

ARCHIVE

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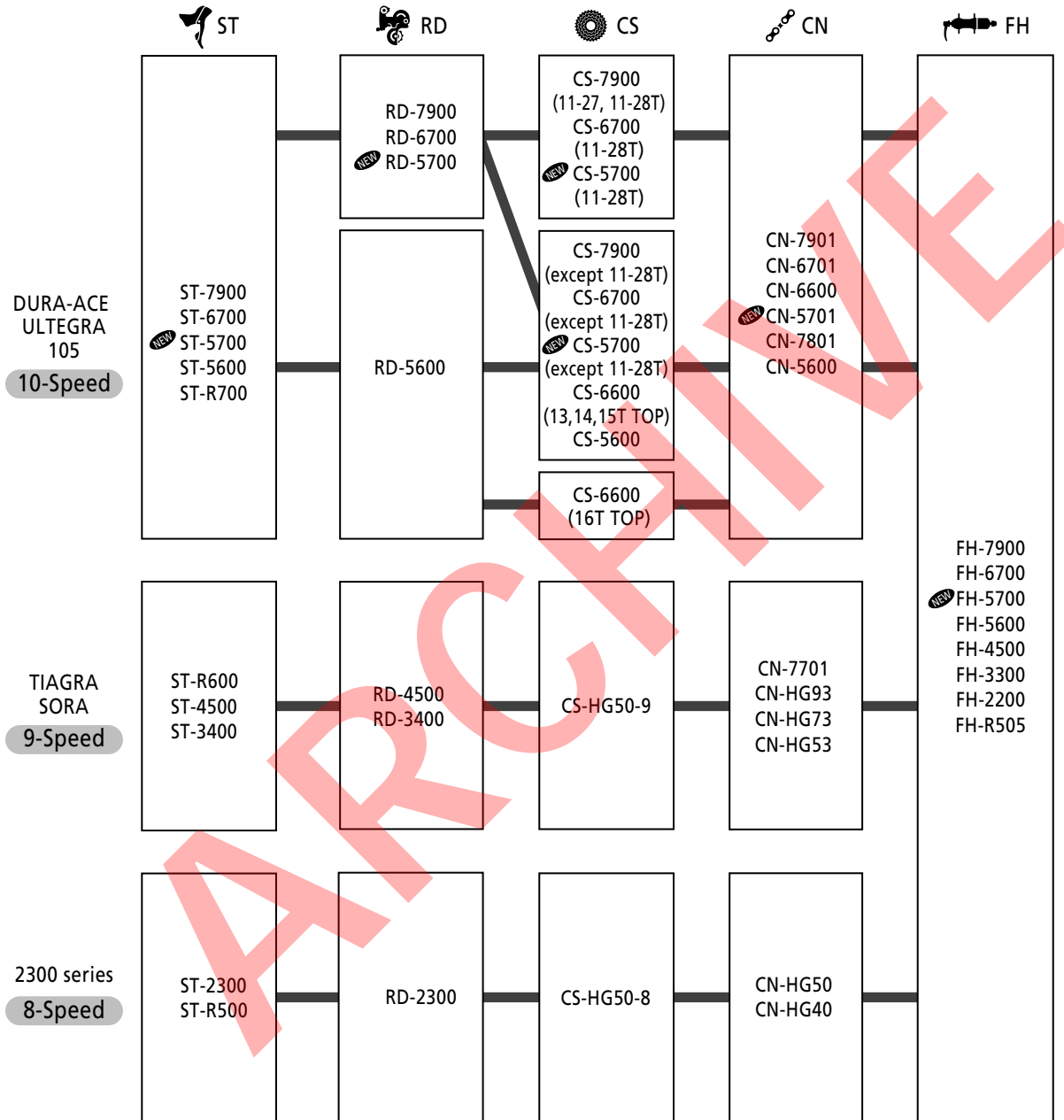
2010-2011

Products compatibility information

Drivetrain Interchangeability

Drivetrain for Road bike components

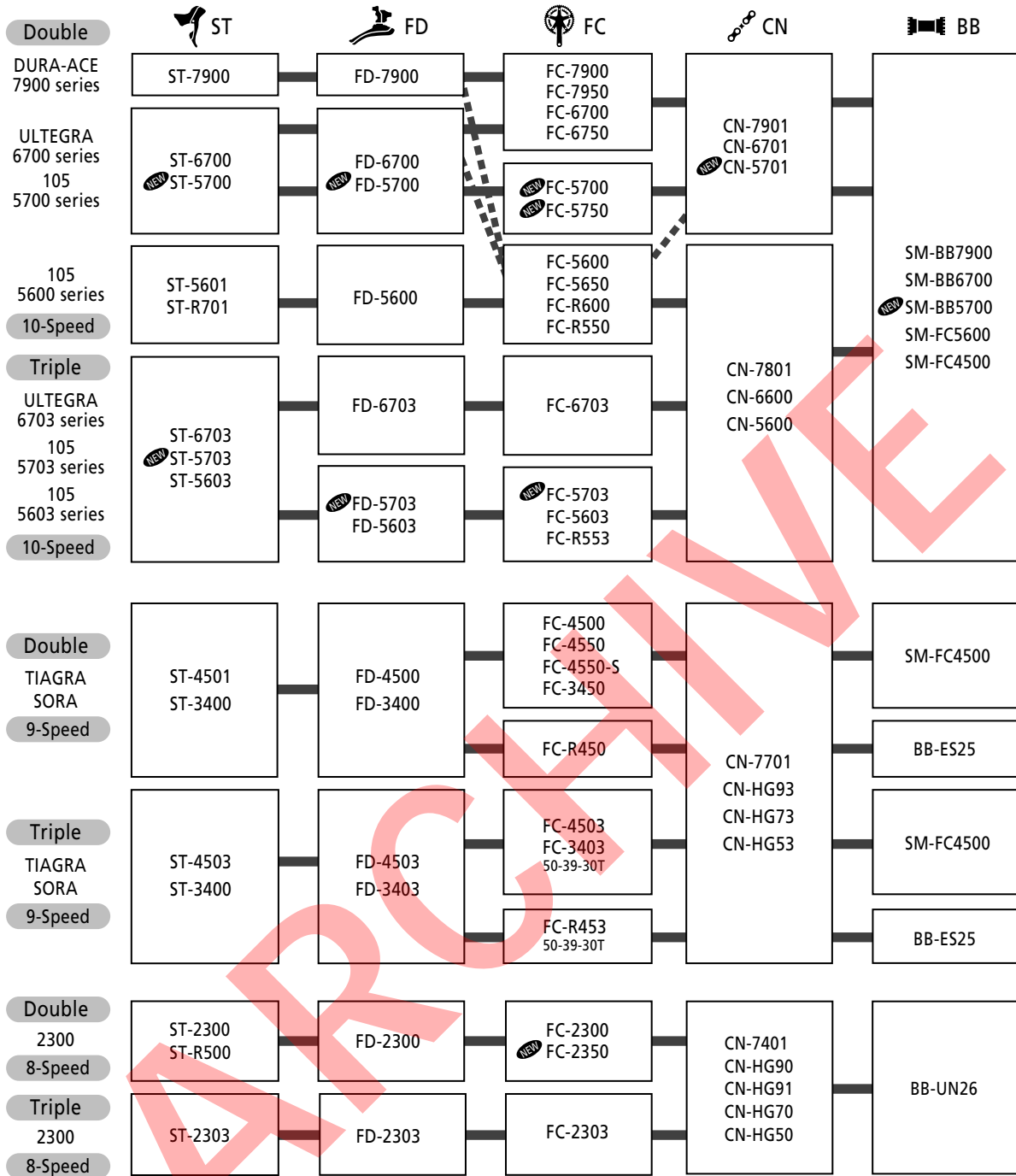
1. Rear drivetrain interchangeability



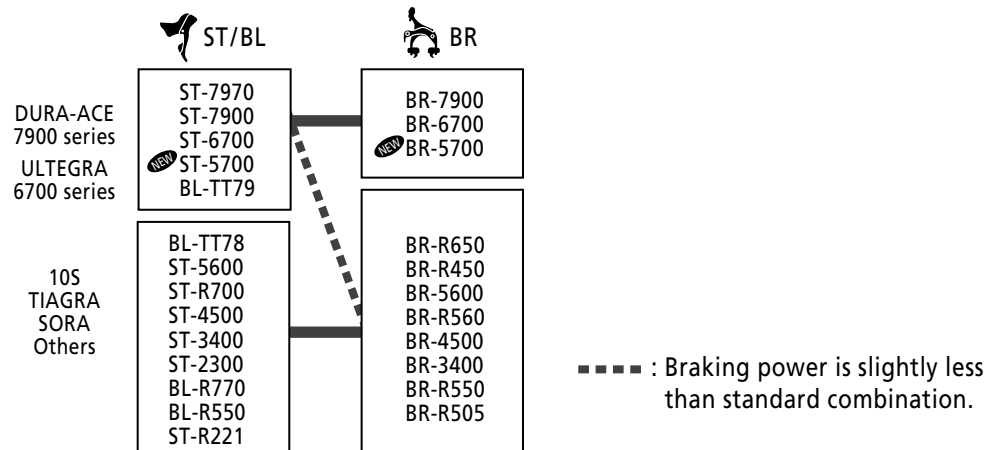
Note:

CS-6600; Do not use front triple chainwheel with 14, 15, 16 top sprockets combination.

2. Front drivetrain interchangeability

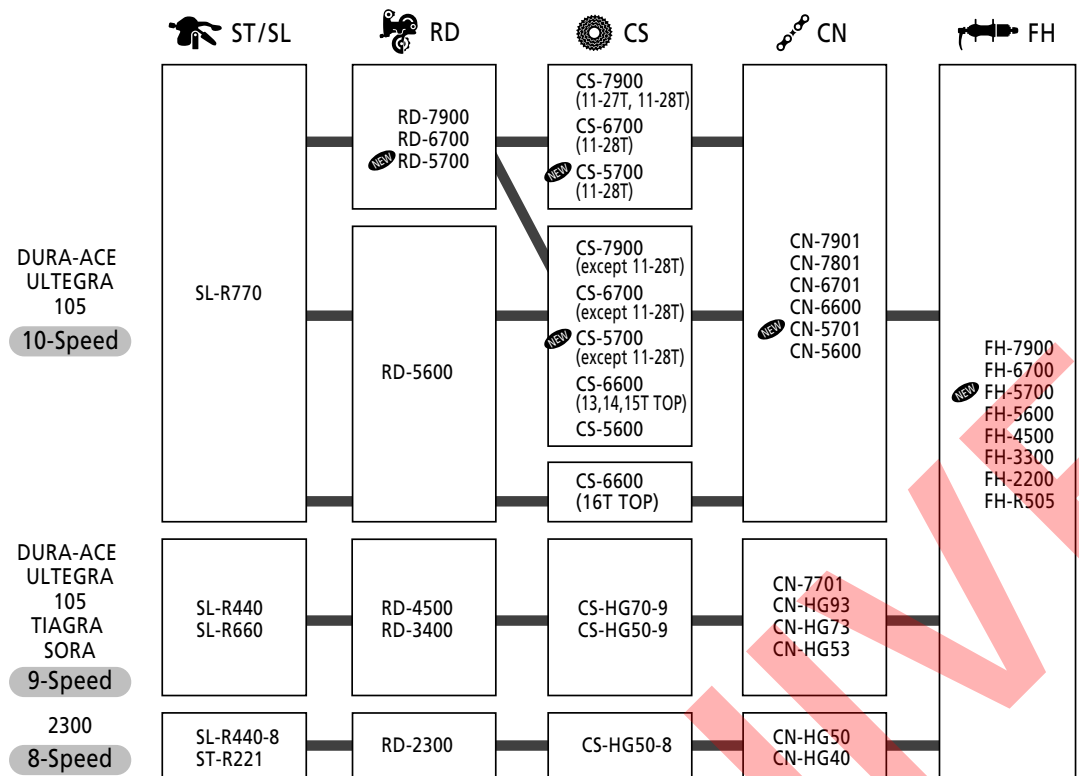


3. Brake systems interchangeability



4. Interchangeability for flat handlebar

4-1. Rear system

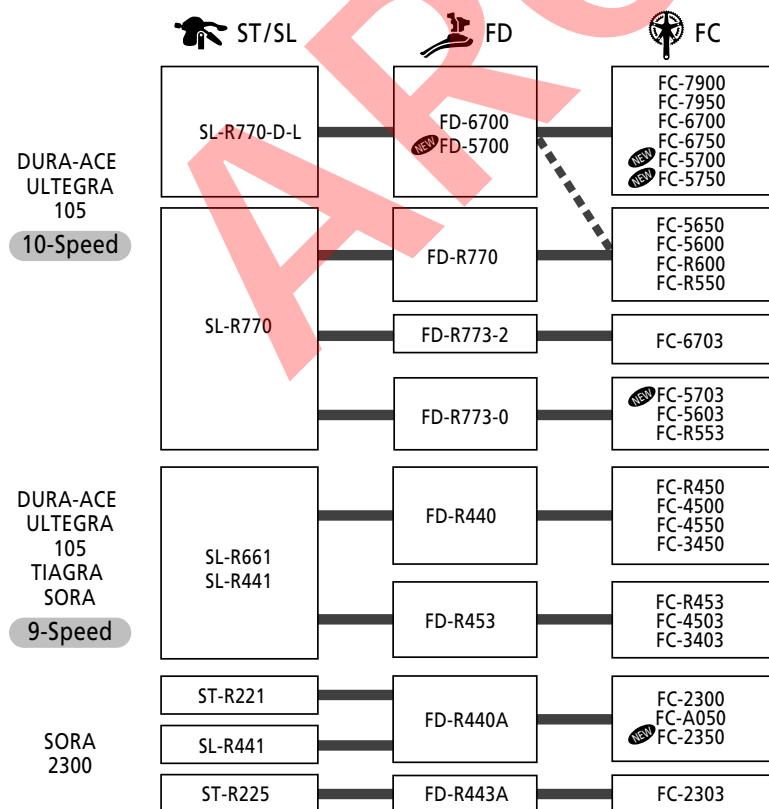


Note:

CS-6600; Do not use front triple chainwheel with 14, 15, 16 top sprockets combination.

Note: FH-R505 O.L.D. 135 mm for disc brake frame.

4-2. Front system

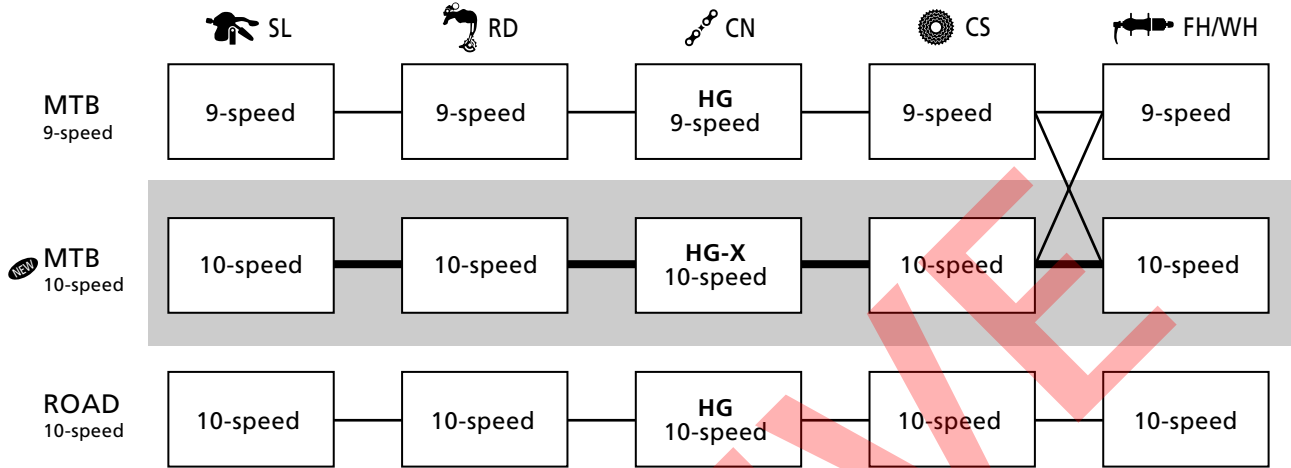


Drivetrain for MTB Components

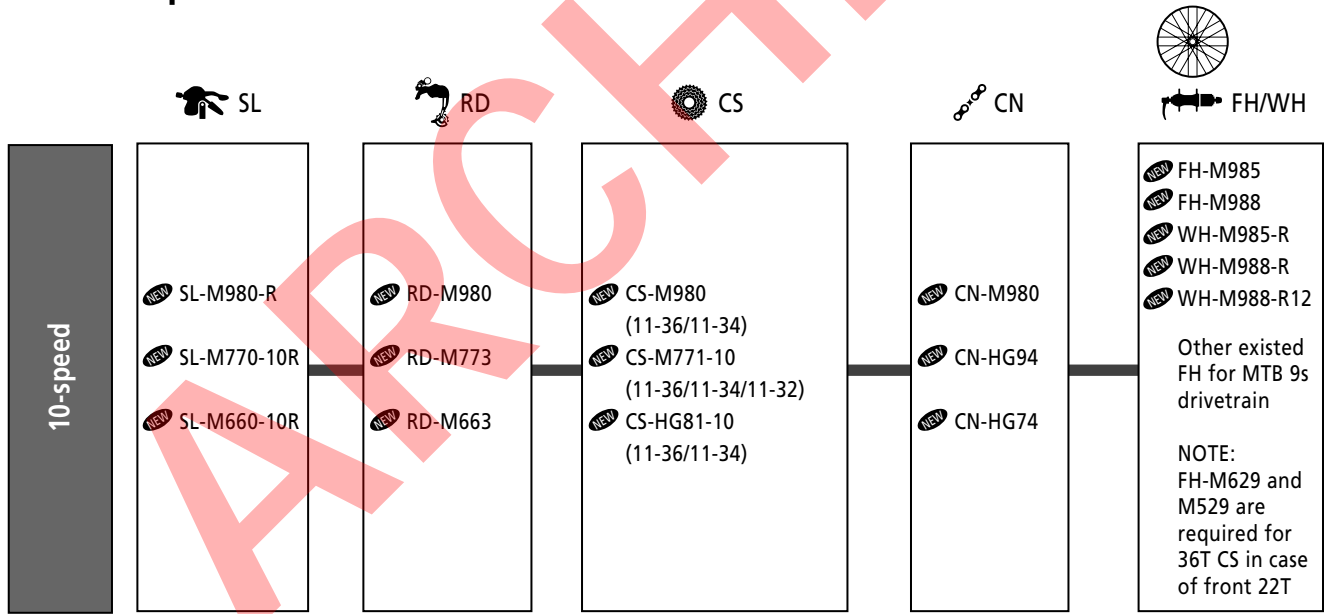
When using components of different series together, be aware of the points given below.

1. Rear drivetrain interchangeability

1-1. 10-speed/9-speed rear drivetrain compatibility



1-2. 10-speed rear drivetrain



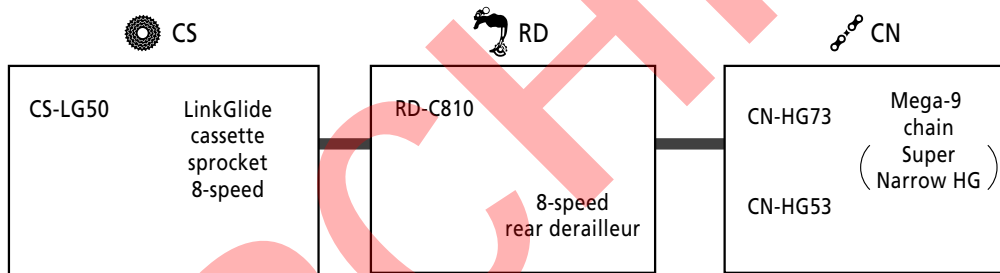
1-3. 9-speed rear drivetrain

CS			Shadow RD		W-servo RD			CN
			RD-M772 RD-M662 RD-M592	RD-M810	RD-M771 RD-M770	RD-T661	RD-M591 RD-M430	CN-7701 CN-HG93 CN-HG73 CN-HG53
CS-HG61-9 bh	12 – 36T		X	X	–	–	–	X
CS-M770 as CS-HG80-9 au CS-HG61-9 au CS-HG50-9 au NEW CS-HG30-9 au	11 – 34T		X	X	X	–	X	X
CS-M770 aq CS-HG80-9 ar CS-HG61-9 ar CS-HG50-9 ar NEW CS-HG30-9 ar	11 – 32T		X	X	X	X	X	X
CS-HG80-9 bg CS-HG61-9	11 – 28T		–	X*	–	X	X	X
CS-6500 –	12 – 25T 11 – 23T		–	X*	–	–	–	X

*: Close ratio setting

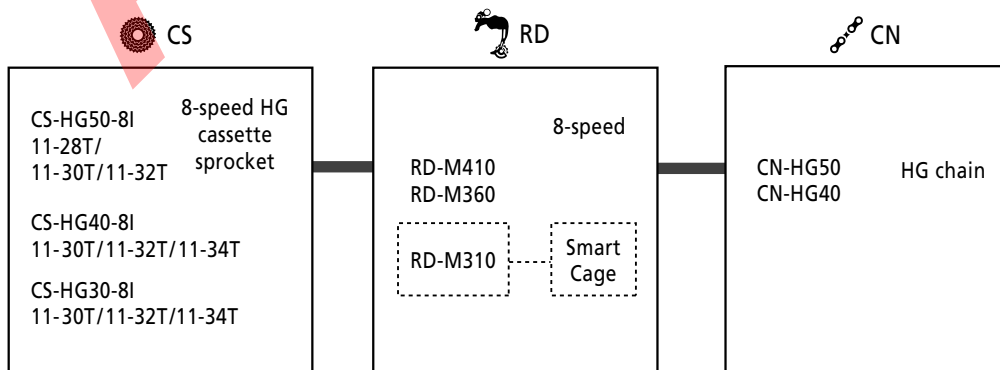
X: Yes

1-4. 8-speed linkglide



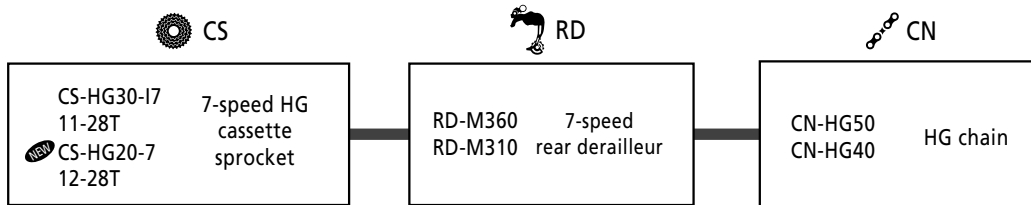
The full performance of LinkGlide will not be realized in combinations other than these. Also, HG performance will be reduced if RD-C810 is used with HG gears other than LinkGlide gears. LinkGlide shifting performance is achieved when combined with ST-C503-A(R) as the shifting lever.

1-5. 8-speed HG



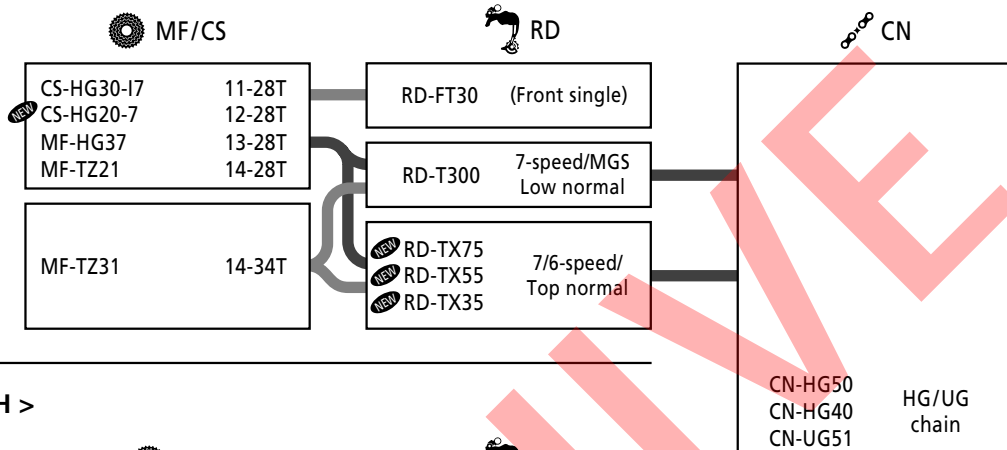
* The rear derailleur for 8-speed can also be used for 7-speed drivetrain.

1-6. 7-speed HG

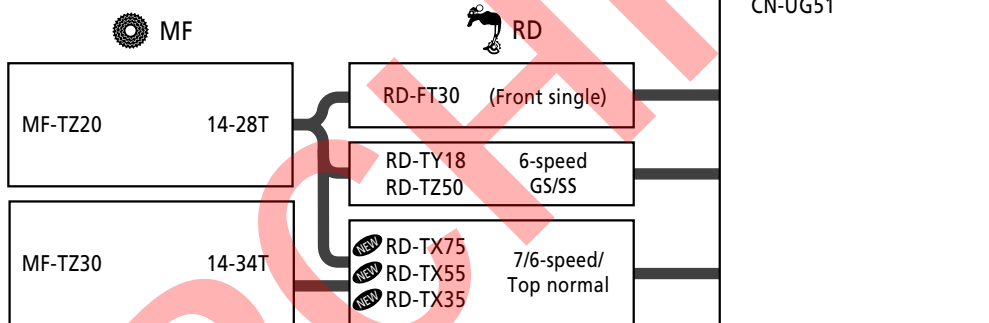


1-7. 7-speed HG/ZH & 6-speed ZH

< 7-speed HG/ZH >

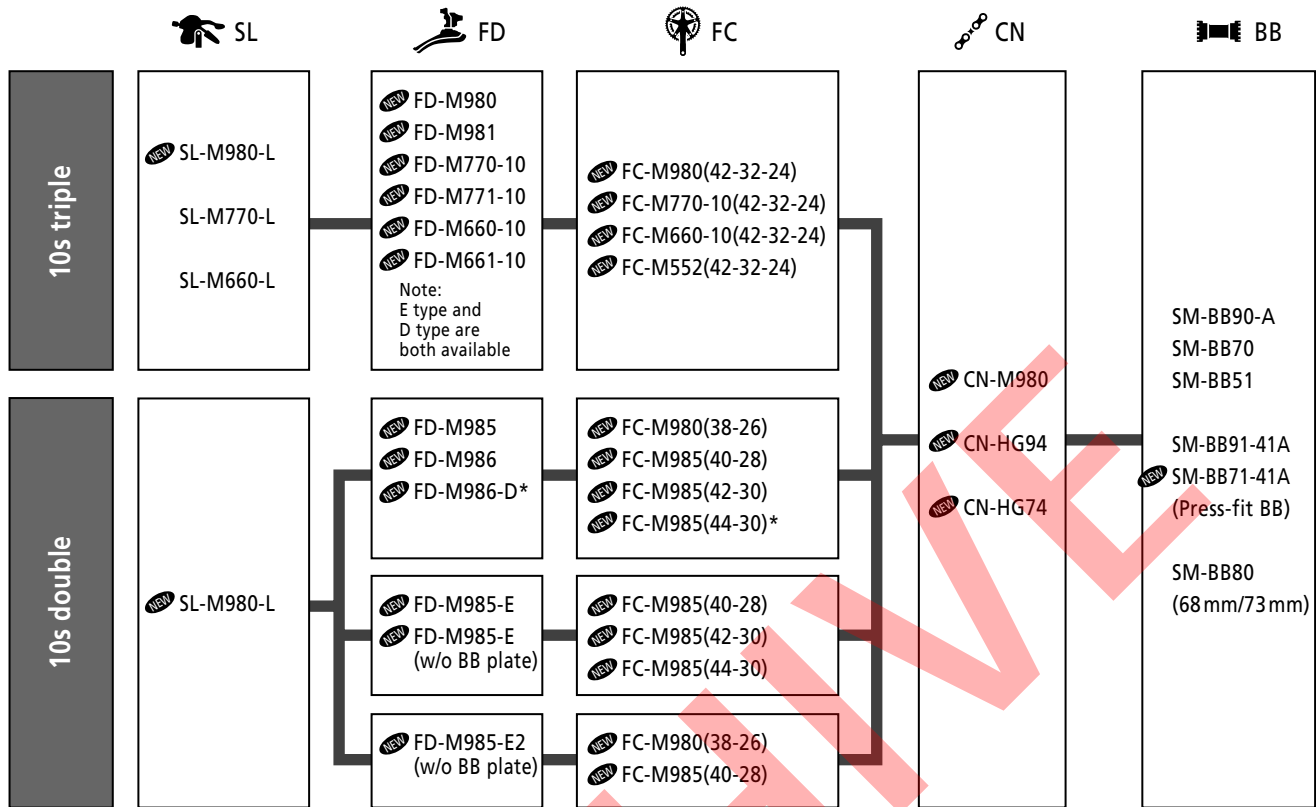


< 6-speed ZH >



2. Front drivetrain interchangeability

2-1. MTB 10-speed front drivetrain



*: New mount position is required for FD-M986-D used with 44T double FC. (Please refer to Page 2, 28, 29)

2-2. MTB 10-speed FC-FD compatibility

FC model No.	Gear combination	Top swing					Down swing			
		For triple		For double			For triple		For double	
		FD-M980 FD-M770-10 FD-M660-10	FD-M980-E FD-M770-10E FD-M660-10E	FD-M985	FD-M985-E	FD-M985-E2 (w/o BB Plate only)	FD-M981 FD-M771-10 FD-M661-10	FD-M981-D FD-M771-10D FD-M661-10D	FD-M986	FD-M986-D
Chain stay angle		66° - 69°								
NEW FC-M980 NEW FC-M770-10 NEW FC-M660-10 NEW FC-M552	42-32-24	X	X	-	-	-	X	X	-	-
NEW FC-M980	38-26	-	-	X	-	X	-	-	X	X*
NEW FC-M985	40-28	-	-	X	X	X	-	-	X	X
	42-30	-	-	X	X	-	-	-	X	X
	44-30	-	-	X	X	-	-	-	X	X

*: New mount position is required for FD-M986-D used with 44T double FC. (Please refer to Page 2, 28, 29)

X: Yes

2-3. MTB 9-speed Triple FC-FD compatibility

FC		Speed		9-speed						
		Chain line		50 mm			47.5/50 mm			
		Chain stay angle		66° - 69°			63° - 66°	66° - 69°	63° - 66°	
		Top swing FD			FD-M770-E FD-M660-E	FD-M770 FD-M660 FD-T660-6 FD-M590-6 FD-M430-6	FD-M772A FD-T660A-3 FD-M590-3 FD-M430-3	FD-M510-6	FD-M510-3	
Chain line	BB Model / structure	Down swing FD		FD-M771 FD-M771D FD-M661 FD-M661D		FD-T661-6 FD-M591-6 FD-M431-6	FD-M773 FD-T661-3 FD-M591-3 FD-M431-3	FD-M511-6	FD-M511-3	
		FC model No.								
50 mm	2pc type FC	FC-M770 FC-M660 FC-T661 FC-M542 FC-M543K FC-M590 FC-M591	44-32-22	X	X	X	X	X	X	X
		FC-M771K FC-M660 FC-T661 FC-M543K FC-M590 FC-M591	48-36-26	-	-	X	X	X	X	X
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	44-32-22	X	-	X	X	X	X	X
	BB-ES25 126 (-K)	FC-M431-8								
	BB-ES25 LL123 (-K)	FC-M431								
	BB-ES25 118 (-E)	FC-M430-8	44-32-22	X	X	X	X	X	X	X
	BB-UN26 LL113 (-E)	FC-M430								
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	48-36-26	-	-	X	X	X	X	X
	BB-ES25 126 (-K)	FC-M431-8								
	BB-UN26 LL123 (-K)	FC-M431								

X: Yes

<FC-M521/BB-ES25 combination>

		MTB (without chain case)	Trekking (with chain case)	E-type
BB shell width	68 mm	ABBES25AKB21W (use with 1.8mm spacer) / ABBES25B21	ABBES25AKB21W (use without 1.8mm spacer) / ABBES25AKB21	ABBES25EB21
	73 mm	ABBES25C21	-	ABBES25EC21

2-4. MTB 9-speed Double FC-FD compatibility

Chainline	BB model No. / structure	FC No.	Chain line	54.3 mm	46.8 mm
			Top swing FD	FD-M815	FD-M665
			Down swing FD	FD-M665-E	FD-M665-E
54.3 mm	HOLLOWTECH II	FC-M815	36-22	X	-
46.8 mm	HOLLOWTECH II	FC-M810	36-22	-	X
		FC-M665			
	2pc type FC	FC-M545			

X: Yes

2-5. MTB 8/7/6-speed Triple FC-FD compatibility

Chain line		BB Model / structure		FC model No.		Speed		8/7-speed					
						Chain line		50 mm		47.5/50 mm		47.5/50 mm	
						Chain stay angle		66° - 69°	63° - 66°	66° - 69°	63° - 66°	66° - 69°	63° - 66°
						Top swing FD		FD-M410-E	FD-M410-E	FD-M412-6 FD-M360-6 FD-M310-6	FD-M412-3 FD-M360-3 FD-M310-3	FD-M190A-6	FD-M190-3
		Down swing FD				FD-M413-6 FD-M311-6	FD-M413-3 FD-M311-3						
50mm	BB-ES25 (-E) 118 (-E)		FC-M410-8	42-32-22	X	X	X	X	-	-			
	BB-UN26 (-E) LL113 (-E)		FC-M410										
	BB-ES25 (-K) 126 (K)		FC-M361-8		-	-	X	X	-	-			
			FC-M311-8										
47.5mm	BB-UN26 (-K) LL123 (-K)		FC-M411 FC-M361 FC-M311	42-32-22	-	-	X	X	-	-			
				48-38-28	-	-	X	X	-	-			
47.5mm	BB-UN26 D-NL		NEW FC-M171 NEW FC-M131	42-34-24	-	-	-	-	X	X			
47.5 + t mm	BB-UN26-K D-NL K			48-38-28	-	-	X	X	-	-			
				42-34-24	-	-	-	-	X	X			
				48-38-28	-	-	X	X	-	-			

Chain line		BB Model / structure		FC model No.		Speed		8/7-speed		7/6-speed			
						Chain line		47.5/50 mm		47.5/50 mm		47.5/50 mm	
						Chain stay angle		66° - 69°	63° - 66°	66° - 69°	63° - 66°	66° - 69°	63° - 66°
						Top swing FD		FD-M191-6	FD-M191-3	FD-TX50-6 FD-TY10*	FD-TX50-3	FD-TX51-6	FD-TX51-3
		Down swing FD											
50mm	BB-ES25 (-E) 118 (-E)		FC-M410-8	42-32-22	-	-	-	-	-	-			
	BB-UN26 (-E) LL113 (-E)		FC-M410										
	BB-ES25 (-K) 126 (K)		FC-M361-8 FC-M311-8		-	-	-	-	-	-			
			FC-M411 FC-M361 FC-M311		42-32-22	-	-	-	-	-			
47.5mm	BB-UN26 (-K) LL123 (-K)			48-38-28	X	X	-	-	X	X			
				42-34-24	-	-	X	X	-	-			
47.5mm	BB-UN26 D-NL		NEW FC-M171 NEW FC-M131	48-38-28	X	X	-	-	X	X			
47.5 + t mm	BB-UN26-K D-NL K			42-34-24	-	-	X	X	-	-			
				48-38-28	X	X	-	-	X	X			

* FD-TY10 L size is designed for 50 mm chain line.

X: Yes

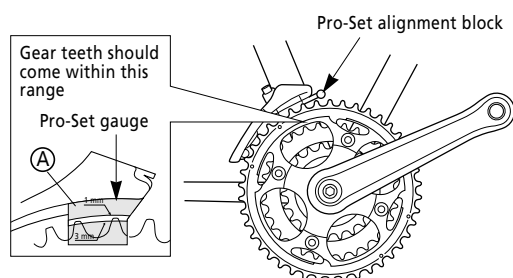
NOTE:

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.

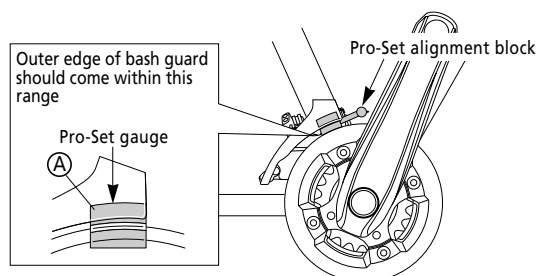
How to set position for FC with bigger top gear chain ring or bash guard in the same series.

- 1) Set A
- 2) Check if outer plate and bigger chainring have clearance
- 3) Reposition height of FD in case problem at process (2)

<9-speed triple FC-FD>



<9-speed double FC-FD>



3. Front derailleur and Crankset

The allowable combinations of front 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.

$$FC \text{ (top gear) - (low gear)} \leq FD \text{ (top and low capacity)}$$

$$FC \text{ (top gear) - (middle gear)} = FD \text{ (allowance of difference in teeth number between top and middle)}$$

Front derailleurs and the number of teeth for corresponding cranksets are given in the chart.

4. Front derailleur and Chain line (Tourney)







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

	Ø 28.6 (S)	Ø 31.8 (M)	Ø 34.9 (L)
FD-TY10	47.5 mm		50 mm
FD-TZ31 FD-TZ30 FD-TZ21 FD-TZ20	47.5 mm		-

5. 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.

5-1. MTB Components (Separate type FC/BB)

Speed	Series	Crankset				Bottom Bracket Model NO.	Chain line & Axle mark			
		Model No.	Type of Crank				47.5mm	50.0mm	52.5mm	47.5+tmm
			OCTALINK	Square	Chaincase					
9	Non-Series	FC-M521	X	-	X*	BB-ES25-AK	-	**	-	-
	Alivio	 FC-M431-8	X	-	X	BB-ES25(-K)	-	126(-K)	-	-
		 FC-M431	-	X	X	BB-UN26(-K)	-	LL123(-K)	-	-
		 FC-M430-8	X	-	-	BB-ES25(-E)	-	118(-E)	-	-
		 FC-M430	-	X	-	BB-UN26(-E)	-	LL113(-E)	-	-
8/7	Alivio	FC-M411 (48T)	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
		FC-M410-8	X	-	-	BB-ES25(-E)	-	118(-E)	-	-
		FC-M411	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
		FC-M410	-	X	-	BB-UN26(-E)	-	LL113(-E)	-	-
		FC-M361-8 (42T)	X	-	X	BB-ES25(-E)	-	126	-	-
	Acera Altus	FC-M361 (42T)	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
		FC-M361 (48T)	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
		FC-M311-42T	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
		FC-M311-48T	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
8/7/6	Non-Series	 FC-M131	-	X	X	BB-UN26(-K)	D-NL(122.5)	-	-	D-NL(122.5)
		 FC-M171	-	X	X	BB-UN26(-K)	D-NL(122.5)	-	-	D-NL(122.5)

X: Yes

Note:

If using a chain case, select a BB- ○○○○ (-K)/-K bottom bracket.

If using an E-type front derailleur, select a BB- ○○○○ (-E) bottom bracket.

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

** : Please refer to page 110 for detailed combination.

Note:

FC-M521: Use 121AK with 1.8 mm spacer if no chain case used.

Combination & Interchangeability

5-2. 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	Crankset			Bottom Bracket	Chain line & Axle mark				
	Model No.	Type of Crank			Model NO.	47.5mm	50.0mm	52.5mm	47.5+ttmm
OCTALINK		Square	Chaincase						
Capreo	NEW FC-F800	-	X	X	BB-UN26	MM110	LL113	YL117	-
					BB-UN26-K	-	-	-	*117.5

X: Yes

Note:

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.

6. 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.


		9-speed HG		HG	
		Cassette sprocket	Crankset	Cassette sprocket	Crankset
FC/CS		CS-M770 CS-HG80-9 CS-HG61-9 CS-HG50-9 NEW CS-HG30-9	FC-M810 FC-M815 FC-M770 FC-M771-K FC-T661 FC-M660 FC-M665 FC-M591 FC-M590 FC-M545 FC-M543-K FC-M542 FC-M521 NEW FC-M431 NEW FC-M430	CS-HG40-8I CS-HG50-8I CS-HG30-I CS-HG30-8I NEW CS-HG20-7	FC-M410 FC-M411 FC-M361 FC-M311 NEW FC-M131 NEW FC-M171
Chain	9-speed Narrow chain CN-7701 CN-HG93 CN-HG73 CN-HG53	Good	Good	Not good	Not good
	HG Chain CN-HG50 CN-HG40	Not good	Not good	Good	Good

Wheels & Cassette sprocket

1. 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, other than multiple freewheel.

Righthand flange diameter	Speed	CS model	Cassette low gear number					Spoke hole number		
			28T	30T	32T	34T	36T	28H	32H	36H
53.8mm	10S	 CS-M980	-	-	-	X	X	-	CP-FH56	CP-FH53
		 CS-M771-10	-	-	X	X	X	-	CP-FH56	CP-FH53
		 CS-HG81-10	-	-	-	X	X	-	CP-FH56	CP-FH53
	9S	CS-M770	-	-	X	X	-	CP-WH13	CP-32H2	CP-36H2
		CS-HG80-9	-	-	X	X	-	CP-WH12	CP-FH56	CP-FH53
		CS-HG80-9	X	-	-	-	-	-	CP-FH35	CP-FH50
		CS-HG61-9	-	-	-	-	X	-	CP-FH56	-
		CS-HG61-9	-	-	X	X	-	CP-WH12	CP-FH56	CP-FH53
		CS-HG61-9	X	-	-	-	-	-	CP-FH35	CP-FH50
		CS-HG50-9	-	-	X	X	-	CP-WH12	CP-FH56	CP-FH53
		 CS-HG30-9	-	-	X	X	-	CP-WH12	CP-FH56	CP-FH53
	CS-ROAD	X	-	-	-	-	CP-FH08	CP-FH35	CP-FH31	
	8S	CS-HG60-8I	-	-	-	X	-	CP-WH12	CP-FH56	CP-FH53
		CS-HG50-8I	X	X	-	-	-	CP-FH40	CP-FH35	CP-FH31
		CS-HG50-8I	-	-	X	-	-	CP-WH12	CP-FH56	CP-FH53
		CS-HG40-8I	-	X	-	-	-	CP-FH40	CP-FH35	CP-FH31
		CS-HG40-8I	-	-	X	X	-	CP-WH12	CP-FH56	CP-FH53
		CS-HG30-8I	-	X	-	-	-	CP-FH40	CP-FH35	CP-FH31
		CS-HG30-8I	-	-	X	X	-	CP-WH12	CP-FH56	CP-FH53
	7S	CS-HG50-I	-	-	-	X	-	-	CP-FH56	CP-FH53
		MF-HG40-7	X	-	-	-	-	-	CP-FH56	CP-FH53
		CS-HG30-I	X	-	-	-	-	-	CP-FH35	CP-FH50
		 CS-HG20-7	X	-	-	-	-	-	CP-FH35	CP-FH50
		MF-HG37	X	-	-	-	-	-	-	CP-HG22
		MF-TZ37	-	-	-	X	-	-	-	CP-HG22
		MF-TZ31	-	-	-	X	-	-	-	CP-HG22
		MF-TZ07	X	-	-	-	-	-	-	CP-HG22
		MF-TZ21	X	-	-	-	-	-	-	CP-HG22
		MF-ZH06	-	-	-	X	-	-	-	CP-HG22
	6S	MF-TZ30	-	-	-	X	-	-	-	-
MF-TZ06		X	-	-	-	-	-	-	-	
MF-TZ20		X	-	-	-	-	-	-	-	
70.6mm	10S	 CS-M980	-	-	-	X	X	-	CP-FH76	CP-FH76
		 CS-M771-10	-	-	X	X	X	-	CP-FH76	CP-FH76
		 CS-HG81-10	-	-	-	X	X	-	CP-FH76	CP-FH76
	9S	CS-M770	-	-	X	X	-	-	CP-FH75	CP-FH75
		CS-HG80-9	-	-	X	X	-	-	CP-FH76	CP-FH76
		CS-HG61-9	X	-	-	-	-	-	-	-
		CS-HG61-9	-	-	X	X	-	-	CP-FH76	CP-FH76
		CS-HG61-9	-	-	-	-	X	-	CP-FH76	CP-FH76
		CS-HG50-9	-	-	X	X	-	-	CP-FH76	CP-FH76
		CS-HG80-9	X	-	-	-	-	-	-	-
		CS-ROAD	X	-	-	-	-	-	-	-
	8S	CS-HG60-8I	-	-	-	X	-	-	CP-FH76	CP-FH76
		CS-HG50-8I	X	X	-	-	-	-	-	-
		CS-HG50-8I	-	-	X	-	-	-	CP-FH76	CP-FH76
		CS-HG40-8I	-	X	-	-	-	-	-	-
		CS-HG40-8I	-	-	X	X	-	-	CP-FH76	CP-FH76
		CS-HG30-8I	-	X	-	-	-	-	-	-
		CS-HG30-8I	-	-	X	X	-	-	CP-FH76	CP-FH76

X: Yes

WH model	CS model	Cassette low gear number			
		28T	32T	34T	36T
WH-M985-R, M988-R	 CS-M980	-	CP-WH14A	CP-WH14A	CP-WH14A
	 CS-M771-10	-	CP-WH14A	CP-WH14A	CP-WH14A
	 CS-HG81-10	-	CP-WH14A	CP-WH14A	CP-WH14A
	CS-M770	-	CP-WH15	CP-WH15	-
	CS-HG80-9	CP-WH14A	CP-WH14A	CP-WH14A	-
	CS-HG50-9	-	CP-WH14A	CP-WH14A	-
WH-M988-R12	 CS-M980	-	CP-WH14A	CP-WH14A	CP-WH14A
	 CS-M771-10	-	CP-WH14A	CP-WH14A	CP-WH14A
	 CS-HG81-10	-	CP-WH14A	CP-WH14A	CP-WH14A
	CS-M970	-	CP-WH14A	CP-WH14A	-
	CS-M770	-	CP-WH15	CP-WH15	-
	CS-HG80-9	CP-WH14A	CP-WH14A	CP-WH14A	-
WH-M975-R, M775/ M776-R, MT75-R, MT65-R	 CS-M980	-	CP-WH14A	CP-WH14A	CP-WH14A
	 CS-M771-10	-	CP-WH14A	CP-WH14A	CP-WH14A
	 CS-HG81-10	-	CP-WH14A	CP-WH14A	CP-WH14A
	CS-M970	-	CP-WH14A	CP-WH14A	-
	CS-M770	-	CP-WH15	CP-WH15	-
	CS-HG80-9	CP-WH14A	CP-WH14A	CP-WH14A	-
WH-MT15-R	 CS-M980	-	CP-WH12	CP-WH12	CP-WH12
	 CS-M771-10	-	CP-WH12	CP-WH12	CP-WH12
	 CS-HG81-10	-	CP-WH12	CP-WH12	CP-WH12
	CS-M970	-	CP-WH12	CP-WH12	-
	CS-M770	-	CP-WH13	CP-WH13	-
	CS-HG80-9	CP-FH08	CP-WH12	CP-WH12	-
	CS-HG50-9	-	CP-WH12	CP-WH12	-

WH model	CS model	Cassette low gear number						
		21T	23T	25T	26T	27T	28T	
 WH-7900 WH-7850 WH-RS80 WH-6700	 CS-7900	CP-WH23	CP-WH23	CP-WH23	-	CP-WH23	CP-WH23	
	CS-6700	-	CP-WH23	CP-WH23	-	CP-WH23	CP-WH23	
	 CS-5700	-	-	CP-WH23	-	CP-WH23	CP-WH23	
	 WH-RS30-A  WH-RS20-A  WH-RS10-A	CS-HG50-9	-	CP-WH23	CP-WH23	-	-	-
		CS-HG50-8	CP-WH23	CP-WH23	CP-WH23	CP-WH23	-	-
WH-R500-A WH-R500	 CS-7900	CP-FH02	CP-FH02	CP-FH02	-	CP-FH35	CP-FH35	
	CS-6700	-	CP-FH02	CP-FH02	-	CP-FH35	CP-FH35	
	 CS-5700	-	-	CP-FH02	-	CP-FH35	CP-FH35	
	CS-HG50-9	-	CP-FH02	CP-FH02	-	-	-	
	CS-HG50-8	CP-FH02	CP-FH02	CP-FH02	CP-FH35	-	-	

1-1. 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

2. Recommendation of the Rim Tape Sizes for Shimano Wheels

Rim Sizes	Applicable Wheel Models	Recommended Rim Tape Size
622 X 15C	WH-7900-C35-CL/7900-C50-CL/7900-C24-CL/7850-C50-CL/ 7850-C24-CL/RS80-C24-CL/RS80-C50-CL/R500/RS30-A/RS20-A/RS10-A	18-622
622 X 17C	WH-S501/S500	18-622
622 X 19C	WH-S501-V/S500/T560	20-622
559 X 19C	WH-M505/MT15	20-559
Road Tubeless	WH-7900-C24-TL/7850-C24-TL/7850-SL/6700	Never use rim tapes
MTB UST	WH-MT985/M988/MT75/M778/M776/M775/ M770/M765/MT65	Never use rim tapes

ARCHIVE



Disc brake

1. Hydraulic Disc Brake hose specification

Series	Hose Model No.	Compatible brake lever & caliper	Connection	Rigidity
XTR	SM-BH90-SB	BL-M985, BL-M988 BR-M985	Straight - Banjo	High power
SAINT	SM-BH80-SB	BL-M810 / BR-M810	Straight - Banjo	High power
Deore XT SLX Deore LX Deore	SM-BH59	ST-M775, BL-M775 / BR-M775 BL-M665 / BR-M665 BL-M595 / BR-595 BL-T605 / BR-T605 BL-T665 / BR-T665 BL-S500 / BR-S501	Straight - Straight	Standard
Non-series	SM-BH59	BL-M505 / BR-M445 BL-M445 / BR-M445		
Deore XT	SM-BH63	BL-M776 / BR-M775	Straight - Banjo	

2. Combination Chart (Mechanical Disc)

2-1. 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
Non-series	BR-M495	*	V-brake BL (1.5-2.5 finger)	SM-RT53/SM-RT53M/RT53L SM-RT51/RT51M for resin pad only	M08 Resin
	BR-M416-A	*			B01S Resin
	BR-R505	**	Road lever	SM-RT62	M06 Metal

* Front mount: International standard/Post mount Rear mount: International standard

** Front & Rear mount: International standard

2-2. Mechanical Disc brake and Brake lever interchangeability

Model No.	Brake lever type			Model No.	Brake lever type
	2 finger	4 finger	4 finger w/modulator w/SM-PM50	BR-R505	Road ST/BL-R770/BL-R550/ ST-R221/ST-R225
BR-M495	Good	Not good	Good		
BR-M416-A					

3. Interchangeability between disc 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 total braking ratio. Be sure to carefully consult the chart below and select the brake and the matching brake lever.

Brake levers	Brakes calipers	
	BR-T665	Other BR models
BL-T665	X	
Other BL models		X

X: Yes

The "NO!" symbols indicate combinations that should not be used under any circumstances.

V-BRAKE, Cantilever brake and Hub roller brake

1. 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.

Brakes \ Brake levers	V-BRAKE			Cantilever Brake Roller Brake
	BR-M770 BR-T660	BR-M590 BR-M432 BR-M422 BR-MX70	With power modulator model BR-T660 with SM-PM70 BR-M590 with SM-PM70 BR-M422 with SM-PM40	
V-Brake Levers ST-M770 BL-M770 ST-M430 BL-M740 ST-M410 BL-M571 ST-M360 (2-finger) ST-EF60 (2-finger) BL-M590 ST-EF51 (2-finger) BL-M421 ST-EF40 BL-MX70	X		X	Note 1
V-Brake Levers BL-M771 ST-M590 ST-T660 BL-M591 BL-T660	No!		X	No!
Brake lever with switch ST-C503-A BL-C800 ST-T300-S BL-T400 ST-M360 (4-finger) ST-EF60 (4-finger) BL-IM65 ST-EF51 (4-finger) BL-IM60 SB-8S20 ST-8S20	No!		X	X
Levers for Cantilever Brake and Roller Brake	No!		No!	X

X: Yes



The "NO!" symbols indicate combinations that should not be used under any circumstances.

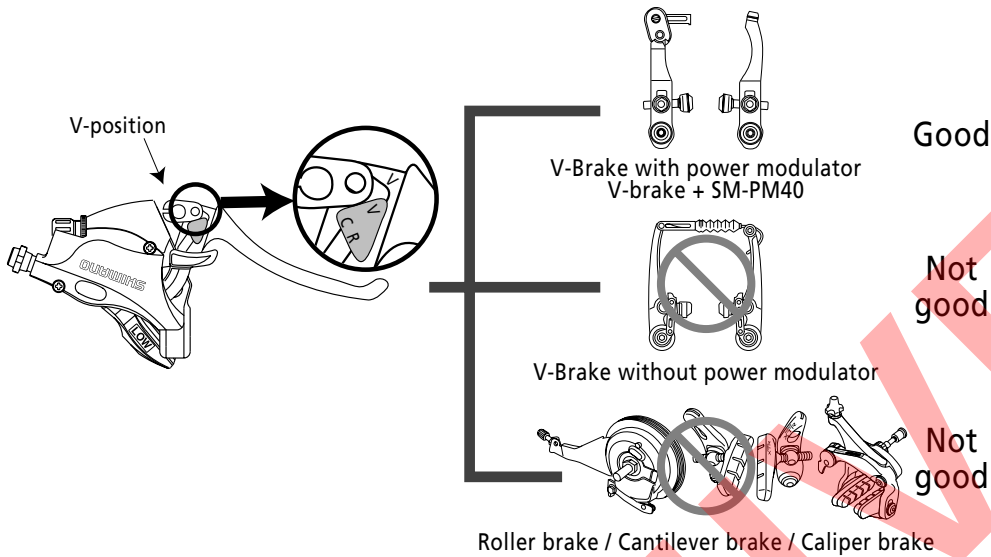
Note :

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

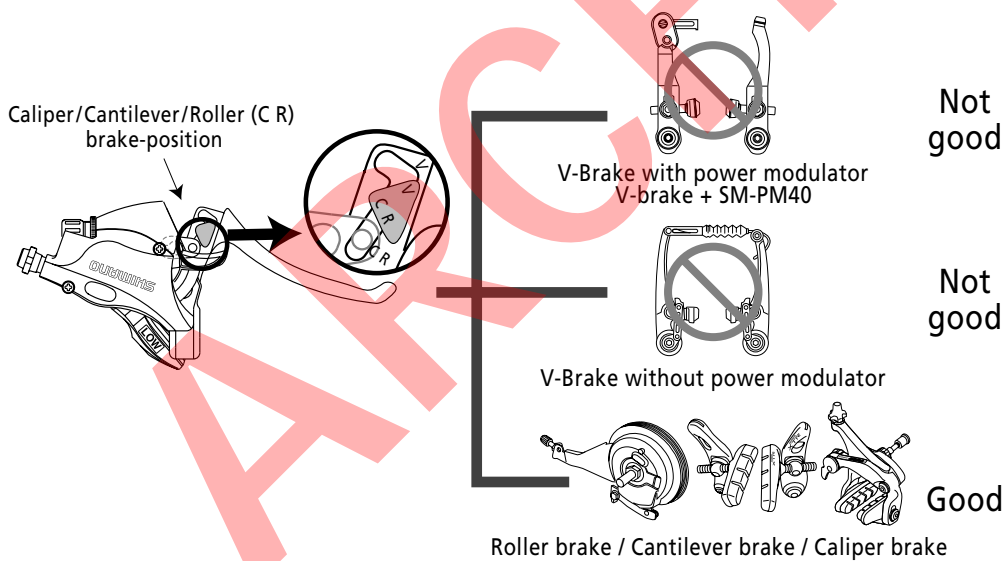
2. Brake lever with switch interchangeability

Four finger brake levers such as brake levers are equipped with a switch to change between the V-Brake with modulator mode (for example BR-M422 with SM-PM40) and the caliper brake, cantilever brake or roller brake mode.

2-1. For V-Brake (with power modulator) mode



2-2. For Caliper brake/Cantilever brake/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.

Brake shoe

1. Brake shoe (for V-Brake and Cantilever brake)

1-1. Brake/Shoe line-up

	M70R2	M70R2 (Severe Condition shoe)	Ceramic	M70T3	M70T4	M70CT4 (Severe Condition shoe)	M65T3	M65T4	S70C	S70C (Severe Condition shoe)	S70T	S65T
BR-M770	Standard	—	Option	Low noise	Option	—	—	—	Standard	—	—	—
BR-T660	—	—	—	Option	Option	—	—	—	Standard	—	—	—
BR-M590	—	—	—	Option	Option	—	—	—	Standard	—	Option	—
BR-M432	Option	—	—	—	—	—	—	—	Standard	—	—	—
BR-M422	—	—	—	—	—	—	Option	Option	—	—	—	Standard
BR-MX70	—	—	—	Option	Option	—	—	—	—	Standard	—	—
BR-R550	—	Option	—	—	—	Option	—	—	—	Standard	—	—


1-2. 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	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.
M65T4	—	X	65 mm	X	
M70CT4 (Severe Condition shoe)	X	X	70 mm	X	Cartridge shoe with M70T4
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

2. Brake shoe (Capreo)


2-1. Shoe characteristics

Shoe	Cartridge shoe	M-system	Length	Thread Shoe Post	Brake Shoe Charectristic
R55C (for  F800/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

3. Brake shoe (for road bikes)

3-1. Brake/Shoe line-up

		R55C3	R55C2	R55C for Carbon rim	R55C for Ceramic rim	M50T	R50T	R50T2
DURA-ACE	BR-7900	Standard	Option	Option	Option	–	–	–
ULTEGRA	BR-6700	Standard	Option	Option	Option	–	–	–
105	 BR-5700	Standard	Option	Option	Option	–	–	–
TIAGRA	BR-4500	–	–	–	–	–	–	Standard
SORA	BR-3400	–	–	–	–	–	–	Standard
Non-series	BR-R650	–	Standard	Option	Option	–	–	
	BR-R560	–	Standard	–	–	–	–	–
	BR-R450	–	–	–	–	–	–	Standard

3-2. Shoe characteristics

	Cartridge shoe	M-system	Length	Brake shoe characteristics
R55C3	X	—	55 mm	Performs well in dry and wet conditions.
R55C2	X	—	55 mm	Performs well in dry conditions and tends to be low noise. Highly resistant to wear in rainy conditions.
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.
R50T2	—	—	50 mm	Performs well in dry conditions and tends to be low noise. Wears in rainy conditions. Toe-in adjust design.

X: Yes

Brake rotor

1. Rotor Specification

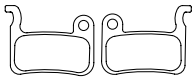
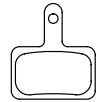
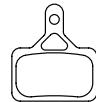
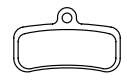



Series	Model No.	Outside Diameter	CENTERLOCK System	PCD 44 mm
XTR	 SM-RT98-SS	140 mm	X	–
	 SM-RT98-S	160 mm	X	–
	 SM-RT98-M	180 mm	X	–
	 SM-RT98-L	203 mm	X	–
SAINT Deore XT	SM-RT79	160 mm	X	–
	SM-RT79M	180 mm	X	–
	SM-RT79L	203 mm	X	–
SLX	SM-RT64	160 mm	X	–
	SM-RT64M	180 mm	X	–
	SM-RT64L	203 mm	X	–
Deore LX	SM-RT64	160 mm	X	–
	SM-RT64M	180 mm	X (for front only)	–
Deore	SM-RT62	160 mm	X	–
	SM-RT62M	180 mm	X	–
	SM-RT62L	203 mm	X	–
Non-series	SM-RT53	160 mm	X	–
	SM-RT53M	180 mm	X	–
	SM-RT53L	203 mm	X	–
	SM-RT76	160 mm	–	X
	SM-RT76M	180 mm	–	X
	SM-RT76L	203 mm	–	X
	SM-RT75S	160 mm	–	X
	SM-RT75MA	180 mm	–	X
	SM-RT75-DH	203 mm	–	X
	SM-RT51	160 mm	–	X
SM-RT51M	180 mm	–	X	






X: Yes

Brake pad

1. Brake pad line-up (for disc brake)

The number of "★" mark shows better performance.

Model No.	Type	A01S	M06Ti	M06	M07Ti	B01S	M08	E01S	D02S	D01S
		Resin	Metal	Metal	Resin	Resin	Resin	Metal	Metal	Resin
Pad Shape Type		A-Type: narrow type 				B-Type: wide type 		E-Type: wide type 	D-Type: narrow type 	
Characteristics	Modulation	★★★★★	★★★★☆	★★★★☆	★★★★★	★★★★★	★★★★☆	★★★★☆	★★★★☆	★★★★★
	Power	★★★★☆	★★★★★	★★★★★	★★★★☆	★★★★☆	★★★★☆	★★★★★	★★★★★	★★★★☆
	Durability	★★★★☆	★★★★★	★★★★★	★★★★☆	★★★★☆	★★★★☆	★★★★★	★★★★★	★★★★☆
	Anti-fading	★★★★☆	★★★★★	★★★★★	★★★★☆	★★★★☆	★★★★☆	★★★★★	★★★★★	★★★★☆
	Silence	★★★★★	★★★★☆	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★☆	★★★★☆	★★★★★
Radiator Fin		-	-	-	-	-	-	-	-	-
Titanium Back plate		-	X	-	X	-	-	-	-	-
Aluminum Back plate		-	-	-	-	-	-	-	-	-
 BR-M985	Hydraulic	-	-	-	-	-	-	-	-	-
BR-M810	Hydraulic	-	-	-	-	-	-	-	Standard	Option
BR-M775 BR-M776 BR-M665 BR-T665 BR-M595	Hydraulic	Standard	Option	Option	Option	-	-	-	-	-
BR-T605 BR-S501	Hydraulic	Standard	-	-	-	-	-	-	-	-
BR-M575	Hydraulic	-	-	-	-	Standard	-	Option	-	-
 BR-M495	Mechanical	-	-	-	-	-	Standard	-	-	-
BR-M445	Hydraulic	-	-	-	-	Standard	-	-	-	-
 BR-M416A	Mechanical	-	-	-	-	Standard	-	-	-	-
BR-R505	Mechanical	-	-	Standard	-	-	-	-	-	-

Model No.	Type	G01A	G03Ti	F01A	F03C
		Resin	Resin	Resin	Resin
Pad Shape Type		G-Type: 		F-Type: 	
Characteristics	Modulation	★★★★★	★★★★☆	★★★★★	★★★★☆
	Power	★★★★☆	★★★★★	★★★★☆	★★★★★
	Durability	★★★★☆	★★★★★	★★★★☆	★★★★★
	Anti-fading	★★★★☆	★★★★★	★★★★☆	★★★★★
	Silence	★★★★★	★★★★☆	★★★★★	★★★★★
Radiator Fin		-	-	X	X
Titanium Back plate		-	X	-	-
Aluminum Back plate		X	-	X	-
 BR-M985	Hydraulic	Standard*	Option*	Standard**	Option**
BR-M810	Hydraulic	-	-	-	-
BR-M775 BR-M776 BR-M665 BR-T665 BR-M595	Hydraulic	-	-	-	-
BR-T605 BR-S501	Hydraulic	-	-	-	-
BR-M575	Hydraulic	-	-	-	-
 BR-M495	Mechanical	-	-	-	-
BR-M445	Hydraulic	-	-	-	-
 BR-M416A	Mechanical	-	-	-	-
BR-R505	Mechanical	-	-	-	-

* For M985 kit
** For M988 kit

X : Yes

2. Disc brake caliper and Rotor compatibility

Caliper	Pad material	Rotor			
		140	160	180	203
NEW BR-M985 BR-M776 BR-M775 BR-M665 BR-T665* BR-M595	Metal/Resin	NEW SM-RT98-SS Narrow Type	NEW SM-RT98-S SM-RT79 SM-RT76 SM-RT75-S Narrow Type	NEW SM-RT98-M SM-RT79-M SM-RT76-M SM-RT75-MA Narrow Type	NEW SM-RT98-L SM-RT79-L SM-RT76-L SM-RT75-DH Narrow Type
BR-M810	Metal		SM-RT64 SM-RT62 Narrow Type	SM-RT64-M SM-RT62-M Narrow Type	SM-RT64-L SM-RT62-L Narrow Type
BR-T605 BR-S501	Resin				
BR-M575	Metal				
BR-M575 BR-M495 NEW BR-M445 NEW BR-M416-A	Resin		SM-RT53 Wide Type SM-RT51 Wide Type	SM-RT53-M Wide Type SM-RT51-M Wide Type	SM-RT53-L Wide Type
BR-R505	Metal		NEW SM-RT98-S SM-RT79 SM-RT75-S Narrow Type SM-RT64 SM-RT62 Narrow Type		

* recommend 160/180mm rotor for front and 160mm rotor for rear.

NOTE:

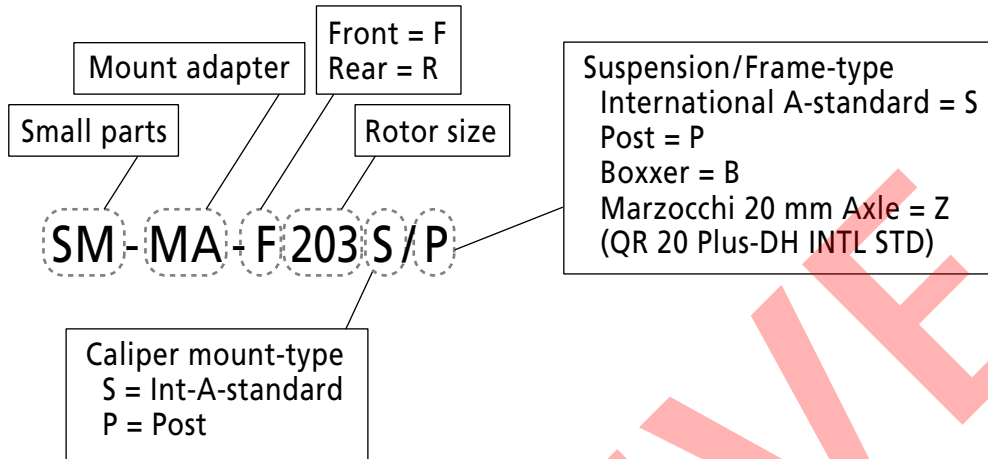
1. suitable mount adapter is necessary according to your frame mount style.
2. SM-RT51/RT53/RT53M/RT53L are compatible with Resin pad caliper specification only. If use with metal pads, rotor will be easily damaged.
3. when using 140mm rotor, braking power is less than 160mm, please confirm the power is enough for your purpose. 140mm rotor is recommended for rear use only.
4. durability of B/E type pad become shorter when the pad is used with narrow type rotor.

ARCHIVE

Disc brake mount adapter

1. Disc brake mount adapter application

1-1. How to read Model No.



1-2. Disc brake mount adapter application table

< Postmount caliper >

Fork & Frame mount style			Rotor			
			140	160	180	203
FRONT	Postmount	160mm direct	-	Direct mount *	NEW SM-MA90-F180P/P SM-MA-F180P/P2	SM-MA-F203P/P
		180mm direct	-	-	Direct mount	NEW SM-MA90-F180P/P SM-MA-F180P/P2
		203mm direct	-	-	-	Direct mount *
	Standard A		-	NEW SM-MA90-F160P/S *, SM-MA-F160P/S *	SM-MA-F180P/S	SM-MA-F203P/S
	MARZOCCHI 20 mm Thru **		-	SM-MA-F160P/Z	-	SM-MA-F203P/Z
	BOXXER		-	-	-	SM-MA-F203P/B
REAR	Standard A		NEW SM-MA90-R140P/S	NEW SM-MA90-R160P/S *, SM-MA-R160P/S *	NEW SM-MA90-R180P/S, SM-MA-R180P/S	SM-MA-R203P/S
	Postmount	140mm direct	Direct mount	NEW SM-MA90-F180P/P SM-MA-F180P/P2	SM-MA-F203P/P *	-
		160mm direct	-	Direct mount *	NEW SM-MA90-F180P/P SM-MA-F180P/P2	SM-MA-F203P/P
		180mm direct	-	-	Direct mount	NEW SM-MA90-F180P/P SM-MA-F180P/P2
		203mm direct	-	-	-	Direct mount

*: BR-R505 is available.

** : Latest MARZOCCHI 20 mm thru axle forks are using postmount type disc mount.

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