its introduction, Shimano Linear Response (SLR) finally reconciled the two opposing factors of bicycle braking performance—stopping power and control sensitivity.

The SLR design eliminates friction in the brake system by utilizing a special helper spring in the lever, low-friction pivot bearings in the caliper, and other mechanisms which result in strong braking power being delivered with sensitive and responsive fingertip control.



Super SLR is the latest refinement of the system in which the sidepull caliper utilizes a new dual-pivot design that acts to boost braking power in relation to lever input.

Super SLR is standard equipment on Shimano 105SC, and the Exage 500EX component groups for 1990.



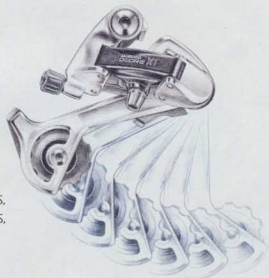
Shimano indexed shifting continues to be refined.

There are many indexed shifting systems available today, but only one SIS. Shimano Index Shifting is the original indexed shifting system that continues to define the world standard in derailleur shifting performance.

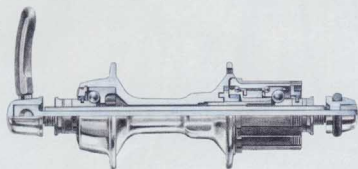
SIS delivers fast, positive, and error-free gear shifting that doesn't take practice or skill. With SIS, anyone can shift like a pro, right from the start.

SIS continues to improve. Progressing from six to seven to 8-speed systems, SIS performance is being upgraded through the use of new light-action SIS units, Hyperglide sprockets, and Superglide chainrings.

SIS is still the leader in indexed shifting.



New Hyperglide Freehub System



The Shimano freehub combines the rear hub and freewheel mechanism into a stronger one-piece unit. The advantages of freehub design are more advantageous placement of spoke flanges, placement of the hub bearings closer to the dropouts, and a stronger rear frame triangle to enhance power transfer efficiency.

The freehub has also contributed to the development of 7- and 8-speed gearing.

Another advantage of the freehub is that it helped make possible the Hyperglide sprocket. An asymmetrical spline on the freewheel body allows precision Hyperglide sprocket indexing.



Greater pedalling efficiency with Superglide shifting

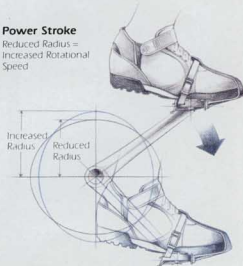
The optimum pedalling motion should copy the natural movement of the human leg when it's walking or running.

That's exactly what Biopace does. Biopace is a computer-designed chainring whose non-round shape produces a pedalling cadence that more closely matches the natural speed changes in the human leg when walking or running.

The result is that pedalling with Biopace feels lighter and livelier, hills are easier to climb, and stamina is also increased.

Now Biopace incorporates the Superglide function which means that it shifts better than ever. It's another Shimano function that brings the bicycle closer to the rider.

Power Stroke
Reduced Radius =
Increased Rotational
Speed



Transition Point
Increased Radius =
Smoother Transition to
Power Stroke

DURA-ACE



● A Revolution in Gear Shifting Heightens the Dura-Ace Advantage.

The latest in advanced Shimano functions has enhanced the winning advantage of Dura-Ace. These functions help realize the fraction-of-a-second advantage that often makes the difference between winning and losing in professional cycling.

Starting with a 6-speed version, Dura-Ace's SIS has been refined and upgraded to include 7-speed and now the Integrated 8-speed version that finally responds to the real needs of the racing cyclists. The result is higher performance proven by the increasing number of racers winning with Dura-Ace.

And now Hyperglide sprockets and Superglide chainwheels have been incorporated into Dura-Ace. Made possible by advanced computer design techniques, Hyperglide and Superglide make SIS shifting faster and smoother than ever before. It's all part of Dura-Ace's winning advantage.



Dura-Ace...
The ultimate racing machine.





Integrated-8 and Hyperglide... An Unbeatable Combination.

Integrated-8 SIS was developed to respond to the racer's demand for more gearing. Integrated-8, Shimano Freehub, and Hyperglide sprockets form Dura-Ace's new winning combination. This is gear shifting performance at the forefront of racing bicycle technology.

Freehub design allows bearing placement nearer the dropouts to reduce rear axle flex and provide greater power transfer efficiency. The Freehub also allows the use of an 8-speed sprocket cluster with no more rim dish than standard 7-speed systems. The result? The advantage of 16-speed SIS shifting with absolutely no sacrifice in rear wheel strength.

Add Hyperglide sprockets to the Freehub and you've got the most advanced 8-speed competition shifting system available today. That's because Hyperglide sprockets make the chain shift faster and smoother, even under the highest pedal loads such as flat-out sprinting, chasing, and climbing.

Integrated-8 with Hyperglide. It's the beginning of a new winning tradition.



Some questions about DURA-ACE and how to answer them.

Q.1:

Can Hyperglide sprockets be installed on the current Dura-Ace freehub? And will I be able to use normal Dura-Ace sprockets on a Hyperglide Freehub?

A.1:

Yes! Hyperglide sprockets can be installed on current 8-speed Dura-Ace freehub!

For the Integrated-8 Freehub (FH-7402), installation of the separately available freewheel body (with dust cap) for the FH-7403 freehub will allow installation of a

Hyperglide 8-speed sprocket cluster.

Also, the right-hand side lock nut must be replaced with a FH-7403 right-hand side lock nut.

Conversely, non-Hyperglide sprockets simply slide on the Hyperglide type spline with no modification necessary except that you have to use the CS-6400 or CS-1000 top gear for 7-speed clusters.

Of course, the Hyperglide shifting advantage won't be realized unless Hyperglide sprockets are installed on the Hyperglide-compatible Freehub.



Superglide...The New Concept in Chainwheel Shifting Performance.

The Dura-Ace Superglide chainwheel uses the same technology applied to the Hyperglide sprocket in order to improve front derailleur shifting performance.

How does Superglide do it? It incorporates special release teeth at two points on the chainwheel which allow the chain to separate cleanly at the point of lowest torque. So, no matter how hard you're pedalling, you always get fast, smooth, and crisp shifts from the chainwheels.

The chain moves cleanly and smoothly from the outer chainwheel to the inner without any shock, slap, or hesitation. With Superglide, there's absolutely no need to let off of pedal pressure or slow down your cadence in order to pull a clean chainwheel shift.

And what's more, the new Dura-Ace FD-7403 front derailleur has a 2-position spring tension adjustment feature which lets you set it to your own preference.

Most of all, Superglide gives the racer complete confidence that the front derailleur will shift fast and dependably during the stress of competition.



Some questions about DURA-ACE and how to answer them.

Q.1:

Can I just install the Superglide chainrings on my Dura-Ace crankset and get the full Superglide advantage?

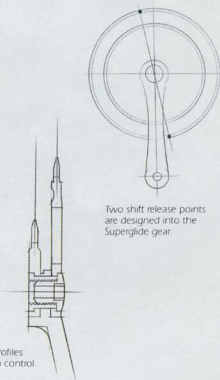
A.1:

Just install Superglide chainrings to your crank for upgraded shifting performance.

Install the Superglide chainrings like any conventional chainring, just be careful to align the indexing marks as indicated. That's all it takes to get upgraded front chainwheel shifting from the advanced Superglide

design.

Remember that Superglide chainrings must be installed in pairs and are available in 52T x 42T, 53T x 42T, and 53T x 39T sets.



Two shift release points are designed into the Superglide gear.

Special gear profiles upgrade chain control

DURA-ACE

ROAD



SG



FC-7402-SG

HG



FH-7403
CS-7401



Model No.	Specifications	Compatibility	Finish	Other Information
Rear Derailleur RD-7402	209g Front Difference: 14T Total Capacity: 26T Max. Rear Sprocket: 26T Min. Rear Sprocket: 12T	6.7 & 8-speed SS Compatible Centeron Guide Pulley Sealed Pulley Sealed Link Pivots B-Tension Adjuster Chain Retainer	Bracket Body: Light Alloy+Anodized Finish Plate Body: Light Alloy+Anodized Finish Right Link: Light Alloy+Anodized Finish Left Link: Light Alloy+Anodized Finish	
Front Derailleur FD-7403-B (Band Type) FD-7403-F (Italian Blazed-on Type)	93g (Band Type) Band Diameter: Ø28.0mm ~ Ø28.6mm Capacity: 15T Stroke (w/Ø28.6mm Band): 37 ~ 51	SS Gear Compatible Narrow Type Chain Compatible Chain Release Dish-Out Helicoi-Secured Cable Fixing Bolt	Right Link: Light Alloy+Anodized Finish Front Band: Light Alloy+Anodized Finish Chain Guide: Chrome Plated	
Shifting Lever SL-7402-FCAl (8-speed SS, Blazed-on A Type)	67g 8-speed SS Down Tube Lever Lever Clamp Diameter: 28.6mm *“C” means Italian Type (Fixing Bolt is 5mm Diameter)	SS-Friction Mode Switch Light Action Lever Sealed Mechanism Human Engineered Design 30° Offset of Lever Stopper Sealed Outer Casing	Light Alloy+Paint Finish	
Shifting Lever SL-7401-BCAl (7-speed SS, Band A Type) SL-7401-FCAl (7-speed SS, Blazed-on A Type)	65g 7-speed SS Down Tube Lever Lever Clamp Diameter: 28.6mm *“C” means Italian Type (Fixing Bolt is 5mm Diameter)	SS-Friction Mode Switch 30° Offset of Lever Stopper Light Action Lever Sealed Mechanism Human Engineered Design Sealed Outer Casing	Light Alloy+Paint Finish	
Shifting Lever SL-7400-BCAl (6-speed SS, Band A Type) SL-7400-FCAl (6-speed SS, Blazed-on A Type)	72g 6-speed SS Down Tube Lever Lever Clamp Diameter: 28.6mm *“C” means Italian Type (Fixing Bolt is 5mm Diameter)	SS-Friction Mode Switch Sealed Mechanism Human Engineered Design Sealed Outer Casing	Light Alloy+Buff Finish	
Caliper Brake BR-7402-49 (Short 49 Type)	376g (F & R, 49 Type) *For SLR System use with SLR Compatible Brake Lever and Shimano Outer Cable with Liner	SLR (Shimano Linear Response) System Spring Sleeve Thrust Bearing & Coated Pivot Washer Low Profile Brake Shoe Click & Eccentric Type Quick Release	Light Alloy+Anodized Finish	
Brake Lever BL-7402 (Aero Type)	240g Pair Lever Clamp Diameter: 24.2mm, 23.8mm Lever Stroke: 88 *For SLR System use with SLR Compatible Brake Lever and Shimano Outer Cable with Liner	SLR (Shimano Linear Response) System Aerodynamic Design	Lever: Light Alloy+Anodized Finish Bracket: Light Alloy+Chrome Plated Cover: Soft Resin-Molding	

Model No.

Front Chainwheel
FC-7402-SG
 (SG Gear Double, LD Type)
FC-7402
 (Double, LD Type)

Bottom Bracket Assembly
BB-7400
 (BB Set)

Freehub
FH-7403
 (Rear, 8-speed)

Freehub
FH-7402-8
 (Rear, 8-speed)
FH-7400-6/7
 (Rear, 6- & 7-speed)

Front Hub
HB-7400

Cassette Sprockets
CS-7401
 (8-speed Hc)

Cassette Sprockets
CS-7400-8
 (8-speed)

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

HG Chain

CN-7401

Head Parts
HP-7400

Cleppel Pedal
PD-7401

Pedal
PD-7400

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

Handle Stem
HS-7400

Specifications

643g (42T, 52T, 170mm)
 292g (BB Set)
 Crank Length: 165mm, 167.5mm,
 170mm, 172.5mm, 175mm,
 177.5mm, 180mm
 BB Axle Length: 112 (113)
 Chain: 1/2" x 3/32"
 Crank Thread: English BC 9/16" x 20TPI
 Cup Thread: English BC 13/7 x 24TPI
 French M35 x 1.0, Italian M36 x 24TPI

439g (w/Quick Release)
 Spoke Holes: 36H, 32H, 28H.
 Hole PCD: 44
 O.L.D.: 130mm
 Axle Thread: 10mm
 Axle Length: 141mm
 Mounting Type: Quick Release

439g
 (6 & 7-speed w/Quick Release)
 Spoke Holes: 36H, 32H, 28H.
 Hole PCD: 44
 Axle Thread: 10mm

228g
 Spoke Holes: 36H, 32H, 28H.
 Hole PCD: 38
 O.L.D.: 100mm
 Axle Thread: 9mm
 Axle Length: 108mm
 Mounting Type: Quick Release

255g
 (Sprocket S Group & Spacer)

255g
 (8-speed, Sprocket 12T ~ 21T & Spacer)
 Teeth: Threaded Sprocket: 12T ~ 14T
 Built-in Spacer Type Sprocket: 13T ~ 15T
 Spine Sprocket: 14T ~ 26T, 28T

208g
 (6-speed, Sprocket 13T ~ 21T & Spacer)
 221g
 (7-speed, Sprocket 12T ~ 21T & Spacer)
 Teeth: Threaded Sprocket: 12T ~ 14T
 Built-in Spacer Type Sprocket: 13T ~ 15T
 Spine Sprocket: 14T ~ 26T, 28T

Size: 1/2" x 3/32" Chain

113g
 Height: Upper Cone 22.8mm
 Lower Cone 13.5mm

416g (Pedal, Pair)
 92g (Cleat & Hard Wear)
 Crank Thread:
 English BC 9/16" x 20TPI

372g (Pair, Including Toe Clip Size L)
 Toe Clip Size: M, L, LL
 Toe Clip Locking System: 3-Screw
 Crank Thread:
 English BC 9/16" x 20TPI

224g (A-Type), 244g (B-Type)
 Shaft Adjustment Length:
 25.0mm, 26.0mm, 26.2mm,
 26.4mm, 26.6mm, 26.8mm,
 27.0mm, 27.2mm, 27.4mm
 Shaft Diameter: 26mm or 28mm

252g (100mm), 269g (120mm)
 Extension: 70mm, 80mm, 90mm,
 100mm, 110mm, 120mm, 130mm
 Handle Stem Diameter: 22.2mm
 Handle Bar Clamp Diameter: 26.0mm

Compatibility

SG Gear (FC-7402-SG)
 Narrow Type Chain Compatible
 Computer Aided Design (Crank)
 Sealed Mechanism (BB)

8-speed SS Compatible
 UGHG Compatible Type
 Lip Type Sealed Mechanism

8-speed SS Compatible (7402-8)
 6/8-speed SS Compatible (7400)
 Lip Type Sealed Mechanism (7402-8)

Lubrication Ports
 with Open/Close Indicator
 Lip Type Sealed Mechanism

8-speed SS Compatible
 8-speed Hyperglide
 Use Narrow Type Chain

8-speed SS Compatible
 Narrow Type Chain
 New Unglide Teeth

6 & 7-speed SS Compatible
 Narrow Type Chain (7-speed)
 New Unglide Teeth

Narrow Type Hyperglide Chain

Road Type
 Sealed Mechanism

34° Road Clearance
 Compound Roller & Ball Bearing Axle
 Aerodynamic Ductless Design
 Adjustable Cleat Grip Tension
 Compatible Look® Cleat

34° Road Clearance
 Compound Structure of
 Needle Bearing and Cup & Cone
 Aerodynamic Design
 Sealed Mechanism

Aerodynamic Design
 Hexagon Release

Aerodynamic Design
 Hexagon Release

Finish

Crank Arm:
 Light Alloy-Anodized Finish
 Chain Ring:
 Light Alloy-Anodized Finish

Light Alloy-Anodized Finish

Light Alloy-Anodized Finish

Light Alloy-Anodized Finish

Steel+Champagne Gold Finish

Steel+Champagne Gold Finish

Steel+Champagne Gold Finish

Roller Link Plate: Silver Finish
 Pin Link Plate: Silver Finish

Body: Light Alloy

Body: Light Alloy+Boff Finish
 Plate: Steel or Anodized
 Toe Clip: Steel or Anodized

Light Alloy+Anodized Finish

Light Alloy+Anodized Finish

Other Information

FC-7402-SG
 Teeth:

	Round		
Top	52T	53T	53T
Low	42T	42T	39T

FC-7402
 Teeth:

	Biopace	Round
Top	53T	56 ~ 48T
Low	42 (H/P)	45 ~ 39T

FH-7402/7400

	7402/8	7400 6/7
O.L.D.	130	126.5
Axle Length	141	137
Chain Line	42.65	42.6 (H/S) 42.95 (7S)
Mounting Type	Quick Release	

CS-7401

Cassette Sprocket Combinations:

8-speed
 S 12, 13, 14, 15, 16, 17, 19, 21, 23T
 T 13, 14, 15, 16, 17, 19, 21, 23T

CS-7400-8

Standard sprocket Combinations:

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

CS-7400-6/7

Standard sprocket Combinations:

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

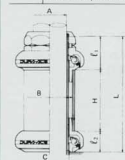
HP-7400

Various:

English/Italian Type	
Thread	BCI x 24T
Press Race Diameter	Upper Cone & Lower Cup: 30.2mm, 30.0mm (JIS)
	Lower Cone: 26.4mm, 27.0mm (JIS)
French Type	
Thread	M25 x P1.0
Press Race Diameter	Upper Cone & Lower Cup: 30.2mm, 30.0mm (JIS)
	Lower Cone: 26.4mm, 27.0mm (JIS)

Dimensions:

ℓ ₁	22.8mm
ℓ ₂	13.5mm
H	Head Tube Length
L	L x 36.3mm
A	22.3mm
B	30.2mm/30.0mm (JIS)
C	26.4mm/27.0mm (JIS)
Thread	BCI (1" x 24T) (English, Italian Thread) M25 x P1.0 (French Thread)



DURA-ACE

TRACK



Model No.

Specifications

Compatibility

Finish

Other Information

Hub
HB-7600
(Large & Small Flange)

313g (Rear Large Flange w/Lock Ring)
241g (Front Large Flange w/Lock Ring)
Axle Thread: 10mm
(One-Side or Both-Side Threaded Type)
Spoke Holes: 24H, 28H, 32H, 36H
Spoke Hole Diameter: $\varnothing 2.4\text{mm}$

	Rear	Front
OLD	120	100
Fork End Slot Width	10mm	9mm

Precision Ground Cones
Diamond-Polished Mirror Finish
(Cup & Cones)
Sealed Mechanism
Composite-Type Design (Large Flange)

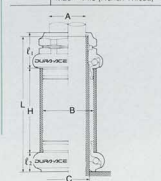
Forged Alloy+Anodized Finish

HP-7600
Variation

English/Italian Type		
Thread	BC1 $\times 24\text{T}$	
Press Race Diameter	Upper Cone & Lower Cup	30.2mm, 30.0mm [JIS]
	Lower Cone	26.4mm, 27.0mm [JIS]
French		
Thread	M25 $\times P1.0$	
Press Race Diameter	Upper Cone & Lower Cup	30.2mm, 30.0mm [JIS]
	Lower Cone	26.4mm, 27.0mm [JIS]

Dimensions:

f_1	19.5mm
f_2	11.5mm
H	Head Tube Length
L	H+31.0mm
A	22.0mm
B	30.2mm/30.0mm [JIS]
C	26.4mm/27.0mm [JIS]
BC $1^{\circ} \times 24\text{T}$ (English: Italian Thread/ M25 $\times P1.0$ (French Thread))	



Sprocket
SS-7600
(Hub Sprocket
for Track Model)

Thread: BC $1.37 \times 24\text{TPI}$ (English)
Standard Sprocket:
 $1/2^{\circ} \times 1/8^{\circ}$; $1/2^{\circ} \times 3/32^{\circ}$
Teeth: 13T, 14T, 15T, 16T
 $1/2^{\circ} \times 1/8^{\circ}$ Sprocket:

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

Cr-Mo Steel

Front Chainwheel
FC-7600

605g (48T, 170mm.)
305g (BB Set)

Bottom Bracket
Assembly
BB-7600
(BB Set)

Crank Length: 165mm., 167.5mm.,
170mm., 172.5mm., 175mm.
Teeth: 42T ~ 55T
BB Axle Length: 109
Chain: $1/8^{\circ} \times 3/32^{\circ}$
Crank Thread: English BC $9/16^{\circ} \times 20\text{TPI}$
Cup Thread: English BC $1.37 \times 24\text{TPI}$
French M35 $\times 1.0$, Italian M36 $\times 24\text{TPI}$

Exclusively Designed for Track
Computer Aided Design (Crank)
Removable Sealed Mechanism (BB)

Crank Arm:
Light Alloy+Anodized Finish
Chain Ring:
Light Alloy+Anodized Finish

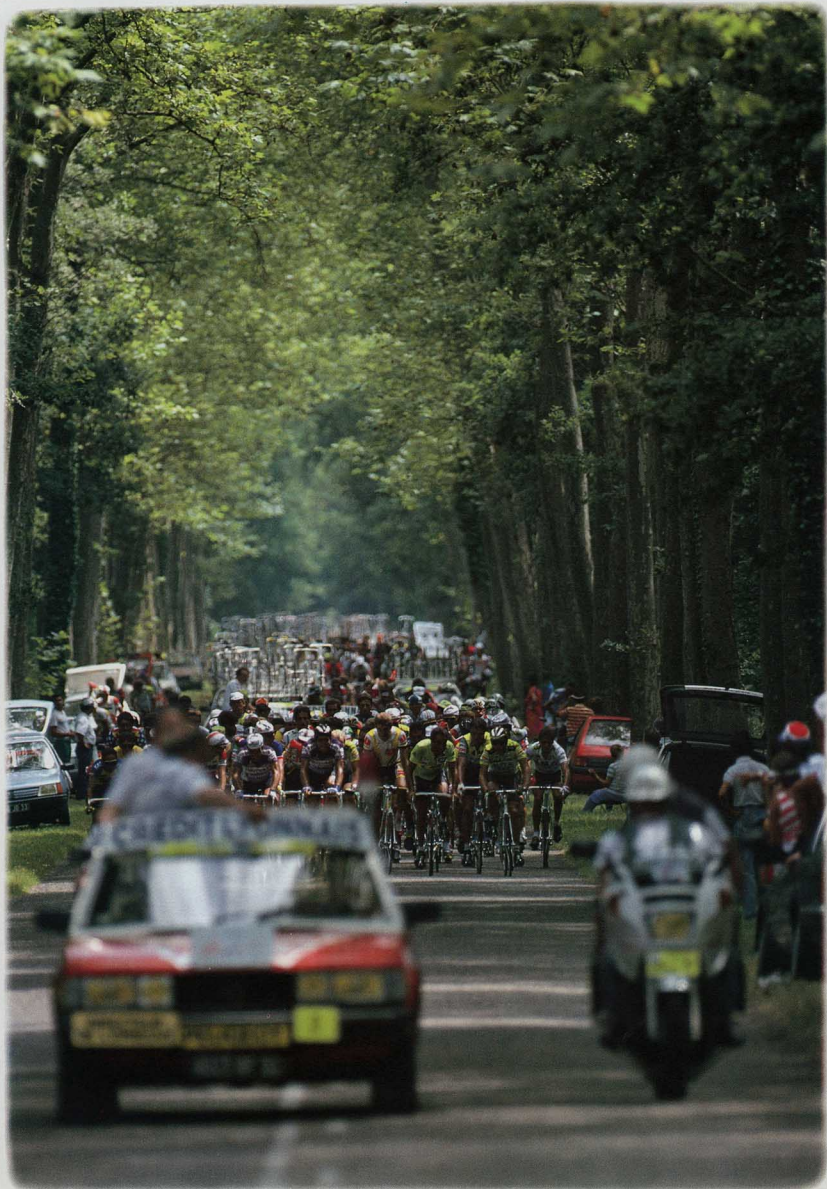
Head Parts
HP-7600

90g
Height: Upper Cone: 19.5mm.
Lower Cone: 11.5mm.

Track Type
Sealed Mechanism
Composite Structure
Super Light Weight

Lock Nut: Light Alloy+Anodized
Upper Cup: Bearing Stainless Steel
Lower Cup: Bearing Stainless Steel
Upper & Lower Cone: Stainless Steel

SHIMANO 600
ULTEGRA



The "high-response" racing components.

Good racing components are not limited only to those used in the highest reaches of professional competition. Shimano 600 ULTEGRA is a real racing component group for the quality racing-style bicycle.

600 ULTEGRA is a unique blend of quality, high-performance functions, and visual appeal that responds perfectly to today's demand for a high-quality competition-oriented sport bike. 600 ULTEGRA delivers high-performance with a friendly feeling of control backed up by the advanced Shimano functions of 7-speed SIS shifting, Hyperglide sprockets, sensitive SLR braking, and a unique Positive Grip Cleat & pedal design. 600 ULTEGRA has been further refined with polished bearing races and strengthening of all vital parts.

Seamless compact design, coordinated 2-tone coloring, and a high-tech image make 600 ULTEGRA reflect the contemporary cycling style with the quality and performance of advanced Shimano functions to back it up.



The 600 Ultegra equipped bicycle is a high-style high-tech machine.



SHIMANO 600 ULTEGRA



Model No.

Specifications

Compatibility

Finish

Other Information

Rear Derailleur
RD-6400

216g
Front Difference: 13T
Total Capacity: 28T
Max. Rear Sprocket: 28T
Min. Rear Sprocket: 12T

687-speed SS Compatible
Double Servo-Panor Mechanism
Ceramic Guide Pulley Bushings
B-Tension Adjuster
Double Spoke Barrier

Bracket & Plate Body: Right Link:
Light Alloy+Enamel Finish
Left Link: Light Alloy+Barrel Finish

Front Derailleur
FD-6400-B (Band Type)
FD-6400-F (Italian Type)

104g (Band Type)
Band Diameter: $\varnothing 28.0\text{mm} \sim \varnothing 28.6\text{mm}$
Capacity: 14T
Stroke (W/ $\varnothing 28.6\text{mm}$ Band): 37 ~ 51

Leading Action Pantograph Mechanism
Compact Design
Rigid Chainguide

Right Link, Front & Rear Band:
Light Alloy+Enamel Finish
Chain Guide: Chrome Plated

Shifting Lever
SL-6400-FCAI
(687-speed SS, Brazed on A Type)
SL-6400-BCAI
(687-speed SS, Side Band A Type)

60g (SL-6400-FCAI)
Same Lever for 687-speed SS
Down Tube Lever
Lever Clamp Diameter: 28.6mm
* "C" means Italian Type
(Fang Bolt 5mm Diameter)

SS-Friction Mode Switch
Light Action Lever
Sealed Mechanism
Lever Interchangeability
30° Off-set of Lever Stopper
Human Engineered Design

Light Alloy+Enamel Finish

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

360g (F & R, 49 Type)
* For SLR System use with SLR Compatible
Brake Lever and Shimano Outer Cable with
Line

SLR (Shimano Linear Response)
Compatible
Spring Sleeve
Thrust Bearing & Coated Pivot Washer
One Piece & Low Profile Brake Shoe
Click & Eccentric Type Quick Release

Light Alloy+Enamel Finish

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

260g (BL-6401, Pair)
Lever Clamp Diameter: 23.8mm~24.2mm
Lever Stroke: 79 (6402), 89 (6401, 6400)
Bracket Cover: Black, White
* For SLR System use with SLR Compatible
Brake and Shimano Outer Cable with Line

SLR (Shimano Linear Response)
Compatible
Aerodynamic Design

Lever: Light Alloy+Enamel Finish
Bracket: Light Alloy+Barrel Finish
Cover: Soft Resin-Molding

Front Chainwheel
FC-6400-BP
(Bespoke Drive, LD Type)
FC-6400
(Round Chaining, LD Type)
* Option

650g (42T, 52T, 170mm)
308g (BB Set)
Crank Length: 165mm, 167.5mm,
170mm, 172.5mm, 175mm.
Teeth: Top 50T, 52T, 53T
Low 40T (HP), 42T (HP)
BB width: 113 (115)
Chain: 1/2" x 3/32"

Narrow Type Chain Compatible
Computer Aided Design (CAD)
Sealed Mechanism (BB)
Low Profile Design
Design Forged Arm & Spider

Crank Arm:
Light Alloy+Anodized Finish
Chain Ring:
Light Alloy+Anodized Finish

Bottom Bracket Assembly
BB-6400

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

7-speed SS Compatible (6401)
687-speed SS Compatible (6400/67)
UGHG Compatible Type (6401)
One-Piece Forged Hub Body
Lip Type Sealed Mechanism
Uni-Balance System

Light Alloy+Anodized Finish

Freehub
FH-6401
(Black, 687-speed)
FH-6400/67
(Black, 687-speed)

423g (687-speed w/Quick Release)
Spoke Holes: 36H, 32H, 28H.
O.L.D.: 126mm
Axle Length: 137mm
Mounting Type: Quick Release

7-speed SS Compatible (6401)
687-speed SS Compatible (6400/67)
UGHG Compatible Type (6401)
One-Piece Forged Hub Body
Lip Type Sealed Mechanism
Uni-Balance System

Light Alloy+Anodized Finish

Front Hub
HB-6400-F

212g
Spoke Holes: 36H, 32H, 28H.
O.L.D.: 100mm
Axle Length: 108mm
Mounting Type: Quick Release

One-Piece Forged Hub Body
Lip Type Sealed Mechanism

Light Alloy+Anodized Finish

Cassette Sprockets
CS-6400-67

223g (7-speed Sprocket 12-21T & Spacer)
For 1/2" x 3/32" Chain
Narrow Type Chain (for 7-speed)

687-speed SS Compatible

Steel/Silver Finish

Cassette Sprockets
CS-HG90
(7-speed HG)

286g (Sprocket 1 Group & Spacer)
For 1/2" x 3/32" Chain
Use Narrow Type Chain

7-speed SS Compatible
7-speed Hyperglide

Steel+Chrome Plated

HG Chain
CN-HG90

326g (110 Link)
Size: 1/2" x 3/32" Chain

Narrow Type Hyperglide Chain
Chromed Finish Link Pins

Roller Link Plate: Black Finish
Pin Link Plate: Silver Finish

Head Parts
HP-6400

100g
Height: Upper Cup: 22.0mm
Lower Cup: 11.5mm

Road Type
Sealed Mechanism

Lock Nut: Anodized
Upper Cup: Anodized
Lower Cup: Anodized

Clipless Pedal
CP-6401

450g (Pedal, Pair)
92g (Cleat & Hard Wear)
Crank Thread: English BC 9/16" x 20TPI

34° Road Clearance
Precision Manufacture
Easy-Maintenance Cartridge Axle
Adjustable Cleat Grip Tension
Efficient Sealed Mechanism
Compatible LOOK® Cleats

Body: Light Alloy

Pedal
PD-6400

478g (Pair, Including Toe Clip Size L)
Toe Clip Size: M, L, LL
Toe Clip Locking System: 3-Screw
Crank Thread: English BC 9/16" x 20TPI

34° Road Clearance
Easy-Maintenance Cartridge Axle
Aerodynamic Design
Sealed Mechanism

Body: Light Alloy+Buff Finish
Plate: Steel
Toe Clip: Steel

Seat Pillar
SP-6400-A
(Round Tube, A Type)
SP-6400-B
(Serr Oval Tube, B Type)

284g (B Type, 27.2mm)
Shaft Adjustment Length:
25.0mm ~ 27.2mm
Shaft Diameter: $\varnothing 6\text{mm}$ or $\varnothing 8\text{mm}$

Aerodynamic Design
Hexagon Release

Light Alloy+Anodized Finish

Handle Stem
HS-6400

286g (100mm)
Extension: 80mm, 90mm, 100mm,
110mm, 120mm, 130mm.
Handle Stem Diameter: 22.2mm.
Handle Bar Clamp Diameter:
25.4mm, 26.0mm.

Aerodynamic Design
Hexagon Release

Light Alloy+Anodized Finish

CS-6400

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
7-speed	12, 14, 16, 19, 22, 26T
	12, 14, 17, 20, 25, 30T
	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
8-speed	15, 16, 17, 18, 19, 20, 21T

Teeth:

6-speed	
Threaded Sprockets	12-16T (65 mark)
2nd Gear (Spine Type) W/Spacer	13T (65 mark)
Splined Sprocket	14-26T/28T/30T/32T/34T
Spacer Width	3.65mm (Light Gray)
7-speed	
Threaded Sprockets	12-16T (75 mark)
2nd Gear (Spine Type) W/Spacer	13T (75 mark)
Splined Sprocket	14-26T/28T/30T/32T/34T
Spacer Width	2nd 3.30mm (Except 13T) 3rd to low 3.15mm (15 mark) (Dark Gray)

CS-HG90

Cassette Sprocket Combinations:

7-speed	J	13	14	15	16	17	19	21T
	I	13	14	15	17	19	21	23T
	M	13	15	17	19	21	23	26T
	E	12	14	16	18	21	24	28T

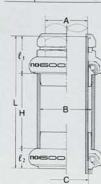
HP-6400

Variant:

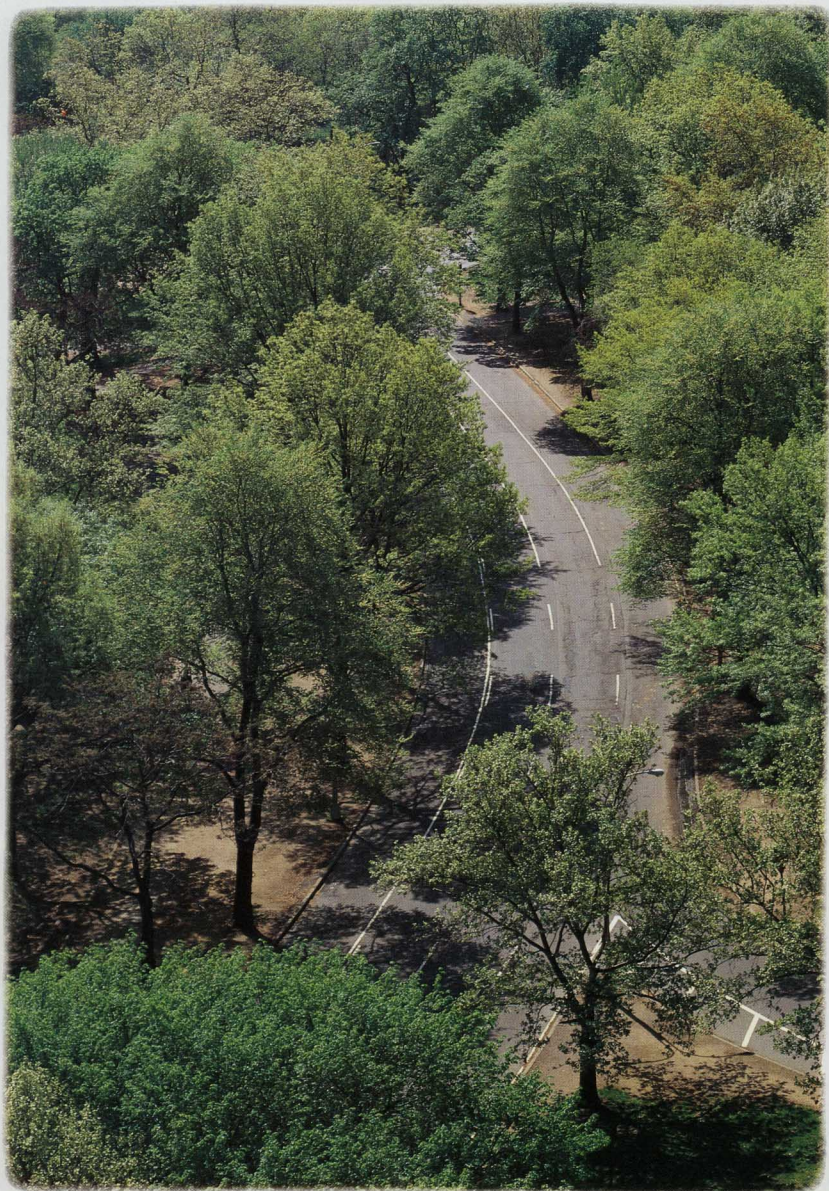
English/Italian Type		
Thread		BCI x 24T
Press Race Diameter	Upper Cone & Lower Cup	30.2mm
	Lower Cone	26.4mm

Dimensions:

E ₁	22.0mm
E ₂	11.5mm
H	Head Tube Length
L	H + 33.5mm
A	23.3mm
B	30.2mm
C	26.4mm
Thread	BCI x 24T (English Thread)



SHIMANO 105 SC



● A refinement of the basic racing-style component group.

Shimano 105 was developed to provide high-performance cycling capability together with a distinct and pleasing appearance reflecting the new age of performance-oriented sport cycling.

Shimano 105 SC is a refinement of that concept in a component group that delivers more performance than ever in a stunning new visual style. 105 SC now incorporates high-performance Hyperglide 7-speed SIS shifting, easy pedalling Biopace chainrings, and a Super SLR dual-pivot caliper that delivers stronger braking power than ever. The PD-1056 clipless pedal offers two release settings to allow easier cleat release for first-time users.

From casual sport riders to budding triathletes to dedicated competition enthusiasts, Shimano 105 SC delivers the looks and performance that's sure to satisfy everyone who loves to ride.



105 SC...High performance components for everybody who loves to ride fast.



Shimano 105 SC

23



**Some questions about
SHIMANO 105 SC
and how to answer them.**

Q.1:

How does the current SLR caliper brake differ from the new Super SLR caliper?

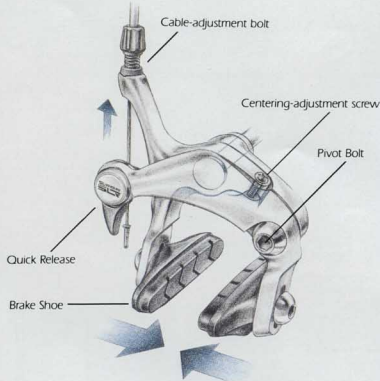
A.1:

More braking power from less lever input.

The new Super SLR caliper utilizes a dual-pivot design which gives each caliper arm its own pivot point. What this does is place the caliper arm pivot closer to the brake shoe in order to increase the caliper's power multiplication factor.

As a result, you get more braking power at the rim with the same amount of input at the lever. This is especially beneficial in a low-friction SLR brake system because the extra braking power can be easily controlled through sensitive lever response.

The Super SLR caliper also offers an adjuster screw which makes centering the caliper over the rim a fast and simple operation.



Q.2:

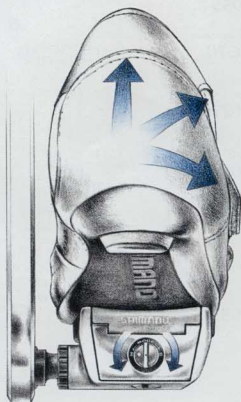
Why is there a switch marked "S" and "M" on the 105 SC clipless pedal?

A.2:

To Allow you to choose the cleat release tension that's comfortable for you.

The PD-1056 clipless pedal lets you choose the cleat release mode that feels best for you. For example, set the changeover switch to the "S" (Single-Release) mode for normal cleat release tension, the same amount of tension as used in the our PD-7401 and PD-6401 pedal system.

The "M" (Multiple-Release) mode provides less tension so your foot can be removed easier from the pedal. This is especially useful for first-time users of clipless pedals who feel more confident if they can remove their feet easily from the pedals.





High-performance sport components with an appearance to match.

More and more different types of sport bicycles are being offered in a wider range of prices. The Shimano RX100 component group can bring advanced Shimano quality, function, and contemporary styling to a very reasonable priced lightweight sport bike.

Yet there's no sacrifice in performance with RX100. You get light-action 7-speed SIS shifting with Hyperglide sprockets plus dual-pivot Super SLR brakes and SG Gear. There's an aerodynamic pedal too.

RX100 also offers the quality component look of pure brushed aluminum which can enhance any bicycle.

Shimano RX100 is the stylish new way to high-performance cycling that won't strain the budget.

RX100—A stylish and economical way to high-performance sport cycling.



Shimano RX100

A collection of bicycle components, including a large chainring, a chain, a cassette, a pedal, a crank arm, a rear derailleur, a front derailleur, a shift lever, a handlebar grip, and various small parts like bolts and washers.

Model No.

Specifications

Compatibility

Finish

Other Information

Rear Derailleur
RD-A550

280g
Front Difference: 13T
Total Capacity: 28T
Max. Rear Sprocket: 28T
Min. Rear Sprocket: 12T

6 & 7-speed SS Compatible
Sintered Alloy Guide Pulley bushing
Creston Guide Pulley
Adjustable Return Spring
B-Tension Adjuster

Bracket: Body: Light Alloy+Barrel Finish
Plate Body: Light Alloy+Barrel Finish
Right Link: Light Alloy+Barrel Finish
Left Link: Steel+Pearl Bright Finish

Front Derailleur
FD-A550-B
(Band Type)
FD-A550-F
(Italian Type)

100g (Band Type)
Band Diameter:
Ø28.0mm ~ Ø28.6mm
Capacity: 14T
Stroke (w/Ø28.6mm Band): 37 ~ 51

Leading Action Pantograph
Mechanism
Compact Design
Rigid Chainguide

Right Link: Light Alloy+Barrel Finish
Front Band: Light Alloy+Barrel Finish
Rear Band: Light Alloy+Barrel Finish
Chain Guide: Pearl Bright Finish

Shifting Lever
SL-A550-FCAI
(7-speed SS, Based on A Type)
SL-A550-BCAI
(7-speed SS, Side Band A Type)

72g (SL-A550-FCAI)
7-speed SS
Down Tube Lever
Lever Clamp Diameter: 28.6mm.
* "C" means Italian Type
(Flying Bolt is 5mm Diameter)

SS-Friction Mode Switch
Light Action Lever
Sealed Mechanism
Lever Interchangeability
Human Engineered Design

Light Alloy+Barrel Finish

Dual Pivot Brake
BR-A550-49
(Short 49 Type)
BR-A550-57
(Long 57 Type)

348g (F & R 49 Type)
*BR-A550 must be used as a set with
BL-A550 and the Shimano SLR outer cable.
No other combination can be used.

Super SLR (Shimano Linear Response)
Compatible
Coated Pivot washer
Easy Adjust
One-Piece & Low Profile Brake Shoe
Spring Sleeve

C-Arm: Light Alloy+Anodized Finish
Y-Arm: Light Alloy+Anodized Finish
Gate: Light Alloy+Anodized Finish

Brake Lever
BL-A550
(Aero Type)

252g (Pair)
Lever Clamp Diameter:
23.8mm ~ 24.2mm.
Lever Stroke: 84
Bracket Cover: 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.

Super SLR (Shimano Linear Response)
Compatible
Aerodynamic Design

Lever: Light Alloy+Anodized Finish
Bracket: Light Alloy+Barrel Finish
Cover: Soft Resin+Molding

Front Chainwheel
FC-A550
(SG Gear Double, LD Type)
Bottom Bracket Assembly
BB-A550

700g (42T, 52T, 170mm.)
327g (BB Seal)
Crank Length: 165mm., 170mm.
BB Axle Length: 113
Chain: 1/2" x 3/32"
Crank Thread: English BC 9/16" x 20TPI.
Cup Thread: English BC 1.37 x 24TPI.
French M35 x 10, Italian M36 x 24TPI.

SG Gear
Narrow Type Chain Compatible
Computer Aided Design (Crank)
Sealed Mechanism (BB)

Crank Arm: Light Alloy+Barrel Finish/
Paint Finish
Chain Ring:
Light Alloy+Anodized Finish

Freehub
FH-A550
(Rear, 7-speed)

420g (7-speed w/Quick Release)
Spoke Holes: 36H, 32H
O.L.D.: 126mm.
Axle Length: 137mm.
Mounting Type: Quick Release

7-speed SS Compatible
UGHG Compatible Type
Sealed Mechanism
Uni-Balance System
One-Piece Forged Hub Body

Light Alloy+Polish Finish

Front Hub
HB-A550-F

202g
Spoke Holes: 36H, 32H
O.L.D.: 100mm., 96mm.
Axle Length: 108mm., 104mm.
Mounting Type: Quick Release

One-Piece Forged Hub Body
Sealed Mechanism

Light Alloy+Polish Finish

Cassette Sprockets
CS-HG70
(7-speed)

325g (Sprocket I Group & Spacer)
Use Narrow Type Chain

7-speed SS Compatible
7-speed Hyperglide

Steel+Silver Finish

HG Chain
CN-HG70

337g (114 Link)
Size: 1/2" x 3/32" Chain

Narrow Type Hyperglide Chain
Bushings Design
Chrome Finish Link Pins

Roller Link Plate: Gray Finish
Pin Link Plate: Black Finish

Pedal
PD-A550

400g (Pair, Including Toe Clip Size: L)
Toe Clip Size: M, L, LL
Toe Clip Locking System: 3-Screw
Crank Thread: English BC 9/16" x 20TPI.

34° Road Clearance
Easy-Maintenance Cartridge Axle
Aerodynamic Design
Sealed Mechanism

Body: Light Alloy+Barrel Finish
Plate: Steel
Toe Clip: Resin

Head Parts
HP-R500

121g
Height: Upper Cone 22.0mm.
Lower Cone 11.5mm.
Color: White, Silver, Black

Road Type
Sealed Mechanism

Lock Nut: Steel
Upper Cup: Resin
Lower Cup: Resin

FC-A550

Test	Blade	Round
Top	52T	52, 53T
Low	42T	42T

CS-HG50

Cassette Sprocket Combinations:

7-speed	J 13, 14, 15, 16, 17, 19, 21T F 13, 14, 15, 17, 19, 21, 23T H 13, 15, 17, 19, 21, 23, 26T E 12, 14, 16, 18, 21, 24, 28T
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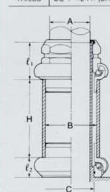
HP-R500

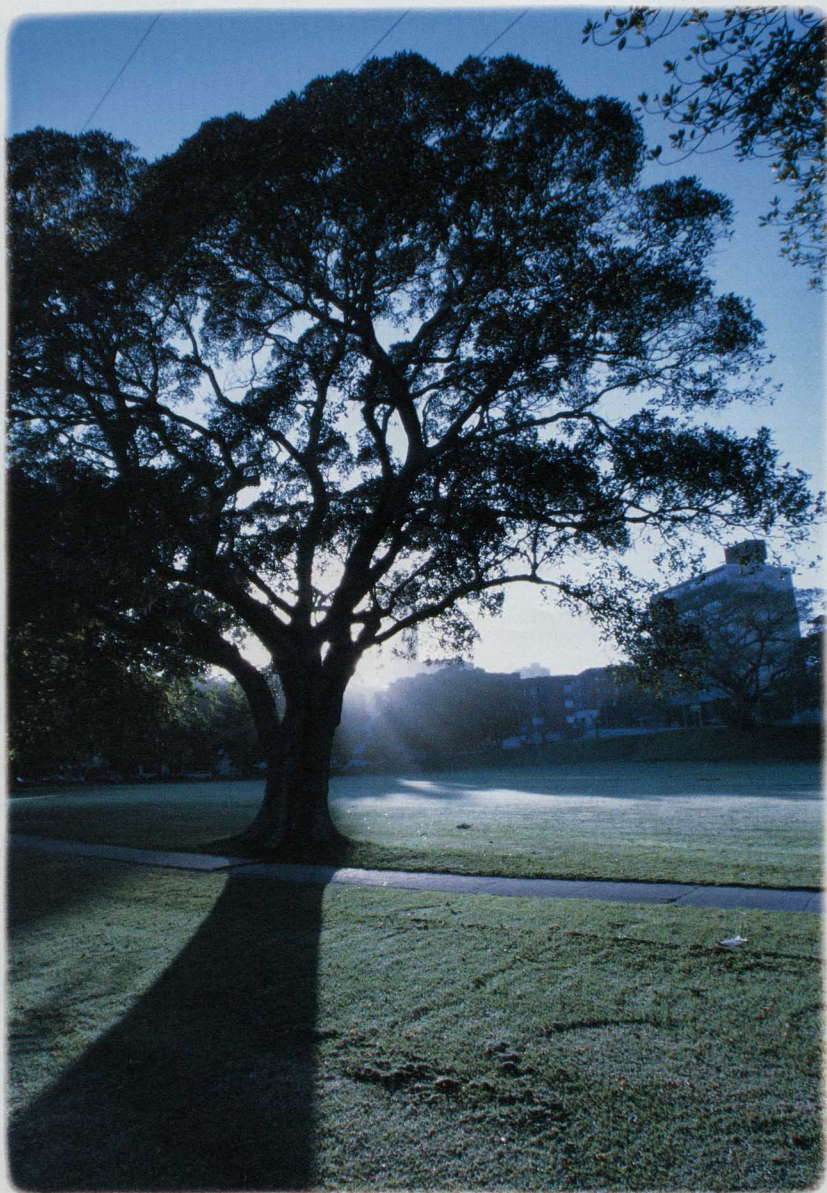
Variation:

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

Dimensions:

t_1	21.2mm
t_2	11.5mm
H	Head Tube Length
L	H + 32.7mm
A	22.3mm
B	30.2mm
C	26.4mm
Thread	BC 1" x 24T (English Thread)





The new leader in sporty performance.

Exage EX delivers looks and performance that are way ahead of its class. Only Shimano can put this kind of quality, functionality, and fresh contemporary appearance into a component system for the budget-priced lightweight sport bicycle.

The Exage EX system consists of three separate on-road component sets—Exage 500EX, 400EX, and 300EX. Exage EX delivers the latest in Shimano cycling technology with advanced features like Biopace chainwheels, smooth shifting Hyperglide sprockets, and 7-speed SIS gear shifting. Exage 500EX even offers a Super SLR brake system. The Shimano freehub is also an integral part of Exage EX. The Exage EX components make advanced Shimano functions and

performance available to a wider range of sport bikes...and a wider range of cyclists who desire Shimano quality and performance.



Some questions about
EXAGE EX
and how to answer them.

Q.1:

How are the Exage 500EX, 400EX, and 300EX components different than the old Exage components?

A.1:

7-speed Hyperglide shifting across the board.

Exage EX line has been upgraded with a new 7-speed SIS Hyperglide shifting system across the board. The old Exage groups of Sport, Action, and Motion correspond to the new Exage groups of 500EX, 400EX and 300EX respectively. In addition, Exage 500EX offers the new Super SLR system with a dual-pivot brake caliper.

EXAGE 500EX



Model No.	Specifications	Compatibility	Finish	Other Information
Rear Derailleur RD-A500	279g Front Difference: 13T. Total Capacity: 28T. Max. Rear Sprocket: 28T. Min. Rear Sprocket: 12T.	6 & 7-speed SS Compatible Double Servo-Panicle Mechanism Sintered Alloy Guide Pulley Bushing Sealed Link Photos B-Tension Adjuster	Bracket Body: Light Alloy+Paint Finish Plate Body: Light Alloy+Paint Finish Right Link: Light Alloy+Paint Finish Left Link: Steel+Pearl Bright Finish	
Front Derailleur FD-A500-B (Band Type) FD-A500-F (Italian Type)	115g (Band Type) Band Diameter: Ø28.0mm ~ 28.6mm Capacity: 14T. Stroke (w/Ø28.6mm Band): 37 ~ 51	Leading Action Pantagraph Mechanism Compact Design Rigid Changguide	Right Link: Light Alloy+Paint Finish Front Band: Steel+Paint Finish Rear Band: Light Alloy+Paint Finish Chain Guide: Chrome Plated	
Shifting Lever SL-A500-FCAl (7-speed SS, Brazed on A Type) SL-A500-BCAl (7-speed SS, Side Band A Type)	76g (SL-A500-FCAl) 7-speed SS Down Tube Lever Lever Clamp Diameter: 28.6mm. *C: means Italian type (Piano Bolt is 5mm Diameter)	SS-Friction Mode Switch Light Action Lever Sealed Mechanism Human Engineered Design	Light Alloy+Barrel Finish	
Dual Pivot Brake BR-A500-49 (Short 49 Type) BR-A500-57 (Long 57 Type)	326g (F & R, 49 Type) *BR-A500 must be used as a set with BL-A500 and the Shimano outer cable. No other combination can be used.	Super-SLR (Shimano Linear Response) Compatible Easy Adjust Spring Sleeve Coated Pivot Washer One-Piece & Low Profile Brake Shoe	C-Arm: Light Alloy+Paint Finish Y-Arm: Light Alloy+Paint Finish Gate: Light Alloy+Barrel Finish	
Brake Lever BL-A500 (Aero Type)	258g (Pair) Lever Clamp Diameter: 23.8mm ~ 24.2mm. Lever Stroke: 84 Bracket Cover: Black, White. *BL-A500 must be used as a set with BR-A500 and the Shimano outer cable. No other combination can be used.	Super-SLR (Shimano Linear Response) Compatible Aerodynamic Design	Lever: Light Alloy+Anodized Finish Bracket: Light Alloy+Barrel Finish Cover: Resin-Molding	
Front Chainwheel FC-A500 (Biopace Double, LD Type) Bottom Bracket Assembly BB-A450	720g (42T, 52T, 170mm.) 333g (BB, Set) Crank Length: 165mm, 170mm. Teeth: Top 50, 52T, 53T. Low 40T, 42T BB Axle Length: 113 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.	Narrow Type Chain Compatible Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Light Alloy+Barrel Finish Chain Ring: Light Alloy+Anodized Finish	
Freehub FH-HG50 (Rear, 7-speed)	436g (7-speed w/Quick Release) Spoke Holes: 36H, 32H. Hole PCD: 45 Axle Thread: 10mm.	7-speed SS Compatible UG/HG Compatible Type Sealed Mechanism Uni-Balance System One-Piece Forged Hub Body	Light Alloy+Dia-Cut Finish	
Front Hub HB-RM50-F	228g. Spoke Holes: 36H, 32H. Hole PCD: 38 O.L.D.: 100mm, 96mm. Axle Length: 108mm, 104mm. Mounting Type: Quick Release Axle Thread: 9mm.	One-Piece Forged Hub Body Sealed Mechanism (Choice)	Light Alloy+Dia-Cut Finish	
Cassette Sprockets CS-HG50 (7-speed)	268g (Sprocket 1 Group & Spacer) Use Narrow Type Chain	7-speed SS Compatible 7-speed Hyperglide	Steel+Brown Finish and Silver Finish (Low Gear)	
HG Chain CN-HG50	337g (114 Link) Size: 1/2" x 3/32" Chain	Narrow Type Hyperglide Chain Bushingsless Design Chromed Finish Link Pins	Roller Link Plate: Black Finish Pin Link Plate: Black Finish	
Pedal PD-A550	407g (Pair, Including Toe Clip Size L) Toe Clip Size: M, L, LL Toe Clip Locking System: 3-Screw Crank Thread: English BC 9/16" x 20TPI.	34° Road Clearance, Easy-Maintenance Cartridge Axle Aerodynamic Design Sealed Mechanism	Body: light Alloy+Barrel Finish Plate: Steel Toe Clip: Resin	
Head Parts HP-R500	121g. Height: Upper Cone 22.0mm. Lower Cone 11.5mm. Color: White, Silver, Black	Road Type Sealed Mechanism	Lock Nut: Steel Upper Cup: Resin Lower Cup: Resin	

FH-HG50

	OLD	135	140	126
Axle Length	146	141	137	
Mounting Type	Quick Release			

CS-HG50

Cassette-Sprocket Combinations:

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

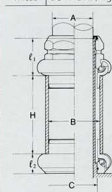
HP-R500

Variation:

	English/Italian Type
Thread	BCI x 24T
Press Race Diameter	Upper Cone & Lower Cup
	30.2mm
	Lower Cone
	26.4mm

Dimensions:

Et	22.0mm
Ez	11.5mm
H	Head Tube Length
A	22.3mm
B	30.2mm
C	26.4mm
Thread	BC 1" x 24T (English Thread)



EXAGE 400EX



Model No.	Specifications	Compatibility	Finish	Other Information
Rear Derailleur RD-A400	278g Front Difference: 13T Total Capacity: 28T Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T	6 & 7-speed SS Compatible Double Servo-Panta Mechanism Sintered Alloy Guide Pulley Bushing Centeron Guide Pulley B-Tension Adjuster Double Spoke Barrier	Bracket Body: Light Alloy+Barrel Finish Plate Body: Light Alloy+Barrel Finish Right Link: Steel+Paint Finish Left Link: Steel+Zinc Plated	
Front Derailleur FD-A400-B (Band Type) FD-A400-F (Italian Type)	113g (Band Type) Band Diameter: Ø28.0mm ~ Ø28.6mm Capacity: 14T Stroke (w/Ø28.6mm Band): 37 ~ 51	Leading Action Pantograph Mechanism Compact Design Rigid Changuide	Right Link: Light Alloy+Paint Finish Front Band: Steel+Pearl Bright Finish Rear Band: Light Alloy+Barrel Finish Chain Guide: Chrome Plated	
Shifting Lever SL-A400-FCAl (7-speed SS Braze-on A Type) SL-A400-BCAl (7-speed SS Side Band A Type)	71g (SL-A400-FCAl) 7-speed SS Down Tube Lever Lever Clamp Diameter: 28.6mm	SS-Friction Mode Switch Light Action Lever Sealed Mechanism Human Engineered Design	Light Alloy+Barrel Finish	
Front Chainwheel FC-A400 (Biopace Double, LD Type) Bottom Bracket Assembly BB-A450	920g (SZT, 52T, 170mm.) 333.3g (BB Set) Crank Length: 165mm., 170mm. Teeth: Top 52T, Low 42T BB Axle Length: 113 Chain 1/2" x 3/32" Crank Thread: English BC 9/16" x 20TPI. Cup Thread: English BC 13.7 x 24TPI. French M35 x 1.0, Italian M36 x 24TPI.	Narrow Type Chain Compatible Computer Aided Design (CAD) Sealed Mechanism (BB)	Crank Arm: Light Alloy+Barrel Finish Chain Ring: Steel+Paint Finish	
Caliper Brake BR-A350-49 (Short 49 Type) BR-A350-57 (Long 57 Type)	310g (F & R, 49 Type) *For SLR System use with SLR Compatible Brake Lever and Shimano Outer Cable with Liner	SLR (Shimano Linear Response) Compatible Click & Eccentric Type Quick Release Coated Pivot Washer Easy Adjust One Piece & Low Profile Brake Shoe Spring Sleeve Computer Aided Design (CAD)	Light Alloy+Paint Finish	
Brake Lever BL-A351 (Aero Type)	302g (Pair) Lever Clamp Diameter: 23.8 ~ 24.2mm Lever Stroke: 88 Bracket Cover: Black, White *For SLR System use with SLR Compatible Brake and Shimano Outer Cable with Liner	SLR (Shimano Linear Response) Compatible Aerodynamic Design	Lever: Light Alloy+Anodized Finish Bracket: Steel+Zinc Plated Cover: Soft Resin-Molding	The Exage 400EX component group uses certain components in common with the 500EX group which include the FH-HG50 freehub, HB-RM50 front hub, CS-HG50 cassette sprockets, CN-HG50 chain, PD-A550 pedals, and HP-R500 headset. See the 500EX component listing for more information on these components.

*"C" means Italian Type (Fixing Bolt is 5mm. Diameter)

*For SLR System use with SLR Compatible Brake Lever and Shimano Outer Cable with Liner

*For SLR System use with SLR Compatible Brake and Shimano Outer Cable with Liner

The Exage 400EX component group uses certain components in common with the 500EX group which include the FH-HG50 freehub, HB-RM50 front hub, CS-HG50 cassette sprockets, CN-HG50 chain, PD-A550 pedals, and HP-R500 headset. See the 500EX component listing for more information on these components.

EXAGE 300EX



Model No.	Specifications	Compatibility	Finish	Other Information
Rear Derailleur RD-A300	28Tg Front Difference: 13T Total Capacity: 28T Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T	6 & 7-speed SS Compatible Double Servo-Panta Mechanism Sintered Alloy Guide Pulley Bushing Cable Saver Arm B-Tension Adjuster	Bracket Body: Light Alloy+Barrel Finish Plate Body: Resin-Molding Right Link: Steel+Zinc Plated Resin-Molding Left Link: Steel+Zinc Plated	
Front Derailleur FD-A300-B (Band Type) FD-A300-A (w/Cable Stopper)	123g (Band Type) Band Diameter: Ø28.0mm ~ Ø28.6mm Capacity: 14T Stroke (w/Ø28.6mm Band): 37 ~ 51	Leading Action Pantograph Mechanism Compact Design Rigid Chainguide	Right Link: Steel+Zinc Plated Resin-Molding Front Band: Steel+Pearl Bright Finish Rear Band: Steel+Pearl Bright Finish Chain Guide: Pearl Bright Finish	
Front Chainwheel FC-A300 (Biopace Double, LD Type)	860g (42T, 52T, 170mm) 333.3g (BB Set) Crank Length: 165mm, 170mm Teeth: Top 52T, Low 42T BB Axle Length: 113 Chain 1/2" x 3/32"	Narrow Type Chain Compatible Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Light Alloy+Paint Finish Chain Ring: Steel+Pearl Bright Finish	
Bottom Bracket Assembly BB-A450	Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 13/1" x 24TPI French M35 x 1.0, Italian M36 x 24TPI			
Shifting Lever SL-A400-FCAI (7-speed SS, Brass/Carbon A Type) SL-A400-BCAI (7-speed SS, Side Band A Type)	71g (SL-A400-FCAI) 7-speed SS Down Tube Lever Lever Clamp Diameter: 28.6mm **C** means Italian Type (Fixing Bolt is 5mm Diameter)	SS-Friction Mode Switch Light Action Lever Sealed Mechanism, Human Engineered Design	Light Alloy+Barrel Finish	
Caliper Brake BR-A250-49 (Short 49 Type) BR-A250-57 (Long 57 Type)	313g (F & R 49 Type) *For SLR System use with SLR Compatible Brake Lever and Shimano Outer Cable with Liner	SLR (Shimano Linear Response) Compatible Click & Eccentric Type Quick Release Coated Pivot Washer Easy Adjust One Piece & Low Profile Brake Shoe Spring Sleeve Computer Aided Design (CAD)	Light Alloy+Barrel Finish	
Brake Lever BL-A251 (Aero Type)	310g (Pair) Lever Clamp Diameter: 23.8~24.2mm Lever Stroke: 88 Bracket Cover: Black, White *For SLR System use with SLR Compatible Brake and Shimano Outer Cable with Liner	SLR (Shimano Linear Response) Compatible Aerodynamic Design	Lever: Light Alloy+Barrel Finish Bracket: Steel+Zinc Plated Cover: Soft Resin-Molding	The Exage 300EX component group uses certain components in common with the 500EX group which include the FH-HG50 freewheel, HB-RM50 front hub, CS-HG50 cassette sprockets, CN-HG50 chain, PD-A550 pedals, and HP-R500 headset. See the 500EX component listing for more information on these components.

SHIMANO DEORE XT



● STI delivers total performance off the road.

Off-road cycling is a challenge that demands a high level of skill. It's the job of the ATB's components to provide the rider with the highest level of control possible to help meet that challenge.

Now equipped with STI, Deore XT components provide a higher level of off-road control than ever before. Deore XT features the new under-bar "Rapidfire" STI shift levers that let you shift "on the fly" without releasing the grip on the bars. Deore XT's STI lets you brake and shift without ever changing your grip.

This hands-on control capability is supported by the most advanced off-road derailleur shifting system available today—7-speed SIS with Hyperglide sprockets and Superglide chainrings. Deore XT's SLR U-Brake, cantilever, and highly responsive "two finger" lever deliver incredibly strong braking power with precise fingertip control. There's also a new headset for large diameter head tubes and a new cone.

The advanced control functions of Deore XT with STI offer improved performance with a greater margin of safety.



STI 
SHIMANO
TOTAL
INTEGRATION

Keep your grip while you shift with the STI/Deore XT off-road group.



SHIMANO DEORE XT



Model No.

Specifications

Compatibility

Finish

Other Information

Rapidfire **ST-M090** (4-Finger Type) **ST-M091** (2-Finger Type)

550g (2-Finger Type)
Lever Clamp Diameter: 22.2mm.
*Use with Shimano SS-SP Outer Cable with Liner.

STI (Shimano Total Integration)
Compatible
7-speed SS Compatible
SLR Compatible
Dual Repeat Function
BULS Angle Adjust

Bracket: Light Alloy
Shifting & Brake Lever:
Steel-Resin Molding

Rear Derailleur **RD-M735-SGS** (Super Long Cage) **RD-M735-SS** (Short Cage)

270g (Super Long Cage)
Total Capacity: 38T
Max. Rear Sprocket: 32T
Min. Rear Sprocket: 12T
250g (Short Cage)
Total Capacity: 28T
Max. Rear Sprocket: 28T
Min. Rear Sprocket: 12T

STI (Shimano Total Integration)
Compatible
6 & 7-speed SS Compatible
Sealed Pulley
Ceramic Guide Pulley Bushing
Adjustable Return Spring
B-Tension Adjuster
Chain Retainer (Super Long Cage)

Bracket Body: Light Alloy+Buff Finish
Plate Body: Light Alloy+Buff Finish
Right Link:
Light Alloy+Anodized Finish
Left Link: Light Alloy+Barrel Finish

Front Derailleur **FD-M735**

116g (Normal Band Type)
Band Diameter:
Ø28.0 ~ Ø28.6mm (Band Type)
Ø31.8, Ø34.9mm (IEC-Type)
Capacity: 24T (Biopace HP)
26T (Round)
Stroke (w/Ø28.6mm Band): 34 ~ 54

STI (Shimano Total Integration)
Compatible
SG Gear Compatible
Narrow Type Chain Compatible
Trailing Action Pantograph Mechanism
Rigid Chain Guide
New Trapezoid Mechanism

Right Link: Light Alloy+Anodized Finish
Front Band: Light Alloy+Buff Finish
Rear Band: Light Alloy+Buff Finish
Chain Guide: Chrome Plated

U-II Brake **BR-M733**

375g (I Unit)
*For SLR System use: Rapidfire or SLR
Compatible Brake Lever and Shimano Outer
Cable with Liner.

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible
Power Plate with Shark Tooth

Light Alloy+Anodized Finish

Cantilever Brake **BR-M732**

185g (Pair)
*For SLR System use: Rapidfire or SLR
Compatible Brake Lever and Shimano Outer
Cable with Liner.

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible
Easy Cable Attachment

Light Alloy+Buff Finish
(Black Finish Available)

Front Chainwheel **FC-M730-SG** (SG Gear Triple, MD Type) **Bottom Bracket Assembly** **BB-M730** (BB Set)

730g (26T, 36T, 46T, 170mm)
295g (BB Set, 68-T122.5, D-3NLI)
Crank Length:
165mm, 170mm, 175mm, 180mm
BB Axle Length: 122.5
Chain: 1/2" x 3/32"
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.

STI (Shimano Total Integration)
Compatible
SG Gear
Narrow Type Chain Compatible,
Computer Aided Design (Crank)
Sealed Mechanism (BB)

Crank Arm:
Light Alloy+Anodized Finish
Chain Ring:
Light Alloy+Anodized Finish

Freehub **FH-M732** (Rear, 7-speed)

490g (w/Quick Release)
Spoke Holes: 36H, 32H
Hole PCD: 45
Axle Thread: 10mm.

STI (Shimano Total Integration)
Compatible
7-speed SS Compatible
Hyperglide Compatible
UGIHG Compatible Type

Light Alloy+Buff Finish

Front Hub **HB-M730-F**

213g
Spoke Holes: 36H, 32H
Hole PCD: 38
Axle Thread: 9mm.

Lip-Type Sealed Mechanism
Cr-Mo Hub Axle Support

Light Alloy+Buff Finish

Cassette Sprockets **CS-HG90** (7-speed)

325g (Sprocket E Group & Spacer)
Use Narrow Type Chain

STI (Shimano Total Integration)
Compatible
7-speed SS Compatible
7-speed Hyperglide

Steel+Chrome Plated

HG Chain **CN-HG90**

326g (110 Link)
Size: 1/2" x 3/32" Chain

STI (Shimano Total Integration)
Compatible
Narrow Type Hyperglide Chain
Chromed Finish Link Pins

Roller Link Plate: Black Finish
Pin Link Plate: Silver Finish

FC-M730-SG

Teeth

	Biopace	Round
Top	48T 46T 48T 46T	46T
Middle	38T 36T 38T 36T	36T
Low	28T 26T 28T 24T	24T

FH-M732

OLD	135	130	135	130
Axle Length	146	141	185	180
Chain Line	46	43.5	46	43.5
Mounting Type	Quick Release	Nut		

HB-M730-F

OLD	100
Axle Length	108 142
Mounting Type	Quick Release Nut

CS-HG90

Cassette sprocket Combinations:

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

SHIMANO DEORE XT



Model No.

Specifications

Compatibility

Finish

Other Information

Head Parts
HP-M735
HP-M736
HP-M737

110g (HP-M735)
149g (HP-M736)
155g (HP-M737)

Off-Road Type
Sealed Mechanism

Black Finish

Pedal
PD-M730

412 (Pair)
Crank Thread:
English BC 9/16" x 20TPI

Low Profile Design
Parallelogram Shape
Contact Type Sealed Mechanism
Stainless Steel Grip Pin
Toe Clip/Reflector Attachable

Body: Light Alloy
Plate: Light Alloy

Pedal
PD-M735

295g (Pair)
Toe Clip Locking System: 2-Screw
Crank Thread:
English BC 9/16" x 20TPI
Toe Clip Size: M, L, LL

Super Low Profile Design
32° Road Clearance
Parallelogram Shape
Contact Type Sealed Mechanism
Stainless Steel Grip Pin
Toe Clip/Reflector Attachable

Body: Light Alloy
Plate: Light Alloy-Anodized Finish
Toe Clip: Resin

Seat Pillar
Quick-Release
SQ-M730

75g
Shaft Adjustment Length:
36 ~ 43mm, 26 ~ 33mm
Shaft Diameter: Ø6mm, or Ø8mm

Easy Operation
Position-Set Spring

Steel

Chain Deflector
DF-M730

9g

Keeps the Chain from Jamming
Between the Tire & Chainstay

Resin

Seat Pillar
SP-M730

296g (330mm)
Outside Diameter:
26.6mm, 26.8mm, 27.0mm
Length: 280mm, 330mm

High Strength Structure
Light Weight
Long Size

Cr-Mo Steel

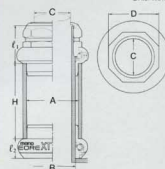
HP-M735/M736/M737 Variation & Dimensions:

Thread	HP-M735	
	BC1-1/8" x 24T	M25 x P1.0
A	30.0 (JIS)	30.2
B	27.0 (JIS)	26.4 27.0
C	22.1	
D	32.0	
E	22.0	
F	11.5	

Unit: mm

Thread	HP-M736	HP-M737
	BC1-1/8" x 26T	BC1-1/4" x 26T
A	34.0	37.0
B	30.0	33.0
C	25.5	28.7
D	36.0	40.0
E	22.0	27.3
F	11.5	13.0

Unit: mm



Some questions about DEORE XT and how to answer them.

Q.1:

I've already got a bike with a Deore XT component group. What can I do if I want the STI function?

A.1:

Upgrade with a new STI retrofit kit!

Shimano makes an upgrade kit available in order to convert current Deore XT bikes so they can use the STI capability.

1) The upgrade kit contains the following components:

- **ST-M090/M091**
Rapidfire Control Lever Set
- **FD-M735**
Front Derailleur
- **FC-M730-SG**
Superglide Chaining
- **CN-HG90**
Hyperglide Chain

2) For people who have a 6-speed Deore XT system, the following components are needed in order to upgrade to STI:

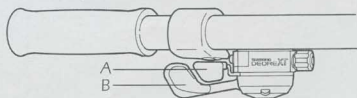
- **ST-M090/M091**
Rapidfire Control Lever Set
- **FD-M735**
Front Derailleur
- **FC-M730-SG**
Superglide Chaining
- **CN-HG90**
Hyperglide Chain
- **FH-M732**
Freehub
- **CS-HG90**
7-speed Hyperglide
Cassette Sprockets

Q.2:

With STI, what should you do if the chain hits the front derailleur after you've just shifted the rear derailleur?

A.2:

A simple solution to chain rub.



If you tap the [A] lever lightly, the front derailleur will move to the inside. If you do the same to the [B] lever, the front derailleur will move to the outside.

You push the [A] lever lightly to shift from the outer chainring to the middle chainring. You push the [A] lever harder to shift from the middle chainring to the small inner chainring.

The front STI levers incorporate a special mechanism that automatically compensates for the amount of overshift needed to move the chain.

Q.3:

What difference does the Superglide chaining make?

A.3:

Smoother shifting from designated shift points.

Computer development resulted in special configuration chain release teeth positioned at two points on the chaining in order to allow the chain to smoothly separate at the point of weakest chain tension.

Furthermore, because the chainrings are indexed in relation to each other, the chain is positively controlled as it moves smoothly and directly from chaining to chaining without sudden shocks, slipping, or riding up onto the gear teeth.

SHIMANO DEORE DX



Take on the challenge of riding in the rough.

Take on the challenge of off-road cycling with the help of Deore DX. Discover new adventure in the wild with components that always get you there and back.

Deore DX is a full performance off-road component group. In fact, Deore DX offers the same "hands-on" integrated STI control capability as found on Deore XT. STI means there's no special technique needed to be able to shift and brake while keeping a tight grip on the bars. Deore DX's STI capability lets you steer, brake, and shift with new confidence—no matter the terrain—no matter how fast or how hard you're riding.

It's all here—Shimano quality and precision with 7-speed SIS, Hyperglide sprockets, Superglide chainrings, Biopace crankset, SLR braking system, Powerplate U-II Brake and cantilever, and a whole lot more.

Deore DX is the component system that's serious about performance in the rough.



STI 
SHIMANO
TOTAL
INTEGRATION

Deore DX... Off-road components that get you there and back.



HG

SG

SLR

SIS

THE SHIMANO
FREEHUB

biopace

SHIMANO DEORE DX



Model No.

Specifications

Compatibility

Finish

Other Information

Rapidfire
ST-M070
(4-Finger Type)
ST-M071
(2-Finger Type)

535g (2-Finger Type)
Lever Clamp Diameter: 22.2mm
*Use with Shimano SS-SP Outer Cable with Liner

STI (Shimano Total Integration)
Compatible
SLR Compatible
Dual Repeat Function
BL/SJL Angle Adjust

Bracket: Light Alloy+Anodized Finish
Shifting & Brake Lever:
Light Alloy+Paint Finish

Rear Derailleur
RD-M650-SGS
(Super Long Cage)
RD-M650-SS
(Short Cage)

320g (Super Long Cage)
Front Difference: 20T
Total Capacity: 38T
Max. Rear Sprocket: 32T
Min. Rear Sprocket: 12T
257g (Short Cage)
Front Difference: 13T
Total Capacity: 28T
Max. Rear Sprocket: 28T
Min. Rear Sprocket: 12T

STI (Shimano Total Integration)
Compatible
6 & 7-speed SS Compatible
B-Tension Adjuster
Chain Retainer

Bracket Body: Light Alloy+Barrel Finish
Plate Body: Light Alloy+Barrel Finish
Right Link: Light Alloy+Paint Finish
Left Link: Steel+Pearl Bright Finish

Front Derailleur
FD-M650

117g (Normal Band Type)
Band Diameter:
228.0~28.6mm (Band Type)
Capacity: 24T (Biopace HP)
26T (Round)
Stroke (w/228.6mm Band): 34~54

STI (Shimano Total Integration)
Compatible
SG Gear Compatible
Narrow Type Chain Compatible
Trailing Action Pantograph Mechanism
New Tapease Mechanism

Right Link: Light Alloy+Paint Finish
Front Band: Light Alloy+Paint Finish
Rear Band: Light Alloy+Paint Finish
Chain Guide: Chrome Plated

U-II Brake
BR-MT63

338g (1 unit)
*For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano Outer Cable with Liner

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible
Power Plate with Shark Tooth

Light Alloy+Anodized Finish

Cantilever Brake
BR-MT62

190g (Pair)
*For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano Outer Cable with Liner

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible

Light Alloy+Barrel Finish
(Black Finish Available)

Front Chainwheel
FC-MT60-SG
(SG Gear Type, MD Type)

740g (28T, 38T, 48T, 170mm)
320g (BB Set, 68-T-122.5, D-3NL)
Crank Length: 170mm, 175mm
BB Axle Length: 122.5
Chain 1/2" x 3/32"
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

STI (Shimano Total Integration)
Compatible
SG Gear
Narrow Type Chain Compatible
Computer Aided Design (CAD)
Sealed Mechanism (BB)

Crank Arm: Light Alloy+Barrel Finish
Chain Ring:
Light Alloy+Anodized Finish

Bottom Bracket Assembly
BB-MT60
(BB Set)

Freehub
FH-M650
(Rear, 7-speed)

445g (w/Quick Release)
Spoke Holes: 36H, 32H
Hole PCD: 45
Axle Thread: 10mm

STI (Shimano Total Integration)
Compatible
7-speed Spoke Compatible
Hyperglide Compatible
UGHG Compatible Type

Light Alloy+Anodized Finish

Front Hub
HB-M650-F

231g (w/Quick Release)
Spoke Holes: 36H, 32H
Hole PCD: 38
Axle Thread: 9mm

One-Piece Forged Hub Body
Lip-Type Sealed Mechanism
Cr-Mo Axle

Light Alloy+Anodized Finish

Cassette Sprockets
CS-HG70
(7-speed)

325g
(Sprocket E group & Spacer)
Use Narrow Type Chain

STI (Shimano Total Integration)
Compatible
7-speed Spoke Compatible
7-speed Hyperglide

Steel-Silver Finish

HG Chain
CN-HG70

325g (114 Link)
Size: 1/2" x 3/32" Chain

STI (Shimano Total Integration)
Compatible
Narrow Type Hyperglide Chain
Chromed Finish Link Pins

Roller Link Plate: Gray Finish
Pin Link Plate: Black Finish

Head Parts
HP-M650
HP-M651

121g (HP-M650)
149g (HP-M651)

Off-Road Type
Sealed Mechanism

Black Finish

Pedal
PD-MT60

412g (Pair)
Crank Thread:
English BC 9/16" x 20TPI

Low Profile Design
Parallelogram Shape
Contact Type Sealed Mechanism

Body: Light Alloy
Plate: Steel

Pedal
PD-M650

385g (Pair w/Toe Clip)
Top Clip Locking System: 2-Screw
Crank Thread:
English BC 9/16" x 20TPI
Toe Clip Size: M, L, LL

Super Low Profile Design
32° Road Clearance
Contact Type Sealed Mechanism
Toe Clip/Reflector Attachable

Body: Light Alloy
Plate: Steel
Toe Clip: Resin

FC-MT60-SG Teeth

	Biopace		Round	
Top	48T	46T	48T	46T
Middle	38T	36T	38T	36T
Low	28T	26T	28T	24T

FH-M650

OLD	135	130	135	130
Axle Length	146	141	185	180
Chain Line	45.7	43.2	45.7	43.2
Mounting Type	Quick Release	Nut		

HB-M650-F

OLD	100			
Axle Length	108		142	
Mounting Type	Quick Release		Nut	

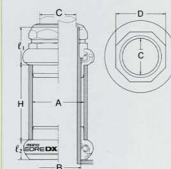
CS-HG70

Cassette Sprocket Combinations	
7-speed	J 13, 14, 15, 16, 17, 19, 21T I 13, 14, 15, 17, 19, 21, 23T H 13, 15, 17, 19, 21, 23, 26T E 12, 14, 16, 18, 21, 24, 28T F 13, 15, 17, 20, 23, 26, 30T K 13, 15, 17, 20, 24, 29, 34T

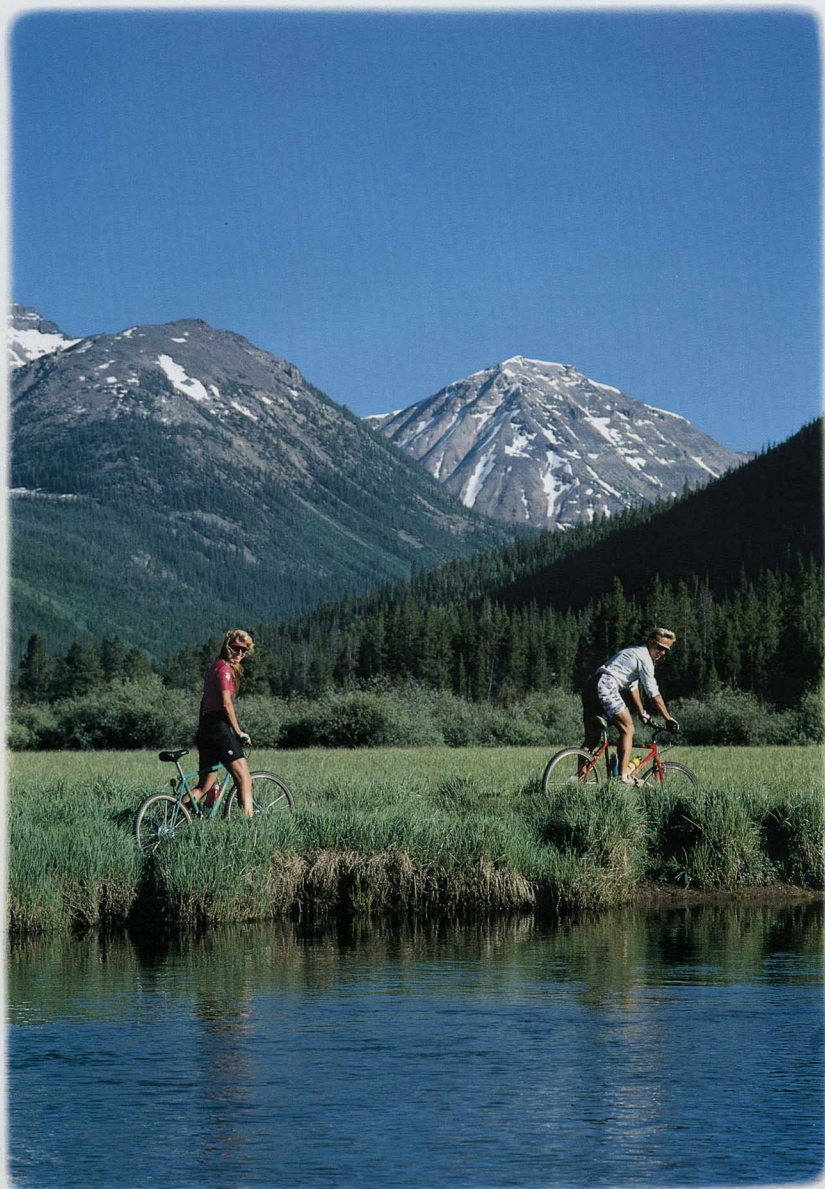
HP-M650/M651

Variation & Dimensions:			
HP-M650			
Thread	BC1"×24T	M25×P1.0	
A	30.0 [JIS]	30.2	30.2
B	27.0 [JIS]	26.4 27.0	26.4
C	22.1		
D	32.0		
ℓ ₁	22.0		
ℓ ₂	11.5		
Unit: mm			

HP-M651	
Thread	BC1-1/8"×26T
A	34.0
B	30.0
C	25.5
D	36.0
f ₁	22.0
f ₂	11.5
Unit: mm	



SHIMANO DEORE LX



The high-value off-road component group with STI

There isn't a better value in off-road components than Deore LX. Whether it's a leisurely exploration of a new trail or an all-out run over open field, Deore LX components deliver a feeling of total control that makes off-road riding that much more enjoyable.

There are no cutbacks in advanced Shimano functions with Deore LX. Full STI capability means you can shift on the run with just a flick of the thumb—and never change your grip on the bars.

STI lets you shift with even more precision thanks to refined SIS and Hyperglide sprockets. Superglide chainrings significantly upgrade chainwheel shifting too.

The full SLR treatment with U-Brake and cantilever means great stopping power with a sensitive lever feeling. And of course, Biopace chainwheels make pedalling that much easier and efficient.

On or off the road, Deore LX delivers performance, value, and enjoyment.



Deore LX... No greater value in off-road components today.

STI 
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Model No.

Specifications

Compatibility

Finish

Other Information

Rapidfire ST-M060 (4-Finger Type)

325g (4-Finger Type Rear)
Lever Clamp Diameter: 22.2mm

*Use with Shimano SIS-SP
Outer Cable with Liner.

STI (Shimano Total Integration)
Compatible
7-speed SIS Compatible
SLR (Shimano Linear Response)
Compatible
Dual Repeat Function
Light Action Lever

Bracket: Light Alloy+Paint Finish
Shifting & Brake Lever:
Steel+Zinc Plated
Resin/Molded

Rear Derailleur RD-M550-SGS (Super Long Cage) RD-M550-GS (Long Cage)

320g (Super Long Cage)
Front Difference: 20T
Total Capacity: 38T
Max. Rear Sprocket: 32T
Min. Rear Sprocket: 12T
[Long Cage]
Front Difference: 20T
Total Capacity: 36T
Max. Rear Sprocket: 30T
Min. Rear Sprocket: 12T

STI (Shimano Total Integration)
Compatible
6 & 7-speed SIS Compatible
Double Servo-Panta Mechanism
Centerion Guide Pulley
Sealed Pivot Axle
Sintered Alloy Guide Pulley Bushing
Adjustable Return Spring
B-Tension Adjuster
Chain Retainer

Bracket Body:
Light Alloy+Barrel Finish
Plate Body:
Light Alloy+Barrel Finish
Right Link:
Light Alloy+Paint Finish
Left Link:
Steel+Pearl Bright Finish

Front Derailleur FD-M550

119g (Normal Band Type)
Band Diameter:
ø28.0 - ø28.6mm (Band Type)
ø31.8, ø34.9mm (JC-Type)
Capacity: 24T (Biospace HP)
26T (Round)
Stroke (w/ø28.6mm Band): 34 - 54

STI (Shimano Total Integration)
Compatible
SG Gear Compatible
Narrow Type Chain Compatible
Trailing Action Pantograph Mechanism
Rigid Changguide
New Trapease Mechanism

Right Link:
Light Alloy+Paint Finish
Front Band:
Light Alloy+Barrel Finish
Rear Band:
Light Alloy+Barrel Finish
Chain Guide: Chrome Plated

U-II Brake BR-M453

368g (I unit)

*For SLR & System use Rapid Fire or SLR
Compatible Brake Lever and
Shimano Outer Cable with Liner.

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible
Pre-Road Spring Design
Sealed Internal Spring Design
Power Plate with Shark Tooth

Light Alloy+Barrel Finish

FC-M550 Teeth:

	Biospace	Round
Top	48T 46T 48T 46T	
Middle	38T 36T 38T 36T	
Low	28T 26T 28T 24T	

Cantilever Brake BR-M550

216g (Pair)

*For SLR & System use Rapid Fire or SLR
Compatible Brake Lever and
Shimano Outer Cable with Liner.

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible
Rigid Computer Designed Shape
Sealed Internal Spring Design
Spring Tension Adjuster

Light Alloy+Barrel Finish

FH-M550

	OLD	135	130	135	130
Axle Length	146	141	185	180	
Chain Line	45.7	43.2	45.7	43.2	
Mounting Type	Quick Release		Nut		

Front Chainwheel FC-M550 (SG Gear Type, MD Type) Bottom Bracket Assembly BB-M500 (BB Set)

752g (28T, 38T, 48T, 170mm)
339g (BB Set)
Crank Length: 170mm, 175mm.
BB Axle Length: 121mm
Chain: 1/2" x 3/32"
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.

STI (Shimano Total Integration)
Compatible
SG Gear
Narrow Type Chain Compatible
Computer Aided Design (Crank)
Sealed Mechanism (BB)

Crank Arm:
Light Alloy+Barrel Finish
Chain Ring:
Light Alloy+Anodized Finish

Freehub FH-M550 (Rear, 7-speed)

445g (w/Quick Release)
Spoke Holes: 36H, 32H
Hole PCD: 45
Axle Thread: 10mm

STI (Shimano Total Integration)
Compatible
7-speed SIS Compatible
Hyperglide Compatible
UGHG Hub Body
One-Piece Forged Hub Body
Bolt-Secured Freehub
Sealed Mechanism

Light Alloy+Polish Finish

Front Hub HB-M550-F

230g (w/Quick Release)
Spoke Holes: 36H, 32H
Hole PCD: 38
Axle Thread: 9mm

One-Piece Forged Hub Body
Sealed Mechanism

Light Alloy+Polish Finish

Pedal PD-M550

326g (Pair)
Toe Clip Locking System: 2-Speed
Toe Clip Size: M, L, LL

Super Low Profile Design
31° Road Clearance
Parallelogram Shape
Toe Clip/Reflector Attachable

Body: Resin
Plate: Steel
Toe Clip: Resin

Cassette Sprockets CS-HG70 (7-speed)

325g
(Sprocket E group & Spacer)
Use Narrow Type Chain

STI (Shimano Total Integration)
Compatible
7-speed SIS Compatible
7-speed Hyperglide

Steel/Silver Finish

HG Chain CN-HG70

323g (114 Link)
Size: 1/2" x 3/32" Chain

STI (Shimano Total Integration)
Compatible
Narrow Type Hyperglide Chain
Bushings Design
Chrome Finish Link Pins

Roller Link Plate: Gray Finish
Pin Link Plate: Black Finish

Head Parts HP-R500

121g
Height: Upper Cone 22.0mm.
Lower Cone 11.5mm.
Color: White, Silver, Black

Road Type
Sealed Mechanism

Lock Nut: Steel
Upper Cup: Resin
Lower Cup: Resin

CS-HG70

Cassette Sprocket Combinations:

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

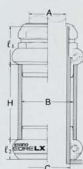
HP-R500

Variation:

	English/Italian Type
	Thread BCI x24T
Press Race Diameter	Upper Cone & Lower Cup 30.2mm
	Lower Cone 26.4mm

Dimensions:

f ₁	22.0mm
f ₂	11.5mm
H	Head Tube Length
A	22.3mm
B	30.2mm
C	26.4mm
Thread	BC 1" x 24T (English Thread)



EXAGE LX



Advanced STI performance for the fat tire bike.

Exage LX is the affordable family of Shimano off-road components featuring STI. This is a value-added component system that clearly out-performs anything else in its class.

Exage LX (500LX, 400 LX, 300LX) components make possible a wide variety of affordable all-terrain and fat tire bikes that can offer the new STI capability—all the performance, convenience, and fun that STI makes possible.

Exage LX delivers more than just the “keep our grip while you shift” convenience of STI. You also get smooth-shifting Biopace SG chainwheels, easy-to-control SLR braking, and a new 7-speed SIS with Hyperglide enhanced performance.

The charm of Exage LX is that it can deliver great performance and rugged quality in a very reasonably priced bike with a real Shimano component system. If that isn't value, we don't know what is.



STI

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INTEGRATION

Model No.	Specifications	Compatibility	Finish	Other Information
Rapidfire ST-M5050 (4-Finger Type)	305g (4-Finger Type Rear) Lever Clamp Diameter: 22.2mm *Use with Shimano S5-SP Outer Cable with Liner.	STI (Shimano Total Integration) Compatible 7-speed S5 Compatible SLR Compatible Dual Repeat Function Light Action Lever Anatomical Design	Bracket: Light Alloy/Paint Finish Shifting and Brake Lever: Steel/Zinc Plated Resin/Molding	
Brake Lever BL-M5050 (Use Front Single)				
Rear Derailleur RD-M5050-SGS (Super Long Cage) RD-M5050-GS (Long Cage)	329g (Super Long Cage) Front Difference: 20T Total Capacity: 38T Max. Rear Sprocket: 32T Min. Rear Sprocket: 12T (Long Cage) Front Difference: 20T Total Capacity: 36T Max. Rear Sprocket: 30T Min. Rear Sprocket: 12T	STI (Shimano Total Integration) Compatible 6 & 7-speed S5 Compatible Double Servo-Panor Mechanism Centering Guide Pulley Sealed Pivot Axle Sintered Alloy Guide Pulley Bushing Cable Saver Arm B-Tension Adjuster Chain Retainer	Bracket Body: Light Alloy/Paint Finish Plate Body: Light Alloy/Paint Finish Right Link: Steel/Paint Finish Left Link: Steel/Pearl Bright	
Front Derailleur FD-M5050	118g (Normal Band Type) Band Diameter: φ28.0 ~ φ28.6mm (Band Type, EC-Type) φ31.8, φ34.9mm (EC-Type) Capacity: 24T (Biopace HP) 26T (Round) Stroke (w/φ28.6mm Band): 34 ~ 54	STI (Shimano Total Integration) Compatible SG Gear Compatible Narrow Type Chain Compatible Trailing Action Pantograph Mechanism Rigid Chaignade New Trapeze Mechanism Sealed Mechanism	Right Link: Light Alloy/Paint Finish Front Band: Light Alloy/Paint Finish Rear Band: Light Alloy/Paint Finish Chain Guide: Chrome Plated	
U-II Brake BR-M453	368g (1 unit) *For SLR System use Rapid Fire or Compatible Brake Lever and Shimano Outer Cable with Liner.	STI (Shimano Total Integration) Compatible SLR (Shimano Linear Response) Compatible: Pre-Road Spring Design Sealed Internal Spring Design Rigid Computer Designed Shape Spring Tension Adjuster Power Plate with shark Tooth	Light Alloy/Barrel Finish	
Cantilever Brake BR-M454	216g (Pair) *For SLR System use Rapid Fire or Compatible Brake Lever and Shimano Outer Cable with Liner.	STI (Shimano Total Integration) Compatible SLR (Shimano Linear Response) Compatible Rigid Computer Designed Shape Sealed Internal Spring Design	Light Alloy/Barrel Finish	
Front Chainwheel FC-M5050 (SG Gear Triple, MD Type) Bottom Bracket Assembly BB-M5050	756g (28T, 38T, 48T, 170mm) 339g (BB Set) Crank Length: 170mm, 175mm BB Axle Length: 121 Teeth: Top 48T Middle 38T Low 28T Chain: 1/2" x 3/32" 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	STI (Shimano Total Integration) Compatible SG Gear Narrow Type Chain Compatible Computer Aided Design (Crank) Sealed Mechanism (BB) Biopace Chaining	Crank Arm: Light Alloy/Barrel Finish Chain Ring: Light Alloy/Anodized Finish	
Freehub FH-HG50 (Rear, 7-speed)	435g (w/Quick Release) Spoke Holes: 36H, 32H Hole PCD: 45 Axle Thread: 10mm	STI (Shimano Total Integration) Compatible 7-speed S5 Compatible Hyperglide Compatible UG/HG Compatible Type One-Piece Forged Hub Body Bolt-Secured Freewheel Sealed Mechanism	Light Alloy/Dia-cut Finish	
Front Hub HB-RM50-F	228g (w/Quick Release) Spoke Holes: 36H, 32H Hole PCD: 38 Axle Thread: 9mm	One-Piece Forged Hub Body Sealed Mechanism (Choice)	Light Alloy/Dia-cut Finish	
Cassette Sprockets CS-HG50 (7-Speed)	325g (Sprocket E Group & Spacer) Use Narrow Type Chain	STI (Shimano Total Integration) Compatible 7-speed S5 Compatible 7-speed Hyperglide	Brown Finish and Silver Finish (Low Gear)	
HG Chain CN-HG50	335g (1/4 Link) Size: 1/2" x 3/32" Chain	STI (Shimano Total Integration) Compatible Narrow Type Hyperglide Chain Bushings Design Chrome Finish Link Pins	Roller Link Plate: Black Finish Pin Link Plate: Black Finish	
Pedal PD-M450	518g (Pair)	Low Profile Design Toe Clip/Reflector Attachable	Body: Resin Plate: Steel	

FH-HG50

O.L.D.	135	130	126
Axle Length	146	141	137
Chain Line	45.7	43.2	41.2
Mounting Type:	Quick Release	Quick Release	Nut

HB-RM50-F

O.L.D.	100	96
Axle Length	108	104
Mounting Type	Quick Release	Quick Release

CS-HG50
Cassette Sprocket Combinations:

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



Model No.	Specifications	Compatibility	Finish	Other Information
Rear Derailleur RD-M400-SGS (Super Long Cage) RD-M400-GS (Long Cage) RD-M400-SS (Short Cage)	330g (Super Long Cage) Front Difference: 20T Total Capacity: 38T Max. Rear Sprocket: 32T Min. Rear Sprocket: 12T 318 (Long Cage) Front Difference: 20T Total Capacity: 36T Max. Rear Sprocket: 30T Min. Rear Sprocket: 12T (Short Cage) Front Difference: 13T Total Capacity: 28T Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T *GS & SS Front Single Available	STI (Shimano Total Integration) Compatible 6 & 7-speed SS Compatible Double Servo-Panta Mechanism Centron Guide Pulley Sealed Pivot Axle Sintered Alloy Guide Pulley Bushing Cable Saver Arm Sealed Link Pivots B-Tension Adjuster Heat-Treated Steel in Link Pivot Double Spoke Barrier Chain Retainer (GS Type, SGS Type)	Bracket Body: Light Alloy-Barrel Finish Plate Body: Light Alloy-Barrel Finish Right Link: Steel-Paint Finish Left Link: Steel-Zinc Plated *GS & SS White Finish Available	
Front Derailleur FD-M400	132g (Normal Band Type) Band Diameter: ø28.0 ~ ø28.6mm (Band Type, EC-Type) ø31.8, ø34.9mm (EC-Type) Capacity: 24T (Bopace HP) 26T (Round) Stroke (w/ø28.6mm Band): 34 ~ 54	STI (Shimano Total Integration) Compatible SG Gear Compatible Narrow Type Chain Compatible Trailing Action Pantograph Mechanism Rigid Chain Guide New Trapeze Mechanism Sealed Mechanism	Right Link: Light Alloy-Paint Finish Front Body: Light Alloy-Paint Finish Rear Band: Light Alloy-Paint Finish Chain Guide: Chrome Plated	
Cantilever Brake BR-M351	227g (Pair) *For SLR System use Rapidfire or SLR Compatible Brake Lever and Shimano Outer Cable with Liner	STI (Shimano Total Integration) Compatible SLR (Shimano Linear Response) Compatible Rigid Computer Designed Shape Sealed Internal Spring Design Spring Tension Adjuster Low Profile Brake Shoe	Steel & Resin	
Front Chainwheel FC-M400 (SG Gear, Triple, MID Type)	763g (28T, 38T, 48T, 170mm) 339g (BB Set) Teeth: Top 48T, Middle 38T, Low 28T Crank Length: 170mm, 175mm BB Axle Length: 121.1 Chain: 1/2" x 3/32" Crank Thread: English BC 9/16" x 20TPI Cup Thread: English BC 13/16" x 24TPI French M35 x 1.0, Italian M36 x 24TPI	STI (Shimano Total Integration) Compatible SG Gear Narrow Type Chain Compatible Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Light Alloy-Barrel Finish Chain Ring: Steel-Paint Finish	
Bottom Bracket Assembly BB-M500				
Pedal PD-M350	445g (Pair)	Low Profile Design Toe Clip/Reflector Attachable	Body: Resin Plate: Steel	The Exage 400LX component group uses certain components in common with the 500LX group which include the FH-HG50 freehub, HB-RM50 front hub, CS-HG50 cassette sprockets, CN-HG50 chain, and HP-R500 headset. See the 500LX component listing for information on these components.



Model No.	Specifications	Compatibility	Finish	Other Information
Rear Derailleur RD-M300-SGS (Super Long Cage) RD-M300-GS (Long Cage)	319g (Super Long Cage) Front Difference: 20T Total Capacity: 38T Max. Rear Sprocket: 32T Min. Rear Sprocket: 12T (Long Cage) Front Difference: 20T Total Capacity: 36T Max. Rear Sprocket: 30T Min. Rear Sprocket: 12T	STI (Shimano Total Integration) Compatible 6 & 7-speed SS Compatible Double Servo-Panta Mechanism Centerton Guide Pulley Sealed Pivot Axle Sintered Alloy Guide Pulley Bushing Cable Saver Arm B-Tension Adjuster Double Spoke Barrier Chain Retainer	Bracket Body: Light Alloy-Barrel Finish Plate Body: Resin/Molding Right Link: Steel & Resin-Zinc Plated Left Link: Steel-Zinc Plated	
Front Derailleur FD-M300	135g (Normal Band Type) Band Diameter: ø28.0 - ø28.6mm (Band Type) ø31.8, ø34.9mm (EC-Type) Capacity: 24T (Biopace HP) 26T (Round) Stroke (w/ø28.6mm Band): 34 - 54	STI (Shimano Total Integration) Compatible SG Gear Compatible Narrow Type Chain Compatible Trailing Action Pantograph Mechanism Rigid Chainguide New Trapeze Mechanism Sealed Mechanism	Right Link: Light Alloy/Paint Finish Front Band: Steel/Pearl Bright Finish Rear Band: Light Alloy-Barrel Finish Chain Guide: Chrome Plated	
Cantilever Brake BR-M250	235g (Pair)	STI (Shimano Total Integration) Compatible SLR (Shimano Linear Response) Compatible Rigid Computer Designed Shape Low Profile Brake Shoe	Steel & Resin	
Front Chainwheel FC-M300 (Triple, MD type)	754g (28T, 38T, 48T, 170mm.) 339g (BB Set) Teeth: Top 48T, Middle 38T, Low 28T Crank Length: 170mm., 175mm. BB Axle Length: 121 Chain: 1/2" x 3/32" Crank Thread: English 8C 9/16" x 20TPI Cup Thread: English 8C 13/16" x 24TPI French M35 x 1.0, Italian M36 x 24TPI	STI (Shimano Total Integration) Compatible SG Gear Narrow Type Chain Compatible Computer Aided Design (Crank) Sealed Mechanism (BB)	Crank Arm: Light Alloy-Barrel Finish Chain Ring: Light Alloy/Anodized Finish	
Bottom Bracket Assembly BB-M500				
Pedal PD-M350	445g (Pair)	Low Profile Design w/Reflector Toe Clip/Reflector Attachable	Body: Resin Plate: Steel	

The Exage 300LX component group uses certain components in common with the 500LX group which include the FH-HG50 freehub, HB-RM50 front hub, CS-HG50 cassette sprockets, CN-HG50 chain, and HP-R500 headset. See the 500LX component listing for information on these components.

SHIMANO 200GS



ST-M020



Model No.

Specifications

Compatibility

Finish

Other Information

Rapidfire

ST-M200

190g (4-Finger Type Rear)
Lever Clamp Diameter: 22.2mm.
*Use with Shimano SS-SP
Outer Cable with Liner.

STI (Shimano Total Integration)
Compatible
7-speed SS Compatible
Dual Repeat Function
Anatomical Design

Bracket: Light Alloy/Paint Finish
Shifting Lever:
Steel/Zinc Plated
Resin-Molding

Rear Derailleur

RD-M200-SGS

(Super Long Cage)

RD-M200-GS

(Long Cage)

323g (Super Long Cage)
Front Difference: 20T
Total Capacity: 38T
Max. Rear Sprocket: 32T
Min. Rear Sprocket: 12T
(Long Cage)
Front Difference: 20T
Total Capacity: 36T
Max. Rear Sprocket: 30T
Min. Rear Sprocket: 12T

STI (Shimano Total Integration)
Compatible
6 & 7-speed SS Compatible
Double Servo-Panta Mechanism
Centeron Guide Pulley
Sealed Pivot Axle
Sintered Alloy Guide Pulley Bushing
B-Tension Adjuster
Double Spoke Barrier
Chain Retainer

Bracket Body:
Light Alloy-Barrel Finish
Plate Body: Resin-Molding
Right Link: Steel/Paint Finish
Left Link: Steel/Zinc Plated

The Shimano 200GS component group uses certain components in common with the 500LX group which include the CN-HG50 chain and HP-R500 headset. See the 500LX component listing for information on these components.

Front Derailleur

FD-M200

169g (Normal Band Type)
Band Diameter:
ø28.0 - 28.6mm. (Band Type)
Capacity: 20T (Biopace-HP)
22T (Round)
Stroke (w/ø28.6mm. Band): 36 - 54

Narrow Type Chain Compatible
Rigid Chainguide
Trapezoid Mechanism
w/Cable Stopper

Right Link: Steel/Paint Finish
Resin Molding
Front Band: Steel-Chrome Plated
Rear Band: Steel/Zinc Plated
Chain Guide: Chrome Plated

Front Derailleur

FD-M201

170g (Normal Band Type)
Band Diameter:
ø28.0 - 28.6mm. (Band Type)
ø31.8mm. (EC-Type)
Capacity: 24T (Biopace-HP)
26T (Round)
Stroke (w/ø28.6mm. Band): 36 - 54

STI (Shimano Total Integration)
Compatible
SG Gear Compatible
Narrow Type Chain Compatible
Rigid Chainguide
Trapezoid Mechanism
w/Cable Stopper

Right Link: Steel/Paint Finish
Front Band: Steel/Paint Finish
Rear Band: Light Alloy-Barrel Finish
Chain Guide: Chrome Plated

Shifting Lever

SL-M200

(6-speed)

SL-M201

(7-speed)

154g (SL-M201)
Lever Clamp Diameter: 22.2mm.
*Use with Shimano SS-SP
Outer Cable with Liner

6-speed SS Compatible (SL-M200)
7-speed SS Compatible (SL-M201)
Sealed Mechanism
Chaining Triple Compatible

Bracket: Steel/Paint Finish
Lever: Resin-Molding

Cantilever Brake

BR-M200

226g (Pair)
*Use with Shimano
Outer Cable with Liner.

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible
Rigid Computer Designed Shape

Steel & Resin

Brake Lever

BL-M200

265g
Lever Clamp Diameter: 22.2mm.
*Use with Shimano
Outer Cable with Liner.

STI (Shimano Total Integration)
Compatible
SLR (Shimano Linear Response)
Compatible

Bracket: Steel/Zinc Plated
Lever: Steel/Zinc Plated
Resin-Molding

Front Chainwheel

FC-M200

(SG Gear Triple, MD Type)

1350g (28T, 38T, 48T, 170mm.)
339g (BB Set)
Teeth: Top 48T, Middle 38T, Low 28T
Crank Length: 170mm.
BB Axle Length: 121.
Chain: 1/2" x 3/32"
Crank Thread: English BC 9/16" x 20TPI.
Cup Thread: English BC 13/16" x 24TPI.
French M35 x 1.0, Italian M36 x 24TPI.

SG Gear
Biopace Chaining
Narrow Type Chain Compatible
Computer Aided Design (Crank)
Sealed Mechanism (BB)

Crank Arm: Steel/Zinc Plated
Resin-Molding
Chain Ring:
Steel/Pearl Bright Finish

Bottom Bracket Assembly

BB-M500

Front Chainwheel

FC-M201

(SG Gear Triple, MD Type)

756g (28T, 38T, 48T, 170mm.)
339g (BB Set)
Teeth: Top 48T, Middle 38T, Low 28T
Crank Length: 170mm., 175mm.
BB Axle Length: 121
Chain: 1/2" x 3/32"
Crank Thread: English BC 9/16" x 20 TPI
Cup Thread: English BC 13/16" x 24TPI.
French M35 x 1.0, Italian M36 x 24TPI.

STI (Shimano Total Integration)
Compatible
SG Gear
Biopace Chaining
Narrow Type Chain Compatible
Computer Aided Design (Crank)
Sealed Mechanism (BB)

Crank Arm: Light Alloy-Barrel Finish
Chain Ring:
Light Alloy-Anodized Finish

Bottom Bracket Assembly

BB-M500

Freehub

FH-HG20-Q/N

(Rear, 7-Speed)

425g (w/Quick Release)
Spoke Holes: 36H
Hole PCD: 45
Axle Thread: 10mm.

STI (Shimano Total Integration)
Compatible
Hyperglide Compatible
7-speed SS Compatible

Light Alloy-Dia-Cut Finish

Cassette Sprockets

CS-HG20

(7-Speed)

325g
(Sprocket: E group & Spacer)
Use Narrow Type Chain

STI (Shimano Total Integration)
Compatible
7-speed SS Compatible
7-speed Hyperglide

Brown Finish and
Silver Finish (Low Gear)

Rear Hub

HR-RA50-R (Rear 6-Speed)

Front Hub

HR-RA50-F

Type: Quick Release/Nut Type
(Small Flange)
Spoke Holes: 36H
Hole PCD: 45

Sealed Mechanism
One-Piece Forged Hub Body

Light Alloy

Multiple Freewheel

MF-HG20

(6-Speed)

460g (14-28T)
Use Narrow Type Chain

STI (Shimano Total Integration)
Compatible
6-speed SS Compatible
6-speed Hyperglide

Brown Finish and
Chrome Plated Finish (Low Gear)

FH-HG20

OLD	130	126
Axle Length	140	137
Chain Line	43.2	41.2
Mounting Type	Quick Release	

CS-HG20

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

MF-HG20

Sprocket Combinations:	
	14, 16, 18, 20, 22, 24T
6-speed	14, 16, 18, 21, 24, 28T
	14, 17, 20, 24, 28, 32T

INDIVIDUAL COMPONENTS

RD-L554-SGS



RD-L554-GS



RD-L554-SS



RD-R552-GS



RD-R552-SS



RD-TY20-GS



RD-TY20-SS



FD-TY20



FD-TY25



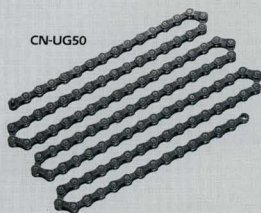
FD-Z260-A



FD-Z261-A



CN-UG50



FD-Z254



FD-Z255



Model No.	Specifications	Compatibility	Finish	
Rear Derailleur RD-L554-SGS (Super Long Cage) RD-L554-GS (Long Cage) RD-L554-SS (Short Cage)	330g (Super Long Cage) Front Difference: 20T Total Capacity: 36T Max. Rear Sprocket: 32T Min. Rear Sprocket: 12T 315g (Long Cage) Front Difference: 20T Total Capacity: 36T Max. Rear Sprocket: 30T Min. Rear Sprocket: 12T	290g (Short Cage) Front Difference: 13T Total Capacity: 28T Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T	6 & 7-speed SS Compatible UG/HG Compatible Double Servo-Panicle Mechanism Centreon Guide Pulley Sealed Pivot Axle Sintered Alloy Guide Pulley Bushing Cable Saver Arm B-Tension Adjuster Double Spoke Barrier Chain Retainer (GS Type, SGS Type)	Bracket Body: Light Alloy+Barrel Finish Plate Body: Light Alloy+Barrel Finish Right Link: Steel+Chrome Plated Left Link: Steel+Zinc Plated
Rear Derailleur RD-R552-GS (Long Cage) RD-R552-SS (Short Cage)	315g (Long Cage) Front Difference: 20T Total Capacity: 36T Max. Rear Sprocket: 30T Min. Rear Sprocket: 12T	290g (Short Cage) Front Difference: 13T Total Capacity: 28T Max. Rear Sprocket: 28T Min. Rear Sprocket: 12T	5, 6 & 7-speed SS Compatible UG/HG Compatible Sintered Alloy Guide Pulley Bushing B-Tension Adjuster Chain Retainer (GS Type)	Bracket Body: Light Alloy+Barrel Finish Plate Body: Resin+Molding Right Link: Steel+Chrome Plated Left Link: Steel+Zinc Plated
Rear Derailleur RD-TY20-GS (Long Cage) RD-TY20-SS (Short Cage)	341g (Long Cage) Front Difference: 20T Total Capacity: 34T Max. Rear Sprocket: 30T Min. Rear Sprocket: 14T *w/Bracket Only	317g (Short Cage) Front Difference: 13T Total Capacity: 28T Max. Rear Sprocket: 24T ~ 28T Min. Rear Sprocket: 14T *Front Single Available	6-speed SS Compatible HG Gear Compatible Sintered Alloy Guide Pulley Bushing Chain Retainer (GS Type) w/Pre-Stretch Saver (SS Type)	Bracket Body: Steel+Zinc Plated Plated Body: Steel+Zinc Plated Right Link: Steel+Chrome Plated Left Link: Steel+Zinc Plated
Rear Derailleur RD-TY10-GS (Long Cage) RD-TY10-SS (Short Cage)	315g (Long Cage) Front Difference: 20T Total Capacity: 34T Max. Rear Sprocket: 34T Min. Rear Sprocket: 13T *w/Bracket Only	290g (Short Cage) Front Difference: 13T Total Capacity: 30T Max. Rear Sprocket: 30T Min. Rear Sprocket: 13T	UG Gear Compatible Centreon Guide Pulley Sintered Alloy Guide Pulley Bushing Chain Retainer (GS Type) w/PreStretch Saver (SS Type)	Bracket Body: Steel+Zinc Plated Plate Body: Steel+Zinc Plated Right Link: Steel+Chrome Plated Left Link: Steel+Zinc Plated
Front Derailleur FD-TY20	154g (Normal Band Type) Band Diameter: $\varnothing 28.0\text{mm}$ ~ 28.6mm (Band Type) Capacity: 14T Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 35 ~ 54	Narrow Type Chain Compatible Rigid Chainguide Trapease Mechanism	Right Link: Steel+Zinc Plated Front Band: Steel+Pearl Bright Finish Rear Band: Steel+Zinc Plated	
Front Derailleur FD-TY25	161g (Normal Band Type) Band Diameter: $\varnothing 28.0$ ~ 28.6mm (Band Type) Capacity: 20T (Biopace+HP), 22T (Round) Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 36 ~ 54	Narrow Type Chain Compatible Rigid Chainguide Trapease Mechanism w/Cable Stopper	Right Link: Steel+Paint Finish Resin+Molding Front Band: Steel+Zinc Plated Rear Band: Steel+Zinc Plated	
Front Derailleur FD-Z260-A	132g (Normal Band Type) Band Diameter: $\varnothing 28.0$ ~ 28.6mm (Band Type) Capacity: 14T Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 37 ~ 51	Narrow Type Chain Compatible Rigid Chainguide New Trapease Mechanism	Right Link: Steel & Resin Front Band: Steel+Pearl Bright Finish Rear Band: Steel+Pearl Bright Finish	
Front Derailleur FD-Z261-A	146g (Normal Band Type) Band Diameter: $\varnothing 28.0$ ~ 28.6mm (Band Type) Capacity: 24T (Biopace+HP), 26T (Round) Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 34 ~ 54	Trailing Action Pantograph Mechanism Narrow Type Chain Compatible Rigid Chainguide New Trapease Mechanism w/Cable Stopper (Detachable)	Right Link: Steel+Paint Finish Front Band: Steel+Pearl Bright Finish Rear Band: Light Alloy+Barrel Finish Chain Guide: Chrome Plated	
Front Derailleur FD-AX50	125g (Normal Band Type) Band Diameter: $\varnothing 28.0$ ~ 28.6mm (Band Type) Capacity: 14T Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 35 ~ 54	Wide Type Chain Compatible w/Cable Stopper	Right Link: Steel & Resin+Zinc Plated Front Band: Steel+Zinc Plated/Chrome Plated Rear Band: Steel+Zinc Plated/Chrome Plated	
Front Derailleur FD-AX55	127g (Normal Band Type) Band Diameter: $\varnothing 28.0$ ~ 28.6mm (Band Type) Capacity: 20T (Biopace+HP), 22T (Round) Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 34 ~ 54	Wide Type Chain Compatible w/Cable Stopper	Right Link: Steel & Resin+Zinc Plated Front Band: Steel+Zinc Plated/Chrome Plated Rear Band: Steel+Zinc Plated/Chrome Plated	
Front Derailleur FD-Z254	125g (Normal Band Type) Band Diameter: $\varnothing 28.0$ ~ 28.6mm (Band Type) Capacity: 14T Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 37 ~ 51	Wide Type Chain Compatible Leading Action Pantograph Mechanism Light Action Mechanism	Right Link: Aluminum+Barrel Finish Front Band: Steel+Pearl Bright Finish Rear Band: Aluminum+Barrel Finish	
Front Derailleur FD-Z255	130g (Normal Band Type) Band Diameter: $\varnothing 28.0$ ~ 28.6mm (Band Type) Capacity: 24T (Biopace+HP), 26T (Round) Stroke (w/ $\varnothing 28.6\text{mm}$ Band): 34 ~ 54	Trailing Action Pantograph Mechanism Wide Type Chain Compatible Rigid Chainguide New Trapease Mechanism	Right Link: Aluminum+Barrel Finish Front Band: Steel+Pearl Bright Finish Rear Band: Steel+Barrel Finish	
UG Chain CN-UG50	Size: 1/2" x 3/32" Chain Speed: 5, 6, 7, 8-speed HG/UG Compatible	STI (Shimano Total Integration) Compatible Narrow Type Uniglide Chain	Black Finish	
UG Chain CN-6130 UG Chain CN-UG30	Size: 1/2" x 3/32" Chain Speed: 5, 6-speed UG Compatible	Wide Type Uniglide Chain Front SS Compatible	Gold & Black Finish	

INDIVIDUAL COMPONENTS



SL-B550



SL-M541



SL-M552



SL-MS55



SL-MY20



SL-S434



SL-S452



SL-S441



SL-SY20
(Stem Type)



SL-SY20
(Bando Type)

Model No.

Specifications

Compatibility

Finish

Shifting Lever
SL-B550-8
 (8-speed)
SL-B550
 (6 & 7-speed)

183g
 Installation Position: Bar End
 Diameter: 19 ~ 22mm (B550).

Combination:

	SL-B550		SL-B550-8
	6-speed	7-speed	8-speed
Shifting Lever	SL-B550 (with the 6-speed adaptor)	SL-B550	SL-B550-8
Rear Derailleur	RD-6400RD-1050	RD-6400RD-1051	RD-7402
Freewheel Cassette Sprockets	FH-6400-6FH-1051-6 CS-6400-6	FH-6400-7FH-1051-7 CS-6400-7	FH-7402-7FH-7403 CS-7400-8CS-7401
Chain	UG Chain	UG Chain (narrow type)	UG Chain (narrow type)
Outer Cable	Shimano SS-SP Cable		Shimano SS-SP Cable

8-speed SS Compatible (SL-B550-8)
 6 & 7-speed SS Compatible (SL-B550)
 SS-Friction Changover

Lever: Light Alloy

- *1: The SL-B550-8 cannot be used for the Dura-Ace 6-speed 7-speed rear derailleur.
 *2: The SL-B550 cannot be used in combination with the RD-7401 rear derailleur.

Rapid Fire
ST-M2020

270g
 Lever Clamp Diameter: 22.2mm.
 *Use with Shimano SS-SP Outer Cable with Liner.

Shifting Lever
SL-M301

154g
 Lever Clamp Diameter: 22.2mm.
 *Use with Shimano SS-SP Outer Cable with Liner.

Shifting Lever
SL-MS41

182g
 Lever Clamp Diameter: 22.2mm.
 *Use with Shimano SS-SP Outer Cable with Liner.

Shifting Lever
SL-MS52 (5-speed)
SL-MS52-6 (6-speed)

120g
 Lever Clamp Diameter: 22.2mm.
 *Use with Shimano SS-SP Outer Cable with Liner.

Shifting Lever
SL-MS55

203g
 Lever Clamp Diameter: 22.2mm.
 *Use with Shimano SS-SP Outer Cable with Liner.

Shifting Lever
SL-MY20

63g
 Lever Clamp Diameter: 22.2mm.
 *Use with Shimano SS
 Outer Cable with Liner.

Shifting Lever
SL-S434-7
 (7-speed)
SL-S434-6
 (6-speed)

85g (7-speed)
 Lever Clamp Diameter: 28.6mm.
 Down Tube Lever
 Combination with RD-R552
 *Use with Shimano SS
 Outer Cable with Liner.

Shifting Lever
SL-S452-7
 (7-speed)
SL-S452-6
 (6-speed)
SL-S452-5
 (5-speed)

85g (7-speed)
 Lever Clamp Diameter: 22.2mm
 Stem Type
 Combination with RD-R552
 *Use with Shimano SS-SP
 Outer Cable with Liner.

Shifting Lever
SL-S460

203g
 Lever Clamp Diameter: 22.2mm.
 Bar Mount-Type
 *Use with Shimano SS Outer Cable with Liner.

Shifting Lever
SL-S441

141g
 Lever Clamp Diameter: 22.2mm.
 Stem Type
 *Use with Shimano SS Outer Cable with Liner.

Shifting Lever
SL-SY20-FCAI
 (6-speed SS Blazed-on A Type)
SL-SY20-BCAI
 (6-speed SS Side Band A Type)
SL-SY20 (Stem Type)

91g (SL-SY20-BCAI)
 Lever Clamp Diameter: 28.6mm. (Down Tube Lever)
 22.2mm. (Stem Type)
 *Use with Shimano SS Outer Cable with Liner.

STI (Shimano Total Integration)
 Compatible (w/BL-200)
 7-speed SS Compatible
 Dual Repeat Function

7-speed SS Compatible
 Chaining Triple Compatible
 Integrated w/Brake Lever

6-speed SS Compatible
 Light Action Lever (Front)
 Sealed Mechanism

5-speed SS Compatible (SL-MS52)
 6-speed SS Compatible (SL-MS52-6)
 Sealed Mechanism

6-speed SS Compatible
 Light Action Lever (Front)
 Sealed Mechanism

6-speed SS Compatible
 Sealed Mechanism

7-speed SS Compatible (SL-S434-7)
 6-speed SS Compatible (SL-S434-6)
 Light Action Lever (Front)
 Sealed Mechanism

7-speed SS Compatible (SL-S452-7)
 6-speed SS Compatible (SL-S452-6)
 5-speed SS Compatible (SL-S452-5)
 Light Action Lever (Front)
 Sealed Mechanism

6-speed SS Compatible
 Light Action Lever (Front)
 Sealed Mechanism

6-speed SS Compatible
 Light Action Lever (Front)
 Sealed Mechanism

6-speed SS Compatible
 Light Action Lever (Front)
 Sealed Mechanism

Bracket: Light Alloy+Paint Finish
 Shifting Lever: Steel+Zinc Plated
 Resin+Molding

Bracket: Steel+Paint Finish
 Lever: Resin+Molding

Bracket: Steel+Paint Finish
 Lever: Resin+Molding

Bracket: Steel+Zinc Plated
 Lever: Resin+Molding

Bracket: Steel+Zinc Plated
 Lever: Resin+Molding

Bracket: Steel+Zinc Plated
 Lever: Resin+Molding

Lever: Light Alloy+Barrel Finish

Lever: Resin

Lever: Resin

Lever: Resin

Lever: Resin

TOOLS

Tool TL-HG15

- Lock Ring Tool for Hyperglide Sprockets.



Tool TL-FW30

- Multiple Freewheel Removal Tool (for MF-7400, MF-6208, MF-2012)



Tool TL-CT10

- Cable Cutter for SIS-SP cable and normal cables, outer casings.)



Tool TL-RD10

- Rear Dropout, Centering and Dropout Hanger Alignment Tool



Tool TL-CN20

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



Reinforced Special Pin

- for HG compatible chain



Tool TL-PD40

- PD-1056, PD-1055, PD-A550 axle unit removal tool



Tool TL-FC10

- Cotterless Crank Extractor for Front Chainwheel



Tool TL-FC30

- Three Spanners for Front Chainwheel, Head Parts, Pedal



Water Bottle

- 20.9 oz.

Cycling Cap

- High Quality Cotton Cycling Cap

Head Band

- High Quality 100% Cotton with Elastic.

Shop Apron

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

Racing Wheel Covers

- Nylon lined inside surface with water resistant rubberized outer skin.

STI COMBINATION CHART

	Rapid Fire	Brake	Rear Derailleur	Front Derailleur	Front Chainwheel	Freehub	Cassette Sprocket	Chain
SHIMANO DEORE XT	ST-M090 ST-M091	BR-M732 BR-M733	RD-M735	FD-M735	FC-M730-SG	FH-M732	CS-HG90	CN-HG90
	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆
SHIMANO DEORE DX	ST-M070 ST-M071	BR-MT62 BR-MT63	RD-M650	FD-M650	FC-MT60-SG	FH-M650	CS-HG70	CN-HG70
	⬆	⬆	⬆	⬆	⬆	⬆		
SHIMANO DEORE LX	ST-M060	BR-M550 BR-M454 BR-M453	RD-M550	FD-M550	FC-M550	FH-M550		
	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆
EXAGE 500 LX	ST-M050	BR-M454 BR-M452 BR-M453	RD-M500	FD-M500	FC-M500	FH-HG50	CS-HG50	CN-HG50
		⬆	⬆	⬆	⬆			
EXAGE 400 LX		BR-M351 BR-M452 BR-M453	RD-M400	FD-M400	FC-M400			
		⬆	⬆	⬆	⬆			
EXAGE 300 LX		BR-M250 BR-M452 BR-M453	RD-M300	FD-M300	FC-M300			
	⬆	⬆	⬆	⬆	⬆	⬆		
SHIMANO 200GS	ST-M020	BR-M200 BL-M200	RD-M200	FD-M201	FC-M200 FC-M201	FH-HG20		

THE SHIMANO FREEHUB SYSTEM

Features:

1. Splined Design—

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

2. Uniglide Tooth Profile—

All sprockets incorporate precise-shifting SIS type uniglide twist-tooth profiles.

3. Advantages of Freehub Design—

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

Greater Interchangeability Among the Freehubs

Series	DURA-ACE/Champagne			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)						
Sprockett Spacer A	No Need*3	No Need*3	No Need	Resin: Dark gray For second gear *Sprocket spacer A is unnecessary if a 13-teeth sprocket is used.	Steel *Sprocket spacer A is unnecessary if a 12-teeth sprocket is used.	For top gear
Sprocket Spacer B	Aluminum Silver 	Steel: Silver 	Steel: Gray 	Resin: Dark gray For third gear-low gear	Resin: Light gray For second gear-low gear *Sprocket spacer B is unnecessary if a 13-teeth sprocket is used.	For second gear-in v 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 desired.

*3: Spacer unnecessary because the 2nd gear is a built-in spacer type.

Notes:

• For 7-speed or 8-speed a narrow type chain is required. Shimano CN-7400 or CN-6208 is recommended for best performance.

• Splined gears (except the built-in spacer type gears) can be used interchangeably on the 6-, 7-, and 8-speed combinations.

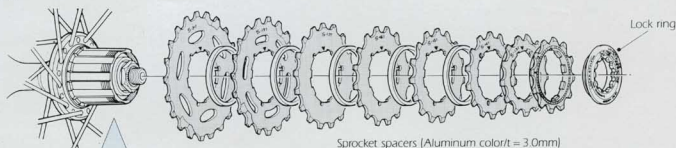
• Top gears, built-in spacer type gears, and sprocket spacers are unique for the 6-, 7-, and 8-speed combinations and are not interchangeable.

• The thread dimensions of the Dura-Ace top gear (screw-on type) are different from other top gear sprockets.

• Due to their asymmetrical spline, Hyperglide sprockets are not interchangeable with non-Hyperglide freehubs. Use designated chain with Hyperglide cassette.

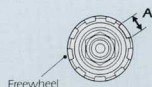
HYPERGLIDE CASSETTE SPROCKET SYSTEM

CS-7401

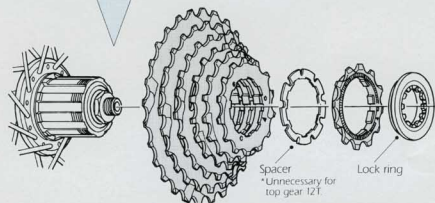


For each sprocket, the surface that has the group mark should face outward and positioned so that the triangle (▲) mark on each sprocket and the A part (where the groove width is wide) of the freewheel are aligned.

The groove width is wide at one place only.



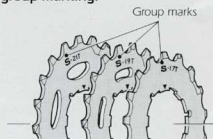
CS-HG90 CS-HG70 CS-HG50



Model No.	Group mark	Combination
CS-7401	S	12, 13, 14, 15, 16, 17, 19, 21T.
	T	13, 14, 15, 16, 17, 19, 21, 23T.
	E	12, 14, 16, 18, 21, 24, 28T.
CS-HG90	F	14, 16, 18, 21, 24, 28, 32T.
	G	13, 15, 17, 20, 23, 26, 30T.
CS-HG70	H	13, 15, 17, 19, 21, 23, 26T.
CS-HG50	I	13, 14, 15, 17, 19, 21, 23T.
	J	13, 14, 15, 16, 17, 19, 21T.
	K	13, 15, 17, 20, 24, 29, 34T.

Notes

- Always be sure to use the HG (Hyperglide) sprocket set bearing the same group marking.
- Never use in combination with a sprocket bearing a different group marking.**



THE SHIMANO FREEWHEEL SYSTEM

Features:

- Splined Design**—All 6-speed freewheels use a thread mounted top gear. The 2nd through 6th gears simply slide on and off for fast and easy replacement. For 7-speed freewheels, the top two sprockets are thread mounted. The 3rd through 7th sprockets are the spline type.
- Uniglide Tooth Profile**—All freewheels incorporate precise-shifting SIS type Uniglide twist-tooth profiles.
- Sealed Mechanisms**—Dura-Ace, Santé, and 600 ULTEGRA freewheels incorporate efficient O-ring sealing

for all-weather durability and a long service life.

4. Easy Maintenance—Dura-Ace, Santé, and 600 ULTEGRA freewheels have an oil port on the body that allows internal lubrication of bearings and pawls simply by removing the sprockets (use oil only).

5. SIS Precision—All 6-speed freewheels use the same precise SIS-type sprocket spacing. 7-speed freewheels (Dura-Ace & Santé) utilize the same narrow-type SIS sprocket spacing.

Hyperglide Freewheel (MF-HG20)

Sprocket Combinations:

14—24	14, 16, 18, 20, 22, 24T.
14—28	14, 16, 18, 21, 24, 28T.
14—32	14, 17, 20, 24, 28, 32T.

Note: Be sure to use Hyperglide Compatible Narrow Chain CN-HG70. CN-HG50.



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