

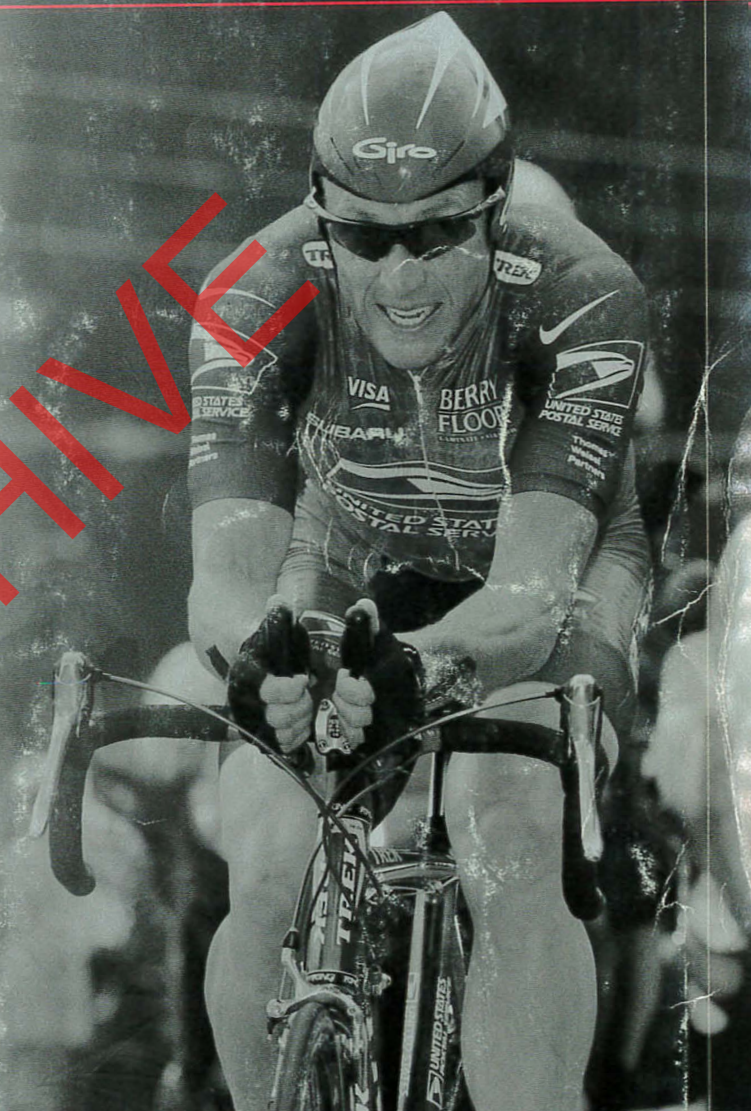
SHIMANO



2004

BICYCLE COMPONENTS
TRADE SALES &
SUPPORT MANUAL

ARCHIVE



Archive

This information was updated in 2004. SHIMANO makes no warranty with respect to this information, including without limitation any warranty on the accuracy of measures, specifications and compatibility of the current products. Regarding any modification and new product information after 2004, please refer to the SHIMANO Business Customer Web Site or directly contact the sales person of our company.

Pursuit of Dreams

First of all, I would like to extend my heart-felt gratitude to our dealers who have continued to support our products.

As concern grows over the global environment and people seek healthier lifestyles, bicycles are poised to significantly attract people's attention.

As a new market for the future, we want to increase our efforts to promote the comfort category, targeting mainstream consumers, as opposed to the higher level enthusiast. We will provide component groups that meet and even exceed consumer desires for smooth shifting and braking, and support consumers in their desire to create new lifestyles.

From that perspective, Nexave C810 equipped with Di2 (Digital Integrated Intelligence) System is the group that holds promise to become a new flagship model of our comfort components.

As you are well aware, Lance Armstrong has completed his fifth straight consecutive victory in the 100th anniversary Tour de France. We are pleased at his inspiring achievement and are proud to have provided him with the new Dura-Ace component group for the race.

For 2004, we will release a number of appealing new products including SAINT for the growing freeride category, the new Dura-Ace, a completely remodeled and refined Deore XT group, Nexave C530 INTEGO and Inter 8 for the comfort category, and Nexave C810.

We will continue to concentrate our efforts on the development of new products that pursue a perfect fusion of technology and human touch to create a new bicycle culture and to act as an active advocate for new bicycle styles.

As always, I look forward to your continued support.

Yozo Shimano
President, Shimano Inc.



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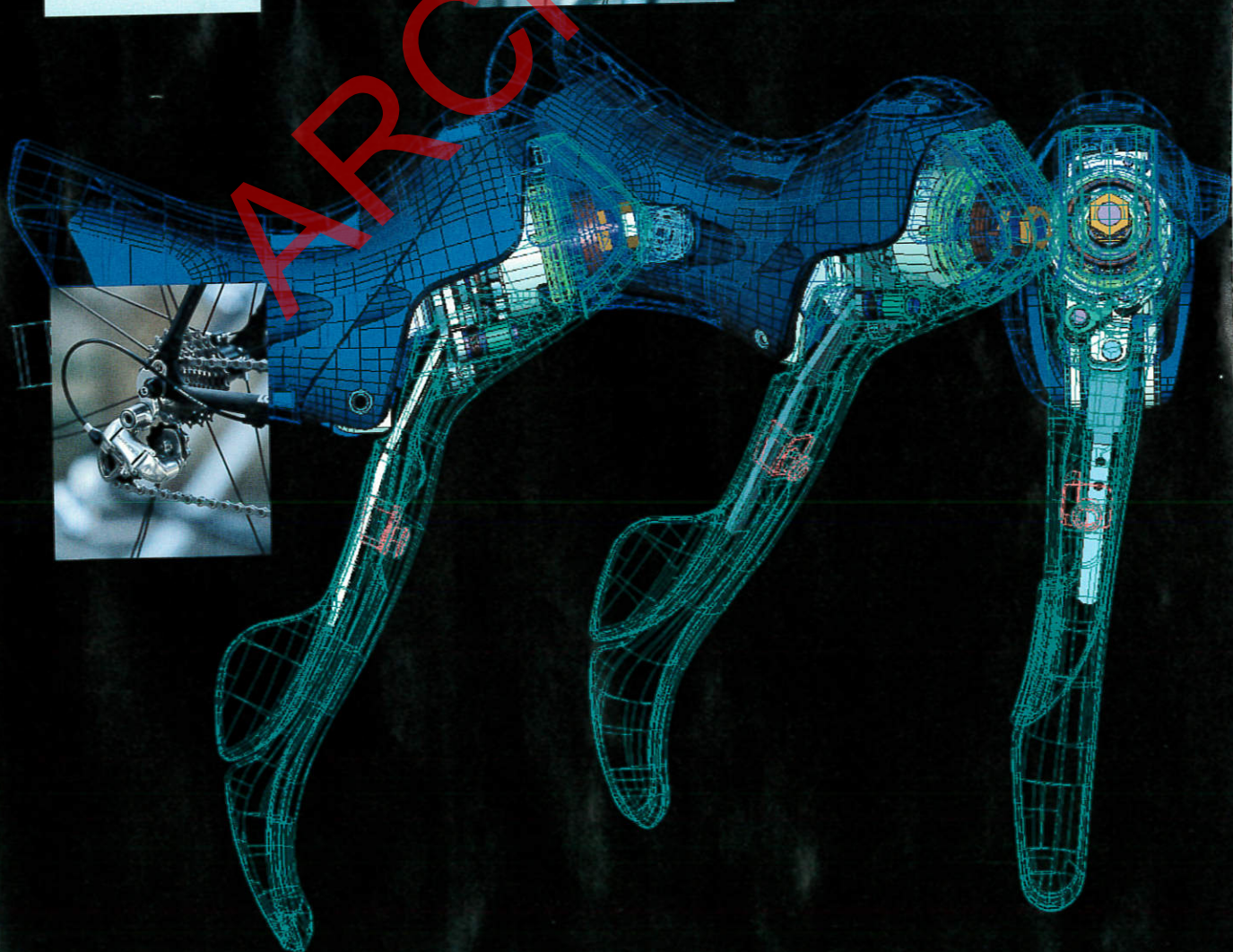
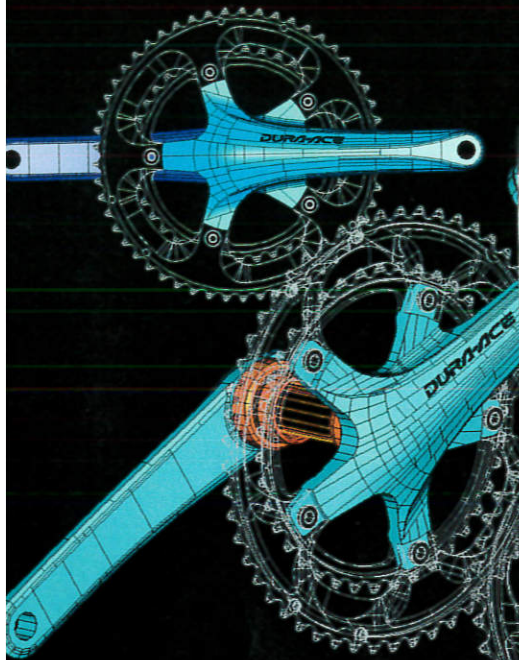
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Logotypes in this manual :

 Stands for "new product"

 Stands for "minor-changed product"



Shimano Systems Engineering Enhancing the cycling experience through innovative technology.

For over 25 years we have been applying the Shimano Systems Engineering concept not only to improve the function of individual components, but also to integrate their operation in a way that improves the overall performance of the bicycle. The result is enhanced cycling experience. Our goal is to produce new and innovative components that make bicycles easier and more fun to ride for more people.

2002, we introduced the revolutionary Di2 (Digital Integrated Intelligence) that was incorporated to NEXAVE C910 on a limited basis. Di2 replaces conventional mechanical control functions with automatic computer control for Premium Comfort.

It isn't aimed at cycling enthusiasts (although they are sure to appreciate it), but at people who have been put off by the perceived complexity of a quality multi-speed bicycle.

For instance, LINKGLIDE Sprockets allows shockless inward and outward shifting to realize a smooth feeling. The performance of LINKGLIDE Sprockets is only possible when it is used together with the specific rear derailleur, shifter and chain. This is a total system engineering developed for general people to enjoy unprecedented levels of smooth shifting.

This year, we have released the Di2 NEXAVE C810 for 24-speed full automatic shifting as the new flagship comfort component system of NEXAVE. This new system features the "ECOVISION", an eco-friendly self-energizing system.

Moreover, the New DURA-ACE underwent a full model change to become the main feature of this year. Also in the MTB category, the SAINT, a new component group specifically developed for extreme freeride, and the fully remodeled DEORE XT, which is equipped with new advanced functions, have lined up among many other exciting products.

ECOVISION

The dynamo stored in the Freehub self-supplies necessary power to the computer and other components as well as the lamp. There is absolutely no need for batteries. This eco-friendly design is another achievement of Shimano Systems Engineering.



The Premium Comfort Component Creates a New Cycling Life-Style.

The comfort bicycle market has been expanding its scale in various ways.

We at Shimano were already supporting this expanding market by introducing new components of NEXAVE C910 and the Di2-loaded model group last year; the marketing scale was still limited, but we are sure to have proposed what potential the new comfort cycling has.

As a strengthened effort to support the market, we present NEXAVE C810 component group developed as a new flagship model of Premium Comfort Components this year.

Furthermore we are presenting the minor changed NEXAVE C500 component group this year, as reasonably priced premium comfort components.

The C500 component group features completely smooth and shockless 24-speed gear changing, has adopted the LINKGLIDE sprocket system and the SPCM 3 (Shimano Power Change Mechanism) Triple Drive Train.

And furthermore, NEXAVE C530 INTEGO combines the benefits of both derailleur systems and internal geared hubs. We have lined up innovative components in order to keep upgrading the concept of Premium Comfort.

Also the Auto-D new Inter-3 System has been developed in addition to the Auto-D Inter- 4 / Inter-3 System in regard to the Nexus.

We at Shimano have committed ourselves to create more comfortable street cycling. As for Premium Comfort, the new concept for ordinary people to enjoy cycling as well as traditional cyclists.

With collaboration from bicycle shops, we at Shimano will continue to present high-quality, easier to ride and more attractive products in various ways for more people to enjoy comfortable cycling. By so doing, we would like to work together with you to keep pursuing larger bicycle component market.



The Premium Comfort Components

The premium comfort bicycle features the state of the art technology. It makes riding easier and more fun through easy handling and low maintenance.

Shimano believes the future of cycling belongs to the bicycle with Premium Comfort components: a bicycle that is very comfortable and easy to control. This new level of care-free cycling is sure to attract the interest of many people who would otherwise not consider owning a bike.

NEXAVE C810, a component system that applies digital technology to bicycle control functions, was developed based on this concept examining the feedback on the test marketing of NEXAVE C910. NEXAVE C810 opens a new world of automatic control that makes the bicycle more comfortable, efficient and fun to ride.

<http://www.premiumcomfort.com>



ARCA

Closer to Nature, Closer to People

At Shimano, we're in the business of producing bicycle components and sport fishing equipment, recreational tools whose value is determined by how well they perform in the hands of the people who use them. Our business philosophy is based on developing products that help people to interact with nature through the outdoor activities they love.

As a manufacturer of bicycle components, we are supplying the broad line of quality products for

all who cycle. We also offer quality products of all categories for sport fishing, including salt water, in order to meet the users' expectations.

We have entered a new field with our new Action Sports Division that was established in 1997, and a new Golf Division that was started in 1999. This division is already producing the Ultegra driver and fairway woods, a golf club designed to improve driving distance and accuracy.



In our rapidly growing urban society it is sometimes easy to forget the importance of harmonious balance between people and nature. Protecting that balance will assure the world's children the very same natural experience we enjoy today. We will be firm with our resolve towards the realization of our corporate ideal - making ourselves closer to people while bringing people closer to nature.



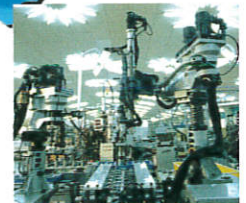
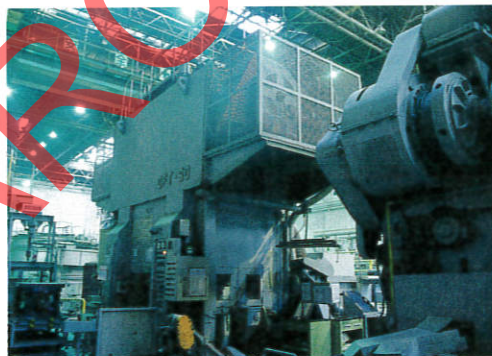
ARCHIVE

A total commitment to quality supported by the latest product development and production technologies

If we have one goal, it's to make components that reduce the amount of energy and concentration the rider must expend to power the bicycle. This is why every Shimano component starts with extensive research into the biomechanical relationship between human and mechanical elements. Mechanical systems are painstakingly developed to work smoothly and precisely without distracting the rider, and to provide precise tactile and even visual signals that enhance control and give the cyclist more confidence.

Our product development work is supported by computer aided design and manufacturing systems that speed up the process through on-screen simulations, quick prototyping and automated tool fabrication. This means that many Shimano products are being developed from initial conception to assembly line in just a few short months.

The advantage of our cold forging technology is a faster manufacturing process, improved quality and reduced costs. We also work within a comprehensive quality control matrix that makes quality an integral part of everyone's job, from initial product development through testing, manufacturing and even shipping.



○ Head Office ■ Production Base ● Marketing Base

Braking Performance for All Types of Cycling — Shimano's Concept of Braking System

Shimano has been seeking after better performance of braking systems for many years. It's understood that the brakes are used in various conditions ranging from road racing to commuting. The conditions also vary widely according to the weights and hand sizes of riders. That's why Shimano is pursuing better performances of braking systems by categorizing into two types: one for cycling enthusiasts including road or MTB racers and the other for unskilled beginners or ordinary cyclists.

The strong braking power and controllability are the most important theme for the former group. At the same time, the development of brake systems for secure and comfortable ride is our top priority issue for the latter group because a particularly strong braking force tends to lock up the front wheel and disables the control risking the safety of riders.



V-BRAKE



Hydraulic Disc Brake

POWER MODULATOR
unit (SM-PM40)
and V-BRAKE



Sport Brake System for enthusiasts

For instance, the braking systems for MTB, such as the V-BRAKE that provides massive braking power and the Shimano M SYSTEM with multi-condition shoe that works well even in rain, have been developed for better braking performances in a broad range of areas.

In the same way, SLR (Shimano Linear Response) has achieved a quick braking and high controllability by the return spring in brake lever for fast return movements. The use of low-friction housing liner in cable has contributed to the realization of SLR as well. SLR is utilized by the current Dual Control Lever for a super light lever operation and a greater overall controllability.

Furthermore, the hydraulic disc brakes have adopted the linear response disc brake system designed for strong and stable braking force with high controllability and good balance. In this way, we have been pursuing the high braking performances to offer subtle and on-demand brake control to skilled riders.



Dual Control Lever
with return spring



Low friction designed
Dual-Pivot Brake

Easy-to-Use Brake System for beginners

Another major development task of Shimano is to create worry-free brake systems for beginners and general people.

To give an actual example, POWER MODULATOR ensures comfortable, easy brake control by preventing excessive lever force from being transferred to the brake in combination use with V-BRAKE or cable actuated Disc Brake and four-finger levers, suitable for riders without a lot of hand strength.

We are proceeding with development projects for creating Easy-to-Use Brake System with better performance for beginners and general people to enjoy riding in comfort.



Roller Brake with
POWER
MODULATOR system

Taking an active part in the international cycling scene



At Shimano, we have always been committed to promoting cycling for sport, recreation, fitness, and transportation. Our ever-growing sponsorship program and schedule of promotional activities are designed to support and encourage cycling in all the markets we serve worldwide.

We are an official sponsor of prestigious UCI cycling events like all World Cycling Championships and Mountain Bike World Cup events. We actively sponsor and provide technical support to well known professional cycling teams such as Rabobank, Kelme and the U.S. Postal Service Team whose leader, Lance Armstrong, won the 1999,

2000, 2001 and 2002 Tour de France on a Shimano-equipped bike. Shimano support cars staffed by expert technicians can often be seen at cycling events in Europe, the USA, and Japan, ready to provide repair and technical service to anyone who needs it.

In Japan, Shimano is the driving force behind the Shimano Suzuka Road Race and the Shimano Mountain Bike Race, nationally known multi-day cycling events attended by literally thousands of bicycle racers and cycling enthusiasts. You'll usually find Shimano people ready to help wherever cyclists get together.



Brian Lopes
(USA)



Roland Green
(Trek/VW, Canada)



Mario Cipollini
(Domina Vacanze, Italy)



Lance Armstrong
(US Postal Service, USA)

Road Teams 2003 with Shimano

Rabobank / Holland
Bankgiroloterij / Holland
Farm-Frites (Lady) / Holland
Palmans / Belgium
Vlaanderen T-Interim (Lady) / Belgium
Gerolsteiner / Germany
Lamonta Stevens / Germany
Team Nürnberger / Germany
Team Fakta / Denmark
Kelme / Spain
Euskaltel / Spain
Credit Agricole / France
Jean Delatour / France

Francaise Des Jeux / France
Lampre / Italy
De Nardi / Italy
Panaria / Italy
Domina Vacanze / Italy
Team Maia / Portugal
Barbot/Torrie / Portugal
Sao Joao Ver / Portugal
Boavista Carvalhelhos / Portugal
Saturn / USA
United States Postal Service / USA

MTB Teams 2003 with Shimano

Heydens/Ten Tüscher / Holland
Stevens/Jeantex / Germany
T-Mobile/Giant / Germany
Merida International / Germany
Fuji MTB Team / Germany
Team Leboucher 72 / France
Lapierre / France
US Filago/Colnago / Italy
Bianchi / Italy
Siemens Mobile/C'dale / Italy
Ceska Sportelna / Czech rep.
Rubena/Merida / Czech rep.
Orbea / Spain
Trek/VW / USA
Kona / USA
Luna Bar / USA
Haro / USA
Subaru/Gary Fisher / USA
Brian Lopes / USA
Intense / USA
ITS/Santa Cruz / USA
Turbo / Mexico
Tokyo Joe's / USA
Hans Rey / USA
Andrew Shandro/SAINT Team / USA
Rocky Mountain / Canada



Line Ups for the year 2004



Comfort Components

SHIMANO **NEXAVE** ^{NEW} C810

The Di2-equipped NEXAVE C810 is the new flagship component of NEXAVE series.



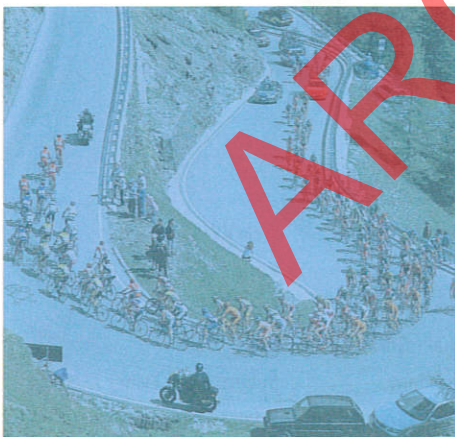
Mountain Bike Components

SHIMANO **XTR**

XTR, introduced as a high-end off-road racing component group last year, continues without any changes.

SAINT ^{NEW}

SAINT is a new component system for extreme freeride. The design concept is "Super Heavy Duty". Durability and rigidity have been pursued to the utmost limit.



Road Components

DURA-ACE ^{NEW}

The first full model changes for DURA-ACE in the past seven years.

Triple version continues as 7700 series.



Others

Wheel System

WH-7800

The new WH-7800, a component of New DURA-ACE, is featured by its super lightweight and rigidity.

WH-M765

The new WH-M765 offers the same functions of WH-M765 tubeless wheel at an affordable price.

**SHIMANO
NEXAVE
C900
C600**

Continues without any changes.

**SHIMANO
NEXAVE** NEW
C500

Offers SPCM3 (Shimano Power Change Mechanism) front triple gear shifting. Redesigned crankset and rear derailleur.

**SHIMANO
NEXAVE** NEW
C530
INTEGO

The new NEXAVE C530 INTEGO series combined the benefits of both derailleur systems and internal geared mechanism.

Nexus NEW
Inter-8

The new 8-speed Inter-8 is to set a new standard of internal geared hubs.

Automatic Inter-3

Offers more user-friendly automatic 3-speed gear shifting and the ECOVISION system.

**SHIMANO
Deore** **XT** NEW

DEORE XT, the proven reliable brand, underwent full model change featuring the most recent functions.

**DEORE
SHIMANO** **LX**

DEORE LX, the off-road component with racing lineage, newly lined up the silver & black version.

**SHIMANO
Deore**

DEORE, the component group to produce pleasures of MTB in diverse ways, will continue without any changes.

**Alivio
SHIMANO**

**Acera
SHIMANO**

**ALTUS
SHIMANO**

Continues without any changes.

**SHIMANO
ULTEGRA**

ULTEGRA, the sport-racing component group for serious road cyclists, continues without any changes.

SHIMANO 105

The black version of Shimano 105, a very popular group among road-sports cyclists, continues without any changes along with the silver version.

**SHIMANO
TIAGRA**

Continues without any changes.

**Flat Handlebar
Components**

The component group for recreational road-sports cycling. Continues without any changes.

**SHIMANO
SORA**

**Shimano 2200
series**

Continues without any changes.

BR-R550

Canti lever brake for road levers

ST-R500

High grade 8-speed Dual Control Levers

CS-HG30-8I

HG 8-speed cassette sprocket at an economical price.

Sport Hub Dynamo

The XT / ULTEGRA grade sport hub dynamo systems for sports and trekking bikes.



The new line-up of PD-M540 and PD-M520 has the same functions as PD-M959 off-road racing pedal.



DURA-ACE PD-7800, PD-R600 and PD-R540 SPD-SL road pedal are lined up.

2004

NEW PRODUCTS

NEXAVE C810

The new NEXAVE C810, the flagship of comfort component to open a new era, features a front triple, rear 8-speed automatic shifting system, front and rear computer-controlled suspension. Electric power is self-supplied by the freehub dynamo to control full-automatic shifting and suspension system realizing environment-friendly "ECOVISION".



NEXAVE C500

NEXAVE C500 offers the outstanding functions of Premium Comfort components at a moderate cost. Above all, the new SPCM3 (Shimano Power Change Mechanism) front triple system together with the cable-guide-roller type rear derailleur strengthens its capabilities.

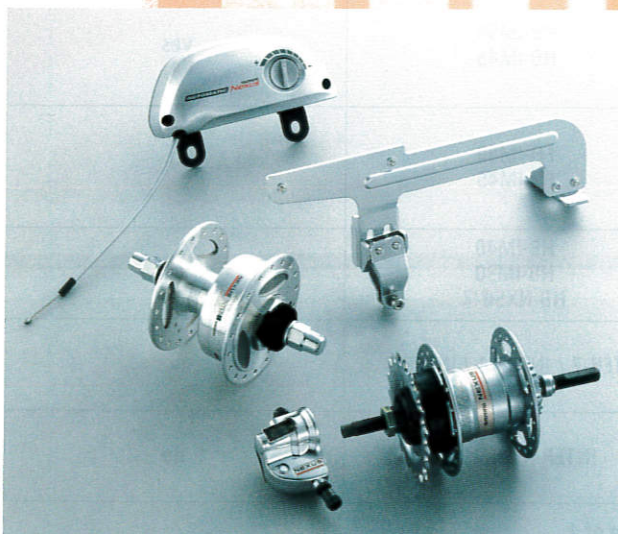
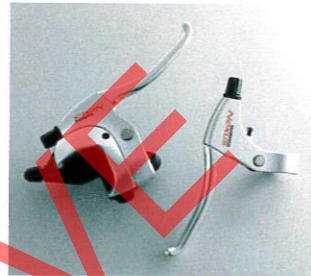
NEXAVE C530 INTEGO

The new NEXAVE C530 INTEGO combines the advantage of a derailleurs system and internal gearing to achieve comfortable and easy shifting with graceful and light shifting touch. The combination of LINKGLIDE 8-speed sprockets and an INTER-3 internal 3-speed gearing hub, provides the best performance you can count on.



INTER-8

INTER-7, which has gained a reputation for high reliability, evolved into INTER-8. It has an additional large gear for wide range gearing system with 307% low-high difference to accommodate any type of terrain. Also, the Gear Change Support Mechanism was adopted for effortless shifting to make riding more comfortable.



Nexus Automatic INTER-3

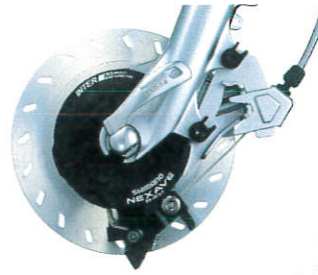
Nexus Automatic INTER-3, an automatic shifting system, was a good reputation, was refined to become more comfortable and user-friendly. Shift timing is adjustable in 8 phases for different riders and the hub dynamo self-supplies electric power to actualize "ECOVISION". Additionally, the main automatic unit is much smaller than before.

2004

NEW PRODUCTS

Roller Brakes

Shimano ROLLER BRAKE has received high evaluation as a multi-condition brake system, which is hardly affected by natural environments such as rain because it is built in the hub. This year, the new BR-IM75-F Disc Mount Front Roller Brake was joined to make the lineup completer.



BR-IM75-F Disc Mount Front Roller Brake

Main Features:

- Compatibility with international A type disc mount
- Silent operation
- Provides comparable braking power as a mechanical disc brake.
- Easy assembly and low maintenance

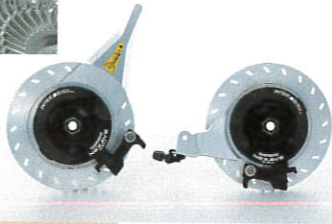
Model	Group	Recommended Hub & Freehub	Power Modulator (front)
NEW BR-IM75-F (front) for disc brake mount	NEXAVE NEXUS	HB-IM70	yes
BR-IM70-F (front)	NEXAVE C500	HB-IM70	yes
BR-IM70-R (rear)		FH-IM70	no
BR-C050-IM-F (front)	TOURNEY TX	HB-C052-IM-F HB-C050-DR*2 HB-C051-DR*2	yes
BR-IM50-F (front)	NEXUS NEXAVE T400/T300	HB-IM50 HB-IM45	yes
BR-IM50-R (rear)		FH-IM50 FH-IM45	no
BR-IM41-F (front)	NEXUS	HB-IM40 HB-IM30 HB-NX50*2	yes
BR-IM41-R (rear)		INTER-7 / INTER-4 / INTER-3	no
BR-IM31 (rear)	NEXUS	INTER-4 / INTER-3	no

*1 Performance index rating uses BR-IM41 brake unit as a reference value of 1.
Testing Conditions
gradient : 6% weight (bicycle & rider) : 100kg speed : 25km/h distance : approx.10km

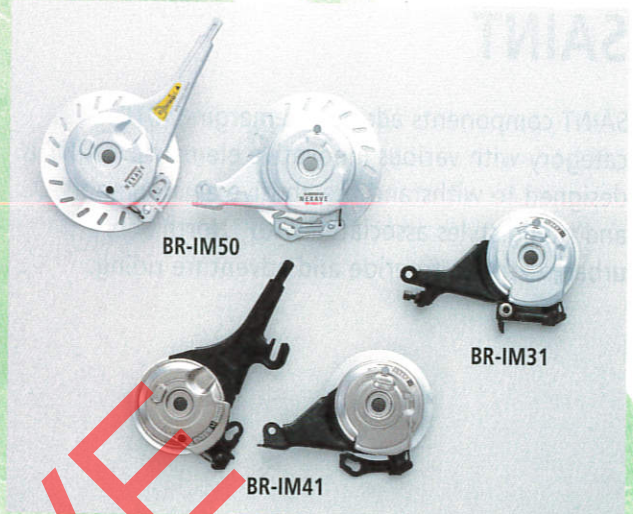
*2 hub dynamo



BR-IM70



HB-IM70
FH-IM70



BR-IM50

BR-IM31

BR-IM41



BR-C050-IM-F



HB-C052-IM-F
for 26 inches wheels
or more

HB-C052C-IM-F
for 20-24 inches wheels

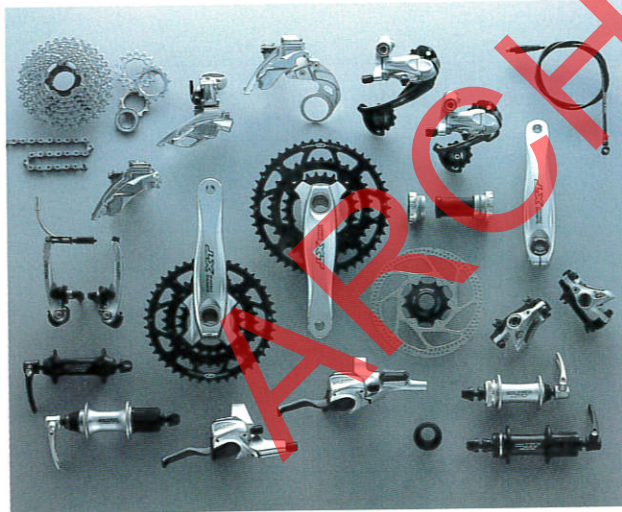
Recommended Lever	Cooling Disc Diameter	V-Section Shoe	Braking Power *1	Heat dissipation *1
NEXUS NEXAVE Brake Lever for Hub Roller Brake	150 mm	yes	1.3	2.2
ST-C503 BL-R440	150 mm	yes	1.3	2.2
ST-C503 BL-R440	150 mm	yes	1.3	2.2
ST-C050 SB-C055 4-finger SB-C055A 4-finger ST-EF29 4-finger	160 mm	yes	1.3	1.4
NEXUS NEXAVE ST-T400/T300-S ST-EF29 4-finger	130 mm	no	1	1.2
NEXUS NEXAVE ST-T400/T300-S ST-EF29 4-finger	130 mm	no	1	1.2
BL-IM45 BL-IM33 ST-EF29 4-finger	90 mm	no	1	1
SB-7S45 SB-4S35 ST-EF29 4-finger	100 mm	no	1	1
SB-4S35 / SB-3S30 BL-IM35 / BL-IM32 (left) ST-EF29 4-finger	90 mm (with or without)	no	1	less than 1

2004

NEW PRODUCTS

SAINT

SAINT components address an emerging MTB category with various innovative elements. SAINT is designed to withstand the abusive environments and riding styles associated with "North Shore", urban, extreme freeride and adventure riding.



DEORE XT

DEORE XT continues to be the recognized standard in high performance components. The new system features the popular and revolutionary functions from the Shimano XTR group.

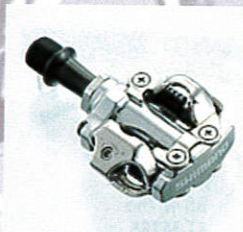
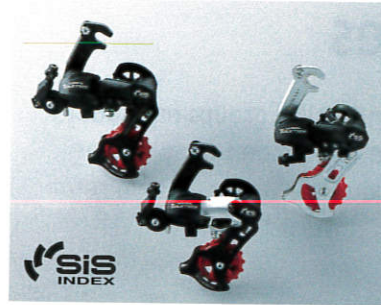
DEORE LX

DEORE LX offers a new two-tone black and silver version in addition to the current two versions. The three color variations accommodate wide-ranging preferences.



TOURNEY TX

The new TOURNEY components were designed for entry-level sport bikes to bring more pleasure and higher value. Advanced functions including the 6 / 7-speed SIS Indexed shifting for rear derailleur and the DUAL SIS front and rear index shifting compatible crankset together with nifty new designs supports creating new basic bicycle models for beginning riders.



PD-M540



PD-M520



New High Performance MTB Wheel

The WH-M765 tubeless tire compatible wheel features the same performance features of the WH-M965 XTR wheels but at a more affordable price.

New SPD Pedals

PD-M540/M520 provide high performance with new designs at affordable prices. The PD-M540 features a durable, lightweight aluminum axle sleeves and the PD-M520 is available in two colors: black and silver.

CS-HG30-8I New HG Cassette Sprockets

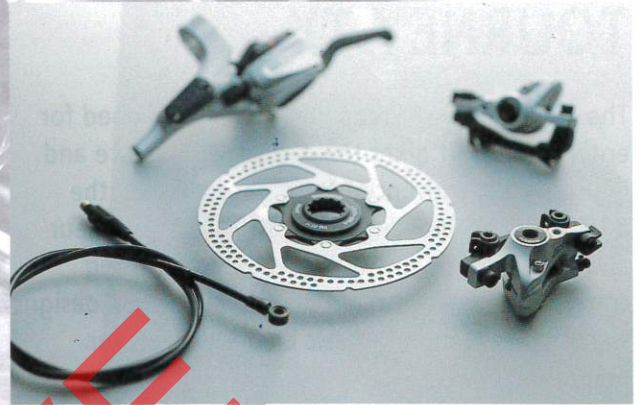
HG 8-speed cassette sprockets lined up at an affordable price.

2004

NEW PRODUCTS

Disc Brakes

The new DEORE XT and SAINT groups have adopted the proven high performing mono-body caliper design. The SAINT group features a 203mm rotor for maximum braking control.



Shimano Disc Brake Systems Line-up

One of the most important things that a disc brake needs for severe off-road conditions is a highly modulated feeling of control. The brake must be able to provide a balance of speed control as well as strong stopping power when quick deceleration or stops are needed. Our engineer's development and effort is in creating and improving modulation and control.

This is the strongest point of all Shimano disc brakes.

XC Competition (XTR)



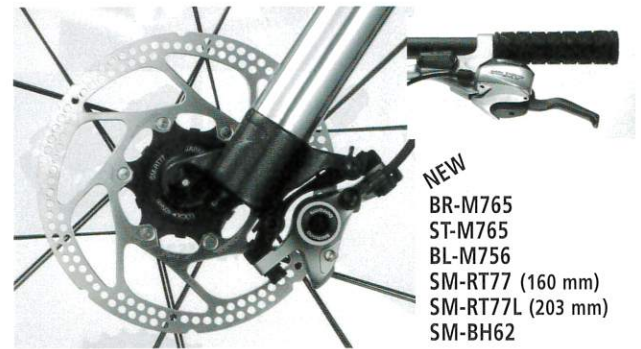
BR-M965
ST-M965
SM-RT96
SM-BH96

Extreme Freeride (SAINT)



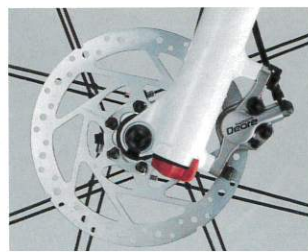
NEW
BR-M800
SM-RT80 (203 mm)
SM-RT80S (160 mm)
SM-BH62

MTB All-around (XT)

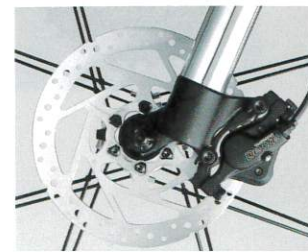


NEW
BR-M765
ST-M765
BL-M756
SM-RT77 (160 mm)
SM-RT77L (203 mm)
SM-BH62

MTB All-around

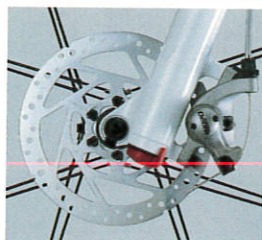


BR-M555
BL-M556
SM-RT61
SM-BH62

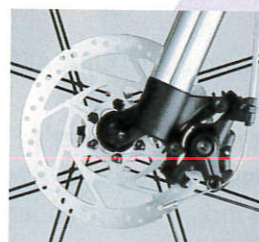


BR-M525
BL-M525
SM-RT61
SM-BH62

MTB Sport / Recreational

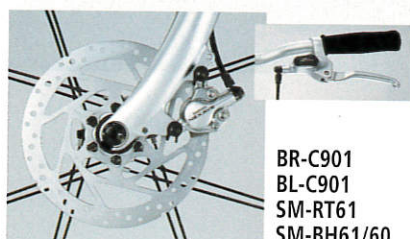


BR-M515-LA
SM-RT61

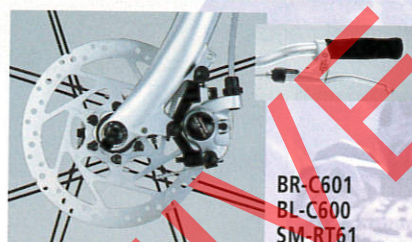


BR-M475
SM-RT61

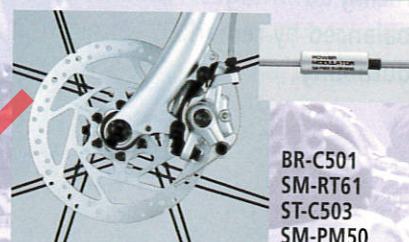
Premium Comfort Disc Brakes for Utility / Recreational



BR-C901
BL-C901
SM-RT61
SM-BH61/60



BR-C601
BL-C600
SM-RT61



BR-C501
SM-RT61
ST-C503
SM-PM50

BR : Disc Brake Caliper BL : Disc Brake Lever SM-RT : Disc Brake Rotor SM-BH : Disc Brake Hose

Disc Brake Performance

M01/M03/M06 : Longer pad-life, good for anti-fade, good consistency either dry/wet. May cause noise while braking.

M02/M04/M05/M07/M07-S : Same level performance as metal pad. Shorter pad-life than metal. Do not use M08 brake pads in combination with the BR-M515/BR-M515-LA brake system. If M08 brake pads are used, the brake arm and caliper will touch before the pad wear indicator is noticed and a noise indicating that the pads need to be replaced is heard, and this will result in a gradual reduction in braking performance until ultimately the brakes stop working.

C01 : Easy, controllable metal pad, good for trekking use.

Model	XTR M965	SAINT M800	DEORE XT M765	DEORE M555	DEORE M525	DEORE M515-LA	M475	NEXAVE C901	NEXAVE C601	NEXAVE C501	
Application	competition (XC)	extreme freeride	all-around	all-around	all-around	sport / recreation	sport / recreation	utility & recreation	utility & recreation	utility & recreation	
Caliper	opposed two-piston	opposed two-piston	opposed two-piston	opposed two-piston	opposed two-piston	single piston	single piston	opposed two-piston	single piston	single piston	
Pad	M06:metal M07:resin	M06:metal option/ M07S:resin	M07S:resin option/ M06:metal	M01:metal option/ M02:resin	M08:resin	M05:resin	M08:resin	C01:metal	M05:resin	M08:resin	
Weight (g)*5	Caliper (front)	98	183 w/ adaptor	163 w/ adaptor	161	219	303	297	161	280	297
	Rotor	139	211 (203mm)/ 146 (160mm)	149	168	168	168	168	168	168	168
	Hub (front)	150	275	180	245	245	245	272	230	230	245
	Lever (front)	221 *1	240 *2	240 *2	123	123	88 *3	88 *3	126	134	250 *4
	Total	608g	909g (203mm rotor)	732g	697g	755g	804g	825g	685g	812g	960g

*1. Weight of ST-M965.

*2. Weight of ST-M765.

*3. Weight of BL-M510.

*4. Shifter unit is included.

*5. The hub of each model weight column is the front hub listed in the chart above.

Note:

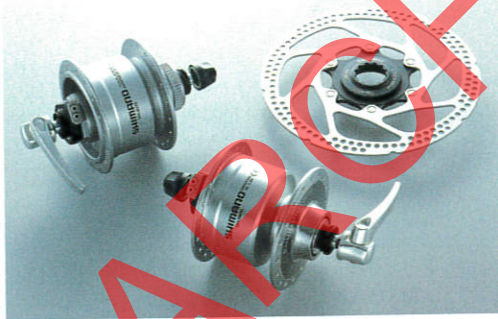
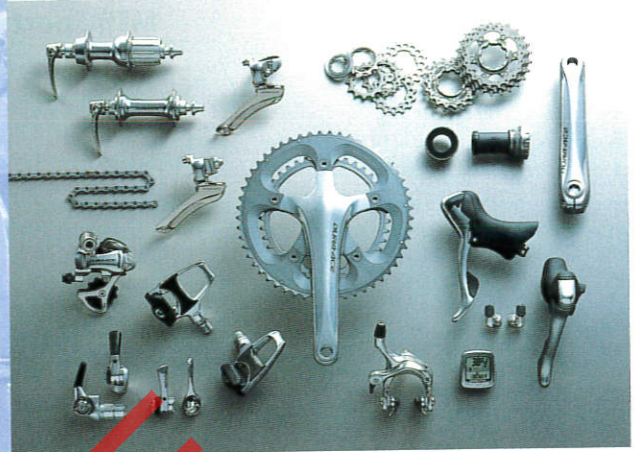
- Always use genuine Shimano mineral oil with Shimano disc brakes.
- Hubset is not included with disc brake systems.
- Both international A-type and Post mount type are available.
- Brake pad number is on the backside of the pad.
- SM-BH96/SM-BH62/SM-BH61/SM-BH59 brake hoses are cuttable.

2004 NEW PRODUCTS

DURA-ACE

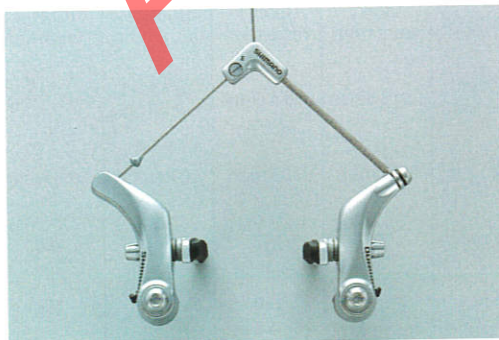
Drawing from thirty years of legendary DURA-ACE systems engineering, the 7800 series has been thoroughly revamped to become the pro-racer's dream come true: A lighter, more precise and responsive system that is also more rigid, stronger and powerful.

New DURA-ACE presents an unprecedented array of racing advantages. Astonishing weight reduction balanced by remarkable new strength, rigidity and durability.



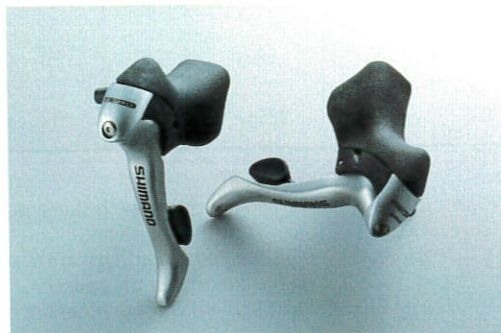
Sport Hub Dynamo

The XT / ULTEGRA grade sport hub dynamo is a practical lighting solution for sport and trekking bikes with hub dynamo lamp system.



BR-R550 Canti-Lever Brake for Road

Canti-lever brake compatible with road STI lever for cyclocross and flat handlebar bikes with wide tires.



ST-R500 8-speed Dual Control Lever

New high-grade 8-speed STI lever for servicing older systems.



Comfort Components

Components Designed for more comfortable cycling

The idea behind comfort is to combine the efficiency of a road bike with the stability and comfort of a mountain bike. Shimano continues to refine the comfort concept with innovative components designed to create an enhanced feeling of comfort and control.

A bike equipped with Shimano comfort components is easier to ride, so cycling becomes more fun, especially for new cyclists, leisure riders or occasional riders.

An enhanced feeling of confidence makes the cyclist feel more relaxed on the bike.

Facing toward 2004, Shimano introduces NEXAVE C810 featuring Front Triple, Rear 8-speed and a completely automated control suspension. It's the new flagship model of our Premium Comfort Components equipped with Di2, Digital Integrated Intelligence.

In addition, the new C500 series has the Triple SPCM Front Drive System and the new C530 INTEGO combines a derailleur system with an internal hub. We present a new approach with those highly enhanced Shimano Comfort Components in the quest for diverse styles of comfort bikes.

SHIMANO
NEXAVE C810 38

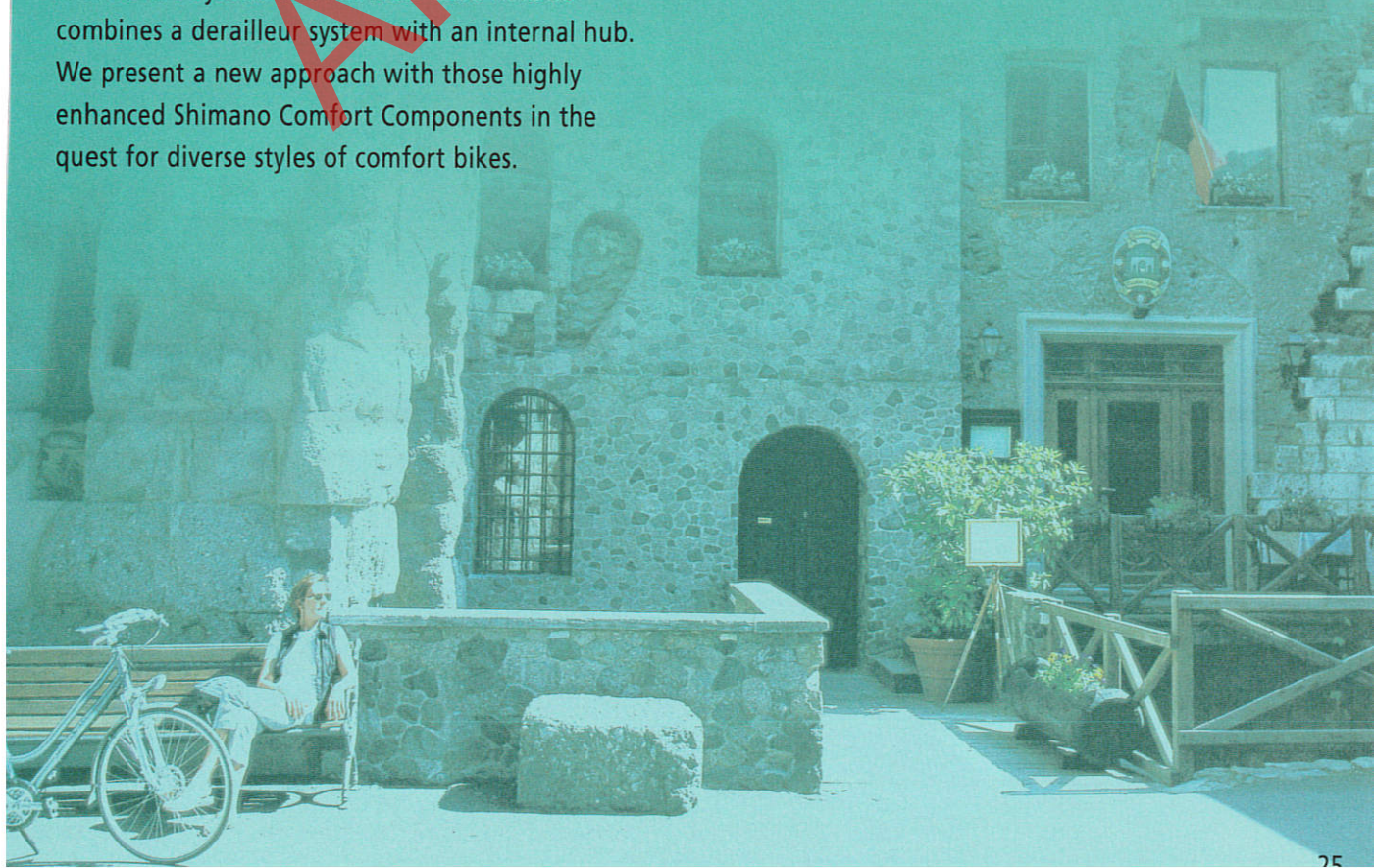
SHIMANO NEXAVE C900 SHIMANO NEXAVE C600 40, 42

SHIMANO
NEXAVE C500 44

SHIMANO
NEXAVE INTEGO C530 46

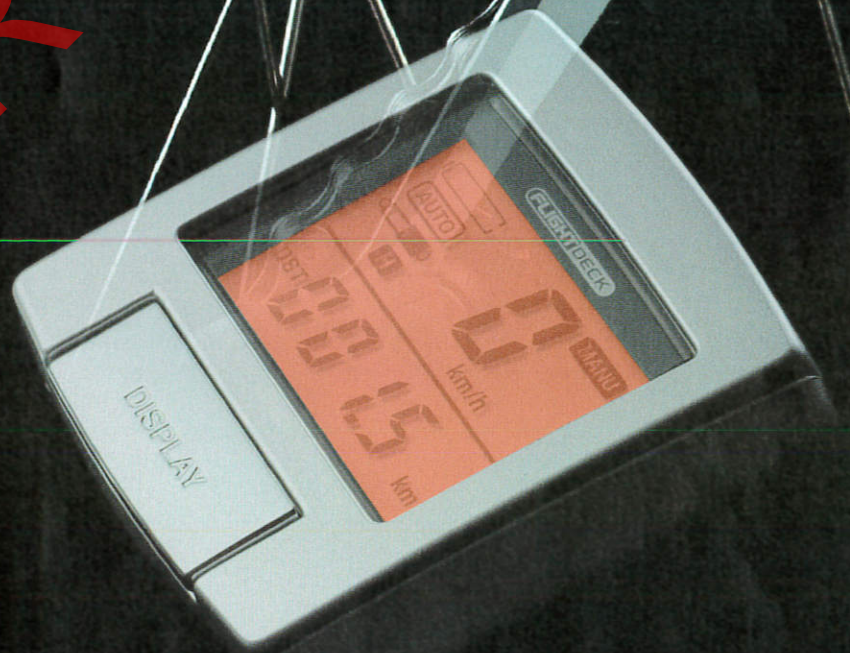
SHIMANO NEXAVE T400/T300 SHIMANO C201 48

Nexus 50



Comfort
Components
Technology

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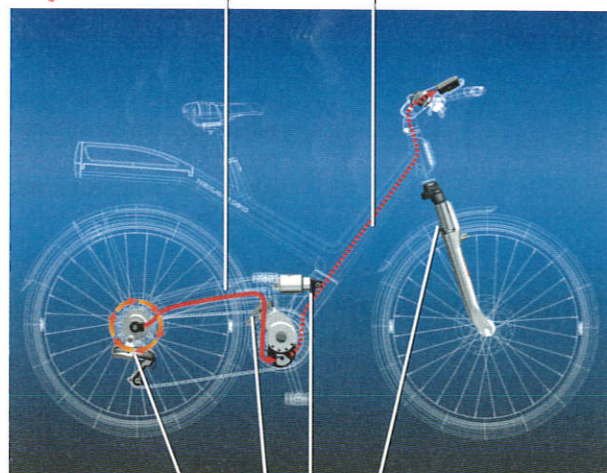
Di2 Digital Integrated Intelligence (NEXAVE C810)

The Di2 system allows all-new comfort riding by the fusion of Shimano's traditional mechanical technology and the advanced digital technology.

The computer-controlled automatic shifting system, the self-adjustable digital suspension for optimum hardness, and the three automatic drive modes at your choice. The advanced computer engineering provides a smooth, silent and shockless ride. This year, we offer NEXAVE C810 that was developed by receiving feedback on our test marketing of NEXAVE C910. It is characterized by many features including the 24-speed completely automated system and a synergy with the auto-suspension for quick response. The high quality of Di2 has entered a new stage. In addition, electric power is supplied from the dynamo stored in the Freehub, to control shifting and suspension realizing an environmental-friendly design. Shimano named it ECOVISION and we will continue to pursue the development of this electric power self supply system.

Features	Benefits
Digital drive system	Computer selects optimum gears in response to the speed. Ensured ideal gear ratios allow comfortable riding at all times.
Computer-controlled shifting	Rear derailleur shifts automatically when the front is shifted to adjust tooth difference and minimize large changes in gear ratios. The shockless and smoother shifting is actualized.
Digital suspension	Hard ride at uphill and on start-up not to waste power; soft ride at normal riding. Computer selects optimum hardness.
Self powered by Freehub dynamo	No battery power for the system provides environmental friendly— ECOVISION.
11 internal dynamo magnets	Immediate speed sensor input at 11 signals-per-rotation for instantaneous response to riding conditions. No more wheel magnet systems.
Simple and easy-to-read display	Riding information is obtainable without having your attention caught in the display.
Mode buttons for shifting and suspension on shift side	Mode button operation is possible while keeping hands on the handlebar.

Environmental Friendly
— **ECOVISION**
completely self-powered
by Freehub dynamo



Advanced Automatic System
completely automated
Synchronized changing
and Suspension
— Quick and Precise Response

SPCM3 (Shimano Power Change Mechanism) / SPCM (NEXAVE C810/C500-SPCM3, C900/C600-SPCM)

SPCM actualizes unprecedented light shifting by using pedaling force as well as finger pressure for front shifting. Moving the ratchet with the button is only one necessary shift lever operation. By using a little pedaling force, shifting at optimum position which is synchronized with crank rotation is possible. The light and smooth shifting provides a comfortable riding. Moreover, this year the newly-introduced SPCM3 actualizes the triple front shifting. The triple shifting by ultralight button operation has finally created a genuine and authentic comfort riding scene. It has made a huge contribution to the actualization of 3x8 24-speed automatic shifting largely.



ST-C505 (L) TAP FIRE lever unit



Features	Benefits
----------	----------

SPCM3
(C810/C500)

SPCM accomodates triple shifting. Crank and derailleur are synchronized for constant shifting at points of optimum gear combination so shifting operation is light, shockless and high-quality. Front automatic shifting mechanism.

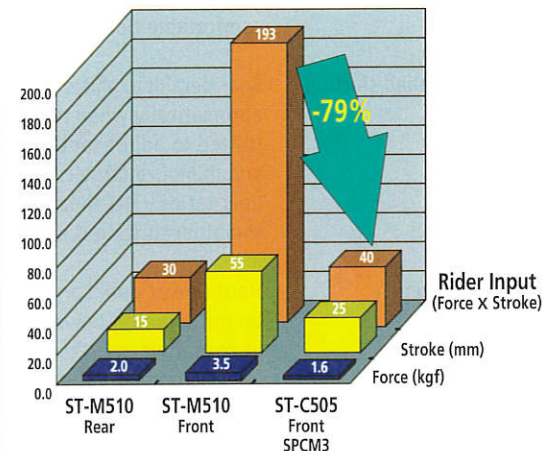
Shift buttons instead of shift levers

Just a press at the shift button activates the crank-powered shifting mechanism. Hand power is not used to shift the derailleur.

Minimum pedaling power loss

Rotating crank inertia is used to power the shift so there is minimal loss of pedaling power.

SPCM3 Comparison of Front Shifting Effort (Input by Rider)



LINKGLIDE Sprocket (NEXAVE C810 / C530 / C500)

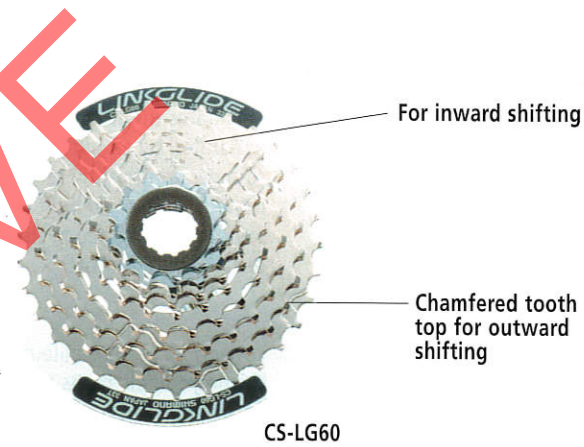
The shockless LINKGLIDE sprocket, developed for Di2 system, is one of the important consistent elements of Premium Comfort Components. During shifting from small gear to large gear or from large gear to small gear, bidirectional shifting shocks are minimized by the original tooth top form and the phase adjustment of gears. The smooth feeling by shockless shifting is "nothing special" when we come to think of it. The LINKGLIDE sprocket, which actualizes high-quality riding comfort, is an absolutely necessary function not only for Di2 System but also for all types of comfort bikes.



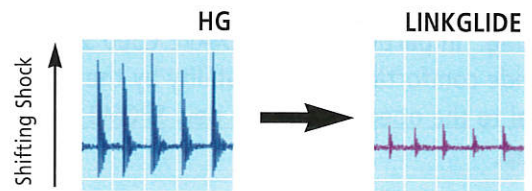
Features	Benefits
Smooth and shockless gear shifting	Comfortable ride, comfortable feeling at shifting, silent riding.
Computerized phase adjustment of gears	Shifting at one push is smooth and precise by the phase of gear change gate.

Note:
Use rear derailleurs and shifters compatible with LINKGLIDE for best performance.
Also, use 9-speed HG chain.

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Gear phase is adjusted for both inward and outward smooth shifting.



Reduced shock by 70%

When you shift from large gear to smaller with using LINKGLIDE gear, the shifting shock is reduced by 70% compared with HG gear. When you shift from small gear to large gear, the shifting performance of LINKGLIDE gear is almost same as HG gear.

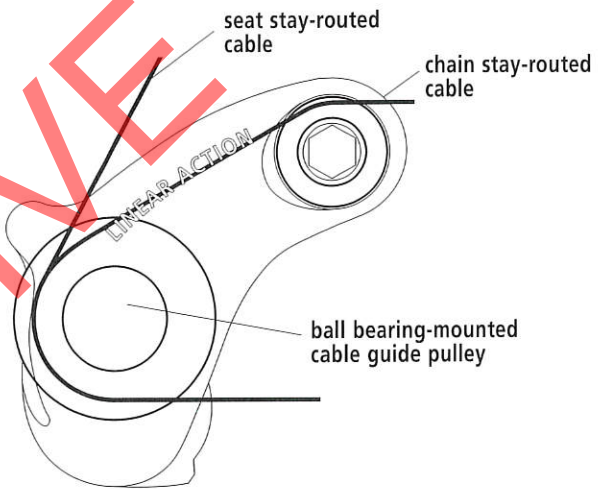
Linear Action Rear Derailleur (NEXAVE C900 / C600)

Linear Action design eliminates the need to run an outer cable casing between the cable stop on the frame and the rear derailleur. There's also a cable guide pulley that rotates on a ball bearing to reduce cable friction. The result is a significant reduction in cable friction for smoother, more precise shifting and a lighter, more responsive lever action for a longer time. The derailleur also works with seat stay or chain stay-routed cables. NEXAVE C900/C600 with Intelligent Integration defines the new state-of-the-art in derailleur shifting.



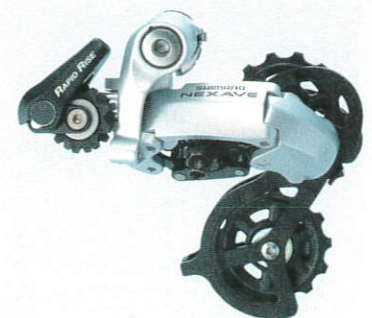
The linear action rear derailleur provides a light shift feeling.

Features	Benefits
Ball bearing cable guide pulley allows linear cable routing.	Eliminates the friction normally generated by an outer cable casing. Significantly reduces cable friction for a light and smooth shifting action that demands little effort.
Complements the SPCM shifting action. (C900/C600)	Low-effort rear derailleur shifting complements the front derailleur's SPCM shifting system. Provides a refined "high-tech" shift feeling for the entire bicycle.



Cable Roller Guide (NEXAVE C530 / C500 / T400 / Shimano 201)

As the Linear Action rear derailleur, the attached rotating cable guide lightens the frictions for light shifting. In particular, the NEXAVE C500 Series can provide comfortable controllability by the lightness equal to the operation of the new SPCM3 Front Triple lineup.



Features	Benefits
Rotating cable guide pulley allows light cable action and direct cable routing.	Reduces cable friction for light and smooth shifting action that demands little effort.
Complements the SPCM3 shifting action (NEXAVE C500)	Low-effort rear derailleur shifting complements the front derailleur's SPCM3 shifting system. Provides a refined "High-tech" shift feeling for the entire bicycles.

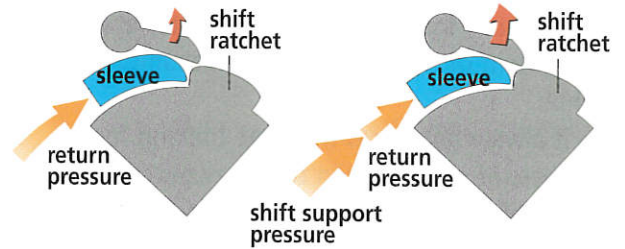


Cable Roller Guide

Shift Support Mechanism Aids Gear Change (NEXUS)

Shimano Gear Change Support Mechanism utilizes some portion of pedaling force at down shifting. The result is a quick and precise downshift with very light feeling. For the Auto-D automatic shifting system, this Gear Change Support Mechanism is the key. Shifting effort is reduced to the point where the hub can be shifted through a small low-torque DC motor. Less electricity is required, so a smaller battery allows the system to be lighter and more compact.

40% Less Shifting Force Required



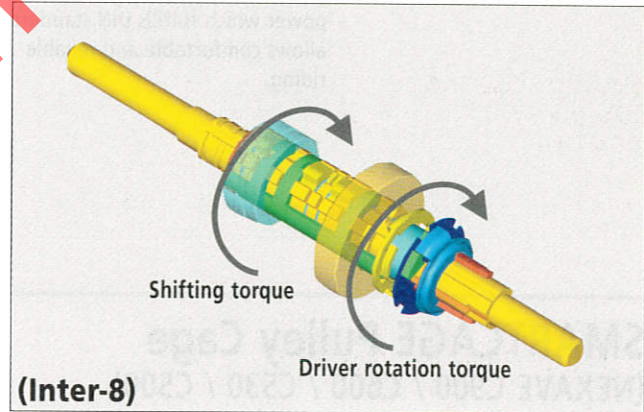
Features	Benefits
Light shifting	Easy and light-effort shifting helps concentration on riding without paying too much attention on shifting.
Pedaling force is partially used for gear change.	Automatic shifting mechanism

SG-4R31/4C30 Hub
Shifting pressure must overcome sleeve return pressure to execute the shift.

**SG-8R20/8R25/
SG-4R35/4C35/
3R40/3C40 Hub**
Pedaling force is applied against the sleeve to help overcome sleeve return pressure and execute the shift.

• The values shown are from tests conducted by Shimano, and has been averaged.

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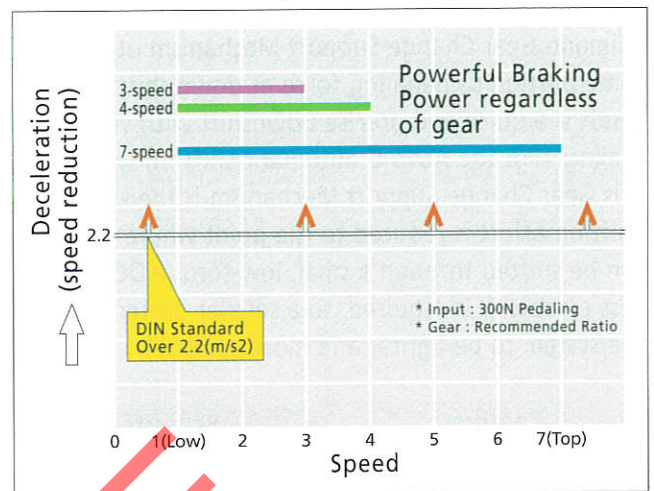
Coaster Brake (NEXUS)

NEXUS Coaster Brake is operated by pedaling backward in a similar way as ordinary types. Its uniqueness is that braking power is transmitted to wheel directly for NEXUS internal coaster brake is independent of the gear shifting mechanism built into the hub.

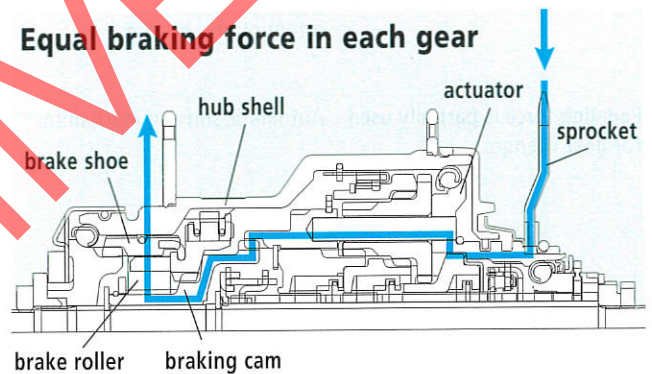
Also it always generates the same braking force regardless of gear position to actualize comfortable and reliable riding. For Inter-7 / Inter-4 / Inter-3, it actualizes the braking force to meet the DIN standard.

Features	Benefits
Simple construction that operates independently of the hub's transmission.	The brakes can provide the same level of control response and uniform braking power regardless of gear.
DIN standard over 2.2 (m/s ²)	The performance of braking power which fulfills DIN standard allows comfortable and reliable riding.

Powerful Braking Power regardless of gear



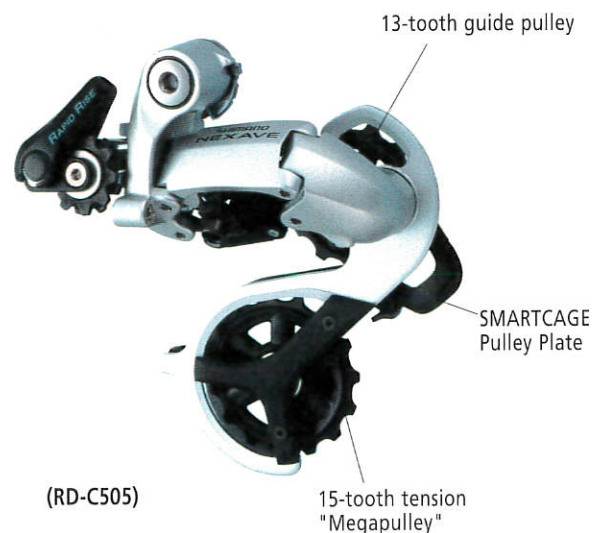
Equal braking force in each gear



SMARTCAGE Pulley Cage (NEXAVE C900 / C600 / C530 / C500)

The use of 13 and 15-tooth pulleys allows for a shorter chain cage that can still handle MEGARANGE gear, wide ratio gearing and 34-tooth sprockets. The SMARTCAGE Pulley Cage not only looks better on the bike, it provides the added benefit of more ground clearance.

Features	Benefits
Use of 15-tooth tension pulley and 13-tooth guide pulley allow for a shorter pulley cage.	SMARTCAGE Pulley Cage is shorter yet provides the large chain capacity needed for wide range gearing. Provides for increased ground clearance and improved appearance.

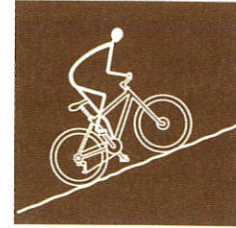


RAPID RISE Rear Derailleur

The adopted low-normal spring allows the left and right shifters shifts up and down by the same operation to actualize an intuitive shifting. The shifting to large gears done by spring tension allows shifting at an exact point, noise reduction, and less strain on gears for longer durability.

Features	Benefits
Low-normal spring	Same operation of left and right shifters allows an intuitive shifting, easy for average riders.
Spring Tension for shifting to large gears	Shifting at the uphill is easy. Avoids needless force for smooth and light inward shifting. Noiseless and longer durability.

Light-touch inward shifting during hill climbing

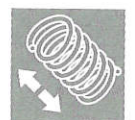
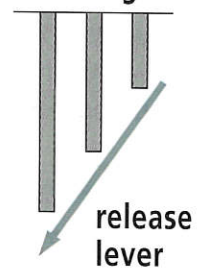


Top Normal



By Finger Force
Unequal and excessive power is applied; entrance into the shifting gate is not smooth.

RAPID RISE Shifting

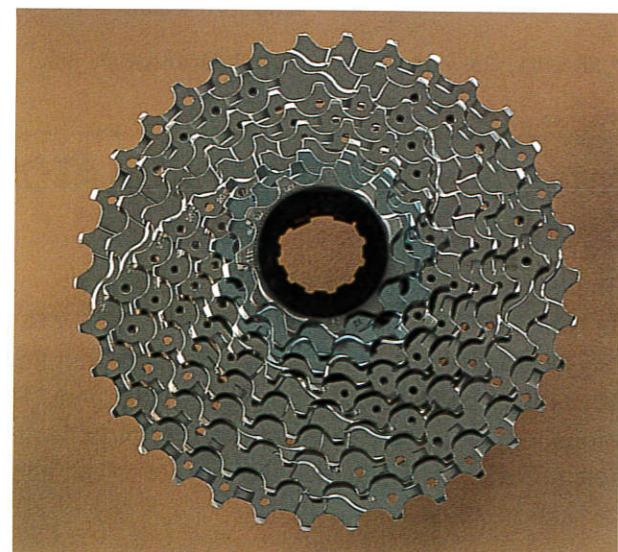


By Spring Return Force
Spring force makes entrance into the shifting gate smooth.

MEGARANGE Sprocket

MEGARANGE sprocket keeps you on the bike. 34-tooth MEGARANGE sprocket provides super-low gearing that lets you pedal up the steepest grades with ease. It's also a comfort feature that also comes in handy when you have to climb when you're tired after spending hours on the bike.

Features	Benefits
34-tooth super-low gear sprocket.	More comfortable cycling lets you pedal up the steepest grades without getting off the bike.
Wider gear range.	Used with 11 or 13-tooth top gear, MEGARANGE sprocket provides ultra-wide range gearing that's great for touring, off-road riding or just taking it easy on the bike.



Disc Brake for Comfort Bikes (NEXAVE C900 / C600 / C500)

NEXAVE C900 brings the performance of hydraulic disc brakes to comfort bikes. Compared to cantilevers, disc brakes are easier to control, work better at high speeds, reduce fade and don't damage your rims. NEXAVE C900's four-finger lever and special pad compound provide the best balance of braking power and control for recreational cyclists. The NEXAVE C600 series offers a mechanical disc brake system that can be used with V-BRAKE levers that have an integrated POWER MODULATOR mechanism. It's a great way to get disc brake performance on a reasonably priced comfort bike.

Features	Benefits
Mineral oil used instead of hydraulic dot brake fluids (C900).	Non-corrosive natural mineral oil is an effective alternative to hazardous DOT brake fluids. It's biodegradable, non-toxic and doesn't harm painted and metallic surfaces.
Opposed twin-piston caliper (C900).	Provides strong, smooth and controllable braking power, easy maintenance and extended pad life.
Cable activated disc brake (C600/C500*).	Eliminates the need for fluid media while simplifying installation and adjustment. Used with 4-finger V-BRAKE lever with integrated POWER MODULATOR unit.

* BR-C501 : Use with SM-PM50 POWER MODULATOR unit.



BR-C901
Twin opposed piston design provides strong, smooth and controllable braking power.



BR-C501

Integrated POWER MODULATOR System (NEXAVE C900/C600)

The NEXAVE C900/C600 V-BRAKE system uses a braking POWER MODULATOR unit that is built into the lever unit itself. Putting the modulator unit into the brake lever bracket makes for a smaller unit. The modulator also provides a stepless adjustment feature (only C900). The modulated braking action can be set to rider preference.

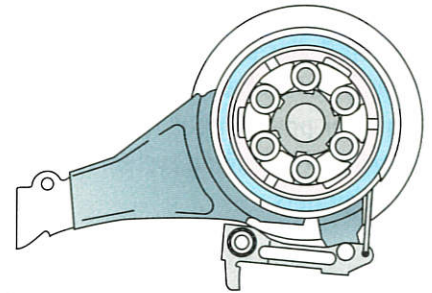
Features	Benefits
POWER MODULATOR System	Gives the cyclist more controllable braking performance.



BL-C900

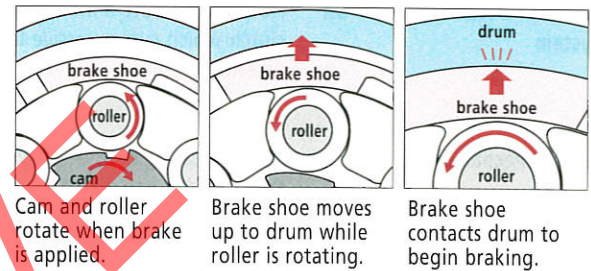
Roller Brakes

Shimano Multi-Condition roller brakes use a precision cam-and-roller design that delivers strong yet easily controllable braking power. Large disc-type radial cooling fins keep temperatures down, eliminate fade, and extend service life of the lubricant. Sealing channels keep out dirt and water to assure safe and dependable braking performance in wet or dry conditions.



Multi-Purpose Roller Brake (BR-IM70-F/R)

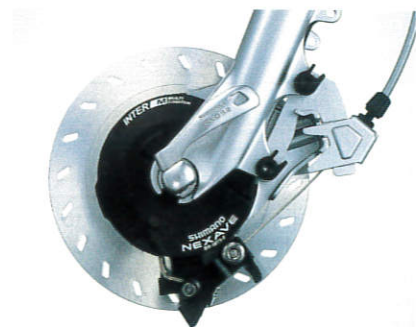
With the adoption of a V-shaped brake shoe, and larger cooling fins, the braking force is closer to that of a mechanical disc brake. The V-shaped brake shoes increase the braking power while the large fin raises its heat dissipation efficiency that allows it to brake longer and harder without fading. These upgrades make the roller brake more suitable for a wider variety of bicycles.



Features	Benefits
Multi-condition brake	As the roller brake itself is built in the drum, it is free from external influences such as dust and rain. For this reason, you can get the braking force that is close to times of fair weather even at times of rain.
Hub mounted	Eliminates the need for external calipers or cantilevers. Braking action is impervious to weather.
Cam-roller mechanism	Strong and responsive braking action that's easy to control.
Large cooling disc (BR-IM70/IM50-IM/ IM50)	Efficient heat dissipation helps prevent fade and extend lubricant life.
Meets DIN-79100 specification	Recognition by this demanding DIN standard means you can use the roller brake with complete confidence.
V-section brake shoes	Deliver more stopping power. (30% more than BR-IM50 model)



BR-IM70-F

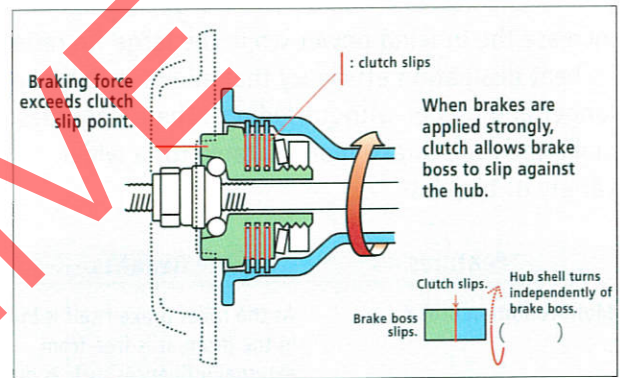
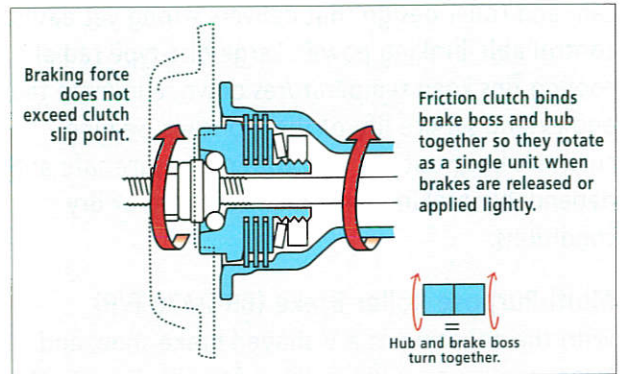


BR-IM75-F
Front Roller Brake for disc mount
(international A-type)

Braking POWER MODULATOR System (Front Roller Brake)

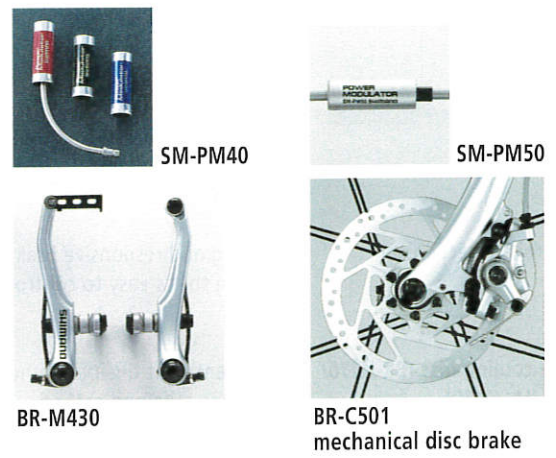
As for the Front Roller Brake, the Braking POWER MODULATOR System is built in on the hub side to ease sudden lever power input for easy and stable braking control. The braking system is especially user-friendly for beginners.

Features	Benefits
Braking POWER MODULATOR System	Hubs incorporate a modulator clutch which cuts excessive lever pressure.
Sealed Mechanisms	Rubber sealing cups effectively shut out dirt and water.
Squeal Suppression Design	Brake and modulator work silently to eliminate brake squeal.



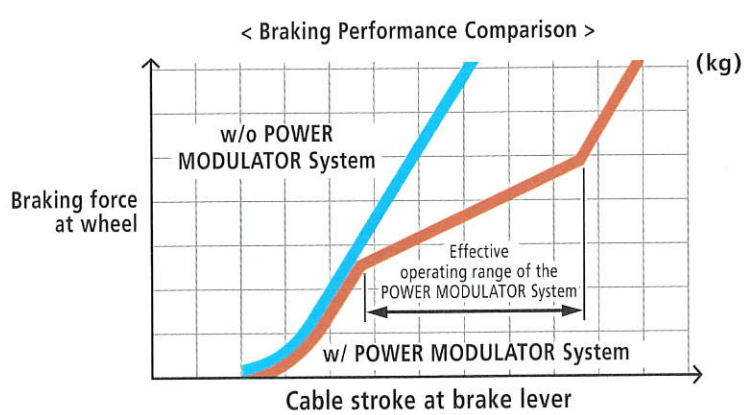
Braking POWER MODULATOR Unit SM-PM40 / PM50

Features	Benefits
POWER MODULATOR Unit	More effective and easy-to-control braking for casual and recreational cyclist.



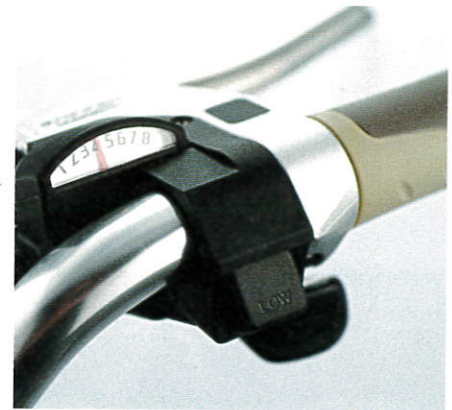
CAUTION

- The power modulator is a device that makes it easier to control braking by increasing the cable stroke at the brake lever within a certain constant range of braking force. If the effective operating range of the power modulator will be exceeded, the lever stroke and the brake will operate as a normal disc brake (sensitive and powerful). In that case, the brakes may operate more powerfully than intended and may cause the wheel to lock up. Therefore it is essential that you fully understand and test the performance of the power modulator before use. The power modulator is not equipped with a function to prevent the wheel from locking up.



TAP FIRE Shifter (NEXAVE C900 / C600 / C530 / C500)

Left side shifter uses a rocker-type push-button to activate the front derailleur. Right side uses a short-throw lever and release button for the Linear Action rear derailleur. This NEXAVE TAP FIRE Shifter design sets a new standard in responsive low-effort gear shifting.



Features	Benefits
Rocker-type push-button	Low-effort gear shifting Easy shifting allows comfortable riding without paying too much attention to shifting.

REVOSHIFT Shifter (NEXUS)

REVOSHIFT Shifter requires just twisting with thumb and index finger while keeping hands on handlebar. Easy and reliable shifting is good for average riders and beginners.



Features	Benefits
Twist Shifting Action	Low-effort rotational shift action doesn't depend on finger strength, allows you to keep your hands on the handlebars.

SB-8520
Dual-diameter shift collar allows any hand size to get a secure grip on the shift collar.

Optical Gear Display

Visible indicator numbers make gear positions easier to read. Additionally indicator symbols help to understand the direction of shifting progression.

Features	Benefits
Visible indicator	Allows instant recognition of gear position so selection of lighter gear or faster gear is easy to do.



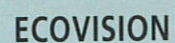
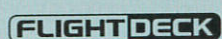
SHIMANO NEXAVE C810

Di2
DIGITAL INTEGRATED INTELLIGENCE



Flagship components with Di2 for the ultimate comfort bike

NEXAVE C810 is Shimano's brand new flagship component group for comfort biking. The Di2 C810 offers a lot of features and benefits for advanced comfort and excitement. The Freehub dynamo supplies the operating power for an environmental friendly system. SPCM3 offers enhanced smooth front triple gear shifting for more wide range comfort cycling.



Self-energizing and Automatic System — ECOVISION

- 11 internal dynamo magnets for immediate speed sensor input at 11 signals-per-rotation
- Instantaneous response to riding conditions
- No more wheel magnet systems
- Simple and easy-to-read display
- Mode buttons for shifting and suspension on shifter side



Environmental friendly
— ECOVISION
completely self-powered
by Freehub dynamo

Advanced Automatic System
completely automated
Synchronized changing
and Suspension
— Quick and Precise Response

RD-C810 Electric Controlled Rear Derailleur

- New sleek design
- 8-Speed for LINKGLIDE Sprockets only
- Max front difference : 22T
- Total capacity : 44T
- 6 fluoroc coated link bushing

FD-C810 SPCM3 TOP SWING FD

- Electric automatic front derailleur controlled SPCM for triple
- TOP SWING Front Derailleur
- Top Gear Teeth : 46T
- Total capacity : 22T

FC-C810 Crankset

- Attractive new design
- Triple chainwheel (46-34-24T) for SPCM3
- Chain Guard available (option)
- Crank Arm length : 170 / 175mm

FH-C810 / C811 Freehub Dynamo

- FH-C810 for roller brake, FH-C811 for disc & V-BRAKE
- Speed signal from freehub dynamo
- Spoke Holes : 32 / 36H
- Light alloy QR (FH-C811)
- Super polished Bearing Races

CS-LG60 LINKGLIDE Sprocket

- Bi-directional gear changing reduces outward shift shock
- 8-speeds (11-33T)
- Integrated spoke protector
- 9-speed HG chain required

SC-C810 FLIGHT DECK cycle computer

- Large scale information display
- Backlight
- Detachable unit for security

SW-C810 Switch

- Push-button gear changing available (manual shifting)
- Mode switch for suspension and shifting

EW-C810 Electric Cable

- Can be cut for sleek in-frame designs (except the cable between rear & front derailleur)

FS-C810 Front Suspension

- Computer controlled suspension
- Coil and oil dumper

RS-C810 Rear Suspension

- Computer controlled air suspension



SC-C810
FLIGHT DECK
Cycle Computer /
Display panel /
Detachable

EW-C810
Electronic cable
SW-C810
Electronic
Shifter &
Mode changer

RD-C810
Computer
Controlled
Rear Derailleur

CS-LG60
11-33T
8-speed
LINKGLIDE
Sprocket

FD-C810
SPCM 3
Front Derailleur &
CPU, Energy Station

FC-C810
SPCM 3
46-34-24T
BB-UN25
130 mm

FS-C810
Computer
Controlled
Front
Suspension

RS-C810
Computer
Controlled
Rear
Suspension

FH-C811
FH w/ Hub dynamo
for Disc Brake
(BR-C901) /
V-BRAKE

FH-C810
FH w/ Hub dynamo
for Roller (BR-IM70)

SHIMANO NEXAVE C900



High quality "premium comfort" components provide maximum riding comfort.

The NEXAVE C900, has various comfort functions that includes the SPCM and continues to be a top level comfort components group. The fine riding quality as well as the effortless shifting touch have received a high evaluation from everyone.



Hydraulic
Disc Brake

MEGARANGE INTER **M** MULTI
CONDITION

SL-C900-L TAP FIRE Shifter for front SPCM
SL-C900-R TAP FIRE Shifter for rear 9-speed

- Super-Light action TAP FIRE Shifting
- Precise, responsive feeling
Light and responsive shifting action.
- Optical Gear Display
- SPCM

RD-C900 Rear Derailleur

- Linear Action for reduced shifting effort
- RAPID RISE Shifting System design for easy down-shifting
- SMARTCAGE Pulley Plate
- Pre-Select Mechanism
- SIS Rear Index Shifting

FD-C900 Front Derailleur

- SPCM (Shimano Power Change Mechanism)
- Dual-Pull cable routing
- Sealed mechanism

FC-C900 OCTALINK BB Mount Crankset

BB-C900 OCTALINK BB Mount Bottom Bracket

- SPCM compatible
- OCTALINK Splined Axle Crank Arm Interface
- One-Key Release
Allows the crank arm to be quickly removed and installed to the BB spindle with a single tool.
- Chain Case compatible
- Sealed Cartridge assembly
- DUAL SIS Front and Rear Index Shifting

BL-C901 Disc Brake Lever

BL-C900

POWER MODULATOR System Integrated V-BRAKE Lever

- Four-Finger design for control
- Integral POWER MODULATOR System (for V-BRAKE)

BR-C901 Hydraulic Disc Brake Caliper (Mineral Oil)

SM-RT61 Disc Brake Rotor

- High stopping power with precision control
The NEXAVE hydraulic disc brake provides high braking power with precision control.
- Opposed Piston design

BR-C900 V-BRAKE

- Special compound brake shoe
Deliver stable and responsive braking performance.
- Efficient V-BRAKE design
- Low-Flex design
Shoes are positioned on the frame side of the cantilever arm to reduce frame flex.
- Side Mount Brake Pads
- Spring Tension Adjusters

HB-C901 Front Disc Brake Hub

FH-C901 Disc Brake Freehub

HB-C900 Front Hub

FH-C900 Freehub

- Easier spoke replacement
Flange-less design allows spokes to be replaced without the need to remove the sprockets or disc rotor.
- Double Contact Sealing
- Super polished Bearing Races
- Light alloy QR
- Mega-9 Gearing compatible

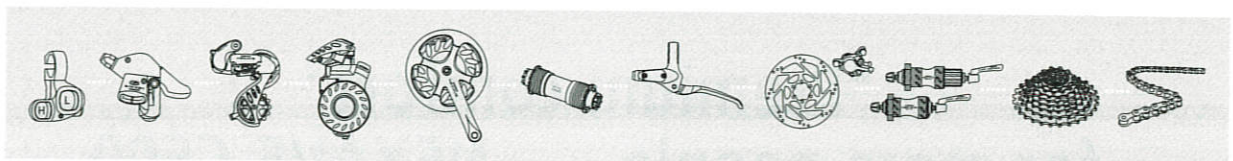
CS-HG70-9 9-Speed Cassette Sprockets

- MEGARANGE Gearing
- Easy shifting HG gears
- Mega-9 Drive Train - enhanced pedaling comfort

CN-HG93 9-Speed Chain

CN-HG73 9-Speed Chain

- Super-narrow 9-Speed construction
- Precision construction
- Improved durability



SL-C900-L Super light action TAP FIRE Shifter
SL-C900-R Super light action TAP FIRE Shifter
RD-C900 Linear action Derailleur
SM-CG90
FD-C900 SPCM
FC-C900 46-34T SPCM OCTALINK BB Mount
BB-C900

Disc brake / Hydraulic type

BL-C901 Hydraulic brake lever
BR-C901 SM-RT61 caliper / rotor SM-BH60/61
FH-C901 HB-C901 For disc brake
CS-HG70-9 11-34T 9-speed CS MEGARANGE Gearing
CN-HG93

V-BRAKE

BL-C900 w/ POWER MODULATOR for V-BRAKE
BR-C900 V-BRAKE
FH-C900 HB-C900 For V-BRAKE

<Option>

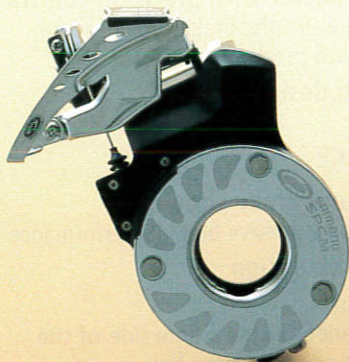
NEW DH-3D70 Hub Dynamo 6V-3.0W w/disc mount Centerlock type

NEW DH-3N70 Hub Dynamo 6V-3.0W

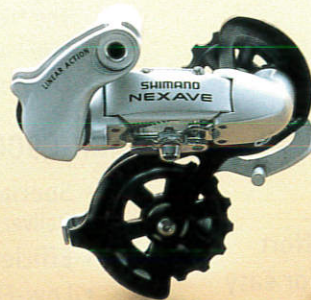
NEW DH-2N70 Hub Dynamo 6V-2.4W

CP-DH50

SHIMANO NEXAVE C600



FD-C600



RD-C600



SM-CG90



CS-HG50-9



CN-HG73



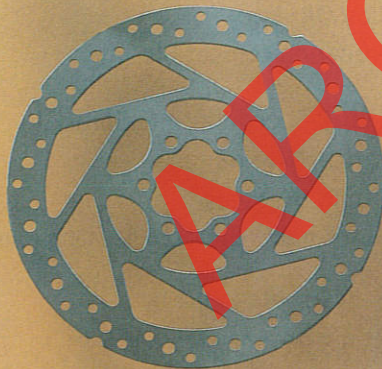
BR-C601



FC-C600



BR-C600



SM-RT61



BL-C600



SL-C600-L



SL-C600-R



BB-UN25-K

"Premium comfort" for more people — NEXAVE C600.

"Premium comfort" is the new component concept that focuses on extra value for bicycles. For instance, the SPCM allows for light shifting and the POWER MODULATOR system built in the brake lever decreases excessive braking force to create a pleasant braking feeling. The new concept has gained widespread acceptance. The C600 was introduced for more people to know about the ever-expanding "premium comfort" category and has achieved a lot of popularity.



Mechanical
Disc Brake

MEGARANGE

SL-C600-L TAP FIRE Shifter for front SPCM
SL-C600-R TAP FIRE Shifter for rear 9-speed

- Super-Light action TAP FIRE shifting
- Precise, responsive feeling
Light and responsive shifting action.
- Optical Gear Display
- SPCM

RD-C600 Rear Derailleur

- Linear Action for reduced shifting effort
- RAPID RISE Shifting System design for easy down-shifting
- SMARTCAGE Pulley Plate
- Pre-Select Mechanism
- SIS Rear Index Shifting

FD-C600 TOP SWING Front Derailleur

- SPCM (Shimano Power Change Mechanism)
- Dual-Pull cable routing
- Sealed mechanism
- TOP SWING Front Derailleur

FC-C600 Square Crankset

BB-UN25-K Cartridge Bottom Bracket

- SPCM compatible
- Chain Case compatible
- Sealed Cartridge assembly
- DUAL SIS Front and Rear Index Shifting

BL-C600 POWER MODULATOR System
Integrated V-BRAKE Lever

- Four-Finger design for control
- Integral POWER MODULATOR System
- Mechanical Disc Brake compatible

BR-C601 Mechanical Disc Brake Caliper

SM-RT61 Disc Brake Rotor

- V-BRAKE Lever compatible

BR-C600 V-BRAKE

SM-PM40 POWER MODULATOR System

- Special compound brake shoe
Delivers stable and responsive braking performance.
- Efficient V-BRAKE design
- Low-Flex design
Shoes are positioned at the frame side of the cantilever arm to reduce frame flex.
- Side mount brake pads
- Spring Tension Adjusters

HB-C901 Front Disc Brake Hub

FH-C901 Disc Brake Freehub

HB-C900 Front Hub

FH-C900 Freehub

- Easier spoke replacement
Flange-less design allows spokes to be replaced without removing the sprockets or disc rotor.
- Double Contact Sealing
- Super polished Bearing Races
- Light Alloy QR
- Mega-9 Gearing compatible

CS-HG70-9 9-Speed Cassette Sprockets

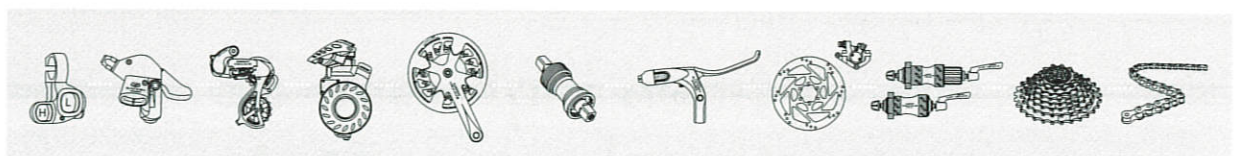
CS-HG50-9 9-Speed Cassette Sprockets

- MEGARANGE Gearing
- Easy shifting HG gears
- Mega-9 Drive Train - enhanced pedaling comfort

CN-HG93 9-Speed Chain

CN-HG73 9-Speed Chain

- Super-narrow 9-Speed construction
- Precision construction
- Improved durability



Disc brake / Mechanical type

SL-C600-L Super light action TAP FIRE Shifter	SL-C600-R Super light action TAP FIRE Shifter	RD-C600 Linear action Derailleur SM-CG90	FD-C600 SPCM	FC-C600 46-34T SPCM	BB-UN25-K	BL-C901 POWER MODULATOR System	BR-C601 SM-RT61 caliper / rotor SM-BH60/61	FH-C901 HB-C901 For disc brake	CS-HG70-9 11-34T 9-speed CS MEGARANGE Gearing CS-HG50-9 11-34T 9-speed CS MEGARANGE Gearing	CN-HG73
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V-BRAKE

<Option>



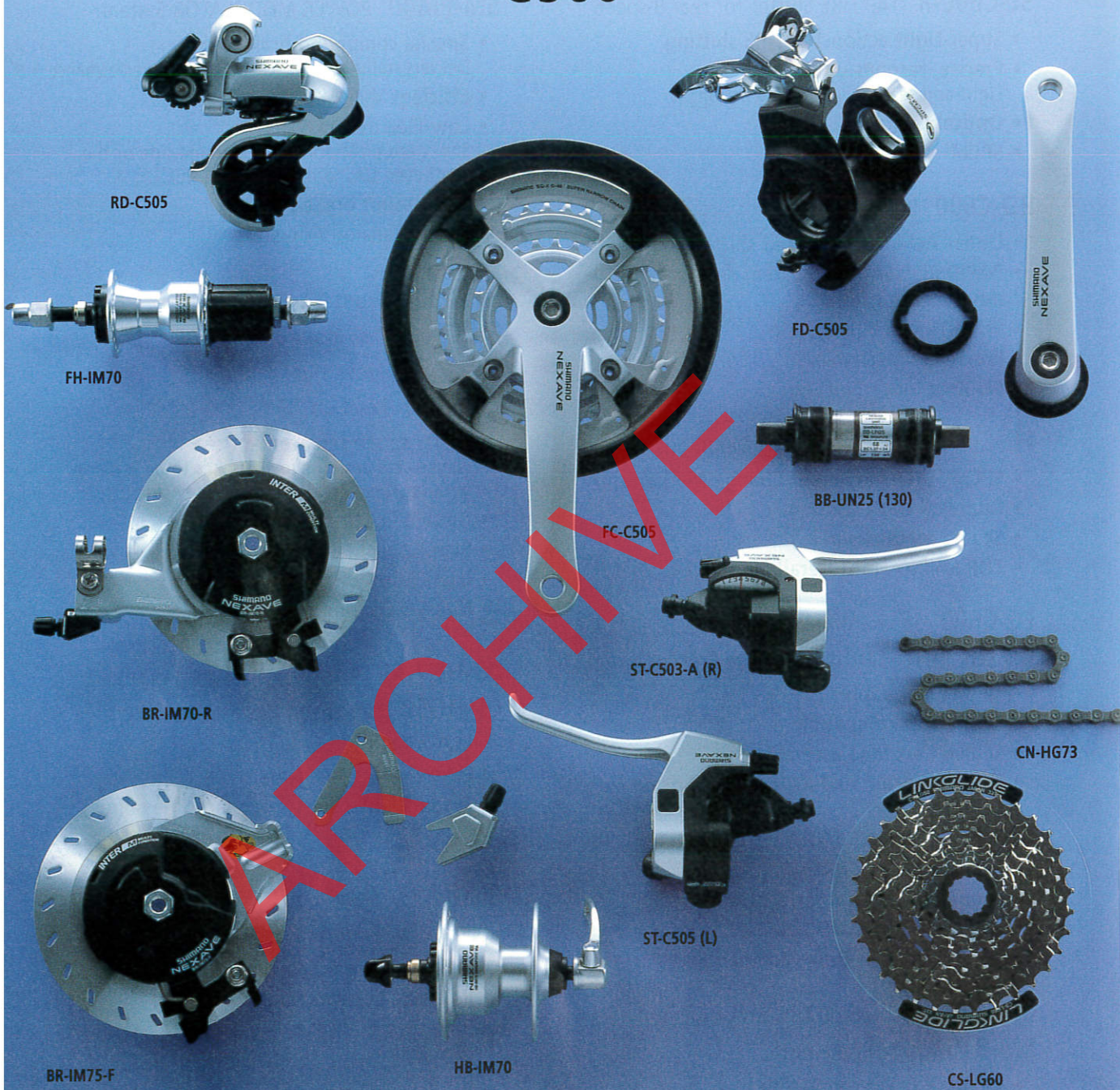
NEW DH-3D70
Hub Dynamo 6V-3.0W
w/disc mount Center lock type

NEW DH-3N70
Hub Dynamo 6V-3.0W

NEW DH-2N70
Hub Dynamo 6V-2.4W

CP-DH50

SHIMANO NEXAVE C500



Refined high-end recreational components

The NEXAVE C500 series features many refinements, lighter weight and fine-tuned cosmetics. New for triple chaining cranks, SPCM3 offers the ultimate in easy and light-effort shifting. LINKGLIDE sprockets are also an important component of the series for shockless and comfortable shifting.

LINKGLIDE

SHIMANO
SPCM3

Mechanical
Disc Brake

INTER **M** MULTI
CONDITION

ST-C505 (L) TAP FIRE Shifter for SPCM3

ST-C503-A (R)

TAP FIRE Shifter for rear LINKGLIDE

- **Precise, responsive feeling**
Light and responsive shifting action gives the bike a feeling of high quality and great value.
- **Optical Gear Display**
- **SPCM3**
- **TAP FIRE Shifter**

RD-C505 Rear Derailleur for LINKGLIDE Sprocket

- **Linear Action for reduced shifting effort**
- **RAPID RISE Shifting System design for easy down-shifting**
- **SMARTCAGE Pulley Plate**
- **Pre-Select Mechanism**
- **SIS Rear Index Shifting**

FD-C511 Down Swing Front Derailleur

FD-C510 TOP SWING Front Derailleur

FD-C505 Front Derailleur SPCM3

- **Dual-Pull Cable Routing**
Allows derailleur to be set up for top or bottom cable routing according to cable anchor position.
- **Compatible with three frame tube sizes (FD-C511/C510)**
Normal : 34.9 mm, Clamp spacer : 28.6 / 31.8 mm
- **SPCM3 (FD-C505)**

FC-C505 Square Crankset SPCM3

BB-UN25 (130) Cartridge Bottom Bracket

FC-C503 Square Crankset

FC-C510 Square Crankset non SPCM3

BB-UN25 (123SP) Cartridge Bottom Bracket

- **Mono-shape design**
The original and simple design gives an urban styling and a fresh impression to the bicycle.
- **Smooth-Shifting triple crankset**
46-34-24T
- **Chain Case compatible**
- **Sealed Cartridge assembly**
- **SPCM3 (FC-C505)**
- **DUAL SIS Front and Rear Index Shifting**

BR-C501* Mechanical Disc Brake Caliper

SM-RT50 Disc Brake Rotor

* use with SM-PM50 POWER MODULATOR System.

BR-IM75-F Hub Roller Brake for Disc Mount

BR-IM70-R Hub Roller Brake

- **Multi-Purpose Roller Brake**
With the adoption of a new V-shaped brake shoe, and larger cooling fins, the braking force is now closer to that of a mechanical disc brake.
- **Large Cooling Fin**
Its heat dissipation efficiency that allows it to brake longer and harder without fading.
- **Contemporary styling**
- **Multi-Condition**

BR-C600 V-BRAKE

SM-PM40 POWER MODULATOR System

- **Special compound brake shoe**
Delivers stable and responsive braking performance.
- **Efficient V-BRAKE design**
- **Low-Flex design**
- **Side mount brake pads**
- **Spring Tension Adjusters**

HB-C501 Front Disc Brake Hub

FH-C501 Disc Brake Freehub

HB-C500 Front Hub

FH-C500 Freehub

HB-IM70 POWER MODULATOR System Front Hub

FH-IM70 Roller Clutch FH for Hub Roller Brake

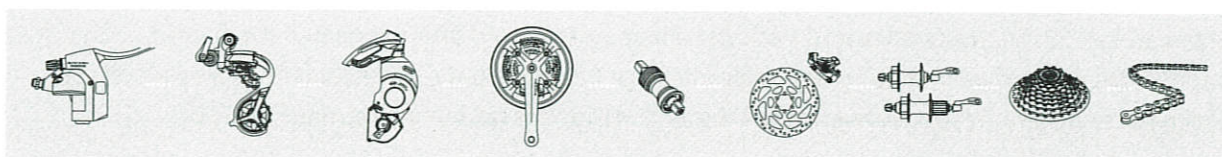
- **Double Contact Sealing**
- **Super polished Bearing Races**
- **Light Alloy QR**
- **Mega-9 Gearing compatible**

CS-LG60 8-Speed LINKGLIDE Sprockets

- **Integrated Spoke Protector**

CN-HG73 9-Speed Chain

- **Super-narrow 9-Speed construction**
- **Precision construction**
- **Improved durability**



NEW ST-C505 (L)
Special for SPCM3
ST-C503-A (R)
TAP FIRE Shifter

NEW RD-C505
SMARTCAGE
Pulley Plate
for 8-speed
LINKGLIDE Sprocket

NEW FD-C505
SPCM3

NEW FC-C505
SPCM3
46-34-24T

NEW BB-UN25
130 mm
for SPCM3

BR-C501
Mechanical
disc brake

HB-C501
FH-C501

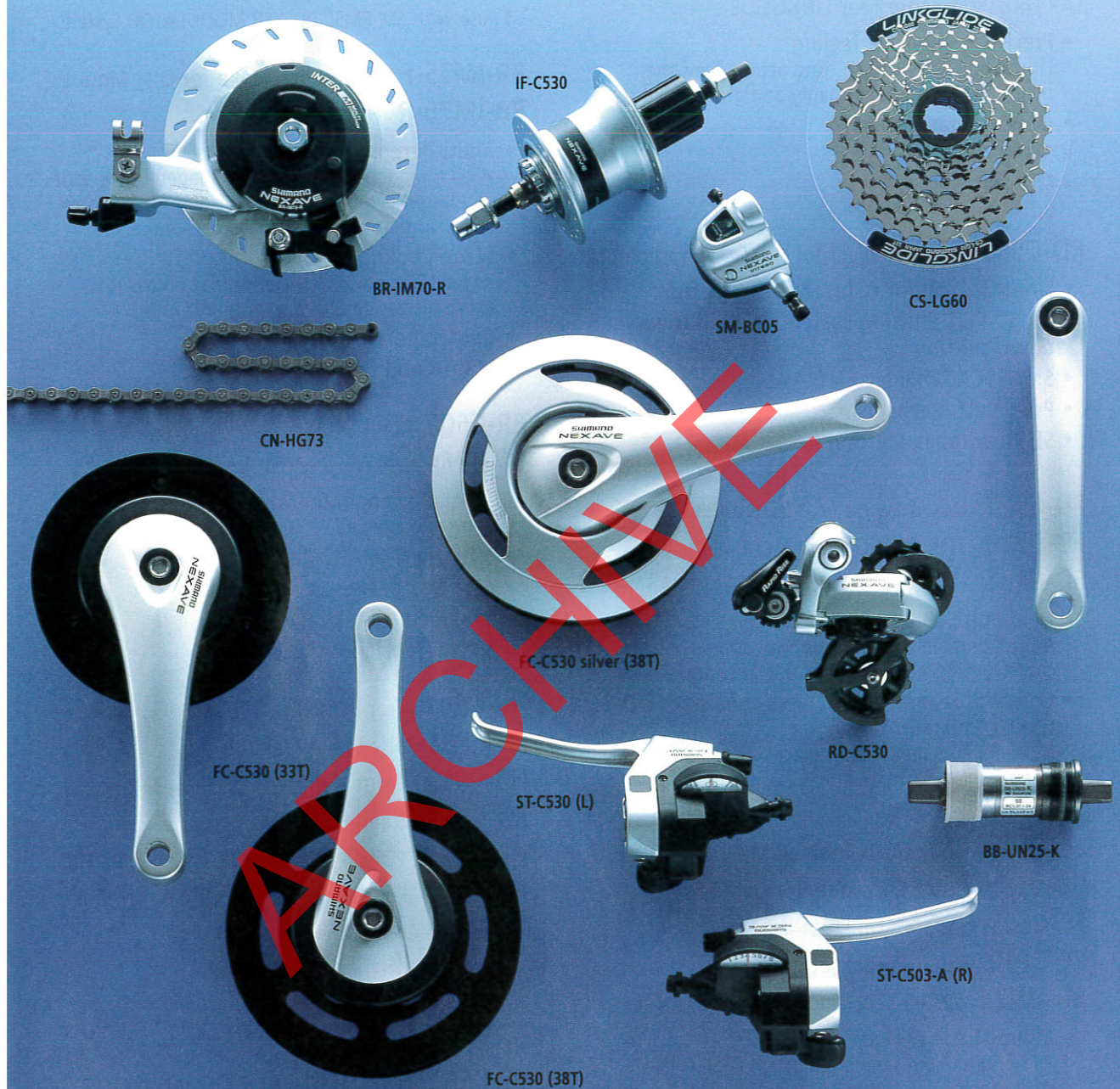
CS-LG60
11-33T
8-speed
LINKGLIDE
Sprocket

CN-HG73
Super narrow
chain

* V-BRAKE (BR-C600) or Roller (BR-IM75-F / IM70-R) brake system are available.

SHIMANO
NEXAVE
C530

INTEGO



A new alternative in drivetrain selection

Shimano has continuously advanced both derailleur systems and internal geared mechanisms. Our drive to improve the ease of gear shifting and rider interface has led to the development of a new systems approach to inspire fresh, creative bicycle designs. From this notion we introduce INTEGO.

We combine the benefits of both derailleurs systems and internal geared hubs.

Smooth, Silent, Less Shock, Simple Design

- Nexus shifting with Roller Clutch
- LINKGLIDE Sprocket system (9-speed HG chain required)
- No-fuss design

High Quality and Durable Mechanism

- Quick engagement
- High corrosion resistance
- High seal performance
- Simple structure for variety of bikes helps bike design
- Gear ratio of Inter-3 : 186%
- Gear combination : 11-33T

RD-C530 Rear Derailleur

- SMARTCAGE Pulley Plate for 8-Speed
- LINKGLIDE Sprocket compatible
Shockless shifting for smoother shifting.
- Total capacity : 22T
- MAX / MIN Sprocket : 33 / 11T
- Wheel-Type Cable Guide
- Large size shifting for elegance in shifting.

ST-C530 (L) TAP FIRE shift lever

- Special shift Lever for INTEGO 3-speed
- Super light action TAP FIRE Shifter
- Optical Gear Display (above handlebar)

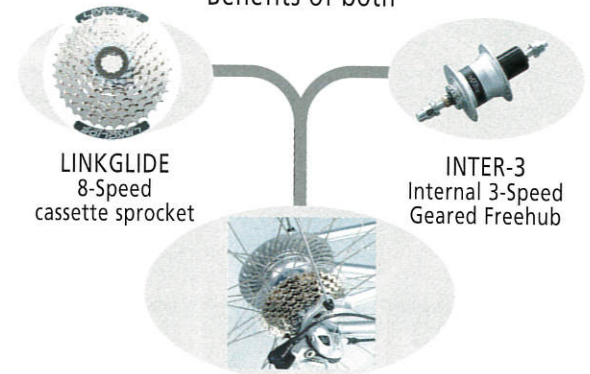
ST-C503-A (R) TAP FIRE shifter for LINKGLIDE

FC-C530 Crankset

- 33 / 38T single crankset
- Chain Guard available (option only for 38T)
- Chain Case compatible

Elegance in Shifting

Benefits of both



Easy, Light and Stress-free Shifting

- ST-C530 STI lever (left), ST-C503-A STI lever (right)
- Mode changer on left side lever unit
- Pictgram Optical Display (left)



IF-C530 w/ SM-BC05 Inter-3 + FH







- 3-speed special Internal Freehub for INTEGO
- Spoke Holes : 32H / 36H
- Gear Change Support Mechanism
- Super polished Bearing Races

CS-LG60 LINKGLIDE Sprocket

- Bi-directional gear changing reduces outward shift shock
- 8-speeds (11-33T)
- Integrated spoke protector
- 9-speed HG chain required
- Inter-3 easy light shifting

BR-IM75-F Front Roller Brake for Disc Mount

- Compatible with international A disc mount.
- All-weather performance (performs same in rain and even muddy conditions).
- Silent operation
- Brake force same as mechanical disc brake
- Easy assemble.

				V-BRAKE			
NEW ST-C530 (L) ST-C503-A (R) TAP FIRE Shifter	NEW RD-C530 SMARTCAGE Pulley Plate for 8-speed LINKGLIDE Sprocket	NEW FC-C530 33T / 38T BB-TS30 BB-UN25-K	NEW IF-C530 w/ SM-BC05 Inter 3 + FH 36H	NEW DH-3N70 HB-NX32-QR/NT 6V-3.0W	BR-C600 SM-PM40		
				NEW DH-2N70 HB-NX22E 6V-2.4W			
				Hub Roller brake			
				NEW DH-3R40-QR/NT 6V-3.0W	NEW BR-IM75-F BR-IM70-R		
				NEW DH-2R40-NT 6V-2.4W			

SHIMANO C201



FD-C202



FH-C201



FC-C201
(w/Chain Guard)



FD-C201-E



FC-C203
(w/Chain Guard)



HB-C201



CN-HG50



SC-C050



CS-HG40-81



ID-C050



SC-C051 SC-C052



BB-UN25



BR-M430 (Black)

SM-PM40



ST-C050-8R



SB-C055-8R
(2 finger)

CI-DECK



MEGARANGE

ID-C050-8R

SHIMANO NEXAVE T400 (3x8 speed)

D-T401-S



RD-T400-S



FD-T400-S



CS-HG60-81



BB-UN25-K



CN-IG51

HB-IM70



FC-T410

FC-T411



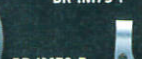
CN-HG50



FH-IM70



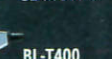
BR-IM75-F



BR-IM70-R



SL-MC41-T



BL-T400



ST-400-S



SHIMANO NEXAVE T300 (3x7 speed)

FH-T300



FD-T301



FC-T303
(w/Chain Guard)



CS-HG50-I



FC-T300-S
(w/Chain Guard)



FD-T300



HB-T300



CN-HG50



BB-UN25



RD-T300



ST-T300-S



BR-T300



More comfortable cycling for the casual rider

Now that more and more people are riding mountain-style bikes for exercise and recreation, there's a demand for role-specific components that can make these bicycles more comfortable and easier to ride.

- SC-C050 (GS/SL)** Speedometer
- SC-C051 (SS)** Odometer/Trip Meter
- SC-C052 (SS)** Stopwatch & Clock
- SM-C050 SWB** Clamp band for SC-C052 switch
- SM-C050 WCA1** (for SC-C050/SC-C051)
Fork mounted sensor wire code adapter
- SM-C050 WCA2** (for SC-C050/C051)
Brake cable mounted sensor wire code adapter

- SB-C055 (SL)**
REVOSHIFT shifter w/4-finger brake lever for roller, canti and V-Brakes (with modulator), and w/2.5 finger brake lever for V-BRAKE
 - **Easy REVOSHIFT Gear Changing**
 - **Ergonomic design**
Features a stepped circumference to accommodate different hand sizes.

- ST-C050 (SL)**
EZ FIRE Plus shifter w/4-finger brake lever for roller, canti and V-Brakes (with modulator)

- ST-C051 (SL)**
EZ FIRE Plus shifter w/2.5-finger brake lever for V-BRAKE
 - **CI-DECK Plus Gear Indicator compatible**

- CS-HG40-8I**
MEGARANGE Cassette Sprockets 8-speed
 - **MEGARANGE Gearing**
 - **Easy shifting HG gear**

- RD-C201** Rear Derailleur
 - **RAPID RISE Shifting System design**
 - **Advanced Light Action design**
 - **Oversize Pulleys**
Run smoother, make less noise.
 - **Cable Guide Pulley**
 - **MEGARANGE Gearing compatible**
 - **Pre-Select Mechanism**
 - **SIS Rear Index Shifting**

- FD-C201-E** TOP SWING FD (BB mount)
- FD-C202** TOP SWING Front Derailleur
 - **Dual Pull system**
Allows for top or bottom pull cable connection.
 - **Bottom Bracket Mount (FD-C201-E)**
Feature bottom bracket mounting that eliminates position adjustment, speeds up installation and also prevents the chain from dropping.
 - **TOP SWING Front Derailleur design**

- FC-C201** Crankset
- FC-C203** Crankset
 - **4-Arm design**
 - **Smooth shifting chainrings**
Pickup flanges and special teeth profiles enhance chain control for precision shifting.
 - **Chain Guard (Option)**
 - **Chain Case compatibility**
 - **DUAL SIS Front and Rear Index Shifting**
 - **Gearing : FC-C201 (42/34/24)**
FC-C203 (48/38/28)

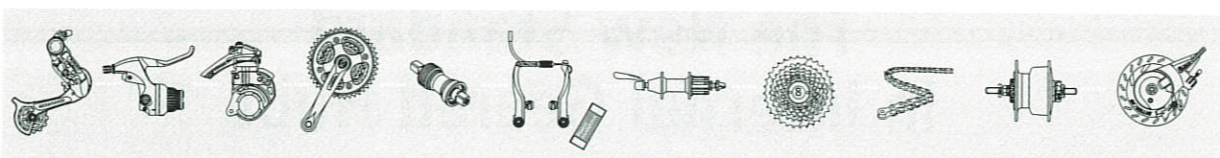
- BR-M430-S/L**
V-BRAKE available w/ cartridge shoe

- BR-M420-S/L** V-BRAKE

- SM-PM40** V-BRAKE POWER MODULATOR unit
 - **Power Modulated V-BRAKE action**
 - **Efficient V-BRAKE design**
 - **Long-Arm Torsion Spring**
Assures a quick and positive return action for improved response.

- HB-C201** Front Hub
- FH-C201** Rear Freehub 8-speed
 - **Freehub design**
 - **Contact Sealing**

- CN-HG50** 8-speed HG chain



RD-C201
RAPID RISE
Shifting
System
For 8-speed/
MGS

SB-C055-8R
SB-C055-L
4 finger BL /
2 finger BL

FD-C201-E
TOP SWING FD
Dual pull
BB mount type

FC-C201
42-34-24

BB-UN25

BR-M430-L/S
BR-M420-L/S
Black or Silver

FH-C201

CS-HG40-8I
8-speed
11-34T
MEGARANGE gear

CN-HG50

Roller Brake
HB-C050-DR
Hub Dynamo
w/ POWER
MODULATOR
System 6V-2.4W

BR-C050-IM-F
roller brake

ST-C051-8R
ST-C051-L
ST-C050-8R
ST-C050-L
EZ FIRE Plus shifter

FD-C202
TOP SWING FD
Dual pull

FC-C203
48-38-28

SM-PM40
POWER
MODULATOR unit

HB-C050-D
Hub Dynamo
6V-2.4W
HB-C051-D
Hub Dynamo
6V-3.0W

V-BRAKE
BR-M430-L/S
Black or Silver
BR-M420-L/S
SM-PM40
POWER
MODULATOR unit

HB-C051-DR
Hub Dynamo
w/ POWER
MODULATOR
System 6V-3.0W

HB-C052
w/ POWER
MODULATOR
System
HB-C201

Nexus

INTER-8 Internal Geared Hub



The New Standard in Internal Geared Hubs

The new NEXUS 8-speed system delivers a new level of design, quality and function. Our designers have updated the conventional internal hub with a refreshing new design inspired by the concepts of beauty, innovation and integrity. Many technical advances have been achieved, like incorporating Shimano's unique gear change support mechanism that makes truly light effort shifting a reality. This achievement paves the way for the development of future automatic shifting systems.

SG-8R25 Premium version For Roller Brake

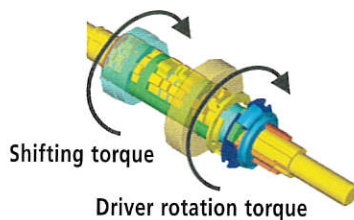
SG-8R20 For Roller Brake

SG-8R25-VS For V-BRAKE

SG-8R20-VS For V-BRAKE

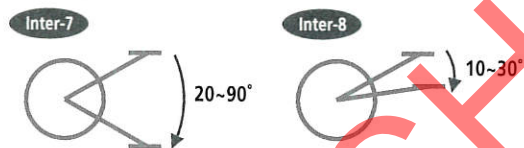
• **Gear Change Support Mechanism**

Shimano's gear change support mechanism uses pedaling power to aid down-shifting. The result is fast and accurate down-shifting with an exceptionally light feel. Mechanical shifting resistance is notably reduced so shifting is not affected under high loads.



• **Smooth Gear Change**

The smaller idling angle realizes shockless, smoother shifting for stressless comfortable shifting.



• **Smoother Rotation**

Shimano's precise manufacturing abilities construct an internal hub that rotates with significantly less drag than previous models.

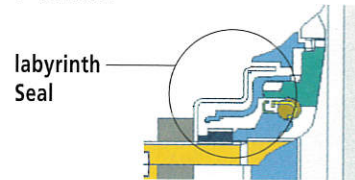
• **Close Ratio Wider Range**

The new Inter-8 hub has increased its gear ratio to 307%, compared to 244% of the current Inter-7 hub. The new Inter-8 hub also incorporates a

closer gear ratio allowing a more efficient and comfortable pedaling cadence. A truly "all conditions" internal hub has arrived.

• **Better Sealing**

The new Inter-8 hub has adopted a labyrinth seal system that shuts out water, and dirt to extend the service life and maintain smooth in all environments. Optionally a waterproof dust cap can be installed ex factory on the non-drive side before shipment, in case you wish to use the hub for combination with separate brake systems as V-brakes.



• **Robust Construction**

Durable planetary and step-up gear sets assure long trouble-free service.

ST-8S20 3-finger shift and Brake lever

BL-IM65 3-finger Brake lever

SB-8S20 4-finger shift and Brake lever

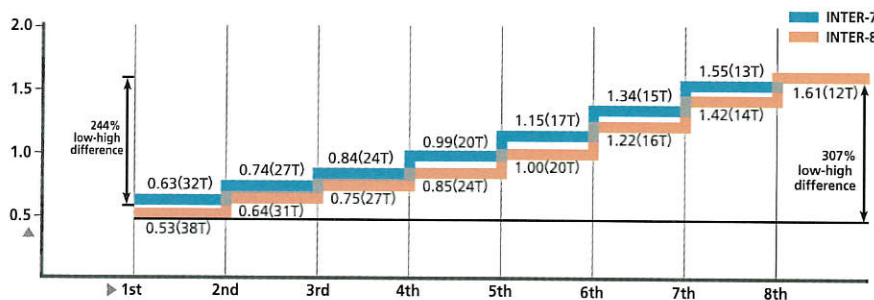
BL-IM60 4-finger Brake lever

• **Fast and Light Shifting**

In combination with the Gear change support mechanism the shifting action is quick, light action even during high pedaling loads.

• **Easy-to-read Gear Indicator**

Larger more visible indicator numbers make gear positions easier to read. Additionally, indicator symbols help to understand the direction of shifting progression.



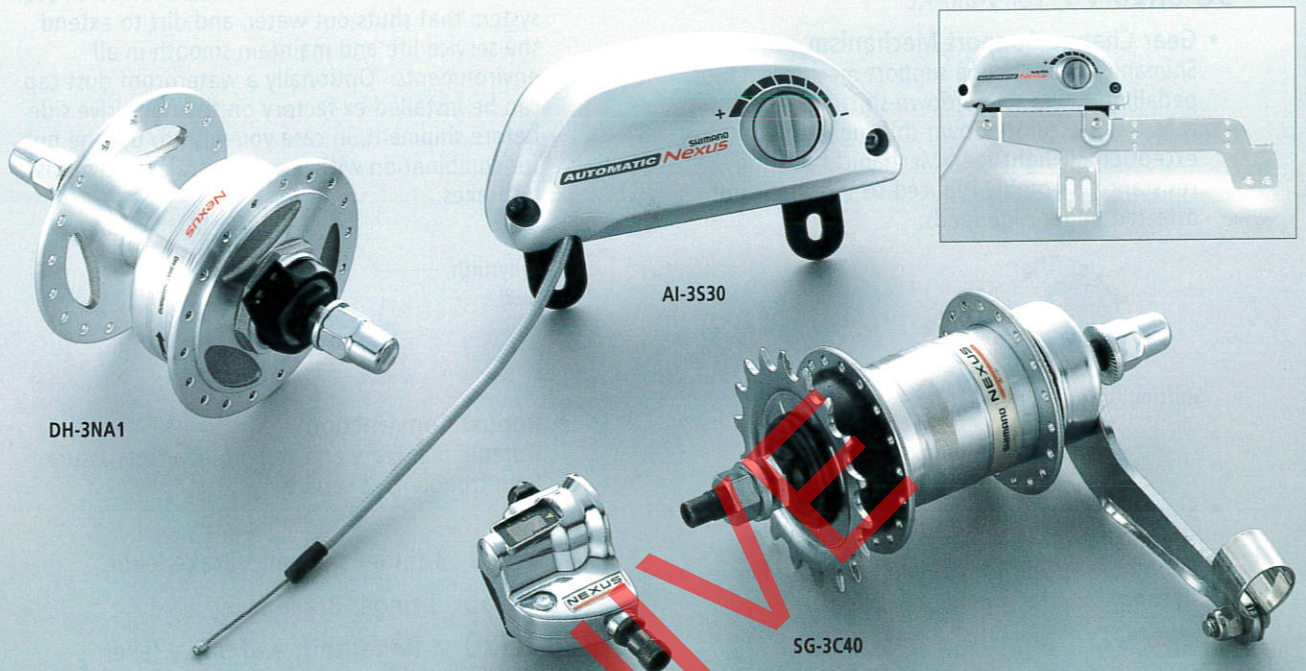
The table at left shows the relative gear ratio for the Inter-7 and new Inter-8 gear hubs when used with a 20T sprocket.

The numbers in parenthesis show the sprocket size that each gear ratio corresponds to in a derailleur system.

BR-IM70-R Roller Brake	SG-8R25 Premium version	Small Parts Set*	FC-NX60 33/38T FC-NX80 HOLLOWTECH Crankset	BB-UN25	BL-IM65 3-finger Brake lever	ST-8S20 3-finger Brake lever
	SG-8R20 for Roller				BL-IM60 4-finger Brake lever	SB-8S20 4-finger Brake lever
	SG-8R25-VS SG-8R20-VS for V-BRAKE	* Accessory spec. combination chart				

Nexus

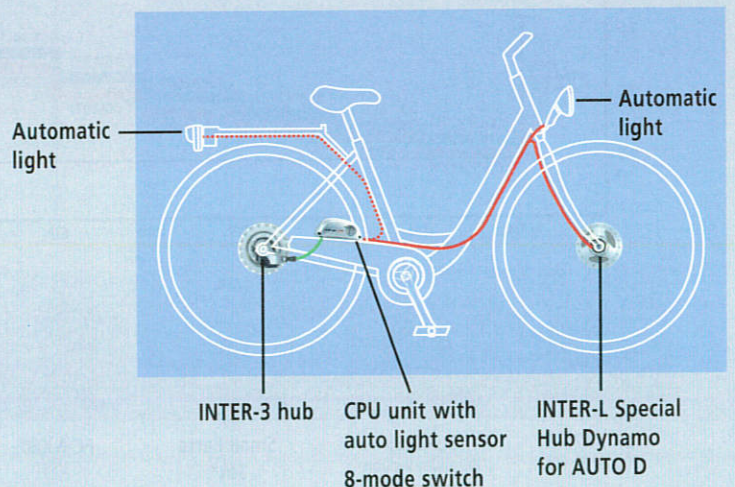
AUTO D with INTER-3



Refined to more comfortable and user-friendly automatic

To make automatic bikes easier to ride for more people, the greatly refined AUTO-D with INTER-3 is released. The completely self-energizing mechanism, automatic light and compact control unit make its visual appearance simple and clear. The new system realizes more comfortable and user-friendly automatic riding.

Self-energizing and automatic shifting
— ECOVISION



SHIMANO
Nexus

ECOVISION

Completely Self-energizing

- Hub dynamo supplies power for Automatic shifting system — ECOVISION.
- Front dynamo supplies power for light too, so regular dynamo not required.
- Electric signal from hub dynamo, so no magnet required.

Quick Response Automatic Shifting

- Internal speed sensor of hub dynamo gives instant speed data.
- Instantaneous response to riding conditions (14 times faster).

8-mode Switch

- 8 modes for customized shift timing

Automatic Lighting

- Both front and rear auto-light system.

Smooth and Simple

- High-quality system allows smooth and comfortable riding.
- Compact and simple design CPU unit.

Low Maintenance

- High quality sealing makes durability and low maintenance.

Shift Support Mechanism Aids Gear Changes

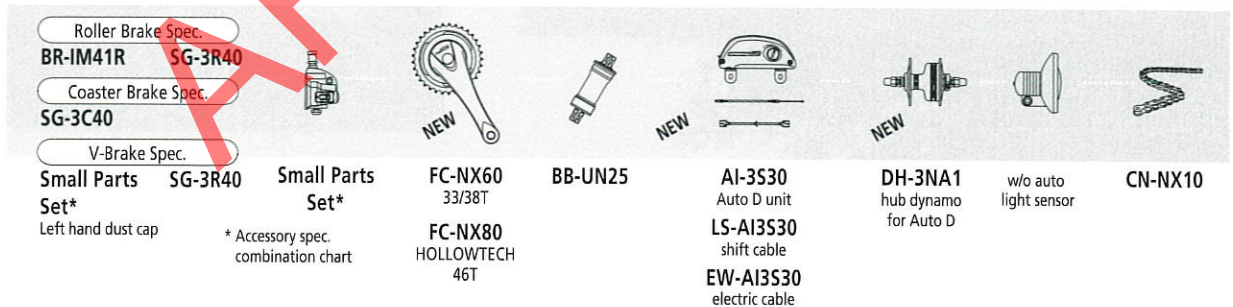
- The key to AUTO-D automatic shifting system is the unique gear change support mechanism in the hub. Shifting effort is reduced to the point where the hub can be shifted through a small low-torque DC motor. Less electricity is required, so a smaller battery allows the system to be lighter and more compact.

Automatic shifting while your pedal!

- The CPU selects and activates the shifting mechanism to get the most efficient and easy-to-pedal gear automatically while you pedal.

Simple and easy control coaster brakes.

- The AUTO-D automatic shifting system (SG-4C35) hub is available with a coaster brake that operates independently of the hub's transmission. As a result, the brake is able to provide the same level of control response and uniform braking power regardless of gear.



NEXUS AUTO D AUTOMATIC DRIVE TRANSMISSION INTER-3 (AI-3S10)

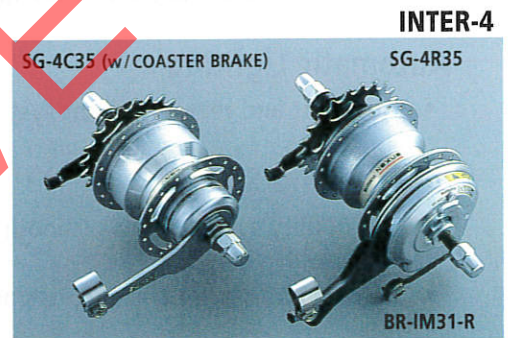
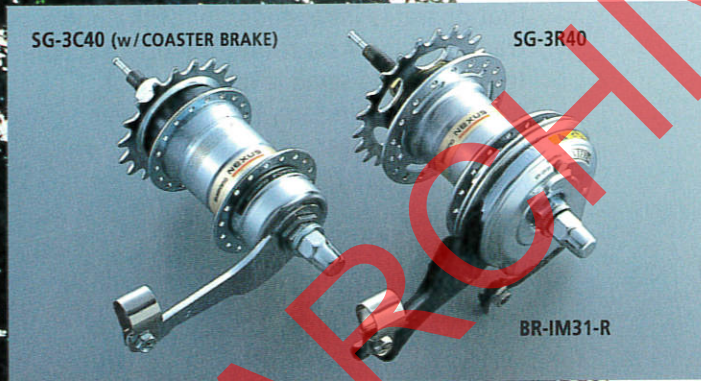
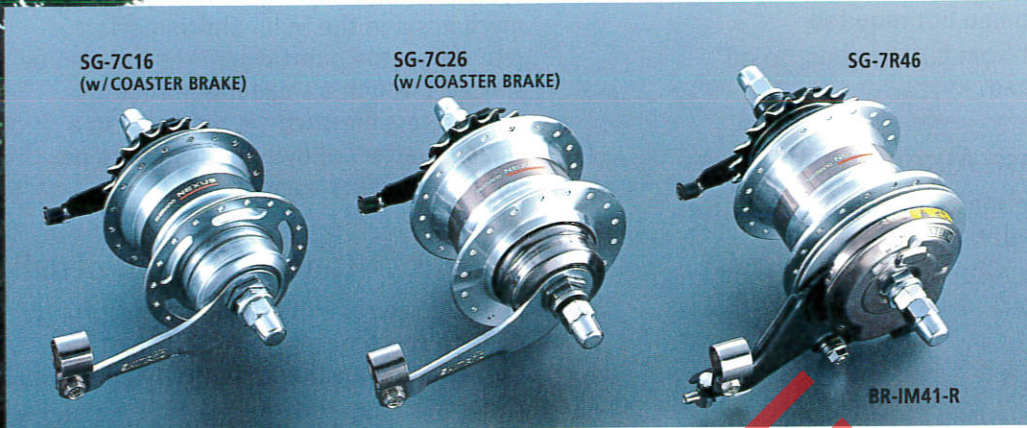


NEXUS AUTO D AUTOMATIC DRIVE TRANSMISSION INTER-4



Internal Geared Hubs

INTER-7



Left Hand Dust Cap For Use Without Roller Brake



Geared Hubs with Coaster Brakes

SG-7C26

Inter-7 Rear Hub 7-speed, Aluminum hub shell

SG-7C16

Inter-7 Rear Hub 7-speed, Steel hub shell

SG-4C35 Inter-4 Rear Hub 4-Speed

SG-3C40 Inter-3 Rear Hub 3-Speed

Geared Hubs with Roller Brakes

SG-7R46 Inter-7 Rear Hub 7-speed

SG-4R35 Inter-4 Rear Hub 4-Speed

SG-3R40 Inter-3 Rear Hub 3-Speed

• Internal Gear Shifting

Gear shifting action is independent of pedaling. You can shift gears anytime, while standing still, pedaling or coasting.

• Heavy-Duty Construction

Rugged planetary and step-up gear sets assure long trouble-free service.

• Integral Coaster Brake (SG-7C26 / 7C16 / 4C35 / 3C40)

Back pedal braking action eliminates the need for a brake cable to the rear wheel.

• Integral Roller Brake (SG-7R46 / 4R35 / 3R40)

Cable activated roller brake works effectively under all weather conditions.

• Silent Roller Clutch Freewheel (SG-4C35 / 4R35)

Features a roller clutch freewheel for silent freewheeling and faster engagement.

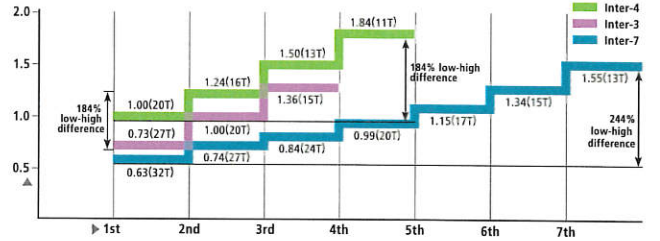
• Shift Modulator Mechanism

Smooths out the shifting action while pedaling.

• Gear Change Support Mechanism (SG-4R35 / 4C35 / 3R40 / 3C40)

Inter-7, Inter-4 and Inter-3 Wide-Range Gearing

The table at right shows the relative gear ratio for the Inter-7, Inter-4 and Inter-3 hubs when used with a 20T sprocket. The numbers in parenthesis show the sprocket size that each gear ratio corresponds to in a derailleur system.



CAUTION

Please use a non-turn washer to secure the hub axle into the drop-out of the frame.

Please see page 193

NEXUS INTER-7

ROLLER BRAKE SPEC. BR-IM70-R SG-7R46										
			NEW FC-NX80 HOLLOWTECH Crankset 46T FC-NX60 33 / 38T	BB-UN25	BL-IM45 hub roller brake use	SB-7S45 hub roller brake use	NEW BR-IM75-F hub dynamo w/ P. MODULATOR	NEW DH-3R40-QR/NT hub dynamo w/ P. MODULATOR	Auto-L compatible lamp	CN-NX10
COASTER BRAKE SPEC. SG-7C26					BL-T400 for roller brake	SL-7S10				
V-BRAKE SPEC. SG-7R46					BL-C900/ C600 w/ P. MODULATOR	ST-7S10 ST-7S20	NEW BR-C900/C600 HB-NX32-QR/NT hub dynamo			

NEXUS INTER-3

ROLLER BRAKE SPEC. BR-IM41R SG-3R40										
			NEW FC-NX80 HOLLOWTECH Crankset 46T FC-NX60 33 / 38T	BB-UN25	BL-IM32 BL-IM32-J for roller brake	SB-3S30 SB-3S30-J for roller brake	NEW BR-IM75-F hub dynamo w/ P. MODULATOR	NEW DH-3R40-QR/NT hub dynamo w/ P. MODULATOR	Auto-L compatible lamp	CN-NX10
COASTER BRAKE SPEC. SG-3C40					BL-IM32 BL-IM32-J for roller brake	SL-3S35				
V-BRAKE SPEC. SG-3R40 dust cap set					BL-M420 for V-BRAKE SM-PM40 P. MODULATOR unit	SL-3S35	NEW BR-M430/M420 HB-NX32-QR/NT hub dynamo			

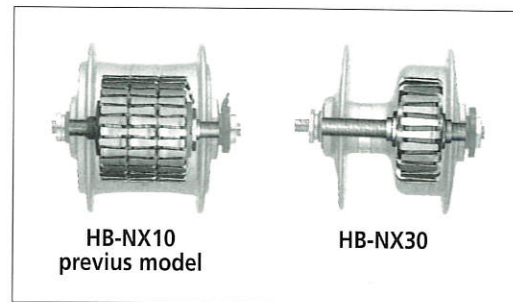
Hub Dynamo



Inter-L Hub Dynamo Auto Lighting System

Compact dynamo hubs provide powerful lighting performance

The Inter-L dynamo hubs are not only compact and lightweight, they're more electrically efficient than ever. A sensor switch (SW-NX30) can be used to turn the lamp on and off automatically according to ambient light levels. The new models such as the HB-NX70 (3.0W) for disc brakes, the HB-NX60 (2.4w) for roller brakes and the HB-NX30 (3.0w) quick release type are now available.



Hub Dynamo

HB-NX70 6v 3.0w Hub dynamo

HB-NX60 6v 2.4w Hub dynamo

HB-NX50-QR / NT 6v 3.0w Hub dynamo

HB-NX32-QR / NT 6v 3.0w Hub dynamo

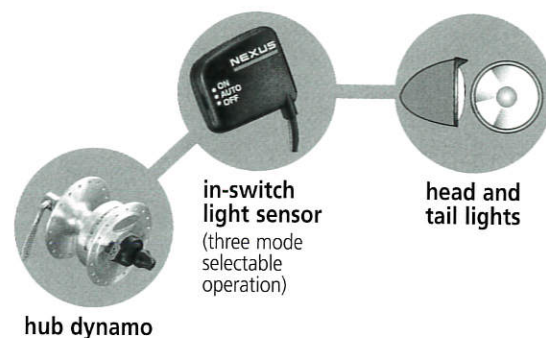
HB-NX22-QR / NT 6v 2.4w Hub dynamo

SW-NX30 In-Switch light Sensor

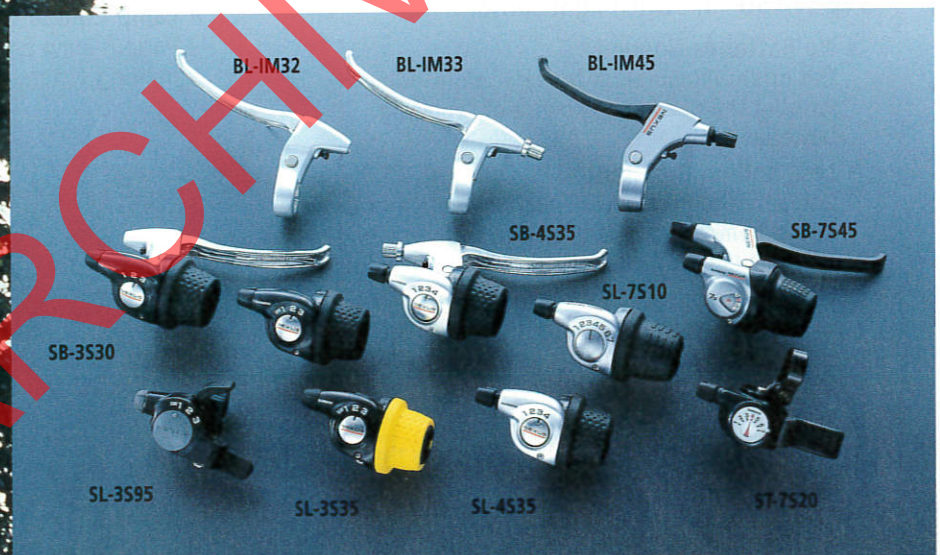
- **No Batteries Needed**
Get bright illumination for safer night riding without the need and expense of replacing batteries.
- **Less Rolling Resistance**
Compared to previous HB-NX10 model, Inter-L hub dynamos rotate with significantly less drag with the lamp off and when starting from stop.
- **Light Weight**
Hubs are significantly lighter than previous HB-NX10 model and offer a smaller axial cross section for improved appearance.
- **Plug-In Wiring**
Wiring harnesses use push-in connectors that make installation fast and easy.
- **Contact Seal**
- **Disc brake mount compatible (HB-NX70)**
- **Spoke Holes : 28H (HB-NX22)**
32H(HB-NX32-QR,HB-NX22)
36H (All)

Auto Lighting System Features

- **In-Switch Light Sensor**
Ambient light sensor is located in the switch assembly to keep it away from the front wheel and avoid ground obstacles.
- **Manual ON-OFF Switch**
Lighting system can be turned off when not needed or to prevent lamp illumination when not desired.
- **Lamp Compatibility**
Various lamp types can be used with the Inter-L lighting systems.



NEXUS Crankset / Shift Lever



Crankset

- FC-NX80 HOLLOWTECH Crankset
- FC-NX60 Crankset
- FC-NX70 Crankset
With Pedaling POWER MODULATOR System
- FC-NX40 Crankset
- FC-NX30 Crankset
- FC-S100 Crankset (Black)

- HOLLOWTECH Crankset Design (FC-NX80)
- Pedaling POWER MODULATOR Elastomer Cushion
FC-NX70 absorbs pedaling and coaster brake shocks for more comfortable cycling. (FC-NX70 only)

REVOSHIFT Shifter

SB-7S45

7-Speed REVOSHIFT Shifter w/integral brake lever

SB-4S35

4-Speed REVOSHIFT Shifter w/integral brake lever

SB-3S30

3-Speed REVOSHIFT Shifter w/integral brake lever

SL-7S10 7-Speed REVOSHIFT

SL-4S35 4-Speed REVOSHIFT

SL-3S35 3-Speed REVOSHIFT

- **Twist Shifting Action**
Low-effort rotational shift action doesn't depend on finger strength, keeps your hands on the handlebars.
- **Optical Gear Display**
Dial-type gear position display makes it easy to see your gear at a glance.
- **Full Range Shift Action**
No need to sequentially shift through each gear. Just rotate the grip to the gear you need.
- **Two-Position Brake Cable**
Allows brake lever to be used with hub roller brake, cantilever brake or V-BRAKE with POWER MODULATOR System (SB-7S45, SB-4S35, SB-3S30).

Shift Lever

ST-7S20 RAPIDFIRE 7Speed Shifter

SL-3S95 3-Speed shifter

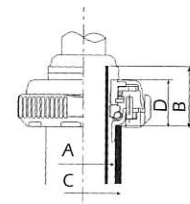
- **RAPIDFIRE Shifter (ST-7S20)**
Compact 7-speed lever offers a low-effort shifting action.
- **Optical Gear Display (ST-7S20)**
Transparent dial type Optical Gear Display provides gear verification at a glance.
- **Soft Touch Shifting (SL-3S95)**
Vertical and horizontal action thumb levers provide a low-effort shifting action.
- **START-2-3 Gear Display (SL-3S95)**
"START" marking provides easy identification of low gear for novice cyclists.

Headset Lock

HP-NX10 NEXUS Headset Lock

- **Locking Action**
Headset lock replaces upper headset components to provide a fork locking function that stabilizes parked bicycle.

Model No.	HP-NX10
A	ø 29.85 - 30 mm or ø 30.01 - 30.2 mm
B	30.5 to 31.5 mm
Front Fork Stem Thread Size	BC1" x 24T.P.I.
C	ø 38 mm (max.)
D	21.7 mm
Head Tube Material	steel



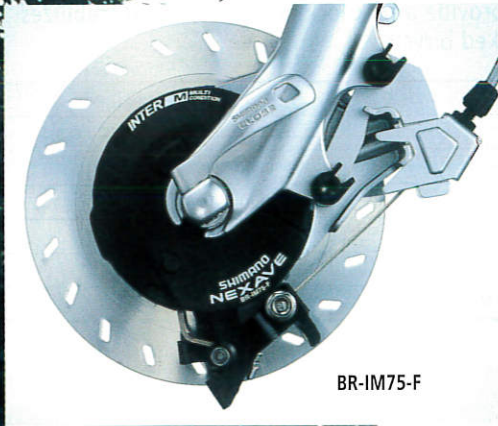
* HP-NX10 is not a complete headset in itself. It replaces the headset components at the top of the head tube.

CN-NX10 Chain

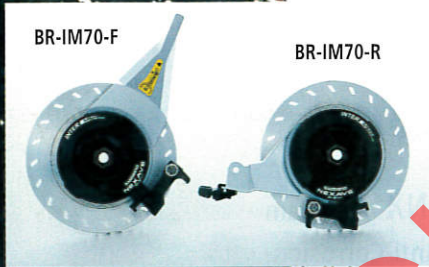
- **Anti-Corrosion**
The anti-corrosion treatment for longer service life.

Please see page 55 for combination chart.

SHIMANO
INTER-M
 Roller Brakes

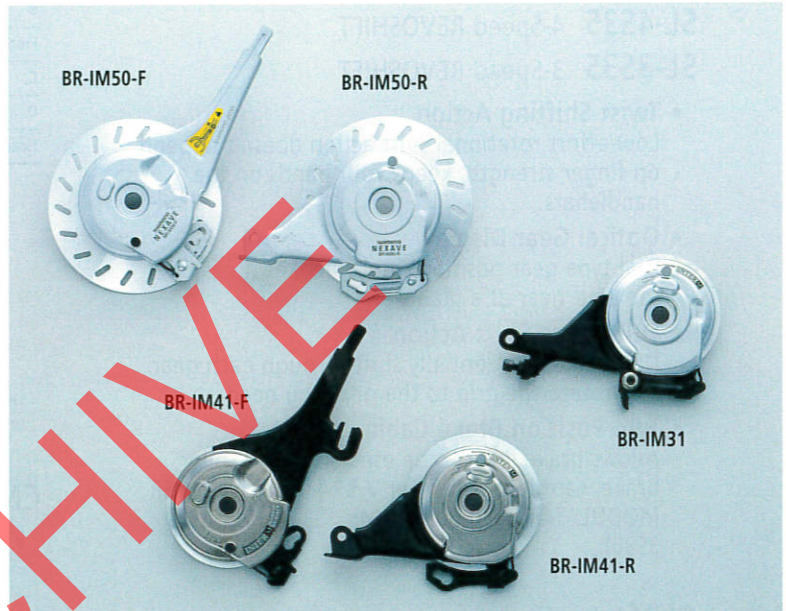


BR-IM75-F



BR-IM70-F

BR-IM70-R



BR-IM50-F

BR-IM50-R

BR-IM41-F

BR-IM31

BR-IM41-R

Hub Roller Brakes

BR-IM70 Roller Brake (for Inter-8/7/4 hubs)

BR-IM50 Roller Brake (for Inter-7/4 hubs)

BR-IM41 Roller Brake (for Inter-7/4/3 hubs)

BR-IM31 Roller Brake (for inter-4/3 hubs)

- **Multi-Condition Brake**
As the roller brake itself is built in the drum, it has the structure free from external influences such as dust and rain. For this reason, you can get braking force that is close to times of fair weather even at times of rain.
- **Hub Mounted**
Eliminates the need for external calipers or cantilevers. Braking action is impervious to weather.
- **Cam-Roller Mechanism**
- **Sealed Mechanism**
- **Cooling Disc**
Efficient heat dissipation helps prevent fade and extends lubricant life (option for BR-IM31).
- **Meets DIN-79100 Specification**

Front Roller Brakes & Hubs

BR-IM75-F Front Roller Brake

BR-IM70-F Front Roller Brake

BR-IM50-F Front Roller Brake

BR-IM41-F Front Roller Brake

HB-NX50

Inter-M Brake Front Dynamo Hub (3.0w)

HB-NX60

Inter-M Brake Front Dynamo Hub (2.4w)

HB-IM40 Inter-M Brake Front Hub

HB-IM30 Inter-M Brake Front Hub

- **Braking POWER MODULATOR System**
Hubs incorporate a modulator clutch that controls excessive lever pressure.
- **Size Specific Design**
Hubs and integral modulators are designed for specific wheel sizes. HB-NX50 and HB-IM40 are for 26" wheels and larger, and HB-IM30 is for 20-24" wheels.
- **Sealed Mechanisms**
- **Squeal Suppression Design**
Brake and modulator work silently to eliminate brake squeal.
- **Meets DIN-79100 Specification**
- **Disc Brake Mount compatible (BR-IM75-F)**

Mountain Bike Components

Great performance and great fun, on or off the road

When you're racing down a back woods trail you can't afford to worry about how your bike's going to respond. We design our mountain bike components so they do what you want them to - instantly. Shimano components create a more efficient bicycle-to-rider interface that demands less of your energy. We do it through low-effort derailleur systems that shift gears with amazing speed and precision and through V-Brakes and disc brakes that deliver awesome stopping power under fingertip control. You can devote more time, more of your energy to going fast and controlling the bike and less to shifting and braking. As completely new XTR was introduced last year, fully redesigned DEORE XT is released for the coming season.

Moreover, SAINT, the new special component group for extreme freeride, has been unveiled. The "super heavy duty" extreme components will create an exciting riding scene for sure.

Additional new product line-up includes DEORE LX Silver & Black version, tubeless compatible WH-M765 wheel system, and PD-M540/520, the moderately priced SPD pedals with the similar technical merits as PD-M959.

Now the difference is boldly showcased. You can always be sure they you're getting a better ride with Shimano.

SHIMANO
XTR 74

SHIMANO
SAINT 78

SHIMANO
XT 80

SHIMANO
LX SHIMANO **Deore** 84, 86

SHIMANO **Alivio** SHIMANO **Acera** SHIMANO **ALTUS** 94, 96, 98

SHIMANO
Tourney 100
TX Series

MTB

Components

Technology

MTB Components

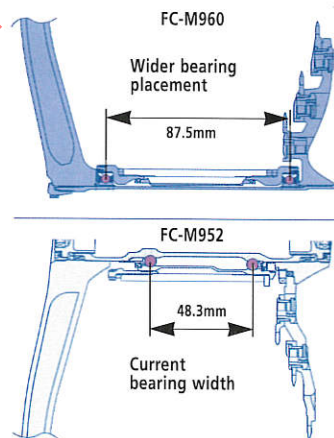


HOLLOWTECH II Crankset & Integrated Bottom Bracket (XTR / SAINT / DEORE XT)

Integrated bottom bracket and crankset design reduces the number of parts, significantly cuts down weight, and increases rigidity. HOLLOWTECH II crankset design allows the bottom bracket bearings to be spaced more widely. This dramatically changes the loads on the bearings to increase rigidity and bearing service life.



Features	Benefits
Integrated crank arm and bottom bracket	Increased rigidity with less weight
Wider bearing positioning	Rigidity is enhanced and pedaling force is efficiently transmitted.
Precision Bearings	Low maintenance and simplified installation.
Compact HYPERDRIVE Chainrings 44-32-22T (XTR / 24T option)	Enhances pedaling efficiency while the SGX chainrings delivers smoother, quicker and precise shifting

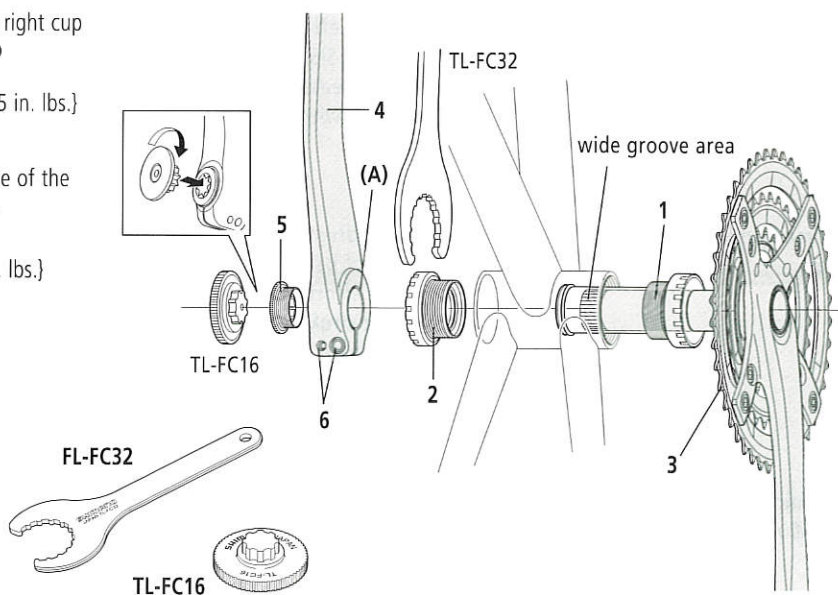


Follow the procedure in the figure.

- 1, 2 Use the special tool TL-FC32 to install the right cup (counterclockwise thread) and the left cup (clockwise thread).
Tightening torque: 35 - 50 N·m {305 - 435 in. lbs.}
- 3 Insert the right crank unit.
- 4 Set section A of the left crank into the axle of the right crank unit where the groove is wide.
- 5 Use the TL-FC16 to tighten the cap.
Tightening torque: 0.4 - 0.7 N·m {4 - 6 in. lbs.}
- 6 Tighten the bolt of the left crank.

Note : Each of the bolts should be evenly and equally tightened to 10 - 15 N·m {88 - 132 in. lbs.}.

See page 196 for more information



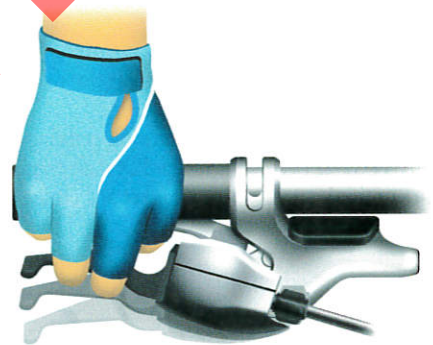
Dual Control Shift Lever (XTR / DEORE XT)

The Dual Control shift lever sets a new standard for shifting ease and swiftness. It lets you shift gears up or down, regardless of your hand position on the handle bar. The secondary release lever provides another shifting option that is a great "transitional" feature as you become accustomed to Dual Control shifting and can be removed if desired for the ultimate "clean" set-up. Internally, shifting is executed by the tried and true high precision indexing system found in the M950 series XTR, featuring three sets of ball bearings that result in more precise shifts, a shorter lever stroke and decreased shifting effort.

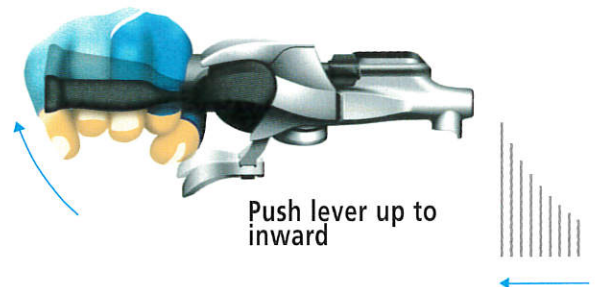
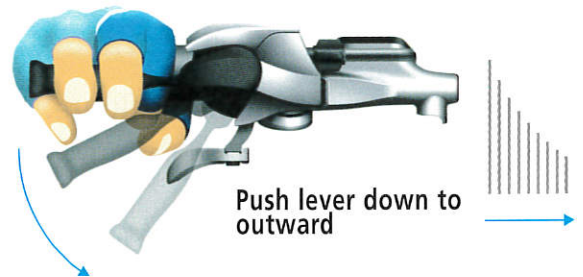


Features	Benefits
Dual Control lever	Allows shifting and braking action from several positions on the handle bar.
Two versions available	The ST-M965/M765 is for hydraulic disc brake compatible. The ST-M960/M760 for V-BRAKE.
Secondary release lever	The secondary release lever provides another shifting option that is a great "transitional" feature as you become accustomed to Dual Control shifting and can be removed if desired for the ultimate "clean" set-up.
SIS-SP41 outer casing	10% reduction in shift effort is achieved with the new SIS-SP41 casing which is fully greased throughout it's length with a silicon based grease.
High precision 9-speed shifting system.	A precision indexing drum featuring three sets of ball bearings provide an effortless and responsive short stroke action that aid in cutting crucial seconds off world class racing times.
Ergonomic design (ST-M760 / M765)	Revised lever shape improves ergonomics.

braking



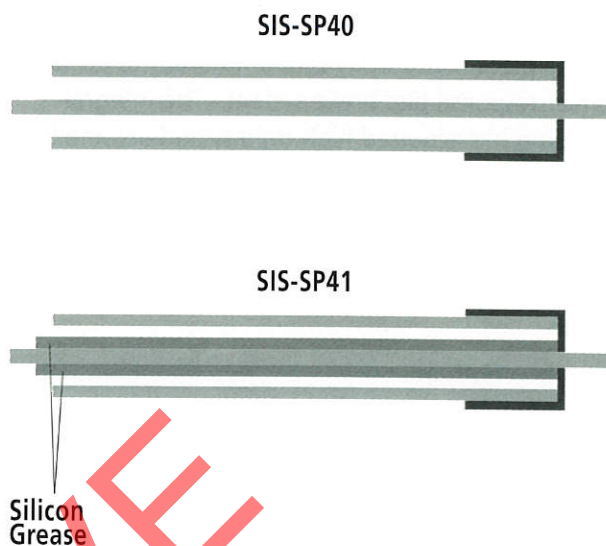
shifting



SIS-SP41 (XTR / DEORE XT)

The SIS-SP41, being prelubricated with the special silicon grease inside the outer casing, decreases the resistance inside the outer cable significantly (about 10% in comparison with the previous model) and achieves the intuitive, quick and precise shifting performance.

Features	Benefits
Clean set-up	Application of grease is not necessary to put through the inner cable.
Special grease for low friction	A great contribution to achieve light shifting of Dual Control System.



Optical Gear Display

The Optical Gear Display tells you which gear position is selected while riding your bike. You can see how many gears you can select either on low side or top side, which makes shifting control easier.

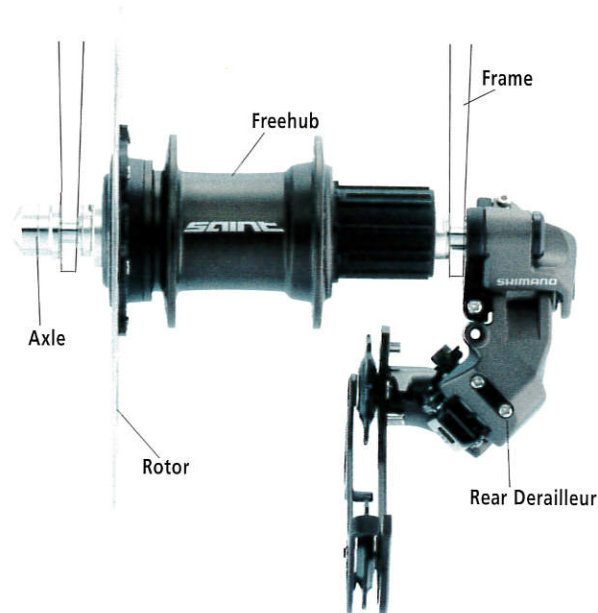
Features	Benefits
Indicator that tells the present gear position on sight	Shifting control is easier.



Hub Axle installation of Rear Derailleur (SAINT)

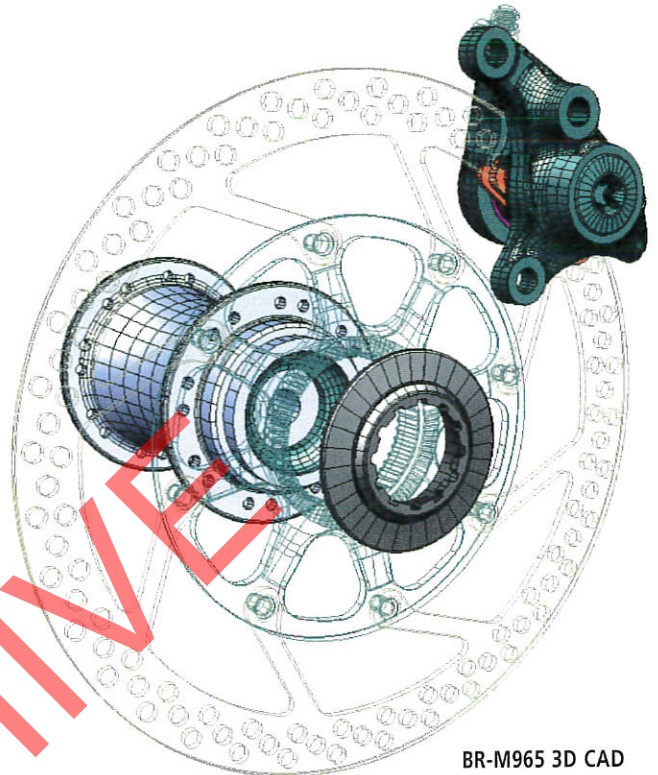
Revolutionary mounting system fixes rear derailleur to the hub axle for unsurpassed durability of the components and shifting performance.

Features	Benefits
Hub Axle installation System	High strength prevents decrease in shifting efficiency caused by the deflection of drop-end on impact.



Mono-Body Caliper (XTR / SAINT / DEORE XT)

Shimano's unique technological skills created the single-piece mono-body caliper in order to achieve the linear response disc brake system. The integral molding has acquired high rigidity and accomplished the compatibility of strong braking power and superb controllability. In addition, the single-piece design has decreased the number of parts and attained the lightweight characteristic.



BR-M965 3D CAD

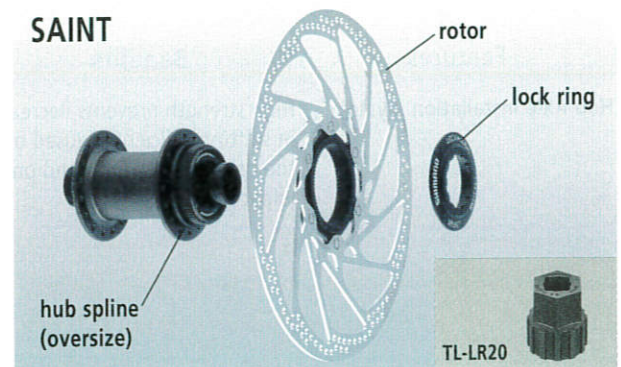
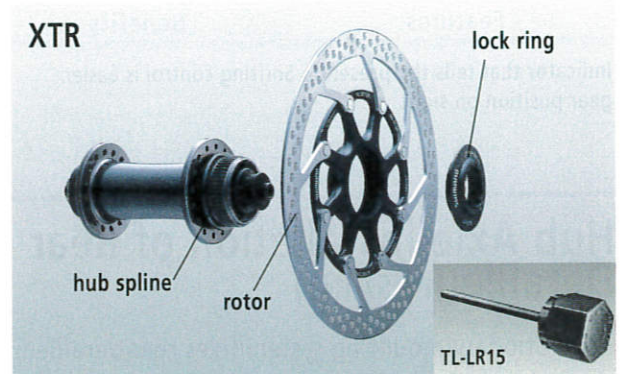
Features	Benefits
"Mono-body" single forged caliper	The single-piece design actualizes high rigidity and the compatibility of strong braking power and superb controllability.
Ultra light with the decrease in number of parts.	While maintaining the lightweight characteristic, which is required as the component for XC race, mounting a disc brake, which has high braking performance, is possible.

MTB Components

Center Lock System

The installation of rotor is possible with spline mount and a lock ring. The lock ring mounting system reduces the total hours of work by shortening the amount of time of both installation and de-installation. In addition, the secure fixing by the spline mount enhances precision and rigidity while improving braking efficiency.

Features	Benefits
Lock ring rotor mounting system	Allows easier and faster rotor installation and realize easy maintenance.
Secure fixing by spline mount	Improves braking efficiency.
Oversize Center Lock system (SAINT)	SAINT's hub is larger than normal size. It provides high durability, realizes "Super Heavy Duty".

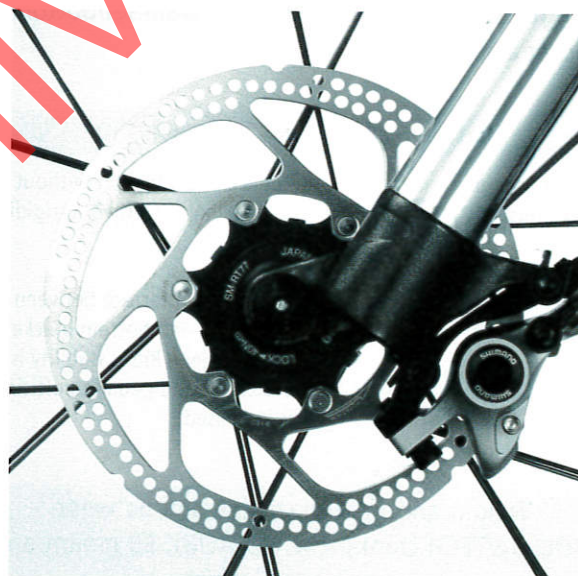


Disc Brakes (XTR / SAINT / DEORE XT / DEORE)

Disc brake for XTR, SAINT and XT provides the benefits of disc brakes at a weight that will be embraced. The opposed dual piston caliper is a forged one-piece "mono-body" design that eliminates the need for caliper assembly bolts. In addition to reduced weight, the caliper is more rigid. The rotor mounts to the hub quickly through a spline and lock ring mechanism. This feature is sure to be popular with riders, when packing and traveling with their bikes and with mechanics that won't be dealing with stripped-out or broken mounting bolts. Brake pad options include, a fade resistant, longer wear metallic compound or a low noise, smooth feeling resin compound. In addition, the BR-M475 mechanical disc brake and the HB/FH-M475 hubs were added to the line-up as a more affordable system for the popular mid-price mountain bikes.



BR-M965 / SM-RT96 / SM-BH96

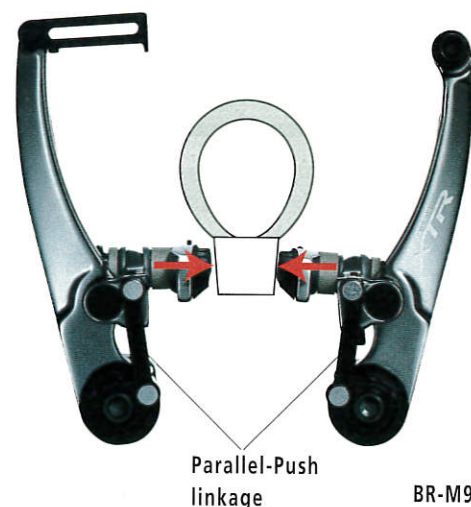


BR-M765 / SM-RT77 / SM-BH62

Features	Benefits
Cutttable resin hose	Assembly is easier and custom fit.
Mineral oil (Hydraulic type)	Non-corrosive natural mineral oil is biodegradable and an effective alternative to hazardous DOT brake fluids.
Cable-activation (Mechanical type)	Simplified design eliminates hydraulic media and is easier to install and maintain. Allows disc brakes to be used with any 1.5 and 2.5-finger V-BRAKE lever.

Parallel-Push V-BRAKE (XTR / DEORE XT / DEORE LX)

The Parallel-Push linkage keeps brake pads parallel with the rim so the brakes work more efficiently and respond quickly for enhanced control. The brake pad surface stays in alignment with the rim so the pad wears more uniformly and lasts longer.



Parallel-Push linkage

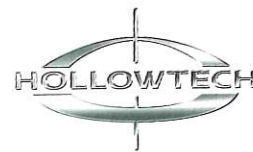
BR-M960

Features	Benefits
Parallel-Push linkage maintains pad alignment against rim.	Keeps pad surface parallel with rim to generate more braking power, improves response and extends brake pad service life.

HOLLOWTECH Cranksets & OCTALINK BB Mount

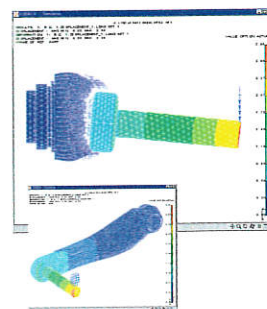
A lightweight crankset not only reduces the bike's weight, but decreases rotating mass to aid in acceleration. The challenge is to reduce the weight of the crank without reducing its strength and rigidity. Shimano's advanced forging technology has solved the problem through the HOLLOWTECH crank. Just like high quality frame tubing, a hollow crank arm can provide amazing strength and rigidity at very light weight.

The bottom bracket plays an important role in regard to crank rigidity. HOLLOWTECH crank arms don't mount to the bottom bracket through the conventional square taper, but use a larger 8-spline interface that connects to a hollow bottom bracket spindle. It's called "OCTALINK". The result is greater strength and rigidity for the entire crankset/bottom bracket assembly.

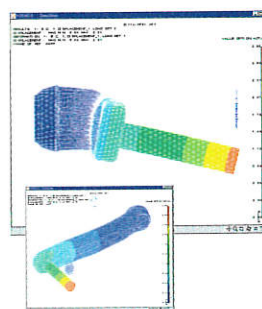


Features	Benefits
Hollow forged crank arms - HOLLOWTECH.	Reduce crank weight without decreasing strength and rigidity.
OCTALINK splined arm and bottom bracket connection	More rigid interface between crank arm and bottom bracket reduces flex. Rider stability is enhanced and pedaling efficiency is increased.

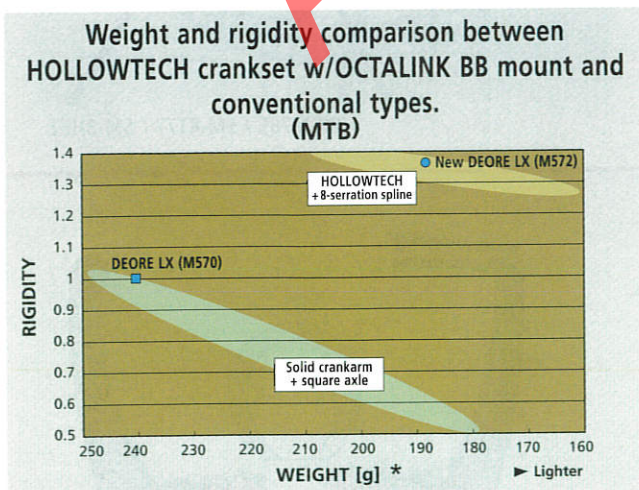
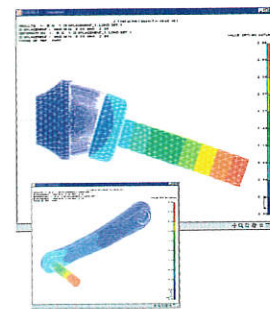
FC-M572 New HOLLOWTECH crankarm



FC-M571 HOLLOWTECH Crankarm



Conventional Solid Crankarm



- * Left hand crank-arm
- For comparative purposes, a rigidity reference value of "1" is used for the FC-M570 Deore LX solid crankarm.
- The table above shows results from tests conducted by Shimano.
- All values shown have been averaged.

The graph shows a comparison of weight and rigidity between HOLLOWTECH cranks and conventional cranks. The upper oval shows that the HOLLOWTECH cranks are lighter and up to 40% more rigid than solid cranks.

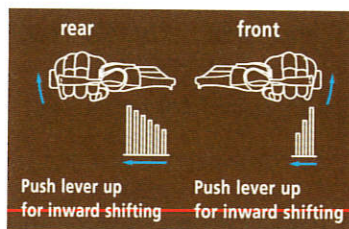
We, at Shimano, conducted a comparative test on the rigidities of a conventional solid crankarm, FC-M571 HOLLOWTECH and FC-M572 New HOLLOWTECH crankarms with our 3-dimensional CAD System. As you can see from the data listed below, the New HOLLOWTECH crankarm has the maximum quality against deflection.

Low Normal Shifting System (XTR / SAINT / DEORE XT)

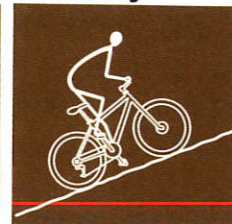
Since the left and right shifting operates in the same way with the low normal rear derailleur, intuitive and accurate operation is possible with the combination use of the Dual Control lever.

In addition, the accurate inward shifting through one-touch operation is realized for the tension of spring works for changing to the lower gear. Breaking away from the conventional style that is shifting gear to the lower gear by the power of finger, there is no need to push the chain to the gear by force. Therefore noise is reduced and the gears wear longer.

Intuitive shifting

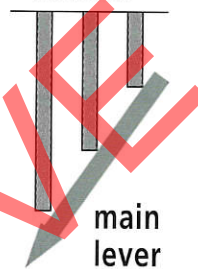


Light-touch inward shifting during hill climbing



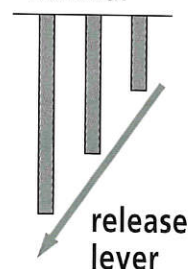
Features	Benefits
Intuitive shifting	Same operation for both left and right levers
Light-touch uphill shifting	Since the reverse spring functions for shifting to the lower gear, shifting needs less effort for the uphill riding. Therefore, you can concentrate on riding.
Low noise and long service life for gears	Comfortable riding

Top Normal



By Finger Force
Unequal and excessive power is applied; entrance into the shifting gate is not smooth.

Low Normal

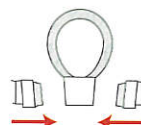
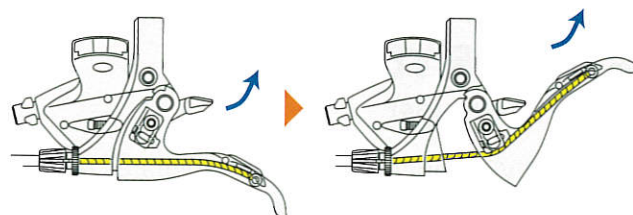


By Spring Return Force
Spring force makes entrance into the shifting gate smooth.

SERVO WAVE Action (XTR / DEORE XT / DEORE LX)

When you pull a SERVO WAVE brake lever, initial cable take-up is fast so little lever movement is needed to bring the pads into contact with the rim. The power multiplication factor then increases rapidly at the pad-to-rim contact so more of the lever stroke is used to apply greater braking power with improved control.

Features	Benefits
Fast initial lever action quickly brings pads into contact with rim after which slower action provides increased leverage for braking.	More lever travel is used to brake the bike. Improves control response and increases braking power.



Quick Response
Cable take-up speed is faster during initial lever movement.

Strong Braking
After pad-rim contact, cable take-up speed slows down to increase braking power and control.

Light Alloy Sprocket Carrier (XTR / DEORE XT)

Sprockets mount to the freewheel body through a light alloy carrier that supports the sprockets close to their perimeter. Sprocket weight is significantly reduced and stiffness has increased for enhanced shifting.

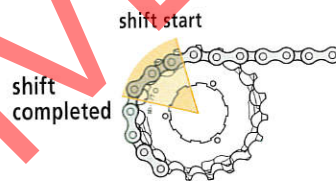
Features	Benefits
Sprockets mount to freewheel body through a light alloy sprocket carrier.	Sprockets are supported at their outer circumference to reduce sprocket weight while increasing rigidity.



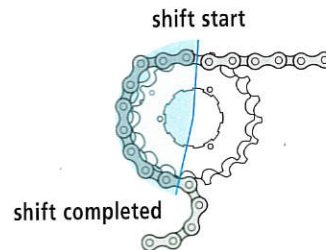
HG Sprockets (all MTB groups)

Computer designed HYPERGLIDE sprockets incorporate specifically positioned shift ramps and tooth profiles for improved chain control during shifting. Fast and responsive indexed shifting is the result.

Features	Benefits
HG sprockets incorporate shift ramps and specially contoured tooth profiles.	Improve chain control, especially during downshifts, to provide a fast and precise shifting action without slipping or engagement shock.



HG sprockets guide the chain quickly and directly to the next sprocket without override.

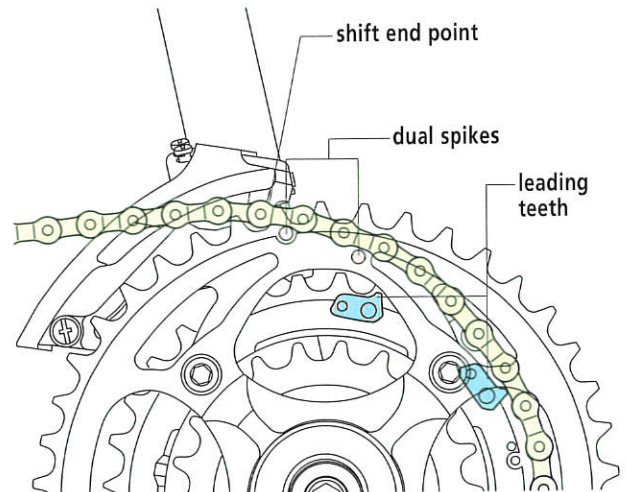


Conventional sprockets cause the chain to ride up and over the gear teeth before engaging the sprocket.

HYPERDRIVE Gearing (all MTB groups)

HYPERDRIVE Gearing refers to the integrated design of the chain, SGX chainrings and front derailleur that results in a precise and dependable indexed shifting action. XTR, DEORE XT, DEORE LX and DEORE all feature the latest 9-speed HYPERDRIVE Gearing technology.

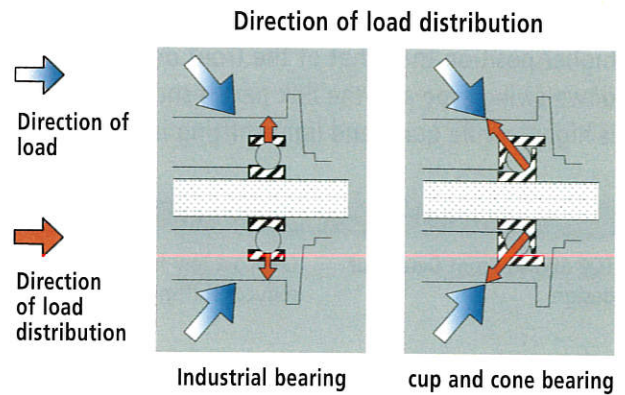
Features	Benefits
Integrated design of SGX chainrings, chain and front derailleur.	Components work together to improve chain control to provide precise and reliable front derailleur shifting that's especially beneficial in severe off-road riding conditions.



Cup and Cone Bearing

As the figure shows, the Cup & Cone type is durable to the force from every direction, where as the industrial type bearing is weak to the power from other than lengthwise direction and that is the reason we adopted it.

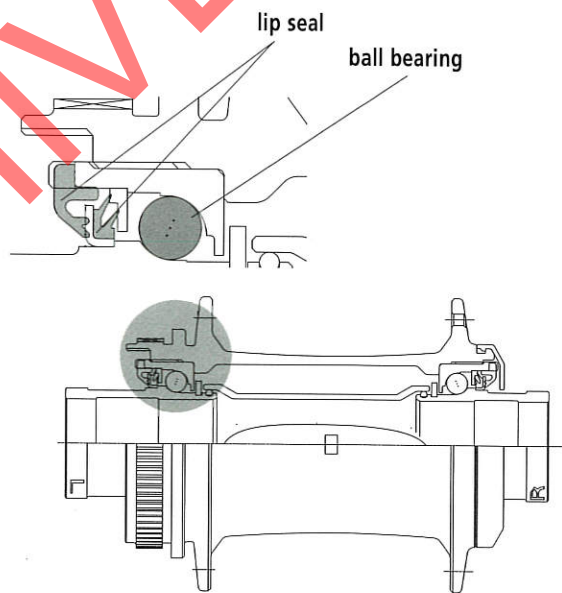
The Cup & Cone type also has an advantage of easy maintenance in the case of unlikely trouble.



Features	Benefits
Cup and cone bearing mechanism	High durability. Easy maintenance. Simple adjustment.

Double Contact Sealing Hubs

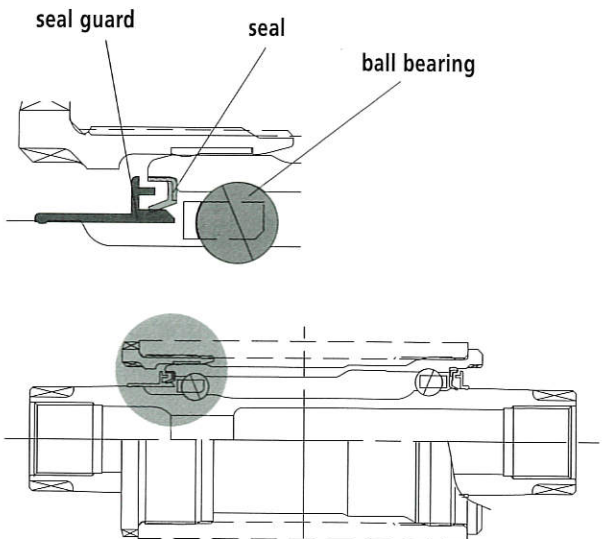
The rubber seals inside the hub hold off mud, dust, dirt and water and protect the mechanism of the hub such as bearings, realizing low maintenance as well as longer service life. Moreover, the double contact sealing, as the rubber seals are set up in two places and the labyrinth type structure is adopted, prevents the penetration of mud, dust, dirt and water. Therefore, the impact on its original performance is to be minimized under long time of unfavorable environmental influences.



Features	Benefits
Double contact seal and labyrinth type structure	Low maintenance and original performance is maintained in any environment for a long period of time.

Sealed Cartridge Bottom Bracket

The cartridge type bottom bracket is hermetically sealed to prevent the penetration of mud, dust, dirt and water allowing the bottom bracket maintains its original performance for a long period of time.



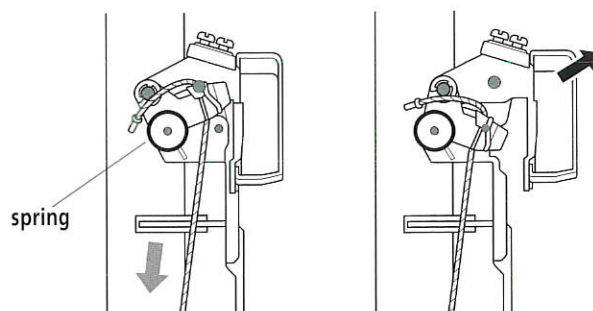
Features	Benefits
Cartridge type bearing	Allow quick installation with adjustment and maintenance-free.

TOP SWING Front Derailleur

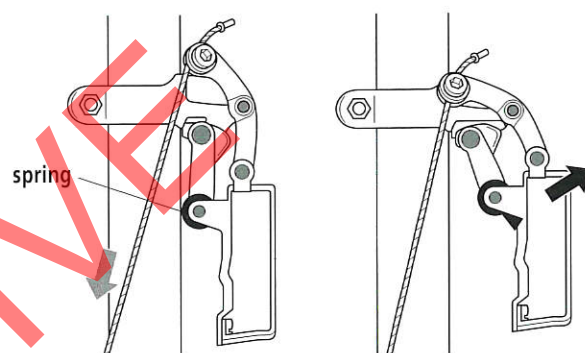
Since the moving part of the front derailleur is set at higher position than that of the front derailleur of down swing type and the link part is short, the rigidity is higher while quick and light shifting is possible.

Features	Benefits
TOP SWING Front Derailleur design	Compact low-friction linkage reduces shifting effort

TOP SWING Front Derailleur



Down Swing Front Derailleur



SMARTCAGE Pulley Plate

The use of 13 and 15-tooth pulleys allows for shorter chain cage that can still handle MEGARANGE Gearing, wide ratio gearing and 34-tooth sprockets. The SMARTCAGE pulley plate not only looks better on the bike, it provides the added benefit of more ground clearance.

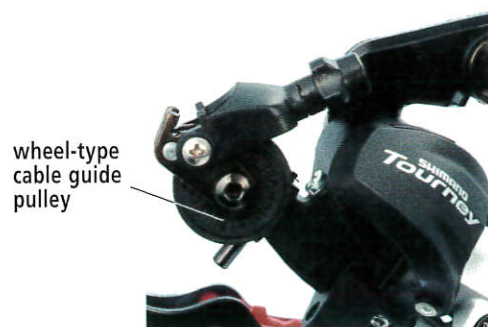
Features	Benefits
Use of 15-tooth tension pulley and 13-tooth guide pulley allow for a shorter pulley cage.	SMARTCAGE pulley plate is shorter yet provides the large chain capacity needed for wide range gearing. Provides for increased ground clearance and improved appearance.



Wheel-Type Cable Guide Pulley

Tourney TX RD-TX70 / TX50 rear derailleurs use a rotating cable guide pulley that reduces cable friction. The result is a lighter and more responsive shifting action.

Features	Benefits
Reduced shifting cable friction	Light and responsive shifting



SHIMANO M SYSTEM Brake Shoe

This brake system maintains its strong braking power and controllability even in wet environments. The M shoe that performs well in wet conditions is adopted.

Features	Benefits
SHIMANO M SYSTEM Brake Shoe	Special pad formulation maintains braking power in wet environments

Mega-9 Gearing



The 9-speed gear cluster actualizes close ratio gearing without impairing wide gear range.

Features	Benefits
Mega-9 sprockets	Wide-range 9-speed sprocket cluster with close-ratio gearing.

MEGARANGE Gearing

34-tooth MEGARANGE sprocket provides super-low gearing that lets you pedal up the steepest grades with ease.

Features	Benefits
34-tooth super-low gear sprocket	More comfortable cycling lets you pedal up the steepest grades without getting off the bike

SIS Rear Index Shifting System

The system constituents such as the index mechanism built in the shifting lever, the frictionless SIS Rear Index Shifting cable and the smooth action rear derailleur actualize the Shimano Index System. Its accurate and quick gear change has become the common sense of shifting system.

Features	Benefits
SIS Rear Index Shifting	Fast, accurate, indexed shifting performance



DUAL SIS Front and Rear Index Shifting

The SIS Rear Index Shifting System, which has been noted for its accurate, precise and smooth shifting system, was adopted to the front. The front with the index system makes shifting operation easier and more comfortable.

Features	Benefits
SIS Rear Index shifting	Fast, accurate, indexed shifting performance
DUAL SIS Front and Rear Index Shifting	Indexed front and rear derailleur shifting allows for easy shifting and comfortable riding.



Double Servo-Panta Mechanism

The Servo Panta Mechanism always stabilizes the clearance between the guide pulley of the derailleur and the tooth top of the sprocket to allow for a quick shifting with absolute precision. In addition, the noise is reduced and the comfortable riding is possible with the same shifting touch to select any gears all the time.

Features	Benefits
Stabilizes the clearance between the guide pulley and the tooth top of sprocket	Quick and precise chain move to the aimed gear allows for a comfortable shifting.

Advanced Light Action

Low-friction link pivots and the use of a low-tension extension spring significantly lower the effort needed to shift the derailleur regardless of gear position.

Features	Benefits
Extension spring and low-friction linkage	Lighter shifting regardless of gear position

SHIMANO XTR

FD-M960-E

FD-M960

FC-M960

RD-M960-GS

RD-M960-SGS

FD-M961

ST-M960

ST-M965

The benchmark of cross country component design

XTR has been designed to give the expected Shimano reliability, while adopting the new generation of shifting, drivetrain and braking systems. From the easy and flexible shifting performance of the Dual Control shift lever to the super-lightweight, linear response ultra-light disc brake design, XTR continues to be the benchmark of off-road component design.

Dual Control
Lever

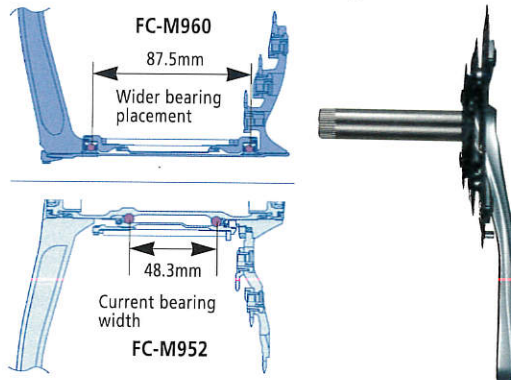


Hydraulic
Disc Brake



FC-M960 Crankset

- **HOLLOWTECH II Crankset design**



- **Cartridge Bearings**
- **Easy assembly**
The integrated design makes installation, adjustment and maintenance easier. Only one chainline of 50mm and one bottom bracket specification for 68 or 73mm shells or E-type front derailleur is necessary. The only spec to decide is crankarm length.
- **HOLLOWTECH Crank Arm Construction**
- **DUAL SIS Front and Rear Index Shifting**
- **Gearing** : 44-32-22 (24T option)
- **Weight** : 797g (175mm)
Total weight including BB

FD-M960 TOP SWING Front Derailleur

FD-M960-E BB Mount TOP SWING FD

FD-M961 Down Swing

- **TOP SWING (M960/M960-E) Front Derailleur design**
- **DUAL SIS Front and Rear Index Shifting compatible**
- **Rigid Extra Wide Link**
The front derailleur pivot link is 50% wider for 110% increase in rigidity. You get a faster and more responsive shifting action plus longer service life.
- **Dual Pull design**
Allows it to be used with top or bottom cable routing. The multi-clamp adapter allows the medium 31.8mm size derailleur clamp to fit 28.6mm frame tubes.
- **Light Alloy Chain Cage**
Durable Nickel plated alloy chain cage reduces weight while improving abrasion resistance.
- **Mega-9 Gearing compatible**
- **Total capacity** : 22T
- **Top-Middle difference** : Min. 12T
- **Weight** : 132g (M960) , 145g (M960-E), 149g (M961)

ST-M960 Dual Control Lever for V-BRAKE

ST-M965

Dual Control Lever for Hydraulic Disc Brake

- **Dual Control Lever**
Shift lever allows shifting and braking action from several positions on the handlebar.
- **Secondary Release Lever**
Secondary trigger release lever (removable).
- **SIS-SP41 Outer Casing**
10% reduction in shift effort is achieved with the SIS-SP41 casing which is fully greased throughout its length with a silicon based grease. (Do not use other grease with SIS-SP41.)
- **Light Action Shifting**
Three sets of ball bearings provide an effortless and responsive short stroke action that aid in cutting crucial seconds off world class racing times.
- **Large Barrel**
A sturdy adjusting barrel is easily accessible to make cable tension adjustments while riding.
- **In-line Optical Gear Display**
- **Coated Stainless Steel Shift Cable**
- **Weight** : 412g (M960) , 442g (M965)

RD-M960-GS/SGS Rear Derailleur

- **Low Normal Return Spring**
- **Dual Control Lever compatible**
- **High rigidity Outer Link**
The outer link embraces the pulley body to increase pivot joint rigidity.
- **11-tooth Sealed Bearing Pulleys**
11-tooth pulleys with sealed bearings run quieter and wear longer due to alternating tooth contact between inner and outer chain plates.
- **Mega-9 Gearing compatible**
- **Low friction Pivot Bushings**
Four fluorine coated link pivot bushings reduce friction for a more responsive shifting action.
- **Detachable Rubber Bumper**
To prevent damage and reduce noise to chainstay, the plate body is outfitted with a removable rubber bumper.
- **Max. / Min. sprocket** : 34 / 11T
- **Total capacity** : 33T (GS), 43T (SGS)
- **Weight** : 198g (GS), 205g (SGS)

SHIMANO XTR

XTR



CN-7701 Chain

- **Precision construction**
Ultra-precision construction maintains strength, dependability and lateral rigidity for responsive shifting.
- **Improved durability**
Pin pull-out resistance increased by 50%.
- **Zinc-Alloy plating**
Both inner and outer links are zinc-alloy plated for corrosion resistance.
- **Weight : 304g (116pins)**

CS-M960 Cassette Sprockets

- **Close-Ratio wide-range Mega-9 Gearing**
- **Light weight design**
Six largest sprockets are mounted to an alloy carrier to reduce weight and increase rigidity.
- **Titanium**
Four largest sprockets are made from titanium
- **HG Sprockets design**
- **Alloy Sprocket Carrier**
- **Gearing : (ba) 11-32T, (as) 11-34T, (ap) 12-34T**
- **Weight : 240g (11-32T)**

BR-M965

Hydraulic Disc Brake Caliper International A-type

BR-M966

Hydraulic Disc Brake Caliper Post-Mount type

SM-RT96 Disc Rotor

SM-BH96 Brake Hose

- Super lightweight Mono-body design
- Center Lock Rotor Mounting System
- Superior control performance
Shimano engineered twin piston design which provides a balance of linear response and high stopping power.
- Brake Pad options
- Metallic compound
- Resin compound
- Cuttable Brake Hose
- Weight : BR-M965 : Front ; 98g, Rear ; 100g (Resin)
BR-M966 : Front ; 104g
SM-RT96 : 139g

HB-M965 Front Disc Brake Hub

FH-M965 Disc Brake Freehub

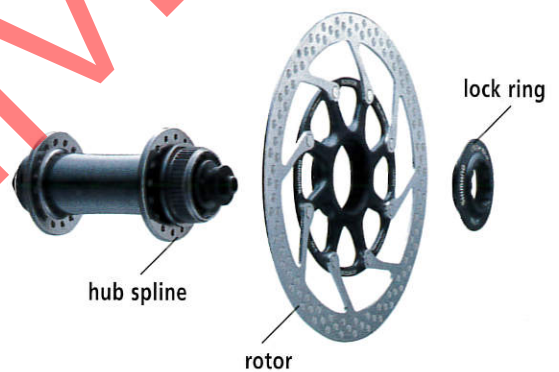
HB-M960 Front Hub

FH-M960 Rear Freehub

- Center Lock Rotor Mount System
- Double Contact Sealing
- Titanium
Hubs feature a titanium axle and freehub body to reduce weight without sacrificing strength.
- Super polished bearing races
Ultra-smooth bearing race surfaces provide a precision low-friction rolling action.
- Cup & Cone Bearing System
- Weight : HB-M965 : 150g
FH-M965 : 310g
HB-M960 : 137g
FH-M960 : 315g
Front QR : 57g
Rear QR : 62g

BR-M960 V-BRAKE

- Parallel-Push Linkage
- Super light weight design
Cantilevers are designed to offer maximum rigidity at minimum weight.
- Low-Flex design
Shoes are positioned on the frame side of the cantilever arm to reduce frame flex and increase braking efficiency.
- SHIMANO M SYSTEM Brake Shoe
- Weight : 484g



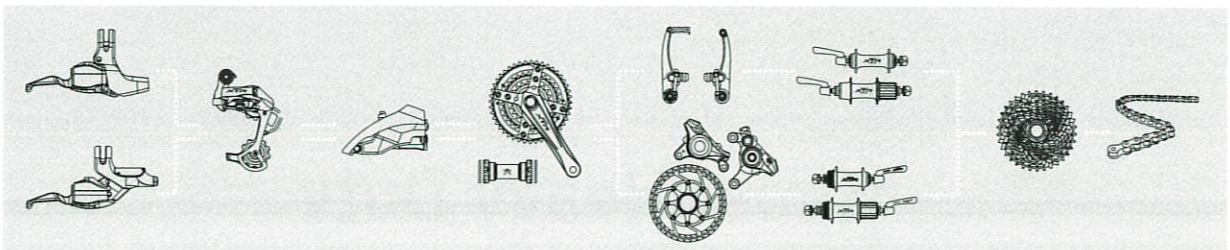
ST-M960

Dual Control lever for V-BRAKE

V-BRAKE

BR-M960
V-BRAKE

HB-M960
FH-M960



Disc brake / Hydraulic type

ST-M965
Dual Control lever
for Hydraulic
Disc BR

RD-M960-GS
Low normal
RD-M960-SGS
Low normal

FD-M960
TOP SWING FD
Dual Pull
FD-M960-E
BB-mount
Dual Pull
FD-M961
Down swing link
Dual Pull

FC-M960
HOLLOWTECH II
crankset
w/ BB unit

BR-M965/M966
Disc brake caliper
SM-RT96
Disc rotor Center
lock mount
SM-BH96
Brake hose

HB-M965
Center lock
rotor mount
FH-M965
Center lock
rotor mount

CS-M960
9-speed HG CS
11-34T
12-34T
11-32T

CN-7701
Super narrow
HG chain

<Option>

SL-M952
RAPIDFIRE Plus shifter
BL-M950
V-BRAKE lever

RD-M952
Top normal

SM-RT75
Conventional rotor mount

SAINT



Super Heavy Duty

The design concept for Saint is "Super Heavy Duty". The concept is achieved by equipping Saint with an innovative mounting system that fixes the rear derailleur directly to the rear hub axle, super durable HOLLOWTECH II crankset and bottom bracket, and powerful disc brakes.

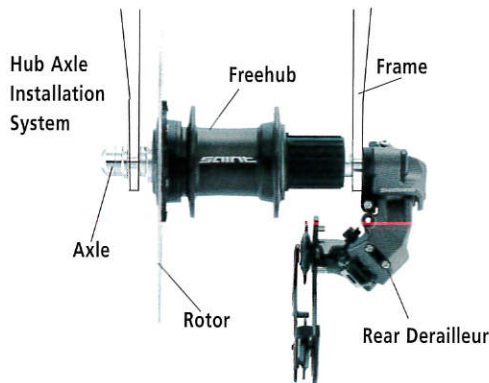
These components are sure to become the cyclists' guardian in the most challenging situations.



Hydraulic
Disc Brake

RD-M800 Rear Derailleur

- **Hub axle installation**
Revolutionary mounting system fixes rear derailleur to the hub axle.



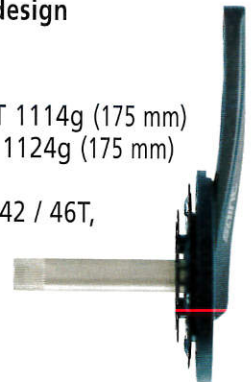
- **Adjustable Bump Stop**
Reduces noise and damage to frame and rear derailleur.
- **Cable Tension Saver**
Allows the rear derailleur to absorb unintentional impact.
- **Integrated Skid Plate design**
The smooth, reinforced rear derailleur lower surface moves the cable anchor to top to prevent damage and increase durability against impact.
- **Low Normal Return Spring**
- **SS : 29T / GS : 33T / SGS : 45T**
- **Weight : SS : 362g / GS : 373g / SGS : 399g**

FH-M800 Rear Freehub

- **Compatible with RD-M800**
- **135mm O.L.D. thru axle design**
Will accommodate most current MTB frame designs with 10mm fixing bolt for compatibility with standard dropouts 20mm rear axle diameter.
- **Cup & Cone Angular Contact Bearings**
for super smooth rotation and longer durability.
- **Over-sized Center Lock System**
for quick rotor assembly.
- **Water Resistant Sealed System**
- **32H / 36H**
- **Weight : 32H 600g (w/ axle)**

FC-M800 HOLLOWTECH II Crankset

- **HOLLOWTECH II Crankset design**
- **Reinforced Pedal / Crankarm Interface**
- **FC-M800-3 : triple 44-32-22T 1114g (175 mm)**
- **FC-M800-2 : double 32-22T, 1124g (175 mm) w/ Bash Guard**
- **FC-M800-1 : single 34 / 38 / 42 / 46T, 1027g (175 mm)**

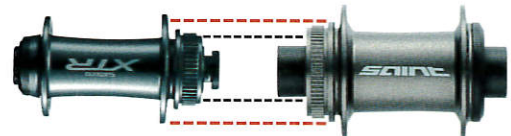


BR-M800 Disc Brake System (Mineral Oil)

- **Mono-body single forged caliper design with opposed 2-piston for maximum power and exceptional control**
- **Oversized Center Lock**
Designed to accommodate 20 mm thru axles.
- **160 and 203mm rotors available**
Easy assembly extension mount for 203mm rotor.
- **International A-type / Post-type**
- **Weight : Front; 183g (w/ adaptor) Rear; 191g (w/ adaptor)**

HB-M800 Front hub

- **Designed for 20mm thru axle forks with 110 O.L.D.**
- **Cup & Cone Angular Contact Bearings**
- **Oversized Center Lock Rotor Mount System**



- **Water Resistant Sealed System**
- **Rubber Cap for Center Lock Mount**
- **32H / 36H**
- **Weight : 275g**



RD-M800-SS
RD-M800-GS
RD-M800-SGS
Hub axle mount type

FC-M800-1
Single
FC-M800-2
Double
FC-M800-3
Triple

BR-M800
Disc brake caliper
SM-RT80
Disc rotor (203mm)
SM-RT80S
Disc rotor (160mm)
SM-BH62
Brake hose

HB-M800
20 mm axle type
Center lock type
(Large size)
FH-M800
Center lock type
(Large size)

<Option>

ST-M765
Dual Control lever
SL-M750
RAPIDFIRE Plus shifter

BL-M756
BL-M556
BL-M525
Disc brake lever

FD-M760
TOP SWING FD
Dual pull / Multi Clamp
FD-M760-E
TOP SWING FD
Dual Pull / BB- mount

FD-M761
Down swing link
Dual Pull / Multi-clamp

SM-RT75-DH
Conventional rotor mount

NEW CS-M760
9-speed CS
11-34

CN-HG93
Super narrow
HG chain

SHIMANO
Deore

XT



FC-M760



FD-M761



FC-M761



FD-M760-E



FD-M760



RD-M760-SGS



RD-M760-GS



ST-M760



ST-M765



DEORE XT

Tradition and Evolution

DEORE XT has established a tradition as the recognized standard in high performance components. The group continues to evolve to keep pace with the changing demands of the latest bicycle designs and riding styles. The new DEORE XT system features the popular and revolutionary functions from the Shimano XTR group.

Dual Control
Lever



Hydraulic
Disc Brake



Dynamic Design

Designed under the concept of Dynamic, DEORE XT's organic appearance will fit well with a variety of bicycle designs.



ST-M760 / M765 Dual Control Lever

- **Dual Control Lever**
Allows lever operation from multiple hand positions. Multi-directional pivoting brake/shift lever is much less susceptible to crash damage than traditional brake levers.
- **Ergonomic design**
Revised lever shape improves ergonomics.
- **Optical Gear Display**
Integrated gear display allows instant gear recognition.



- **ST-M760** for V-BRAKE, **ST-M765** for hydraulic disc brake
- **Weight** : ST-M760 : 440g, ST-M765 : 480g

RD-M760 Rear Derailleur

- **Wide Link design**
New design outer link increases rigidity and service life.
- **Rubber Bumper on P-body**
Reduces noise and adds durability.
- **Low Normal Return Spring**
Lends to incredibly intuitive operation when combined with Dual Control shift levers. Enhances and allows for pre-selection of inward shifts, especially in varying terrain.
- **GS** : 33T capacity, **SGS** : 45T capacity
- **Weight** : GS 232g, SGS 362g

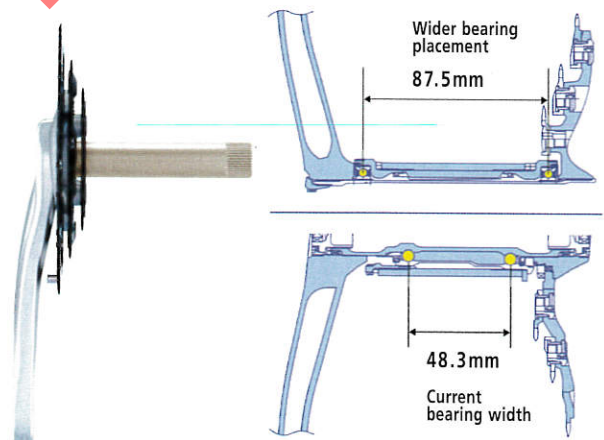
FD-M760 / M760-E / M761

Front Derailleur

- **Wide Link Design**
Wider pivot link for greater torsional rigidity, improves shifting response and service life.
- **Dual Pull**
Dual pull design allows it to be used with top or bottom cable routing.
- **Multi Clamp**
Multi-clamp band is compatible with all frame dimensions, adapters utilized for 28.6 and 31.8mm sizes.
- **Variations** :
FD-M760 TOP SWING FD (66-69°) for 44T top
FD-M760-E TOP SWING E-type FD for 44T top
FD-M761-type-3 Down Swing FD (63-66°) for 48T top (for Trekking Bike)
FD-M761-type-6 Down Swing FD (66-69°) for 44T top
- **Weight** : FD-M760 158g, FD-M760-E 180g, FD-M761 165g

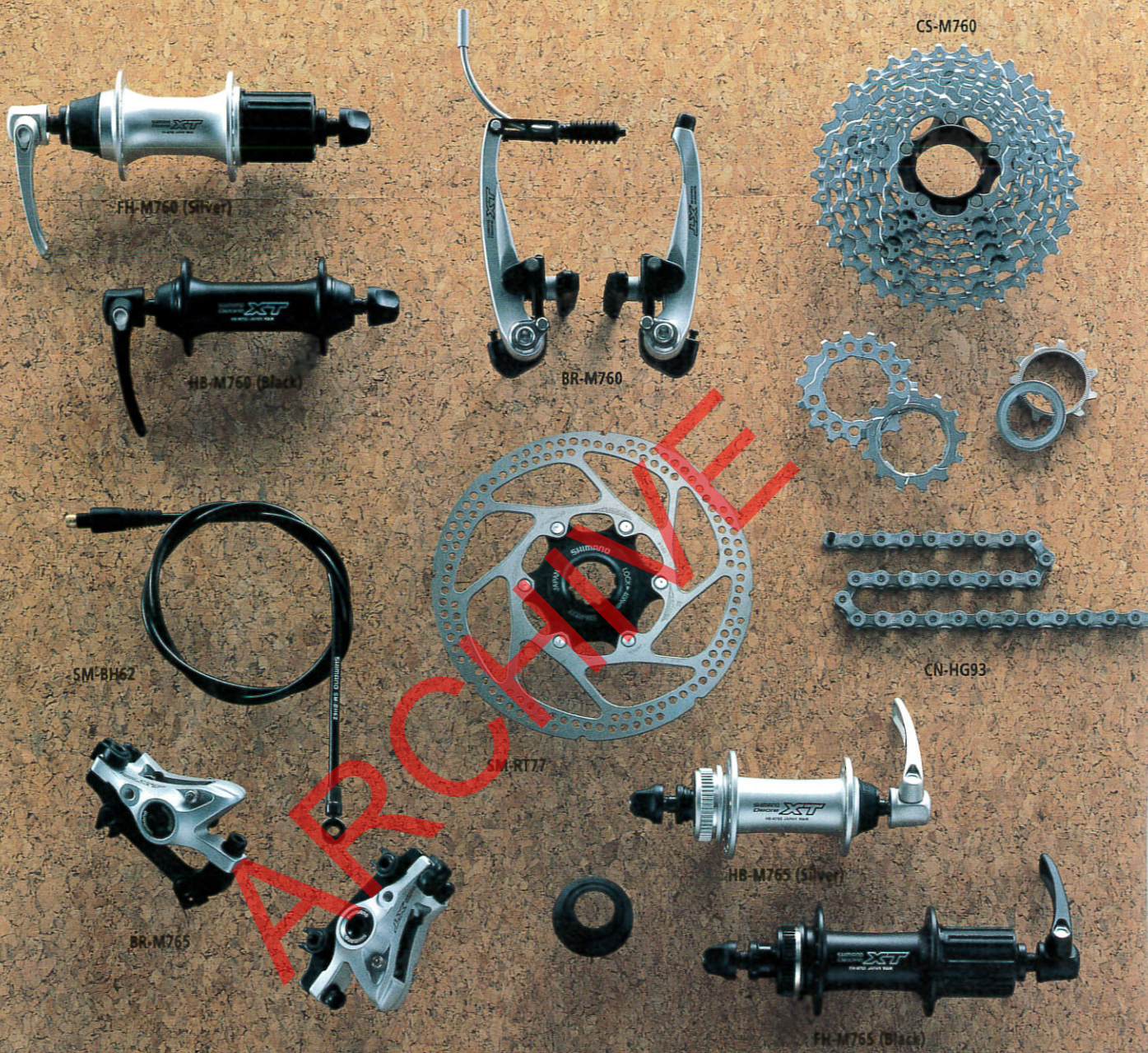
FC-M760 / M761 HOLLOWTECH II Crankset

- **HOLLOWTECH II Crankset**
Integrated crankset and bottom bracket significantly cuts down weight and increases rigidity.



- **FC-M760** : 44T-32T-22T
- **FC-M761** : 48T-36T-26T chain case compatible
- **Weight** : 860g (44-32-22T, 175mm)

SHIMANO Deore XT

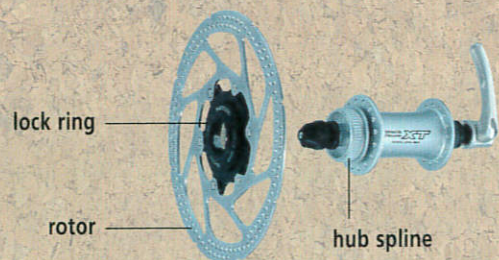


DEORE XT

BR-M765 Disc Brake System
SM-RT77/77L Disc Rotor
SM-BH62 Hose

- **Hydraulic Disc Brake (Mineral Oil)**
The best balance between comfortable controllability and powerful braking force.
- **Mono-Body design**
Super-lightweight and rigid one-piece forged caliper.
- **Easy and fast set-up**
Shim-less caliper mounting and adjustment and Center Lock rotor mounting simplifies installation.

- **Opposed 2-Piston**
Strong braking power with minimalist design.
- **Center Lock System**
- **SM-RT77 : 160mm, SM-RT77L : 203mm**



- Resin and metal pad are available
- Compatible with International and Post-type mounts
- Weight : 288g

BR-M760 V-BRAKE

- Cartridge Shoe
- Parallel Link
- Weight : 455g (F & R)

CS-M760 Cassette Sprocket

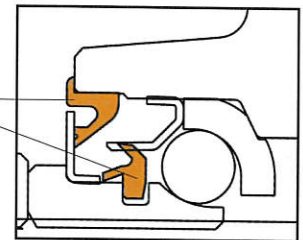
- **Alloy Sprocket Carrier**
5-arm sprocket carrier prevents deflection, resulting in superb shifting performance and lightweight.
- **Gearing** : 11-34T, 11-32T
- **Weight** : 264g (11-32T)



HB/FH-M760 Hub set for V-BRAKE

HB/FH-M765 Hub set for Disc Brake

- **Center Lock System compatible (M765)**
- **Cup & Cone Bearing**
Angular bearing loads are displaced more evenly for super smooth rotation and longer durability.
- **Smooth rotation**
Ball races are ground with super polished process for high precision, durability and super smooth rolling.
- **Double Contact Sealing**
Shuts out mud, dust, dirt and water from bearings to extend service life and maintain smooth operation in all environments.



- **Rubber cap for Center Lock mount**
- **Color options** : Black, Silver
- **32H/36H**
- **Weight** : HB-M760 : 150g, FH-M760 : 370g, HB-M765 : 180g, FH-M765 : 369g
Front QR : 56g, Rear QR : 61g

CN-HG93 9-Speed HG Chain

- **Super-narrow 9-Speed construction**
- **Precision construction**
- **Improved durability**

STI 27-SPEED

ST-M765
Dual Control lever
for Hydraulic
Disc Brake

FD-M760
TOP SWING FD
Dual Pull
Multi Clamp

Disc Brake / Hydraulic type

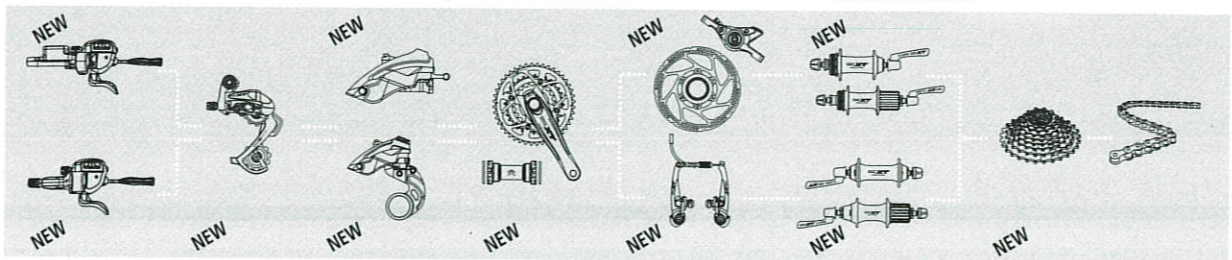
BR-M765
Brake Caliper

SM-RT77
Disc Rotor
Center Lock mount

SM-BH62

HB-M765

FH-M765
For Disc Brake
Center Lock mount



ST-M760
Dual Control lever
for V-BRAKE

RD-M760-SGS

FD-M760-E
TOP SWING FD
Multi Clamp
BB-mount

FC-M760
HOLLOWTECH II
Crankset w/ BB unit
44-32-22T

BR-M760
V-BRAKE

HB-M760
FH-M760

CS-M760
9-speed CS
11-32T

CN-HG93
Super narrow
HG Chain

V-BRAKE

<Option>

SL-M750
RAPIDFIRE Plus shifter
BL-M756
Disc brake lever
BL-M739-S
V-BRAKE lever

NEW RD-M760-GS

NEW FC-M761
HOLLOWTECH II
Crankset w/ BB unit
for chaincase
48-36-26T

SM-RT75
Conventional
rotor mount

NEW CS-M760
9-speed CS
11-34



High-energy components that are at home on or off the road

DEORE LX continues as a great value in a performance-oriented off-road group. New for this season is a striking new black and silver two-tone color version, and continues to blue-gray version and black and gold version. The lineup of these three versions gives some unique characteristics to a wide variety of bikes.



ST-M570 Mega-9 STI Lever Set

SL-M570 Mega-9 Shift Lever Set

BL-M570 Brake Lever Set

- 9-speed RAPIDFIRE Plus Shifting Lever
- 3-level adjustment SERVO-WAVE Brake Lever
- Light Action Shifting
- FLIGHT DECK Cycle Computer compatible
- Weight : 410g (ST-M570) 240g (SL-M570) 188g (BL-M570, pair)

RD-M570-SGS Rear Derailleur

- Mega-9 Gearing compatible
- Low-Friction Pivot Bushings
- Rubber Boot Cable Protectors
- Max. / Min. capacity : 34T / 11T
- Total capacity : 43T
- Weight : 288g

FD-M570 TOP SWING Front Derailleur

FD-M570-E BB Mount TOP SWING FD

FD-M571 Down Swing

- Reinforced Chain Guide
- Mega-9 Gearing compatible
- Light Alloy Mounting Plate
FD-M570-E type uses a light alloy bottom bracket mounting plate to reduce weight.
- TOP SWING Front Derailleur (M570 / M570-E)
- Total capacity : 22T
- Top-Middle difference : Min. 12T
- Weight : 128g (M570), 138g (M570-E), 140g (M571)

FC-M572 HOLLOWTECH Crankset

- HOLLOWTECH Crank Arm Construction
- Powerful design
The new design of the Deore LX cranksets showcases the clear differentiation between Hollowtech cranks and other solid crank arms.

- Shimano shifting performance
Quick, precise and dependable shifting.
- Weight : 644g (175mm)

BB-ES51 Cartridge Bottom Bracket

BB-ES51-E Cartridge Bottom Bracket

- OCTALINK Splined Axle Crank Arm Interface
- Oversized BB spindle
- Sealed Cartridge assembly
- Anti-Corrosion Treatment
- Weight : 262g

BR-M570 V-BRAKE

- Parallel-Push Linkage
Pad stays parallel with rim for stronger, more efficient braking and longer pad life.
- Weight : 542g

Disc Brake System See page 85.

HB-M570 Front Hub (9mm steel axle)

HB-M571 Front Hub (10mm steel axle)

FH-M570 Rear Freehub

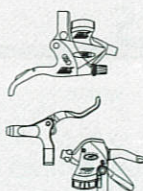

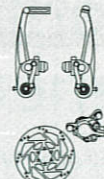
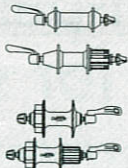


- Cup and Cone Bearing
- Double Contact Sealing
- Light Alloy Quick Release
- Weight : HB-M571 : 162g, HB-M570 : 149g, FH-M570 : 365g
Front QR : 56g, Rear QR : 61g

CS-HG70-9 9-Speed Cassette Sprockets

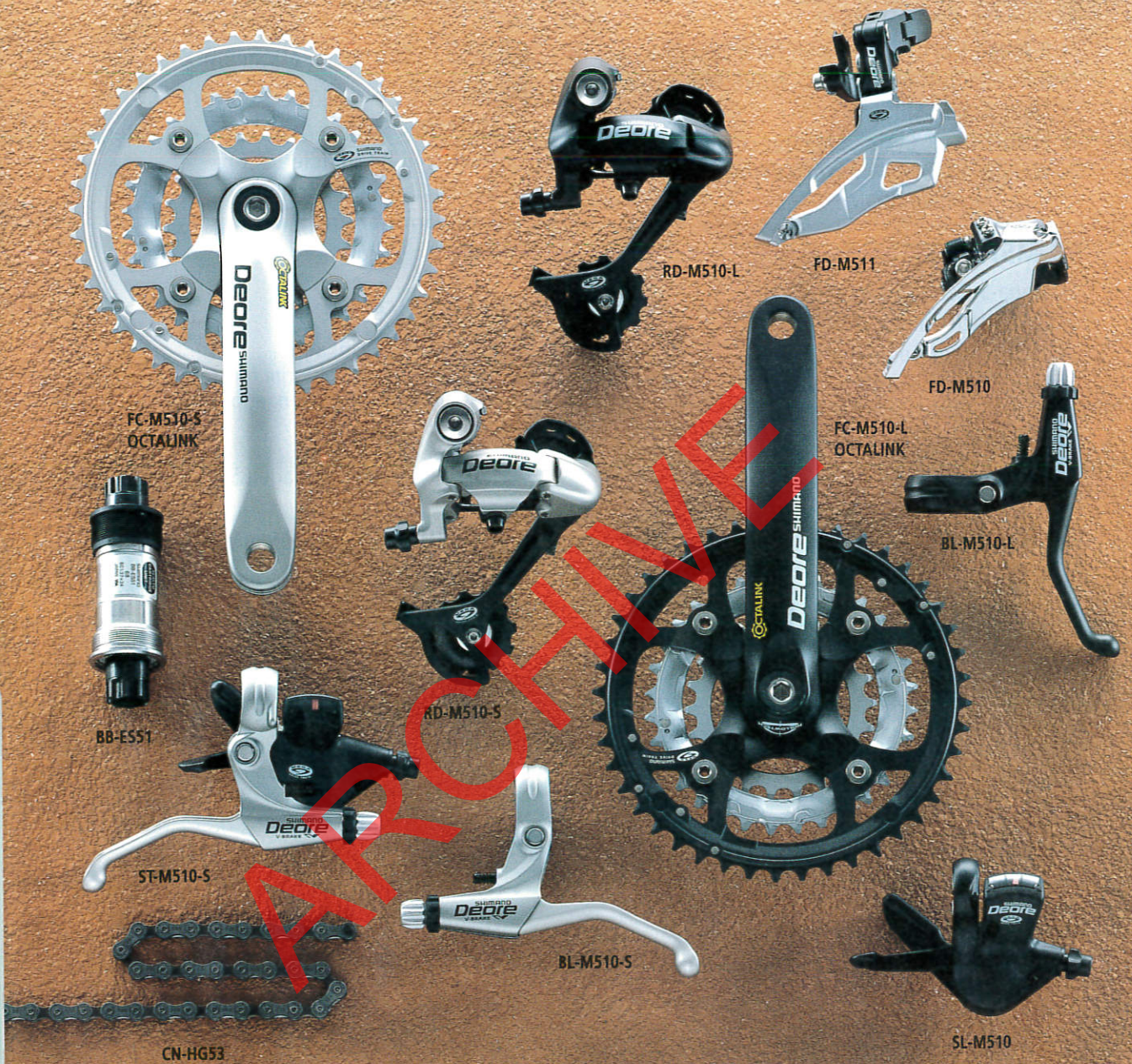
- Gearing : 11-32T, 11-34T
- Weight : 330g (11-32T)

CN-HG73 9-Speed Chain

- Zinc-Alloy Plated for corrosion resistance.
- Weight : 304g (116pins)

<p>ST-M570 RAPIDFIRE Plus shifter</p> 		<p>FD-M760 TOP SWING FD Dual Pull Multi Clamp</p> 		<p>BR-M570</p> 		<p>HB-M765 FH-M570 HB-M570</p> 		<p>CS-HG70-9 9-speed CS</p> 		<p>CN-HG73 Super narrow HG Chain</p> 	
<p style="text-align: center;">Disc brake / Hydraulic type</p>											
<p>SL-M570 RD-M570 BL-M556 Hydraulic disc BL</p>		<p>FD-M570 TOP SWING FD FD-M571 Down swing link</p>		<p>FC-M572 HOLLOWTECH crankset w/ OCTALINK BB mount 44-32-22T</p>		<p>BB-ES51 BB-ES51 Hydraulic disc brake SM-RT61 SM-BH60/61 Disc rotor Hydraulic brake hose</p>		<p>HB-M525 CS-HG70-9 FH-M525 9-speed CS 11-32T 11-34T</p>		<p>CN-HG73 Super narrow HG Chain</p>	
<p><Option></p>		<p>BL-M570</p>		<p>FD-M570-E BB-mount</p>		<p>BB-ES71-E BB-ES51 For FD-M570-E BB-ES51-K</p>		<p>HB-M571 Oversized axle</p>			

SHIMANO Deore



High-performance components for serious cycling fun

The DEORE group delivers a high level of quality and performance you would expect in an upper level but a great value system. Whether it's a friendly race in the dirt, cruising along single track, or just riding around town, Shimano DEORE's got performance to match.



Hydraulic
Disc Brake

ST-M510-S/L Mega-9 STI Lever Set

SL-M510 Mega-9 Shift Lever Set

BL-M510-S/L V-BRAKE Lever Set

- **Light Action Shifting**
- **Flight Deck compatible**
- **Optical Gear Display**
- **Weight** : 431g (ST-M510-S / L)
270g (ST-M510)
170g (BL-M510-S / L / pair)

RD-M510-S/L Rear Derailleur

- **Mega-9 compatible**
- **11-Tooth Pulleys**
11-tooth pulleys run quieter and wear longer due to alternating tooth contact between inner and outer chain plates.
- **Alloy construction**
Weight is reduced while maintaining strength and durability.
- **Low-Friction Pivot Bushings**
Two fluorine coated link pivot bushings reduce friction.
- **Max. / Min. sprocket** : 34 / 11T
- **Total capacity (Max)** : 22T
- **Double Servo Panta**
- **REAR SIS Index Shifting System**
- **Weight** : 300g

FD-M510 TOP SWING Front Derailleur

FD-M511 Down Swing Type Front Derailleur

- **Dual-Pull cable routing**
Convenient Dual-Pull feature allows derailleur to be set up for top or bottom cable routing.
- **Compatible with three frame tube sizes**
Clamp spacers allow the derailleur to be mounted to 28.6 or 31.8mm frame tubes. Without ring spacers the derailleur mounts to 34.9mm frame tubes.
- **Reinforced Chain Guide**
Special chain guide cross section offers high strength and rigidity.
- **Mega-9 Gearing compatibility**
- **Total capacity (Max)** : 22T
- **Top-Middle capacity (Min)** : 12T
- **TOP SWING Front Derailleur**
- **DUAL SIS Front and Rear Index Shifting**
- **Total capacity (Max)** : 22T
- **Weight** : 128g (ø34.9)

CN-HG73 9-Speed Chain

CN-HG53 9-Speed Chain

- **Precision construction**
Ultra-precision construction maintains strength, dependability and shifting performance.
- **Improved durability**
Pin pull-out resistance increased by 50%.
- **Weight** : 304g

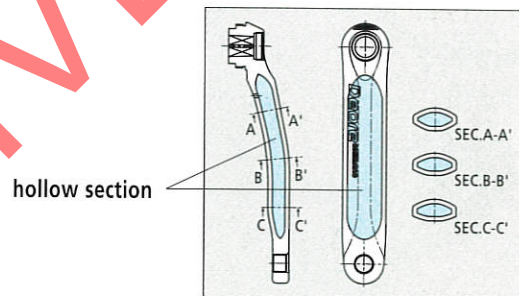
FC-M510-SO/LO

HOLLOWTECH Crankset w/ OCTALINK BB Mount

FC-M510-SK/LK

HOLLOWTECH Crankset w/ OCTALINK BB Mount

- **HOLLOWTECH Crank Arm construction**
- **Mega-9 Gearing compatible Chainrings**
- **DUAL SIS Front and Rear Index Shifting**
- **Weight** : 706g
(M510, w/ OCTALINK BB Mount)



BB-ES51 OCTALINK Bottom Bracket

BB-ES51-E

BB-ES30

BB-ES30-E

- **Oversize BB Spindle (BB-ES51/30)**
Large 22mm diameter hollow pipe billet spindle reduces weight, increases strength and rigidity.
- **OCTALINK Splined Axle Crank Arm Interface**
- **Sealed Cartridge assembly**
- **Weight** : 262g (ES51), 308g (ES30)

SHIMANO Deore



CS-HG50-9



BR-M510-L



FH-M510-S



HB-M510-L



SM-BH59



BL-M525



BR-M510-S



BR-M515-LA



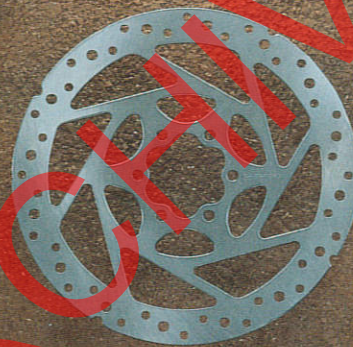
BR-M525



BR-M555



BR-M525



SM-R761



HB-M525-S



FH-M525-L



BL-M556



BR-M555



BR-M555



SM-BH62

CS-HG50-9 9-Speed Cassette Sprockets

- Wide-Range Mega-9 Gearing
- HYPERGLIDE Sprocket design
- Weight : 358g (11-32T)

BR-M510-S/L V-BRAKE

BR-M510-SC/LC V-BRAKE w/ cartridge shoe

- Efficient V-BRAKE design
Vertical cantilever arms & direct cable action V-BRAKE design provides a leverage ratio.

• Side Mount Brake Pads

Reduces pad flexing, simplifies and speeds up installation and positional adjustment.

• Long-Arm Torsion Spring

Assures a quick and positive return action.

• Spring Tension Adjusters

• SHIMANO M SYSTEM Brake Shoe (Option)

- Weight : 420g

<Hydraulic type>

BR-M555 Hydraulic Disc Brake
BL-M556 Hydraulic Disc Brake Lever
SM-RT61 Disc Brake Rotor
SM-BH62 Brake Hose

BR-M525 Hydraulic Disc Brake
BL-M525 Hydraulic Disc Brake Lever
SM-RT61 Disc Brake Rotor
SM-BH59 Brake Hose

<Mechanical type>

BR-M515-LA Mechanical Disc Brake
SM-RT61 Disc Brake Rotor

- **Opposed Piston design (BR-M555/M525)**
The disc brake caliper uses a compact opposed piston design that helps absorb rotor vibrations for smooth and powerful braking.
- **Strong stopping power with precision control**
Disc brakes deliver strong braking power that's easy to control. They reduce fade and eliminate the problem of rim sidewall damage.
- **V-BRAKE Lever compatible (BR-M515-LA)**
- **BR-M525 upgrades**
 - 160mm rotor mounts to post-type boss or to A-type international boss through an adapter.
 - Locking caps on fasteners
 - Adjustable reach levers

• Cuttable Resin Hose

- **Weight** : Front : 142g, Rear : 144g (BR-M555),
Front : 319g, Rear : 224g (BR-M525),
Front : 306g, Rear : 307g (BR-M515-LA)

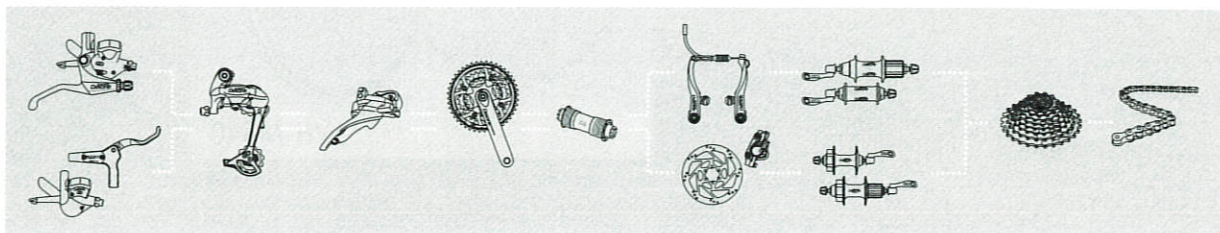
HB-M525-S/L Disc Brake Compatible Front Hub
FH-M525-S/L Disc Brake Compatible Freehub
HB-M510-S/L Front Hub
FH-M510-S/L Rear Freehub

- **Double Contact Sealing**
- **Super polished Bearing Races**
Ultra-smooth bearing race surfaces provide a precision low-friction rolling action.
- **Light alloy Quick Release**
QR lever and adjuster nut are made from light alloy.
- **Weight** : HB-M525-S/L : 245g
HB-M510-S/L : 179g
FH-M525-S/L : 449g
FH-M510-S/L : 396g
Front QR : 59g, Rear QR : 64g

ST-M510-S/L
RAPIDFIRE-Plus shifter
SL-M510
BL-M510-S/L
Silver or Black

V-BRAKE

BR-M510-S/L
BR-M510-SC/LC Cartridge shoe
HB-M510-S/L
FH-M510-S/L



SL-M510
BL-M525
Hydraulic disc BL
BL-M556
Hydraulic disc BL

RD-M510-S/L
For 9 speed

FD-M510
Dual pull
Multi Clamp
TOP SWING FD

FC-M510-SO/LO
HOLLOWTECH Crankset
OCTALINK BB Mount
44-32-22T/48-36-26T

FD-M511
Dual pull
Multi Clamp
Down swing type

BB-ES51
BB-ES30

Disc Brake / Hydraulic type

BR-M525
Hydraulic disc brake
SM-RT61
Disc rotor

SM-BH59
Hydraulic
brake hose

HB-M525-S/L
FH-M525-S/L

BR-M555
Hydraulic disc brake

SM-RT61
Disc rotor
SM-BH62
Hydraulic
brake hose

CS-HG50-9
9-speed HG
11-32T
11-34T

CN-HG73
Super narrow
HG Chain

<Option>

FC-M510-SKO
-LKO
HOLLOWTECH Crankset
OCTALINK BB Mount
for chaincase

FC-M445-S/L
Shimano logo
44-32-22T
HOLLOWTECH Crankset
OCTALINK BB Mount

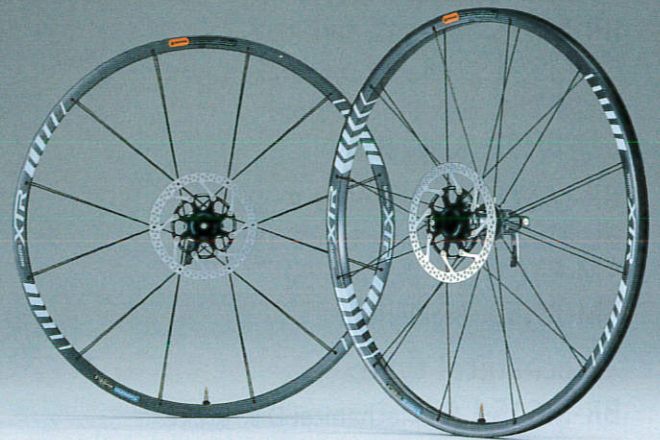
BB-ES51

Disc Brake / Mechanical type

SM-RT61
Disc rotor
BR-M515-LA
Mechanical Disc Brake

HB-M525-S/L
FH-M525-S/L

MTB Wheel Sets



The rotor is sold separately.

WH-M965



WH-M765

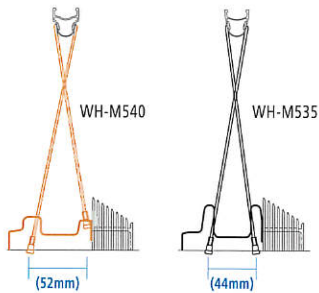


WH-M540

Systems Engineering At Its Best!

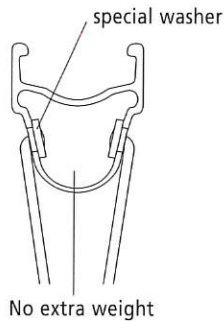
What's the big deal about the Shimano Wheel System?

The Shimano Wheel System is the first wheel that is suitable for most riding situations without compromise. They're lightweight, strong, durable and efficient wheels with an amazing smooth ride. The WH-M965 and WH-M765 wheels feature reduced rolling resistance and added traction of advanced tubeless tire technologies. The Shimano disc specific rim design, at 400 grams is notably lighter than other tubeless rims. Now, tubeless technology paired with Shimano mono-body disc brakes and the Center-Lock rotor mount system yields a wheels system that is virtually free of any weight penalty. The WH-M540 enhances the original design by increasing the lateral rigidity of the rear wheel with a new lacing pattern, at the same time reducing weight by over 100 grams than the previous WH-M535.



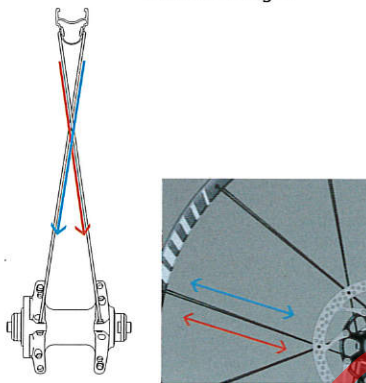
New Spoke Lacing Pattern

The major refinements to the WH-M965, WH-M765 and the WH-M540 is the new rear hub design that uses "radial crossover" lacing on the drive and 1-cross on the opposite side. This yields a wider by 8mm triangular base that increases lateral rigidity by 20%. This new design contributes to increase power transfer and lighter weight.



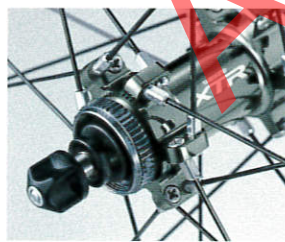
Sidewall Spoke Mounting

The head (curved end) of the spoke is anchored in the rim's sidewall. A special washer distributes spoke stresses throughout the aerodynamic rim's large cross section, so less metal is needed at the rim's inner circumference where spokes would normally mount. The result is a lightweight aerodynamic rim that's extremely strong.



Lateral Cross-Over Spoke Pattern

The lateral crossover pattern increases the rim-to-hub triangulation, which creates the same effect as increasing the width of the hub shell flanges by the width of the rim. Lateral rigidity is increased.



WH-M965 / M765:
Compatible with the Center Lock System for the hub spline.
* The rotor is sold separately.

WH-M965

Tubeless and traditional tire compatible for cross-country racing. Placing rigidity and lightweight at a premium this high performance wheel is equipped with a 400 gram rim, titanium freehub-body and aluminum front axle. 1742 grams per pair.

WH-M765

Featuring nearly all the benefits of the WH-M965 wheel, at an affordable price. Utilizing the same lightweight rim design with the wide range of tire selection to suit all riding styles and off-road conditions. 1847 grams per pair.

WH-M540

All conditions sport wheel set at a great price. New enhanced spoke pattern increases lateral rigidity. For rim brake use only.

		Weight *	Center Lock Mount	Number of Spokes	Rim Height x Width	Freehub Body
WH-M965	front	800g	○	24	20.5 x 23.3 (mm)	—
	rear	942g	○	24	20.5 x 23.3	titanium
WH-M765	front	831g	○	24	20.5 x 23.3	—
	rear	1016g	○	24	20.5 x 23.3	steel
WH-M540	front	841g	—	16	28.0 x 24.0	—
	rear	1082g	—	16	28.0 x 24.0	steel

* Weight does not include quick release. Weight for WH-765 is not final.

Non-Series Components

Non-Series Components



FC-M440-L
OCTALINK

FH-M475-L

SM-RT50 (for OEM)

SM-RT61

HB-M475-S

BB-ES30

BR-M475

BL-M420

FC-M445-S

Disc Brakes

- BR-M475** Mechanical Disc Brake
- SM-RT61** Disc Rotor (for After Market)
- SM-RT50** Disc Rotor (OEM Specification Only)

- **Strong stopping Power with Precision Control**
Disc brakes deliver strong braking power that's easy to control. They reduce fade and eliminate the problem of rim sidewall damage. The BR-M475 model is a mechanical disc brake that can be used with 1.5 or 2.5-finger V-BRAKE levers.
- **V-BRAKE Lever compatible**
Cable activated BR-M475 model can be used with 1.5 or 2.5-finger V-BRAKE levers.

Hubs

- HB-M475** Disc Brake Compatible Hub (available in silver or black)
- FH-M475** Disc Brake Compatible Freehub (available in silver or black)

- **Contact Sealing**
Rubber cup seals shut out mud, dust, dirt and water.
- **Freehub Design**
Wide bearing placement and reduced spoke offset strengthen the rear wheel.

- BL-M420** V-BRAKE Lever
- **Adjustable Lever Reach**

Cranksets

FC-M445-S/L

HOLLOWTECH Crankset w/ OCTALINK BB Mount

FC-M440-SO/LO

Crankset OCTALINK w/ BB Mount

FC-M440-S/L Crankset

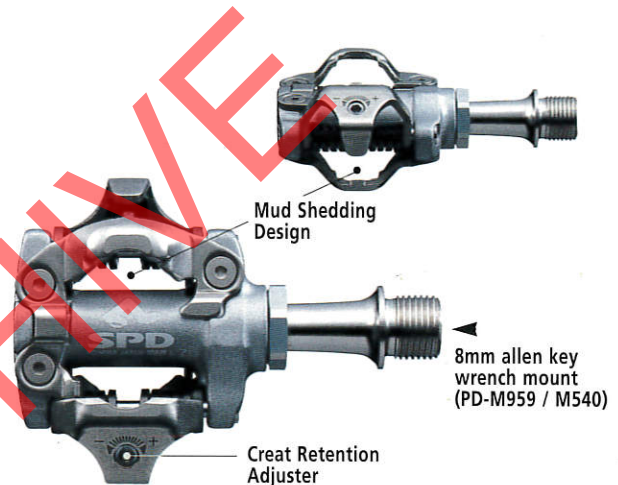
BB-ES30 Bottom Bracket

BB-UN25 Bottom Bracket

- Mega-9 DRIVE TRAIN compatible
- HOLLOWTECH Crankset design (FC-M445)
Advanced Shimano forging technology has made possible a forged hollow crank arm that increases strength and rigidity.
- OCTALINK BB Mount (FC-M445 / M440-SO / LO)
- Gearings : 44-32-22T
- Optional Chain Guard
- Chain Case compatible (FC-M445)

Off-Road Racing Pedals

- **Mud Shedding Compact Open Design**
Good mud-shedding ability is an essential element to be the winner of XC race. The mud shedding Open Design of PD-M959 and PD-M540 / M520 clear away mud horizontally as well as vertically.
- **Easy Step-in and Step-out**
The well-designed shape of fixing cleat unit allows easy entry and release with sharp-edged clicking feeling.
- **Fluorine Coated Binding Claw (PD-M959)**
The binding claw of PD-M959 is coated by PTFE fluorocarbon-resin-mixed treatment to allow easy step-in and step-out and maintain its original performance for an extended period of time. (*PTFE= polytetrafluoroethylene)
- **Lightweight Compact Design**
The stress data of every section was analyzed and practical test was conducted repeatedly, unwanted excess weight was scrapped off. While maintaining the unity of pedal and shoes for comfortable pedaling, the design was made as compact as possible to meet even the high level requirements of the riders of fast XC racing.



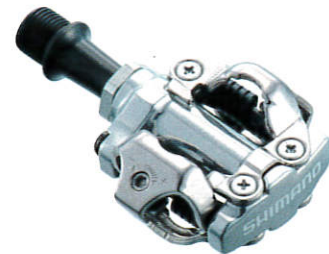
PD-M959 Off-Road Racing Pedal

- 350g (pair)



PD-M540 Off-Road Racing / Sport Pedal

- 352g (pair)



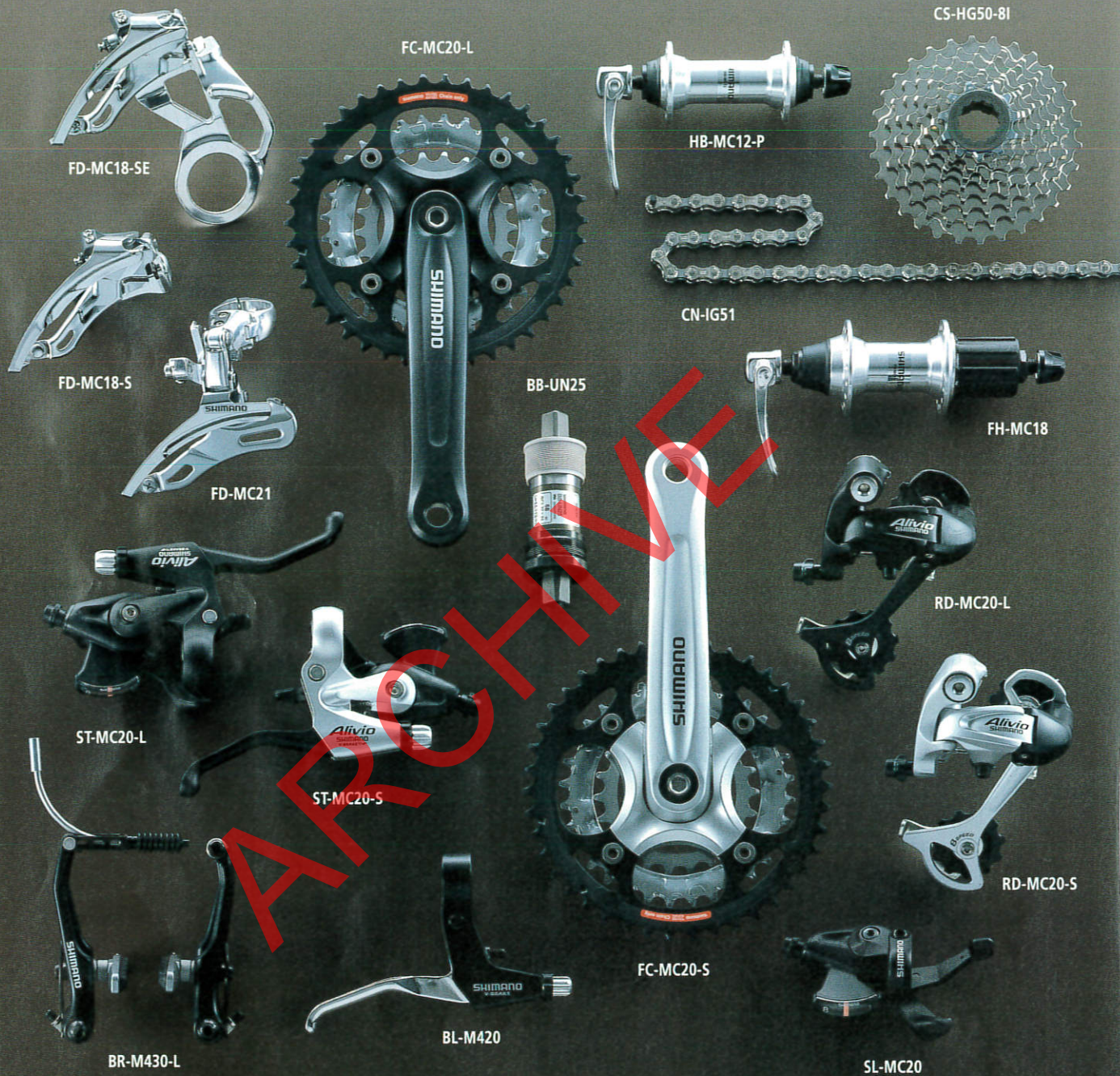
PD-M520 Off-Road Performance Pedal

- 380g (pair)
- Color variations : black and silver



* These products are intended for combination use with SM-SH51 cleat only.

Alivio SHIMANO



High-Performance Recreational MTB Components

ALIVIO has a reputation for style, value and great performance. Simple rugged design, 8-speed drivetrains, and full compliment of advanced Shimano functions add up to a high-quality recreational mountain bike group.

ST-MC20-S/L

8-Speed RAPIDFIRE-Plus Shift/Brake Lever Set

SL-MC20

- 8-Speed RAPIDFIRE shifting
- Optical Gear Display
- Adjustable Lever Reach (ST-MC20-S)
Allows adjustment of brake lever reach.

CS-HG50-8I

- **HG Sprockets**
Compatible with IG chains, HG sprockets deliver faster, quieter down-shifts and smoother up-shifts.

CN-IG51/IG31

- 8-Speed chain use with IG chainring

⚠ CAUTION

Be sure to use only the Shimano IG chain with the IG front chainwheel. The HG or UG type of chain cannot be used.

FD-MC21

FD-MC18-S

FD-MC18-SE

- **Dual Pull/Multi-Clamp Band Type (FD-MC21)**
28.6/31.8/34.9mm
- **TOP SWING Front Derailleur design**
- **Bottom Bracket Mount (FD-MC18-SE)**
- **DUAL SIS Front and Rear Index Shifting**

FC-MC20-S/L

BB-UN25

- IG-Chainrings
- Replaceable Chainrings (FC-MC20)
- Sealed Cartridge assembly
- Chainguard availability
- **DUAL SIS Front and Rear Index Shifting**

RD-MC20-S/L

Rear Derailleur (available in silver or black)

- **Advanced Light Action design**
- **11-Tooth Pulleys**
- **Low-Friction Link Pivot Bushings**
- **SIS Rear Index Shifting**

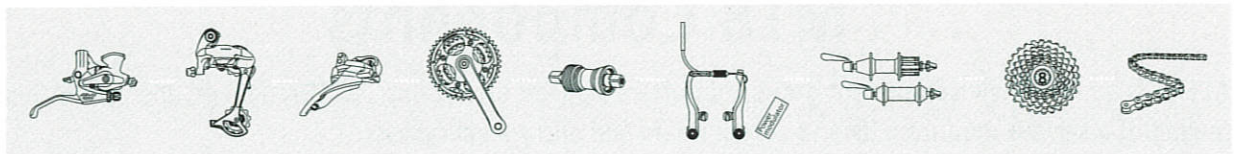
HB-MC12-P

FH-MC18

- **Contact Sealing (HB-MC12-P, FH-MC18)**
- **Light Alloy Quick Release**

BR-M430-L/S

- **Efficient V-BRAKE design**
- **Cartridge Shoe**
- **POWER MODULATOR System (SM-PM40) for V-BRAKE with 4-finger lever**
Absorbs excess lever force to modulate the V-BRAKE's stopping power and improve braking control.
- **Bushing Type Pivot**
Brake arm rides on internal bushing.



ST-MC20-S/L
RAPIDFIRE-Plus
Shift/Brake
Lever Set
SL-MC20

RD-MC20-S/L
Low gear:
30T max.

FD-MC18-S
FD-MC21
Down Swing style
Dual pull
Multi clamp

FC-MC20-S/L
42-32-22T

BB-UN25
Bottom
Bracket

BR-M430-L/S
Cartridge Shoe
SM-PM40
POWER MODULATOR
System

HB-MC12-P
FH-MC18

CS-HG50-8I
8-speed
11-30T
11-32T

CN-IG51
CN-IG31
Chain

V-BRAKE

Acera

SHIMANO



CS-HG40-8I



FH-RM40



HB-RM40



CN-IG31



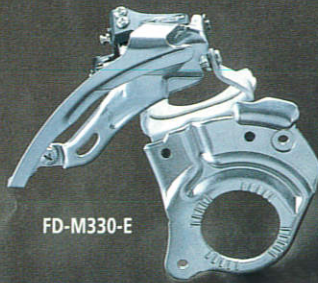
FD-M330



ST-EF35



SB-C055A



FD-M330-E



FC-M340
(w/Chain Guard)



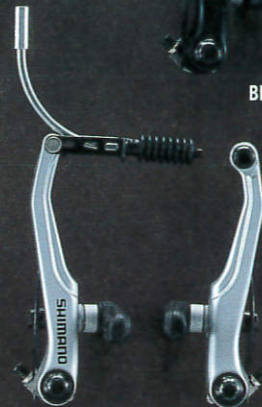
BR-M420-L



RD-M340-L



RD-M340-S



BR-M420-S



BB-UN25



SM-PM40

ACERA

8-Speed Recreational MTB Components

ACERA is an MTB-style component group that offers 8-speed drivetrains. ACERA delivers the responsive feeling of a serious mountain bike to casual riders and entry-level cyclists.



MEGARANGE

ST-EF35

8-Speed EZ FIRE Plus Low Profile Shift/Brake Lever Set (V-BRAKE)

SB-C055A

REVOSHIFT Shifter (8S, R/L) with Brake Lever

ST-EF29-8-LL/LS

8-Speed EZ FIRE Plus Shift/Brake Lever Set (V-BRAKE)

- **8-Speed EZ FIRE Shifting**
- **Optical Gear Display**
- **Easy gear changing with REVOSHIFT Shifter**
REVOSHIFT lever is available in 8-speed model for convenient indexed SIS shifting.
- **Adjustable Lever Reach**
Allow adjustment of brake lever reach. (ST-EF35, ST-EF29-8)
- **CI-DECK Plus Gear Indicator compatible**

CS-HG50-8I 8-Speed HG Cassette Sprockets

CS-HG40-8I 8-Speed HG Cassette Sprockets

CS-HG30-8I 8-Speed HG Cassette Sprockets

- **HG Sprockets**
Compatible with IG chains, HG sprockets deliver faster, quieter down-shifts and smoother up-shifts.
- **Gearing** : 11-30 / 11-32T (CS-HG50-8I)
11-34T (CS-HG40-8I)
11-30 / 11-32T (CS-30-8I)
- **Finish** : Ni-plated (CS-HG50-8I / HG40-8I)
Painted (CS-HG30-8I)

FD-M330 TOP SWING Front Derailleur

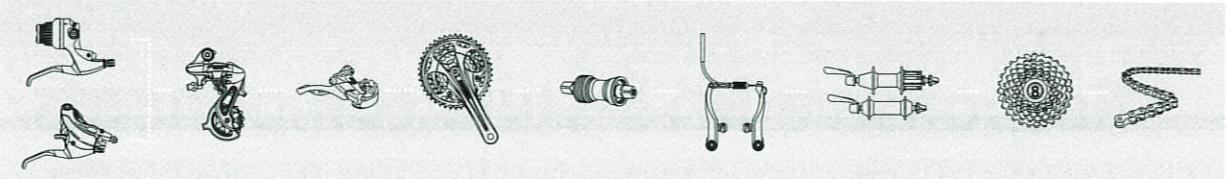
FD-M330-E

TOP SWING Front Derailleur (bottom bracket mount)

- **TOP SWING Front Derailleur design**
- **Bottom Bracket Mount (FD-M330-E)**
Derailleur features BB mounting that eliminates the need for position adjustment.

SB-C055A

REVOSHIFT Shift Lever



ST-EF35-8R

8-speed/
EZ FIRE-plus shifter /
Brake Lever Set

RD-M340-S/L

SMARTCAGE
Pulley Plate

FD-M330

TOP SWING FD

FC-M340

42-32-22T

BB-UN25

BR-M430-S/L

Cartridge Shoe

HB-RM40

FH-RM40-8

CS-HG40-8

8-speed
11-34T

CN-IG51

CN-IG31

NEW

CS-HG30-8I

8-speed
11-30T
11-32T

ST-EF35-L

<Option>

ST-EF29-8R

ST-EF29-L
CI-DECK Gear Indicator
BL-M420
ST-MC20

RD-CT95

SMARTCAGE
Pulley Plate
7/8 speed

FD-MC18-SE

FD-M330-E

FC-MC08

FC-TS52*

BB-UN25-E

BR-M420-S/L

FH-RM40-8 Rear Freehub (8-speed)

HB-RM40 Front Hub

- **Wide bearing placement and reduced spoke offset strengthen the rear wheel.**

RD-M340-S/L Rear Derailleur

- **MegaPulley**
Oversize 15-tooth tensioner and 13-tooth guide pulleys reduce noise and wear.
- **SMARTCAGE Pulley Plate**
- **Advanced Light Action design**
- **Low-Friction Link Pivot Bushings (RD-M340)**
- **REAR SIS Index Shifting System**

FC-M340 Crankset (black)

BB-UN25 Cartridge Bottom Bracket

- **Strong, organic design**
Dynamic form gives special appeal.
- **IG-Chainrings**
Pickup pins and special teeth profiles enhance chain control for precision shifting.

CAUTION

Be sure to use only the Shimano IG chain with the IG front chainwheel. The HG or UG type of chain cannot be used.

- **Sealed Cartridge assembly**
- **Chainguard availability (Option)**
- **DUAL SIS Front and Rear Index Shifting**
- **HYPERDRIVE Sprockets**

BR-M430-S/L V-BRAKE (silver or black)

BR-M420-S/L V-BRAKE (silver or black)

- **Efficient V-BRAKE design**
- **Cartridge Shoe (BR-M430)**
- **POWER MODULATOR System (SM-PM40) for V-BRAKE with 4-finger lever**
- **Bushing Type Pivot**
Brake arm rides on internal bushing.

ALTUS SHIMANO



RD-CT95-S (Silver)



FD-CT92-E



FH-RM40-8



RD-CT95-L (Black)



HB-RM40



SM-PM40



FC-CT93



CN-HG50



BR-M420-L (Black)



CS-HG30-8I



BR-M420-S (Silver)



ST-EF29-8R (Black)



BB-UN25-E



ST-EF29-8R (Silver)

Responsive MTB-style components

ALTUS is a 8 / 7-speed MTB-style component group for city-sport and youth bikes. In addition to an excellent cost performance and value recovery, ALTUS provides a feeling of "easy control" that inspires confidence, especially among novice cyclists and younger riders.



MEGARANGE

ST-EF29-8-LL/LS

8-Speed EZ FIRE Plus Shift/Brake Lever Set

ST-EF29-7-LL/LS

7-Speed EZ FIRE Plus Shift/Brake Lever Set

- **7 or 8-Speed EZ FIRE Shifting**
ALTUS offers 8/7-speed shifting from sleek low-profile EZ FIRE lever sets.
- **Optical Gear Display**
- **Easy gear changing with REVOSHIFT Shifter**
REVOSHIFT Shifter is available in 8-speed model for convenient indexed SIS shifting.
- **Adjustable Lever Reach**
Allow adjustment of brake lever reach.
- **CI-DECK Plus Gear Indicator compatible**

CS-HG50-8I 8-Speed HG Cassette Sprockets

CS-HG40-8I 8-Speed HG Cassette Sprockets

CS-HG30-8I 8-Speed HG Cassette Sprockets

- **HG Sprockets**
Compatible with IG chains, HG sprockets deliver faster, quieter down-shifts and smoother up-shifts.
- **Gearing** : 11-30 / 11-32T (CS-HG50-8I)
11-34T (CS-HG40-8I)
11-30 / 11-32T (CS-30-8I)
- **Finish** : Ni-plated (CS-HG50-8I / HG40-8I)
Painted (CS-HG30-8I)

FD-CT92-E TOP SWING Front Derailleur (bottom bracket mount)

- **TOP SWING Front Derailleur design**
- **Bottom Bracket Mount**
- **DUAL SIS Front and Rear Index Shifting**

RD-CT95-S/L Rear Derailleur

- **MegaPulley**
Oversize 15-tooth tensioner and 13-tooth guide pulleys to reduce noise and wear.
- **SMARTCAGE Pulley Plate**
- **Advanced Light Action design**
- **SIS Rear Index Shifting**

FH-RM40-8 Rear Freehub (8-speed)

HB-RM40 Front Hub

- **Freehub design**
Wide bearing placement and reduced spoke offset strengthen the rear wheel.
- **HB-C050-D (2.4w) / C050-D (3.0w)** are available.

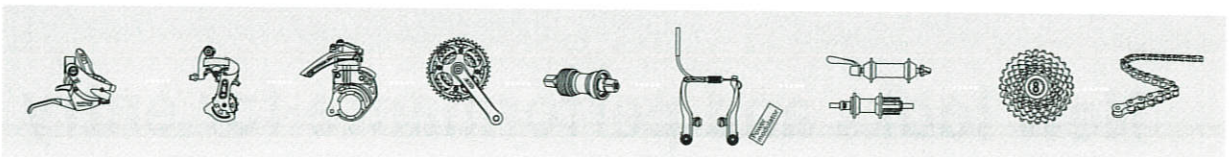
FC-CT93 Crankset (4-arm)

BB-UN25 Cartridge Bottom Bracket

- **Sealed Cartridge assembly**
- **Chainguard availability**
- **DUAL SIS Front and Rear Index Shifting**
- **HYPERDRIVE Sprockets**

BR-M420-L/S V-BRAKE (silver or black)

- **Efficient V-BRAKE design**
- **POWER MODULATOR System (SM-PM40) for V-BRAKE with 4-finger lever**
- **Bushing Type Pivot**
Brake arm rides on internal bushing, not frame pivot.



ST-EF29-8R
ST-EF29-L
EZ FIRE plus
shift/Brake
Lever Set
CI-DECK Gear
Indicator

RD-CT95
SMARTCAGE
Pulley Plate
7/8 speed

FD-CT92-E

FC-CT93
4-arm
42T-34T-24T

BB-UN25-E

BR-M420-S/L
Black or Silver
SM-PM40
POWER MODULATOR
for V-BRAKE

HB-RM40
FH-RM40-8

CS-HG50-8I
8-speed
11-30T/11-32T

CN-HG50

CS-HG40-8I
8-speed
11-34T

NEW CS-HG30-8I
8-speed
11-30T/11-32T

<Option>

ST-EF35
BL-M420
SB-C055A

FC-TS32
FC-TS31
42-34-24T

BB-TS30
BB-UN25

BR-M420-S/L
Black or Silver

BR-CT91-M
BR-CT90-EL
canti BR

FH-RM40
HB-C050-D 2.4W
HB-C051-D 3.0W
Hub Dynamo

NEW CS-HG50-I
CS-HG30-I

NEW CN-UG51

SHIMANO *Tourney* TX Series

FD-C051



FD-TY18



FD-TZ31



MF-TZ06



BB-UN25



RD-TX30



MF-TZ37



FC-TX71



MF-TZ07



RD-TX50



RD-TX70



FD-TY10



FD-TZ30



CN-HG50



MF-HG40-7



FD-C050



FC-TX70



TOURNEY

New looks and performance for entry model sport bikes: Tourney TX

Tourney TX has been developed to give entry level sport bikes a boost. It fully incorporates advanced Shimano functions including DUAL SIS Front and Rear Index Shifting and MEGARANGE 34T Super Low Gear. Tourney TX is also compatible with CI-DECK Gear Indicator, Hub Dynamo and Hub Roller Brake components. Best of all, its visual appearance has the high-level impression that is in no way inferior to the upper classes, its finished form sets the appealing standard in this category.



MEGARANGE

RD-TX70/RD-TX50/RD-TX30

Rear Derailleur

- **6/7 speed SIS Rear Index Shifting**
Consumer brand awareness
- **Slant Pantagraph**
Precise shifting, reliable shifting.
- **SMARTCAGE Pulley Plate**
- **Aluminum right link**
High grade appearance (RD-TX70).
- **Wheel Type Cable Guide Pulley**
Light Action shifting effort (RD-TX70/TX50).
- **MEGARANGE Gear compatible**
- **Mega Pulley**
Attractive, long service life and less noise.
- **B-Tension Adjusting Screw for easy adjustment**



wheel type cable guide pulley

MF-HG50

7-speed Multiple Freewheel (HG sprockets)

MF-TZ37

7-speed Multiple Freewheel (HG/UG sprockets)

- **New affordable freewheel**
- **Close ratio gears with MEGARANGE 34T Gear for easy climbing**
- **Gearing :** HG50 / 11-13-15-18-21-24-34T
TZ37 / 14-16-18-20-22-24-34T

MF-TZ07 (7-speed, HG/UG sprockets)

MF-TZ06 (6-speed, HG/UG sprockets)

- **Easy SIS shifting sprockets**
- **Gearing :** 14-28T

MTB Gearing 42-34-24T

FC-TX70 Crankset

FC-C050/FC-TY40/FC-TS32

Trekking Gearing 48-38-28T

FC-TX71 Crankset

FC-C051/FC-TY33/FC-TY33-A

- **8, 7, 6-speed compatible**
(FC-TX70/71, FC-C050/51)
- **DUAL SIS Front and Rear Index Shifting compatible**
- **New design with new SIS logo (FC-TX70/71)**
- **Smooth & accurate shifting**
Chainwheels use chain pickup ridges, special teeth profiles, and guide ramps to assure fast and precise SIS shifting.
- **Chain Case compatibility (except TY40)**

- **Crank Length variations :**
160 / 170 mm ; FC-C050/C051/TY40
170 mm ; FC-TX70/TX71/TY33/TY33-A

Index 48-38-28T compatible

FD-C051 TOP SWING Front Derailleur
Dual Pull, Multi Clamp Band

FD-TY30 Down Swing Front Derailleur

Index 42-34-24T compatible

FD-C050 TOP SWING Front Derailleur
Dual Pull, Multi Clamp Band

FD-TY10 Down Swing Front Derailleur

Friction 48-38-28T compatible

FD-C051 TOP SWING Front Derailleur
Dual Pull, Multi Clamp Band

FD-TZ31 Down Swing Front Derailleur

FD-TY18 Down Swing Front Derailleur (Rear 6S)

Friction 42-34-24T compatible

FD-C050 TOP SWING Front Derailleur
Dual Pull, Multi Clamp Band

FD-TZ30 Down Swing Front Derailleur

- **TOP SWING Front Derailleur design (FD-C050/C051)**
- **Dual Pull Cable anchor (FD-C050 / C051)**
Two cable anchor positions allow a single derailleur to be used with frames that have top or bottom pull cables.
- **Multi-Clamp System (FD-C050 / C051)**
Allows a single derailleur to be mounted to 28.6, 31.8 or 34.9 mm frame tube diameters. (Two smaller sizes use adopters.)
- **DUAL SIS Front and Rear Index Shifting (FD-C050 / C051 / TY10)**

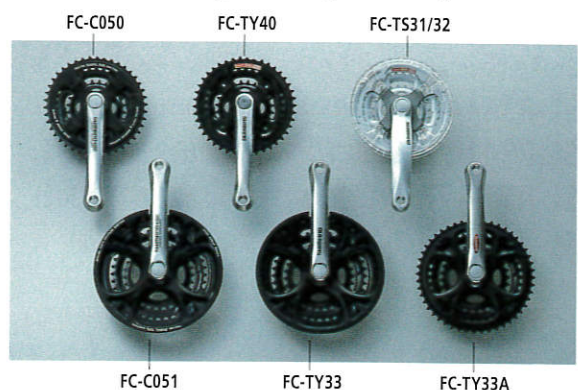
CN-HG50 HG Chain

CN-UG50 UG Chain

- **HG/UG chain for precise SIS / DUAL SIS Index Shifting**

BB-UN25 Cartridge Bottom Bracket

- **Sealed Cartridge Bearing assembly**



SHIMANO *Tourney*



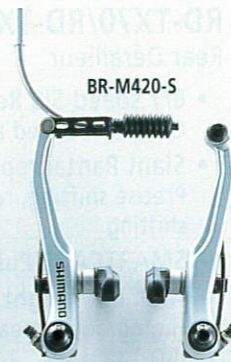
HB-C052-IM-F



HB-IM20-E



BR-M420-L



BR-M420-S



SB-C055A



SM-PM40



SL-RS31-L

BR-C050-IM-F



SL-TY22-7



SL-RS31-LA



SL-RS41A-L



SL-RS41A-7R



SL-TY22-A



SL-RS31-6R



SL-RS41-L



RH-IM10



SL-RS41-7R



BR-C050-IM-R

TOURNEY

DUAL SIS 21-speed Shift Lever

- SB-C055A** REVOSHIFT Shifter (7S, R/L) with Brake Lever
- SL-RS41A-7R/L** REVOSHIFT Shifter (7S, R/L)
- SL-RS41-7R/L** REVOSHIFT Shifter (7S, R/L)
- SL-RS31-7R/LA** REVOSHIFT Shifter (7S, R/L)
- SL-TY22-7R/LA** Thumb Shifters (7S, R/L)

DUAL SIS 18-speed Shift Lever

- SL-RS41-6R/L** REVOSHIFT Shifter (6S, R/L)
- SL-RS31-6R/LA** REVOSHIFT Shifter (6S, R/L)

Rear SIS 21-speed Shift Lever

SL-RS31-7R/L

REVOSHIFT Shifter (7S, R/L, left lever is non-SIS)

SL-TY22-7R/L

Thumb Shifters (7S, R/L, left lever is non-SIS)

Rear SIS 18/12-speed Shift Lever

SL-RS31-6/SL-RS31-L

REVOSHIFT Shifter (6S, R/L, left shifter is non-SIS)

SL-TY22

Thumb Shifters (6S, R/L, left shifter is non-SIS)

SL-TY18

Thumb Shifters (6S, R/L, left shifter is non-SIS)

- **Easy gear changing with REVOSHIFT Shifter**
REVOSHIFT Shifter is available in 5, 6 and 7-speed models for convenient SIS index shifting with just a twist of the wrist. (except TY22)
- **Optical Gear Display**
Every Tourney shifter features the Optical Gear Display for convenient gear position verification at a glance.
- **CI-DECK Gear Indicator compatible (SB-C055, SL-RS41/31)**

RH-IM10 Steel Rear Hub

- **Roller brake (BR-C050-IM-R) compatible rear hub for multi-speed.**
- **OLD : 130mm, 6 or 7 speed**

HB-C052-IM-F Aluminum Alloy Front Hub

HB-IM20-E Steel Front Hub

- **Roller brake (BR-C050-IM-F) compatible front hub for 26" wheel or larger.**
- **Braking Power Modulator**
Roller brake compatible front hub features a built-in braking power modulator that prevents excess brake pressure.
- **HB-C052-C-IM-E/HB-IM20-EC 20" - 24" wheel type available. (for child use only)**

BR-C050-IM-R Hub Roller Brake (Rear)

BR-C050-IM-F Hub Roller Brake (Front)

- **Multi purpose roller brake has the same level brake performance as BR-M515-LA.**
- **Require less maintenance at all, such as toe-in adjust, balancing L & R spring, shoe angle adjustment on V-BRAKE.**
- **All-weather performance (performs same in rain condition)**
- **Almost no noise.**

BR-M420-S/L

V-BRAKE available in silver or black

SM-PM40 V-BRAKE POWER MODULATOR Unit

- **BR-M430/M420 V-Brake and SM-PM40 POWER MODULATOR unit**

ID-C050 CI-DECK Gear Indicator

SC-C050 CI-DECK Plus Speedometer

SC-C051 CI-DECK Plus Odometer/Trip meter

SC-C052 CI-DECK Plus Clock/Stopwatch

SM-C050 SWB Clamp band for SC-C052 switch

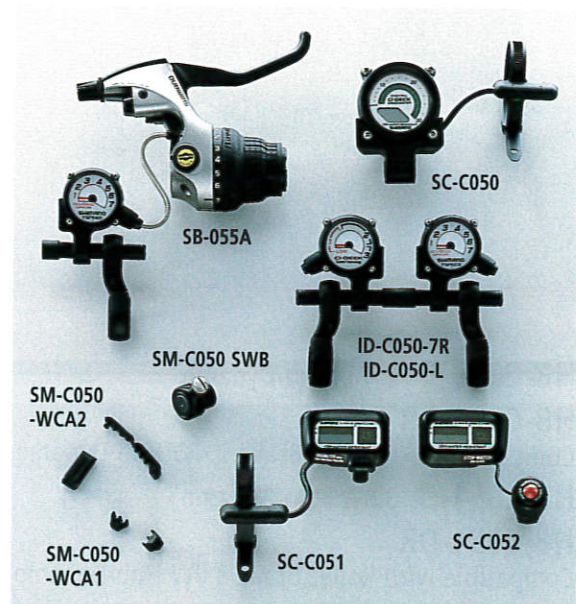
SM-C050 WCA1

Fork mounted sensor wire code adapter (for SC-C050/SC-C051)

SM-C050 WCA2

Brake cable mounted sensor wire code adapter (for SC-C050/C051)

- **Dual gear position display (ID-C050)**
- **Safety cable mounting**
Cable will automatically release from the CI-DECK Gear Indicator if excessive force is applied. Cable can be easily reinstalled.
- **CI-DECK Plus digital data options**
Cyclists can select from speedometer, odometer and/or clock/stopwatch modular units as they desire for the cycling information they want.



SHIMANO Tourney

LP-C050+SM-C050-BT



SM-C050-DC



HB-C050-D



LP-C050



HB-C050-DR

HB-C051-D



HB-C051-DR



HB-C050-D 2.4W Hub-Dynamo

HB-C050-DR

Compatible with Roller Brake 2.4W Hub-Dynamo

HB-C051-D 3.0W Hub-Dynamo

HB-C051-DR

Compatible with Roller Brake 3.0W Hub-Dynamo

- **Battery unnecessary**

Electricity is supplied from the dynamo which is assembled to the front wheel axle.

- **Less rolling resistance**

HB-C050/C051 hub dynamos rotate with significantly less drag with the lamp off and when starting again from stop.

- **Plug-In wiring**

Wiring leads feature push-in connectors that make installation fast and easy.

LP-C050 Lamp

SM-C050-BT Battery Case

SM-C050-DC Cord

• **Night Time Visibility**

Increased night time visibility with halogen(EU) for large lamp.

• **Dual power versatility**

Lamp system can be powered by either dynamo or battery.

• **Eye Catch**

Large lamps feature great eye catch.

• **Handlebar Mount/Ball Joint Mechanism**

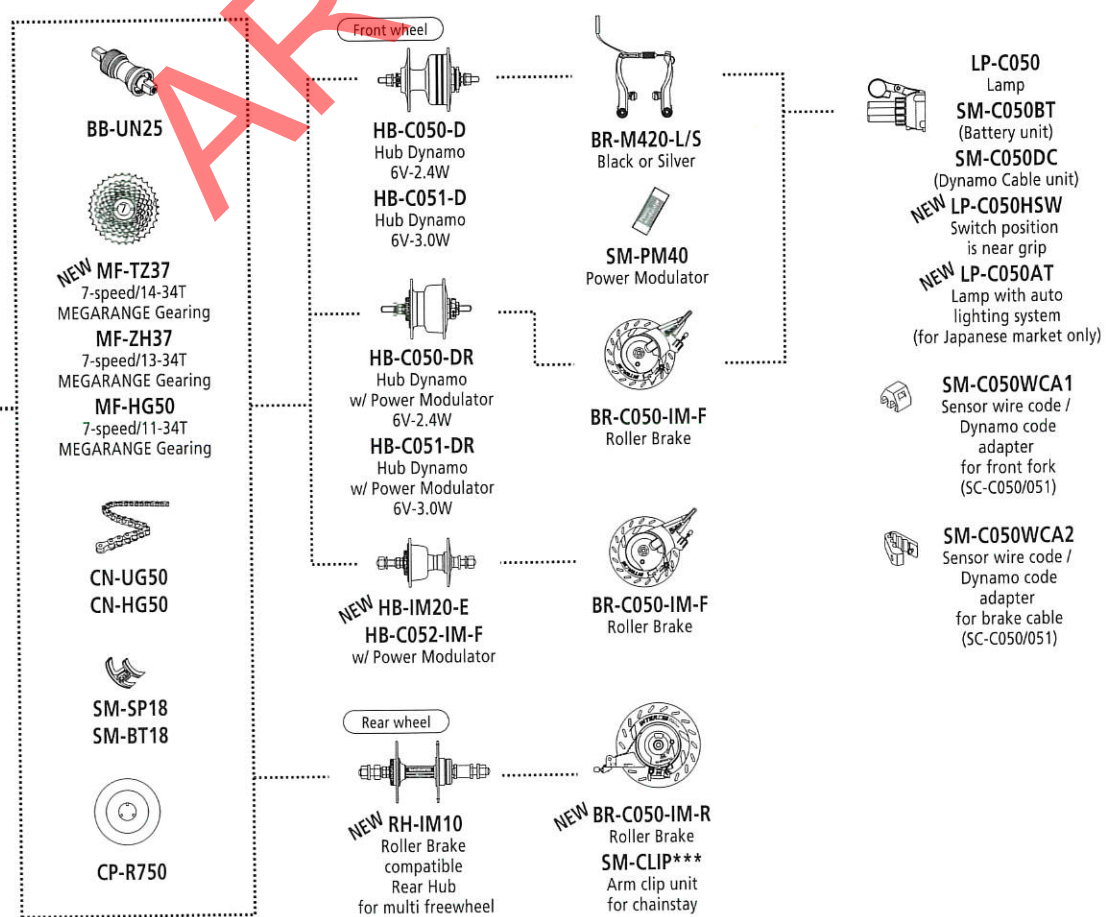
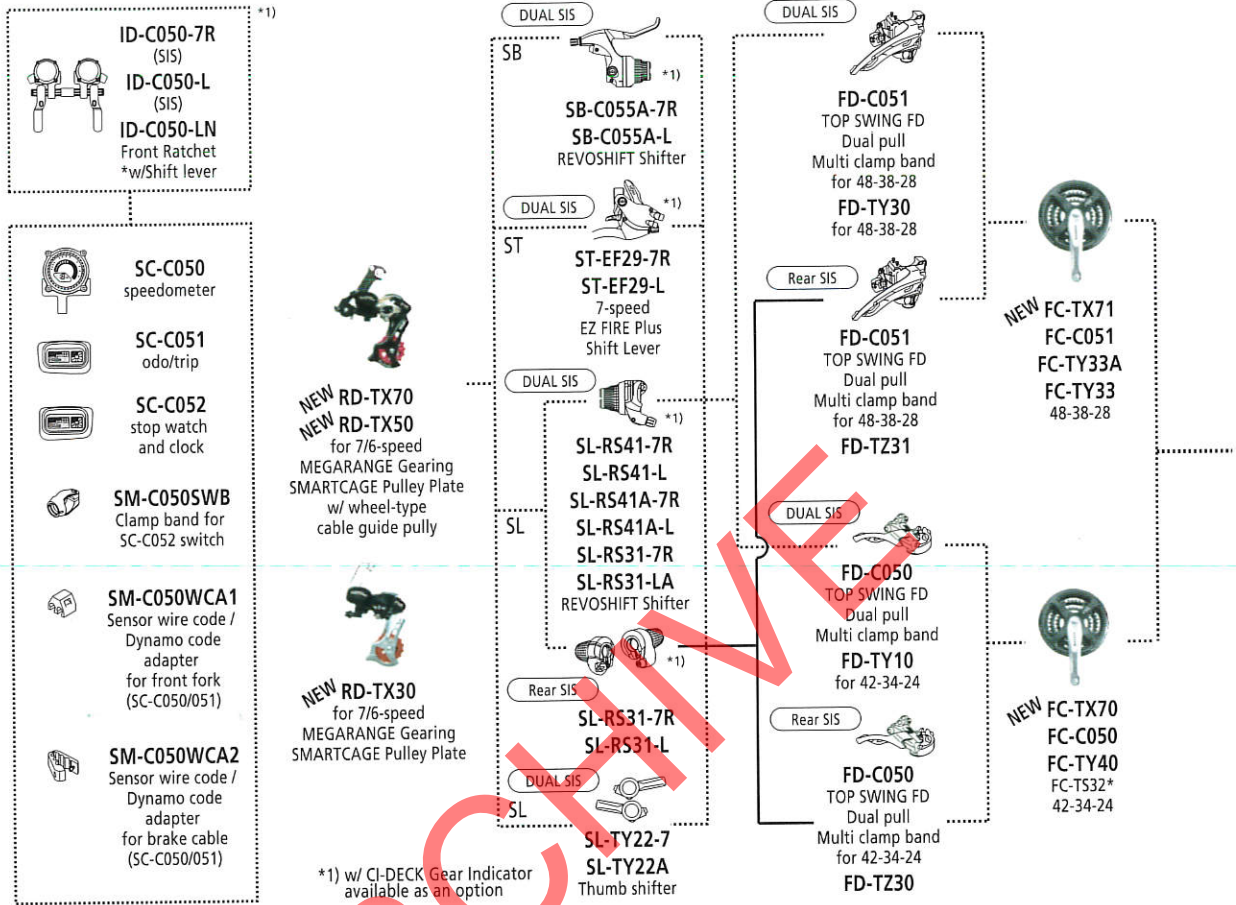
• **Variation : Auto sensor**

Hand switch version will also be available soon.

TOURNEY TX Specifications

Gearing	Rear Derailleur	Front Derailleur	Shift Lever
TOURNEY TX DUAL SIS Front and Rear Index Shifting 3x7 speed	RD-TX70 <ul style="list-style-type: none"> • 7/6-speed SIS Index Shifting • MAX. Front Difference : 20T • Total Capacity : 43T • MAX. Rear Sprocket : 28-34T • Min. Rear Sprocket : 11T • Aluminum Right Link • Wheel-Type Cable Guide 	DUAL SIS Front and Rear Index Shifting 48-38-28T FD-C051 TOP SWING FD Dual Pull, Multi Clamp Band FD-TY30 Down Swing FD <ul style="list-style-type: none"> • 7/6-speed • Top Gearing : 48T • Total Capacity : 20T • Top-Middle Min. Difference : 10T 	DUAL SIS Front and Rear Index Shifting 7-speed SB-C055A-7R/L REVOSHIFT Shifter ST-EF29-7R/L EZ FIRE Plus Shift Lever SL-RS41-7R/L REVOSHIFT Shifter SL-RS41A-7R/L REVOSHIFT Shifter SL-RS31-7R/LA REVOSHIFT Shifter SL-TY22-7R/LA Thumb Shifter
TOURNEY TX DUAL SIS Front and Rear Index Shifting 3x6 speed	RD-TX50 <ul style="list-style-type: none"> • 7/6-speed SIS Index Shifting • MAX. Front Difference : 20T • Total Capacity : 43T • MAX. Rear Sprocket : 28-34T • Min. Rear Sprocket : 11T • Wheel-Type Cable Guide 	DUAL SIS Front and Rear Index Shifting 42-34-24T FD-C050 TOP SWING FD Dual Pull, Multi Clamp Band FD-TY10 Down Swing FD <ul style="list-style-type: none"> • 7/6-speed • Top Gearing : 42T • Total Capacity : 18T • Top-Middle Min. Difference : 8T 	DUAL SIS Front and Rear Index Shifting 6-speed SL-RS41-6R/L REVOSHIFT Shifter SL-RS31-6R/LA REVOSHIFT Shifter
TOURNEY TX SIS Rear Index Shifting 3x7 speed	RD-TX30 <ul style="list-style-type: none"> • 7/6-speed SIS Index Shifting • MAX. Front Difference : 20T • Total Capacity : 43T • MAX. Rear Sprocket : 28-34T • Min. Rear Sprocket : 11T 	SIS Rear Index Shifting 48-38-28T FD-C051 TOP SWING FD Dual Pull, Multi Clamp Band FD-TZ31 Down Swing FD <ul style="list-style-type: none"> • 7/6-speed • Top Gearing : 48T • Total Capacity : 20T • Top-Middle Min. Difference : 10T FD-TY18 Down Swing FD <ul style="list-style-type: none"> • 6-speed • Total Capacity : 22T 	SIS Rear Index Shifting 7-speed SL-RS31-7R/L REVOSHIFT Shifter SL-TY22-7R/L Thumb Shifter
TOURNEY TX SIS Rear Index Shifting 3x6 speed		SIS Rear Index Shifting 42-34-24T FD-C050 TOP SWING FD Dual Pull, Multi Clamp Band FD-TZ30 Down Swing FD <ul style="list-style-type: none"> • 7/6-speed • Top Gearing : 42T • Total Capacity : 18T • Top-Middle Min. Difference : 8T 	SIS Rear Index Shifting 6-speed SL-RS31-6R/L REVOSHIFT Shifter SL-TY22 Thumb Shifter SL-TY18 Thumb Shifter SB-C055A-6R/LN REVOSHIFT Shifter

TOURNEY TX 3x7-Speed MEGARANGE Combination Chart



TOURNEY

Shimano Road & Sport Components

Proven in your neighbourhood and on the world's great road courses

We apply extensive ergonomic research to the design of our road components with the purpose of reducing the stresses that the bicycle's control functions impose on the rider. For example, our STI Dual Control Levers let you shift gears quickly and precisely without removing your hands from the bars. Our Dual-Pivot caliper brakes are more powerful, responsive and easier to control than conventional types. And then there's our HOLLOWTECH crank technology that actually increases strength and stiffness while reducing weight.

Drawing from twenty years of legendary DURA-ACE systems engineering, the 7800 series has been thoroughly revamped to become the pro-racer's dream come true: A lighter, more precise and responsive system that is also more rigid, stronger, and powerful. NEW DURA-ACE presents an unprecedented array of racing advantages. Astonishing weight reduction balanced by remarkable new strength, rigidity and durability. Finally, the ergonomic innovations in Dual Control shifting technology culminates in the smoothest, most precise shifting ever, a total integration of bike, mind and body.

Additional new components include an efficient and lightweight Sports Hub Dynamo, cantilever brake compatible with road STI levers and a high-grade 8-speed STI lever.

DURA-ACE 7800 **DURA-ACE 7700 Triple** 114, 118

SHIMANO ULTEGRA **SHIMANO 105** 120, 122

SHIMANO TIAGRA **SHIMANO SORA** 128, 130

SHIMANO 2200 **SHIMANO A050** 132

Flat Handlebar Components **Sport Hub Dynamo** 134, 135

Capreo SHIMANO 136

ROAD

Components

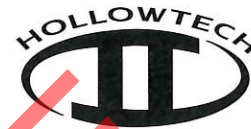
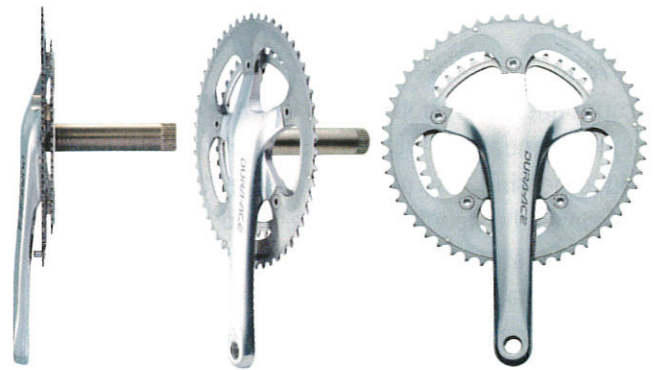
Technology

ROAD
Components

ARCHIVE

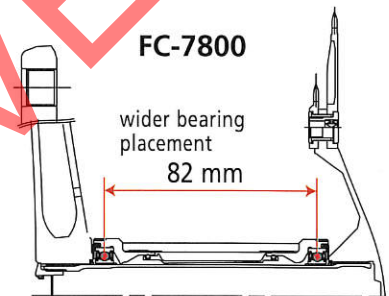
HOLLOWTECH II Integrated Crankset and Bottom Bracket FC-7800

Another technical import from our proven MTB technology, the DURA-ACE HOLLOWTECH II crank and bottom bracket combines race-proven hollow forging technology with the integrated crankset and bottom bracket. They're one unit now, not two. Number of parts are reduced. Weight is reduced. Rigidity and power transfer are radically increased. A combined FC/BB weight reduction of 30grams (compared to FC-7701) has been achieved. In addition, HOLLOWTECH II allows the bottom bracket bearings to be spaced wider apart (outboard bearings) and the axle and bearings themselves to be larger. The net result is a more effective load distribution, increased rigidity and stability, as well as longer service life. When combined with the RD-7800, FD-7800 and the new CN-7800 10-speed chain, DURA-ACE HOLLOWTECH II enables as close to a 100% transfer of power as exists. Plus, there's the benefit of easier installation, adjustment and maintenance.



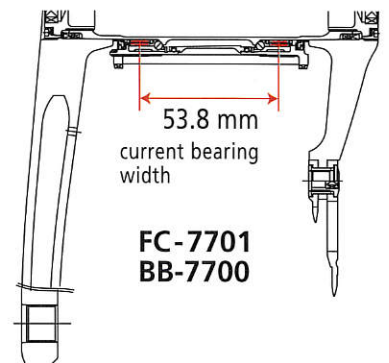
FC-7800

wider bearing placement
82 mm



53.8 mm
current bearing width

**FC-7701
BB-7700**



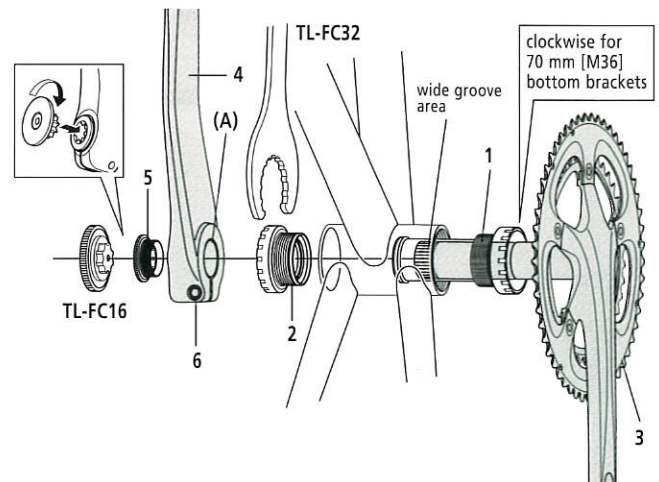
Features	Benefits
Lighter & more rigid crank	Better power transfer, acceleration and speed
Integrated Crank & Bottom bracket	Fewer parts. Lighter. Better power transfer & speed
Outboard bearing	Better weight distribution. More stability.
Oversized axle and bearings	Rigidity. And power transfer
Same Q-factor as FC-7701	Maintains same position and fit

Installation of the front chainwheel

Follow the procedure in the figure.

- 1, 2 Use the special tool TL-FC32 to install the right cup (counterclockwise thread) and the left cup (clockwise thread).
Tightening torque: 35 - 50 N·m [305 - 435 in. lbs.]
- 3 Insert the right crank unit.
- 4 Set section A of the left crank into the axle of the right crank unit where the groove is wide.
- 5 Use the TL-FC16 to tighten the cap.
Tightening torque: 0.4 - 0.7 N·m [4 - 6 in. lbs.]
- 6 Tighten the bolt of the left crank.

Note : Each of the bolts should be evenly and equally tightened to 10 - 15 N·m [88 - 132 in. lbs.].



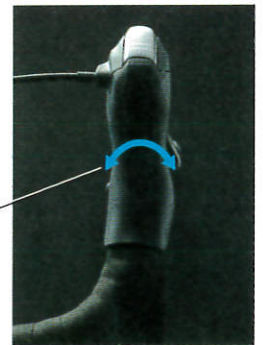
STI Dual Control Lever

ST-7800

Ergonomic innovation is probably more critical to the higher standard of DURA-ACE performance than the added gearing. The narrower cradle-style perch welcomes the new high-on-the-hood racing style, and accommodates all sizes of hands and grip. The new shift internals borrow the robustness from our MTB technology and are so smooth and effortless that one finger shifts front and rear are not uncommon. "It's so easy I just rest high on the lever and shift with my finger" is a comment that echoed throughout the pro circuit. Indeed, shifting NEW DURA-ACE is the ultimate act of Shimano Total Integration, and simply has to be experienced to be understood.



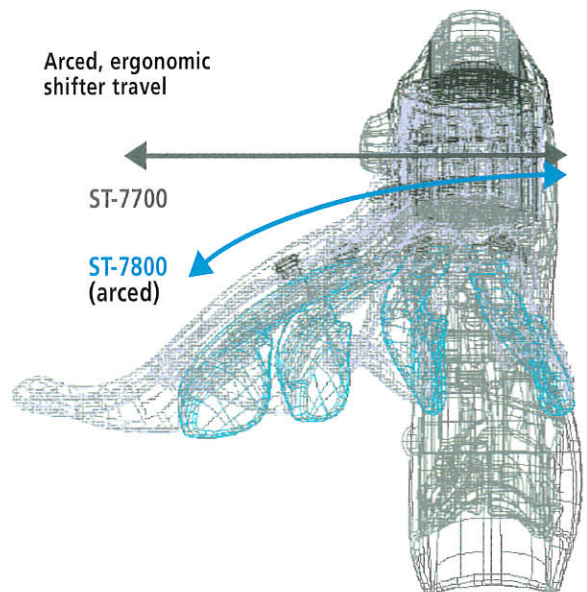
Ergonomic Shape



5mm smaller circumference

Features	Benefits
Cradle-style perch (ST-7800)	Better ergonomics. Easier, faster, more efficient shifting
Arced, ergonomic shift travel (ST-7800)	Easier shifting conserves energy. Quicker more efficient shifts.
Robust internal mechanism (ST-7800)	Smoother, more precise and powerful shifting
Modified pivot (ST-7800)	Better shift lever access
5 mm smaller grip circumference (ST-7800)	Fits all hands
FLIGHT DECK cycle computer compatible	Integrated operation buttons and sensors makes it an easy to use cycle computer
Ergonomic design (ST-R600)	Adjustable reach for riders with small hands

ROAD Components



Arced, ergonomic shifter travel

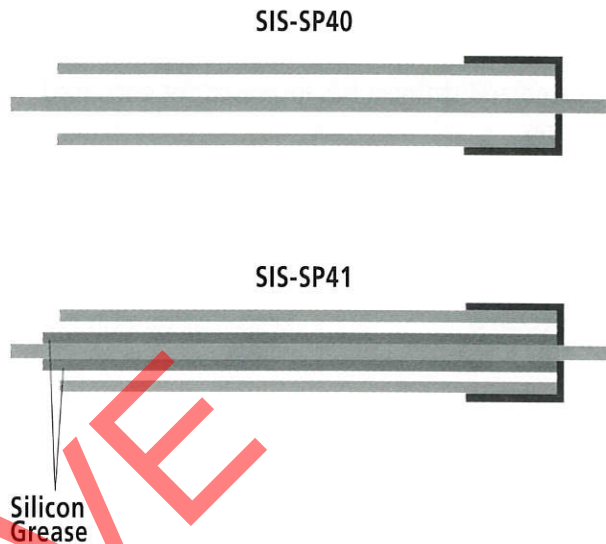
ST-7700

ST-7800 (arc'd)

SIS-SP41

Special silicone-base grease is injected into the shifting outer casing to significantly decrease cable resistance. Combined with the new wide link derailleur designs (RD-7800, RD-M960 and RD-M760) adds key advantages: crisp, instantaneous shifts that are 10% more efficient from lever to rear derailleur.

Features	Benefits
Clean set-up	Not necessary to apply grease before inserting cable into housing.
Silicon-base grease	10% reduction in cable friction. Makes a great contribution in achieving light shifting action of Dual Control shifting systems.

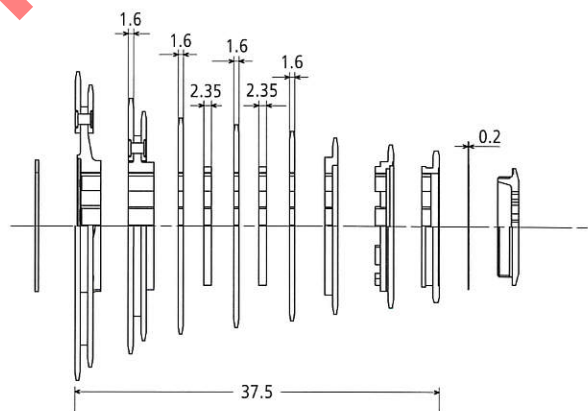


CS-7800 10-speed HG Cassette Sprocket (New DURA-ACE)

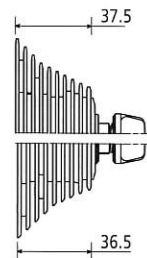
The new CS-7800 Sprocket is compatible with the 9-speed freehub because it is designed to have the same spacing. A superior surface treatment has been applied to the titanium sprockets which increases durability by approximately 30%. The sprocket width has been slightly reduced, to achieve chain compatibility and only increases the overall weight of the cassette sprocket by 17 grams more compared to the 9-speed CS-7700 sprocket.

Features	Benefits
Titanium sprockets	30% increase in wear resistance and lighter weight
Same spacing as 9-speed	Compatibility with 9-speed freehub systems

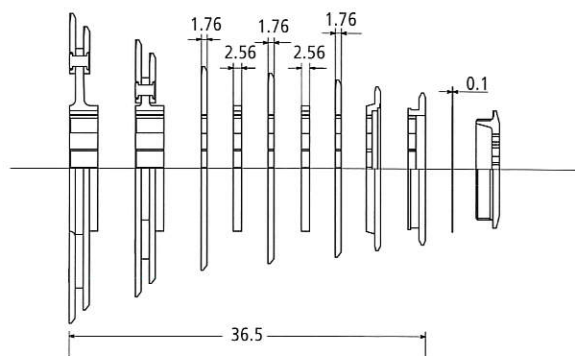
Note : Use with 10-speed super narrow chain.



10-speed
CS-7800 (11-23T)



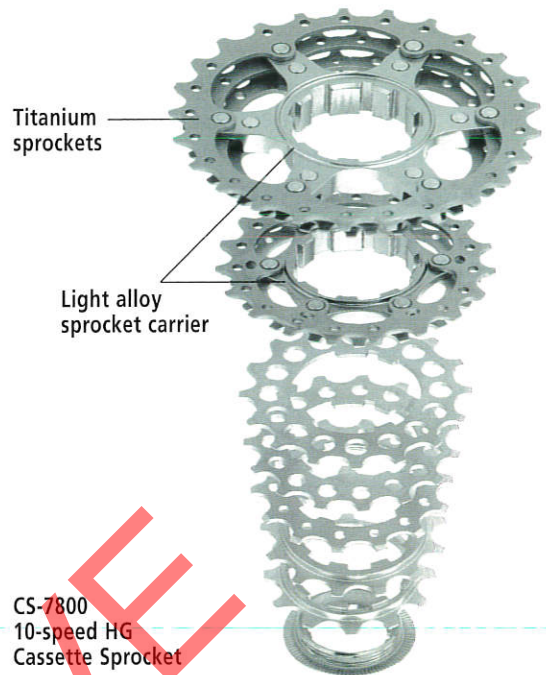
CS-7700 (11-23T)
9-speed



Light Alloy Sprocket Carrier (DURA-ACE, ULTEGRA)

Sprockets mount to the freewheel body through a light alloy carrier that supports the sprockets close to their perimeter. Sprocket weight is significantly reduced and stiffness has increased for enhanced shifting.

Features	Benefits
Sprockets mount to freehub body through a light alloy sprocket carrier.	Sprockets are supported at their outer circumference to reduce sprocket weight while increasing rigidity.



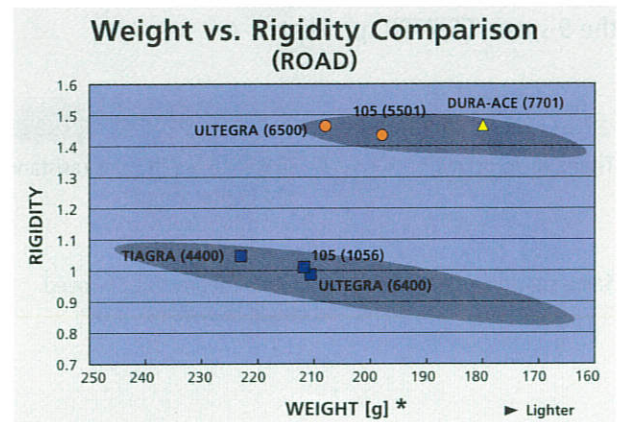
HOLLOWTECH Cranksets & OCTALINK BB Mount (ULTEGRA, 105)

A lightweight crankset not only reduces the bike's weight, but decreases rotating mass to aid in acceleration. The challenge is to reduce the weight of the crank without reducing its strength and rigidity. Shimano's advanced forging technology has solved the problem by the HOLLOWTECH crank. Just like high quality frame tubing, a hollow crank arm can provide amazing strength and rigidity at very light weight.

The bottom bracket plays an important role in regard to crank rigidity. HOLLOWTECH crank arms don't mount to the bottom bracket through the conventional square taper, but use a larger 8-spline interface that connects to a hollow bottom bracket spindle. It's called "OCTALINK". The result is greater strength and rigidity for the entire crankset/bottom bracket assembly.



Features	Benefits
Hollow forged crank arms - HOLLOWTECH.	Reduce crank weight without decreasing strength and rigidity.
OCTALINK splined arm and bottom bracket connection	More rigid interface between crank arm and bottom bracket reduces flex. Rider stability is enhanced and pedaling efficiency is increased.



- * Left hand crankarm
- For comparative purposes, a rigidity reference value of "1" is used for the 105 (FC-1056) solid crankarm.
- The table above shows results from tests conducted by Shimano.
- All values shown have been averaged.

The graph shows a comparison of strength and rigidity between HOLLOWTECH and conventional cranks. The upper oval shows that the HOLLOWTECH cranks are lighter and up to 40% more rigid than solid cranks.

Cup and Cone Bearing Hubs

As the figure shows, the Cup & Cone type is durable to the force from every direction, whereas the industrial type bearing is weak to the power from other than lengthwise direction and that is the reason we adopted it.

The Cup & Cone type also has an advantage of easy maintenance in the unlikely case of unlikely trouble. Cup & Cone type bearings are adopted for all Shimano hubs.

Features	Benefits
Cup and cone bearing mechanism	High durability. Easy maintenance. Simple adjustment.

Direction of load distribution

The diagram shows two cross-sections of bearings. On the left, labeled 'Industrial bearing', a blue arrow points to the right, indicating the 'Direction of load'. A red arrow points to the left, indicating the 'Direction of load distribution'. The load is concentrated on the right side of the bearing. On the right, labeled 'cup and cone bearing', a blue arrow points to the right, indicating the 'Direction of load'. A red arrow points to the left, indicating the 'Direction of load distribution'. The load is distributed evenly around the hub.

9-Speed HG Cassette Sprockets (DURA-ACE, ULTEGRA, 105, TIAGRA)

9-speed HG sprockets incorporate special shift ramps and tooth profiles to enhance control of narrower 9-speed chains. 9-speed HG sprocket cluster is the same overall width as 8-speed type.

Features	Benefits
HG sprockets incorporate shift ramps and specially contoured tooth profiles.	Improve chain control, especially during downshifts, to provide a fast and precise shifting action without slipping or engagement shock.

Super SLR

SLR stands for Shimano Linear Response. The Super SLR design makes use of friction-reducing mechanism in the caliper, lever and cable that improve response. SLR is the essential factor in the Shimano Dual-Pivot calipers that deliver more braking power than conventional side-pulls.

Features	Benefits
Dual-Pivot caliper	Though lightweight and compact, braking power is strong and controllability is high.
Low friction mechanism	Linear Response is literally realized reducing friction of caliper / lever / cable.

Shimano HYPERDRIVE

HG chain, SGX chainrings and front derailleur are designed as an integrated system to maximize shifting performance. DURA-ACE, ULTEGRA, 105, TIAGRA and SORA offer smooth-shifting triple cranksets born from Shimano MTB crank technology.

Features	Benefits
Integrated design of SGX chainrings, chain and front derailleur.	Components work together to improve chain control to provide precise and reliable front derailleur shifting that's especially beneficial in severe off-road riding conditions.

Labyrinth & Contact Sealing

The labyrinth structure and the contact seal prevent the penetration of mud, dust, dirt and water to protect the mechanisms inside the hub such as the bearing. Easy maintenance and long service life are achieved to keep the original performance over an extended time period.

Features	Benefits
Easy maintenance & Long service life	Labyrinth and low-friction contact seals effectively shut out mud, dust, dirt and water without affecting rotational smoothness.

DURA-ACE



DURA-ACE

Performance without compromise

Three key words have emerged as the theme for the total new DURA-ACE system: Speed, Smooth and Strength. Speed and Smooth result in effortless shifting, improved braking operation, enhanced ergonomics and updated attractive feeling and design. Strength is focused on the critical need for lightweight without sacrificing rigidity, durability or precision. "100% Power Transmission" is the goal pursued by the fusion of those three concepts.

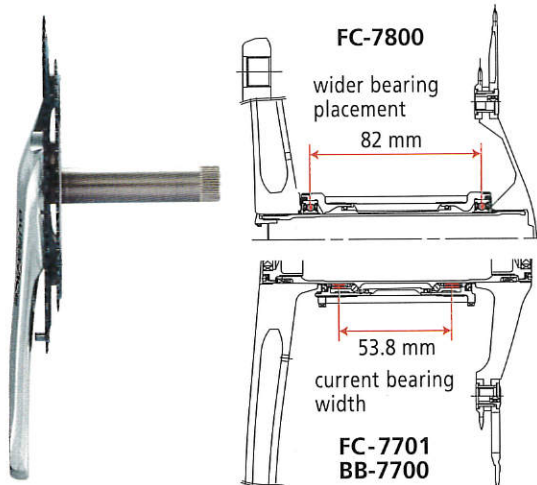


10-SPEED
DRIVE TRAIN

FC-7800

Crankset with Integrated Bottom Bracket
Super power transmission

- **HOLLOWTECH II crankset**
Optimum balance of lightweight and rigidity.



- **Useful Q-factor**
Q-factor remains same as FC-7701/BB-7700.
- **More smoother rolling**
Minimal bearing interface for smoother rolling.
- **Gearing** : 52-39T, 53-39T, 52-42T, 50-39T
- **Triathlon spec** : 54-42T, 56-44T, 55-42T
- **Crank Arm Length variations** :
165 mm, 167.5 mm, 170 mm, 172.5 mm,
175 mm, 177.5 mm, 180 mm
- **Weight** : 740g (53-39T, 170 mm)
Total weight including BB

FD-7800 Front Derailleur

Improved shifting under load

- **High rigidity**
New angle and reinforcement of pivot point and wide link for high rigidity and precise shifting.
- **New Pivot locations**
Pivot location at cage moved to point of greatest force to reduce cage deflection.
- **Narrower Chain Cage**
Narrower chain cage to accommodate new chain.
- **Capacity** : 15T
- **Weight** : 74g (Brazed-on type)

RD-7800 Rear Derailleur

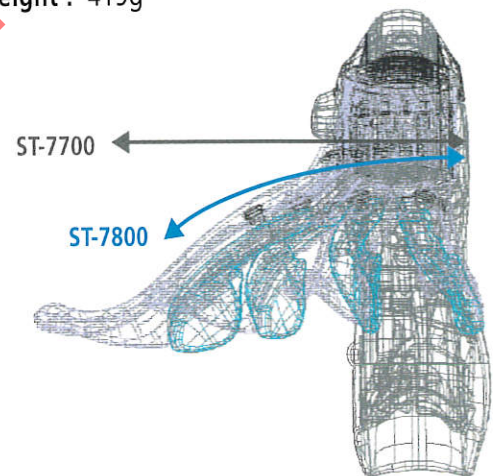
Quick and accurate

- **Wide Link design**
New outer link design increases rigidity.
- **SIS-SP41 cable housing**
with silicon grease reduces cable friction by 10%.
- **9 & 10-speed compatible**
- **Max. Front Difference** : 14T
- **Total Capacity** : 29T
- **Weight** : 180g

ST-7800 STI Dual Control Lever

Refined functions that enhance the rider-bicycle interface

- **Newly designed mechanism**
- **Refined lever hood for improved ergonomics**
- **Shift stroke movement ergonomically improved**
- **Effortless Shifting**
Shift effort reduced on release lever.
- **Short Stroke Shifting**
Inward shift stroke distance reduced by 10mm.
- **Weight** : 419g

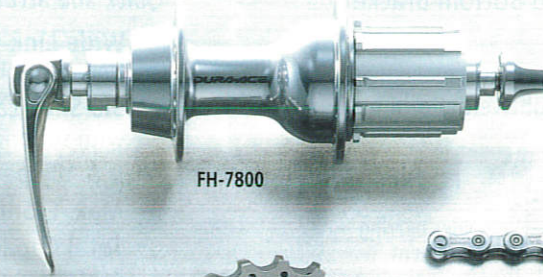


SL-7800 Shift Lever for down tube

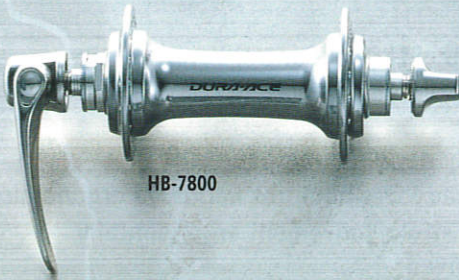
SL-BS78 Shift Lever for bar end

- **10-speed compatible**

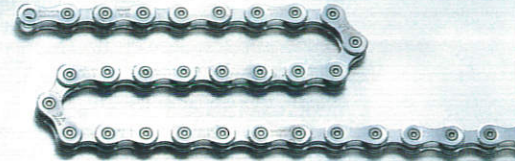
DURA-ACE



FH-7800



HB-7800



CN-7800



CS-7800



PD-7800



BR-7800



DURA-ACE

CS-7800 Cassette Sprocket

- Titanium sprockets increased wear resistance 30% by surface treatment.
- 9-speed freehub compatible
- Use with Super Narrow Chain for 10-speed
- Combinations : 11-12-13-14-15-16-17-18-19-21T
11-12-13-14-15-16-17-19-21-23T
12-13-14-15-16-17-18-19-20-21T
12-13-14-15-16-17-18-19-21-23T
12-13-14-15-16-17-19-21-23-25T
12-13-14-15-16-17-19-21-24-27T

Underlined large sprockets in this chart are made from titanium.

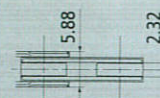
- Weight : 173g (11-23T)

CN-7800 Chain

- Super Narrow for 10-speed

CN-7800 for 10-speed

CN-7701 for 9-speed



* maintains durability and strength by utilizing same roller dimensions as 9-speed chain

- 10-speed compatible only
- New chain connecting tool (TL-CN23/CN32) is required for CN-7800.
- Weight : 280g

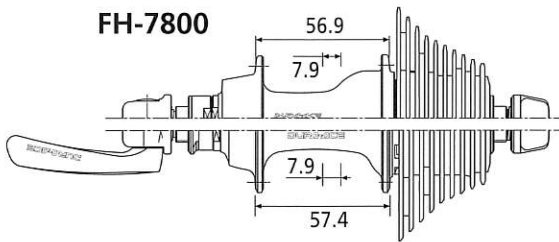
BR-7800 Dual Pivot Caliper Brake
Firm and instantaneous response

- 100% improved brake pad durability
- Convex washer adjustable brake pad
- 25% increased rigidity: front brake focuses braking power where most needed
- Weight : 314g

FH-7800 Rear Freehub

HB-7800 Front Hub

- **User-friendly Dish Distance**
 Dish distance remains same as FH-7700 9-speed freehub.



FH-7700

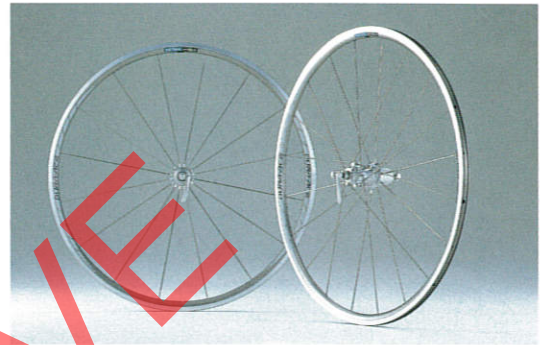
- **Super lightweight**
 Alloy Freehub body and axles for super lightweight.
- 10-speed compatibility only
- Front hub radial lacing compatible
- **Smooth rolling**
 Ball races are ground with super polished process for high precision, durability and super smooth rolling.
- **Double Contact Sealing**
 Shuts out water, mud and dirt from bearings to extend service life and maintain smooth operation in all environments.
- **Regular Hole** : 24/28/32/36H (FH-7800),
 24/28/32/36H (HB-7800)
Aero Spoke Hole : 24/28H (FH-7800),
 18H (HB-7800)

- 10-speed compatible only
- Weight : 328g (FH-7800), 188g (HB-7800)
 64g (Rear QR), 59g (Front QR)

WH-7800 Wheel System

Redefined commitment to meet pro road race criteria

- 1579 grams per pair (w/o Quick Release)
- Designed for 10-speed specification
- Front : 16 spokes
 Rear : 20 spokes



* See page 127 for more information

SC-6502 Cycle Computer

SM-SC70 Bracket / Sensor Kit

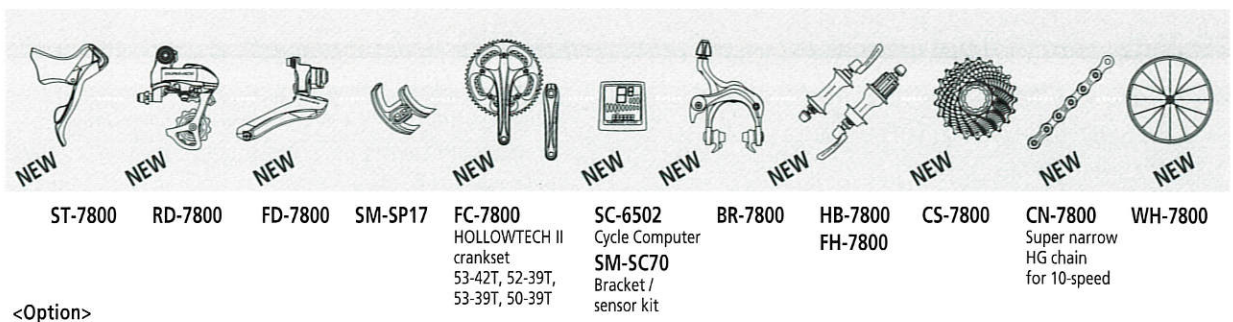
- 10-speed compatible



PD-7800 SPD-SL Pedal

Stable and efficient pedaling

- Low profile and stable platform design
- Pedals : 281g / Cleats : 70g



<Option>

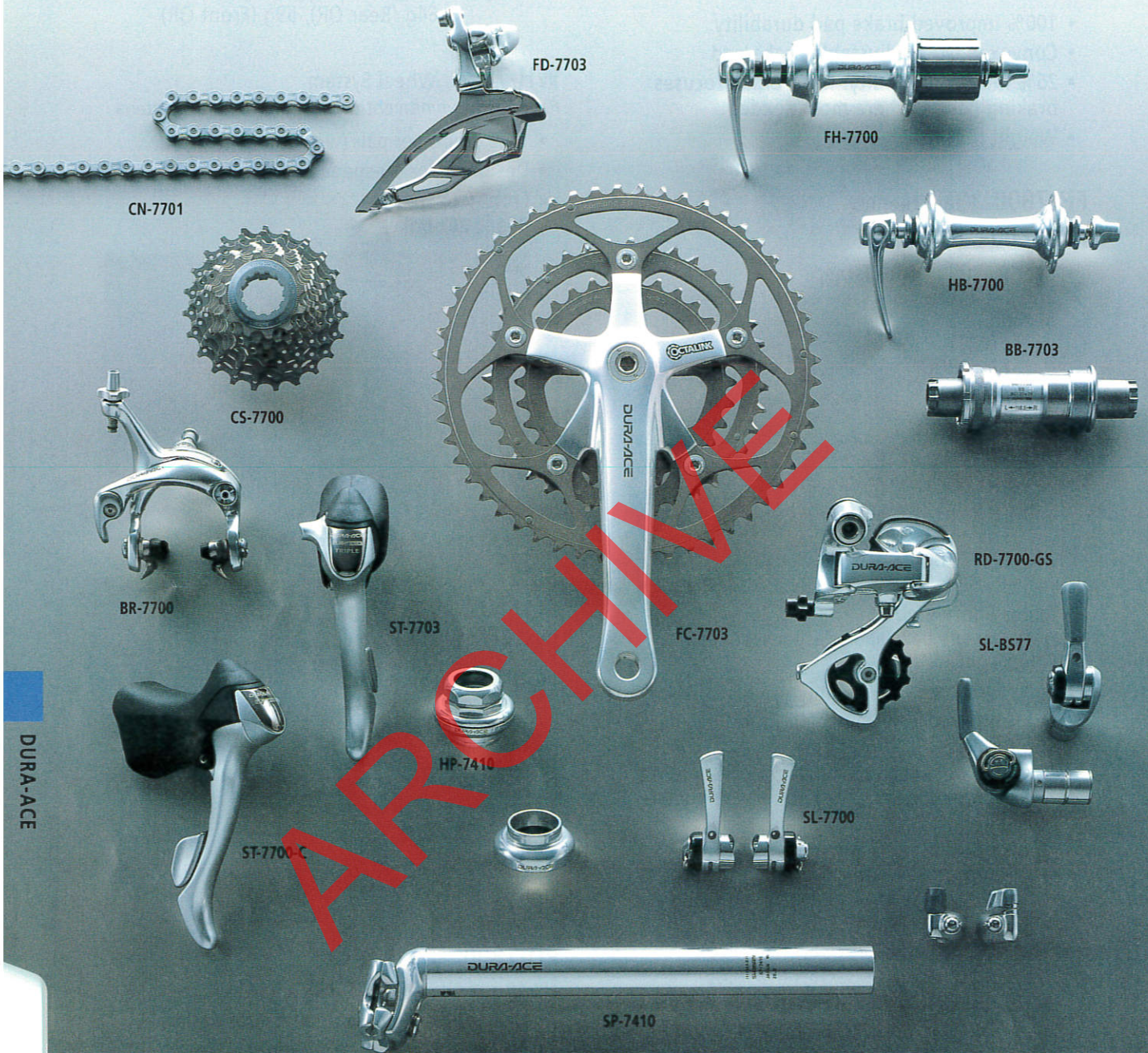
- NEW SL-7800
- NEW SL-BS78
- BL-R600

for triathlon
 54-42T
 55-42T
 56-44T

- NEW BR-R600 long reach caliper brake
- BR-R550 Cantilever brake

DURA-ACE

7700 Series Triple Version



FC-7703 HOLLOWTECH Crankset

BB-7703 Bottom Bracket

- Advanced HOLLOWTECH Design
- OCTALINK BB Mounting
- Nickel Plated Chainrings
Hard nickel plating resists abrasion to increase chainring durability.
- SG-X Chain Rings
- Number of Teeth : 53-39-30T
- Weight : 681g (170mm, FC-7703)
217g (BB-7703)

FD-7703 Front Derailleur

- Lightweight Alloy Chain Cage
Nickel plated alloy chain cage reduces weight while improving abrasion resistance.
- Wide Pivot Link
- HYPERDRIVE Gearing compatibility
- Capacity : 23T
- Weight : 113g (FD-7703-B), 103g (FD-7703-F)

RD-7700-GS Rear Derailleur

- **Precision Rear Derailleur for 8 or 9-speed**
Precision construction results in crisp and reliable shifting for the narrower 9-speed sprocket pitch.
- **Sealed Bearings**
- **SMARTCAGE Pulley Plate**
- **Advanced Light Action design**
- **13-Tooth Pulleys (RD-7700-GS)**
Pulleys run quieter and wear longer due to alternating tooth contact between inner and outer chain plates.
- **Zytel* Resin Pulleys**
* Zytel is a trademark of Dupont Corporation.
- **SIS Rear Index Shifting**
- **Double Servo Panta Mechanism**
- **Max. Front Difference : 23T**
- **Max. / Min. Sprocket : 27/11T**
- **Total capacity : 38T**
- **Weight : 212g**

CS-7700 9-Speed Cassette Sprockets

- **Lightweight Alloy Sprocket Carrier**
- **Strategic use of materials**
Bottom two or three sprockets (depending on cassette size) are made of titanium, and the rest of chrome-moly steel.
- **9-Speed Cassette Sprockets**
Interchangeability is maintained.
- **Full Gearing selection**
Fewer sprocket assemblies can be combined to provide any desirable gearing choice.
- **HG Sprockets**
- **Weight : 159.5g (12-23T)**

HB-7700 Front Hub

FH-7700 Rear Freehub

- **Labyrinth & Contact Sealing**
- **Super polished Bearing Races**
Super-mirror finish bearing races reduce friction.
- **Lightweight design**
Front : light alloy axle, Rear:titanium freewheel spline

- **Spoke Holes : 36/32/28/24H (HB-7700), 36/36/28/24/20H (FH-7700)**
- **Weight : 119g (HB-7700), 59g (QR) 312g (FH-7700), 64g (QR)**

ST-7703 Dual Control Lever

- **Precision 9-speed shifting**
- **Long term performance**
Three-bearing main lever shifting unit and heat treated release lever deliver precision shifting.
- **Reduced weight design**
Lever bracket is made from high-impact engineering resin to reduce weight.
- **FLIGHT DECK Cycle Computer compatible**
- **Anatomic design**
Lever bracket cover conforms to the shape of the hand to reduce fatigue.
- **Weight : 224g (for front)**

BR-7700 Dual-Pivot Caliper Brakes

- **Dual-Pivot design**
- **Compact construction**
Compact calipers and brake shoes reduce flex improving Shimano Linear Response action.
- **Reduced weight**
- **Oversize Coil Spring**
Maintains positive return action.
- **Easy-Replacement shoes**
- **Weight : 317.5g (F&R)**

CN-7701 9-Speed Chain

- **Super-narrow 9-Speed construction**
Allows the use of a 9-speed sprocket cluster with the same overall width as 8-speed types.
- **Precision tolerances**
Tighter chain tolerances help maintain strength, dependability and shifting performance.
- **Improved durability**
- **Weight : 304g (116 pins)**



ST-7703	RD-7700-GS SMARTCAGE Pulley Plate	FD-7703	SM-SP17	FC-7703 HOLLOWTECH Crankset	BB-7703 OCTALINK BB Mount	SC-6502 Cycle Computer SM-6501 Bracket/ sensor kit	BR-7700	HB-7700 FH-7700	CS-7700	CN-7701 Super narrow HG chain for 9-speed
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<Option>

ST-R600
SL-7700 BL-R600
SL-BS77

BR-R600 NEW
long reach
caliper brake

BR-R550
Cantilever
brake



SHIMANO ULTEGRA



ULTEGRA

This is the sport-racing component group for serious road cyclists.

ULTEGRA components offer precision operation and dependable performance for road racers, triathletes, and sport-performance cyclists who demand the best equipment. ULTEGRA's smooth flowing contours bestow a look of quality and performance to any road bike.



9-SPEED
DRIVE TRAIN

ST-6510 Dual Control Lever

- **9-Speed Shifting with STI precision**
- **Comfortable Anatomic design**
Lever bracket cover conforms to the shape of the hand to reduce fatigue.
- **Hands-on-Bars FLIGHT DECK Cycle Computer control**
Integrated control buttons on each lever set.
- **Weight : 485g (ST-6510 pair)**

RD-6500-SS / 6500-GS Rear Derailleur

- **Compatible with 9 or 8-Speed cassettes**
- **Long-Life pulleys**
Use of larger 11-tooth pulleys.
- **Advanced Light Action**
- **Zytel* Resin Pulleys**
* Zytel is a trademark of Dupont Corporation.
- **Max. Front Difference : 14T(SS), 22T(GS)**
- **Max. / Min. Sprocket : 27/11T**
- **Total capacity : 38T(RD-6500-SS), 37T(RD-6500-GS)**
- **SIS Rear Index Shifting**
- **Double Servo Panta Mechanism**
- **Weight : 212g (RD-6500-SS), 221g (RD-6500-GS)**

FD-6500 / 6503 Front Derailleur

- **Wide Pivot Link**
- **Triple SG-X Chainwheel availability**
- **Capacity : 15T(FD-6500), 22T(FD-6503)**
- **DUAL SIS Front and Rear Index Shifting**
- **Weight : 81g (FD-6500-F), 88g (FD-6503-F)**

CN-HG93 9-Speed Chain

- **Super-narrow 9-Speed construction**
- **Precision tolerances**
- **Improved durability**
- **Weight : 304g (116 pins)**

FC-6500 / 6503 HOLLOWTECH Crankset

BB-6500 Cartridge Bottom Bracket

- **Advanced HOLLOWTECH Crankset design**
- **OCTALINK Oversize Bottom Bracket Axle**
Large 22mm diameter hollow pipe billet axle reduces weight.
- **SG-X Chainrings**
- **Cartridge Bottom Bracket**
- **Number of Teeth : 53-42T / 53-49T / 52-39T (FC-6500), 52-42-30T (FC-6503)**
- **Weight : 643g (FC-6500, 175mm / 53-49T), 760g (FC-6503, 170mm), 221.5g (BB-6500 for FC-6500, 68mm)**

BR-6500 Dual-Pivot Caliper Brake

- **Compact Dual-Pivot design**
- **Lightweight construction**
- **Compact Cartridge Brake Shoe**
- **Resin Bumper Tire Guide (BR-6500)**
- **Weight : 334.5g (BR-6500 F&R)**

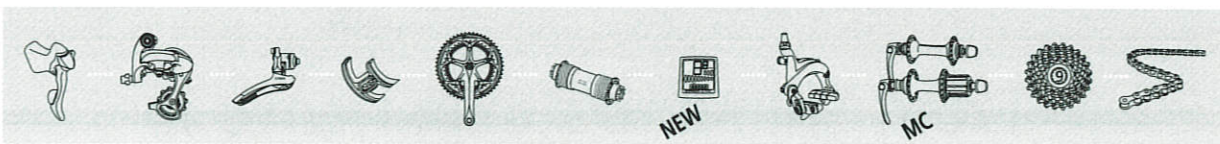
CS-6500 9-Speed Cassette Sprockets

- **Smooth Shifting 9-Speed HG Sprocket design**
- **Light alloy Sprocket Carrier**
- **Lightweight design**
Actually weighs less than the previous 8-speed.
- **Total interchangeability**
The use of identical drive train specifications allows complete interchangeability between 105, ULTEGRA and DURA-ACE 7700 series components.
- **Weight : 210g (12-23T)**

HB-6500-A Front Hub

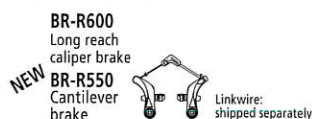
FH-6500 Rear Freehub

- **Labyrinth & Contact Sealing**
- **Super polished Bearing Races**
- **Spoke Holes : 24/28/32/36H (HB-6500-A), 36/32/28H (FH-6500)**
- **Aero Spoke : 18H**
- **Radial Spoke Lacing compatible (HB-6500-A)**
- **Weight : 140g (HB-6500-A), 58g (QR) 347g (FH-6500), 63g (QR)**



18-SPEED	ST-6510	RD-6500-SS	FD-6500	SM-SP17	FC-6500 HOLLOWTECH Crankset	BB-6500 OCTALINK BB Mount	SC-6502 Cycle Computer	BR-6500	HB-6500-A FH-6500	CS-6500	CN-HG93 Super narrow HG chain for 9-speed
27-SPEED	ST-6510	RD-6500-GS	FD-6503	SM-SP17	FC-6503 HOLLOWTECH Crankset	BB-6500	SM-6501 Bracket/sensor kit wireless				

18-SPEED	ST-R600	SL-7700 BL-R600	SL-BS77	For flat handle bar	SL-R660 BL-R440 FD-R440
27-SPEED	ST-R600	SL-BS77 BL-R600		For flat handle bar	SL-R660 BL-R440 FD-R443



NEW

BR-R600
Long reach
caliper brake

BR-R550
Cantilever
brake

Linkwire:
shipped separately

ULTEGRA

SHIMANO 105



From Shimano's experience in pro road racing — Shimano 105.

The Shimano 105 components are interchangeable with DURA-ACE and ULTEGRA due to the identical systems engineering concept specifications. 105 is available in both a high polished silver or black versions. The black components create a bold look for the road bike.



9-SPEED
DRIVE TRAIN

ST-5510 Dual Control Lever

- **9-Speed Shifting with STI precision**
- **Comfortable Anatomic design**
Lever bracket cover conforms to the shape of hand to reduce fatigue.
- **Hands-on-Bars FLIGHT DECK Cycle Computer control**
Integrated control buttons on each lever set.
- **Weight : 495g (pair)**

RD-5501-SS / 5501-GS Rear Derailleur

- **Compatible with 9 or 8-Speed cassettes**
- **Long-Life pulleys**
Use of larger 11-tooth pulleys.
- **Advanced Light Action**
- **Zytel* Resin Pulleys**
* Zytel is a trademark of Dupont Corporation.
- **Max. Front Difference : 14T(SS), 22T(GS)**
- **Max. / Min. Sprocket : 27/11T**
- **Total capacity : 29T (RD-5501-SS), 37T (RD-5501-GS)**
- **SIS Rear Index Shifting**
- **Double Servo Panta Mechanism**
- **Weight : 228g (RD-5501-SS), 231g (RD-5501-GS)**

FD-5501 / 5504 Front Derailleur

- **Wide Pivot Link**
- **Triple SG-X Chainwheel availability**
- **Capacity : 15T(FD-5501), 22T(FD-5504)**
- **DUAL SIS Front and Rear Index Shifting**
- **Weight : 81g (FD-5501-F), 88g (FD-5504-F)**

FC-5502 / 5505 HOLLOWTECH Crankset

BB-5500 Cartridge Bottom Bracket

- **Advanced HOLLOWTECH Crankset design**
- **OCTALINK Oversize Bottom Bracket Axle**

• **SG-X Chainrings**

- **Cartridge Bottom Bracket**
- **Number of Teeth : 53-42T / 53-39T / 52-39T / 50-39T (FC-5502), 52-42-30T (FC-5505)**
- **Weight : 654g (FC-5502, 170mm / 53-39T), 745g (FC-5505, 170mm), 148(59)g (BB-5500)**

BR-5501 Dual-Pivot Caliper Brake

- **Compact Dual-Pivot design**
- **Lightweight construction**
- **Compact Cartridge Brake Shoe**
- **Weight : 353g (BR-5501 F&R)**

CS-HG70-9 9-Speed Cassette Sprockets

- **Smooth Shifting 9-Speed HG Sprocket design**
- **Lightweight design**
Drilled out sprockets result in weights less than the previous 8-speed.
- **Total interchangeability**
Allows complete interchangeability between 105, ULTEGRA and DURA-ACE 7700 series components.
- **Weight : 236g (12-23T)**

HB-5501-A Front Hub

FH-5501 Rear Freehub

- **Labyrinth & Contact Sealing**
- **Super polished Bearing Races**
Super-mirror finish bearing races reduce friction.
- **Spoke Holes : 36/32H**
- **Radial Spoke Lacing compatible (HB-5501-A)**
- **Weight : 148g (HB-5501-A), 59g (QR) 348g (FH-5501), 63g (QR)**

CN-HG73 9-Speed Chain

- **Super-narrow 9-Speed construction**
- **Precision tolerances**
- **Improved durability**
- **Weight : 304g (116 pins)**



18-SPEED	ST-5510	RD-5501-SS	FD-5501	SM-SP17	FC-5502 HOLLOWTECH Crankset	BB-5500 OCTALINK BB Mount	NEW SC-6502 Cycle Computer	BR-5501	HB-5501-A FH-5501	CS-HG70-9	CN-HG73 Super narrow HG chain
27-SPEED	ST-5510	RD-5501-GS	FD-5504	SM-SP17	FC-5505 HOLLOWTECH Crankset	BB-5500	MC SM-6501 Bracket/sensor kit wireless				

<Option>

18-SPEED	ST-R600	SL-7700 BL-R600	SL-BS77	For flat handle bar	SL-R660	BL-R440	FD-R440	BR-R600 long reach	NEW BR-R550 Cantilever brake
27-SPEED	ST-R600	SL-BS77 BL-R600		For flat handle bar	SL-R660	BL-R440	FD-R443		

SHIMANO 105

Silver Version

FH-5501



HB-5501-A

FD-5504



BR-5501



FD-5501



FC-5502



FC-5505



ST-5510



RD-5501-SS



RD-5501-GS



105

High-Grade Road Components



ST-R600



PD-R540



BL-R600



BR-R550



BR-R600

High-Grade Road Components

Levers

ST-R600

STI Dual Control Lever (9-speed, Double/Triple)

- **High-Grade Lever for Small Hands**
Ultra-grade lever set features adjustable brake lever reach that makes it easier for people with smaller hands to brake and shift.
- **Super SLR (Shimano Linear Response)**
- **Adjustable Lever reach**
Lever reach is adjustable by the use of either 5-degree or 10-degree spacers.
- **Seamless Design**
Clean image is retained by the use of uniform shaped spacers.
- **Compatibility**
ST-R600 is compatible with dual pivot brakes except new DURA-ACE components and conventional DURA-ACE triple.
- **FLIGHT DECK Cycle Computer compatible**

ST-R500

STI Dual Control Lever (8-speed, Double/Triple)

- **High-Grade 8-speed STI lever design**
- **8-speed SIS compatible shifting lever except DURA-ACE 8-speed**
- **Front double & triple compatible**
- **Super SLR (Shimano Linear Response)**
- **FLIGHT DECK Cycle Computer compatible**

BL-R600 Brake Lever

- **Aerodynamic lever design**
- **Super SLR (Shimano Linear Response)**
- **Compatible with all dual pivot brakes**

Brakes

BR-R600

57 mm reach type Dual-Pivot Caliper Brake

- **Dual-Pivot design**
Dual-pivot construction provides increased leverage from more compact caliper arms while improving braking response.
- **Lightweight Construction**
Unnecessary mass has been strategically eliminated to provide maximum strength at minimum weight.
- **Compact Cartridge Brake Shoe**
Compact cartridge type brake shoe and holder have the same dimensions as DURA-ACE BR-7700.

BR-R550 Cantilever brake for road levers

- **Road STI lever compatible**
- **BL-R440 brake lever compatible**
- **Not compatible with V-BRAKE lever**
- **For cyclocross and flat handlebar bikes with wide tires**
- **Easy set-up and adjust**
New link wire design and 5mm hex key setup
- **Three types of cartridge brake shoes available**

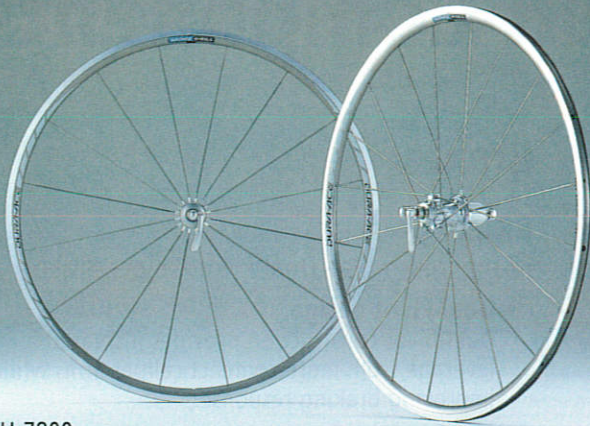
side mount type for easy installation



5 mm Allen wrench

Road Wheel Sets

SHIMANO WHEEL
AERODYNAMICS
TECHNOLOGY



WH-7800



WH-7701-carbon



WH-7701

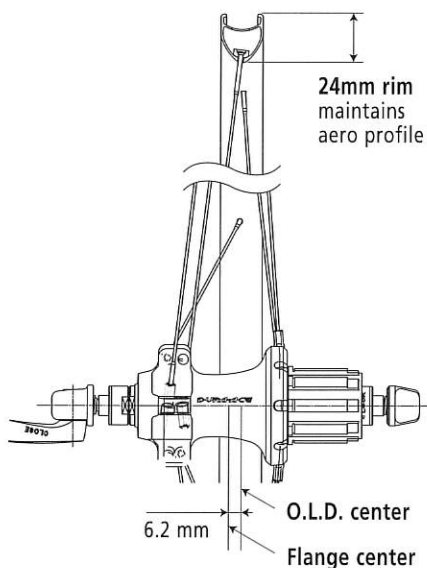


WH-R540

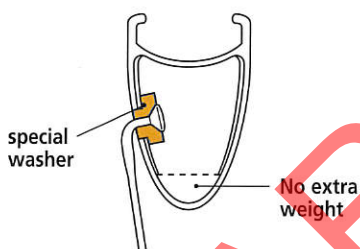
Road Wheel Sets

System Engineering At Its Best!

The Shimano Wheel System is the first wheel that is suitable for every riding situation without compromise. It's a lightweight, strong, durable, aerodynamic and efficient wheel with an amazing smooth ride. With a direct focus on racing, the NEW WH-7800 wheel set is the first to earn the DURA-ACE pedigree and adds yet another performance advantage to the overall superiority of the new component system. The wheel is substantially lighter than the WH-7701 at the same time, lateral rigidity has been increased to improve acceleration and power transfer.



Minimal offset maintains lateral rigidity

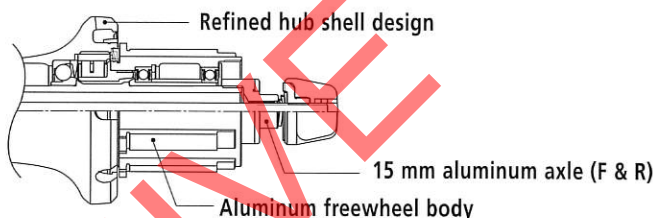


Sidewall Spoke Mounting (WH-7701-carbon / 7701 / R540)

The head (curved end) of the spoke is anchored in the rim's sidewall. A special washer distributes spoke stresses throughout the aerodynamic rim's large cross section, so less metal is needed at the rim's inner circumference where spokes would normally mount. The result is a lightweight aerodynamic rim that's extremely strong.

NEW WH-7800 Wheel System (clincher type)

The NEW WH-7800 wheel set is the first to earn the DURA-ACE pedigree and adds yet another performance advantage to the overall superiority of the new system. With a focus on speed, the rim profile of 24mm yields a substantial reduction in weight while maintaining the aerodynamic shape of the rim and its race-tested advantages (less subject to crosswinds and enhances precise steering). A 16-spoke front wheel with an oversize 15mm aluminum axle helps counter the flex that occurs in contemporary super-light fork designs. The 20-spoke rear wheel, centered on a lighter weight aluminum freehub body creates the delicate balance -- so crucial to acceleration and speed -- between light weight and rigidity. The WH-7800 has the feel and speed of a super-light tubular carbon wheel, yet less subject to treacherous crosswinds and taking on the most challenging turns, even in the drops or the aero-bar. 10-speed compatible only.



WH-7701-carbon (tubular type)

Ultra-light professional-level wheel set for tubular tires. Light and strong carbon fiber rims and dependable FH / HB-7700 hub internals. Exclusively developed cork composite brake pads provide the necessary braking power with excellent modulation. 10-speed compatible.

WH-7701 (clincher / tubular type)

Durable road racing wheel set for clincher / tubular tires. Light alloy rim with FH / HB-7700 hub internals featuring a durable, lightweight titanium freehub body. Special spoke pattern has increased lateral rigidity and achieved weight saving. 10-speed compatible.

WH-R540 (clincher type)

Best value wheel set in our lineup. Light alloy rims with dependable Shimano hub internals. Light rim and rear hub spoke pattern results in a weight decrease of 150 grams compared to the previous WH-R535 model.

		Weight*	Number of Spokes	Rim Height & Width	Axle Material
WH-7800	front	722g (clincher)	16	24.0 x 20.8 _(mm)	Aluminum
	rear	857g (clincher)	20	24.0 x 20.8	Aluminum
WH-7701** -carbon	front	635g (tubular)	16	30.0 x 18.8	Aluminum
	rear	838g (tubular)	16	30.0 x 18.8	Steel
WH-7701	front	755g (tubular) 771g (clincher)	16	30.0 x 18.8	Aluminum
	rear	957g (tubular) 975g (clincher)	16	30.0 x 18.8	Steel
WH-R540	front	839g (clincher)	16	28.0 x 19.2	Steel
	rear	1050g (clincher)	16	28.0 x 19.2	Steel

* Weight does not include quick release. Weight for WH-7800 is not final.

** Specially designed cork-composite brake pads must be used.

SHIMANO TIAGRA



Components for the new generation of recreational road bikes

The TIAGRA-equipped road bike is light and responsive, just like a pro-level machine. The group also offers shift levers (SL-R440), front derailleurs (FD-R440/FD-R443) and brake levers (BL-R440) designed specifically for road-sport bikes with flat handlebars.

**9-SPEED
DRIVE TRAIN**

ST-4400

Dual Control Lever (for double/triple crank)

- 9-Speed Shifting with STI precision
- 9-Speed RAPID FIRE Plus Shifting
- FLIGHT DECK Cycle Computer compatibility

CS-HG50-9 9-Speed HG Cassette Sprockets

- Precision 9-Speed Cassette Sprockets
- HG Sprockets
- Interchangeability
The 9-speed sprockets are made to the same specifications as those used in the 9-speed DURA-ACE, ULTEGRA and 105 groups, so there's complete interchangeability.

RD-4400-SS Rear Derailleur (for double crank)

RD-4400-GS Rear Derailleur (for triple crank)

- 11-Tooth pulleys
The use of larger 11-tooth pulleys results in alternating chain link contact to reduce pulley wear. Low-friction sintered alloy pulley bushings provide a long service life.
- Advanced Light Action
- Compatible with 9 or 8-Speed cassette sprockets
- SIS Rear Index Shifting
- Double Servo Panta Mechanism
- Max. / Min. Sprocket : 27/11T
- Total capacity : 29T (RD-4400-SS)
37T (RD-4400-GS)

BR-4400 Dual-Pivot Caliper Brake

BR-A550-57 57-type Dual-Pivot Caliper Brake

- Compact design
Compact calipers and brake pads reduce flex to improve the responsive Super SLR action.
- Lightweight construction
Unnecessary mass has been strategically eliminated to provide maximum strength at minimum weight.

- Dual-Pivot design
- Super SLR action

FC-4400 Double Crankset

FC-4403 Triple Crankset

BB-UN53 Cartridge Bottom Bracket

- SG-X Chainrings
- Triple Cranksets available
Both TIAGRA offer triple crankset (FC-4403) that provide low gear capability on lightweight sport and touring bikes.
- HYPERDRIVE Gearing
- DUAL SIS Front and Rear Index Shifting
- Number of Teeth : 52-39T/50-39T (FC-4400)
52-42-30T (FC-4403)

FD-4400 Front Derailleur (for double crank)

FD-4403 Front Derailleur (for triple crank)

- Wide Pivot Link
- Triple SG-X Chainwheel compatibility
- Capacity : 15T (FD-4400), 22T (FD-4403)

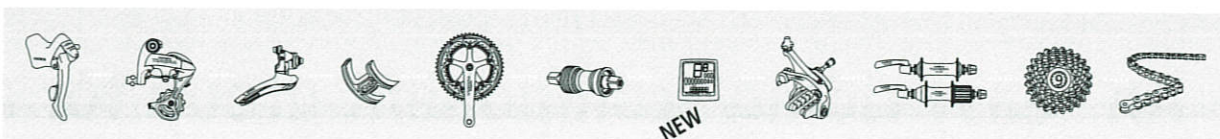
HB-4400 Front Hub

FH-4400 Rear Freehub

- Labyrinth and Contact Sealing for greater durability
- Light Alloy Quick-Release
- 9-Speed Freehub
Flexible application can be used with 8 or 9-speed cassette sprockets with 11T top gear.
- Spoke Holes : 36/32H

CN-HG53 Super-Narrow Chain (for 9-speed)

- Super-narrow 9-Speed construction
- Precision construction
Precision construction of the CN-HG53 chain maintains strength, dependability, and shifting performance on the narrower 9-speed sprocket cluster.



18-SPEED	ST-4400	RD-4400-SS	FD-4400	SM-SP17	FC-4400	BB-UN53
27-SPEED	ST-4400	RD-4400-GS	FD-4403	SM-SP17	FC-4403	BB-UN53

NEW

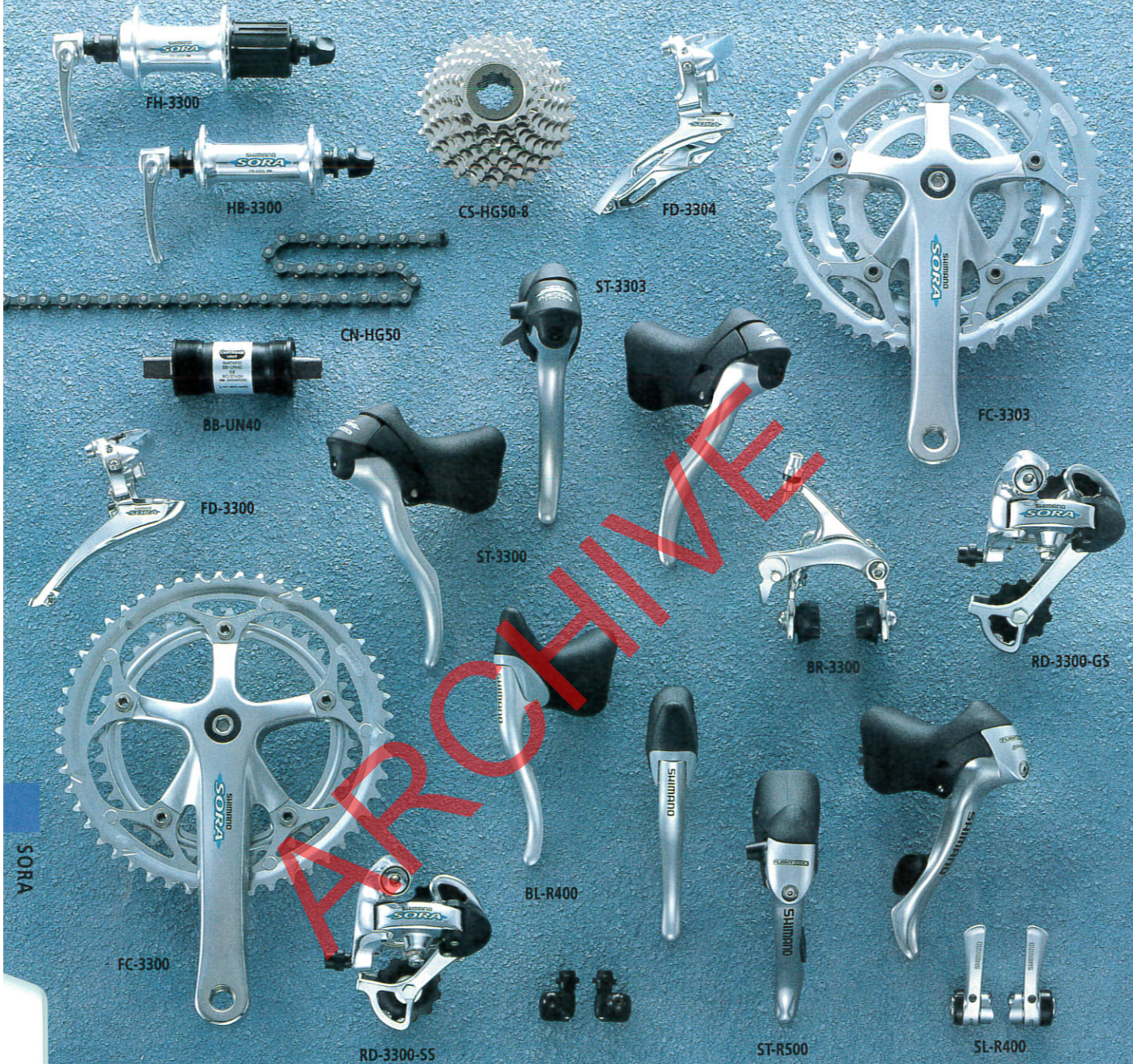
SC-6502 Cycle Computer	BR-4400	HB-4400 FH-4400	CS-HG50-9	CN-HG53 Super narrow HG chain
SM-6501 Bracket/sensor kit wireless				

<Option>

18-SPEED	ST-R600	SL-7700 BL-R400	SL-B577	SL-R440 BL-R440 FD-R440
27-SPEED	ST-R600	SL-B577 BL-R400	SL-R440 BL-R440 FD-R443	

NEW
BR-A550-57
long reach w/ shimano logo
BR-R600
long reach
BR-R550
Cantilever
brake

SHIMANO SORA



An "easy riding" component group for a more casual sport-recreation road bike

Just like the top-line road groups, SORA's Dual-Control Levers give you the advantage of hands-on-bars shifting. Rider-friendly features make the SORA-equipped bike a high-performer that's fun and easy to ride.

8-SPEED
DRIVE TRAIN

ST-3300

Dual Control Lever (for double crank)

ST-3303

Dual Control Lever (for triple crank)

- **Easy-Operation design lever**
Lever bracket boot is made of soft rubber and anatomically shaped to allow easy braking and shifting regardless of hand position. Adjustable reach main lever and light-action release lever assure easy gear shifting and braking.
- **FLIGHT DECK Cycle Computer compatibility**

CS-HG50-8 8-Speed HG Cassette Sprockets

- **HG Sprockets**
Compatible with IG chains, HG sprockets deliver faster, quieter down-shifts and smoother up-shifts.

RD-3300-SS Rear Derailleur (for double crank)

RD-3300-GS Rear Derailleur (for triple crank)

- **11-Tooth Pulleys**
The use of larger 11-tooth pulleys results in alternating chain link contact to reduce pulley wear.
- **Advanced Light Action**
- **SIS Rear Index Shifting**
- **Double Servo Panta Mechanism**
- **Max. / Min. Sprocket : 27/11T**
- **Total capacity : 29T (RD-3300-SS)
37T (RD-3300-GS)**

BR-3300 Dual-Pivot Caliper Brake

BR-A550-57 57-type Dual-Pivot Caliper Brake

- **Compact design**
Compact calipers and brake pads reduce flex to improve the responsive Super SLR action.
- **Lightweight construction**
Unnecessary mass has been strategically eliminated to provide maximum strength at minimum weight.

- **Dual-Pivot design**
- **Super SLR action**

FC-3300 Double Crankset

FC-3303 Triple Crankset

BB-UN40 Cartridge Bottom Bracket

- **SG-X Chainrings**
- **Triple Cranksets available**
- **Variation**
Chain Guard type is available : FC-3300/FC-3303.
- **HYPERDRIVE Gearing**
- **DUAL SIS Front and Rear Index Shifting**
- **Number of Teeth : 52-39T/50-39T (FC-3300)
52-42-30T (FC-3303)**

FD-3300 Front Derailleur (for double crank)

FD-3303 Front Derailleur (for triple crank)

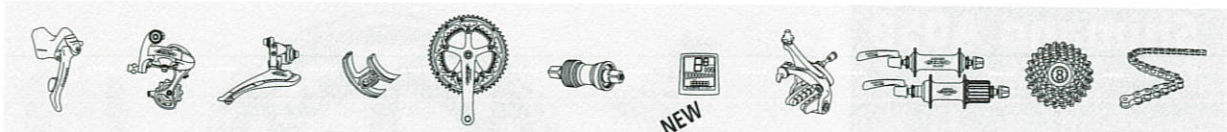
- **Wide Pivot Link**
Extra-wide pivot link increases rigidity while suppressing flex for improved shifting response.
- **Triple SG-X Chainwheel compatibility**
- **Capacity : 15T (FD-3300), 22T (FD-3304)**

HB-3300 Front Hub

FH-3300 Rear Freehub

- **Contact Sealing for greater durability**
Labyrinth and contact seals on TIAGRA hubs and single contact seals on SORA hubs keep out mud, dust, dirt and water from the bearings to extend service life.
- **Light alloy Quick-Release**
- **9-Speed Freehub**
Flexible application - can be used with 8 or 9-speed cassette sprockets with 11T top gear.
- **Spoke Holes : 36/32H**

CN-HG50 Narrow Chain (for 8-speed)



16-SPEED	ST-3300	RD-3300-SS	FD-3300	SM-SP17	FC-3300	BB-UN40
NEW	ST-R500					
24-SPEED	ST-3303	RD-3300-GS	FD-3303	SM-SP17	FC-3303	BB-UN40
NEW	ST-R500					
<Option>						

SC-6502 Cycle Computer	BR-3300	HB-3300 FH-3300	CS-HG50-8	CN-HG50
SM-6501 Bracket/sensor kit wireless				

16-SPEED	SL-R400	BL-R400	For flat handle bar
	ST-R220	SL-R440-8	BL-R440
			FD-R440A
24-SPEED	SL-R400	BL-R400	For flat handle bar
	ST-R223	SL-R440-8	BL-R440
			FD-R443A

NEW	BR-A550-57 long reach w/ shimano logo
	BR-R600 long reach
	BR-R550 cantilever brake

Shimano 2200

Road Bike Components



FH-2200-5



FH-2200-L



HB-2200-5



HB-2200-L

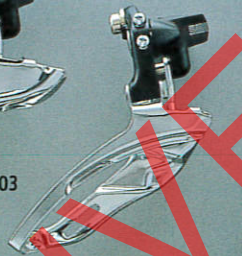


FD-2200-F



FD-2200-B

FD-2203



FC-2200



RD-2200



FC-2203

2200 / A050

Shimano A050

RD-A050

Rear Derailleur
7-speed
max sprocket : 28T min. sprocket : 13T

FD-A050

Front Derailleur
for double chainwheel

FC-A050

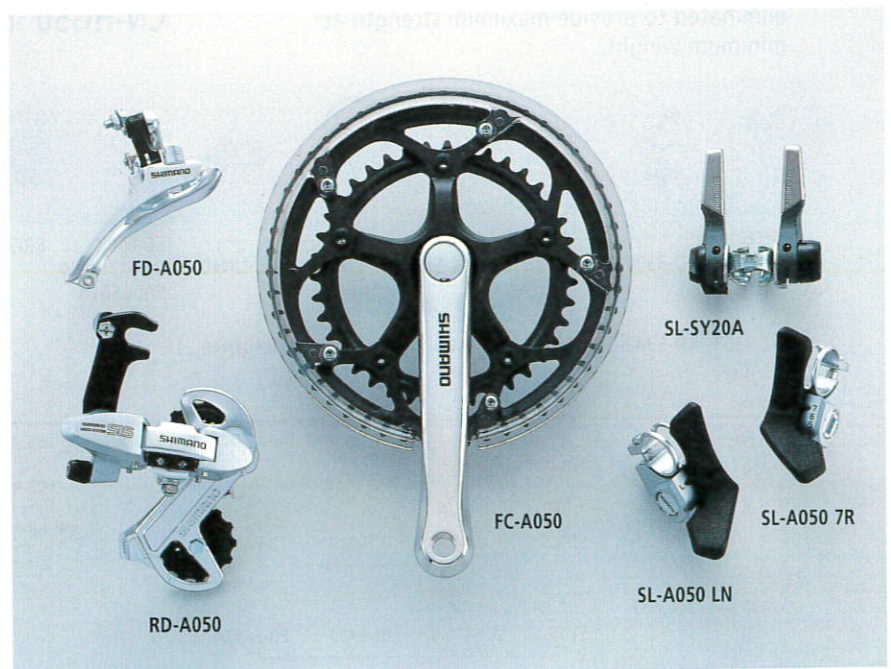
Crankset
52-39T / 50-39T 160 / 170 mm length

SL-A050-LN

Shift lever
handlebar mount

SL-SY20A

Shift lever
stem or down tube mount



FD-A050

SL-SY20A

FC-A050

SL-A050 7R

RD-A050

SL-A050 LN

To inspire more people to enjoy road cycling, Shimano 2200

The 2200 components, are great for road-sport bikes with flat handle bars. These components carry Shimano logo and are compatible with the TIAGRA and SORA groups.

FC-2200 Double Crank Set

FC-2203 Triple Crank Set

- SG-X Chainrings
- Triple Crankset option :
24-speed combination is available.
- Number of Teeth : 52-39T/50-39T (FC-2200)
52-42-30T (FC-2203)

FD-2200 Front Derailleur/Double

FD-2203 Front Derailleur/Triple

- Wide Pivot Link
- Triple SG-X Chainwheel compatibility
- Capacity : 15T (FD-2200), 22T (FD-2203)

RD-2200 Rear Derailleur

- SMARTCAGE Pulley Plate design
- 8-speed compatible
- SIS Rear Index Shifting

- Max. / Min. sprocket : 26/11T

- Total capacity : 35T

HB-2200 Front Hub

FH-2200 Rear Freehub

- Water resistant design guarantees durability
- Alloy Quick Release
- Spoke Holes : 36/32H

ST-R220

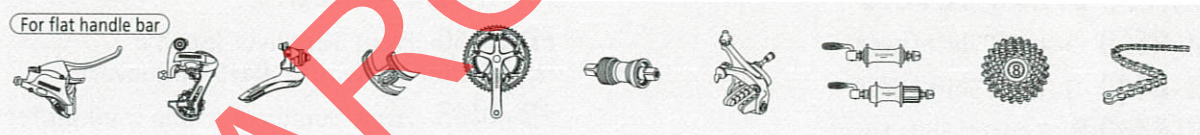
EZ FIRE Plus Shift / Brake Lever Set (for double crank)

ST-R223

EZ FIRE Plus Shift / Brake Lever Set (for triple crank)

- **8-Speed EZ FIRE shifting**
Designed to allow easy shifting with fingers on brake lever.
- **Brake component interchangeability**
ST-R220/R223 brake levers are equipped with a switch to change between the V-BRAKE with modulator mode and the caliper brake, canti brake or roller brake mode.

Shimano 2200



16-SPEED ST-R220	RD-2200	FD-R440A	SM-SP17	FC-2200	BB-UN25	BR-3300	HB-2200-S/L FH-2200-S/L	CS-HG50-8	CN-HG50
24-SPEED ST-R223	RD-2200	FD-R443A	SM-SP17	FC-2203	BB-UN25				

<Option>

16-SPEED				
For flat handle bar	For drop handle bar			
SL-R440-8 BL-R440	FD-R440-A	ST-3300 ST-R500 SL-R400 BL-R400	FD-2200	

BR-A550-57
w/ SHIMANO logo
BR-R600
long reach
NEW BR-R550
Cantilever
brake

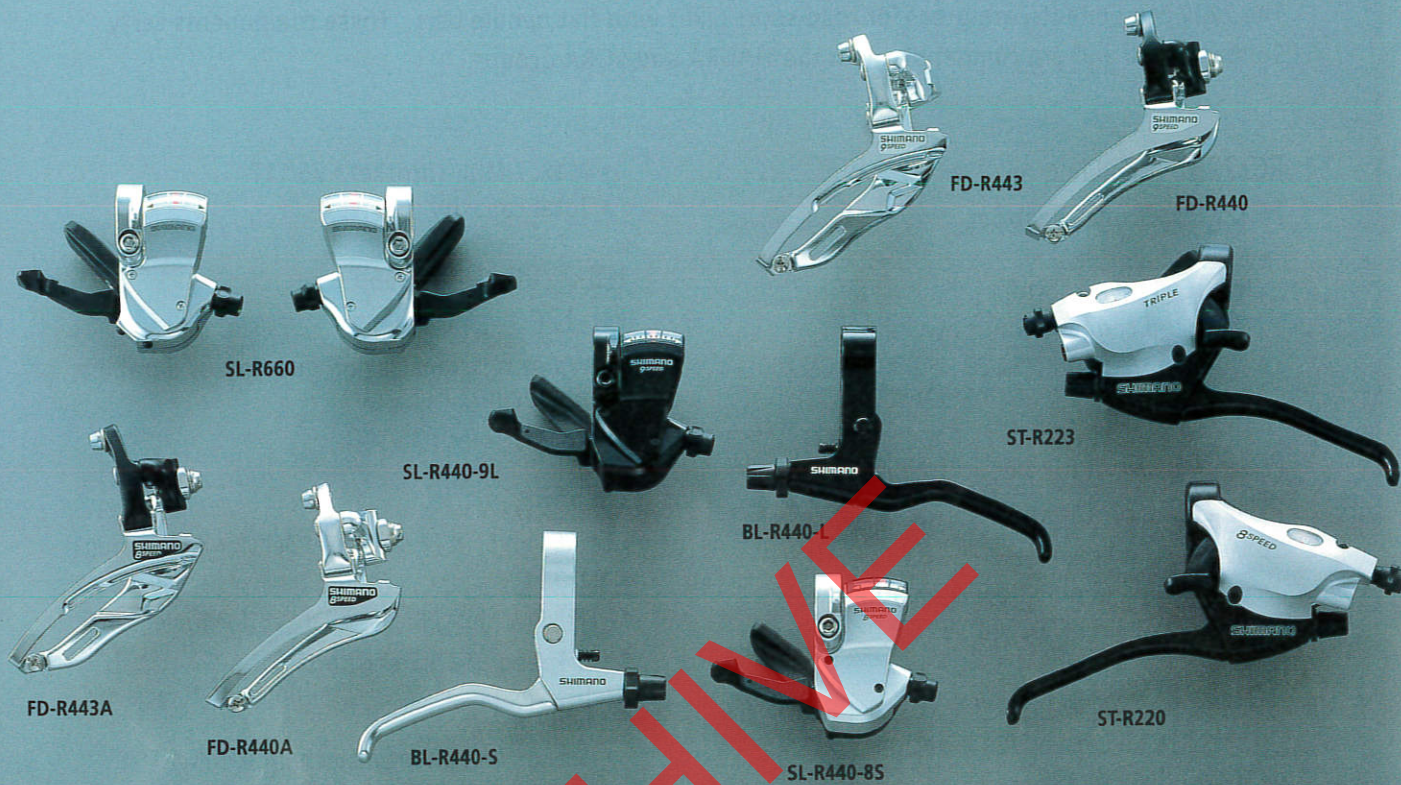
24-SPEED			
For flat handle bar	For drop handle bar		
SL-R440-8 BL-R440	FD-R443-A	ST-3303 (Left)	FD-2203

A050



14-SPEED SL-A050LN SL-A0507R SL-SY20A	RD-A050	FD-A050	FC-A050 52-39 50-39	MF-HG37 MF-TZ07	NEW CN-HG50 CN-UG51	BB-UN25
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Flat Handlebar Components



Shift / Brake Levers

SL-R660 9-speed Shift Lever

SL-R440 9-speed Shift Lever

SL-R440-8 8-speed Shift Lever

BL-R440-S/L Brake Lever

- 9-Speed shifting with STI precision (SL-R660 / R440)
Lightweight Dual Control Levers provide a precision 9-speed shifting action. Left lever can be used with double or triple cranks.
- 9-Speed RAPIDFIRE-Plus Shifter (SL-R660 / R440)
- Variations : Black version is available for SL-R440 / R440-8 / BL-R440

Note : SL-R660 /R440 /R440-8 shift lever must be used with FD-R440 or FD-R443 front derailleur. 9-speed RD-7700/6500/5501/4400 rear derailleurs can be used with SL-R660 shift lever.

Front Derailleurs

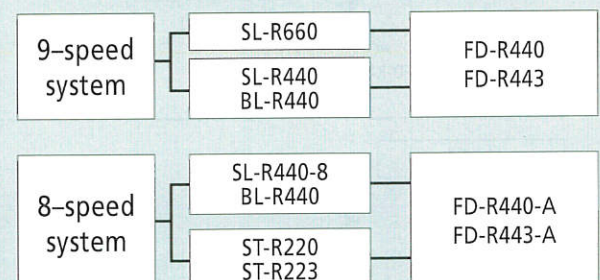
FD-R440 Front Derailleur (double crankset/for use with SL-R440 shift lever)

FD-R443 Front Derailleur (triple crankset/for use with SL-R440 shift lever)

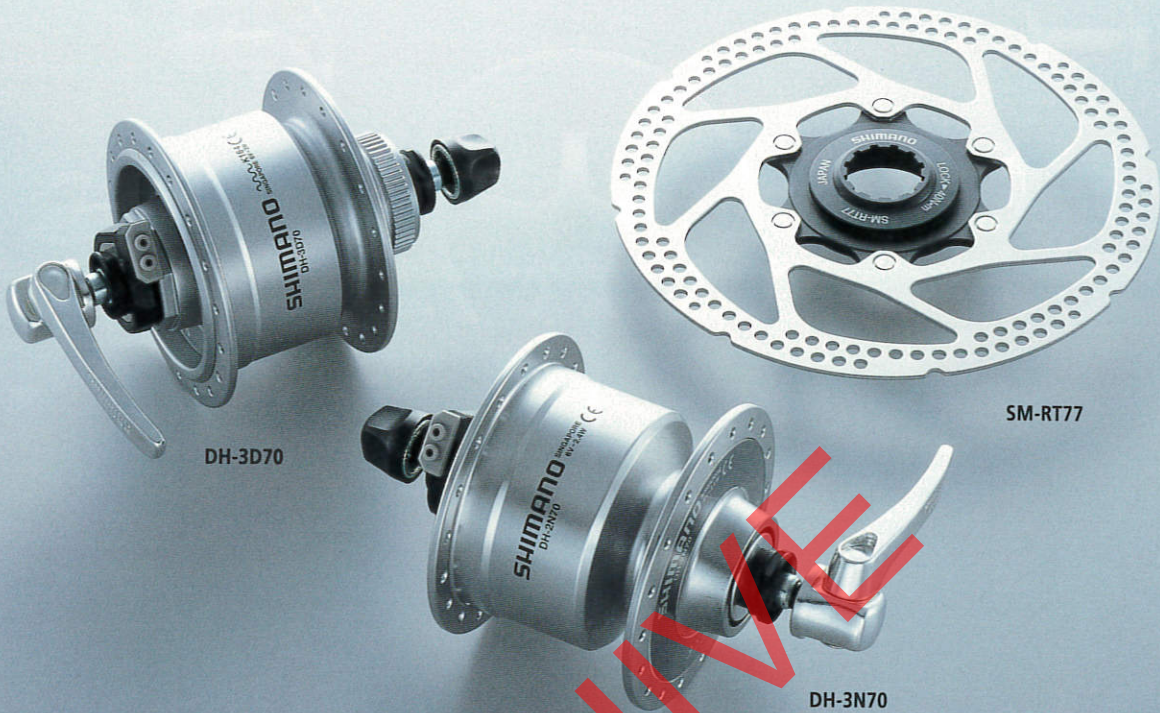
FD-R440A Front Derailleur (double crankset / for use with SL-R440-8 / ST-R220 shift lever)

FD-R443A Front Derailleur (triple crankset / for use with SL-R440-8 / ST-R223 shift lever)

- Wide Pivot Link
- Triple SG-X Chainwheel compatibility
- Variation
Black color option is available for FD-R440A / R443A.



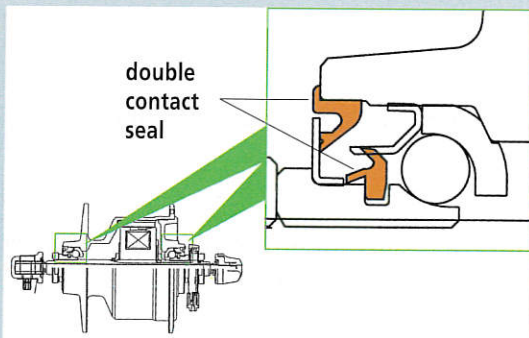
Sport Hub Dynamo



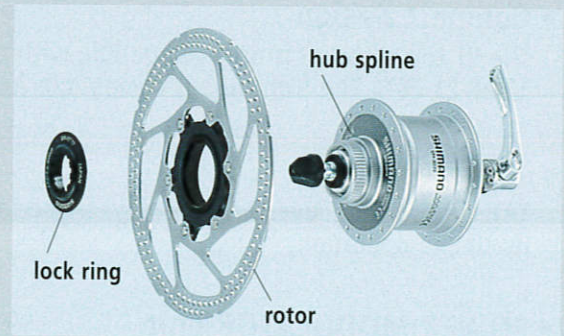
The XT/ULTEGRA grade sport hub dynamo is a practical lighting solution for sport and trekking bikes with hub dynamo lamp systems. The reason Shimano strongly recommends the Hub Dynamo is that it is good for the environment as well as it is functionally superior to every other dynamo system. Obviously the hub dynamo is far more superior to the battery type in terms of ecology and economy.

- DH-3N70 (6V 3.0W)
- DH-2N70 (6V 2.4W)
- DH-3D70 (6V 3.0W, Disc Brake compatible)

- Economical and Ecological
- Reduced rotation friction by 60-70% compared to HB-NX21 / NX31 when lamp is off.
- The rolling resistance at time of lamp-off is reduced by 70%.
- Double contact seal mechanism, same level as ULTEGRA / DEORE XT

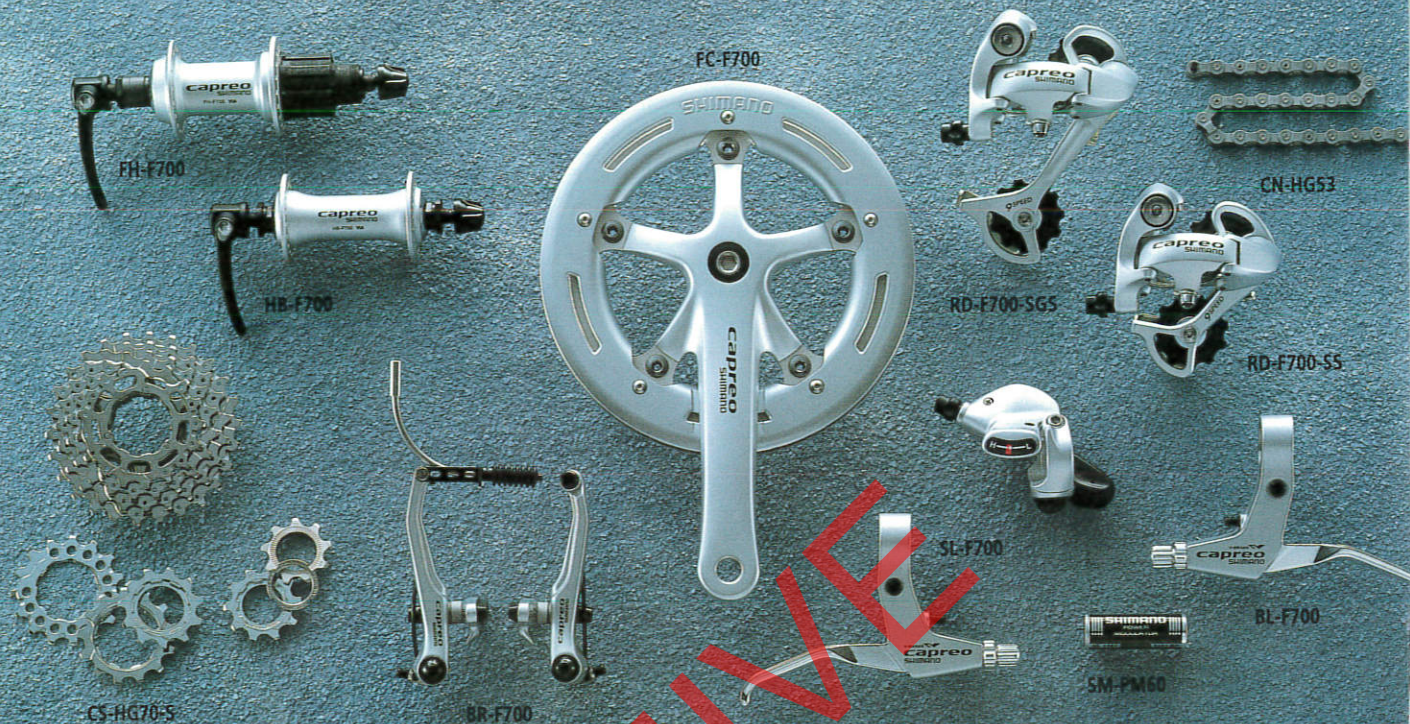


- Hub rotation performance: ULTEGRA / XT grade featuring super polished bearing races
- DH-3D70 model features Center Lock design



- 110 grams lighter than HB-NX70
- Compact and lightweight design
- Spoke Holes : 32 / 36H
- Quick Release

capreo SHIMANO



"capreo" Debuts as the First Component Group for Small Wheel Bicycles

The first Shimano component group for small wheel bicycles has been developed. The group is named "capreo" after "Capreolus" of Latin word that means "fawn". Picture an image of a small wheel bike which runs through the street speedily like a fawn.

- **Compact design**

The 9T top sprocket is only compatible with the FH-F700 freehub. The gear combination is 9-10-11-13-15-17-20-23-26T. The front hub is compatible for radial lacing.

- **TAP FIRE Shifter**

TAP FIRE shifting lever, which enjoys a good reputation as a Comfort System Component, was adopted for its simple operation.

- **POWER MODULATOR unit**

The POWER MODULATOR unit "SM-PM60" is compatible with BR-F700 for controllable braking.

- **Double chain guards**

FC-F700 with stylish double chain guards. The chain guards are designed with a soft Europeanized image.

RD-F700-SS/SGS Rear Derailleur

- Total capacity : 17T
- Max. / Min. Sprocket : 26 / 9T
- Direct attachment for easy assembly

FC-F700 Crankset

- 45T Chainring
- Rear 9-Speed compatible

BR-F700 V-BRAKE

BL-F700 Brake Lever

SM-PM60 POWER MODULATOR unit

- R55C for F700 special shoe for folding bike rims
- POWER MODULATOR unit (SM-PM60)

SL-F700 TAP FIRE Shifter

- TAP FIRE Shifter
- 9-Speed SIS Rear Index Shifting compatible.
- Optical Gear Display (above handlebar type)

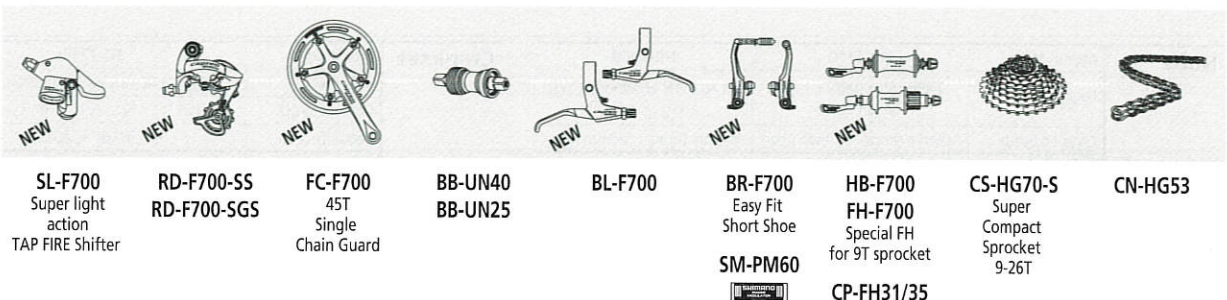
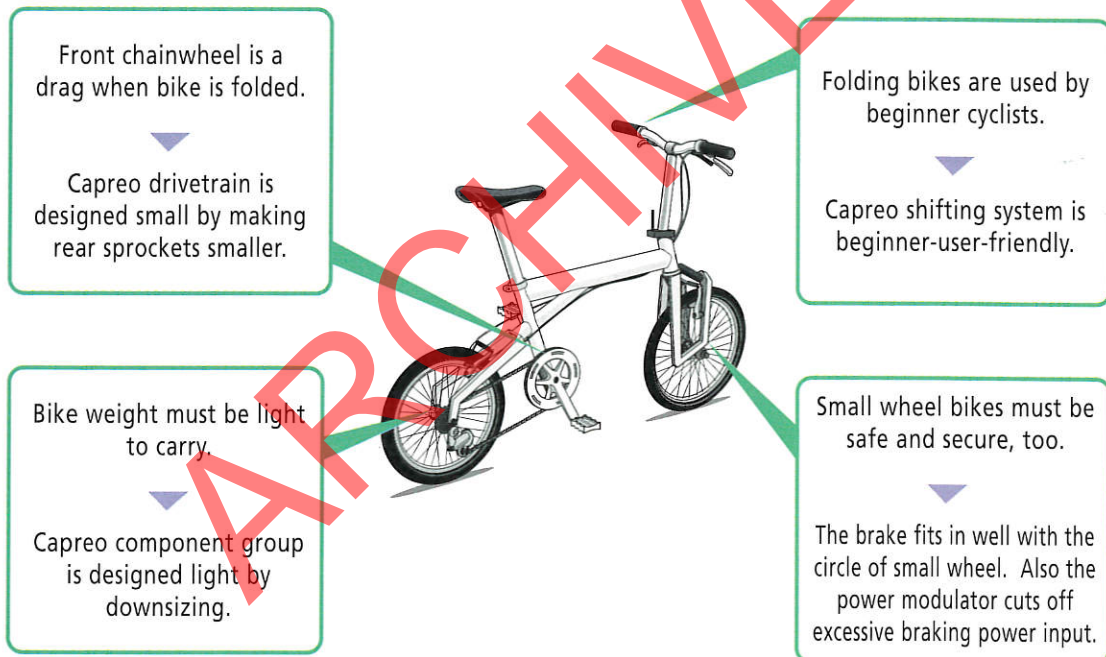
CS-HG70-S 9-Speed HG Cassette Sprocket

- 9T Top Gear for Lightweight
- Only for FH-F700

HB-F700 Front Hub

FH-F700 Freehub

- Spoke Holes : 24 / 32 / 36T
- Only for CS-HG70-S (FH-F700)



CAUTION

The F700 "capreo" component group is designated for folding bicycles with small wheels for riding on the paved streets. Therefore, when it is used for the bicycles with larger than 20-inch wheels or for riding on unpaved roads, there is the possibility of deformation or damage.

DURA-ACE

TRACK

Components that deliver the fraction-of-a-second advantage for track racing

The Shimano system engineering approach has been applied to the development of the DURA-ACE Track components. Painstakingly designed to realize the ultimate balance of light weight and rigidity, DURA-ACE Track provides the fraction-of-a-second advantage that's often the difference between winning and losing on the banked oval. Silky smooth high-precision bearings enhance the high level of power transmission efficiency provided by the ultra-rigid lightweight design.



DURA-ACE TRACK

Hubs	Model No.	HB-7710	HB-7600
	Weight	298g (rear w/lock ring) 203g (front)	313g (rear LF w/lock ring) 241g (front LF)
Over Locknut	100mm (front), 120mm (rear)	100mm (front), 120mm (rear)	
Holes	28H/32H/36H	28H/32H/36H	
Hole Diameter	2.4mm	2.4mm	
Drop Width	9mm (front), 10mm (rear)	9mm (front), 10mm (rear)	
Material/Finish	Hub Body and Hub Shell: forged aluminum/anodized	Hub Body: forged aluminum/anodized Hub Shell: composite poly carbonated resin	
Sprocket	Model No.	SS-7600	
	Weight	(1/2"x1/8" sprocket) 31g (13T), 38g (14T) 44g (15T), 53g (16T)	
	Chain Size	1/2" x 1/8", 1/2" x 3/32"	
	Teeth	13T, 14T, 15T, 16T	
	Material	Chrome-moly steel	
	Thread	BC 1.37 x 24T.P.I.	

Crankset	Model No.	FC-7710	
	Weight	505g (170mm without chaining)	
	Crank Length	165/167.5/170/172.5/175mm	
	Pedal Thread	BC 9/16" x 20T.P.I.	
Material/Finish	hollow forged aluminum/anodized		
Chainring	Chain Size	1/2" x 1/8", 1/2" x 3/32"	
	Teeth	46T - 54T	
	Material/Finish	aluminum/nickel plated	
	Weight	82g (46T, 1/2"x1/8")	
Bottom Bracket	Model No.	BB-7700	BB-7710 (NJS type)
	Weight	173g	244g
	BB Shell width	68 / 70mm	68mm
	Axle Length	109.5mm	
Mount	splined crank arm mounts		
Headset	Model No.	HP-7410	
	Spec	See page 176	
Seat Post	Model No.	SP-7410	
	Spec	See page 176	



SPD
SHIMANO PEDALING DYNAMICS



Shimano's original shoe and pedal system that enhances comfort and improves performance.

SPD stands for Shimano Pedaling Dynamics. It's an integrated shoe and pedal system that provides the pedaling performance of cleated cycling shoes along with the ability to walk safely and comfortably off the bike.

The SPD cleat system is available in two types. The standard SPD system is used by the off-road, general purpose, and touring shoes. The SPD-SL system is used on the road.

The SPD-SL system was developed specifically for the needs of world-class road racers. SPD-SL uses a large and low profile cleat and binding mechanism that creates a highly stable interface between the shoe and pedal in a super lightweight design.

The SPD shoe line-up continues to expand with the addition of ten new models this year. These new designs can be recognized by the "NEW" designation in the shoe descriptions.

These icons show the recommended application of each SPD shoe style.



WEIGHT
(gram/pair)



COMPETITION



CROSS



LEISURE



MTB



ROAD RACE



WOMEN / MEN



URBAN / MULTI
PURPOSE

SPD Technology

SH-R215 Pro-Level Competition Shoes

The new SH-R215 is the evolutionary top-of-the-line road racing shoe designed and engineered for the professional road racer. The new carbon sole is 20% lighter than previous designs while increasing rigidity. Combined with the SPD-SL pedal platform this new system is as close to a 100% transfer of power as possible.

1. Super-light & Stiff Carbon Sole

New carbon graphite sole with hollow channels creates an optimal balance between stiffness and weight for power transfer and maximum speed.

2. Cool, Ventilated Design

Molded toecap and heel cup with functional air vents provide a cool, secure fit. Stretch resistant synthetic fabric with super-breathable reinforced mesh for cool, lightweight and efficient pedaling. A patterned, ventilated insole allows moisture to evaporate. Large vent hole in carbon sole toe-box enhances breathability.

3. Sure-fitting Buckle & Strap System

Wide, 50mm, high positioned strap, with micro-adjustable buckle and asymmetrical top straps alleviate pressure points and create a secure, stable and comfortable connection to the pedaling platform for maximum transfer of power. Dual positioning anchors for the buckle allow custom fitting.

4. Comfortable Fitting

Molded, deep padded heel cup provides comfort and lessens fatigue on extended long rides. Molded toe-cup for better fit, comfort and durability. Available in "E" width with a roomier toe box.

5. Antibacterial Scented Insole

Sole is impregnated with an aromatic peppermint scent along with a deodorizer and antibacterial agent.

Special molding carbon sole



Carbon hollow



SH-FN01 Indoor Cycling/Multi-Activity Shoe

An indoor cycling specific SPD shoe with a contemporary sport fit and styling.

1. High Breathability

Upper is made of highly ventilated, quick drying mesh material. A patterned, ventilated insole allows moisture to evaporate.

2. Quick adjust strap

Single strap allows one simple reach to fasten.

3. Antibacterial Scented Insole

Sole is impregnated with an aromatic peppermint scent along with a deodorizer and antibacterial agent.

4. Comfortable Walkability

Stable pedaling/walking sole with EVA non-marking outsole perfect for gym applications

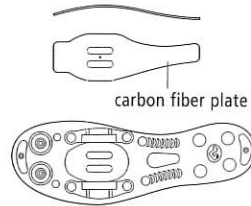


SH-M221 Off-Road Competition Shoes

The SH-M221 racing shoe features a lightweight carbon fiber-reinforced plate embedded in the sole to distribute high pedaling loads and reduce fatigue.

1. Lightweight & Stiff Sole

The fiberglass reinforced nylon mid-sole features a carbon fiber plate for the ultimate in lightweight and stiffness. The Polyurethane outer sole reduces weight and adds rigidity.



2. Increased Upper Support

Upper panels are carefully selected from quality materials such as synthetic leather, polyurethane-coated split leather and nylon mesh. Well-selected material and careful sewing allows strong support, comfort and efficient pedaling.

3. Sure Fitting Buckle Strap

Buckle strap plus two hook & loop straps assure a snug, comfortable fit.

4. Shape Retention Pad

Shape retention padding and molded heel support cup enhance stability and fit comfort.

5. Secure Grip

Soles are specially designed to provide a secure grip in the dirt. The SH-M221 / M180 / M152 feature replaceable spikes for increased traction in sand or loose dirt.



SPD-SL

A further refinement of the Shimano Pedaling Dynamics system, SPD-SL was designed specifically for the needs of world-class road racers. SPD-SL uses a large and low profile cleat and binding mechanism that creates a highly stable interface between the shoe and pedal in a super lightweight design. The result is more efficient power transfer under the extreme pedaling loads encountered in competition.

1. Wide Pedal Platform

The larger SPD-SL cleat provides for a wider contact point with the pedal for improved foot-pedal stability. Pedaling stresses on the sole of the shoe are dispersed over a wider area for greater comfort.

2. Lightweight design

Total system weight is 351g. Pedals = 281g cleats = 70g.

3. Wide bearing placement for enhanced load distribution

Features three sets of bearings: ball-type at both ends for symmetrical load dispersion, reduced flex rotation and wide a needle-type centered under the foot to stabilize load distribution.

4. Quick binding entry

The near vertical pedal position angle for entry has been maximized for a faster and effortless clip-in. Entry is also simplified by the large cleat entry width at the front of pedal. Adjustable bindings allow the cleat tension to be set to each rider preference.

5. Low profile design

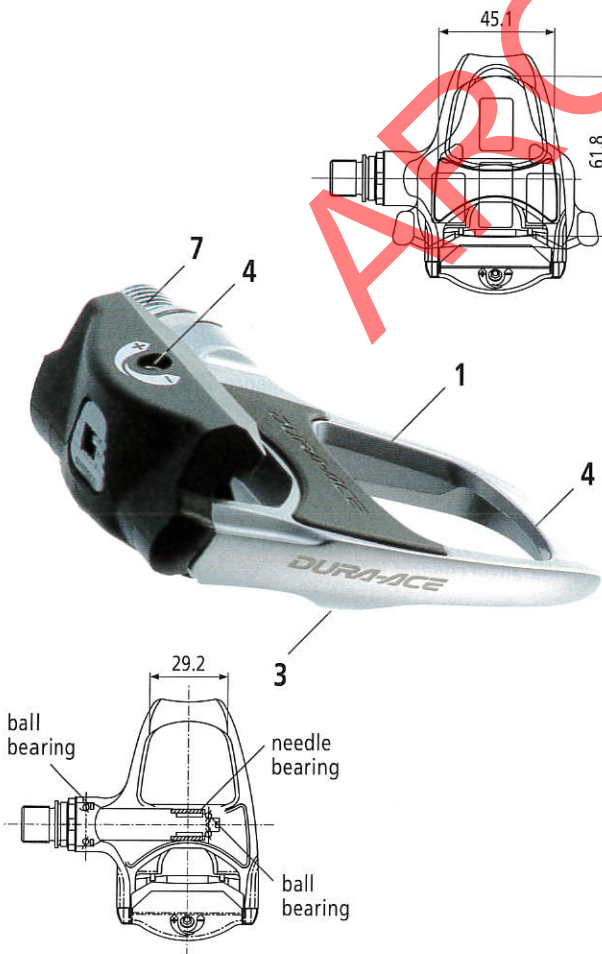
The SPD-SL cleat design brings the foot closer to the spindle for improved stability. Sole-to-axle distance is 14.5mm, allowing for a lower saddle position without changing leg extension.

6. Versatile cleats

Two cleat options: the standard SM-SH11 (3-degrees) and optional SM-SH10 (fixed) are available. Nylon resin cleats with non-slip rubber base, allow great walking ability.

7. Durable construction

Features a serviceable high strength cro-moly spindle. The recessed spindle end allows the pedal to be installed with an 8mm hex wrench.



Mountain Bike Shoes

SH-M221 Off-Road Elite Competition Shoe.

- An elite competition off-road racing shoe.
- Carbon fiber-reinforced plate in the outsole transfers your energy straight to the pedals.
- Sure fitting buckle strap with twin hook-and-loop straps.
- Shape retention padding and molded heel support cup enhance stability and fit comfort.

Recommended pedal :
PD-M959



784
(size 40)
Available sizes
36, 37 – 47 in half, 48

SH-M120G Off-Road Sport/Performance Shoe New

- An expert level off-road shoe.
- Reinforced uppers feature breathable mesh with polyurethane-coated split leather upper. Breathable, secure and easy fit for comfortable long rides.
- Durable and lightweight rubber sole offers walking comfort.

Recommended pedals :
PD-M540
PD-M520



645
(size 40)
Available sizes
37 – 49 whole

SH-M180B Off-Road Sport/Competition Shoe New

- An expert level off-road racing or performance off-road shoe
- Reinforced uppers feature breathable mesh with polyurethane-coated split leather upper. Breathable, secure and easy fit for comfortable long rides.
- Sure fitting buckle strap with twin hook-and-loop straps.
- Rigid fiberglass reinforced midsole, toe-spikes, sure fitting buckle strap and twin hook-and-loop straps provide excellent grip in mud and loose dirt.

Recommended pedal :
PD-M540



795
(size 40)
Available sizes
36, 37 – 47 in half, 48

SH-M120WA Women Specific Off-Road/Performance Shoe New

- Not just a scaled down version of the men's shoe, this shoe was designed specifically to fit women, with a lower, narrower heel section and a lower volume front end.
- Same specifications as the SH-M120S.

Recommended pedals :
PD-M540
PD-M520



680
(size 40)
Available sizes
36 – 42 whole

SH-M071 Off-Road Sport/Performance Shoe

- Designed for recreational and fitness cycling on or off the road
- Durable and lightweight rubber sole offers walking comfort.
- Fiberglass reinforced nylon plate increases rider's stability
- Reshaped last for higher comfort.
- Durable PVC coated leather upper and neoprene padded tongue for better ankle comfort.

Recommended pedals :
PD-M520
PD-M515



790
(size 40)
Available sizes
36 – 49 whole



SH-M058 Off-Road Sport/Performance Shoe

- High-cut design with hiking-style rubber sole offers great ankle stability and walking comfort.
- Lugged rubber sole encloses a nylon-fiber plate for added sole stiffness.
- Secure strap and lace closure for a snug fit.
- Great choice for both off-road and street cycling

Recommended pedals :

PD-M545
PD-M520
PD-M515



(size 40)
Available sizes
36 – 48 whole

SH-M034 Multi-Purpose Sport Shoe

- Design for most riding styles including commuting, recreational and fitness cycling on or off the road.
- "D-pocket" shoe lace pocket keeps them away from the chain.
- Fiberglass reinforced nylon midsole for cycling efficiency yet allows comfortable walking.
- Easily removable sole plate makes cleat installation simple.

Recommended pedal :

PD-M324



(size 40)
Available sizes
36 – 48 whole

SH-M038 Multi-Purpose Sport Shoe New

- Design for most riding styles including commuting, recreational and fitness cycling on or off the road.
- Fiberglass reinforced nylon midsole for cycling efficiency yet allows comfortable walking.
- Easily removable sole plate makes cleat installation simple.

Recommended pedals :

PD-M424
PD-M520
PD-M324



(size 40)
Available sizes
36 – 48 whole

SH-M021G Value Priced Multi-Purpose Sport Shoe New

- An entry-level SPD shoe that is as comfortable for walking as it is for cycling.
- Nylon mesh and split leather upper with full lace closure.
- Reflective material at heel keeps you visible.

Recommended pedal :

PD-M324



(size 40)
Available sizes
36 – 48 whole

SH-M038W Women Specific Multi-Purpose Sport Shoe New

- Not just a scaled down version of the men's shoe, this shoe was designed specifically to fit women, with a lower, narrower heel section and a lower volume front end.
- Same specifications as SH-M038.

Recommended pedals :

PD-M424
PD-M520
PD-M324



(size 40)
Available sizes
36 – 42 whole

SH-SD60 SPD Cycling Sandal

- Great for after race riding/walking or cycling in hot weather.
- Comfortable rubber insole and padded heel support.

Recommended pedals :

Any SPD pedals



(size 39-40)
Available sizes
37 – 38, 39 – 40, 41 – 42, 43 – 44, 45 – 46, 47 – 48

Multi-Purpose Shoes

SH-MP66 Multi-Purpose SPD Cycling Sneaker ^{New}

- SPD cleat compatible for stable pedaling on rough road surface.
- Tall inside height of upper supports ankle and keeps mud, dirt and water out.
- Great for the course demanding frequent pedaling.
- Comes with SHIMANO DX hologram logo.

Recommended pedal :
PD-M647



SH-FN01 Fitness Shoe ^{New}

- Large nylon mesh area allows excellent breathability and comfortability.
- Highly breathable insole helps cut out sweating.
- Single strap for quick, easy and secure fit.
- Heal lining with fragrance of mint. Antibromic and antibacterial.
- Minimized inside lining stitch for comfort without socks.

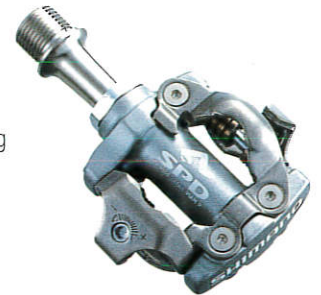
Not compatible with SPD-SL, SPD-R and Pop-up SPD Pedal:
PD-M646 / M536 / M545 / M424 / M647 / A515.



Mountain Bike Pedals

PD-M959 Off-Road Racing Pedal

- The new standard in off-road competition pedals
- A fluorine coated binding claw allows easy entry and release
- The open binding mechanism is designed to better shed mud
- Strong and durable chrome-moly spindle with a 8mm Allen wrench mount.
- Low maintenance sealed bearing cartridge axle.



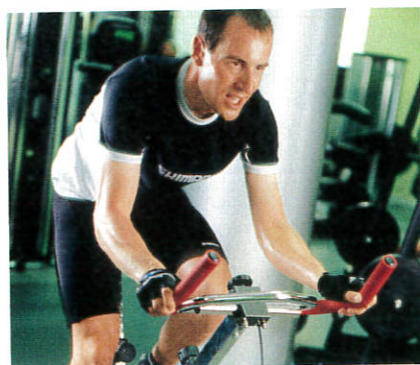
PD-M647 Off-Road Racing/BMX Pedal ^{New}

- Designed for the rigors of BMX as well as off-road racers.
- Dual-sided pop-up bindings that position the body at 12.5 degrees angle for easy and fast entry.
- Cleat tension adjustment with indicators for each rider preference.



PD-M540 Off-Road Racing Pedal ^{New}

- High performance racing pedal as PD-M959 in affordable price.
- The open binding mechanism is designed to better shed mud.
- Strong and durable chrome-moly spindle with 8mm Allen key.
- Low maintenance sealed bearing cartridge axle.



PD-M545/M424 Off-Road Sport Pedal

- Dual-sided pop-up bindings that position the body at 12.5 degrees angle for easy and fast entry.
- Large cages for non-cleated shoes for all around use.
- Low maintenance sealed bearing cartridge axle.
- Cleat tension adjustment for each rider preference.



(alloy cage)



PD-M515 Off-Road sport/Performance Pedal

- Super-compact lightweight design.
- Dual SPD bindings for easy entry.



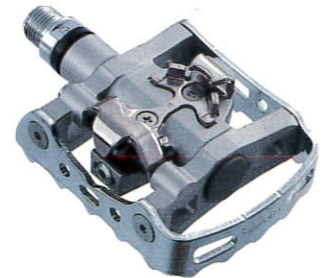
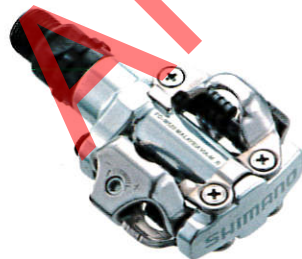
(resin cage)

PD-M324 Multi-Purpose Pedal

- Combines the efficiency of the SPD system and the convenience of a platform pedal.
- Adjustable cleat tension for each rider preference.
- A sealed mechanism and serviceable cup & cone bearings.

PD-M520 Off-Road sport/Performance Pedal New

- Open designed pedal in economical price.
- The open binding mechanism is designed to better shed mud.
- Low maintenance sealed bearing cartridge axle.



PD-MX30 BMX Pedal

- The perfect pedals for BMX, downhill and dual-slalom courses
- Heavy-duty design with 10 replaceable grip-pins for non-slip contact with shoes.
- A low maintenance chrome-moly sealed cartridge axle.



Road Shoes

SH-R215/R215E Elite Road Competition Shoe New

- The Ultimate choice of professional cyclists.
- Original hollow molded carbon fiber sole. Super light weight, stiffness and rigidity for ultra power transfer.
- Upper has 2 ventilators and breathable tongue. Broad nylon mesh area provides high breathability.
- Buckle and reinforced straps system provides foot stability for increased power transfer.
- Sponge deep heel cup with shape retaining pad enhance fit and comfort.
- SPD-SL, SPD-R/SPD (with adaptor SM-SH85) and Look* cleat compatible.
- Available in "E" width

Recommended pedal :
PD-7800



(size 40)

Available sizes

R215 : 37, 38, 39 - 46.5 in half, 47, 48

R215E (wide type): 40 - 46.5 in half, 47, 48



SH-R125 Road Sport/Performance Shoe

- An expert level road shoe at a sport price.
- Dual strap and buckle system allows precise adjustments.
- Lightweight and stiff carbon powder reinforced sole.
- SPD-SL, SPD-R, SPD and Look* cleat compatible.

Recommended pedal :
PD-R600



(size 40)

Available sizes

37 - 48 whole



SH-R151/R151E Road Sport/Competition Shoe New

- An expert level road racing or performance shoe.
- Super lightweight and rigid carbon fiber sole for power transfer.
- Upper's large nylon mesh area provides high breathability.
- Three strap closure assures an efficient fit and maintains low shoe weight.
- SPD-SL, SPD-R/SPD (with adaptor SM-SH85) and Look* cleat compatible.
- Available in "E" width

Recommended pedal :
PD-7800
PD-R600



(size 40)

Available sizes

R151 : 37, 38, 39 - 46.5 in half, 47, 48

R151E (wide type): 40 - 46.5 in half, 47, 48



SH-R097 Sport/Fitness Road Shoe

- A comfortable, lightweight shoe for performance, fitness or distance cycling.
- Triple hook-and-loop strap holds feet securely.
- Contoured molded inner sole improves comfort and support.
- SPD-SL, SPD-R, SPD and Look* cleat compatible.

Recommended pedal :
PD-R600



(size 40)

Available sizes

37 - 48 whole



SH-R097W Women Specific Sport/Fitness Road Shoe

- Designed specifically to fit women, with a lower, narrower heel section and a lower volume front end.
- Same specifications as SH-R097.

Recommended pedal :
PD-R600



(size 40)

Available sizes

36 - 42 whole



SH-TR01 Elite Multi-Sport Racing Shoe

- Specifically designed for Elite tri/duathlon racing.
- Super lightweight and rigid 3-D molded carbon fiber sole.
- Single wide 45mm strap for a secure fit.
- Reversed strap closure and oversize heel strap for fast translations.
- Seamless interior and quick drying mesh for comfort without socks.
- SPD-SL, SPD-R, SPD and Look* cleat compatible.

Recommended pedal :
PD-7800
PD-R600



(size 40)

Available sizes

36, 37 - 47 in half, 48



Road Pedals

SH-R073 Sport/Fitness Road Shoe

- An entry-level road shoe that delivers good performance.
- Dual-strap closure supports foot securely.
- Stiff fiberglass reinforced nylon outer sole.
- SPD-SL, SPD-R, SPD and Look* cleat compatible.

Recommended pedal :
PD-R540



616 (size 40)
Available sizes
36 - 48 whole



PD-7800 SPD-SL Road Racing Pedal ^{New}

- Wide pedal platform for improved foot-pedal stability for better power transfer.
- The wider shoe cleat has enhanced the entry and release mechanism and wider binding section allows for more efficient pedaling.
- Lightweight design:
Total system weight 351g (Pedals 281g, Cleats 70g).
- Wide bearing placement for enhanced load distribution.



261 (size 40)
Available sizes
36 - 48 whole



SH-T092 Sport Touring/Fitness Shoe

- A great lightweight shoe for indoor fitness or touring cyclists.
- Recessed SPD cleat mounting and non-slip smooth rubber sole lets you get off and walk whenever.
- Triple hook-and-loop straps offer subtle adjustments.

Recommended pedal :
PD-A515



667 (size 40)
Available sizes
36 - 48 whole



PD-R600 SPD-SL Sport-Competition Pedal ^{New}

- Wide pedal platform for improved foot-pedal stability.
- Wide binding section allows for more efficient pedaling.
- Low maintenance sealed cartridge axle unit.



305 (size 40)
Available sizes
36 - 48 whole



PD-A515 SPD Sport Pedal

- A great pedal for the cyclo-tourist.
- Recessed SPD system for efficient cycling.
- Low maintenance sealed cartridge axle unit.
- Adjustable cleat tension for each ride preference.



338 (size 40)
Available sizes
36 - 48 whole



PD-R540 SPD-SL Sport Pedal ^{New}

- Wide pedal platform for improved foot-pedal stability.
- Wide binding section allows for more efficient pedaling.
- Low maintenance sealed cartridge axle unit.



330 (size 40)
Available sizes
36 - 48 whole



SPD / SPD-R / SPD-SL cleat application table

The table below shows the recommended cleats for each SPD, SPD-R and SPD-SL pedal. Cleats listed under "usable cleat" can be substituted for the recommended cleat, but with certain restrictions as listed.

Pedal	PD-7800 PD-R600 PD-R540	PD-7701 PD-7700	PD-6601 PD-6600 PD-5500 PD-R535	PD-6500	PD-M959 PD-M540 PD-M520 PD-M647	PD-M858	PD-M646 PD-M545 PD-M536 PD-M424 PD-M515 PD-M505 PD-M324 PD-A515	PD-M323		
	Shoe	Recommended cleats	Recommended cleats	Recommended cleats	Recommended cleats	Recommended cleats	Recommended cleats	Usable cleats	Recommended cleats	Usable cleats
SH-R215* / SH-R215E* SH-R151* / SH-R151E* SH-R125* / SH-R097* SH-R097W* / SH-R073*	SM-SH10 SM-SH11	SM-SH91 SM-SH90 SM-SH92	SM-SH90 SM-SH91 SM-SH92	SM-SH70 SM-SH71						
SH-M221 / SH-M120 SH-M120W / SH-M180 SH-M071 / SH-M058 SH-M038 / SH-M038W SH-M034 / SH-M021 SH-T092 / SH-TR01 SH-MP66 / SH-SD60 SH-FN01***					SM-SH51	SM-SH52	SM-SH51 SM-SH52 SM-SH55	SM-SH70** SM-SH71**	SM-SH51 SM-SH52 SM-SH55	SM-SH71**

* SH-R215/SH-R215E/SH-R151/SH-R151E/SH-R125/SH-R097/SH-R073/SH-R060 can also take Look® cleats.
SH-R215/SH-R215E/SH-R151/SH-R151E can be used SPD-R cleat with adaptor.

** SM-SH70/71 road cleats can be used with non-road SPD shoes but without pontoons.

*** Not compatible with SPD-SL, SPD-R and Pop-up SPD Pedal: PD-M646 / M536 / M545 / M424 / M647 / A515.

"Look" is a registered trademark of LOOK S.A.

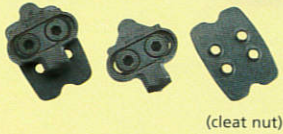
< SPD / SPD-R / SPD-SL pedal & cleat sets >

1. PD-7800, PD-7750, PD-R600 and PD-R540 package includes SM-SH11 cleat set.
 2. PD-7701, PD-6601 and PD-R535 pedal packages include SM-SH91 cleat sets.
 3. SM-SH51 cleat set is included with PD-M959, PD-M647, PD-M646, PD-M545, PD-M540, PD-M536, PD-M424, PD-M520, PD-M515, PD-M505 and PD-A515 pedal packages.
 4. SM-SH52 cleat set is included with PD-M858 pedal packages.
 5. SM-SH55 cleat set is included with PD-M324 pedal packages.
- (Some specifications do not include any cleats in the pedal packages.)

USA and Europe size comparison chart

US	3.5	4.5	5	5	5.5	6	6.5	7	7	7.5	8	8.5	8.5
European	36	37	37.5	38	38.5	39	39.5	40	40.5	41	41.5	42	42.5
US	9	9.5	10	10.5	10.5	11	11.5	12	12.5	13	14		
European	43	43.5	44	44.5	45	45.5	46	46.5	47	48	49		

Footwear Accessories and Replacement Parts



(cleat nut)

SM-SH51 SPD Cleat Sets

SM-SH51 for single direction release, and for "Easy step-in" feature

Code No.
Y-424 98200 (Cleat Nut included)
Y-424 98201 (Cleat Nut not included)



(cleat nut)

SM-SH52 SPD Cleat Sets

SM-SH52 for PD-M858 and other SPD pedals except PD-7410 or PD-6500

Code No.
Y-41M 98020 (Cleat Nut included)
Y-41M 98021 (Cleat Nut not included)



(cleat nut)

SM-SH55 SPD Cleat Sets

SM-SH55 for multi-directional release

Code No.
Y-424 98300 (Cleat Nut included)
Y-424 98301 (Cleat Nut not included)

Cleat Nut for SM-SH51/52/55

Code No. Y-40N 01000 (one piece)



SM-SH11

SM-SH10

SM-SH10/11 SPD-SL Cleat Sets

SPD-SL road racing cleat sets

- SM-SH10 : fixed mode
- SM-SH11 : floating mode

Code No.
SM-SH10 Y-42U 98020
SM-SH11 Y-42U 98010



SM-SH85 SPD-R/SPD Cleat Adapter

SPD-R / SPD Cleat Adapter for SH-R215 and R151 shoes

Code No.
Y-425 98010



(pontoon)

SM-SH90/91/92

SM-SH90/91/92 SPD-R Cleat Sets

SPD-R road racing cleat sets

- SM-SH90 for fixed binding
- SM-SH91 self aligning (6° of swing)
- SM-SH92 self aligning (10° of swing)

Code No.
SM-SH90 Y-43Y 98010 (pontoons included)
SM-SH91 Y-43Y 98020 (pontoons included)
SM-SH92 Y-43Y 98030 (pontoons included)

Side pontoons for SM-SH90/91/82/92

Code No. Y-43Y 98060 (one pair)



(pontoon)

SM-SH70/71 SPD Cleat Sets

SPD road shoe cleat sets
SM-SH70 : fixed retention type
SM-SH71 : rotational retention type

Code No.
SM-SH70 Y-426 98040 (pontoons included)
SM-SH71 Y-426 98050 (pontoons included)

Side pontoons for SM-SH70/71

Code No. Y-426 98060 (one pair)



Spikes

SH-M210-spike

Removable sole spikes for SH-M320, SH-M151 and SH-M150 shoes.

SH-M220-spike

Removable sole spikes for SH-M221, SH-M220, SH-M152, SH-M082 and SH-M082W shoes.

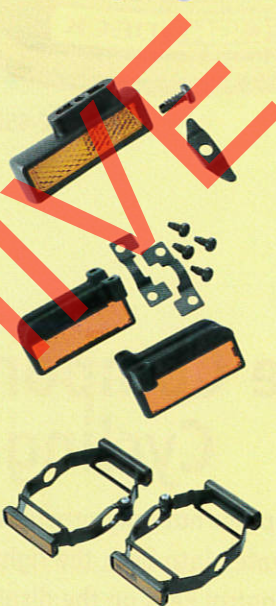


Buckle Closure Set

For SH-M221 / M180 / R214 / R125



For SH-R215



Reflector Set

SM-PD58 Code No. Y-40R 98070
For use with PD-7800, PD-7750, PD-R600 and PD-R540

SM-PD57 Code No. Y-40R 98050
For use with PD-M536

SM-PD56 Code No. Y-40R 98060
For use with PD-R535

SM-PD53 Code No. Y-40R 98020
For use with PD-7410, PD-6500, PD-6600, PD-5500 and PD-A515

SM-PD54 Code No. Y-40R 98030
For use with PD-7700

SM-PD55 Code No. Y-40R 98040
For use with PD-M858

SM-PD40 Code No. Y-41J 98010
For use with PD-M545, PD-M434 and PD-M424

SM-PD60 Code No. Y-40Z 98010
For use with PD-M647

SM-PD22 Code No. Y-41R 98070
For use with PD-M959, PD-M515, PD-M520, PD-M540 and PD-M505

SM-PD21 Code No. Y-40S 98010
For use with PD-M747 and PD-M536

For PD-M646
Code No. Y-41L 98050

For PD-MX30, PD-M324
Code No. Y-41B 98010



Shoe Insoles

Size : 36-38, 39-40, 41-42, 43-44, 45-46, 47-48
For women : 36, 37, 38, 39, 40, 41, 42



SPD Seal

Code No. Y-40E 98010

FLIGHT DECK



SC-6502



SC-6501

The Component-Integrated Cycling Computer

The FLIGHT DECK cycle computer not only provides more information than conventional cycling computers, it features control keys integrated into both the right and left shift lever units for more convenient "hands-on-bars" operation. With no control keys on the display head, FLIGHT DECK cycle computer is able to offer an extra-large screen with easy-to-read information. In addition to all the normal cycling computer functions, FLIGHT DECK cycle computer gives you a graphic gear position display, gear size display after shifting, and cadence display without the need for a crank sensor.

FLIGHT DECK cycle computer is available with a wireless wheel speed sensor, and you can program gearing for up to four bicycles into a single FLIGHT DECK cycle computer unit.

New for the coming season, the SC-6502 display head and SM-SC70 sensor kit are designed to interface with the new DURA-ACE 7800 series. The new lineup comes up with the popular benefits and user-friendliness.

FLIGHT DECK

< Features of FLIGHT DECK Cycle Computer >

- **Hands-On-Bars Operation**

Start/stop and mode selection keys are built into the right and left lever brackets for safe and convenient operation. (SM-SC70 and SM-6501 series)



SM-SC70

- **Cadence Display Without a Crank Sensor**

Gear ratio and speed data allow computation and display of pedaling cadence without the need of a separate crank speed sensor.

Main display
cadence



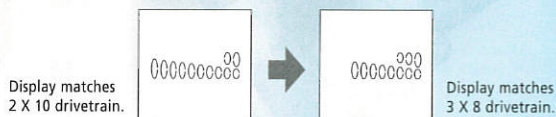
• Gear Size Display

Sprocket and chainring size are momentarily displayed after shifting to give you instant gearing positioning.



• Gear Position Display

Front and rear gear positions are always displayed so you can verify your gear at a glance. New SC-6502 can be programmed for 8, 9 or 10-speed drive trains with single, double or triple chainwheels.



• Four Bike Programing

Gearing and wheel size data can be entered for four bicycles. One FLIGHT DECK cycle computer display head can be used with up to four different bicycles, and you can get at total cycling information of respective bicycles.

• Improved Weatherproofing

FLIGHT DECK cycle computer features improved sealing that's rated to withstand water immersion to a depth of 10-meter. (SC-6502 and SC-6501 models)

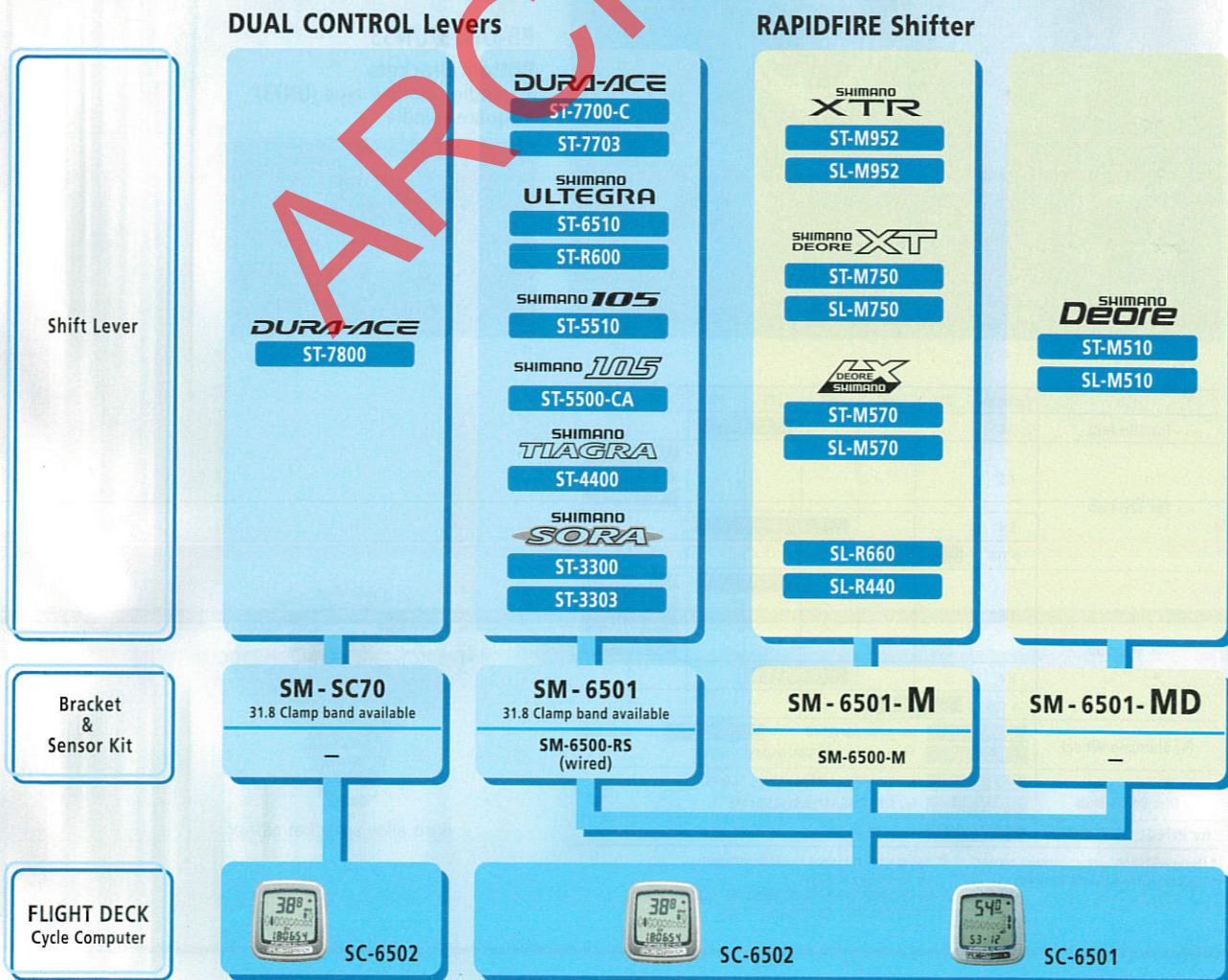
• Wireless Wheel Speed Sensor

SM-SC70 and SM-6501 series harnesses feature a wireless wheel speed sensor for a cleaner installation and easier bike maintenance.

• Other Features:

- Large easy-to-read display screen
- Elapsed time and stop watch functions
- Easy wheel diameter registration
- Control keys on bottom of display head allow off-bike data viewing
- Lap counter function
- Low battery indicator
- Battery saving auto shut-off function

< Shift Lever & Bracket / Sensor Kit Compatibility >



Non-Series Components



FC-MC08-L

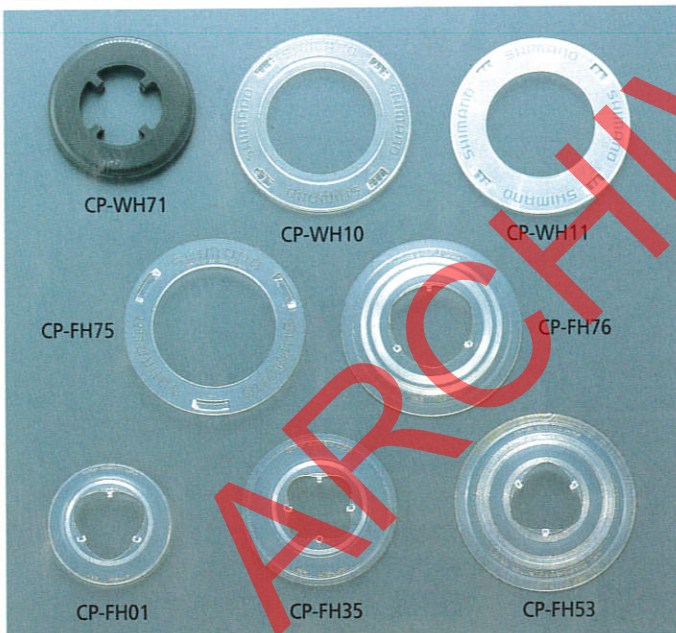


FC-MC08-S

FC-MC08-S/L crankset

- Chaining combination : 42-32-22T
- Crankarm length : 170mm only

Chain Protector

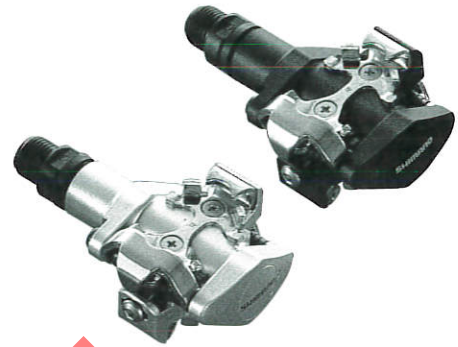


PD-M505

Off-Road Sport / Performance Pedal

- Super-compact lightweight design
- Dual SPD bindings

* For OEM only



BB-UN73/UN53

Bottom Brackets

- Spindle : Hollow type (UN73)
- Square spindle



Hub	Protector	21T	24T	26T	28T	30T	32T	34T
for 28H hub	5.4"				CP-FH40			
for 32H hub	7.5"						CP-FH56*	CP-FH75*
	5.4"			CP-FH35			CP-FH75*	CP-FH76**
for 36H hub	7.5"				CP-FH50		CP-FH53	CP-FH75*
	5.4"			CP-FH31			CP-FH76**	CP-FH76**
	ø 109	CP-FH02					CP-IF53****	CP-IF53****
for Shimano Wheel	CP-WH71	for WH-7701/R540			CP-WH20	for WH-7800		
	CP-WH10/11	*** for WH-M965/M765/M575/M540						
for Shimano Disc Brake Hub	CP-FH75*	for FH-M755 / M756 / M525 / M475						
	CP-FH76**	for FH-M755/M756/M525/M475						
for INTEGO 36H freehub	CP-IF53****	for IF-C530						

* Using with light alloy sprocket carrier ** Using with standard cassette sprocket

*** Compatible cassette sprocket CP-WH11 : for CS-M750 (11-32T)

CP-WH10 : for CS-M953 (12-34T), CS-M750 (12-34T/11-34T), CS-HG70-9 (11-32T/11-34T), CS-HG50-9 (11-32T)



light alloy sprocket carrier



■ Comfort Concept Components

NEXAVE C900 / C810 / C600 / C530 / C500, C201 — 154 – 158

Hub Dynamo — 159

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Comfort Concept Components — NEXAVE

Specifications		Series	NEXAVE C900	NEXAVE C810		
Rear Derailleur	Model No.		RD-C900	RD-C810		
	Speeds		9-speed	8-speed		
	Max. Sprocket		32-34T	33T		
	Min. Sprocket		11T	11T		
	Front Difference		12T max.	22T max.		
	Total Capacity		35T	44T		
	Sealed Bearing Tension Pulley		○	∅		
	Pulleys		13/15T	11T		
	Cable Roller Guide		○	—		
	RAPID RISE (Reverse Spring)		○	—		
	SMARTCAGE		○	—		
	Pre-Select Arm		○	—		
Advanced Light Action		○	—			
Link Pin Bushing		fluorine coated (3)	fluorine coated (6)			
Front Derailleur	Model No.		FD-C900	FD-C810		
	E-type BB Mount		○ w/o bolt	○ w/o bolt		
	Top-Low Max. Capacity		12T	22T		
	Top-Mid Min. Capacity		—	12T		
	Top Gear Teeth		46T	46T		
	Clamp Band		28.6/31.8/34.9mm	Max.34.9mm		
	Chain Stay Angle		63-66°, 66-69°	63-69°		
	SPCM™*		○	SPCM 3		
	TOP SWING Action		○	○		
	DUAL SIS		○	SPCM 3		
	Tap Fire/ Shift Lever/ Brake Lever	Model No.		SL-C900	BL-C900**	BL-C800
		DUAL SIS	Rear	9-speed	—	—
Front			double	—	—	
Brake Lever Length			—	4-finger	3-finger	
Optical Gear Display			rear:slide type	—	—	
Rear Derailleur Compatibility			Linear Action rear derailleur	—	—	
Brake Compatibility			—	V-BRAKE	V-BRAKE w/P.MODULATOR, Canti Brake, Roller Brake	
SPCM™* Front Derailleur Compatible			○	—	—	
Brake POWER MODULATOR			—	○	—	
V-BRAKE	Model No.		BR-C900	BR-C900		
	POWER MODULATOR		∅ (Integrated to BL-C900)	∅ (Integrated to BL-C900)		
	Brake Shoe Type		M70W	M70W		
	Low-flex Design		○	○		
	Linear Spring		○	○		
	Coil Spring		∅	∅		
	Spring Tension Adjuster		○	○		
Hub Roller Brake	Model No.		Not Available	BR-IM75-F	BR-IM70-R	
	Compatible hub			HB-IM70	FH-C810	
	Large Cooling Fin			○ (150mm)	○ (150mm)	
	Low Maintenance			○	○	
	Silent Multi condition Braking			○	○	
	Crankset	Model No.		FC-C900	FC-C810	
Gearing			46-34T	46-34-24T SPCM3		
Bolt Circle Diameter			112mm	100/64mm		
Crank Length			170/175mm	170/175mm		
Chain Compatibility			Super Narrow HG	Super Narrow HG		
Spider			4-arm	4-arm		
Bottom Bracket Compatibility			BB-C900	BB-UN25		
Chain Line			52.5mm	50mm		
BB Spindle Length			121mm	130mm		
Optional chain guard			○	○		
Chaincase Compatible			○	○		
Chainrings			aluminum	outer:aluminum, other:steel		
One-Key Release Crank Bolts			○	∅		

* Shimano Power Change Mechanism

** BL-C901 / BL-C600 brake lever for disc brake is shown on the next page.

*** BL-C800 / ST-C503 brake levers have a mode select to accommodate usage with disc brake / V-BRAKE with POWER MODULATOR, or cantilever / hub roller brakes.

○ = yes

∅ = no

— = Out of relation

NEXAVE C600		NEXAVE C530 INTEGO			NEXAVE C500		
RD-C600		RD-C530			RD-C503	RD-C505	
9-speed		8speed			8-speed	8-speed	
32-34T		33T			33T	33T	
11T		11T			11T	11T	
12T max.		0			22T max.	22T max.	
35T		22T			44T	44T	
∅		∅			∅	∅	
13/15T		13/13T			13/15T	13/15T	
○		○			○	○	
○		○			○	○	
○		○			○	○	
○		○			○	○	
○		○			○	○	
fluorine coated (3)		fluorine coated (3)			fluorine coated (3)	fluorine coated (3)	
FD-C600		Not Available			FD-C510	FD-C511	FD-C505
○ w/o bolt					∅	∅	○ w/o bolt
12T					22T	22T	22T
—					12T	12T	12T
46T					46T	46T	46T
28.6/31.8/34.9mm					28.6/31.8/34.9mm	28.6/31.8/34.9mm	Max.34.9mm
63-66°, 66-69°					63-66°, 66-69°	63-66°, 66-69°	63-69°
○					∅	∅	SPCM 3
○					○	∅	○
○					○	○	SPCM 3
SL-C600	BL-C600**	ST-C530 (L)	ST-C503-A		ST-C505 (L)		ST-C503-A
9-speed	—	—	8-speed		—		8-speed
double	—	special for INTEGO	triple		SPCM 3		triple
—	4-finger	4-finger	4-finger		4-finger		4-finger
rear:slide type	—	pictgram	○		—		○
Linear Action rear derailleur	—	—	cable roller guide rear derailleur		—		cable roller guide rear derailleur
—	V-BRAKE, Disc Brake	V-BRAKE w/ POWER MODULATOR, Canti Brake, Roller Brake	V-BRAKE, Disc Brake, Roller Brake***		V-BRAKE, Disc Brake, Roller Brake***		V-BRAKE, Disc Brake, Roller Brake***
○	—	∅	∅		○		∅
—	○	SM-PM40 for V-BRAKE	SM-PM50 for disc brake / SM-PM40 for V-BRAKE		SM-PM50 for disc brake / SM-PM40 for V-BRAKE		SM-PM50 for disc brake / SM-PM40 for V-BRAKE
BR-C600		BR-C600			BR-C600		
∅ (Integrated to BL-C600)		∅ (Integrated to BL-C600)			∅ (Integrated to BL-C600)		
M70W		M70W			M70W		
○		○			○		
○		○			○		
∅		∅			∅		
○		○			○		
Not Available		BR-IM70-F/IM75-F	BR-IM70-R		BR-IM70-F/IM75-F	BR-IM70-R	
		DH-3R40-GR/NT	IF-C530		HB-IM70	FH-IM70	
		○ (150mm)	○ (150mm)		○ (150mm)	○ (150mm)	
		○	○		○	○	
		○	○		○	○	
FC-C600		FC-C530			FC-C510	FC-C505	
46-34T		33T	38T	38T	46-34-24T	46-34-24T	
112mm		—			100/64mm	100/64mm	
170/175mm		170mm			170/175mm	170/175mm	
Super Narrow HG		Super Narrow HG			Super Narrow HG	Super Narrow HG	
4-arm		4-arm			4-arm	4-arm	
BB-UN25-K		BB-UN25-K			BB-UN25 (123SP)	BB-UN25 (130)	
52.5mm		44 + t mm, 46 + t mm, 47 + t mm			50	50	
117.5mm		YL117 for C.L.44 + t / 117.5 for C.L.46 + t / D-NL for C.L.47 + t			123SP	130mm	
○		small double	large double	small double	∅	∅	
○		○	∅	○	○	○	
steel		steel			aluminum / steel	aluminum / steel	
∅		∅			∅	∅	

* Shimano Power Change Mechanism

** BL-C901 / BL-C600 brake lever for disc brake is shown on the next page.

*** ST-C503 brake levers have a mode select to accommodate usage with disc brake / V-BRAKE with power modulator, or cantilever / hub roller brakes.

○ = yes

∅ = no

— = Out of relation

Specifications		Series	NEXAVE C900				NEXAVE C810			
			HB-C901	FH-C901	HB-C900	FH-C900	FH-C811	HB-C501	HB-C500	
Front Hub/ Rear Freehub	Model No.									
	Disc Brake Compatible		○		∅	○	○	∅		
	Over Lock-nut Dimension		100mm	135mm	100mm	135mm	135mm	100mm	100mm	
	Axle Length		108mm (M10)	146mm (M10)	108mm (M10)	146mm (M10)	146mm (M10)	108mm (M9)	108mm (M9)	
	Spoke Holes		32/36H	32/36H	32/36H	32/36H	32/36H	32/36H	32/36H	
	Spoke Hole Circle		L:37.8mm R:44.2mm	L:37.8mm R:47.3mm	L:44.2mm R:44.2mm	L:37.8mm R:47.3mm	74.4mm	61mm	42mm	
	Center to Flange	Right		33.5mm	21.25mm	33.5mm	21.25mm	21.05mm	35.2mm	35.8mm
		Left		25.7mm	33.15mm	33.5mm	33.15mm	34.65mm	24.2mm	35.8mm
	Speed Compatibility		—	9/8-speed	—	9/8-speed	9/8-speed	—	—	
Quick Release		○	○	○	○	○	○	○		
Sealed Mechanism		○	○	○	○	○	○	○		
Front Hub/ Rear Freehub for Roller Brake	Model No.		Not Available				FH-C810	HB-IM70		
	Brake Compatibility						BR-IM70-R	BR-IM70-F		
	Over Lock-nut Dimension						135mm	100mm		
	Axle Length						—	108mm (M9)		
	Spoke Holes						32/36H	36H		
	Spoke Hole Circle						74.4mm	52mm		
	Center to Flange	Right						21.05mm	32.6mm	
		Left						34.65mm	24.2mm	
	Speed Compatibility						9/8-speed	—		
Quick Release						∅	○			
Sealed Mechanism						○	○			
Cassette Sprocket	Model No.		CS-HG70-9		CS-HG50-9		CS-LG60			
	Speeds		9-speed		9-speed		8-speed			
	Combination		11-13-15-17-20-23-26-30-34T		11-13-15-17-20-23-26-30-34T		11-13-15-17-21-25-29-33T			
	Chain Compatibility		Super Narrow HG		Super Narrow HG		Super Narrow HG			
	Mega 9		○		○		∅			
	MegaRange		○		○		○			
HG Cassette Sprocket		○		○		LINKGLIDE				
Chain	Model No.		CN-HG93			CN-HG73				
	Type		Super Narrow HG			Super Narrow HG				
	Pin Link Plate		Zinc-alloy plated			gray				
	Roller Link Plate		gray			gray				
	Chromizing Treatment		○			○				
	Link Pin		○			○				

NEXAVE C900 / C600 / C500 DISC BRAKE - FEATURES & SPECIFICATIONS

Brake Caliper	Model No.	BR-C901	BR-C601	BR-C501*
	Brake Type	Hydraulic	Mechanical	Mechanical
	Compatible Brake Lever	BL-C901	BL-C600	V-BRAKE (w/modulator, 4finger)
	Oil	Shimano genuine mineral oil	—	—
	Mount Type	front mount : International standard/Post mount** rear mount : International standard		
	Piston	Opposed 2 - piston	Single side 1-piston	Single side 1-piston
	Material	aluminum	aluminum	aluminum/steel
	Average Weight (w/fixing bolts)	Front : 142g Rear : 144g	Front : 280g Rear : 285g	
Brake Rotor	Model No.	SM-RT61		SM-RT50
	Outside Diameter	160 mm		160 mm
	PCD	44 mm		44 mm
	Average Weight (w/fixing bolts)	160g		171g

Brake Lever	Model No.	BL-C901		
	Compatible Brake Caliper	BR-C901		
	Oil	Shimano genuine mineral oil		
	Master cylinder	○		
	Brake Hose Type	SM-BH61 (Resin)		
	Brake Hose Length (cuttable)	Front	90cm	
		Rear	130/170cm	
	Material	aluminum		
Average Weight (pair)	250g			

* Use V-BRAKE lever with POWER MODULATOR SM-PM50

** BR-C901 : international standard only

○ = yes
∅ = no
— = Out of relation

NEXAVE C600				NEXAVE C530 INTEGO				NEXAVE C500			
HB-C901	FH-C901	HB-C900	FH-C900	DH-3N70	DH-2N70	HB-NX32	HB-NX22E	HB-C501	FH-C501	HB-C500	FH-C500
100mm	135mm	100mm	135mm	100mm	100mm	100mm	100mm 93mm	100mm	135mm	100mm	135mm
108mm(M10)	146mm(M10)	108mm(M10)	146mm(M10)	108mm	108mm	100mm 140mm	140mm 150mm	108mm(M9)	146mm(M10)	108mm(M9)	146mm(M10)
32/36H	32/36H	32/36H	32/36H	32/36H	32/36H	32/36H 36H	28/36H	32/36H	32/36H	32/36H	32/36H
L:37.8mm R:44.2mm	L:37.8mm R:47.3mm	L:44.2mm R:44.2mm	L:37.8mm R:47.3mm	74mm	74mm	80mm	80mm	61mm	61mm	42mm	45mm
25.7mm	21.25mm	33.5mm	21.25mm	30mm	30mm	30mm	30mm	35.2mm	21.75mm	35.8mm	21.7mm
33.5mm	33.15mm	33.5mm	33.15mm	30mm	30mm	30mm	30mm	24.2mm	35.35mm	35.8mm	37.5mm
—	9/8-speed	—	9/8-speed	—	—	—	—	—	9/8-speed	—	9/8-speed
○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	Single	Single	○	○	○	○
Not Available				DH-3R40-QR/NT	DH-2R40-NT	IF-C530	IF-C530-V5	HB-IM70		FH-IM70	
				BR-IM70-F / IM75-F		BR-IM70-R	BR-M420	BR-IM70-F / IM75-F		BR-IM70-R	
				100mm	100mm	136mm		100mm		135mm	
				108mm 140mm	140mm	197		108mm(M9)		185mm(M10)	
				36H	36H	32/36H		36H		36H	
				80mm	80mm	71.5mm		52mm		45mm	
				32.6mm	32.6mm	21.8mm		32.6mm		23.2mm	
				24.3mm	24.3mm	36.7mm		24.2mm		36.8mm	
				—	—	3		—		9/8-speed	
				○	○	○		○		Nut type	
				Single	Single			○		○	
CS-HG70-9		CS-HG50-9		CS-LG60				CS-LG60			
9-speed		9-speed		8-speed				8-speed			
11-13-15-17-20-23-26-30-34T		11-13-15-17-20-23-26-30-34T		11-13-15-17-21-25-29-33T				11-13-15-17-21-25-29-33T			
Super Narrow HG		Super Narrow HG		Super Narrow HG				Super Narrow HG			
○		○		○				○			
○		○		○				○			
○		○		LINKGLIDE				LINKGLIDE			
CN-HG93				CN-HG73				CN-HG73			
Super Narrow HG				Super Narrow HG				Super Narrow HG			
Zinc-alloy plated				gray				gray			
gray				gray				gray			
○				○				○			

C201 - FEATURES & SPECIFICATIONS

Rapid Rise Rear Derailleur	Model No.	RD-C201	
	Speeds	8-speed	
	Max. Sprocket	28-34T	
	Min. Sprocket	11T	
	F / Difference	20T max.	
	Total Capacity	43T	
	Rapid Rise	○	
	Wheel-Type Cable Guide	○	
	Pre-Select Arm	○	
	Advanced Light Action	○	
15T Mega Pulley	○		
15T & 13T Pulleys	13T / 11		
Front Derailleur	Model No.	FD-C202	FD-C201-E
	E-type BB Mount	○	○ (w/o bolt)
	Top-Low Max. Capacity	20T	18T
	Top-Mid Min. Capacity	10T	8T
	Top Gear Teeth	48T	42T
	Multi Clamp Band	○	○
	Clamp Band	28.6/31.8 mm	28.6/31.8/34.9 mm
	Chain Stay Angle	66-69°	63-66***, 66-69°
	Dual Pull System	○	○
	TOP SWING Action	○	○

Crankset	Model No.	FC-C203	FC-C201	
	Gearing	48-38-28T	42-34-24T	
	Crank Length	170mm	170mm	
	Chain Compatibility	HG	HG	
	Spider	4-arm	4-arm	
	Bottom Bracket	BB-UN25	BB-UN25	
	Chain Line	47.5 / 50.0mm	47.5 / 50.0mm	
	BB Spindle Length	YL117 / ZL122	YL117 / ZL122	
	DUAL SIS Compatible	○	○	
	Optional Chain Guard	○	○	
Aluminum Crank Arm	○	○		
Chain Case Compatible	○	○		
Front Hub & Freehub	Model No.	HB-C201	FH-C201	
	Over Lock-nut Dimension	100 mm	135 mm	
	Axle Length	108mm (M9)	146mm (M10)	
	Spoke Holes	32 / 36H	32 / 36H	
	Spoke Hole Circle	38 mm	45 mm	
	Center to Flange	Right	35.8 mm	22.6 mm
		Left	35.8 mm	38.0 mm
	Speed Compatibility	—	8-speed	
	Quick Release	○	○	
	Sealed Mechanism	○	○	

* Use V-BRAKE lever with POWER MODULATOR SM-PM50

** Except 34.9mm seat tube type

Cycle Computer (Head Display unit) Specifications

Series		NEXAVE
Model No.		SC-C810
Wheel size range	24" - 26" - 700C	○
Front single gear available		—
Auto Start & Auto Stop		○
Water resistant (1bar)		○
Current Speed		○
Clock		○
Trip Time		—
Trip Distance		○
Trip Meter Reset		○
ODO Meter		○
Gear change information		○
Maximum Speed		—
Average Speed		—
Gear Position display		○
Gear auto and manual Select Switch		SW-C810
Low Battery Display		○
RD-auto and manual Display		○
Suspension auto and manual Select Switch		SW-C810
Suspension auto and manual Display		○
Suspension hard and soft Display		○
Display panel detachable		○
Back Light		○

Front Suspension (NEXAVE / Di2) Specifications

Series		NEXAVE	
Model No.		FS-C810	
Adjuster	Auto	○	
	Manual	○	
Travel		70mm (60+10)	
Damping		Oil	
Spring		Coil	
Wheel size		700C	26"
V-BRAKE Fixation		○	∅
Disc brake (International A) fixation		○	○
HRB compatible		○*1	○*1
Dynamo Eye		—	
Mudguard Eye		○	
Speed Sensor bracket		—	
Disc BRK cable holder		○	
Crown	Material	Aluminum	
	Finish	Black Anodized	
Stanchion	Material	Cromoly	
	Finish	Chrome Plated	
Steer Diameter		25.4mm	28.6mm
Steer Threads		1 x 24T	1-1/8 x 26T
Threadless		—	○
Cone race		26.4 / 27mm	30mm
Lower Tubes	Material	Magnesium	
	Color	Silver	
Note		*1 : only BR-IM75-F	

Electronic Wire Cable (NEXAVE / Di2) Specifications

Series		NEXAVE				
Model No.		EW-C810				
		EW-C810-RD	EW-C810-SC	EW-C810-FH	EW-C811-FH	EW-C810-SUS
Length		550mm	1,250mm	450mm	540mm	400mm 500mm
Cutttable		—	○	○	○	○
For		RD-FD	SC-FD	FH-C810-FD	FH-C811-FD	FS-Sc bracket RS-FD

Rear Suspension (NEXAVE / Di2) Specifications

Series		NEXAVE	
Model No.		RS-C810-25	RS-C810-45
Adjuster	Auto	○	○
	Manual	○	○
Travel		20mm	30mm
Damping		—	—
Spring		Air	Air
Eye to Eye		125mm	145mm

Switch (NEXAVE / Di2) Specifications

Series		NEXAVE
Model No.		SW-C810
Lever type		Seasaw & Button type
Front		Triple
Rear		8 speed
Harness holder		—
Compatible Brake Lever		BL-C901/C900/C800/C600
Compatible Front Derailleur		FD-C810
Compatible Rear Derailleur		RD-C810
Compatible Flight Deck		SC-C810
Beep (on and off switch)		○

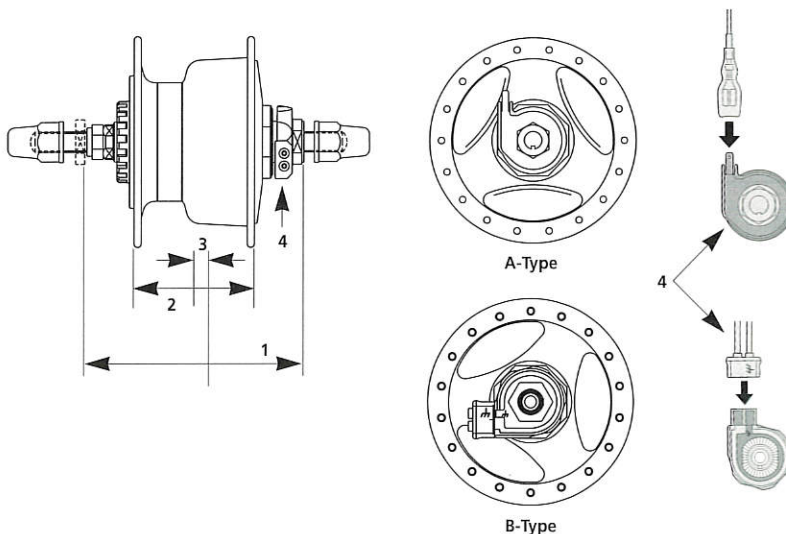
○ = yes
 ∅ = no
 — = Out of relation

Hub Dynamo Specifications

* Use with new AUTO D Inter-3 unit (AI-3S30) only.

Series		NEXAVE			NEXAVE / NEXUS				
Model No.		HB-NX70	DH-2R40	HB-NX60	DH-3R40	HB-NX50		DH-3NA1*	
Type		Disc	Roller	Roller	Roller	Roller		Regular	
Voltage		6V	6V	6V	6V	6V		6V	
Output		3.0W	2.4W	2.4W	3.0W	3.0W		3.0W	
QR type		○	—	—	○	—	○	—	
Nut type		—	○	○	—	○	—	○	
1	Over Locknut Dim.	100mm	100mm	100mm	100mm	100mm	100mm	100mm	
2	Flange Distance	54.4	53.3	53.3	53.3	53.3	53.3	60.0	
3	Offset	2.8	2.35	2.35	2.35	2.35	2.35	0	
Hole Reference (PCD)		80mm	80mm	80mm	80mm	80mm	80mm	80mm	
Axle Length		108mm	140mm	140mm	108mm 140mm	108mm	140mm	140mm	
Spoke Size		#14	#14	#14	#14	#14	#14	#14	
Spoke Hole		28H	—	—	—	—	—	—	
		32H	—	—	—	—	—	○	
		36H	○	○	○	○	○	○	○
Roller Brake Modulator Grade	More than 26 Inches	High	—	○	—	○	—	—	
		Standard	—	—	○	—	○	—	
		20-24 Inches	—	—	—	—	—	—	—
4	Electric power output connector	A-Type	—	—	—	—	—	—	
		B-Type	○	○	○	○	○	○	—
		C-Type	—	—	—	—	—	—	○

Series		NEXUS					C050 SERIES					
Model No.		HB-NX32		HB-NX22			HB-C050-DR	HB-C050-DRC	HB-C051-DR	HB-C051-DRC	HB-C050-D	HB-C051-D
Type		Regular		Regular			Roller	Roller	Roller	Roller	Regular	Regular
Voltage		6V		6V			6V	6V	6V	6V	6V	6V
Output		3.0W		2.4W			2.4W	2.4W	3.0W		2.4W	3.0W
QR type		○	—	○	—	—	—	—	—	—	—	—
Nut type		—	○	—	○	○	○	○	○	○	○	○
1	Over Locknut Dim.	100mm		100mm 93mm			100mm	100mm	100mm	100mm	100mm	100mm
2	Flange Distance	60.0		60.0			53.3	53.3	53.3	53.3	60.0	60.0
3	Offset	0		0			2.35	2.35	2.35	2.35	0	0
Hole Reference (PCD)		80mm		80mm			80mm	80mm	80mm	80mm	80mm	80mm
Axle Length		108mm	140mm	108mm	140mm	150mm	140mm/M9					
Spoke Size		#14		#14			#14	#14	#14	#14	#14	#14
Spoke Hole		28H	—	—	○	○	—	—	—	—	—	—
		32H	○	—	○	—	—	—	—	—	—	—
		36H	○	○	○	○	○	○	○	○	○	○
Roller Brake Modulator Grade	More than 26 Inches	High	—	—	—	—	○	—	○	—	—	—
		Standard	—	—	—	—	—	—	—	—	—	—
		20-24 Inches	—	—	—	—	—	○	—	○	—	—
4	Electric power output connector	A-Type	—	—	○	—	—	—	—	—	—	—
		B-Type	○	○	—	○	○	○	○	○	○	○
		C-Type	—	—	—	—	—	—	—	—	—	—



Internally Geared Hubs < Inter-8 / Inter-7 >

Function Name		Inter-8				Inter-7		
Model No.		SG-8R20	SG-8R25	SG-8R20-VS	SG-8R25-VS	SG-7R46	SG-7C26	SG-7C16
Speed		8-speed				7-speed		
Silent Clutch		○				∅		
Shifting POWER MODULATOR		○				○		
Shifting Lever		ST-8S20 / SB-8S20				SB-7S45, SL-7S10, ST-7S20		
Internal Brake	Coaster	—				—		
	Inter M Brake	BR-IM41 / 50 / 70-R				BR-IM70-R		
V-BRAKE		○				—		
Hub Shell Material		Aluminum				Aluminum		Steel
Corrosion Resist Coating		○				○		
Gear Ratio	Total	307%				244%		
	1	0.527				0.632		
	2	0.644				0.741		
	3	0.748				0.843		
	4	0.851				0.989		
	5	1				1.145		
	6	1.223				1.335		
	7	1.419				1.545		
8	1.615				—			
Axle Length (mm)		184				201 / 182	175.5	175.5
Over Lock-nut Dimension (mm)		132				130	127	127
Spoke Hole		36H				36H		
Spoke Size		#13, #14				#13, #14		
Sprocket Teeth		16, 17, 18, 19, 20, 21, 22, 23T				16, 18, 19, 20, 21, 22, 23T		
Chain-Line (mm)	15T	—				—		
	16T	—				45.3	46.5	46.5
	16T - 23T	42.7 / 47.7				—		
	18T - 23T	—				40.3 / 45.3	41.5 / 46.5	41.5 / 46.5
Average Weight		1750g	1550g	1750g	1550g	1465g	1760g	1860g
Gear Change Support		○				∅		
Cassette Joint		CJ-8S20 / CJ-8S40				CJ-7S40 / CJ-NX10 / CJ-NX40		

* After assemble Motor Unit, it becomes 130.2mm.

** 40.7mm for AUTO-D

Inter-S Shifters < Inter-8 / Inter-7 >

Function Name	Inter-S				
Model No.	SB-8S20	ST-8S20	SB-7S45	SL-7S10	ST-7S20
Speed	8-speed		7-speed		
Optical Gear Display	Dial-Type	○	Dial-Type	Dial-Type	Dial-Type
Stainless Steel SL Inner Cable	○	○	○	○	○
Sealed Outer Cable Cap	○	○	○	○	○
Max. Number of Shifts with a Single Stroke	7	1	6	6	1
Brake Lever Integrated	○	○	○	∅	∅
Brake Lever Size	4 Finger	3 Finger	3 Finger	—	—
Left Hand Brake Lever	BL-IM60	BL-IM65	BL-IM45	—	—
Brake Compatibility	V.R.C *	V.R.C *	V.R.C *	—	—

* V.R.C : V-BRAKE w/POWER MODULATOR / Roller Brake, Canti-Lever Brake

Inter-C Cranksets

Function Name	Inter-C					
Model No.	FC-NX80	FC-NX40	FC-NX70	FC-NX40	FC-NX30	FC-S100
Peddalling POWER MODULATOR	—	—	○	∅	∅	∅
Chain Ring Teeth	46T	33/38T	33T	33/38T	33/38T	33/38T
Chain Ring	Material	Aluminum	Steel	Steel	Steel	Steel
	Finish	—	Black	Black	Black	Black
Crank Length (mm)	170	170	170	170	170	170/150
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Anodized	Barrel / Painted	Barrel / Painted	Painted
Chain Line (mm)	43	45	45	45	45	45
Bottom Bracket	BB-UN25	BB-UN25	BB-UN25	BB-UN25	BB-UN25	BB-UN25 Axle Length 122.5mm

Front Hubs

Model No.	Hub				Dynamo Hub					
		HB-IM40	HB-IM30	HB-NX60	HB-NX50	DH-3R40	DH-2R40-NT	DH-3NA1	HB-NX32	HB-NX22-E
Over Lock-nut Dimension	100mm									
Axle Length (Cap Nut)	140 (Nut)	140 (Nut)	140 (Nut)	108(QR) / 140(Nut)	108(QR) / 140(Nut)	140mm	140mm	108(QR) / 140(Nut)	108(QR) / 140(Nut)	
Spoke Hole	36H	28/36H	36H	36H	36H	36H	36H	32/36H	36H	
Spoke Size	#14									
Spoke Hole P.C.D	52 mm				80 mm					
Hub Dynamo	∅				○ (6V 2.4W)	○ (6V 3W)	○ (6V 3W)	○ (6V 2.4W)	○ (6V 3W)	○ (6V 3W)
Brake POWER MODULATOR	○*	○**	○*	○*	○*	○*	—	—	—	
Inter M compatible	○	○	○	○	○	○	—	—	—	
Compatible Electric Switch	—	—	SW-NX30	SW-NX30	SW-NX30	SW-NX30	for AI-3S30	SW-NX30	SW-NX30	

* for more than 26" wheel size

** HB-IM30 for 20-24" wheel size and 20 to 50kg rider's weight.

○ = yes
∅ = no
— = Out of relation

Internally Geared Hubs < Inter-4 / Inter-3 >

Function Name	Inter-4	AUTO-D	Inter-4	AUTO-D	Inter-3	AUTO-D	Inter-3	AUTO-D						
Model No.	SG-4R35	SG-4R35A	SG-4C35	SG-4C35A	SG-3R40		SG-3C40							
Speed	4-speed				3-speed									
Silent Clutch	○				∅									
Shifting POWER MODULATOR	○				○									
Shifting Lever	SB-4S35, SL-4S35	AI-4S35	SB-4S35, SL-4S35	AI-4S35	SB-3S30/3S30-J, SL-3S35/3S95	AI-3S30/10	SB-3S30/3S30-J, SL-3S35/3S95	AI-3S30/10						
Internal Brake	Coaster	—	○	○	—		○							
	Inter M Brake	BR-IM70-R	BR-IM70-R	—	BR-IM41-R, BR-IM31-R		—	BR-IM75-F						
V-BRAKE	—				—									
Hub Shell Material	Steel				Steel									
Corrosion Resist Coating	○				○									
Gear Ratio	Total	184%			186%									
	1	1.000			0.733									
	2	1.244			1.000									
	3	1.500			1.360									
	4	1.843			—									
	5	—			—									
	6	—			—									
	7	—			—									
Axle Length (mm)	202 / 182		174.5		170.3	176.8	170.3	176.8	168/178	175	175	168/178	175	175
Over Lock-nut Dimension (mm)	130.2	130.2*	130.2	130.2*	120.4	126.8	120.4	126.8	120	127.4	126.7	120	127.4	126.7
Spoke Hole	28 / 36H		28 / 36H		28 / 36H									
Spoke Size	#13, #14				#13, #14									
Sprocket Teeth	(15, 16) 18, 19, 20, 21, 22, 23T	(16, 18, 19) 20, 21, 22, 23T	(15, 16) 18, 19, 20, 21, 22, 23T	(16, 18, 19) 20, 21, 22, 23T	15, 16, 18, 19, 20, 21, 22, 23T									
Chain-Line (mm)	15T	—	—	—	42.2	40.5	42.2	40.5	43.7	42.2	42.5	43.7	42.2	42.5
	16T	—	—	—	44.7	43	44.7	43	46.2	44.7	45	46.2	44.7	45
	16T - 23T	—	—	—	—	—	—	—	—	—	—	—	—	—
	18T - 23T	40.7 / 45.7	40.7**	40.7 / 45.7	40.7**	39.7/44.7	38 / 43	39.7/44.7	38 / 43	41.2/46.2	39.7/44.7	40/45	41.2/46.2	39.7/44.7
Average Weight	1370g		1700g		885g			1120g						
Gear Change Support	○				○									
Cassette Joint	CJ-7S40/CJ-NX10/CJ-NX40	AI-4S41M	CJ-7S40/CJ-NX10/CJ-NX40	AI-4S41M	Bell Crank 3									

* After assemble Motor Unit, it becomes 130.2mm.

** 40.7mm for AUTO-D

Inter-S Shifters < Inter-4 / Inter-3 >

Function Name	Inter-S		AUTO-D	Inter-S				AUTO-D
Model No.	SB-4S35	SL-4S35	AI-4S35	SB-3S30	SB-3S30-J	SL-3S35	SL-3S95	AI-3S30
Speed	4-speed		—	3-speed				—
Optical Gear Display	Dial-Type	Dial-Type	LED	Dial-Type	Dial-Type	Dial-Type	Dial-Type	—
Stainless Steel SL Inner Cable	○	○	—	○	○	○	○	—
Sealed Outer Cable Cap	○	○	—	○	○	○	○	—
Max. Number of Shifts with a Single Stroke	3	3	1	2	2	2	1	1
Brake Lever Integrated	○	∅	○	○	○	∅	∅	∅
Brake Lever Size	3 Finger	—	3 Finger	3 Finger	2.5 Finger	—	—	—
Left Hand Brake Lever	BL-IM33	—	BL-IM33	BL-IM32	BL-IM32-J	—	—	***
Brake Compatibility	R.C **	—	R.C **	R.C **	R.C **	—	—	V.R.C.

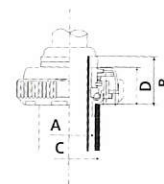
** R.C : Roller Brake, Canti-Lever Brake

Inter-M Brakes

Function Name	Inter-M						
Model No.	BR-IM75-F	BR-IM70-R	BR-IM70-F	BR-IM41-F	BR-IM41-R	BR-IM31	
	Front	Rear	Front	Front	Rear	Rear	
Inter-8 Recommended	○	○	○	—	—	—	
Inter-7 Recommended	○	○	○	○	○	○	
Inter-4 Recommended	○	○	○	○	○	○	
Inter-3 Recommended	○	○	○	○	○	○	
Cooling Disc	With	○ (ø150)	○ (ø150)	○ (ø150)	○ (ø90)	○ (ø100)	○ (ø90)
	Without	—	—	—	—	—	○
Recommended Brake Lever	Right	ST-8S20/SB-8S20		SB-7S45/SB-4S35		SB-7S35/SB-3S30	
	Left	BL-IM65/60		BL-IM45/BL-IM33		BL-IM33/BL-IM32	
Inner Cable Hooking Type	○		○	○	—	—	

Headset

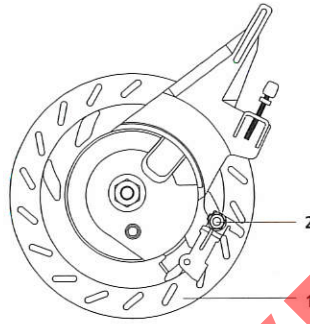
Model No.	HP-NX10
A	ø29.85 - 30.0 mm or ø30.01 - 30.2 mm
B	30.5 - 31.5 mm
Front Fork Stem Thread Size	BC1" X 24 T.P.I
C	ø38 mm (Max.)
D	21.7 mm
Head Tube Material	Steel



○ = yes
∅ = no
— = Out of relation

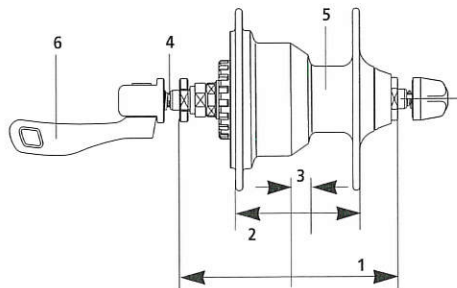
Hub Roller Brake Specifications

Function Name		Inter-M						Inter-M			
Series		NEXAVE				NEXUS		C050			
Model No.		BR-IM75-F	BR-IM70		BR-IM50		BR-IM41		BR-IM31	BR-C050-IM	
		Front	Front	Rear	Front	Rear	Front	Rear	Rear	Front	Rear
Brake Type	Multi condition	○	○	○	—	—	—	—	—	○	○
	Regular	—	—	—	○	○	○	○	○	—	—
Cooling Fin Diameter		150mm	150mm	150mm	130mm	130mm	90mm	100mm	90mm	160mm	160mm
1 Structure		Hyper	Hyper	Hyper	Normal	Normal	Normal	Normal	Normal	Hyper	Hyper
	Without Cooling Fin	—	—	—	—	—	Available	Available	Available	—	—
2 Inner Cable Quick Release		○	○	○	○	○	○	○	—	—	○
Note		Disc Brake mount compatible									

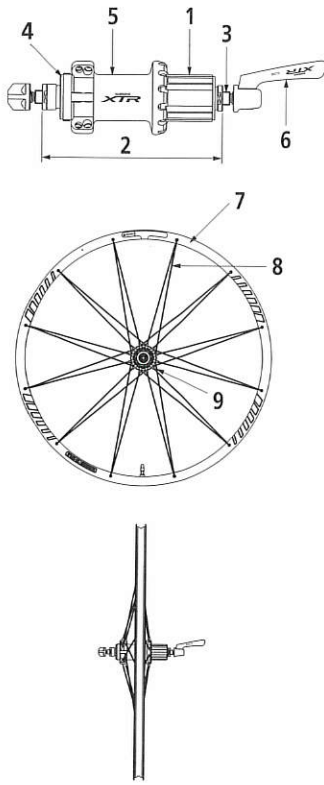


HB for Hub Roller Brake Specifications

Series		NEXAVE			NEXUS		C-SERIES		TOURNEY	
Model No.		HB-IM70	HB-IM50	HB-IM45	HB-IM40	HB-IM30	HB-C052-IM-F	HB-C052C-IM-F	HB-IM20-E	HB-IM20-EC
Spoke Holes	24H	—	—	—	—	—	—	—	—	—
	28H	—	—	—	—	—	—	—	—	—
	32H	—	—	—	—	—	—	—	—	—
	36H	○	○	○	○	○	○	○	○	○
	40/48H	—	—	—	—	—	—	—	—	—
	Hole PCD (mm)	70	52	38	38	38	70	38	62	62
1 O.L.D. (mm)		100	100	100	100	100	100	100	100	100
2 Flange Distance		56.8	61.5	61.5	61.5	61.5	56.8	56.8	56.8	56.8
3 Offset		4.2	4.9	4.3	4.3	4.3	3.7	3.7	3.7	3.7
4 Axle	QR	○	○	—	—	—	—	—	—	—
	QR Skewer Length	129mm	129mm	—	—	—	—	—	—	—
	Axle Length	108mm (M9)	108mm (M9)	—	108mm (M9)	108mm (M9)	—	—	—	—
	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Nut	—	—	○	○	○	○	○	○	○
	Axle Length	—	—	140mm (M9)	140mm (M9)	140mm (M9)	140mm (M9)	140mm (M9)	140mm (M9)	140mm (M9)
Seal		○	○	○	○	○	○	○	○	○
5 Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel	Aluminum
	Finish	Polished	Polished	Machined	Anodized	Anodized	Painted	Painted	Painted	Painted
6 Quick Release Lever	Material	Aluminum	Aluminum	—	—	—	—	—	—	—
	Finish	Anodized	Anodized	—	—	—	—	—	—	—
Note		26 inches or more	26 inches or more	26 inches or more	26 inches or more	20-24 inches	26 inches or more	20-24 inches	26 inches or more	20-24 inches



Wheel Specifications (MTB)



Model No.		WH-M965-disc (front)	WH-M965-disc (rear)	WH-M765-disc (front)	WH-M765-disc (rear)	
1	Freehub Body	Compatible Cassette Sprockets	—	9-speed	—	
		11T Top Compatible	—	○	○	
		Material	—	titanium	—	
2	O.L.D	100mm	135mm	100mm	135mm	
3	Axle	QR	○	○	○	
		QR Skewer Length	133mm	168mm	133mm	168mm
		Length	108mm	146mm	108mm	146mm
		Material	titanium	titanium	steel	steel
4	Labyrinth and Contact Seal	○	○	○	○	
5	Hub Shell	Disc Brake Mount	Center Lock	Center Lock	Center Lock	
		Material	aluminum	aluminum	aluminum	aluminum
		Finish	anodized	anodized	anodized	anodized
6	QR Lever	Material	aluminum	aluminum	aluminum	
		Finish	anodized	anodized	anodized	anodized
7	Rim	Size	559 x 18 (26")	559 x 18 (26")	559 x 18 (26")	
		Material	aluminum	aluminum	aluminum	aluminum
		Finish	anodized	anodized	anodized	anodized
		Height	20.5mm	20.5mm	20.5mm	20.5mm
		Width	23.3mm	23.3mm	23.3mm	23.3mm
8	Spokes	No. of Spokes	24	24	24	
		Length	272mm	252/272mm	272mm	252/272mm
		Bladed	—	—	—	—
		Material	stainless steel	stainless steel	stainless steel	stainless steel
9	Nipple	Size	4.3mm (#11)	4.3mm (#11)	4.3mm (#11)	
		Thread	BC 2 (#14)	BC 2 (#14)	BC 2 (#14)	BC 2 (#14)
		Material	aluminum	aluminum	aluminum	aluminum
	Spoke Protector (Option)	—	CP-WH10/WH11	—	CP-WH10/WH11	
	Reflector (Option)	CAT EYE : RR-550-WUW / W SMN03 (CPSC / JIS / BS), RR-550-WUA / A SMN03 (AS), RR-317-WUA / 4K SMN03 (DIN)				
	Average Weight*	800g	942g	831g	1016g	
	Note	Recommended Tires 26 x 1.50-2.25		Recommended Tires 26 x 1.50-2.25		
		* Weight does not include quick release.		* Weight is not final and does not include quick release.		

Model No.		WH-M575-disc (front)	WH-M575-disc (rear)	WH-M540 (front)	WH-M540 (rear)	
1	Freehub Body	Compatible Cassette Sprockets	—	8/9-speed	—	
		11T Top Compatible	—	○	○	
		Material	—	steel	—	
2	O.L.D	100mm	135mm	100mm	135mm	
3	Axle	QR	○	○	○	
		QR Skewer Length	133mm	168mm	133mm	168mm
		Length	108mm	146mm	108mm	146mm
		Material	steel	steel	steel	steel
4	Labyrinth and Contact Seal	○	○	○	○	
5	Hub Shell	Disc Brake Mount	standard	standard	—	
		Material	aluminum	aluminum	aluminum	aluminum
		Finish	anodized	anodized	anodized	anodized
6	QR Lever	Material	aluminum	aluminum	aluminum	
		Finish	anodized	anodized	anodized	anodized
7	Rim	Size	559 x 18 (26")	559 x 18 (26")	559 x 18 (26")	
		Material	aluminum	aluminum	aluminum	aluminum
		Finish	anodized	anodized	anodized	anodized
		Height	28mm	28mm	28mm	28mm
		Width	24mm	24mm	24mm	24mm
8	Spokes	No. of Spokes	16	16	16	
		Length	262mm	260mm	256mm	250/266mm
		Bladed	○	○	○	○
		Material	stainless steel	stainless steel	steel	steel
9	Nipple	Size	4.3mm (#11)	4.3mm (#11)	4.3mm (#11)	
		Thread	BC 2.3 (#13)	BC 2.3 (#13)	BC 2 (#14)	BC 2.3 (#13) / BC 2 (#14)
		Material	aluminum	aluminum	aluminum	aluminum
	Spoke Protector (Option)	—	CP-WH10/11	—	CP-WH10/11	
	Reflector (Option)	CAT EYE : RR-550-WUW SW (CPSC / JIS / BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)				
	Average Weight*	945g	1160g	841g	1082g	
	Note	Recommended Tires 26 x 1.50-2.25				
		* Weight does not include quick release.				

High-End MTB Components

Specification		Series			XTR			DEORE XT			DEORE LX Gray/Silver/Gold			DEORE	
Front Derailleur		FD-M960	FD-M960-E	FD-M961	FD-M760	FD-M760-E	FD-M761	FD-M570	FD-M570-E	FD-M571	FD-M510	FD-M511			
Model No.		FD-M960	FD-M960-E	FD-M961	FD-M760	FD-M760-E	FD-M761	FD-M570	FD-M570-E	FD-M571	FD-M510	FD-M511			
TOP SWING Action		○	○	∅	○	○	∅	○	○	∅	○	∅			
Rear Compatibility		9-speed	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed			
Total Top-low Max. Capacity		22T	22T	22T	22T	22T	22T	22T	22T	22T	22T	22T			
Top-middle Min. Capacity		12T	12T	12T	12T	12T	12T	12T	12T	12T	12T	12T			
Top Gear Teeth		44T	44T	44T	44T	44T	44T/48T	44/48T	44T	44/48T	44/46/48T	44/46/48T			
Cable Routing		dual-pull type			top & bottom route types available			top & bottom route types available			dual-pull type				
Chain Stay Angle		66 – 69°			66 – 69°		66 – 69°	66 – 69°		63 – 66°/66 – 69°	63 – 66°/66 – 69°				
Mount Type	Seat Tube Band Mount	28.6/31.8/34.9mm	—	28.6/31.8/34.9mm	28.6/31.8/34.9mm	—	28.6/31.8/34.9mm	28.6/31.8/34.9mm	—	28.6/31.8/34.9mm	28.6 mm (w/adaptor) 31.8 mm (w/adaptor) 34.9 mm				
	Band Material	aluminum/anodized	—	aluminum/anodized	aluminum/painted	—	aluminum/painted	aluminum/painted	—	aluminum/painted	aluminum/painted				
	B.B. Mounting Plate	—	○	—	—	○	—	—	○	—	—				
	Plate Material	aluminum			—	aluminum	—	—	aluminum	—	—				
Outer Link		steel/painted		aluminum/anodized	steel/painted		aluminum/painted	steel/painted		aluminum/painted	aluminum/painted				
Inner Link		aluminum/painted			aluminum/painted			aluminum/painted			aluminum/painted				
Link Bushing		outer & inner			inner		outer & inner	inner		outer & inner	—				
Chain Cage		aluminum/nickel plated		steel/nickel plated	steel/chrome plated			steel/pearl bright finish			steel/chrome plated	steel/pearl bright			
Average Weight		132g (M)	145g	149g (M)	158g	180g	165g	128g	138g	140g	128g (ø34.9)				
Crankset		FC-M960			FC-M760	FC-M761		FC-M572			FC-M510-L/S*	FC-M445-L/S			
HOLLOWTECH Crank Arm		○			○		○			○		○			
Splined Octalink Mount		○			○		○			○		○			
4-Arm Chaining		○			○		○			○		○			
Chain		Super Narrow HG			Super Narrow HG		Super Narrow HG			Super Narrow HG		Super Narrow HG			
Number of Teeth		44-32-22T***			44-32-22T	48-36-26T		44-32-22T			44-32-22T	44-32-22T			
Bolt Circle Diameter		146/102/64mm			104/64mm		104/64mm			104/64mm		104/64mm			
Crank Arm Length		165/167.5/170/172.5/175/177.5/180mm			165/170/175/180mm		170/175mm			170/175mm		170/175mm			
Crank Arms		forged ultra duralumin / hollow type			forged aluminum / hollow type		forged aluminum / hollow type			forged aluminum / hollow type		forged aluminum / hollow type			
Outer Chaining		7075 aluminum			7075 aluminum		aluminum			aluminum		steel			
Middle Chaining		7075 aluminum			aluminum		aluminum			steel		steel			
Inner Chaining		7075 aluminum			aluminum		steel			steel		steel			
Chaining Bolts & Nuts		7075 aluminum			aluminum (bolt), steel (nut)		stainless steel (bolt), steel (nut)			stainless steel (bolt), steel (nut)		stainless steel (bolt), steel (nut)			
Chain Guard		∅			○ (option)		○ (option)			○ (option)		○ (option)			
Average Weight		797g**** (175mm)			860g**** (FC-M760, 175mm)		644g (175mm)			706g (175mm)	715g (175mm)	785g (175mm)			
Bottom Bracket		—			—		BB-ES71		BB-ES71-E		BB-ES51	BB-ES51-E	BB-ES51(-K)	BB-ES51	
Model No.		—			—		BB-ES71		BB-ES71-E		BB-ES51	BB-ES51-E	BB-ES51(-K)	BB-ES51	
Octalink Splined Mount		—			—		○		○		○	○	○	○	
E-type**		○			○		∅		○		∅	○	∅	○	
Chain Line		50mm			50mm		47.5 mm	50 mm	47.5 mm	50 mm	47.5 mm	50 mm	47.5 mm	50 mm	
B.B. Shell Width		73/68mm			73/68mm		73/70/68 mm	73/70/68 mm	68 mm	73 mm	73/68 mm	73/68 mm	73/68 mm	73 mm	
Spindle Length		133.5mm			133.5mm		113 mm	118 mm	113 mm	118 mm	113 mm	118 mm	121 mm	126 mm	
Spindle		ø22.2mm chrome-moly steel / hollow type			ø22.2mm chrome-moly steel / hollow type		ø22.2mm chrome-moly steel / hollow type		ø22.2mm chrome-moly steel / hollow type		ø22mm chrome-moly steel / hollow type	ø22mm chrome-moly steel / hollow type	chrome-moly steel	chrome-moly steel	
Adapter		aluminum			aluminum		aluminum			aluminum		resin	resin		
Average Weight		—			—		255g			262g (ES51)		308g			

* FC-M510-L/S : Available OCTALINK BB mount type or square BB mount type.
 FC-M510-LK/SK : Available chain case type.
 Available 48-36-26T type for FC-M510-SK
 FC-M480-L/S : Available steel outer chaining type.
 ** E-type bottom bracket is for use with bottom bracket mount front derailleurs.
 *** Option : 24T for lowest chaining.
 **** Total weight including BB

○ = yes ∅ = no

Specification		Series		XTR		DEORE XT		DEORE LX Gray/Silver/Gold		DEORE	
		Model No.	ST-M960	ST-M965	ST-M760	ST-M765	ST-M570	SL-M570	ST-M510-L/S	SL-M510	
Rapidfire Lever Set	Types	dual control lever	dual control lever	dual control lever		combined shift & brake lever set	shift lever set only	combined shift & brake lever set	shift lever set only		
	Rear	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed	9-speed		
	Front	triple	triple	triple	triple	triple	triple	triple	triple		
	Optical Gear Display	○	○	○	○	○	○	○	○		
	Shift Cable Casing	sealed SIS-SP41	sealed SIS-SP41	sealed SIS-SP41		sealed SIS-SP40	sealed SIS-SP40	sealed SIS-SP40	sealed SIS-SP40		
	Shift Cable	stainless steel	stainless steel	stainless steel		stainless steel	stainless steel	stainless steel	stainless steel		
	Compatible Flight Deck Bracket & Sensor kit	—		—		SM-6501-M/SM-6500-M		SM-6501-MD			
Brake Lever Specs	Brake Compatibility	V-BRAKE / Mechanical Disc Brake	Hydraulic Disc Brake	V-BRAKE / Mechanical Disc Brake	Hydraulic Disc Brake	V-BRAKE / Mechanical Disc Brake	—	V-BRAKE / Mechanical Disc Brake	—		
	SERVO WAVE Action Power Adjuster	○	∅	2-step	∅	3-step	—	∅	—		
Average Weight	412g	442g	440g	480g	410g	240g	431g	270g			
Brake Lever	Model No.	—		—		BL-M570		BL-M510-L/S			
	Brake Compatibility	—		—		V-BRAKE/Mechanical Disc Brake		V-BRAKE/Mechanical Disc Brake			
	SERVO WAVE Action Power Adjuster	○	—	○	—	3-step		∅			
	Reach Adjuster	○		○		○		○			
	Cable Adjuster	○	—	○	—	○		○			
	Average Weight	—		—		188g (pair)		170g (pair)			
V-Brake	Model No.	BR-M960		BR-M760		BR-M570		BR-M510-C	BR-M510		
	Reinforced Parallel Link	○		○		○		—	—		
	M SYSTEM Brake Pad	○		∅		∅		∅	∅		
	Brake Pad Types	M70R2		S70C		S70T		S70C	S70T		
	Fixing Bolt Length (mm)	18/21.5/30.5 (mm)		22/25/34 (mm)		22/25/34 (mm)		16/25 (mm)	16/25 (mm)		
	Cartridge Shoe Holder	○		○		∅		○	∅		
	Spring Tension Adjuster	○		○		○		○	○		
	Average Weight	484g		455g		542g		420g			

○ = yes ∅ = no

DISC BRAKE - FEATURES & SPECIFICATIONS

Specifications		Series		XTR		SAINT		DEORE XT	
		Model No.	BR-M965	BR-M966	BR-M800		BR-M765		
Brake Caliper	Brake Type	Hydraulic Disc Brake		Hydraulic Disc Brake		Hydraulic Disc Brake			
	Compatible Brake Lever	ST-M965		ST-M765, BL-M756/M556/M525		ST-M765, BL-M756			
	Hydraulic	Shimano genuine mineral oil		Shimano genuine mineral oil		Shimano genuine mineral oil			
	Mount Type	International standard	Post mount	International A-type Post-type / Boxer-type		International A-type Post-type			
	Piston	Opposed 2-Piston	○		○		○		
		1-Piston	—		—		—		
	Caliper	Different Piston Diameters	—		—		—		
		Material	aluminum		aluminum		aluminum		
	Finish	anodized		painted		painted			
	Average Weight** (w/fixing bolts)	Front:98g, Rear:100g (Resin)		Front:104g		Front :183g, Rear :191g w / adaptor		Front : 163g, Rear : 170g w / adaptor	
Note			Front only						
Brake Lever	Model No.	ST-M965		ST-M765		BL-M756			
	Hydraulic	Shimano genuine mineral oil		Shimano genuine mineral oil		Shimano genuine mineral oil			
	Master Cylinder	○		○		○			
	Brake Hose Type	SM-BH96 (Resin)*		SM-BH62 (Resin)*		SM-BH62 (Resin)*			
	Brake Hose Length (cm)	Front	90/130/170		90/130/170		90/130/170		
		Rear	90/130/170		90/130/170		90/130/170		
	Lever	Material	aluminum		aluminum		aluminum		
		Finish	anodized		anodized		anodized		
Bracket	Material	aluminum		aluminum		aluminum			
	Finish	painted		painted		painted			
Average Weight (pair)	442g		480g		246g				
Brake Rotor	Model No.	SM-RT96		SM-RT80	SM-RT80S	SM-RT77	SM-RT77L		
	Outside Diameter (mm)	160		203	160	160	203		
	PCD (mm)	—		—		—			
	Average Weight (w/fixing bolts)	139g		211g	146g	149g	213g		
	Note	Center Lock type mount		Center Lock type mount Large type		Center Lock type mount			

* Cuttable brake hose

** International A-type

Specification		Series	XTR	DEORE XT		DEORE LX Silver / Gold Version	DEORE
Rear Derailleur	Model No.		RD-M960-GS/SGS	RD-M760-GS/SGS	RD-M750-GS/SGS	RD-M570	RD-M510-L/S
	Low Normal		○	○	∅	∅	∅
	Speeds		9-speed	9-speed	9-speed	9-speed	9-speed
	Max. Sprocket		34T	34T	34T	34T	34T
	Min. Sprocket		11T	11T	11T	11T	11T
	Front Difference		22T max.	22T max.	22T max.	22T max.	22T max.
	Total Capacity		33T(GS), 43T(SGS)	33T(GS), 45T(SGS)	33T(GS), 43T(SGS)	43T	43T
	Guide Pulley		sealed bearing			chromized steel bushing	chromized steel bushing
	Tension Pulley		sealed bearing	sealed bearing		chromized steel bushing	chromized steel bushing
	Pulley Bolts		stainless steel	stainless steel		stainless steel	stainless steel
	Pulley Bolts Retainer		○		∅		
	Bracket Body		cold forged aluminum/color anodized	aluminum/electrostatic painted		aluminum/electrostatic painted	aluminum/electrostatic painted
	Bracket Pivot Bolt		stainless steel	stainless steel		stainless steel	stainless steel
	Bracket Pivot Seal		double O-rings	double O-rings		single O-ring	∅
	Plate Body		cold forged aluminum/color anodized	aluminum/electrostatic painted		aluminum/electrostatic painted	aluminum/electrostatic painted
	Plate Pivot Bolt		aluminum	steel		steel	steel
	Plate Pivot Seal		single O-ring	single O-ring		∅	∅
	Outer Link		cold forged aluminum/anodized	aluminum/painted		aluminum/electrostatic painted	aluminum/electrostatic painted
	Inner Link		cold forged aluminum/anodized	aluminum/painted		steel/electrostatic painted	steel/electrostatic painted
	Link Pin Bushings		fluorine coated (4)	fluorine coated (4)		fluorine coated (2)	fluorine coated (2)
Outer Plate		aluminum/anodized	aluminum/anodized		steel/chrome plated	steel/painted	
Inner Plate		aluminum/anodized*	aluminum/anodized	steel/painted	steel/chrome plated	steel/painted	
Sealed Boot		○	○	○	○	∅	
Average Weight		198g (GS), 205g (SGS)	232g (GS)	245g (GS)	288g	300g	

* GS type : aluminum/anodized, SGS type : steel/electrostatic painted

DISC BRAKE - FEATURES & SPECIFICATIONS

Specifications		Series					DEORE		Non-Series
Brake Caliper	Model No.	BR-M555	BR-M555-M	BR-M525	BR-M515-LA	BR-M515-LA-M	BR-M475		
	Brake Type	Hydraulic Disc Brake				Mechanical Disc Brake		Mechanical Disc Brake	
	Compatible Brake Lever	BL-M556		BL-M525	V-BRAKE lever (1.5-2.5 finger)		V-BRAKE lever (1.5-2.5 finger)		
	Hydraulic	Shimano genuine mineral oil				—		mechanical	
	Mount Type	International A-type / Flange Mount	Post-type mount (front)*	International A-type / Post-type	International A-type / Flange Mount	Post-type mount (front)*	***		
	Piston	Opposed 2-Piston	○		○	—		—	
		1-Piston	—		—	○		○	
		Different Piston Diameters	—		—	—		—	
	Caliper	Material	aluminum		aluminum	aluminum		aluminum/steel	
		Finish	anodized		anodized	painted		painted	
Average Weight (w/fixing bolts)	Front:142g, Rear:144g(BR-M555)			Front:219g, Rear:224g	Front:306g, Rear:307g(BR-M515-LA)		Front:253g, Rear:260g		
Note				Only for use with Manitou front Suspension fork			Only for use with Manitou front Suspension fork		
Brake Lever	Model No.	BL-M556		BL-M525	Any V-BRAKE Lever (1.5-2.5 finger)		Any V-BRAKE Lever (1.5-2.5 finger)		
	Hydraulic	Shimano genuine mineral oil				—		—	
	Master Cylinder	○		○	—		—		
	Brake Hose Type	SM-BH62(Resin)**		SM-BH59(Resin)**	—		—		
	Brake Hose Length (cm)	Front	90/130/170						
		Rear	90/130/170						
	Lever	Material	aluminum		aluminum				
		Finish	anodized		barrel				
	Bracket	Material	aluminum		aluminum				
		Finish	painted		painted				
Average Weight (pair)	246g		246g						
Brake Rotor	Model No.				SM-RT61			SM-RT50	
	Outside Diameter (mm)				160			160	
	PCD (mm)				44			44	
	Average Weight (w/fixing bolts)				160g			171g	
	Note							For resin pad only	

* Only for use with Manitou front suspension fork except 2000 Manitou Mars CL

** Cuttable brake hose

*** front mount : International standard/Post mount
rear mount : International standard

Specification		Series		XTR		DEORE XT		DEORE LX Gray/Gold		DEORE	
Rear Freehub	Model No.	FH-M960	FH-M965	FH-M760-L/S	FH-M765-L/S	FH-M570	FH-M525-L/S	FH-M510-L/S			
	Sprockets	9/8-speed	9/8-speed	9/8-speed	9/8-speed	9/8-speed	9/8-speed	9/8-speed			
	Disc Brake Compatible	∅	○	∅	○	∅	○	∅	○	∅	
	Over Locknut	135mm	135mm	135mm	135mm	135mm	135mm	135mm	135mm	135mm	
	Axle Length	146mm	146mm	146mm	146mm	146mm	146mm	146mm	146mm	146mm	
	Axle Diameter & Material	10mm titanium	10mm titanium	10mm steel	10mm steel	10mm steel	10mm steel	10mm steel	10mm steel	10mm steel	
	QR Skewer Length	168/173 mm	168/173 mm	168/173 mm	168/173 mm	168 mm	168 mm	168 mm	168/173 mm	168/173 mm	
	Stainless Steel Ball Bearings	○	○	∅	∅	∅	∅	∅	∅	∅	
	Cone Races	super polished	super polished	super polished	super polished	super polished	super polished	super polished	super polished	super polished	
	Cup Races	super polished	super polished	∅	∅	barrel polished	barrel polished	barrel polished	barrel polished	barrel polished	
	Contact Sealing	double	double	double	double	double	double	double	single	single	
	Spoke Holes	36/32/28/24 holes	36/32/28/24 holes	36/32 holes	36/32 holes	36/32 holes	36/32 holes	36/32 holes	36/32 holes	36/32 holes	
	Spoke Hole Circle	45mm	45mm	45mm	45mm	45mm	45mm	61mm	45mm	45mm	
	Hub Shell	aluminum/anodized	aluminum/anodized	aluminum/anodized	aluminum/anodized	aluminum/anodized	aluminum/anodized	aluminum/anodized	aluminum/anodized	aluminum/anodized	
Center to Flange	Right	23.05mm	23.05mm	21.75mm	23.05mm	22.7mm	21.75mm	21.7mm	21.7mm		
	Left	35.35mm	35.35mm	37.55mm	35.35mm	37.9mm	35.35mm	37.5mm	37.5mm		
Average Weight w/o QR (QR weight)	315g	310g	370 (61)g	369 (61)g	365 (61)g	449 (64)g	396 (64)g				
Cassette Sprocket	Model No.	CS-M960		CS-M760		CS-HG70-9		CS-HG50-9			
	Alloy Sprocket Carrier	○		○		∅		∅			
	Number of Sprockets	9-speed HG		9-speed HG		9-speed HG		9-speed HG			
	Group Identification	ap, as, ba		aq, as		ar, au		ar, au			
	Sprocket	(ba) titanium (21,24,28,32T) steel (11,12,14,16,18T)		(aq) titanium (-) steel (11-32T)		steel		steel			
	Sprocket finish	Ti/Ni-P coated		chrome plated		pearl bright finish		Ni-plated			
	Chain Compatibility	Super Narrow HG		Super Narrow HG		Super Narrow HG		Super Narrow HG			
	Average Weight	240g (11-32T)		264g (11-32T)		330g (11-32T)		358g (11-32T)			
Chain	Model No.	CN-7701		CN-HG93		CN-HG73		CN-HG53			
	Type	Super Narrow HG		Super Narrow HG		Super Narrow HG		Super Narrow HG			
	Pin Link Plate	zinc-alloy plated		zinc-alloy plated		gray		gray			
	Roller Link Plate	zinc-alloy plated		gray		gray		black			
	Chromizing Treatment Link Pin	○		○		○		○			
	Average Weight	304g (116links)		304g (116links)		304g (116links)		304g (116links)			
Front Hub	Model No.	HB-M960	HB-M965	HB-M760-L/S	HB-M765-L/S	HB-M571	HB-M570	HB-M525-L/S	HB-M510-L/S		
	Disc Brake Compatible	∅	○	∅	○	∅	∅	○	○		
	Over Locknut	100mm	100mm	100mm	100mm	100mm	100mm	100mm	100mm		
	Axle Length	108mm	108mm	—	—	108mm	108mm	108mm	108mm		
	Axle Diameter & Material	10mm titanium	10mm titanium	10mm steel	10mm steel	10mm steel	9mm steel	9mm steel	9mm steel		
	QR Lever	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum		
	Stainless Steel Ball Bearings	○	○	—	—	∅	∅	∅	∅		
	Cone Races	super polished		super polished		super polished		super polished			
	Cup Races	super polished		—		barrel polished		barrel polished			
	Contact Sealing	double		double		double		single			
	Spoke Holes	36/32/28/24 holes		36/32 holes		36/32 holes		36/32 holes			
	Spoke Hole Circle	38mm	L:44mm,R:38mm	38mm		38mm		61mm	42mm		
	Hub Shell	aluminum/anodized		aluminum/anodized		aluminum/anodized		aluminum/anodized			
	Center to Flange	Right	35.8mm	35.8mm	35.8mm	35.8mm	35.8mm	35.8mm	35.2mm	35.8mm	
Left		35.8mm	24.8mm	35.8mm	24.8mm	35.8mm	35.8mm	24.2mm	35.8mm		
Average Weight w/o QR (QR weight)	137g	150g	150 (56)g	180 (56)g	162 (56)g	149 (56)g	245(59)g	171(59)g			

○ = yes ∅ = no

Cassette Sprockets Availability Chart

Model No.	Chain Compatibility	Group Identification	Gear Combination	Compatible Freehubs	
CS-M960	Super Narrow HG	9-speed ap-group	12, 14, 16, 18, 20, 23, 26, 30, 34*	8/9-speed compatible Freehub	
		9-speed as-group	11, 13, 15, 17, 20, 23, 26, 30, 34*		
		9-speed ba-group	11, 12, 14, 16, 18, 21, 24, 28, 32*		
CS-M760	Super Narrow HG	9-speed aq-group	11, 12, 14, 16, 18, 21, 24, 28, 32		
		9-speed as-group	11, 13, 15, 17, 20, 23, 26, 30, 34		
CS-HG70-9	Super Narrow HG	9-speed ar-group	11, 12, 14, 16, 18, 21, 24, 28, 32		
		9-speed au-group	11, 13, 15, 17, 20, 23, 26, 30, 34		
CS-HG50-9	Super Narrow HG	9-speed ar-group	11, 12, 14, 16, 18, 21, 24, 28, 32		
		9-speed au-group	11, 13, 15, 17, 20, 23, 26, 30, 34		
CS-HG50-8I	HG/IG chain	8-speed an-group	11, 13, 15, 17, 20, 23, 26, 30		
CS-HG30-8I	HG/IG chain	8-speed an-group	11, 13, 15, 17, 20, 23, 26, 30		
		8-speed aw-group	11, 13, 15, 18, 21, 24, 28, 32		
CS-HG30-I	HG/IG chain	7-speed ac-group	11, 13, 15, 18, 21, 24, 28		11-tooth top gear compatible 7-speed Freehub

* CS-M960 specifies four bottom sprockets made of titanium.

Specification	Series	SAINT		
Crankset	Model No.	FC-M800-1	FC-M800-2	FC-M800-3
	HOLLOWTECH II Crank	○	○	○
	Splined Crank	○	○	○
	4-Arm Chainring	○	○	○
	Chain	Super Narrow HG		
	Number of Teeth	34/38/42/46T	32-22T	44/32/22T
	Bolt Circle Diameter	104/64mm	104/64mm	104/64mm
	Crank Arm Length	165/170/175/180mm		
	Crank Arms	forged aluminum / hollow type		
	Outer Chainring	7075 aluminum	—	7075 aluminum
	Middle Chainring	—	aluminum	aluminum
	Inner Chainring	—	aluminum	aluminum
	Chainring Bolts & Nuts	7075 aluminum	aluminum (bolt), steel (nut)	
	Chain Guard	∅	○	∅
	Chain Line	50mm		
	B.B. Shell Width	73/68mm		
	Adapter	aluminum		
Average Weight	1027g	1124g	1114g	
Rear Derailleur	Model No.	RD-M800 (-SS/GS/SGS)		
	RAPID RISE	○		
	Speeds	9-speed		
	Max. Sprocket	34T		
	Min. Sprocket	11T		
	Front Difference	10T max. (GS), 22T max. (SGS)		
	Total Capacity	29T (SS), 33T (GS), 45T (SGS)		
	Parallelogram Spring Adjuster	∅		
	Tension Pulley	sealed bearing		
	Pulley Bolts	stainless steel		
	Pulley Bolts Retainer	○		
	Bracket Body	forged aluminum/painted		
	Dropout type	Straight dropend or BMX type		
	Adjustable Bump stopper	○		
	Plate Body	forged aluminum/painted		
	Plate Pivot Bolt	aluminum		
	Plate Pivot Seal	single O-ring		
	Outer Link	forged aluminum/painted		
	Inner Link	steel/plated		
	Link Pin Bushings	fluorine coated (4)		
	Outer Plate	aluminum/anodized		
Inner Plate	aluminum/painted, steel painted*			
Average Weight	312g (SS), 323g (GS), 399g (SGS)			

* SS/GS type : aluminum/anodized, SGS type : steel/electrostatic painted ○ = yes ∅ = no

Specification	Series	SAINT	
Rear Freehub	Model No.	FH-M800	
	Sprockets	9/8-speed	
	Disc Brake Compatible	○	
	Over Locknut	135mm	
	Axle Length	168mm	
	Axle Diameter & Material	10mm steel	
	QR Skewer Length	—	
	Stainless Steel Ball Bearings	∅	
	Cone Races	super polished	
	Cup Races	super polished	
	Contact Sealing	double	
	Spoke Holes	36/32 holes	
	Spoke Hole Circle	61mm	
	Hub Shell	aluminum/anodized	
Center to Flange	Right	21.8mm	
	Left	35.3mm	
Average Weight	600g (w/ axle)		
Front Hub	Model No.	HB-M800	
	Disc Brake Compatible	○	
	Over Locknut	110mm	
	Axle Length	—	
	Axle Diameter & Material	—	
	QR Lever	—	
	Stainless Steel Ball Bearings	○	
	Cone Races	super polished	
	Cup Races	super polished	
	Contact Sealing	double	
	Spoke Holes	36/32 holes	
	Spoke Hole Circle	56mm	
	Hub Shell	aluminum/anodized	
	Center to Flange	Right	35.95mm
Left		24.95mm	
Average Weight	275g		

○ = yes ∅ = no

SPD Pedal

Model No.	PD-M959	PD-M647	PD-M545	PD-M540	PD-M520	PD-M515	PD-M424	PD-M324	PD-MX30
SPD Cleat Surfaces	both surfaces	both surfaces	both surfaces	both surfaces	both surfaces	both surfaces	both surfaces	one-side	—
Pop-up Floating Cage	∅	○	○	∅	∅	∅	○	∅	—
Spindle Thread	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.	BC 9/16" x 20T.P.I.
Spindle	chrome-moly	chrome-moly	chrome-moly	chrome-moly	chrome-moly	chrome-moly	chrome-moly	chrome-moly	chrome-moly
Cartridge Spindle	○	○	○	○	○	○	○	∅	○
Cleat Retention Indicator	○	○	○	○	○	○	○	○	—
Cleat Retention Adjuster	○	○	○	○	○	○	○	○	—
Mud Shedding Design	○	○	∅	○	○	∅	∅	∅	—
Pedal Body	aluminum/painted	aluminum/anodized	aluminum/anodized	aluminum/painted	aluminum/barrel (silver), painted (black)	aluminum/barrel or black anodized	aluminum/barrel	aluminum/painted	aluminum/painted
Cage	—	Resin	aluminum	—	—	—	resin	steel	aluminum
Reflector	SM-PD22	SM-PD60	SM-PD40	SM-PD22	SM-PD22	SM-PD22	SM-PD40	Y41B98010	Y41B98010
Average Weight	350g (pair)	552g (pair)	567g (pair)	352g (pair)	380g (pair)	415g (pair)	472g (pair)	530g (pair)	492g (pair)

MTB Components

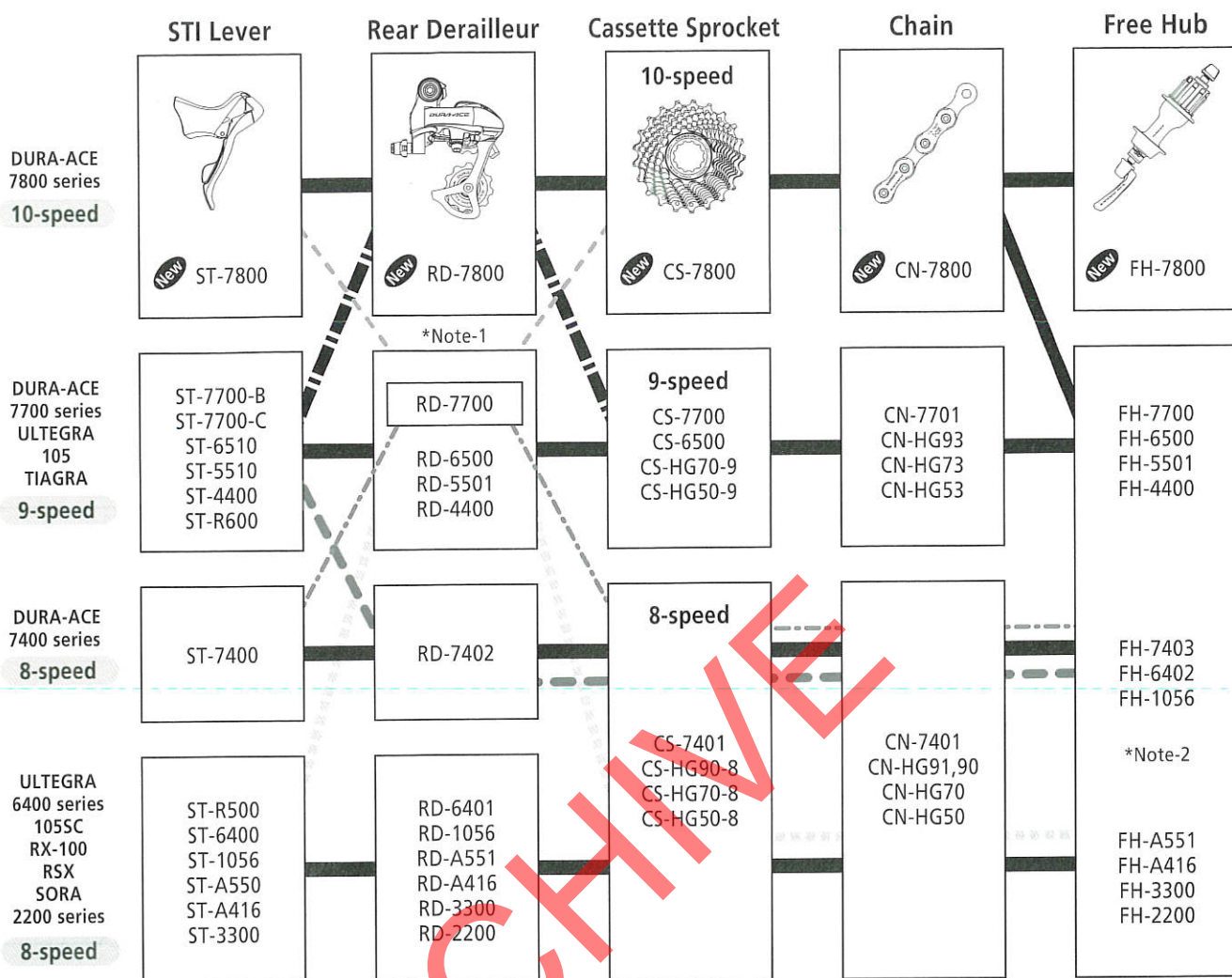
Specifications		Series			SHIMANO ALIVIO	SHIMANO ACERA	SHIMANO ALTUS	
Rear Derailleur	Model No.	RD-MC20-L/S			RD-M340-L/S		RD-CT95-L/S	
	Speeds	8-speed			8/7-speed		7/8-speed	
	Max. Sprocket	30T			34T		34T	
	Min. Sprocket	11T			11T		11T	
	Max.Front Difference	20T			20T		20T	
	Total Capacity	39T			43T		43T	
	Advanced Light Action	○			○		○	
	Chain Compatibility	IG/HG			IG/HG		HG	
Link Pin Bushing	fluorine coated (2)			fluorine coated (1)		—		
Front Derailleur	Model No.	FD-MC18-S/SE*	FD-MC21		FD-M330	FD-M330-E*	FD-CT92-E*	
	Top-Low Max. Capacity	20T	20T		20T	20T	18T	
	Top-Middle Min. Capacity	10T	10T		10T	10T	8T	
	Top Gear Teeth	42T	42T		42T	42T	42T	
	Clamp Diameter	28.6/31.8/34.9mm	28.6/31.8/34.9mm**		28.6/31.8mm	28.6/31.8/34.9mm**	28.6/31.8/34.9mm**	
	Chain Stay Angle	63 – 66°, 66 – 69°	63 – 66°, 66 – 69°		63 – 66°, 66 – 69°	63 – 66°, 66 – 69°	63 – 66°, 66 – 69°	
	Advanced Light Action	○	Dual Pull		○	○	○	
	Top Swing Action	○	Down Swing		○	○	○	
	Rapidfire/ EZ Fire Plus	Model No.	ST-MC20-L/S	SL-MC20	SL-MC40	ST-EF35-8	ST-EF35-7	ST-EF29-LL/L/S
DUAL SIS		Rear	8-speed	8-speed	7-speed	8-speed	7-speed	8/7-speed
		Front	triple	triple	triple	triple	triple	triple
Optical Gear Display		slide type (below bar)				dial type	dial type	dial type
Brake Compatibility		V-BRAKE	—	—	V-BRAKE	V-BRAKE	V-BRAKE	
Brake Lever Length		2-finger	—	—	2-finger	2-finger	2-finger	
Note	RAPID FIRE Plus	RAPID FIRE Plus	RAPID FIRE Plus	EZ FIRE Plus	EZ FIRE Plus	EZ FIRE Plus		
Brake Lever	Model No.	BL-MC18	BL-MC16		BL-M420			
	Brake Compatibility	V-Brake	Cantibrake		V-Brake			
	Lever Length	2-finger	2.5-finger		2-finger			
	Power Adjuster	∅	∅		∅			
	Reach Adjuster	○	○		○			
	Cable Adjuster	○	○		○			
V-Brake	Model No.	BR-M430-L/S					BR-M420-L/S	
	Brake Pad Type	S70C					S65T	
Disc Brake	Model No.	BR-M475					—	
	Brake Type	Mechanical Disc Brake (see page 181)					—	
Crankset	Model No.	FC-MC20-L/S	FC-M340		FC-MC08-L/S		FC-CT93	
	Gearing	42-32-22T (4-arm)			42-32-22T (4-arm)		42-34-24T (4-arm)	
	Bolt Circle Diameter	104/64mm			Riveted		riveted	
	Crank Length	170/175mm			170mm		170mm	
	Chain Compatible	IG			IG		HG	
	HYPERDRIVE-C	w/SGX-II			w/SGX-II		w/SGX-II	
Sealed Cartridge Bottom Bracket	Model No.	BB-UN25			BB-UN25-E			
	Marking/Spindle Length	MM110/110mm	LL113/113mm		MM110/110mm	LL113/113mm	YL117/117mm*** ZL122/122mm***	
	Chain Line	47.5mm	50.0mm		47.5mm	50.0mm	47.5mm 50.0mm	
	Shell Width	68/70/73mm	68/70/73mm		68mm	73mm	68mm 73mm	
Rear Freehub	Model No.	FH-MC18	FH-M475-L/S		FH-RM40-8		FH-RM40	
	Speeds	9 or 8-speed	9 or 8-speed		9 or 8-speed		7-speed	
	Over Lock Nut Dimension	135mm	135mm		135mm		130/135mm	
	Spoke Holes	36/32H	36/32H		36/32H		36H	
	Seal Hub	○	○		∅		∅	
	Seal Freewheel	○	○		∅		∅	
	QR Lever	aluminum	aluminum		steel		steel	
Front Hub	Model No.	HB-MC12-P	HB-M475-L/S		HB-RM40			
	Over Lock Nut Dimension	100mm	100mm		100mm			
	Spoke Holes	36/32H	36/32H		36/32H			
	Seal	○	○		∅			
	QR Lever	aluminum	aluminum		steel			
Cassette Sprocket/ Freewheel	Model No.	CS-HG50-8I		CS-HG40-8I	CS-HG30-8I	CS-HG30-I		
	Speeds	8-speed		8-speed	8-speed	7-speed		
	Chain Compatibility	IG/HG		IG/HG	IG/HG	IG/HG		
	Group Identification	an (11-30T) / aw (11-32T)		ao (11-34T)	an (11-30T) / aw (11-32T)		ac (11-28T)	
	Color	nickel plated		nickel plated			nickel plated	
Chain	Model No.	CN-IG51			CN-IG31		CN-HG50 CN-UG51	
	Type	IG			IG		HG UG	
	Pin Link Plate	nickel plated			gray		black gray	
	Roller Link Plate	gray			black		black black	
	Chromizing Treatment Link Pin	○			∅		○ ∅	

* The E-type front derailleur mounts to the bottom bracket through a support plate.

** 34.9mm seat tube cannot be used with FD-MC18-SE, FD-M330-E and FD-CT92-E front derailleur when the chain stay angle is 63°-66°. Chain Line must be 50.0mm when FD-M330-E and FD-CT92-E front derailleurs are used with 34.9mm seat tube.

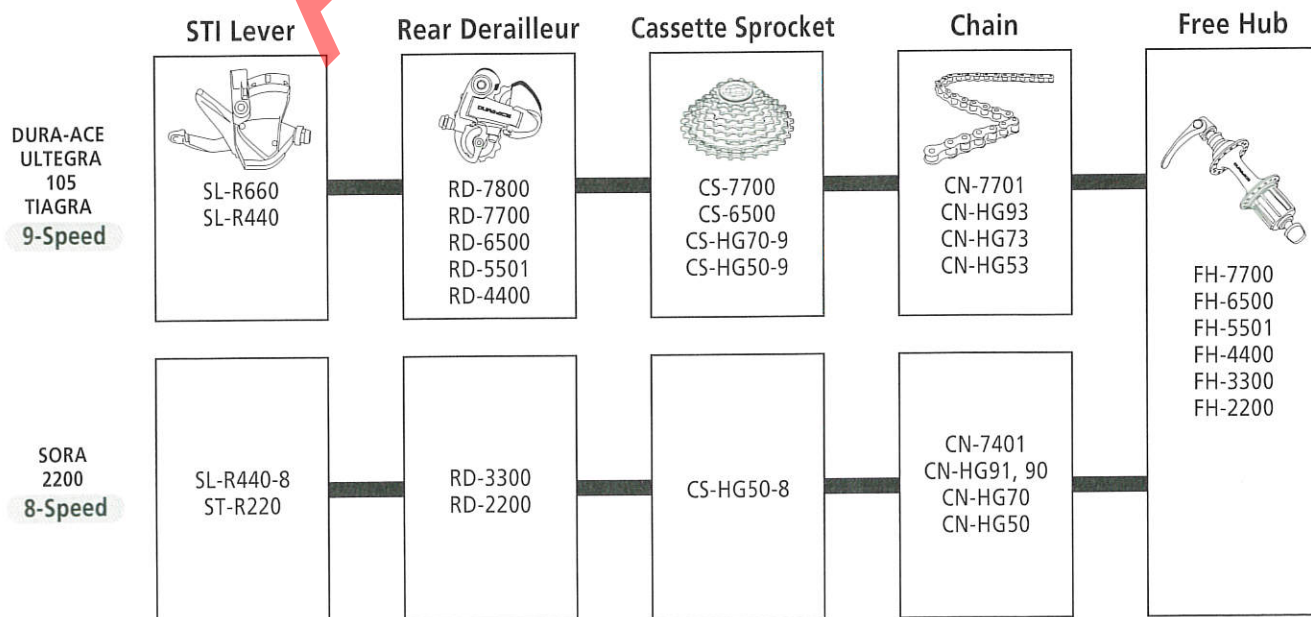
*** With fixing bolt.

ROAD Compatibility Chart [Rear Drive]

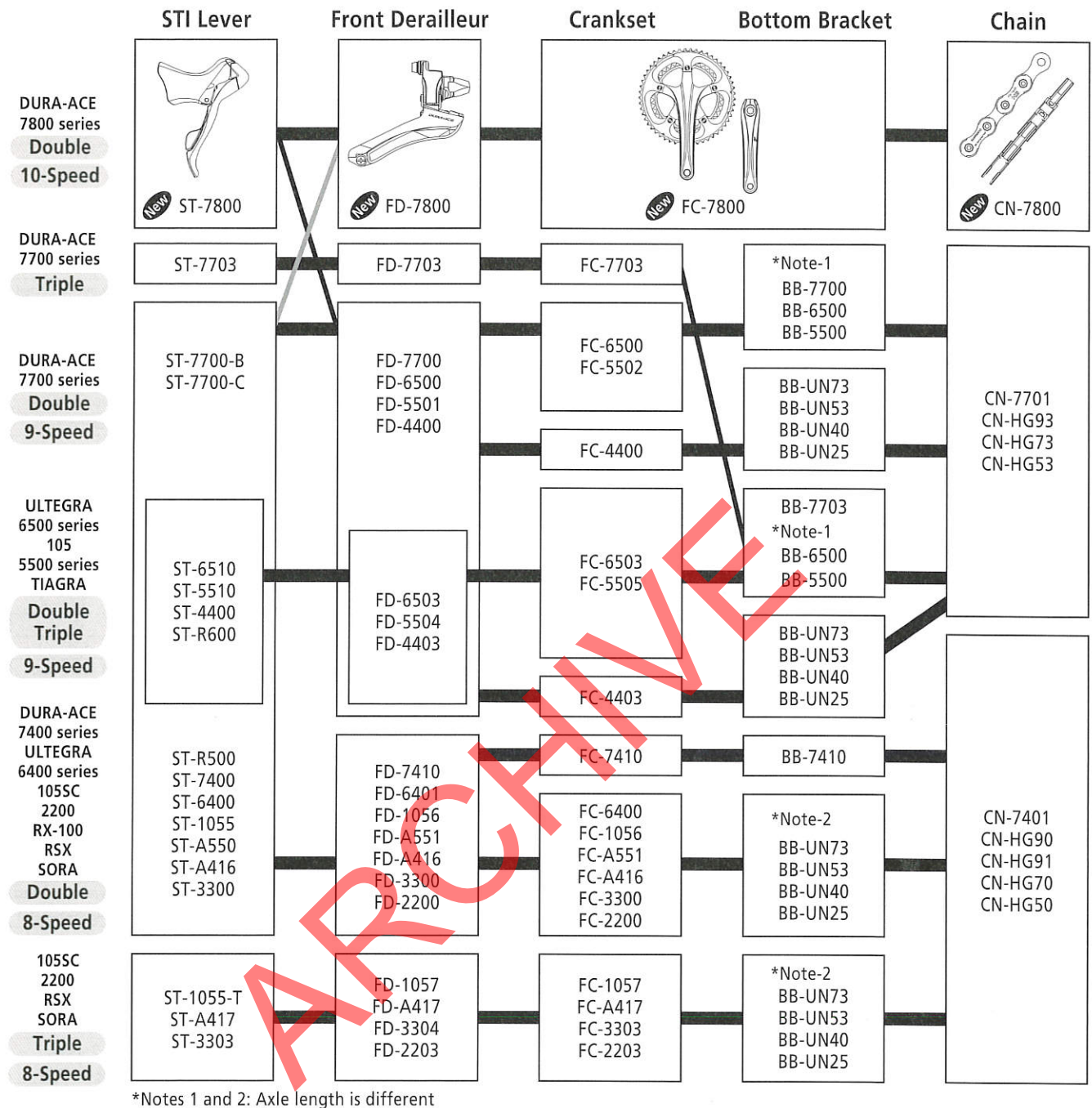


Note-1 : Can not use this combination with a spoke protector.
 Note-2 : The FH components listed here cannot be used with 11T sprockets

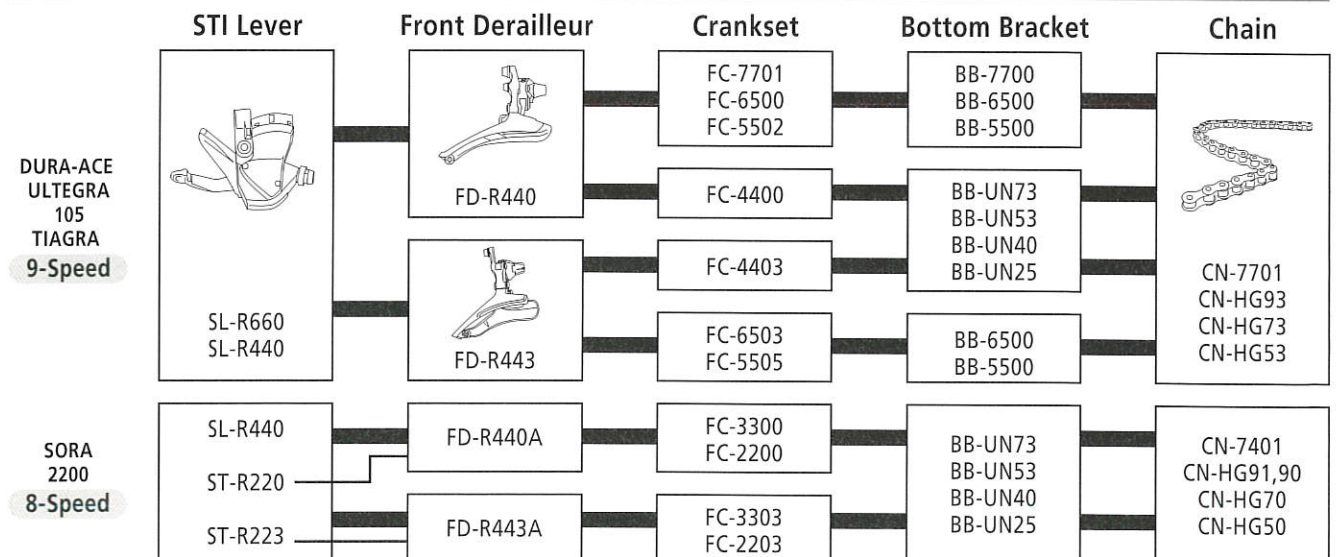
For flat-type handlebar



ROAD Compatibility Chart [Front Drive]



For flat-type handlebar



Road Components

Specifications		Series		DURA-ACE		ULTEGRA	
Rear Derailleur	Model No.	RD-7800 SS		RD-7700 smart cage		RD-6500-SS	RD-6500-GS
	Speeds	10-speed		9-speed		9-speed	9-speed
	Max. Sprocket	27T		27T		27T	27T
	Min. Sprocket	11T		11T		11T	11T
	Max Front Difference.	14T		23T		14T	22T
	Total Capacity	29T		38T		29T	37T
	Guide Pulley	sealed bearing		sealed bearing		sealed ceramic bushing	sealed ceramic bushing
	Tension Pulley	sealed bearing		sealed bearing		sealed bearing	sealed bearing
	11T Pulley	○		13/13T		○	○
	Bracket Body	cold forged aluminum/anodized		cold forged aluminum/anodized		aluminum/clear coated	aluminum/clear coated
	Bracket Body Pivot Seal	double O-rings		double O-rings		double O-rings	double O-rings
	Plate Body	cold forged aluminum/anodized		cold forged aluminum/anodized		aluminum/clear coated	aluminum/clear coated
	Plate Body Pivot Seal	single O-ring		single O-ring		single O-ring	single O-ring
	Outer Link	cold forged aluminum/anodized		cold forged aluminum/anodized		aluminum/clear coated	aluminum/clear coated
	Inner Link	cold forged aluminum/anodized		cold forged aluminum/anodized		aluminum/barrel	aluminum/barrel
	Sealed Link Pins	outer/inner link		outer/inner link		outer/inner link	outer/inner link
	Link Pin Bushings	fluorine coated (4)		fluorine coated (4)		fluorine coated (4)	fluorine coated (4)
Outer Plate	aluminum/anodized		aluminum/anodized		aluminum/anodized	aluminum/anodized	
Inner Plate	aluminum/anodized		aluminum/anodized		aluminum/barrel	aluminum/barrel	
Average Weight	180g		212g		215g	221g	
Front Derailleur	Model No.	FD-7800-B	FD-7800-F	FD-7703-B	FD-7703-F	FD-6500-B/6500-F	FD-6503-B/6503-F**
	Rear Speeds	10-speed	10-speed	9-speed	9-speed	9-speed	9-speed
	Dual SIS	○	○	○	○	○	○
	Replaceable Chain Cage	○	○	○	○	∅	∅
	Top Gear Teeth	50-56T	50-56T	53T	53T	50-56T	52T
	Capacity	15T	15T	23T (triple)	23T (triple)	15T	22T (triple use)
	Link Bushing	upper & lower AB-pins	upper & lower AB-pins	upper & lower AB-pins	upper & lower AB-pins	lower A-pin	lower A-pin
	O-ring Seals	○	○	○	○	∅	∅
	Spring Cover	○	○	○	○	○	○
	Chain Stay Angle	61 – 66°	61 – 66°	63 – 66°	63 – 66°	61 – 66°	63 – 66°
	Mounting	band	brazed-on	band	brazed-on	band/brazed-on	band/brazed-on
	Applicable Chainline	43.5mm	43.5mm	45mm	45mm	43.5mm	45mm
	Compatible Adapter	SM-AD11(31.8mm) SM-AD15(34.9mm)	○ ○	— —	○ ○	○ (6500-F) ○ (6500-F)	○ (6503-F) ∅
	Band Diameter	28.6/31.8mm	—	28.6/31.8mm	—	28.6/31.8mm	28.6/31.8mm
	Band/Brazed-On Clamp	forged aluminum/anodized		forged aluminum/anodized		aluminum/clear coated	aluminum/clear coated
	Outer Link	forged aluminum/anodized		forged aluminum/anodized		aluminum/clear coated	aluminum/clear coated
	Inner Link	forged aluminum/anodized		forged aluminum/anodized		aluminum/barrel	aluminum/barrel
Chain Guide	aluminum/nickel plated	aluminum/nickel plated	steel/nickel plated	steel/nickel plated	steel/pearl bright finish	steel/pearl bright finish	
Average Weight	79g (ø28.6)	74g	113g	103g	81g (6500-F)	88g (6503-F)	
Dual Control Lever	Model No.	ST-7800		ST-7703		ST-6510	ST-R600 (For small hands)
	Optical Gear Display	○		—		∅	—
	Rear	10-speed		—		9-speed	9-speed
	Front	double		triple		double/triple	double/triple
	Flight Deck	compatible	SM-SC 70		SM-6501/SM-6500-RS		SM-6501/SM-6500-RS
	Deck	Gear Sensor	○		○		∅
	Max. Single-Stroke Shifts	3 (Rear)		3 (rear)		3 (rear)*	3 (rear)*
	Handle Bar Diameter	23.8 – 24.2mm		23.8 – 24.2mm		23.8 – 24.2mm	23.8 – 24.2mm
	Bracket	engineering plastic		engineering plastic		engineering plastic	engineering plastic
	Lever	aluminum/anodized		aluminum/anodized		aluminum/clear coated	aluminum/clear coated
	Super SLR	○		○		○	—
	Shift Cable Casing	SIS-SP41		SIS-SP40		SIS-SP40	SIS-SP40
Shift Cable	stainless steel		stainless steel		stainless steel	stainless steel	
Average Weight	419g (pair)		224g (for front)		485g (pair)	498g (pair)	
Shift Lever	Model No.	SL-7800	SL-BS78	SL-7700		SL-BS77	
	Light Action Lever (F)	○		○		○	
	Rear Speed	10-speed	10-speed	9-speed		9-speed	
	Front Speed	double	double/triple	double/triple		double/triple	
	Mount Position	down tube	bar end	down tube		bar end	
	Tube Diameter	brazed-on	—	brazed-on		—	
	Material	aluminum/clear coated		aluminum/clear coated		aluminum/clear coated	
	Shift Cable Casing	—	SIS-SP41	SIS-SP40		SIS-SP40	
	Average Weight	76g	178g	76g		178g	

* except downshifts to bottom gear

** Depending on frame design, chainwheel shifting for a road bike using a triple crank with brazed-on derailleur may be adversely affected if the seat tube diameter is larger than 31.8mm. Please consult the chart for allowable dimensions on page 180.

SHIMANO 105 silver(S) / black(L)		SHIMANO TIAGRA		For Flat Handlebar				SHIMANO SORA		SHIMANO 2200				
RD-5501-SS L/S	RD-5501-GS L/S	RD-4400-SS	RD-4400-GS	Compatible with Dura-Ace, Ultegra, Shimano 105 and Tiagra component groups.				RD-3300-SS	RD-3300-GS	RD-2200 Smartcage				
9-speed		9-speed						8-speed		8-speed		8-speed		
27T	27T	27T	27T					27T	27T	26T	27T	26T	27T	26T
11T	11T	11T	11T					11T	11T	11T	11T	11T	11T	11T
14T	22T	14T	22T					14T	22T	22T	14T	22T	22T	22T
29T	37T	29T	37T					29T	37T	35T	29T	37T	35T	35T
sintered alloy bushing	sintered alloy bushing	sintered alloy bushing	sintered alloy bushing					sintered alloy bushing	sintered alloy bushing	sintered alloy bushing	sintered alloy bushing	sintered alloy bushing	sintered alloy bushing	sintered alloy bushing
○	○	○	○					○	○	—	○	○	—	—
aluminum/clear coated (S)****	aluminum/clear coated (S)****	aluminum/barrel	aluminum/barrel					aluminum/polished	aluminum/polished	aluminum/painted	aluminum/polished	aluminum/polished	aluminum/painted	aluminum/painted
∅	∅	∅	∅					∅	∅	∅	∅	∅	∅	∅
aluminum/clear coated (S)****	aluminum/clear coated (S)****	aluminum/barrel	aluminum/barrel	resin	resin	resin	resin	resin	resin	resin				
∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅				
aluminum/clear coated (S)****	aluminum/clear coated (S)****	aluminum/barrel	aluminum/barrel	steel/pearl plated	steel/pearl plated	steel/chrome plated	steel/pearl plated	steel/pearl plated	steel/chrome plated	steel/chrome plated				
steel/pearl bright	steel/pearl bright	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel painted	steel/zinc plated	steel/zinc plated	steel painted	steel painted				
outer link	outer link	outer link	outer link	outer link	outer link	outer link	outer link	outer link	outer link	outer link				
fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)	fluorine coated (2)				
aluminum/anodized	aluminum/anodized	steel/plated	steel/plated	steel/plated	steel/plated	steel/plated	steel/plated	steel/plated	steel/plated	steel/plated				
aluminum/barrel	aluminum/barrel	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel/zinc plated	steel/zinc plated				
228g	231g	265g	280g	265g	280g	288g	265g	280g	288g	288g				
FD-5501-B/5501-F L/S	FD-5504-B/5504-F** L/S	FD-4400-B/4400-F	FD-4403-B/4403-F**	FD-R440-B/ R440-F**	FD-R440A-B/ R440A-F	FD-R443-B/ R443-F**	FD-R443A-B/ R443A-F	FD-3300-B/ 3300-F	FD-3304-B/ 3304-F**	FD-2200-B/ 2200-F	FD-2203-B/ 2203-F**			
9-speed	9-speed	9-speed	9-speed	9-speed	8-speed	9-speed	8-speed	8-speed	8-speed	8-speed	8-speed			
○	○	○	○	○	○	○	○	○	○	○	○			
∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅			
50-56T	52T	50-56T	52T	50-56T	53T	52T	52T	53T	52T	53T	52T			
15T	22T (triple use)	15T	22T (triple use)	15T	15T	22T (triple use)	22T (triple use)	15T	22T (triple use)	15T	22T (triple use)			
∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅			
∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅			
○	○	○	○	○	○	○	○	○	○	○	○			
61 – 66°	63 – 66°	61 – 66°	63 – 66°	61 – 66°	61 – 66°	63 – 66°	63 – 66°	61 – 66°	63 – 66°	61 – 66°	63 – 66°			
band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on	band/brazed-on			
43.5mm	45mm	43.5mm	45mm	43.5mm	43.5mm	45mm	45mm	43.5mm	45mm	43.5mm	45mm			
○ (5501-F)	○ (5504-F)	○ (4400-F)	○ (4403-F)	○ (R440-F)	○ (R440-F)	○ (R443-F)	○ (R443-F)	○ (F)	○ (F)	○ (F)	○ (F)			
○ (5501-F)	∅	○ (4400-F)	∅	○ (R440-F)	○ (R440-F)	∅	∅	○ (F)	∅	○ (F)	∅			
28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm	28.6/31.8mm			
aluminum/clear coated	aluminum/clear coated	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum	aluminum	aluminum	aluminum			
aluminum/clear coated	aluminum/clear coated	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum/barrel	aluminum	aluminum	aluminum	aluminum			
aluminum/barrel	aluminum/barrel	zinc/pearl plated	zinc/pearl plated	zinc/pearl plated	zinc/pearl plated	zinc/pearl plated	zinc/pearl plated	pearl plated	aluminum	steel painted	steel painted			
steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated	steel/chrome plated			
81g (5501-F)	89g (5504-F)	110g (4400-B)	113g (4403-B)	96g (R440-B)	105g (R443-B)	110g (3300-B)	120g (3304-B)	113g (2200-B)	119g (2203-B)	119g (2203-B)	119g (2203-B)			
ST-5510-L/S	ST-4400	ST-R500	ST-R220	ST-R223	ST-3300	ST-3303								
∅	∅	—	—	—	∅	∅								
9-speed	9-speed	8-speed	8-speed	—	8-speed	—								
double/triple	double/triple	double/triple	double	triple	double	triple								
SM-6501/SM-6500-RS	SM-6501/6500-RS	—	—	—	SM-6501/6500-RS	SM-6501/6500-RS								
○	○	○	—	—	○	○								
3 (rear)*	3 (rear)*	3 (rear)*	—	—	2 (rear)	2 (rear)								
23.8 – 24.2mm	23.8 – 24.2mm	23.8 – 24.2mm	22.2mm	—	23.8 – 24.2mm	23.8 – 24.2mm								
engineering plastic	engineering plastic	engineering plastic	aluminum/painted	—	engineering plastic	engineering plastic								
aluminum/S : clear coated, L : painted	aluminum/painted	aluminum/painted	SL:steel+resin BL:aluminum	—	aluminum/painted	aluminum/painted								
○	○	○	∅	—	∅	∅								
SIS-SP40	SIS-SP40	SIS-SP40	SIS-SP40	—	SIS-SP40	SIS-SP40								
stainless steel	stainless steel	stainless steel	steel	—	stainless steel	stainless steel								
495g (pair)	490g (pair)	482g (pair)	482g (pair)	—	445g (pair)	445g (pair)								
not available	not available	SL-R660	SL-R440***	—	SL-R400	SL-R400								
compatible with SL-7700/SL-B577	compatible with SL-7700/SL-B577	∅	∅	—	○	○								
		9-speed	9-speed/8-speed	—	8-speed	8-speed								
		triple	double/triple	—	double/triple	double/triple								
		handlebar	handlebar	—	down tube	down tube								
		22.2mm	22.2mm	—	brazed-on	brazed-on								
		aluminum/clear coated	aluminum/painted	—	aluminum/barrel	aluminum/barrel								
		SIS-SP40	SIS-SP40	—	SIS-SP40	SIS-SP40								
		247g (pair, w/o inner cable)	276g (pair)	—	75g	75g								

*** Flight Deck compatible (SM-6501-M / 6500-M)

**** Black version is painted.

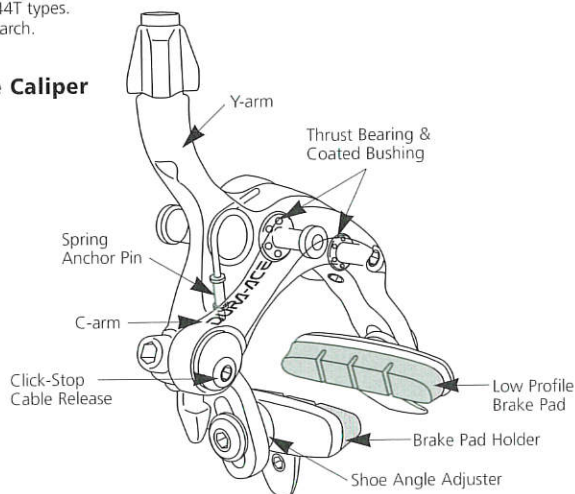
○ = yes ∅ = no

A050 Specifications : See page

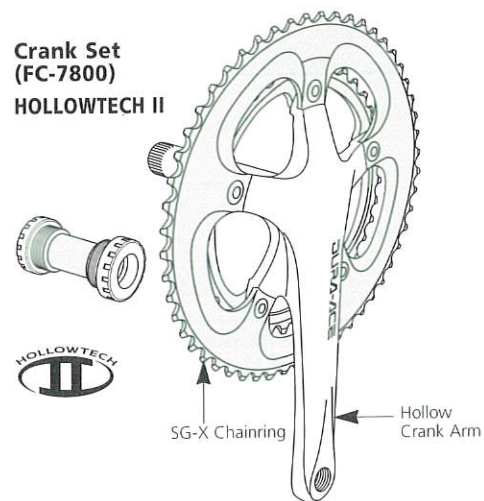
Specifications		Series		DURA-ACE	ULTEGRA	
Brake Lever	Model No.	BL-R600				
	Return Spring (SLR)	○				
	Bar Diameter	23.8 – 24.2mm				
	Brake Cable Casing	SLR outer				
	Lever	aluminum/anodized				
	Bracket	aluminum/barrel				
	Average Weight	260g (pair)				
Brake Caliper	Model No.	BR-7800	BR-7700	BR-6500	BR-R600**	
	Type	Super SLR dual pivot	Super SLR dual pivot	Super SLR dual pivot	Super SLR dual pivot	
	Reach	49mm	49mm	49mm	57mm	
	Pads	R55C2	R55C + 1	R55C	R55C	
	Cartridge shoe holder	○	○	○	○	
	Caliper	cold forged aluminum/anodized	cold forged aluminum/anodized	cold forged aluminum/anodized		
	C-Arm Pivot	coated bushing & thrust bearing	coated bushing & thrust bearing	coated pivot washer	coated pivot washer	
	Y-Arm Pivot	coated bushing & thrust bearing	coated bushing & thrust bearing	thrust bearing	thrust bearing	
	Average Weight	314g (F&R)	317.5g (F&R)	334.5g (F&R)	380g (F&R)	
	Crankset	Model No.	FC-7800	FC-7703	FC-6500	FC-6503
HYPERDRIVE		○	○	○	○	
DUAL SIS		○	○	○	○	
Chain compatibility		10-S Super Narrow HG	Super Narrow HG	Super Narrow HG	Super Narrow HG	
Hollow Crank Arm		HOLLOWTECH II	○	○	○	
One-Key Release		∅	○	○	○	
Reinforced Spider		○	○	○	○	
Number of Teeth		53-42T/52-39T/53-39T/50-39T/54-42T/55-42T/56-44T	53-39-30T	53-42T/53-39T/52-39T	52-42-30T	
Bolt Circle Diameter		130mm	130mm/92mm	130mm	130/74mm	
Crank Arm Length		165/167.5/170/172.5/175/177.5/180mm		165/167.5/170/172.5/175mm		
Crank Arms		forged aluminum/anodized	forged aluminum/anodized	forged aluminum/anodized		
Chainrings		aluminum/anodized	aluminum/nickel plated*	aluminum/anodized		
Optional Chain Guard		∅	∅	∅		
Average Weight		740g (170mm, integrated BB)	681g (170mm)	643g (175mm/53-39T)	760g (170mm)	
Bottom Bracket	Model No.	—	BB-7703	BB-6500		
	Crankset	—	FC-7703	FC-6500	FC-6503	
	Pipe Billet Spindle/OctaLink Mounting	HOLLOWTECH II integrated BB	○	○	○	
	Chainline Stabilizer	○	○	○	○	
	Chainline	43.5mm	45mm	43.5mm	45mm	
	B.B. Shell Width	68/70mm	68/70mm	68/70mm	68/70mm	
	Marking	—	—	—	—	
	Spindle Length	HOLLOWTECH II	118.5mm	109.5mm	118.5mm	
	Spindle Material	chrome-moly steel	chrome-moly steel	chrome-moly steel	chrome-moly steel	
	Adaptor	aluminum	aluminum	aluminum	aluminum	
	Average Weight	—	217g	221.5g (68mm)	242g (68mm)	
Front Hub	Model No.	HB-7800	HB-7700	HB-6500-A		
	Over Locknut	100mm	100mm	100mm		
	Axle Length	108mm	108mm (11mm dia)	108mm (M9)		
	Spoke Holes	36/32/28/24, 18(aero type)	36/32/28/24, 32/28/24/18/16/12(aero)	36/32/28/24		
	Spoke Hole Circle	40mm	38mm	38mm		
	Sealings	labyrinth and contact seals	labyrinth and contact seals	labyrinth and contact seals		
	Stainless Steel Balls	○	○	∅		
	Hub Shell	cold forged aluminum/anodized		cold forged aluminum/anodized		
	Center to Flange	Right	37.0mm	37.0mm	37.0mm	
		Left	37.0mm	37.0mm	37.0mm	
	Average Weight w/o QR (QR weight)	129 (59)g	119 (59)g	140 (58)g		

* Except 54-42T/55-42T/56-44T types.
** SHIMANO logo on brake arch.

Dual Pivot Brake Caliper (BR-7800)



Crank Set (FC-7800) HOLLOWTECH II



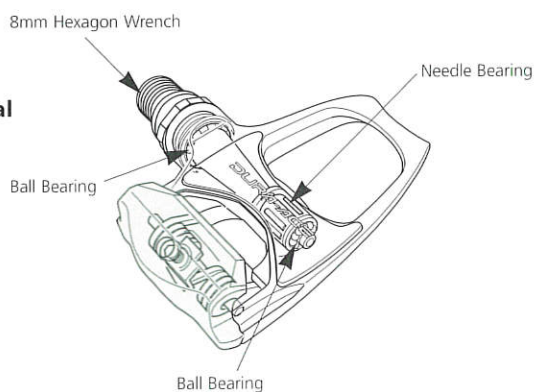
SHIMANO 105			SHIMANO TIAGRA		SHIMANO SORA	SHIMANO 2200		
BL-R600			BL-R400	BL-R440 (Flat Handlebar)	BL-R400			
○			○	○	○			
23.8 – 24.2mm			23.8 – 24.2mm	22.2mm	23.8 – 24.2mm			
SLR outer			SLR outer	MTB outer	SLR outer			
aluminum/anodized			aluminum/anodized	aluminum/anodized	aluminum/anodized			
aluminum/barrel			aluminum/barrel	aluminum/painted	aluminum/barrel			
260g (pair)			258g (pair)	175g (pair)	258g (pair)			
BR-5501-L/S	BR-A550-57**	BR-R550	BR-4400		BR-3300			
Super SLR dual pivot	Super SLR dual pivot	Canti-brake	Super SLR dual pivot		Super SLR dual pivot			
49mm	49/57mm	—	49mm		49mm			
R55C	R50T	S70C	R50T		R50T			
○	∅	∅	∅		∅			
cold forged aluminum/anodized	aluminum/anodized	aluminum/anodized	aluminum/anodized		aluminum/barrel			
coated pivot washer	coated pivot washer	—	coated pivot washer		coated pivot washer			
thrust bearing	thrust bearing	—	coated pivot washer		coated pivot washer			
353g (F&R)	397g (F&R)	g (F&R)	355g (F&R)		348g (F&R)			
FC-5502-L/S	FC-5505-L/S	FC-4400	FC-4403	FC-3300	FC-3303	FC-2200	FC-2203	
○	○	○	○	○	○	○	○	
○	○	○	○	○	○	○	○	
Super Narrow HG	Super Narrow HG	Super Narrow HG		HG		HG		
○	○	∅		∅		∅		
∅	∅	∅	∅	∅	∅	∅	∅	
∅	∅	∅	∅	∅	∅	∅	∅	
53-42T/53-39T/52-39T/50-39T	52-42-30T	52-39T/50-39T	52-42-30T	52-39T/50-39T	52-42-30T	52-39T/50-39T	52-42-30T	
130mm	130/74mm	130mm	130/74mm	130mm	130/74mm	130mm	130/74mm	
165/170/172.5/175	165/170/175mm	165/170/175mm	165/170/175mm	165/170/175mm	165/170/175mm	165/170/175mm	165/170/175mm	
forged aluminum/anodized	forged aluminum/anodized	aluminum/polished	aluminum/polished	aluminum/polished	aluminum/polished	aluminum/painted	aluminum/painted	
aluminum/anodized	aluminum/anodized	aluminum/steel	aluminum/steel/steel	steel	steel	steel	steel	
∅	∅	∅	∅	○	○	○	○	
654g (170mm/53-39T)	745g (170mm)	776g (170mm/52-39T)	940g (170mm)					
BB-5500		BB-UN53		BB-UN40		BB-UN25		
FC-5502	FC-5505	FC-4400	FC-4403	FC-3300	FC-3303	FC-2200	FC-2203	
○	○	∅	∅	∅	∅	∅	∅	
○	○	○	○	○	○	○	○	
43.5mm	45mm	43.5mm	45mm	43.5mm	45mm	43.5mm	45mm	
68/70mm	68/70mm	68/70mm	68/70mm	68/70mm	68/70mm	68/70mm	68/70mm	
—	—	MM110	LL113	MM110	LL113	MM110	LL113	
109.5mm	118.5mm	110mm	113mm	110mm	113mm	110mm	113mm	
chrome-moly steel	chrome-moly steel	chrome-moly steel	chrome-moly steel	chrome-moly steel	chrome-moly steel	chrome-moly steel	chrome-moly steel	
aluminum	aluminum	resin	resin	resin	resin	resin	resin	
250g (109.5mm)	259g (118.5mm)	311g		308g				
HB-5501-AS/AL		HB-4400		HB-3300	HB-3300-B***	HB-2200	HB-2200-L	
100mm		100mm		100mm		100mm		
108mm (M9)		108mm (M9)		108mm (M9)		108mm (M9)		
36/32		36/32		36/32		36/32		
38mm		38mm		38mm		38mm		
labyrinth and contact seals		labyrinth and contact seals		single contact		single contact		
∅		∅		∅		∅		
cold forged aluminum/anodized		aluminum/anodized		aluminum	anodized	aluminum	anodized	
35.5mm		35.5mm		35.5mm		35.5mm		
35.5mm		35.5mm		35.5mm		35.5mm		
148 (59g)		146 (59g)		141 (59g)				

*** Black version with SHIMANO Logo.

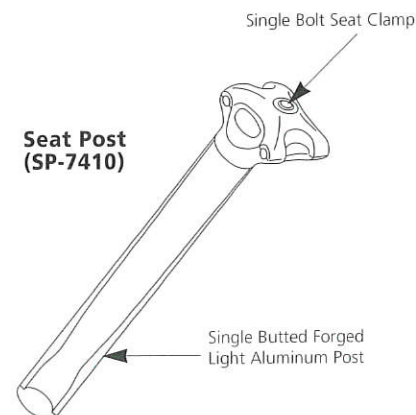
○ = yes ∅ = no

Specifications		Series		DURA-ACE	ULTEGRA	SHIMANO 105
Rear Freehub	Model No.	FH-7800		FH-7700	FH-6500	FH-5501-L/S
	No. of Sprockets	10-speed		9-speed & 8-speed	9-speed & 8-speed	9-speed & 8-speed
	Over Locknut	130mm		130mm	130mm	130mm
	Axle Length	141mm		141mm	141mm	141mm
	Spoke Holes	36/32/28/24, 28/24(aero)		36/32/28/24, 18(aero)	36/32/28	36/32
	Spoke Hole Circle	44mm		44mm	45mm	45mm
	Sealings	labyrinth and contact seals		labyrinth and contact seals	labyrinth and contact seals	labyrinth and contact seals
	Stainless Steel Balls	○		○	∅	∅
	Freehub Body	aluminum		Titanium	Steel	Steel
	Hub Shell	cold forged aluminum/anodized		cold forged aluminum/anodized	forged aluminum/anodized	forged aluminum/anodized
	Center to Flange	Right	20.55mm		21.1mm	21.1mm
Left		36.35mm		36.9mm	36.9mm	36.9mm
Average Weight w/o QR (QR weight)	264 (64)g		312 (64)g	347 (63)g	348 (63)g	
Cassette Sprockets	Model No.	CS-7800		CS-7700	CS-6500	CS-HG70-9
	Speeds	10-speed		9-speed	9-speed	9-speed
	Group Identification	—		—	—	—
	Finish	nickel plated & Ti-silver		nickel plated & Ti-silver	luster silver & chrome plated	pearl bright finish
	Average Weight	173g (11-23T)		160g (12-23T)	210g (12-23T)	236g (12-23T)
Chain	Model No.	CN-7800		CN-7701	CN-HG93	CN-HG73
	Type	Super Narrow HG		Super Narrow HG	Super Narrow HG	Super Narrow HG
	Pin Link Plate	zinc-alloy plated		zinc-alloy plated	zinc-alloy plated	gray
	Roller Link Plate	zinc-alloy plated		zinc-alloy plated	gray	gray
	Chromizing Treatment Link Pin	○		○	○	○
Average Weight	280g (116 links)		304g (116 links)	304g (116 links)	304g (116 links)	
Headset	Model No.	HP-7410		HP-6500	HP-5501-L/S	
	Sealed Cartridge Bearings	○		○	○	
	Thread	BC 1" x 24 T.P.I.		BC 1" x 24 T.P.I.	BC 1" x 24 T.P.I.	
	Stack Height	37.6mm		37.6mm	37.6mm	
	Locknut	aluminum/anodized		aluminum/anodized	aluminum/anodized	
	Upper/Lower Cups	aluminum/anodized		aluminum/anodized	aluminum/anodized	
	Upper Stem Cone	aluminum/anodized		aluminum/anodized	aluminum/anodized	
	Lower Stem Cone	aluminum/anodized		steel	steel	
	Average Weight	101g		109g	106g	
Pedal	Model No.	PD-7800		PD-R600	PD-R540	
	Type	SPD-SL		SPD-SL	SPD-SL	
	Road Clearance	35°		34°	34°	
	Cleat Retention Adjuster	○		○	○	
	Cleat Retention Indicator	○		○	○	
	Spindle Thread	BC 9/16" x 20 T.P.I.		BC 9/16" x 20 T.P.I.	BC 9/16" x 20 T.P.I.	
	Spindle	nickel chrome-moly steel		chrome-moly steel	chrome-moly steel	
	Body	aluminum/painted		aluminum/barrel	resin	
Average Weight	281g (cleat : 70g)		305g	330g		
Seat Post	Model No.	SP-7410				
	Post Type	round				
	Special Easton Tubing	○				
	Outer Dia. (mm)	26.8/27.0/ 27.2				
	Length	270mm				
	Material	thin wall aluminum				
	Average Weight	195g				

SPD-SL Pedal (PD-7800)



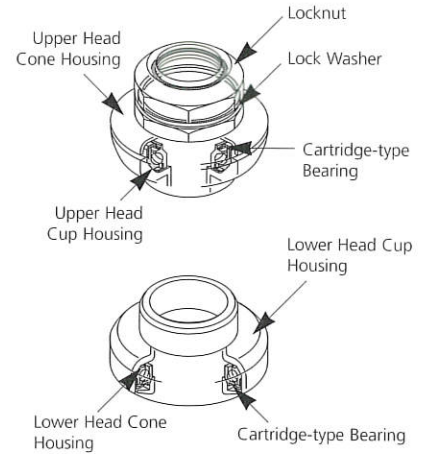
Seat Post (SP-7410)



SHIMANO TIAGRA	SHIMANO SORA		SHIMANO 2200	
FH-4400	FH-3300	FH-3300-B	FH-2200	FH-2200-L
9-speed & 8-speed	9-speed & 8-speed		9-speed & 8-speed	
130mm	130mm		130mm	
141mm	141mm		141mm	
36/32	36/32		36/32	
45mm	45mm		45mm	
labyrinth and contact seals	single contact		single contact	
∅	∅		∅	
Steel	Steel		Steel	
aluminum/anodized	aluminum	anodized	aluminum	anodized
21.3mm	21.3mm		21.3mm	
38.7mm	38.7mm		38.7mm	
362(63)g	355g		375(87)g	
CS-HG50-9	CS-HG50-8			
9-speed	8-speed			
—	S , T , U , V , W			
nickel plated	nickel plated			
270g (12-23T)	278g (u group)			
CN-HG53	CN-HG50			
Super Narrow HG	HG Narrow			
gray	black			
black	black			
○	○			
304g (116 links)	335g (114 links)			
not available				

○ = yes ∅ = no

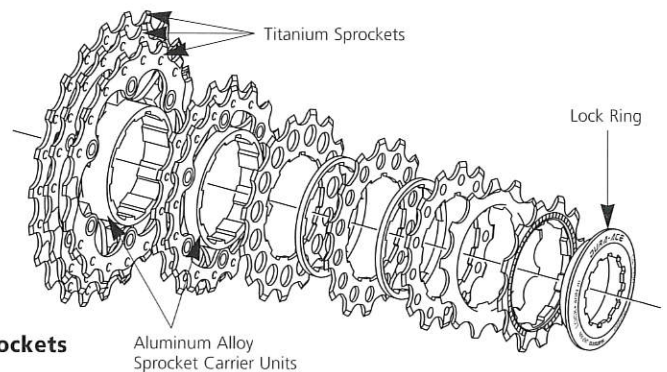
Cartridge Headset (HP-7410)



Cassette Sprockets Combinations

Model No.	Speeds	Group Letter	Gearing
CS-7800	10	—	11, 12, 13, 14, 15, 16, 17, 18, 19, 21
		—	11, 12, 13, 14, 15, 16, 17, 19, 21, 23
		—	12, 13, 14, 15, 16, 17, 18, 19, 20, 21
		—	12, 13, 14, 15, 16, 17, 18, 19, 21, 23
		—	12, 13, 14, 15, 16, 17, 19, 21, 23, 25
		—	12, 13, 14, 15, 16, 17, 19, 21, 24, 27
CS-7700 CS-6500	9	—	11, 12, 13, 14, 15, 16, 17, 19, 21
		—	12, 13, 14, 15, 16, 17, 18, 19, 21
		—	12, 13, 14, 15, 16, 17, 19, 21, 23
		—	11, 12, 13, 14, 15, 17, 19, 21, 23
CS-6500	9	—	12, 13, 14, 15, 17, 19, 21, 23, 25
		—	12, 13, 14, 15, 17, 19, 21, 24, 27
		—	13, 14, 15, 16, 17, 18, 19, 21, 23
CS-HG70-9	9	—	13, 14, 15, 16, 17, 19, 21, 23, 25
		—	14, 15, 16, 17, 18, 19, 21, 23, 25
		—	12, 13, 14, 15, 16, 17, 19, 21, 23
CS-HG50-9	9	—	12, 13, 14, 15, 16, 17, 19, 21, 23
		—	12, 13, 14, 15, 17, 19, 21, 23, 25
		—	13, 14, 15, 16, 17, 19, 21, 23, 25
CS-HG50-8	8	S	12, 13, 14, 15, 16, 17, 19, 21
		T	13, 14, 15, 16, 17, 19, 21, 23
		U	12, 13, 14, 15, 17, 19, 21, 23
		V	13, 14, 15, 17, 19, 21, 23, 26
		W	12, 13, 15, 17, 19, 21, 23, 25

Titanium Sprockets only for CS-7800/CS-7700



Cassette Sprockets (CS-7800)

Aluminum Alloy Sprocket Carrier Units

Two types of lock ring can be used with the CS-7800 / 7700 / 6500 : one with top 11 teeth and one with top 12 teeth.

Capreo Specifications

Rear Derailleur

Model No.	RD-F700
Pulley Cage	SS / SGS
Speeds	9
Total Capacity	17T
Max. Rear Sprocket	26T
Min. Rear Sprocket	9T
Fluoric Coated Link Bushings	2

9-speed Cassette Sprocket

Model No.	CS-HG70-S
Type	HG Cassette Sprocket
Combination	9, 10, 13, 15, 17, 20, 23, 26T
Chain	Super Narrow HG

* Note : Only for FH-F700

Shift Lever

Model No.	SL-F700-R
Lever type	TAP FIRE Shifter
Rear	9 speed SIS
SL cable adjust	○
Optical gear display	Above handlebar
SL outer casing	SP40 sealed

Brake Lever

Model No.	BL-F700
Brake type	V-BRAKE
Lever size	2 finger
Brake cable type	T-type
Reach adjust	○
Cable adjust	○

Brake

Model No.	BR-F700
Brake type	V-BRAKE
POWER MODULATOR System	○ (option)
Linear Spring	○
Threaded BR Shoe Post	○
Brake shoe type	R55C for F700
Fixing bolt length	16/25mm
Sleeve & Bushing	○
Lead Pipe Angle	45/90/135

Crankset

Model No.	FC-F700	
Rear Speeds	9	
Chainring Combination	45T	
PCD	130mm	
Crank Arm Length	165, 170mm	
Chain	Super narrow HG	
Bottom Bracket	BB-UN40(-K) / UN25(-K)	
Axle Length	Chain Line 46	MM110
	Chain Line 48.5	LL113
	Chain Line 50	YL117
	Chain Line 52.5 +t	117.5

Hub

Model No.	HB-F700
Spoke Holes	24, 32, 36H
Spoke Hole PCD	38mm
O.L.D.	100mm
Flange Distance	71.6mm
QR	○
QR Skewer Length	133mm
Axle Length	108mm (M9)
Seal	○

Freehub

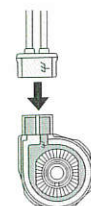
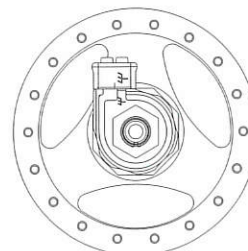
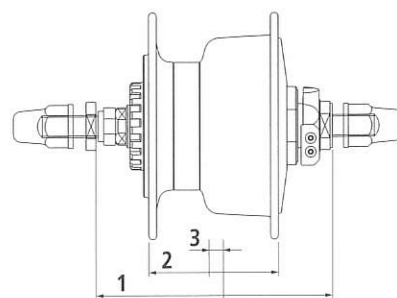
Model No.	FH-F700
Spoke Holes	24, 32, 36H
Spoke Hole PCD	45mm
Speeds	9
O.L.D.	135mm
Flange Distance	60.3
Dish	8.3
QR	○
QR Skewer Length	168mm
Axle Length	146mm (M10)
Seal	○

* Note : Only for CS-HG70-S, Only for 16-20 inch

Sport Hub Dynamo Specifications

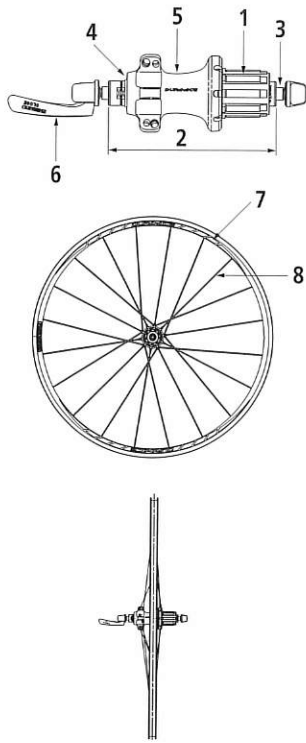
Model No.	DH-3D70	DH-3N70	DH-2N70
Type	Disc*	Regular	Regular
Voltage	6V	6V	6V
1 Output	3.0W	3.0W	2.4W
2 Over Locknut Dim.	100mm	100mm	100mm
3 Flange Distance	52.3	60.0	60.0
Offset	3.85	0	0
Hole Reference (PCD)	74mm	74mm	74mm
Axle Length	108mm	108mm	108mm
Spoke Size	# 14	# 14	# 14
Spoke Hole	32H	○	○
	36H	○	○
Seal	Double Contact	Double Contact	Double Contact

* Center Lock rotor mount type



electric power output connector

Wheel Specifications (Road)



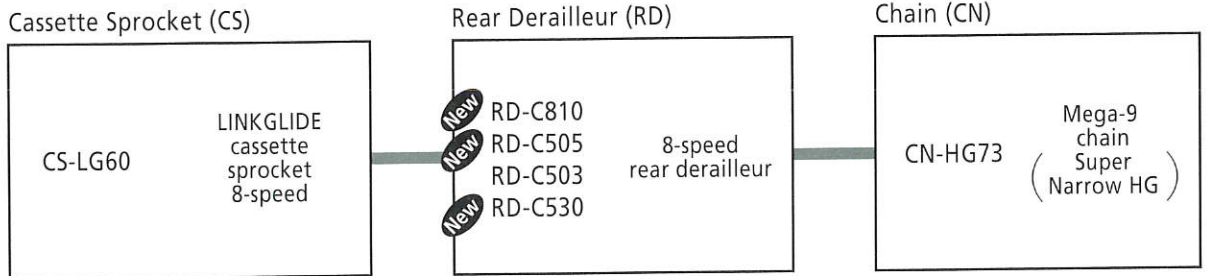
Model No.		WH-7800 (front)	WH-7800 (rear)	WH-7701-carbon (front)	WH-7701-carbon (rear)	
1	Freehub Body	Compatible Cassette Sprockets	—	10-speed	—	
		11T Top Compatible	—	○	—	
		Material	—	aluminum	—	
2	O.L.D	100mm	130mm	100mm	130mm	
3	Axle	QR	○	○	○	
		QR Skewer Length	133mm	163mm	133mm	163mm
		Length	108mm	141mm	108mm	141mm
		Material	aluminum	aluminum	aluminum	steel
4	Labyrinth and contact Seal	○	○	○	○	
5	Hub Shell	Material	aluminum	aluminum	aluminum	
		Finish	anodized	anodized	anodized	anodized
6	QR Lever	Material	aluminum	aluminum	aluminum	
		Finish	anodized	anodized	anodized	anodized
7	Rim	Tubular	—	—	700C	
		Clincher	622 x 13C (700C)	622 x 13C (700C)	—	
		Material	aluminum	aluminum	CFRP	CFRP
		Finish	anodized	anodized	—	—
		Height	24mm	24mm	30mm	30mm
8	Spokes	Width	20.8mm	20.8mm	18.8mm	
		No. of Spokes	16	20	16	
		Length	280mm	277/300mm	294mm	
		Bladed	○	○	○	
		Material	stainless steel	stainless steel	stainless steel	
Nipple	Nipple	Size	4.3mm (#11)	4.3mm (#11)	4.3mm (#11)	
		Thread	BC2 (#14)	BC2 (#14)	BC2 (#14)	
		Material	aluminum	aluminum	aluminum	
Spoke Protector (Option)		—	CP-WH20	—	CP-WH71	
Reflector (Option)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)				
Average Weight*	Tubular	—	—	635g	838g	
	Clincher	722g	857g	—	—	
Note		Recommended Tires 19-28mm (Clincher)		Recommended Tires 19-25mm (Tubular)		
		* Weight does not include quick release		Specially designed cork-composite brake pads must be used * Weight does not include quick release		

Model No.		WH-7701 (front)	WH-7701 (rear)	WH-R540 (front)	WH-R540 (rear)	
1	Freehub Body	Compatible Cassette Sprockets	—	8/9/10-speed	—	
		11T Top Compatible	—	○	—	
		Material	—	titanium	—	
2	O.L.D	100mm	130mm	100mm	130mm	
3	Axle	QR	○	○	○	
		QR Skewer Length	133mm	163mm	133mm	163mm
		Length	108mm	141mm	108mm	141mm
		Material	aluminum	steel	steel	steel
4	Labyrinth and contact Seal	○	○	○	○	
5	Hub Shell	Material	aluminum	aluminum	aluminum	
		Finish	anodized	anodized	anodized	anodized
6	QR Lever	Material	aluminum	aluminum	aluminum	
		Finish	anodized	anodized	barrel	barrel
7	Rim	Tubular	700C	700C	—	
		Clincher	622 x 13C (700C)	622 x 13C (700C)	622 x 13C (700C)	
		Material	aluminum	aluminum	aluminum	
		Finish	anodized	anodized	anodized	
		Height	30mm	30mm	28mm	
8	Spokes	Width	18.8mm	18.8mm	18.8mm	
		No. of Spokes	16	16	16	
		Length	294mm	278/294mm	286mm	
		Bladed	○	○	○	
		Material	stainless steel	stainless steel	steel	
Nipple	Nipple	Size	4.3mm (#11)	4.3mm (#11)	4.3mm (#11)	
		Thread	BC 2 (#14)	BC 2 (#14)	BC 2 (#14)	
		Material	aluminum	aluminum	aluminum	
Spoke Protector (Option)		—	CP-WH71	—	CP-WH71	
Reflector (Option)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)				
Average Weight*	Tubular	755g	957g	—	—	
	Clincher	771g	975g	839g	1,050g	
Note		Recommended Tires 19-28mm (Clincher)		Recommended Tires 19-28mm (Clincher)		
		* Weight does not include quick release		* Weight does not include quick release		

Rear Drivetrain Interchangeability

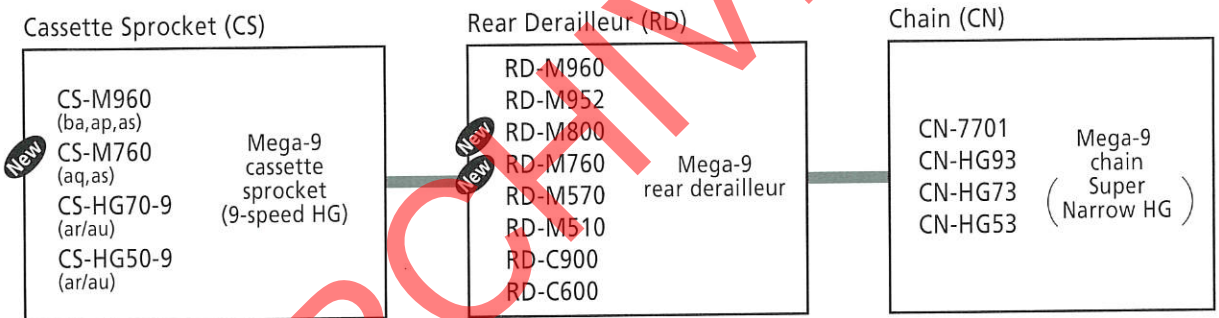
When using components of different series together, be aware of the points given below. "New" is shown if it is a new product and "MC" is given if only minor changes have been made.

8-Speed LINKGLIDE

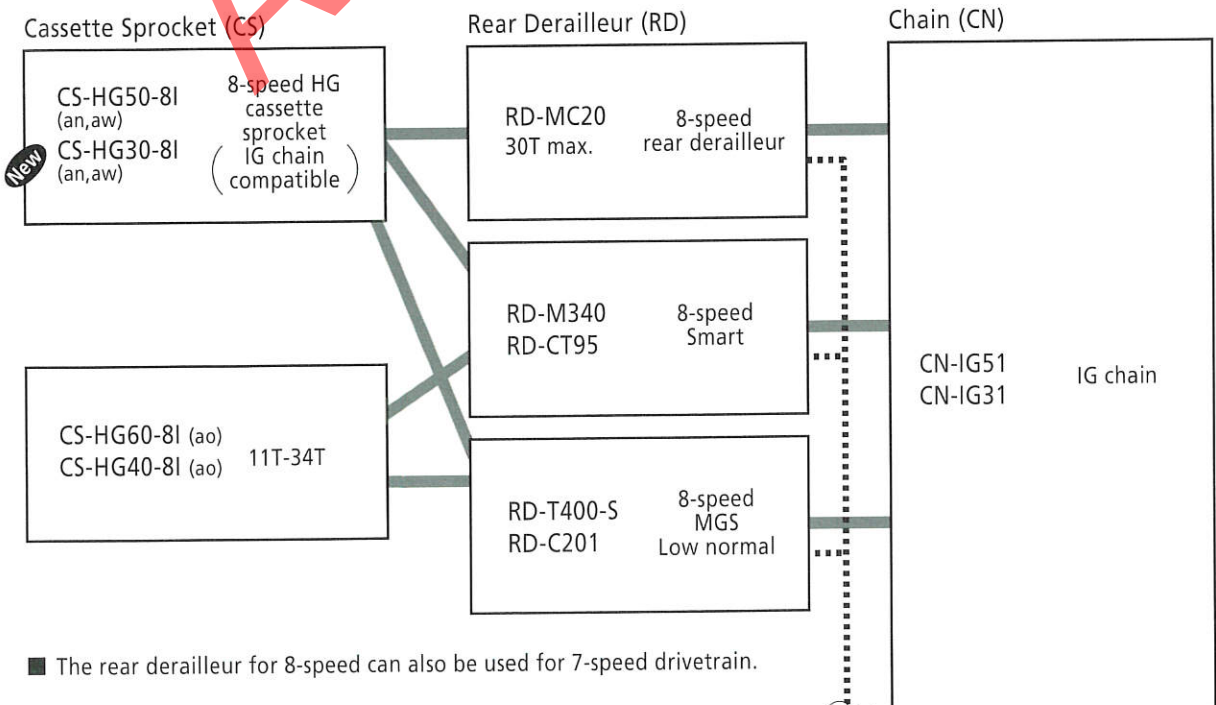


The full performance of LINKGLIDE sprocket will not be realized in combinations other than these. Also, HG gearing performance will be reduced if RD-C505, C503, C530 and C810 are used with HG gears other than LINKGLIDE gears. Best performance is achieved when combined with ST-C503-A (R) as the gear change lever. (C505,C503,C810)

Mega-9 Drivetrain (9-speed HG gearing)

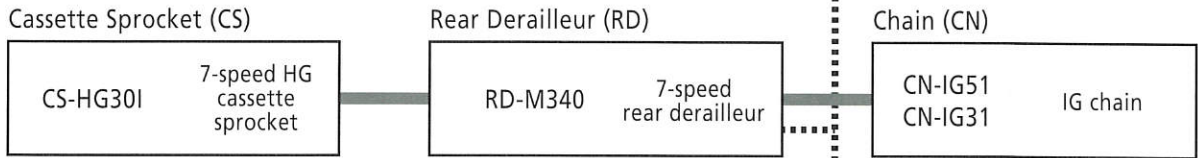


8-Speed HG gearing



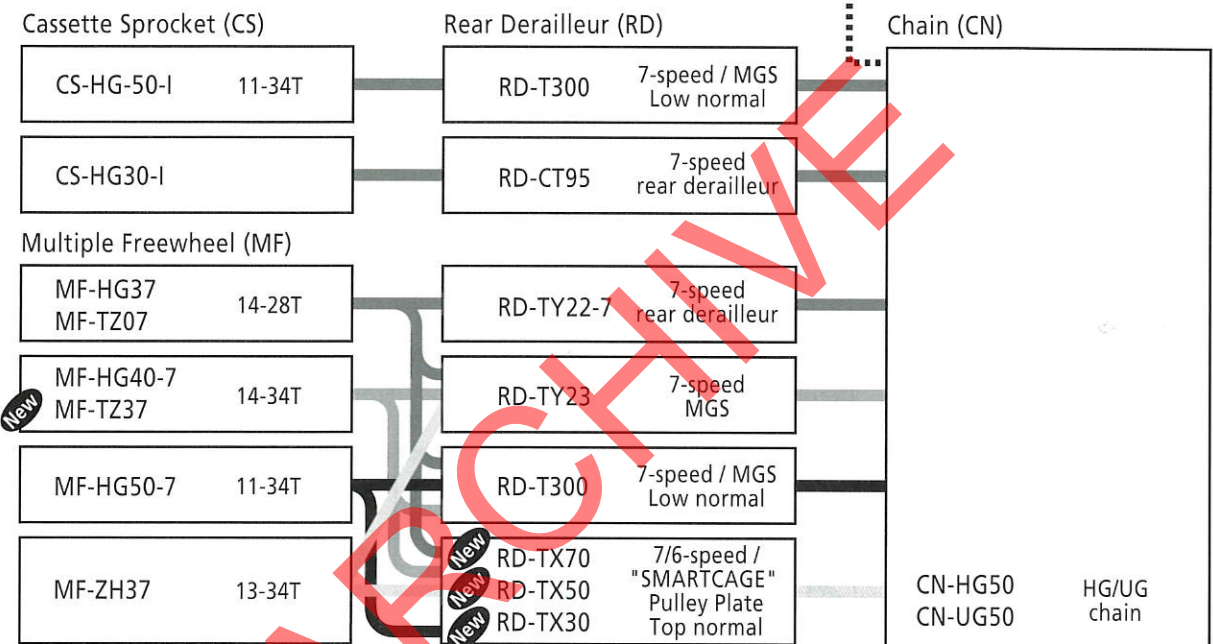
TECHNICAL NOTES

7-Speed HG gearing

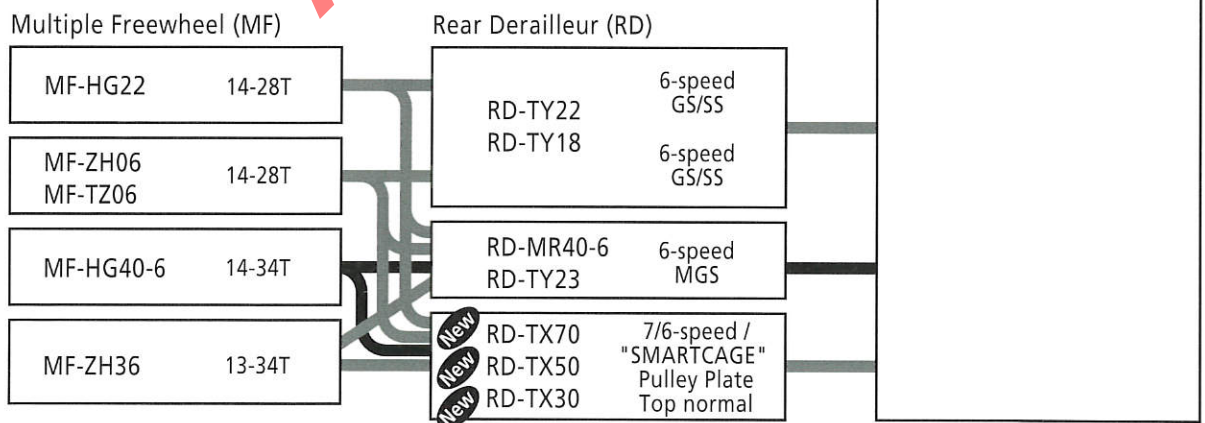


■ HG chain can only be used when using an HG compatible crankset.

7-Speed HG/ZH gearing



6-Speed HG/ZH gearing

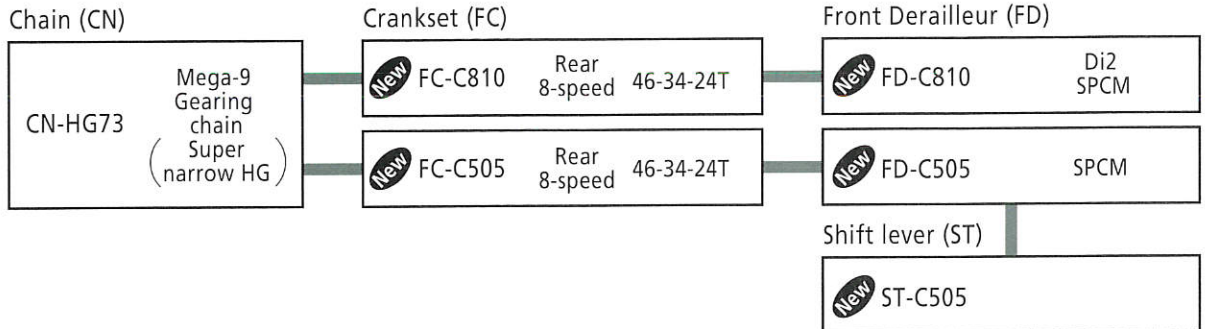


5-Speed UG

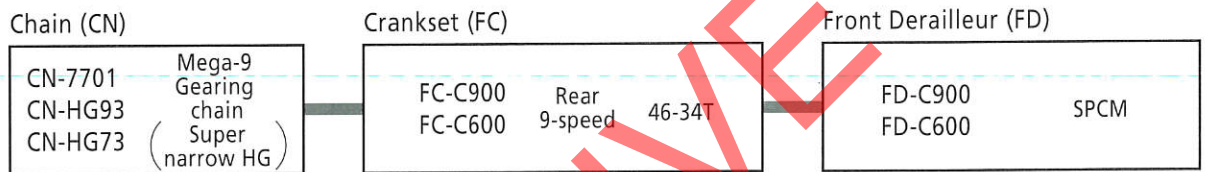


Front drivetrain interchangeability (MTB front SIS Rear Index Shifting)

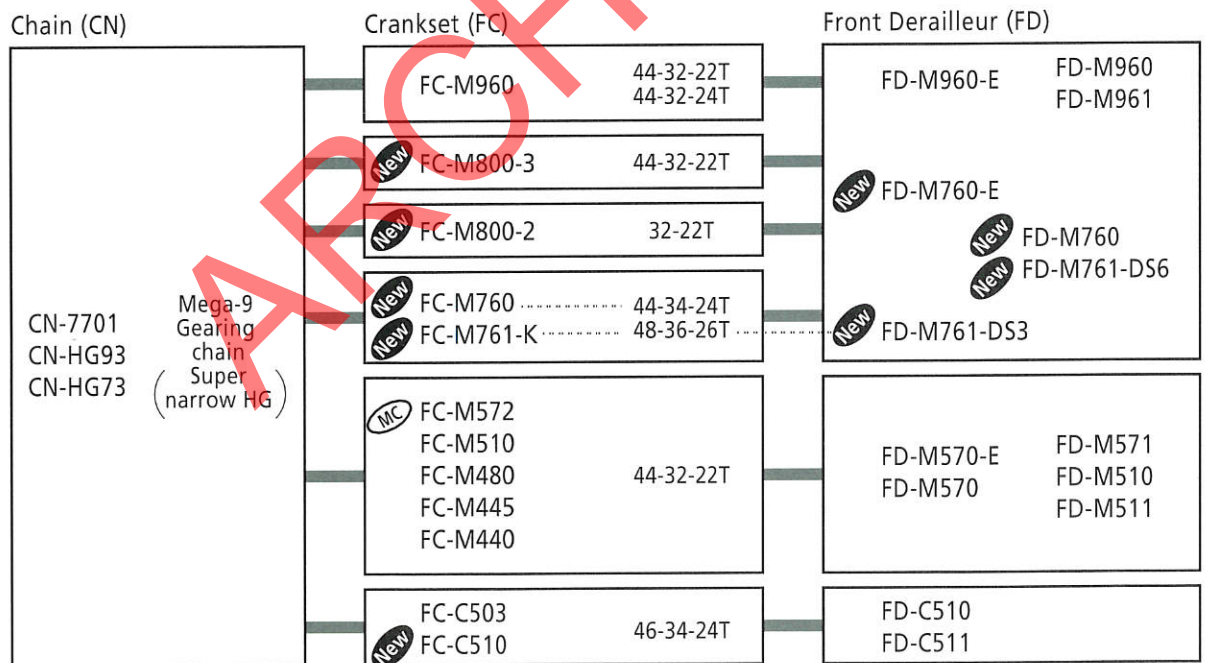
SPCM (TRIPLE)



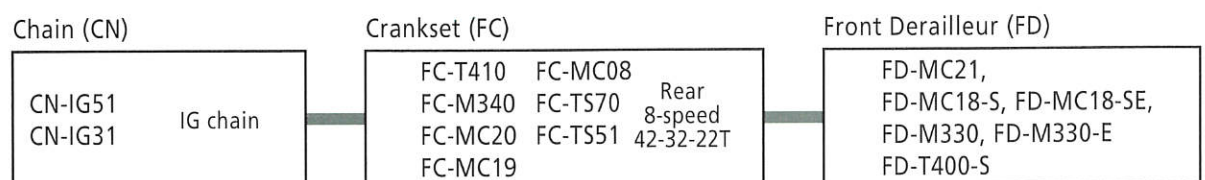
SPCM (DOUBLE)



Mega-9 Drivetrain (9-speed HG) / LINKGLIDE sprocket (8-speed)

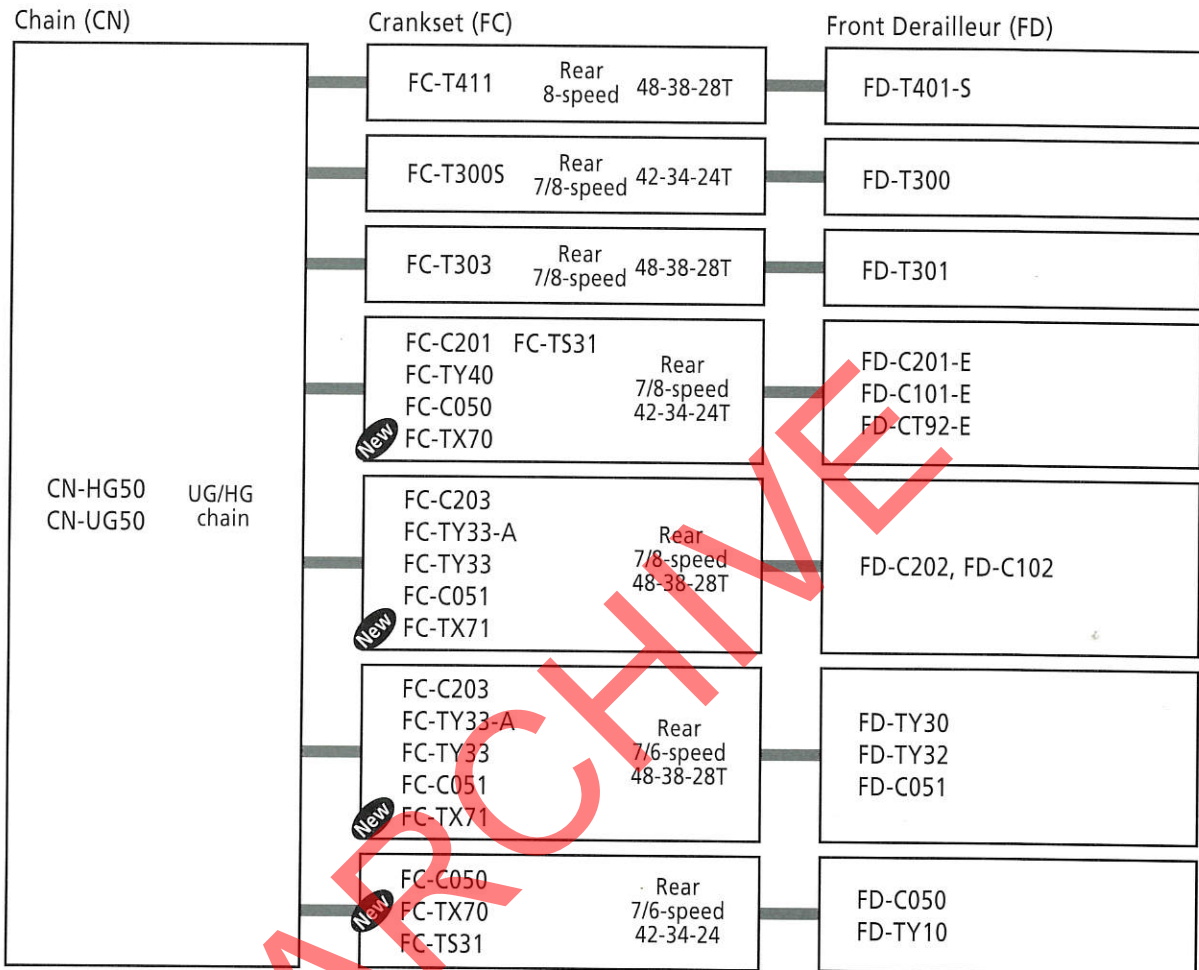


IG triple Gearing (8 and 7-speed)



■ When using the front derailleur designed for a 7-speed system on an 8-speed system, the front derailleur plate may interfere with the chain even if it has been installed correctly.

HG triple Gearing (8 and 7-speed)



■ When using the front derailleur designed for a 7-speed system on an 8-speed system, the front derailleur plate may interfere with the chain even if it has been installed correctly.

Front derailleur and crankset

The allowable combinations of front derailleurs and rear derailleurs depends on the difference in the number of teeth of the gears and the shape of the front derailleur plate.

- If the conditions given below are not satisfied, then the desired shiftability may not be obtained.

$$FC (\text{top gear}) - (\text{low gear}) \leq FD (\text{top and low capacity})$$

$$FC (\text{top gear}) - (\text{middle gear}) \leq FD (\text{minimum difference in teeth number between top and middle})$$

Front derailleurs and the number of teeth for corresponding cranksets are given in the chart below.

Front derailleur specifications (TRIPLE)

	Mega-9 drivetrain				SPCM (Triple)	SPCM (Double)	FD-MC21	FD-T401-S	FD-T300	FD-TY30
	FD-M960 FD-M960-E FD-M961 New FD-M760 New FD-M760-E New FD-M761-D56	FD-M570-E	FD-M570 New FD-M571 FD-M510 FD-M511 FD-C510 FD-C511	FD-M761-D53 New	FD-C810 New FD-C505	FD-C900 FD-C600	FD-MC18 FD-MC18-E FD-M330 FD-M330-E	FD-T301 FD-C202 FD-C102 FD-TZ31 FD-C051 FD-TY32 FD-TY32A	FD-T300-E FD-C201-E FD-C101-E FD-C050 FD-TY10 FD-CT92-E FD-TZ30 FD-TY10	
Top gear teeth number	44T	44/46T	48T/46T/44T	48T			42T	48T	42T	48T
Top-Middle min. teeth difference	12T	12T	12T	12T	SPCM (46/34/24T)	SPCM (46/34T)	10T	10T	8T	10T
Capacity	22T	22T	22T	22T			20T	20T	18T	22T

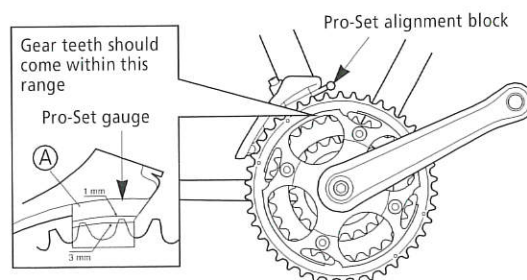
Crankset specifications

	For Super Narrow chain						For IG Chain	For HG Chain	For HG Chain	
	FC-M960 (44-32-24) *option New FC-M800-3 New FC-M760 FC-M572 FC-M510 FC-M480 FC-M445 FC-M440	FC-M510 New FC-M761-K New	FC-C503 New FC-C510 New	FC-C810 New FC-C505 New	FC-C900 FC-C600	FC-M800-2 New	FC-M800-1	FC-T410 FC-MC20 FC-MC19 FC-M340 FC-MC08 FC-TS70 FC-TS51	FC-T300S FC-CT93 FC-TY40 FC-C201 FC-C050 TC-TS31 New FC-TX70	FC-T303 FC-TY33 FC-TY33A FC-C203 FC-C103 FC-C051 FC-T411 FC-TS38 New FC-TX71
Top gear	44T	48T	46T	SPCM 46/34/24T	SPCM 46/34T	Bash Guard	34/38/42/46	42T	42T	48T
Middle gear	32T	36T	34T			32T	(-)	32T	34T	38T
Low gear	22T	26T	24T			(-)	22T	(-)	22T	24T

NOTE : When using the front derailleur designed for a 7-speed system on an 8-speed system, the front derailleur plate may interfere with the chain even if it has been installed correctly.

How to set position for FC with bigger top gear chain ring in the same series.

- 1) Set A.
- 2) Check if outer plate and bigger chainring have clearance.
- 3) Reposition height of FD in case of a problem (2).

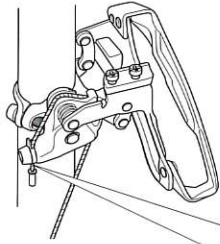


Installation of inner wire for front derailleur

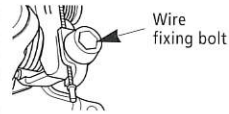
The figure below shows the installation of inner wire by the combination of front derailleur with bike frame.

Dual Pull type

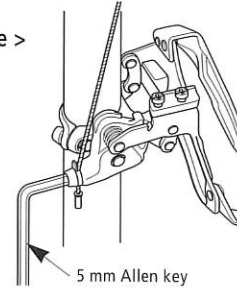
< Normal type >



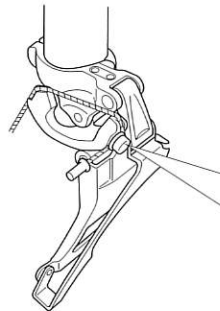
Note:
Pass the cable through as shown in the illustration.



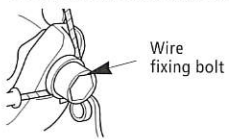
< Top route type >



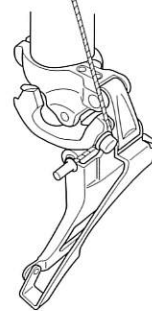
< Normal type >



Note:
Pass the cable through as shown in the illustration.

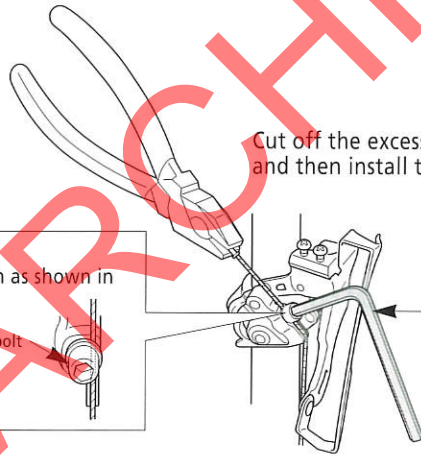


< Top route type >

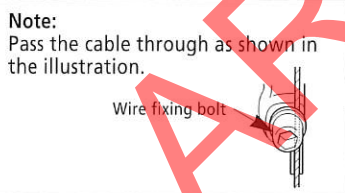


Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

Normal type



Cut off the excess length of inner cable and then install the inner end cap.



Note:
Pass the cable through as shown in the illustration.

Wire fixing bolt

5 mm Allen key

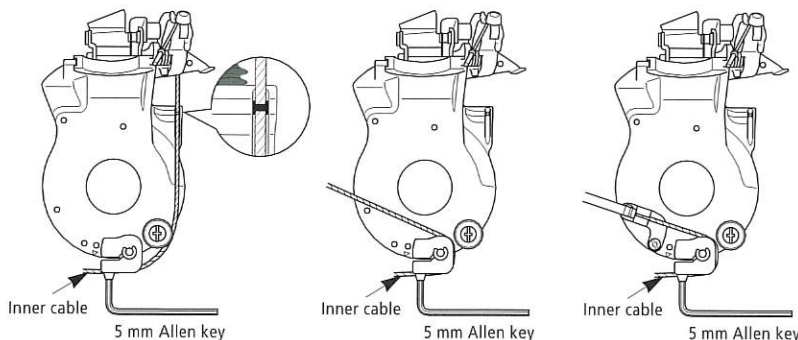
Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

Connection and securing the inner cable

Press the H button to set the lever to the initial position.

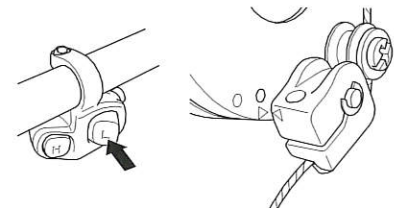
While pulling the inner cable, tighten the wire fixing bolt with a 5 mm Allen key to secure the cable.

Pass the cable through as shown in the illustration.



Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

Next, turn the lever adjustment bolt to align the Δ marks.



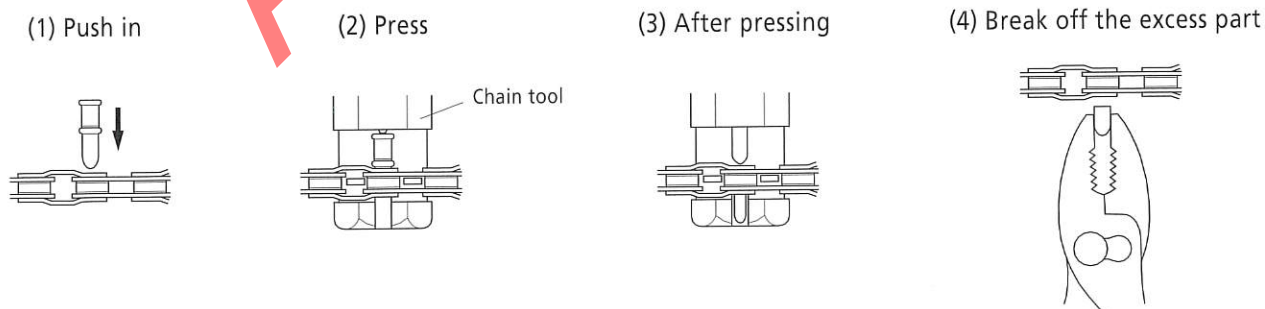
Front derailleur & chain line (MTB)

The Shimano line-up for front derailleurs and the chainlines they support are given in the chart below.

		Ø 28.6 (S)	Ø 31.8 (M)	Ø 34.9 (L)
XTR	FD-M960, FD-M960-E FD-M961	50 mm		
DEORE XT	FD-M760, FD-M760-E FD-M761-DS6, FD-M761-DS3	50 mm		
DEORE LX	FD-M570, FD-M570-E FD-M571	47.5 / 50 mm For the E-type (BB mounting front derailleur) : 47.5 mm (shell width of 68 mm), 50 mm (shell width of 73 mm) When using the FD-MC18SE with a seat tube of diameter 34.9 mm (L) the chainstay angle should be between 66 and 69		
DEORE	FD-M510, FD-M511			
	FD-MC21			
ALIVIO	FD-MC18-S, FD-MC18-SE			
ACERA	FD-M330	47.5 / 50 mm For the E-type (BB mounting front derailleur) : 47.5 mm (shell width of 68 mm), 50 mm (shell width of 73 mm)		the chainstay angle should be between 66 and 69
	FD-M330-E			
NEXAVE	FD-C900, FD-C600	52.5mm (shell width of 68mm)		
	FD-C810, FD-C505	50mm (shell width of 68mm)		
	FD-C510, FD-C511	50 mm		
	FD-T400-S, FD-T401-S	47.5 mm		
	FD-T300, FD-T301	47.5 mm (shell width 68 mm), 50 mm (shell width 73 mm)		
C-series	FD-C101-E, FD-C102 FD-C201-E, FD-C050	With seat tube of diameter 34.9 mm (L), the chainstay angle should be between 66 and 69 For the E-type (BB mounting front derailleur) : 47.5 mm (shell width of 68 mm), 50 mm (shell width of 73 mm)		
	FD-C102	For the E-type (BB mounting front derailleur) :	73mm shell width/ 66 and 69	
	FD-C202	47.5 mm (shell width of 68 mm), 50 mm (shell width of 73 mm)		

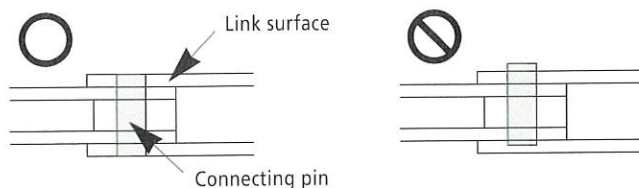
Shimano front derailleurs, with the exception of some of the C-series and the Tourney class, support chain lines of 47.5 and 50mm.

How to connect CN-7800 10-speed compatible chain



NOTE

- Be sure to check that the connecting pin protrudes uniformly from the link surfaces at both ends after the chain has been joined.



- Use special connecting pin for CN-7800 narrow-type chain Y-08D 98010 (5 pcs)
- Use TL-CN32 / TL-CN23

Crankset, bottom bracket, and chain line

In order to use SIS to its full extent, the required correct chain line, along with the crankset and bottom bracket required to obtain that, are given in the chart below.

Series	Model NO.	FC			BB	Chainline & Axle mark			
		Spline	Square	Chaincase		Model NO.	47.5mm	50.0mm	52.5mm
XTR	FC-M960	○			included				
Saint	FC-M800-1	○			included				
	FC-M800-2	○			included				
	FC-M800-3	○			included				
Deore XT	FC-M760	○			included				
	FC-M761-K	○		○	included				
Deore LX	FC-M572	○		○	BB-ES51-K	121	126*	–	121
Deore	FC-M510-O	○			BB-ES51(-E)	113	118	–	–
	FC-M510-KO	○		○	BB-ES51-K			–	121
	FC-M510		○		BB-UN25(-E)	MM110	LL113	–	
	FC-M510-K		○	○	BB-UN25-K			–	117.5
	FC-M480		○		BB-UN25(-E)	MM110	LL113	–	–
	FC-M445	○		○	BB-ES51/30(-E)	121	126	–	121
	FC-M440-O	○			BB-UN25(-E)	113	118	–	–
NEXAVE	FC-M440		○		BB-UN25(-E)	MM110	LL113	–	–
	FC-C900	○		○	BB-C900	–	–	121	–
	FC-C810		○	○***	BB-UN25	–	130	–	–
	FC-C505		○	○***	BB-UN25	–	130	–	–
	FC-C600		○	○	BB-UN25-K	–	–	117.5	–
	FC-C503		○	○	BB-UN25-K	123	123	–	123
	FC-C530 (33T w/small guard)****		○	○	BB-UN25-K / BB-TS30-K	Chainline : 44+t (YL117) / 46+t (117.5) / 47+t (D-NL 122.5)			
	FC-C530 (38T w/small guard)****		○	○	BB-UN25/TS30	Chainline : 44 (YL117) / 46 (117.5) / 47 (D-NL 122.5)			
	FC-C530 (38T w/large guard)****		○	○	BB-UN25/TS30	Chainline : 44 (YL117) / 46 (117.5) / 47 (D-NL 122.5)			
	FC-C510 **		○	○***	BB-UN25	–	123SP	–	–
	FC-T410		○	○	BB-UN25-K	–	–	–	117.5
	FC-T411		○	○	BB-UN25-K	–	–	–	–
FC-T300-S		○	○	BB-UN25(-E)	YL117	ZL122	–	–	
FC-T303		○	○	BB-UN25(-E)	YL117	ZL122	–	–	
Alivio	FC-MC20		○		BB-UN25(-E) /(-K)	MM110	LL113	–	–
	FC-MC19		○					–	–
Acera	FC-M340		○	○				–	MM110
Non-Series	FC-MC08		○			–	–		
C-Series	FC-C101/201		○			YL117	ZL122	–	–
	FC-C103/203		○	○		–	–	–	–
Tourney	FC-TY40/TS31		○			BB-UN25	D-NL(122.5)	–	–
C-Series	FC-C051/050		○	○	BB-UN25	D-NL(122.5)	–	–	
Tourney	FC-TY33A/33/TX70/TX71		○	○	BB-UN25	D-NL(122.5)	–	–	

* without chaincase stay

** BB-UN25 bottom brackets parts for FC-C510 includes 1.8mm and 0.7mm thickness spacers.

In case of without chain case, use both spacers between hanger and right hand BB adapter.

In case of with chain case, use 0.7mm thickness spacer only. Put chain case stay with 0.7mm thickness spacer between hanger and right hand BB adapter.

*** Chain case stay thickness should be 1.5 mm to 2.1 mm.

**** Small guard: Small outer chain guard, Large guard: Large outer chain guard

Front Chainwheels from Shimano Italy

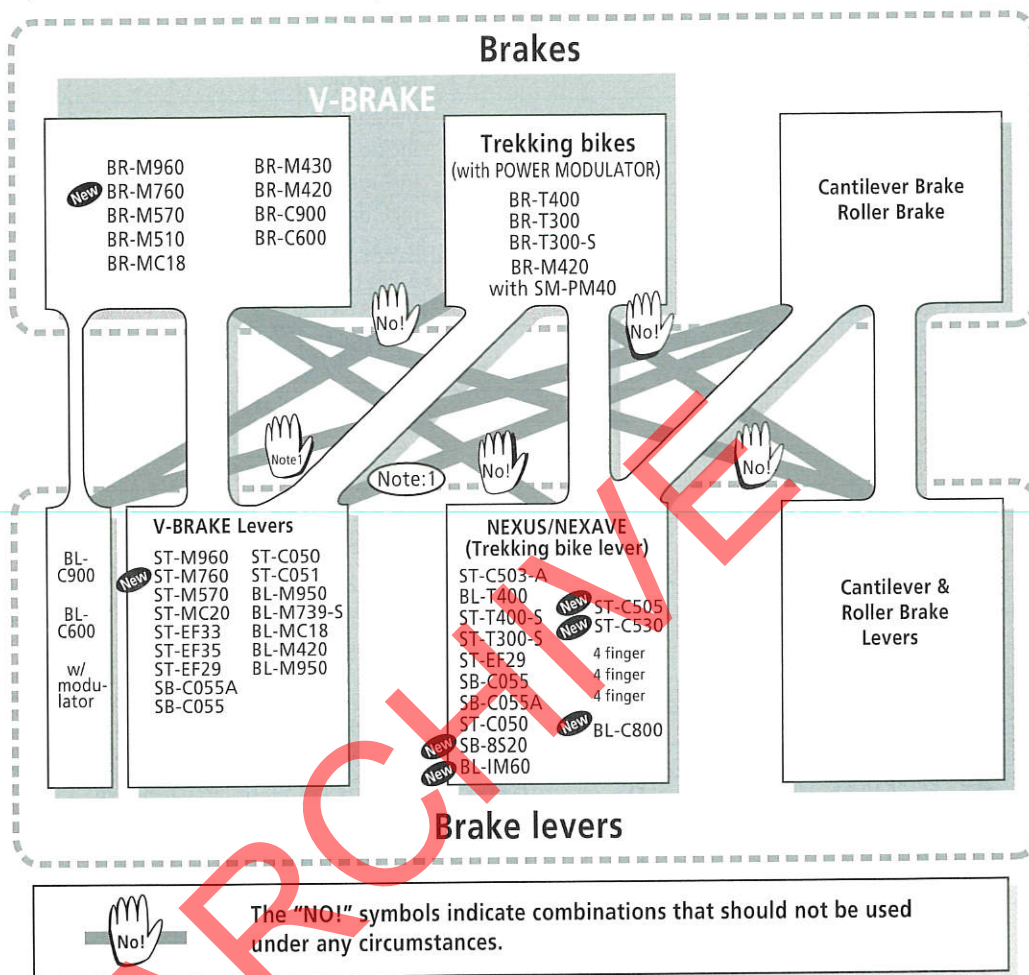
FC				BB	Chainline		
Model NO.	Chain ring	Square	Chain case	Model NO.	46.5+t	47.5+t	
FC-M510-K	44-32-22	○	○	BB-TS50/30	–	117.5	0 < t < 2.5mm
FC-TS91	44-32-22	○	○		–	117.5	
FC-TS52	44-32-22	○	○		–	117.5	
FC-TS38	48-38-28	○	○		–	–	
FC-TS32	42-34-24	○	○		–	YL117	

Note: "t" is thickness of chain case stay.

Interchangeability between brake systems

Depending on the brake and brake lever combination to be used, the relationship between the input at the brake lever and the actual braking force output at the wheels is very easily affected.

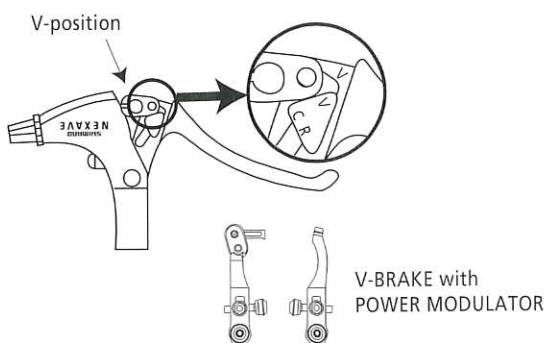
- Be very careful when combining a brake and brake lever. Incorrect combinations can cause accidents or insufficient braking forces due to improper cable strokes. Be sure to carefully consult the chart below and select the brake and the matching brake lever.



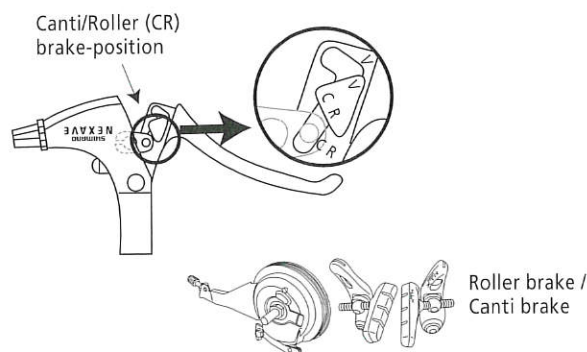
Note 1: This combination will not provide the sufficient amount of braking force.

- ST-T400/BL-T400/ST-T300/ST-EF29/SB-C055/ST-C050/SB-7545/BL-IM45 brake levers are equipped with a switch to change between the V-BRAKE with modulator mode (BR-T400, BR-T300 and BR-M420-P) and the cantilever or roller brake mode.

< For V-BRAKE (with POWER MODULATOR system) mode >



< For Canti /Roller-brake >



WARNING:

If the mode is not matched to the type of brake being used, this could result in inadequate or excessive braking power. Please proceed with caution when selecting the correct mode for the corresponding brake.

Shimano Disc Brake combination chart

In order to realize the best performance, we recommend that the following combination be used.

< Hydraulic Disc Brake >

Series	Caliper	Mount type	Brake Lever	Rotor	PAD (option)	Hose	
XTR	BR-M965	International standard	ST-M965	SM-RT96 SM-RT75S	M07 Resin (M06 Metal)	SM-BH96	
	BR-M966	Post mount					Front Only
Saint	BR-M800	*1	ST-M765 BL-M756	SM-RT80 SM-RT80S SM-RT75-DH	M06 Metal (M07-S resin)	SM-BH62	*1 Front: Boxxer, Post (Manitou) & International standard available. Rear: International standard
Deore XT	BR-M765	*2	ST-M765 BL-M756	SM-RT77 SM-RT75S	M07-S resin (M06 Metal)	SM-BH62	*2 Front mount: International standard / Post mount Rear mount: International standard
Deore	BR-M555	International standard	BL-M556	SM-RT61 SM-RT60	M01 Metal (M02 Resin)	SM-BH62	
		Post mount	BL-M555			SM-BH60/61	For Manitou fork, Front only
	BR-M525	*2	BL-M525		M08 Resin	SM-BH59	*2 Front mount: International standard / Post mount Rear mount: International standard
NEXAVE	BR-C901	International standard	BL-C901		C01 Metal	SM-BH60/61	

< Mechanical Disc Brake >

Series	Caliper	Mount type	Brake Lever	Rotor	PAD
DEORE	BR-M515-LA	International standard	V-BRAKE BL (1.5-2.5finger)	SM-RT60 SM-RT61	M05 Resin
	BR-M515-LA-M	Post mount only front	V-BRAKE BL (1.5-2.5finger)		
NEXAVE	BR-C601	International standard	V-BRAKE BL (4finger w/ modulator)	SM-RT60 SM-RT61	M08 Resin
	BR-C501	International standard	V-BRAKE BL (4finger) + SM-PM50		
Non-series	BR-M475	*	V-BRAKE BL (1.5-2.5finger)	(SM-RT50 For resin pad only)	

* FRONT MOUNT: International standard / Post mount

* REAR MOUNT: International standard

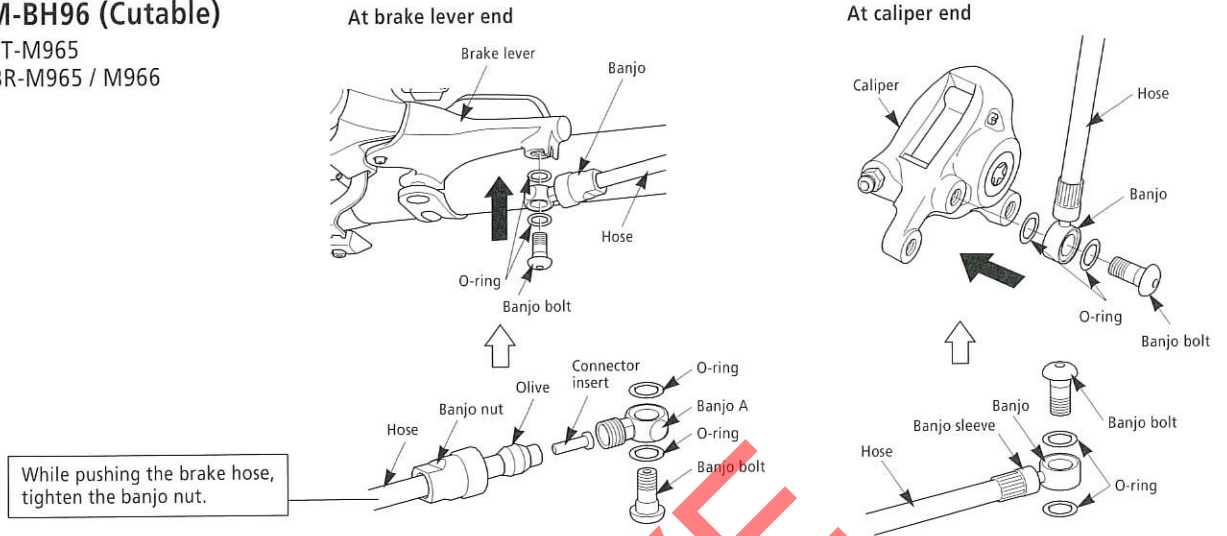
■ Mechanical Disc brake and Brake lever interchangeability

Model NO.	BL type			
	2 finger	4 finger	4 finger w/ modulator	
			BL-C900/C600 type or w/ SM-PM40	w/ SM-PM50
BR-M515-LA	Good	No good	No good	Good
BR-C601	Good	No good	Good	Good
BR-C501	Good	No good	No good	Good
BR-M475	Good	No good	No good	Good

Brake Hose

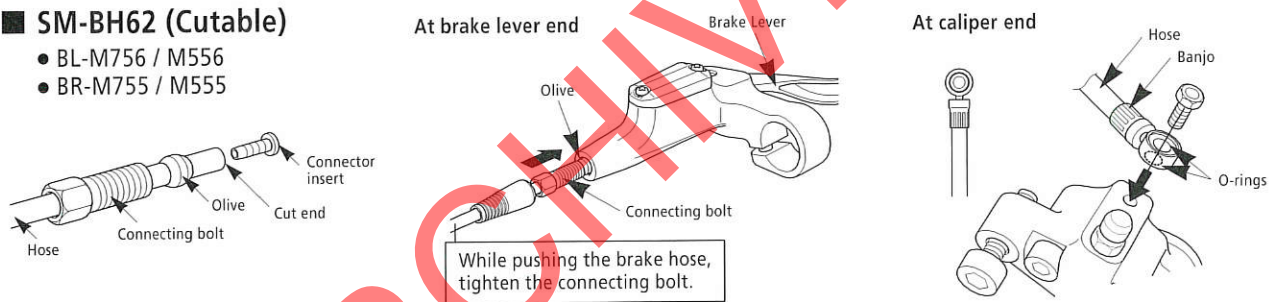
■ SM-BH96 (Cutable)

- ST-M965
- BR-M965 / M966



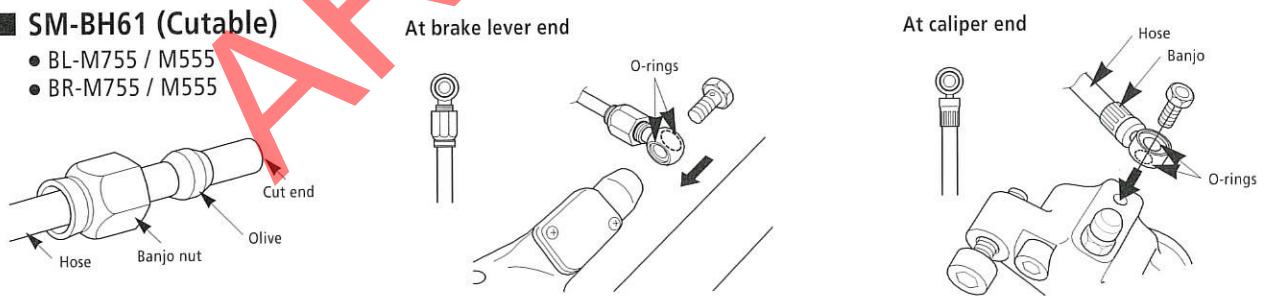
■ SM-BH62 (Cutable)

- BL-M756 / M556
- BR-M755 / M555



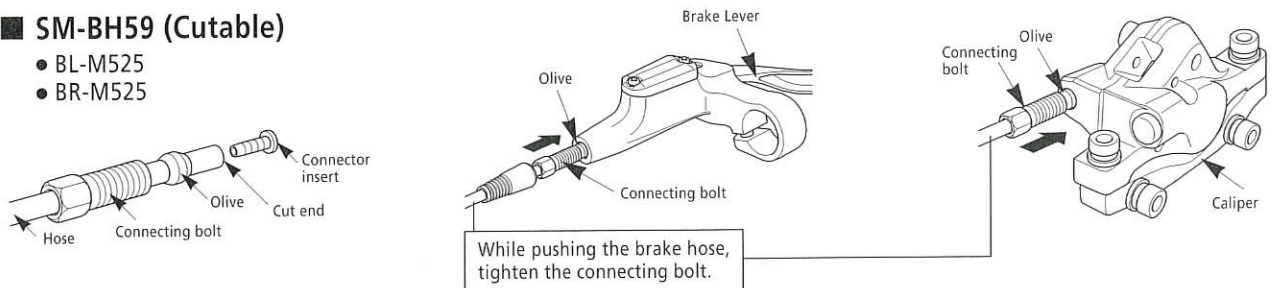
■ SM-BH61 (Cutable)

- BL-M755 / M555
- BR-M755 / M555



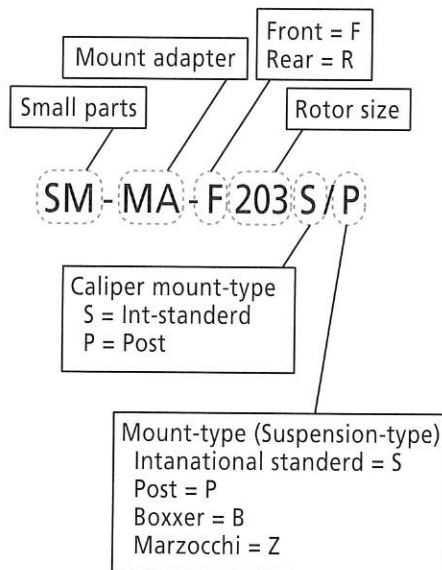
■ SM-BH59 (Cutable)

- BL-M525
- BR-M525



Disc brake mount adapter application

How to read product model No.



Mount adapter /model NO.
SM-MA-F203S/S
SM-MA-F203S/B
SM-MA-F203S/P
SM-MA-R203S/S
SM-MA-F160P/S
SM-MA-R160P/S
SM-MA-F170S/P
SM-MA-F203P/S
SM-MA-R203P/S
SM-MA-F203S/Z
SM-MA-F203P/Z
SM-MA-F203P/B
SM-MA-F203P/P
SM-MA-F160P/Z

Shimano hydraulic disc brake mount adapter application table

< For front >

Model	Rotor diameter	Mount-type			
		A-standard	MARZOCCHI 20 mm Axle (QR 20 Plus-DH INTL STD)	BOXXER-type	POST-type
BR-M965	∅203	SM-MA-F203S/S	SM-MA-F203S/Z	SM-MA-F203S/B	SM-MA-F203S/P
	∅160	Direct attach			
BR-M966	∅203	SM-MA-F203P/S	SM-MA-F203P/Z	SM-MA-F203P/B	SM-MA-F203P/P
	∅160	SM-MA-F160P/S	SM-MA-F160P/Z	Direct attach	
BR-M800	∅203	SM-MA-F203P/S	SM-MA-F203P/Z	SM-MA-F203P/B	SM-MA-F203P/P
	∅160	SM-MA-F160P/S	SM-MA-F160P/Z	Direct attach	
BR-M765	∅203	SM-MA-F203P/S	SM-MA-F203P/Z	SM-MA-F203P/B	SM-MA-F203P/P
	∅160	SM-MA-F160P/S	SM-MA-F160P/Z	Direct attach	
BR-M755	∅203	SM-MA-F203S/S	SM-MA-F203S/Z	SM-MA-F203S/B	SM-MA-F203S/P
	∅160	Direct attach			
	∅170	SM-MA-F170S/P			
BR-M555	∅203	SM-MA-F203S/S	SM-MA-F203S/Z	SM-MA-F203S/B	
	∅160	Direct attach			
BR-M555-M	∅203	SM-MA-F203P/S	SM-MA-F203P/Z	SM-MA-F203P/B	SM-MA-F203P/P
	∅160	Direct attach			
BR-M525	∅203	SM-MA-F203P/S	SM-MA-F203P/Z	SM-MA-F203P/B	SM-MA-F203P/P
	∅160	SM-MA-F160P/S	SM-MA-F160P/Z	Direct attach	

< For rear >

Model	Rotor diameter	A-standard
BR-M965	∅203	SM-MA-R203S/S
	∅160	Direct attach
BR-M966	∅203	SM-MA-R203P/S
	∅160	SM-MA-R160P/S
BR-M800	∅203	SM-MA-R203P/P
	∅160	SM-MA-R160P/S
BR-M765	∅203	SM-MA-R203P/S
	∅160	SM-MA-R160P/S
BR-M755	∅203	SM-MA-R203S/S
	∅160	Direct attach
BR-M555	∅203	SM-MA-R203S/S
	∅160	Direct attach
BR-M555-M	∅203	SM-MA-R203P/S
BR-M525	∅203	
	∅160	SM-MA-R160P/S

Shimano mechanical disc brake mount adapter application table

< For front >

Model	Rotor diameter	Mount-type		
		A-standard	A-standard (MARZOCCHI)	POST-type
BR-M515	∅203			
	∅160	M515 Adapter (F)		
BR-M515-M	∅203			
	∅160	SM-MA-F160P/S	SM-MA-F160P/Z	Direct attach
BR-M475	∅203			
	∅160	SM-MA-F160P/S	SM-MA-F160P/Z	Direct attach

< For rear >

Model	Rotor diameter	A-standard
BR-M515	∅203	
	∅160	M515 Adapter (R)
BR-M515-M	∅203	
	∅160	SM-MA-R160P/S
BR-M475	∅203	
	∅160	M475 Adapter (R)

Chain, chainring and cassette sprocket interchangeability

The allowable combinations for the Shimano chain (CN), chainrings (FC), and cassette sprockets (CS) are given in the chart below. Three chains are available in order to match the type of drivetrain. Select the combination you desire after checking the chart below.

FC/CS	Mega-9		LG		IG		HG	
	Cassette sprocket	Crankset	Cassette sprocket	Crankset	Cassette sprocket	Crankset	Cassette sprocket	Crankset
Chain	CS-M960 CS-M760 CS-HG70-9 CS-HG50-9	FC-M960 New FC-M800 New FC-M760 New FC-M761 FC-M572 FC-M510 FC-M480 FC-M445 FC-M440 FC-C900 FC-C600	CS-LG60	New FC-C810 New FC-C505 FC-C503 New FC-C530 New FC-C510	CS-IG60	FC-T410 FC-MC20 FC-MC19 FC-M340 FC-MC08 FC-TS70 FC-TS51	CS-HG40-8I CS-HG60-I CS-HG50-8I CS-HG50-I CS-HG30-I CS-HG30-8I	New FC-T411 FC-T300-S FC-T303 FC-CT93 FC-C201 FC-C203 FC-TY33-A FC-TY33 FC-TY40 FC-C050 FC-C051 FC-TX70 FC-TX71 FC-TS38 FC-TS31
Mega-9 Super Narrow chain CN-7701 CN-HG93 CN-HG73 CN-HG53	Good	Good	Good	Good	No good	No good	No good	No good
IG Chain (Note 2) CN-IG51 CN-IG31	No good	No good	No good	No good	Good	Good	Good (Note 1)	No good poor performance
HG Chain CN-7401 CN-HG50	No good	No good	No good	Not good	No good poor performance	No good Will not work	Good	Good

Note 1 : When used together with HG cassette sprocket CS-M737/HG70-8, the adjustable range is very narrow and requires great care.

Note 2 : IG chain cannot be used with Altus class rear derailleurs.

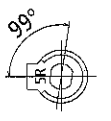
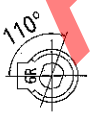
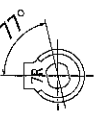
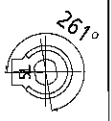
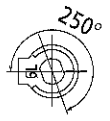
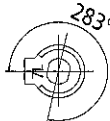
TECHNICAL NOTES


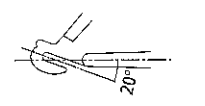
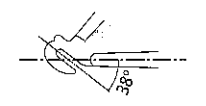

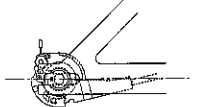
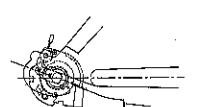
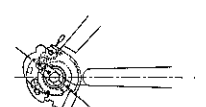

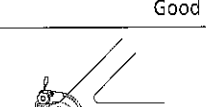
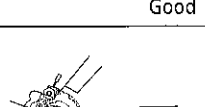
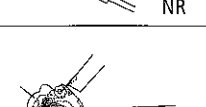

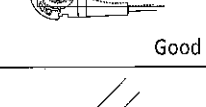



NEXUS Non-turn Washer Compatible Chart (for Inter-8/7/4/3)

Mark	Fork End	Size	Colour	Installation Side	Fork End Angle	Hub			
						SG-85	SG-75	SG-45	SG-35
1	Standard	4mm	Black	Right side	20° - 38°		SG-7C12, SG-7C20, SG-7C21, SG-7C22, SG-7R40, SG-7R41, SG-7R42	SG-4R31, SG-4C30, SG-4C31	
2	Reversed (Chaincase)	4mm	Yellow	Right side (SG3R40-Left side)	0°		SG-7C12, SG-7C20, SG-7C21, SG-7C22, SG-7R40, SG-7R41, SG-7R42	SG-4R31, SG-4C30, SG-4C31	SG-3C40 (left non-turn washer), SG-3R40
3	Reversed	4mm	Silver	Right side	0°		SG-7C12, SG-7C20, SG-7C21, SG-7C22, SG-7R40, SG-7R41, SG-7R42	SG-4R31, SG-4C30, SG-4C31	
5R, 5L	Reversed (Chaincase)	6mm	Yellow (5R), Brown(5L)	Right side (5R), Left side (5L)	0°	SG-8R20, SG-8R25	SG-7C15, SG-7C16, SG-7C25, SG-7C26, SG-7R45, SG-7R46	SG-4R40, SG-4R41, SG-4R35, SG-4C35 (only 5R, 6R, 7R)	
6R, 6L	Reversed	6mm	Silver (6R), White (6L)	Right side (6R), Left side (6L)	0°	SG-8R20, SG-8R25	SG-7C15, SG-7C16, SG-7C25, SG-7C26, SG-7R45, SG-7R46	SG-4R40, SG-4R41, SG-4R35, SG-4C35 (only 5R, 6R, 7R)	
7R, 7L	Standard	6mm	Black (7R), Gray (7L)	Right side (7R), Left side (7L)	20° - 38°	SG-8R20, SG-8R25	SG-7C15, SG-7C16, SG-7C25, SG-7C26, SG-7R45, SG-7R46	SG-4R40, SG-4R41, SG-4R35, SG-4C35 (only 5R, 6R, 7R)	

Mainly three sets of non-turn washers are provided for use with the two different types of fork ends.

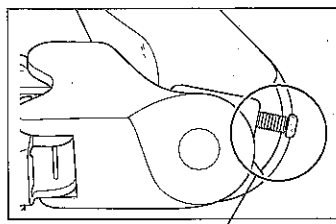
■ Shape & Color

	5R/L	6R/L	7R/L
For right hand side	 5R:Yellow	 6R:Silver	 7R:Black
For left hand side	 5L:Brown	 6L:White	 7L:Gray

	Reversed fork end		Standard fork end	
				
5R/L				
	Good	Good	NR	NR
6R/L				
	Good	NR	NR	NR
7R/L				
	NR	Good	Good	Good

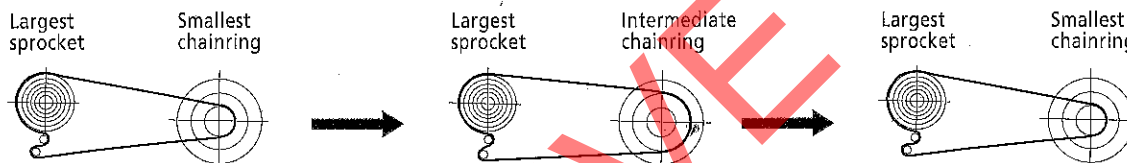
NR: not recommend

How to use the B-tension adjustment screw

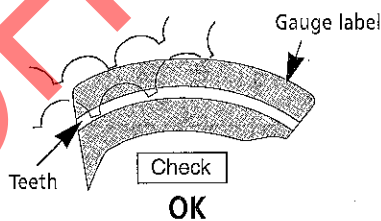


B-tension adjustment screw

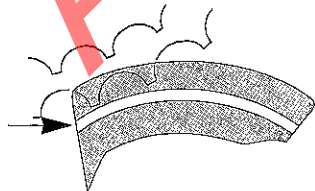
- While turning the pedals, operate the right lever to move the chain to the largest sprocket. Then operate the left lever to move the chain first to the intermediate chainring, and then move it to the smallest chainring.



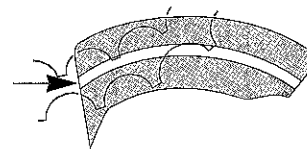
- Check that the teeth of the sprocket are overlapping the indicated section of the gauge label. If they are not overlapping, adjust by the following procedure.



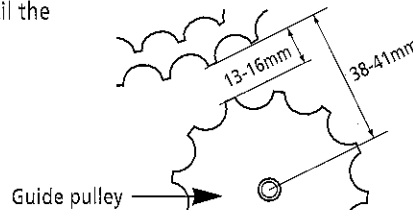
If the teeth are above the section indicated by the arrow, loosen the B tension screw.



If the teeth are below the section indicated by the arrow, tighten the B tension screw.



If there is no gauge seal attached, turn the B tension screw until the guide pulley is within the range indicated in the illustration.



As a guide, the teeth move about 1 mm for every 270° rotation of the B tension screw.

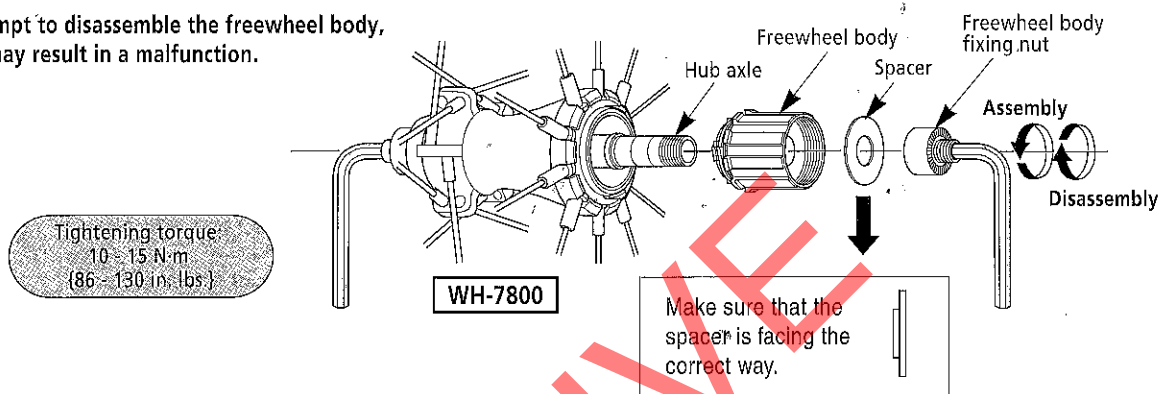
While turning the pedals, operate the left lever to move the chain first to the intermediate chainring, and then move it once more to the smallest chainring. If a gauge label is attached, check that the teeth of the sprocket are overlapping the indicated section of the gauge label. If no gauge label is attached, check that the guide pulley is within the indicated range. If teeth are not overlapping or the guide pulley position is incorrect, repeat the adjustment procedure.

Replacement of the freewheel body (FH-7800 / WH-7800)

- Remove the freewheel body fixing nut (inside the freewheel body), and then replace the freewheel body.
(The freewheel body fixing nut has a left-hand thread.)
- Special grease is used for the freewheel body. Do not mix it with other types of grease, as this may cause problems with the operation of the freewheel clutch mechanism.
(Grease part number: Y-3B980000)

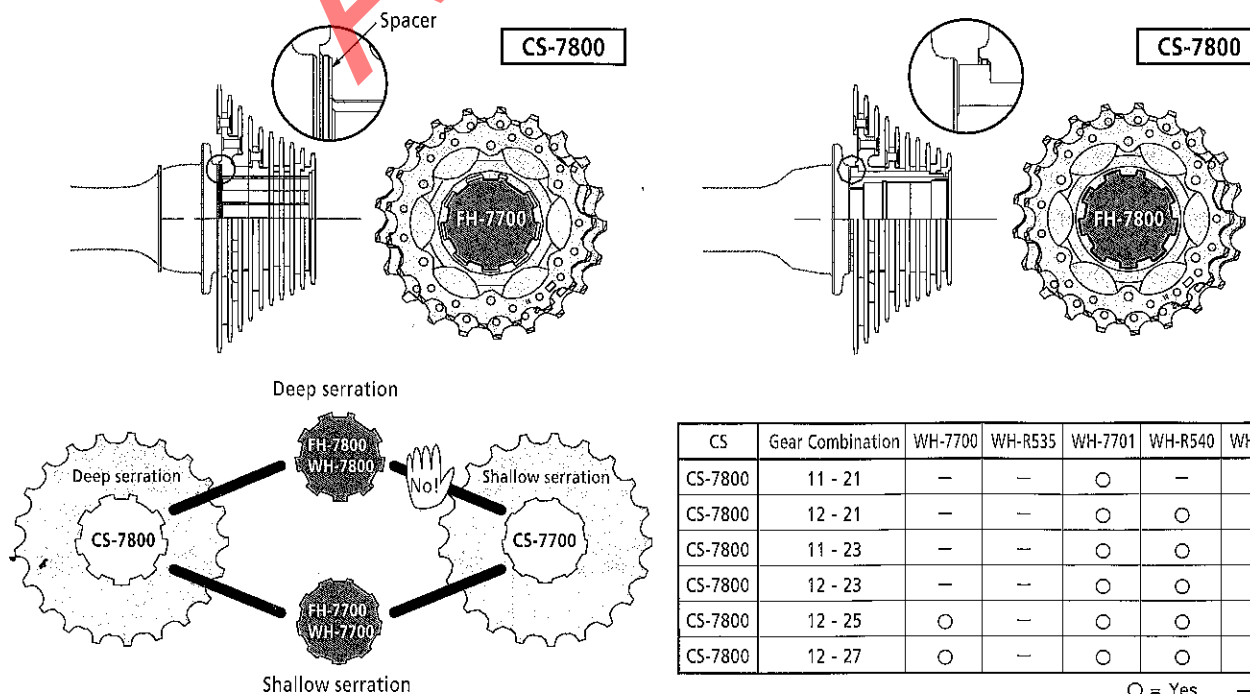
Note:

Do not attempt to disassemble the freewheel body, because it may result in a malfunction.



CS/FH/WH interchangeability (DURA-ACE)

The depth of the serration part is different between FH-7700 and FH-7800 as following illustration. So, ensure not to use a wrong combination.



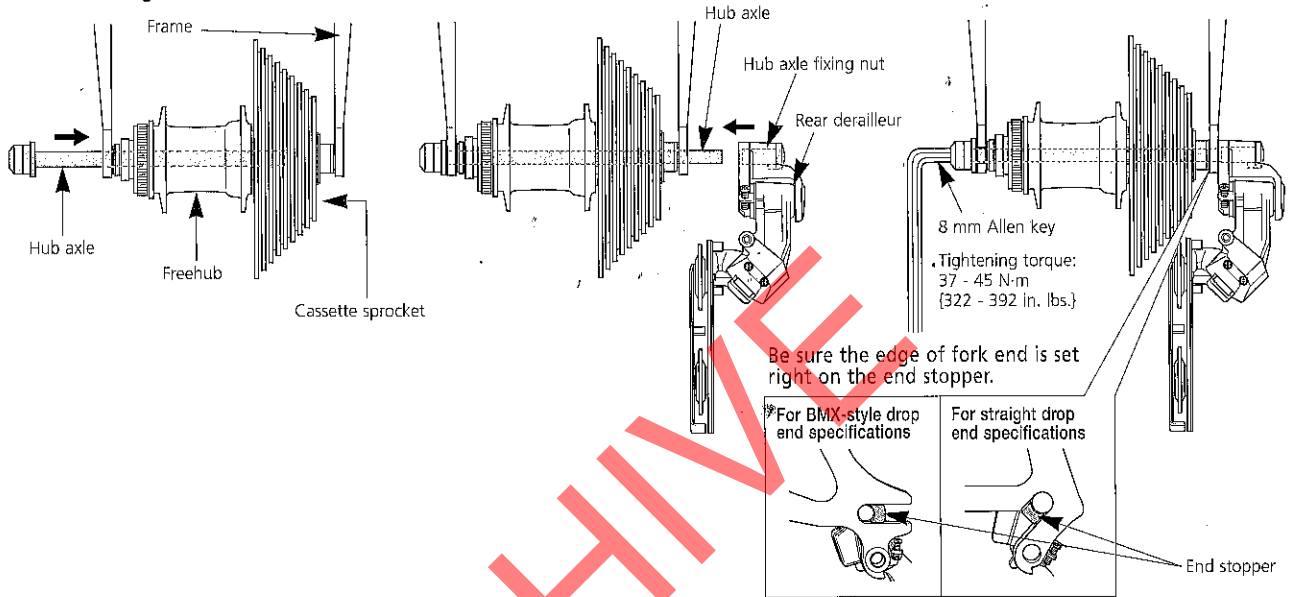
TECHNICAL NOTES

Installation of RD-M800 To Frame

1 Install the sprockets to the FH-M800 freehub, place the freehub onto the frame and pass the hub axle through it.

2 Install the hub axle fixing nut that is attached to the rear derailleur onto the hub axle.

3 Turn the hub axle to secure the freehub and the rear derailleur to the frame.

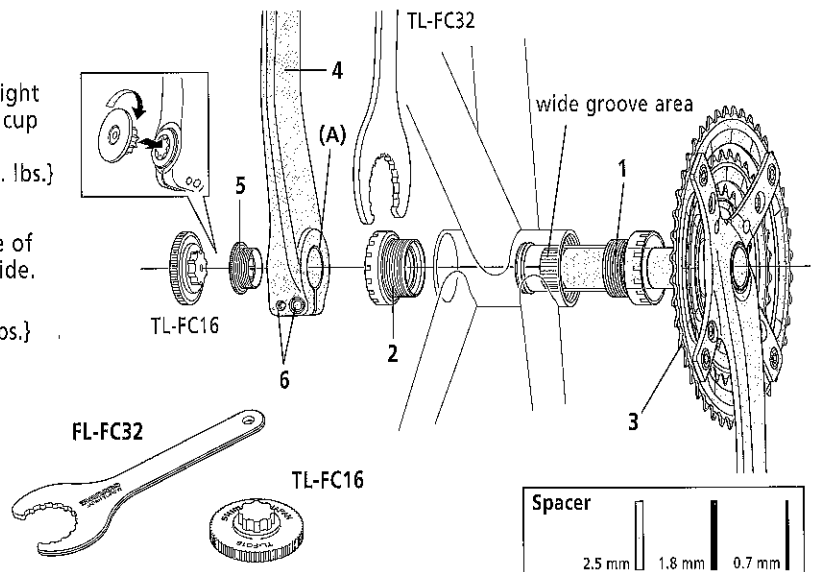


HOLLOWTECH II Crankset Assembly (XTR, XT, SAINT)

Follow the procedure in the figure.

- 1,2 Use the special tool TL-FC32 to install the right cup (counterclockwise thread) and the left cup (clockwise thread).
Tightening torque: 35 - 50 N-m (305 - 435 in. lbs.)
- 3 Insert the right crank unit.
- 4 Set section A of the left crank into the axle of the right crank unit where the groove is wide.
- 5 Use the TL-FC16 to tighten the cap.
Tightening torque: 0.4 - 0.7 N-m {4 - 6 in. lbs.}
- 6 Tighten the bolt of the left crank.

Note : Each of the bolts should be evenly and equally tightened to 10 - 15 N-m (88 - 132 in. lbs.).



FC-M960 / M760 / M800	
68 mm (Band Type) Spacer	68 mm (Bracket Type) E-type bracket
73 mm (Band Type) 	73 mm (Bracket Type)

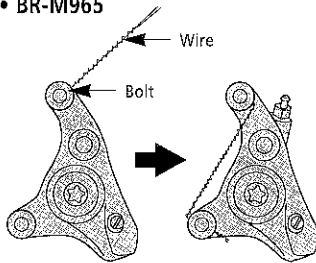
FC-M761		
68 mm (Band Type) Spacer	68 mm (Chaincase Stay Type) Chaincase stay	68 mm (Bracket Type) E-type bracket
73 mm (Band Type) 	73 mm (Chaincase Stay Type) 	73 mm (Bracket Type)

Preventing loosening of the caliper fixing bolts

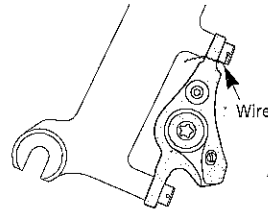
■ Wire

Secure the two bolts with a length of wire as shown in the illustration in order to prevent the bolts from coming loose.

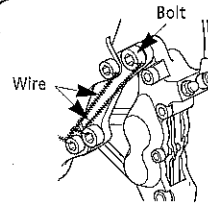
• BR-M965



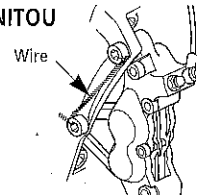
• For post type (BR-M966)



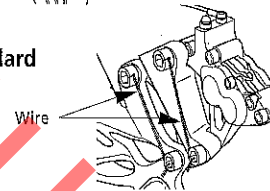
< Front > BOXXER



MANITOU

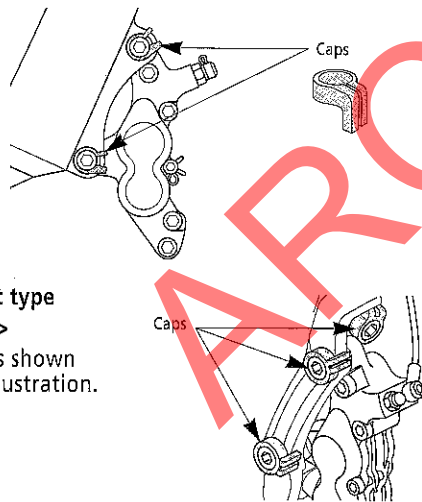


< Rear > International standard



■ Cap

Install the accessory caps as shown in the illustration to prevent the bolts from loosening.

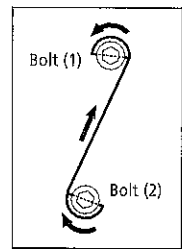


• For post type < Front >

Install as shown in the illustration.

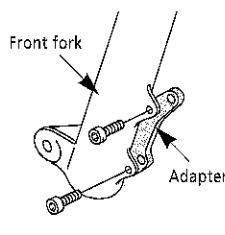
If bolt (1) tries to loosen (turn in the counterclockwise direction), force is applied via the wire to turn bolt (2) in the tightening direction (clockwise). However, bolt (2) cannot turn any further in the tightening direction. Accordingly, this prevents bolt (1) from turning in the loosening direction because it is also connected via the wire.

If either one of the bolts tries to loosen, this causes a force to be applied to the other bolt to turn it in the tightening direction. In other words, this system prevents the bolts from loosening.

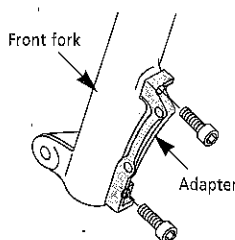


Installation of the adapters

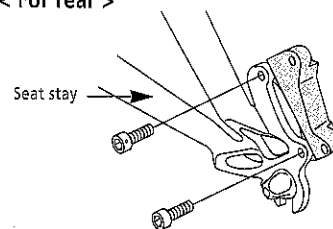
< For front > For BOXXER



For MANITOU



< For rear >



Tightening torque:
6 - 8 N·m [53 - 69 in. lbs.]

Shimano Service Parts

ORIGINAL TOOLS

Lock Ring Tool
TL-LR10

For Disc Rotor SM-RT96/RT77
& HG Sprockets
(Mounts to ratcheting
socket wrench handle.)

Code No.
Y-120 09220



Lock Ring Tool
TL-LR15

For Disc Rotor SM-RT96/RT77
& HG Sprockets

Code No.
Y-120 09230



Lock Ring Tool
TL-LR20

For SAINT Disc Rotor SM-RT80/80S

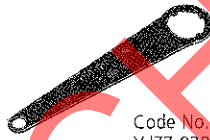
Code No.
Y-25U 15000



Lock Ring Tool
TL-HG09

For CAPREO CS-HG70-S

Code No.
Y-1Z7 02000



Crank Adaptor Installation Tool
TL-FC22

For FC-M960/FC-M760/FC-M800/FC-7800

Code No.
Y-130 09210



Crank Adaptor Installation Tool
for Impact Wrench
TL-FC33

For FC-M800/FC-M760

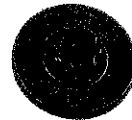
Code No.
Y-130 09230



Crank Installation Tool
TL-FC16

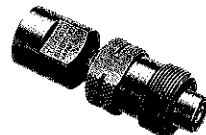
For FC-M960/FC-M760/FC-M800/FC-7800

Code No.
Y-130 09220



Cotterless Crank Extractor
TL-FC10

Code No.
Y-130 09010



Special Plug Tool
TL-FC15

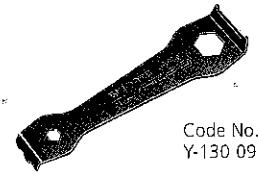
For FC-5502/FC-5505/FC-M572

Code No.



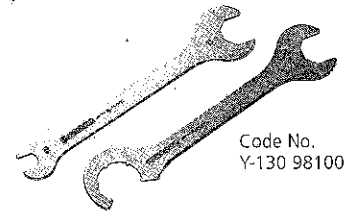
Peg Spanner
TL-FC20

Code No.
Y-130 09130



Head Parts Spanner Set
TL-FC31

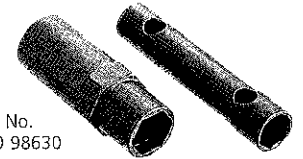
Code No.
Y-130 98100



Cone Adjusting Tool Set
TL-PD63

For SPD Pedal.

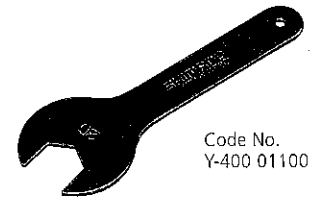
Code No.
Y-460 98630



Cone Adjusting Tool Set
TL-PD77

For PD-7700

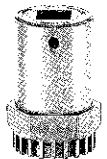
Code No.
Y-400 01100



Bottom Bracket Installation Tool
(Mounts to ratcheting socket
wrench handle.)

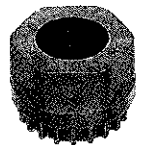
TL-UN66

Code No.
Y-130 09075



Bottom Bracket Installation Tool
TL-UN74-S

Code No.
Y-130 09073



Right hand cone Removal Tool
TL-8S10

For Inter-8 Geared Hubs

Code No.
Y-708 00100



Right-hand cone installation Tool
TL-8S20

For Inter-8 Geared Hubs

Code No.
Y-708 00200



Carrier unit gear Arraignment Tool
TL-8S30

For Inter-8 Geared Hubs

Code No.



Shimano Service Parts

ORIGINAL TOOLS

Chainwheel Installation Tool TL-UN75

FC-M750, M739, M570, M569, MC40 chainwheel installation tool for use with TL-UN96

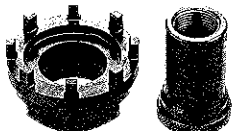
Code No.
Y-130 09068



Chainwheel / Bottom Bracket TL-UN96

FC-M952, M951, M950, / BB-M950 FC-M750, M739, M570, M569, MC40

Code No.
Y-130 98090



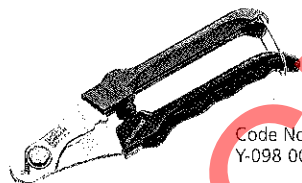
Sprocket Holding Tool (Holds sprockets when removing lock rings.) TL-SR20



Code No.
Y-130 09150

Cable Cutter TL-CT10

Use to cut outer casings, cables and pinch end caps.



Code No.
Y-098 00010

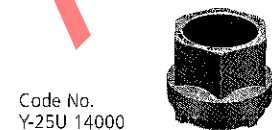
Multiple Freewheel Removal Tool TL-FW30



Code No.
Y-120 09050

Ball Bearing Unit Installation Tool TL-HA20

For SAINT



Code No.
Y-25U 14000

Single Freewheel Removal Tool TL-FW40

2 Keies



Code No.
Y-120 09040

Single Freewheel Removal Tool TL-FW45

4 Keies for BMX



Code No.
Y-120 09040

R/H Adapter Open and Close Tool TL-FH81

For FH-C810/C811

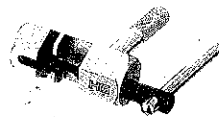


Code No.

Chain Connecting Tools TL-CN23

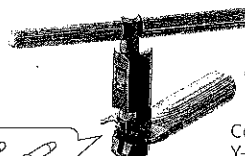
For IG/HG/UG Chain (SPARE ARROW) 130 09110

Code No.
Y-130 98140



Chain Connecting Tools TL-CN32

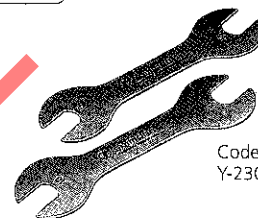
For IG/HG/UG Chains
2 spare pins included in grip.



Code No.
Y-130 98150

Hub Cone Wrenches TL-HS10

13/14mm, 2 wrenches



Code No.
Y-230 90010

Hub Cone Wrenches TL-HS20

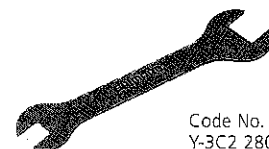
15/17mm



Code No.
Y-320 90010

Hub Spanner 23mmX15mm TL-HS21

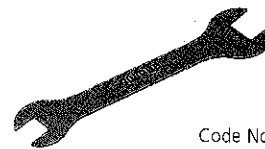
For HB-M800, 15/23 mm



Code No.
Y-3C2 28000

Hub Spanner 24mmX17mm TL-HS22

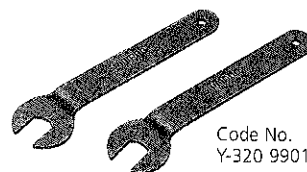
For HB-M800, 17/24 mm



Code No.
Y-3C2 27000

Hub Cone Wrenches TL-3R10

14 mm
2 wrenches



Code No.
Y-320 99010

Geared Hub Cable Setting Tool TL-CJ10



Code No.
Y-708 98010

Geared Hub Cable Setting Tool TL-CJ40



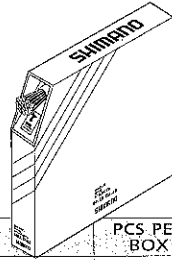
Code No.

Shimano Service Parts

CABLES

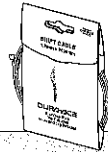
We strongly recommend the use of genuine Shimano service parts in order to maintain the performance of the HG/IG drive trains, Advanced Light Action mechanisms, DUAL SIS and M SYSTEM brakes.

Inner Cable File Box



Code No.	Description	PCS PER BOX
Y-600 98510	For Shifting Lever ø1.2mm x 2000mm (Stainless steel)	100
Y-600 98520	For Shifting Lever ø1.2mm x 2100mm	100
Y-600 98530	For Shifting Lever ø1.1mm x 2100mm (Stainless steel)	100
Y-800 98550	For ATB Brake Lever ø1.6mm x 1700mm (Stainless steel)	100
Y-800 98520	For ATB Brake Lever ø1.6mm x 1700mm	100
Y-800 98560	For Racing Brake Lever ø1.6mm x 1700mm (Stainless steel)	100
Y-800 98530	For Racing Brake Lever ø1.6mm x 1700mm	100

DURA-ACE Die-Extruded Shifting Cable



Code No.	Description
Y-600 98900	ø1.2mm x 2000mm (Stainless steel/1-pack)
Y-600 30014	ø1.2mm x 3000mm (Stainless steel/1-pack)

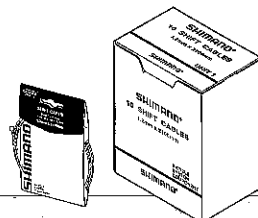
XTR Die-Extruded & Coated Inner Cable

for Shift Levers



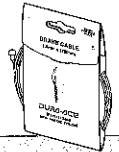
Code No.	Description
Y-600 98600	ø1.2mm x 2100mm (Stainless steel/1-pack)

Shift Inner Cables w/inner end cap



Code No.	Description

DURA-ACE Brake Cable



Code No.	Description
Y-800 98300	ø1.6mm x 1700mm (Stainless steel/1-pack)

XTR Brake Cable



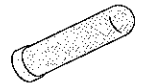
Code No.	Description
Y-800 98200	ø1.6mm x 1700mm (Stainless steel/1-pack)

Brake Cable Double-End



Code No.	Description
Y-800 98400	ø1.6mm x 1700mm (10-pack)

Inner Cable Cap



Code No.	Description	QTY.
Y-620 98030	Inner Cable Cap (ø1.2mm)	100
Y-620 98040	Inner Cable Cap (ø1.6mm)	100
Y-620 98060	Inner Cable Cap (ø1.2mm)	10
Y-620 98070	Inner Cable Cap (ø1.6mm)	10

Sealed Cap with Tongue & Rubber Shield

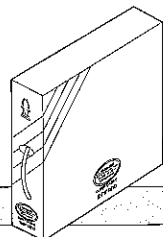


for SIS-SP40 Shift cables

Code No.	Description	QTY.
Y-6AM 98080	Sealed Cap with Tongue & Rubber Shield	3 pieces

M SYSTEM Brake Outer Casing File Box (ø5mmx30m/98.5ft.)

Use for 1.6mm diameter brake inner cables.

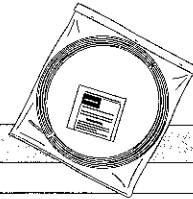


Code No.	Description
Y-80Y 00210	ø5mm x 30m/Red (#107)
Y-80Y 00220	ø5mm x 30m/Blue (#207)
Y-80Y 00240	ø5mm x 30m/Yellow (#407)
Y-80Y 00250	ø5mm x 30m/White (#507)
Y-80Y 00251	ø5mm x 30m/Transparent Silver (#517)
Y-80Y 00260	ø5mm x 30m/Black (#607)
Y-80Y 00263	ø5mm x 30m/High-Tech Gray (#637)

CABLES

SIS-SP41 Gleased Outer Casing
(ø4mmx10m/32.8ft.)

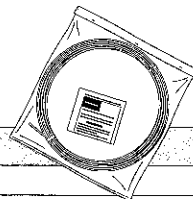
For ø1.2mm inner cable (10mm)



Code No.	Color
Y-6Y1 98010	Black (#607)

SIS-SP40 Outer Casing
(ø4mmx10m/32.8ft.)

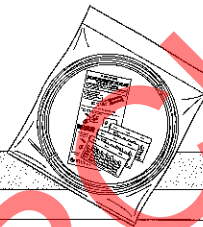
For ø1.2mm inner cable (10mm)



Code No.	Color
Y-6Z2 98100	Black (#607)
Y-6Z2 98110	High Tech Gray (#637)

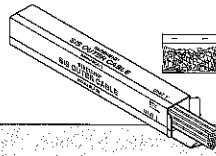
SIS-SP Shift Outer Casing
(ø5mmx7.62m/25ft.)

w/Outer Cap
(ø6mm:30pcs./ø5.5mm:15pcs./ø4mm:15pcs.)



Code No.	Color
Y-60B 97601	Silver (#537)
Y-60B 97611	White (#507)
Y-60B 97620	Red (#107)
Y-60B 97631	Blue (#207)
Y-60B 97650	Black (#607)
Y-60B 97680	Yellow (#407)
Y-60B 97690	High Tech Gray (#637)

SIS40 Shift Gleased Outer Casing (ø4mm)



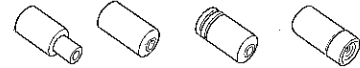
Code No.	Description
Y-600 98700	Black/600mm(50pcs)/w/Outer Cap(50pcs)
Y-600 98800	Black/300mm(50pcs)/w/Outer Cap(50pcs)

Cable Liner (1800mm)



Code No.	Description
Y-800 98100	For Shifter/Brake(10-pack)

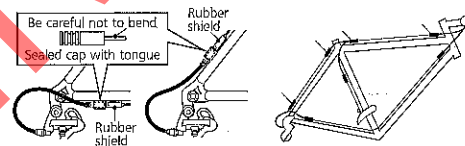
Outer Casing Cap



Code No.	Description	Material	QTY.
Y-872 98100	Outer Cap For BR-M950, BR-M739/Silver	Aluminum	1
Y-872 98110	Outer Cap For BR-M950, BR-M739/Black	Aluminum	1
Y-60E 00010	Sealed Outer Cap (ø6mm)	Steel	1
Y-60B 98010	Outer Caps (ø6mm)	Steel	100
Y-6Z2 90030	SIS-SP40 Sealed Outer Cap (ø4mm)	Aluminum	1
Y-6Z2 98010	SIS-SP40 Sealed Outer Caps (ø6mm)	Plastic	100
Y-6Z1 98010	SIS-SP40 Outer Caps (ø6mm)	Plastic	100
Y-6Z1 90010	SIS-SP40 Sealed Outer Cap ALUMINUM (ø6mm)	Aluminum	1

Note;
regarding the sealed cap with tongue and rubber shield

The sealed cap with tongue and the rubber shield should be installed to the outer casing stopper of the frame.



Shimano Service Parts

CABLES

Shift Cable Set

(DURA-ACE)

Code No. Y-600 98030



- Outer Casing: ϕ 4mm x 600mm (2pcs.)
 ϕ 4mm x 320mm (1pc.)
- Inner Cable: ϕ 1.2mm x 2000mm (2 pcs./Stainless steel)
- With Outer Cap / Inner End Cap

(NEW XTR)

Code No. Y-600 98060

- SIS-5P41 Black Outer Casing: ϕ 4mm x 600mm (2pcs.)
 ϕ 4mm x 340mm (1pc.)
 ϕ 4mm x 300mm (2pcs.)
- Inner Cable: ϕ 1.2 mm x 2100 mm (2pcs./Stainless steel/Coated Inner Cable)
- With Sealed Outer Cap & Rubber Shield / Inner End Cap

(XTR)

Code No. Y-600 98020



- Gray Outer Casing: ϕ 4mm x 600mm (2pcs.)
 ϕ 4mm x 340mm (1pc.)
 ϕ 4mm x 300mm (2pcs.)
- Inner Cable: ϕ 1.2 mm x 2100 mm (2pcs./Stainless steel/Coated Inner Cable)
- With Sealed Outer Cap & Rubber Shield / Inner End Cap

(DEORE)

Code No. Y-600 98040



- Outer Casing: ϕ 4mm x 600mm (2pcs.)
 ϕ 4mm x 340mm (1pc.)
 ϕ 4mm x 300mm (2pcs.)
- Inner Cable: ϕ 1.2mm x 2100mm (2pcs./Stainless steel)
- With Sealed Outer Cap & Rubber Shield / Inner End Cap

(SIS40)

Code No. Y-600 98500

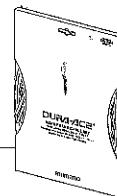


- Outer Casing: ϕ 4mm x 600mm (2pcs.)
 ϕ 4mm x 340mm (1pc.)
- Inner Cable: ϕ 1.2mm x 2100 mm (2pcs.)
- With Outer Cap / Inner End Cap

Brake Cable Set

(DURA-ACE)

Code No. Y-800 98070



- Outer Casing: ϕ 5mm x 800mm (1pc.)
 ϕ 5mm x 1400mm (1pc.)
- Inner Cable: ϕ 1.6mm x 1000mm (1pc./Stainless steel)
 ϕ 1.6mm x 1700mm (1pc./Stainless steel)
- With Sealed Outer Cap / Inner End Cap

(XTR)

Code No. Y-800 98090

- Black Outer Casing: ϕ 5mm x 800mm (1pc.)
 ϕ 5mm x 1400mm (1pc.)
- Inner Cable: ϕ 1.6mm x 1000mm (1pc./Stainless steel)
 ϕ 1.6mm x 1700mm (1pc./Stainless steel)
- With Boot / Sealed Outer Cap / Inner End Cap

(XTR)

Code No. Y-800 98060



- Gray Outer Casing: ϕ 5mm x 800mm (1pc.)
 ϕ 5mm x 1400mm (1pc.)
- Inner Cable: ϕ 1.6mm x 1000mm (1pc./Stainless steel)
 ϕ 1.6mm x 1700mm (1pc./Stainless steel)
- With Boot / Sealed Outer Cap / Inner End Cap

(Standard)

Code No. Y-800 98080



- Outer Casing: ϕ 5mm x 800mm (1pc.)
 ϕ 5mm x 1400mm (1pc.)
- Inner Cable: ϕ 1.6mm x 1000mm (1pc.)
 ϕ 1.6mm x 1700mm (1pc.)
- With Outer Cap / Inner End Cap

Disc Hose Kit

Code No. Y-8H4 98020

(Compatible with all Shimano's Disc brakes)

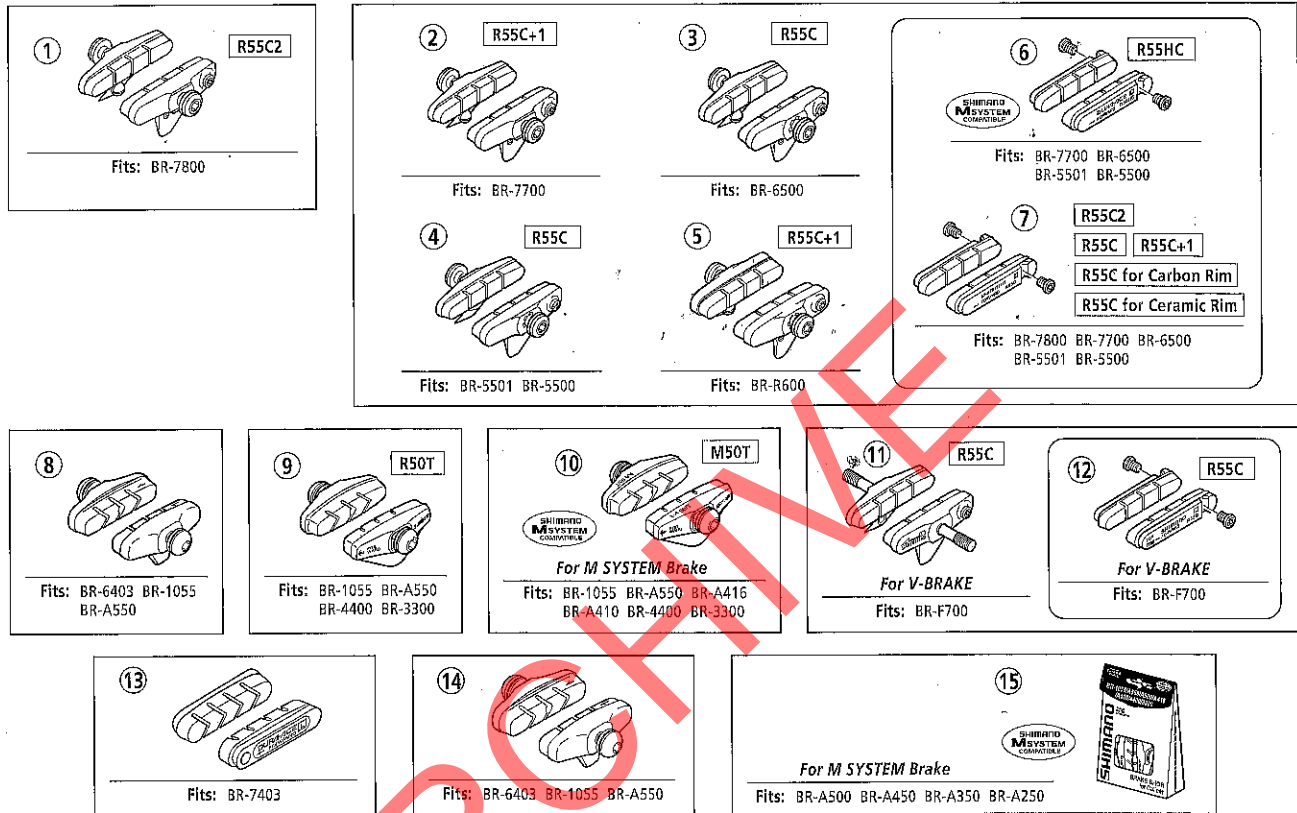
- Brake Hose: 1780mm (1pc.)
- O-rings: (4pcs.)
- Connector Insert: (2pcs.)
- Olives: (2pcs.)

Shimano Service Parts

BRAKE SHOES

Always use Shimano brake pads to assure top performance for your Shimano brake system.

Brake Shoes for Road

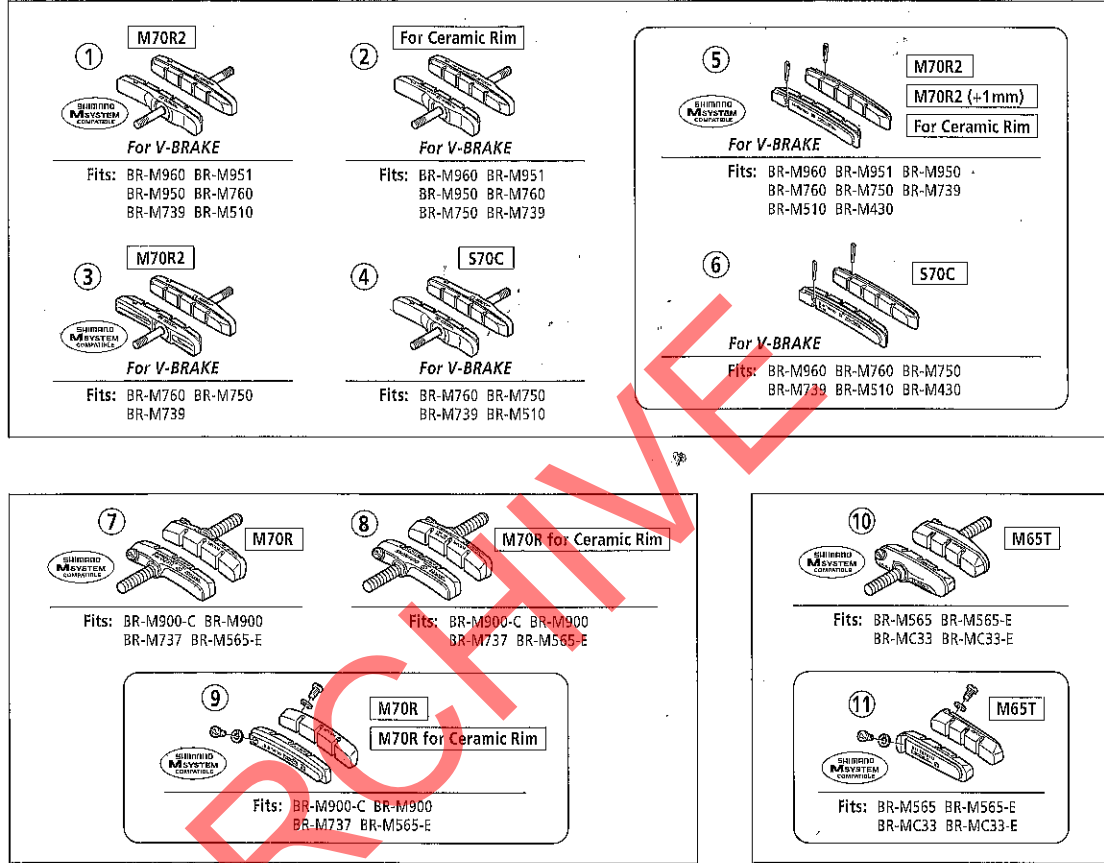


■ Brake shoe characteristics

	Cartridge shoe	M SYSTEM	Length	Brake shoe characteristics
R55C2	○	—	55 mm	Performs well in dry conditions and tends to be low noise. Highly resistant to wear in rainy conditions.
R55C	○	—	55 mm	Performs well in dry conditions and tends to be low noise. Wears in rainy conditions.
R55C+1	○	—	55 mm	Shoe thickness is 1 mm thicker than R55C.
R55HC	○	○	55 mm	Performs well both in dry and wet conditions. But may give off noise, faster rim wear, and tends to fade.
R55C for Carbon rim	○	—	55 mm	For Carbon rim
R55C for Ceramic rim	○	○	55 mm	For Ceramic rim only
M50T	—	○	50 mm	Performs well in wet conditions. But faster rim wear.
R50T	—	—	50 mm	Performs well in dry conditions and tends to be low noise. Wears in rainy conditions.

	Code No.	Description
1	Y-8A0 98010	R55C2 (BR-7800) Cartridge-Type Brake Shoe Set
2	Y-8FA 98010	R55C (BR-7700) Cartridge-Type Brake Shoe Set (+1 mm / Pair)
3	Y-83H 98010	R55C (BR-6500) Cartridge-Type Brake Shoe Set (Pair)
4	Y-83J 98070	R55C (BR-5501) Cartridge-Type Brake Shoe Set (Pair)
	Y-83J 98010	R55C (BR-5500) Cartridge-Type Brake Shoe Set (Pair)
5	Y-8C7 98030	R55C (BR-R600) Cartridge-Type Brake Shoe Set (+1 mm / Pair)
6	Y-8FA 98021	R55HC (BR-7700) Hight Performance Type Brake Shoes & Fixing Bolts (Pair)
	Y-8A0 98020	R55C2 (BR-7800) Brake Shoes & Fixing Bolts (Pair)
	Y-8FA 98020	R55C (BR-7700) Brake Shoes & Fixing Bolts (Pair)
	Y-8FA 98130	R55C+1 (BR-7700) Brake Shoes (+1 mm) & Fixing Bolts (Pair)
	Y-8FA 98140	R55C (BR-7700/6500) Brake Shoes & Fixing Bolts (Pair) for Carbon Rim
7	Y-8FA 98150	R55C (BR-7700/6500) Brake Shoes & Fixing Bolts (Pair) for Ceramic Rim
	Y-83G 98010	BR-6403 Brake Shoe Set (5 pairs)
8	Y-82A 99010	R50T (BR-1050) Brake Shoe Set (5 pairs)
9	Y-8BC 98100	M50T Brake Shoe Set (10 pairs)
10	Y-8CU 98010	R55C (BR-F700) Cartridge-Type Brake Shoe Set (Pair)
11	Y-8CU 98020	R55C (BR-F700) Brake Shoes & Fixing Bolts (Pair)
12	Y-84B 98020	BR-7403 DA Brake Shoe Brock (pair)
13	Y-83C 98010	BR-6403 Brake Shoe Set (5 pairs)

Cartridge-Type Brake Shoes for ATB



■ Brake shoe characteristics

	Cartridge shoe	M SYSTEM	Length	Threaded shoe post	Brake shoe characteristics
M70R2	○	○	70 mm	○	A race shoe that performs well in dry and wet conditions, and is also highly resistant to wear may give off noise.
Ceramic	○	—	70 mm	○	Specific shoe for ceramic rims.
S70C	○	—	70 mm	○	Performs well in dry conditions and tends to be low noise. Wears in muddy conditions.
M70R	○	○	70 mm	—	A race shoe that performs well in dry and wet conditions.
M65T	○	○	65 mm	—	Performs especially well in wet conditions and may pass DIN standards. Faster rim wear and tends to fade.

	Code No.	Description
1	Y-8CL 98030	M70R2 (BR-M960) Brake Shoe Set (Pair)
	Y-8AB 98010	M70R2 (BR-M950) Brake Shoe Set (Pair)
2	Y-8CL 98040	BR-M960 Brake Shoe Set (Pair) for Ceramic Rim
	Y-8AA 98030	BR-M950 Brake Shoe Set (Pair) for Ceramic Rim
	Y-8AA 98100	BR-M739 Brake Shoe Set (Pair) for Ceramic Rim
3	Y-8BW 98010	M70R2 (BR-M750) Brake Shoe Set (Pair)
4	Y-8GV 98020	S70C (BR-M750) Brake Shoe Set (Pair)
5	Y-8AA 98020	M70R2 (BR-M950 / M739) Brake Shoes & Fixing Pins (Pair)
	Y-8AA 98200	M70R2 (BR-M950 / M739) Brake Shoes (+1 mm) & Fixing Pins (Pair)
	Y-8AA 98040	BR-M950 / M739 Brake Shoes & Fixing Pins (Pair) for Ceramic Rim
6	Y-8AA 98130	S70C (BR-M750) Brake Shoes & Fixing Pins (Pair)
7	Y-83X 98010	M70R (BR-M737) Brake Shoe Set (4 pcs.)
8	Y-8BG 98100	M70R Brake Shoe Set (4 pcs.) for Ceramic Rim
9	Y-83X 98020	M70R Brake Shoes & Fixing Screws (2 pairs)
	Y-83X 98070	M70R Brake Shoes & Fixing Screws (2 pairs) for Ceramic Rim
10	Y-8RA 98010	M65T Brake Shoe Set (4 pcs.)

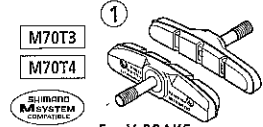
Shimano Service Parts

BRAKE SHOES

Brake Shoes for ATB

①

M70T3
M70T4



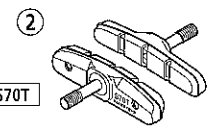
SHIMANO M-SYSTEM COMPATIBLE

For V-BRAKE

Fits: BR-M750 BR-M739 BR-M570
BR-M600 BR-M600-MX
BR-M510 BR-MC18 BR-M330
BR-M420 BR-T300

②

S70T



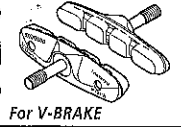
SHIMANO M-SYSTEM COMPATIBLE

For V-BRAKE

Fits: BR-M570 BR-M600
BR-M510 BR-MC18 BR-T300

③

M70W



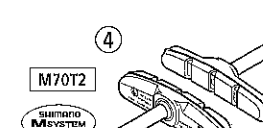
SHIMANO M-SYSTEM COMPATIBLE

For V-BRAKE

Fits: BR-C900 BR-C600 BR-M951
BR-M750 BR-M739 BR-M600-MX
BR-M600 BR-M570 BR-M510
BR-MC18 BR-M330 BR-M420
BR-T300

④

M70T2



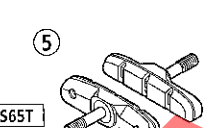
SHIMANO M-SYSTEM COMPATIBLE

For V-BRAKE

Fits: BR-MC16
BR-T400 BR-MC40 BR-M280

⑤

S65T



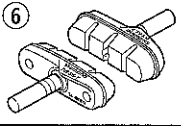
SHIMANO M-SYSTEM COMPATIBLE

For V-BRAKE

Fits: BR-M330 BR-M420

⑥

M55T

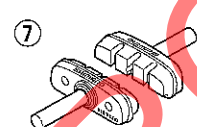


SHIMANO M-SYSTEM COMPATIBLE

For V-BRAKE

Fits: BR-M290 BR-M290-E BR-CT91
BR-CT90 BR-CT90-E BR-CT50
BR-CT51 BR-CT20 BR-CT21
BR-TY22 BR-TY23 BR-TY20
BR-TY21 BR-MJ05-E BR-MJ05
BR-MJ10

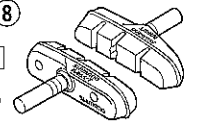
⑦



Fits: BR-CT91 BR-CT90-E BR-CT90
BR-CT50 BR-CT51 BR-CT20
BR-CT21 BR-TY22 BR-TY23
BR-TY20 BR-TY21 BR-MJ05-E
BR-MJ05 BR-MJ10

⑧

M65T



SHIMANO M-SYSTEM COMPATIBLE

Fits: BR-M560 BR-M561 BR-MC32-E
BR-MC32 BR-MC30-CH BR-MC30
BR-MC31-CH BR-MC31 BR-MC12
BR-MC12-E BR-MC10 BR-MC11
BR-MC15 BR-M290 BR-M290-E
BR-CT50 BR-CT51 BR-TY22
BR-TY23

■ Brake shoe characteristics

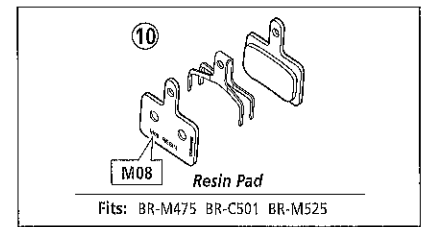
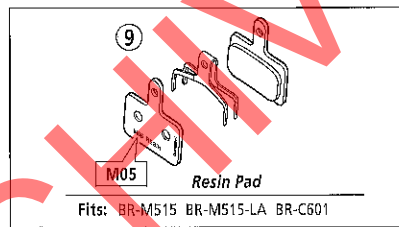
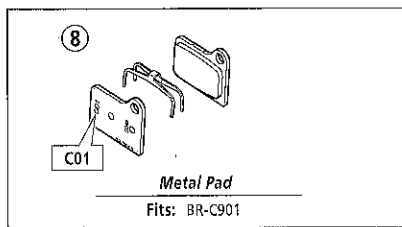
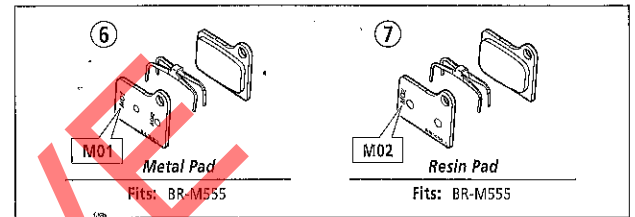
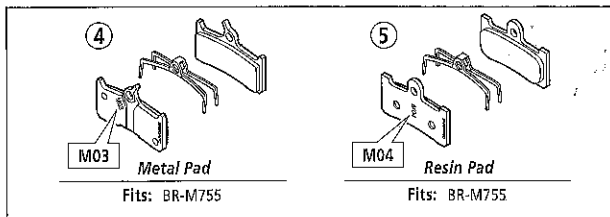
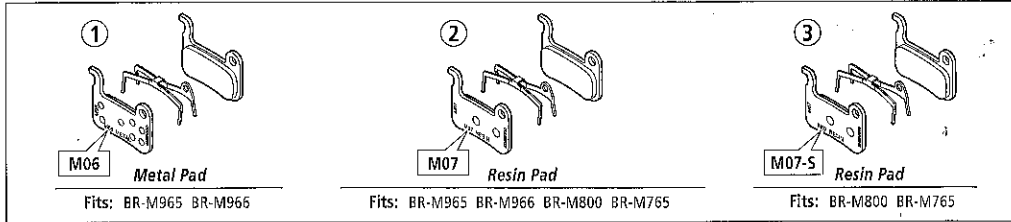
	Cartridge shoe	M SYSTEM	Length	Threaded shoe post	Brake shoe characteristics
M70T3	—	○	70 mm	○	Performs especially well in wet conditions and may pass DIN standards. Gives off less noise, but the pad is heavier, faster rim wear and tends to fade.
M70T4	—	○	70 mm	○	Only for side wall machined rims. Performs especially well in wet conditions and may pass DIN standard.
M70W	—	○	70 mm	○	Tend to be low noise, low rim wear and fade.
S70T	—	—	70 mm	○	Performs well in dry conditions and tends to be low noise.
S65T	—	—	65 mm	○	Wears in muddy conditions.
M70T2	—	○	70 mm	—	Performs especially well in wet conditions and may pass DIN standards. Gives off less noise, but the pad is heavier, faster rim wear and tends to fade.
M65T	—	○	65 mm	—	Performs especially well in wet conditions and may pass DIN standards.
M55T	—	○	55 mm	—	Faster rim wear and tends to fade.

	Code No.	Description
1	Y-8BM 98030	M70T4 Brake Shoe Set (Pair)
	Y-8BM 98100	M70T3 (BR-M600) Brake Shoe Set (Pair)
2	Y-8GV 98010	S70T (BR-M570) Brake Shoe Set (Pair)
3	Y-8B3 98010	M70W (BR-C900) Brake Shoe Set (Pair)
4	Y-8CF 98100	M70T2 Brake Shoe Set (10 pairs)
5	Y-8GP 98100	S65T (BR-M330) Brake Shoe Set (10 pairs)
6	Y-81X 98100	M55T Brake Shoe Set (10 pairs)
7	Y-8GK 98100	BR-CT91 Brake Shoe Set (10 pairs)

Shimano Service Parts

BRAKE PADS

Brake Pads for Disc Brake



- M01/M03/M06: Longer pad-life, good for anti-fade, good consistency either dry/wet. May cause noise while braking.
- M02/M04/M05/M07/M07-S: Same level performance as metal pad. Shorter pad-life than metal.
- Do not use M08 brake pads in combination with the BR-M515/BR-M515-LA and BR-C601 brake system. If M08 brake pads are used, the brake arm and calliper will touch before the pad wear indicator is noticed and a noise indicating that the pads need to be replaced is heard, and this will result in a gradual reduction in braking performance until ultimately the brakes stop working.
- C01: Easy, controllable metal pad, good for trekking use.

	Code No.	Description
1	Y-8CL 98010	BR-M965 Metal Pad (M06) & Spring
2	Y-8CL 98020	BR-M965 Resin Pad (M07) & Spring
3	Y-8CY 98010	BR-M765/M800 Resin Pad (M07-S) & Spring
4	Y-8B2 98060	BR-M755 Metal Pad (M03) & Spring
5	Y-8B2 98090	BR-M755 Resin Pad (M04) & Spring
6	Y-8B5 98010	BR-M555 Metal Pad (M01) & Spring
7	Y-8B5 98040	BR-M555 Resin Pad (M02) & Spring
8	Y-8C2 98010	BR-C901 Metal Pad (C01) & Spring
9	Y-8B6 98010	BR-M515 Resin Pad (Unmarked or M05) & Spring
10	Y-8C9 98010	BR-M475 Resin Pad (M08) & Spring
11	Y-8C5 98020	BR-M525 Resin Pad (M08) & Spring

Model NO.	type	M01 Sintered Metal	M02 Resin	M03 Sintered Metal	M04 Resin	M05 Resin	M06 Sintered Metal	M07 Resin	M07-S New Resin	M08 Resin	C01 Sintered Metal
BR-M965	Hydraulic						option	Standard			
BR-M800 New	Hydraulic						Standard		option		
BR-M765 New	Hydraulic						option		Standard		
BR-M755	Hydraulic			Standard	option						
BR-M555	Hydraulic	Standard	option								
BR-M525	Hydraulic									Standard	
BR-M515-LA	Mechanical					Standard					
BR-M475	Mechanical									Standard	
BR-C901	Hydraulic										Standard
BR-C601	Mechanical					Standard					

Mud Flap

For use with all top-swing front derailleurs

Code No. Y-5CA 98020



SM-AD11

ø31.8
Code No. Y-57Y 92100

SM-AD15

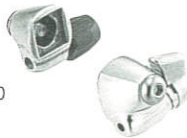
ø34.9
Code No. Y-57Y 91100



SM-ST74

standard
Code No. Y-67D 98010

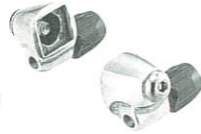
For aluminum
Code No. Y-67D 98020



SM-CS50

standard
Code No. Y-67B 91000

For aluminum
Code No. Y-67B 91010

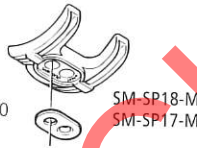


SM-SP18-M

Code No. Y-66Y 98600

SM-SP18-T

Code No. Y-66Y 98610

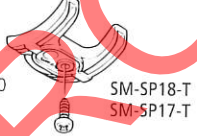


SM-SP17-M

Code No. Y-66Y 98500

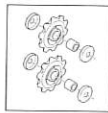
SM-SP17-T

Code No. Y-66Y 98510



Rear Derailleur Pulley Sets (10 pairs)

Code No. Y-563 98100



RD-7700 Tension&Guide Pulley Set (pair)

Code No. Y-5TJ 98100
1 set



RD-M951, 952, 953 Tension & Guide Pulley Set (pair)

Code No. Y-53N 98120
1 set



RD-5500, 4400, 3300, M570, M510, T400, T300 Tension & Guide Pulley Set (pair)

Code No. Y-50N 98100

Rear Derailleur Adapter Unit

Code No. Y-52U 98010



Mineral Oil For Disc Brake

Code No. Y-839 98010



Internal Hub Grease

100g Tube Type

Code No. Y-041 20600



Roller Brake Grease

100g Tube Type

Code No. Y-041 20400



DURA-ACE Grease

50g Can
Code No. Y-041 10000

500g Can
Code No. Y-041 10010



SIS-SP41 Grease

Special grease for SIS-SP41 outer casing
50g Can
Code No. Y-041 80000



Freehub Body Special Grease

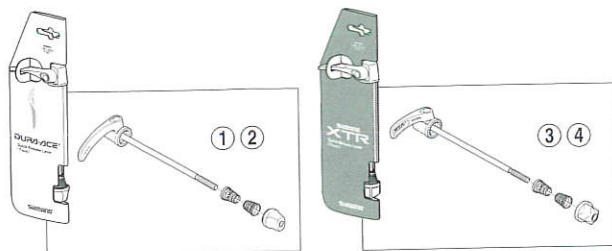
50g Can
Code No. Y-3B9 80000



Disc Brake Banjo Unit

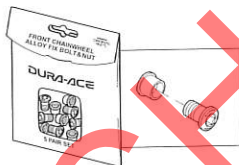
Code No. Y-8H1 98010

Complete Quick Release for Front Hub / Freehub



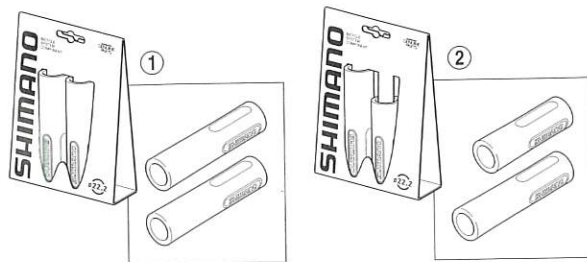
	Code No.	Description
1	Y-22Z 90100	Complete Quick Release (133 mm) for DURA-ACE Front Hub
2	Y-3A0 90100	Complete Quick Release (163 mm) for DURA-ACE Freehub
3	Y-23R 90100	Complete Quick Release (133 mm) for XTR Front Hub
4	Y-32T 90100	Complete Quick Release (163 mm) for XTR Freehub
5	Y-22E 90102	Complete Quick Release (129 mm) for Front Hub
6	Y-3AN 90131	Complete Quick Release (168 mm) for Freehub

Gear Fixing Bolt & Nut (Aluminum) for Front Chainwheel



Code No.	Description
Y-17X 98010	Gear Fixing Bolt (M8 x 9.8) & Nut (Silver/5 sets) for DURA-ACE
Y-17X 98040	Gear Fixing Bolt (M8 x 9.8) & Nut (Blue/5 sets) for DURA-ACE
Y-17X 98050	Gear Fixing Bolt (M8 x 9.8) & Nut (Red/5 sets) for DURA-ACE
Y-17X 98060	Gear Fixing Bolt (M8 x 9.8) & Nut (Black/5 sets) for DURA-ACE

Grip (For Handle Bar Diameter 22.2 mm)



	Code No.	Description
1	Y-8XE 98100	Long Grip (Black/Pair)
	Y-8XE 98110	Long Grip (Gray/Pair)
2	Y-8XE 98120	Half & Long Grip (Black)
	Y-8XE 98130	Half & Long Grip (Gray)

Chain Pin



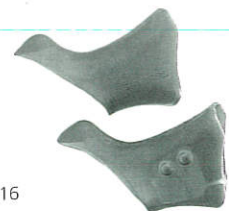
Code No.	Description
Y-08D 98010	Super Narrow 10-speed HG chain (5pcs)
Y-08D 98020	Super Narrow 10-speed HG chain (50pcs)
Y-069 98010	Super Narrow 9-speed HG chain (5pcs)
Y-069 98020	Super Narrow 9-speed HG chain (50pcs)
Y-045 98010	HG IG chain (3pcs)
Y-045 98020	HG IG chain (50pcs)

10-speed		Silver color with line
9-speed		Silver color
8-speed		Black color

Bracket Cover (pair)

• For SM-6500-R

Code No.	Description
Y-6BD 98170	For ST-7700
Y-88B 98012	For ST-7400
Y-87G 98011	For ST-6400
Y-85Z 98070	For ST-1055/A550/A410/A416



• For SM-6501/SM-6500-RS

Code No.	Description	Code No.	Description
Y-6CX 98110	For ST-7700-C	Y-6BD 98160	For ST-7700
Y-6C8 98070	For ST-6510	Y-6BS 98090	For ST-6500
Y-6B9 98090	For ST-5500-C	Y-6BZ 98090	For ST-6501
	ST-5500-CA	Y-85Z 98050	For ST-1055 (Black)
Y-6CT 98100	For ST-4400	Y-85Z 98060	For ST-1055 (White)
Y-6CU 98040	For ST-3300		

Cotter Less Crank Cap

(1 Set, 10 pairs)
Altus / Tourney / Acera

Code No.
Y-1A1 98010



V-BRAKE 90° Inner Cable Lead & Boots Unit

Code No.
Y-8AA 98140



Shimano Service Parts

Shimano Genuine Service Parts

"2003 Shimano Service Parts Shop in Shop" 70 kinds of best selling minimum refill item set



Code No.	Description
Y-998 98020	2003 Shop in shop 70 kinds refill item set
Y-998 98070	Name plate
Y-998 98080	Rack

Parts List

Code No.	Description	QTY.	Code No.	Description	QTY.
Y-8FA 98010	BR-7700 DA Brake shoe Pair	2	Y-5UN 98100	Shimano Rear Derailleur Guide & Tension Pulley Set	3
Y-83G 98010	BR-6403 ULTEGRA Brake Shoe 5 Pair Set	1	Y-563 98100	Tourney Rear Derailleur Pulley 10 Pair Set	1
Y-8FA 98020	BR-7700 DA Brake shoe Block Pair	3	Y-620 98060	10 pc. Shift inner cable caps	3
Y-84B 98020	BR-7403 DA Brake Shoe Block Pair	3	Y-620 98070	10pc. Brake inner cable caps	3
Y-8BC 98100	BR-A410 M50/T Caliper Brake Shoe 10 Pair Set	1	Y-43Y 98010	SM-SH90 SPD-R Fixed Mode Cleat Pair	2
Y-8AB 98010	BR-M950 XTR V-BRAKE Shoe Pair	2	Y-43Y 98020	SM-SH91 SPD-R Self-Align 6 Mode Cleat Pair	2
Y-8AA 98020	BR-M950/M739 XTR V-BRAKE Shoe Block Pair	5	Y-43Y 98030	SM-SH92 SPD-R Self-Align 10 Mode Cleat Pair	2
Y-8AA 98200	BR-M950/M739 XTR V-BRAKE Shoe Block Pair (1mm thicker)	3	Y-426 98040	SM-SH70 SPD Fixed Mode Cleat Pair	2
Y-8BM 98100	BR-M600/570 (M70T3) V-BRAKE M Shoe Pair	3	Y-426 98050	SM-SH71 SPD Self-Align Mode Cleat Pair	2
Y-8CF 98100	BR-MC16 M70T2 Canti Brake M Shoe 10 Pair Set	1	Y-424 98200	SM-SH51 SPD Single Mode Cleat Pair with Nut	3
Y-8GP 98100	BR-M330 V-BRAKE Shoe 10 Pair Set	1	Y-424 98201	SM-SH51 SPD Single Mode Cleat Pair only	2
Y-8GK 98100	BR-CT91 Canti Brake Shoe 10 Pair Set	1	Y-424 98300	SM-SH55 SPD Multi Mode Cleat Pair with Nut	3
Y-84F 98100	M65T Canti Brake M Shoe 5 Pair Set	1	Y-424 98301	SM-SH55 SPD Multi Mode Cleat Pair only	2
Y-8AA 98140	V-BRAKE 90 Dig. Inner cable lead unit with boot	3	Y-41M 98020	SM-SH52 SPD Single Mode Cleat Pair with Nut	2
Y-8CL 98020	BR-M965/M966 XTR Disc Pad M07 Rsn pair & spring	2	Y-41M 98021	SM-SH52 SPD Single Mode Cleat Pair only	2
Y-8B2 98060	BR-M755 "XT" Disc Pad M03 Mtl Pair & Spring	2	Y-42U 98010	SM-SH11 SPD-SL Cleat Set, floating Mode (Yellow)	3
Y-8B5 98010	BR-M555 "DEORE" Disc Pad M04 Mtl Pair & Spring	2	Y-42U 98020	SM-SH10 SPD-SL Cleat Set, fixed Mode (Red)	3
Y-8C9 98010	BR-M525/M475 "DEORE" Disc Pad M08 Rsn Pair & Spring	2	Y-045 98010	CN-M732 8-Spd HG-Chain Pin 3 Pc Set	3
Y-8B6 98010	BR-M515/C601 "DEORE" disc Pad M05 Rsn Pair & Spring	2	Y-069 98010	CN-7700 9-Spd HG-Chain Pin 5 Pc Set	3
Y-8H4 98020	XTR Disc Brake Replacement Hose & Olive Set	3	Y-17X 98010	DA Silver Alloy FCW Fix bolt & nut 5 pair Set	2
Y-839 98010	Disc Brake Mineral Oil 50ml	3	Y-22Z 90100	HB-7700 DA Front QR Unit 133mm	3
Y-8H1 98010	Disc Brake Banjo Unit	2	Y-3A0 90100	FH-7700 DA Rear QR Unit 163mm	3
Y-600 98600	XTR Coated Shift Cable 1.2 x 2100	3	Y-23R 90100	HB-M950 XTR Front QR Unit 133mm	3
Y-600 98900	DA Stainless Shift Cable 1.2 x 2000	3	Y-32T 90100	HB-M950 XTR Rear QR Unit 168mm	3
Y-600 98100	Shimano Shift Cable 1.2 x 2100 10 Pc. Set	1	Y-22E 90102	HB-MC12 Shimano Front QR Unit 129mm	3
Y-800 98200	XTR Stainless Brake Cable 1.6 x 1700	3	Y-3AN 90131	FH-MC12 Shimano Rear QR Unit 168mm	3
Y-800 98300	DA Stainless Brake Cable 1.6 x 1700	3	Y-1A1 98010	Shimano Front Crank Arm Cap pair (10 pair pack)	1
Y-800 98400	Shimano Brake Cable Double Ends 1.6 x 1700 10 Pc. Set	1	Y-8XE 98110	Shimano Grip Pair Gray	3
Y-600 98020	XTR SIS Shift Cable Set	3	Y-8XE 98130	Shimano Grip Pair Gray for REVOSHIFT	3
Y-600 98030	DA SIS Shift Cable Set	3	Y-041 10000	DURA-ACE Grease 50g can	2
Y-600 98040	DEORE SIS Shift Cable Set	3	Y-130 09010	TL-FC10 Cotterless Crank Extractor	2
Y-600 98500	Shimano SIS Shift Cable Set	3	Y-130 90600	TL-CN22 IG/HG/UG Chain Cutter	2
Y-800 98060	XTR ATB Brake Cable Set	3	Y-098 00010	TL-CT10 Cable Cutter	2
Y-800 98070	DA Road Brake Cable Set	3	Y-120 09220	TL-LR10 HG/IG sprocket & Rotor Remover	3
Y-800 98080	Shimano Brake Cable Set	3	Y-120 09230	TL-LR15 HG/IG sprocket & Rotor Remover for QR Hub Use	2
Y-800 98100	1800mm Tube Liner for Inner 10 pc. Set	1		Service Parts Re-order Tag Set	1

Display Set

Code No.	Description
Y-600 98050	6 Kinds of Cable Set w/Display

Parts List

Code No.	Description	QTY.
Y-600 98100	1.2 x 2100 Standard Inner Cable For Shifter Individual Pack (10sets)	1
Y-600 98600	Teflon Coated Die-extruded Inner Cable For Shifting Lever (1.2mm x 2100mm)	10
Y-600 98900	Die-extruded Inner Cable For Shifting Lever (1.2mm x 2000mm)	10
Y-800 98200	Brake Inner 1.6 x 1700mm Stainless Taiko For ATB (individual Pack)	10
Y-800 98300	Brake Inner Cables 1.6 x 1700mm Stainless For Road (individual Pack)	10
Y-800 98400	Brake Inner Tin 1.6 x 1700mm for ATB & road (individual 10packs)	1



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Fax: (800) 619-9067

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One Holland, Irvine, California 92618, U.S.A.
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SHIMANO Bicycle Division Limited 3-2-1 Warranty

Shimano warrants to the original retail purchaser that the Shimano bicycle division product for which they received this warranty, is free from non-conformities in material and workmanship for a period of two years and their Dura-Ace and/or XTR components, for a period of three years from the date of original retail purchase. Shimano shoe products, soft goods, and wheels are warranted for a period of one year.

LIMITS OF THE WARRANTY

Shimano's sole obligation under this warranty is to repair or replace the product, at Shimano's option.

LIMITATIONS OF IMPLIED WARRANTIES

The duration of any implied warranty or condition, of merchantability, fitness for a particular purpose, or otherwise, on this product shall be limited to the duration of the express warranty set forth above. In no event shall Shimano be liable for any loss, inconvenience or damage, whether direct, incidental, consequential or otherwise resulting from breach of any express or implied warranty or condition, of merchantability, fitness for a particular purpose, or otherwise with respect to this product except as set forth herein. Some locations may not allow limitations on how long an implied warranty lasts and some locations may not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

To obtain service under this warranty, you must send your Shimano product together with the retail seller's original bill, your charge or credit receipt or other satisfactory proof of the date of purchase of the product to Shimano American Corporation, Attn: Bicycle Warranty Dept., One Holland, Irvine, CA 92618. Any postage, insurance or shipping costs incurred in sending your Shimano product for service are your responsibility.

This warranty gives you specific legal rights, and you may also have other rights which may vary from location to location.

WARRANTY EXPLANATION

This warranty in no way replaces or is an extension of a complete bicycle manufacturer's warranty. Retailers and wholesale outlets for Shimano products are not authorized to modify this warranty in any way.

It is the consumer's responsibility to regularly examine the product to determine the need for normal service or replacement. This warranty does not cover the following:

1. Shimano products that have been modified, neglected or poorly maintained, used in competition or for commercial purposes, misused or abused or involved in accidents.
2. Damage occurring during shipment of the products (such claims must be presented directly to the carrier).
3. Damage to products resulting from improper assembly or repair.
4. Damage resulting from causes other than non-conformities in materials and workmanship, including but not limited to lack of technical skill, competence, or experience of the user.
5. Damage or deterioration to the surface finish, aesthetics or appearance of the product.
6. The labor required to remove and/or re-fit and re-adjust the product within the bicycle assembly.
7. Normal wear to the product.

SHIMANO AMERICAN CORPORATION: ONE HOLLAND • IRVINE, CA 92618

THIS WARRANTY APPLIES SPECIFICALLY TO THE UNITED STATES AND CANADA. FOR COUNTRIES OTHER THAN THE UNITED STATES OR CANADA, PLEASE CONTACT YOUR DISTRIBUTOR OR AGENT, OR SHIMANO AMERICAN CORPORATION FOR FURTHER INFORMATION.

Shimano American Corporation ENVIRONMENTAL POLICY

At Shimano American Corporation, we are dedicated to creating recreational products that not only put us in touch with our natural environment, but also create a more natural and responsive interface between the environment and ourselves.

The people who are Shimano American Corporation believe that the integration of environmental issues into our business culture will yield superior products. We will strive to lead by example and are committed to:

- Compliance with applicable environmental regulations, codes and standards.
- Prevention of pollution; and
- Continual improvement in our environmental performance

It is our intent to be recognized by our customer, employees and community as a responsible business committed to environmental protection and preservation.

SHIMANO EUROPE HOLDING B.V.

Industrieweg 24, 8071 CT Nunspeet, The Netherlands
Phone: +31-341-272222 Fax: +31-341-272200

SHIMANO AUSTRALIA PTY. LTD.

6/30 Endeavour Road, Caringbah, NSW 2229, Australia
Phone: +61-2-9526-7799 Fax: +61-2-9526-7622

SHIMANO INC.

3-77 Oimatsu-cho, Sakai, Osaka 590-8577, Japan
Phone: +81-72-223-3957 Fax: +81-72-223-3493

When participating in the sports depicted in this manual, Shimano recommends that you use the proper safety protection for that sport. The riders seen in these pictures are experienced experts or professionals, and Shimano requests that you do not attempt to duplicate any of the actions shown in this brochure that are beyond the capabilities of your equipment or your own abilities.



SPD / SPD-R / SPD-SL cleat application table

The table below shows the recommended cleats for each SPD, SPD-R and SPD-SL pedal. Cleats listed under "usable cleat" can be substituted for the recommended cleat, but with certain restrictions as listed.

Pedal	PD-7800 PD-R600 PD-R540	PD-7701 PD-7700	PD-6601 PD-6600 PD-5500 PD-R535	PD-6500	PD-M959 PD-M540 PD-M520 PD-M647	PD-M858	PD-M646 PD-M545 PD-M536 PD-M424 PD-M515 PD-M505 PD-M324 PD-A515	PD-M323		
	Shoe	Recommended cleats	Recommended cleats	Recommended cleats	Recommended cleats	Recommended cleats	Usable cleats	Recommended cleats	Usable cleats	
SH-R215*/SH-R215E* SH-R151*/SH-R151E* SH-R125*/SH-R097* SH-R097W*/SH-R073*	SM-SH10 SM-SH11	SM-SH91 SM-SH90 SM-SH92	SM-SH90 SM-SH91 SM-SH92	SM-SH70 SM-SH71						
SH-M221 / SH-M120 SH-M120W / SH-M180 SH-M071 / SH-M058 SH-M038 / SH-M038W SH-M034 / SH-M021 SH-T092 / SH-TR01 SH-MP66 / SH-SD60 SH-FN01***					SM-SH51	SM-SH52	SM-SH51 SM-SH52 SM-SH55	SM-SH70** SM-SH71**	SM-SH51 SM-SH52 SM-SH55	SM-SH71**

* SH-R215/SH-R215E/SH-R151/SH-R151E/SH-R125/SH-R097/SH-R073/SH-R060 can also take Look® cleats.

SH-R215/SH-R215E/SH-R151/SH-R151E can be used SPD-R cleat with adaptor.

** SM-SH70/71 road cleats can be used with non-road SPD shoes but without pontoons.

*** Not compatible with SPD-SL, SPD-R and Pop-up SPD Pedal: PD-M646 / M536 / M545 / M424 / M647 / A515.

"Look" is a registered trademark of LOOK S.A.

< SPD / SPD-R / SPD-SL pedal & cleat sets >

1. PD-7800, PD-7750, PD-R600 and PD-R540 package includes SM-SH11 cleat set.
 2. PD-7701, PD-6601 and PD-R535 pedal packages include SM-SH91 cleat sets.
 3. SM-SH51 cleat set is included with PD-M959, PD-M647, PD-M646, PD-M545, PD-M540, PD-M536, PD-M424, PD-M520, PD-M515, PD-M505 and PD-A515 pedal packages.
 4. SM-SH52 cleat set is included with PD-M858 pedal packages.
 5. SM-SH55 cleat set is included with PD-M324 pedal packages.
- (Some specifications do not include any cleats in the pedal packages.)

USA and Europe size comparison chart

US	3.5	4.5	5	5	5.5	6	6.5	7	7	7.5	8	8.5	8.5
European	36	37	37.5	38	38.5	39	39.5	40	40.5	41	41.5	42	42.5
US	9	9.5	10	10.5	10.5	11	11.5	12	12.5	13	14		
European	43	43.5	44	44.5	45	45.5	46	46.5	47	48	49		