



2015-2016

Products compatibility information

Word definitions

Line D	Line D goes thru bottom bracket center and freehub center. In case of rear suspension type, line D should be determined by riding height such as 1G sag.
BB	Bottom bracket
BC	Brake cable
BL	Brake lever
BR	Brake caliper
BT	Battery
CB	Coaster brake
CG	Chain guard
CJ	Cassette joint
CN	Chain
CP	Spoke protector
CS	Cassette sprocket
CT	Chain tensioner
DH	Hub dynamo
DU	Drive unit
EW	Electric wire
FC	Crankset
FD	Front derailleur
FH	Freehub
HB	Front hub
HP	Head parts
HRB	Hub roller brake
ID	CI-DECK
I-spec	Integration mounting system of brake and shift lever
LP	Light
MF	Multiple freewheel
MU	Motor unit
O.L.D.	Over locknut dimension
P.C.D.	Pitch circle diameter
PD	Pedal
PM	Power modulator
QR	Quick release
RD	Rear derailleur
SB	Revo shifter integrated with brake lever
SC	Cycle computer
SF	Single free
SG	Internal geared hub
SL	Shift lever
SPD	Shimano pedaling dynamics
SPD-SL	Shimano pedaling dynamics-SL
ST	Dual control lever / Shift lever integrated with brake lever
SW	Switch
WH	Wheel

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Compatibility

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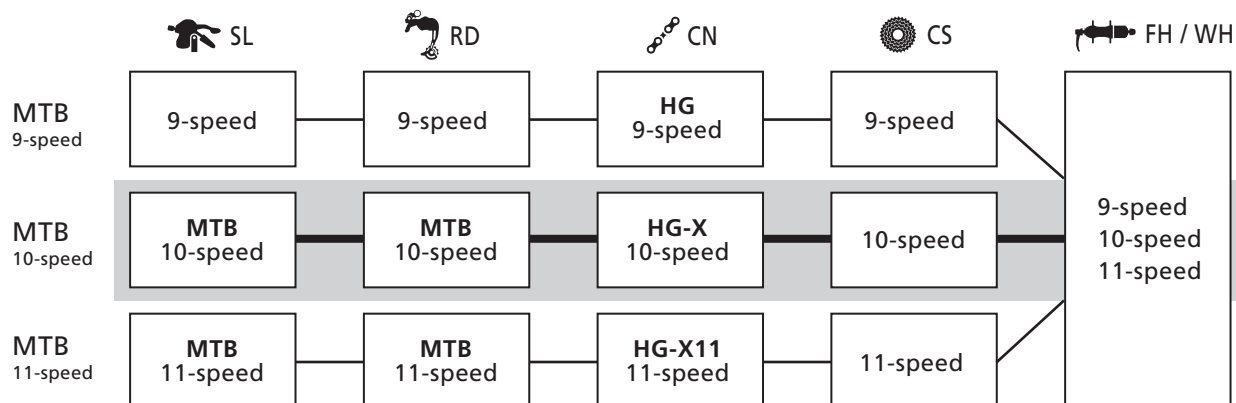
MTB and ROAD components

Drivetrain for MTB components

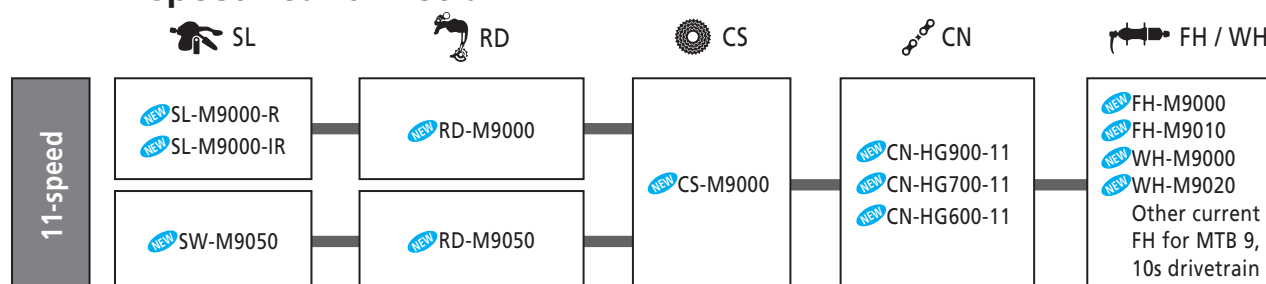
When using components of different series together, be aware of the points given below.

1. Rear drivetrain compatibility

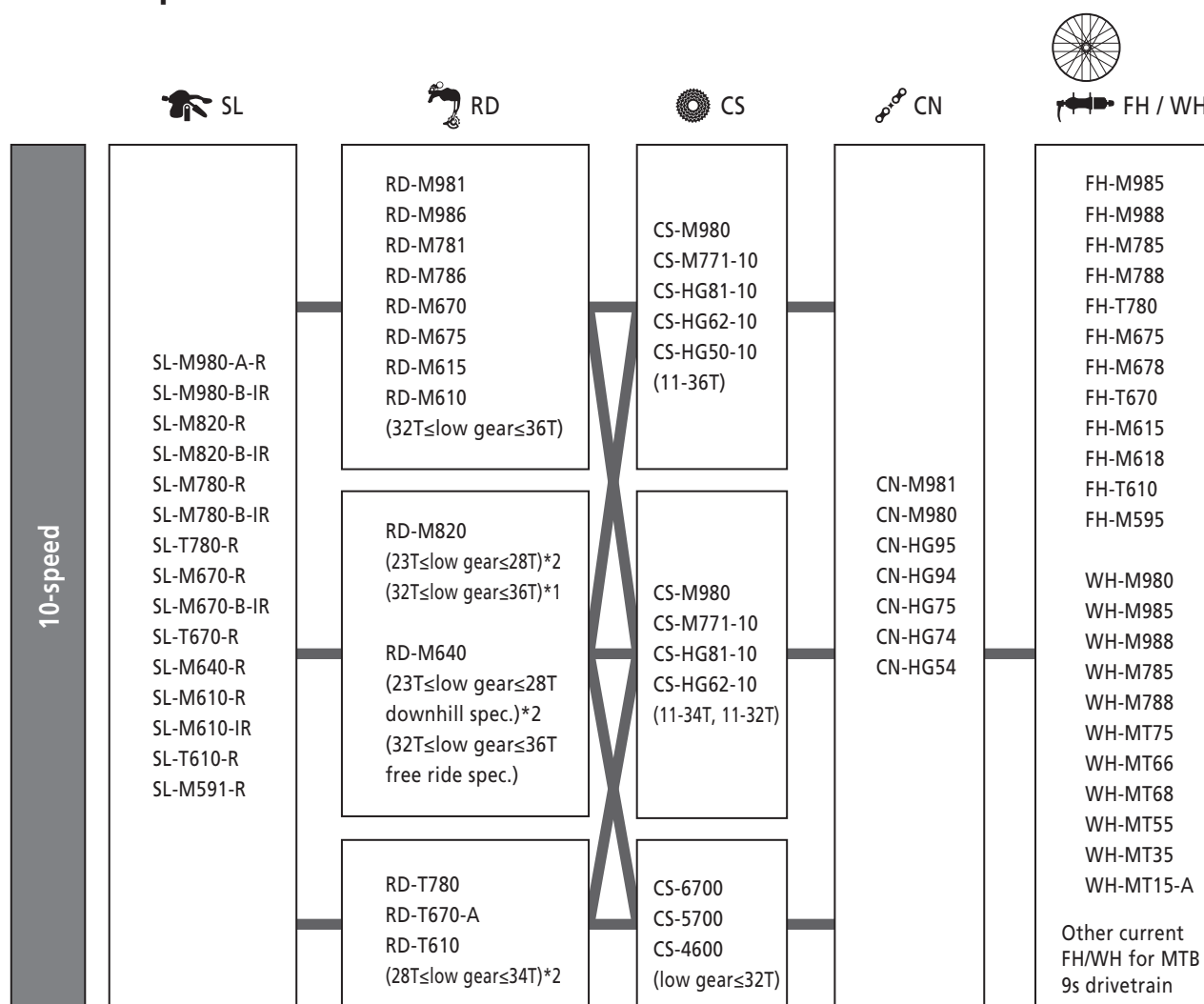
1-1. 9,10,11-speed rear drivetrain Compatibility



1-2. 11-speed rear drivetrain



1-3. 10-speed rear drivetrain



*1: Mode converter

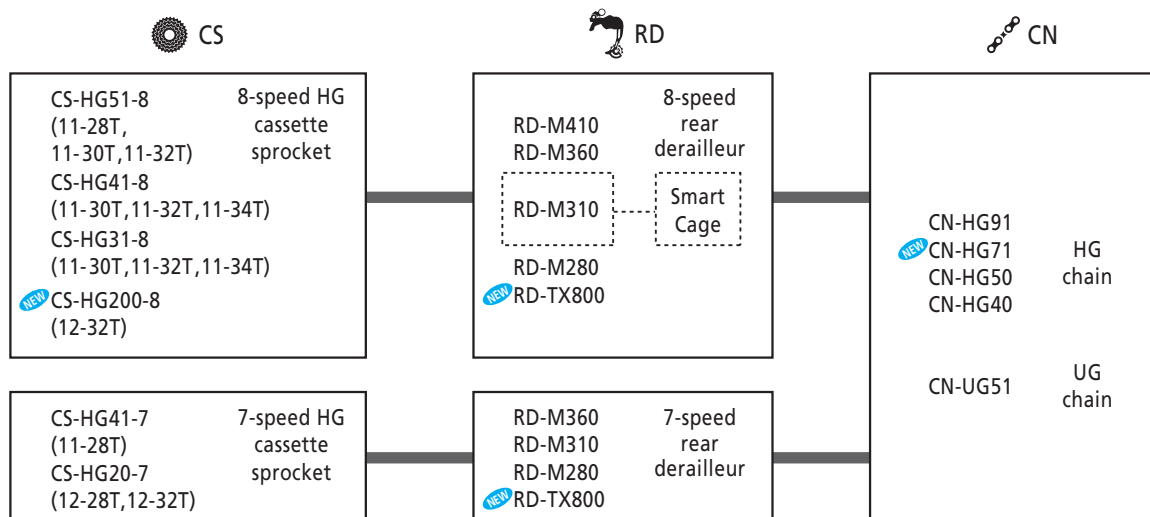
*2: Compatible with road Cassette sprocket

1-4. 9-speed rear drivetrain

 CS		 Shadow RD	 W-servo RD	 CN
		RD-M772 RD-M662 RD-M592  RD-M4000	 RD-T4000 RD-M430 RD-M390 RD-M370	CN-7701 CN-HG93 CN-HG73 CN-HG53
 CS-HG61-9 bh  CS-HG400-9 bh  CS-HG300-9 bh	12 – 36T	X	–	X
 CS-HG80-9 au  CS-HG61-9 au  CS-HG400-9 au  CS-HG300-9 au  CS-HG200-9 bn CS-HG50-9 au CS-HG30-9 au CS-HG20-9 bn	11 – 34T	X	X	X
 CS-HG80-9 ar  CS-HG61-9 ar  CS-HG400-9 ar  CS-HG300-9 ar  CS-HG200-9 bo CS-HG50-9 ar CS-HG30-9 ar CS-HG20-9 bo	11 – 32T	X	X	X
 CS-HG80-9 bg  CS-HG61-9 bg  CS-HG400-9 bg  CS-HG300-9 bg	11 – 28T	–	X	X

X: Yes

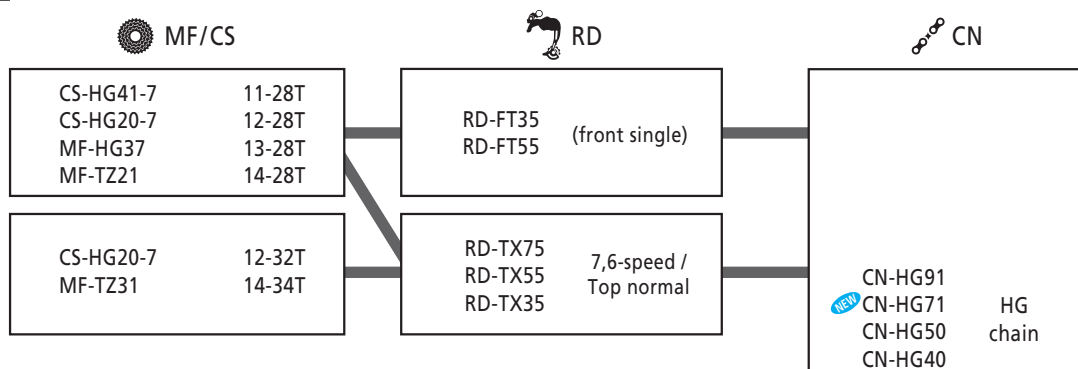
1-5. 8,7-speed HG



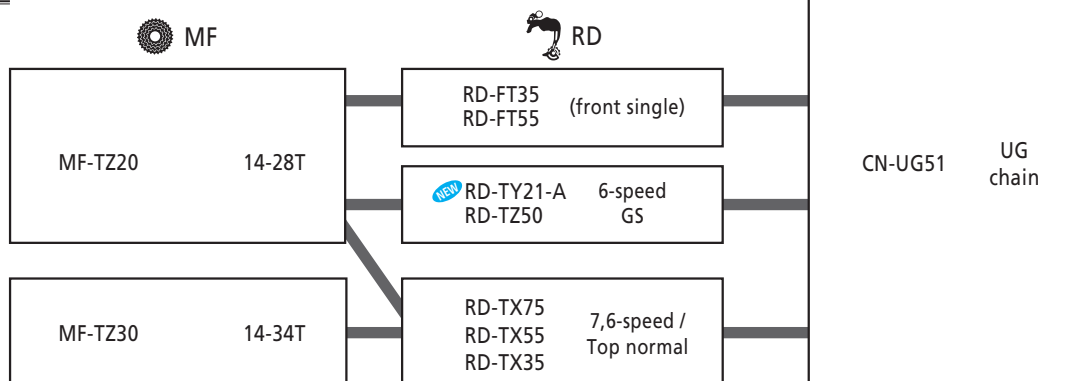
* The rear derailleur for 8-speed can also be used for 7-speed drivetrain.

1-6. 7-speed HG and 6-speed

7-speed

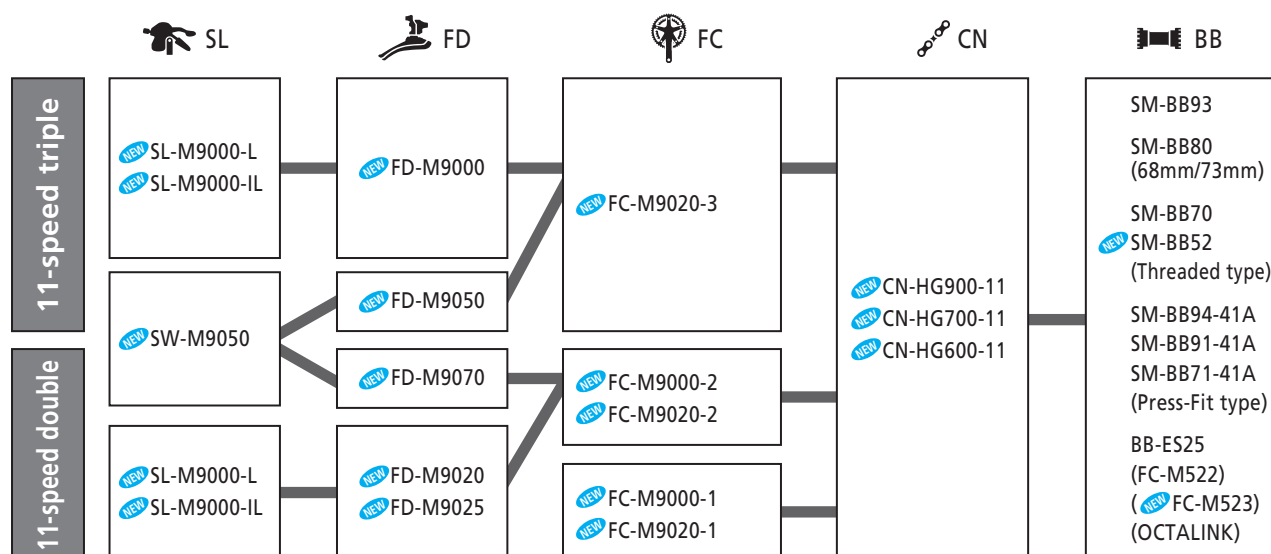


6-speed

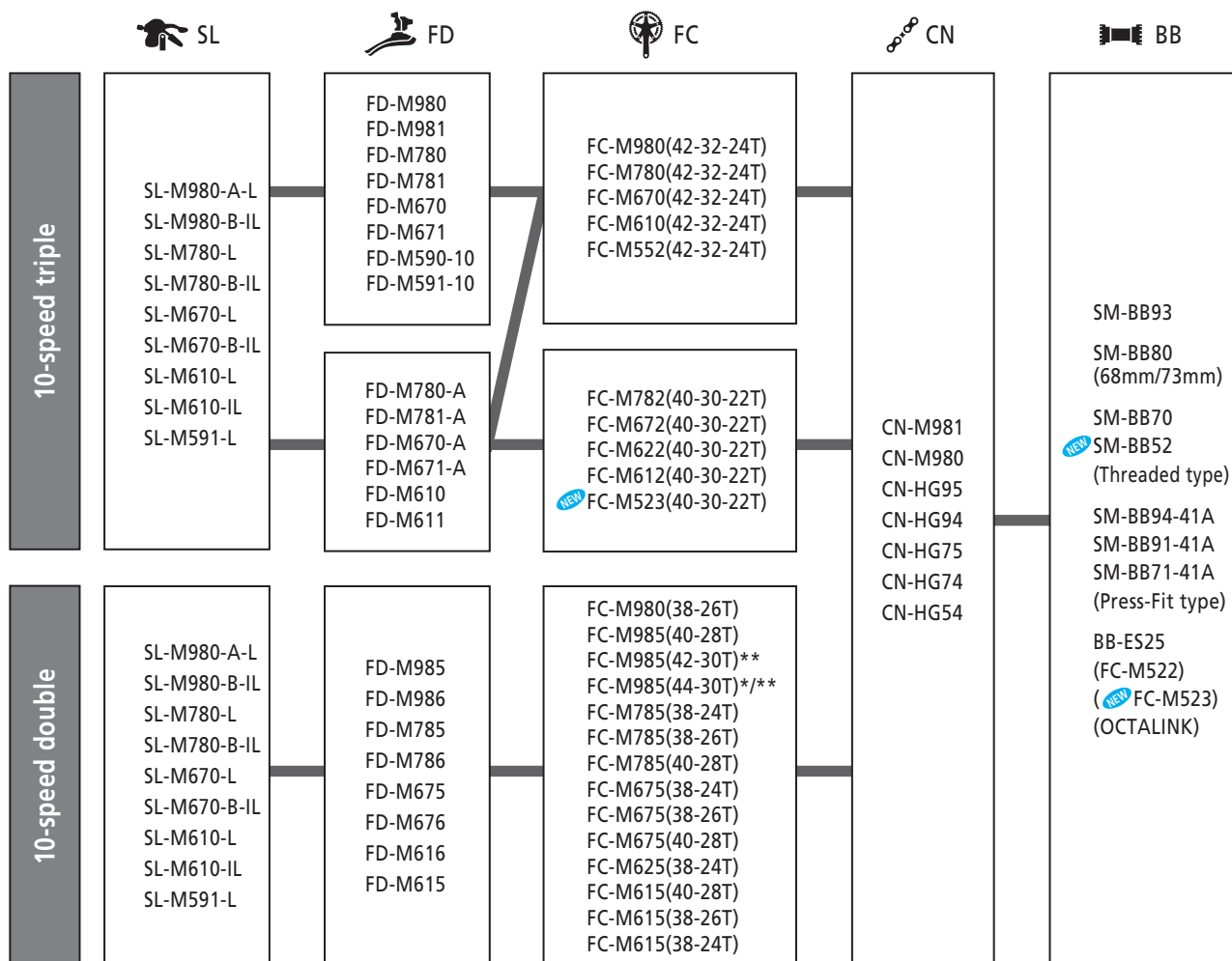


2. Front drivetrain compatibility

2-1. 11-speed front drivetrain



2-2. 10-speed front drivetrain



*: Mount position is required for FD-M986-D used with double crankset 44T.

** : Not compatible with E2 type front derailleur.

	SL	FD	FC	CN	BB
10-speed Trekking	SL-T780-L SL-M780-L SL-M780-B-IL SL-T670-L SL-M670-L SL-M670-B-IL SL-T610-L SL-M610-L SL-M610-IL SL-M591-L	FD-T780-3 FD-T780-6 FD-T781-3 FD-T670-3 FD-T670-6 FD-T671-3 FD-T610-3 FD-T610-6 FD-T611-3	FC-T780(48-36-26T) FC-T781(48-36-26T) FC-T781(44-32-24T) FC-T671(48-36-26T) FC-T671(44-32-24T) FC-M610(48-36-26T) FC-M670(48-36-26T) FC-T611(48-36-26T) FC-T611(44-32-24T) FC-T551(48-36-26T) FC-T551(44-32-24T) FC-T521 (48-36-26T) FC-T521 (44-32-24T)	CN-M981 CN-M980 CN-HG95 CN-HG94 CN-HG75 CN-HG74 CN-HG54	SM-BB70 NEW SM-BB52 (Threaded type) SM-BB71-41A (Press-Fit BB) BB-ES25 (FC-T521) (Square type)

2-3. 11-speed FC-FD compatibility

FC		Speed	11-speed		11-speed	
		Chain line	50	48.8	50	48.8
		Chain stay angle	66-69°	66-69°	66-69°	66-69°
Chain line (mm)	FC Model No.	Gear combination	For triple	For double	For triple	For double
			NEW FD-M9000	NEW FD-M9020 NEW FD-M9025	NEW FD-M9050	NEW FD-M9070
48.8	NEW FC-M9000-2 NEW FC-M9020-2	38-28T	—	X	—	X
		36-26T	—	X	—	X
		34-24T	—	X	—	X
50.0	NEW FC-M9020-3	40-30-22T	X	—	X	—

2-4. 10-speed FC-FD compatibility

FC Model No.	Chain stay angle Gear combination	Top swing								
		For triple						For double		
		66°- 69°	66°- 69°	66°- 69°	66°- 69°	63°- 66°	66°- 69°	66°- 69°	66°- 69°	66°- 69°
		FD-M980	FD-M780-A FD-M670-A FD-M610	FD-M980-E	FD-M780-A-E FD-M670-A-E FD-M610-E	FD-T780-3 FD-T670-3 FD-T610-3	FD-T780-6 FD-T670-6 FD-T610-6	FD-M985 FD-M785 FD-M675 FD-M615	FD-M985-E	FD-M985-E2 FD-M785-E2 FD-M675-E2 FD-M615-E2 (w / o BB plate only)
FC-M980 FC-M780 FC-M670 FC-M610 FC-M552 FC-M522 (BB-ES25 113 mm)	42-32-24T	X	X	X	X	-	-	-	-	-
FC-M782 FC-M672 FC-M622 FC-M612	40-30-22T	-	X	-	X	-	-	-	-	-
 FC-M523	40-30-22T	-	X	-	X	-	-	-	-	-
FC-M610	48-36-26T	-	-	-	-	X	-	-	-	-
FC-T780 FC-M670	48-36-26T	-	-	-	-	X	-	-	-	-
FC-T781 FC-T671 FC-T611 FC-T551 FC-T521	48-36-26T	-	-	-	-	X	-	-	-	-
	44-32-24T	-	-	-	-	X	-	-	-	-
FC-M985	44-30T	-	-	-	-	-	-	X	X	-
	42-30T	-	-	-	-	-	-	X	X	-
	40-28T	-	-	-	-	-	-	X	X	X
FC-M980	38-26T	-	-	-	-	-	-	X	-	X
FC-M785 FC-M675 FC-M625 FC-M615	40-28T	-	-	-	-	-	-	X	X	X
	38-26T	-	-	-	-	-	-	X	-	X
	38-24T	-	-	-	-	-	-	X	-	X

FC Model No.	Chain stay angle Gear combination	Down swing						
		For triple					For double	
		66°- 69°	66°- 69°	66°- 69°	66°- 69°	63°- 66°	66°- 69°	66°- 69°
		FD-M981	FD-M781-A FD-M671-A FD-M611	FD-M981-D	FD-M781-A-D FD-M671-A-D FD-M611-D	FD-T781-3 FD-T671-3 FD-T611-3	FD-M986 FD-M786 FD-M676 FD-M616	FD-M986-D FD-M786-D FD-M676-D FD-M616-D
FC-M980 FC-M780 FC-M670 FC-M610 FC-M552 FC-M522 (BB-ES25 113 mm)	42-32-24T	X	X	X	X	-	-	-
FC-M782 FC-M672 FC-M622 FC-M612	40-30-22T	-	X	-	X	-	-	-
 FC-M523	40-30-22T	-	X	-	X	-	-	-
FC-M610	48-36-26T	-	-	-	-	X	-	-
FC-T780 FC-M670	48-36-26T	-	-	-	-	X	-	-
FC-T781 FC-T671 FC-T611 FC-T551 FC-T521	48-36-26T	-	-	-	-	X	-	-
	44-32-24T	-	-	-	-	X	-	-
FC-M985	44-30T	-	-	-	-	-	X	X*
	42-30T	-	-	-	-	-	X	X
	40-28T	-	-	-	-	-	X	X
FC-M980	38-26T	-	-	-	-	-	X	X
FC-M785 FC-M675 FC-M625 FC-M615	40-28T	-	-	-	-	-	X	X
	38-26T	-	-	-	-	-	X	X
	38-24T	-	-	-	-	-	X	X

*: Mount position is required for FD-M986-D used with double crankset 44T.

X: Yes

2-5. 9-speed triple FC-FD compatibility

FC		FD		9-speed					
				50 mm					
				66° - 69°					
				63° - 66°					
Chain line	BB Model No. / Structure	FC model No.	Down swing FD	FD-M771 FD-M771D FD-M661D	FD-M770-E	NEW FD-M4000-TS6	FD-M770 FD-M590-6 FD-T4000-TS6 FD-M390-6 FD-M370-6	NEW FD-M4000-TS3	FD-M772A FD-T660A-3 FD-M590-3 FD-T4000-TS3 FD-M390-3 FD-M370-3
50 mm	2pc type FC	NEW FC-M4050	40-30-22T	-	-	X	-	X	-
		FC-M770	44-32-22T	X	X	-	X	-	X
		FC-M542							
		FC-M543K							
		FC-M590							
		FC-M591							
		NEW FC-T4060	48-36-26T	-	-	-	X	-	X
		FC-M543K							
		FC-M590							
		FC-M591							
		NEW FC-M4060							
		NEW FC-T4060							
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	44-32-22T	X	-	-	X	-	X
	BB-ES25 126 (-K)	NEW FC-T4010							
		FC-M391-8							
	BB-UN26 LL123 (-K)	FC-M391							
		FC-M371							
	BB-ES25 118 (-E)	NEW FC-M4000	40-30-22T	-	-	X	-	X	-
	BB-ES25 118 (-E)	FC-M430-8	44-32-22T	X	X	-	X	-	X
	BB-UN26 LL113 (-E)	FC-M430							
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	48-36-26T	-	-	-	X	-	X
	BB-ES25 126 (-K)	NEW FC-T4010							
		FC-M391-8							
	BB-UN26 LL123 (-K)	FC-M391							
		FC-M371							

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 1.8 mm spacer) / ABBES25B21	ABBES25AKB21W (use without 1.8 mm spacer) / ABBES25AKB21	ABBES25EB21
	73 mm	ABBES25C21	-	ABBES25EC21

2-6. 8,7,6-speed triple FC-FD compatibility

		Speed		8,7-speed					
		Chain line		50.0 mm		47.5 / 50.0 mm		47.5 / 50.0 mm	
		Chainstay angle		66° - 69°	63° - 66°	66° - 69°	63° - 66°	66° - 69°	63° - 66°
		Top swing FD		FD-M410-E	FD-M410-E	FD-M360-6 FD-M310-6 FD-TX800-TS6 NEW	FD-M360-3 FD-M310-3 FD-TX800-TS3 NEW	FD-M190A-6	FD-M190-3
Chain line	BB Model No. / Structure	Down swing FD		FC Model No.		FD-M313-6 NEW	FD-M313-3 NEW		
50 mm	BB-ES25 (-K) 126 (K)	FC-M361-8 FC-M311-8	42-32-22T	-	-	X	X	-	-
	BB-UN26 (-K) LL123 (-K)	FC-M361 FC-M311 FC-TX801 NEW	42-32-22T	-	-	X	X	-	-
			48-38-28T	-	-	X	X	-	-
47.5 + t mm	BB-UN26 (-E) LL123 (-E)	FC-M361 FC-M311	42-32-22T	X	X	-	-	-	-
		FC-M171-A FC-M171 FC-M131	42-34-24T	-	-	-	-	X	X
47.5 + t mm	BB-UN26-K D-NL K	FC-M171-A FC-M171 FC-M131	48-38-28T	-	-	X	X	-	-

		Speed		8,7-speed		7,6-speed		7,6-speed	
		Chain line		47.5 / 50.0 mm		47.5 / 50.0 mm		47.5 mm	
		Chainstay 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
Chain line	BB Model No. / Structure	Down swing FD		FC Model No.					
50 mm	BB-ES25 (-K) 126 (K)	FC-M361-8 FC-M311-8	42-32-22T	-	-	-	-	-	-
	BB-UN26 (-K) LL123 (-K)	FC-M361 FC-M311 FC-TX801 NEW	42-32-22T	-	-	-	-	-	-
			48-38-28T	X	X	-	-	X	X
47.5 + t mm	BB-UN26-K D-NL K	FC-M171-A FC-M171 FC-M131	42-34-24T	-	-	X	X	-	-
			48-38-28T	X	X	-	-	X	X

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

X: Yes

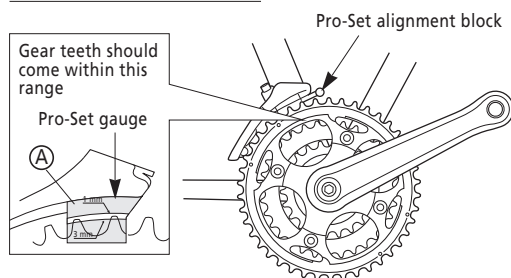
Note:

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.

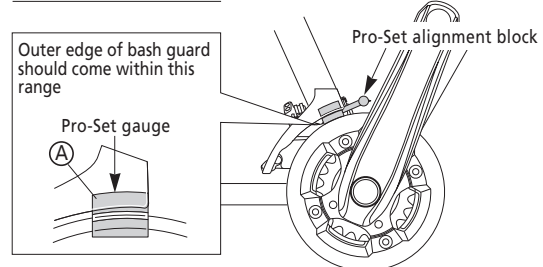
How to set position for crankset with bigger top gear chain ring or bash guard in the same series.

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

Without bash guard



With bash guard



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 (top gear) - (low gear) ≤ FD (top and low capacity)
 FC (top gear) - (middle gear) ≤ FD (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.

		28.6 mm (S)	31.8 mm (M)	34.9 mm (L)
Chain line (mm)	FD-TY10	ø47.5		ø50.0
	FD-TZ31 FD-TZ30	ø47.5		–

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	Chain line and axle mark				
		Model No.	Type of crank				Model No.	47.5 mm	50.0 mm	52.5 mm	47.5+t mm
			OCTALINK	Square	Chaincase						
10	SHIMANO	 FC-M523	X	–	–	BB-ES25	–	118	–	–	
		FC-M522	X	–	–	BB-ES25	–	113	–	–	
		FC-M521	X	–	X*	BB-ES25-AK	–	**	–	–	
9	ALIVIO	 FC-M4000	X	–	–	BB-ES25(-E)	–	118(-E)	–	–	
		 FC-T4010	X	–	X*	BB-ES25(-K)	–	126(-K)	–	–	
		FC-M430-8	X	–	–	BB-ES25(-E)	–	118(-E)	–	–	
		FC-M430	–	X	–	BB-UN26(-E)	–	LL113(-E)	–	–	
	Acera	FC-M391-8	X	–	X*	BB-ES25(-K)	–	126(-K)	–	–	
		FC-M391	–	X	X*	BB-UN26(-K)	–	LL123(-K)	–	–	
	SHIMANO	FC-M371	–	X	X*	BB-UN26(-K)	–	LL123(-K)	–	–	
8, 7	Acera ALTUS	FC-M361	–	X	X*	BB-UN26(-K)	–	LL123(-K)	–	–	
		FC-M311	–	X	X*	BB-UN26(-K)	–	LL123(-K)	–	–	
	Tourney	 FC-TX801	–	X	X*	BB-UN26(-K)	–	LL123(-K)	–	–	
8, 7, 6	SHIMANO	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)	
		FC-M171-A	–	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 8 for detailed combination.

Note:

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

5-2. Capreo series components

The combinations of the crankset 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 and axle mark			
Capreo	Model No.	Type of crank			Model No.	47.5 mm	50.0 mm	52.5 mm	47.5+t mm
		OCTALINK	Square	Chaincase					
	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.

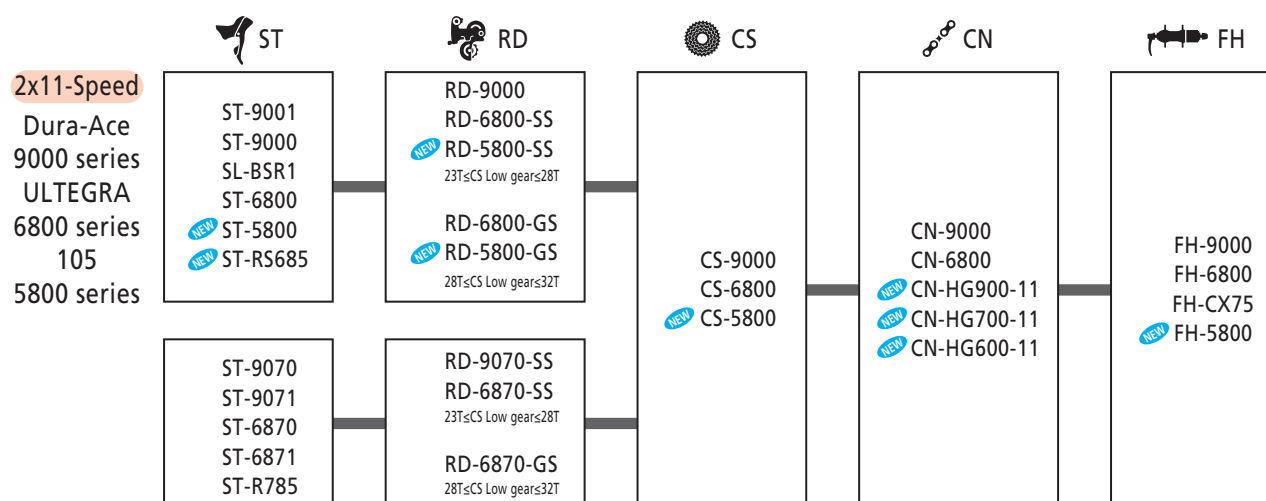
6. Chain, chainring and cassette sprocket

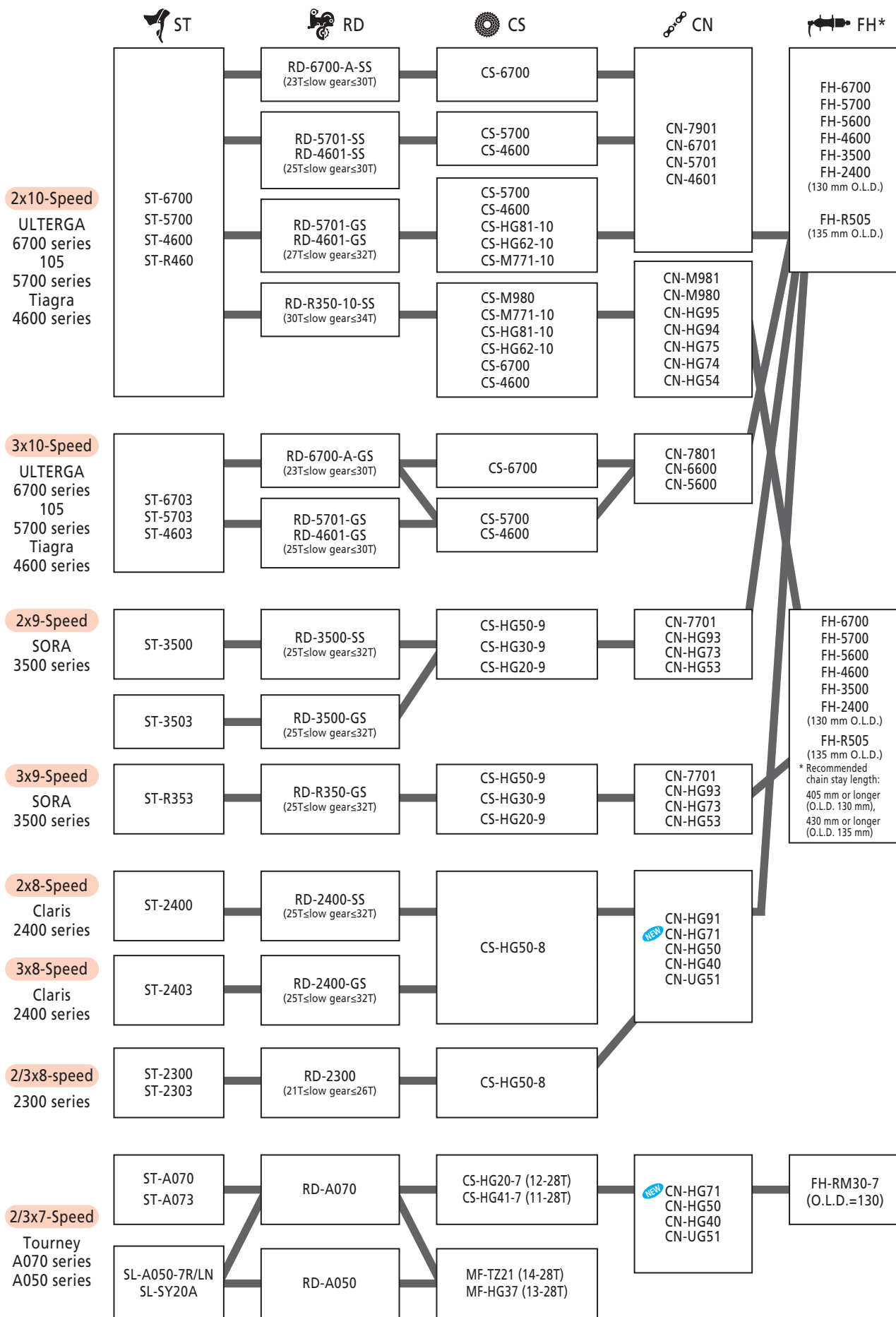
The allowable combinations for the Shimano chain (CN), chainrings (FC), and cassette sprockets (CS) are given in the chart below. These chains are available in order to match the type of drivetrain. Select the combination you desire after checking the chart below.

		9-speed		7, 8-speed	
		CS	FC	CS	FC
FC / CS		CS-M770 CS-HG80-9 CS-HG50-9 NEW CS-HG400-9 NEW CS-HG300-9 NEW CS-HG200-9	FC-M770 FC-M665 FC-M591 FC-M590 FC-M543-K FC-M542 FC-M521 NEW FC-M4060 NEW FC-M4050 NEW FC-T4060 NEW FC-M4000 NEW FC-T4010 FC-M430 FC-M430-8 FC-M391 FC-M391-8 FC-M371	CS-HG51-8 CS-HG41-8 CS-HG31-8 NEW CS-HG200-8 CS-HG41-7 CS-HG20-7	FC-M361 FC-M311 FC-M311-8 NEW FC-TX801 FC-M171 FC-M171-A FC-M131
CN	9-speed CN-HG93 CN-HG73 CN-HG53	X	X	–	–
	NEW CN-HG71 CN-HG40	–	–	X	X

Drivetrain for road bike components

1. Rear drivetrain compatibility

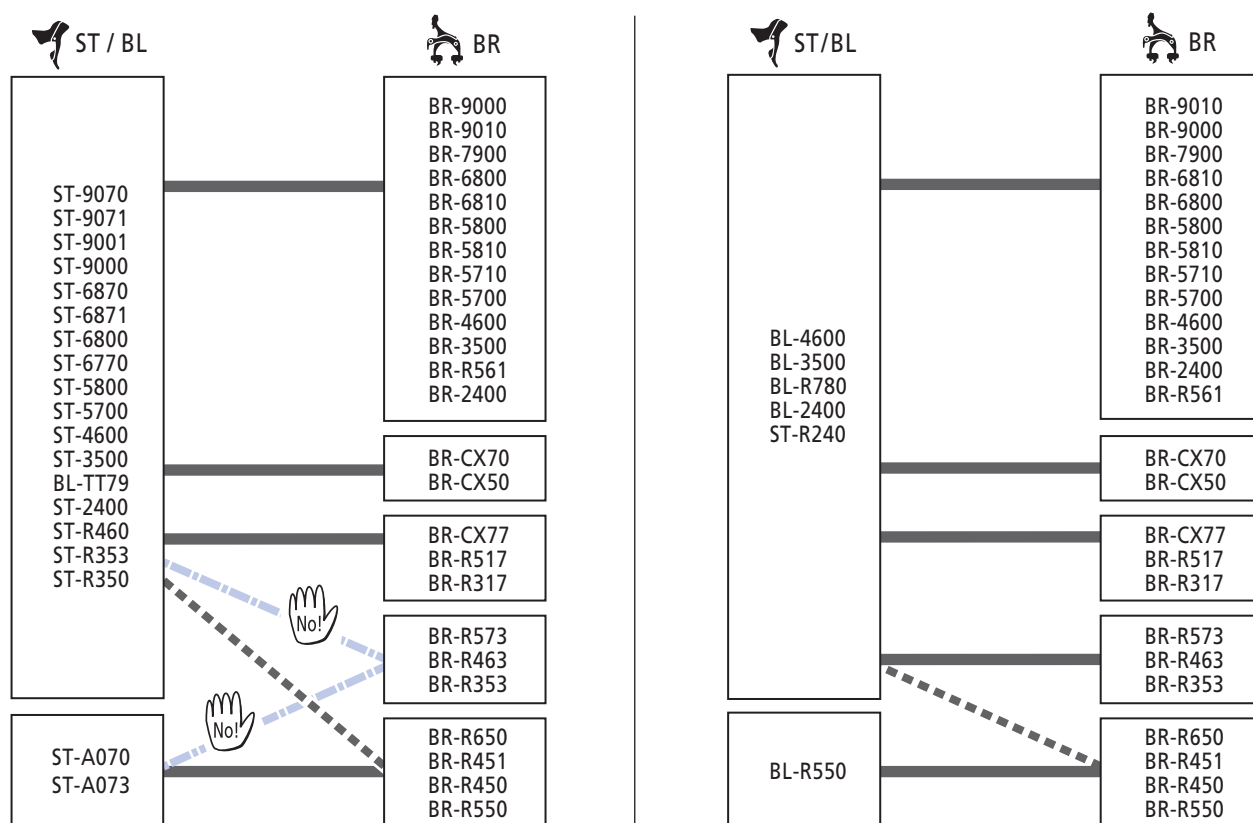




2. Front drivetrain compatibility

	ST	FD	FC	CN	BB
11-Speed 2x11-Speed Dura-Ace 9000 series ULTEGRA 6800 series 105 5800 series	ST-9001 SL-BSR1 ST-6800 NEW ST-5800 NEW ST-RS685 ST-9070 SL-9071 ST-6870 ST-6871 ST-R785	FD-9000 (not compatible with 46T) NEW FD-6800 FD-5800 FD-9070 FD-6870	FC-9000 FC-6800 NEW FC-5800 NEW FC-RS500	CN-9000 CN-6800 NEW CN-HG900-11 NEW CN-HG700-11 NEW CN-HG600-11	
10-Speed Double ULTEGRA 6700 series 105 5700 series Tiagra 4600 series Triple ULTEGRA 6703 series 105 5703 series Tiagra 4600 series	ST-6700 ST-5700 ST-4600 ST-R460 ST-6703 ST-5703 ST-4603	FD-6700 FD-5700 FD-4600 (50T _{stop} gear≤56T) FD-CX70 FD-4600 FD-R460 Note: Recommended chain stay length: 405 mm or longer (O.L.D. 130 mm), 430 mm or longer (O.L.D. 135 mm) CS angle 63 - 66 FD-6703 FD-5703 FD-4603	FC-6700 FC-6700G FC-6750 FC-6750G FC-5700 FC-5750 FC-4600 FC-4650 FC-R565 FC-CX70 FC-CX50 FC-R460 (46-34T) FC-R460 (48-34T) FC-6703 FC-6703G FC-5703 FC-4603 FC-R563	CN-7901 CN-6701 CN-5701 CN-4601 CN-M981 CN-M980 CN-HG95 CN-HG94 CN-HG75 CN-HG74 CN-HG54 CN-7801 CN-6600 CN-5600	SM-BB9000 SM-BBR60 SM-BB6700 SM-BB5700 SM-BB4600 (Threaded type) SM-BB92-41B SM-BB72-41B SM-BB71-41B (Press-fit type)
9-Speed Double SORA 3500 series Triple SORA 3500 series	ST-3500 ST-3503 ST-R353	FD-3500 FD-3503 FD-R353	FC-3550 FC-R345 FC-R350 FC-3503 FC-R453	CN-7701 CN-HG93 CN-HG73 CN-HG53	BB-ES25 (OCTALINK)
8-Speed Double Claris 2400series 2300 series Triple Claris 2400 series 2300 series	ST-2400 ST-2300 ST-R240 ST-2403 ST-2303 ST-R243	FD-2400 FD-2300 FD-2403 FD-2303	FC-2450 (OCTALINK) FC-2300 FC-2350 (Square type) FC-2403 (OCTALINK) FC-2303 (Square type)	CN-HG91 CN-HG71 CN-HG50 CN-HG40 CN-UG51	BB-ES25 (OCTALINK) BB-UN26 (Square type)
7-Speed Double Tourney A070 series A050 series Triple Tourney A070 series	ST-A070 SL-A050-LN SL-SY20A ST-A073	FD-A070A FD-A050 FD-A073	FC-A070 (50-34T) (Square type) FC-A073 (Square type)		

3. Brake systems compatibility

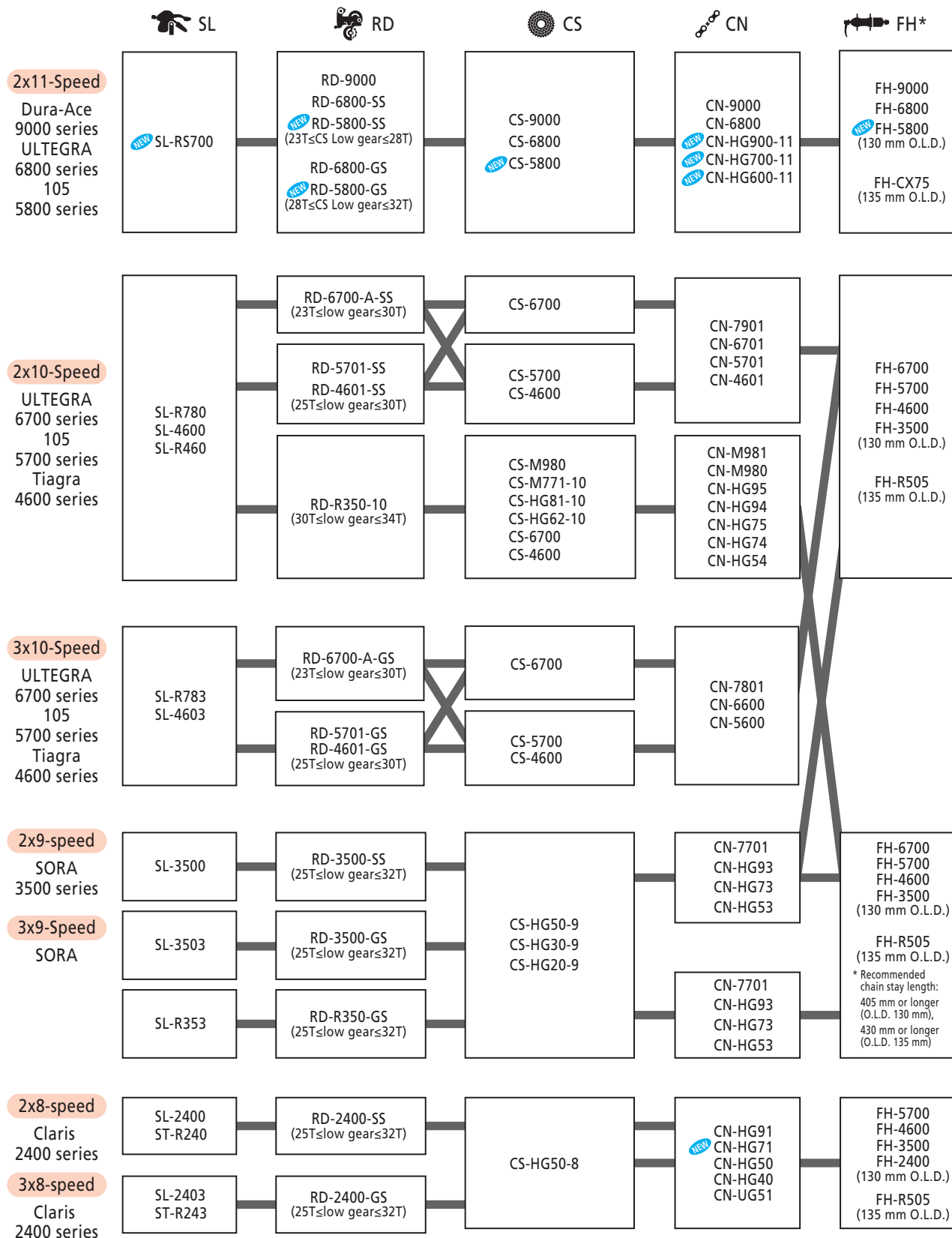


----- : Braking power is slightly less than standard combination.

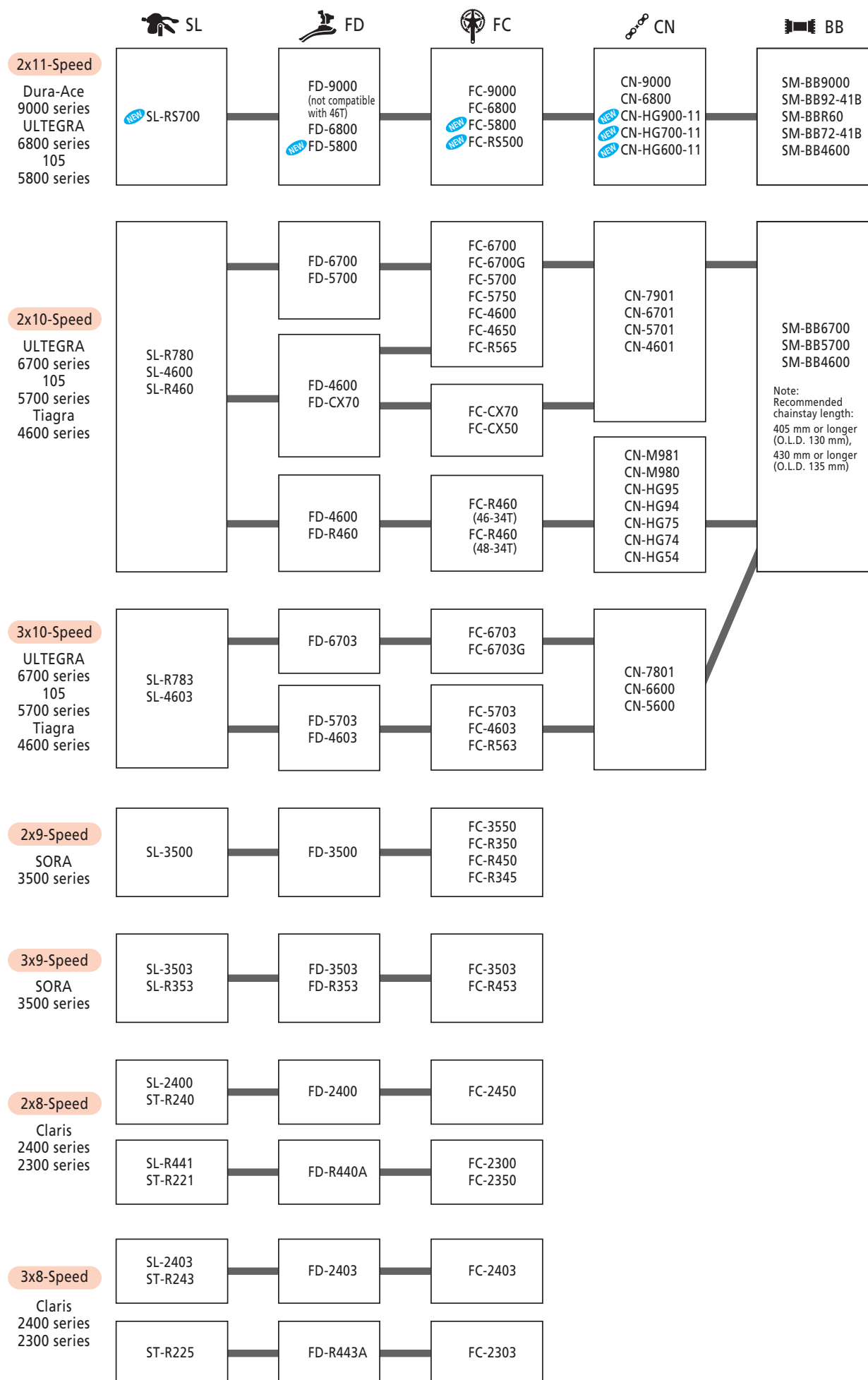
: The "NO!" symbols indicate combinations that should not be used under any circumstances.

4. Compatibility for flat handlebar

4-1. Rear system



4-2. Front system



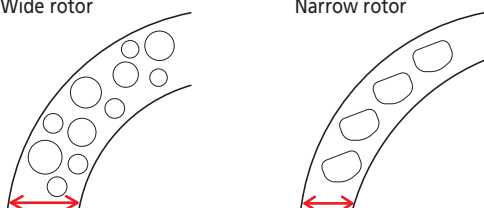
Disc brake

1. Disc brake caliper and Rotor compatibility

Caliper	Pad material	Rotor size			
		140 mm (SS)	160 mm (S)	180 mm (M)	203 mm (L)
NEW BR-M9000 NEW BR-M9020 BR-M785 BR-M675 BR-M615	Metal / Resin	SM-RT99-SS Narrow Type	SM-RT99-S SM-RT86-S SM-RT81-S SM-RT68-S SM-RT76-S SM-RT64-S SM-RT66-S Narrow Type	SM-RT99-M SM-RT86-M SM-RT81-M SM-RT68-M SM-RT76-M SM-RT64-M SM-RT66-M Narrow Type	SM-RT99-L SM-RT86-L SM-RT81-L SM-RT68-L SM-RT76-L SM-RT64-L SM-RT66-L Narrow Type
BR-M820 BR-M640	Metal / Resin				
BR-S700	Resin				
BR-T675 BR-T615 NEW BR-M4050 BR-M447 BR-M446 BR-M416-A BR-M395 BR-M375 NEW BR-M355 NEW BR-TX805 BR-R317	Resin	-	NEW SM-RT20-S SM-RT30-S SM-RT54-S SM-RT56-S Wide Type	NEW SM-RT20-M SM-RT30-M SM-RT54-M SM-RT56-M Wide Type	-
NEW BR-R785 BR-R5785	Metal / Resin	SM-RT99-SS Narrow Type	SM-RT99-S SM-RT86-S SM-RT81-S SM-RT68-S Narrow Type	-	-
BR-CX77 BR-R517	Metal / Resin	-	SM-RT98-S SM-RT86-S SM-RT81-S SM-RT76-S SM-RT75-S SM-RT64-S SM-RT66-S Narrow Type	-	-

Note:

- Suitable mount adapter is necessary according to your frame mount style.
- SM-RT56 / SM-RT54 / SM-RT30 / SM-RT20 are compatible with Resin pad caliper specification only. If use with metal pads, rotor will be easily damaged.
- When using 140mm rotor, braking power is less than 160 mm, please confirm the power is enough for your purpose. 140 mm rotor is recommended for rear use only.
- Durability of B / E-type pad become shorter when the pad is used with narrow type rotor.
- Narrow type 2piece rotor are not compatible to caliper for Wide type rotor because of interference.
- Wide rotor



Interference between brake caliper and adapter of rotor

Do not use these combinations for a reason of interference between brake caliper and adapter of rotor.

Caliper	Rotor			
	140 mm (SS)	160 mm (S)	180 mm (M)	203 mm (L)
BR-T675 BR-T615 NEW BR-M4050 BR-M447 BR-M446 BR-M395 NEW BR-M355	SM-RT99	SM-RT99 SM-RT86 SM-RT81 SM-RT76	SM-RT99	SM-RT99 SM-RT86 SM-RT81 SM-RT76

2. Combination chart (Mechanical Disc)

2-1. 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
SHIMANO	BR-M416-A BR-M375 NEW BR-TX805	*	V-BRAKE BL (2 finger)	SM-RT54 SM-RT56 SM-RT30 NEW SM-RT20 for resin pad only	B01S Resin
	BR-R517	*	Road lever**	SM-RT64 / 66	G01S Resin
	BR-R317	*	Road lever**	SM-RT54 / 56	G01S Resin
	BR-CX77	*	Road lever**	SM-RT81 / 86	G01A Resin / G03Ti Metal

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

** For BL-R780 / 4600 / 5700 / 4600

2-2. Mechanical Disc brake and Brake lever compatibility

Model No.	Brake lever type		
	2 finger	3,4 finger	3,4 finger w / modulator
			w / SM-PM50
BR-M416-A	X	—	X
BR-M375	X	—	X
NEW BR-TX805	X	—	X

V-BRAKE and Hub roller brake

1. Compatibility 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		Roller Brake
	BR-T780 BR-MX70 BR-R353 BR-R463 BR-R573 BR-T670 BR-T610 BR-T4010 BR-T4000	With power modulator model BR-T780 with SM-PM70 BR-T670 with SM-PM70 BR-T610 with SM-PM70 BR-T4010 with SM-PM40 BR-T4000 with SM-PM40 BR-R353 with SM-PM40 BR-R463 with SM-PM40 BR-R573 with SM-PM70	
V-BRAKE Levers (2-finger) NEW ST-M4000 BL-T610 ST-M370 ST-M310 ST-EF65 ST-EF51 ST-EF51-A NEW ST-EF41 NEW ST-TX800 BL-M571 NEW BL-T4000 BL-MX70	X	X	Note
V-BRAKE Levers (3-finger) NEW ST-T4000 BL-T611 BL-T780-B BL-T670-B BL-T780 BL-T670 NEW BL-T4010		X	
V-BRAKE Levers with switch BL-4600 BL-R780 BL-3500 BL-2400 ST-R240	X	X	
Brake lever with switch ST-M310 (4-finger) ST-EF65 (4-finger) ST-EF51 (4-finger) ST-EF51-A (4-finger) SB-8520 ST-8520 SB-7S45 BL-IM45 BL-IM65 BL-IM60 NEW BL-C6000		X	X
Levers for Roller Brake			X

X: Yes



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

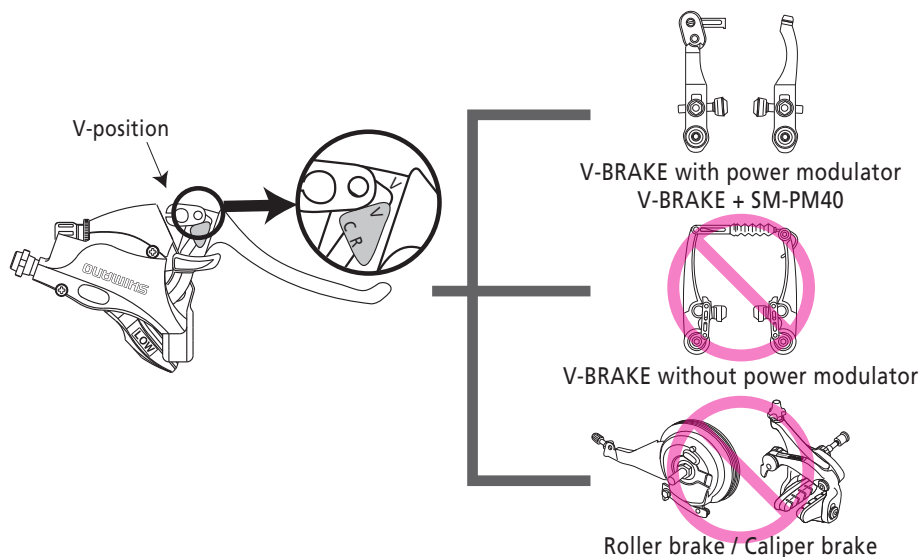
Note:

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

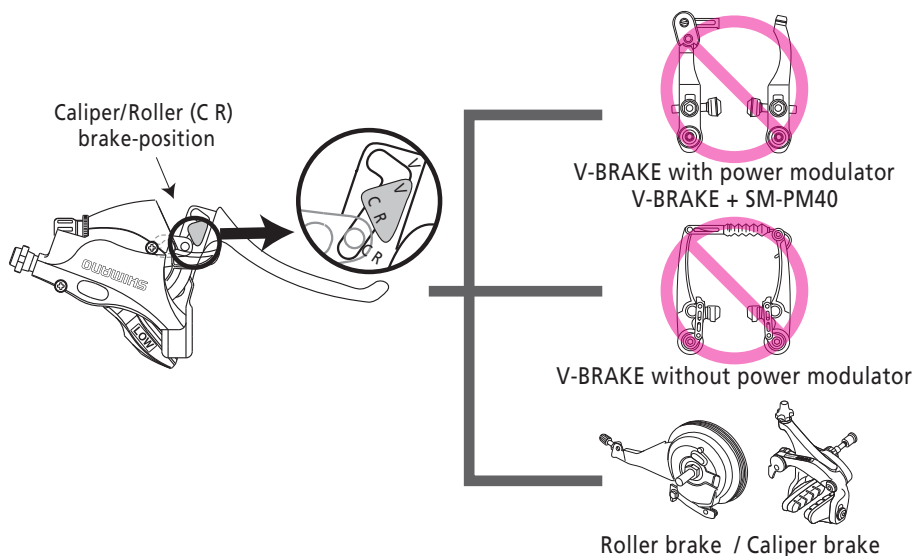
2. Brake lever with switch compatibility

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

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



2-2. For Caliper brake / Roller brake



Some models can't be used with roller brake,
please refer to page 21 for more information.

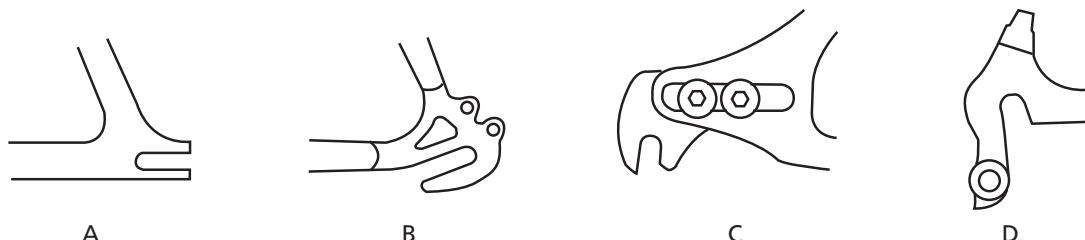
⚠ Warning:

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.

Comfort components

Compatibility for comfort bike components

1. Combinations of the rear gear, cassette sprocket, and crankset for designing the frame



Dropout design	Compatibility	FC	CN
A: Reversed (Track end, w / o RD mount) B: Standard (w / o RD mount) C: Adjustable Disc brake mount / Eccentric BB D: Vertical dropout (Road bike type, w / RD mount)	NR: Not recommend	E: FC-NX75 F: FC-S501 / S400 : Double guard spec G: FC-S501 / S400 : Single guard spec	H: CN-NX10(1 / 2"x1 / 8") or HG 85(1 / 2"x3 / 32") I: Super Narrow HG 95 J: HG 85(1 / 2"x3 / 32")

Series	Speed	Brake type	Dropout design	Compatibility	CT use	CS / SM -GEAR	FC	CN	additional condition
ALFINE	11S / 8S	Disc use	A	NR	–	–	–	–	*1
			B	NR	–	–	–	–	
			C	OK	–	SM-GEAR	G	J	
			D	OK	CT-S500	CS-S500	F	I	
		V-BR use	D	OK	CT-S510	SM-GEAR	G	J	
			A	OK	–	SM-GEAR	G	J	
			B	OK	–	SM-GEAR	G	J	
			C	OK	–	SM-GEAR	G	J	
Nexus	8S / 7S / 3S (except 3D)	HRB / V-BR	D	OK	CT-S500	CS-S500	F	I	*2
			D	OK	CT-S510	SM-GEAR	G	J	
			A	OK	–	SM-GEAR	E	H	
			A	OK	–	SM-GEAR	G	J	
		Coaster	B	OK	–	SM-GEAR	E	H	
			B	OK	–	SM-GEAR	G	J	
			C	OK	–	SM-GEAR	E	H	
			C	OK	–	SM-GEAR	G	J	
		Disc use	D	NR	CT-S500	–	–	–	*3
			D	NR	CT-S510	–	–	–	
			A	NR	–	–	–	–	
			A	NR	–	–	–	–	
	3D	Disc use	B	NR	–	–	–	–	*1
			C	OK	–	SM-GEAR	G	J	
			D	OK	CT-S500	CS-S500	F	I	
			D	OK	CT-S510	SM-GEAR	G	J	
		V-BR use	A	OK	–	SM-GEAR	G	J	
			B	OK	–	SM-GEAR	G	J	
			C	OK	–	SM-GEAR	G	J	
			D	OK	CT-S500	CS-S500	F	I	

*1: Special disc brake mount design is needed.

*2: without chain guard for hub gear side.

*3: Structure of CT-S500 can't transfer chain tension by back pedalling.

*4: Not enough force of fixation against back pedalling power.

Electronic Product Information

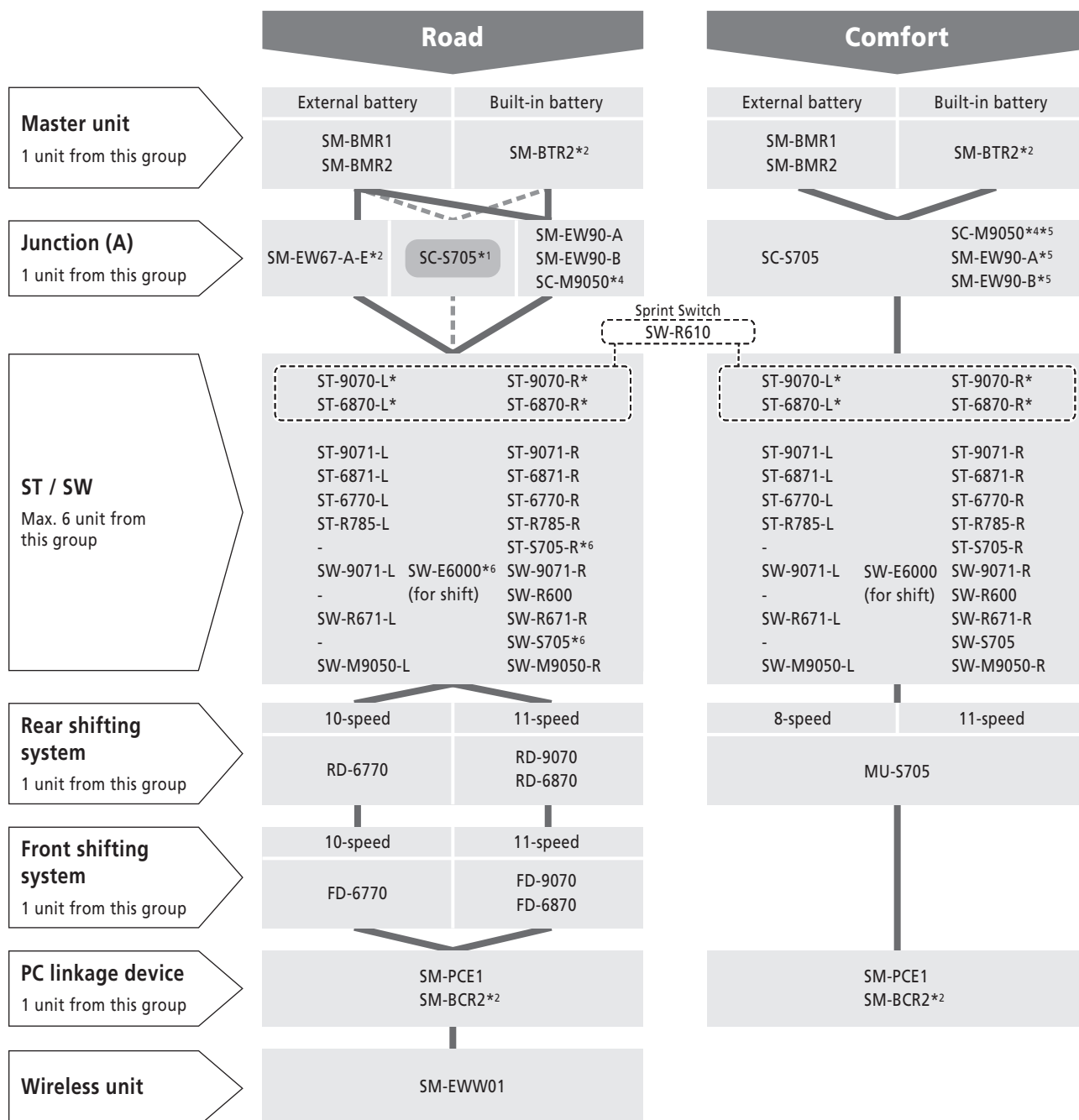
1. E-tube compatibility chart

E-tube compatibility chart

This chart shows E-tube device compatibility based on latest version firmware as of Nov. 1st, 2014. Please see the following site for more E-tube information. <http://e-tubeproject.shimano.com/>

Master unit firmware for Road/ Comfort/ MTB category is ver. 3.0

When any device which is not shown in this compatibility chart is connected, all components don't work.



Limitation of function -----

*1 SC-S705

- Front derailleur position will not appear on display
- Recovery from Rear derailleur protection function is not available
- Front / Rear derailleur adjustment mode is not available. Use E-tube project software

*2 SM-BCR2 requires any device which has charging connector.

SM-EW67-A-E (Junction (A)) is not compatible with SM-BCR2 and SM-BTR2.

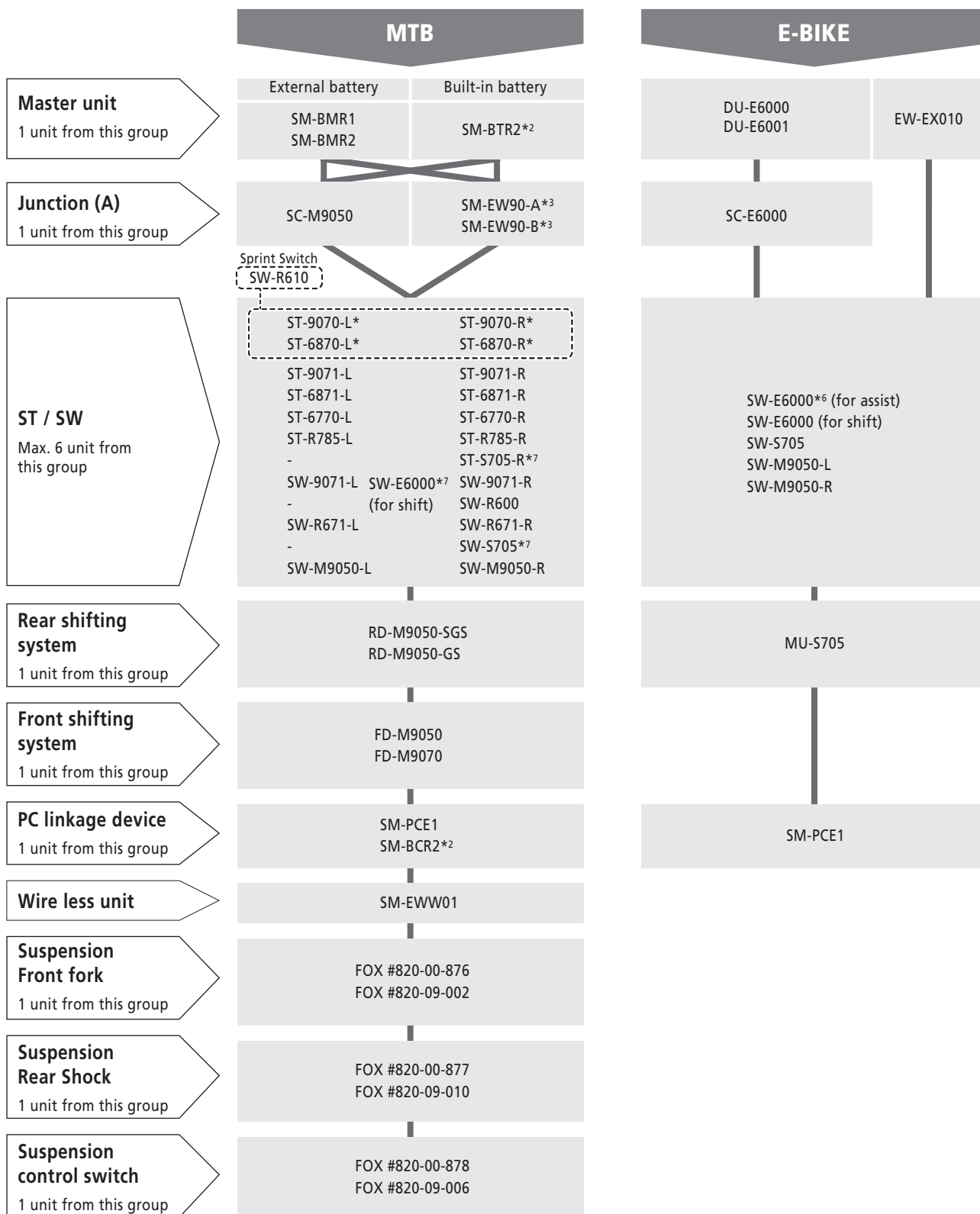
*3 SC-M9050 is required for synchronized shift

*4 Synchronized shift is available only in MTB category

*5 Front / Rear derailleur adjustment mode is not available in "Comfort" category

*6 Only for rear shifting

- SC-S705 has only 1 E-tube port for ST / SW
- SC-S705 may not turn on the display by front shifting switch



Limitation of function -----

*1 SC-S705

- Front derailleur position will not appear on display
- Recovery from Rear derailleur protection function is not available
- Front / Rear derailleur adjustment mode is not available. Use E-tube project software
- SC-S705 has only 1 E-tube port for ST / SW
- SC-S705 may not turn on the display by front shifting switch

*2 SM-BCR2 requires any device which has charging connector.

SM-EW67-A-E (Junction (A)) is not compatible with SM-BCR2 and SM-BTR2.

*3 SC-M9050 is required for synchronized shift

*4 Synchronized shift is available only in MTB category

*5 Front / Rear derailleur adjustment mode is not available for MU-S705

*6 Available switch for SHIMANO STEPS assist control is SW-E6000 (for assist mode).
It doesn't work as assist control switch for other E-BIKE system via EW-EX010

*7 Only for rear shifting (RD & IHG)