

ARCHIVE

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SHIMANO

2004-2005

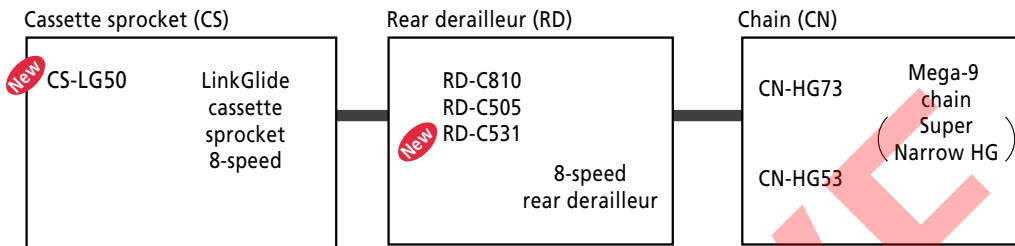
Products compatibility information

Drivetrain Interchangeability

Rear drivetrain for Comfort & MTB Components

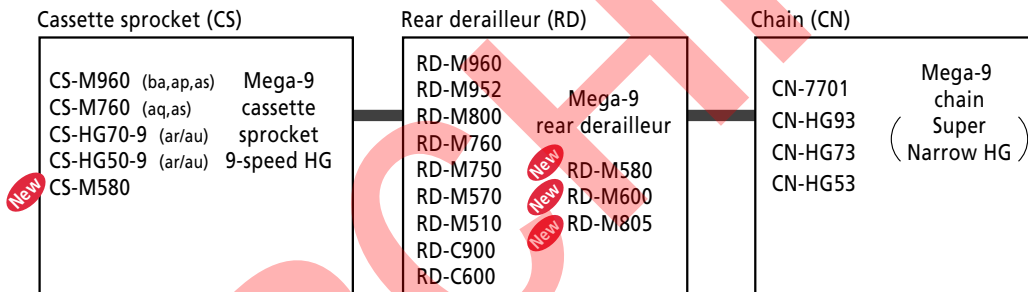
When using components of different series together, be aware of the points given below.
 "New" is shown if it is a new product and "MC" is given if only minor changes have been made.

8-Speed LinkGlide

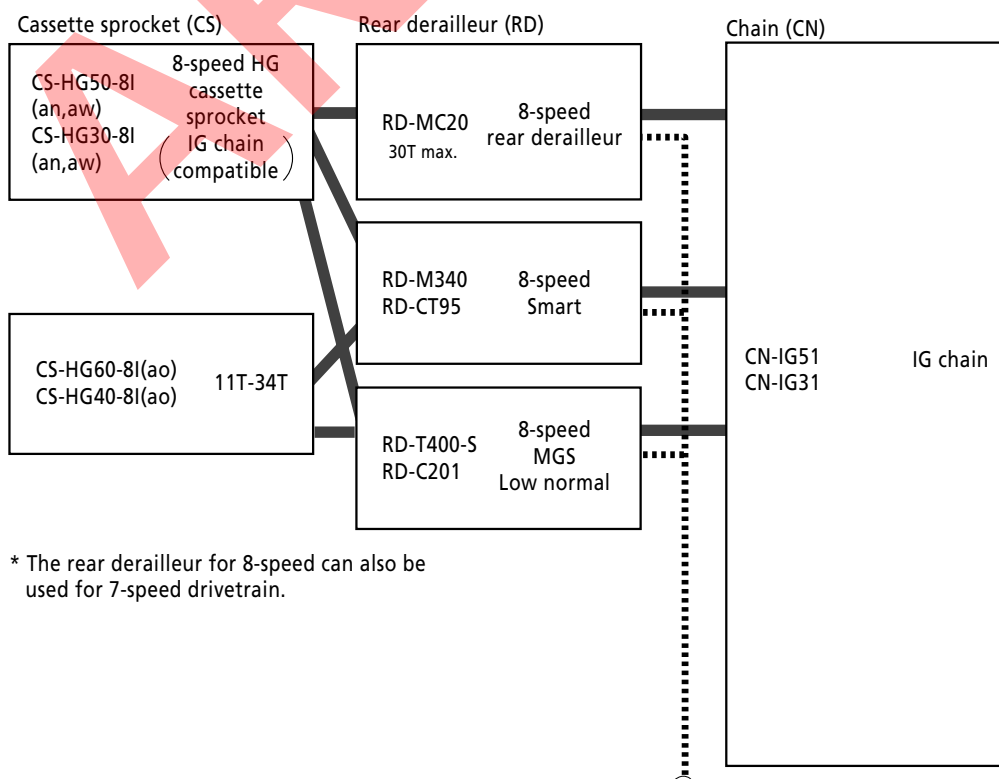


The full performance of LinkGlide will not be realized in combinations other than these. Also, HG performance will be reduced if RD-C505, C531 and C810 are used with HG gears other than LinkGlide gears. LinkGlide shifting performance is achieved when combined with ST-C503-A(R) as the shifting lever. (RD-C505/C531)

Mega-9 Drivetrain (9-speed HG)

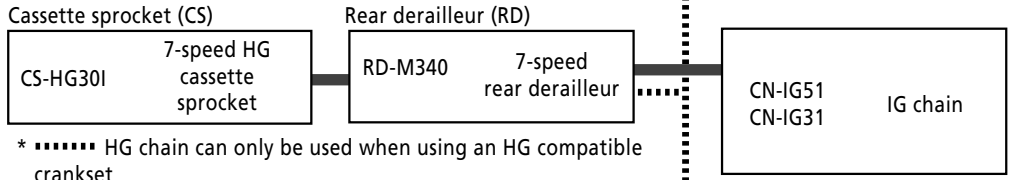


8-Speed HG

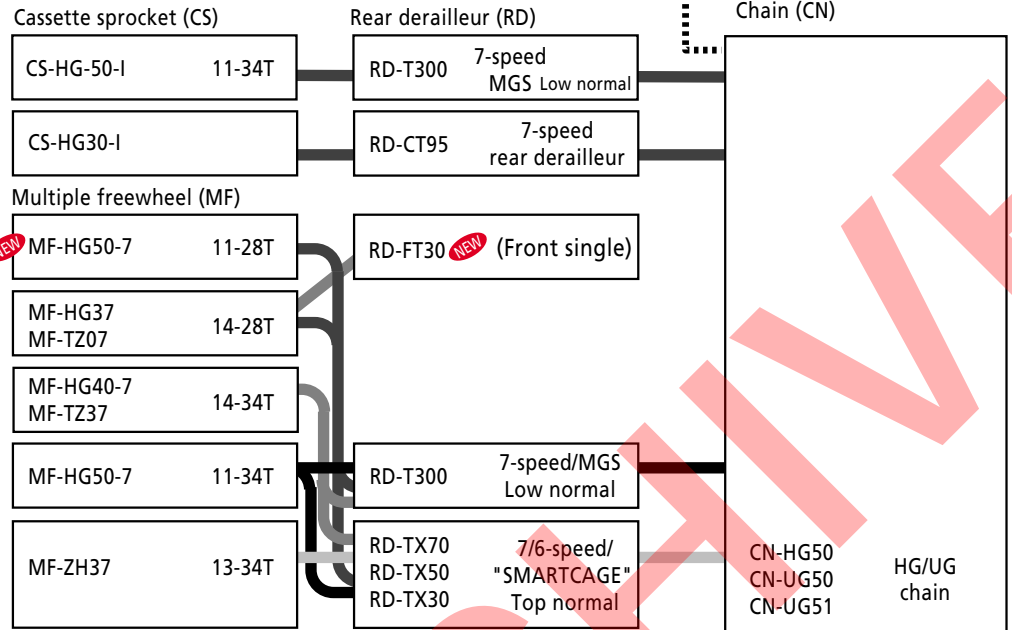


* The rear derailleur for 8-speed can also be used for 7-speed drivetrain.

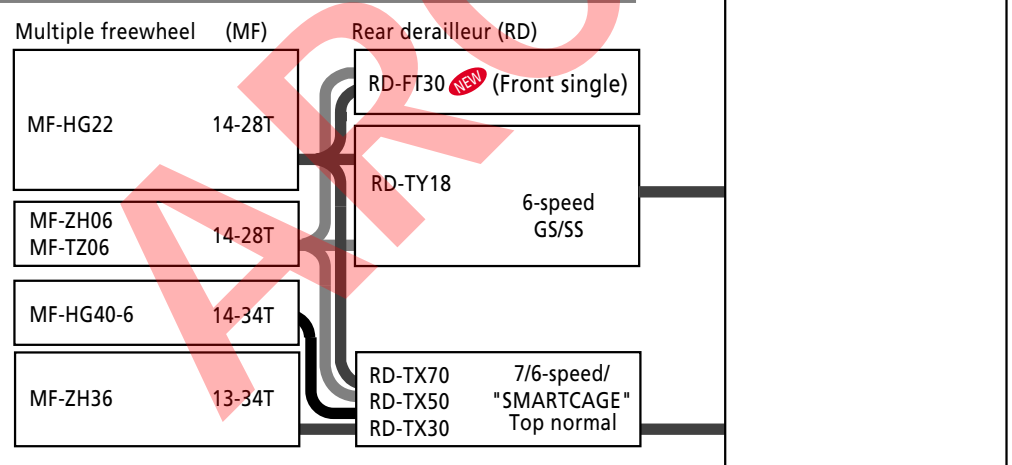
7-speed HG



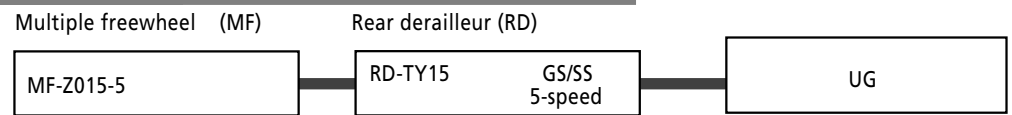
7-speed HG/ZH



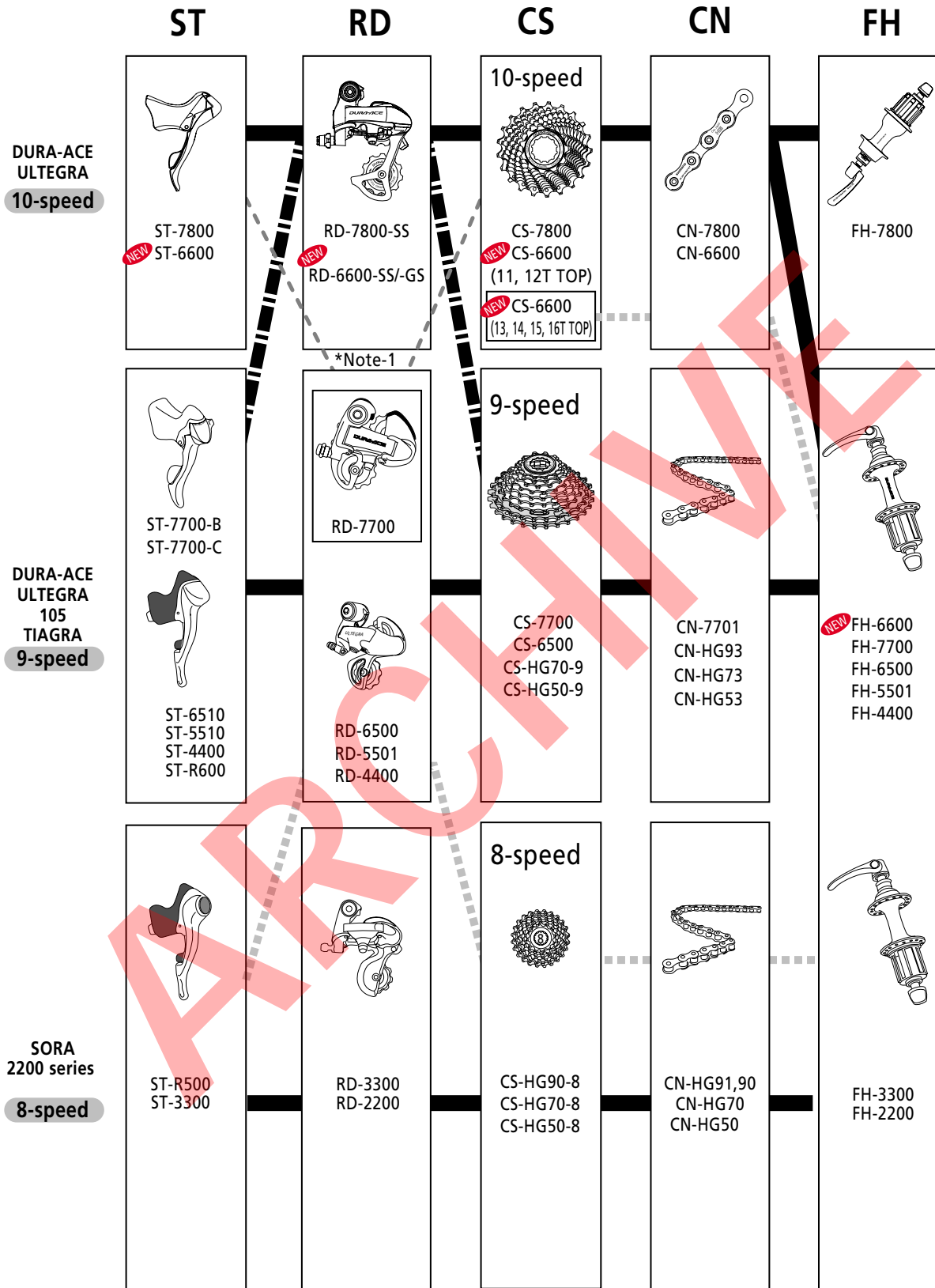
6-speed HG/ZH



5-speed UG



Rear drivetrain for Road bike components

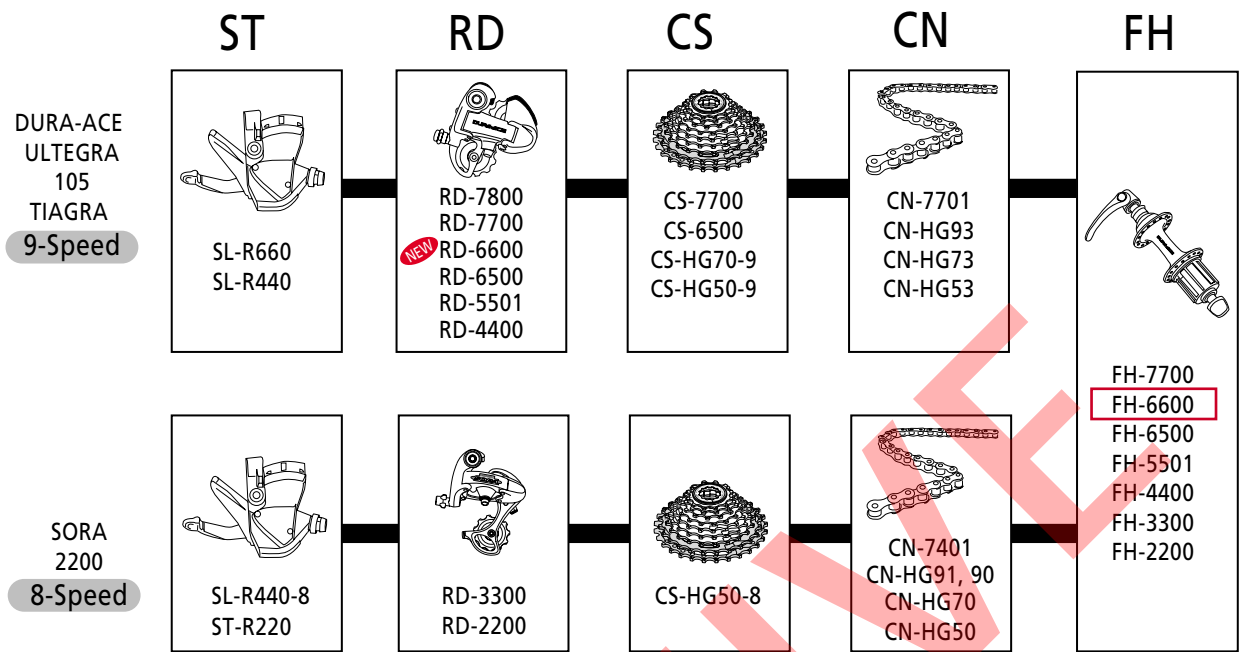


Note-1 : Can not use this combination with a spoke protector.

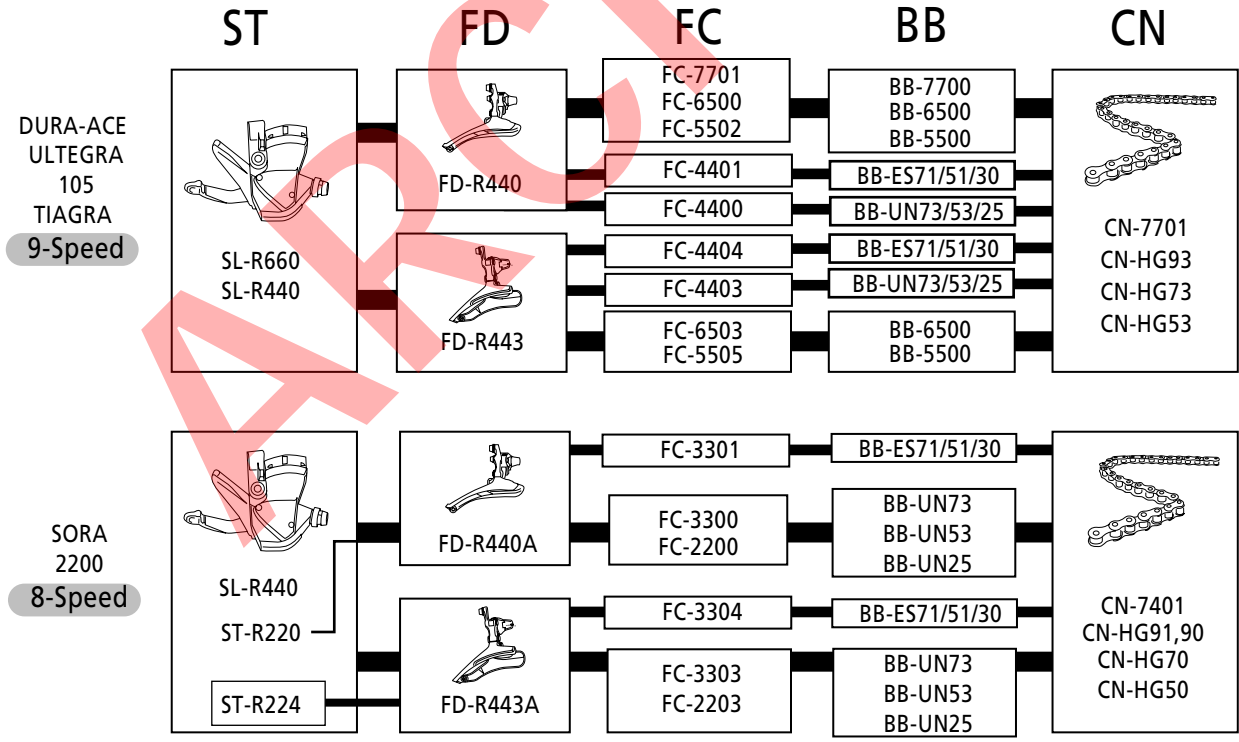
Note-2 : The FH components listed here cannot be used with 11T sprockets

Interchangeability for flat handlebar

Rear system

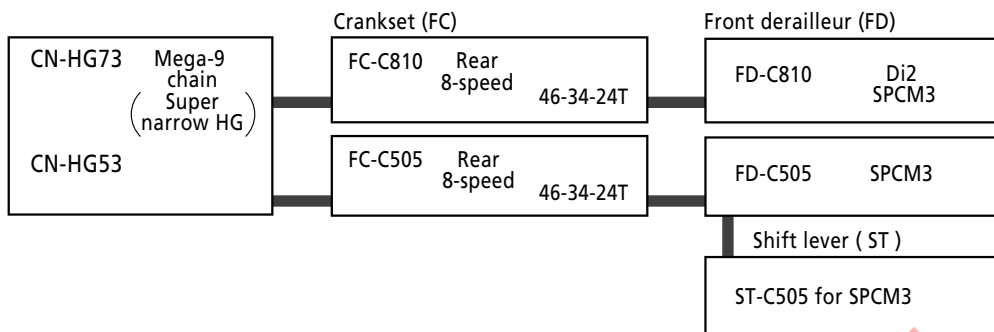


Front system

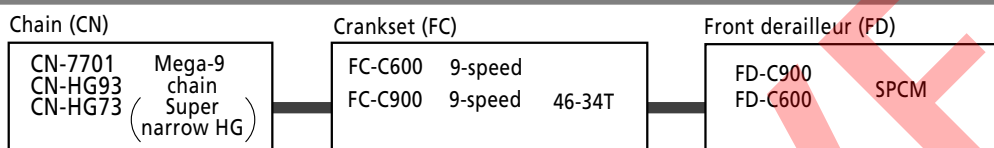


Front drivetrain interchangeability (MTB front SIS)

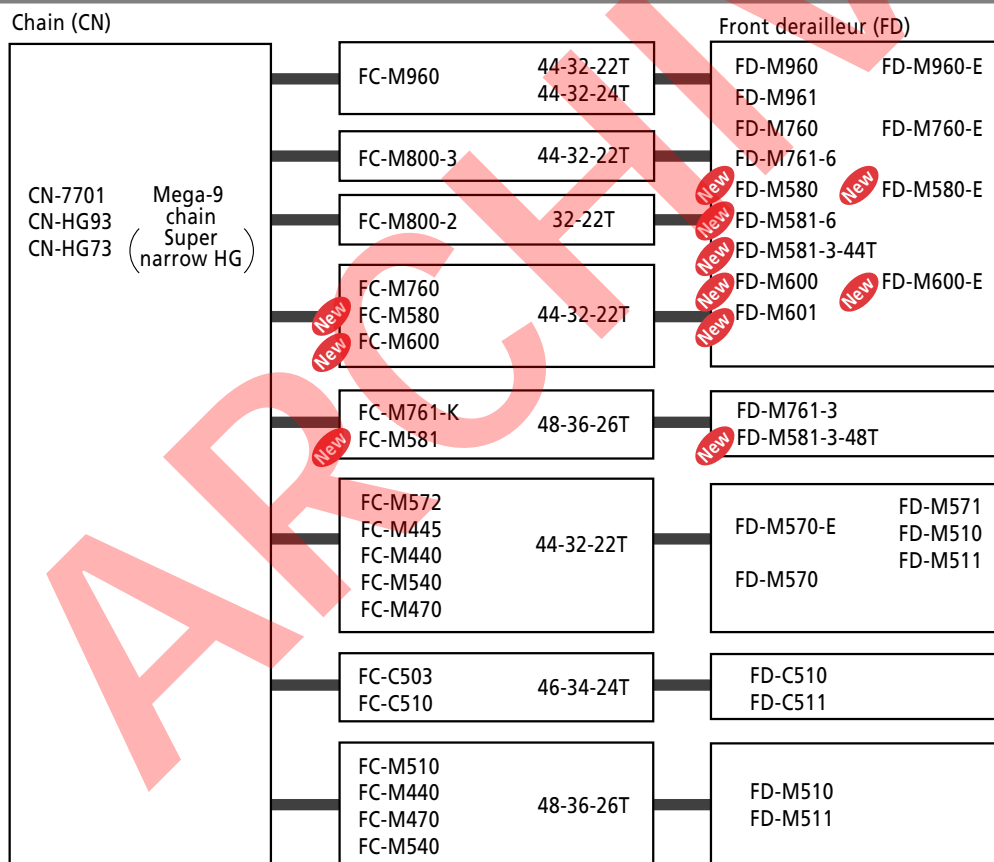
SPCM (TRIPLE)



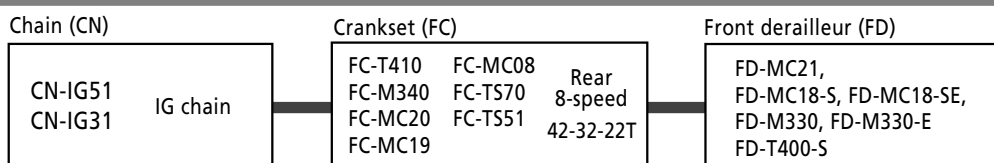
SPCM (DOUBLE)



Mega-9 drivetrain (9-speed HG) / LinkGlide (8-speed)

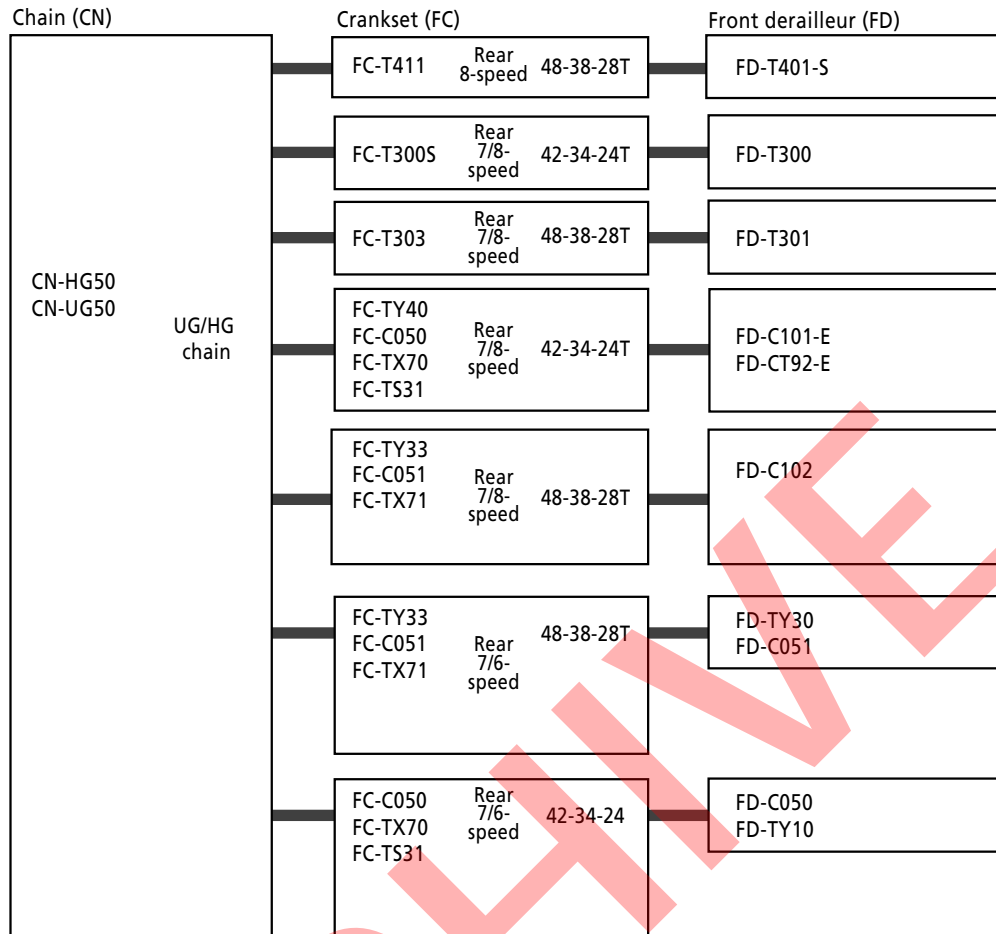


IG triple (8 and 7-speed)




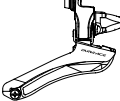
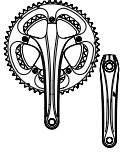



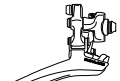








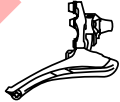



* When using the front derailleur designed for a 7-speed system on an 8-speed system, the front derailleur plate may interfere with the chain even if it's installed correctly.

HG triple (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's installed correctly.

Front drivetrain interchangeability (Road bike components)

	ST	FD	FC	BB	CN
DURA-ACE 7800 series ULTEGRA 6600 series Double 10-Speed	 ST-7800 NEW ST-6600	 FD-7800 NEW FD-6600	 FC-7800 NEW FC-6600	 SM-FC7800 (SM-FC6600)	 CN-7800 NEW CN-6600
ULTEGRA 6603 series Triple 10-Speed	NEW ST-6603	NEW FD-6603	NEW FC-6603	(SM-FC6600)	
DURA-ACE 7700 series Triple	ST-7703	FD-7703	FC-7703		
DURA-ACE 7700 series Double 9-Speed	 ST-7700-B ST-7700-C	 FD-7700 FD-6500 FD-5501 FD-4400	 FC-6500 FC-5502 FC-4401 FC-4400	 *1 BB-6500 BB-5500 BB-ES71/51/30 BB-UN73/53/25	 CN-7701 CN-HG93 CN-HG73 CN-HG53
ULTEGRA 6500 series 105 5500 series TIAGRA Double Triple 9-Speed	 ST-6510 ST-5510 ST-4400 ST-R600	 FD-6503 FD-5504 FD-4403	 FC-6503 FC-5505 FC-4404 FC-4403	 *1 BB-7703 BB-6500 BB-5500 BB-ES71/51/30 BB-UN73/53/25	
2200 SORA Double 8-Speed	 ST-R500 ST-3300	 FD-3300 FD-2200	 FC-3301 FC-3300 FC-2200	 BB-ES71 BB-ES51 BB-ES30 *2 BB-UN73 BB-UN53 BB-UN25	 CN-7401 CN-HG90 CN-HG91 CN-HG70 CN-HG50
2200 SORA Triple 8-Speed	ST-3304	FD-3304 FD-2203	FC-3304 FC-3303 FC-2203	BB-ES71 BB-ES51 BB-ES30 *2 BB-UN73 BB-UN53 BB-UN25	

*Notes 1 and 2: Axle length is different

Note 3: When the cable is adjusted normally, the front derailleur (FD) and chain (CN) may contact when both the front and rear are in low gear. If this happens, please loosen the cable adjust barrel until the chain stops making contact.

Front derailleur and Crankset

The allowable combinations of front derailleurs and rear derailleurs depend 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-T400-S FD-MC18 FD-MC18-E FD-M330 FD-M330-E	FD-T401-S FD-T301 FD-C102 FD-TZ31 FD-C051	FD-T300 FD-T300-E FD-C101-E FD-C050 FD-TY10 FD-CT92-E FD-TZ30 FD-TY10	FD-TY30
		FD-M960 FD-M960-E FD-M961 FD-M760 FD-M760-E FD-M761-DS6 FD-M600 FD-M601 FD-M600-E FD-M580 FD-M580-E FD-M581-6 FD-M581-3-44T	NEW FD-M805 NEW FD-M806	FD-M570-E	FD-M570 FD-M571 FD-M510 FD-M511 FD-C510 FD-C511	FD-M761-3 FD-M581-3-48T	FD-C810 FD-C505	FD-C900 FD-C600			
Top gear teeth number	44T	44-32-22 32-22	44/46T	48T/46T/44T	48T	SPCM (46/34/24T)	SPCM (46/34T)	42T	48T	42T	48T
Top-Middle min. teeth difference	12T		12T	12T	12T			10T	10T	8T	10T
Capacity	22T	22T	22T	22T	22T			20T	20T	18T	22T

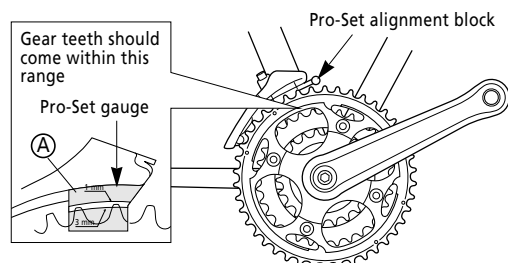
Crankset specifications

	For Super Narrow chain							For IG Chain	For HG Chain	For HG Chain
		FC-M960 (44-32-24) *option FC-M800-3 FC-M760 FC-M572 FC-M510 FC-M445 FC-M440 FC-M600-3 FC-M580 FC-M540 FC-M470	NEW FC-M510 FC-M761-K NEW FC-M581 FC-M440 FC-M470 FC-M540	FC-C503 FC-C510	FC-C810 FC-C505	FC-C600	FC-M800-2	FC-M800-1	FC-T410 FC-MC20 FC-MC19 FC-M340 FC-MC08 FC-TS70 FC-TS51	FC-T300S FC-TY40 FC-C050 TC-TS31 FC-TX70
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	28T

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 its 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 problem at process (2)



Front derailleur and Chain line

The Shimano line-up for front derailleurs and the chainlines they support are given in the chart below.

■ Front derailleur and chain line (MTB)

		Ø 28.6 (S)	Ø 31.8 (M)	Ø 34.9 (L)
XTR	FD-M960 FD-M960-E FD-M961	50 mm		
SAINT	NEW FD-M805, NEW FD-M806	57.5 mm (shell width of 83 mm)		
DEORE XT	FD-M760 FD-M760-E FD-M761-6 FD-M761-3	50 mm		
DEORE LX	NEW FD-M580, NEW FD-M580-E NEW FD-M581			
HONE	NEW FD-M600, NEW FD-M600-E NEW FD-M601			
DEORE LX	FD-M570 FD-M570-E FD-M571			
DEORE	FD-M510, FD-M511	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		
	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	50mm		
	FD-T400-S, FD-T401-S	47.5mm		
	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-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) : 47.5 mm (shell width of 68 mm) 50 mm (shell width of 73 mm)		73mm shell width/ 66 and 69
	FD-C202			

Shimano front derailleurs, with the exception of some of the C-series and the Tourney class, support chain lines of 47.5 and 50mm. The Tourney front derailleurs and corresponding chain lines are given in the chart below.

■ Front derailleur and chain line (Tourney)

		Ø28.6 (S)	Ø31.8 (M)	Ø34.9 (L)		
TOURNEY 30	FD-TY18 FD-TY30	47.5/50mm (down pull only)				
TOURNEY 22	FD-TY22GS	45/47.5mm				
	FD-TY22SS	43.5/45mm (down pull only)				
TOURNEY 15	FD-TY15GS	47.5/50mm (down pull only)				
	FD-TY15SS	43.5/45mm (down pull only)				
TOURNEY 05	FD-TY05	45mm (down pull only)				
TOURNEY 10	FD-TY10	47.5/50 mm				
TZ	FD-TZ30 FD-TZ31					

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.

■ Comfort bike and MTB Components

Series	Model NO.	Crankset			Bottom Bracket	Chainline & Axle mark			
		Spline	Square	Chaincase		Model NO.	47.5mm	50.0mm	52.5mm
XTR	FC-M960	X			include	Chainline : 50 mm			
SAINT	NEW FC-M805-1	X			include	Chainline : 57.5 mm			
	NEW FC-M805-2								
	NEW FC-M805-3								
	FC-M800-1 FC-M800-2 FC-M800-3	X			include	Chainline : 50 mm			
Deore XT	FC-M760	X			include	Chainline : 50 mm			
	FC-M761	X		X	include				
Deore LX	NEW FC-M580	X			include				
	NEW FC-M581	X		X	include				
HONE	NEW FC-M600	X			include				
Deore	FC-M510-O	X			BB-ES51(-E)				
	FC-M510-KO	X		X	BB-ES51-K			-	121
	NEW FC-M540	X			BB-ES51(-E)	113	118	-	
	NEW FC-M540-K	X		X	BB-ES51-K	121	126	-	121
	NEW FC-M470(44T)	X		X	BB-ES51/30(-K)	121	126	-	121
	NEW FC-M470(48T)	X		X	BB-ES51/30(-K)	121	126	-	121
	NEW FC-M460		X	X	BB-UN25(-K)	117.5	-	-	117.5
	NEW FC-M440 (48T)		X	X	BB-UN25(-K)	117.5	-	-	117.5
	FC-M440-O	X			BB-ES51/30(-E)	113	118	-	-
FC-M440		X		BB-UN25(-E)	MM110	LL113	-	-	
NEXAVE	FC-C810		X	X***	BB-UN25	-	130	-	-
	FC-C505		X	X***	BB-UN25	-	130	-	-
	FC-C600		X	X	BB-UN25-K	-	-	117.5	-
	FC-C503			X	BB-UN25-K	123	123	-	123
	FC-C530		X	X	BB-TS30/UN25-K	See page 61.			
	FC-C510**		X	X***	BB-UN25	-	123	-	-
	FC-T410		X	X	BB-UN25-K	-	-	-	117.5
	FC-T411		X	X	BB-UN25-K	-	-	-	
	FC-T300-S FC-T303		X X	X X	BB-UN25(-E)	YL117	ZL122	-	-
Alivio	FC-MC20		X		BB-UN25(-E) /(-K)	MM110	LL113	-	-
	FC-MC19		X					-	-
Acera	FC-M340		X	X				-	MM110
Non-Series	FC-MC08		X					-	-
Tourney	FC-TY40		X			YL117	ZL122	-	-
C-Series	FC-C051/050		X	X	BB-UN25	D-NL(122.5)	-	-	-
Tourney	FC-TX70/TX71		X	X			-	-	-

* 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 adaptor.

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 adaptor.

*** Chain case stay thickness should be 1.5 mm to 2.1 mm.

X: Yes

■ Front Chainwheels from Shimano Italy

Model NO.	FC			Model NO.	Chainline		
	Chain ring	Square	Chain case		46.5+t	47.5+t	
FC-M510-K	44-32-22	X	X	BB-TS50/30	-	117.5	0<t<2.5mm
FC-TS91	44-32-22	X	X		-	117.5	
FC-TS52	44-32-22	X	X		-	117.5	
FC-TS38	48-38-28	X	X		-	YL117	
FC-TS32	42-34-24	X	X		-		

Note: "t" is thickness of chain case stay.

X: Yes

■ Capreo series components

The combinations of the front chainwheel and the bottom bracket to obtain proper chain line, which are necessary for the SIS (= Shimano Indexed System) to function well, are presented in the following chart.

Series	FC				Model No.	Chain Line & Axle mark			
	Model No.	type of Crank				46.0 mm	48.5 mm	50.0 mm	52.5+t mm
		Spline	Square	Chaincase					
Capreo	FC-F700		X	X	BB-UN40	MM110	LL113	-	-
					BB-UN40-K	-	-	-	*117.5
					BB-UN25	MM110	LL113	YL117	-
					BB-UN25-K	-	-	-	*117.5

* This specification can be used without the chain case as 52.5 mm chain line. In that case, a space is to be left between the shell and the adapter on the left side of the BB, but there is no problem in actual use.

X: Yes

Octalink Bottom Bracket

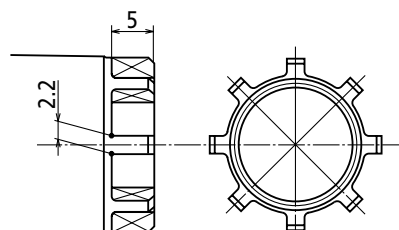
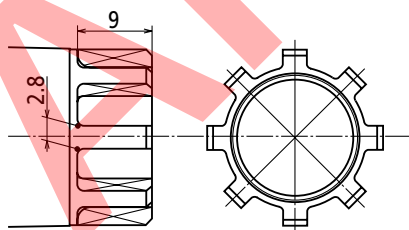
The dimensions of the eight serrations on the BB are shown below.

The dimensions for BB-ES71/51/30 are different from those for BB-M952/7700/7703/7710/6500/5500.

Be aware that these models are not compatible.

BB-ES71
BB-ES51
BB-ES30
BB-C900

BB-M952
BB-7700
BB-7703
BB-7710
BB-6500
BB-5500



Chain, Chainring and Cassette sprocket

The allowable combinations for the Shimano chain (CN), chainrings (FC), and cassette sprockets (CS) are given in the chart below. These chains are available in order to match the type of drivetrain. Select the combination you desire after checking the chart below.

		Mega-9		LG		IG		HG	
		Cassette sprocket	Crankset	Cassette sprocket	Crankset	Cassette sprocket	Crankset	Cassette sprocket	Crankset
FC/CS		CS-M960 NEW	FC-M960 NEW FC-M805 FC-M800 FC-M760 FC-M761-K NEW	NEW CS-LG50	FC-C810 FC-C505 FC-C503 FC-C530 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	FC-T411 FC-T300-S FC-T303 FC-TY40 FC-C050 FC-C051 FC-TX70 FC-TX71 FC-TS38 FC-TS31
Chain	Mega-9 Super Narrow chain CN-7701 CN-HG93 CN-HG73 CN-HG53	Good	Good	Good	Good	Not good	Not good	Not good	Not good
	IG Chain (Note 2) CN-IG51 CN-IG31	Not good	Not good	Not good	Not good	Good	Good	Good (Note 1)	Not good poor performance
	HG Chain CN-7401 CN-HG50	Not good	Not good	Not good	Not good	Not good poor performance	Not good Will not work	Good	Good

Note 1: When used together with the HG cassette sprocket CS-M737/HG70-8, the adjustable range is very narrow and requires great care.

Note 2: The IG chain cannot be used with the Altus class rear derailleurs.

Spoke protector

Select the spoke protector after checking the chart below.
It is decided by hole number of hub and number of the gear teeth.

Hub	Protector	21T	25T	26T	28T	30T	32T	34T
for 28H hub	5.4"				CP-FH40			
for 32H hub	7.5"						CP-FH56*	CP-FH75*
							CP-FH76**	
	6.3"					NEW	CP-IF52****	
for 10 speed 32H hub	5.4"			CP-FH35				
	ø109	CP-FH02						
	ø109	NEW	CP-FH05					
for 36H hub	7.5"				CP-FH50		CP-FH53	CP-FH75*
							CP-FH76**	
	6.3"						CP-IF53****	
	5.4"			CP-FH31				
for 10 speed 36H hub	ø109	NEW	CP-FH06					
for Shimano Wheel	CP-WH71	for WH-7701						
	CP-WH10/11	*** for WH-M575/M540/M765/M965						
	CP-WH20	for WH-7800/R550						
	CP-FH02/35	for WH-R500						
for (6-bolts) Shimano Disc Brake Hub	CP-FH75*	for FH-M755 / M756 / M525 / M475						
	CP-FH76**	for FH-M755/M756/M525/M475						
for IF-C530 INTEGO 36H Freehub	CP-IF53****							
for IF-C530 INTEGO 32H Freehub	NEW CP-IF52****							

* Using with light alloy sprocket carrier ** Using with standard cassette sprocket

*** Compatible cassette sprocket

CP-WH11 : for CS-M750/M760/M960 (11-32T)

CP-WH10 : for CS-M953/M960 (12-34T)

CS-M750/M760 (12-34T/11-34T)

CS-HG70-9 (11-32T/11-34T)

CS-HG50-9 (11-32T)

Note: A spoke protector is included with the cassette sprocket CS-LG50.

Spoke protector for Capreo

Choose an appropriate spoke protector in the chart below.

FH		Spoke Protector
FH-F700	24H	CP-FH35/FH31
	32H	CP-FH35
	36H	CP-FH31

Cassette sprocket, Rear freehub and Wheel (10-speed)

Cassette sprocket compatibility will differ depending on the freehub (FH) and wheel (WH) used.

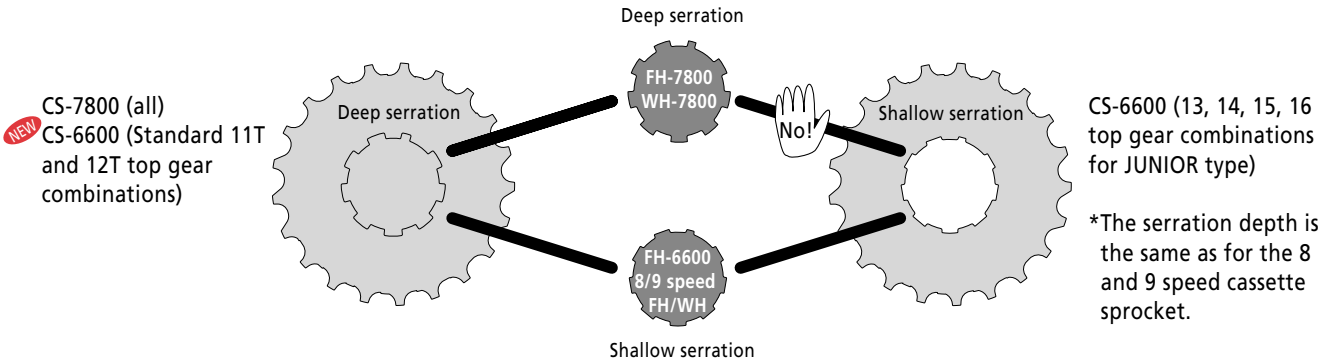
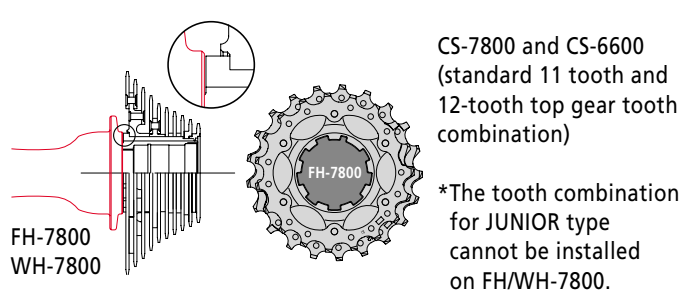
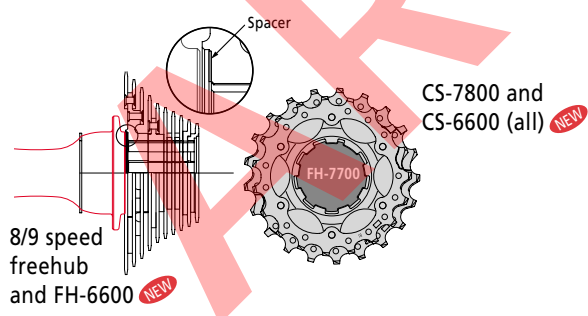
Type	Model No.	Tooth	FH/WH -7800	FH-6600/8/9 speed freehub	WH-7700	WH-6500	WH-R535	WH-7701	WH-R540	WH-R500	WH-R550
10 speed standard	CS-7800	11 – 21	X	X	—	—	—	X	—	X	X
	CS-7800	12 – 21	X	X	—	—	—	X	X	X	X
	CS-7800 CS-6600	11 – 23	X	X	—	—	—	X	X	X	X
	CS-7800 CS-6600	12 – 23	X	X	—	—	—	X	X	X	X
	CS-7800 CS-6600	12 – 25	X	X	X	X	—	X	X	X	X
	CS-7800 CS-6600	12 – 27	X	X	X	X	—	X	X	X	X
10 speed JUNIOR	CS-6600	13 – 25	—	X	X	X	—	X	X	X	X
	CS-6600	14 – 25	—	X	X	X	—	X	X	X	X
	CS-6600	15 – 25	—	X	X	X	—	X	X	X	X
	CS-6600	16 – 27	—	X	X	X	—	X	X	X	X

X = Yes — = No

Be aware that freehub (FH) and wheel (WH) compatibility with CS-6600 might differ depending on the tooth combination.

*The tooth combination for CS-6600 JUNIOR type cannot be installed on FH/WH-7800.

A 1 mm spacer is required when combining CS-7800 and CS-6600 (except junior types) with a 8/9 speed freehub (FH) and FH-6600.



Disc brake

Combination Chart (Hydraulic Disc)

■ Shimano Hydraulic Disc Brake combination chart

In order to realize the best performance, we recommend that the following combination be used.

Series	Caliper	Mount type	Brake Lever	Rotor	PAD (option)	Hose	Remarks
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/BH63	*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/BH63	*2 Front mount: International standard / Post mount Rear mount: International standard
Deore LX	NEW BR-M585	*2	ST-M585 BL-M585 ST-M600	SM-RT62	M07-S resin (M06 Metal)	SM-BH59	*2 Front mount: International standard / Post mount Rear mount: International standard
NEW HONE	BR-M601				M06 Metal (M07-S resin)		
Deore	BR-M555	International standard	BL-M556	SM-RT61	M01 Metal (M02 Resin)	SM-BH62/BH63	—
		Post mount	BL-M555			SM-BH60/61	Front only
	BR-M525	*2	BL-M525			M08 Resin	SM-BH59
NEXAVE	BR-C901	International standard	BL-C901		C01 Metal	SM-BH60/61	—

■ Rotor Specification

Series	Model No.	Outside Diameter	CENTERLOCK System	Oversized CENTERLOCK System	PCD 44 mm
XTR	SM-RT96	160 mm	X	—	—
SAINT	SM-RT80	203 mm	—	X	—
	SM-RT80S	160 mm	—	X	—
	SM-RT75-DH	203 mm	—	—	X
Deore XT	SM-RT77L	203 mm	X	—	—
	SM-RT77	160 mm	X	—	—
	SM-RT75S	160 mm	—	—	X
	SM-RT75M	170 mm	—	—	X
Deore LX HONE	SM-RT62	160 mm	X	—	—
	SM-RT62L	203 mm	X	—	—
Deore / NEXAVE	SM-RT60	160 mm	—	—	X
	SM-RT61	160 mm	—	—	X

X: Yes

■ Hose material & length

Series	Model No.	Compatible brake lever & caliper	Material	Hose length (mm)		
				for Front	for Rear	
XTR	SM-BH96	ST-M965	Resin	900, 1300, 1700 mm		Cutable
SAINT Deore XT Deore	SM-BH62 SM-BH63	ST-M765 BL-M756 BL-M556		900, 1300, 1700 mm		Cutable
NEW Deore LX HONE	SM-BH59	NEW ST-M585 NEW BL-M585 NEW ST-M600		900, 1300, 1700 mm		Cutable
Deore / NEXAVE	SM-BH61	BL/BR-M555, BL/BR-C901		900, 1300, 1700 mm		Cutable
	SM-BH60			500-1000 (every 50mm)	1200-1700 (every 50mm)	
	SM-BH59	BL/BR-M525 NEW BL-M585 NEW ST-M585 NEW BR-M585		900, 1300, 1700 mm		Cutable

Combination Chart (Mechanical Disc)

■ Shimano Mechanical Disc Brake combination chart

In order to realize the best performance, we recommend that the following combination be used.

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-RT50 For resin pad only	M08 Resin
	BR-C501	International standard	V-brake BL (4finger) + SM-PM50		
Non-series	BR-M475	*	V-brake BL (1.5-2.5finger)	SM-RT52 For resin pad only	M08 Resin
	NEW BR-M495	*	V-brake BL (1.5-2.5finger)		
	NEW BR-M465	*			

* FRONT MOUNT: International standard / Post mount

* REAR MOUNT: International standard

■ Mechanical Disc brake and Brake lever interchangeability

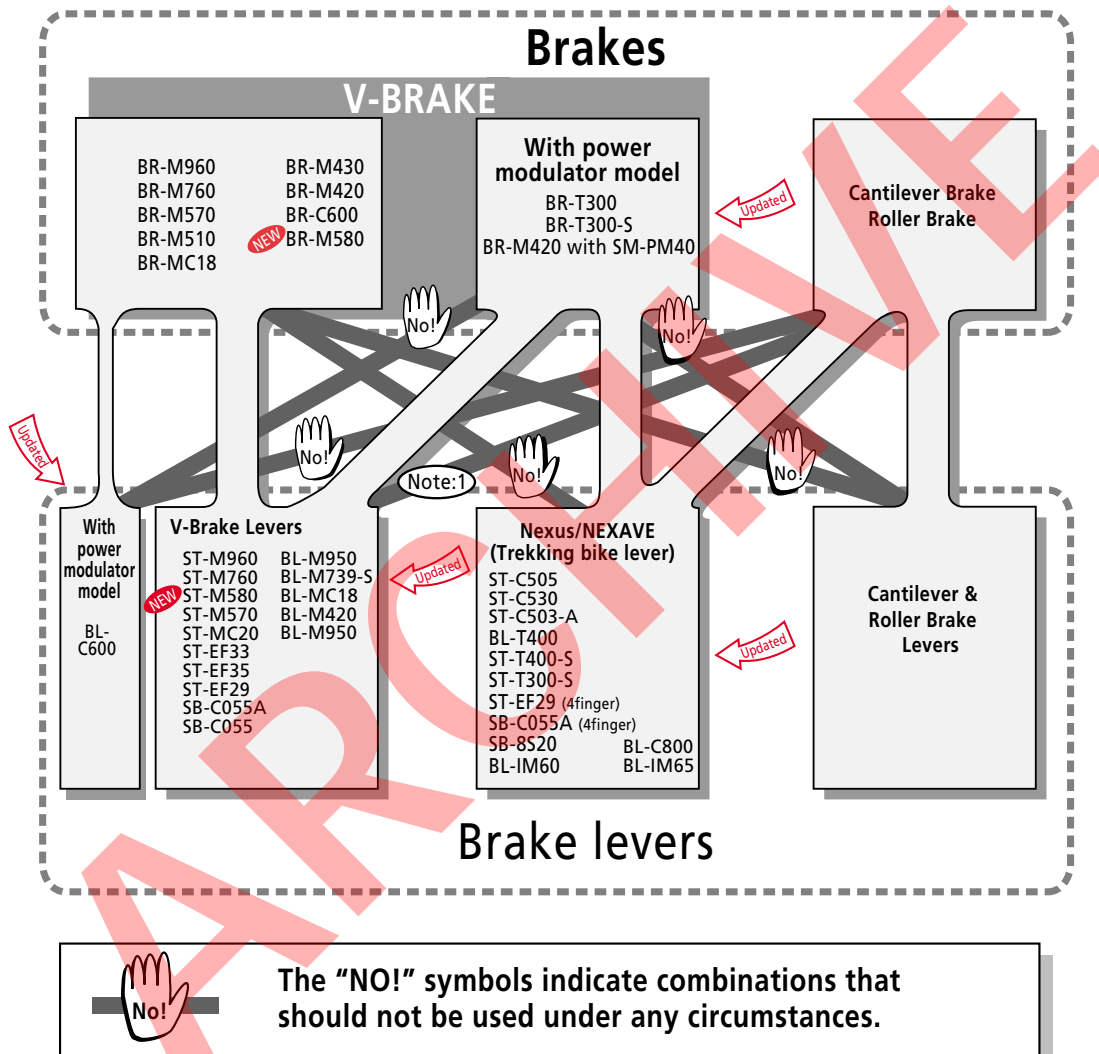
Model NO.	BL type			
	2 finger	4 finger	4 finger w/ modulator	
			BL-C900/C600 type or w/ SM-PM40	w/ SM-PM50
BR-M515-LA	Good	Not good	Not good	Good
BR-C601	Good	Not good	Good	Good
BR-C501	Good	Not good	Not good	Good
BR-M475	Good	Not good	Not good	Good
NEW BR-M495	Good	Not good	Not good	Good
NEW BR-M465	Good	Not good	Not good	Good

V-BRAKE and Canti-brake

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.

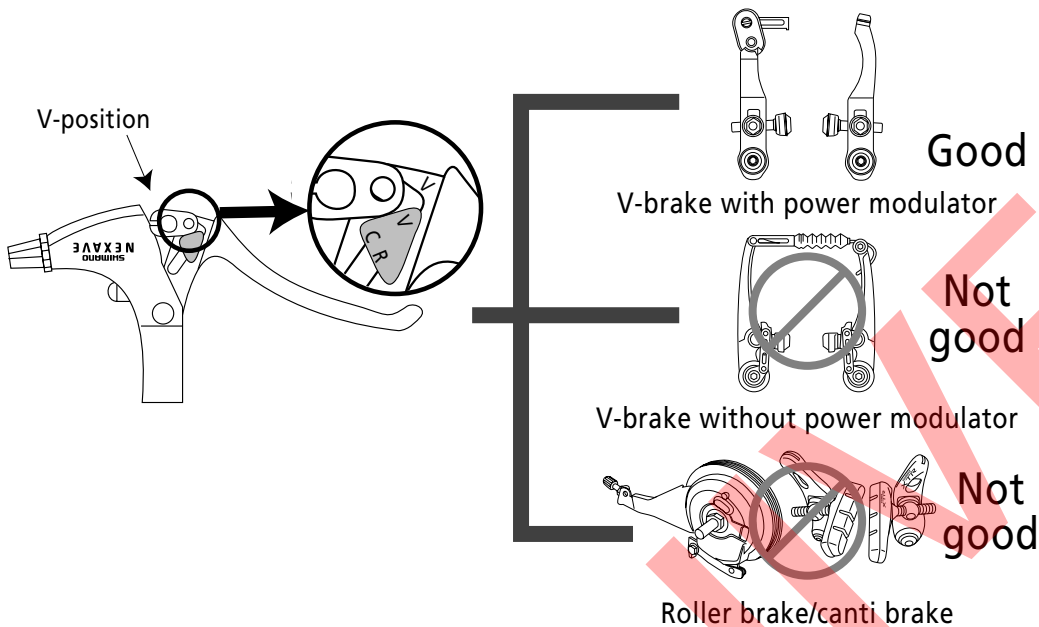


Note 1: This combination will not provide the sufficient amount of braking force.

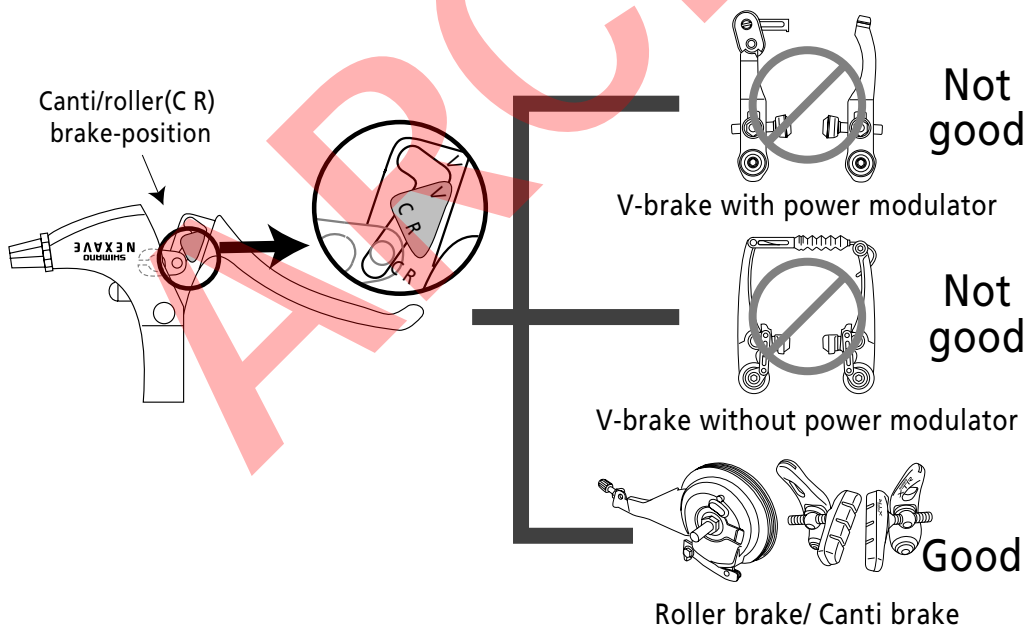
Brake component interchangeability

ST-T400/BL-T400/ST-T300/ST-EF29/SB-C055A/SB-7S45/BL-IM45 brake levers are equipped with a switch to change between the V-brake with modulator mode (BR-T300 and BR-M420 with SM-PM40) and the cantilever or roller brake mode.

■ For V-brake (with power modulator) mode



■ For Canti /Roller-brake.

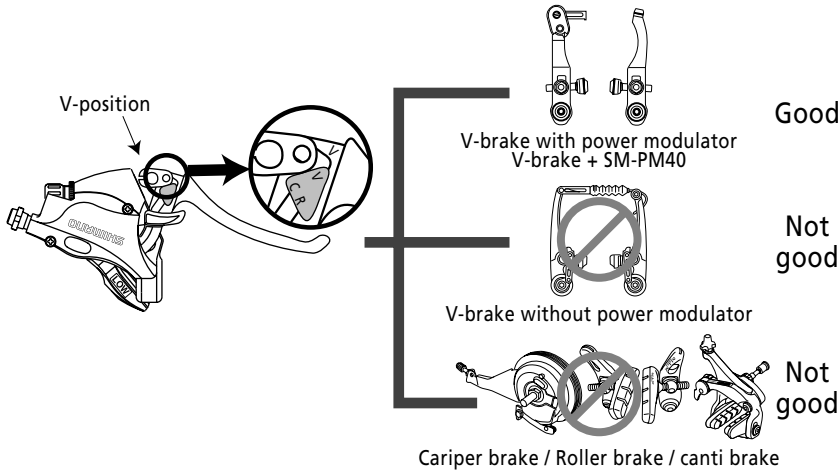


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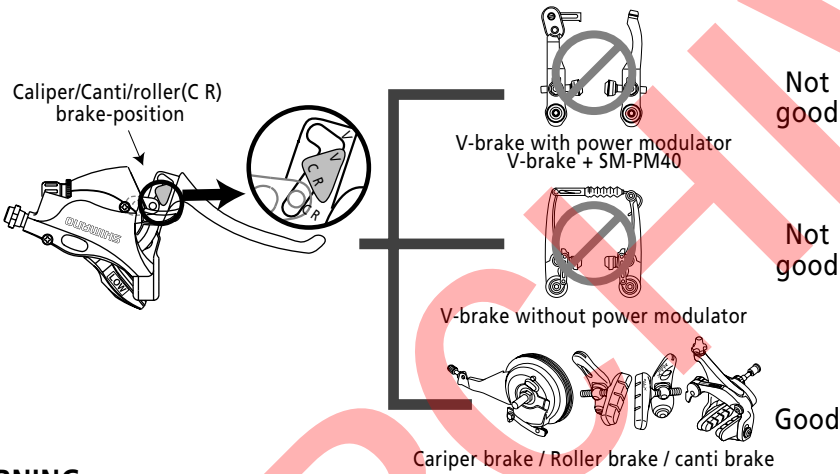
If the mode is not matched to the type of brake being used, this could result in inadequate or excessive braking power. Please proceed with caution when selecting the correct mode for the corresponding brake.

ST-R220/R224/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.

■ For V-brake (with power modulator) mode



■ For Caliper/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.

Hub roller brake

Interchangeability between hub and roller brake

■ Hub roller brake and Front hub w/modulator

Model NO.	Modulator Level	type	BR-IM75-F	BR-IM70-F	BR-IM50-F	BR-IM41-F	BR-C050-IM-F
HB-IM70	Hyper	QR	⊙	⊙	not good	not good	not good
HB-IM50	Normal	QR	○	○	⊙	⊙	not good
HB-IM45	Normal	NUT	○	○	⊙	⊙	○
HB-IM40	Normal	NUT	○	○	⊙	⊙	○
HB-C052-IM	Hyper	NUT	⊙	⊙	not good	not good	⊙
HB-IM20-E	Hyper	NUT	⊙	⊙	not good	not good	⊙

⊙: Recommended combination

○: Usable

■ Hub roller brake and Front hub w/modulator For 20" to 24" bike (for Children)

Model NO.	Modulator Level	type	BR-IM75-F	BR-IM70-F	BR-IM50-F	BR-IM41-F	BR-C050-IM-F	
HB-IM30	20-24inches	NUT	good					
HB-IM20-EC	20-24inches	NUT						
HB-C052C-IM	20-24inches	NUT						

■ Hub roller brake and Hub Dynamo w/modulator

Model NO.	Modulator Level	type	BR-IM75-F	BR-IM70-F	BR-IM50-F	BR-IM41-F	BR-C050-IM-F
DH-3R40	Hyper	QR	⊙	⊙	not good	not good	not good
		NUT	⊙	⊙	not good	not good	⊙
DH-2R40	Hyper	NUT	⊙	⊙	not good	not good	⊙
HB-NX50	Normal	QR	○	○	⊙	not good	not good
		NUT	○	○	⊙	⊙	○
HB-NX60	Normal	NUT	○	○	⊙	⊙	○
HB-C051-DR	Hyper	NUT	⊙	⊙	not good	not good	⊙
HB-C050-DR	Hyper	NUT	⊙	⊙	not good	not good	⊙

⊙: Recommended combination

○: Usable

■ Hub roller brake and Hub Dynamo w/modulator For 20" to 24" bike (for Children)

Model NO.	Modulator Level	type	BR-IM75-F	BR-IM70-F	BR-IM50-F	BR-IM41-F	BR-C050-IM-F	
HB-C051-DRC	20-24inches	NUT	good					
HB-C050-DRC	20-24inches	NUT						

Brake shoe

Brake shoe (for V-brake and Canti-brake)

■ Brake/Shoe line-up

	M70R2	M70R2 (Severe Condition shoe)	Ceramic	M70T3	M70T4	M70CT4 (Severe Condition shoe)	M70W	M65T3	M65T4	S70C	S70C (Severe Condition shoe)	S70T	S65T
BR-M960	Standard	—	Option	—	—	—	—	—	—	—	—	—	—
BR-M760	Option	—	Option	Low noise	Option	—	—	—	—	Standard	—	—	—
NEW BR-M580	—	—	—	Option	Option	—	—	—	—	Standard	—	—	—
BR-M570	—	—	—	Option	Option	—	—	—	—	—	—	Standard	—
BR-M510	Option	—	—	Option	Option	—	—	—	—	Standard	—	Standard	—
BR-M430	Option	—	—	—	—	—	—	—	—	Standard	—	—	—
BR-M420	—	—	—	—	—	—	—	Option	Option	—	—	—	Standard
BR-M330	—	—	—	Option	Option	—	—	—	—	—	—	—	Standard
BR-C900	—	—	—	—	—	—	Standard	—	—	—	—	—	—
BR-C600	—	—	—	—	—	—	Standard	—	—	—	—	—	—
BR-T300	—	—	—	Option	Option	—	—	—	—	—	—	Standard	—
BR-MC18	—	—	—	Option	Option	—	—	—	—	—	—	Standard	—
BR-CT91	Standard shoe is "CONVENTIONAL TYPE". M55T M-system shoe is optional choice.												
BR-R550	—	Option	—	—	—	Option	—	—	—	—	Standard	—	—

■ Shoe characteristics

	Cartridge shoe	M-system	Length	Threaded shoe post	Brake shoe characteristics
M70R2	X	X	70 mm	X	A race shoe that performs well in dry and wet conditions, and is also highly resistant to wear. may give off noise.
M70R2 (Severe Condition shoe)	X	X	70 mm	X	+1mm thicker shoe with M70R2
Ceramic	X	—	70 mm	X	Specific shoe for ceramic rims.
M70T3	—	X	70 mm	X	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.
M65T3	—	X	65 mm	X	
M70T4	—	X	70 mm	X	
M70W	—	X	70 mm	X	
M65T4	—	X	65 mm	X	Only for side wall machined rims. Performs especially well in wet conditions and may pass DIN standard. Tend to be low noise, low rim wear and fade.
M70CT4 (Severe Condition shoe)	X	X	70 mm	X	
S70C	X	—	70 mm	X	Performs well in dry conditions and tends to be low noise. Wears in muddy conditions.
S70T	—	—	70 mm	X	
S65T	—	—	65 mm	X	
S70C (Severe Condition shoe)	X	—	70 mm	X	+1mm thicker shoe with S70C

X: Yes

Brake shoe (for road bikes)

< Brake/Shoe line-up >

		R55C2	R55C +1	R55C	R55HC	R55C for Carbon rim	R55C for Ceramic rim	M50T	R50T
DURA-ACE	BR-7800	Standard	Option	—	—	Option	Option	—	—
	BR-7700	—	Standard	—	Option	Option	Option	—	—
ULTEGRA	BR-6500	—	—	Standard	Option	Option	Option	—	—
	NEW BR-6600	Standard	—	—	—	Option	Option	—	—
105	BR-5501	—	—	Standard	Option	Option	Option	—	—
non-series	BR-R600	—	Standard	—	Option	Option	Option	—	—
TIAGRA	BR-4400	—	—	—	—	—	—	Option	Standard
SORA	BR-3300	—	—	—	—	—	—	Option	Standard
non-series	BR-A550-57	—	—	—	—	—	—	Option	Standard

< Shoe characteristics >

	Cartridge shoe	M-system	Length	Brake shoe characteristics
R55C2	X	—	55 mm	Performs well in dry conditions and tends to be low noise. Highly resistant to wear in rainy conditions.
R55C +1	X	—	55 mm	* 1 mm thicker shoe with R55C
R55C	X	—	55 mm	Performs well in dry conditions and tends to be low noise. Wear in rainy conditions.
R55HC	X	X	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	X	—	55 mm	For Carbon rim
R55C for Ceramic rim	X	X	55 mm	For Ceramic rim only
M50T	—	X	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.

X: Yes

Brake shoe (Capreo)

< Shoe characteristics >

Shoe	Cartridge shoe	M-system	Length	Thread Shoe Post	Brake Shoe Charectristic
R55C (for F700)	X	X	55 mm	X	Performs well in wet conditions and may pass DIN standards. Tends to be low noise. But faster rim wear.

X: Yes

Brake pad

Brake pad line-up (for disc brake)

		M01	M02	M03	M04	M05	M06	M07	M07-S	M08	C01
Model NO.	type	Sintered Metal	Resin	Sintered Metal	Resin	Resin	Sintered Metal	Resin	Resin	Resin	Sintered Metal
BR-M965 BR-M966	Hydraulic						option	Standard			
BR-M800	Hydraulic						Standard		option		
BR-M765	Hydraulic						option		Standard		
BR-M755	Hydraulic			Standard	option						
NEW BR-M601	Hydraulic						Standard		option		
NEW BR-M585	Hydraulic						option		Standard		
BR-M555	Hydraulic	Standard	option								
BR-M525	Hydraulic									Standard	
NEW BR-M495	Mechanical									Standard	
NEW BR-M465	Mechanical									Standard	
BR-M515	Mechanical					Standard					
BR-M475	Mechanical									Standard	
BR-C901	Hydraulic										Standard
BR-C601	Mechanical					Standard					
BR-C501	Mechanical									Standard	

M01/M03/M06 : Longer pad-life, good for anti-fade, good constancy 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.

M08 : 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 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.

Disc brake caliper / Rotor combination

Item	SM-RT96	SM-RT80	SM-RT80S	SM-RT77	SM-RT77L	SM-RT75M	SM-RT75-DH	SM-RT62	SM-RT62-L	SM-RT61	SM-RT52	SM-RT50
Size	160mm	203mm*2	160mm*2	160mm	203mm	170mm	203mm	160mm	203mm	160mm	160mm	160mm
Center Lock	X	X	X	X	X	—	X	X	X	—	X	—
Caliper Model No.	BR-M965	X	X	X	X	—	X	X	X	X	X	—
	BR-M966	X	X	X	X	—	X	X	X	X	X	—
	BR-M765	X	X	X	X	—	X	X	X	X	X	—
	BR-M755	X	X	X	X	X	Manitou*1	X	X	X	X	—
	BR-M800	X	X	X	X	X	—	X	X	X	X	—
	NEW BR-M601	X	X	X	X	X	—	X	X	X	X	—
	NEW BR-M585	X	X	X	X	X	—	X	X	X	X	—
	BR-M555	X	X	X	X	X	—	X	X	X	X	—
	BR-M525	X	X	X	X	X	—	X	X	X	X	—
	BR-C901	X	—	X	X	—	—	—	X	—	X	—
	BR-M515	X	—	X	X	—	—	—	X	—	X	—
	NEW BR-M495	X	—	X	X	—	—	—	X	—	X	—
	NEW BR-M465	X	—	X	X	—	—	—	X	—	X	—
	BR-M475	X	—	X	X	—	—	—	X	—	X	X
BR-C601	X	—	X	X	—	—	—	X	—	X	—	
BR-C501	X	—	X	X	—	—	—	X	—	X	X	

Notes: • SM-RT52; Compatible with resin pad caliper specification only. If use with caliper with metal pads, rotor will be easily damaged

• SM-RT50; Compatible with BR-M475/C501 only

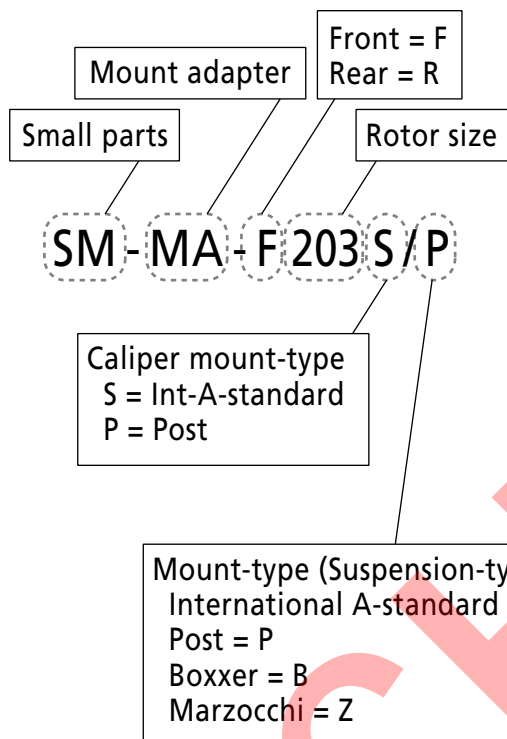
*1; For Manitou post mount

*2; Large size centerlock ring

Disc brake mount adapter

Disc brake mount adapter application

How to read 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
BR-M601	∅ 160	SM-MA-F160P/S	SM-MA-F160P/Z		Direct attach
BR-M585					
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		SM-MA-F160P/Z		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/S
	∅ 160	SM-MA-R160P/S
BR-M765	∅ 203	SM-MA-R203P/S
BR-M601	∅ 160	SM-MA-R160P/S
BR-M585		
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
	∅ 160	
BR-M525	∅ 203	SM-MA-R203P/S
	∅ 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)	BOXXER-type	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
BR-M495	∅ 203				
BR-M465	∅ 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)
BR-M465	∅ 203	
BR-M495	∅ 160	M475 Adapter (R)